

CITY OF MAPLE PLAIN

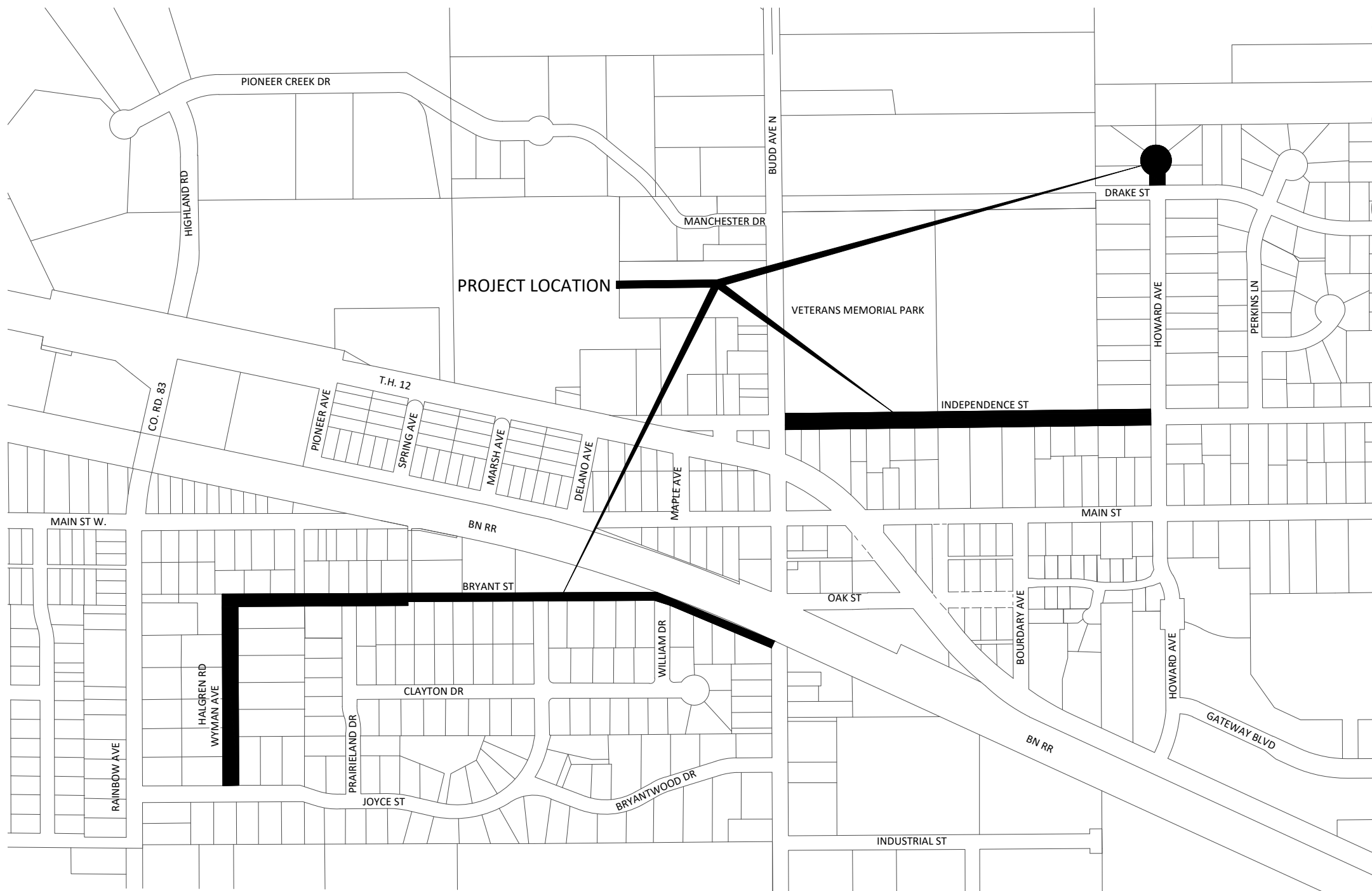
CONSTRUCTION PLANS FOR

2024 STREET RECONSTRUCTION

CURB & GUTTER, BITUMINOUS STREETS, WATERMAIN, SANITARY SEWER AND STORM SEWER IMPROVEMENTS

MARCH, 2024

2



SHEET NUMBER	SHEET TITLE
GENERAL	
G0.01	TITLE SHEET
G0.02	LEGEND
G0.03	CONSTRUCTION NOTES
CIVIL	
C0.01 - C0.06	EXISTING CONDITIONS, REMOVALS PLAN
C1.01 - C1.17	TYPICAL SECTION & STANDARD DETAILS PLATES
C2.01 - C2.09	EROSION CONTROL PLAN, SWPPP
C3.01	BIORETENTION BASIN GRADING
C4.01 - C4.11	SANITARY SEWER & WATER PLAN & PROFILE
C5.01 - C5.06	STORM SEWER PLAN & PROFILE
C6.01 - C6.20	STREET PLAN & PROFILE, MILL & OVERLAY, INTERSECTION DETAILS
THIS PLAN SET CONTAINS 73 SHEETS.	

PLAN REVISIONS		
REVISION	SHEETS	DATE
1	C5.01, C5.05 - C5.06, C6.19	4/9/2024
2	C0.06, C1.01, C2.09, C6.09A	04/16/2024
3	C4.04 TO C4.09	5/14/2024

MAP OF THE CITY OF MAPLE PLAIN HENNEPIN COUNTY, MN

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 C UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."



MAP LEGEND

PROJECT LIMITS

- 2 UPDATED LEGEND WITH ADDED SHEETS
- 3 REVISED SANITARY & STORM SEWER ON GRADES WYMAN AVE AND BRYANT ST. ADDED INSULATION.
- 4 REVISED SANITARY TO CIPP LINER

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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.

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JEFFREY J. WEYANDT
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DATE 3/13/2024



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DESIGNED	NO.	ISSUED FOR	DATE
RAN	1		4/9/24
DRAWN	2	STRM REV	4/15/24
	3	SAN REV	5/14/24
CHECKED	4	SAN LINER	5/14/24
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
TITLE SHEET

SHEET
G0.01

EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN NON TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGN TRAFFIC
	BARRICADE PERMANENT		SIGNAL CONTROL CABINET
	BASKETBALL POST		SOIL BORING
	BENCH		SIREN
	BIRD FEEDER		TELEPHONE BOOTH
	BOLLARD		TILE INLET
	BUSH		TILE OUTLET
	CATCH BASIN RECTANGULAR CASTING		TILE RISER
	CATCH BASIN CIRCULAR CASTING		TRANSFORMER-ELECTRIC
	CURB STOP		TREE-CONIFEROUS
	CLEAN OUT		TREE-DEAD
	CULVERT END		TREE-DECIDUOUS
	DRINKING FOUNTAIN		TREE STUMP
	DOWN SPOUT		TRAFFIC ARM BARRIER
	FILL PIPE		TRAFFIC SIGNAL
	FIRE HYDRANT		TRASH CAN
	FLAG POLE		UTILITY MARKER
	FLARED END / APRON		VALVE
	FUEL PUMP		VALVE POST INDICATOR
	GRILL		VALVE VAULT
	GUY WIRE ANCHOR		VAULT
	HANDHOLE		VENT PIPE
	HANDICAP SPACE		WATER SPIGOT
	IRRIGATION SPRINKLER HEAD		WELL
	IRRIGATION VALVE BOX		WETLAND DELINEATED MARKER
	LIFT STATION CONTROL PANEL		WETLAND
	LIFT STATION		WET WELL
	LIGHT ON POLE		YARD HYDRANT
	LIGHT-GROUND		
	MAILBOX		

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

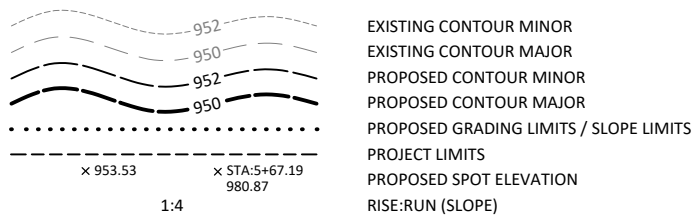
EXISTING UTILITY LINES

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

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:
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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 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA"

	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 38-02.

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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DRAWN	RAN			
CHECKED	JJW			
CLIENT PROJ. NO.	0C1132036			

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT

LEGEND

SHEET

G0.02

CONSTRUCTION NOTES

GENERAL

- 1) CONTRACTOR SHALL MAINTAIN LOCAL ACCESS TO ALL PROPERTIES DURING CONSTRUCTION. THE CONTRACTOR SHALL RESTORE ALL DRIVEWAYS AND THE ROADWAY WITH MILLINGS OR SALVAGED CLASS 5 AT THE END OF EACH WORK DAY TO THE SATISFACTION OF THE ENGINEER. THIS TEMPORARY RESTORATION IS CONSIDERED INCIDENTAL TO THE PROJECT.
- 2) CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO THEIR PRECONSTRUCTION STATE, INCLUDING TURF RESTORATION.
- 3) ANY GARDEN, ROCK GARDEN OR LANDSCAPING DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO ITS ORIGINAL CONDITION USING LIKE MATERIALS. RESTORATION WILL BE PAID FOR UNDER THE LANDSCAPING ALLOWANCE SHOWN ON THE BID SCHEDULE IF A SPECIFIC ITEM IS NOT PROVIDED.
- 4) THE CONTRACTOR SHALL REPAIR ANY EXISTING IRRIGATION SYSTEMS OR ELECTRIC FENCE SYSTEMS DISTURBED BY PROJECT CONSTRUCTION. SYSTEMS SHALL BE REPAIRED WITH SALVAGED MATERIALS AND/OR NEW IRRIGATION SYSTEM MATERIALS AS DIRECTED BY THE ENGINEER. CARE SHOULD BE TAKEN TO MINIMIZE THE DISTURBANCE OF EXISTING SYSTEMS WHEN WORKING IN THESE AREAS.
- 5) CONTRACTOR SHALL PROTECT EXISTING FOLIAGE, CLEARING AND GRUBBING OF EXISTING FOLIAGE SHALL BE AS DIRECTED BY THE ENGINEER.
- 6) THERE WILL BE CONFLICTS WITH EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION.
- 7) THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE AT ALL TIMES DURING CONSTRUCTION.
- 8) CONTRACTOR SHALL INSTALL INLET PROTECTION ON ALL CATCH BASINS AS DIRECTED BY THE ENGINEER.

REMOVALS

- 1) CONTRACTOR SHALL PROTECT EXISTING CONCRETE CURB AND GUTTER AND CONCRETE SIDEWALK NOT DESIGNATED FOR REMOVAL UNLESS OTHERWISE DIRECTED BY THE ENGINEER IN FIELD.
- 2) CONTRACTOR SHALL REMOVE CONCRETE ALONG JOINT LINES TO THE MAXIMUM EXTENT POSSIBLE, REMOVAL LIMITS SHALL BE COORDINATED IN THE FIELD WITH ENGINEER.
- 3) CONTRACTOR SHALL PROVIDE FOR THE REMOVAL AND DISPOSAL OF ANY OTHER STRUCTURES OR DEBRIS THAT WOULD INTERFERE WITH CONSTRUCTION. ALL SUCH MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, UNLESS OTHERWISE NOTED AND SHALL EITHER BE RECYCLED TO THE EXTENT ALLOWED OR DISPOSED OF OFFSITE.
- 4) THE CONTRACTOR SHALL INVESTIGATE AND MAKE HIS OWN DETERMINATION OF EXISTING PAVEMENT AND AGGREGATE BASE THICKNESS.
- 5) UNLESS SPECIFICALLY NOTED FOR SALVAGE, ALL MATERIALS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE SUITABLY DISPOSED OF OFFSITE.
- 6) REMOVAL OF CURB STOPS, FITTINGS, AND ANY OTHER WATERMAIN APPURTENANCES SHALL BE CONSIDERED INCIDENTAL TO WATERMAIN REMOVAL.
- 7) ALL WORK SHALL REMAIN WITHIN THE APPROVED REMOVAL LIMITS. ALL REMOVALS OUT OF THE APPROVED LIMITS AND THE RESTORATION THEREOF SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 8) WHERE PAVEMENT TO BE REMOVED ADJOINS EXISTING PAVEMENT THAT IS TO REMAIN IN PLACE, THE PAVEMENT SHALL BE SAW CUT. BITUMINOUS PAVEMENT REMOVAL IS CONSIDERED INCIDENTAL TO COMMON EXCAVATION WITH NO DIRECT COMPENSATION PAID THEREFORE REGARDLESS OF THE BITUMINOUS THICKNESS.
- 9) ALL WATER SERVICES SHALL BE REMOVED UP TO AND INCLUDING THE CURB STOP.
- 10) ALL SANITARY SERVICES SHALL BE REMOVED TO 2' INSIDE THE RIGHT OF WAY OR AS DIRECTED BY THE ENGINEER.
- 11) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL, TEMPORARY PLACEMENT, MAINTENANCE, AND REINSTALLATION OF ALL MAIL BOXES WITHIN THE PROJECT AREA AS NECESSARY FOR CURB AND UTILITY CONSTRUCTION.
- 12) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SALVAGE, STORAGE, AND REINSTALLATION OF ALL SIGNS WHICH MAY NEED TO BE REMOVED DURING CONSTRUCTION (INCIDENTAL)
- 13) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL TREES UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- 14) THE INTENT IS TO PROTECT AS MANY TREES AS POSSIBLE. THE CONTRACTOR SHALL EXPOSE ALL SERVICES AND VERIFY LOCATION PRIOR TO ANY TREE REMOVAL.
- 15) TREE REMOVAL IS DEPENDENT ON SEWER AND CURB STOP LOCATION.
- 16) WATER SERVICES THAT INTERFERE WITH TREES SHALL BE RELOCATED AROUND THE TREE TO AVOID ITS REMOVAL IF POSSIBLE.
- 17) PROTECT POWER POLES, LIGHT POLES AND STEPS UNLESS OTHERWISE NOTED.
- 18) EXCESS EXCAVATED MATERIAL THAT CANNOT BE USED ON-SITE SHALL BECOME PROPERTY OF THE CONTRACTOR, AND SHALL BE DISPOSED OFF-SITE AT THE CONTRACTORS EXPENSE.

REMOVALS (CONTINUED)

- 19) REMOVAL LIMITS EXTEND 10-FEET BEHIND THE BACK OF CURB UNLESS OTHERWISE SHOWN. AT UTILITY SERVICES THE REMOVAL LIMITS EXTEND TO THE RIGHT OF WAY AND 15-FEET ON EACH SIDE OF THE SERVICE. THE REMOVAL LIMITS SHOWN AND DESCRIBED IN THE PLAN ARE APPROXIMATE. ACTUAL REMOVAL LIMITS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 20) THE CONTRACTOR SHALL SALVAGE AND REINSTALL LANDSCAPE ROCK AND LANDSCAPE MULCH LOCATED WITHIN THE REMOVAL LIMITS AS DIRECTED.
- 21) PROTECTION AND/OR THE SALVAGE AND REINSTALLATION OF ALL ITEMS SHALL BE INCIDENTAL UNLESS THE PROPOSAL INCLUDES A LINE ITEM FOR THE SPECIFIC TASK.
- 22) REMOVAL AND DISPOSAL OF SHRUBS AND BUSHES INSIDE OF THE APPROVED REMOVAL LIMITS SHALL BE CONSIDERED INCIDENTAL.
- 23) THE CONTRACTOR MAY BE ABLE TO PROTECT SOME OF THE ITEMS THE ENGINEER IS CALLING OUT AS SALVAGE AND REINSTALL.

UTILITIES

- 1) WATER AND SANITARY SEWER SERVICE SHALL BE MAINTAINED DURING CONSTRUCTION.
- 2) CONTRACTOR SHALL PROVIDE TEMPORARY WATER SERVICE TO PROVIDE CONTINUOUS WATER SERVICE DURING CONSTRUCTION. LOSS OF SERVICE WILL BE ALLOWED FOR UP TO 4 HOURS BETWEEN THE HOURS OF 9 AM AND 3 PM FOR INDIVIDUAL RESIDENCES WHEN 48 HOURS ADVANCE NOTICE IS PROVIDED.
- 3) SANITARY SEWER SERVICE PIPE SHALL BE PVC SDR 26 UNLESS OTHERWISE NOTED.
- 4) WATER SERVICES SHALL BE 1" COPPER TYPE K UNLESS OTHERWISE NOTED.
- 5) MINIMUM SEPARATION AT SANITARY/WATERMAIN CROSSINGS SHALL BE 18-INCHES, AND 3 FEET AT STORM/WATERMAIN CROSSINGS.
- 6) DEFLECT WATERMAIN AND INSTALL HORIZONTAL BENDS AS REQUIRED TO MAINTAIN THE PROPOSED ALIGNMENT.
- 7) ALL WATERMAIN SHALL HAVE A MINIMUM COVER OF 7.5'.
- 8) WATERMAIN SERVICES SHALL BE EXTENDED TO EXISTING CUB STOP OR AS DIRECTED IN THE FIELD.
- 9) PROPOSED SERVICE LOCATIONS SHOWN ON THE PLANS ARE SHOWN IN AN APPROXIMATE WAY. THE EXACT LOCATION OF THE PROPOSED SERVICES SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR.
- 10) CONTRACTOR SHALL DETERMINE IF ALL SEWER AND WATER SERVICES ENCOUNTERED DURING CONSTRUCTION ARE OPERATIONAL OR OUT OF SERVICE.
- 11) NOT ALL CURB STOPS OR SANITARY SEWER SERVICES WERE LOCATED FOR THE PREPARATION OF THE PLANS. THE CONTRACTOR SHALL LOCATE ALL CURB STOPS PRIOR TO CONSTRUCTION.
- 12) CURB STOPS LOCATED IN PAVED/CONCRETE AREAS SHALL BE PROTECTED BY A WATER SERVICE LID COVER IN ACCORDANCE WITH THE DETAILS.
- 13) CONTRACTOR SHALL INSTALL SAME SIZE SANITARY SERVICE PIPE AND WYE AS EXISTING.
- 14) DEFLECT COPPER SERVICES AS NECESSARY TO MAINTAIN 18" SEPARATION FROM SANITARY SEWER AND 3' SEPARATION FROM STORM SEWER.
- 15) THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE AND ELEVATION OF EXISTING UTILITIES AT ALL CONNECTION POINTS PRIOR TO CONSTRUCTION.
- 16) ALL CONNECTIONS TO EXISTING SANITARY OR STORM SEWER SHALL BE WATERTIGHT AND APPROVED BY THE ENGINEER.
- 17) THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE LOCATION, SIZE AND ELEVATION OF EXISTING UTILITIES AT ALL CONNECTING POINTS.

STREET

- 1) PAVEMENT MILLINGS AND SALVAGED CLASS 5 MAY BE USED FOR MAINTAINING ACCESS TO RESIDENCES WHEN APPROVED BY THE ENGINEER.
- 2) TEST ROLLING SHALL BE REQUIRED ON SUBGRADE FOR ALL STREETS.
- 3) STREETS USED AS HAUL ROUTES SHALL BE APPROVED BY THE ENGINEER AND SWEEPED DAILY.

MISCELLANEOUS

- 1) ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MINNESOTA MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
- 2) THE CONTRACTOR IS HEREBY REMINDED OF HIS RESPONSIBILITY UNDER STATE LAW TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE-CALL.
- 3) WHENEVER THE WORD "INCIDENTAL" IS USED IN THIS PLAN, IT SHALL MEAN THIS WORK WILL BE INCIDENTAL TO THE CONTRACT, FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.
- 4) PORTABLE CONCRETE BARRIERS IF REQUIRED ARE INCIDENTAL TO TRAFFIC CONTROL.

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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 41342 DATE 4/13/2024



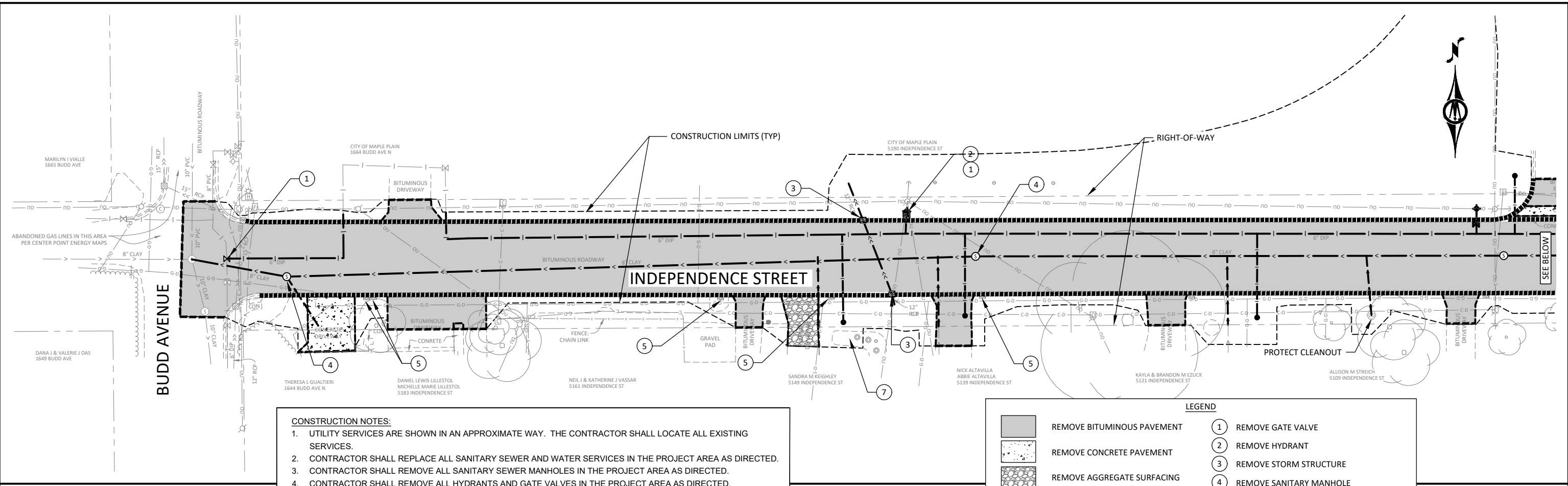
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DESIGNED	NO.	ISSUED FOR	DATE
RAN			
DRAWN			
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CLIENT PROJ. NO.			
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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 CONSTRUCTION NOTES

SHEET

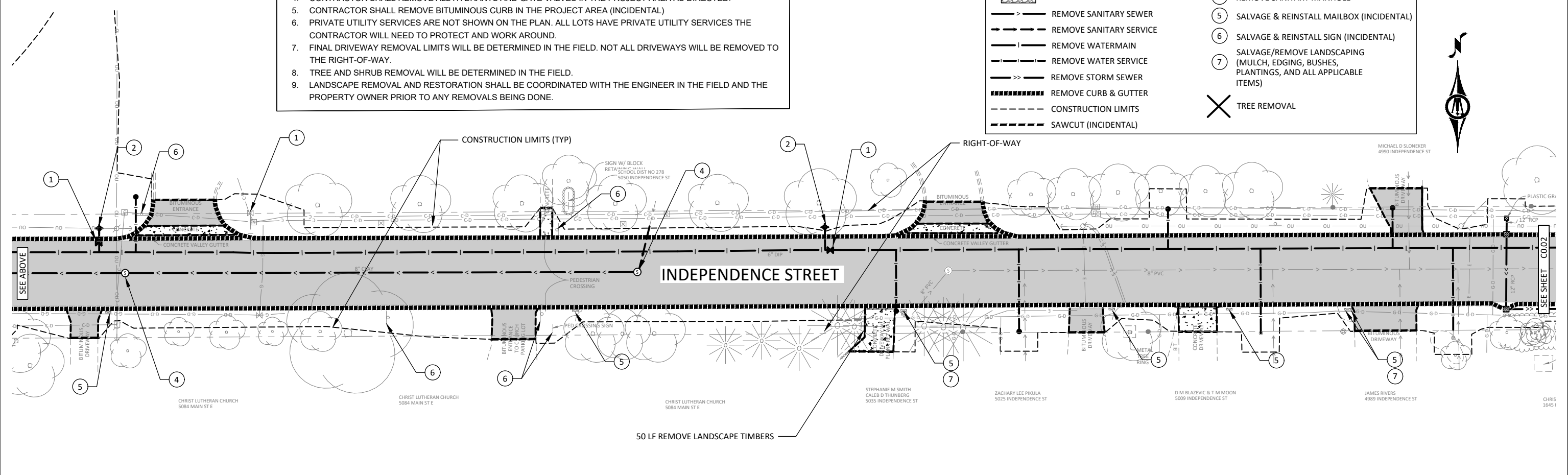
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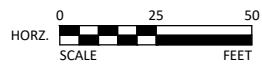
- CONSTRUCTION NOTES:**
- UTILITY SERVICES ARE SHOWN IN AN APPROXIMATE WAY. THE CONTRACTOR SHALL LOCATE ALL EXISTING SERVICES.
 - CONTRACTOR SHALL REPLACE ALL SANITARY SEWER AND WATER SERVICES IN THE PROJECT AREA AS DIRECTED.
 - CONTRACTOR SHALL REMOVE ALL SANITARY SEWER MANHOLES IN THE PROJECT AREA AS DIRECTED.
 - CONTRACTOR SHALL REMOVE ALL HYDRANTS AND GATE VALVES IN THE PROJECT AREA AS DIRECTED.
 - CONTRACTOR SHALL REMOVE BITUMINOUS CURB IN THE PROJECT AREA (INCIDENTAL)
 - PRIVATE UTILITY SERVICES ARE NOT SHOWN ON THE PLAN. ALL LOTS HAVE PRIVATE UTILITY SERVICES THE CONTRACTOR WILL NEED TO PROTECT AND WORK AROUND.
 - FINAL DRIVEWAY REMOVAL LIMITS WILL BE DETERMINED IN THE FIELD. NOT ALL DRIVEWAYS WILL BE REMOVED TO THE RIGHT-OF-WAY.
 - TREE AND SHRUB REMOVAL WILL BE DETERMINED IN THE FIELD.
 - LANDSCAPE REMOVAL AND RESTORATION SHALL BE COORDINATED WITH THE ENGINEER IN THE FIELD AND THE PROPERTY OWNER PRIOR TO ANY REMOVALS BEING DONE.

LEGEND

	REMOVE BITUMINOUS PAVEMENT	①	REMOVE GATE VALVE
	REMOVE CONCRETE PAVEMENT	②	REMOVE HYDRANT
	REMOVE AGGREGATE SURFACING	③	REMOVE STORM STRUCTURE
	REMOVE SANITARY SEWER	④	REMOVE SANITARY MANHOLE
	REMOVE SANITARY SERVICE	⑤	SALVAGE & REINSTALL MAILBOX (INCIDENTAL)
	REMOVE WATERMAIN	⑥	SALVAGE & REINSTALL SIGN (INCIDENTAL)
	REMOVE WATER SERVICE	⑦	SALVAGE/REMOVE LANDSCAPING (MULCH, EDGING, BUSHES, PLANTINGS, AND ALL APPLICABLE ITEMS)
	REMOVE STORM SEWER	✕	TREE REMOVAL
	REMOVE CURB & GUTTER		
	CONSTRUCTION LIMITS		
	SAWCUT (INCIDENTAL)		



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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.

Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE: 4/13/2024



2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
www.bolton-menk.com

DESIGNED	NO.	ISSUED FOR	DATE
RAN			
DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EXISTING CONDITIONS & REMOVALS
INDEPENDENCE STREET

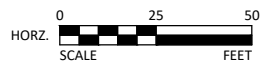
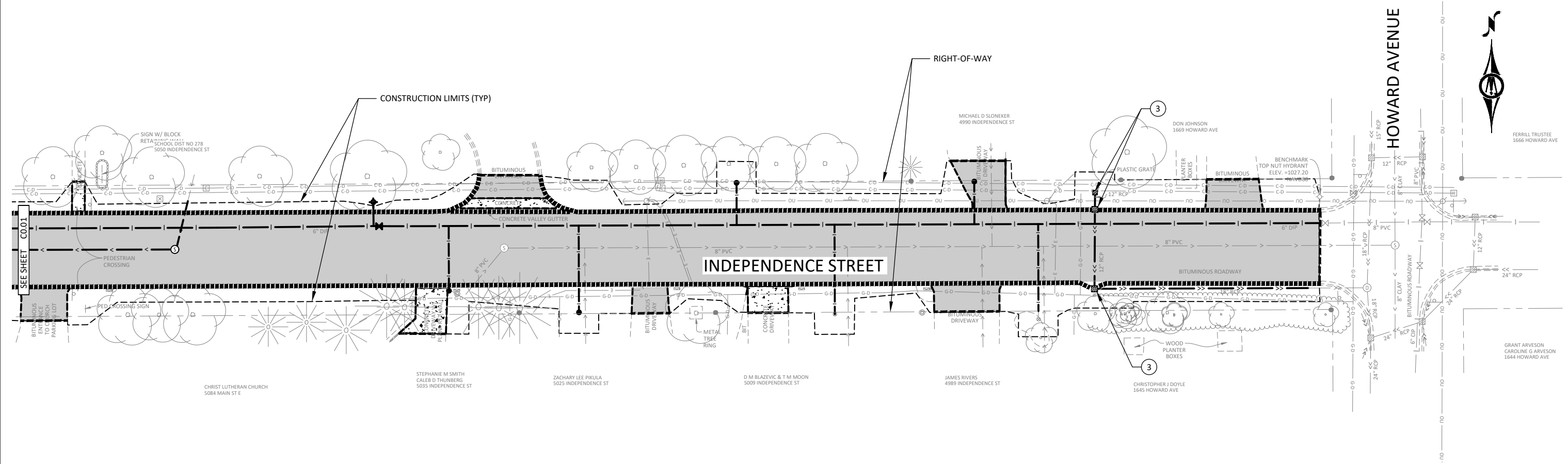
SHEET
C0.01

CONSTRUCTION NOTES:

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LEGEND

	REMOVE BITUMINOUS PAVEMENT	①	REMOVE GATE VALVE
	REMOVE CONCRETE PAVEMENT	②	REMOVE HYDRANT
	REMOVE AGGREGATE SURFACING	③	REMOVE STORM STRUCTURE
	REMOVE SANITARY SEWER	④	REMOVE SANITARY MANHOLE
	REMOVE SANITARY SERVICE	⑤	SALVAGE & REINSTALL MAILBOX (INCIDENTAL)
	REMOVE WATERMAIN	⑥	SALVAGE & REINSTALL SIGN (INCIDENTAL)
	REMOVE WATER SERVICE	⑦	SALVAGE/REMOVE LANDSCAPING (MULCH, EDGING, BUSHES, PLANTINGS, AND ALL APPLICABLE ITEMS)
	REMOVE STORM SEWER	X	TREE REMOVAL
	REMOVE CURB & GUTTER		
	CONSTRUCTION LIMITS		
	SAWCUT (INCIDENTAL)		



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE 8/13/2024



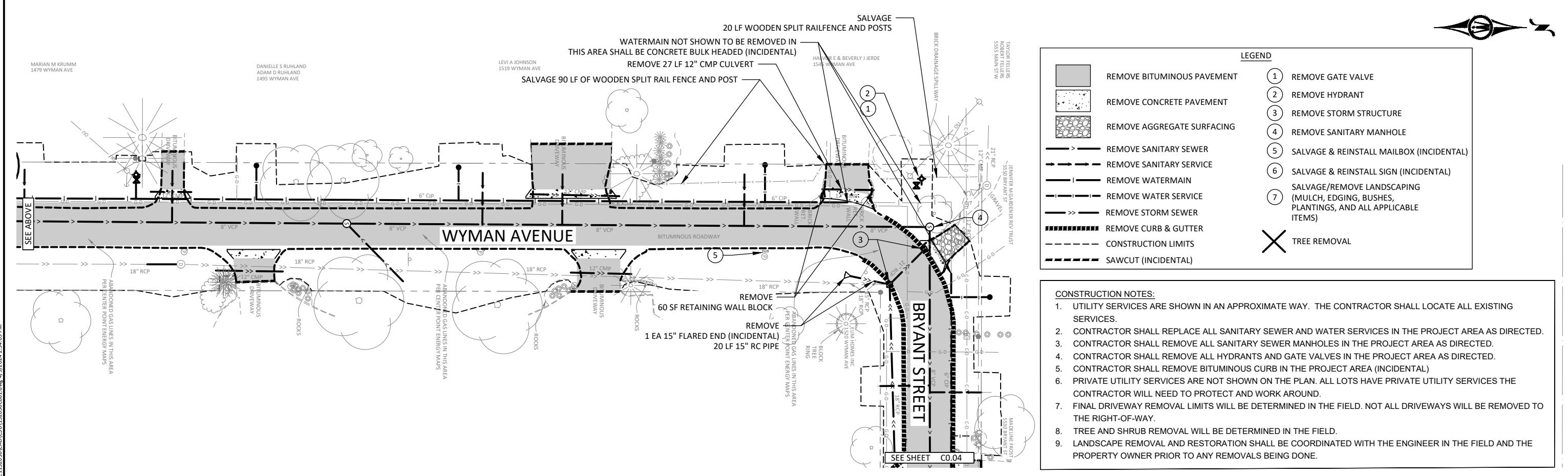
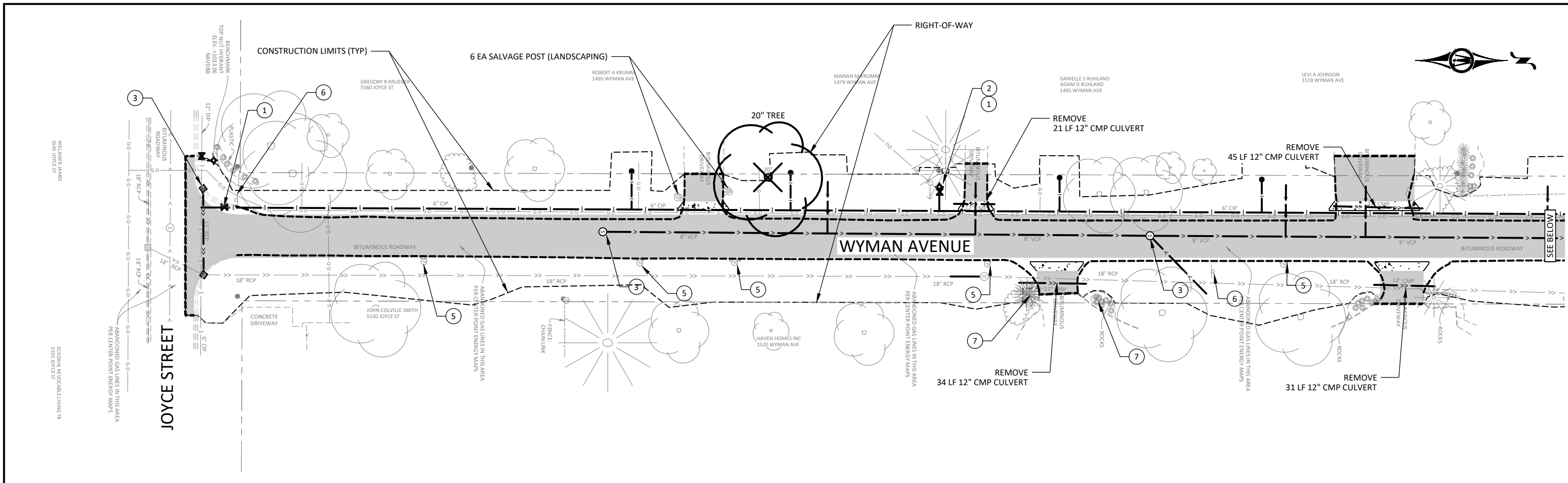
2638 SHADOW LANE, SUITE 200
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EXISTING CONDITIONS & REMOVALS
INDEPENDENCE STREET

SHEET
C0.02

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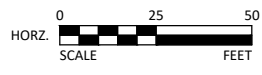


LEGEND

	REMOVE BITUMINOUS PAVEMENT	①	REMOVE GATE VALVE
	REMOVE CONCRETE PAVEMENT	②	REMOVE HYDRANT
	REMOVE AGGREGATE SURFACING	③	REMOVE STORM STRUCTURE
	REMOVE SANITARY SEWER	④	REMOVE SANITARY MANHOLE
	REMOVE SANITARY SERVICE	⑤	SALVAGE & REINSTALL MAILBOX (INCIDENTAL)
	REMOVE WATERMAIN	⑥	SALVAGE & REINSTALL SIGN (INCIDENTAL)
	REMOVE WATER SERVICE	⑦	SALVAGE/REMOVE LANDSCAPING (MULCH, EDGING, BUSHES, PLANTINGS, AND ALL APPLICABLE ITEMS)
	REMOVE STORM SEWER		
	REMOVE CURB & GUTTER		
	CONSTRUCTION LIMITS		
	SAWCUT (INCIDENTAL)		
	TREE REMOVAL		

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342 DATE 4/13/2024

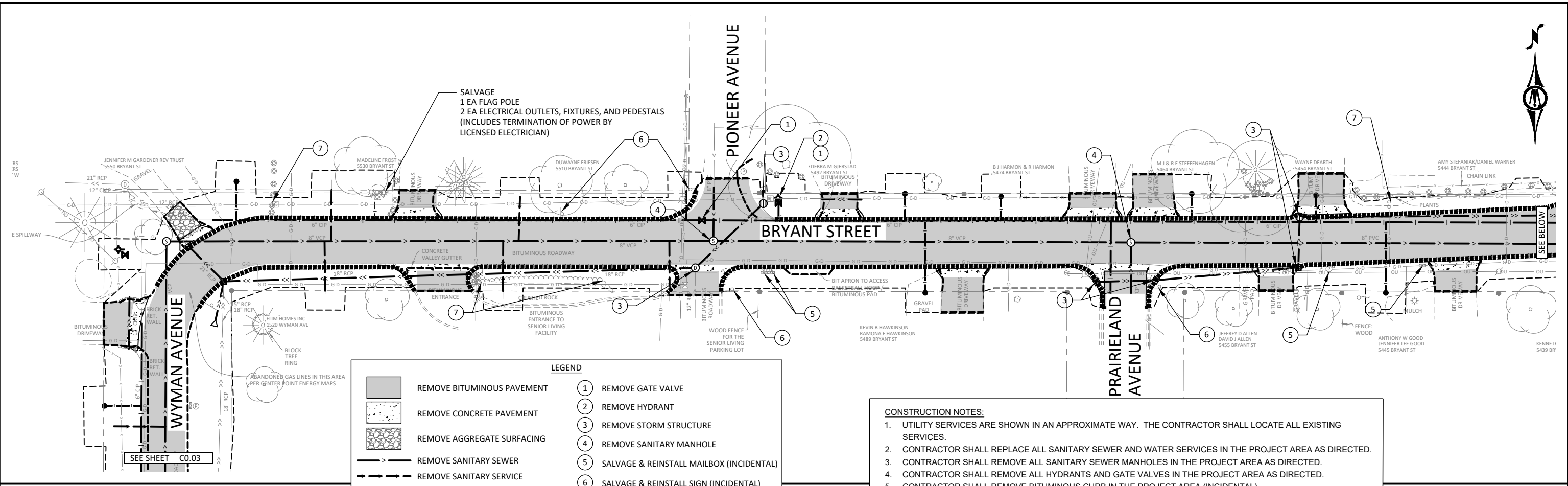


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DESIGNED	NO.	ISSUED FOR	DATE
RAN			
RAN			
CHCKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EXISTING CONDITIONS & REMOVALS
WYMAN AVENUE

SHEET
C0.03

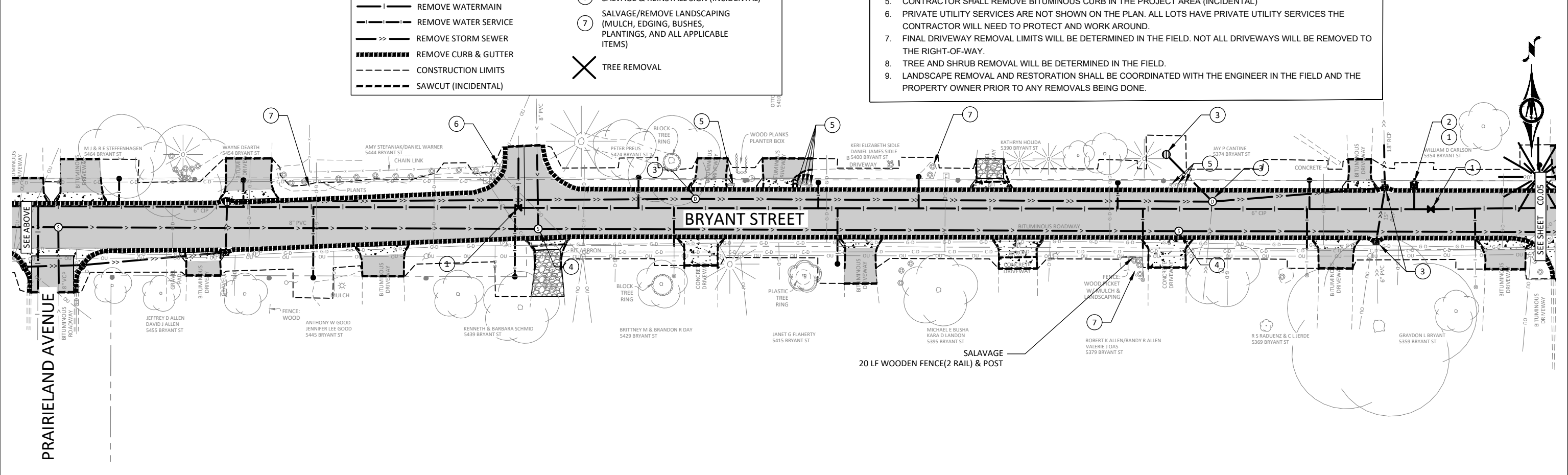


LEGEND

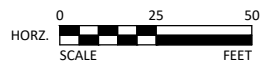
	REMOVE BITUMINOUS PAVEMENT	1 REMOVE GATE VALVE
	REMOVE CONCRETE PAVEMENT	2 REMOVE HYDRANT
	REMOVE AGGREGATE SURFACING	3 REMOVE STORM STRUCTURE
	REMOVE SANITARY SEWER	4 REMOVE SANITARY MANHOLE
	REMOVE SANITARY SERVICE	5 SALVAGE & REINSTALL MAILBOX (INCIDENTAL)
	REMOVE WATERMAIN	6 SALVAGE & REINSTALL SIGN (INCIDENTAL)
	REMOVE WATER SERVICE	7 SALVAGE/REMOVE LANDSCAPING (MULCH, EDGING, BUSHES, PLANTINGS, AND ALL APPLICABLE ITEMS)
	REMOVE STORM SEWER	X TREE REMOVAL
	REMOVE CURB & GUTTER	
	CONSTRUCTION LIMITS	
	SAWCUT (INCIDENTAL)	

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
P.E. NO. 43342 DATE 8/13/2024

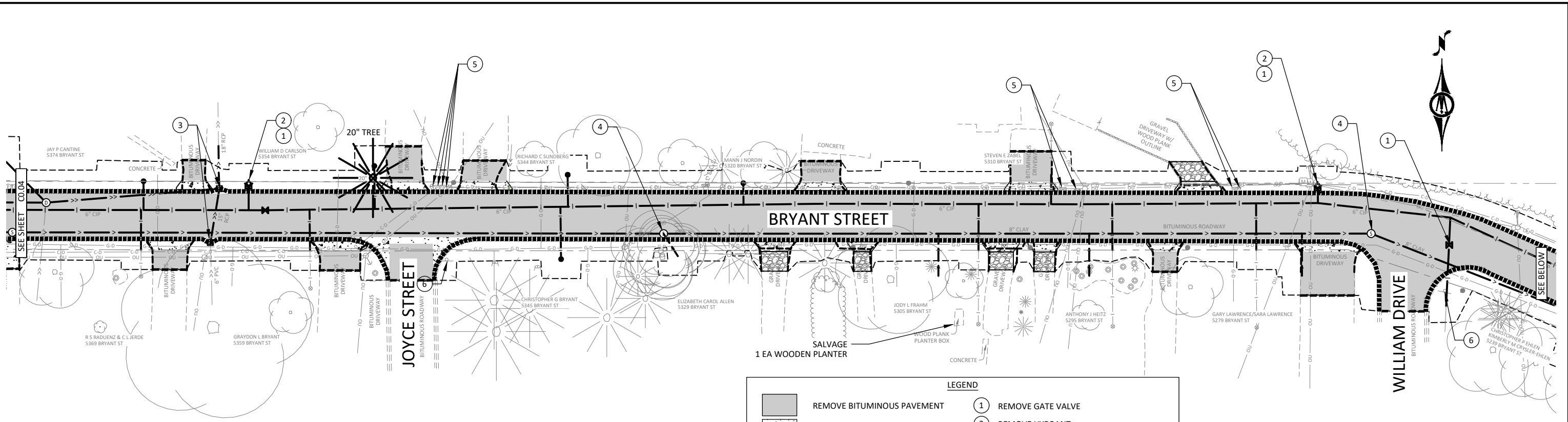


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RAN			
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EXISTING CONDITIONS & REMOVALS
BRYANT STREET

SHEET
C0.04

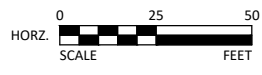
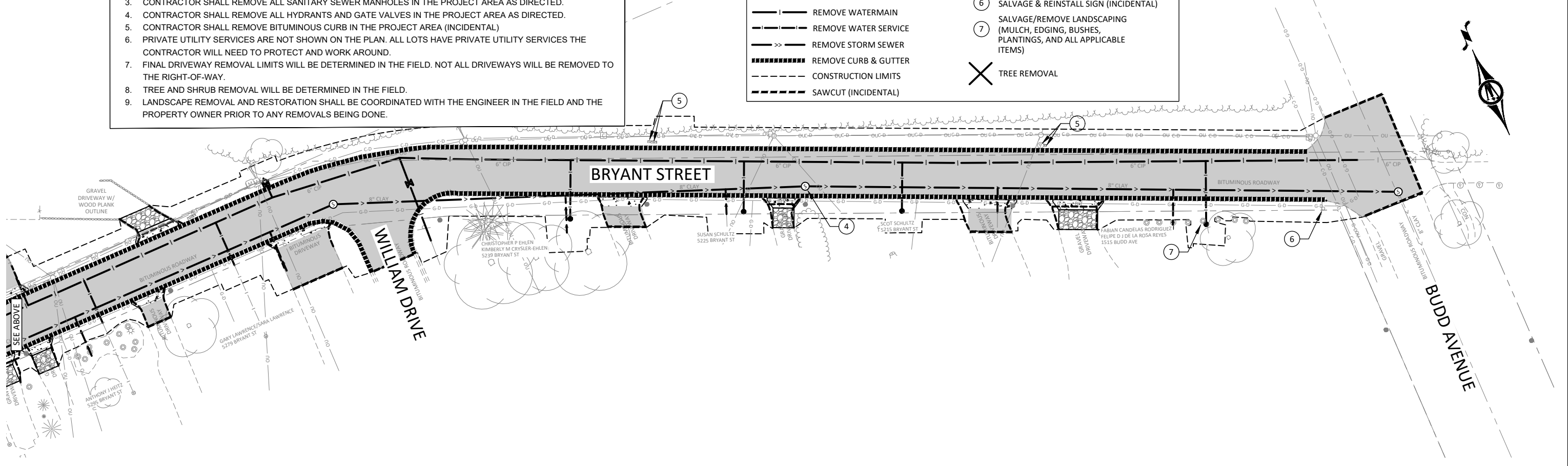


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LEGEND

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	REMOVE CONCRETE PAVEMENT	②	REMOVE HYDRANT
	REMOVE AGGREGATE SURFACING	③	REMOVE STORM STRUCTURE
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	REMOVE CURB & GUTTER		
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	SAWCUT (INCIDENTAL)		



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
P.E. NO. 41342 DATE 8/13/2024



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CHASKA, MINNESOTA 55318
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www.bolton-menk.com

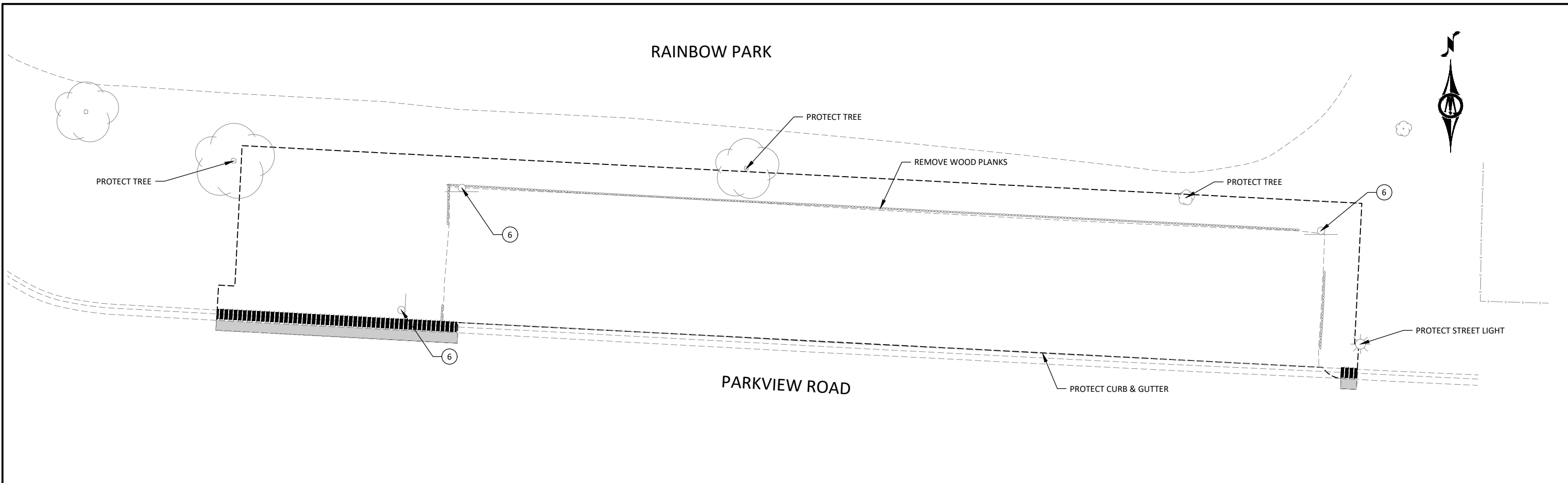
DESIGNED	NO.	ISSUED FOR	DATE
RAN			
DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EXISTING CONDITIONS & REMOVALS
BRYANT STREET

SHEET
C0.05

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RAINBOW PARK

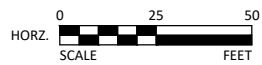


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	REMOVE AGGREGATE SURFACING	③	REMOVE STORM STRUCTURE
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	REMOVE CURB & GUTTER		
	CONSTRUCTION LIMITS		
	SAWCUT (INCIDENTAL)		

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 P.E. NO. 43342 DATE 8/13/2024



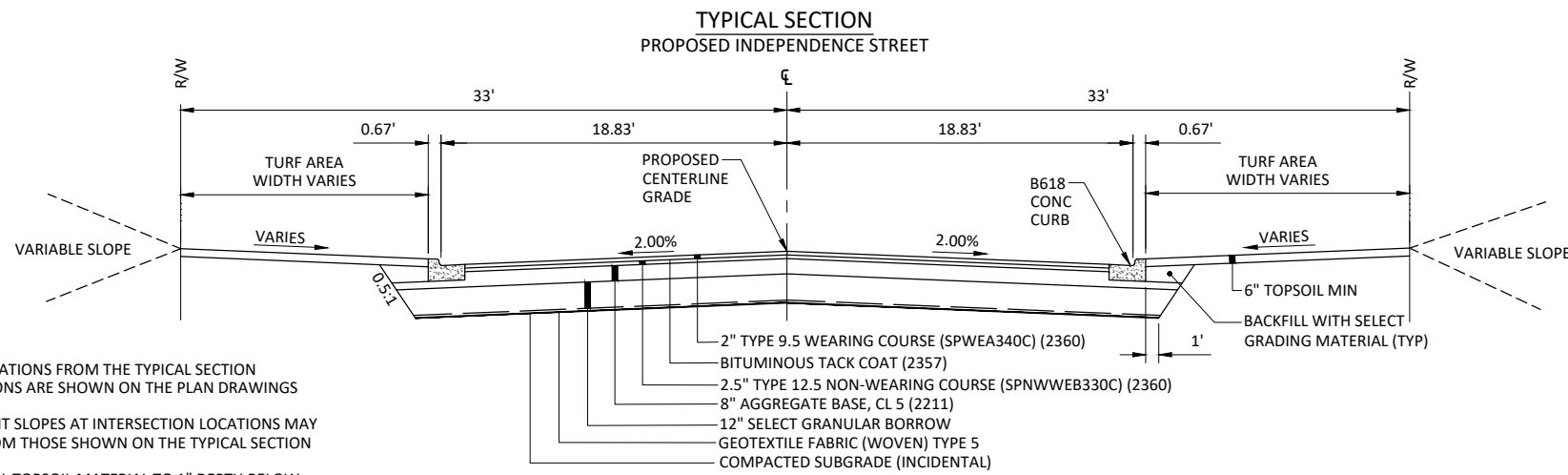
2638 SHADOW LANE, SUITE 200
 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
 Email: Chaska@bolton-menk.com
 www.bolton-menk.com

2 ADDED SHEET

DESIGNED	NO.	REVISION FOR	DATE
RAN	2	REV. 2	04/16/2024
DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

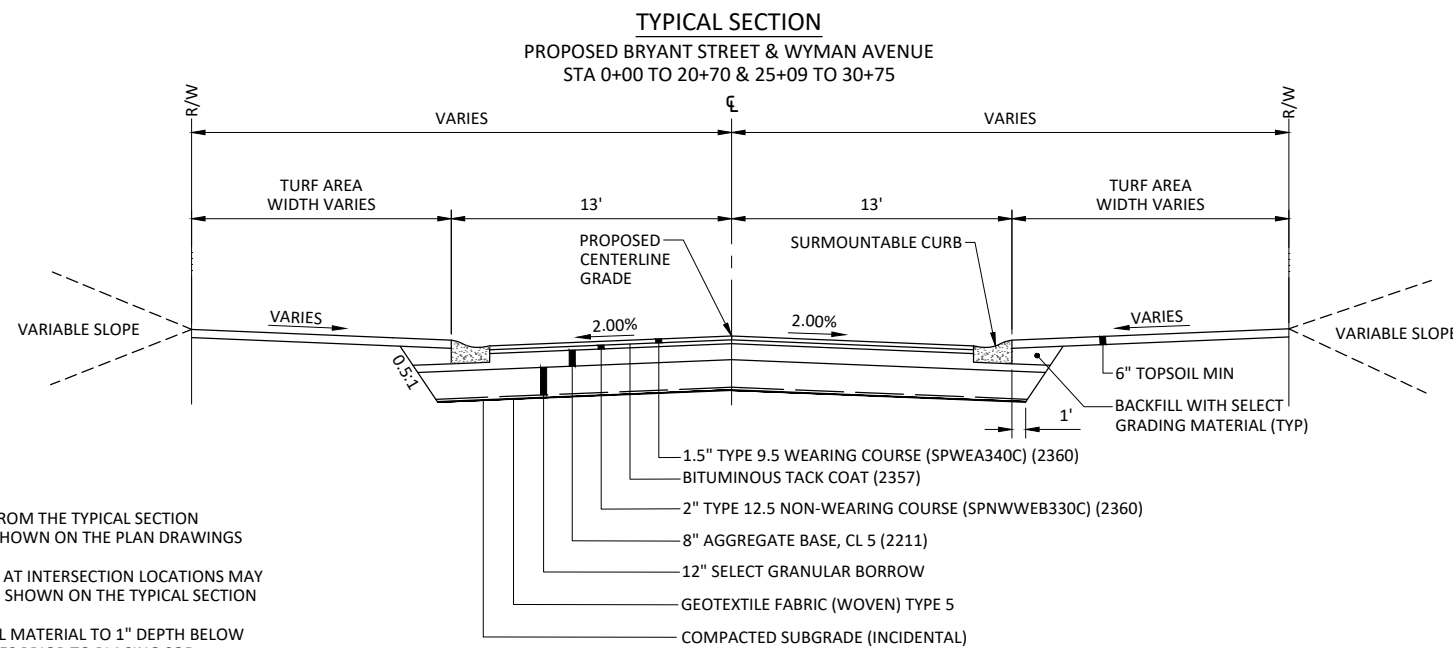
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 EXISTING CONDITIONS & REMOVALS
 RAINBOW PARK PARKING LOT

SHEET
C0.06



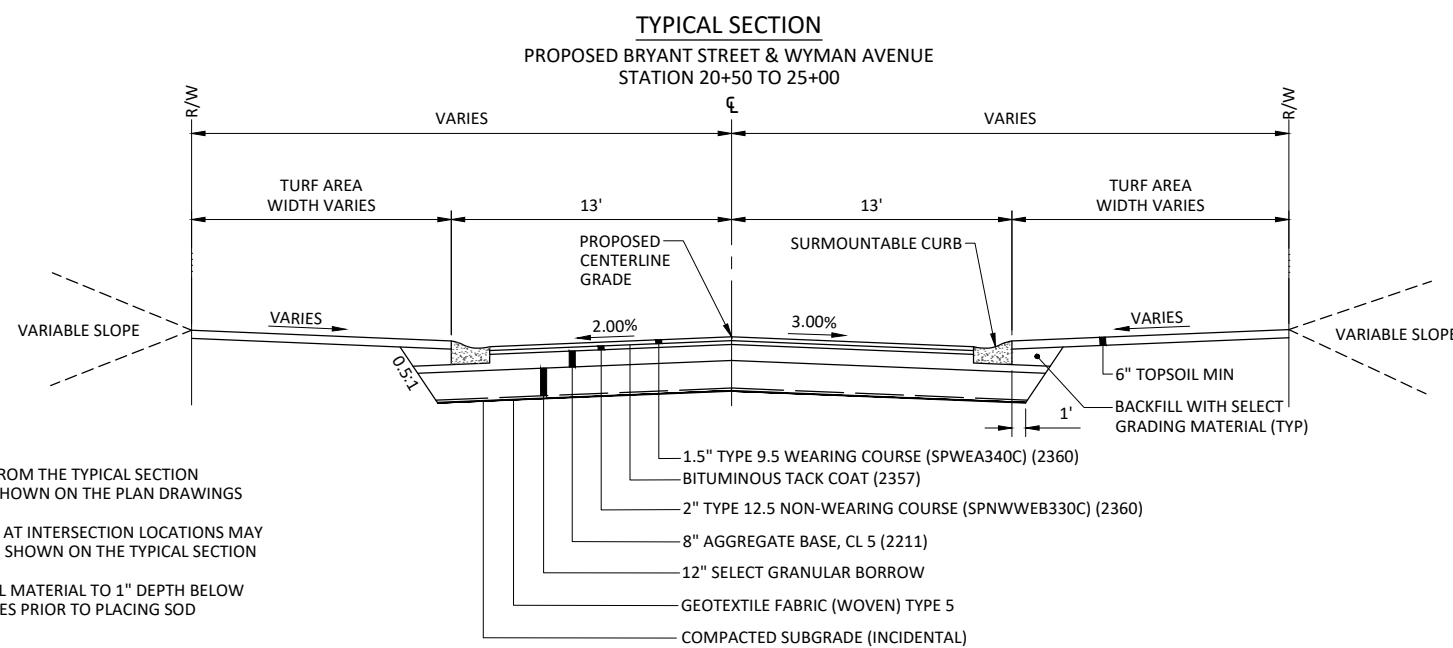
NOTES:

1. ANY VARIATIONS FROM THE TYPICAL SECTION DIMENSIONS ARE SHOWN ON THE PLAN DRAWINGS
2. PAVEMENT SLOPES AT INTERSECTION LOCATIONS MAY VARY FROM THOSE SHOWN ON THE TYPICAL SECTION
3. GRADE ALL TOPSOIL MATERIAL TO 1" DEPTH BELOW CONCRETE SURFACES PRIOR TO PLACING SOD



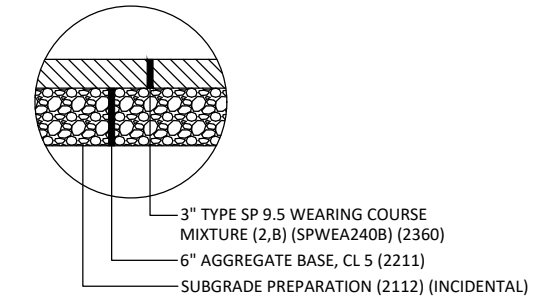
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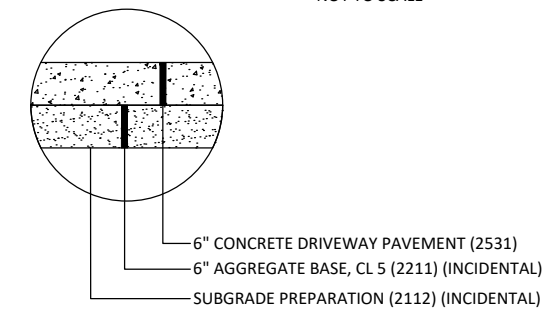


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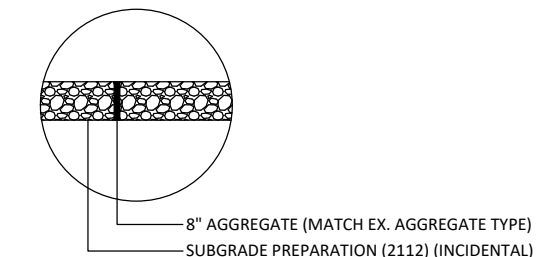
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3. GRADE ALL TOPSOIL MATERIAL TO 1" DEPTH BELOW CONCRETE SURFACES PRIOR TO PLACING SOD



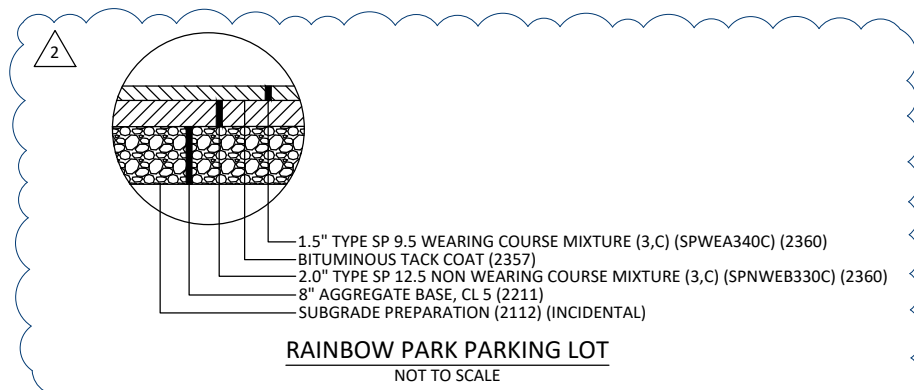
3" BITUMINOUS DRIVEWAY
NOT TO SCALE



CONCRETE DRIVEWAY PAVEMENT
NOT TO SCALE



AGGREGATE DRIVEWAY SURFACING
NOT TO SCALE



RAINBOW PARK PARKING LOT
NOT TO SCALE

2 ADDED PARKING LOT TYPICAL SECTION

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342 DATE 6/13/2024

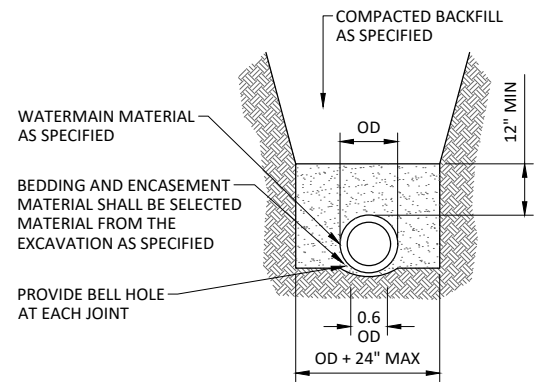


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DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

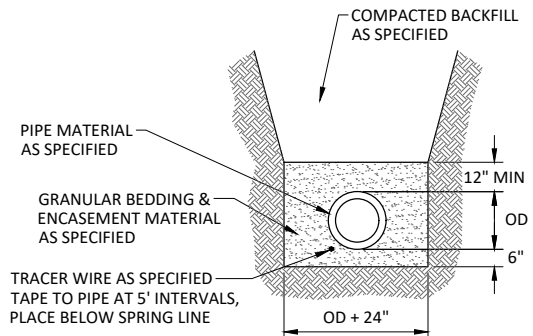
MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
TYPICAL SECTIONS
TYPICAL SECTIONS

SHEET
C1.01



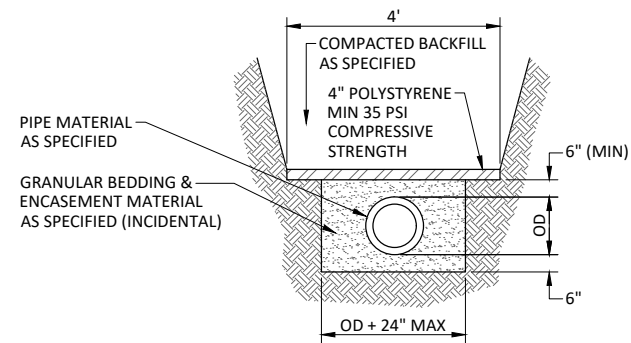
DIP WATERMAIN TRENCH
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-201



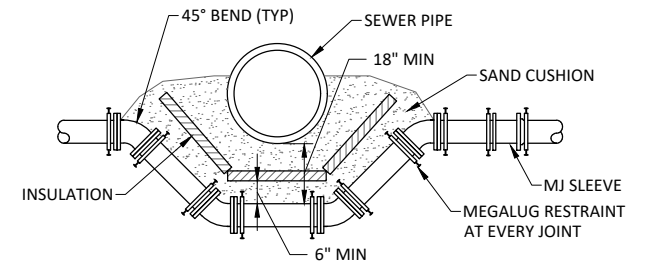
PVC WATERMAIN TRENCH
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-200



WATERMAIN INSULATION
NOT TO SCALE

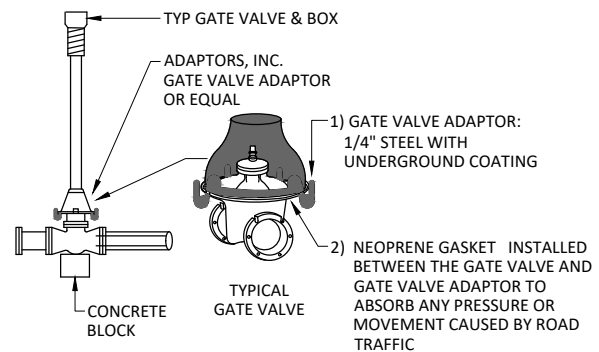
LAST REVISION:
04-2021
PLATE NO.
6-202



WATERMAIN OFFSET
NOT TO SCALE

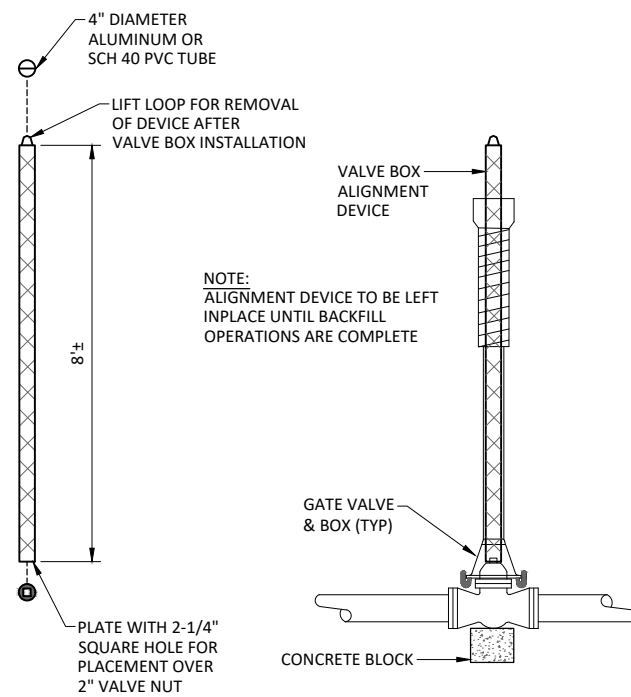
LAST REVISION:
04-2021
PLATE NO.
6-203

- NOTES:
1. PROVIDE MEGALUG RESTRAINT AT JOINT ON BENDS AND AS SHOWN THIS DETAIL
 2. COAT ALL ANCHORAGE AS PER SPECS
 3. PROVIDE SAND CUSHION BETWEEN TOP OF WATERMAIN AND BOTTOM OF SEWER PIPE, MIN DIMENSIONS AS SHOWN THIS DETAIL (INCIDENTAL)
 4. INSULATION TO BE 2" THICK POLYSTYRENE



GATE VALVE ADAPTOR
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-400

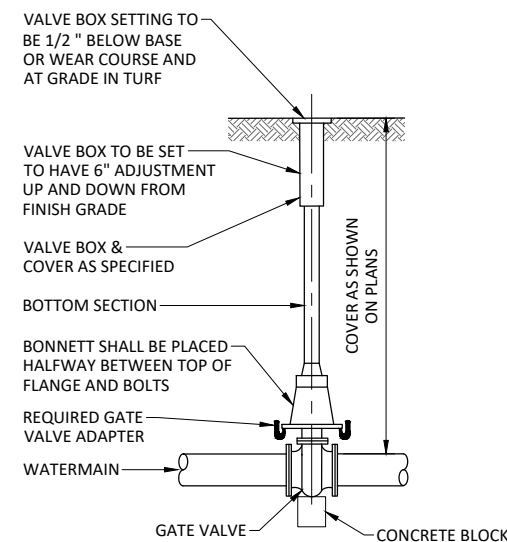


GATE VALVE BOX ALIGNMENT DEVICE
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-401

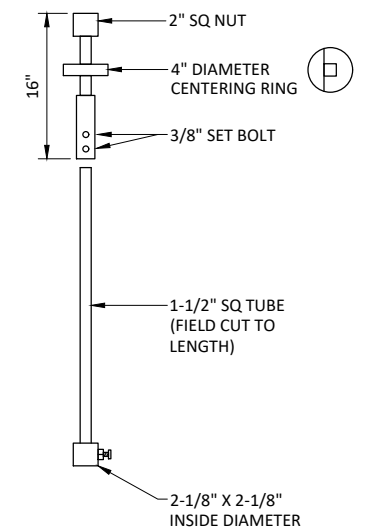
NOTE:
ALIGNMENT DEVICE TO BE LEFT IN PLACE UNTIL BACKFILL OPERATIONS ARE COMPLETE

- NOTES:
1. VALVE BOX SHALL BE CENTERED ON OPERATING NUTS, STRAIGHT, FREE FROM DEBRIS, AND ALL SECTIONS UNBROKEN
 2. VALVES IN EASEMENTS SHALL HAVE CHANNEL POST WITNESS MARKERS WITH REFLECTIVE "GV" SIGN
 3. DEEP VALVES SHALL HAVE NUT EXTENSIONS INSTALLED TO ELEVATION TO ACCOMMODATE STANDARD 10' KEY; BOTTOM NUT SHALL BE BOLTED TO VALVE NUT AND ONLY ONE SECTION
 4. COMPACTION WITH MECHANICAL TAMPER AROUND VALVE BOX SHALL BE PLACED AND COMPACTED WITH 2' LIFTS TO ACHIEVE 95% COMPACTION
 5. GATE VALVES LOCATED WITHIN THE CONCRETE SIDEWALK SHALL INCLUDE A METAL SEPARATOR BETWEEN THE VALVE BOX AND THE CONCRETE



GATE VALVE BOX INSTALLATION
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-402



ADJUSTABLE VALVE EXTENSION STEM
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-404

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE 8/13/2024



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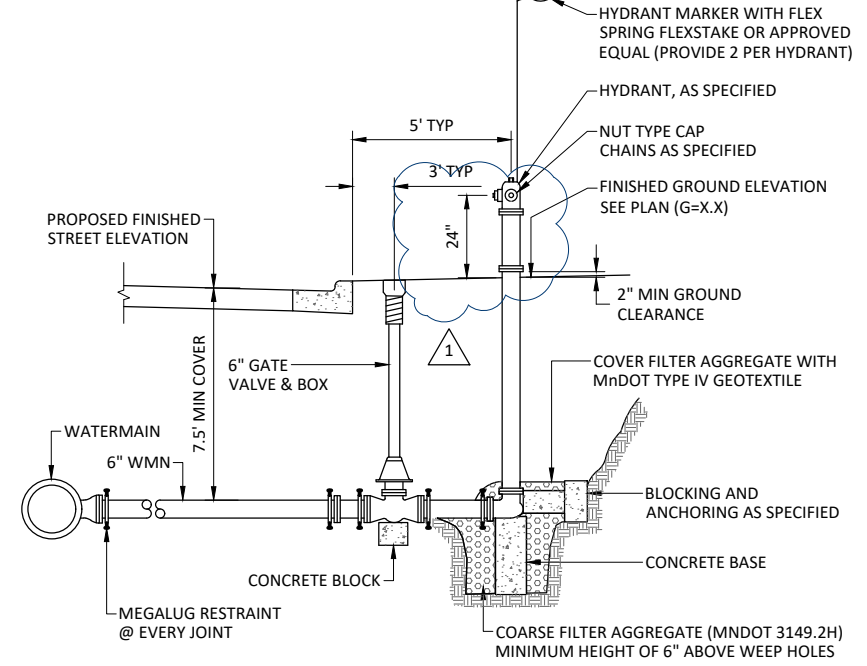
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
WATERMAIN

SHEET

C1.02

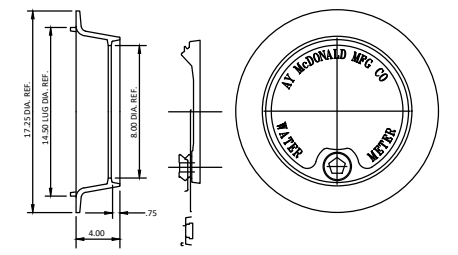
1 HYDRANT HEIGHT



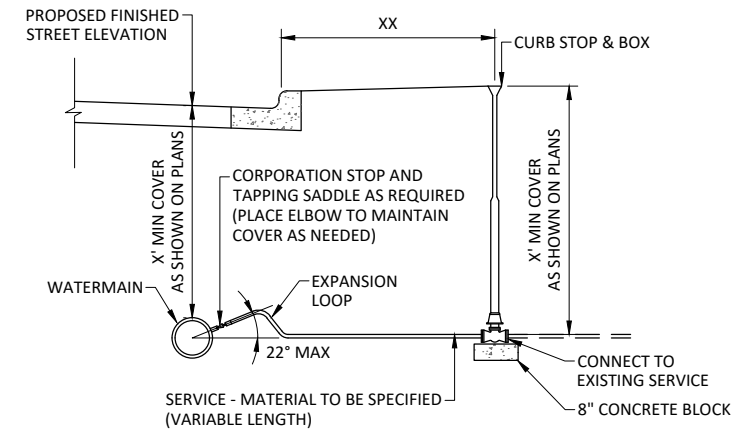
HYDRANTS LOCATED WHERE THE GROUNDWATER TABLE IS ABOVE THE DRAIN OUTLET SHALL HAVE THE OUTLET DRAIN PLUGGED AND SHALL BE EQUIPPED WITH A TAG STATING "PUMP AFTER USE"

HYDRANT INSTALLATION, MEGALUGS
NOT TO SCALE

*INSTALL OVER CURB BOXES AND TRACER WIRE BOXES LOCATED IN CONCRETE AND BITUMINOUS WALKS OR DRIVEWAYS

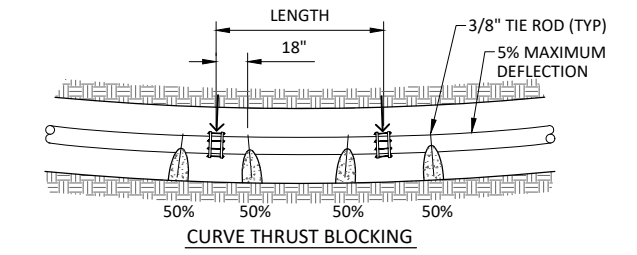
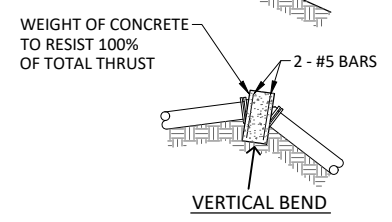
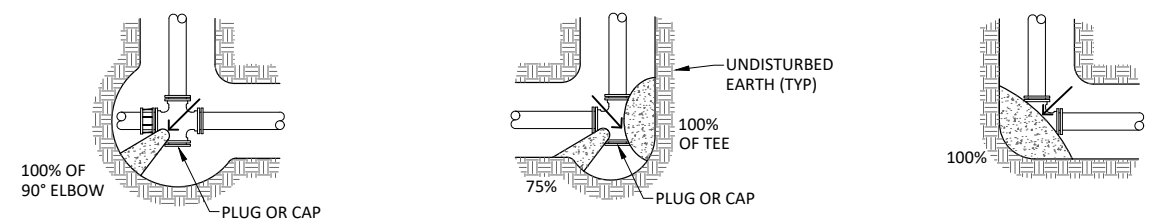
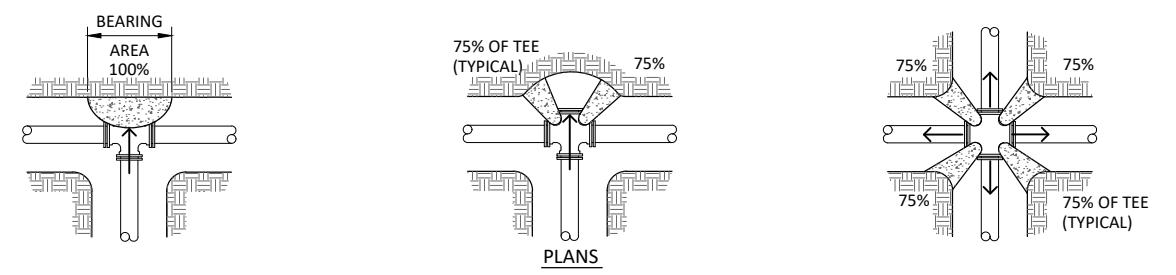


WATER SERVICE LID COVER
NOT TO SCALE



NOTE: WHERE NO EXISTING WATER SERVICE IS IN PLACE, INSTALL 0.5" FLARED & CRIMPED COPPER SERVICE LINE AND STEEL "T" FENCE POST AT CURB STOP

WATER SERVICE INSTALLATION RECONSTRUCTION
NOT TO SCALE



100% BEARING AREA (SQ FT)

PIPE SIZE	DEAD END OR TEE	90° ELBOW	45° ELBOW	22 1/2° ELBOW
4	2.4	3.4	1.9	0.9
6	4.9	6.9	3.8	1.9
8	8.4	11.8	6.4	3.4
10	13.7	19.3	10.5	5.4
12	19.4	27.3	14.9	7.7
14	26.3	37.0	20.1	10.3
16	34.0	47.9	26.2	13.3
18	43.9	61.8	33.7	17.2
20	54.3	76.4	41.7	21.2
24	77.9	109.8	59.8	30.5

NOTE: BEARING AREAS ARE BASED ON 250 LB MAXIMUM PRESSURE AND SOIL BEARING STRENGTH OF 2000 LB/SQ FT.

ARROWS (→) INDICATE THRUST DIRECTION

- NOTES:
- FIGURE (100%) AT THRUST BLOCK INDICATES PER CENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA.
 - CONCRETE FOR THRUST BLOCKS TO BE 2000 PSI.
 - RESTRAINING RODS ARE REQUIRED AT ALL TEES AND AT BENDS DEFLECTING 22-1/2° OR MORE.
 - WRAP THE PIPE WITH POLYETHYLENE WRAPPING PRIOR TO POURING THE THRUST BLOCK.
 - SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL. IN ABSENCE OF A SOILS REPORT, AN AVERAGE SOIL (SPADABLE MEDIUM CLAY) CAN BE ASSUMED TO HAVE A BEARING STRENGTH OF 2000 PSI.
 - THRUST BLOCKS ARE NOT REQUIRED ON PVC WITH SOLVENT WELDED JOINTS.

SIDE THRUST PER 100 LB/SQ IN PRESSURE PER DEGREE OF DEFLECTION

PIPE SIZE	SIDE THRUST-LB	PIPE SIZE	SIDE THRUST-LB
4	35	14	377
6	72	16	486
8	122	18	665
10	197	20	790
12	278	24	1150

MULTIPLY THRUST BY DEGREE OF DEFLECTION TO OBTAIN TOTAL THRUST



CONCRETE THRUST BLOCKS
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
6-207

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
43342
DATE 8/13/2024

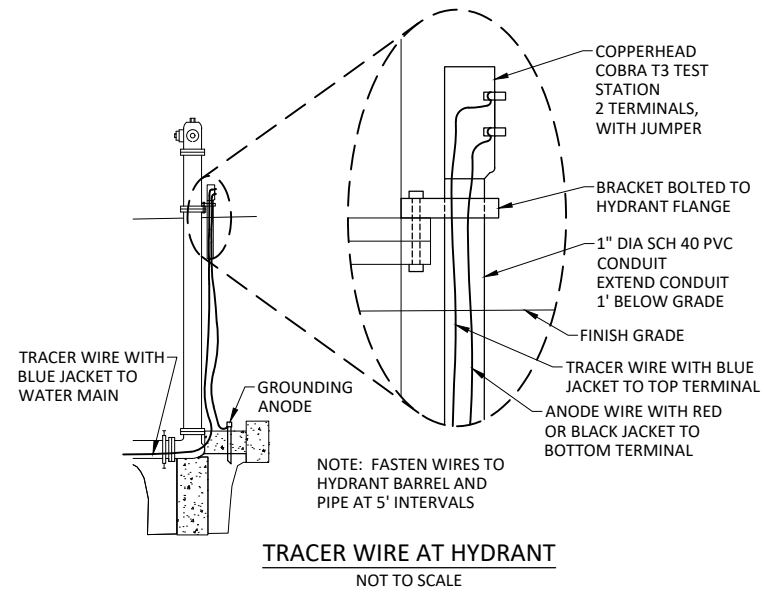


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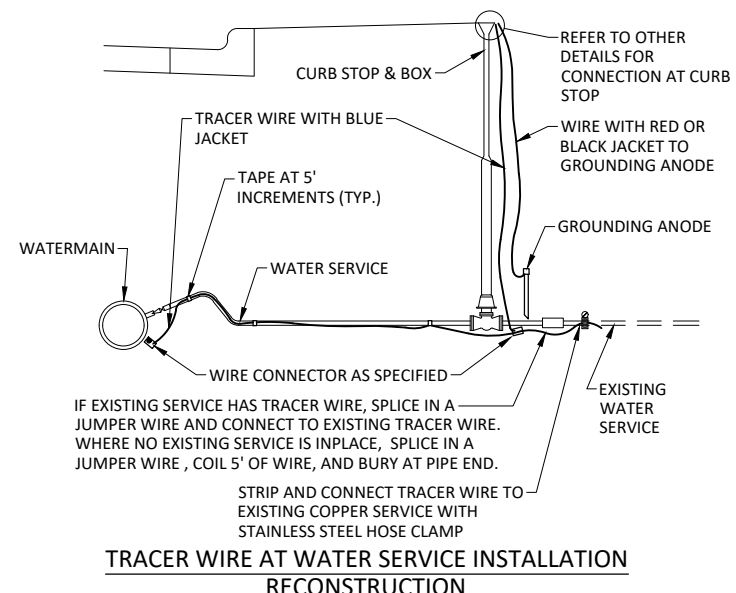
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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
WATERMAIN

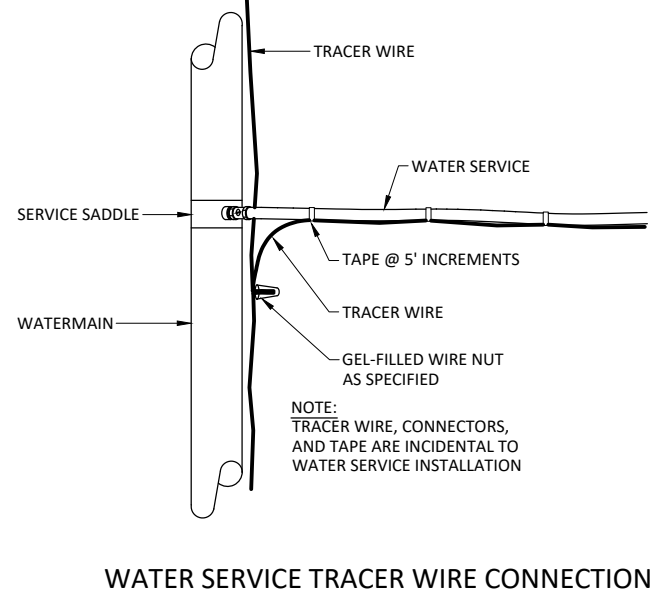
SHEET
C1.03



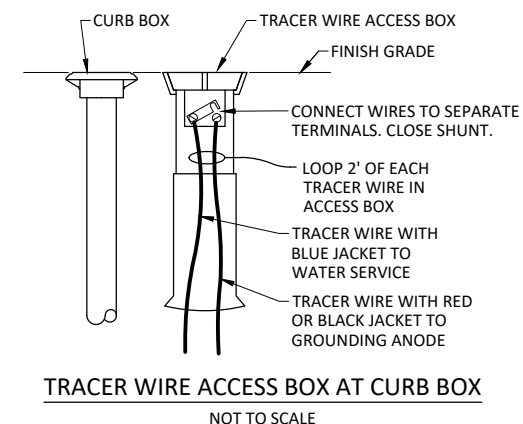
TRACER WIRE AT HYDRANT
NOT TO SCALE



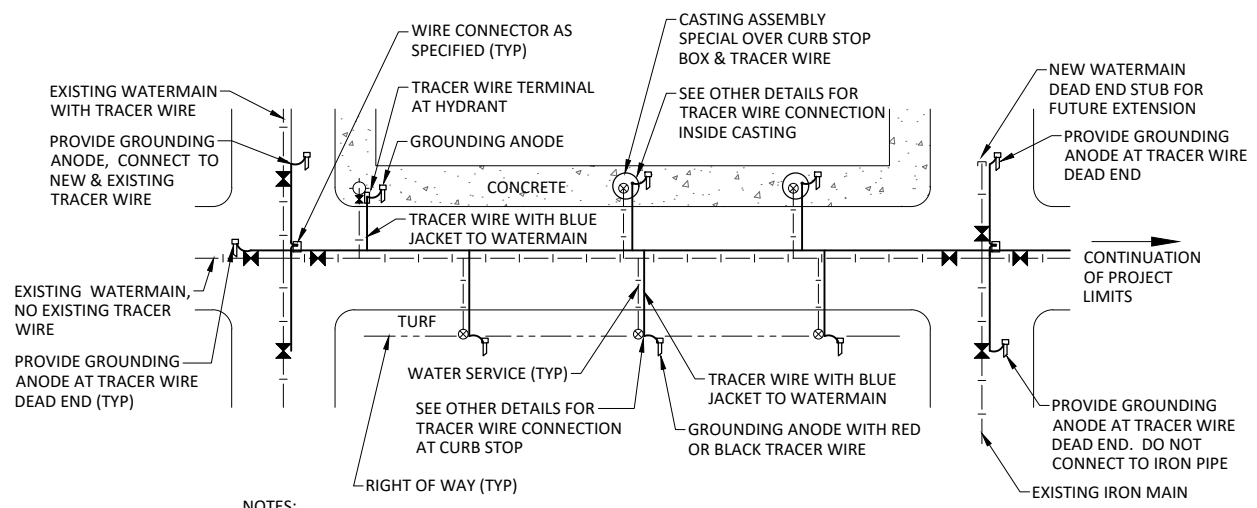
TRACER WIRE AT WATER SERVICE INSTALLATION RECONSTRUCTION
NOT TO SCALE



WATER SERVICE TRACER WIRE CONNECTION
NOT TO SCALE

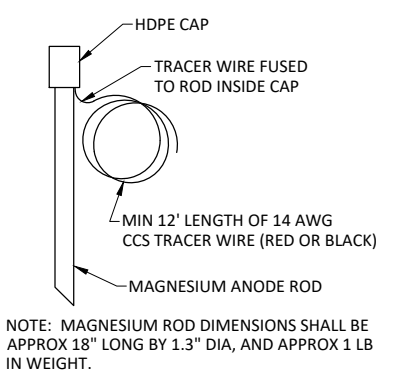


TRACER WIRE ACCESS BOX AT CURB BOX
NOT TO SCALE



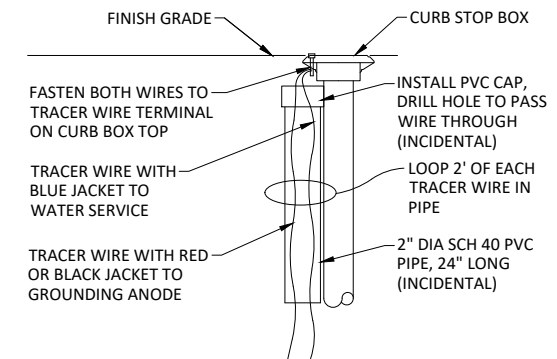
- NOTES:
1. NUMBER OF SERVICES, CASTINGS AND TRACER WIRE ACCESS BOXES REQUIRED PER BLOCK VARIES. REFER TO UTILITY PLAN SHEETS.
 2. CONNECTIONS TO EXISTING WATERMAINS AND TRACER WIRES VARY BY LOCATION.
 3. DO NOT CAD WELD TRACER WIRE TO DUCTILE IRON PIPE.

TRACER WIRE SYSTEM SCHEMATIC - WATER DISTRIBUTION
NOT TO SCALE

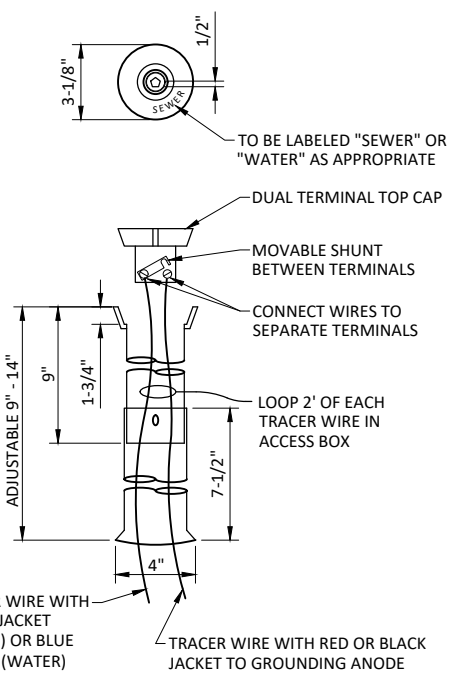


NOTE: MAGNESIUM ROD DIMENSIONS SHALL BE APPROX 18" LONG BY 1.3" DIA, AND APPROX 1 LB IN WEIGHT.

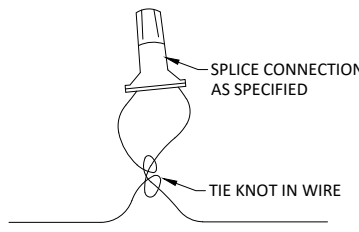
GROUNDING ANODE
NOT TO SCALE



TRACER WIRE CONNECTED TO CURB BOX
NOT TO SCALE



ADJUSTABLE TRACER WIRE ACCESS BOX DUAL TERMINAL SEWER OR WATER
NOT TO SCALE



WHERE IN-LINE SPLICES ARE REQUIRED ALONG PIPES, THE TRACER WIRE SHALL BE KNOTTED PRIOR TO INSERTION INTO THE SPLICE CONNECTION.

IN-LINE TRACER WIRE SPLICE
NOT TO SCALE

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JEFFREY J. WEYANDT
41342
DATE: 8/13/2024

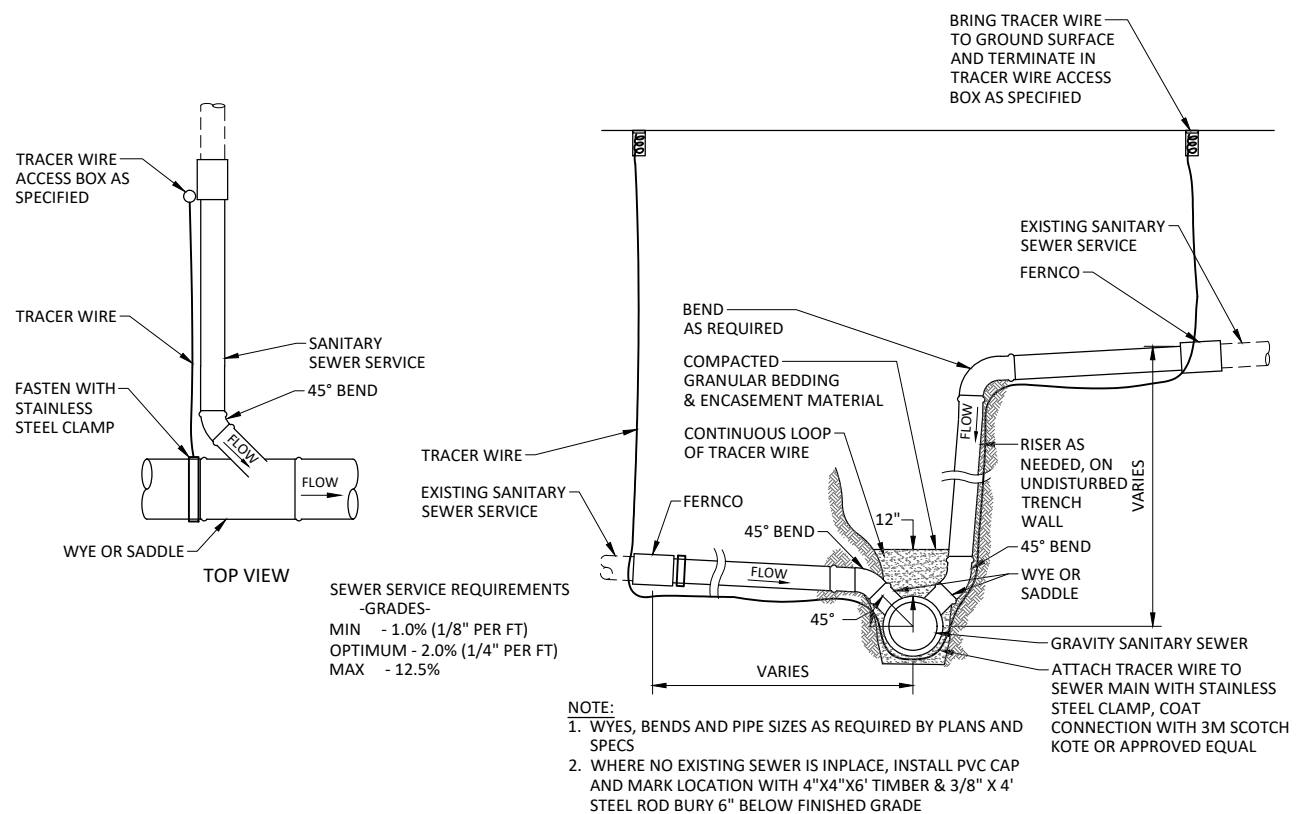


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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
TRACER WIRE

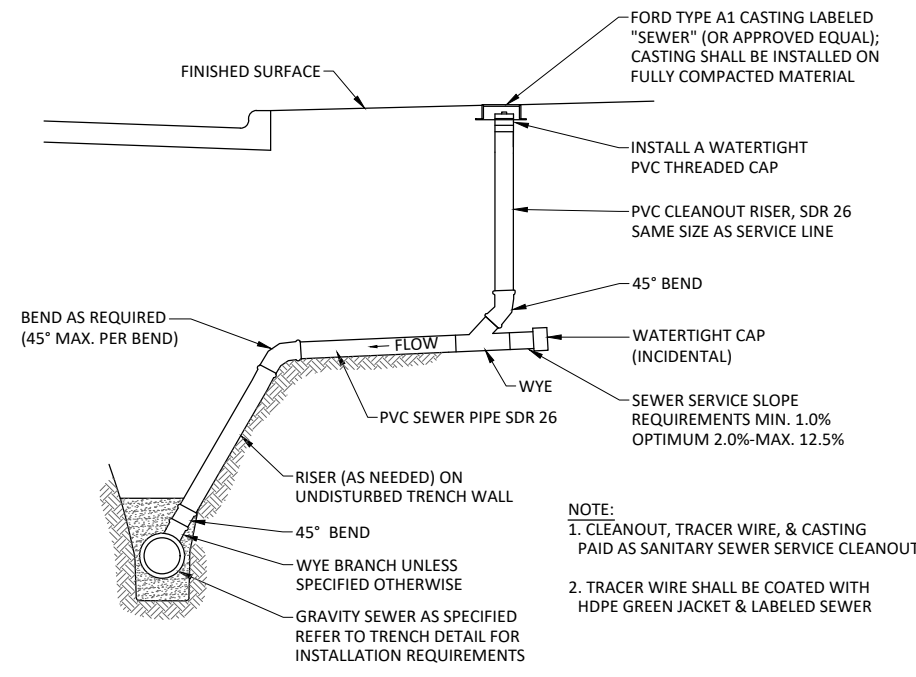
SHEET
C1.04



SANITARY SEWER SERVICE AND SERVICE RISER, RECONSTRUCTION, WITH TRACER WIRE ACCESS BOX
NOT TO SCALE

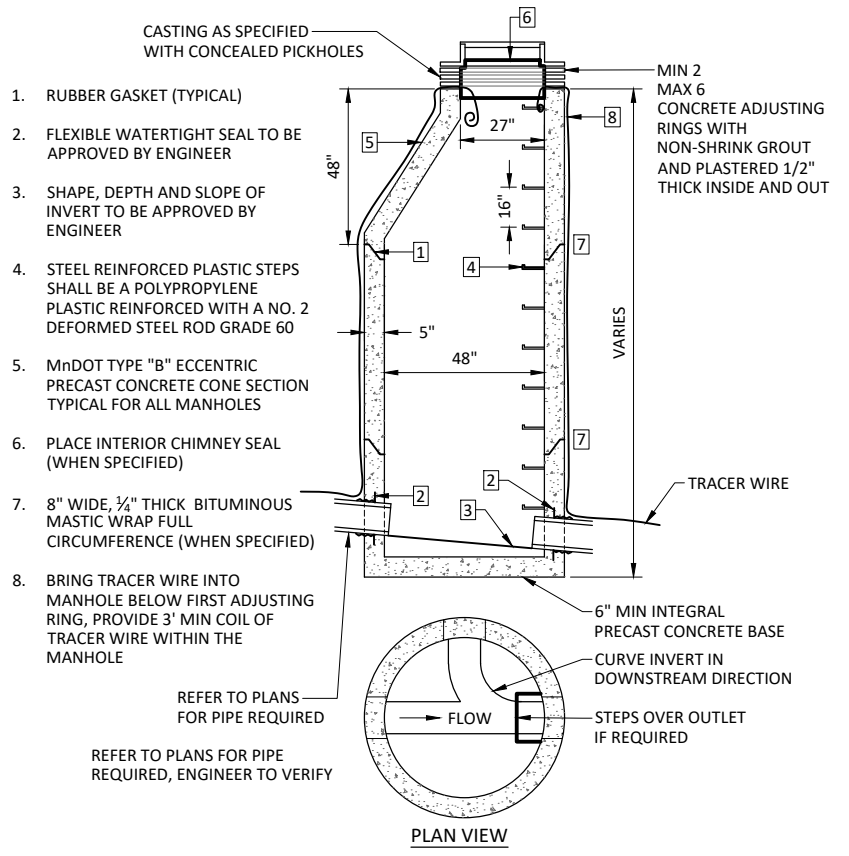
SEWER SERVICE REQUIREMENTS -GRADES-
MIN - 1.0% (1/8" PER FT)
OPTIMUM - 2.0% (1/4" PER FT)
MAX - 12.5%

NOTE:
1. WYES, BENDS AND PIPE SIZES AS REQUIRED BY PLANS AND SPECS
2. WHERE NO EXISTING SEWER IS INPLACE, INSTALL PVC CAP AND MARK LOCATION WITH 4"X4"X6" TIMBER & 3/8" X 4" STEEL ROD BURY 6" BELOW FINISHED GRADE



SANITARY SEWER SERVICE WITH CLEANOUT
NOT TO SCALE

NOTE:
1. CLEANOUT, TRACER WIRE, & CASTING PAID AS SANITARY SEWER SERVICE CLEANOUT
2. TRACER WIRE SHALL BE COATED WITH HDPE GREEN JACKET & LABELED SEWER



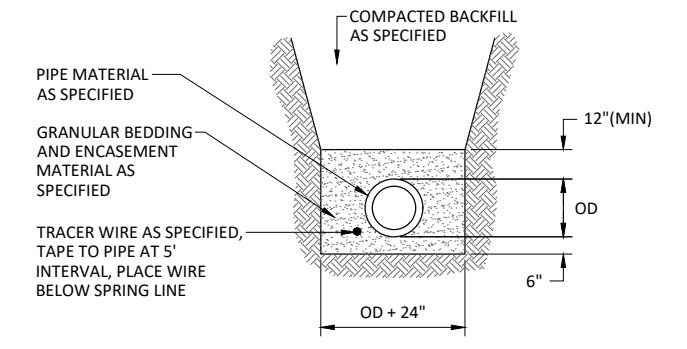
SANITARY MANHOLE WITH TRACER WIRE
NOT TO SCALE

- RUBBER GASKET (TYPICAL)
- FLEXIBLE WATERTIGHT SEAL TO BE APPROVED BY ENGINEER
- SHAPE, DEPTH AND SLOPE OF INVERT TO BE APPROVED BY ENGINEER
- STEEL REINFORCED PLASTIC STEPS SHALL BE A POLYPROPYLENE PLASTIC REINFORCED WITH A NO. 2 DEFORMED STEEL ROD GRADE 60
- MnDOT TYPE "B" ECCENTRIC PRECAST CONCRETE CONE SECTION TYPICAL FOR ALL MANHOLES
- PLACE INTERIOR CHIMNEY SEAL (WHEN SPECIFIED)
- 8" WIDE, 3/4" THICK BITUMINOUS MASTIC WRAP FULL CIRCUMFERENCE (WHEN SPECIFIED)
- BRING TRACER WIRE INTO MANHOLE BELOW FIRST ADJUSTING RING, PROVIDE 3' MIN COIL OF TRACER WIRE WITHIN THE MANHOLE

REFER TO PLANS FOR PIPE REQUIRED
REFER TO PLANS FOR PIPE REQUIRED, ENGINEER TO VERIFY

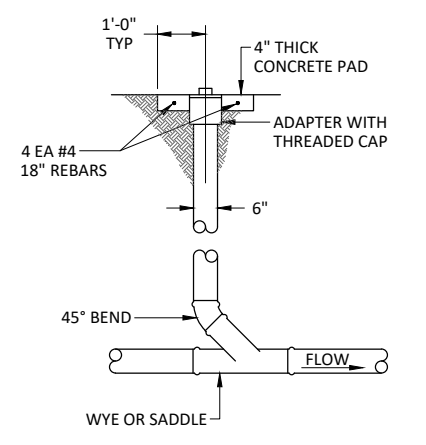


LAST REVISION:
04-2021
PLATE NO.
5-111



NON-RIGID SANITARY SEWER TRENCH
NOT TO SCALE

LAST REVISION:
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PLATE NO.
5-200



SANITARY SEWER CLEANOUT
NOT TO SCALE

LAST REVISION:
04-2021
PLATE NO.
5-110



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43342
DATE 4/13/2024

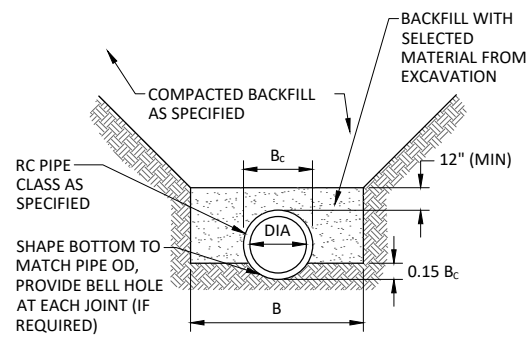


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2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
SANITARY SEWER

SHEET
C1.05



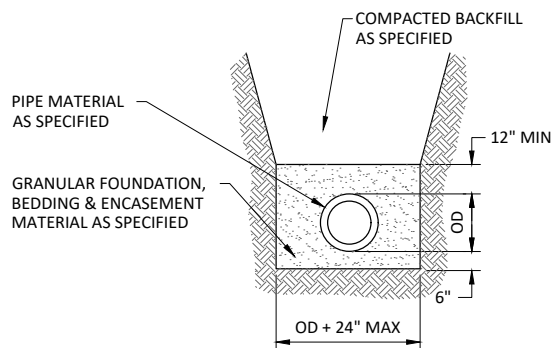
PIPE DIA	B
36" OR LESS	B _c + 24"
42" TO 54"	1.5 x B _c
60" OR OVER	B _c + 36"



RC PIPE CLASS "C" BEDDING
NOT TO SCALE

LAST REVISION: 04-2021

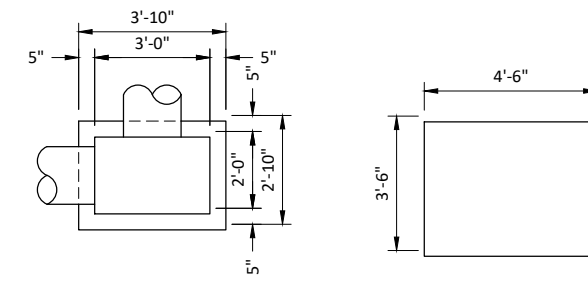
PLATE NO. 4-000



NON-RIGID STORM SEWER TRENCH
NOT TO SCALE

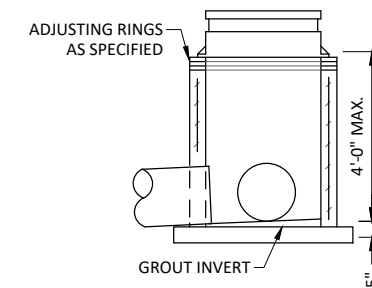
LAST REVISION: 04-2021

PLATE NO. 4-002



CATCH BASIN PLAN

BASE SLAB PLAN

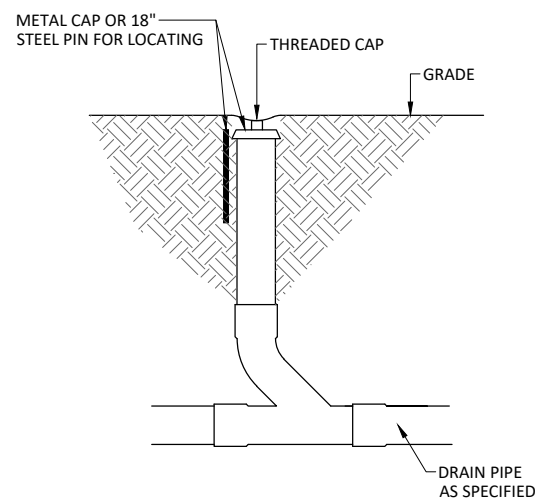


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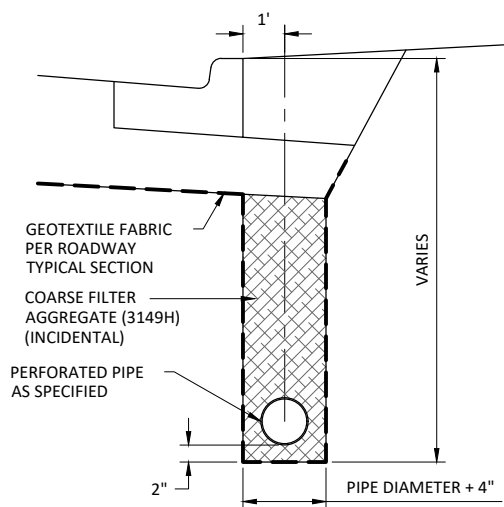
NOTES:

1. CASTING PER CONSTRUCTION DOCUMENTS
2. PIPE CUT-OUTS PER CONSTRUCTION DOCUMENTS
3. ALTERNATE CAST-IN-PLACE BASE CAN BE USED
4. MIN REINFORCING SHALL BE WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ IN PER FOOT IN BOTH DIRECTIONS

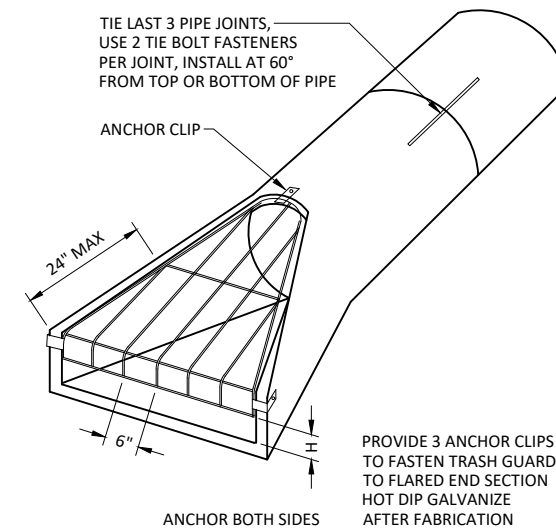
CATCH BASIN STRUCTURE DESIGN R-1 (2'x3')
NOT TO SCALE



SUBSURFACE DRAIN CLEANOUT
NOT TO SCALE



SUBSURFACE ROADWAY EDGE DRAIN COURSE AGGREGATE
NOT TO SCALE



TRASH GUARD SIZES			
PIPE SIZE	BAR	"H"	BOLTS
12"-18"	3/4"Ø	4"	5/8"
21"-42"	1"Ø	6"	3/4"
42"-72"	1 1/4"Ø	12"	1"



RC APRON TRASH RACK (STEEL BARS)
NOT TO SCALE

LAST REVISION: 04-2021

PLATE NO. 4-601

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JEFFREY J. WEYANDT
43342 DATE 8/13/2024

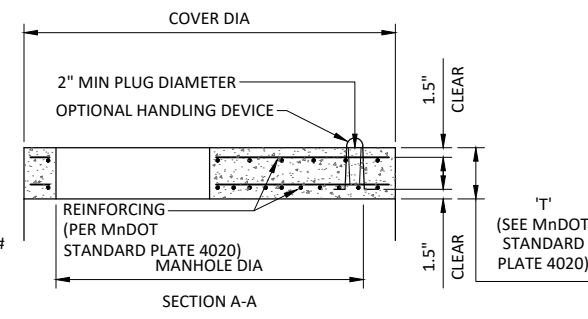
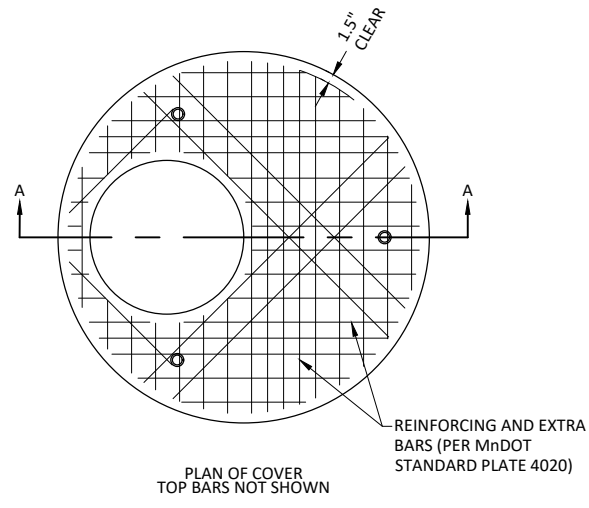
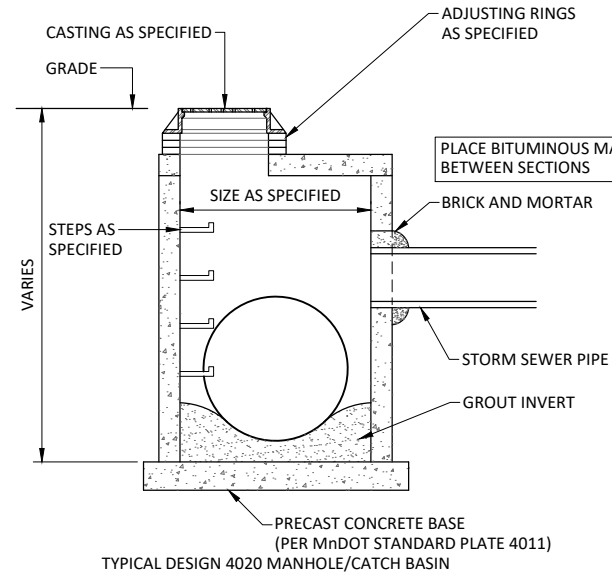


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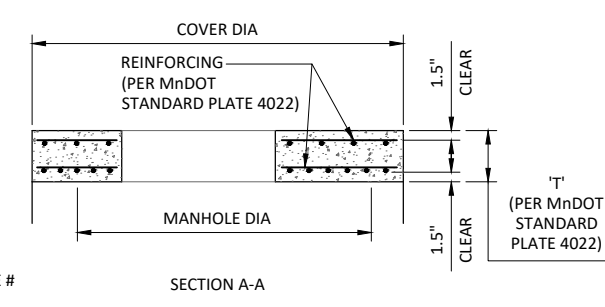
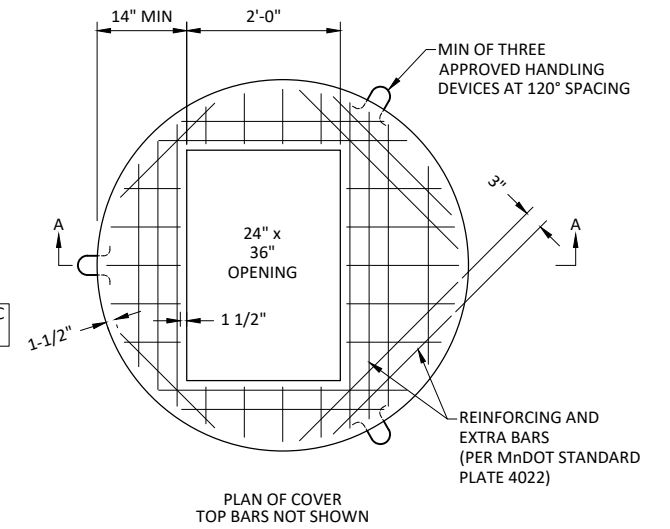
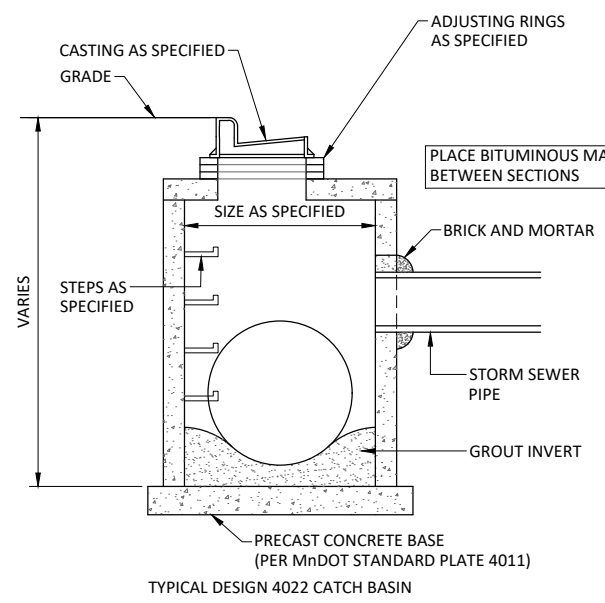
MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
STORM SEWER

SHEET
C1.06



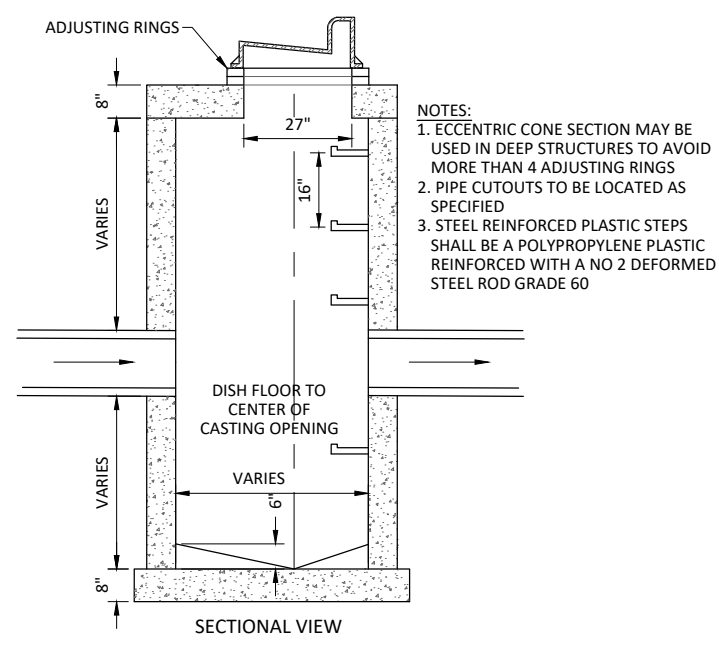
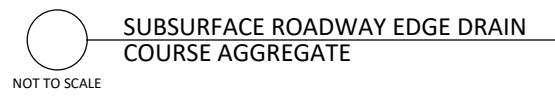
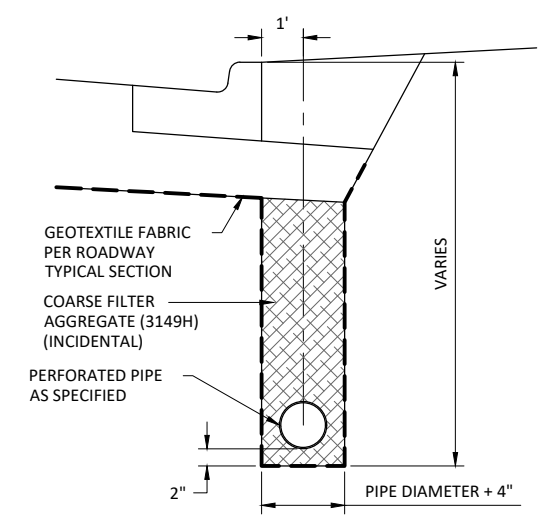
- NOTES:
1. AASHTO HS 25 LOADING MAX FILL HEIGHT 15'
 2. THE # 4020 SHALL BE PERMANENTLY MARKED ON THE TOP COVER
 3. EQUIVALENT STEEL AREAS IN WIRE MESH MAY BE USED
 4. REINFORCEMENT PER SPEC 3301, GRADE 60 A SINGLE HOOP OF 8ga STEEL WIRE

DESIGNATION:
DESIGN DIAMETER - STANDARD PLATE #
DESIGN 48-4020

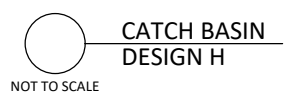
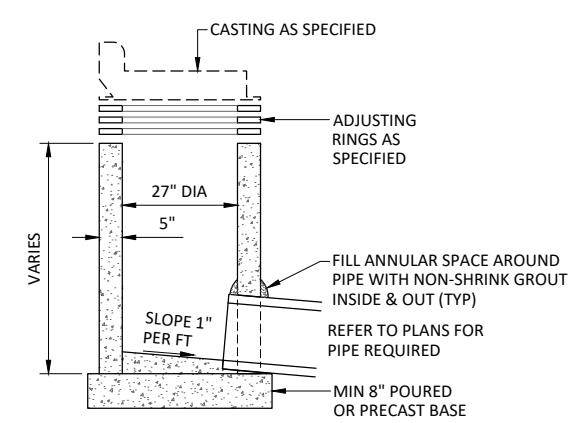


- NOTES:
1. AASHTO HS 25 LOADING MAX FILL HEIGHT 15'
 2. THE # 4022 SHALL BE PERMANENTLY MARKED ON THE TOP COVER
 3. EQUIVALENT STEEL AREAS IN WIRE MESH MAY BE USED
 4. REINFORCEMENT PER SPEC 3301, GRADE 60 A SINGLE HOOP OF 8ga STEEL WIRE

DESIGNATION:
DESIGN DIAMETER - STANDARD PLATE #
DESIGN 48-4020



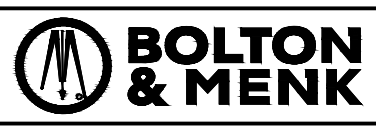
DRAINAGE STRUCTURE WITH SUMP NOT TO SCALE



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
P.E. NO. 41342 DATE 8/13/2024

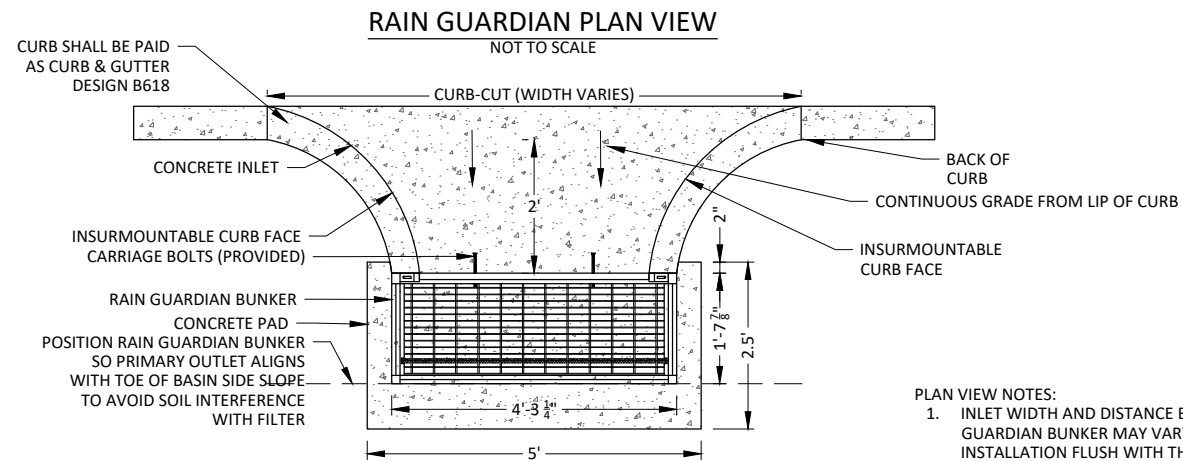


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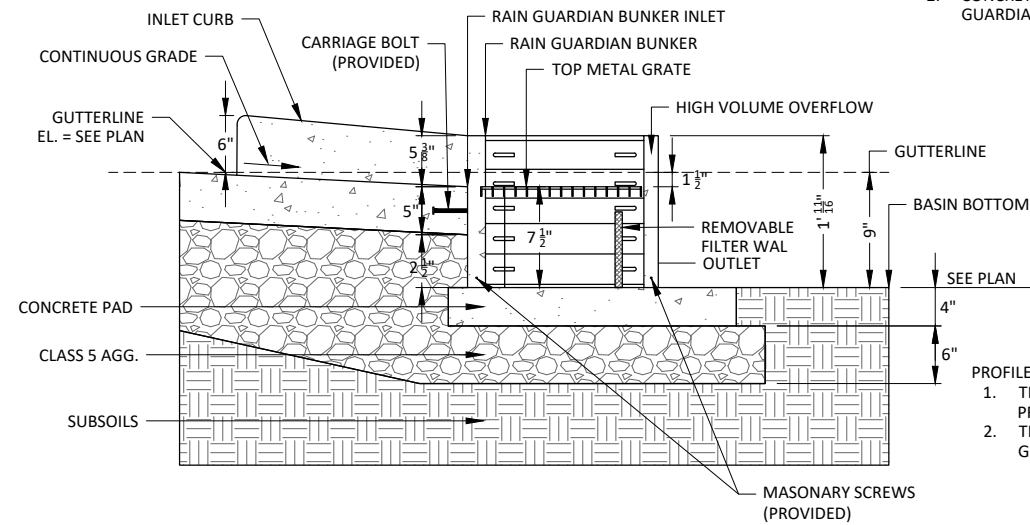
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
STORM SEWER

SHEET
C1.07



- PLAN VIEW NOTES:**
1. INLET WIDTH AND DISTANCE BETWEEN BACK OF CURB AND RAIN GUARDIAN BUNKER MAY VARY WITH SITE CONDITIONS. INSTALLATION FLUSH WITH THE BACK OF CURB CAN ALSO BE COMPLETED.
 2. CONCRETE PAD EXTENDS BEYOND THE FILTER WALL OF THE RAIN GUARDIAN BUNKER TO SERVE AS A SPLASH DISSIPATOR.



- PROFILE VIEW NOTES:**
1. THE TOP OF THE CLASS 5 BASE (COMPACTED TO 95% STANDARD PROCTOR) IS PRECISELY 1'-1" BELOW THE GUTTERLINE ELEVATION.
 2. THE TOP OF THE CONCRETE PAD IS PRECISELY 9" BELOW THE GUTTERLINE.

NOTES:

1. INSTALL THE CONCRETE PAD WITH A 1' 10" OFFSET FROM THE BACK OF THE CURB TO ACCOMMODATE THE CONCRETE INLET. THIS DISTANCE MAY VARY BASED ON SITE CONDITIONS, BUT CONSIDERATIONS SHOULD INCLUDE SLOPE OF THE INLET AND BASIN SIDE SLOPES ADJACENT TO THE RAIN GUARDIAN BUNKER. POSITION RAIN GUARDIAN BUNKER SO PRIMARY OUTLET ALIGNS WITH TOE OF BASIN SIDE SLOPE TO AVOID SOIL INTERFERENCE WITH REMOVABLE FILTER WALL. THE CONCRETE PAD SHOULD BE REINFORCED WITH REBAR.
2. EXCAVATE 1' 7" BELOW THE GUTTERLINE ELEVATION (I.E. THE BIORETENTION OVERFLOW ELEVATION) TO ACCOMMODATE THE 9" PONDING DEPTH, 6" CLASS 5 AGGREGATE, AND 4" CONCRETE PAD TO WHICH THE RAIN GUARDIAN BUNKER WILL BE SECURED. THEREFORE, THE TOP OF THE FINISHED CONCRETE PAD IS PRECISELY 9" BELOW THE GUTTERLINE ELEVATION. THE TOP OF THE RAIN GUARDIAN BUNKER METAL GRATE WILL BE 7-1/2" ABOVE THE TOP OF THE CONCRETE PAD AND 1-1/2" BELOW THE GUTTERLINE ELEVATION TO ACCOMMODATE A SLOPED INLET FROM THE GUTTER TO THE RAIN GUARDIAN BUNKER.
3. THE RAIN GUARDIAN BUNKER SHOULD BE POSITIONED 2" FROM THE EDGE OF THE CONCRETE PAD CLOSEST TO THE BACK OF THE WALL. THEREFORE, THE RAIN GUARDIAN BUNKER WILL BE 2' FROM THE BACK OF THE CURB.
4. USING THE PILOT HOLE IN EACH OF THE FOUR CORNER POSTS, PREDRILL 5/32" HOLES INTO THE CONCRETE PAD WITH A 4-1/2" MASONRY BIT AND HAMMER DRILL.
5. SECURE RAIN GUARDIAN BUNKER TO CONCRETE PAD WITH FOUR 3/16" X 2-3/4" MASONRY SCREWS (PROVIDED).
6. INSTALL FRAMING FOR INLET BETWEEN RAIN GUARDIAN BUNKER AND BACK OF CURB. TOP ELEVATIONS OF THE FRAMING SHOULD MATCH THE TOP OF THE CURB ON THE STREET SIDE AND THE TOP OF THE RAIN GUARDIAN BUNKER ON THE BIORETENTION SIDE.
7. WHEN POURING THE CONCRETE INLET, ENSURE THE CARRIAGE BOLTS ON THE RAIN GUARDIAN BUNKER ARE SURROUNDED BY AT LEAST 2" OF CONCRETE ON ALL SIDES.
8. SIDE CURBS OF THE POURED INLET MUST HAVE AN INSURMOUNTABLE PROFILE TO PREVENT WATER FLOW FROM OVERTOPPING THE DOWNSTREAM SIDE OF THE INLET.
9. WRAP CABLE THROUGH TOP METAL GRATE AND SECURE WITH PROVIDED CLAMP. ENSURE SUFFICIENT SLACK EXISTS IN CABLE TO ALLOW FOR GRATE REMOVAL AND PLACEMENT IN CONCRETE INLET DURING CLEANING. REMOVABLE FILTER WALL SHOULD BE INSTALLED WITH FILTER FABRIC FACING THE RAIN GUARDIAN BUNKER INLET.

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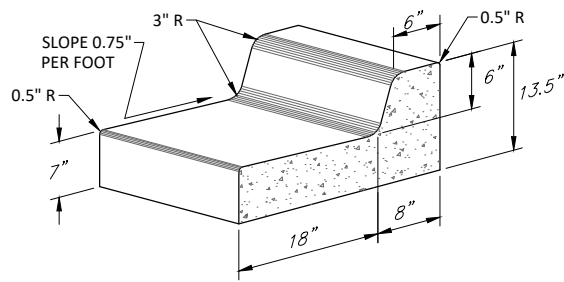


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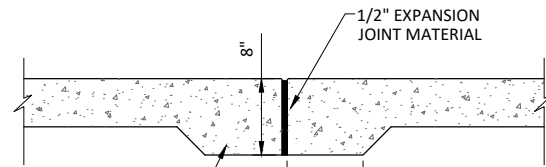
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
GRADING DETAILS

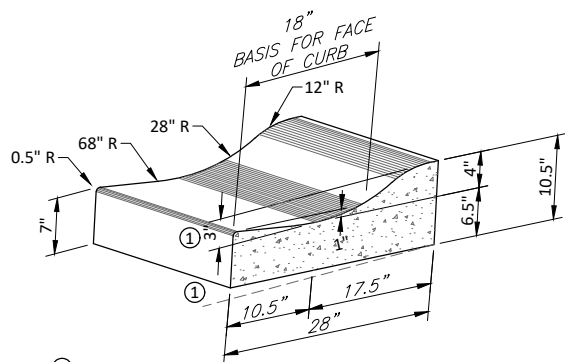
SHEET
C1.08



**CONCRETE CURB & GUTTER
DESIGN B618
NOT TO SCALE**

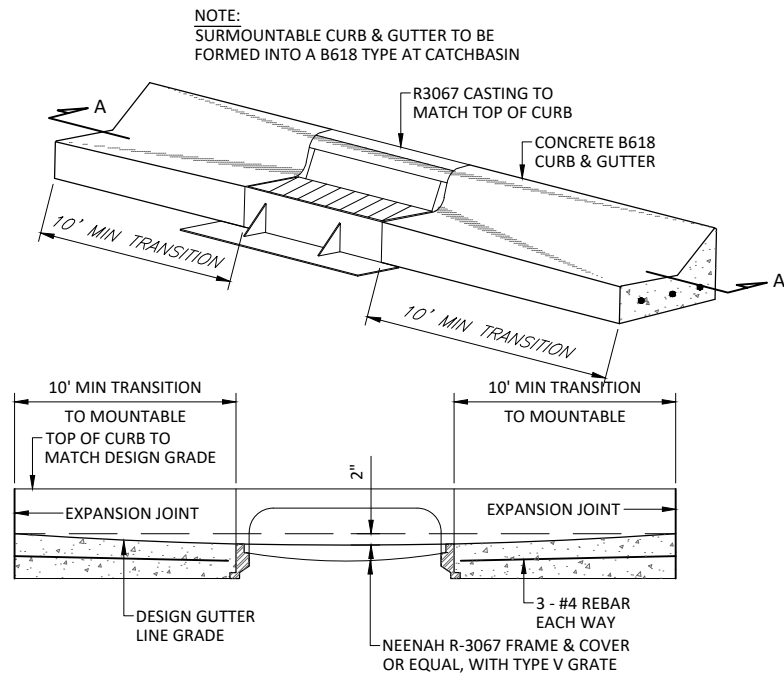


**EXPANSION JOINT
NOT TO SCALE**



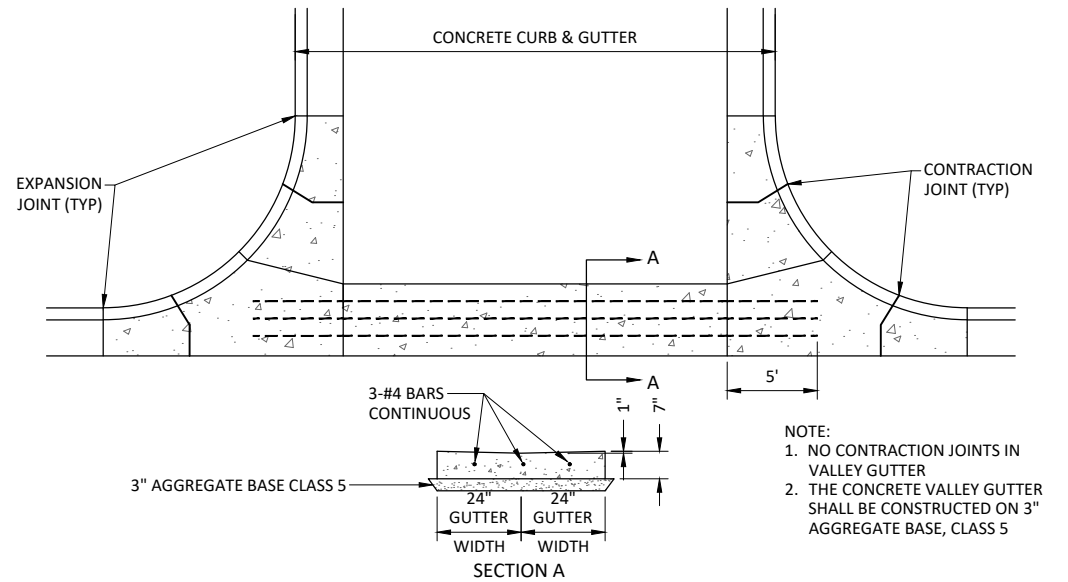
① NOTE:
CURB SHALL BE PLACED IN A TILTED POSITION AS SUCH TO PROVIDE A 3" DEPTH FROM THE TOP OF CURB TO THE FLOWLINE WHEN MEASURED ON A LEVEL PLANE.

**MOUNTABLE
CONCRETE CURB & GUTTER
NOT TO SCALE**

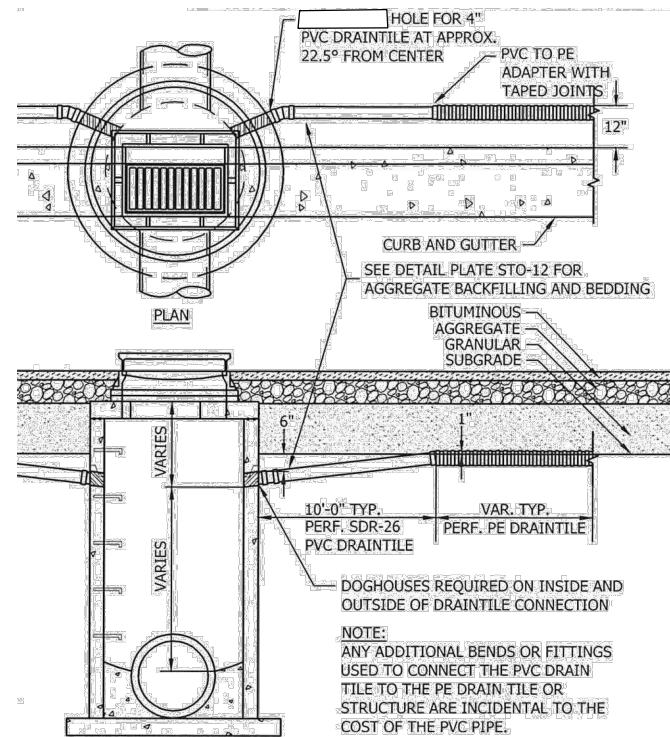


SECTION A-A

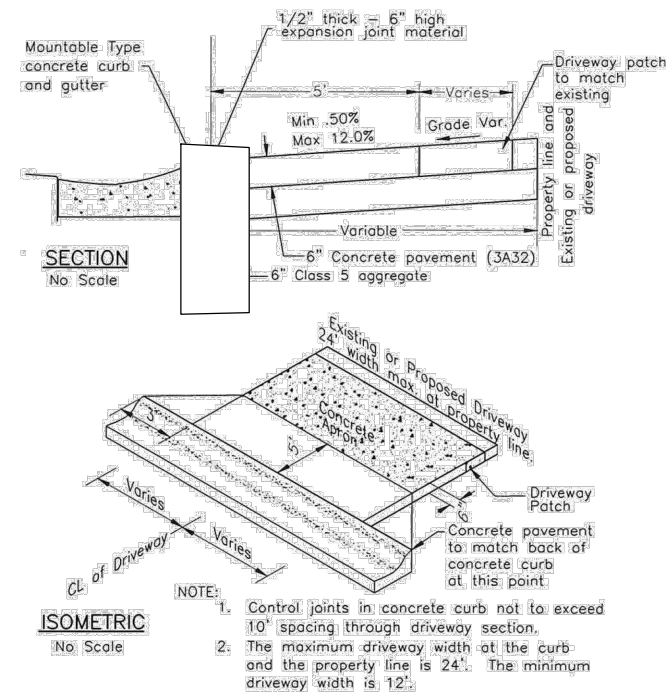
**CATCHBASIN - CURB DETAIL FOR R-3067
IN MOUNTABLE CURB
NOT TO SCALE**



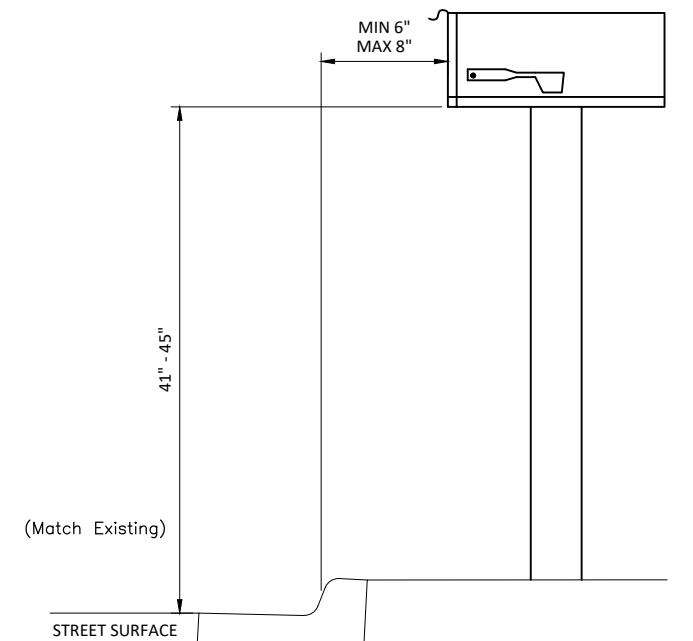
**CONCRETE VALLEY GUTTER
NOT TO SCALE**



**DRAINTILE INSTALLATION INTO CATCHBASIN MANHOLE
NOT TO SCALE**



**CONCRETE DRIVEWAY APRON FOR SURMOUNTABLE CURB
NOT TO SCALE**



**MAILBOX INSTALLATION
NOT TO SCALE**

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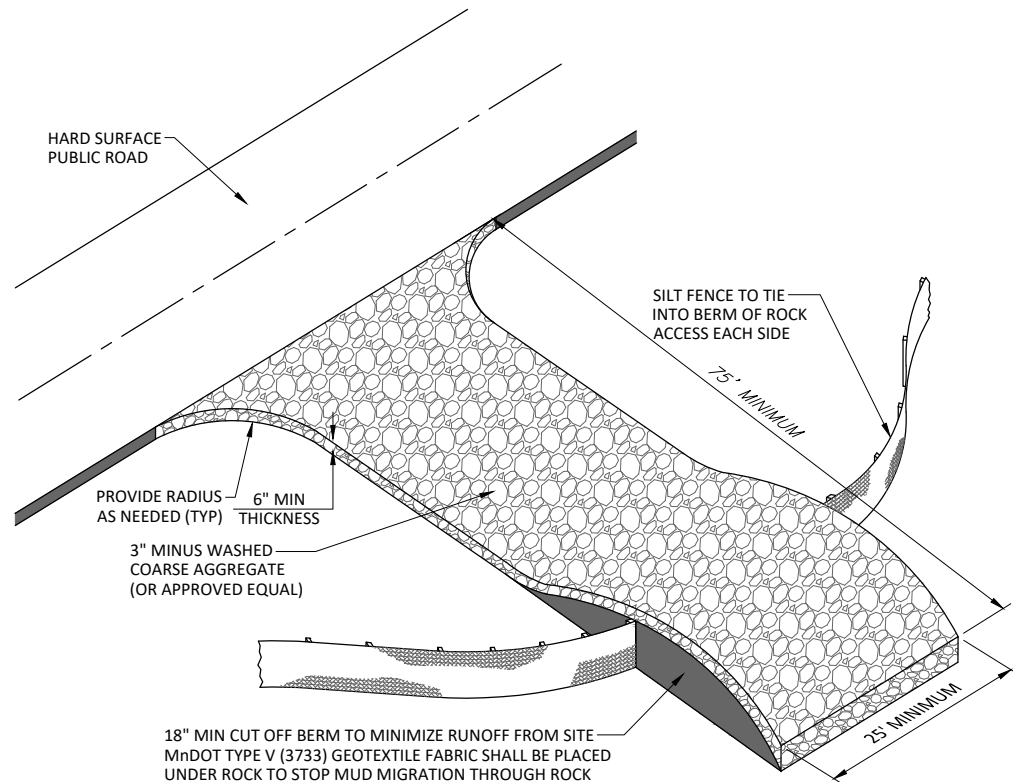
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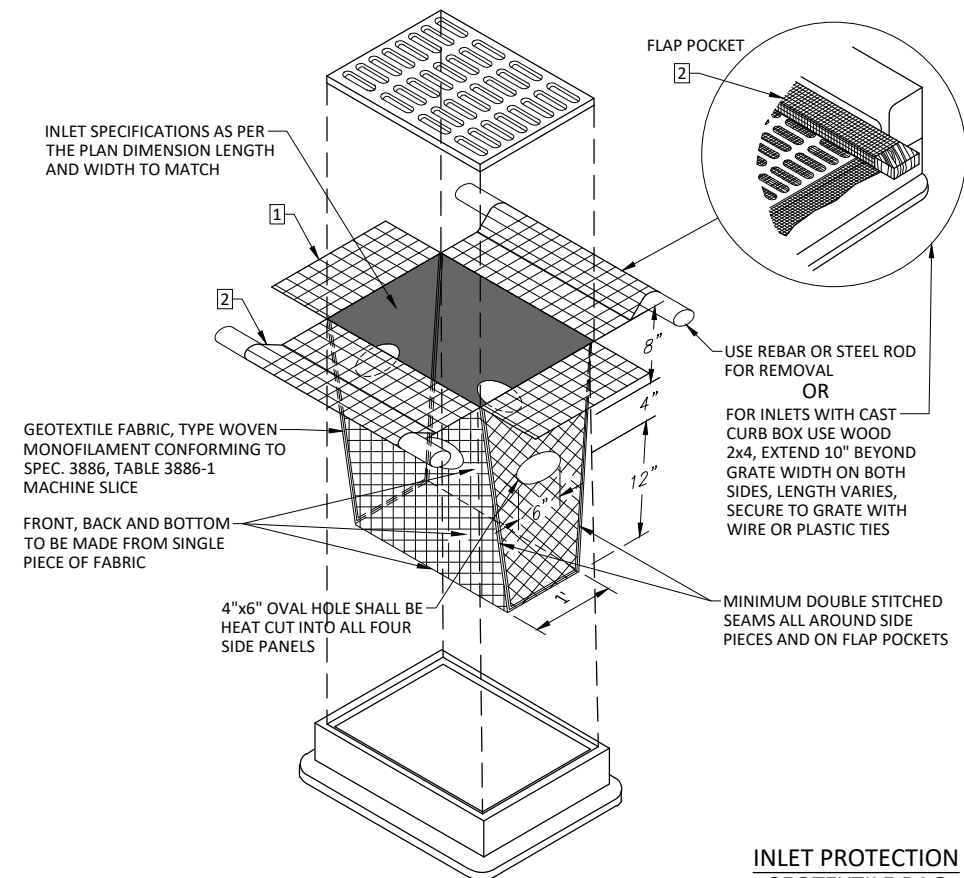
**MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
STREET**

SHEET

C1.09



ROCK CONSTRUCTION ENTRANCE
NOT TO SCALE



NOTES:

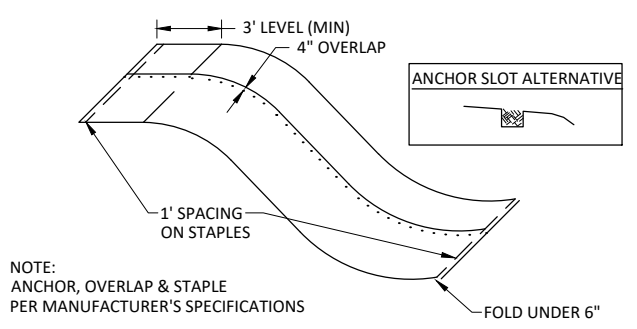
- INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER. MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENTS EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL IN THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.
- FINISHED SIZE, INCLUDING POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2x4.

INSTALLATION NOTES:
DO NOT INSTALL PROTECTION IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.
TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

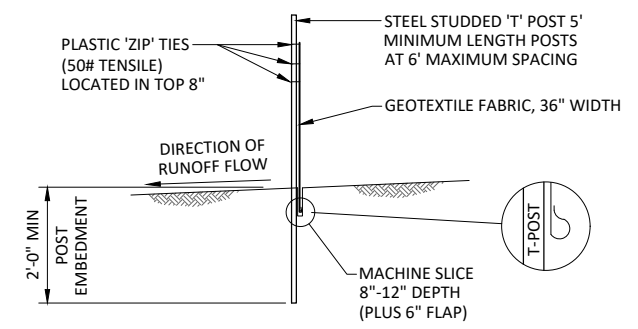
THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CLINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

**INLET PROTECTION
GEOTEXTILE BAG**
NOT TO SCALE

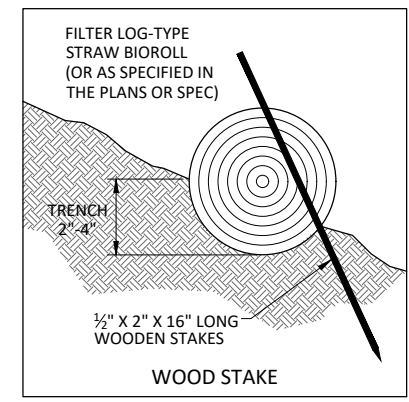


NOTE:
ANCHOR, OVERLAP & STAPLE
PER MANUFACTURER'S SPECIFICATIONS

EROSION CONTROL BLANKET INSTALLATION
NOT TO SCALE



SILT FENCE - MACHINE SLICED
NOT TO SCALE



NOTE:
1. OVERLAP ENDS OF FILTER LOG BY A MINIMUM OF 6".
2. FILTER LOGS SHALL BE ACCORDING TO MNDOT SPEC 3897 AND INSTALLED ACCORDING TO MNDOT SPEC 2573.

FILTER LOG
NOT TO SCALE

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JEFFREY J. WEYANDT
43342 DATE 4/13/2024

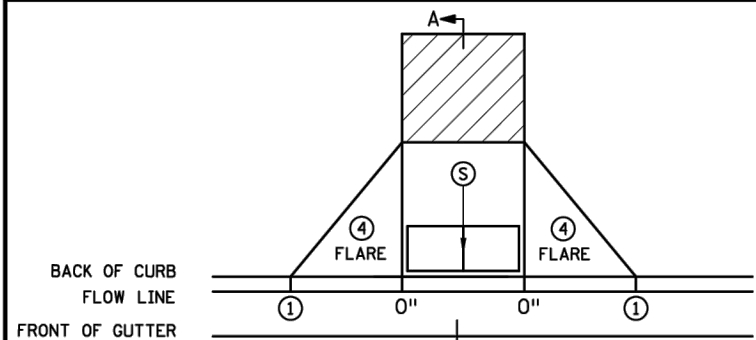


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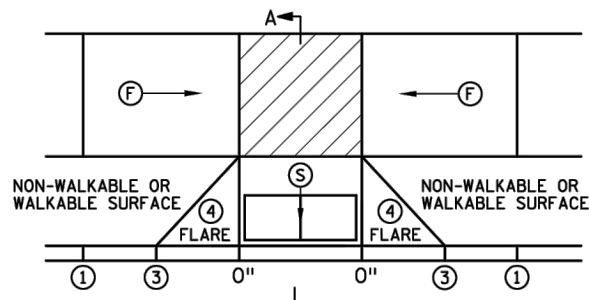
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
STREET

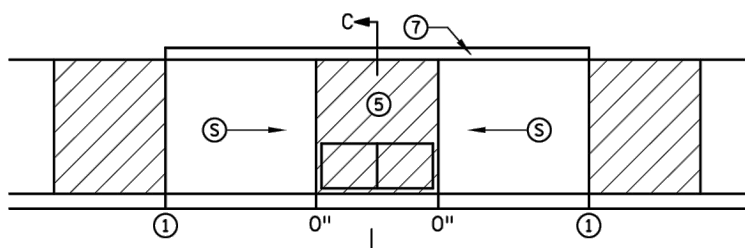
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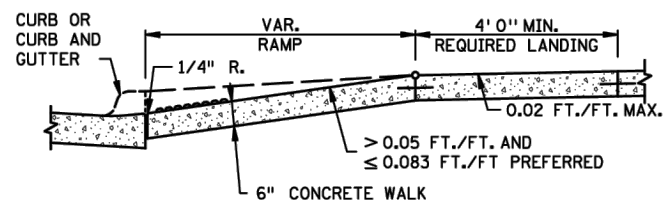
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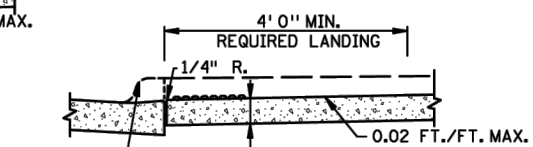
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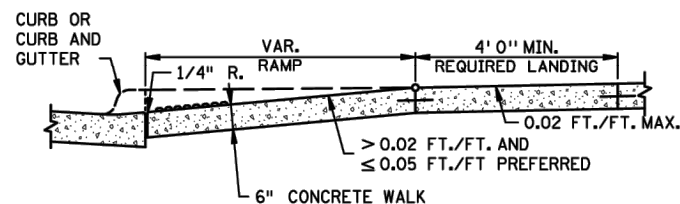
PARALLEL



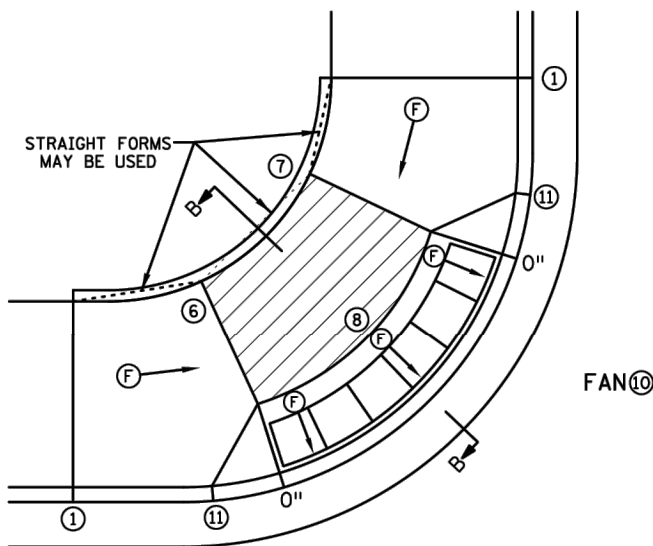
SECTION A-A
PERPENDICULAR/TIERED/DIAGONAL



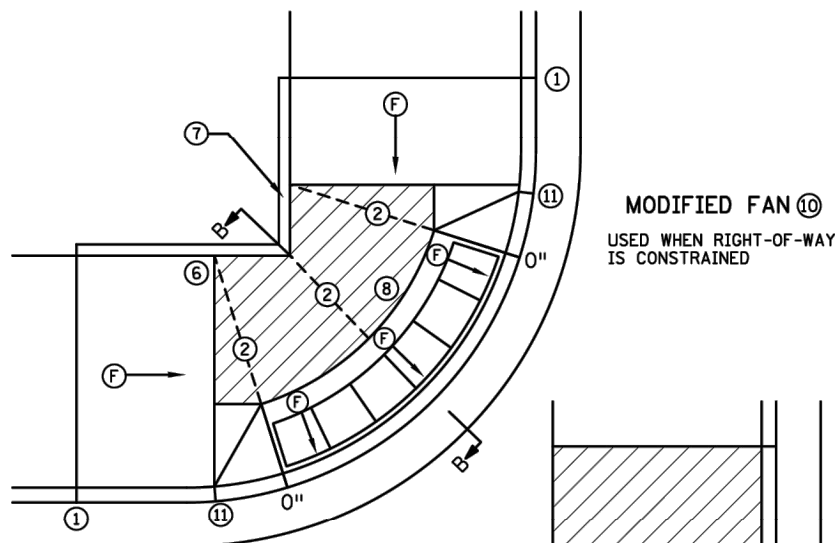
SECTION C-C
PARALLEL/DEPRESSED CORNER



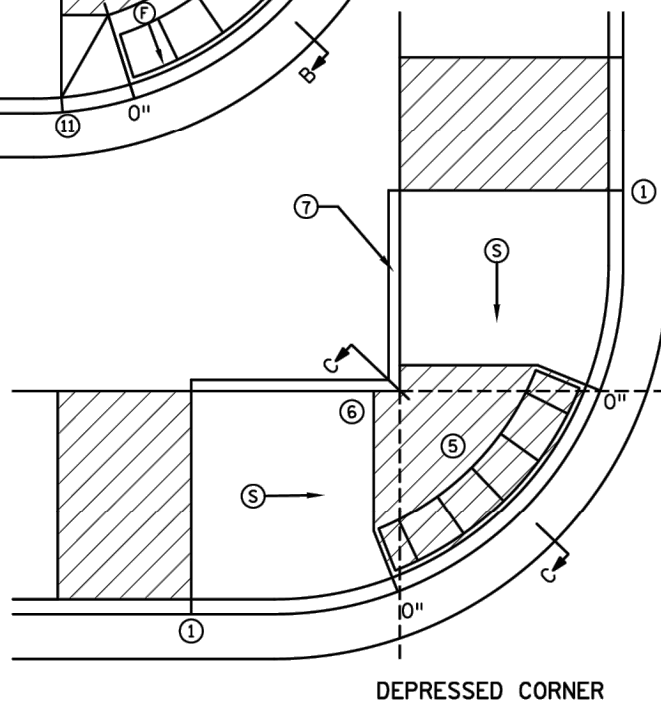
SECTION B-B
FAN



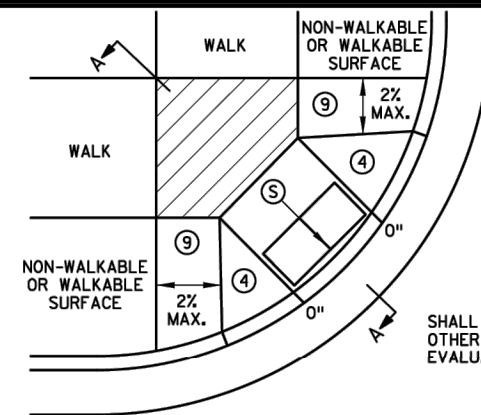
FAN 10



MODIFIED FAN 10
USED WHEN RIGHT-OF-WAY IS CONSTRAINED



DEPRESSED CORNER



DIAGONAL
SHALL ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL

NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMP THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR, 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH, EXCEPT AS STATED IN 6 BELOW.
- TO ENSURE RAMP AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR, FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE. MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.
- ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMP. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.
- WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.
- RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.

- 1 MATCH FULL HEIGHT CURB.
- 2 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
- 3 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
- 4 SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
- 5 DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
- 6 THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK, THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
- 7 WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
- 8 A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
- 9 PAVE FULL WALK WIDTH.
- 10 "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
- 11 INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

- S INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- F INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
- X" CURB HEIGHT

REVISION:
APPROVED: 11-04-2021
Jeffrey J. Perkins
OPERATIONS DIVISION

STANDARD PLAN 5-297.250 1 OF 6
MINNESOTA DEPARTMENT OF TRANSPORTATION
APPROVED: 11-04-2021
THOMAS STYRBICKI
STATE DESIGN ENGINEER
STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
PED RAMP DETAILS PLATES

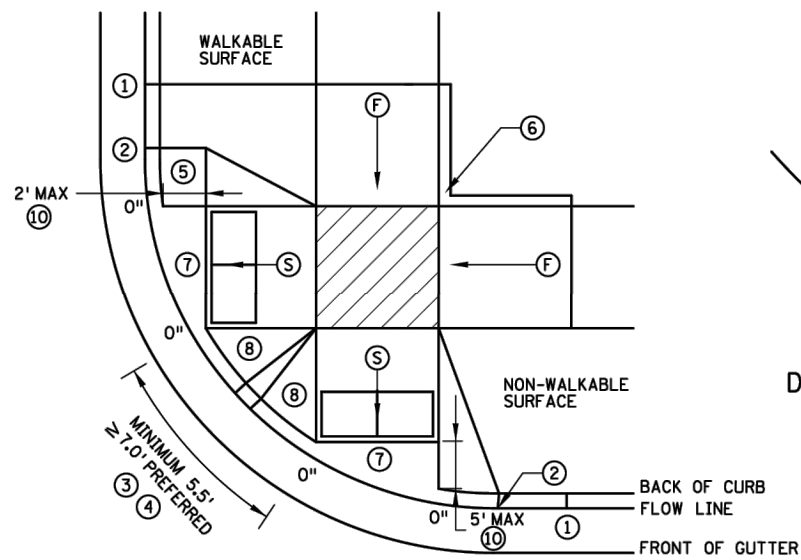
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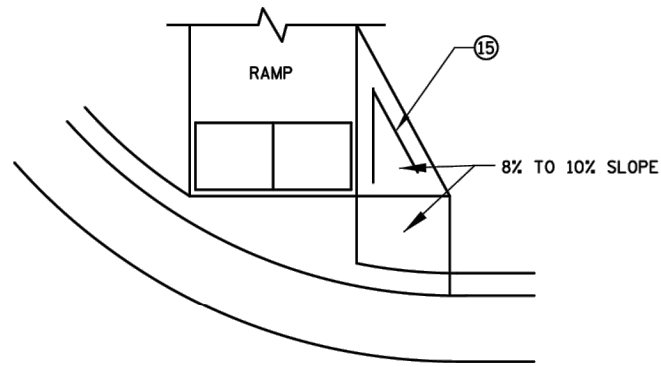
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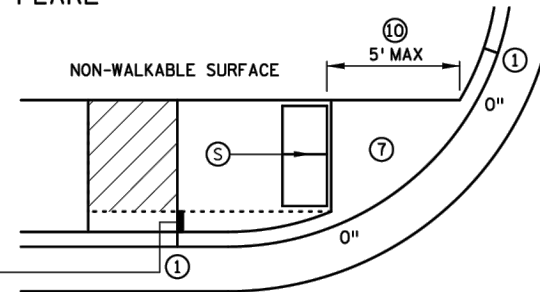


COMBINED DIRECTIONAL

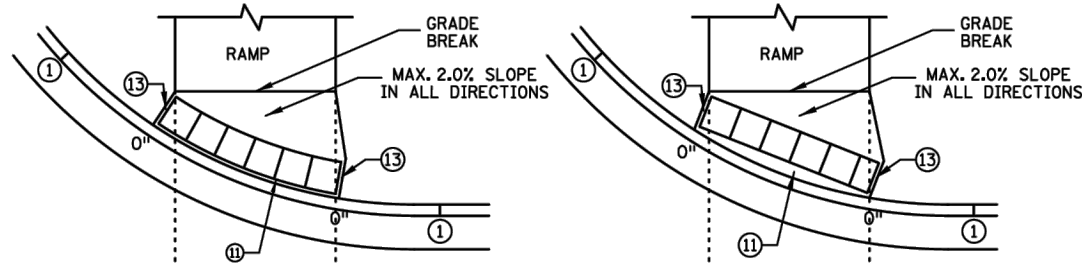


DIRECTIONAL RAMP WALKABLE FLARE

IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.

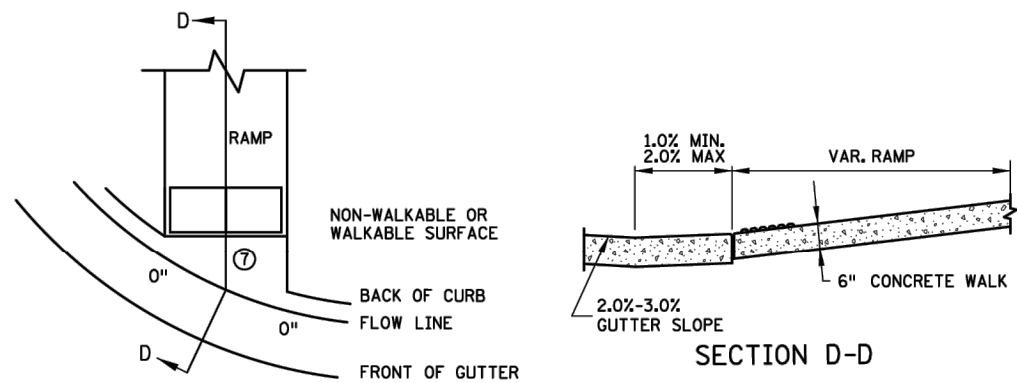


STANDARD ONE-WAY DIRECTIONAL ⑨

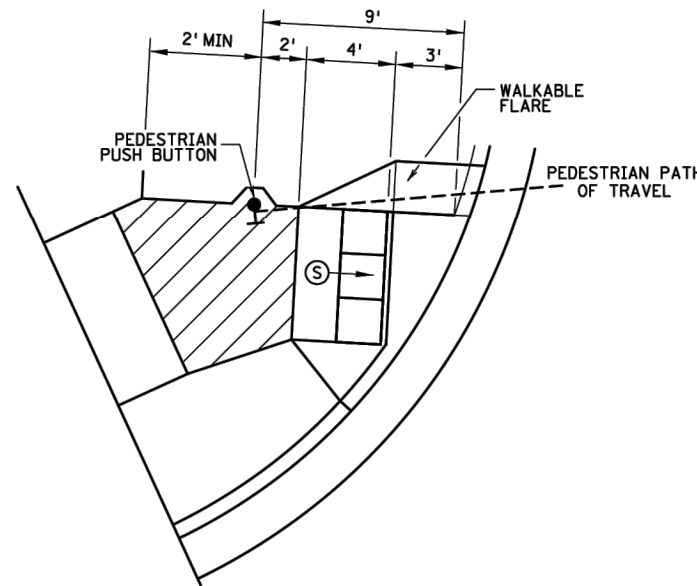


DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫

ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB



CURB FOR DIRECTIONAL RAMPS ⑭



SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB
 PRIMARILY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)

NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.
- INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.
- SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.
- CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.
- ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.
- TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).
- TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.
- WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.
- ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.
- 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.
- WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.
- RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.
- ① MATCH FULL CURB HEIGHT.
- ② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.
- ③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).
- ④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.
- ⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.
- ⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
- ⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.
- ⑧ 8% TO 10% WALKABLE FLARE.
- ⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.
- ⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SETBACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3" FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
- ⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.
- ⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.
- ⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.
- ⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

- ⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- ⑥ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
- ▨ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
- X" CURB HEIGHT

REVISION:
 APPROVED: 11-04-2021
 Jeff J. Perkins
 OPERATIONS DIVISION

m MINNESOTA
 DEPARTMENT OF TRANSPORTATION
 STANDARD PLAN 5-297.250 2 OF 6
 APPROVED: 11-04-2021
 REVISOR:
 STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS
 MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 DETAIL PLATES
 PED RAMP DETAILS PLATES



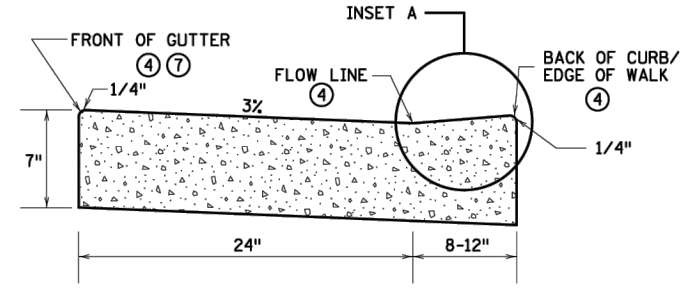
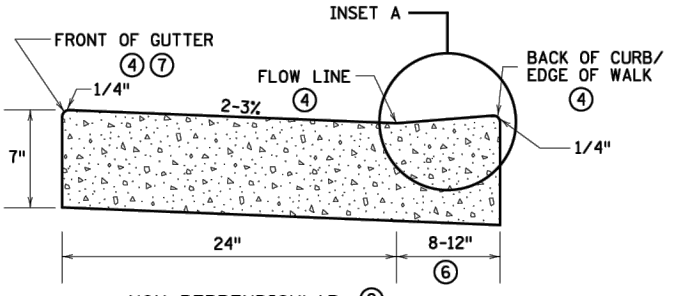
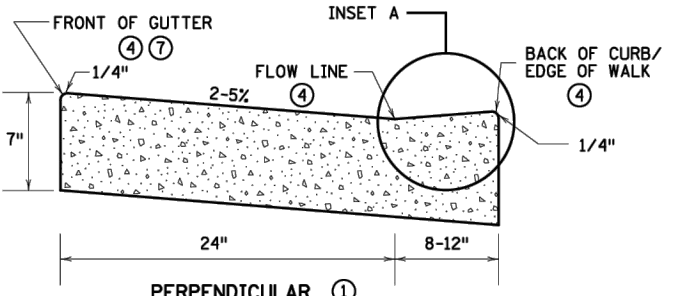
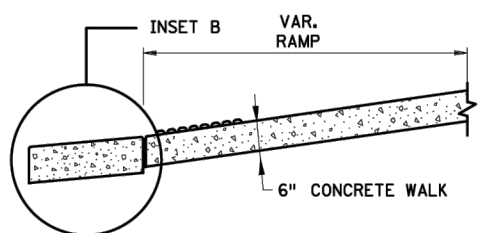
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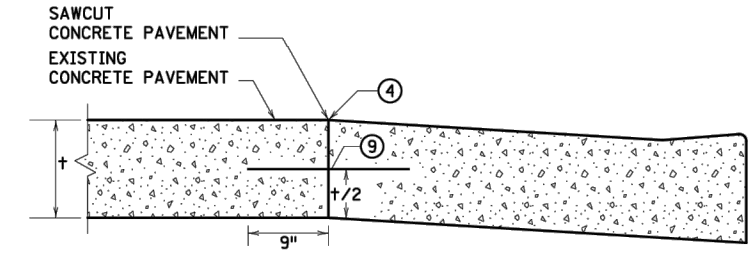
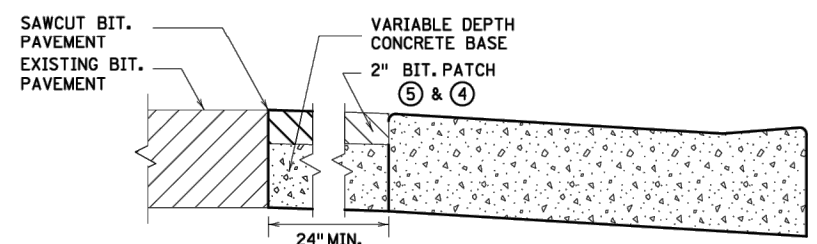
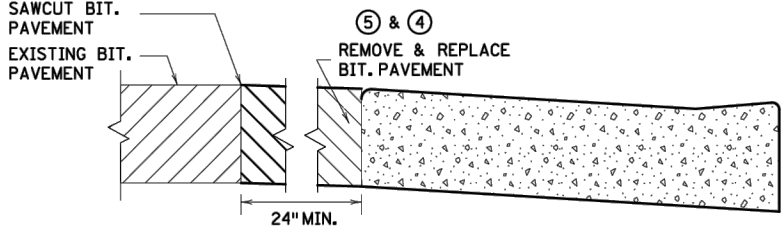
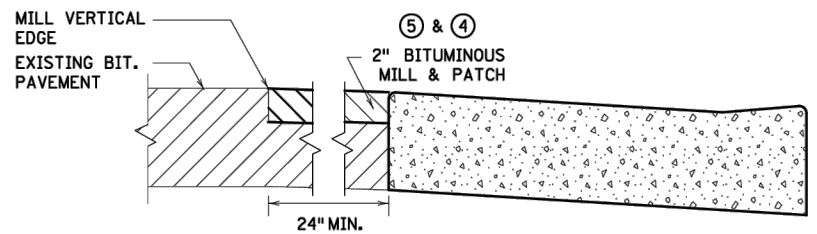
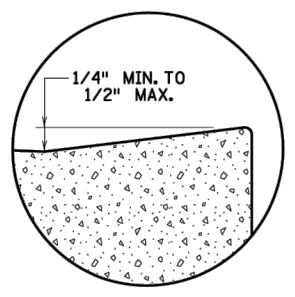
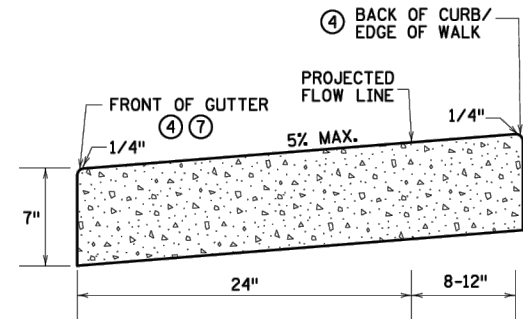
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 Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 43342 DATE 8/13/2024

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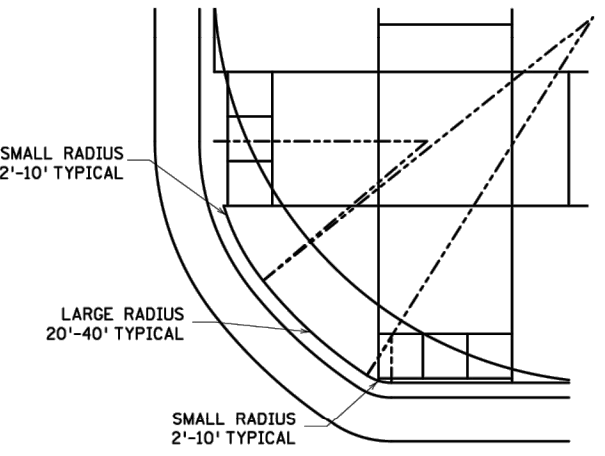
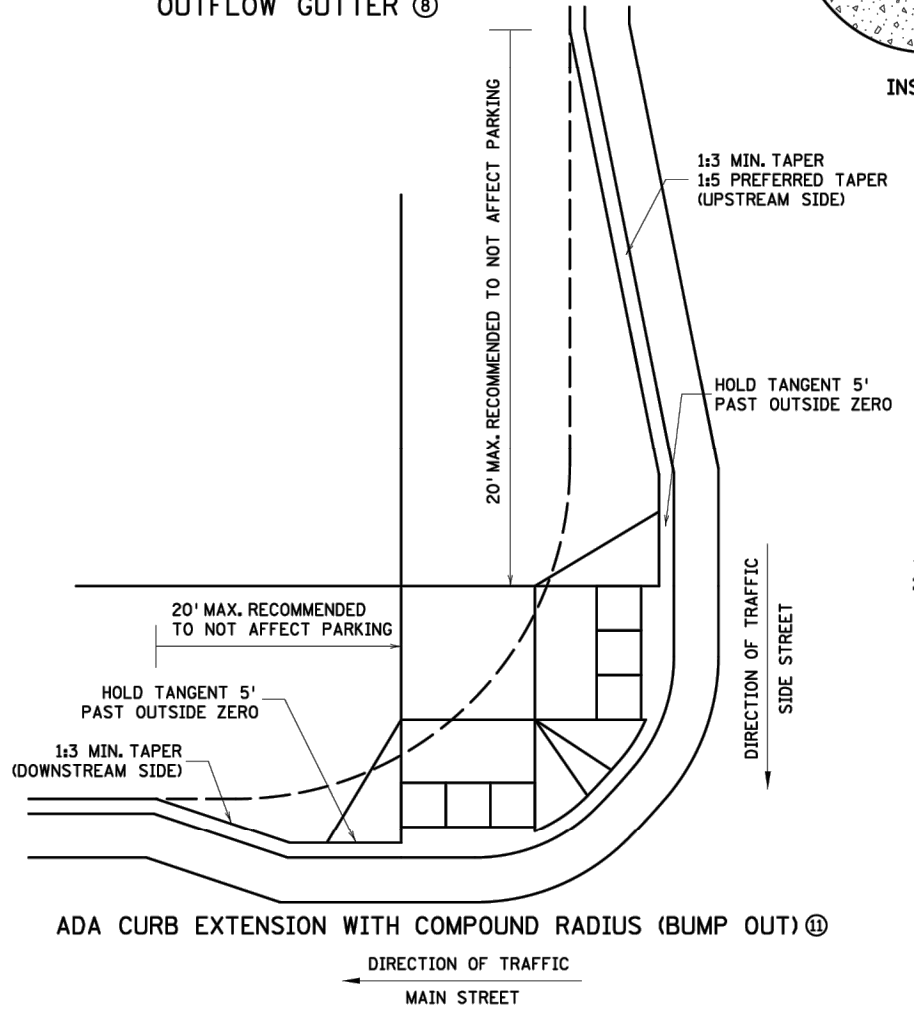
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PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL



PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER FOR USE ON CURB RAMP RETROFITS



- NOTES:**
- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM. NO PONDING SHALL BE PRESENT IN THE PAR.
 - ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
 - FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMP.
 - FOR USE AT CURB RAMP WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.
 - BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMP.
 - THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".
 - ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
 - VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.
 - TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.
 - SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.
 - DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1' MINIMUM FROM ALL JOINTS.
 - HELPS PROVIDE TWO SEPARATE RAMPS, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.
 - CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED. PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.

REVISION:
 APPROVED: 11-04-2021
 Jeffrey J. Perkins
 OPERATIONS DIVISION

STANDARD PLAN 5-297.250 3 OF 6
 APPROVED: 11-04-2021
 REVISION:
 THOMAS STYRBICKI
 STATE DESIGN ENGINEER

PEDESTRIAN CURB RAMP DETAILS
 (TH) SHEET NO. OF SHEETS

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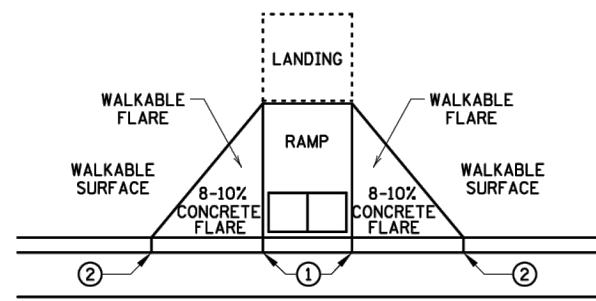
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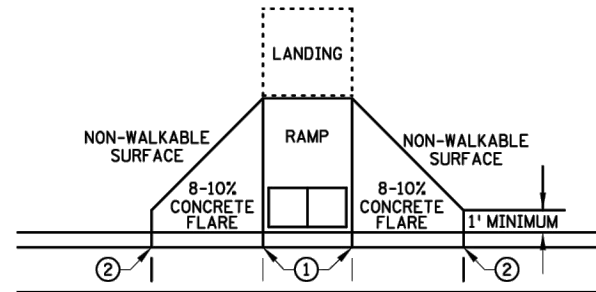
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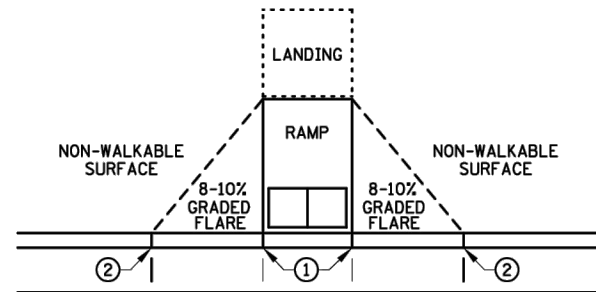
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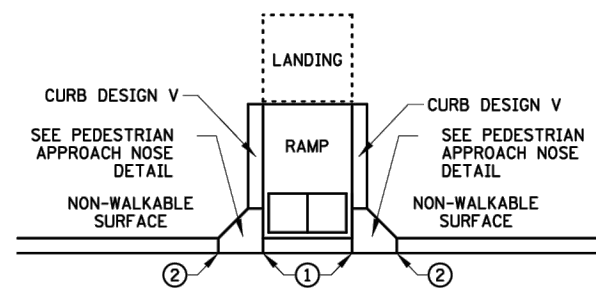
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

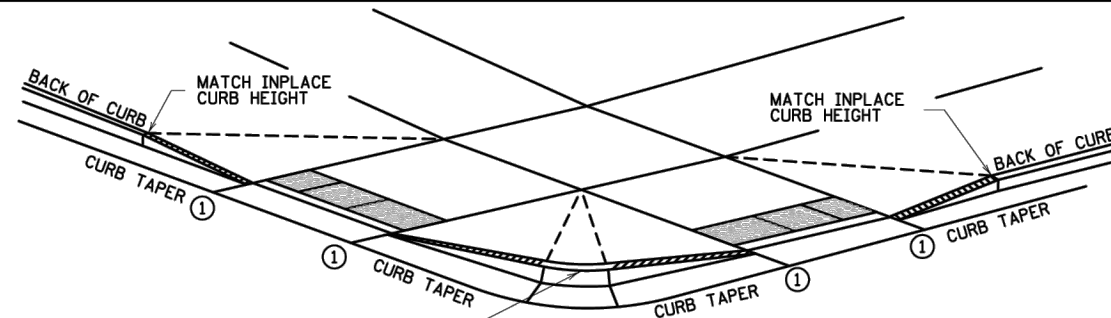


GRADED FLARES



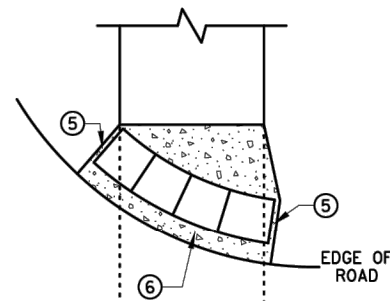
RETURNED CURB ④

TYPICAL SIDE TREATMENT OPTIONS ③ ⑩

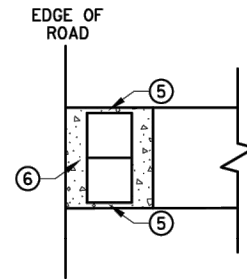


3" MINIMUM CURB HEIGHT, 4" PREFERRED
(MEASURED AT FRONT FACE OF CURB)
FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH ⑦
CURB AND GUTTER

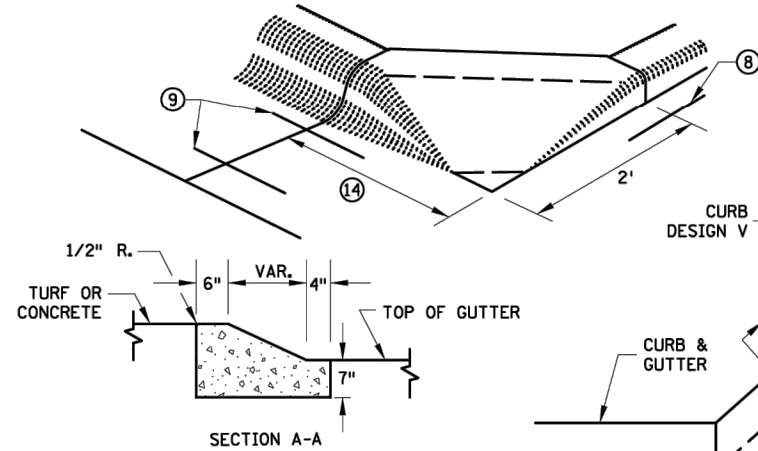


RADIAL DETECTABLE WARNING

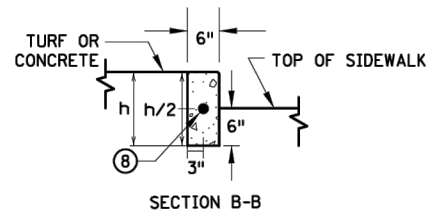


RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

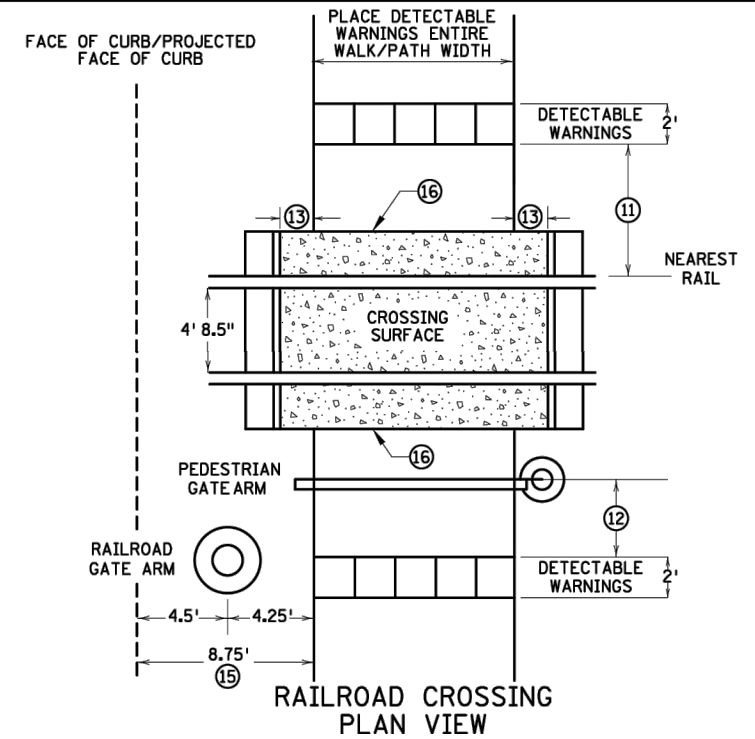


SECTION A-A



SECTION B-B

PEDESTRIAN APPROACH
NOSE DETAIL
(FOR RETURNED CURB
SIDE TREATMENT)



RAILROAD CROSSING
PLAN VIEW

NOTES:

INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3 INCH CURB HEIGHT. INCREASE CURB TAPER LENGTH AT LESS THAN 8% OR REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.

A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMPS FROM THE BACK OF CURB.

- ① 0" CURB HEIGHT. SEE INSET A ON SHEET 3 OF 6.
- ② FULL CURB HEIGHT.
- ③ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
- ④ TYPICALLY USED FOR MEDIANS AND ISLANDS.
- ⑤ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑥ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.
- ⑦ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS, AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.
- ⑧ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.
- ⑨ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.
- ⑩ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6' LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE. CONSTRUCT THESE TAPERS AT 0"-3" AT 8-10%, THEN LESS THAN 5% FROM 3" CURB TO FULL CURB HEIGHT.
- ⑪ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.
- ⑫ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑪.
- ⑬ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.
- ⑭ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.
- ⑮ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.
- ⑯ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

REVISION:
APPROVED: 11-04-2021
<i>Jeffrey J. Weyandt</i>
JEFFREY J. WEYANDT OPERATIONS DIVISION

	STANDARD PLAN 5-297.250	4 OF 6
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THOMAS STYRBIICKI STATE DESIGN ENGINEER	STATE PROJ. NO.	(TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

MAPLE PLAIN, MINNESOTA
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DETAIL PLATES
PED RAMP DETAILS PLATES



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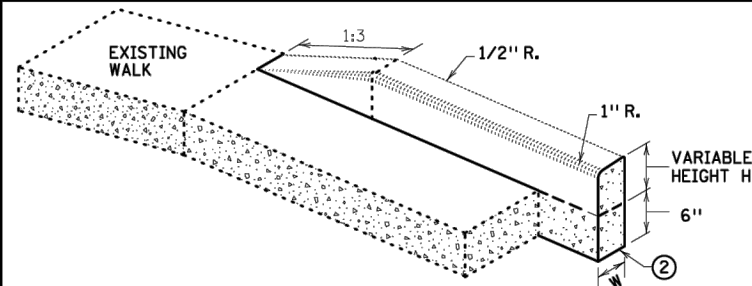
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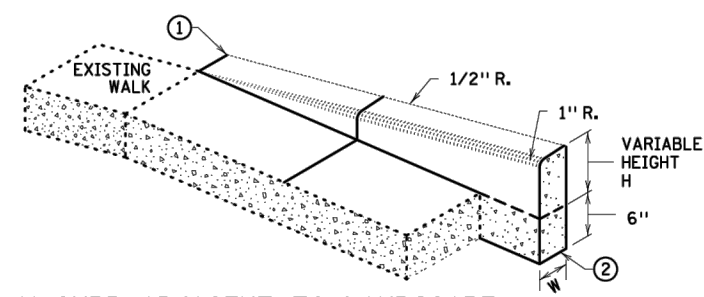
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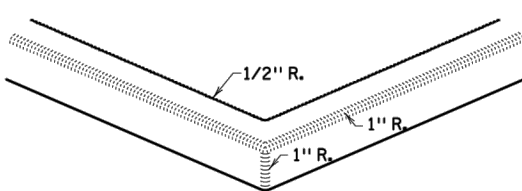
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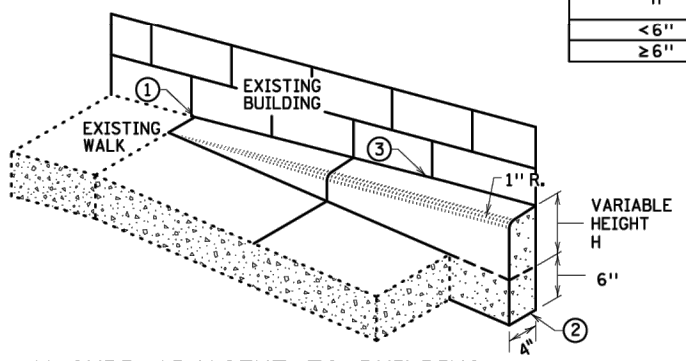
V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS



V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS

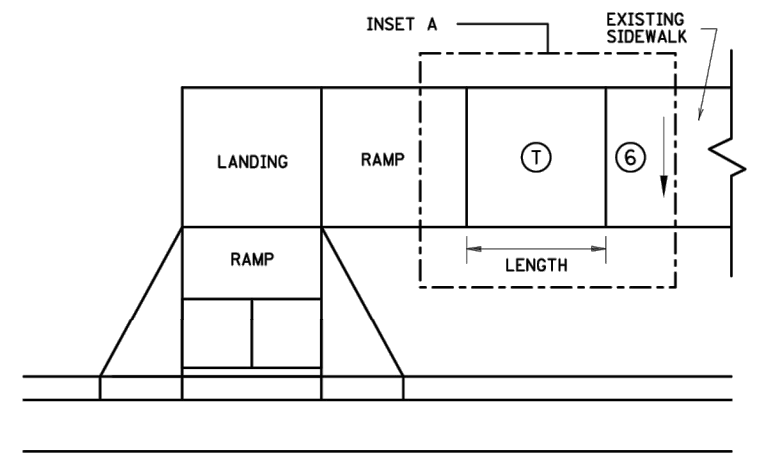


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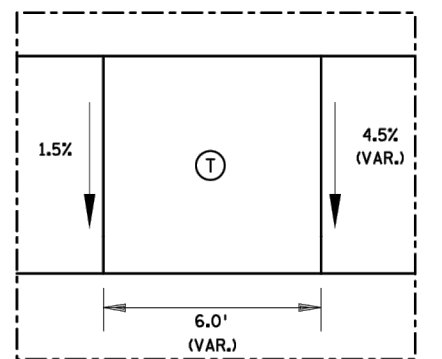


V CURB ADJACENT TO BUILDING
OR BARRIER

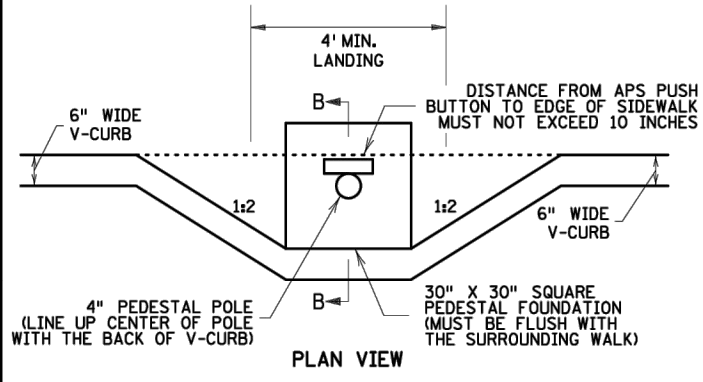
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



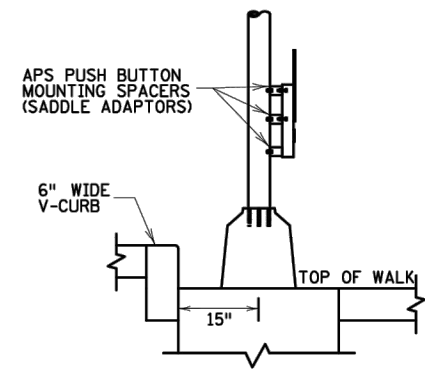
TRANSITION PANEL ④ ⑤



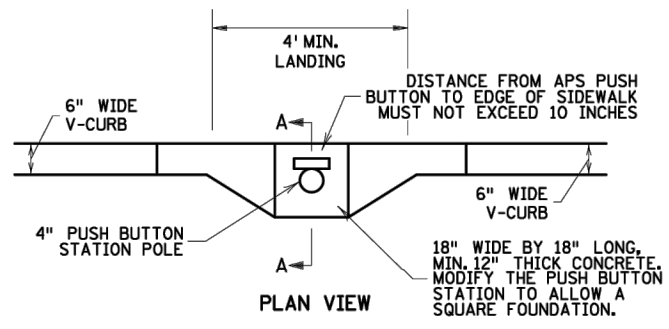
INSET A



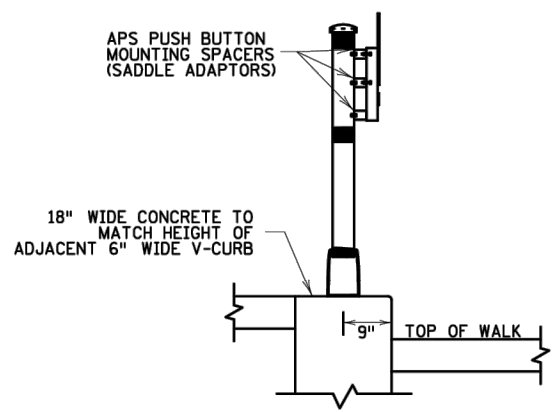
SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



SECTION B-B



PUSH BUTTON STATION (V-CURB)



SECTION A-A

NOTES:

- A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.
- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- ① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- ③ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM 1/2" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.
- ④ THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.
- ⑤ TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.
- ⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

- THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.
- ⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.
- ① TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

REVISION:
APPROVED: 11-04-2021
Jeffrey J. Perkins
JEFFREY J. PERKINS
OPERATIONS DIVISION

STANDARD PLAN 5-297.250 5 OF 6
MINNESOTA DEPARTMENT OF TRANSPORTATION
Thomas Strubicki
THOMAS STRUBICKI
STATE DESIGN ENGINEER
APPROVED: 11-04-2021
REVISED:
STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
PED RAMP DETAILS PLATES

SHEET
C1.15

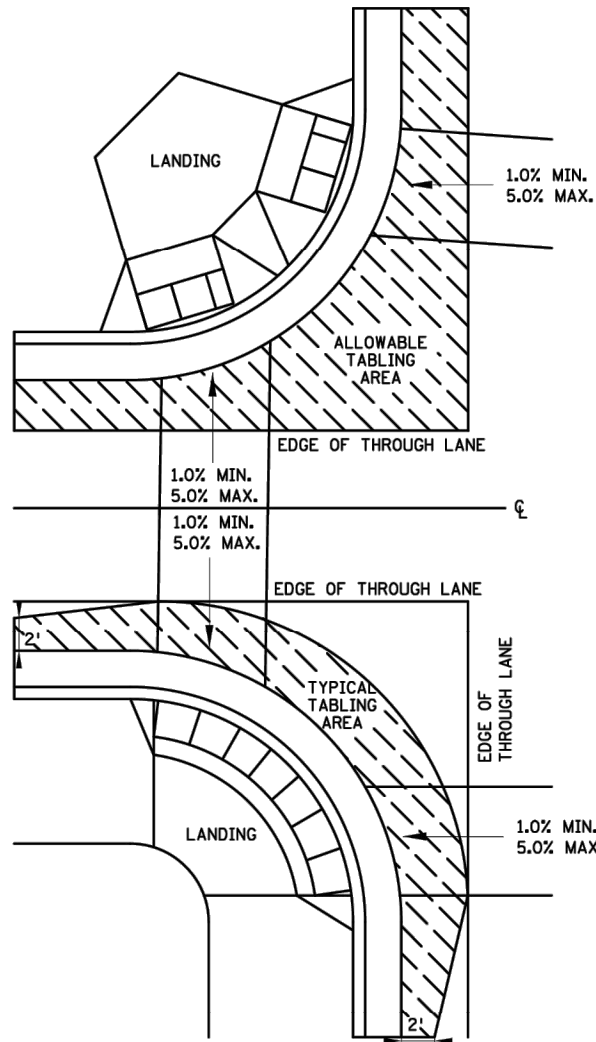


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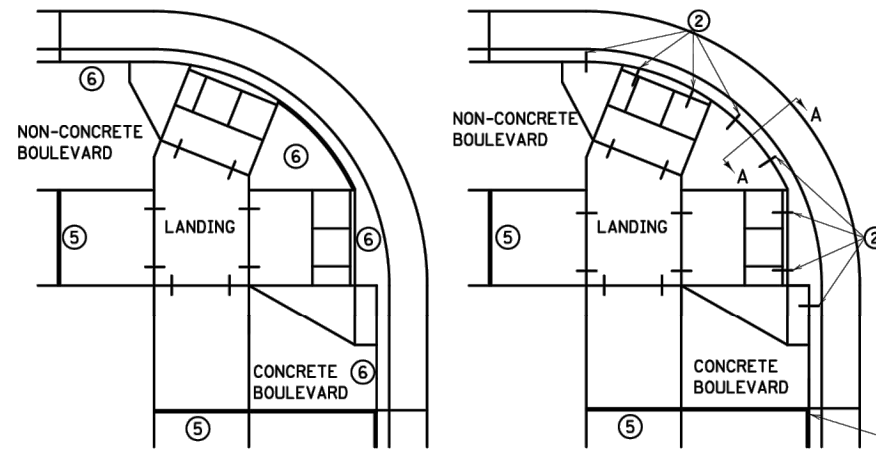
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JJW			
CLIENT PROJ. NO.			
0C1132036			

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.
Jeffrey J. Weyandt
JEFFREY J. WEYANDT
P.E. NO. 43342 DATE 8/13/2024

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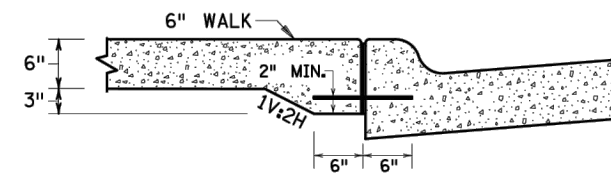


CURB LINE AND ROAD CROSSING ADJUSTMENTS

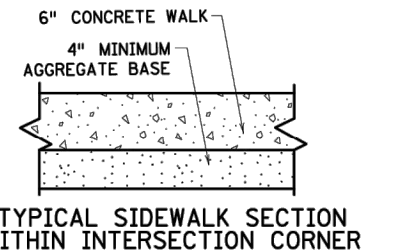


EXPANSION MATERIAL PLACEMENT FOR CONCRETE ROADWAYS

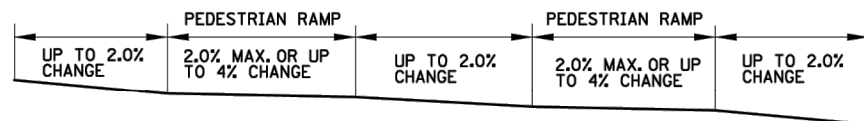
CURB LINE REINFORCEMENT PLACEMENT ON BITUMINOUS ROADWAYS



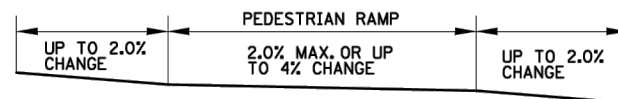
SECTION VIEW A-A THICKENED SECTION THROUGH CURB RAMP FLARES



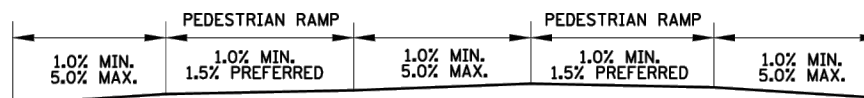
TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER



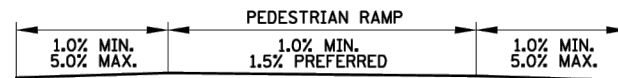
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



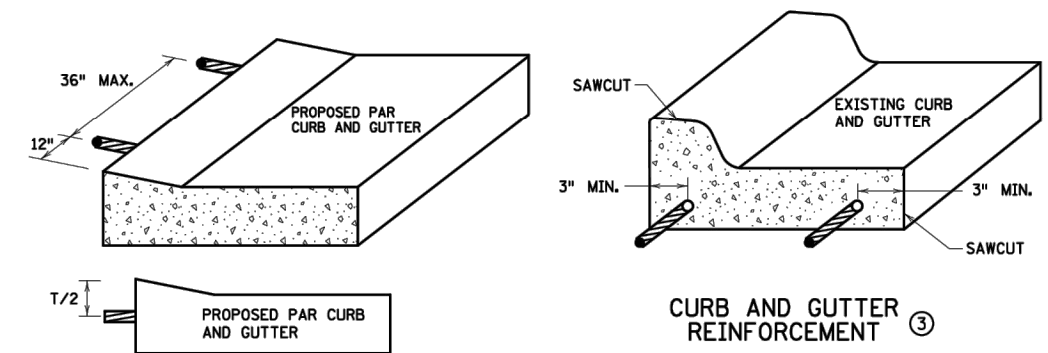
FLOW LINE PROFILE "TABLE" - FAN



FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS

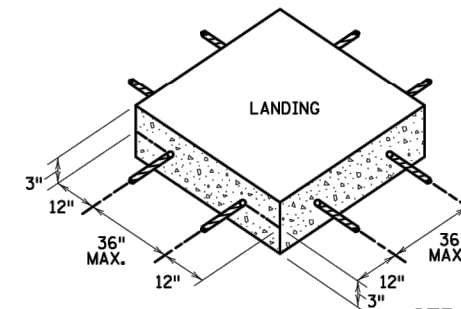


FLOW LINE PROFILE RAISE - FAN



CURB RAMP REINFORCEMENT DETAILS

CURB AND GUTTER REINFORCEMENT



SEPARATE LANDING POUR REINFORCEMENT

GENERAL NOTES:

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK, IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
- 2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
- 3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
- 4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
- 2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
- 3) 5.0% RECOMMENDED MAX. FLOW LINE
- 4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

NOTES:

- 1) TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- 2) DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) AT 36" MAXIMUM CENTER TO CENTER MINIMUM 12" SPACING FROM CONSTRUCTION JOINTS. BARS TO BE ADJUSTED TO MATCH RAMP GRADE. BARS TO BE PAID BY EACH.
- 3) DRILL AND GROUT 2 - NO. 4 X 12" LONG (6" EMBEDDED) REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS. BARS TO BE PAID BY EACH.
- 4) THIS CURB LINE REINFORCEMENT DETAIL SHALL BE USED ON BITUMINOUS ROADWAYS. FOR CONCRETE ROADWAYS, SEE NOTE 6.
- 5) CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.
- 6) USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.

REVISION:

APPROVED: 11-04-2021

Jeff J. Perkins
JEFFREY J. PERKINS
OPERATIONS DIVISION

m MINNESOTA
DEPARTMENT OF TRANSPORTATION

STANDARD PLAN 5-297.250 6 OF 6

APPROVED: 11-04-2021
REVISOR:

Tom Styrbicki
THOMAS STYRBICKI
STATE DESIGN ENGINEER

STATE PROJ. NO. () SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
DETAIL PLATES
PED RAMP DETAILS PLATES

SHEET

C1.16

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.

Jeffrey J. Weyandt
JEFFREY J. WEYANDT
43342 DATE 8/13/2024



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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN R100001 (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: <https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

- Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
- There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
 - Types and/or Locations of BMPs
 - Material Storage and Spill Response
 - Fueling Plans
 - Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
 - Project Phasing
- It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
- The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP during active construction and within 24-hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24-hours after a rainfall event, the next inspection must be conducted at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

- Inspections of areas with permanent cover to be reduced to once per month,
- Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
- Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

- All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
- Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
- Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
- Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

- Substantial Completion has been reached and no ground disturbing activities are anticipated.
- Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.

- Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
- All sediment has been removed from conveyance systems
- All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
- For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
- For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	7 calendar days
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SITE INSPECTION INTERVAL:

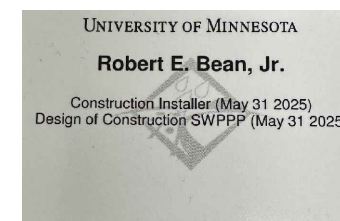
A trained person shall routinely inspect the entire construction site during active construction at an interval of no more than:	7 calendar days
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SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

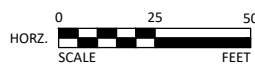
1) Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
2) Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3) Does any portion of this site discharge to a Calcareous fen.	NO
4) Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5) Have any Karst features been identified in the project vicinity?	NO
6) Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7) Has the MN DNR promulgated "work in water restrictions" for any Public Water this site discharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	PENDING

SWPPP DESIGNER TRAINING DOCUMENTATION:



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Jeffrey J. Weyandt
 JEFFREY J. WEYANT
 P.E. NO. 43342 DATE 2/13/2024



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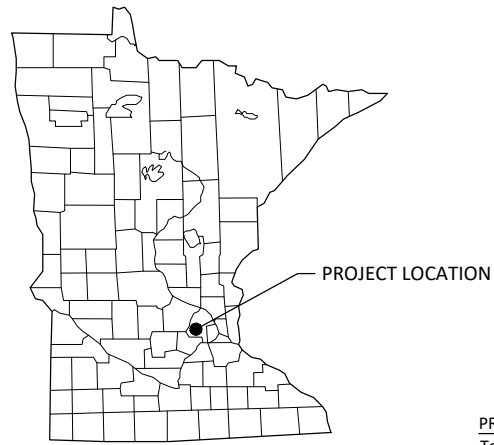
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 EROSION CONTROL & TURF ESTABLISHMENT
 SWPPP NARRATIVE

SHEET

C2.01

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

2024 STREET RECONSTRUCTION CITY OF MAPLE PLAIN HENNEPIN COUNTY, MINNESOTA



LEGEND	
	1-MILE BOUNDARY
	PROJECT BOUNDARY
	OR IMPAIRED, SPECIAL OR PROTECTED WATERS
	NATIONAL WETLANDS INVENTORY
	CALCAREOUS FEN
	RECEIVING WATERS

PROJECT AREAS:

Total Project Size (disturbed area) =	4.8	ACRES
Existing area of impervious surface =	3.5	ACRES
Post construction area of impervious surface =	3.6	ACRES
Total new impervious surface area created =	0.1	ACRES

Planned Construction Start Date: 06/01/2024
Estimated Construction Completion Date: 12/01/2024

PERMANENT STORMWATER MANAGEMENT SYSTEM:
Type of storm water management used if more than 1 acre of new impervious surface is created:

X	Wet Sedimentation Basin
	Infiltration/Filtration
	Regional Pond
	Permanent Stormwater Management Not Required

PROJECT LOCATION:

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
HENNEPIN	T118N	R24W	24	45.0087°	-93.6498°
HENNEPIN	T118N	R24W	25	45.0067°	-93.6615°

BMP SUMMARY	QUANTITY	UNIT
CATCH BASIN INLET PROTECTION	26	EA
STABILIZED CONSTRUCTION EXIT/ENTRANCE	4	EA
EROSION CONTROL BLANKET	400	SY
BFM HYDROMULCH W/ MNDOT SEED MIX 25-131	2600	SY
SODDING, TYPE LAWN	11075	SY

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Site grading, sanitary sewer and water main replacements, temporary erosion and sediment control, and permanent stabilization.

Stormwater currently is split between two major water sheds. Wyman-Bryant section and the west half of the Independence Street section all drain northeast via curb, gutter, and storm sewer to Pioneer Creek in the Pioneer-Sarah Creek Watershed. The west half of Independence Street drains to Lake Katrina in Minnehaha Creek Watershed.

After construction is complete stormwater will continue with the same routing, but will have additional flow coming from Wyman-Bryant section caused by a necessary width matching of Wyman Avenue.

This project includes the following stormwater management BMPs; inlet protection placed at catch basins, stabilized construction entrances, erosion control blanket, seeding, sodding, and an infiltration basin on the northeast end of Independence Street.



RECEIVING WATERS:
Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds, within 1-mile of the project boundary are identified on the USGS 7.5 min quad map above. Receiving waters that are impaired, the impairment, and WLA are listed as follows. All specific BMPs relative to construction activities listed in the permit for special, prohibited, restricted, or impaired have been incorporated into this plan. All specific BMPs listed in approved TMDLs and those BMPs listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water ¹	Flows to Impaired Water Within 1-Mile ²	USEPA Approved Construction Related TMDL ³
PIONEER CREEK	CREEK	NO	YES	YES
LAKE INDEPENDENCE	LAKE	NO	YES	YES
PAINTER CREEK	CREEK	NO	YES	YES

¹ Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).

² Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

³ Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

- 1) Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
- 2) Install perimeter sediment control, inlet protection, and construction exit.
- 3) Reconstruct streets and utilities per plan.
- 4) Add additional temporary BMPs as necessary during construction based on inspection reports.
- 5) Ensure final stabilization measures are complete.
- 6) Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
- 7) Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

RESPONSIBLE PARTIES:

The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	CITY OF MAPLE PLAIN	JACOB KOLANDER	763-479-0516
SWPPP DESIGNER:	Bolton & Menk, Inc.	BOB BEAN	952-448-8838
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	CITY OF MAPLE PLAIN	JACOB KOLANDER	763-479-0516

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION

Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION

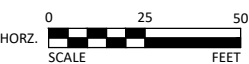
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS

All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.



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Jeffrey J. Weyandt
JEFFREY J. WEYANT
41342
DATE 8/13/2024



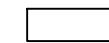
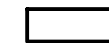





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RAN			
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
SWPPP PLAN



LEGEND

-  PROJECT BOUNDARY
-  SOIL TYPE
-  IMPAIRED, SPECIAL OR PROTECTED WATERS
-  NATIONAL WETLANDS INVENTORY
-  DWSMA, LOW VULNERABILITY
-  STEEP SLOPES (>33.3%)
-  RECEIVING WATERS



SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group	Erodibility
L23A	Cordova	C/D	NHEL
L25A	Le Sueur	B/D	NHEL
L26A	Shorewood	C/D	NHEL
L35A	Lerdal	C/D	NHEL
L40B	Kilkenny	C/D	NHEL
L9A	Minnetonka	C/D	NHEL

NHEL - Not Highly Erodible Land
 PHEL - Potentially Highly Erodible Land
 HEL - Highly Erodible Land

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	SHEET NO.
SITE MAP	C2.01
DIRECTION OF FLOW	C2.04-C2.08
FINAL STABILIZATION	C2.04-C2.08
SOILS	C2.03
DRAINAGE STRUCTURES	C5.01-C5.06
STORM SEWER PLAN & PROFILE SHEETS	C5.01 - C5.06
EROSION & SEDIMENT CONTROL DETAILS	C2.04-C2.08
EROSION CONTROL TABULATION	C2.02
NARRATIVE & NOTES	C2.01 - C2.02

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 P.E. NO. 41342 DATE 6/13/2024




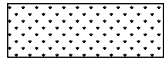

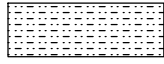

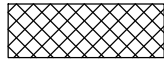
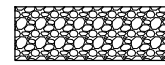
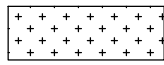
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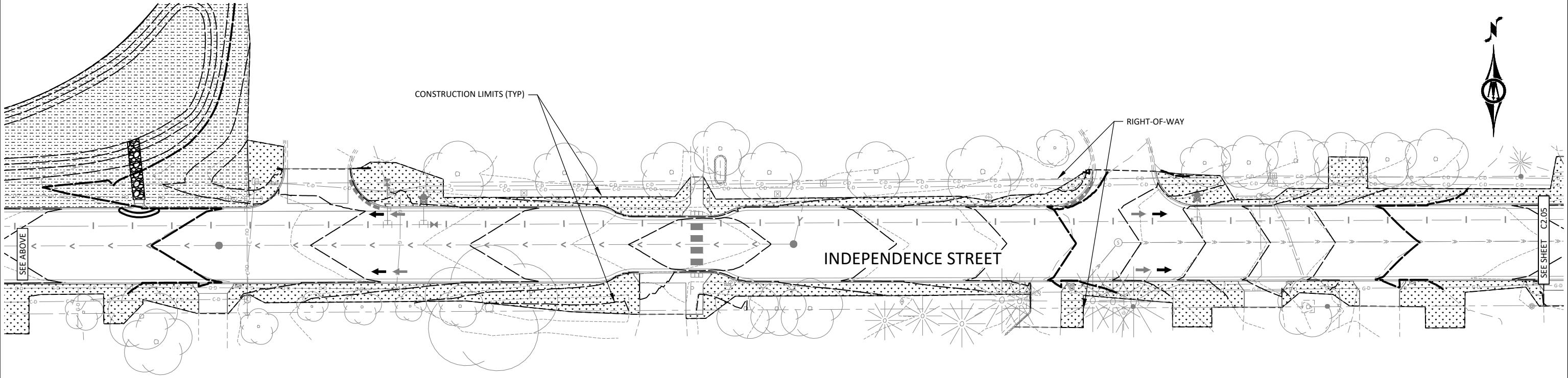
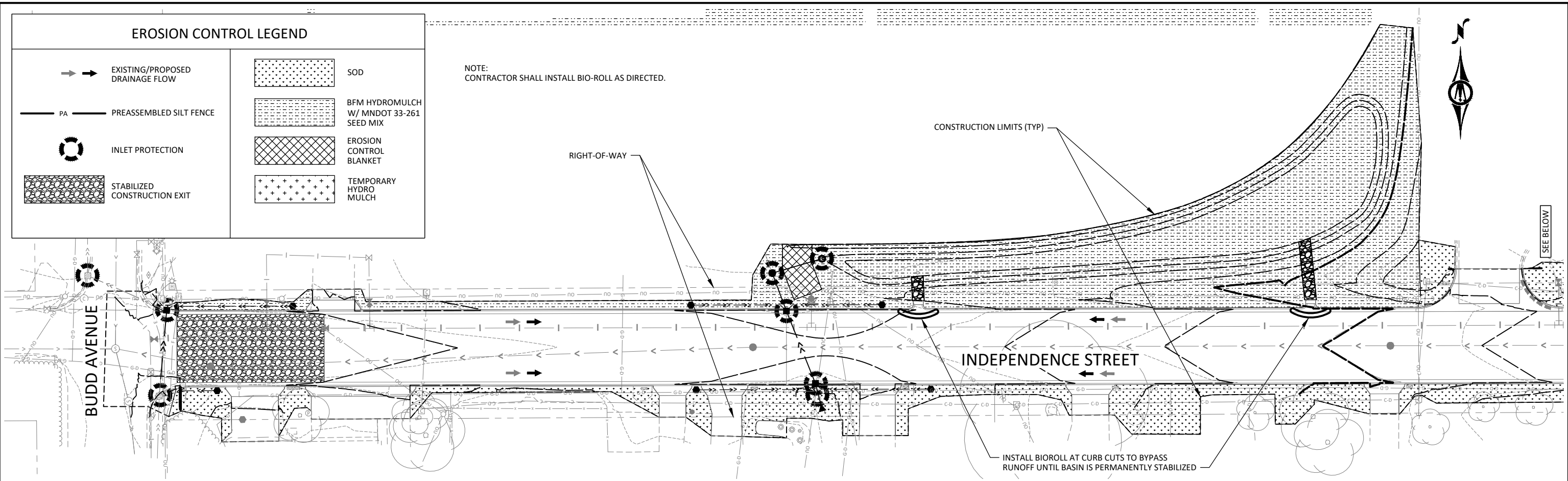
MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
SWPPP SOILS

SHEET
C2.03

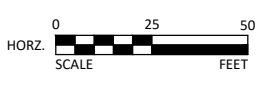
EROSION CONTROL LEGEND

	EXISTING/PROPOSED DRAINAGE FLOW		SOD
	PREASSEMBLED SILT FENCE		BFM HYDROMULCH W/ MNDOT 33-261 SEED MIX
	INLET PROTECTION		EROSION CONTROL BLANKET
	STABILIZED CONSTRUCTION EXIT		TEMPORARY HYDRO MULCH

NOTE:
CONTRACTOR SHALL INSTALL BIO-ROLL AS DIRECTED.



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JEFFREY J. WEYANDT
P.E. NO. 43342 DATE 6/13/2024

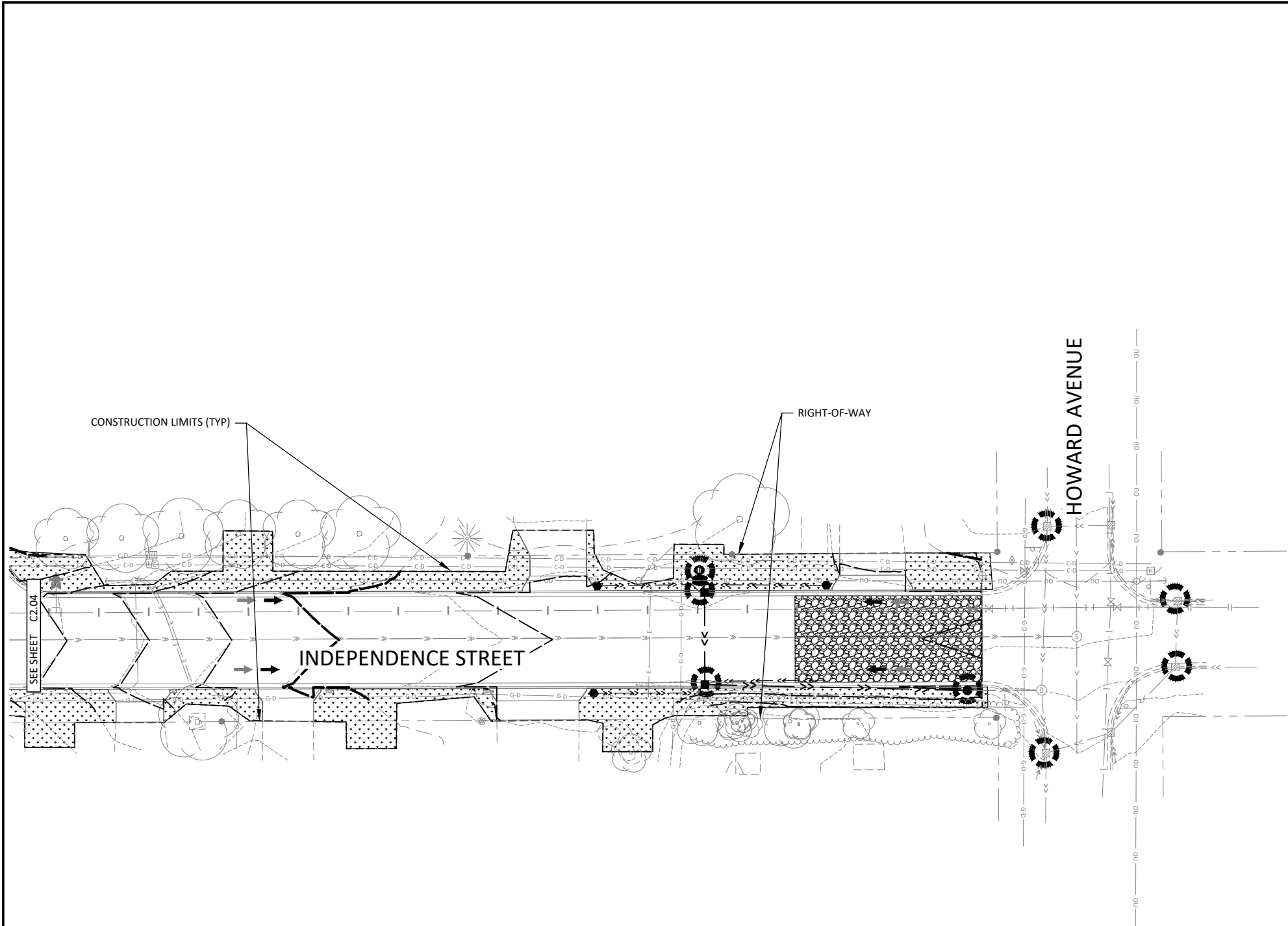


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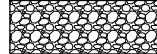

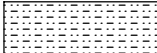

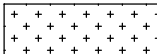
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2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
INDEPENDENCE STREET

SHEET
C2.04

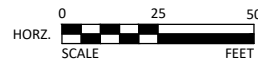


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EROSION CONTROL LEGEND	
	EXISTING/PROPOSED DRAINAGE FLOW
	PREASSEMBLED SILT FENCE
	INLET PROTECTION
	STABILIZED CONSTRUCTION EXIT
	SOD
	BFM HYDROMULCH W/ MNDOT 33-261 SEED MIX
	EROSION CONTROL BLANKET
	TEMPORARY HYDRO MULCH

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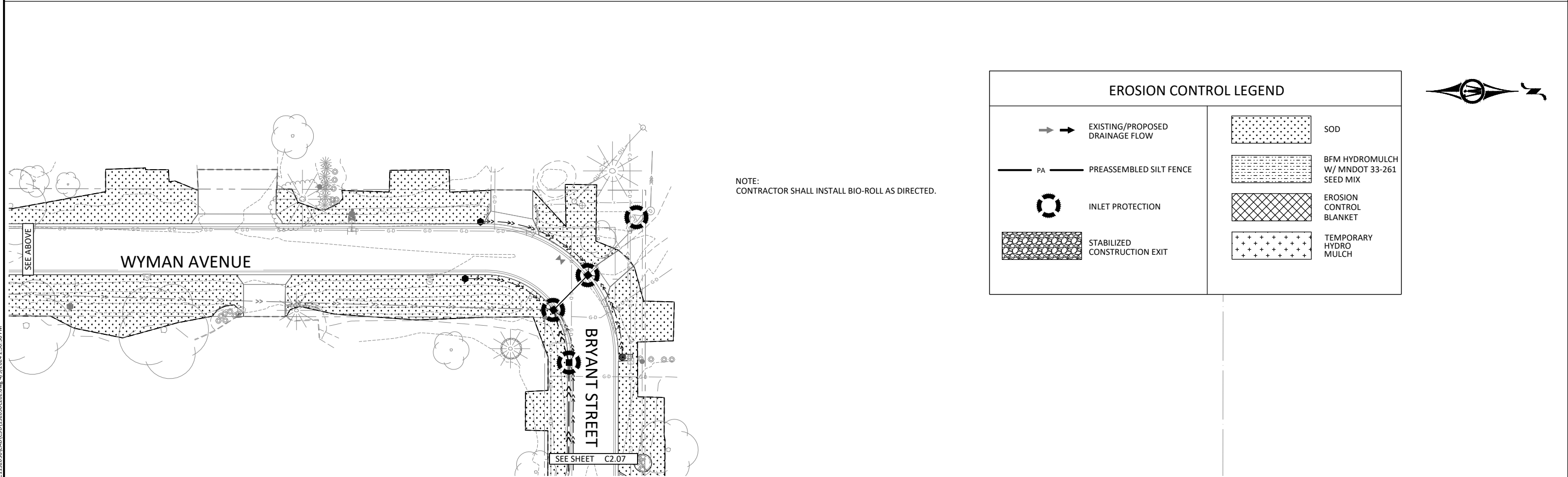
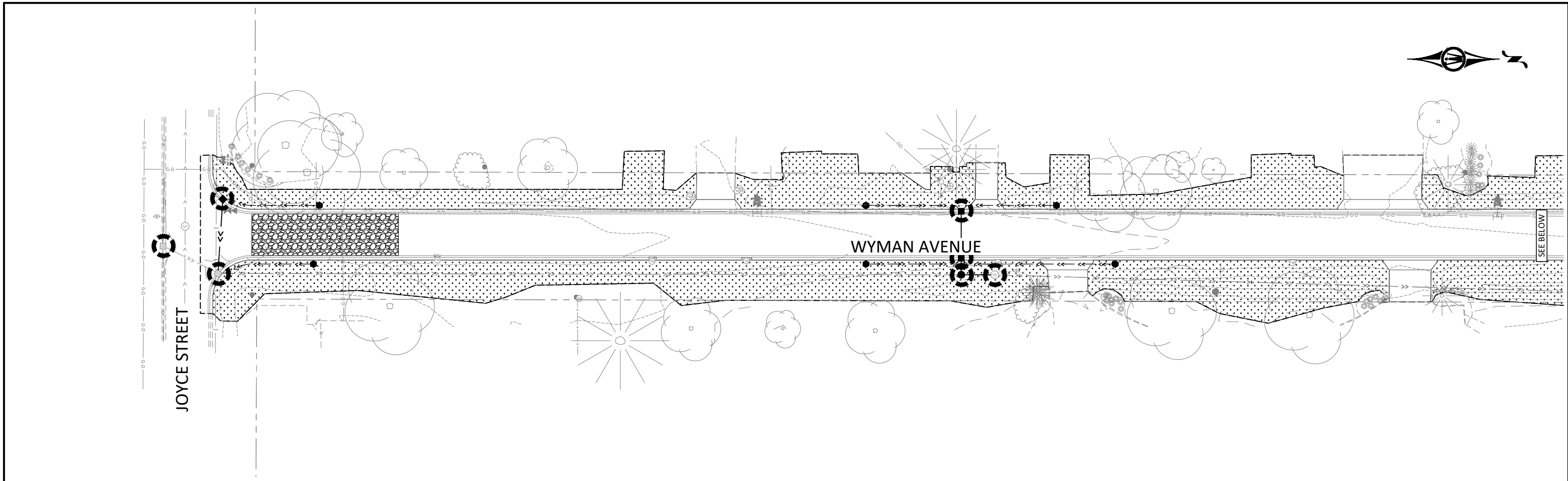


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2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
INDEPENDENCE STREET

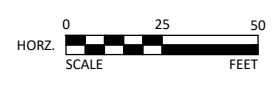
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	INLET PROTECTION
	STABILIZED CONSTRUCTION EXIT
	SOD
	BFM HYDROMULCH W/ MNDOT 33-261 SEED MIX
	EROSION CONTROL BLANKET
	TEMPORARY HYDRO MULCH

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 P.E. NO. 41342 DATE 8/13/2024

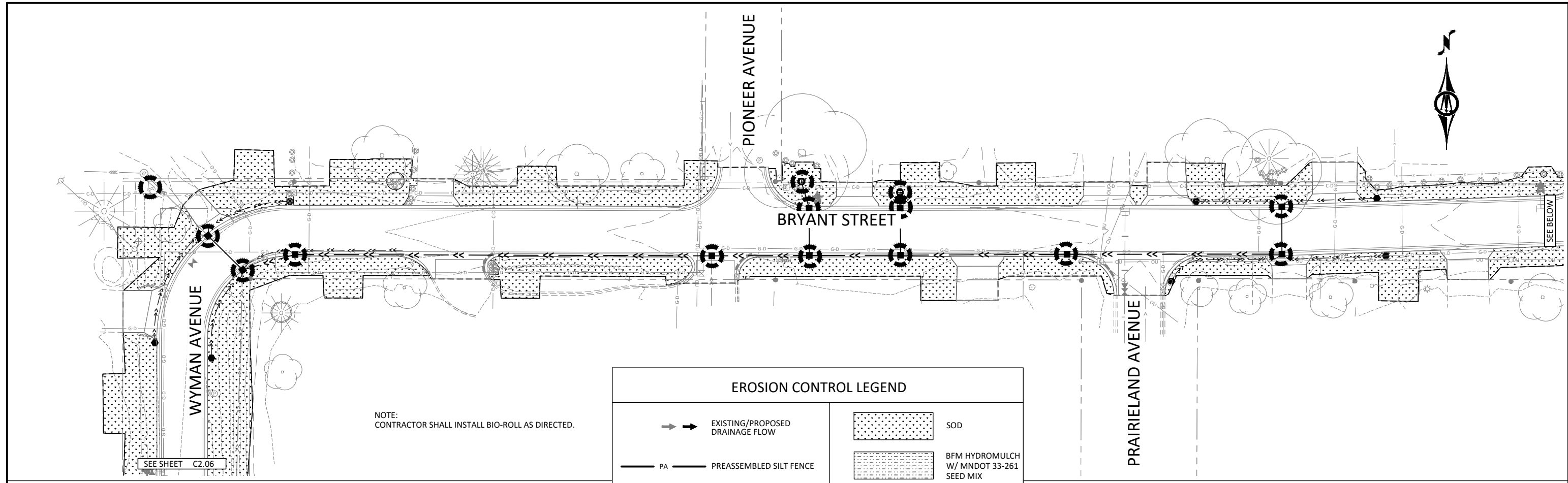


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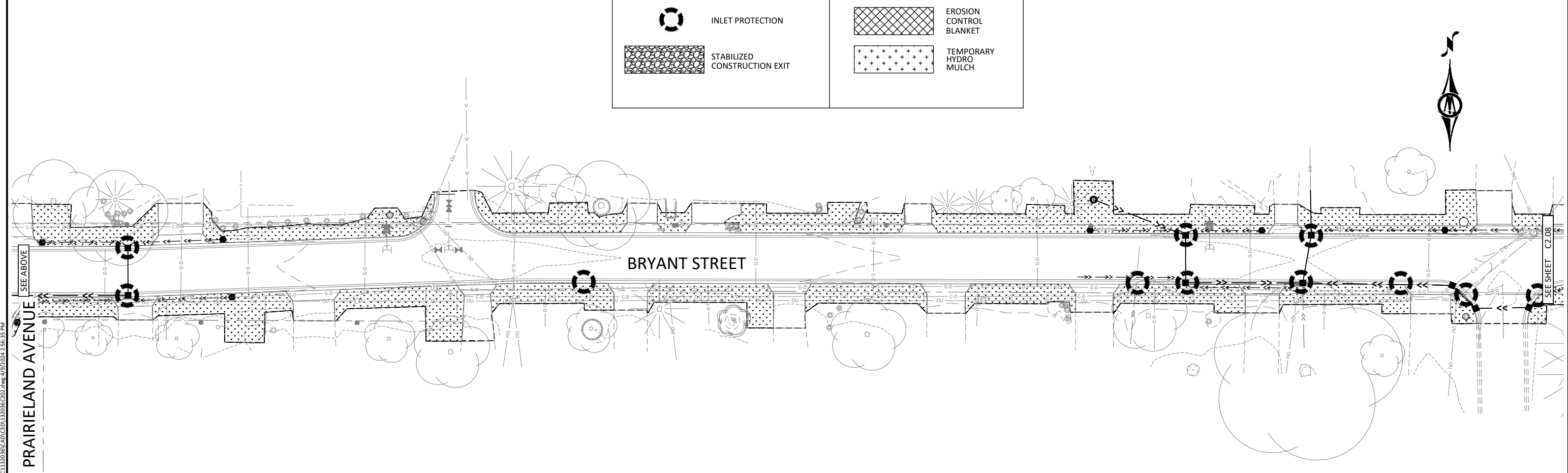
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 EROSION CONTROL & TURF ESTABLISHMENT
 WYMAN AVENUE

SHEET
C2.06



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EROSION CONTROL LEGEND	
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	PREASSEMBLED SILT FENCE
	INLET PROTECTION
	STABILIZED CONSTRUCTION EXIT
	SOD
	BFM HYDROMULCH W/ MNDOT 33-261 SEED MIX
	EROSION CONTROL BLANKET
	TEMPORARY HYDRO MULCH



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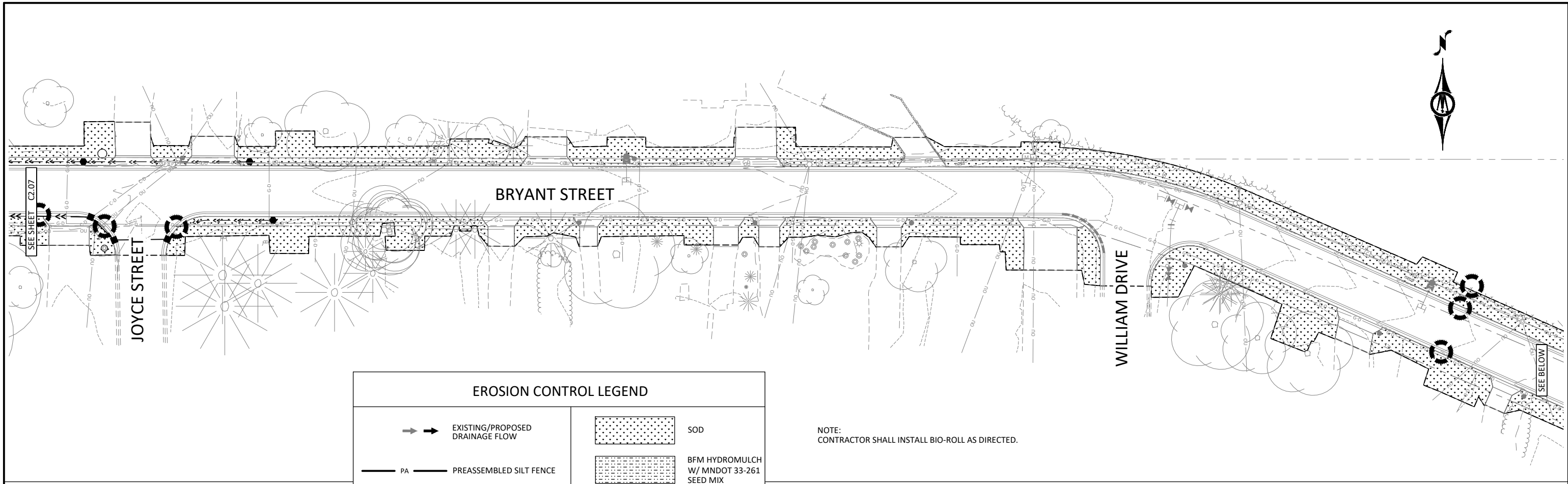


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2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
BRYANT STREET

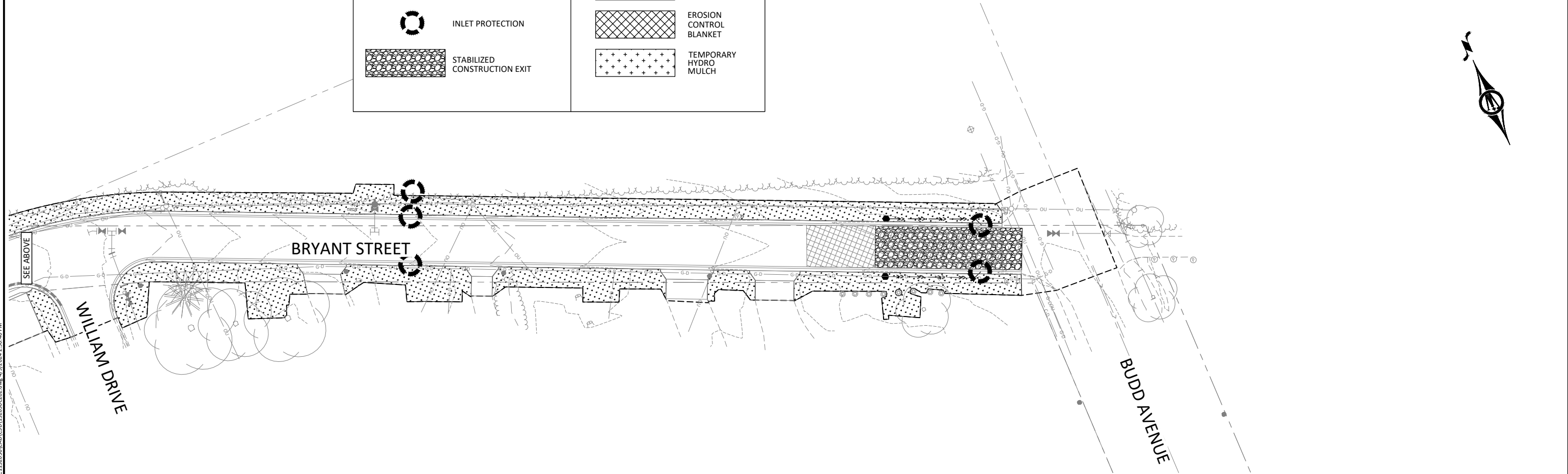
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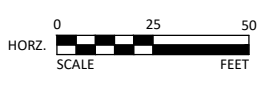
EROSION CONTROL LEGEND

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	PREASSEMBLED SILT FENCE		BFM HYDROMULCH W/ MNDOT 33-261 SEED MIX
	INLET PROTECTION		EROSION CONTROL BLANKET
	STABILIZED CONSTRUCTION EXIT		TEMPORARY HYDRO MULCH

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P.E. NO. 41342 DATE 8/13/2024



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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
BRYANT STREET

SHEET
C2.08


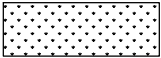

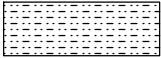


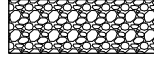
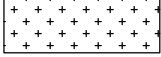
RAINBOW PARK

PARKVIEW ROAD

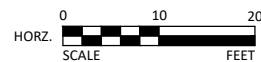
CONSTRUCTION LIMITS (TYP.)

NOTE:
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EROSION CONTROL LEGEND

	EXISTING/PROPOSED DRAINAGE FLOW		SOD
	PREASSEMBLED SILT FENCE		BFM HYDROMULCH W/ MNDOT 33-261 SEED MIX
	INLET PROTECTION		EROSION CONTROL BLANKET
	STABILIZED CONSTRUCTION EXIT		TEMPORARY HYDRO MULCH

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JEFFREY J. WEYANDT
P.E. NO. 43342 DATE 6/13/2024



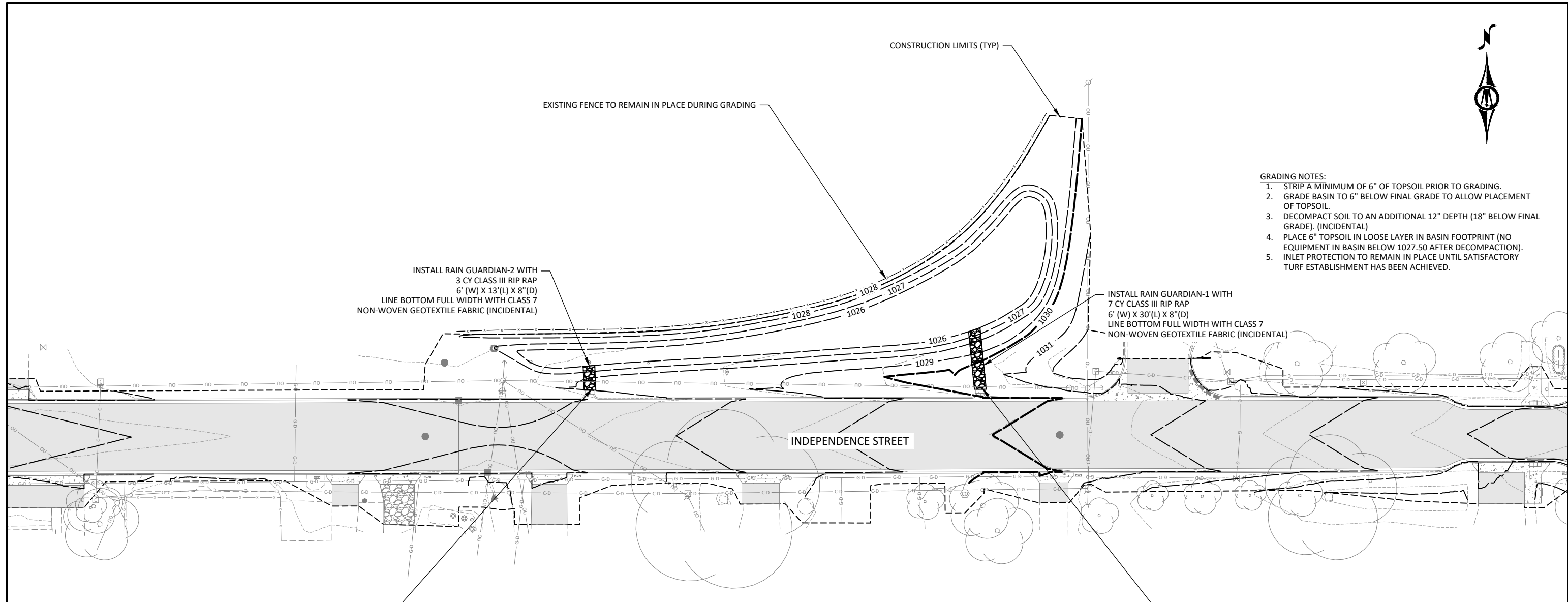
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CHECKED	JJW		
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
EROSION CONTROL & TURF ESTABLISHMENT
RAINBOW PARK PARKING LOT

SHEET
C2.09



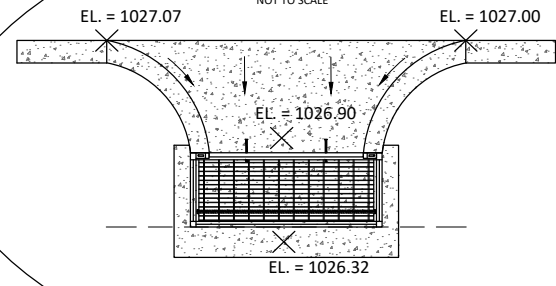
- GRADING NOTES:**
1. STRIP A MINIMUM OF 6" OF TOPSOIL PRIOR TO GRADING.
 2. GRADE BASIN TO 6" BELOW FINAL GRADE TO ALLOW PLACEMENT OF TOPSOIL.
 3. DECOMPACT SOIL TO AN ADDITIONAL 12" DEPTH (18" BELOW FINAL GRADE). (INCIDENTAL)
 4. PLACE 6" TOPSOIL IN LOOSE LAYER IN BASIN FOOTPRINT (NO EQUIPMENT IN BASIN BELOW 1027.50 AFTER DECOMPACTION).
 5. INLET PROTECTION TO REMAIN IN PLACE UNTIL SATISFACTORY TURF ESTABLISHMENT HAS BEEN ACHIEVED.

INSTALL RAIN GUARDIAN-2 WITH
3 CY CLASS III RIP RAP
6' (W) X 13'(L) X 8"(D)
LINE BOTTOM FULL WIDTH WITH CLASS 7
NON-WOVEN GEOTEXTILE FABRIC (INCIDENTAL)

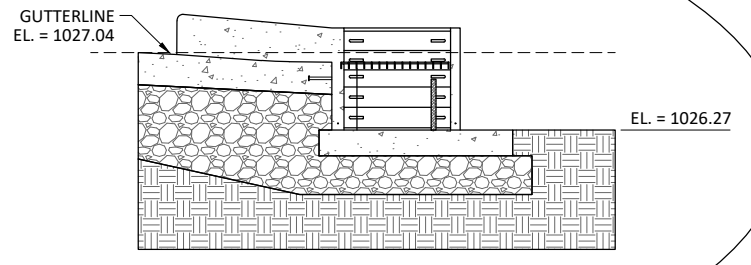
INSTALL RAIN GUARDIAN-1 WITH
7 CY CLASS III RIP RAP
6' (W) X 30'(L) X 8"(D)
LINE BOTTOM FULL WIDTH WITH CLASS 7
NON-WOVEN GEOTEXTILE FABRIC (INCIDENTAL)

INDEPENDENCE STREET

RAIN GUARDIAN-2 PLAN VIEW
NOT TO SCALE

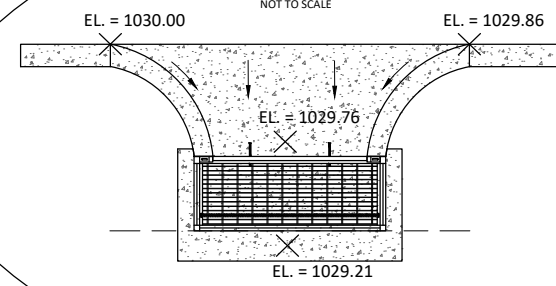


RAIN GUARDIAN-2 PROFILE VIEW
NOT TO SCALE

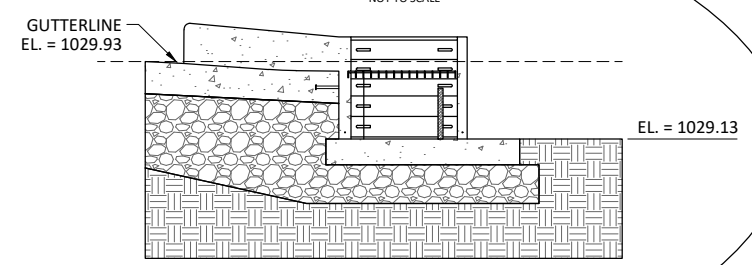


NOTE:
REFER TO SHEET C1.08 FOR FULL RAIN GUARDIAN DETAILS

RAIN GUARDIAN-1 PLAN VIEW
NOT TO SCALE

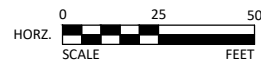


RAIN GUARDIAN-1 PROFILE VIEW
NOT TO SCALE



NOTE:
REFER TO SHEET C1.08 FOR FULL RAIN GUARDIAN DETAILS

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342 DATE 8/13/2024

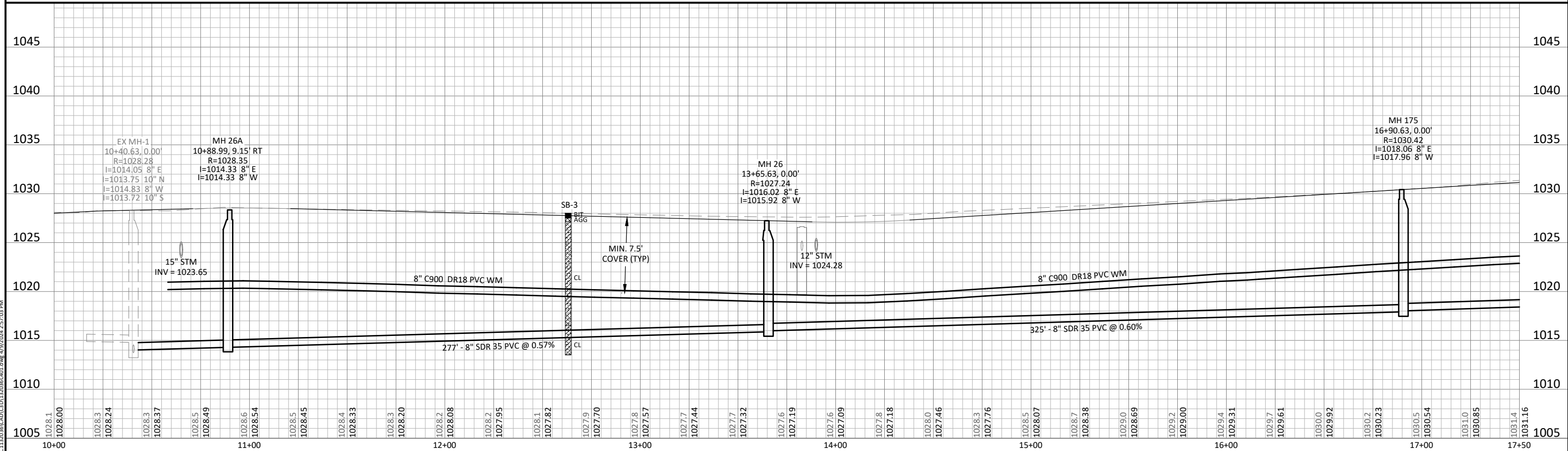
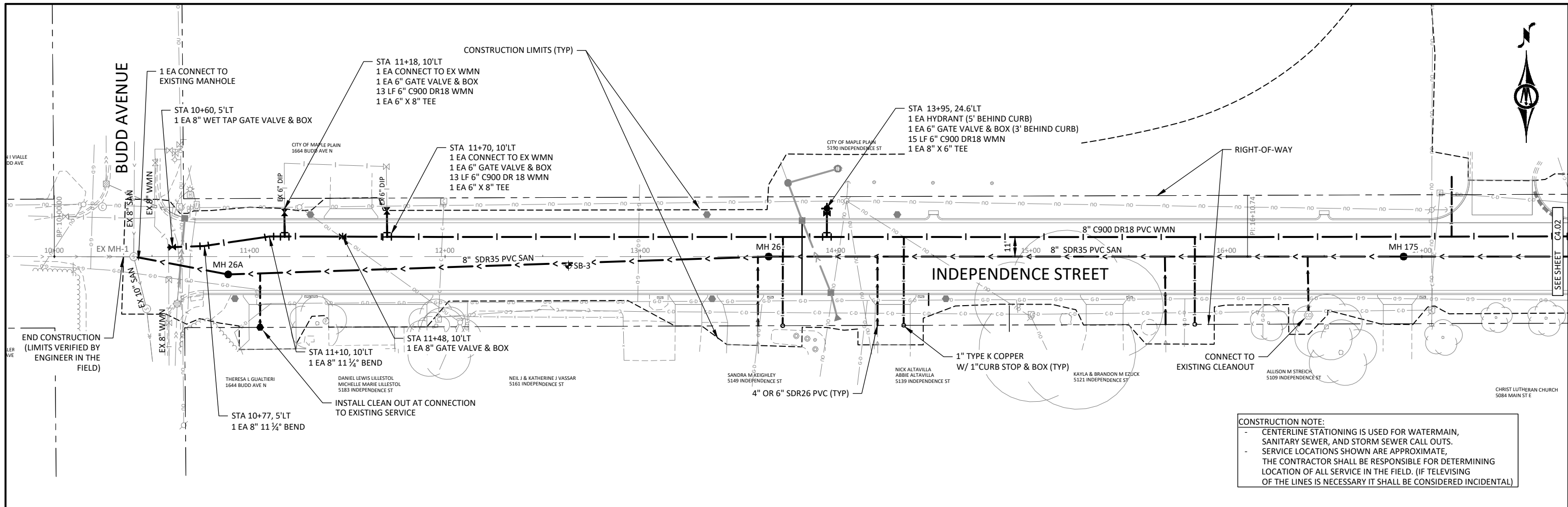


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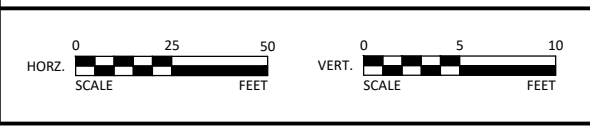
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RAN			
DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	OC1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
GRADING
BIORETENSION BASIN GRADING

SHEET
C3.01

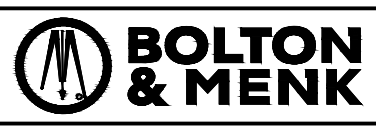


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JEFFREY J. WEYANDT
41342
DATE: 4/13/2024

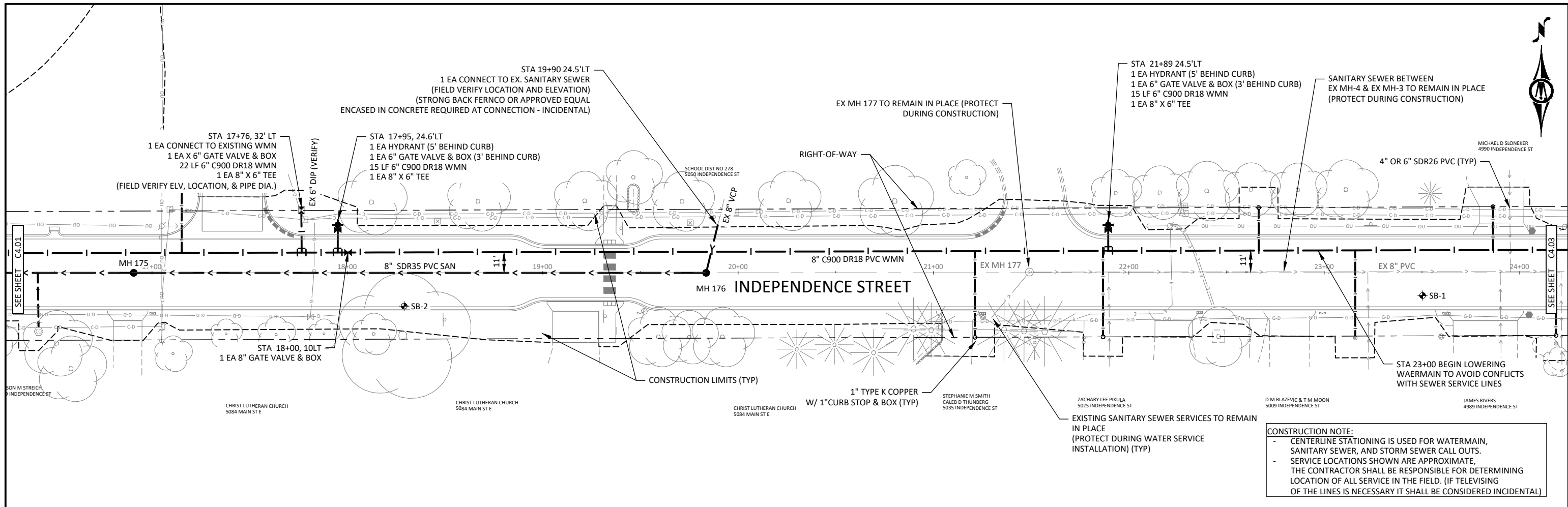


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CHECKED	JJW		
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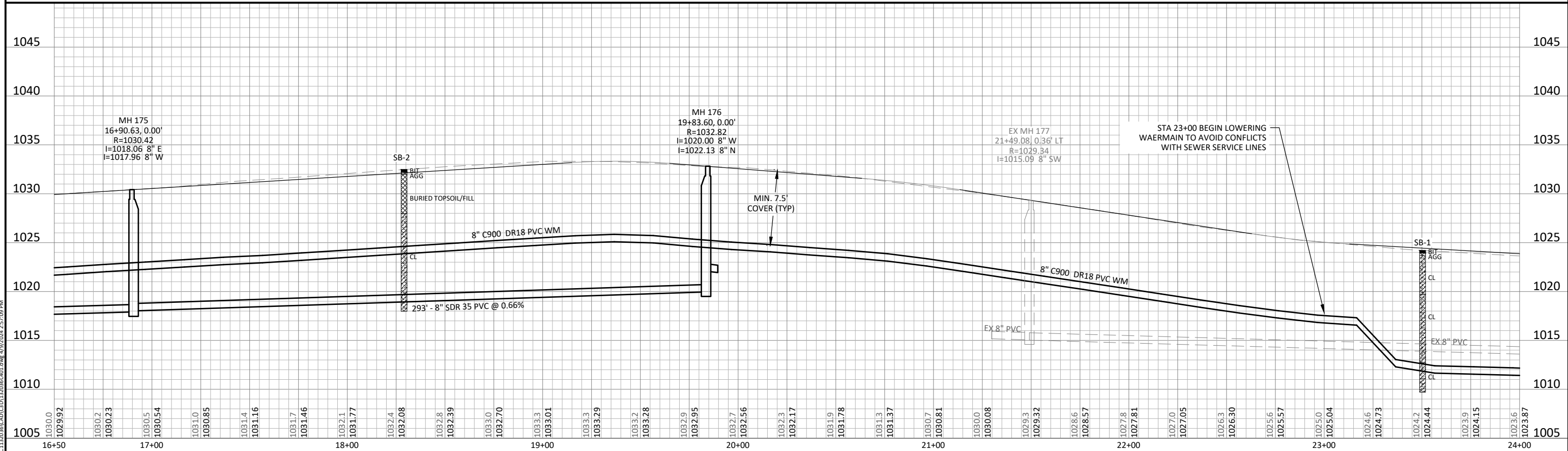
MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
SANITARY & WATER PLAN
INDEPENDENCE STREET

SHEET
C4.01

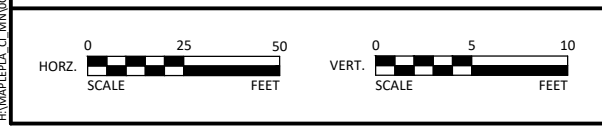


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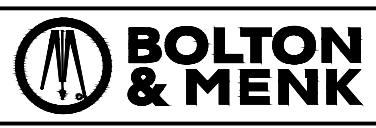
- CENTERLINE STATIONING IS USED FOR WATERMAIN, SANITARY SEWER, AND STORM SEWER CALL OUTS.
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Jeffrey J. Weyandt
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 P.E. NO. 43342 DATE 8/13/2024

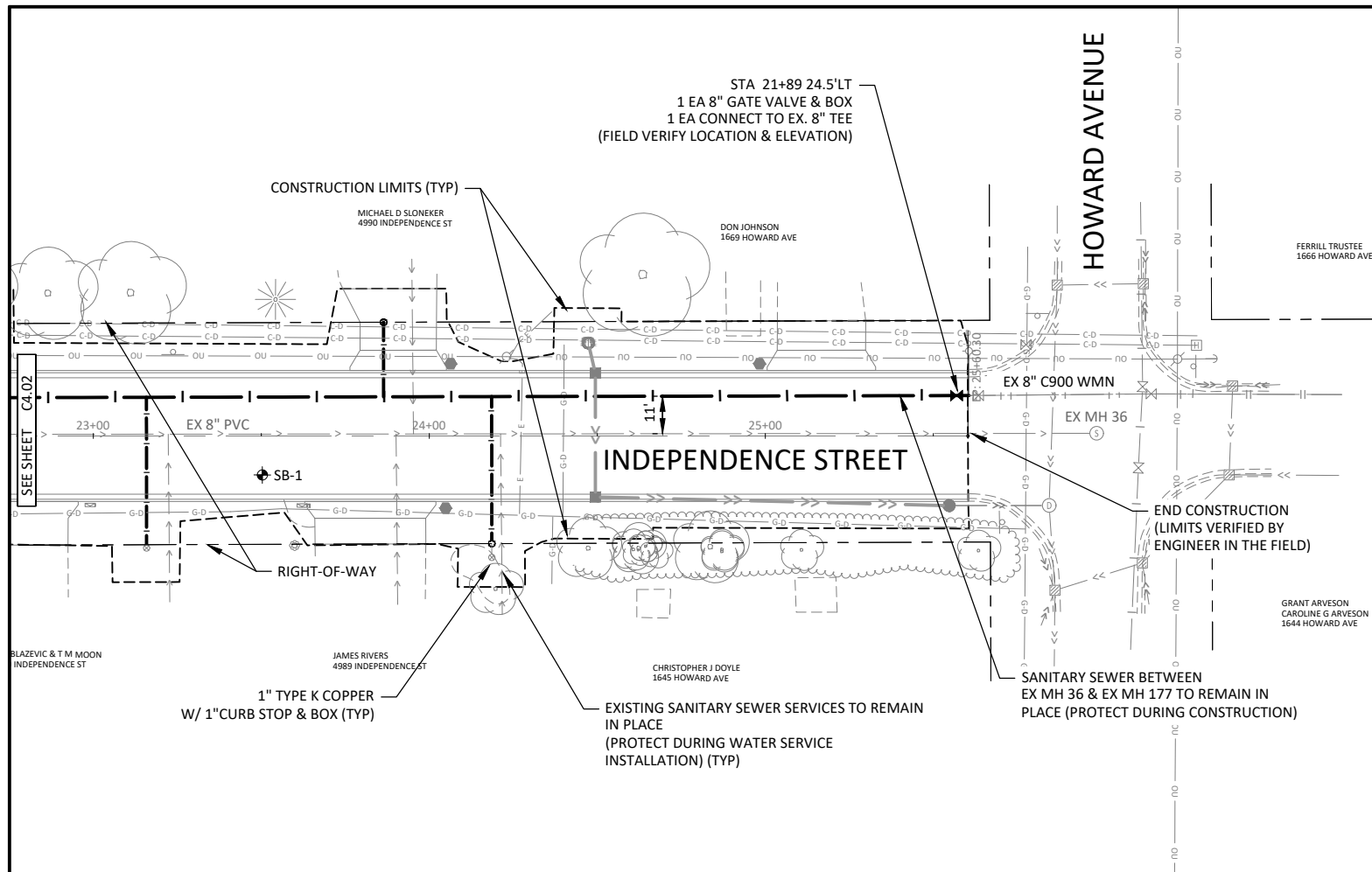


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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

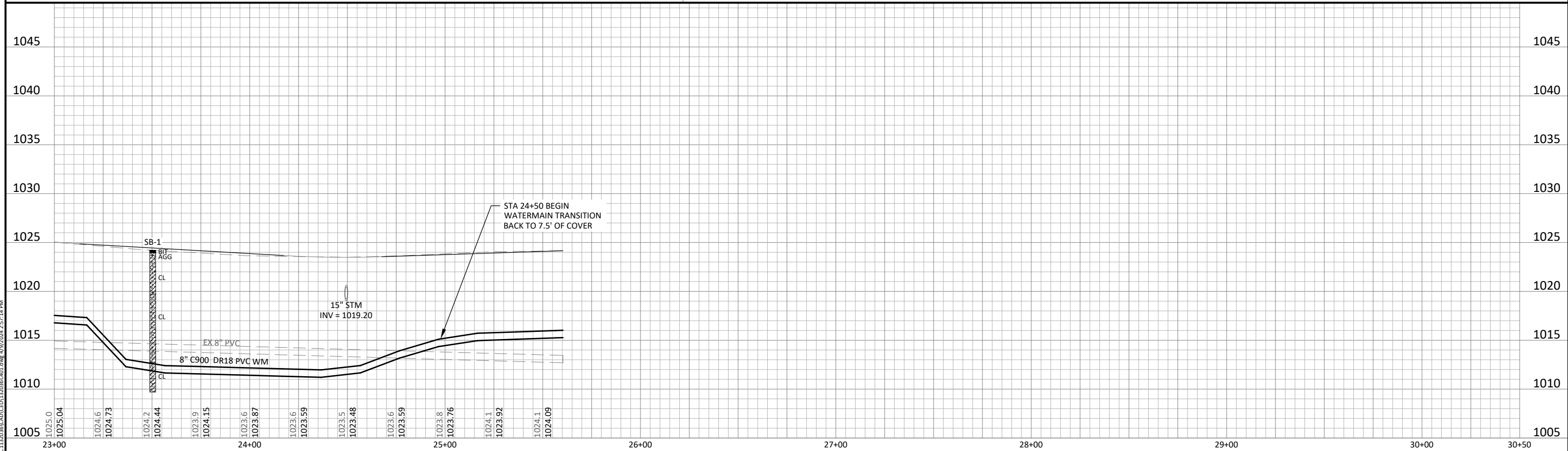
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 SANITARY & WATER PLAN
 INDEPENDENCE STREET

SHEET
C4.02

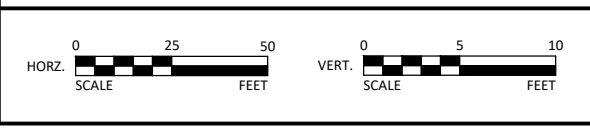


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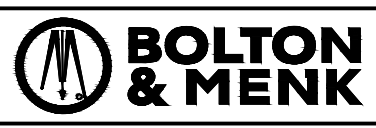


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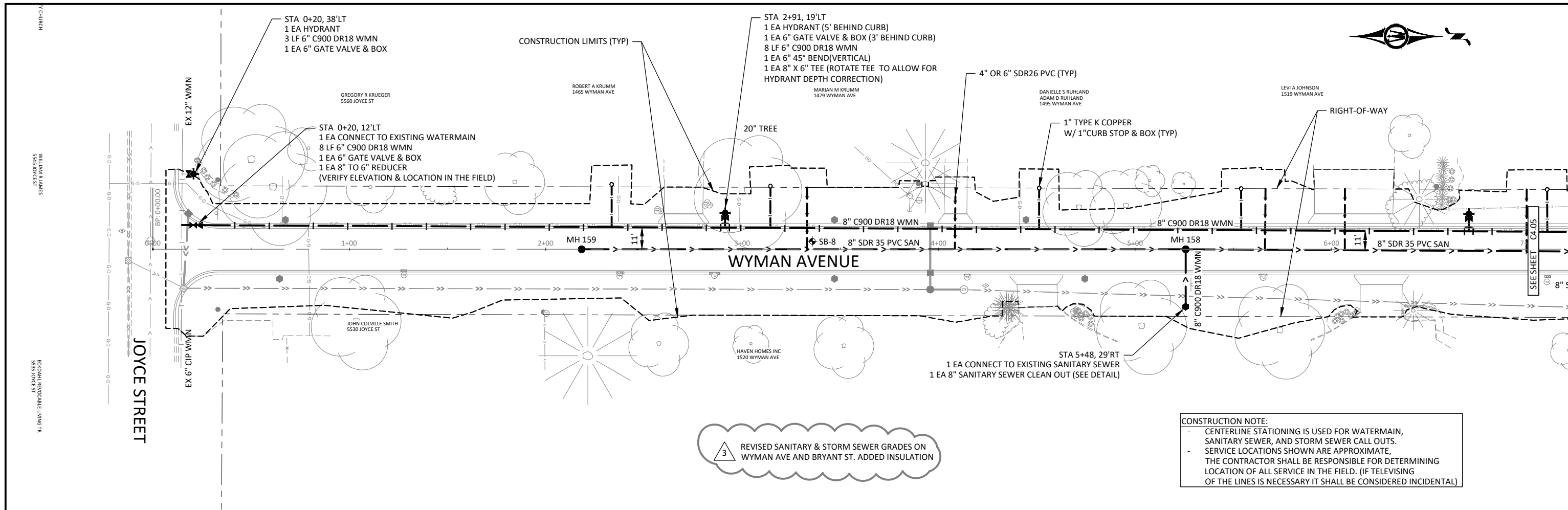


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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

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 2024 STREET RECONSTRUCTION PROJECT
 SANITARY & WATER PLAN
 INDEPENDENCE STREET

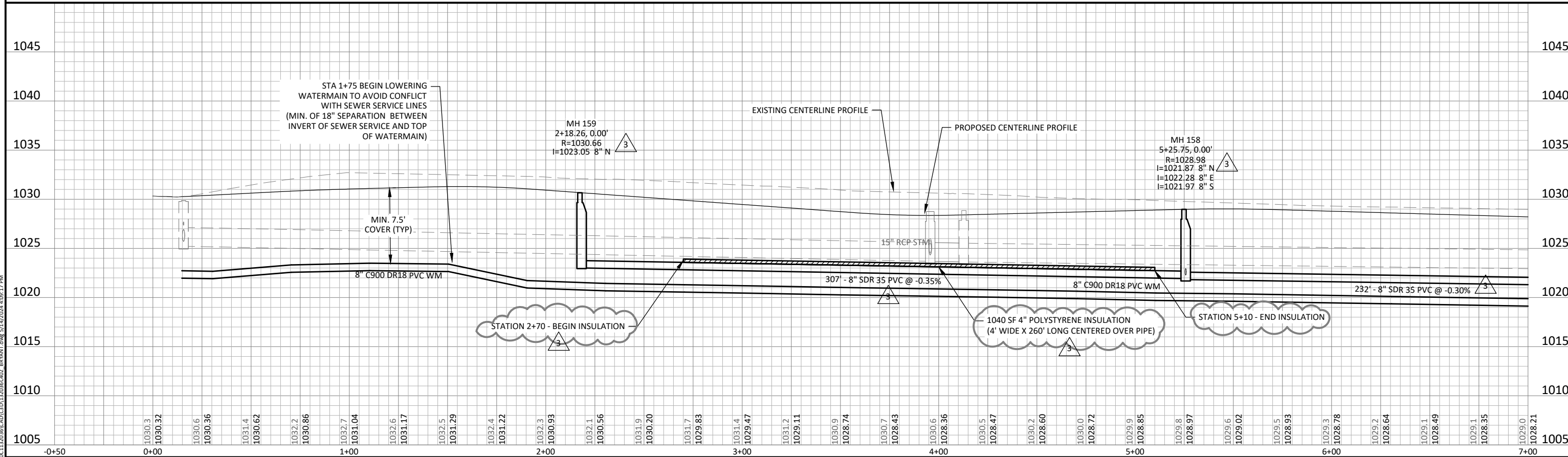
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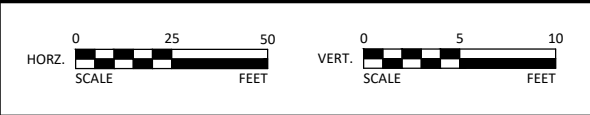
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3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION



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 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 5/13/2024



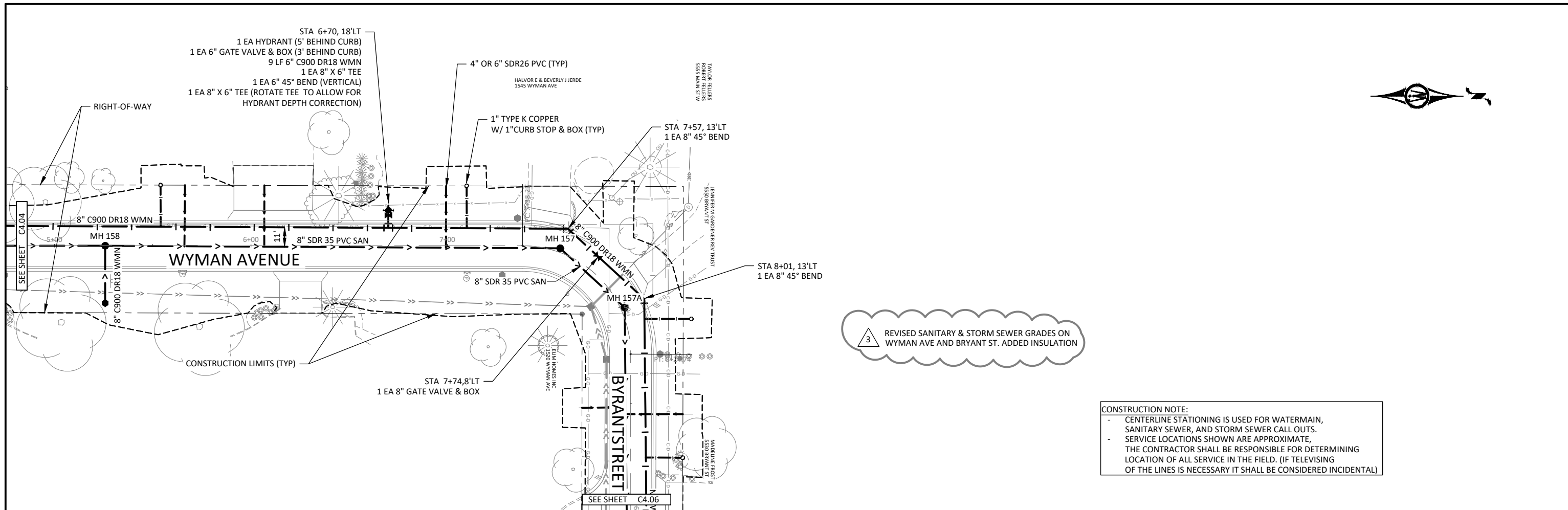
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JJW	3	SAN REV	5/14/24
JJW	4	SAN LINER	5/14/24

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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 SANITARY & WATER PLAN
 WYMAN AVENUE

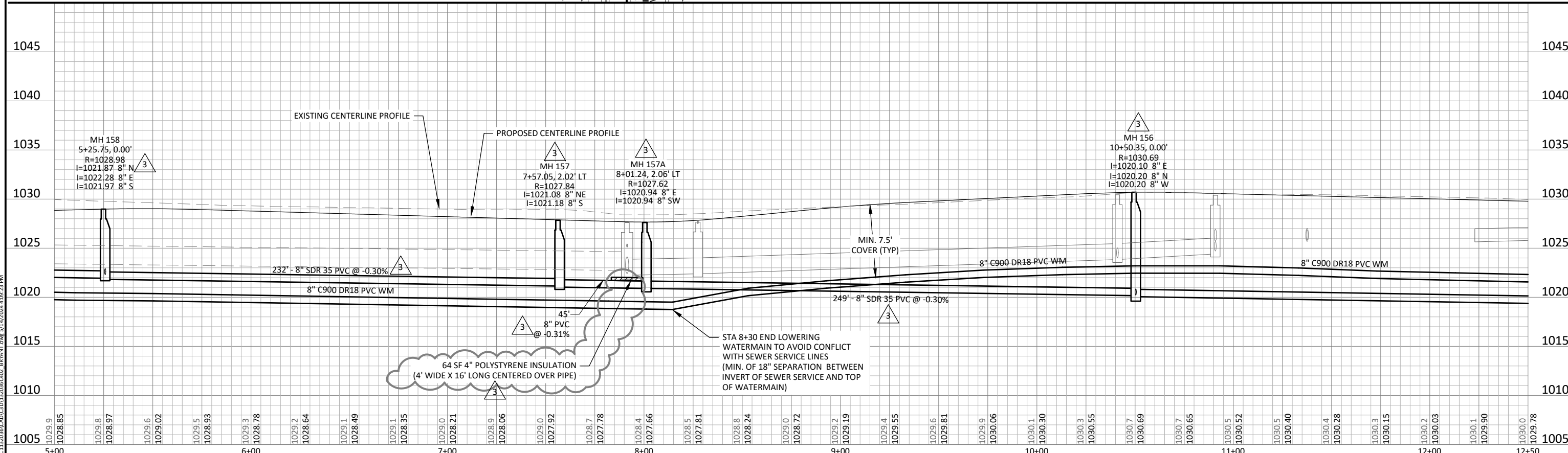
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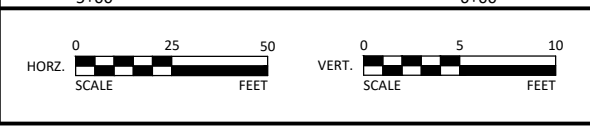
3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION

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41342
DATE 5/13/2024



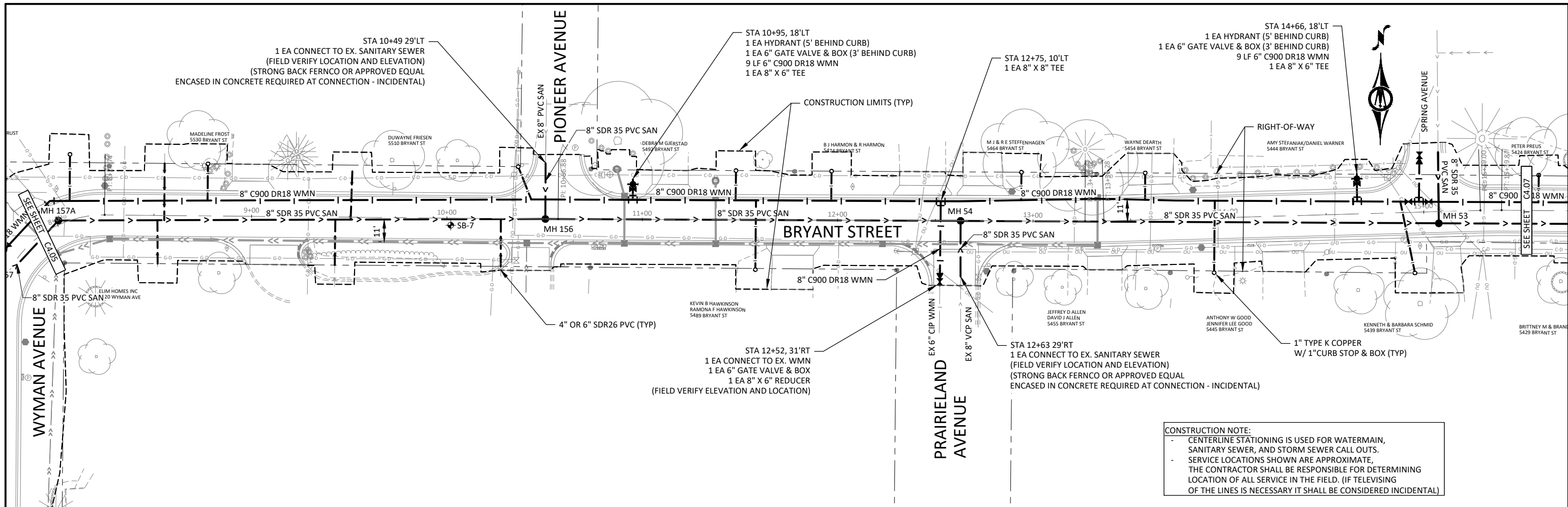
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JJW	4	SAN LINER	5/14/24

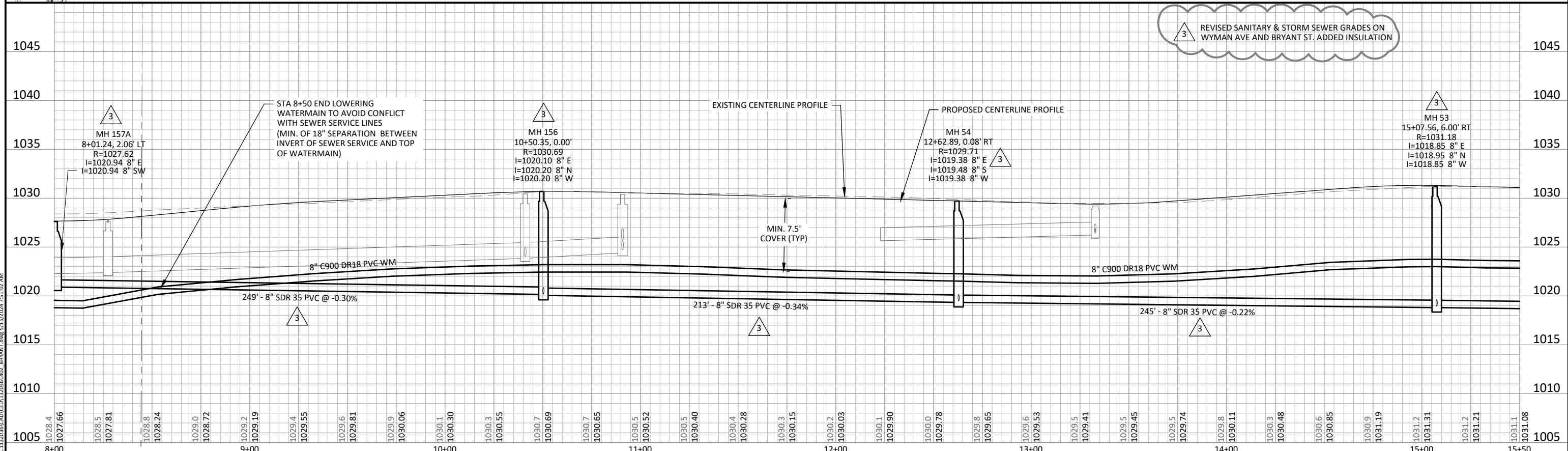
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
SANITARY & WATER PLAN
WYMAN AVENUE

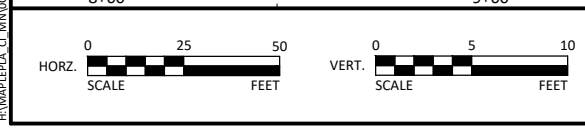
SHEET
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3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION



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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 41342 DATE 8/13/2024



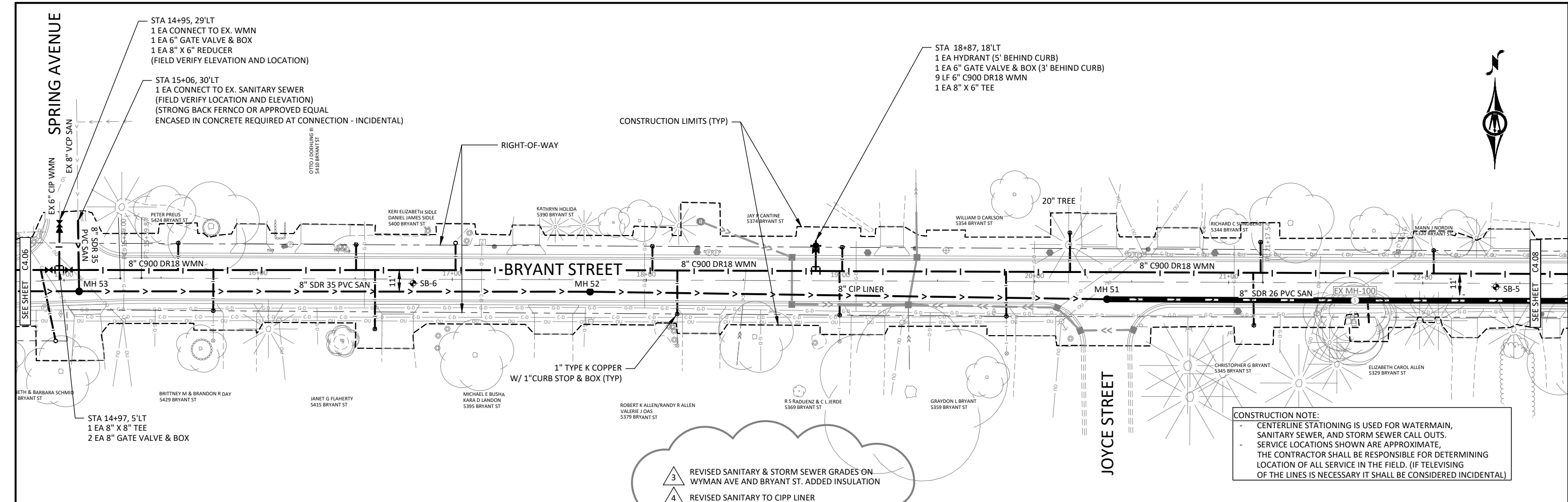
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JJW	3	SAN LINER	5/14/24
JJW	4	SAN LINER	5/14/24

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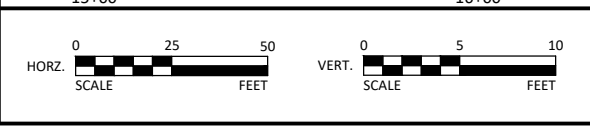
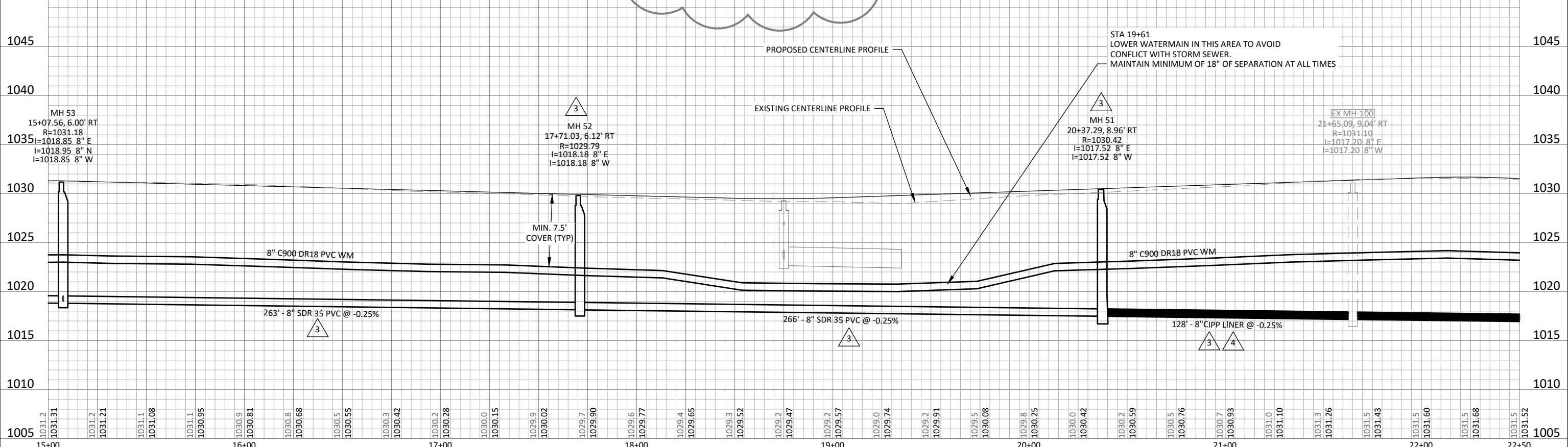
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 2024 STREET RECONSTRUCTION PROJECT
 SANITARY & WATER PLAN
 BRYANT STREET

SHEET
C4.06



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3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION
 4 REVISED SANITARY TO CIPP LINER



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 P.E. NO. 41342 DATE 8/13/2024



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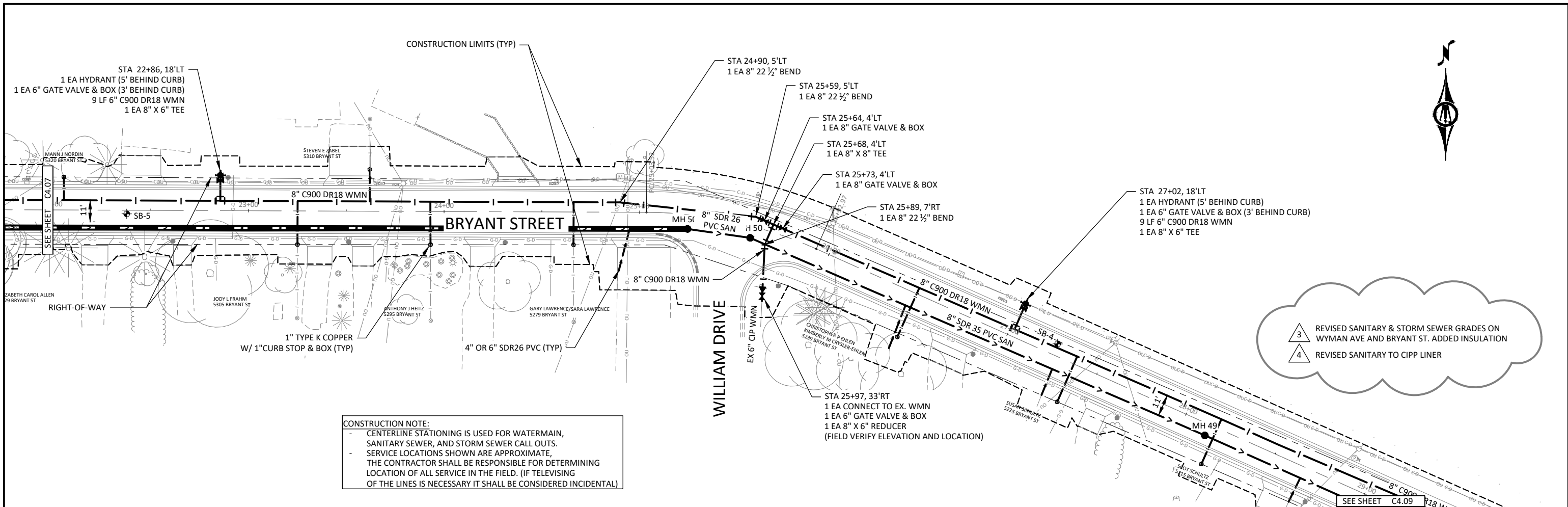
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JJW	3	SAN REV	5/14/24
JJW	4	SAN LINER	5/14/24

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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 SANITARY & WATER PLAN
 BRYANT STREET

SHEET
C4.07

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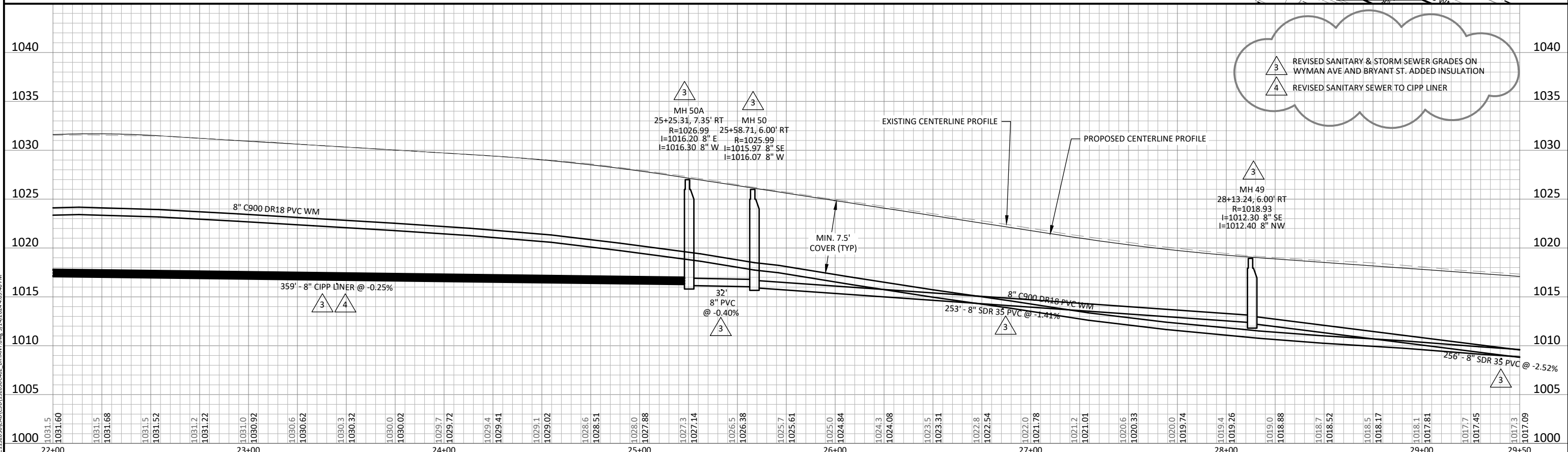


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3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION

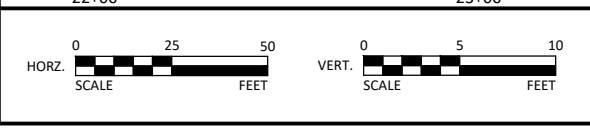
4 REVISED SANITARY TO CIPP LINER



3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION

4 REVISED SANITARY SEWER TO CIPP LINER

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41342
DATE: 5/13/2024



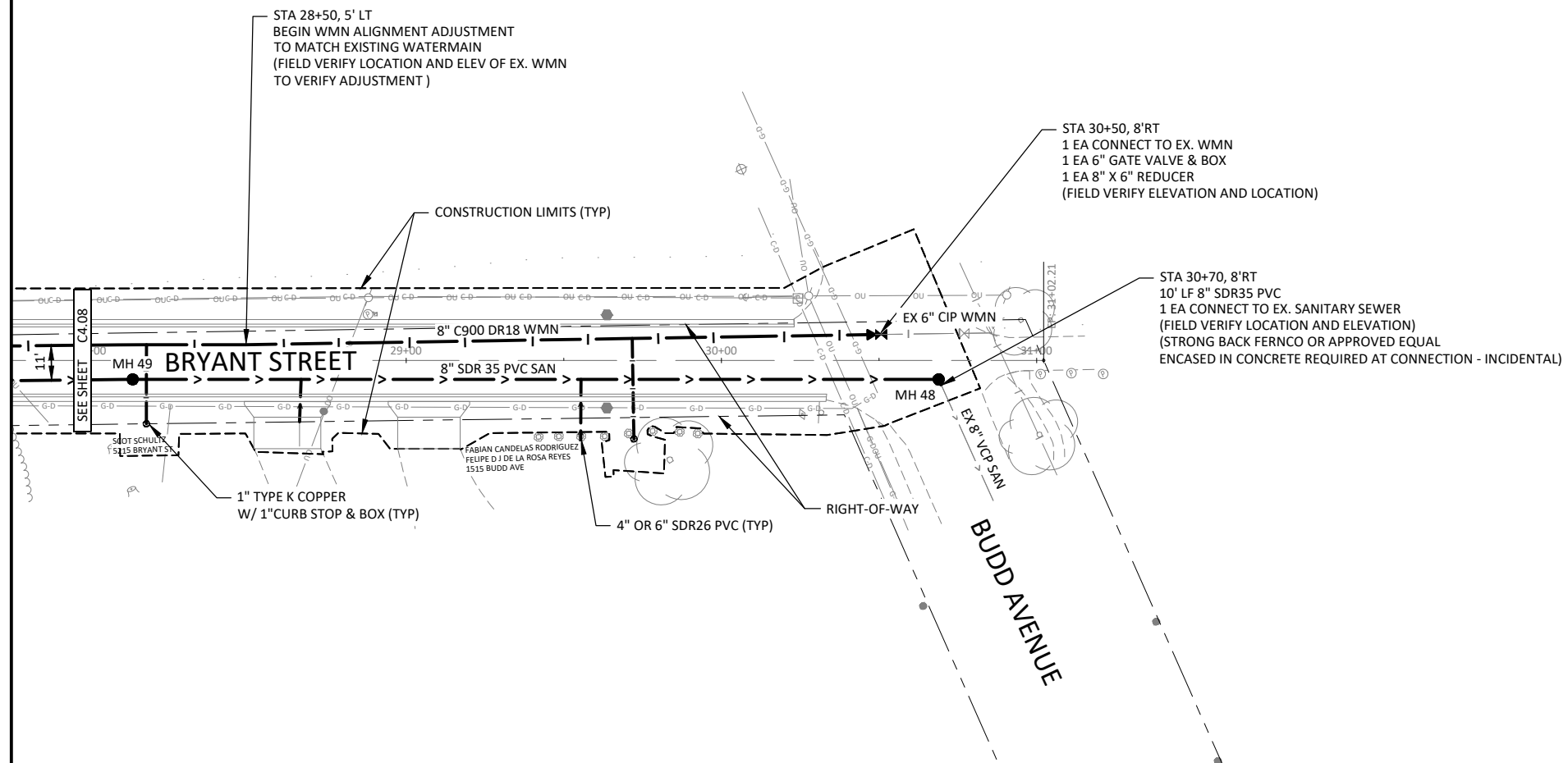
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JJW	3	SAN REV	5/14/24
JJW	4	SAN LINER	5/14/24

CLIENT PROJ. NO.: 0C1123036

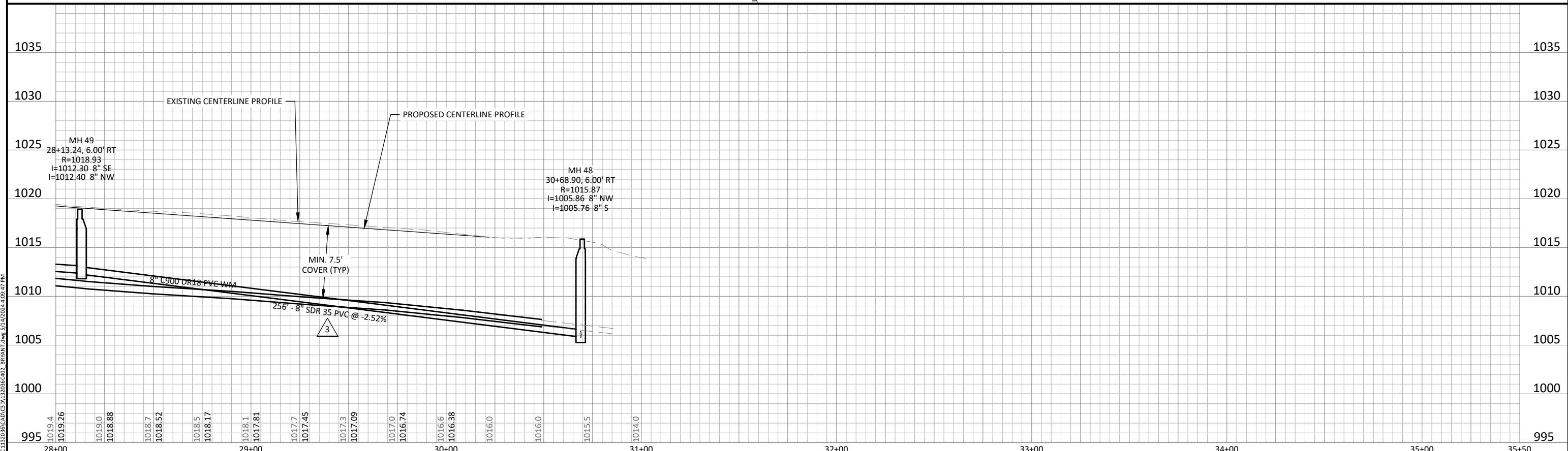
MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
SANITARY & WATER PLAN
BRYANT STREET

SHEET
C4.08

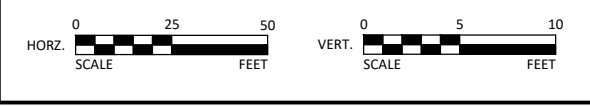


3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION

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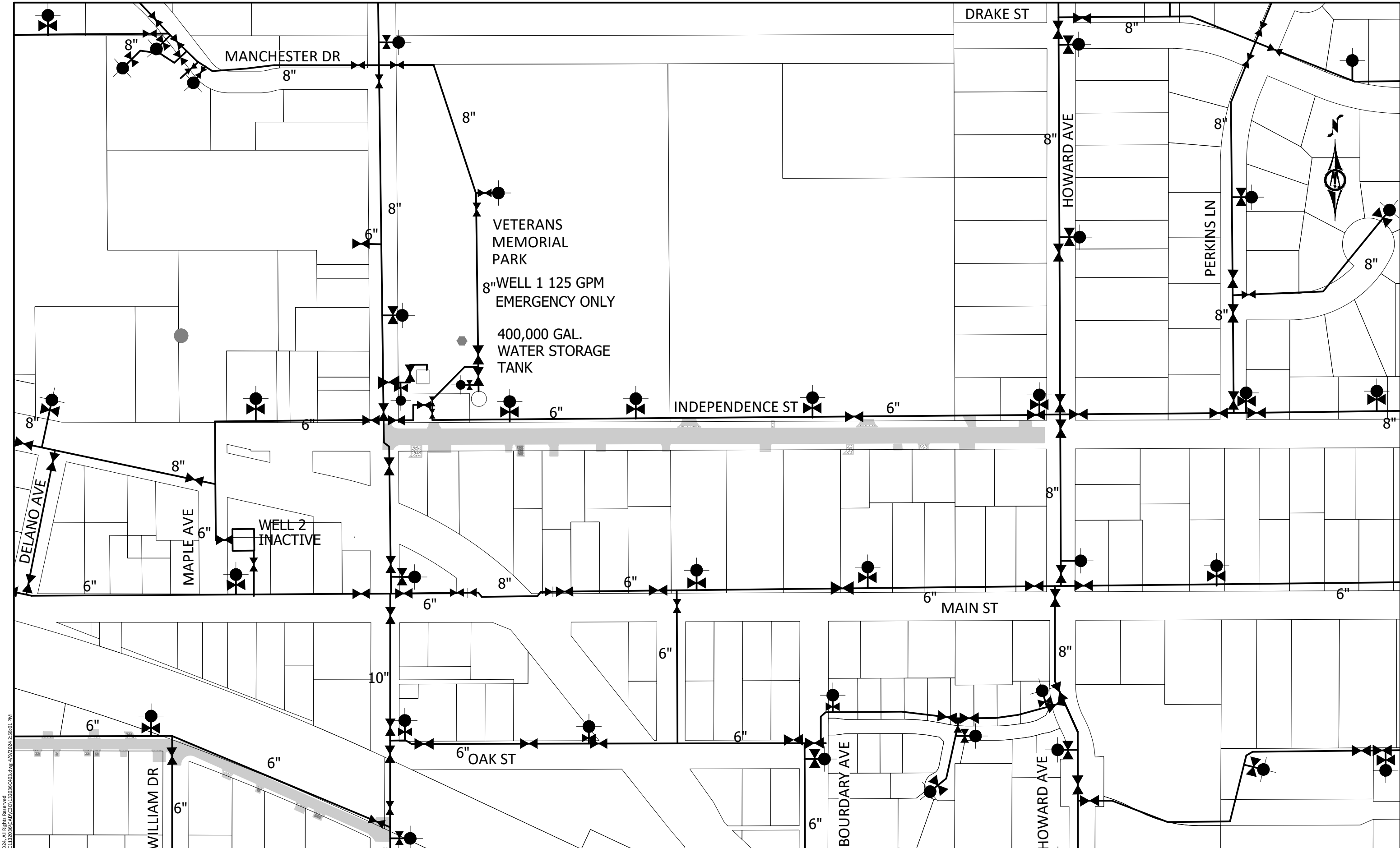
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JJW	3	SAN REV	5/14/24
JJW	4	SAN LINER	5/14/24

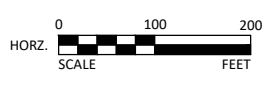
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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 SANITARY & WATER PLAN
 BRYANT STREET

SHEET
C4.09



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 A:\MAPLE PLAIN\2024\2024-03-28\2024-03-28.dwg 4/9/2024 2:58:01 PM



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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 6/13/2024

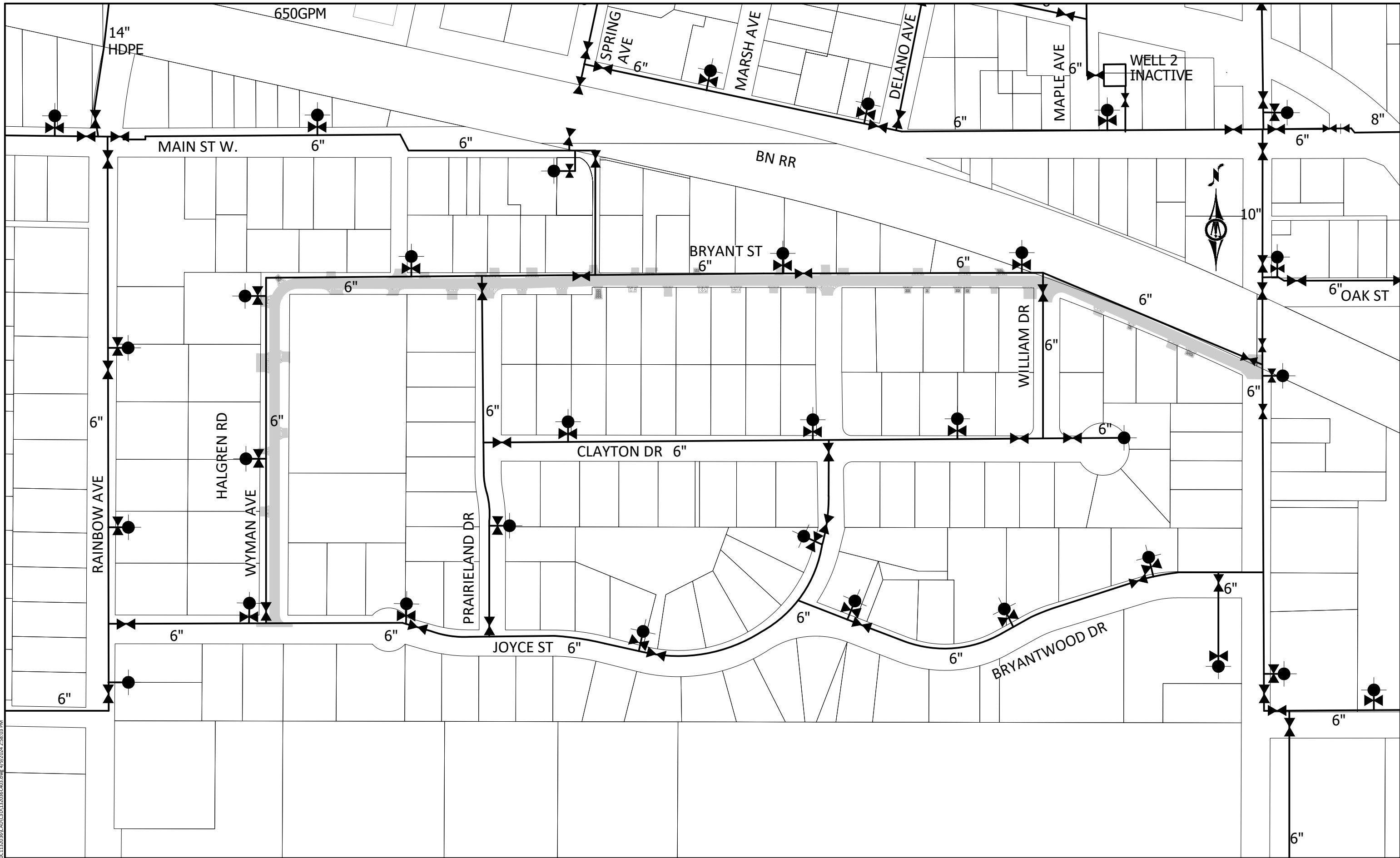


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 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
 Email: Chaska@bolton-menk.com
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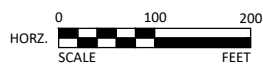
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RAN			
DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 EXISTING WATER SYSTEM

SHEET
 C4.10



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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024

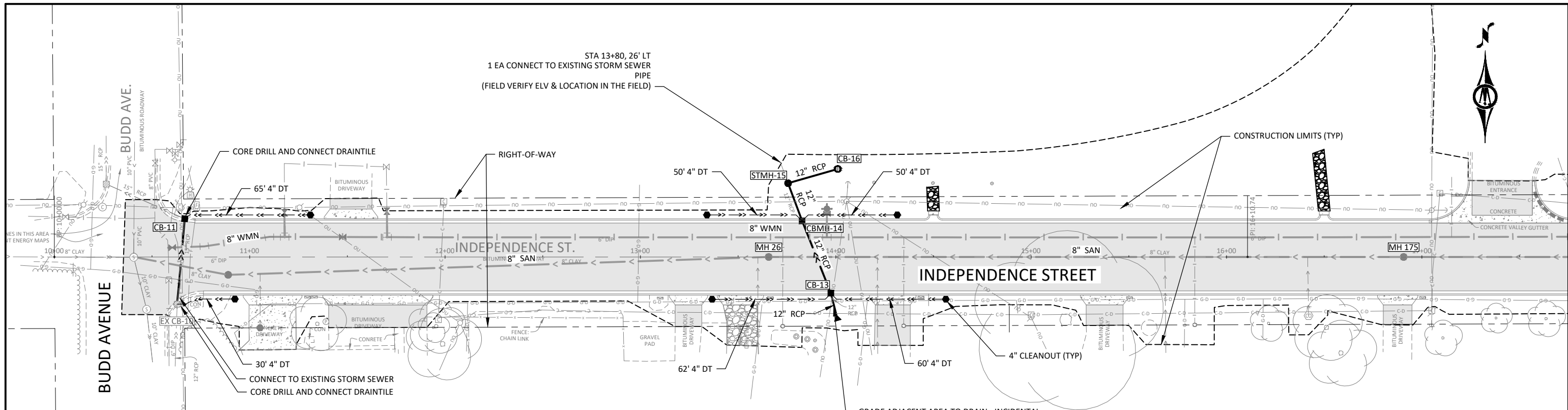


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DESIGNED	NO.	ISSUED FOR	DATE
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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

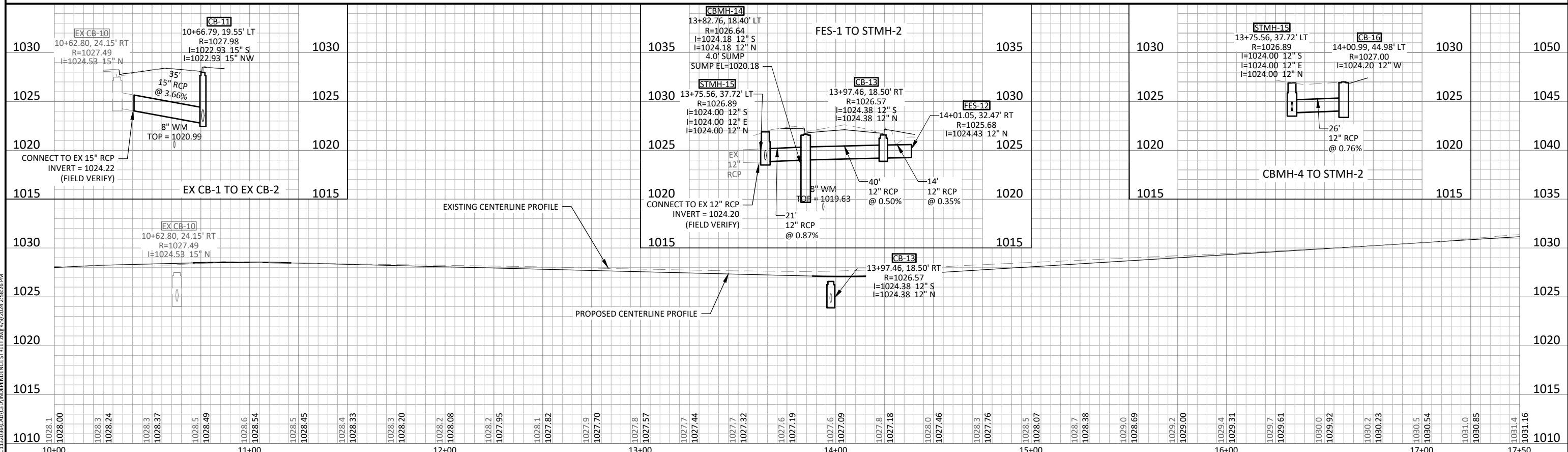
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 EXISTING WATER SYSTEM

SHEET C4.11

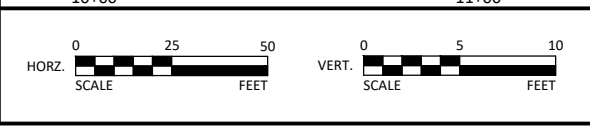


STA 13+80, 26' LT
 1 EA CONNECT TO EXISTING STORM SEWER PIPE
 (FIELD VERIFY ELV & LOCATION IN THE FIELD)

CONSTRUCTION NOTE:
 - CENTERLINE STATIONING IS USED FOR WATERMAIN, SANITARY SEWER, AND STORM SEWER CALL OUTS.
 - SERVICE LOCATIONS SHOWN ARE APPROXIMATE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING LOCATION OF ALL SERVICE IN THE FIELD. (IF TELEVISIONING OF THE LINES IS NECESSARY IT SHALL BE CONSIDERED INCIDENTAL)



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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 43342
 DATE 8/13/2024

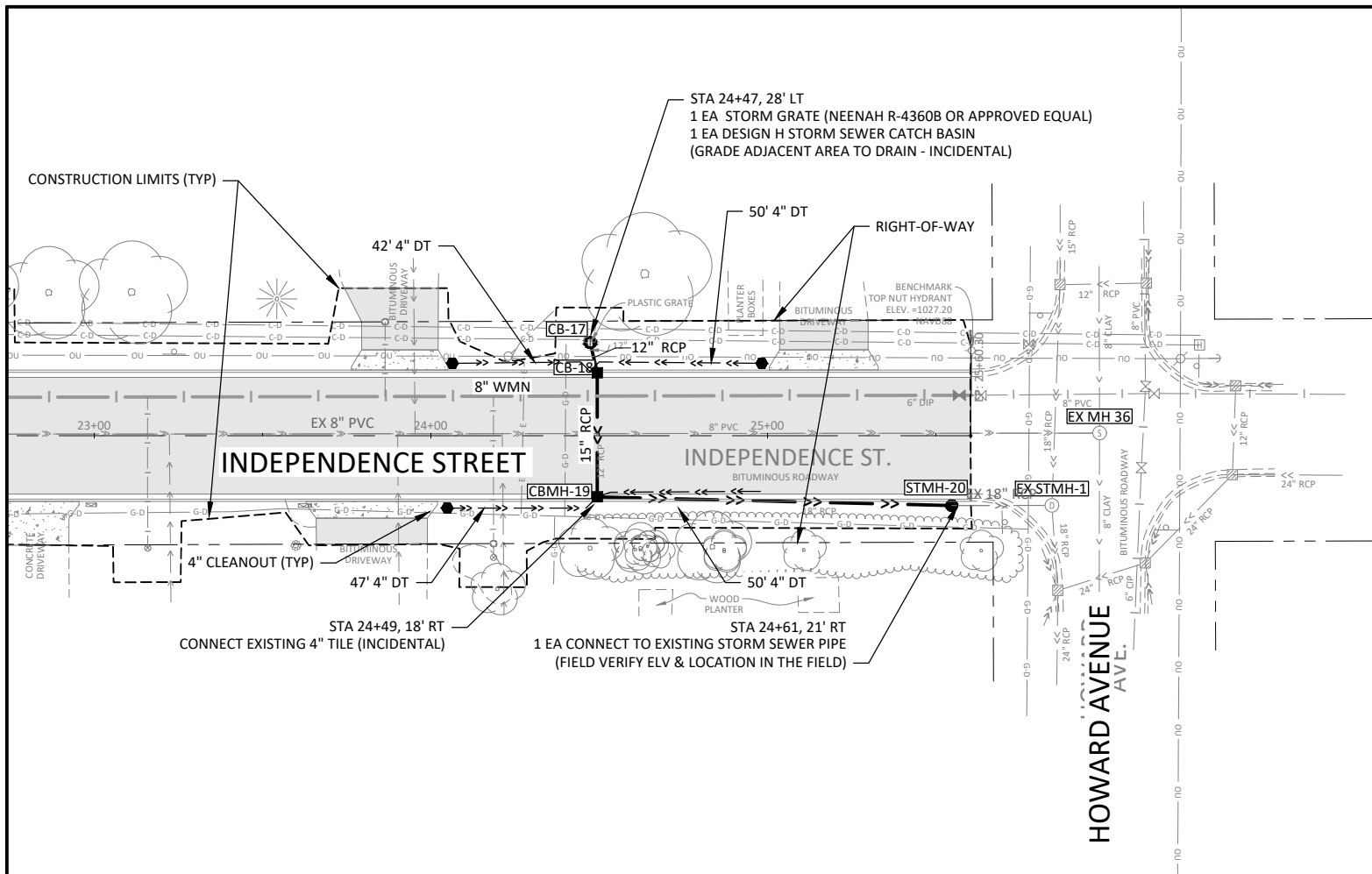


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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

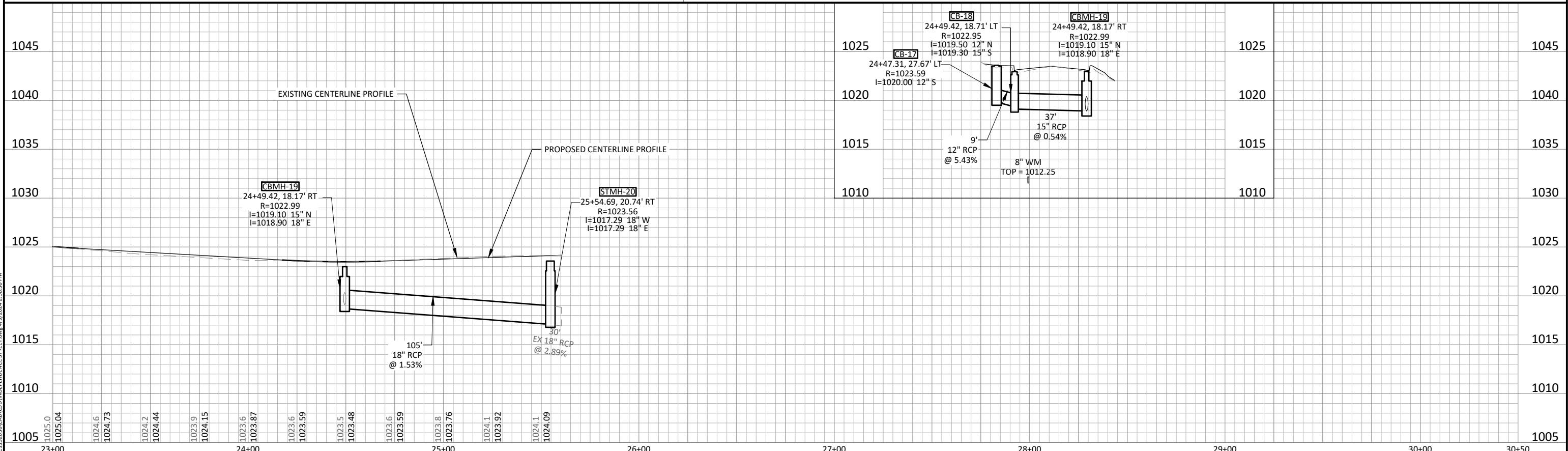
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STORM SEWER PLAN & PROFILE
 INDEPENDENCE STREET

SHEET
C5.02



CONSTRUCTION NOTE:

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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024

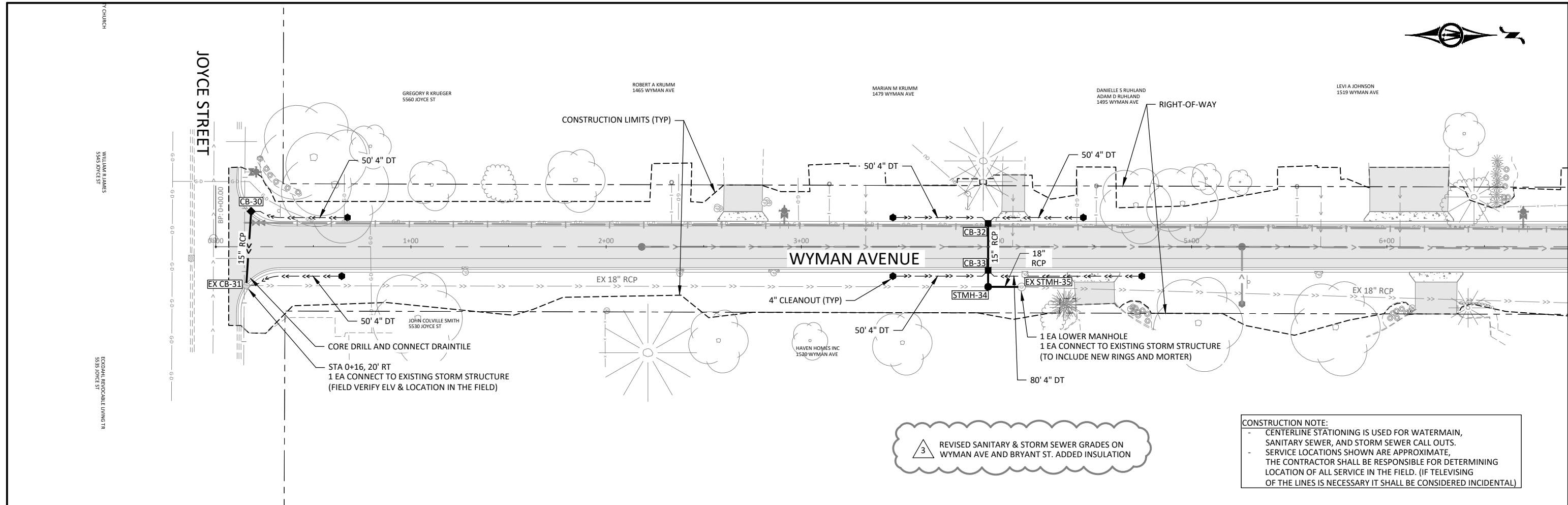


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DESIGNED	NO.	ISSUED FOR	DATE
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DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

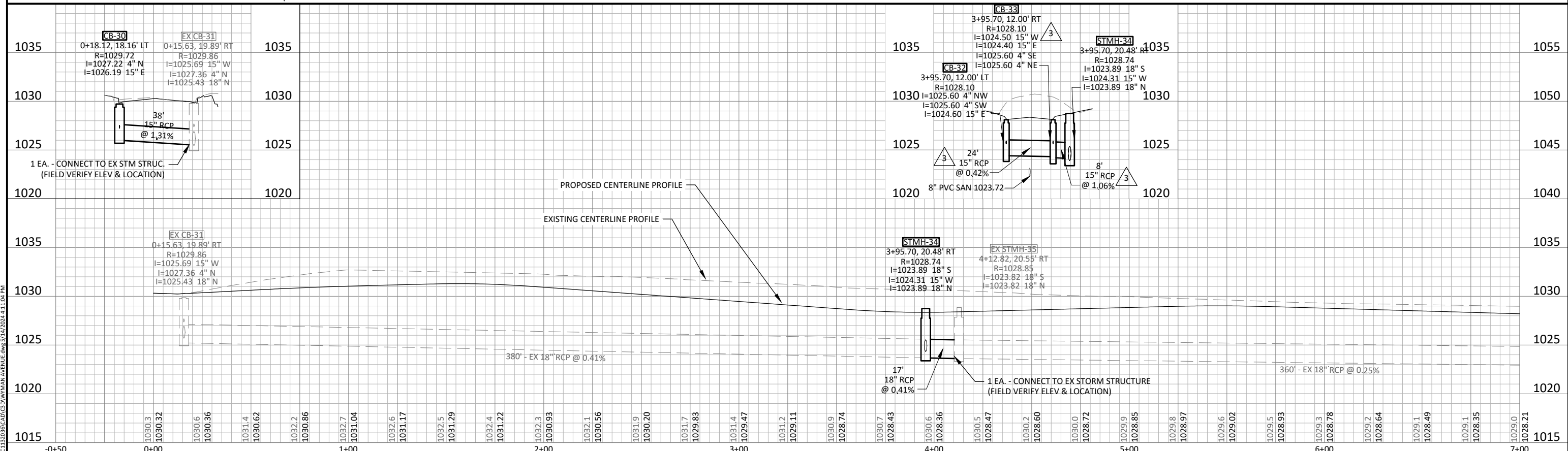
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STORM SEWER PLAN & PROFILE
 INDEPENDENCE STREET

SHEET
C5.03

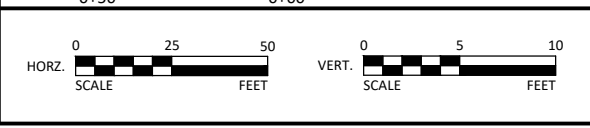


3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION

CONSTRUCTION NOTE:
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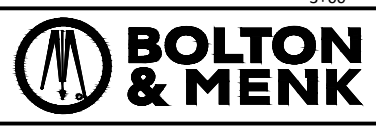


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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 5/13/2024



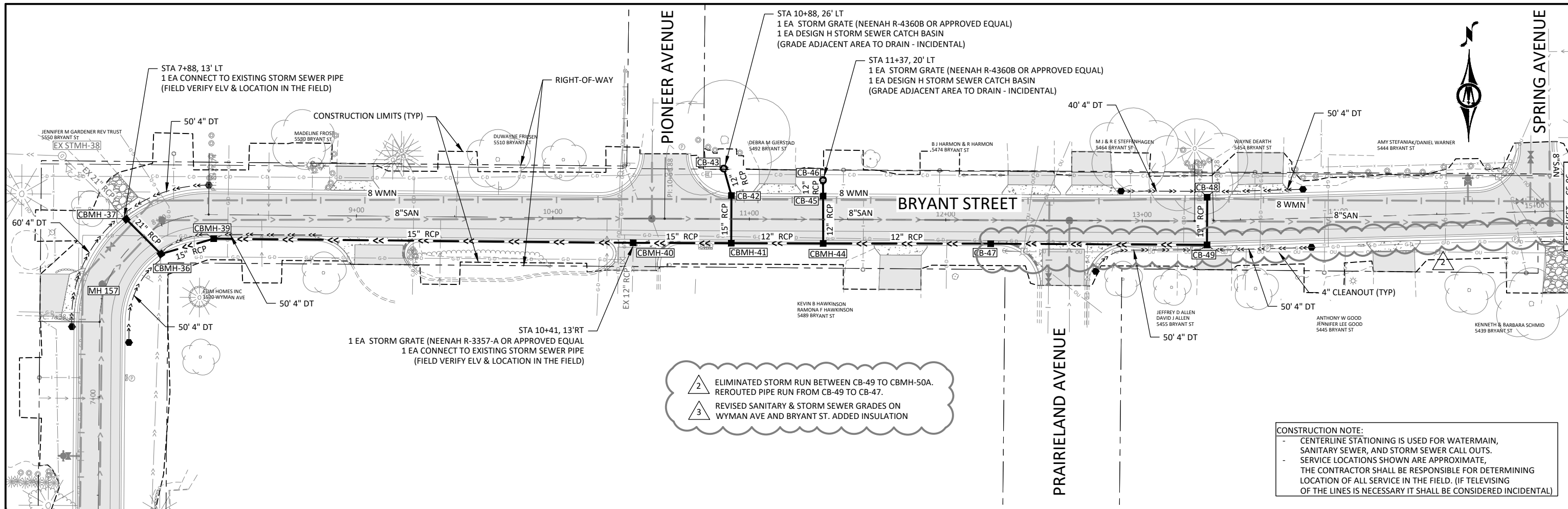
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 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
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DESIGNED	NO.	ISSUED FOR	DATE
RAN	1	STORM REV	4/9/24
RAN	2	STRM REV	4/15/24
JJW	3	SAN REV	5/14/24
JJW	4	SAN LINER	5/14/24

CLIENT PROJ. NO.: 0C1132036

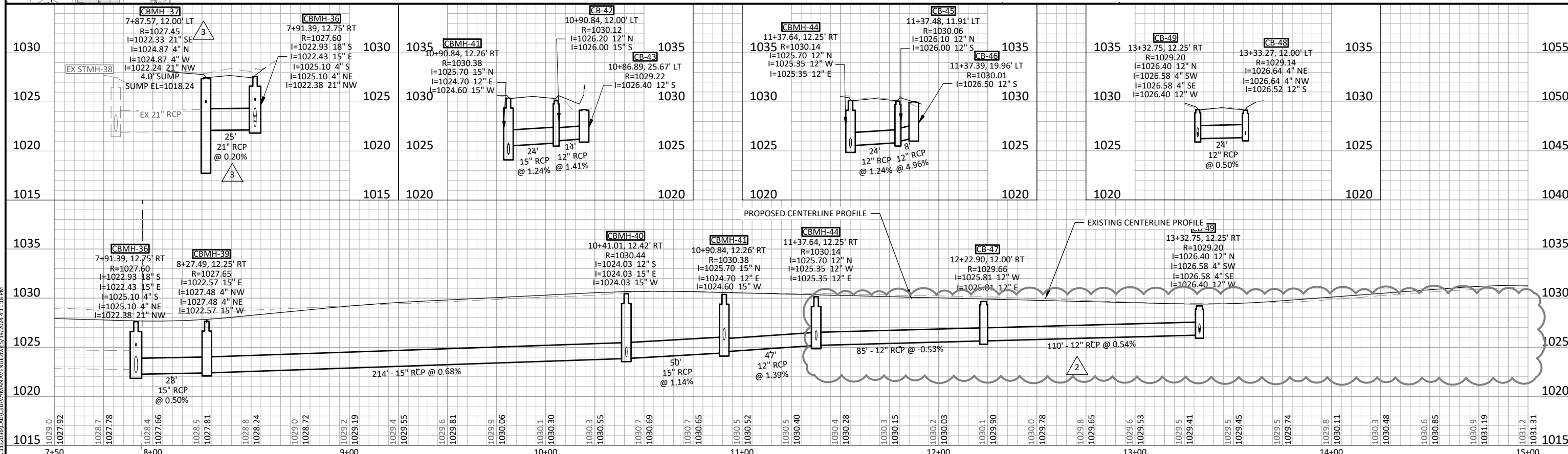
MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STORM SEWER PLAN & PROFILE
 WYMAN AVENUE

SHEET
C5.04

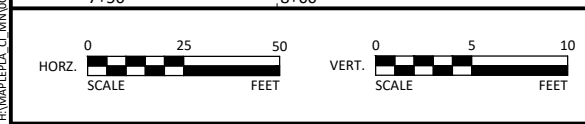


- 2 ELIMINATED STORM RUN BETWEEN CB-49 TO CBMH-50A. REROUTED PIPE RUN FROM CB-49 TO CB-47.
- 3 REVISED SANITARY & STORM SEWER GRADES ON WYMAN AVE AND BRYANT ST. ADDED INSULATION

CONSTRUCTION NOTE:
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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024

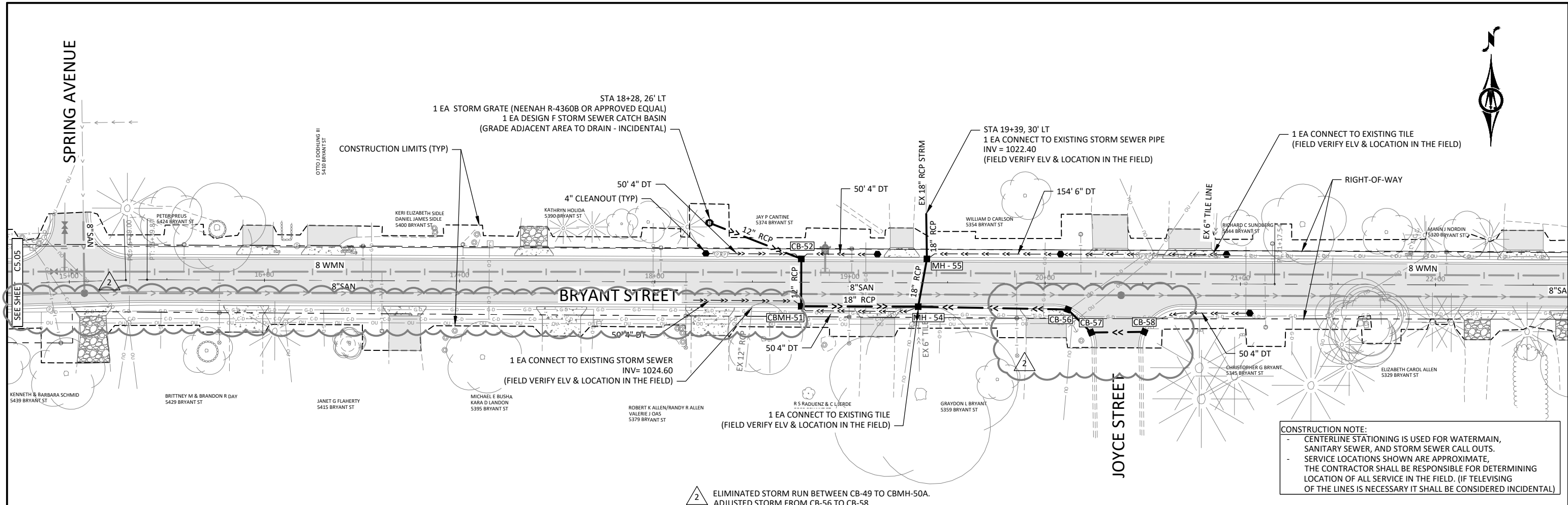


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DESIGNED	NO.	ISSUED FOR	DATE
RAN	1	STRM REV	4/9/24
RAN	2	SAN REV	4/15/24
JJW	3	SAN LINER	5/14/24
JJW	4	SAN LINER	5/14/24

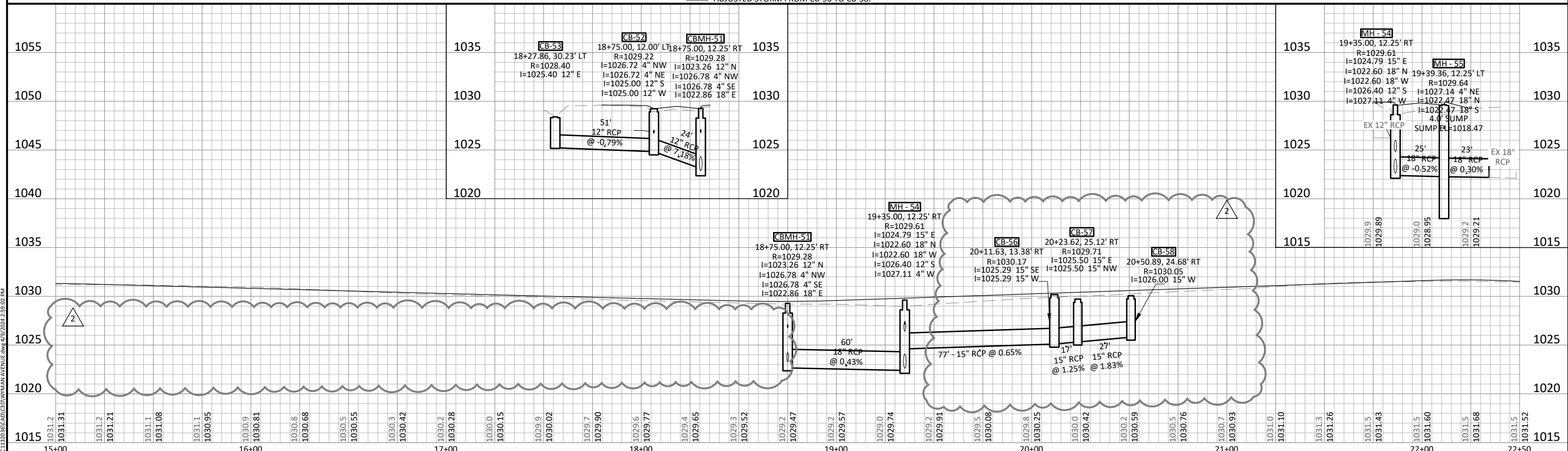
CLIENT PROJ. NO. 0C1132036

MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STORM SEWER PLAN & PROFILE
 WYMAN AVENUE
 SHEET C5.05

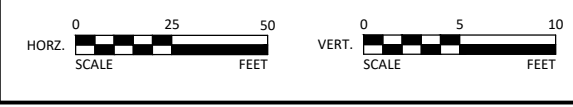


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2 ELIMINATED STORM RUN BETWEEN CB-49 TO CBMH-50A. ADJUSTED STORM FROM CB-56 TO CB-58.



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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 41342 DATE 8/13/2024

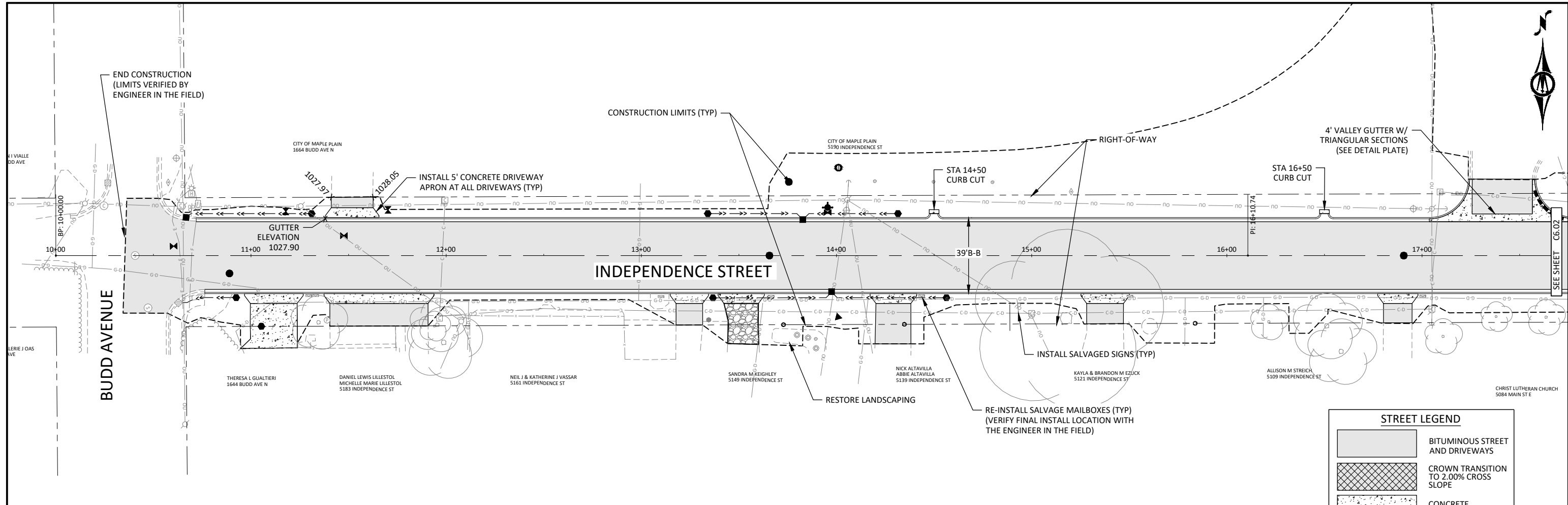


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DESIGNED	RAN	NO.	2	ISSUED FOR	REV. 1	DATE	04/09/2024
DRAWN	RAN						
CHECKED	JJW						
CLIENT PROJ. NO.	0C1132036						

MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STORM SEWER PLAN & PROFILE
 BRYANT STREET

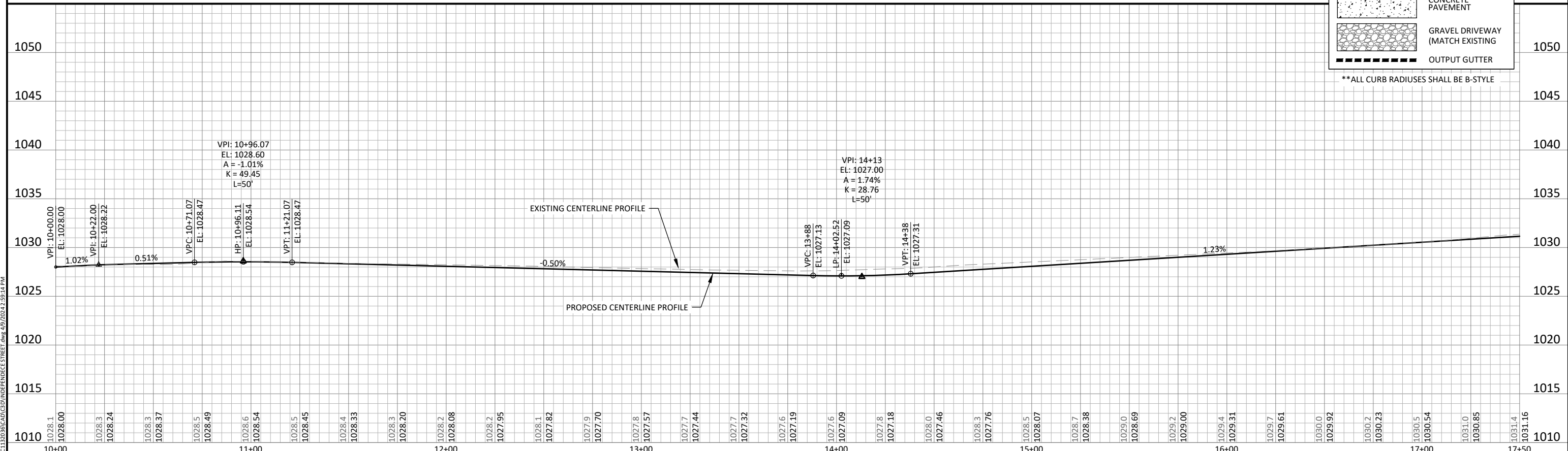
SHEET
C5.06



STREET LEGEND

- BITUMINOUS STREET AND DRIVEWAYS
- CROWN TRANSITION TO 2.00% CROSS SLOPE
- CONCRETE PAVEMENT
- GRAVEL DRIVEWAY (MATCH EXISTING)
- OUTPUT GUTTER

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
43342
DATE: 8/13/2024

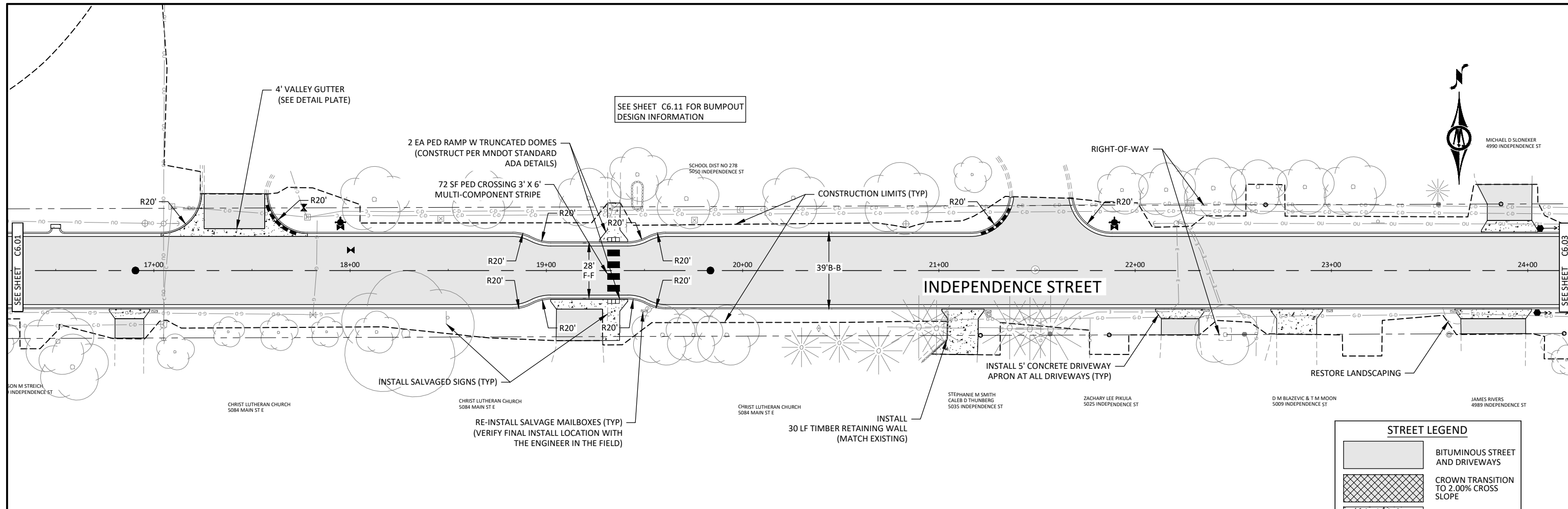


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DRAWN	RAN		
CHECKED	JJW		
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
INDEPENDENCE STREET

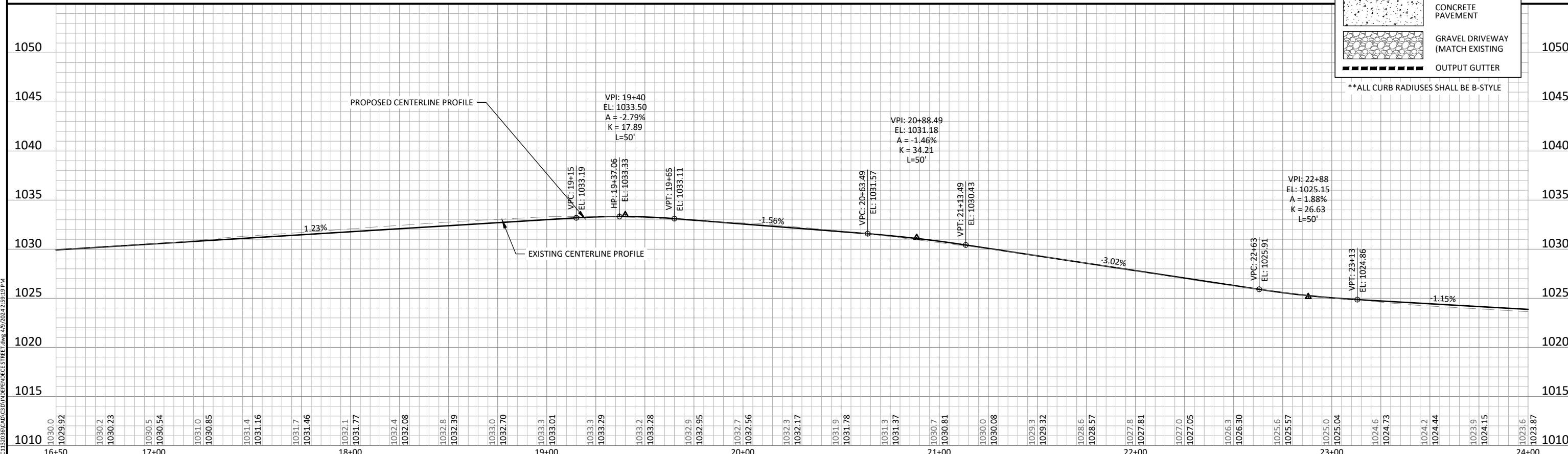
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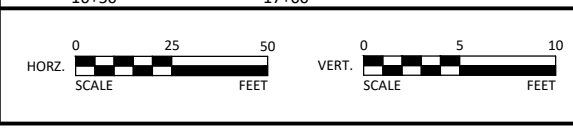
STREET LEGEND

	BITUMINOUS STREET AND DRIVEWAYS
	CROWN TRANSITION TO 2.00% CROSS SLOPE
	CONCRETE PAVEMENT
	GRAVEL DRIVEWAY (MATCH EXISTING)
	OUTPUT GUTTER

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Jeffrey J. Weyandt
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41342
DATE: 8/13/2024

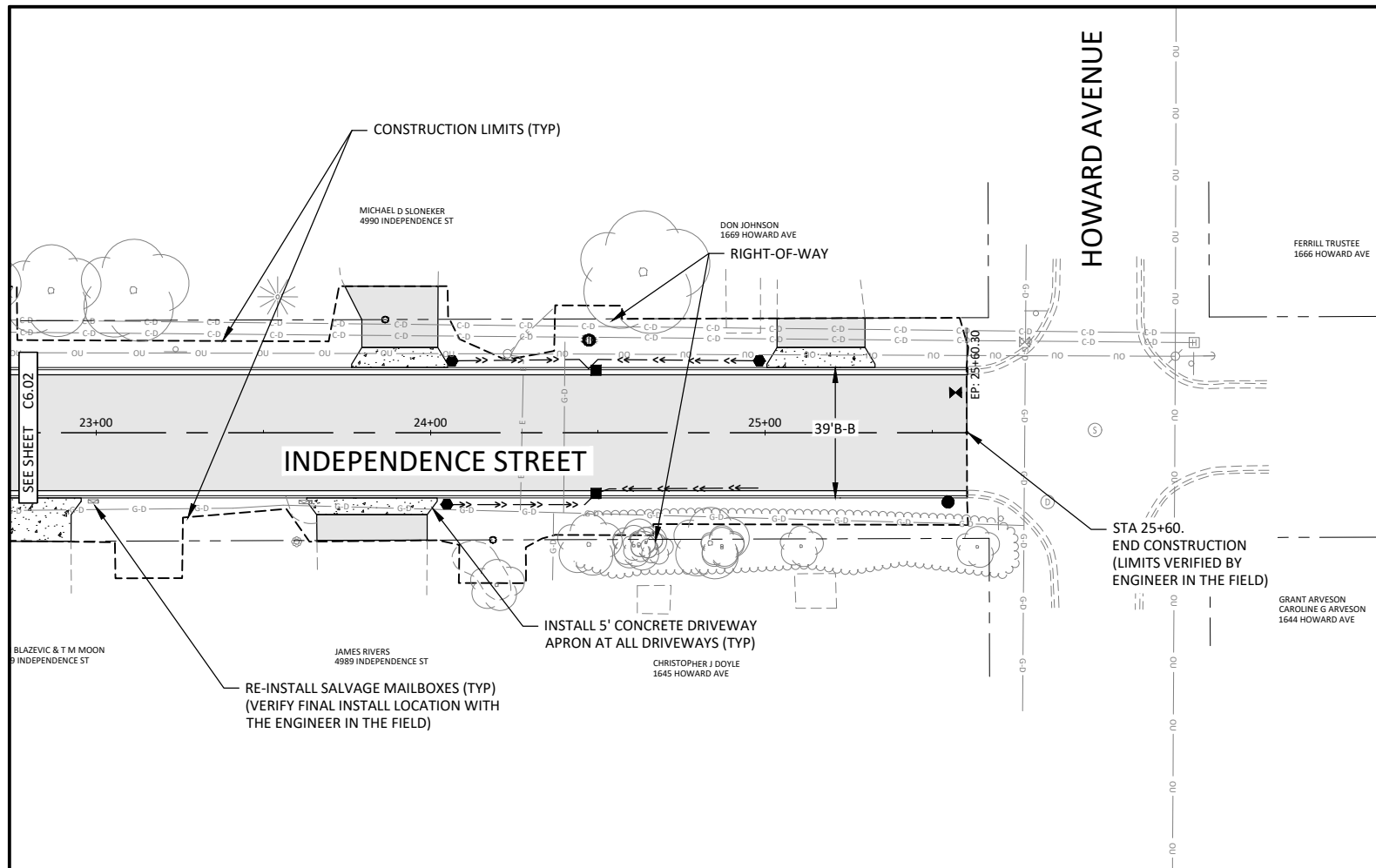


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CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
INDEPENDENCE STREET

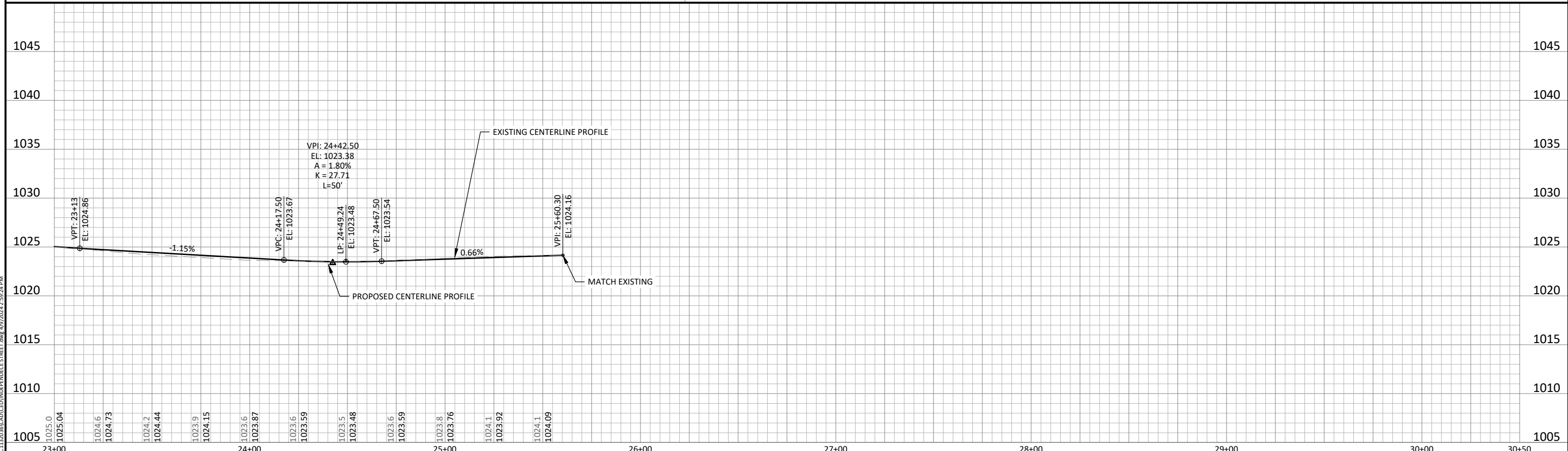
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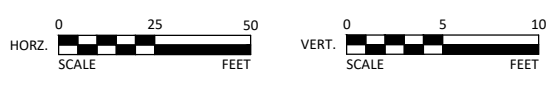
STREET LEGEND

	BITUMINOUS STREET AND DRIVEWAYS
	CROWN TRANSITION TO 2.00% CROSS SLOPE
	CONCRETE PAVEMENT
	GRAVEL DRIVEWAY (MATCH EXISTING)
	OUTPUT GUTTER

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JEFFREY J. WEYANDT
43342
DATE 8/13/2024

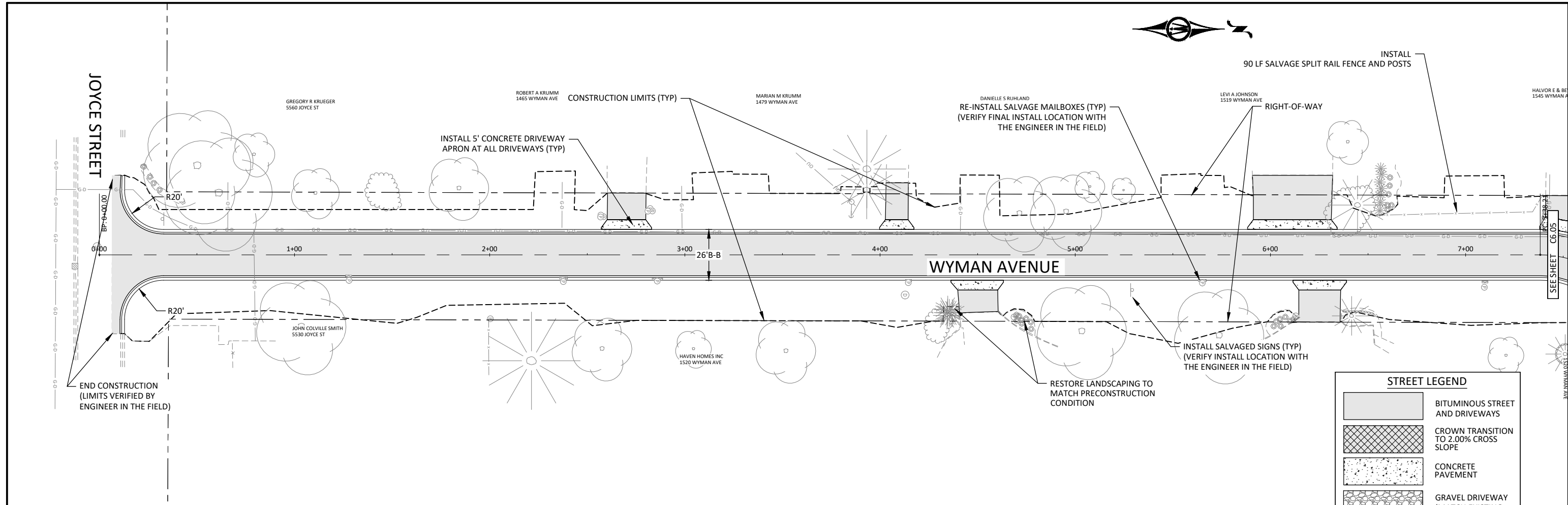


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DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
INDEPENDENCE STREET

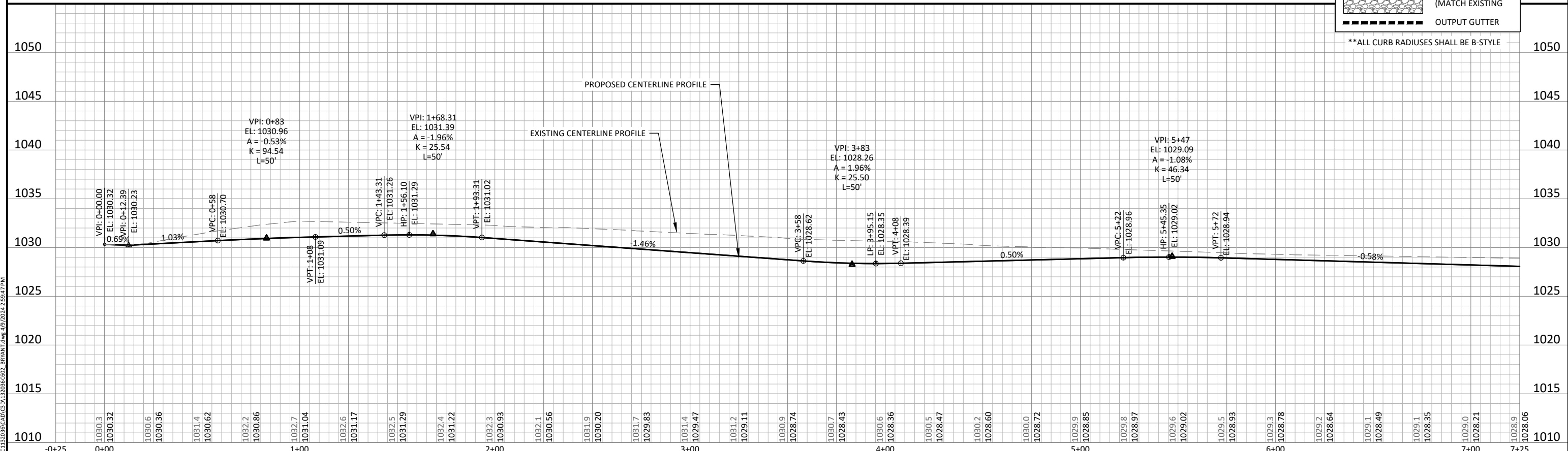
SHEET
C6.03



STREET LEGEND

	BITUMINOUS STREET AND DRIVEWAYS
	CROWN TRANSITION TO 2.00% CROSS SLOPE
	CONCRETE PAVEMENT
	GRAVEL DRIVEWAY (MATCH EXISTING)
	OUTPUT GUTTER

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P.E. NO. 43342 DATE 8/13/2024



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DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
WYMAN AVENUE

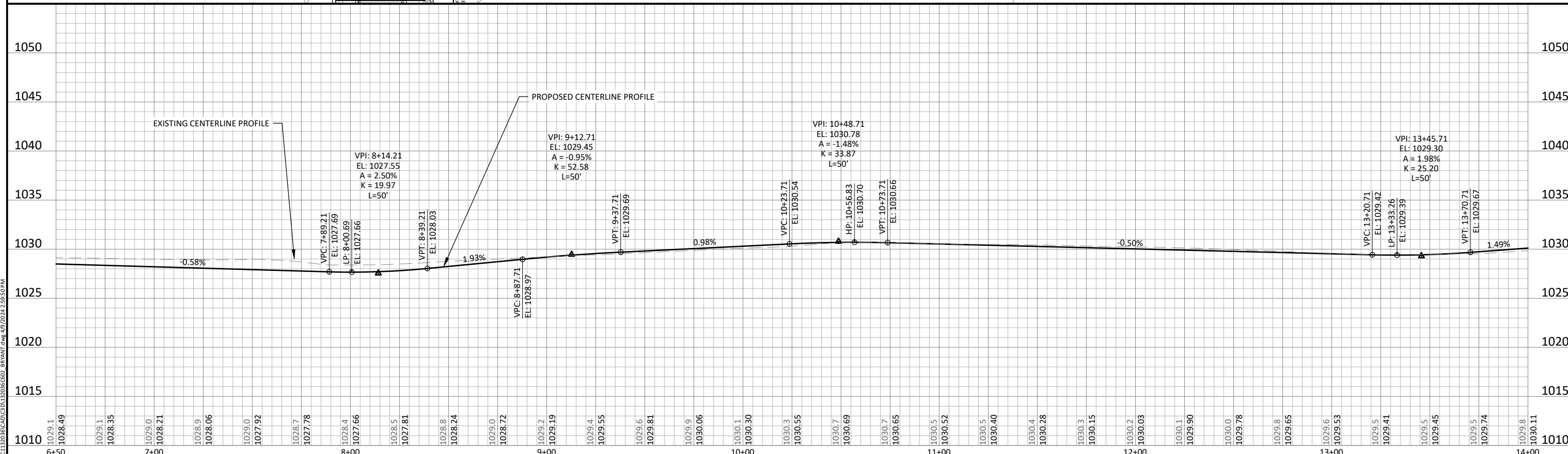
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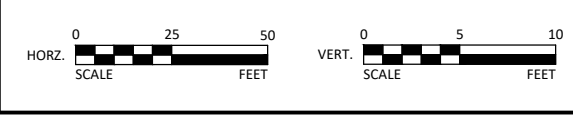
STREET LEGEND

- BITUMINOUS STREET AND DRIVEWAYS
- CROWN TRANSITION TO 2.00% CROSS SLOPE
- CONCRETE PAVEMENT
- GRAVEL DRIVEWAY (MATCH EXISTING)
- OUTPUT GUTTER

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 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024

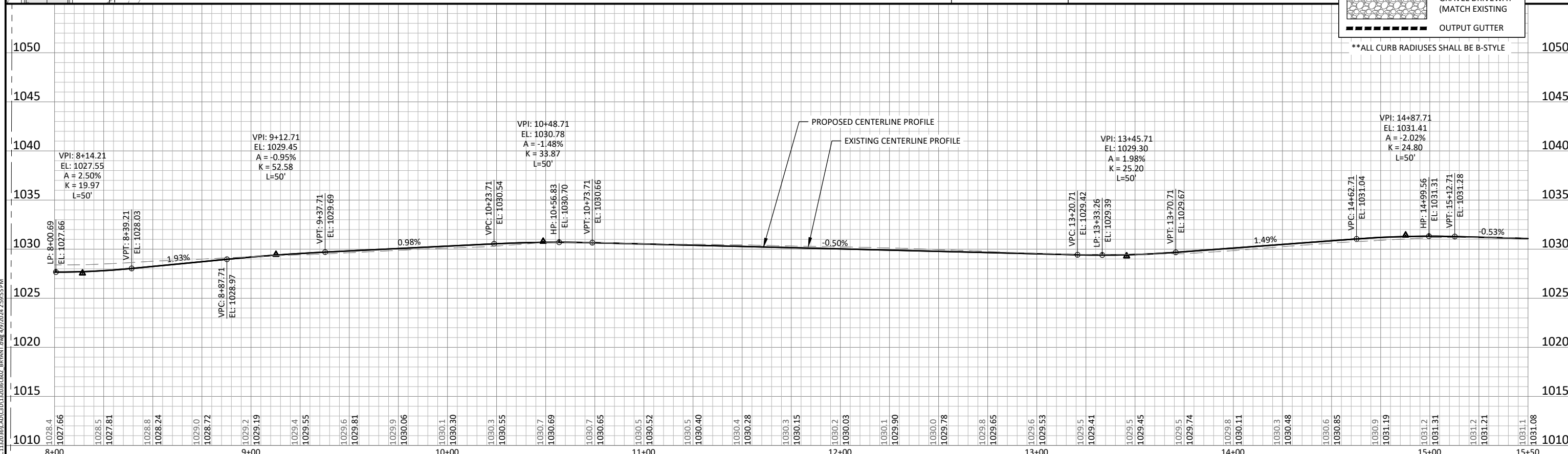
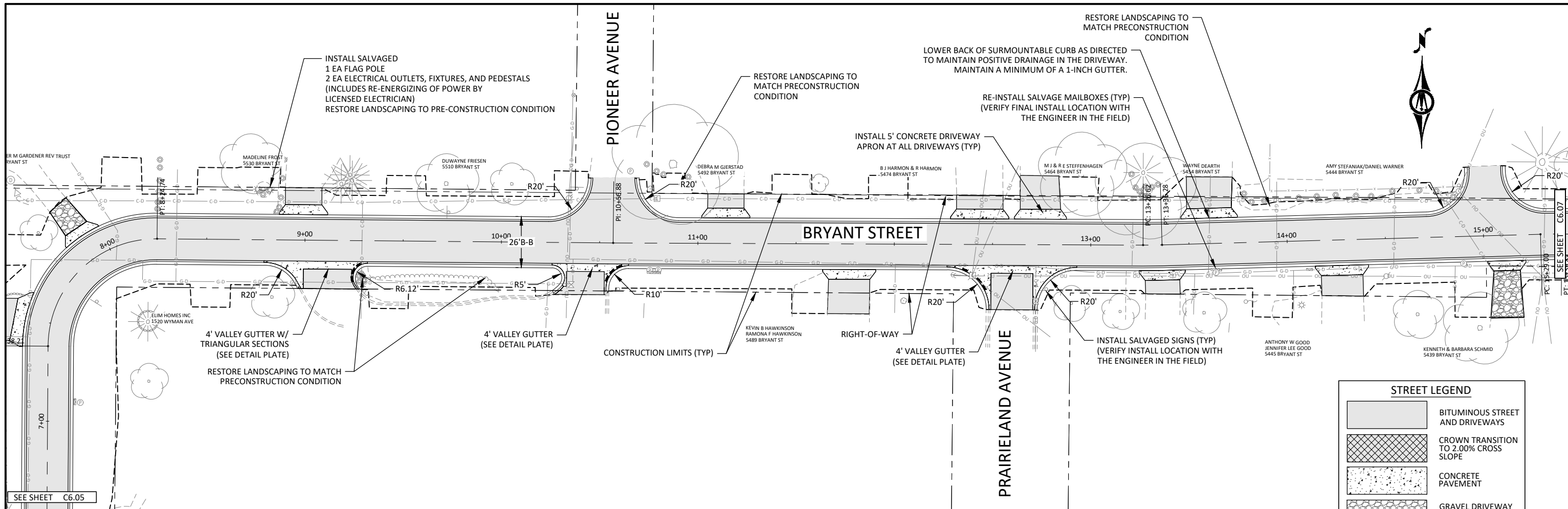


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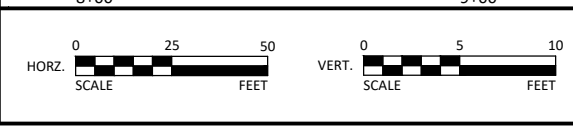
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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STREET PLAN & PROFILE
 WYMAN AVENUE

SHEET
C6.05



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 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024

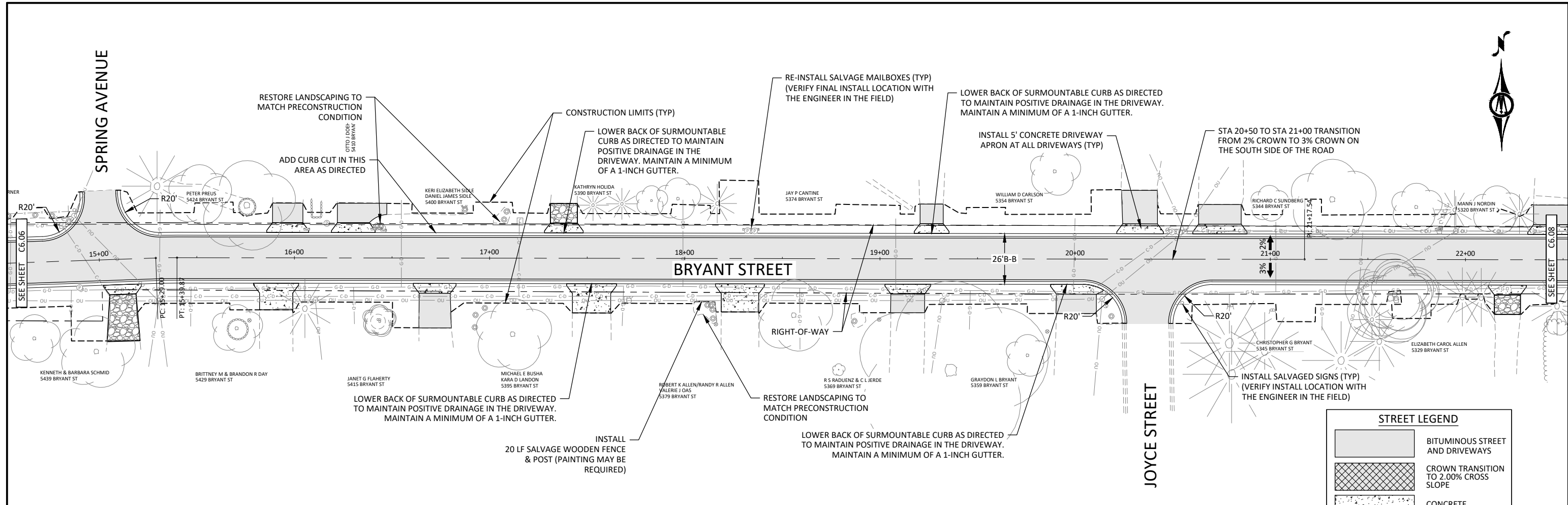


2638 SHADOW LANE, SUITE 200
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 Phone: (952) 448-8838
 Email: Chaska@bolton-menk.com
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DRAWN	RAN		
CHECKED	JJW		
CLIENT PROJ. NO.	0C1132036		

MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 STREET PLAN & PROFILE
 BRYANT STREET

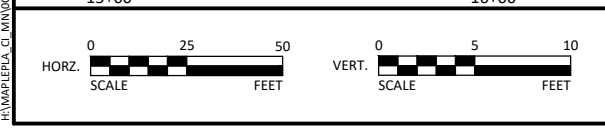
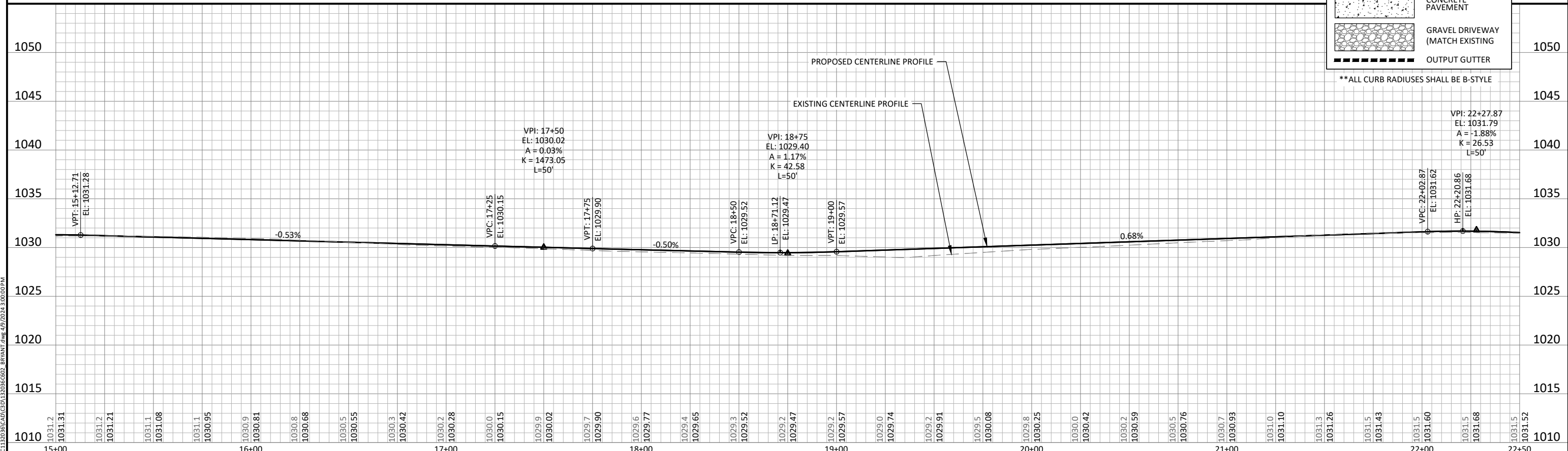
SHEET
C6.06



STREET LEGEND

	BITUMINOUS STREET AND DRIVEWAYS
	CROWN TRANSITION TO 2.00% CROSS SLOPE
	CONCRETE PAVEMENT
	GRAVEL DRIVEWAY (MATCH EXISTING)
	OUTPUT GUTTER

****ALL CURB RADIUSSES SHALL BE B-STYLE**



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE: 8/13/2024



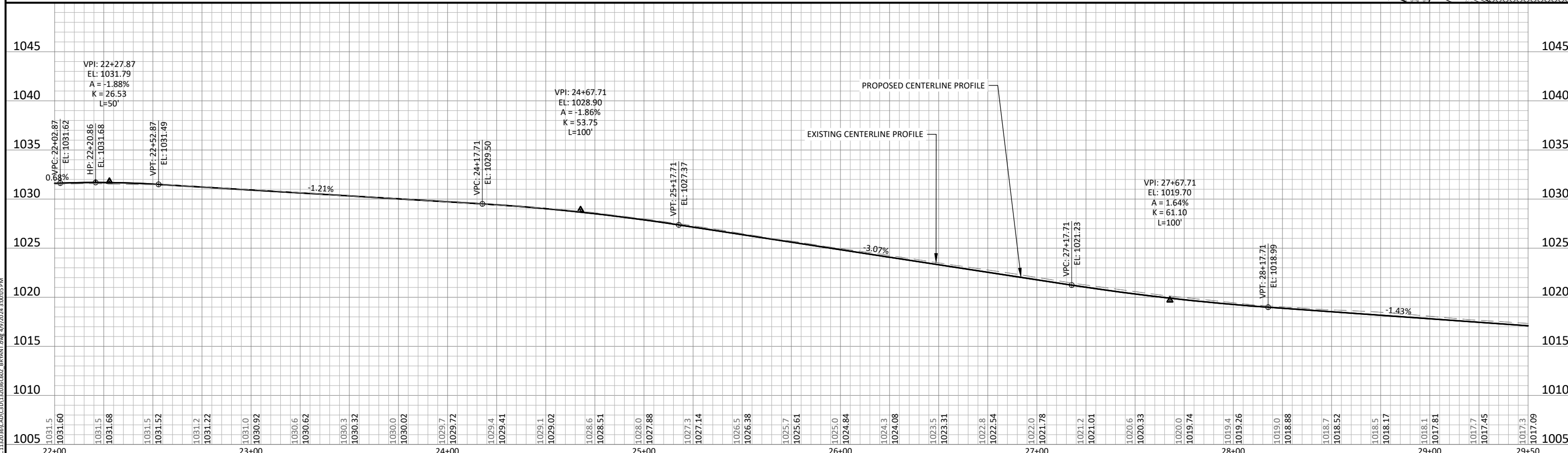
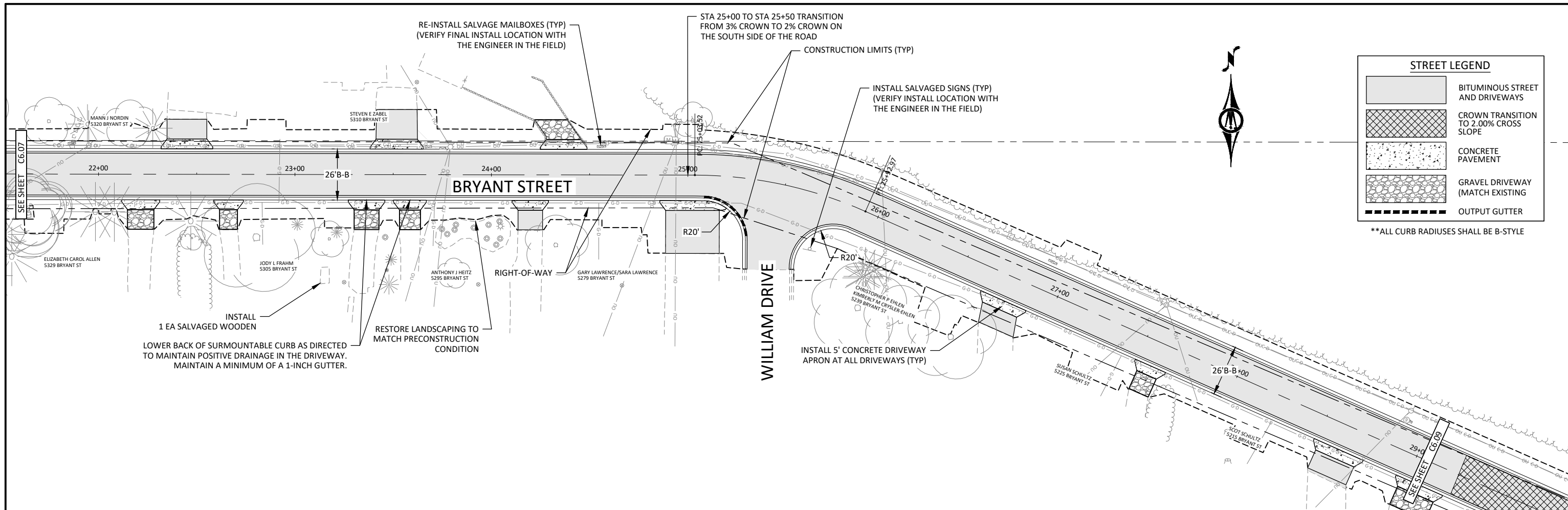
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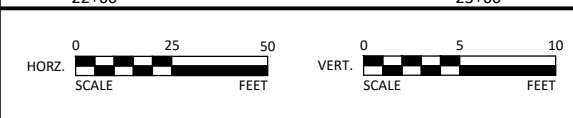
MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
BRYANT STREET

SHEET
C6.07

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE: 8/13/2024

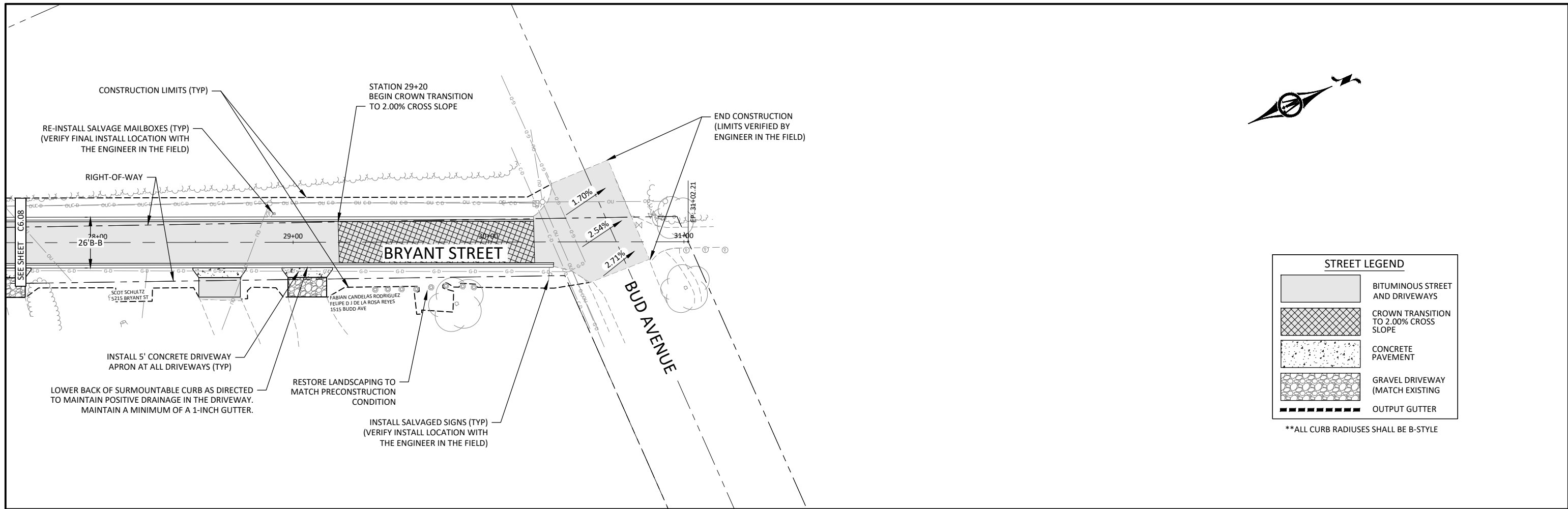


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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
WYMAN AVENUE

SHEET
C6.08



STREET LEGEND

	BITUMINOUS STREET AND DRIVEWAYS
	CROWN TRANSITION TO 2.00% CROSS SLOPE
	CONCRETE PAVEMENT
	GRAVEL DRIVEWAY (MATCH EXISTING)
	OUTPUT GUTTER

**ALL CURB RADIUSSES SHALL BE B-STYLE



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
43342
DATE: 8/13/2024



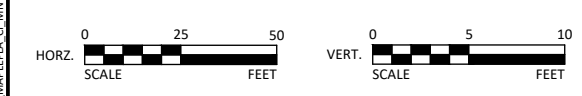
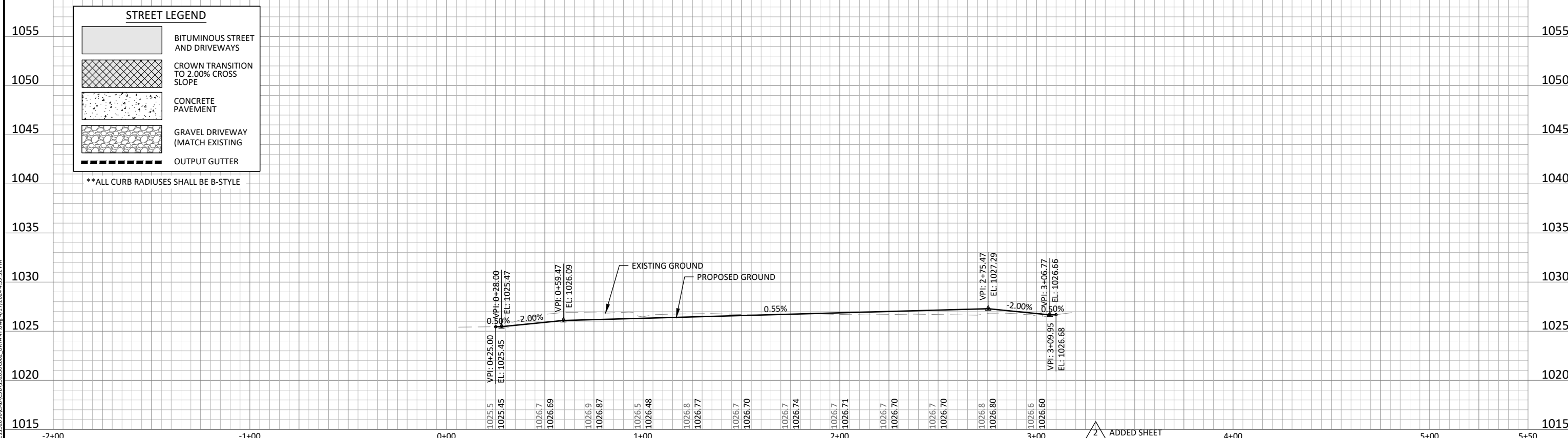
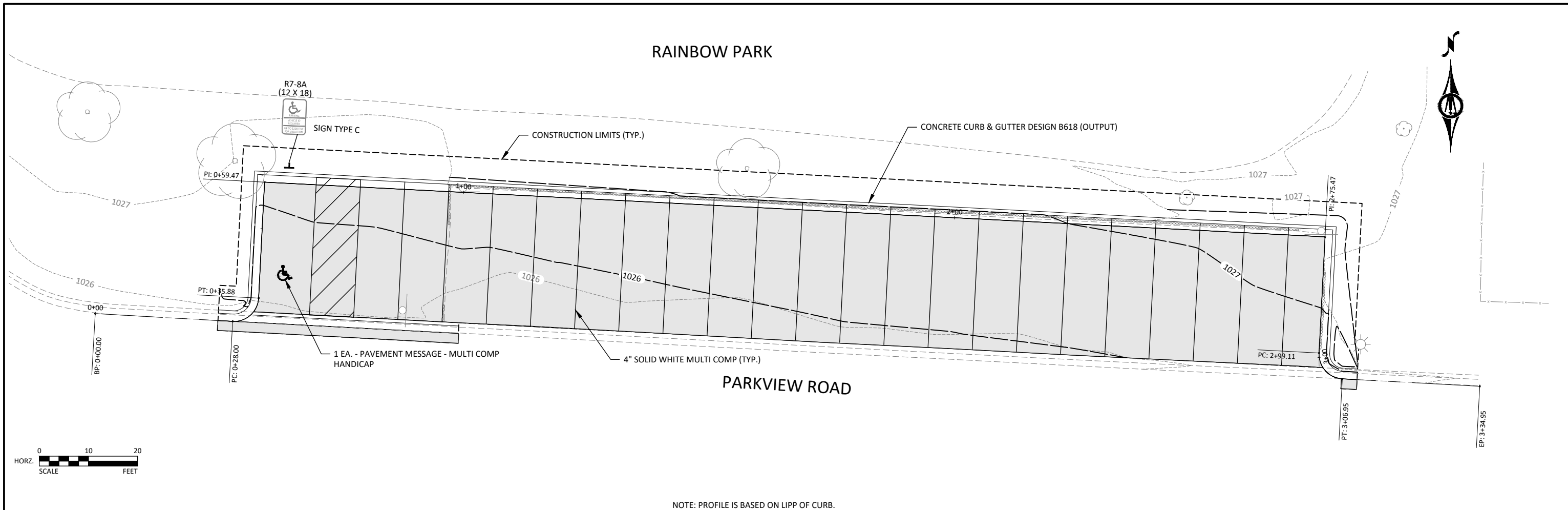
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
BRYANT STREET

SHEET
C6.09

RAINBOW PARK



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Jeffrey J. Weyandt

JEFFREY J. WEYANDT
P.E. NO. 41342 DATE 8/13/2024



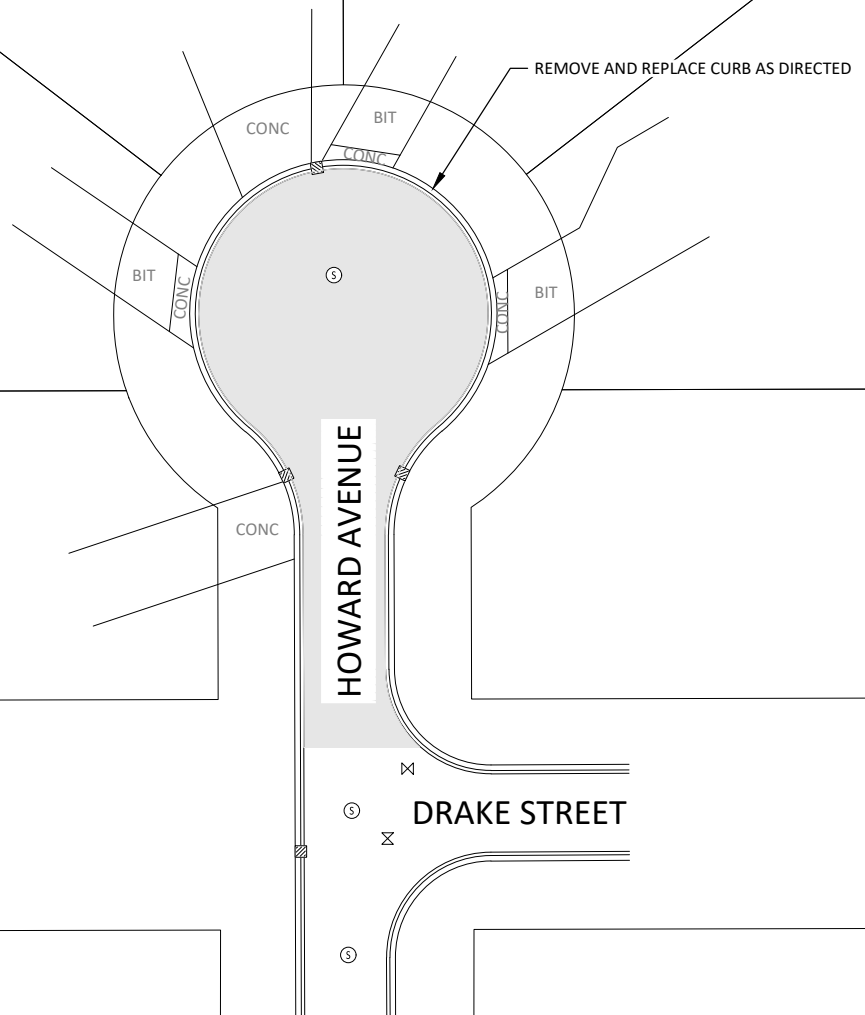
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
STREET PLAN & PROFILE
RAINBOW PARK PARKING LOT

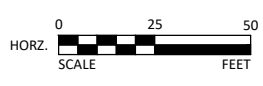
SHEET
C6.09A

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STREET LEGEND

	2" MILL, 2" OVERLAY
-------------------------------------------------------------------------------------	---------------------



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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024



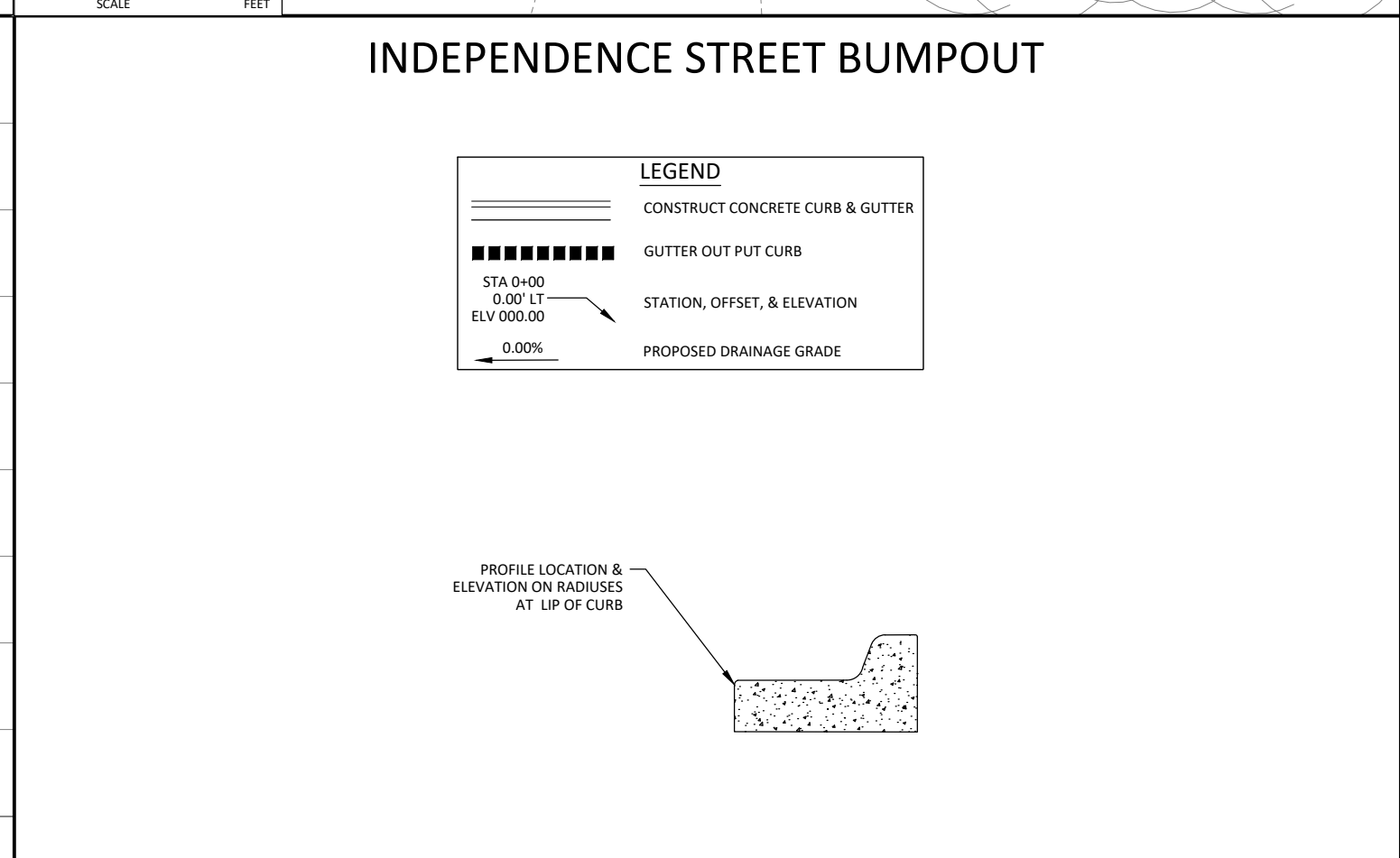
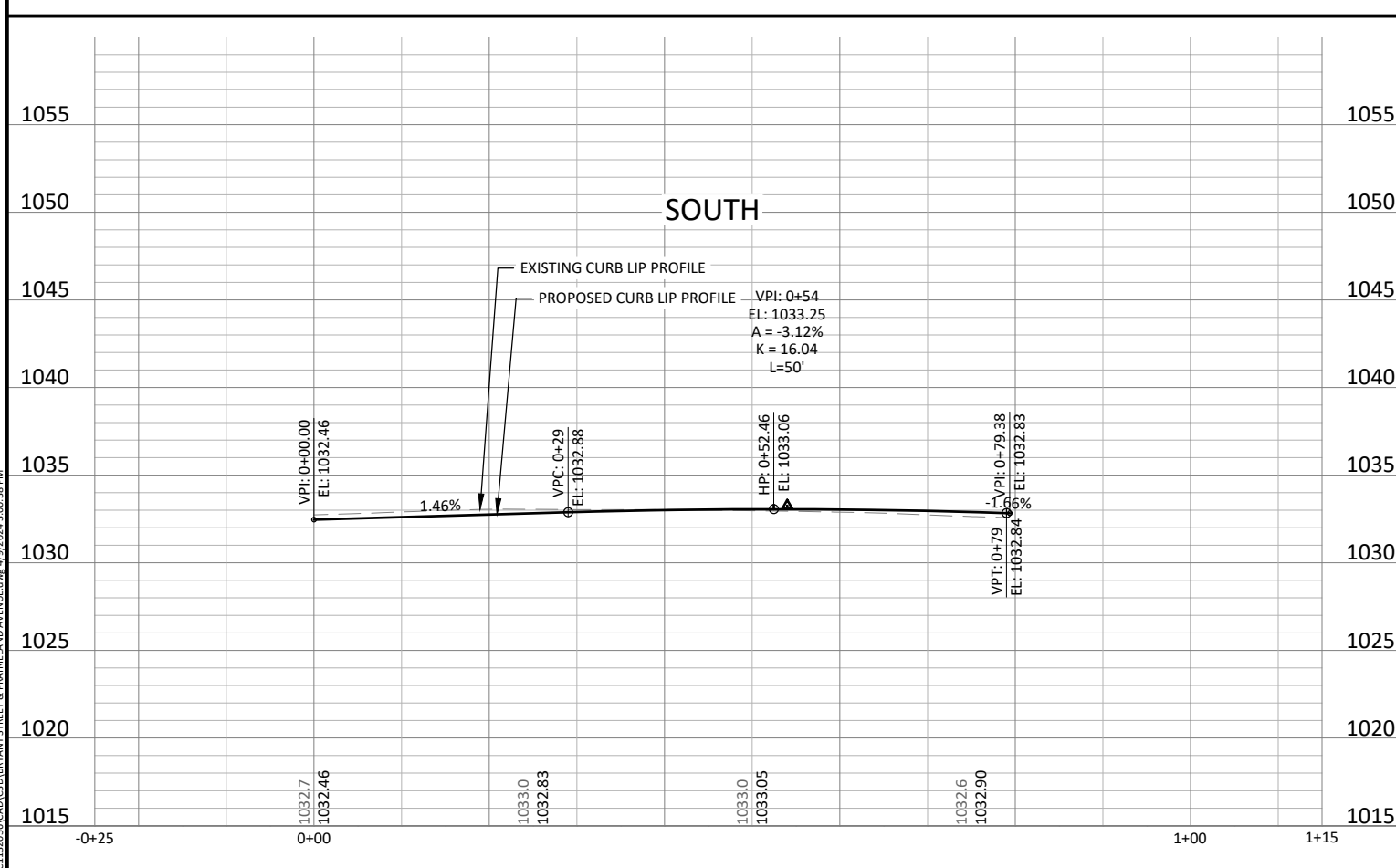
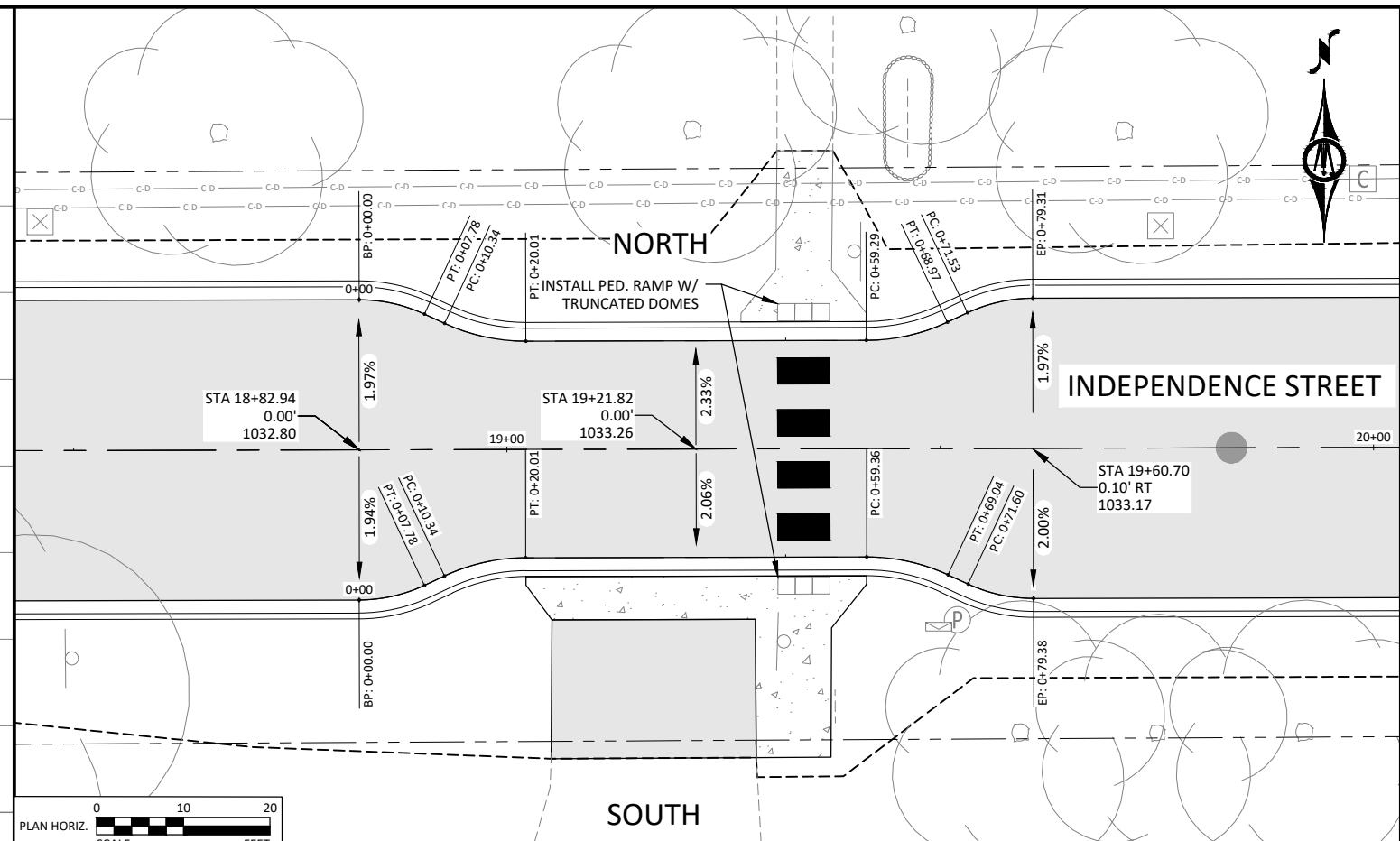
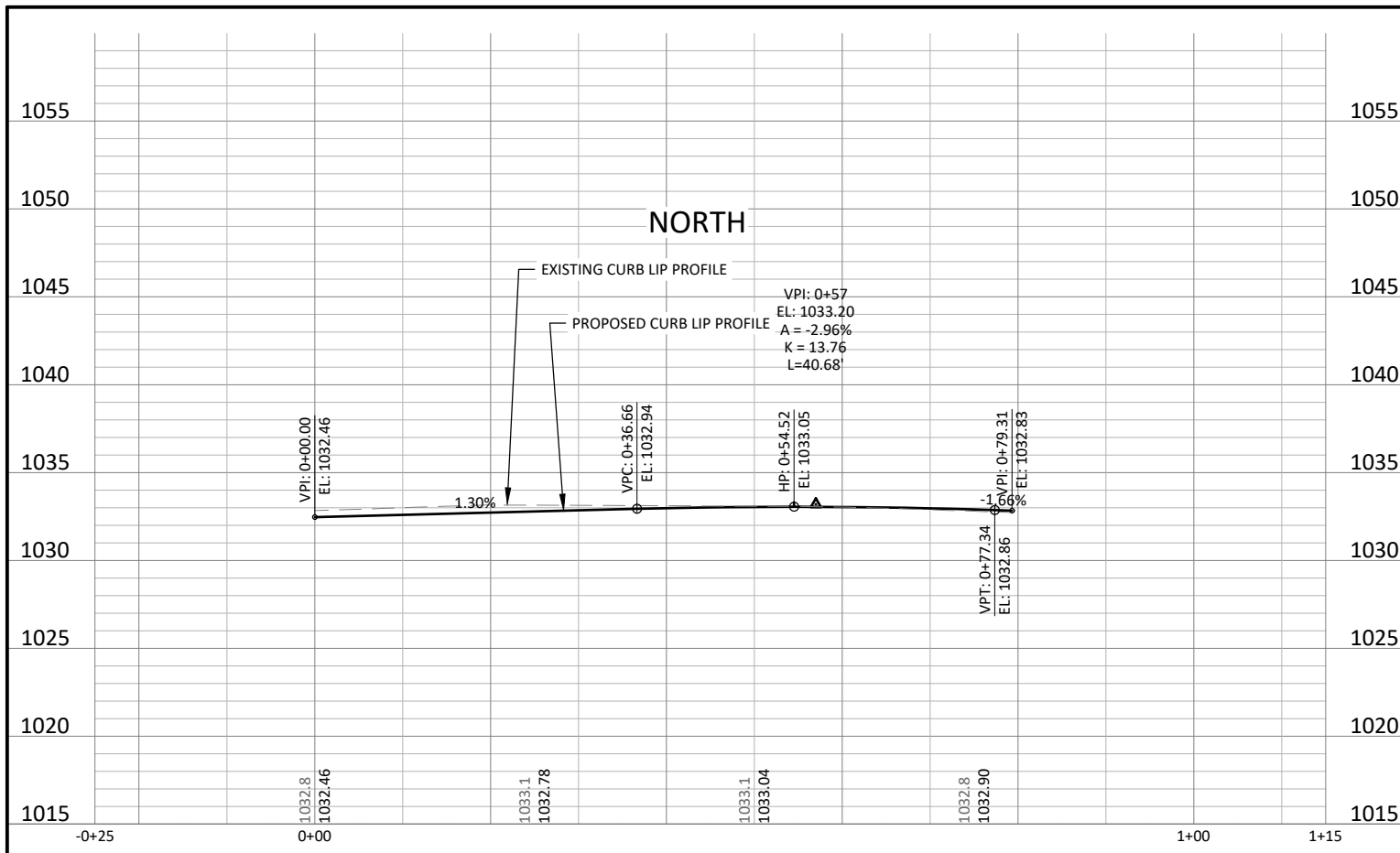
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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 MILL & OVERLAY
 HOWARD AVENUE CUL-DE-SAC

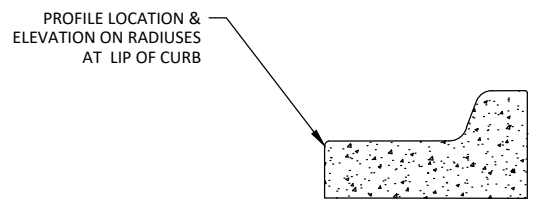
SHEET
C6.10

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LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STATION, OFFSET, & ELEVATION
- PROPOSED DRAINAGE GRADE



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 JEFFREY J. WEYANDT
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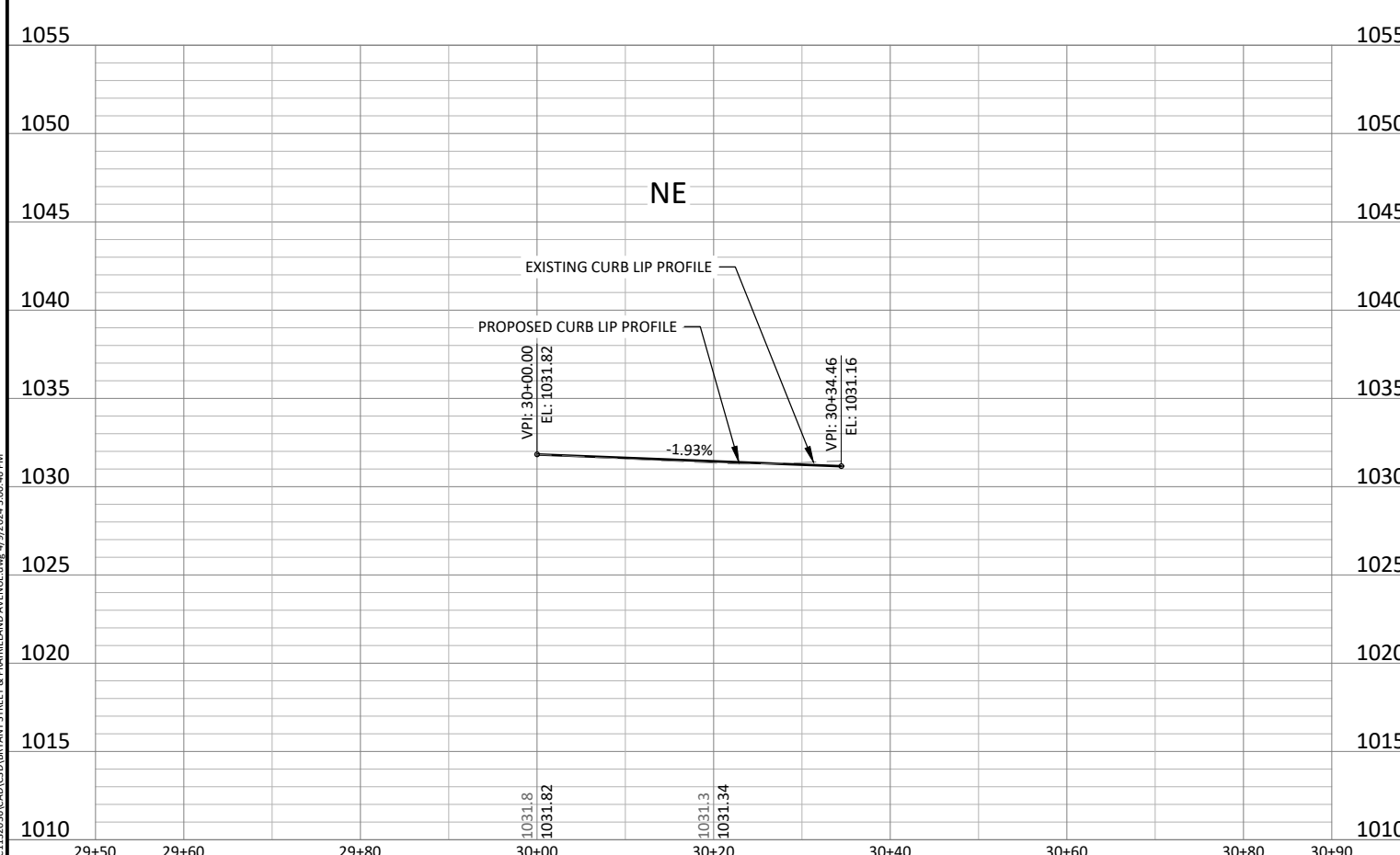
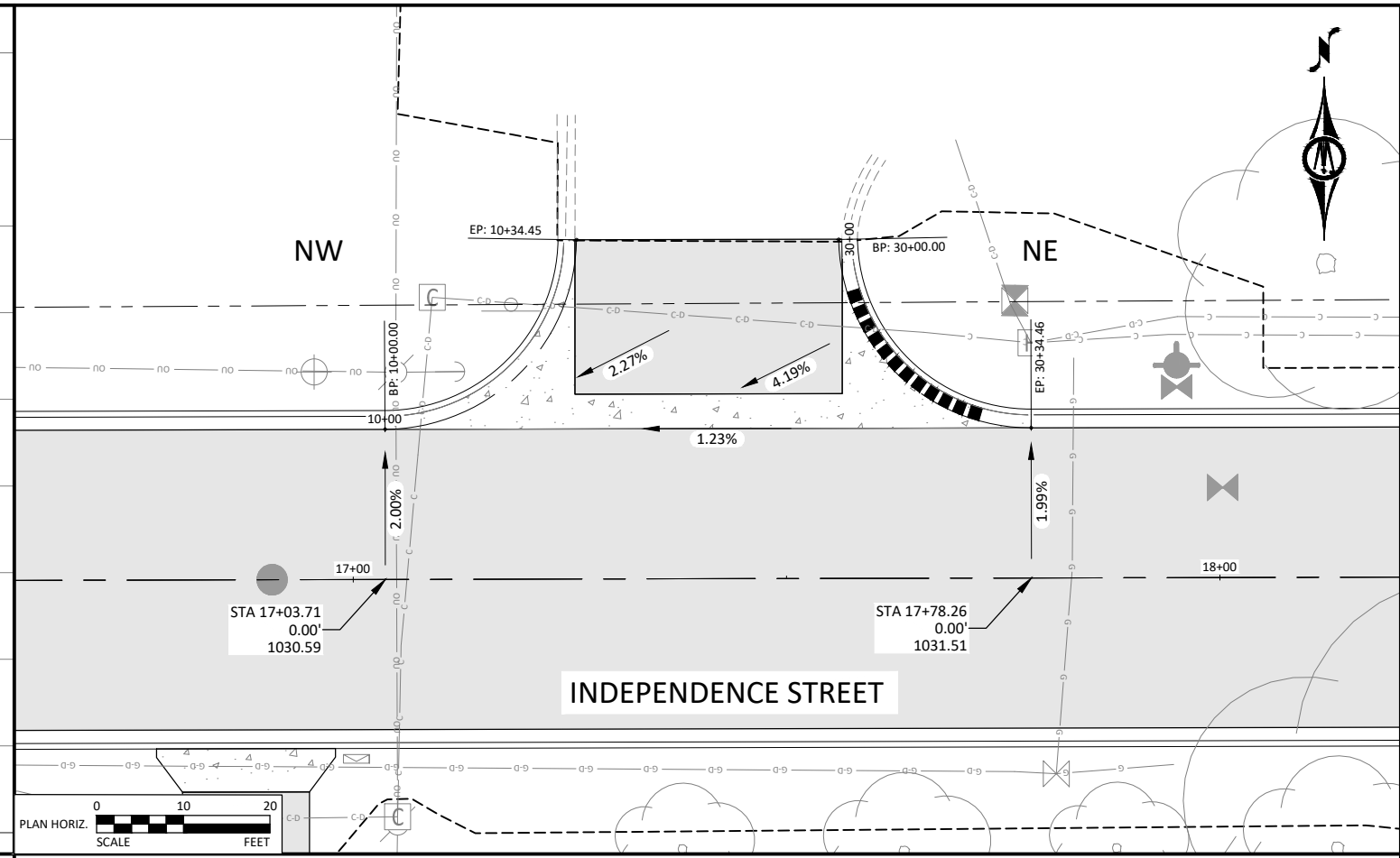
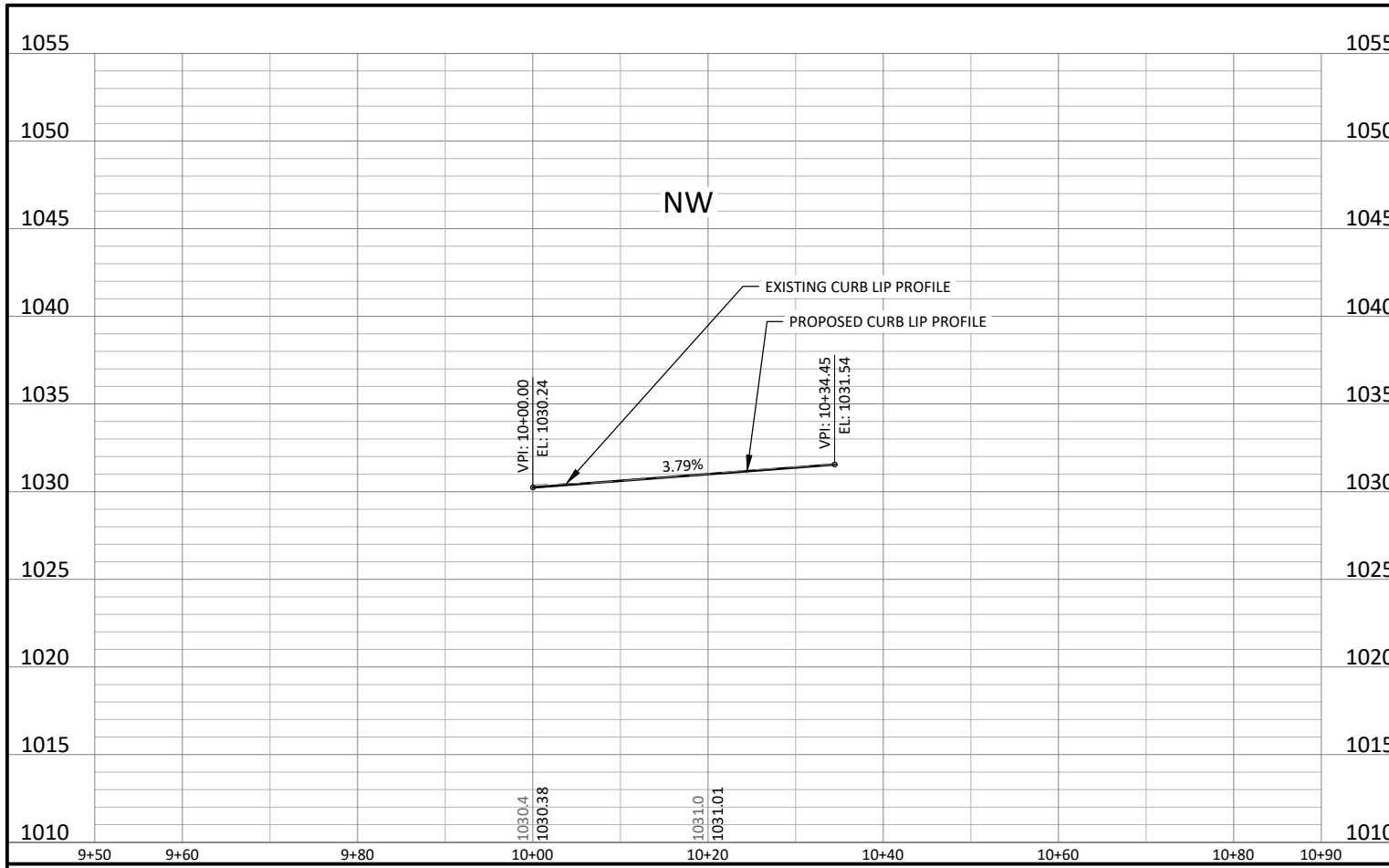


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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 INTERSECTION DETAILS
 INDEPENDENCE STREET - BUMPOUT

SHEET
C6.11



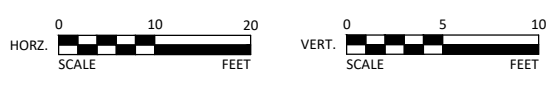
INDEPENDENCE STREET & CITY HALL WEST ENTRANCE

LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STA 0+00
0.00' LT
ELV 000.00
- 0.00%

PROFILE LOCATION & ELEVATION ON RADIIUSES AT LIP OF CURB

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JEFFREY J. WEYANDT
41342
DATE 8/13/2024

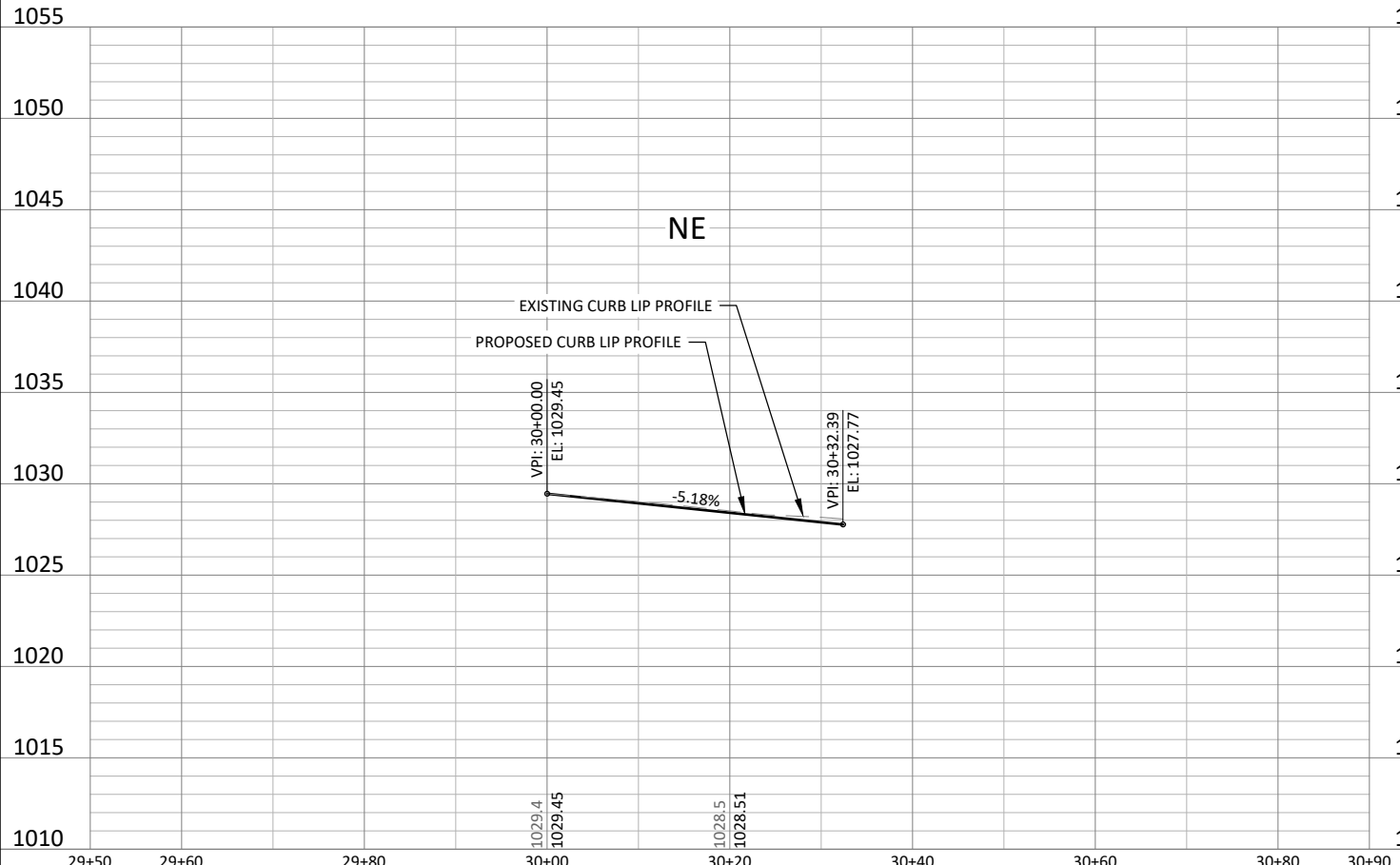
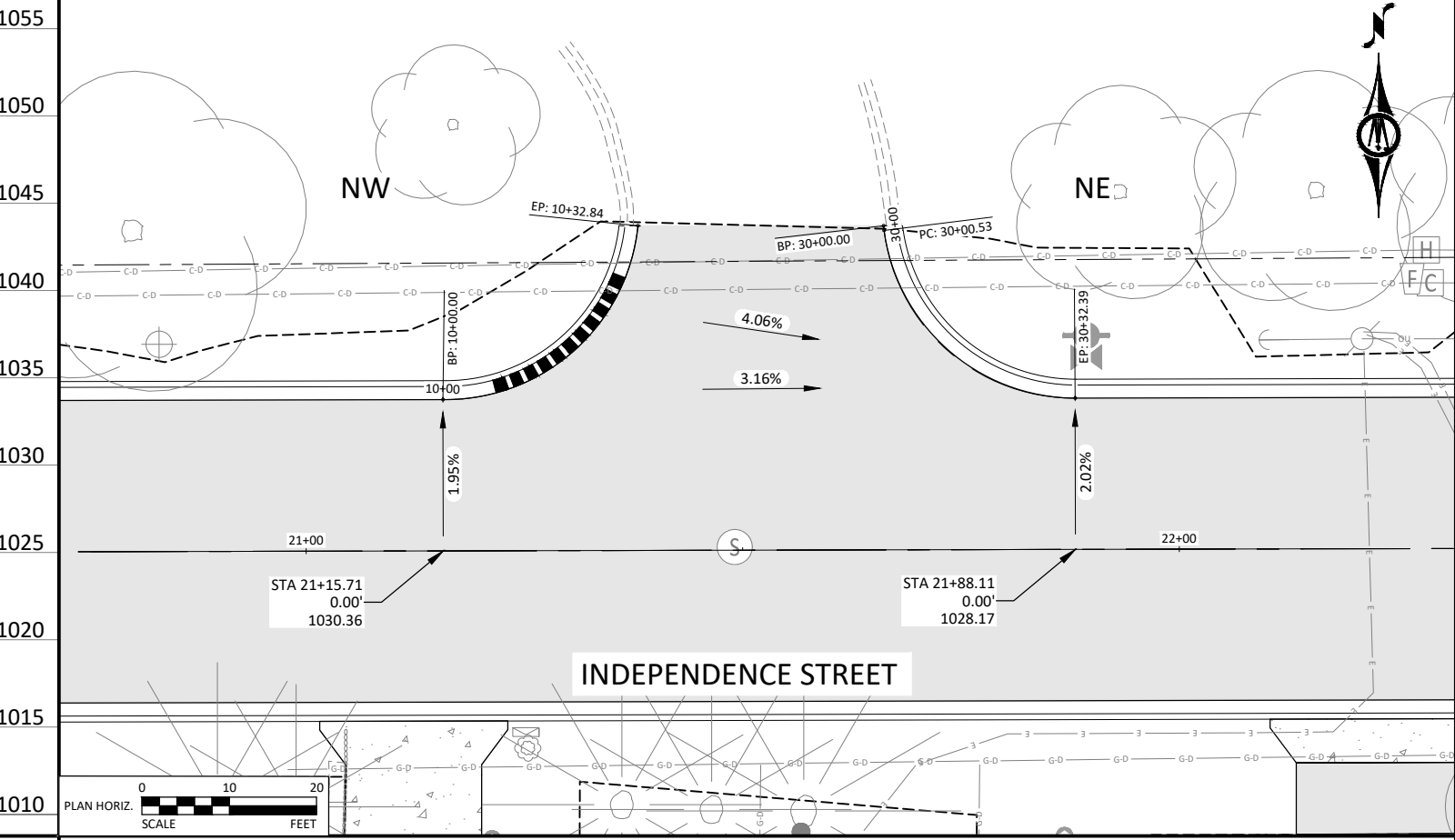
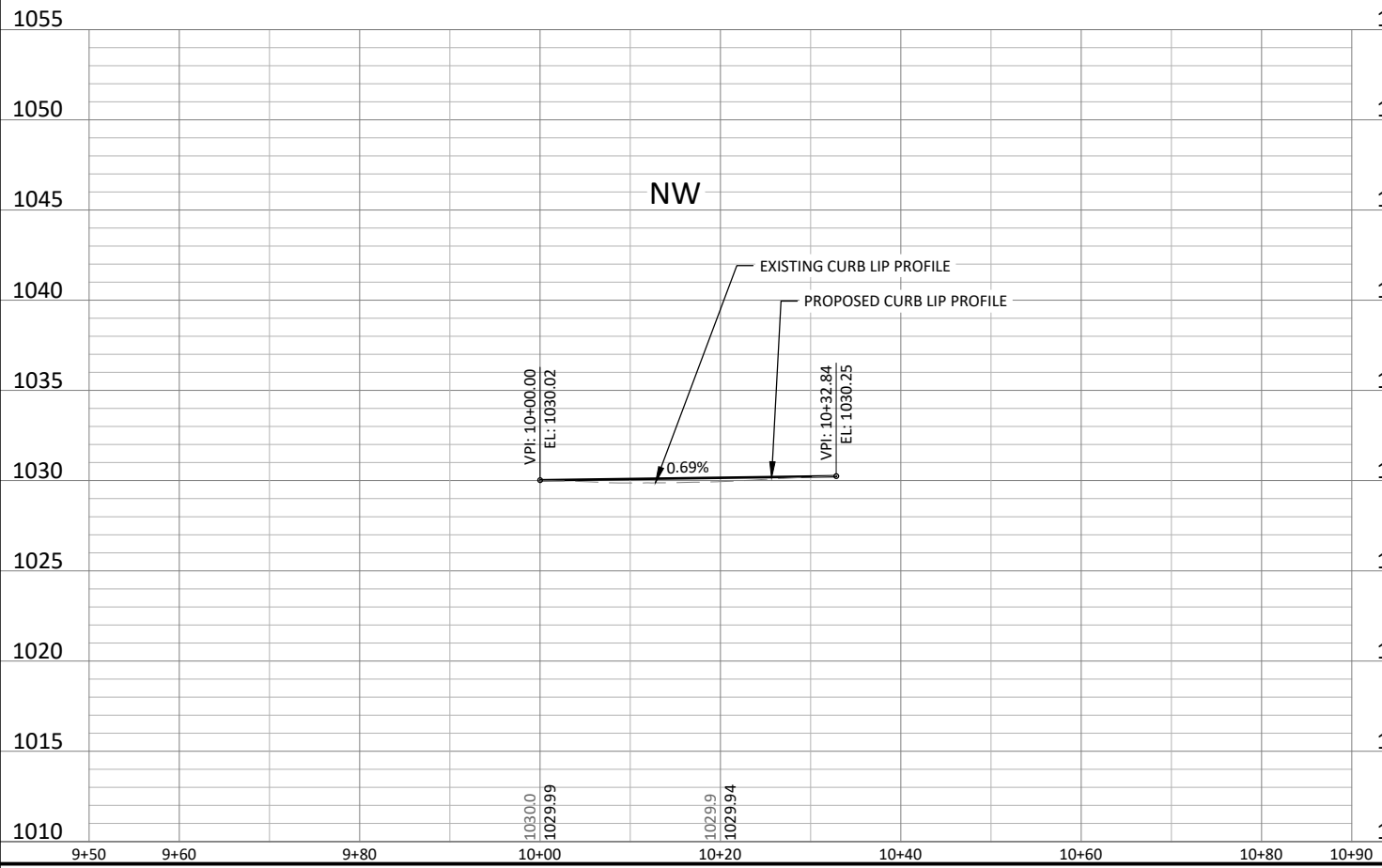


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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
INTERSECTION DETAILS
INDEPENDENCE STREET - WEST CITY HALL ENTRANCE

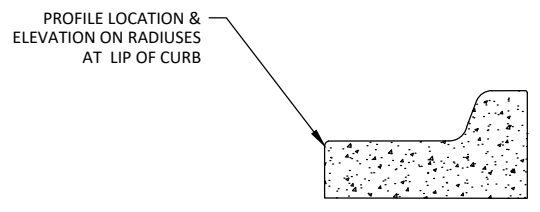
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C6.12



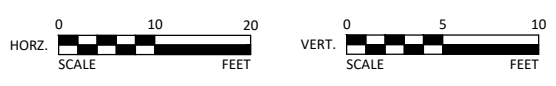
INDEPENDENCE STREET & CITY HALL EAST ENTRANCE

LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STA 0+00
0.00' LT
ELV 000.00
- 0.00% PROPOSED DRAINAGE GRADE



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE: 8/13/2024

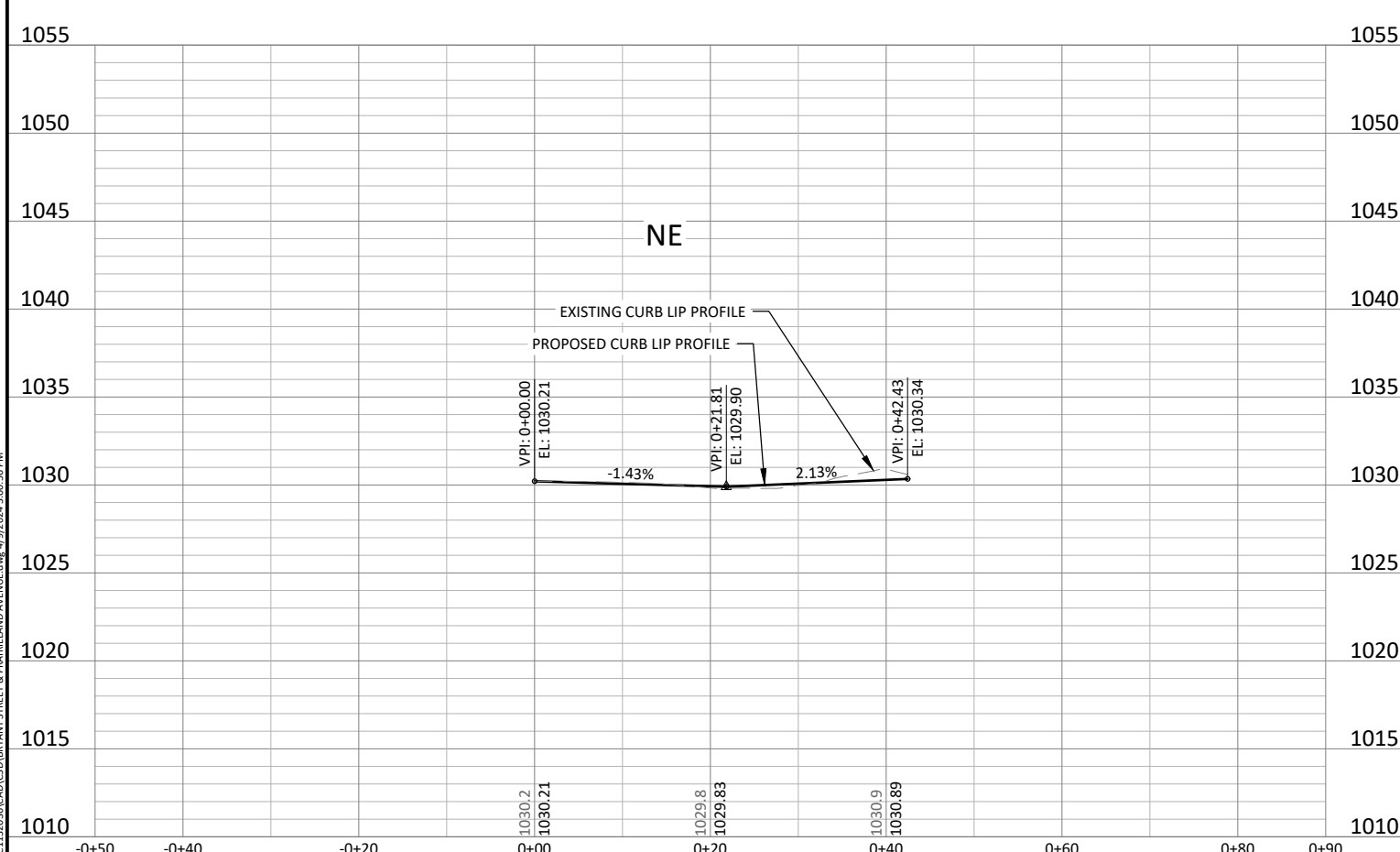
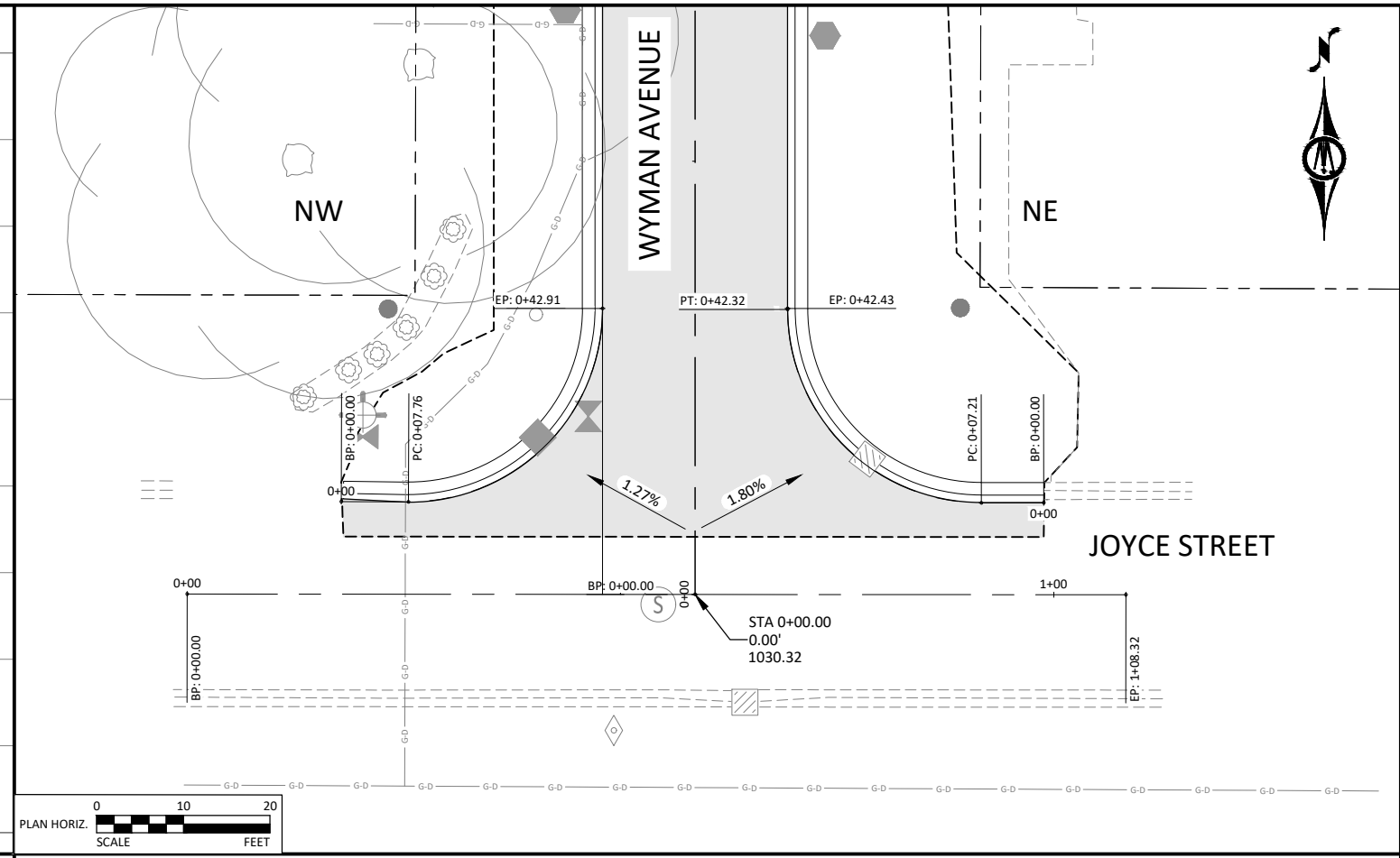
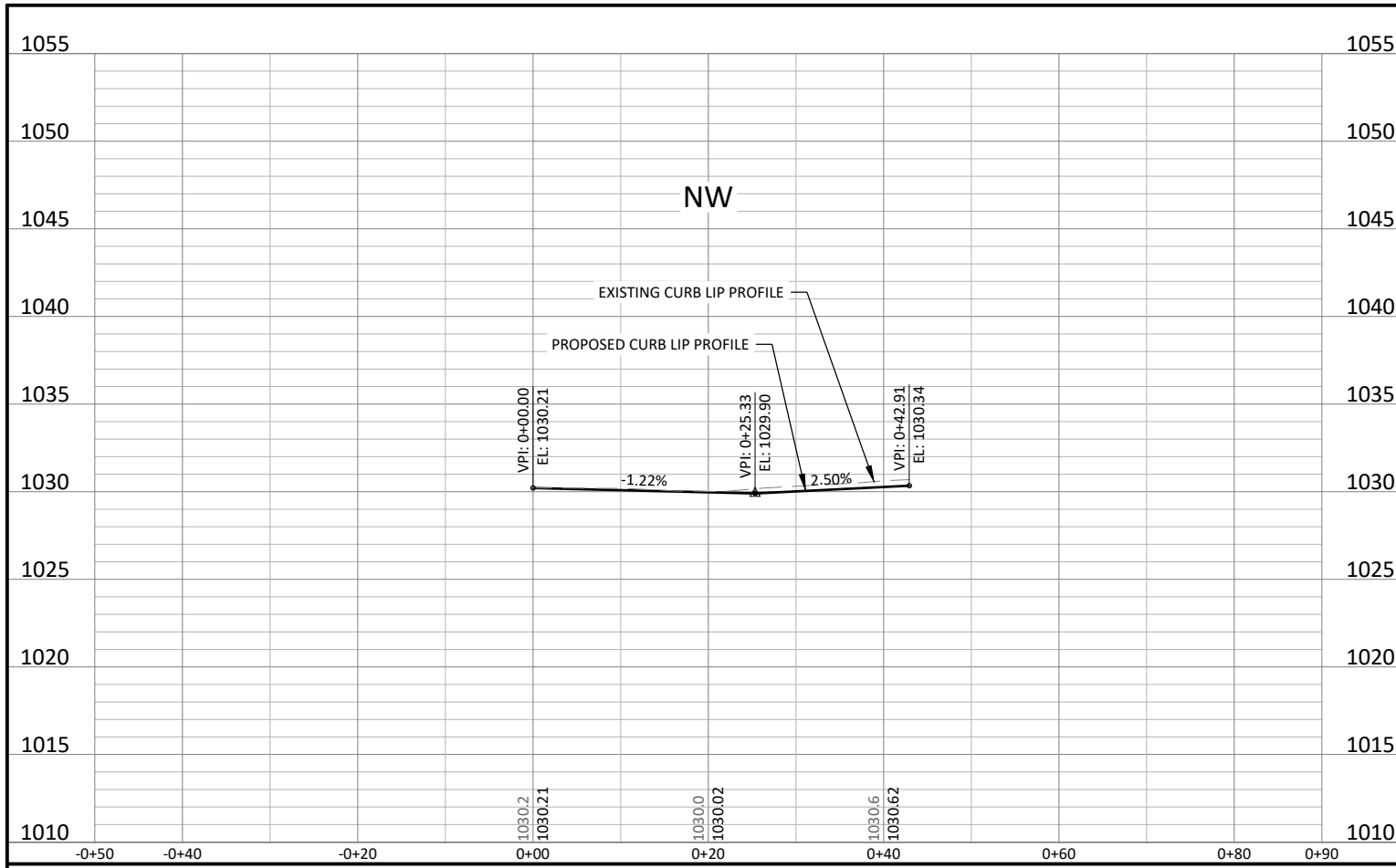


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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
INTERSECTION DETAILS
INDEPENDENCE STREET - CITY HALL EAST ENTRANCE

SHEET
C6.13



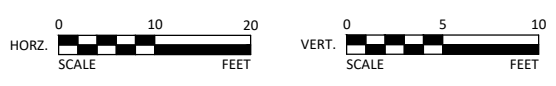
WYMAN AVENUE & JOYCE STREET

LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STA 0+00 0.00' LT ELV 000.00
- 0.00% PROPOSED DRAINAGE GRADE

PROFILE LOCATION & ELEVATION ON RADIIUSES AT LIP OF CURB

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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 8/13/2024

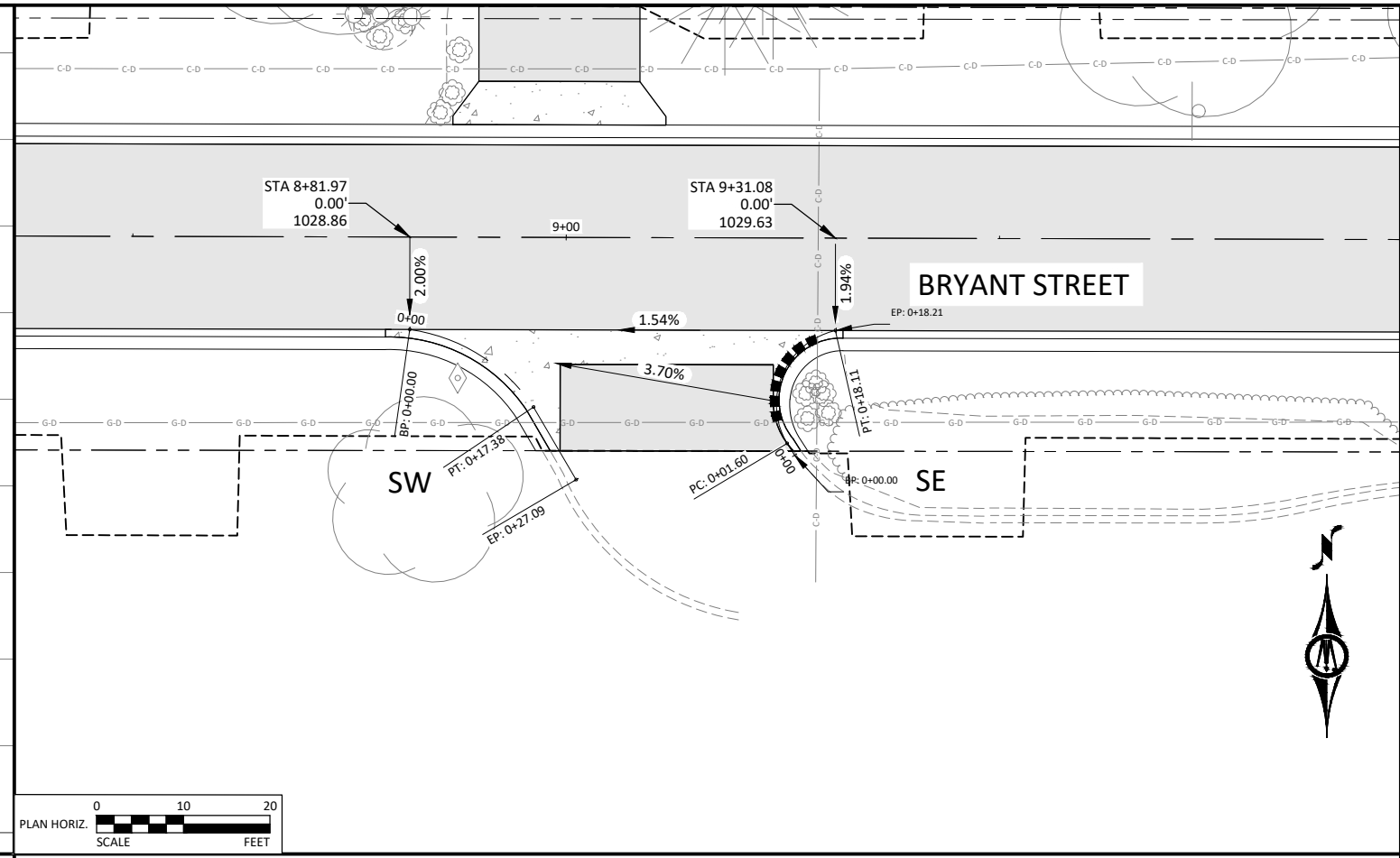
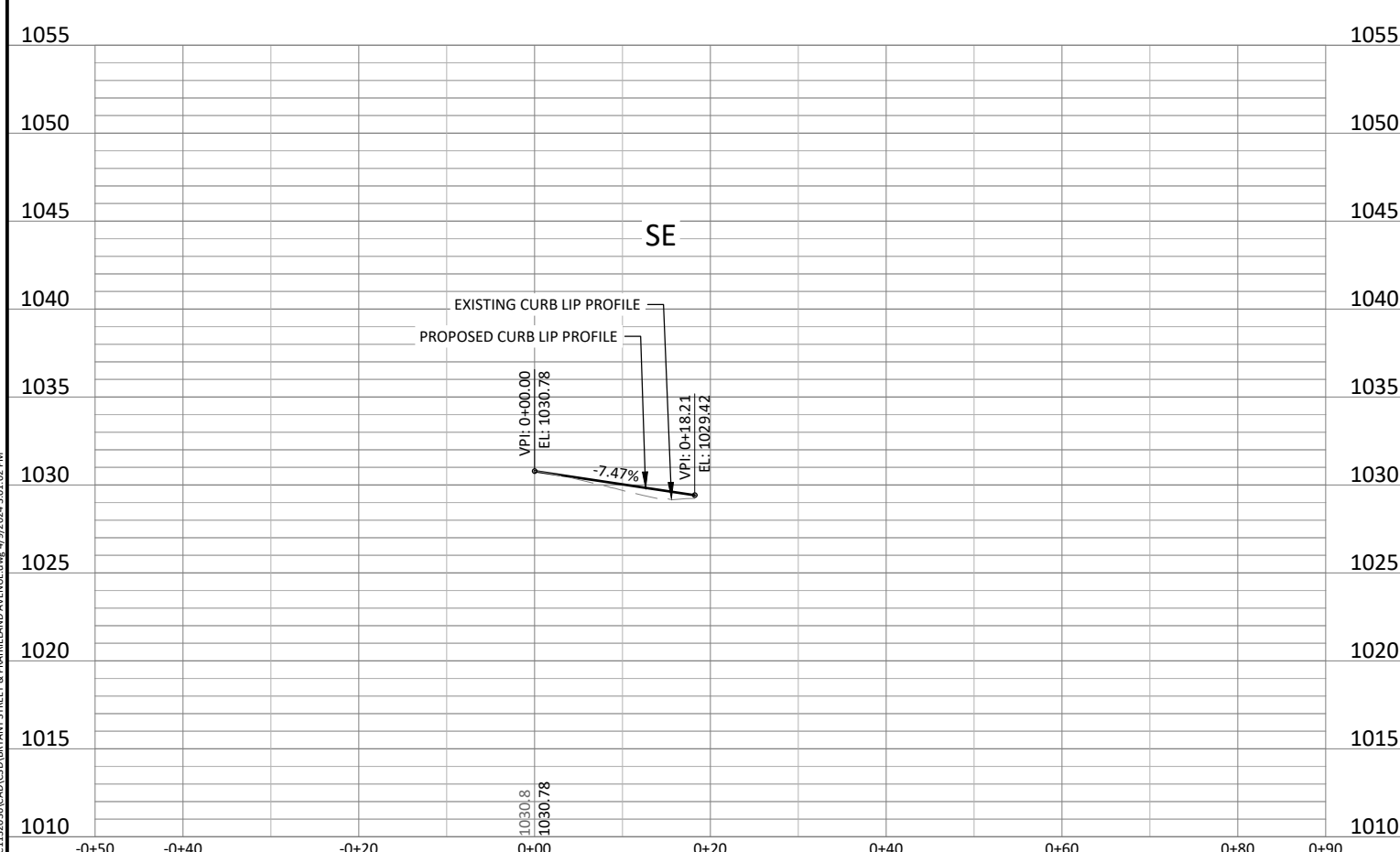
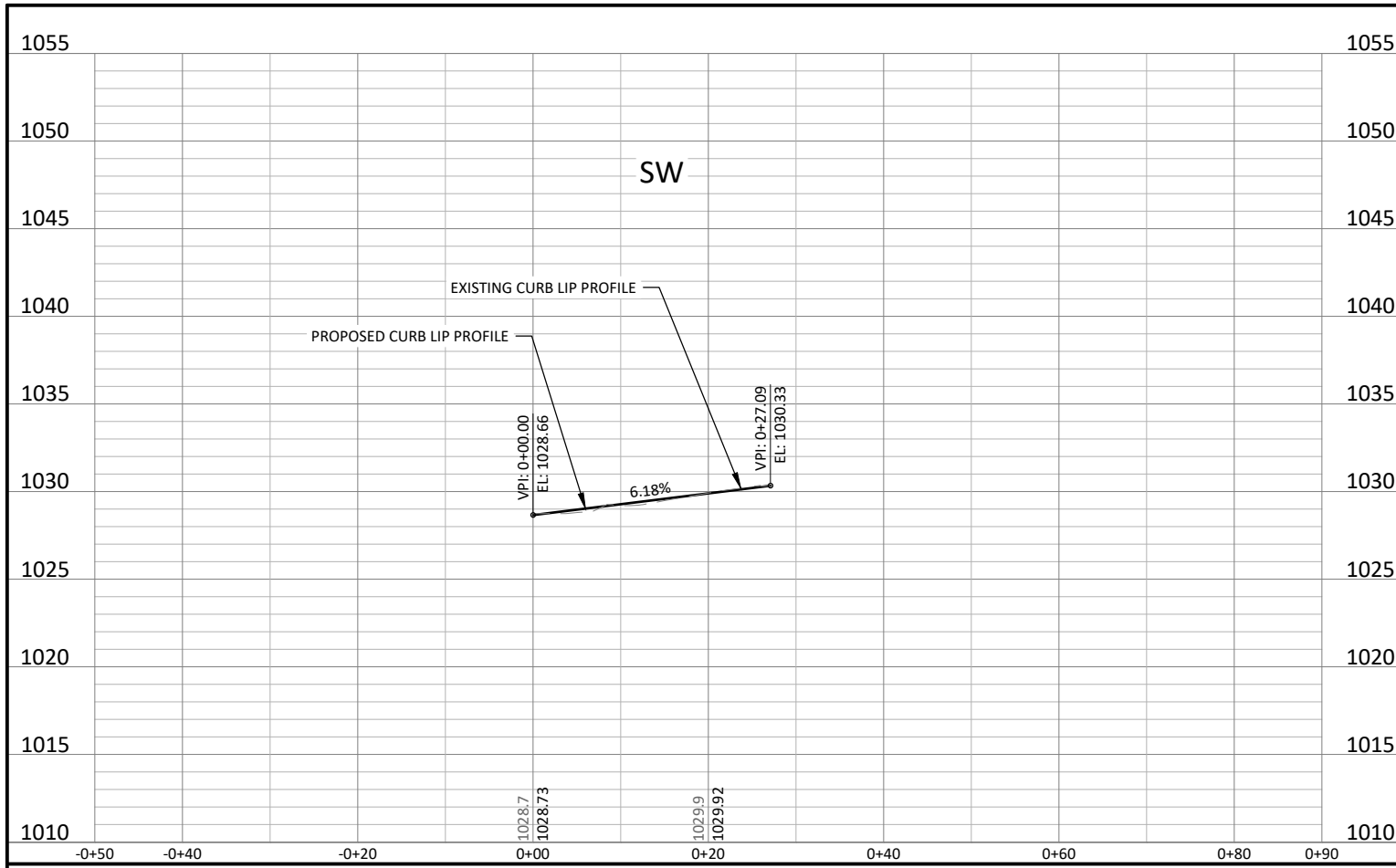


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MAPLE PLAIN, MINNESOTA
 2024 STREET RECONSTRUCTION PROJECT
 INTERSECTION DETAILS
 WYMAN AVENUE & JOYCE STREET

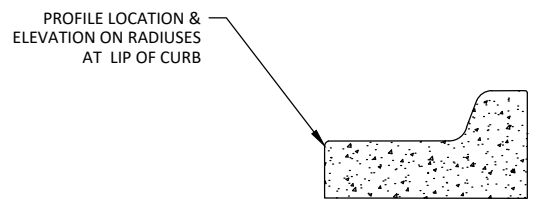
SHEET
C6.14



BRYANT STREET & BRYANT HOUSE WEST ENTRANCE

LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STA 0+00
0.00' LT
ELV 000.00
- PROPOSED DRAINAGE GRADE



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Jeffrey J. Weyandt

JEFFREY J. WEYANDT
41342

DATE 8/13/2024

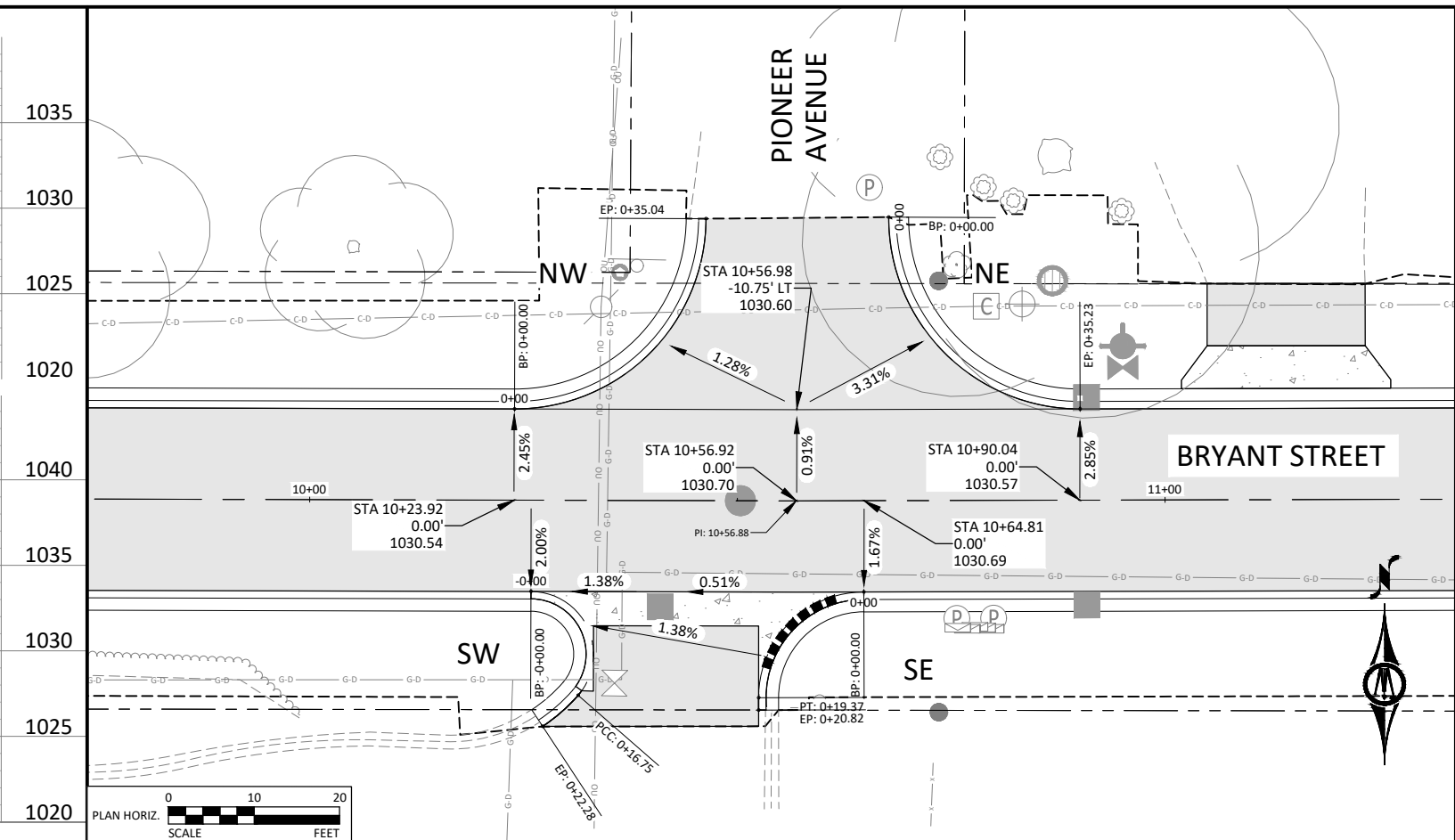
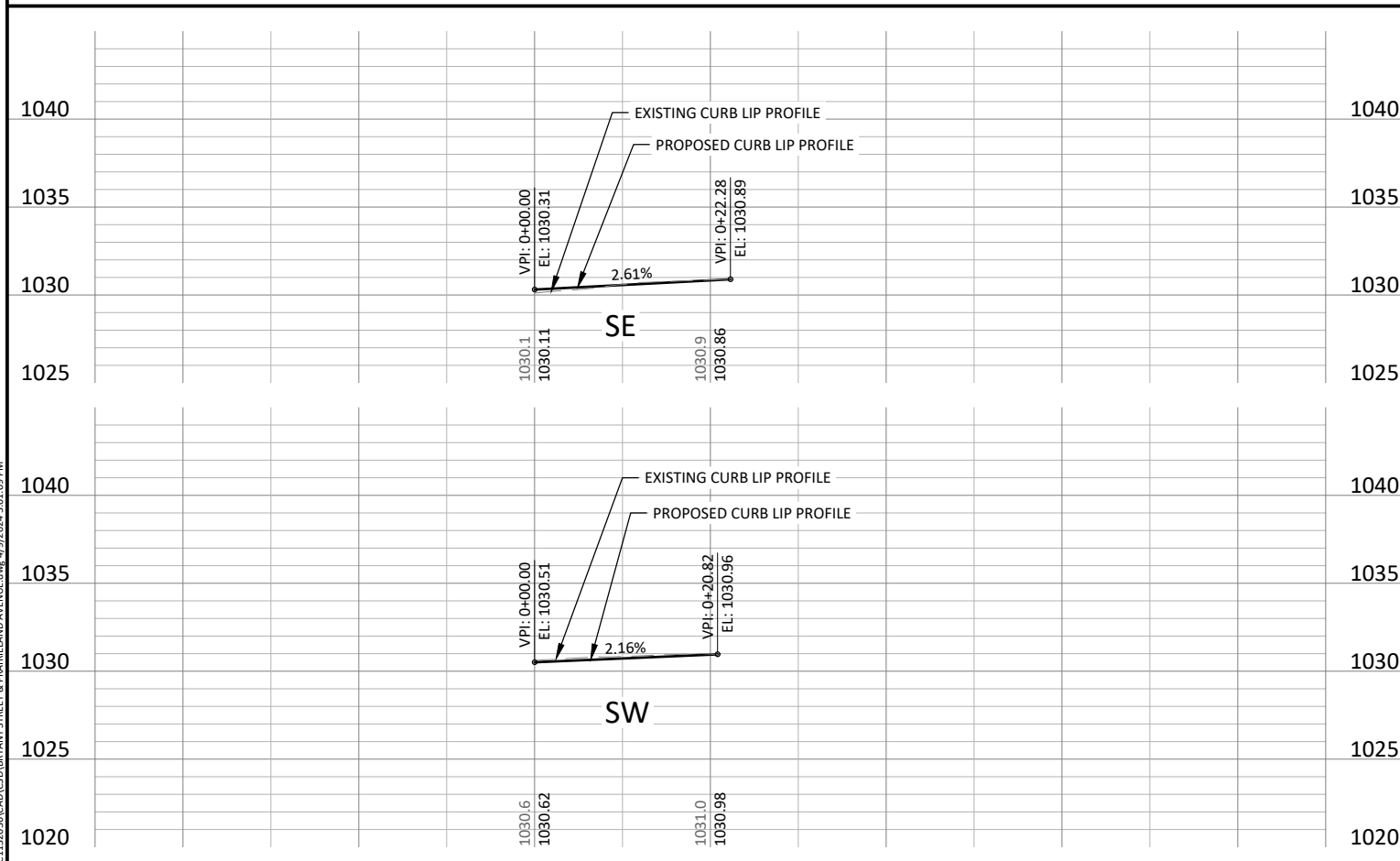
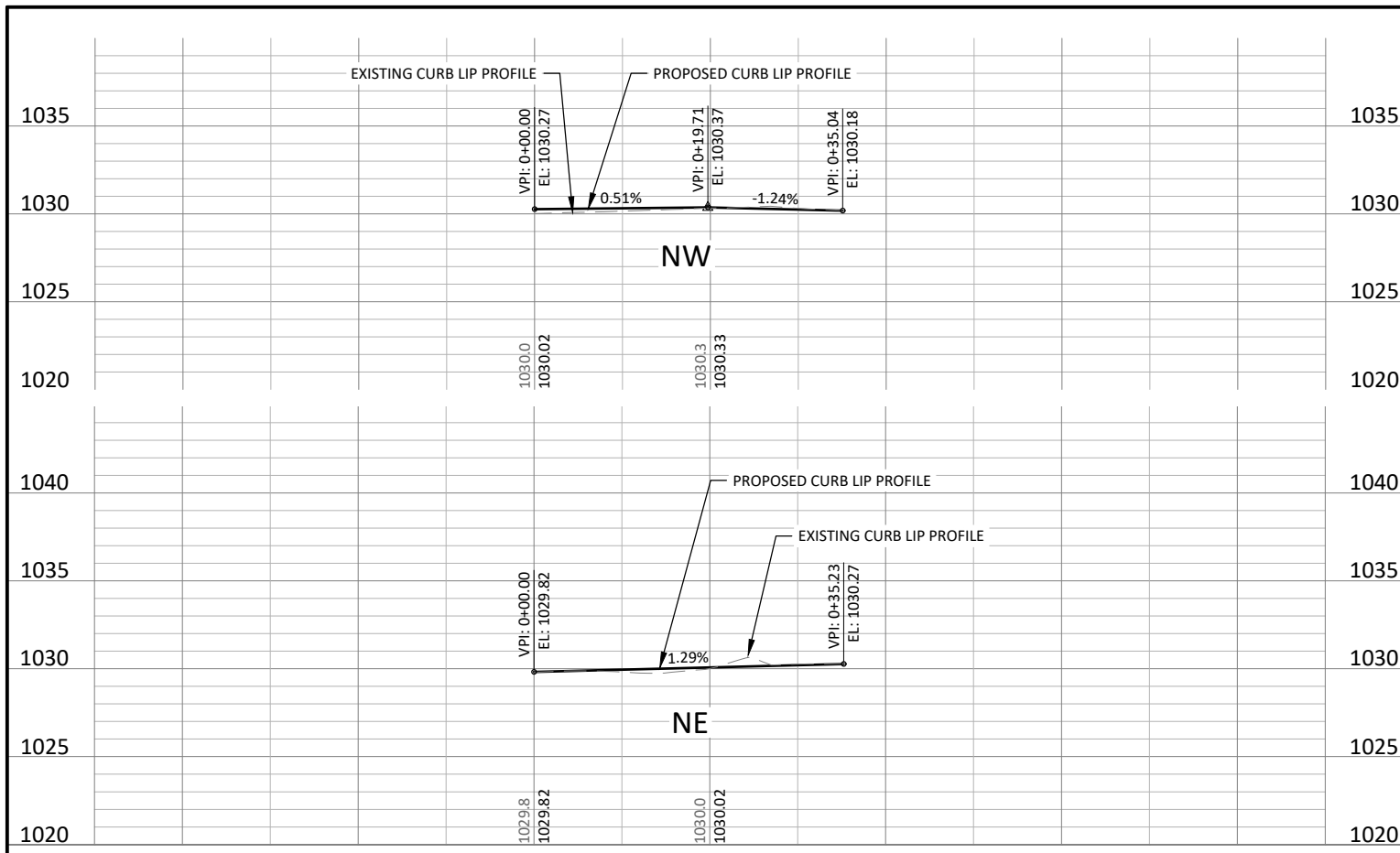


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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
INTERSECTION DETAILS
BRYANT STREET & BRYANT HOUSE WEST ENTRANCE

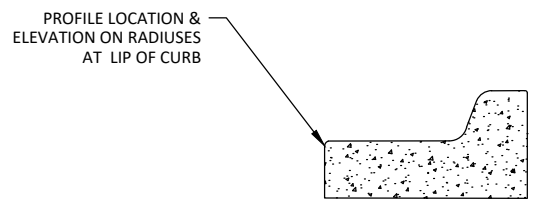
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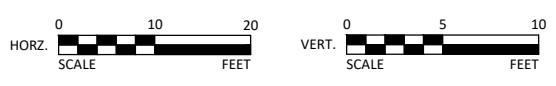
BRYANT STREET & PIONEER AVENUE

LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STATION, OFFSET, & ELEVATION
- PROPOSED DRAINAGE GRADE



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Jeffrey J. Weyandt

JEFFREY J. WEYANDT
43342
DATE: 4/13/2024

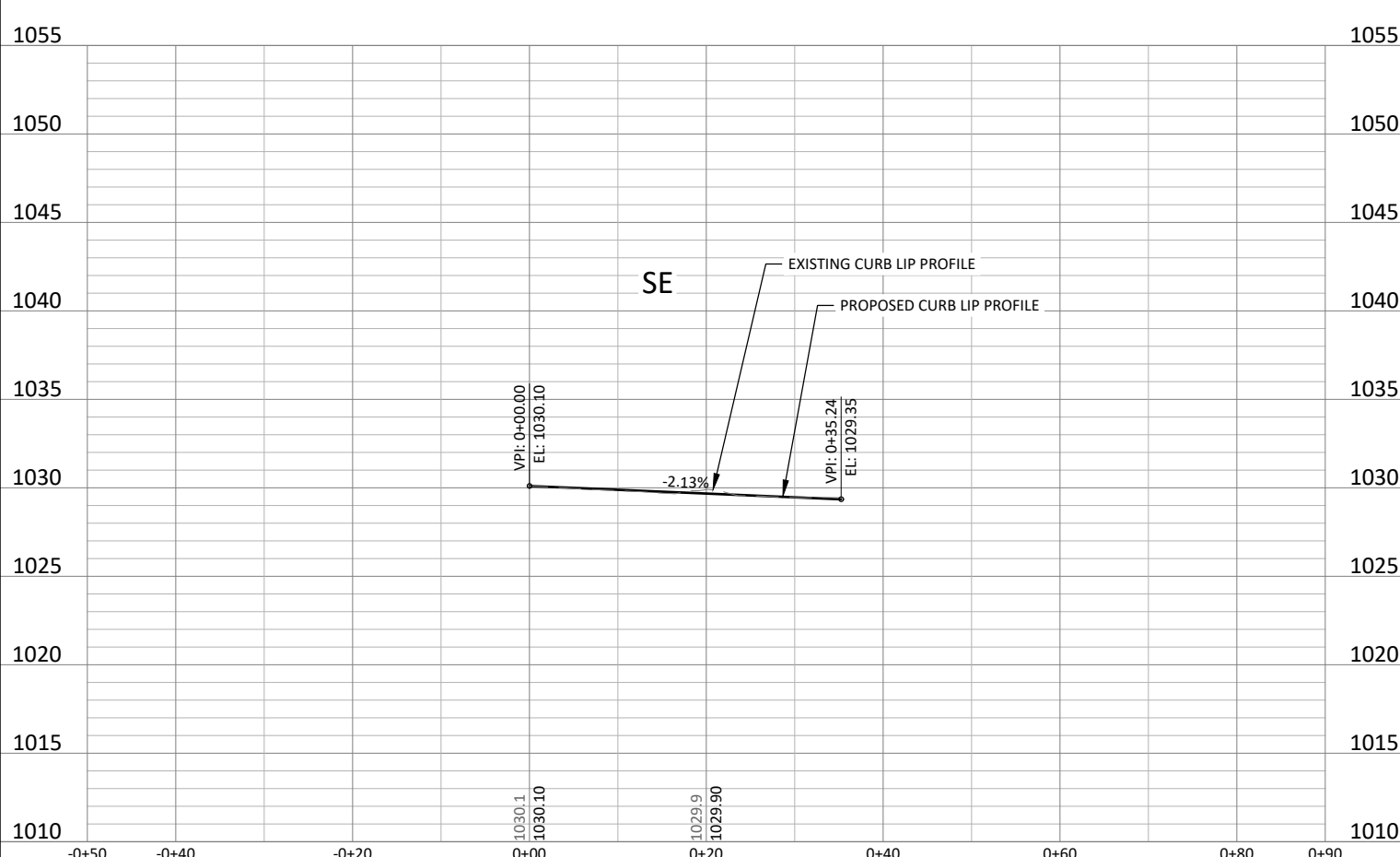
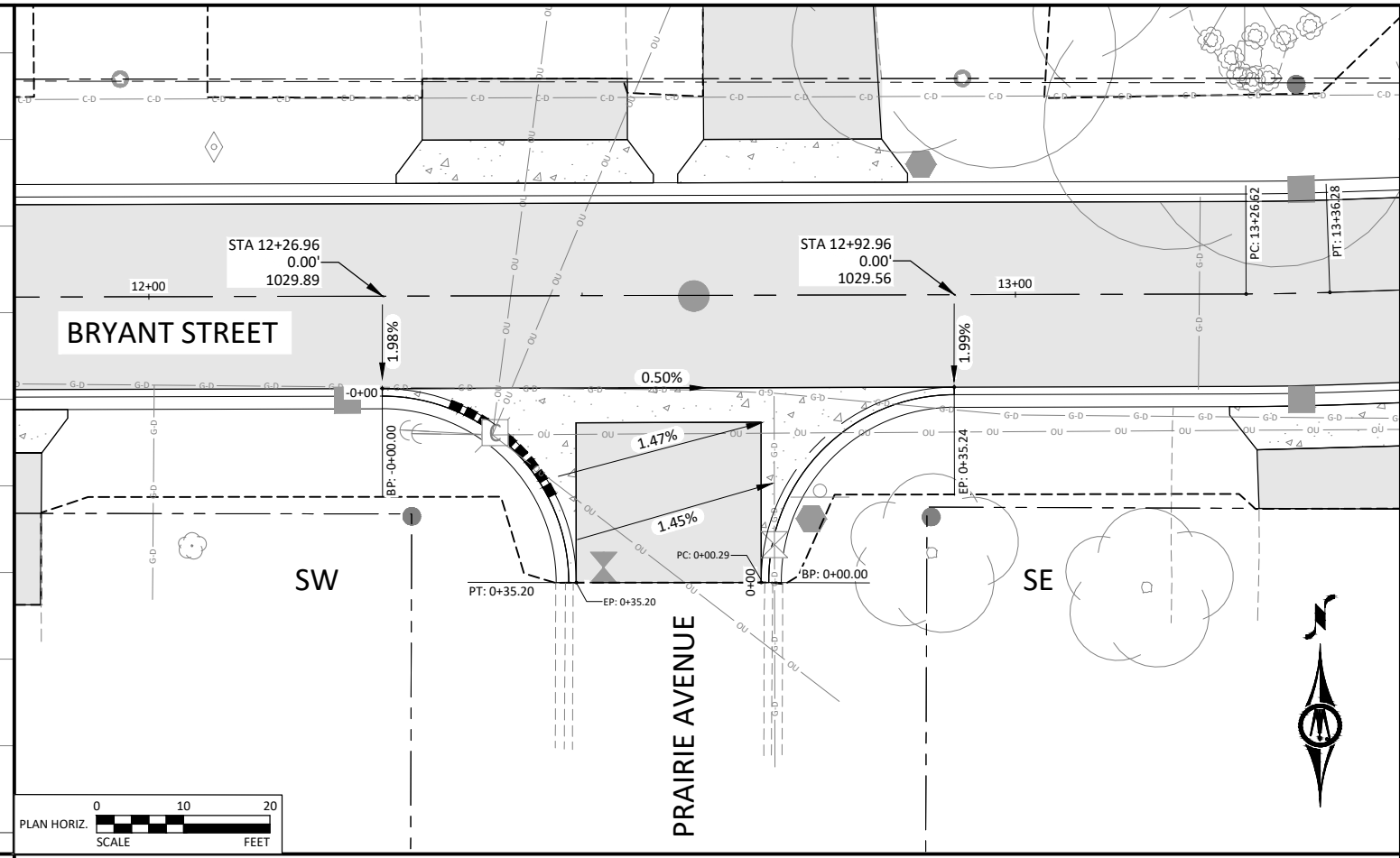
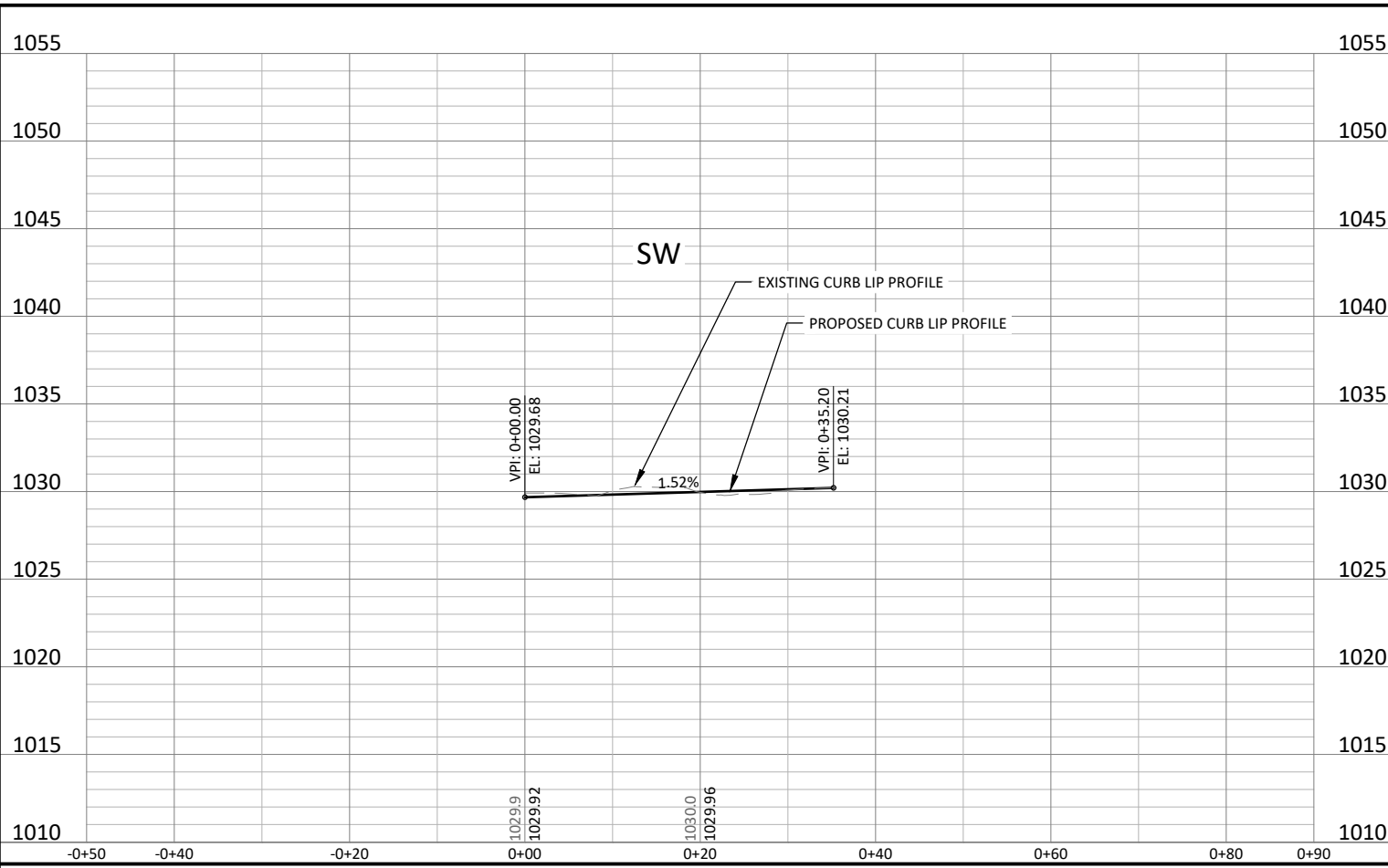


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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
INTERSECTION DETAILS
BRYANT STREET & PIONEER AVENUE

SHEET
C6.16



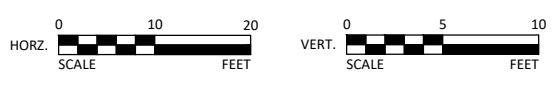
BRYANT STREET & PRAIRIE AVENUE

LEGEND

- CONSTRUCT CONCRETE CURB & GUTTER
- GUTTER OUT PUT CURB
- STA 0+00
0.00' LT
ELV 000.00
- 0.00%

PROFILE LOCATION & ELEVATION ON RADIIUSES AT LIP OF CURB

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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
P.E. NO. 43342 DATE 4/13/2024

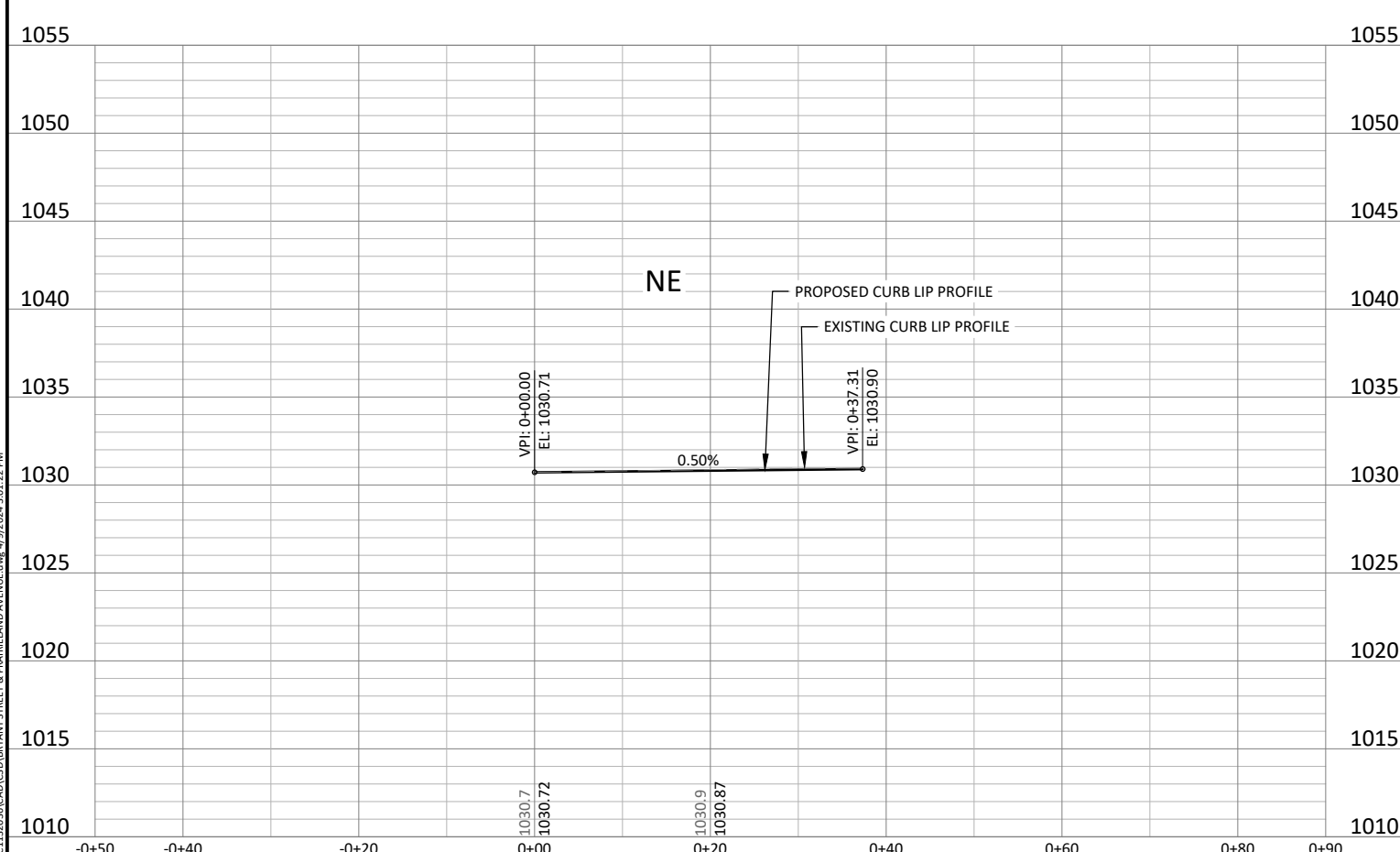
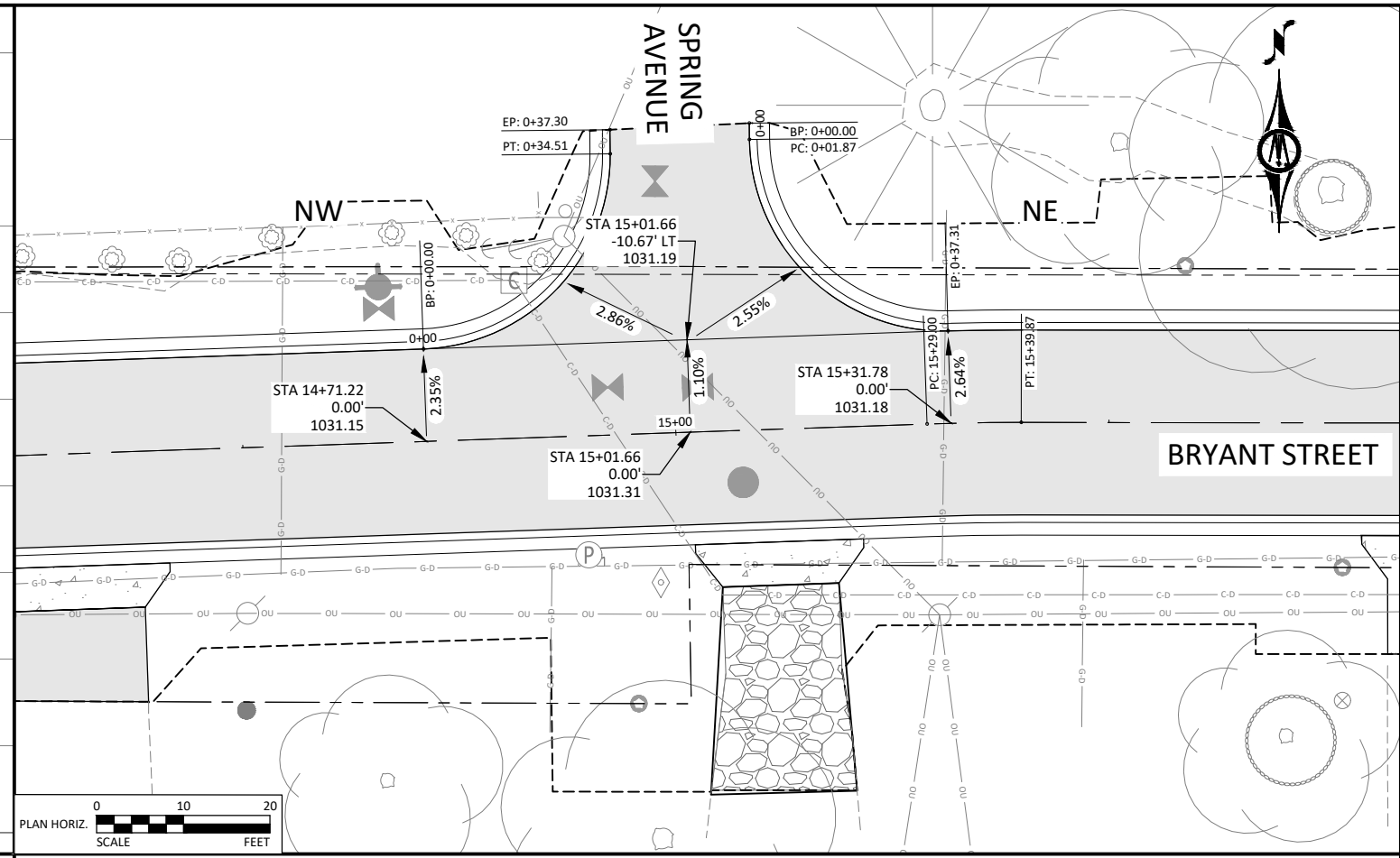
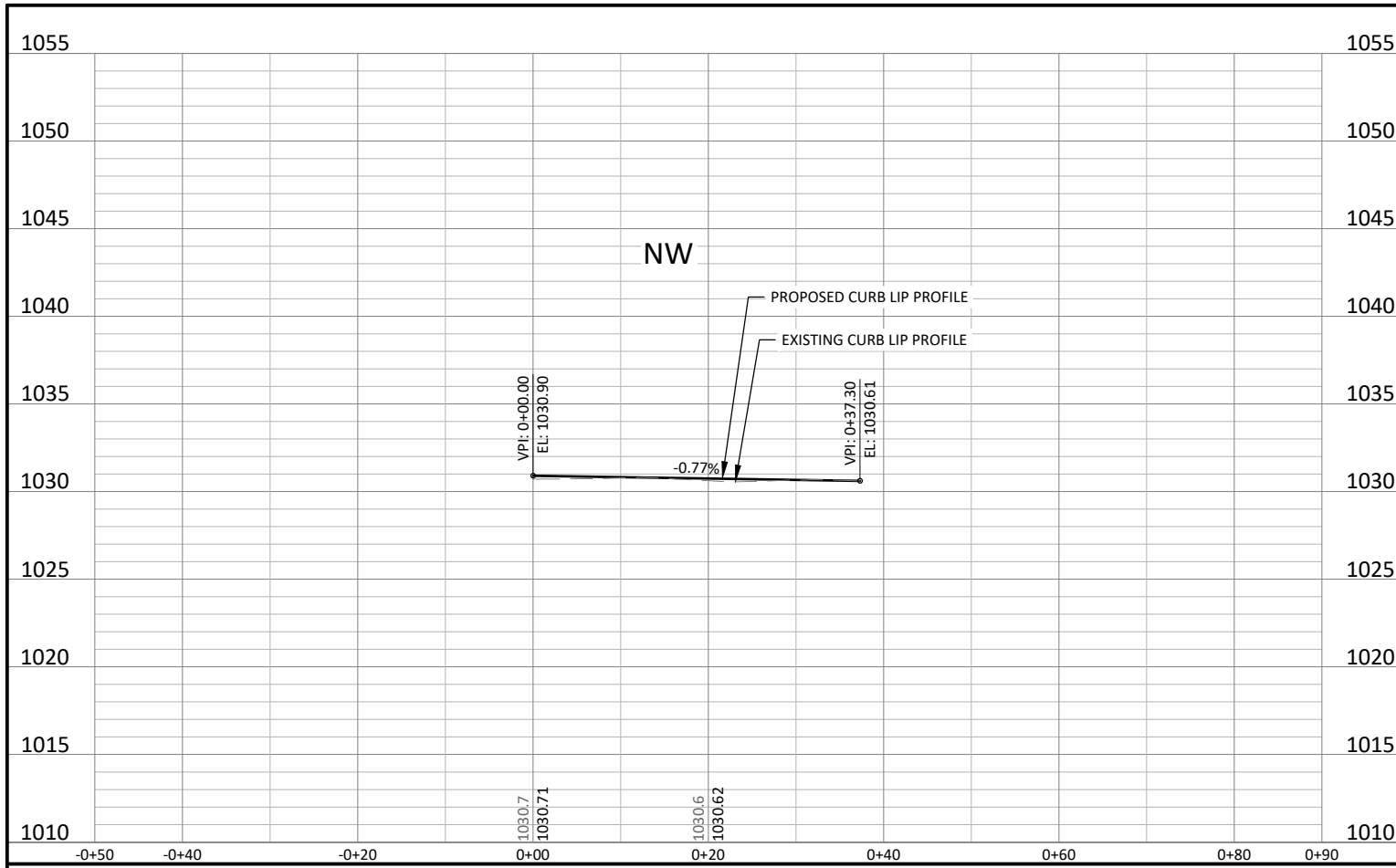


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DRAWN	RAN		
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MAPLE PLAIN, MINNESOTA
2024 STREET RECONSTRUCTION PROJECT
INTERSECTION DETAILS
BRYANT STREET & PRAIRIELAND AVENUE

SHEET
C6.17



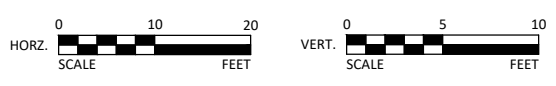
BRYANT STREET & SPRING STREET

LEGEND

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- GUTTER OUT PUT CURB
- STA 0+00
0.00' LT
ELV 000.00
- 0.00% PROPOSED DRAINAGE GRADE

PROFILE LOCATION & ELEVATION ON RADIUSSES AT LIP OF CURB

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JEFFREY J. WEYANDT
43342
DATE 4/13/2024

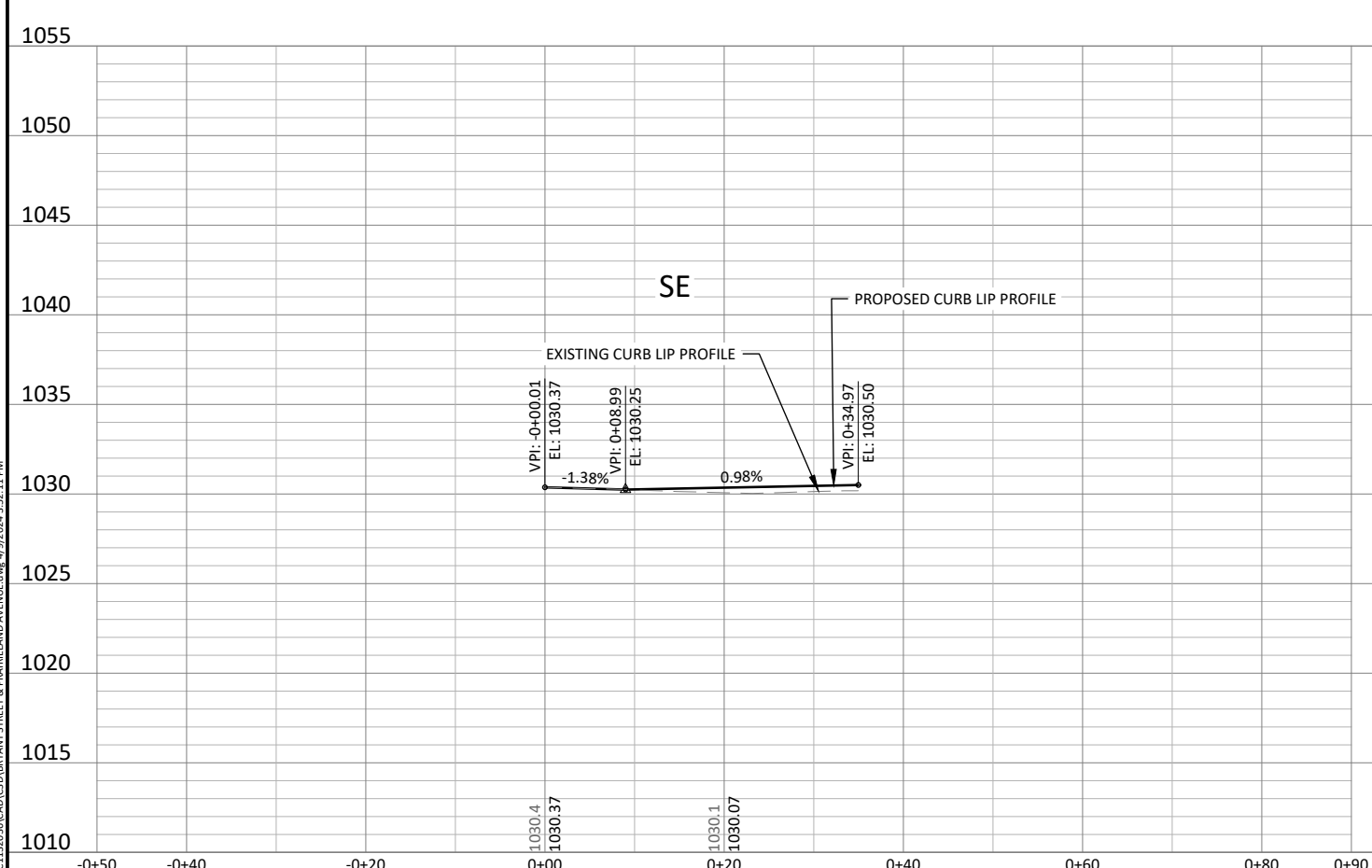
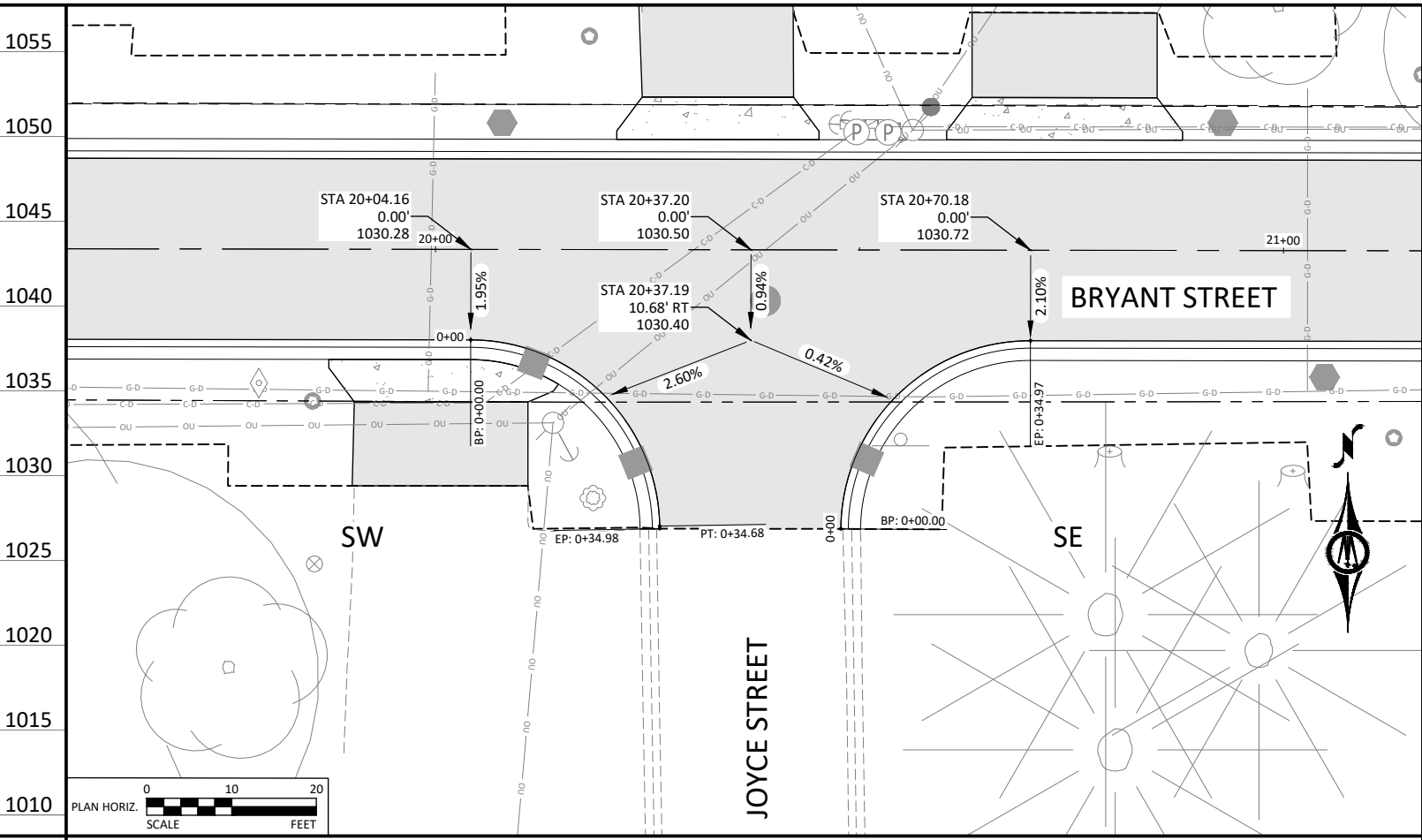
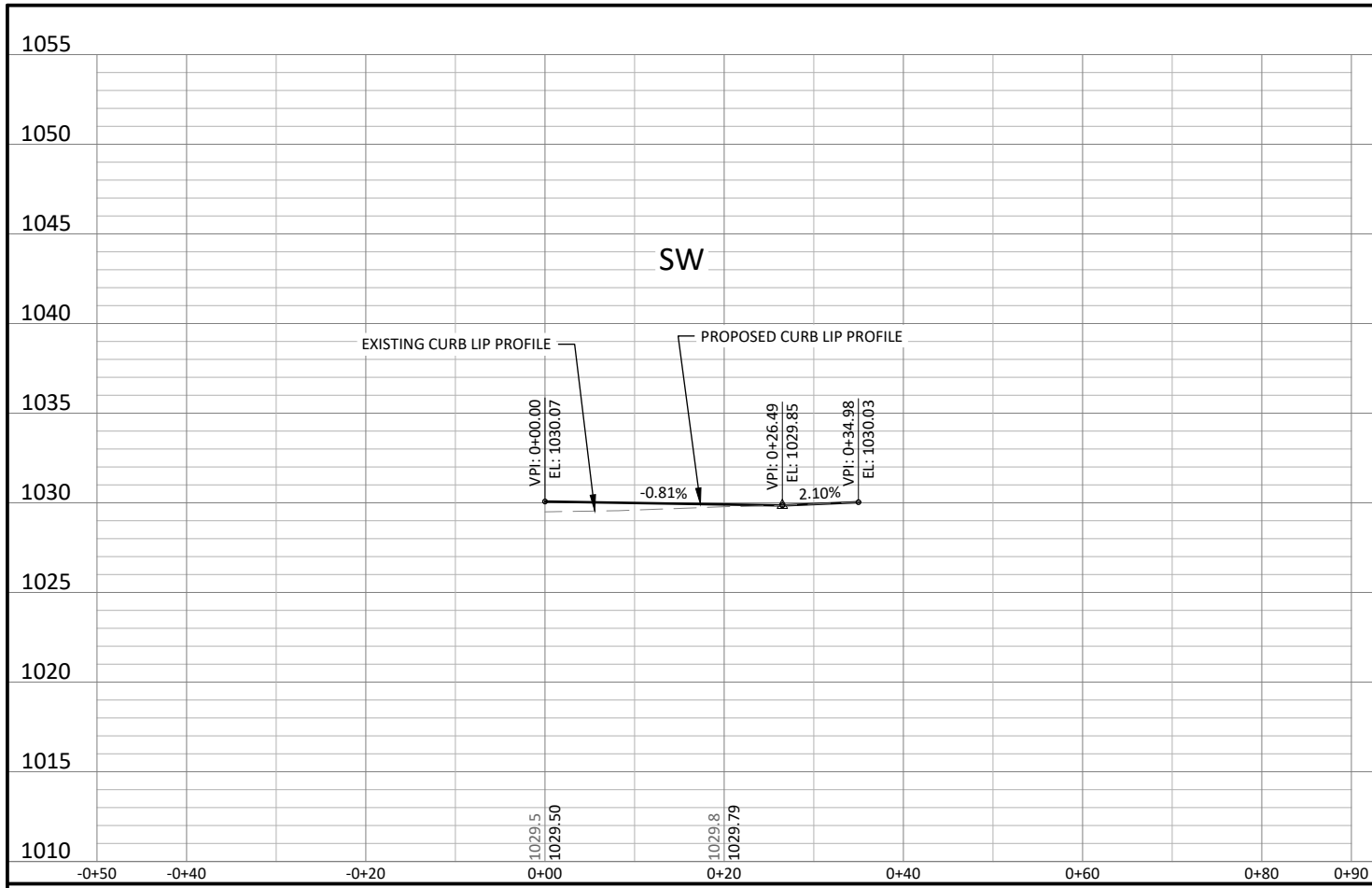


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BRYANT STREET & JOYCE STREET

LEGEND

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- GUTTER OUT PUT CURB
- STA 0+00
0.00' LT
ELV 000.00
- 0.00%

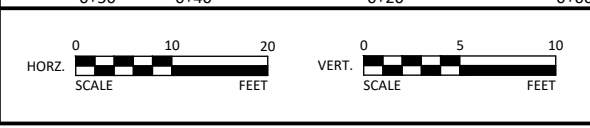
PROFILE LOCATION & ELEVATION ON RADIUS AT LIP OF CURB

2

UPDATED PROFILES

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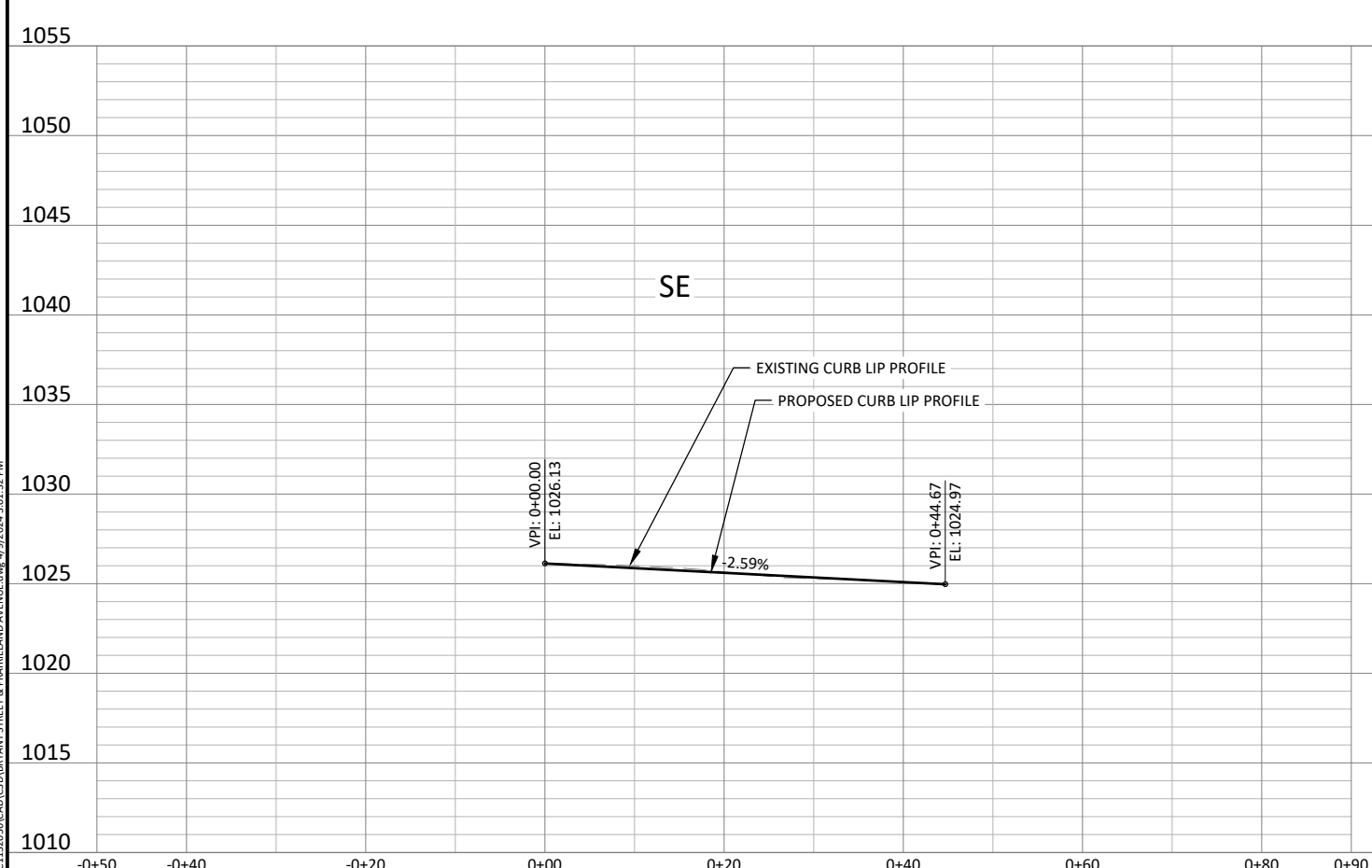
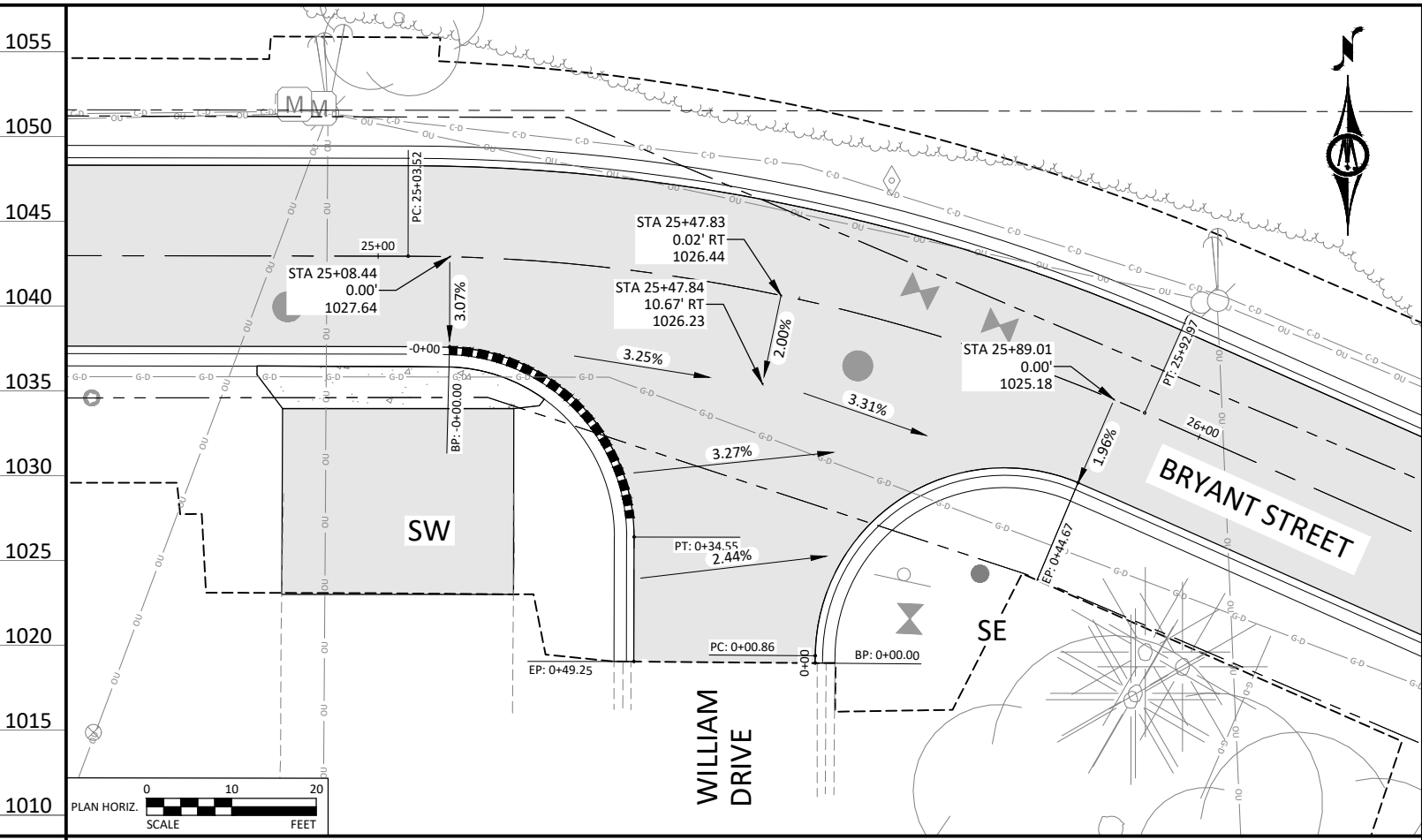
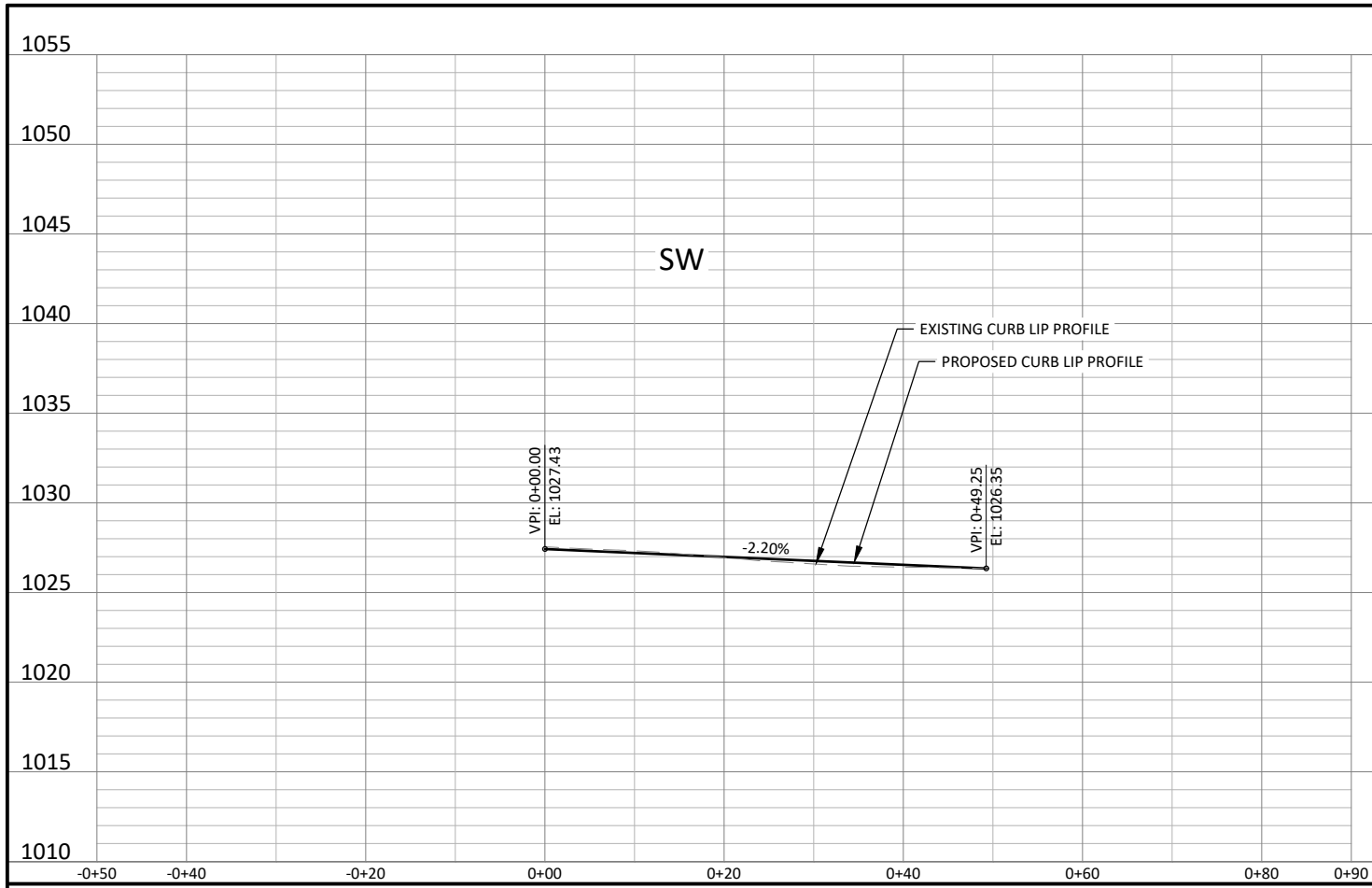
Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342
DATE: 8/13/2024



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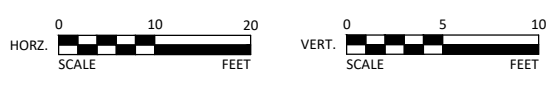
BRYANT STREET & WILLIAM DRIVE

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ELV 000.00
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PROFILE LOCATION & ELEVATION ON RADIUSSES AT LIP OF CURB

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41342
DATE 8/13/2024

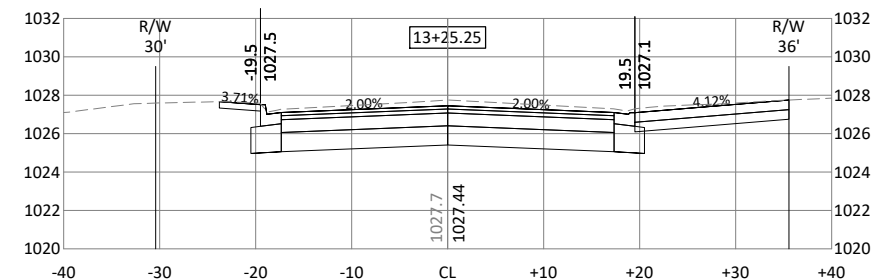
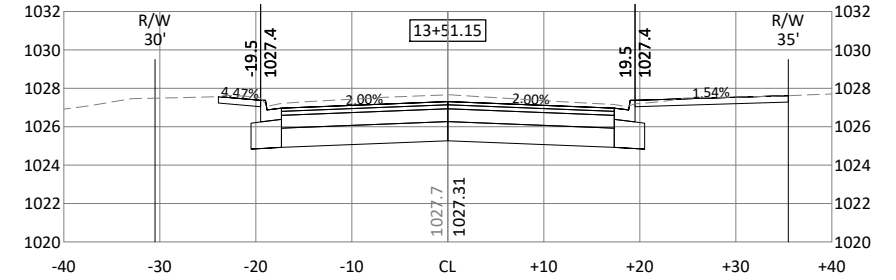
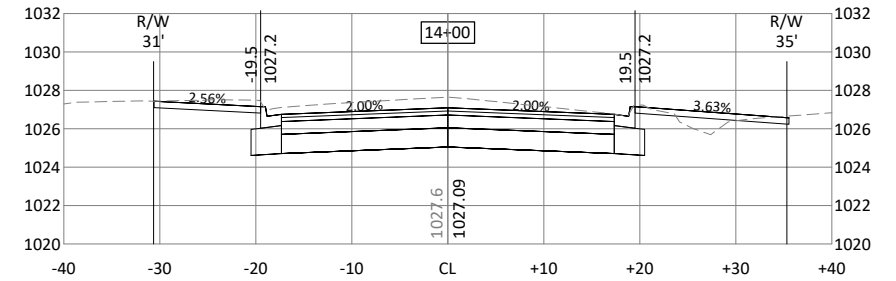
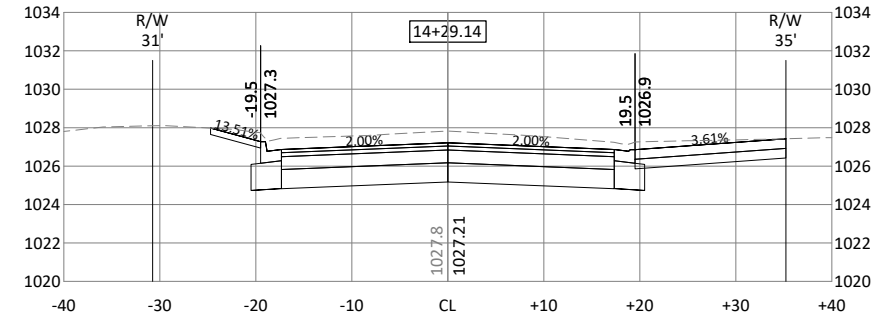
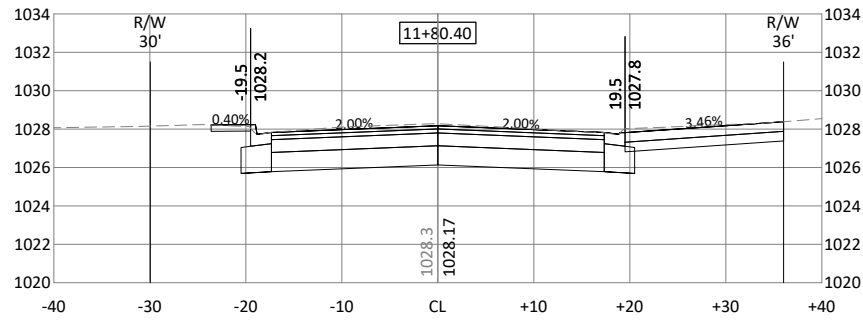
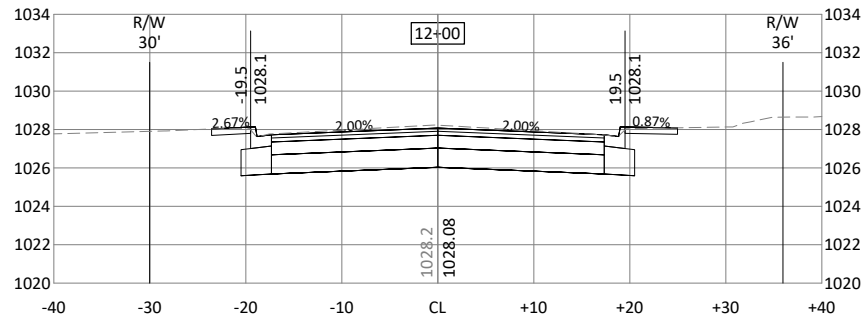
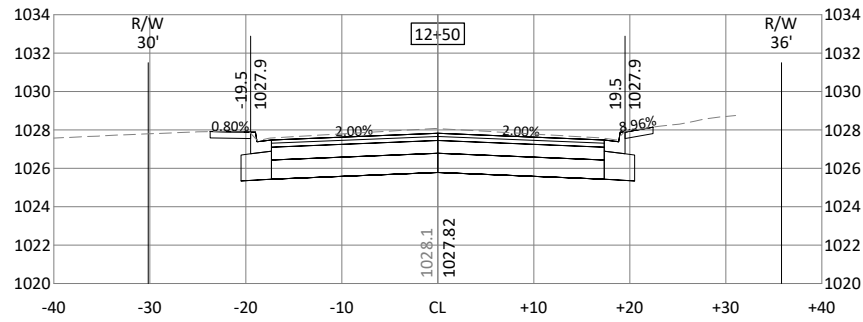
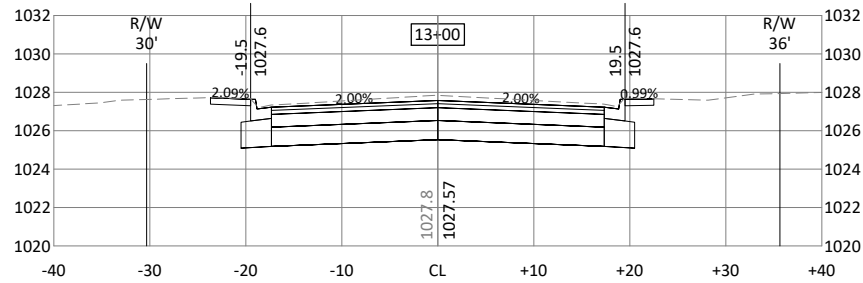
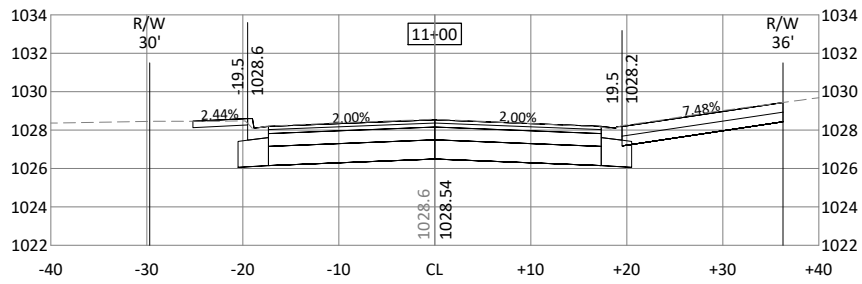
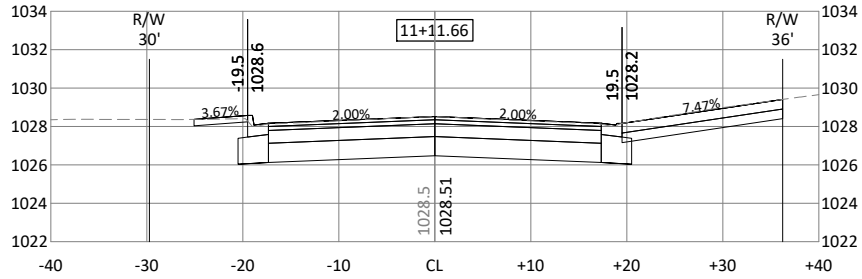
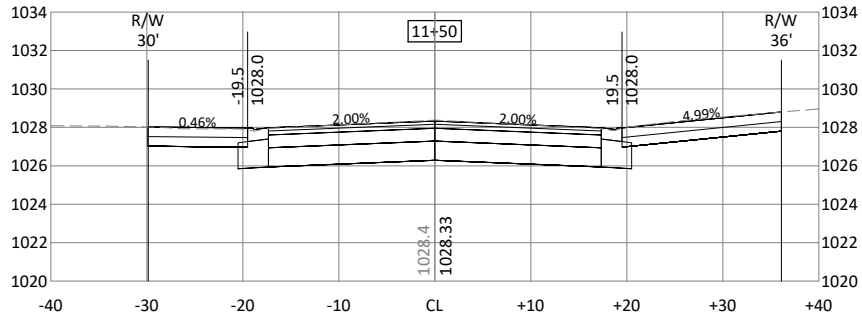
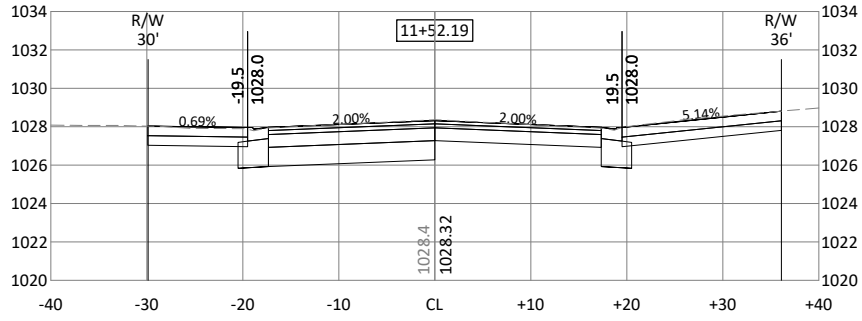
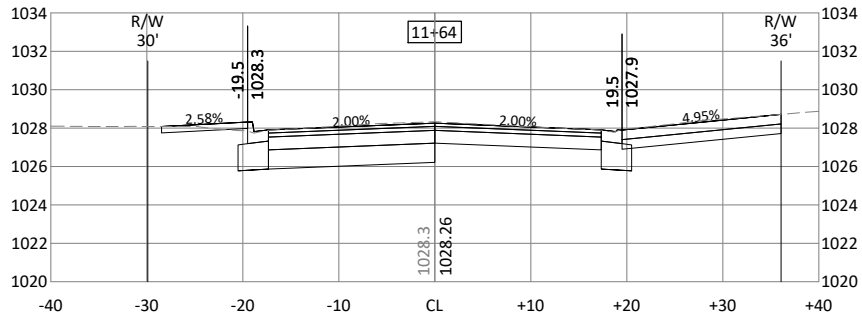


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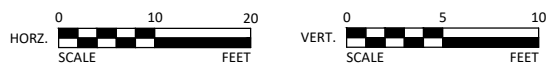
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MAPLE PLAIN, MINNESOTA
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INTERSECTION DETAILS
BRYANT STREET & WILLIAM DRIVE

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C6.20



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Jeffrey J. Weyandt
JEFFREY J. WEYANDT
41342 DATE 4/13/2024



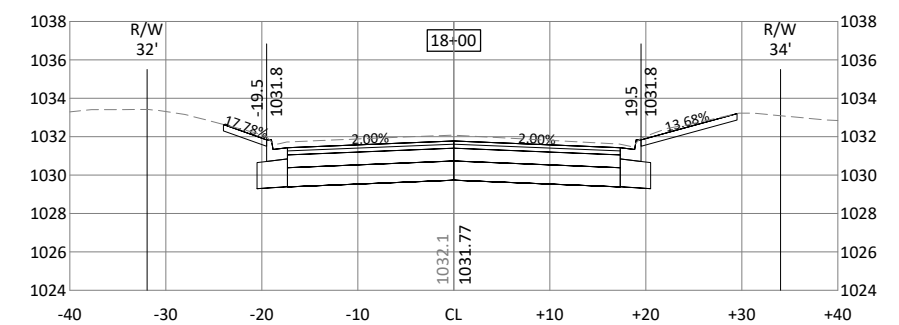
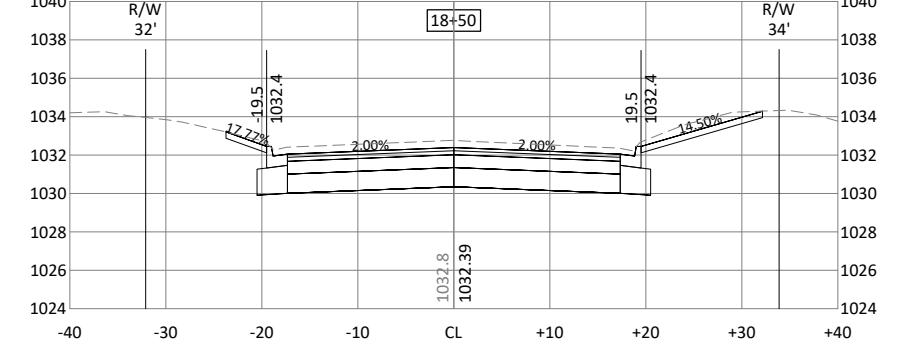
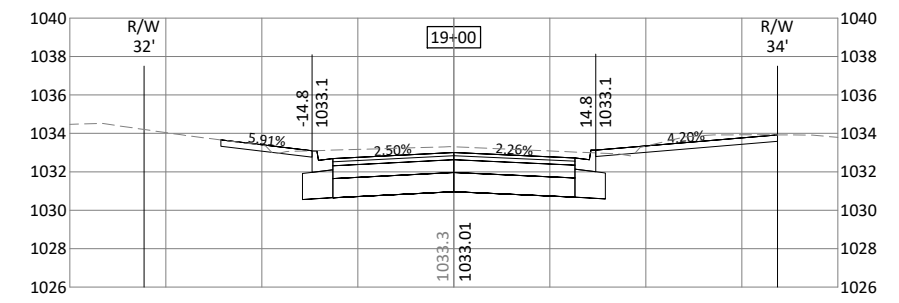
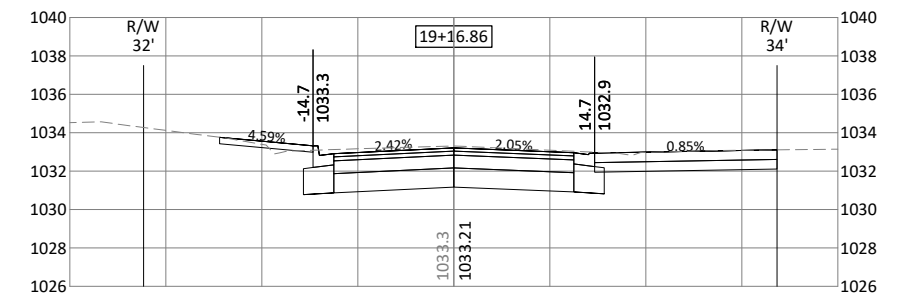
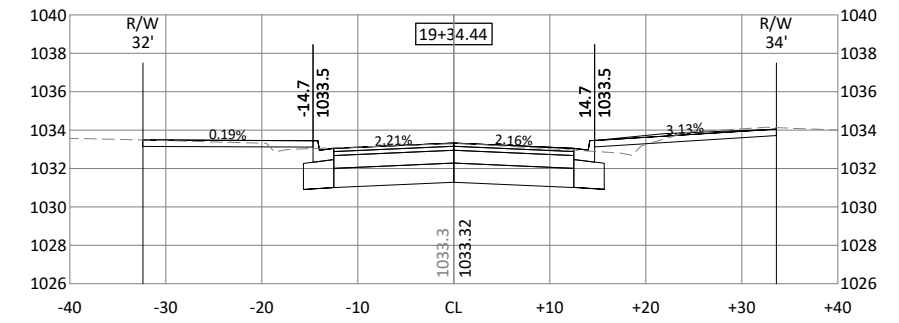
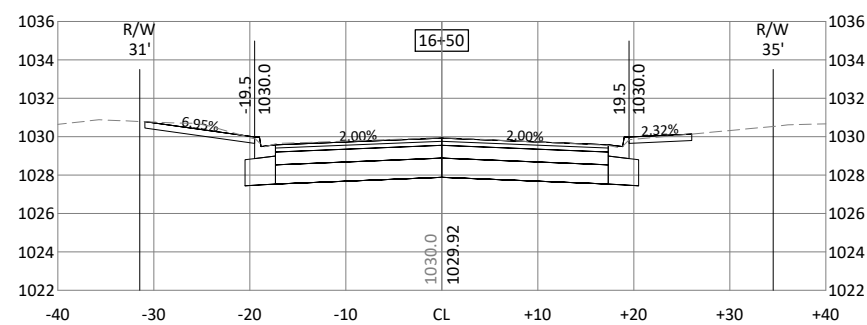
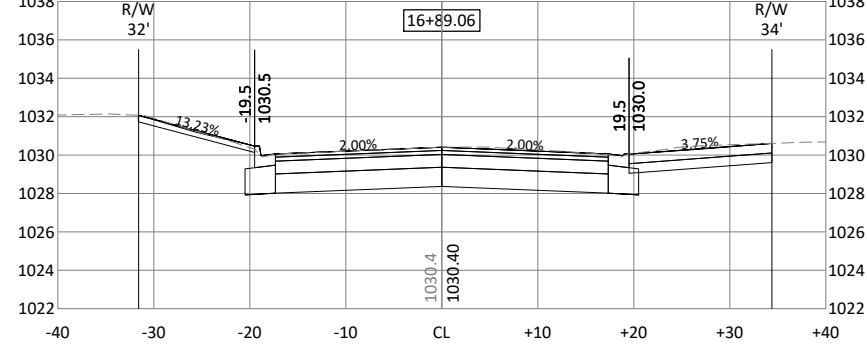
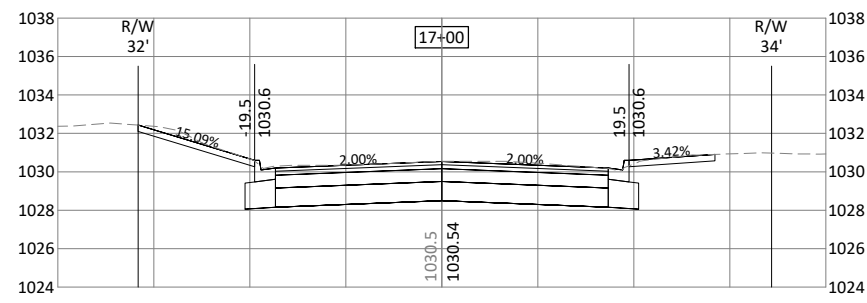
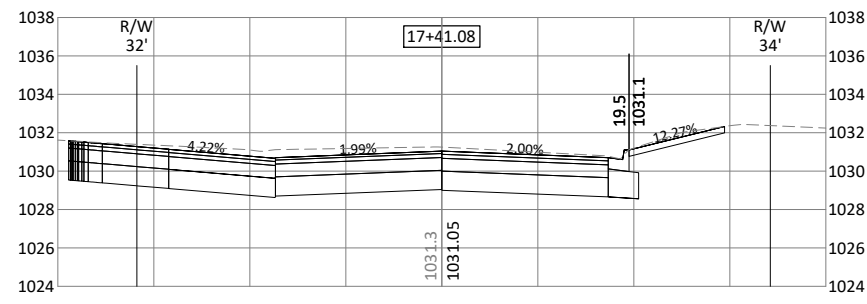
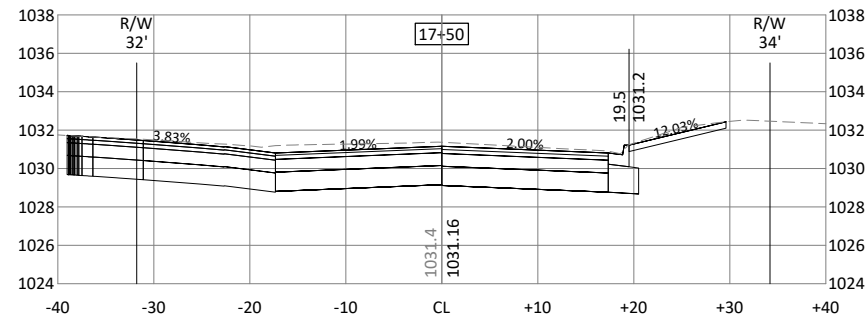
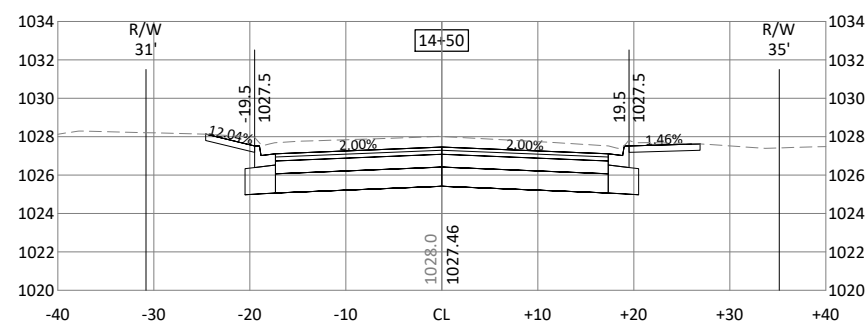
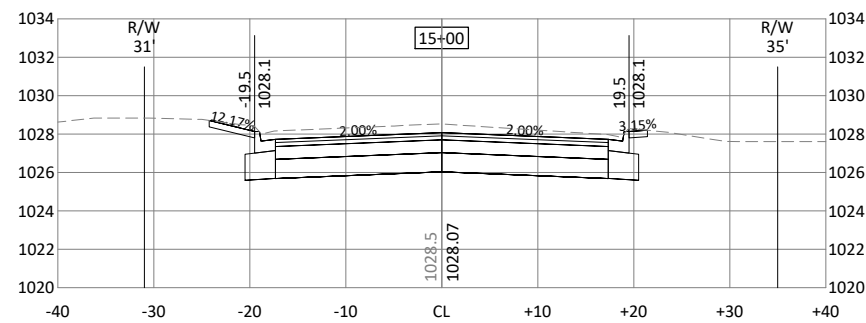
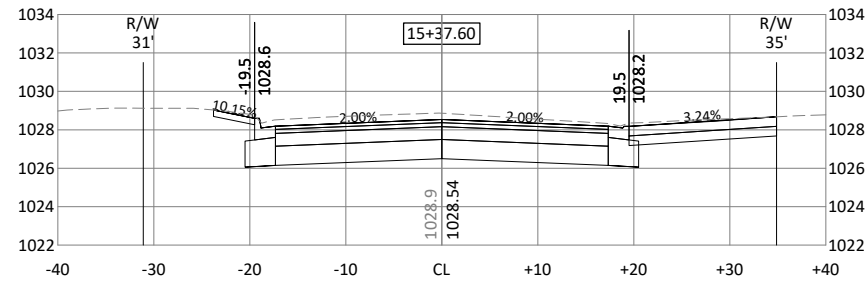
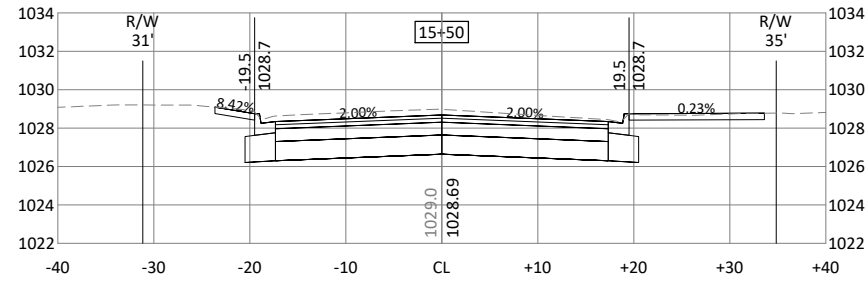
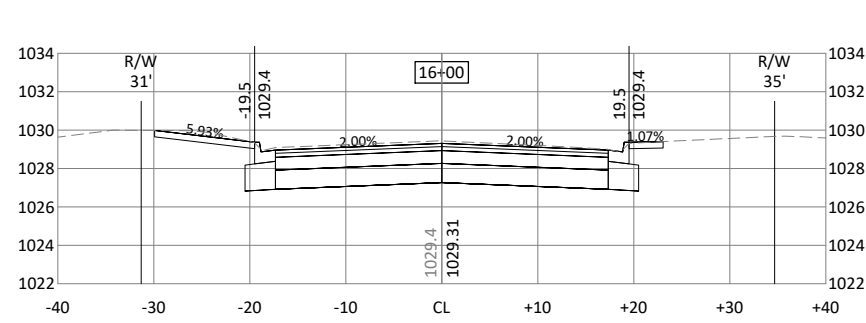
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 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 6/13/2024

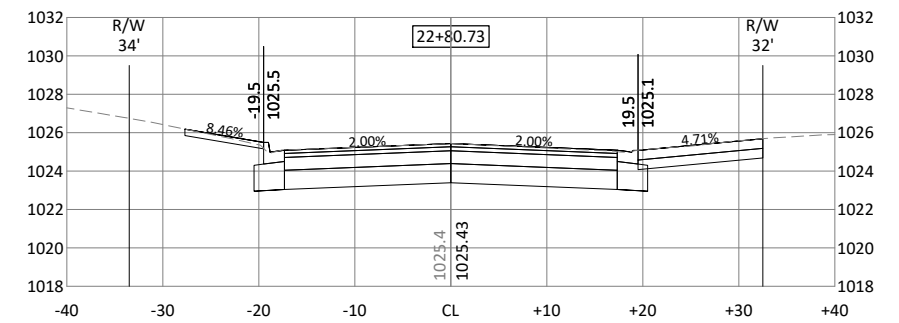
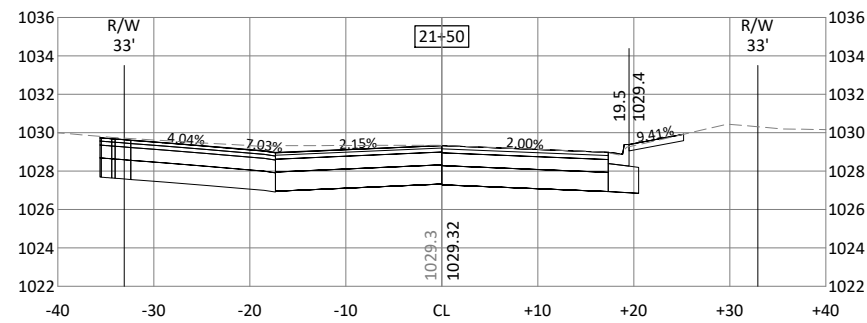
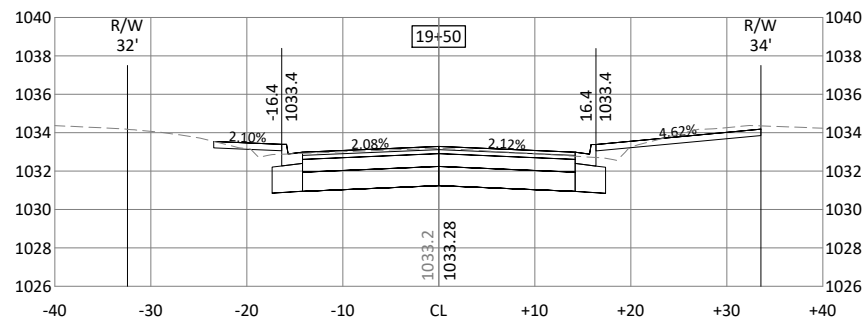
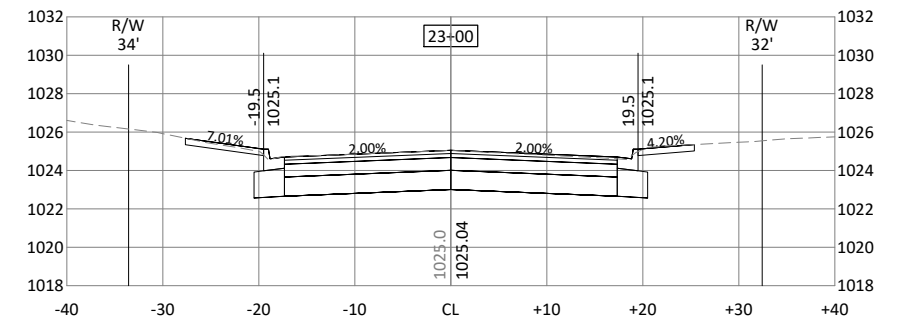
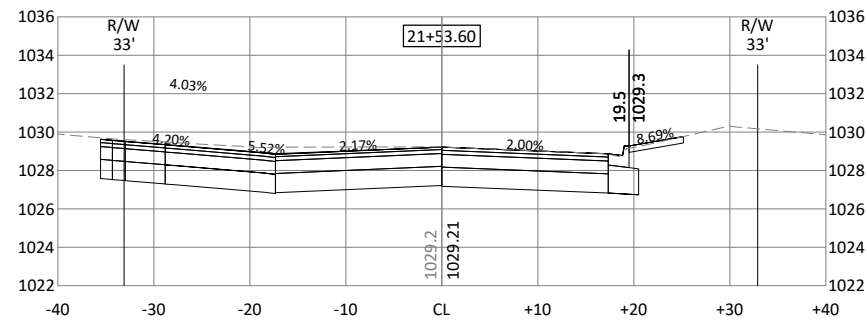
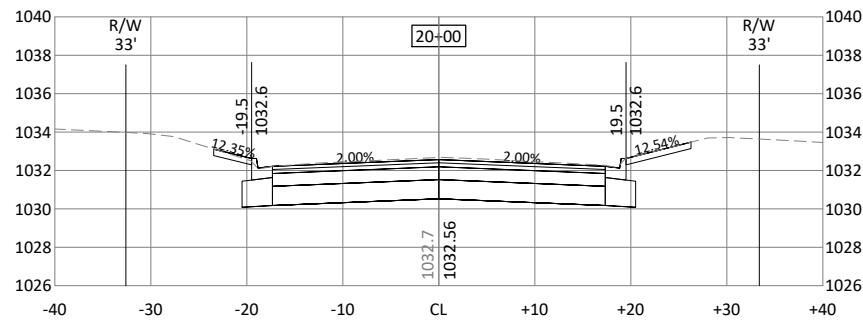
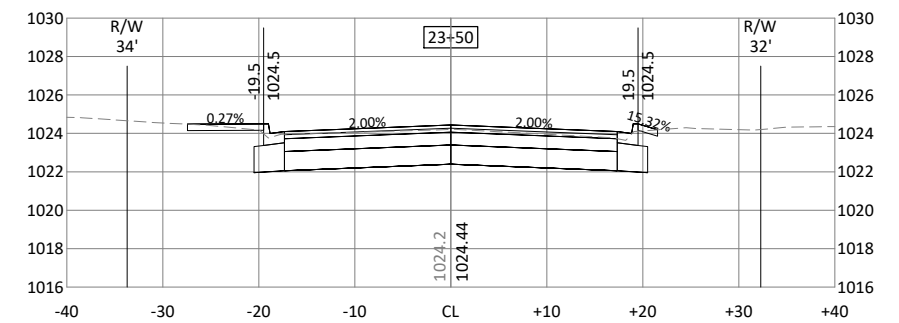
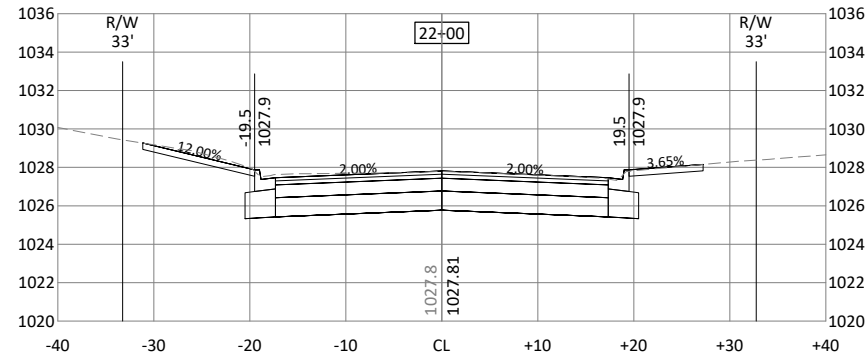
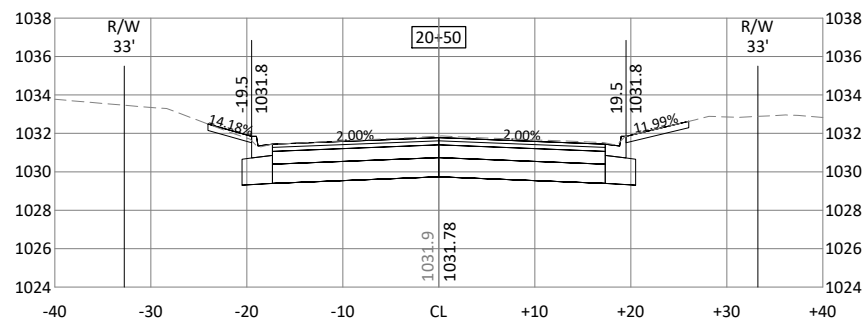
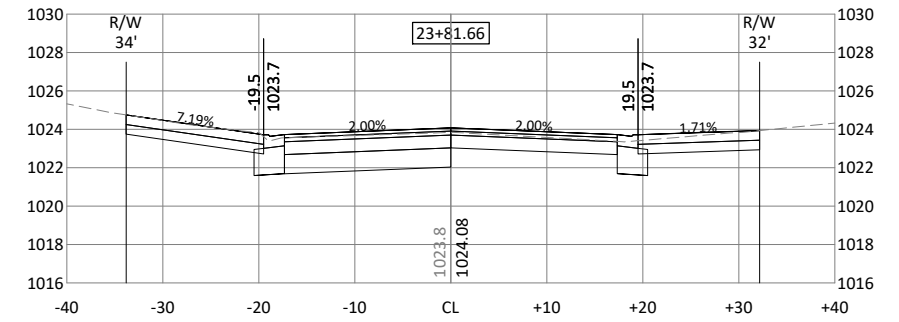
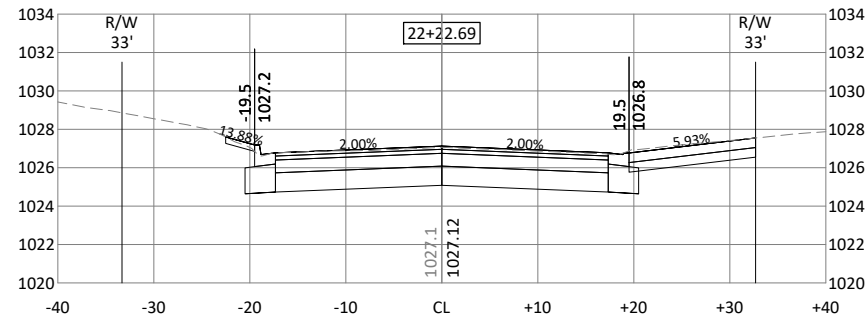
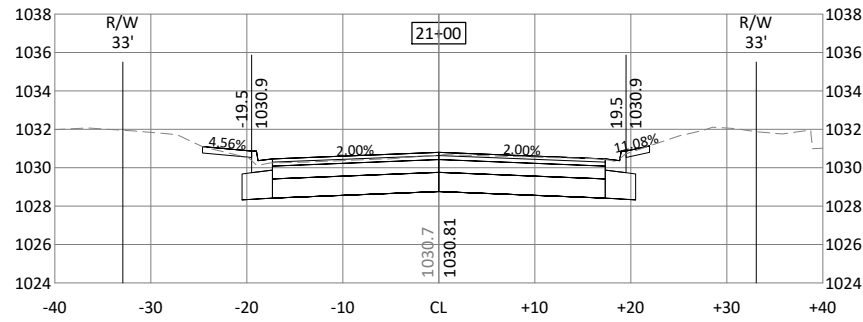
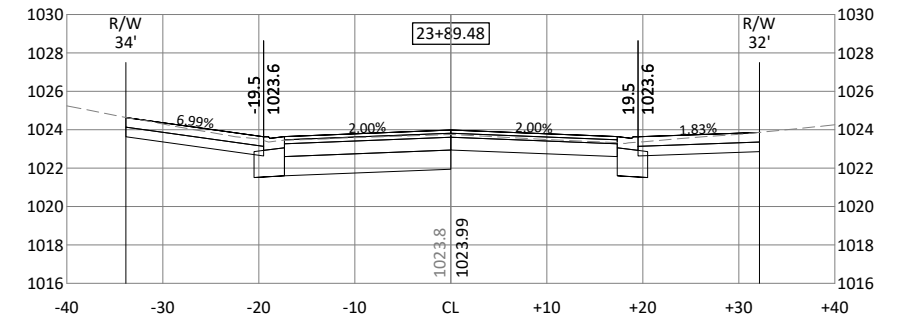
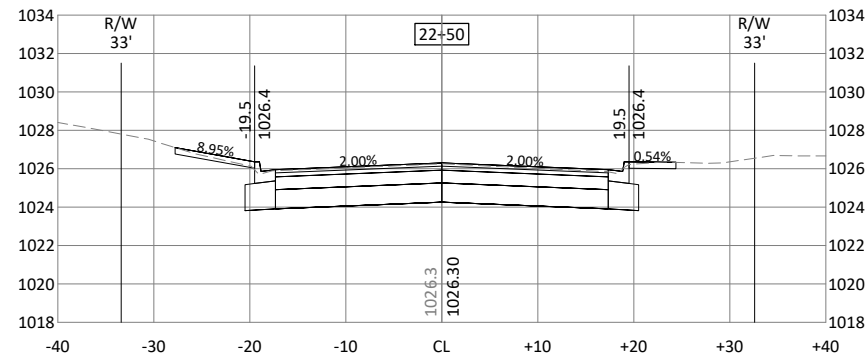
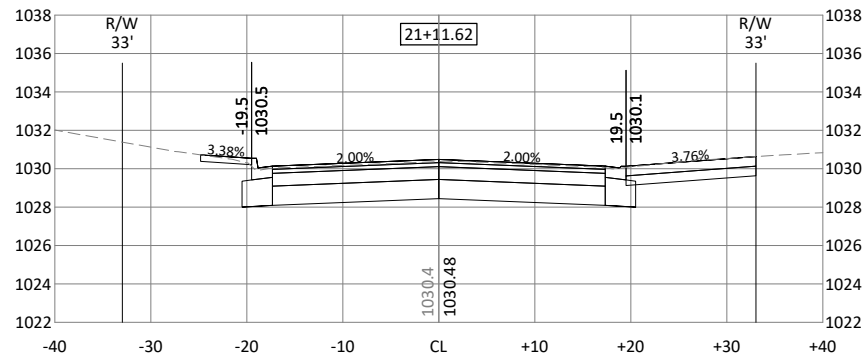


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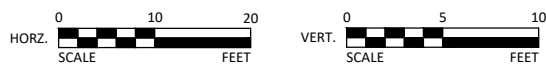
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Jeffrey J. Weyandt
 JEFFREY J. WEYANT, NDT
 43342 DATE: 8/13/2024



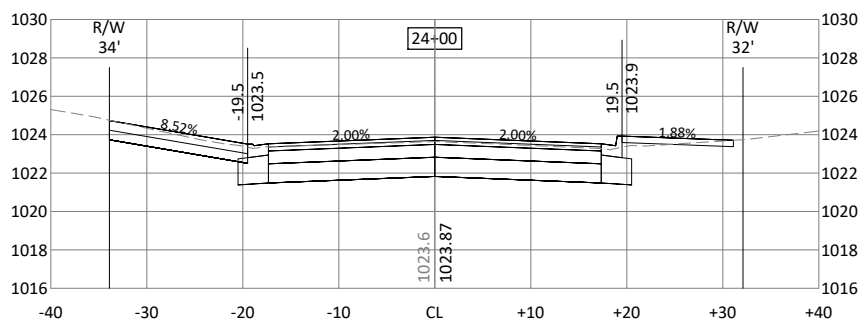
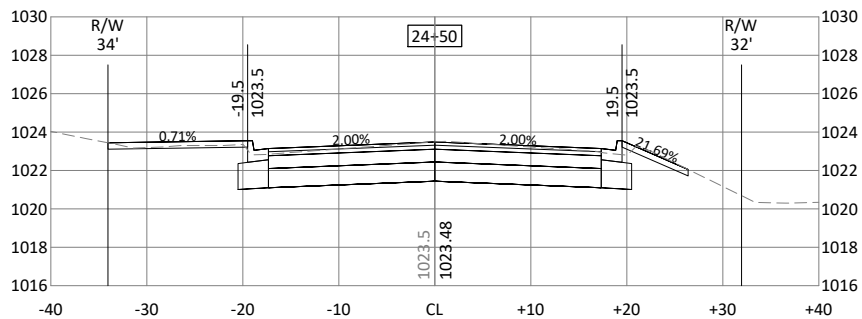
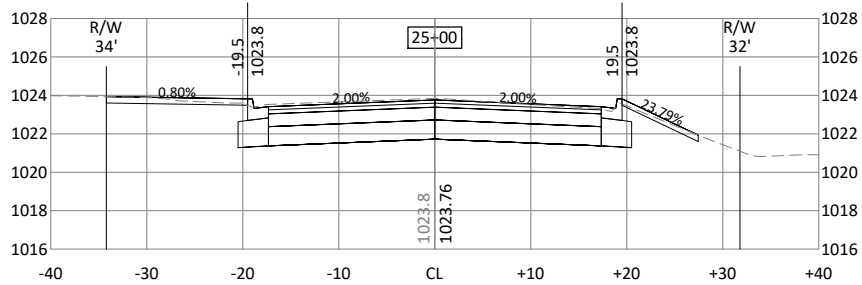
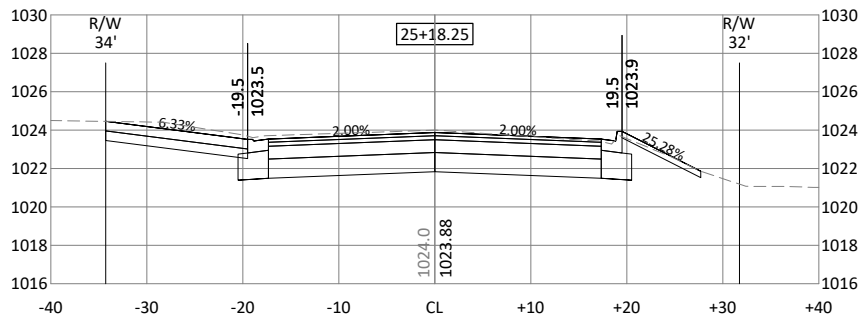
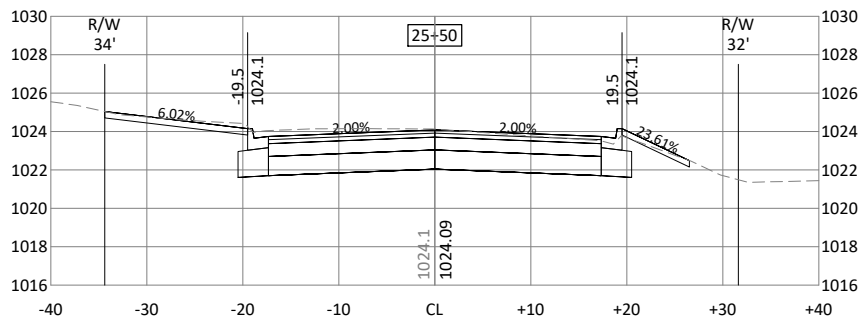
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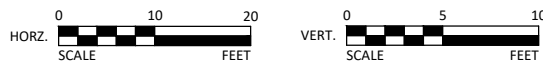
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Jeffrey J. Weyandt
 JEFFREY J. WEYANDT
 P.E. NO. 43342 DATE 4/13/2024



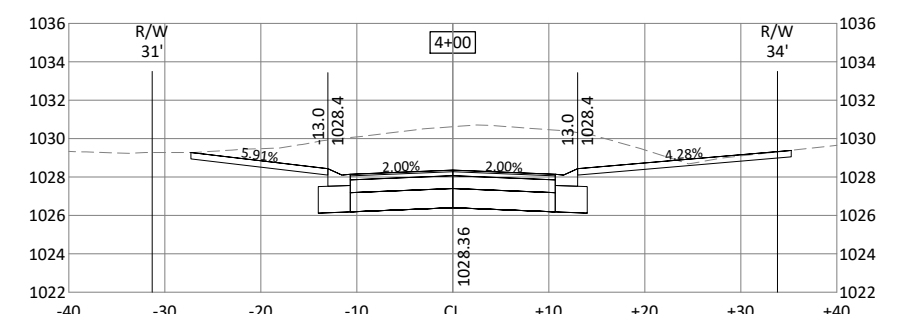
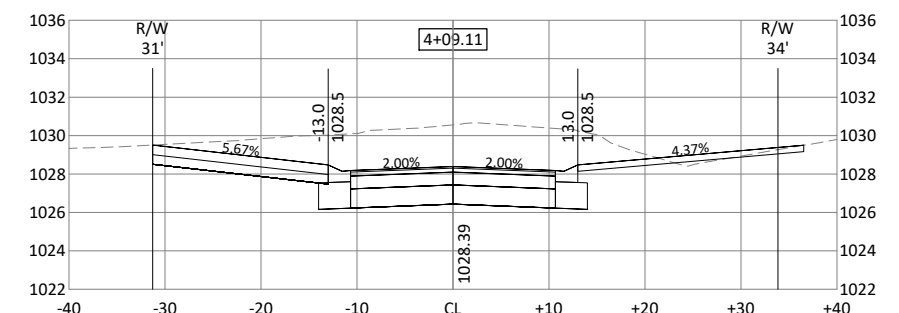
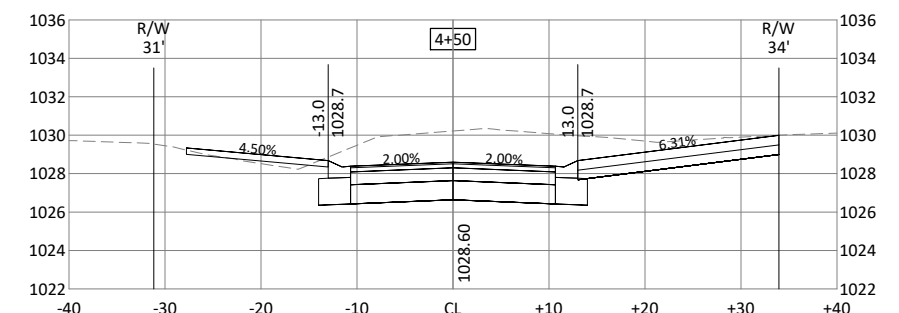
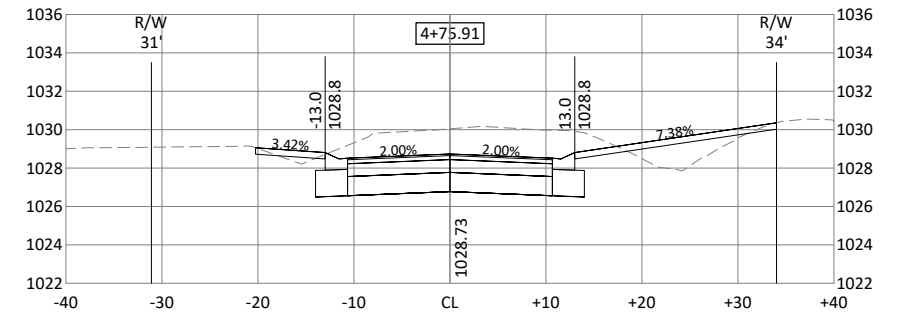
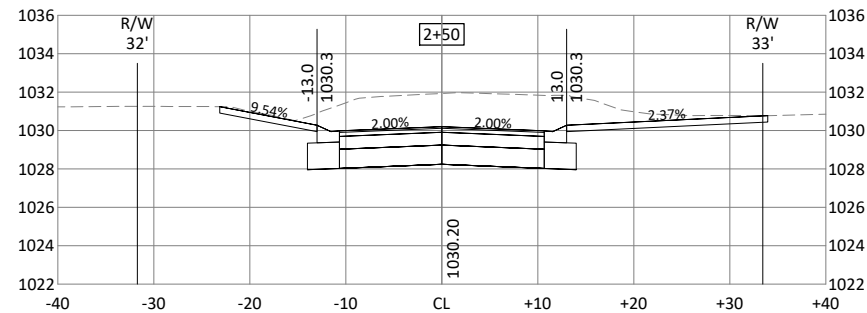
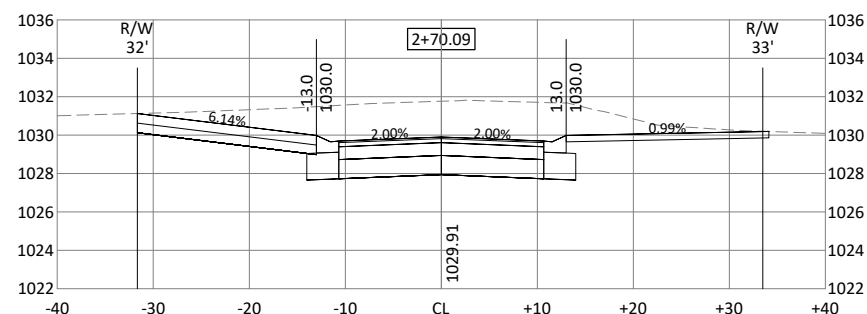
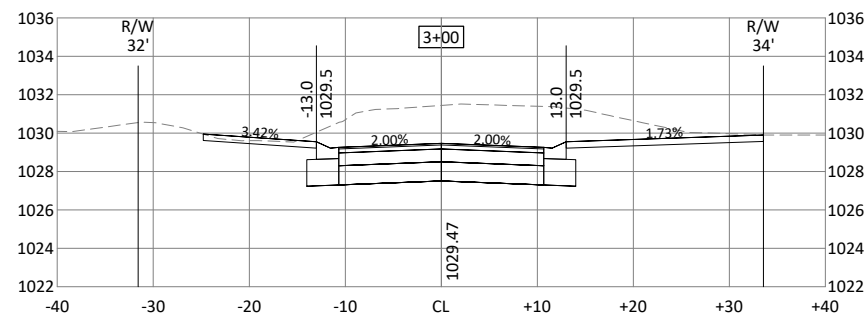
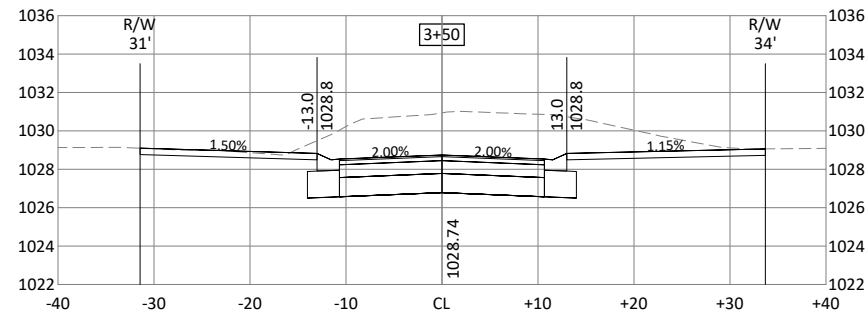
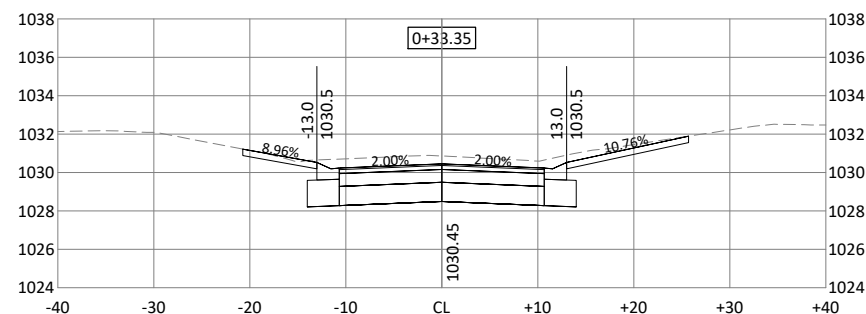
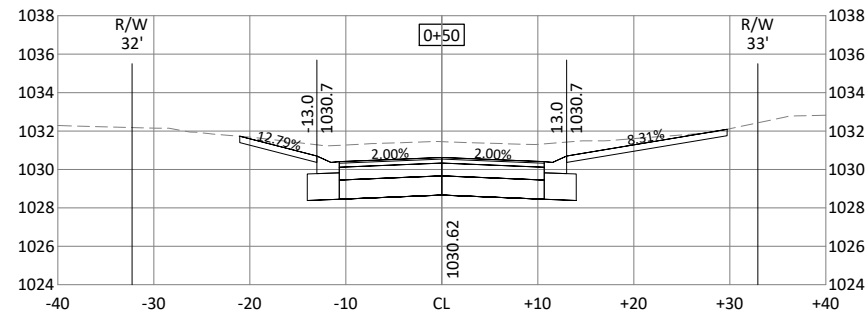
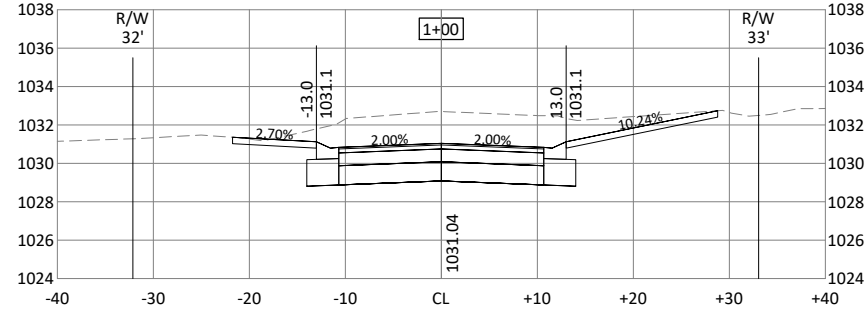
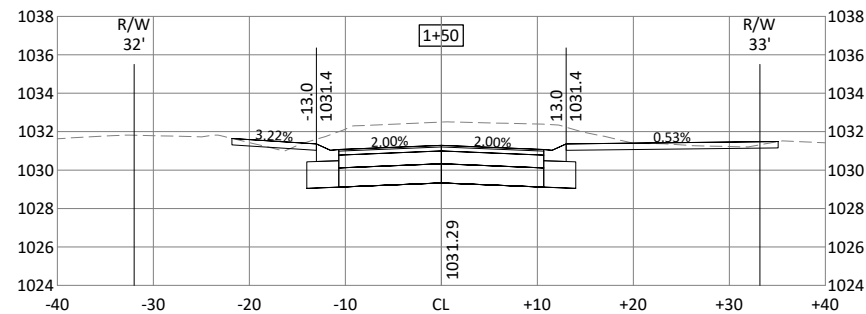
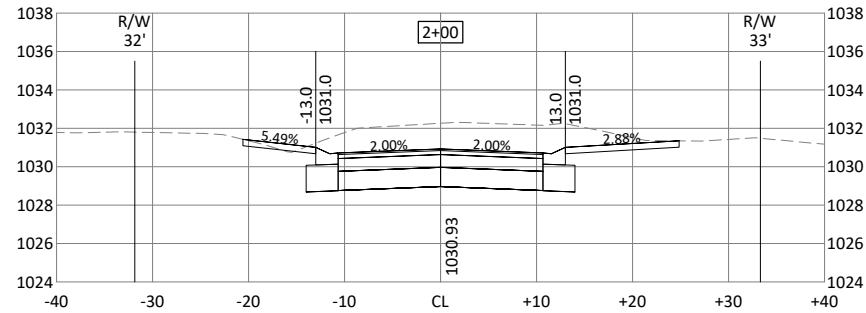
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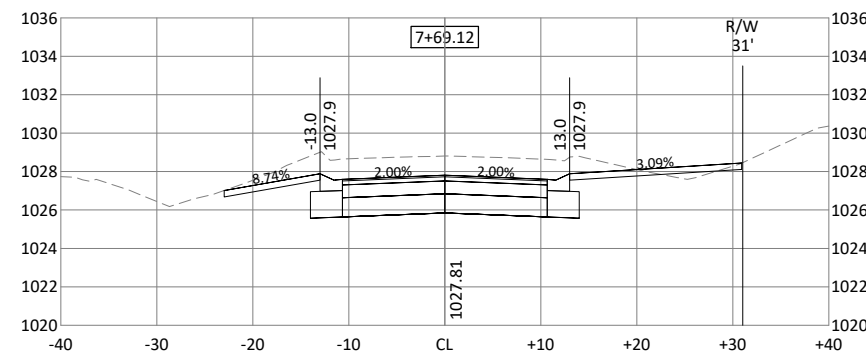
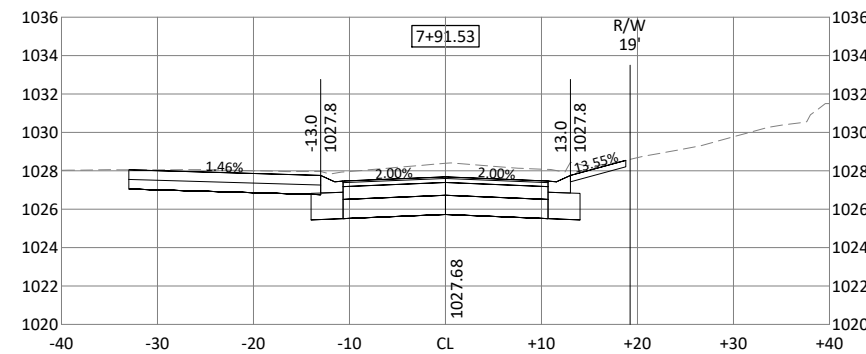
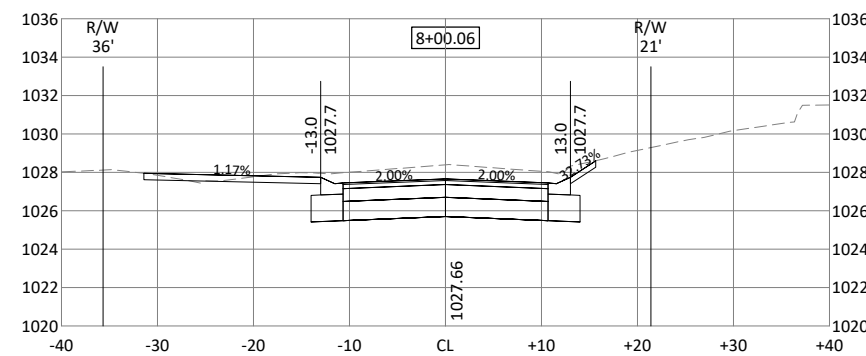
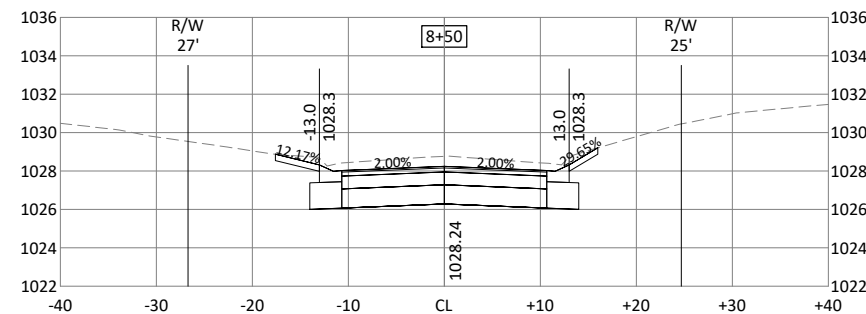
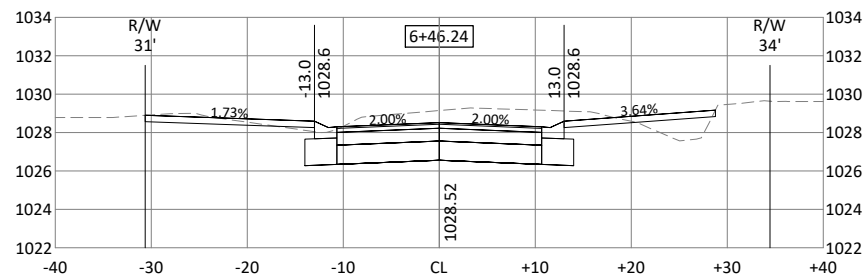
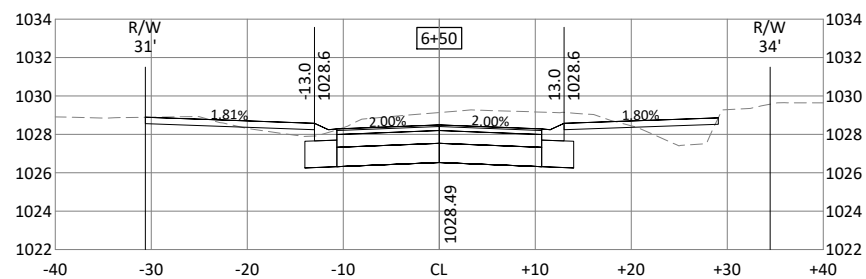
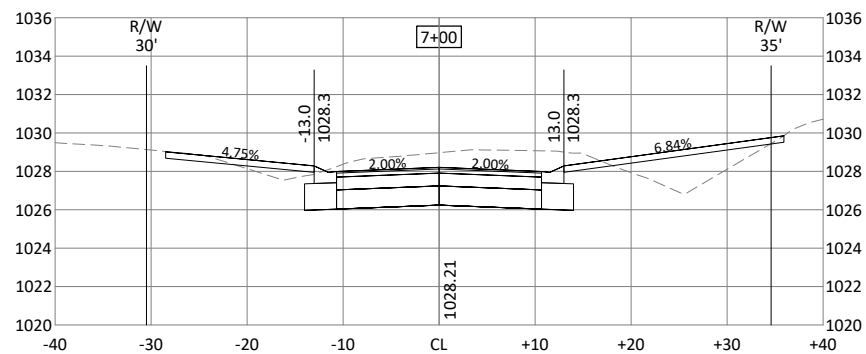
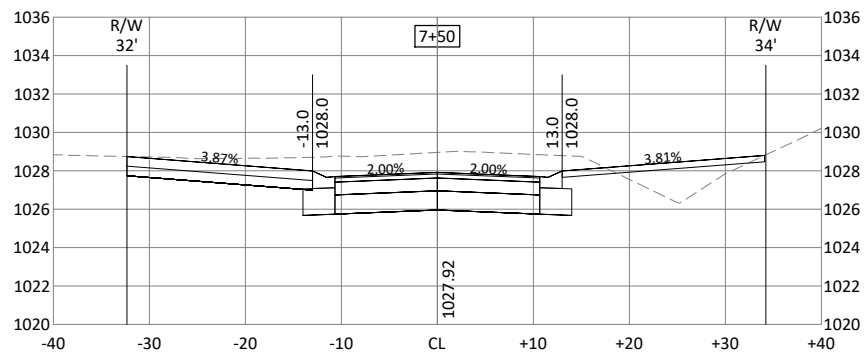
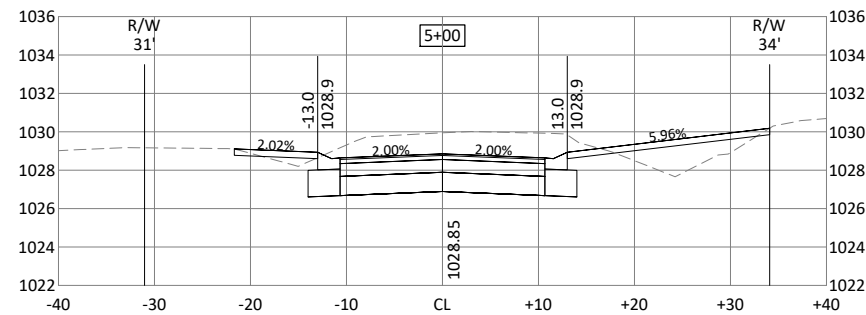
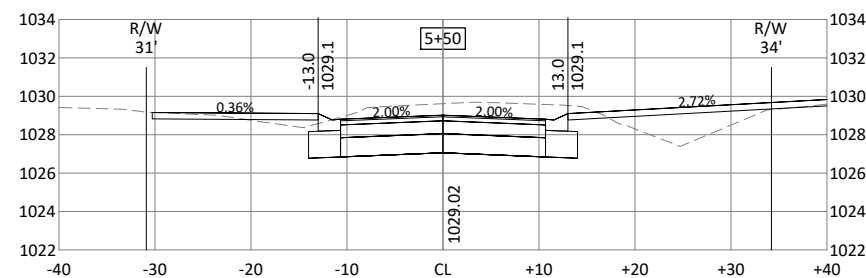
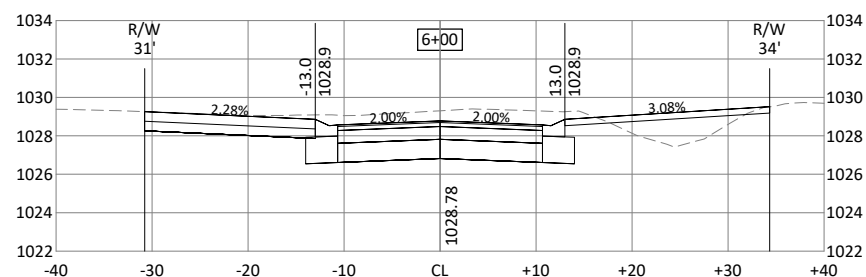
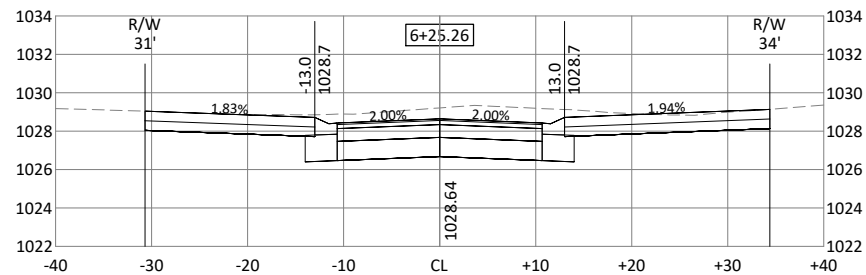
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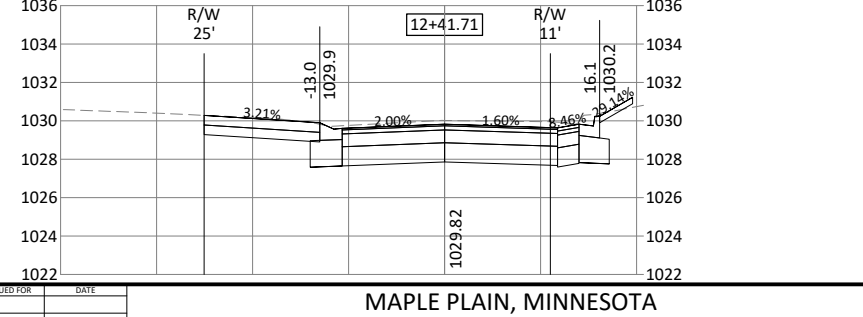
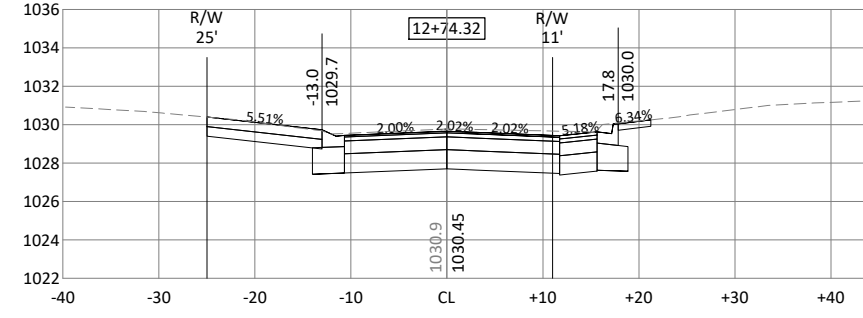
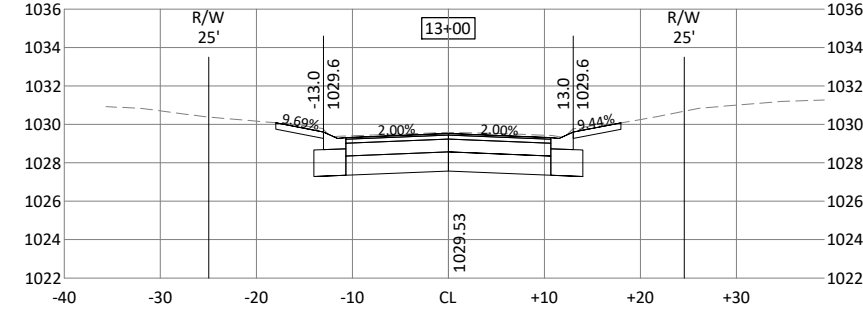
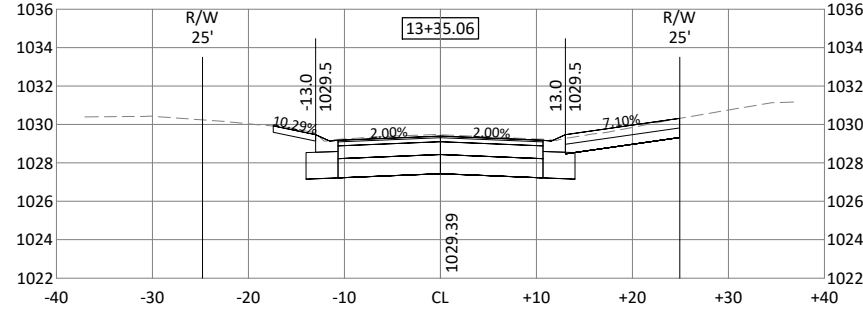
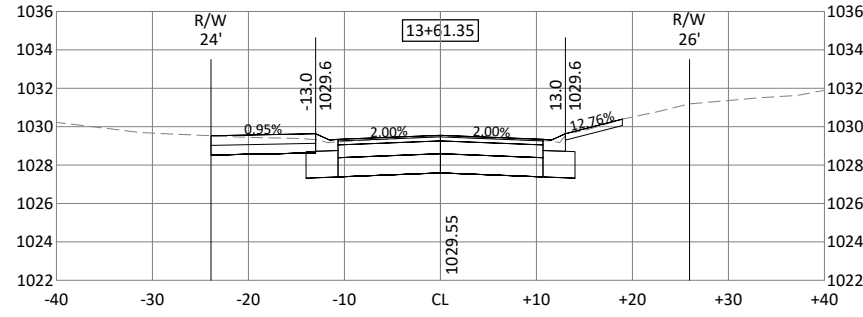
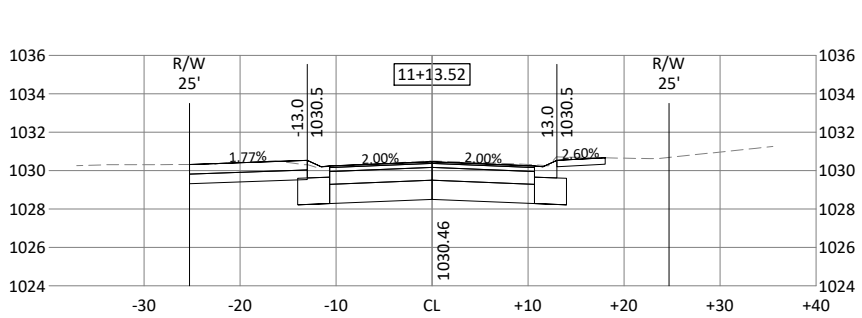
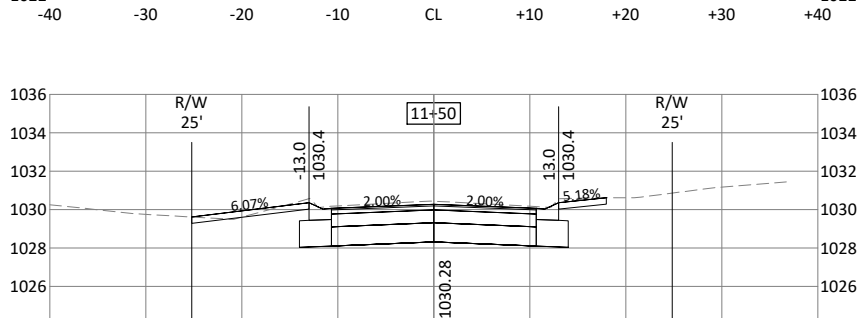
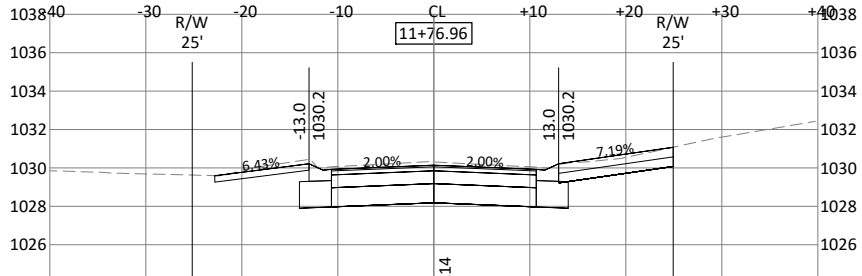
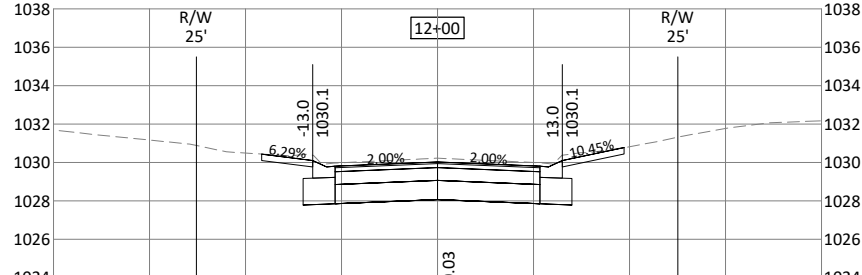
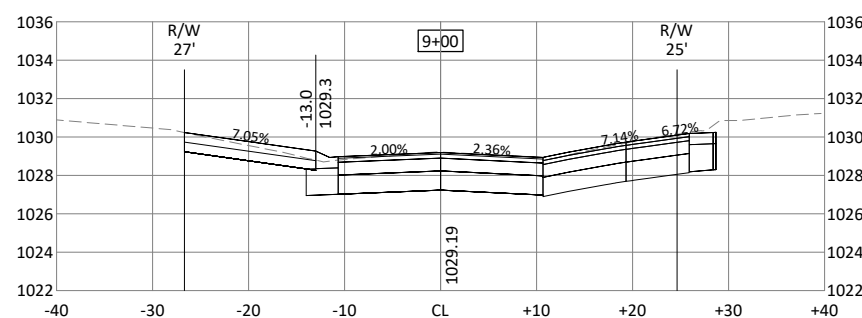
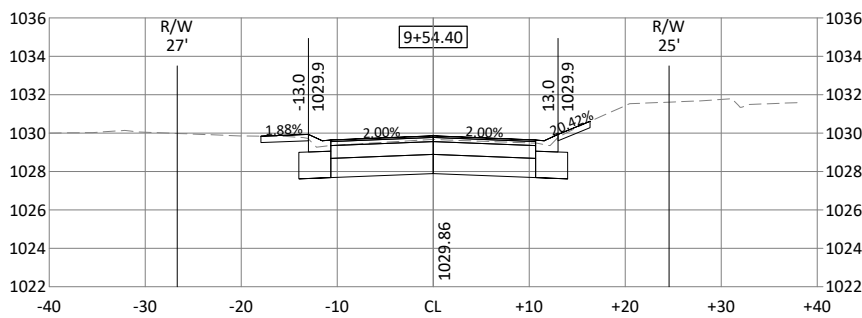
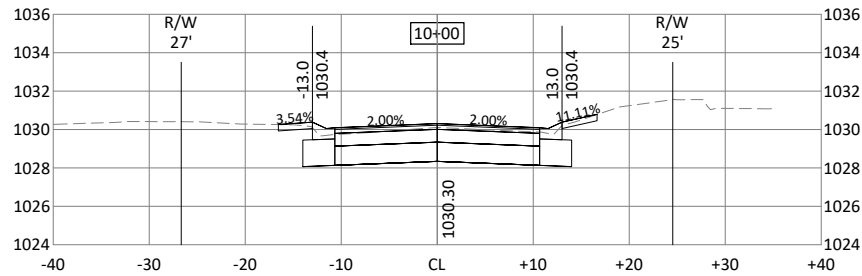
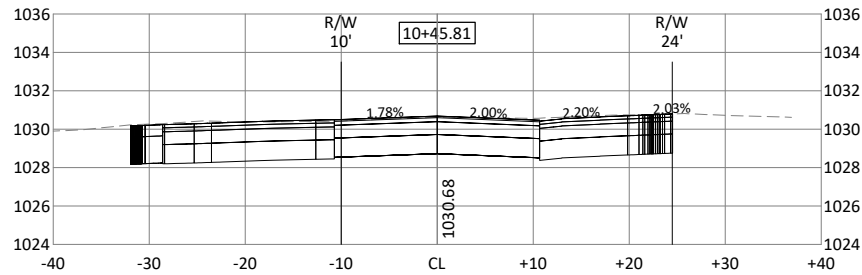
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JEFFREY J. WEYANDT
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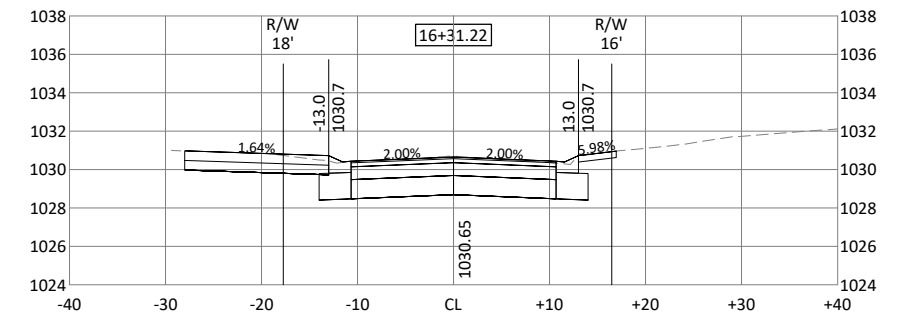
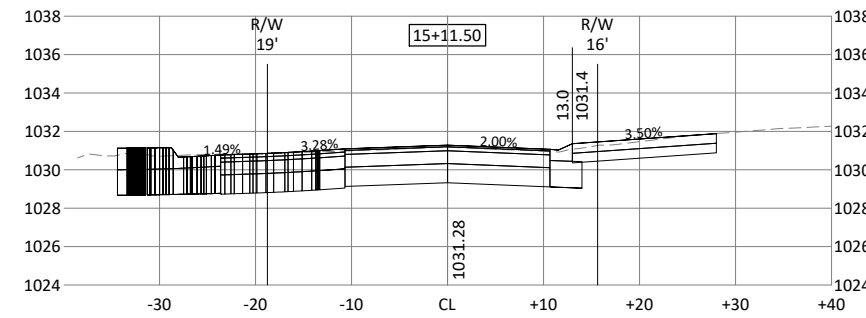
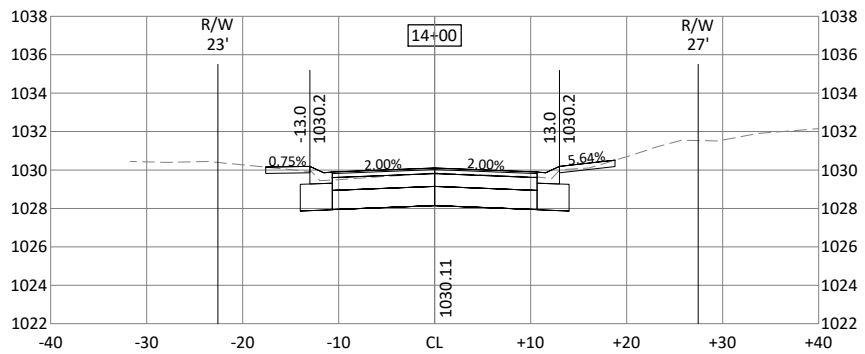
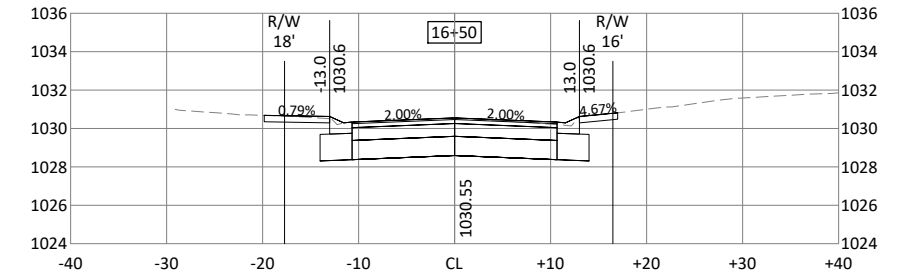
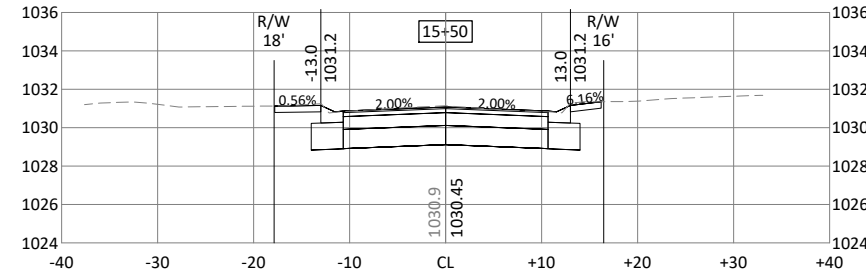
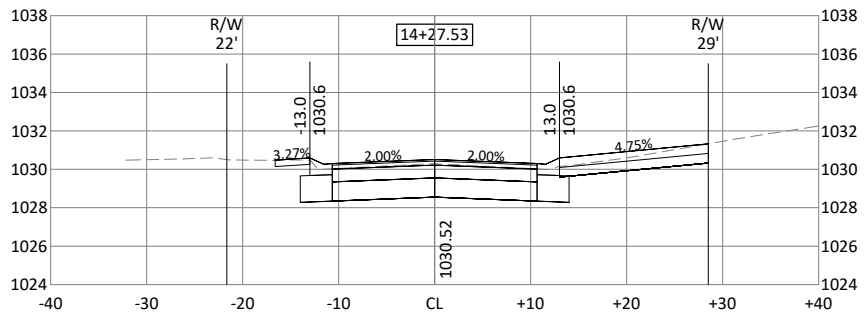
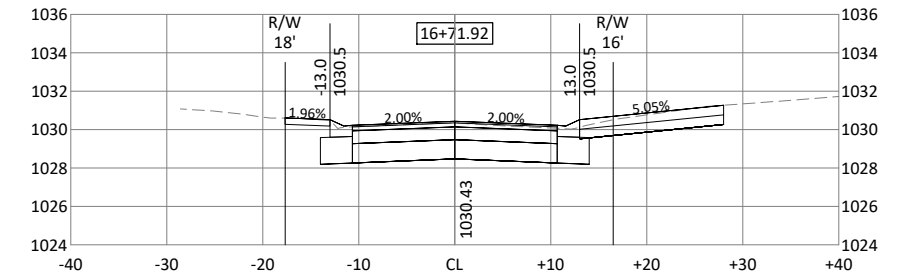
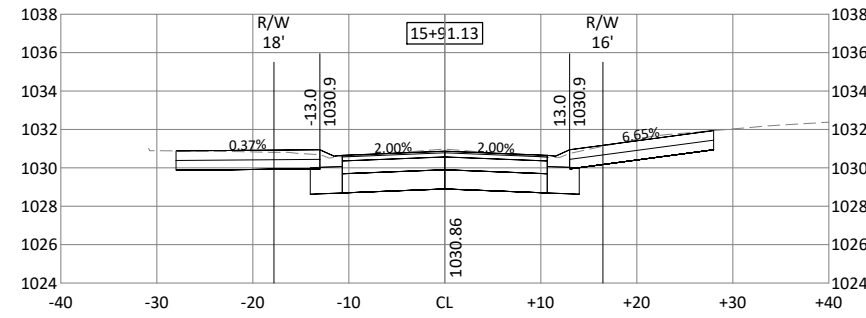
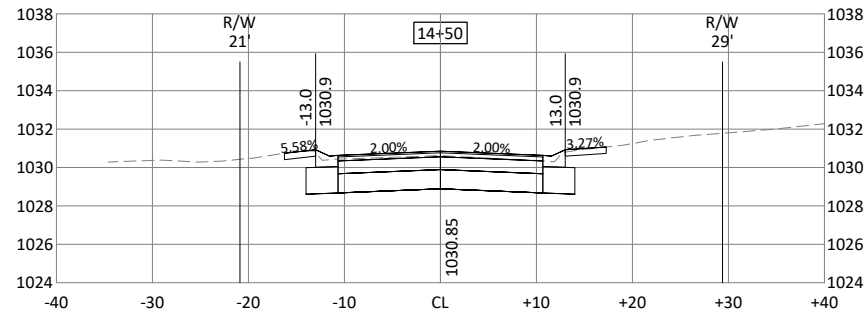
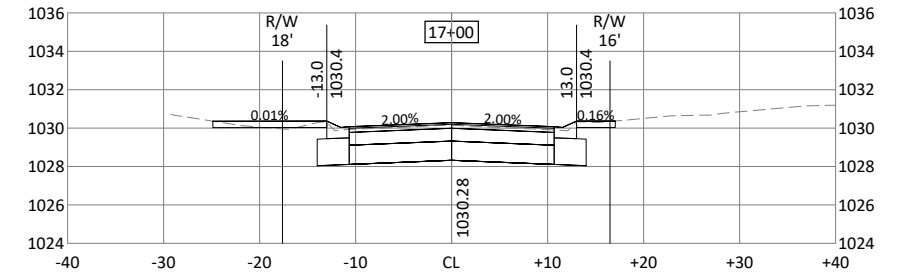
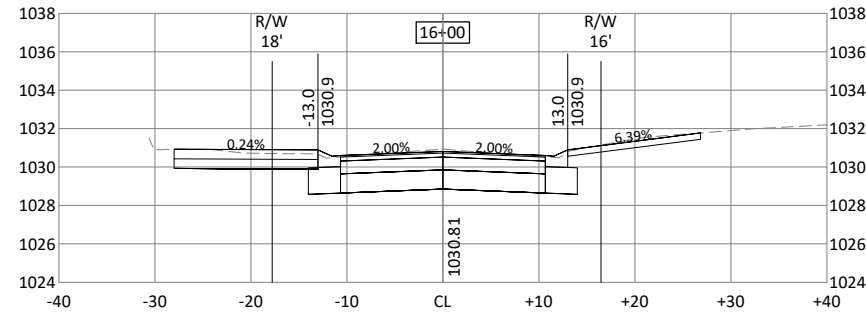
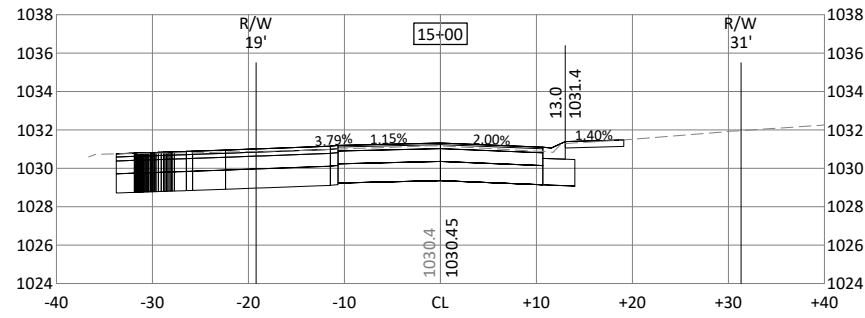
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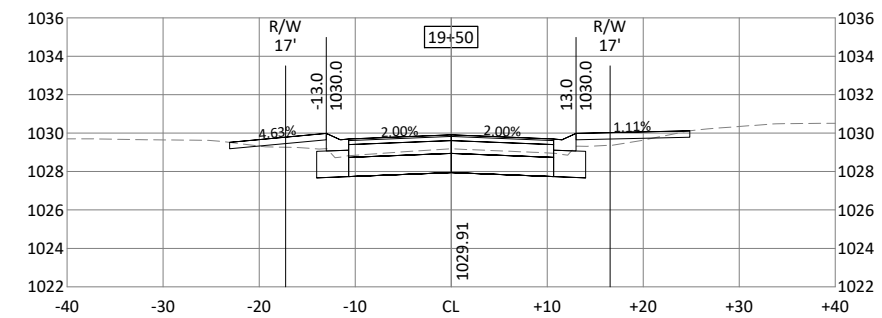
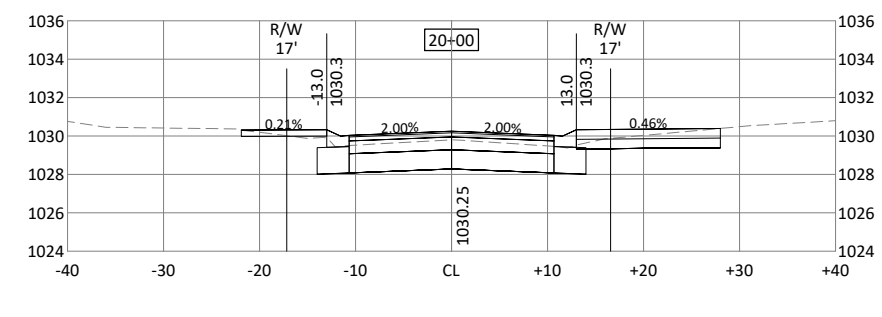
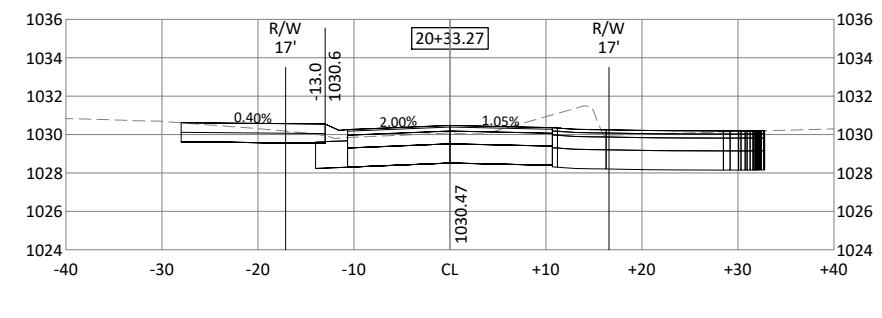
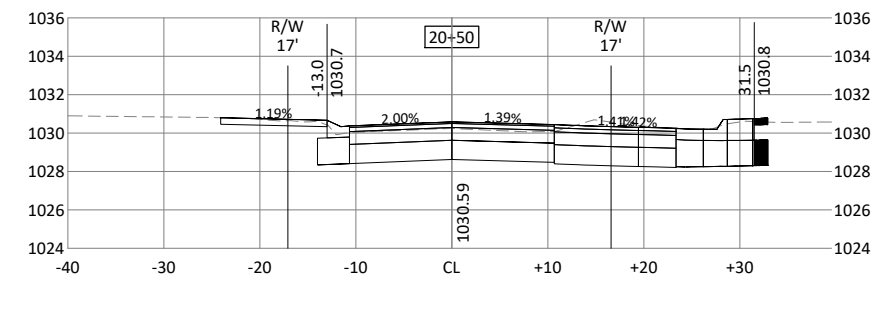
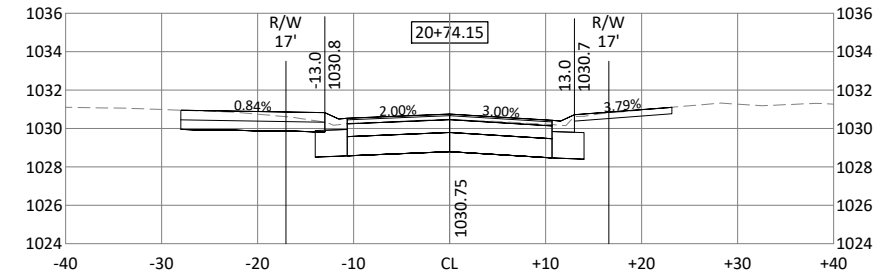
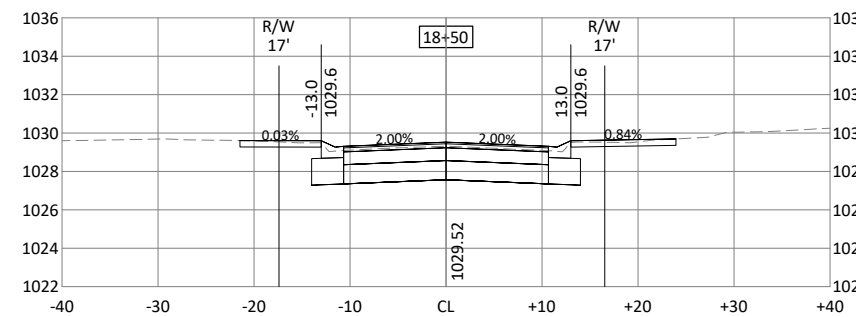
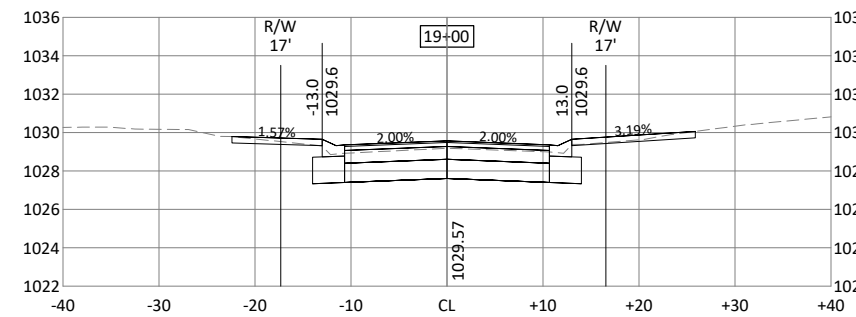
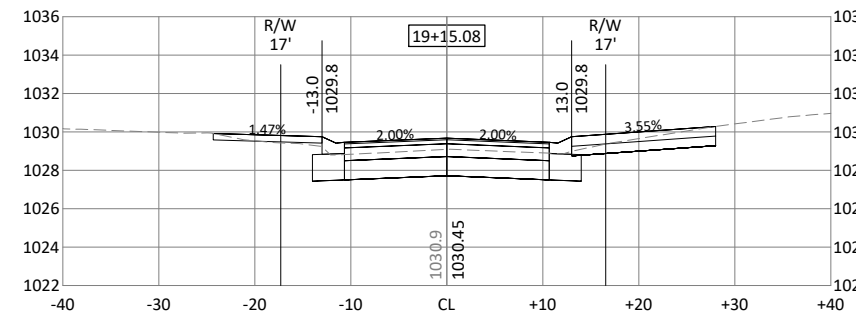
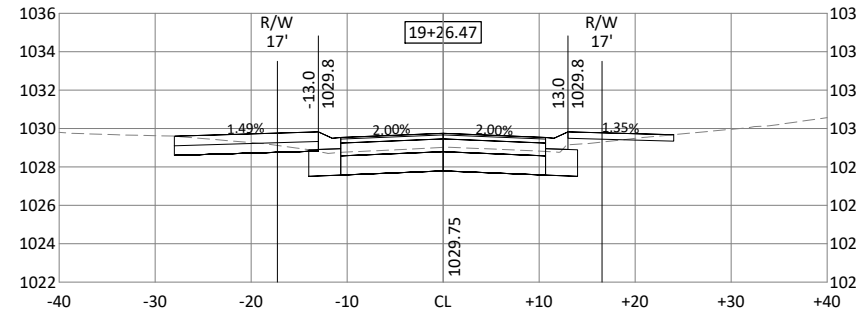
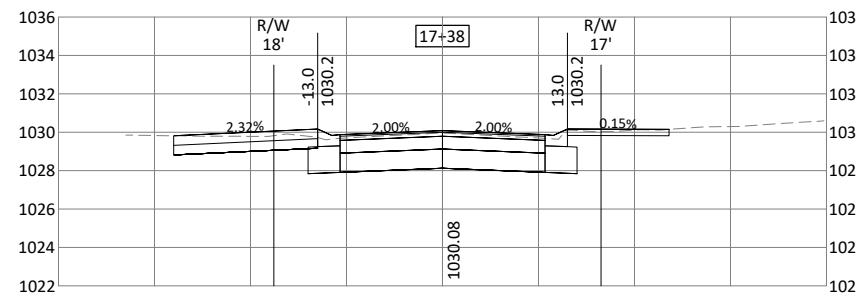
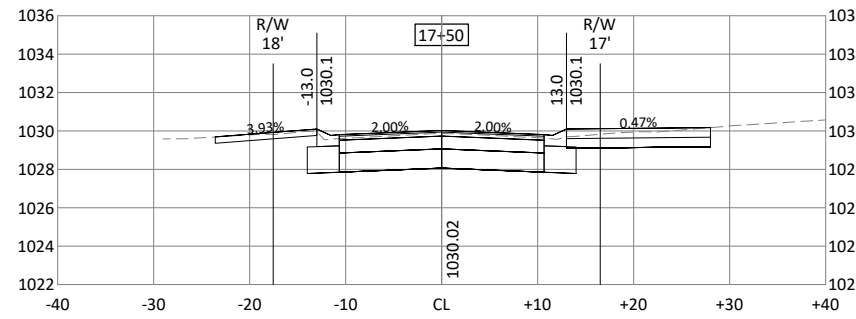
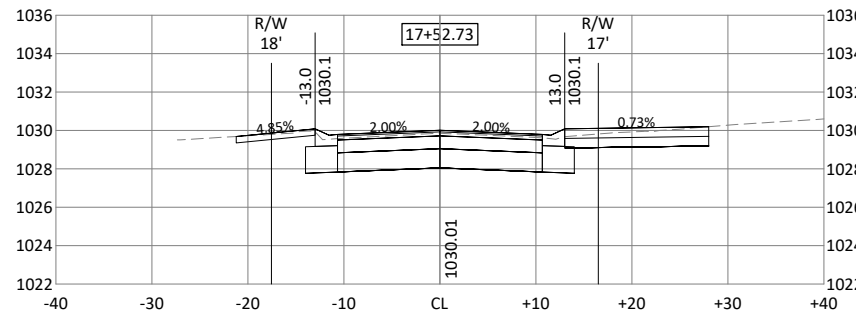
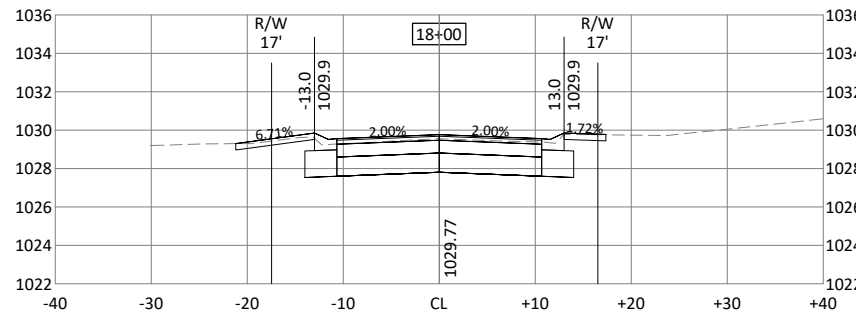
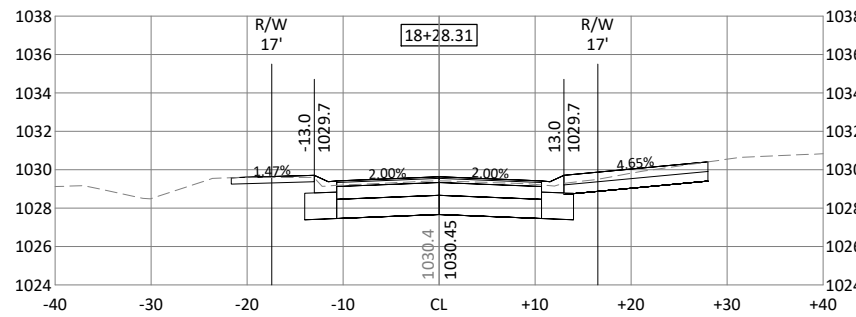
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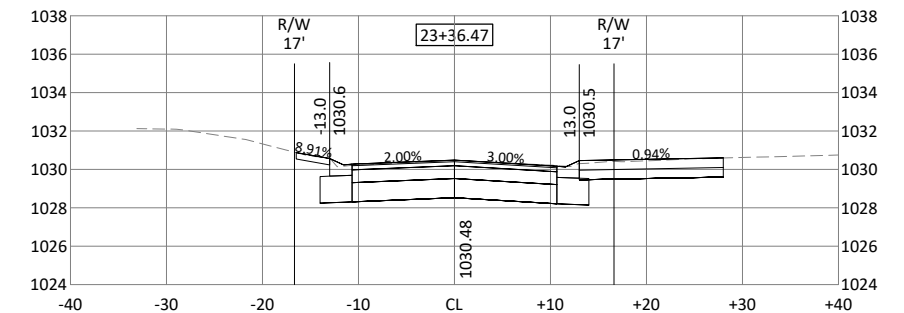
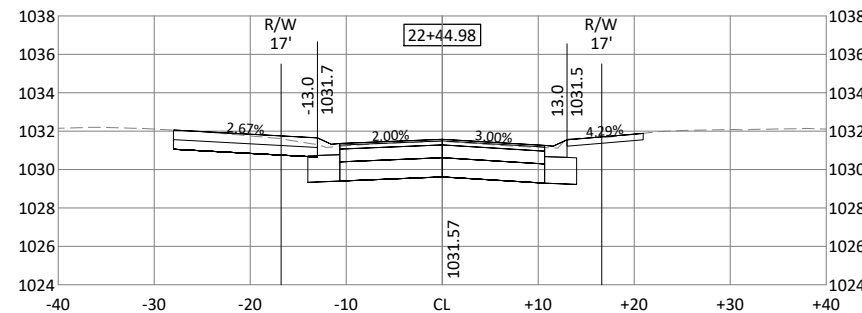
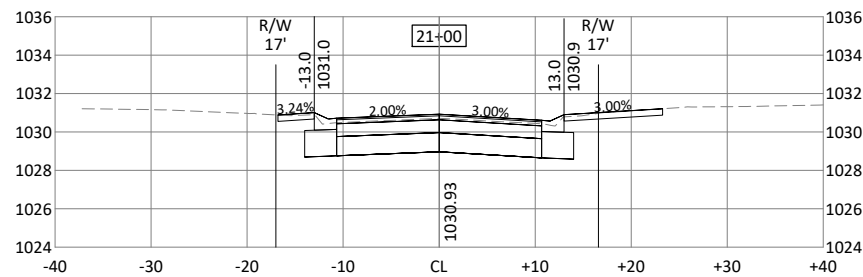
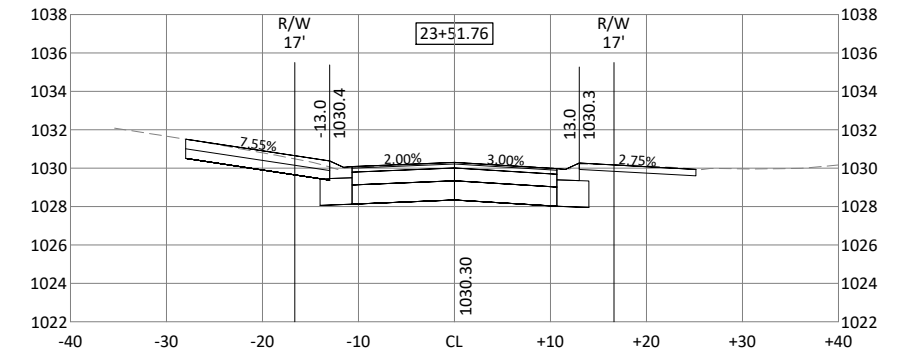
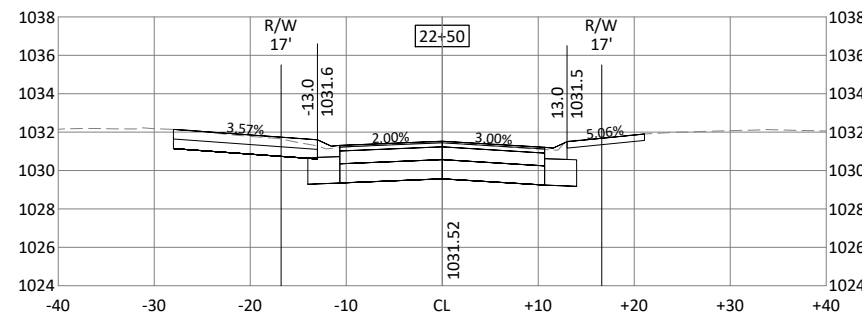
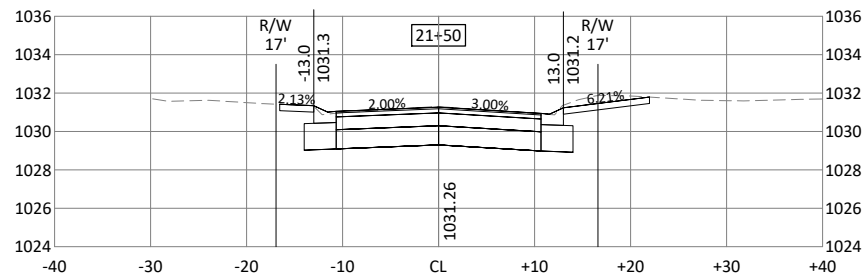
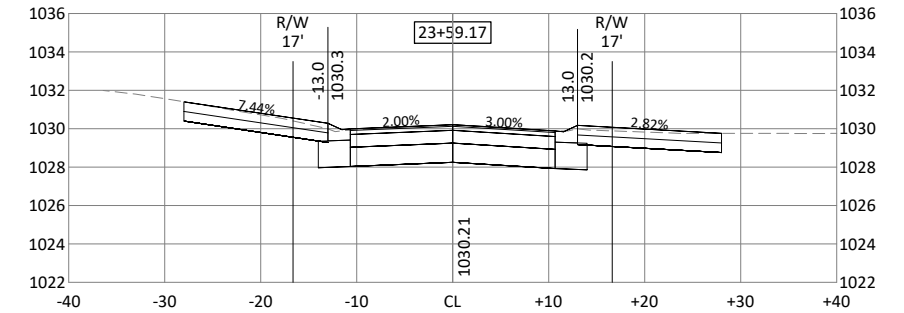
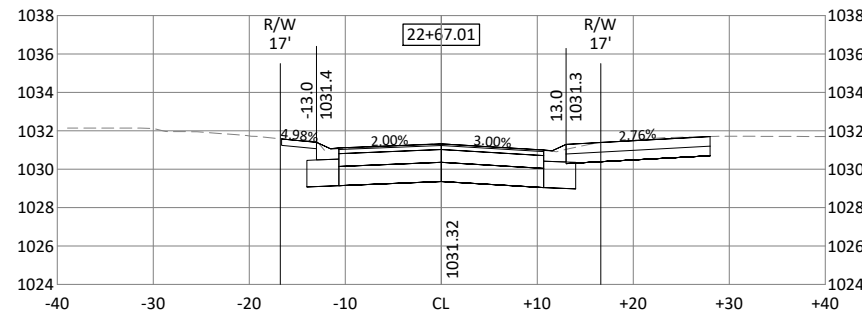
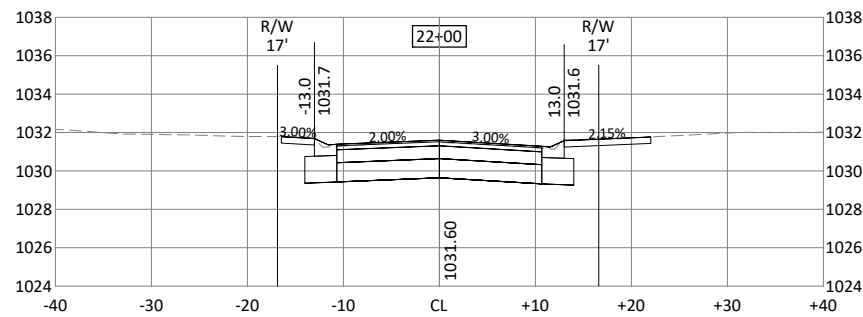
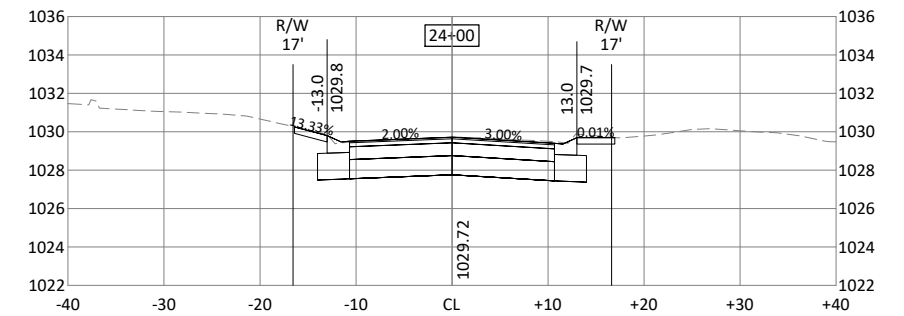
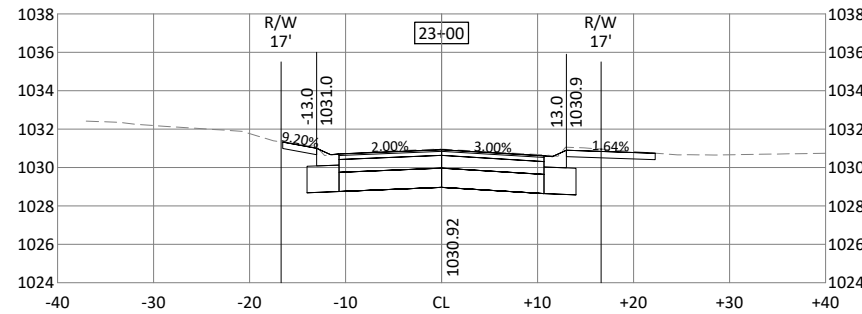
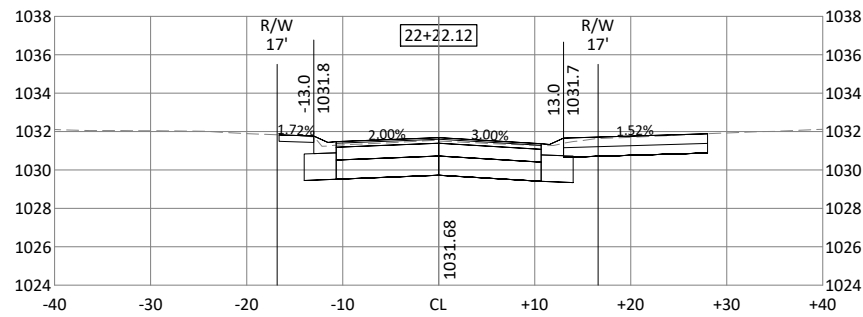
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 JEFFREY J. WEYANT
 41342 DATE 4/13/2024



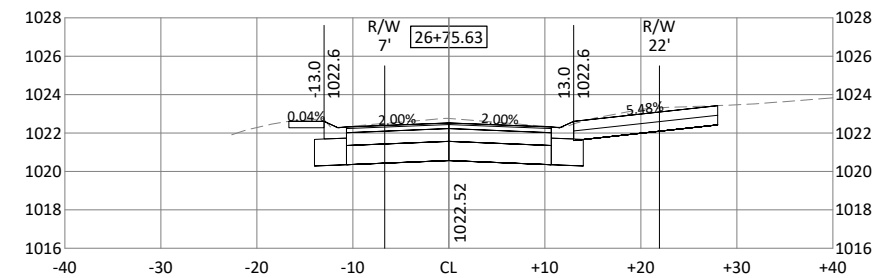
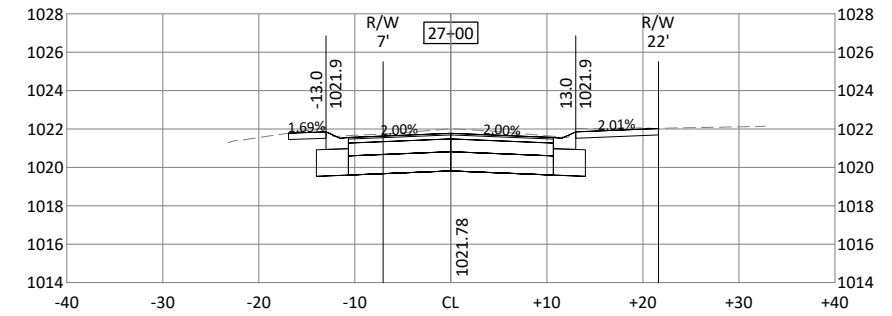
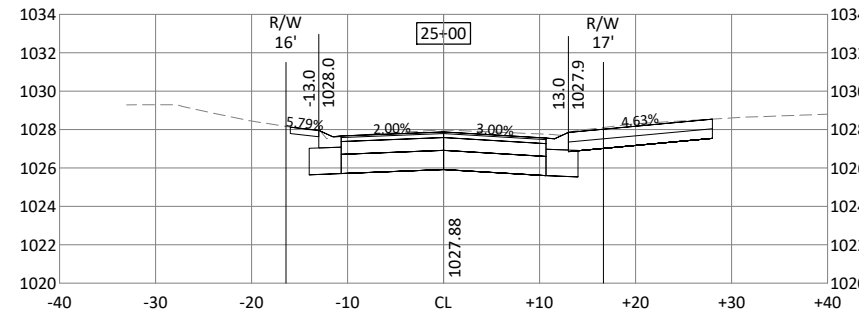
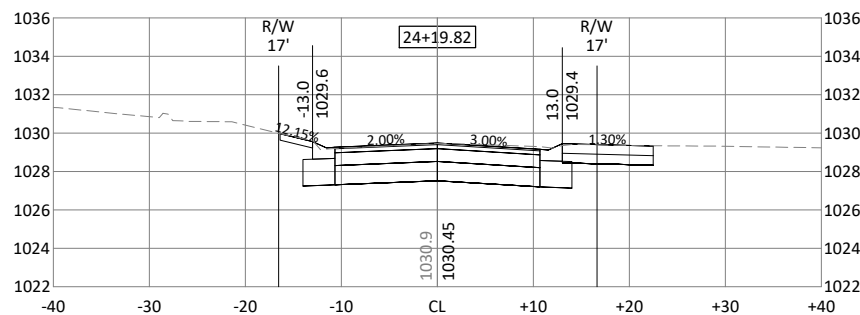
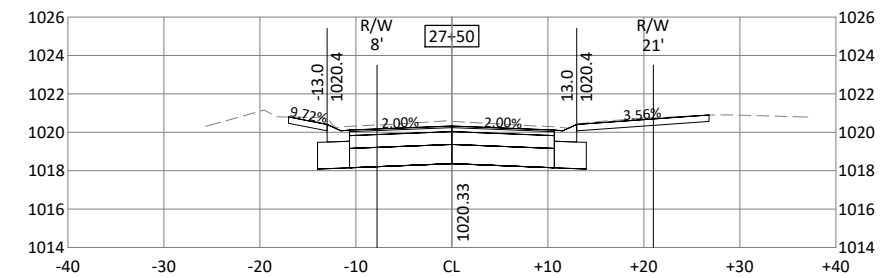
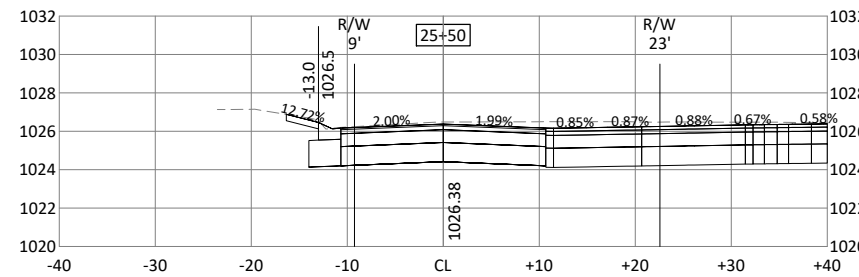
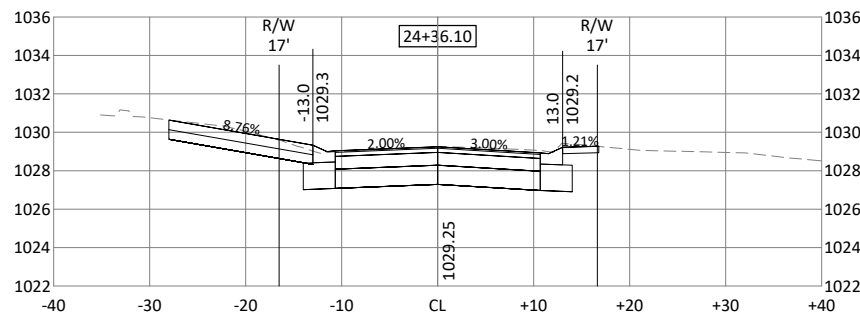
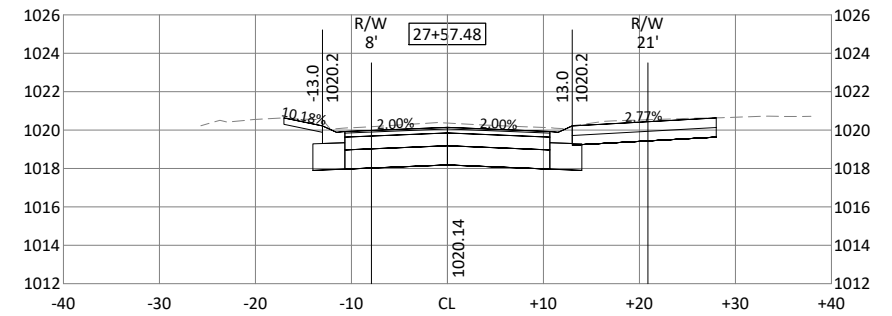
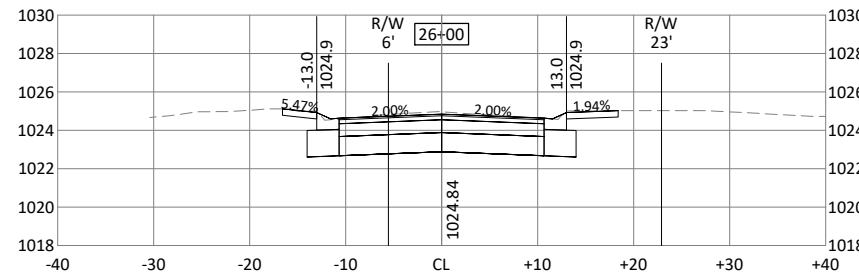
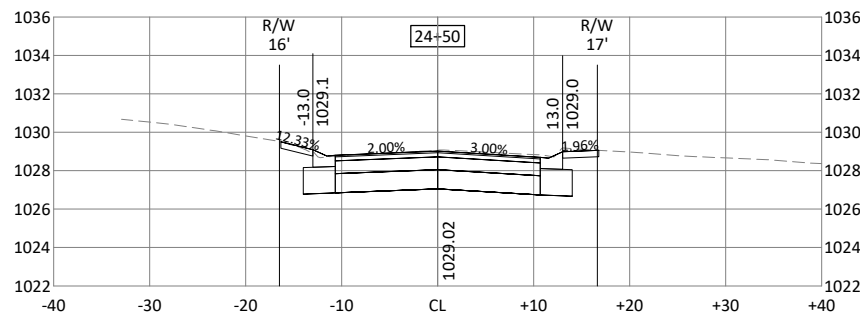
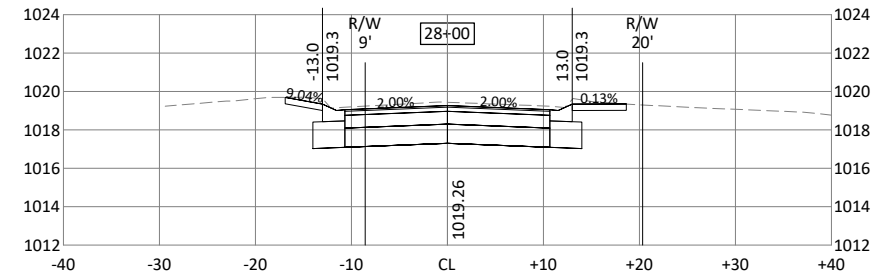
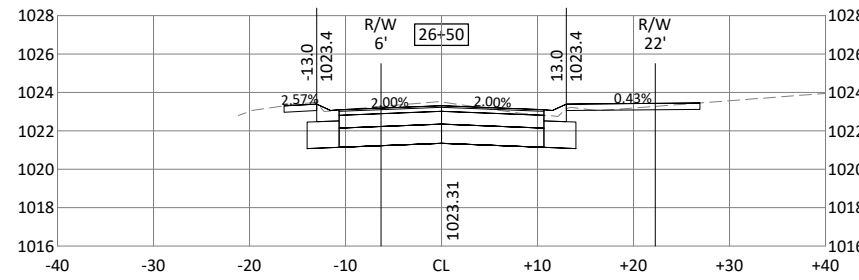
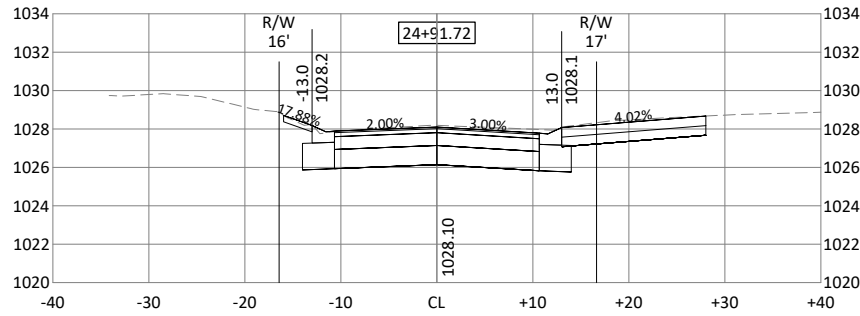
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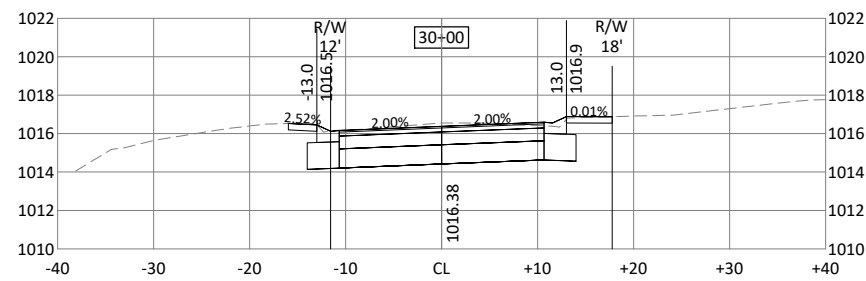
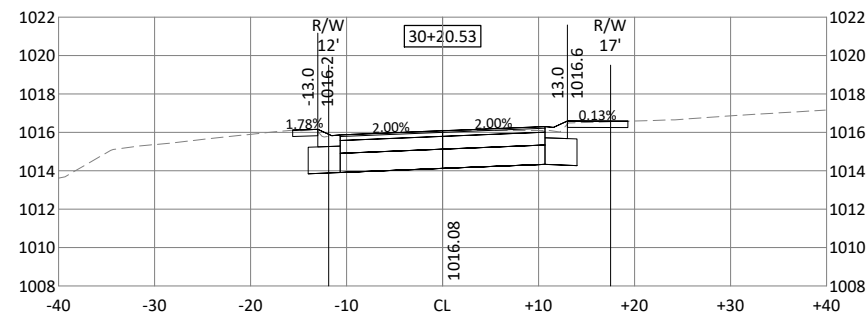
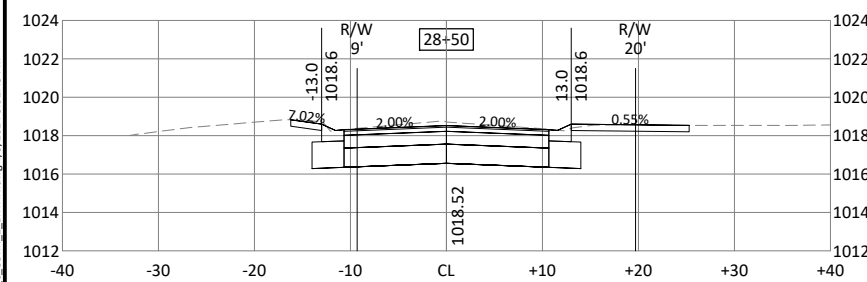
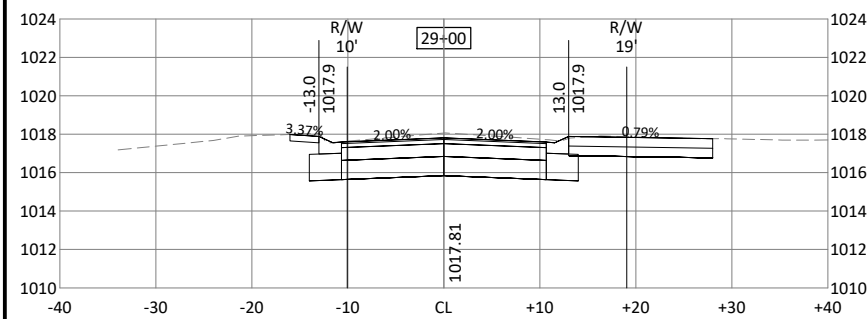
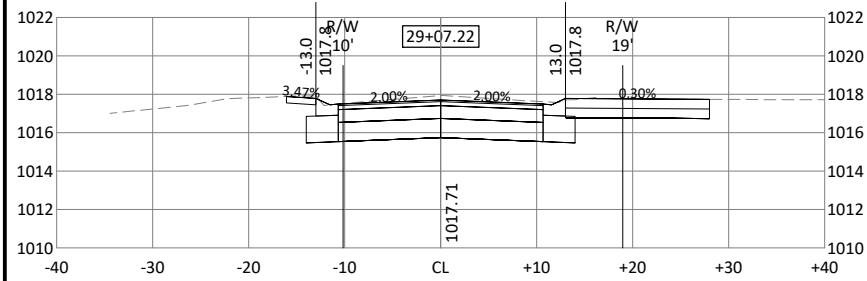
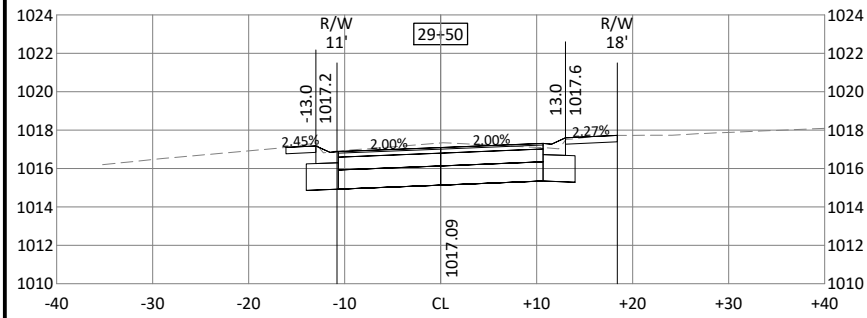


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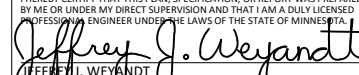
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