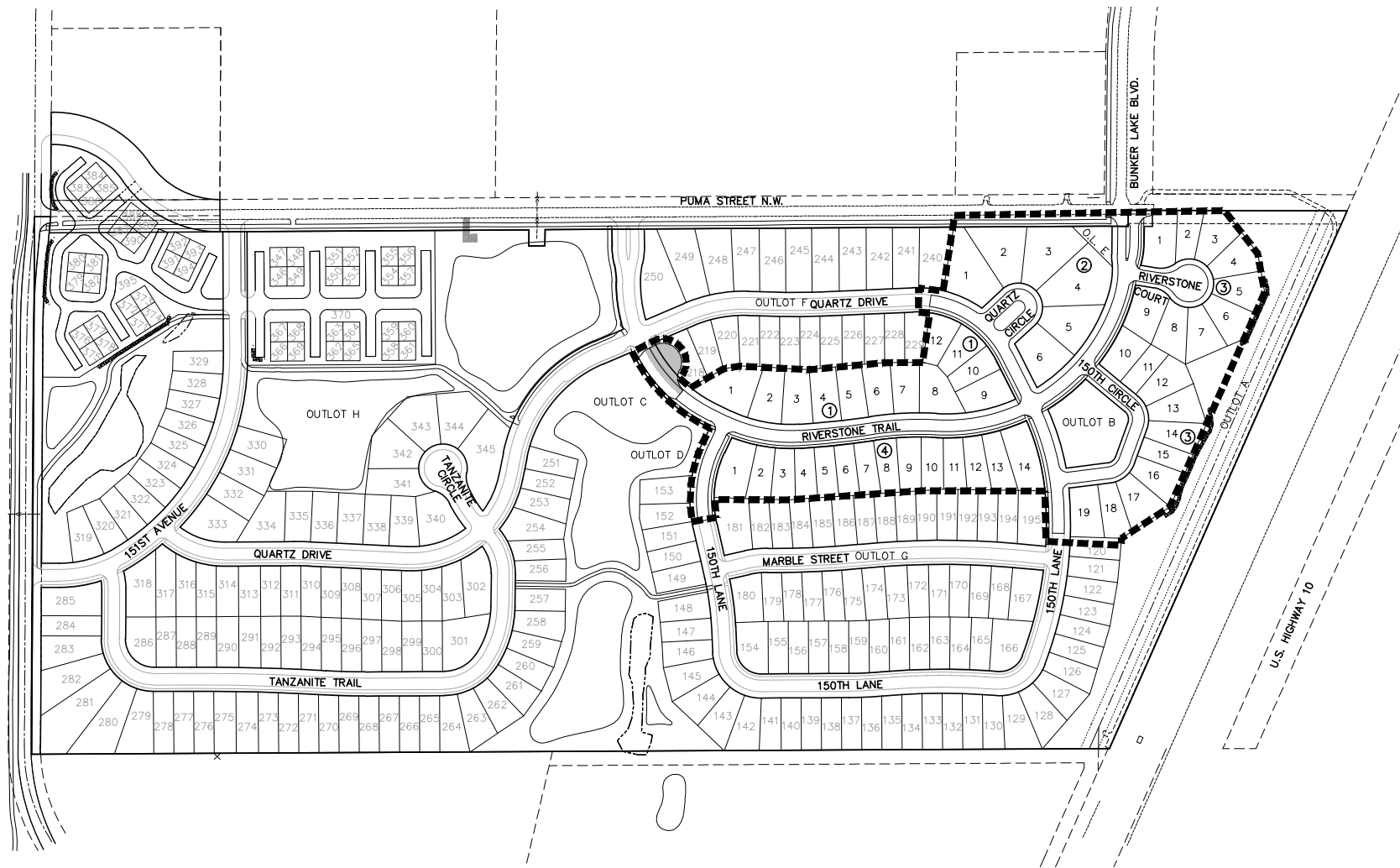
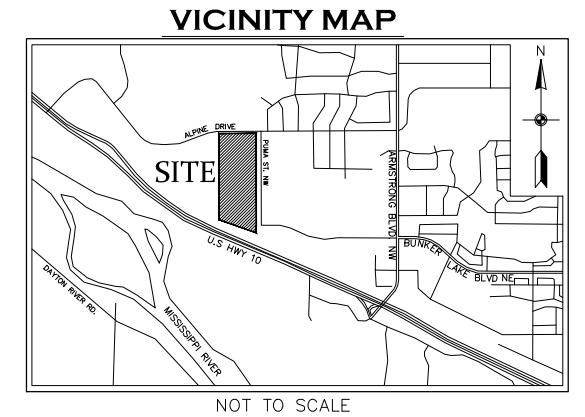


RIVERSTONE 1ST ADDITION

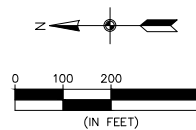
SANITARY SEWER, WATER MAIN, STORM SEWER AND STREET CONSTRUCTION PLANS

RAMSEY, MINNESOTA



SHEET INDEX

1. COVER
2. SANITARY SEWER INDEX
3. STORM SEWER INDEX
- 4-6. SANITARY SEWER & WATERMAIN
- 7-10. STORM SEWER
11. STREET CONSTRUCTION
 - RIVERSTONE TRAIL
12. STREET CONSTRUCTION
 - RIVERSTONE TRAIL / 150TH LANE
13. STREET CONSTRUCTION
 - 150TH LANE / QUARTZ DRIVE / QUARTZ CIRCLE
14. STREET CONSTRUCTION
 - 150TH CIRCLE / RIVERSTONE COURT
- 15-17. DETAILS

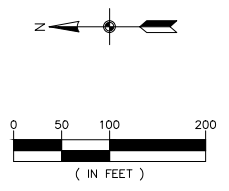
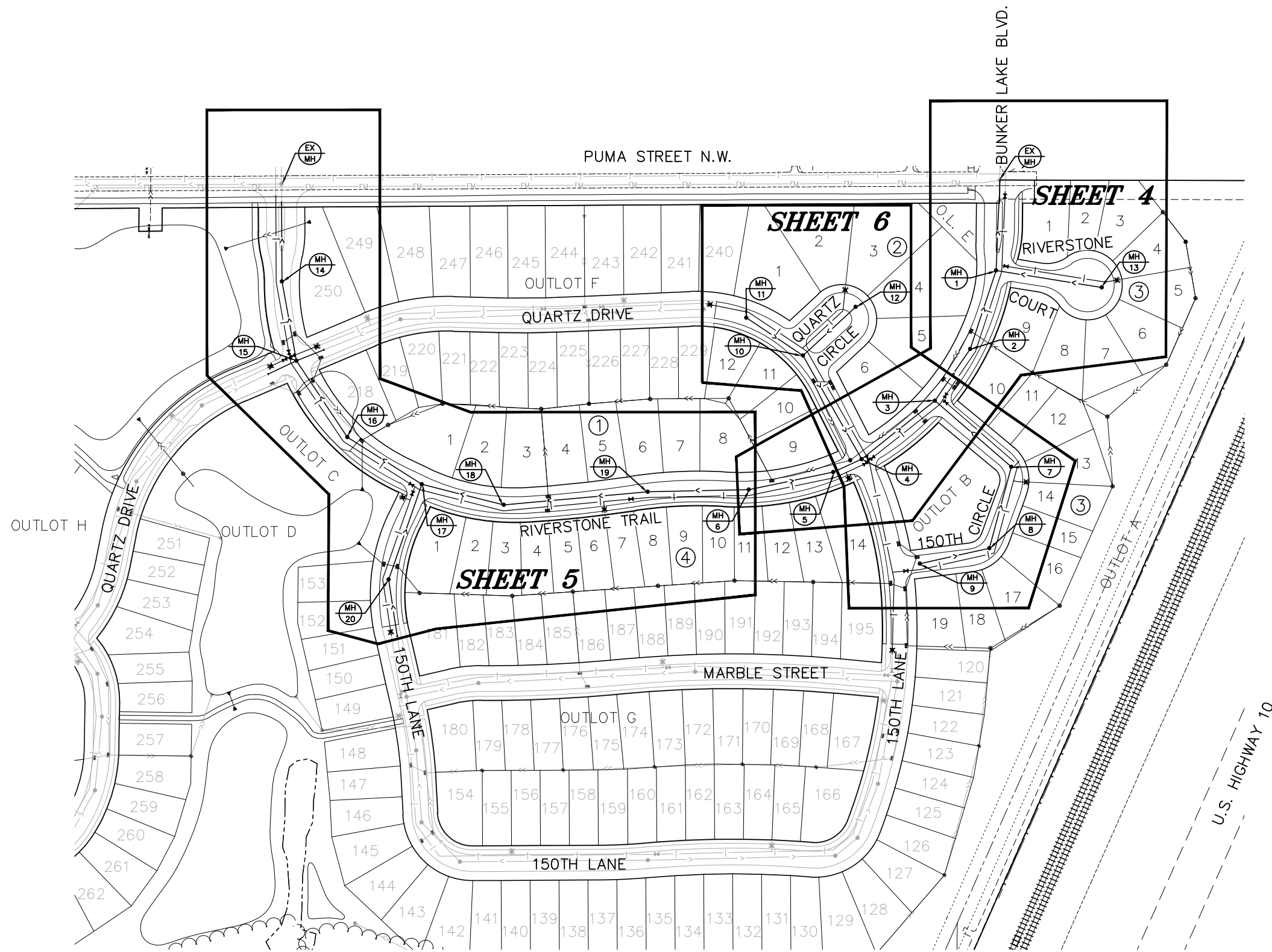


BENCHMARK

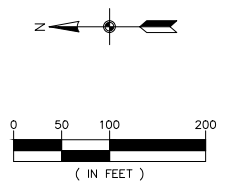
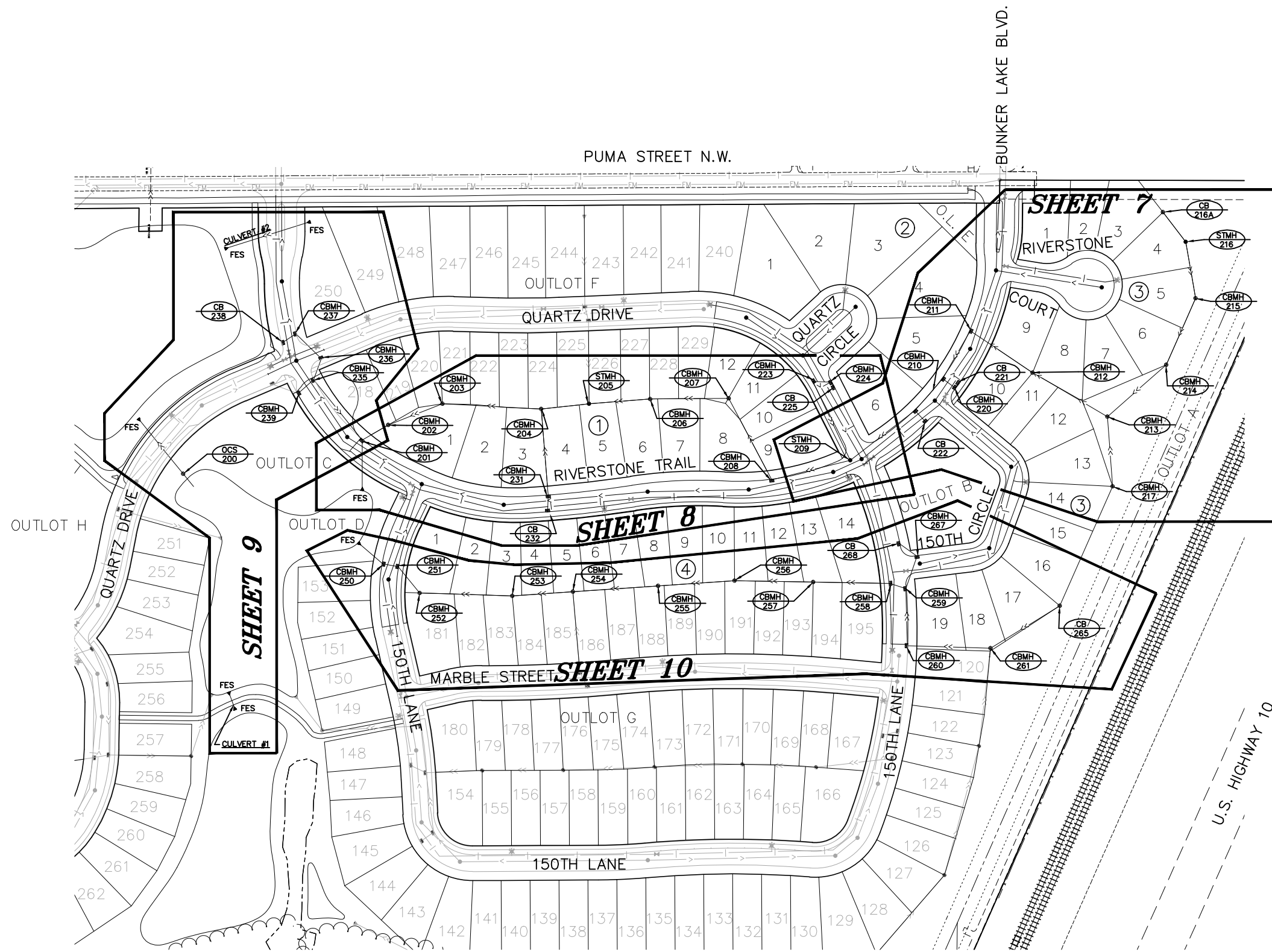
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Elev.= 890.186 (NAVD 88)
2. Anoka County Benchmark No. 2078
Elev.= 899.499 (NAVD 88)



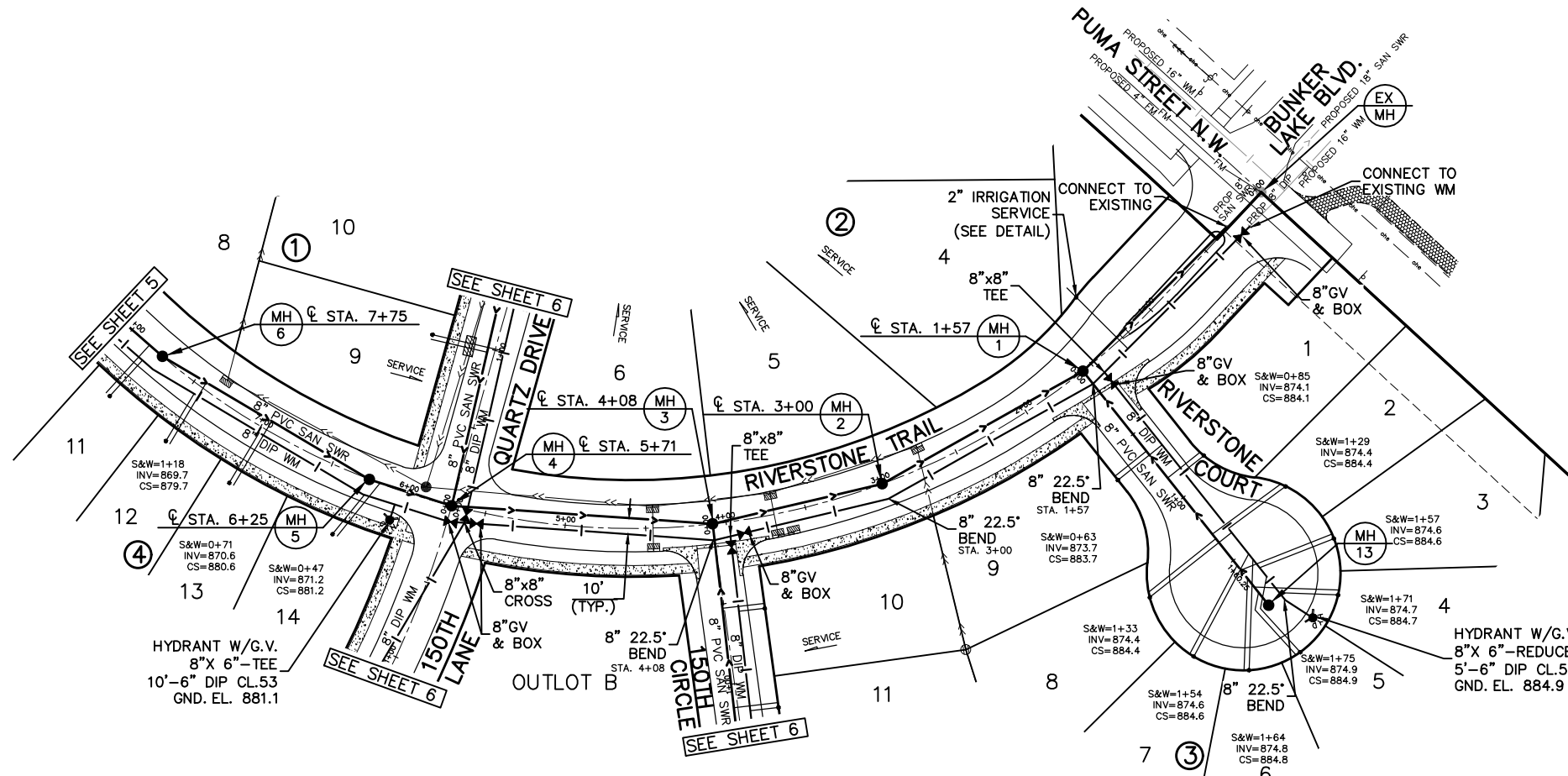
The subsurface utility information shown on this plan is utility Quality Level D. This quality level was determined according to the guidelines of C/ASCE 38-02, entitled "Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data."



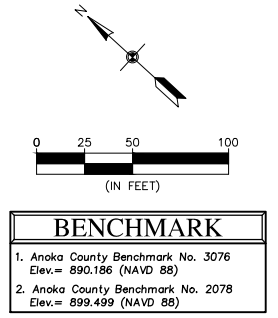
BENCHMARK	
1.	Anoka County Benchmark No. 3076 Elev. = 890.186 (NAVD 88)
2.	Anoka County Benchmark No. 2078 Elev. = 899.499 (NAVD 88)



BENCHMARK	
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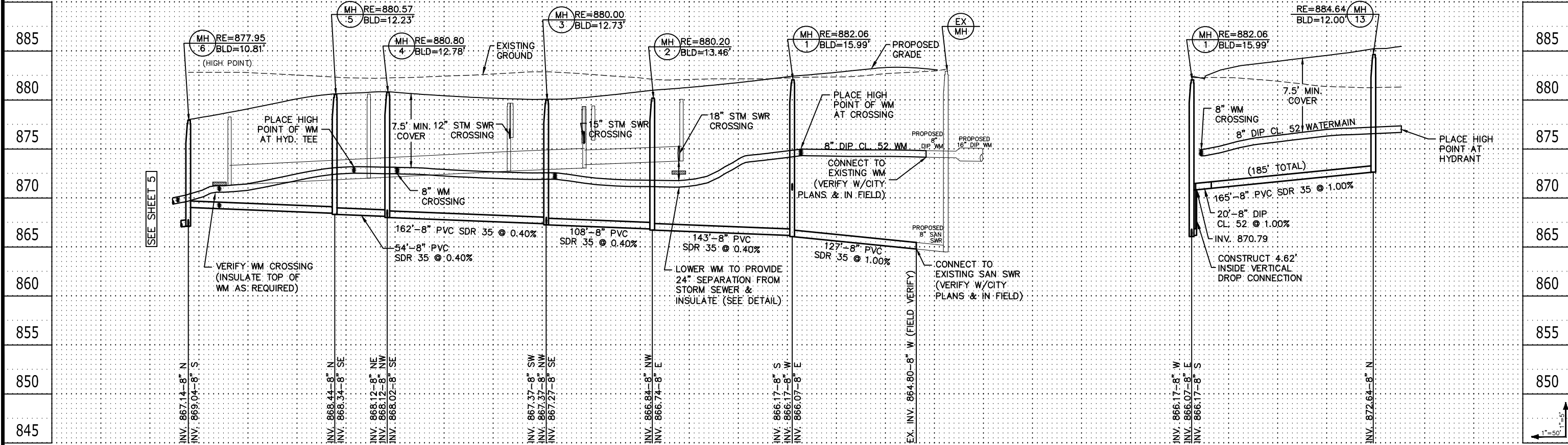


- GENERAL NOTES:**
- SANITARY SEWER SERVICES SHALL BE 4" PVC SDR 26 UNLESS OTHERWISE NOTED.
 - WATER SERVICES SHALL BE 1" DIA. TYPE K COPPER WITH 7.5' MINIMUM COVER.
 - SANITARY SEWER SERVICE WYES ARE STATIONED FROM THE DOWN STREAM MANHOLE.
 - SANITARY SEWER INVERTS ARE SHOWN AT THE CURB STOP.
 - SANITARY SEWER & WATER SERVICES SHALL BE CONSTRUCTED TO THE R/W WHERE THERE IS NO SIDEWALK, AND 10' BEYOND THE R/W WHERE THERE IS SIDEWALK.



RIVERSTONE TRAIL

RIVERSTONE COURT



3890 Pheasant Ridge DR. NE,
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Blaine, MN 55449
Phone: (763) 489-7900
Fax: (763) 489-7959
www.carlsonmccain.com

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Date: 6/9/17 License #: 25063

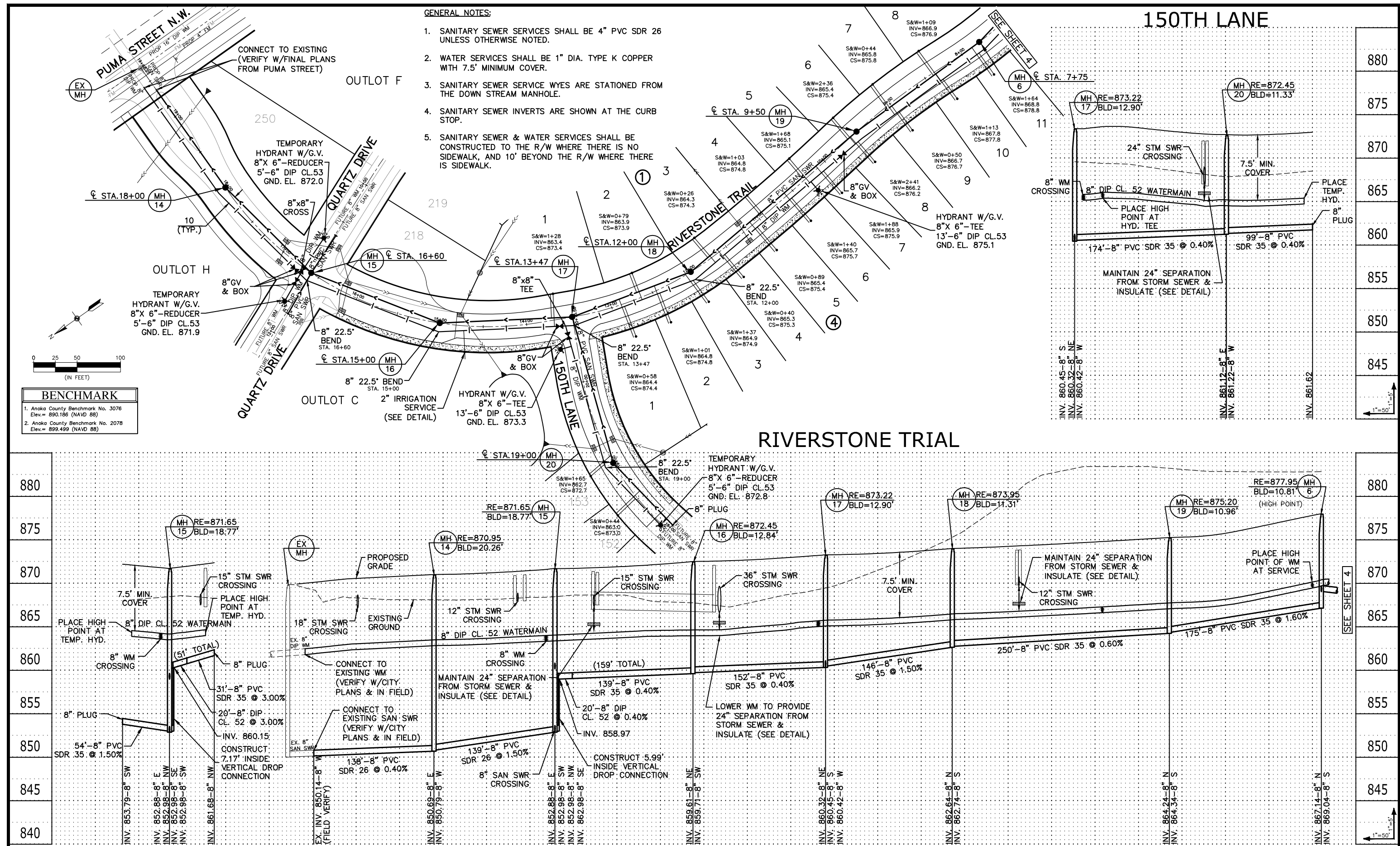
Print Name: Brian J. Krystofiak, P.E.
Signature: *Brian J. Krystofiak*
Date: 6/9/17 License #: 25063

Drawn: KRO
Designed: BJK
Date: 6/9/17

RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake Blvd., Suite 400
Ramsey, MN 55303

RIVERSTONE 1ST ADDITION
Ramsey, Minnesota

SANITARY SEWER & WATER MAIN
4 of 17

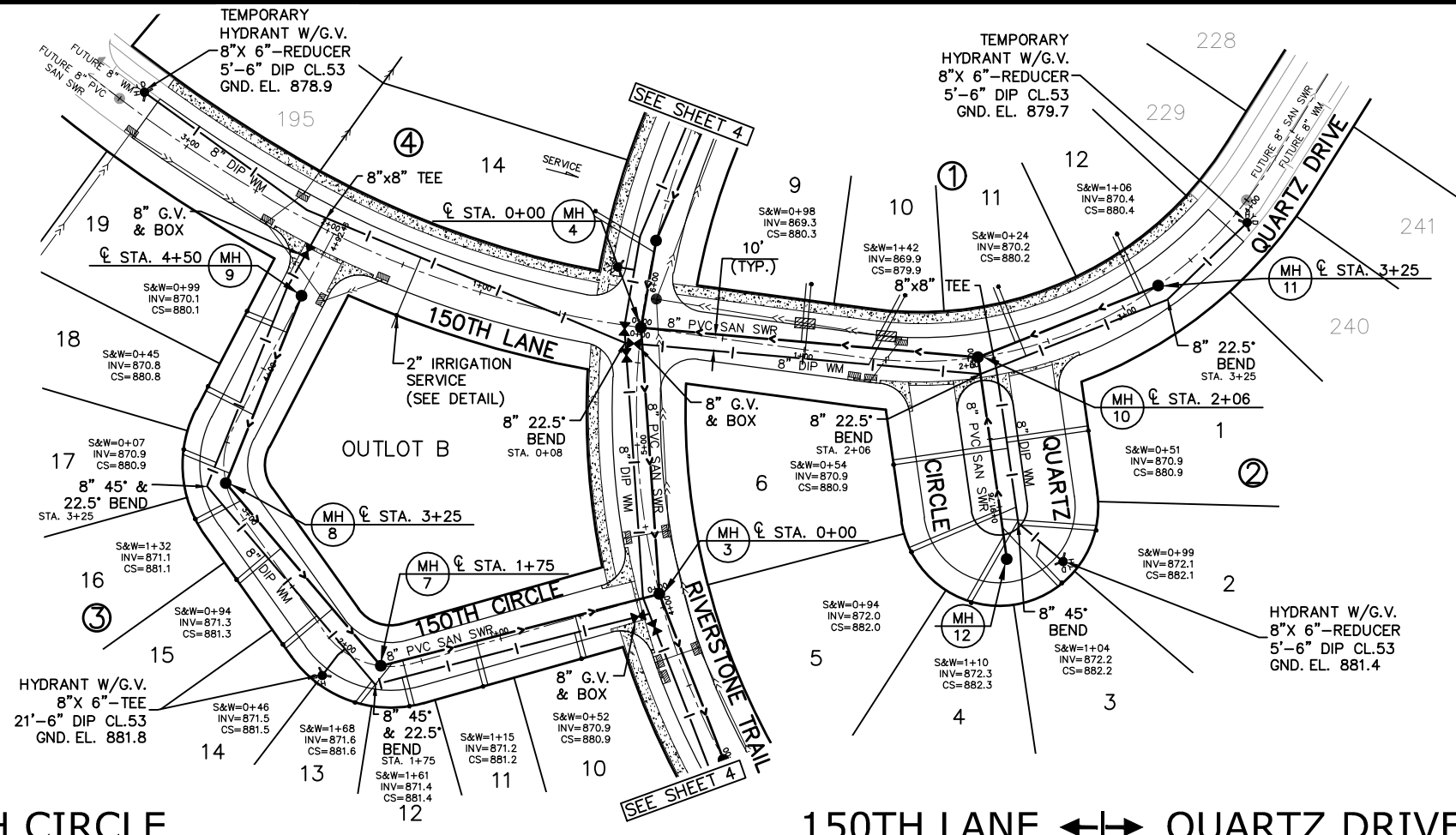
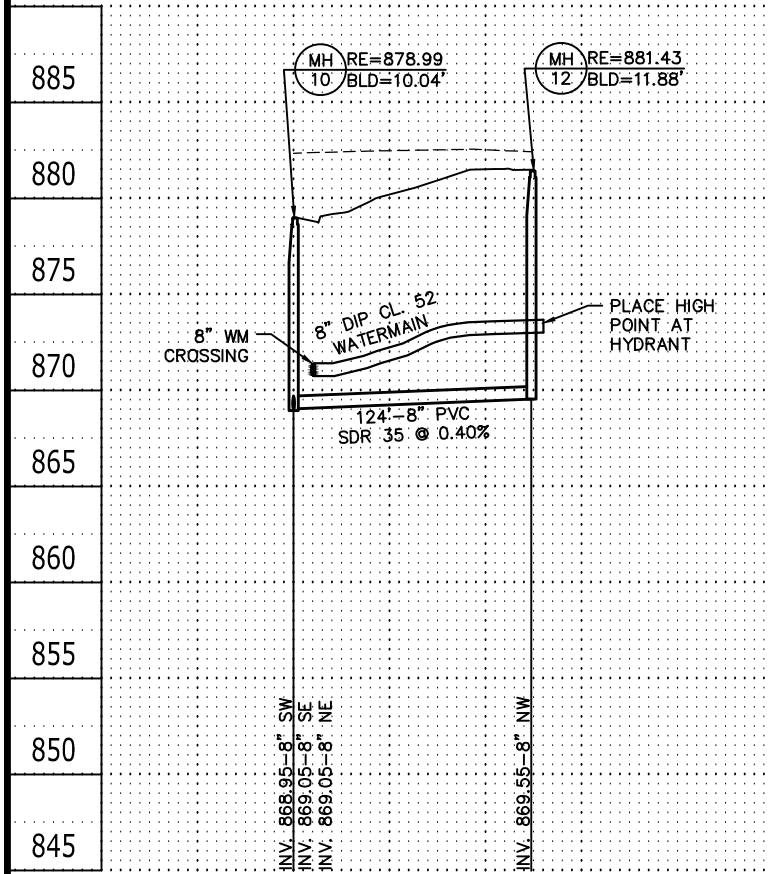


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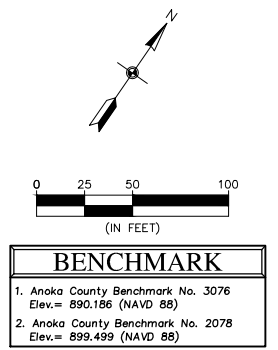
BENCHMARK

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2. Anoka County Benchmark No. 2078 Elev.= 899.499 (NAVD 88)

QUARTZ CIRCLE

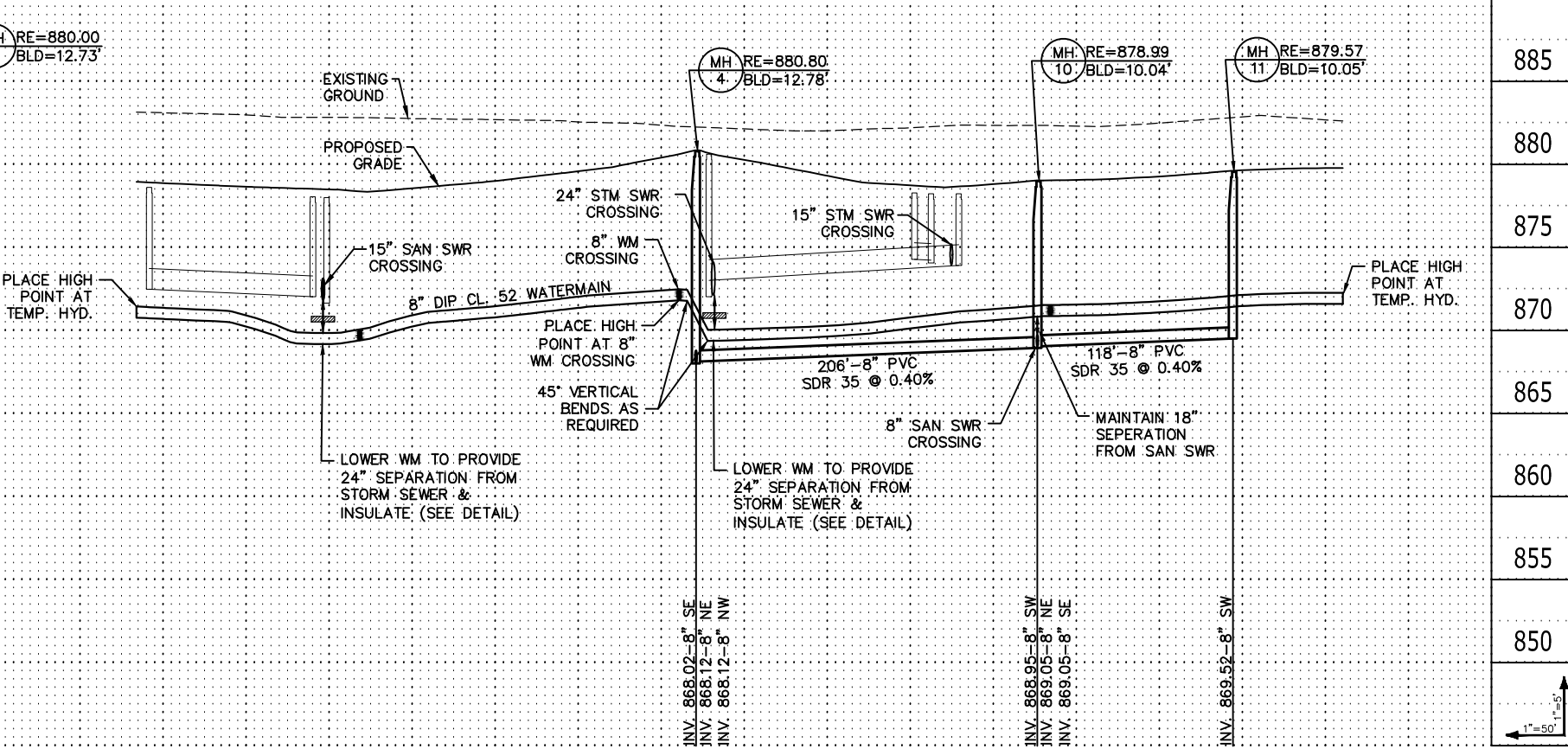
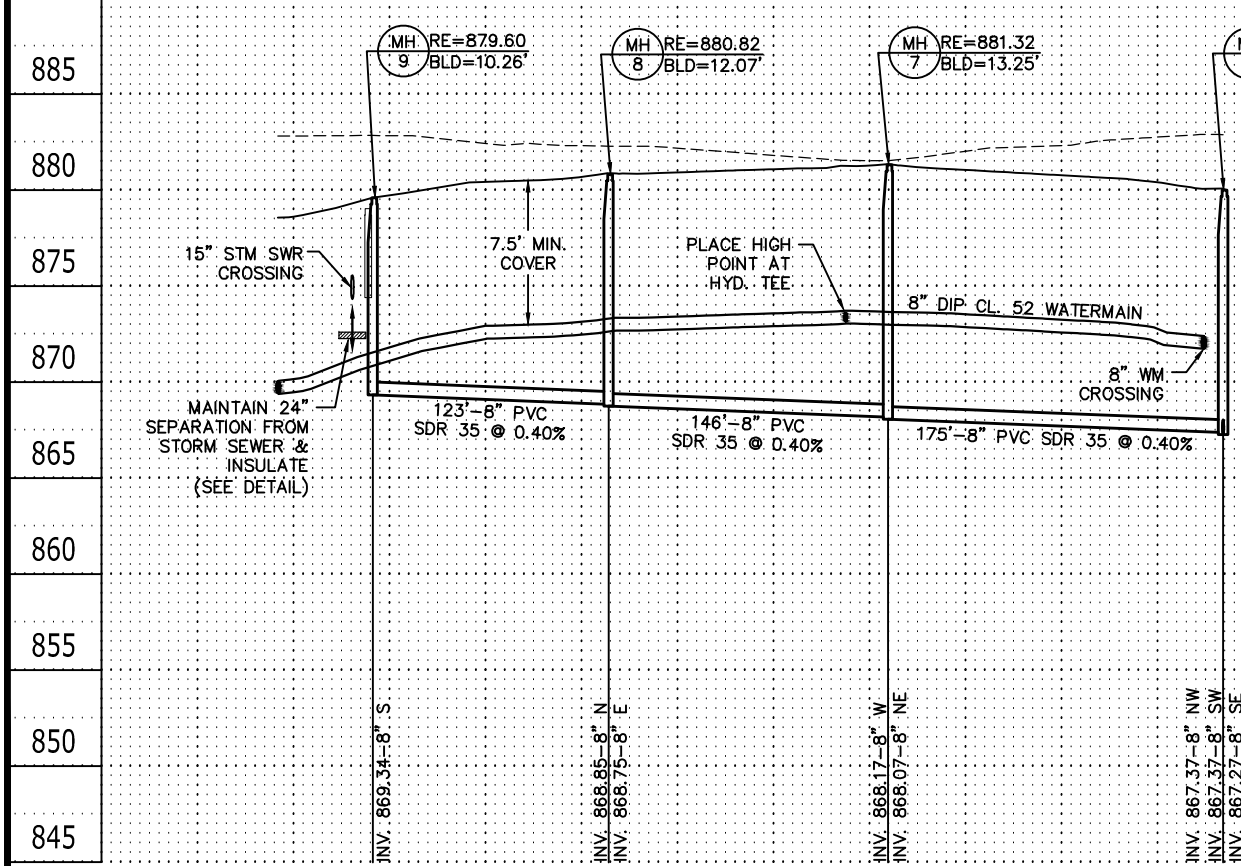


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 - SANITARY SEWER INVERTS ARE SHOWN AT THE CURB STOP.
 - SANITARY SEWER & WATER SERVICES SHALL BE CONSTRUCTED TO THE R/W WHERE THERE IS NO SIDEWALK, AND 10' BEYOND THE R/W WHERE THERE IS SIDEWALK.
 - WATER SERVICES FOR LOTS 9 & 10, BLOCK 1 SHALL BE LOWERED 2' UNDER THE STORM SEWER AND INSULATED.



150TH CIRCLE

150TH LANE ↔ QUARTZ DRIVE



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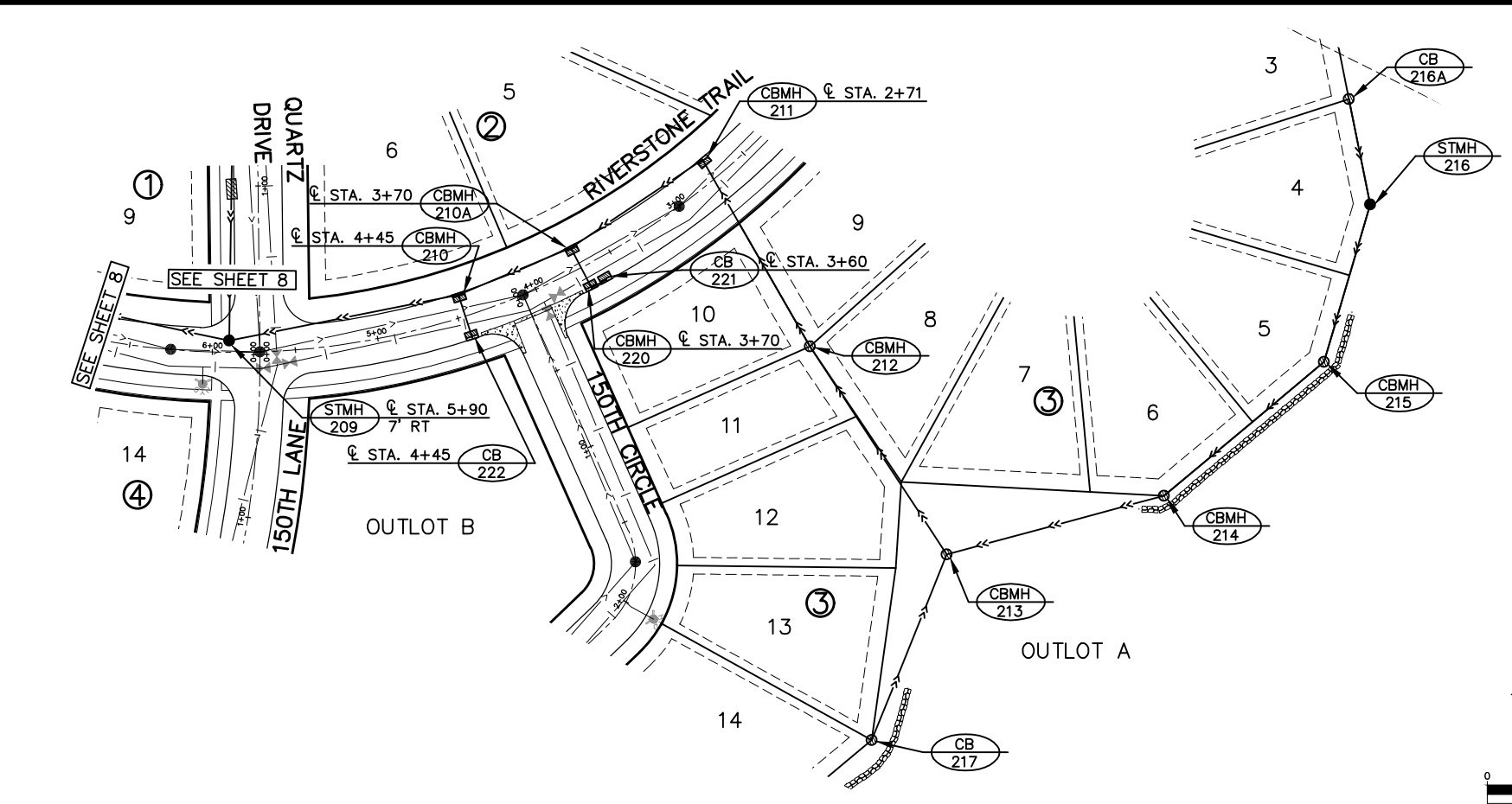
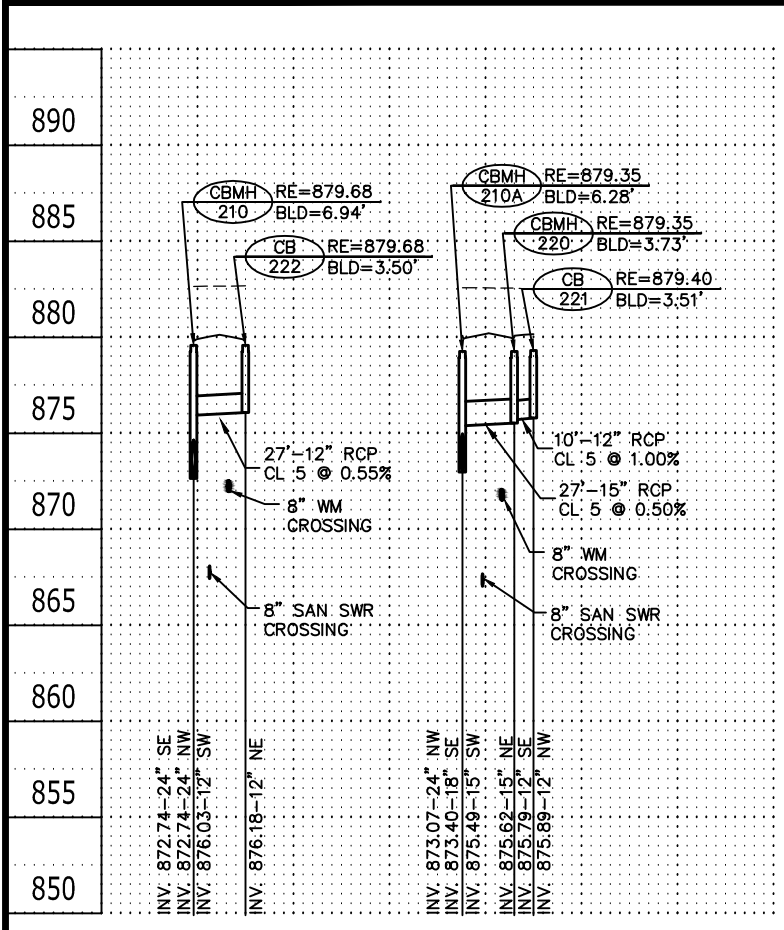
Drawn: KRO
 Designed: BJK
 Date: 6/9/17

Revisions:
 1. 6/23/17 Per City Comments

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 Ramsey, MN 55303

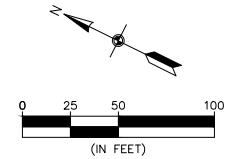
RIVERSTONE 1ST ADDITION
 Ramsey, Minnesota

SANITARY SEWER & WATER MAIN

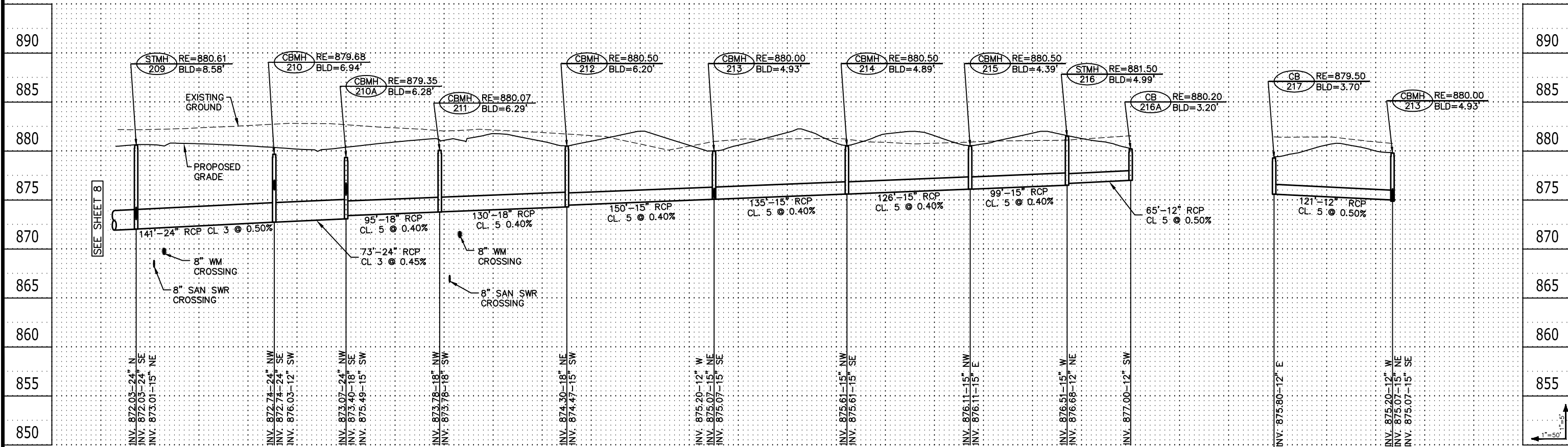


STORM SEWER SCHEDULE		
STRUCTURE	SIZE	NEENAH CASTING or EQUAL
STMH-209	60" DIA.	R-1642
CBMH-210	48" DIA.	R-3067
CBMH-210A	48" DIA.	R-3067
CBMH-211	48" DIA.	R-3067
CBMH-212	48" DIA.	R-2570
CBMH-213	48" DIA.	R-2570
CBMH-214	48" DIA.	R-2570
CBMH-215	48" DIA.	R-2570
STMH-216	48" DIA.	R-1642
CB-216A	27" DIA.	R-2570
CB-217	27" DIA.	R-2570
CBMH-220	48" DIA.	R-3246R
CB-221	24"X36"	R-3246R
CB-222	24"X36"	R-3246R

GENERAL NOTES:
 1. INSTALL SEDIMENT CONTROL BARRIER INSERTS ON ALL CATCH BASINS (SEE DETAIL).



BENCHMARK	
1. Anoka County Benchmark No. 3076	Elev.= 890.186 (NAVD 88)
2. Anoka County Benchmark No. 2078	Elev.= 899.499 (NAVD 88)



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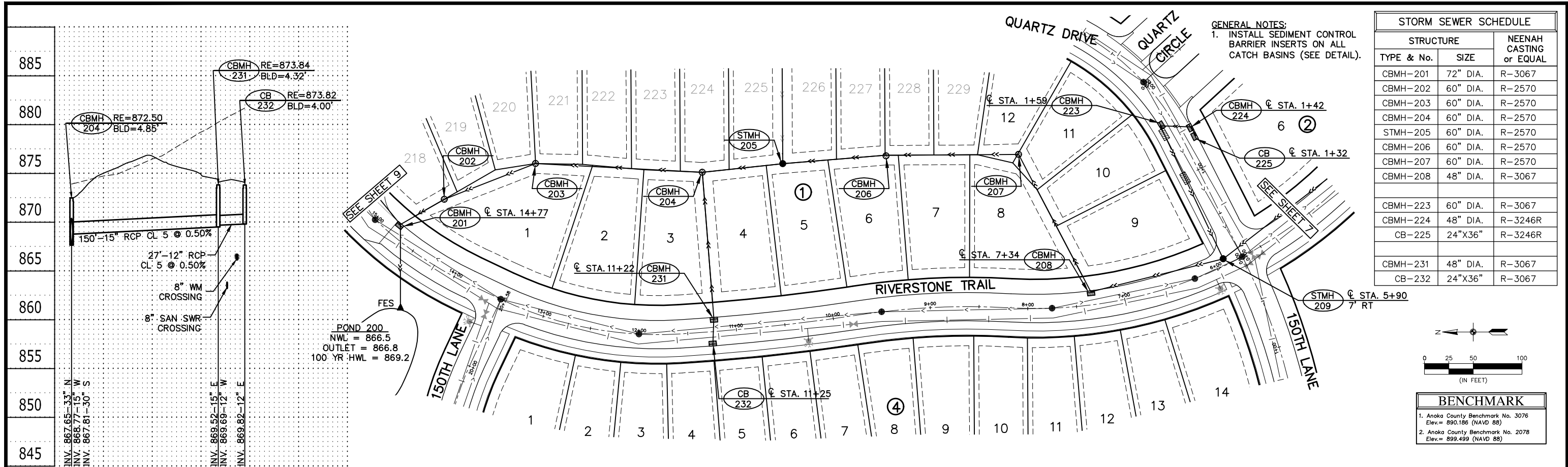
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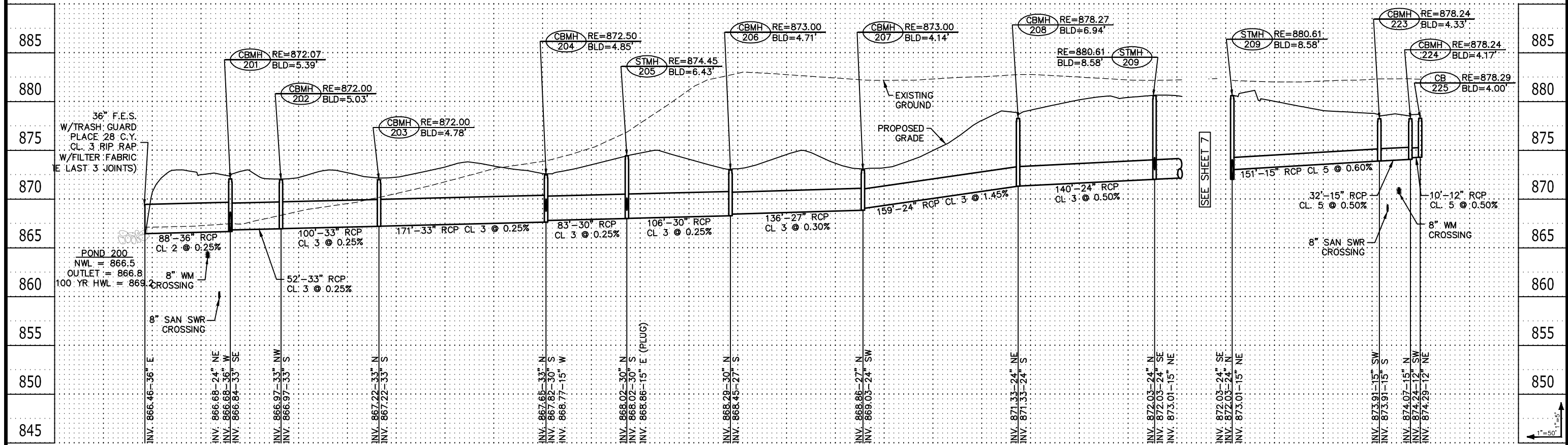
RIVERSTONE 1ST ADDITION
 Ramsey, Minnesota

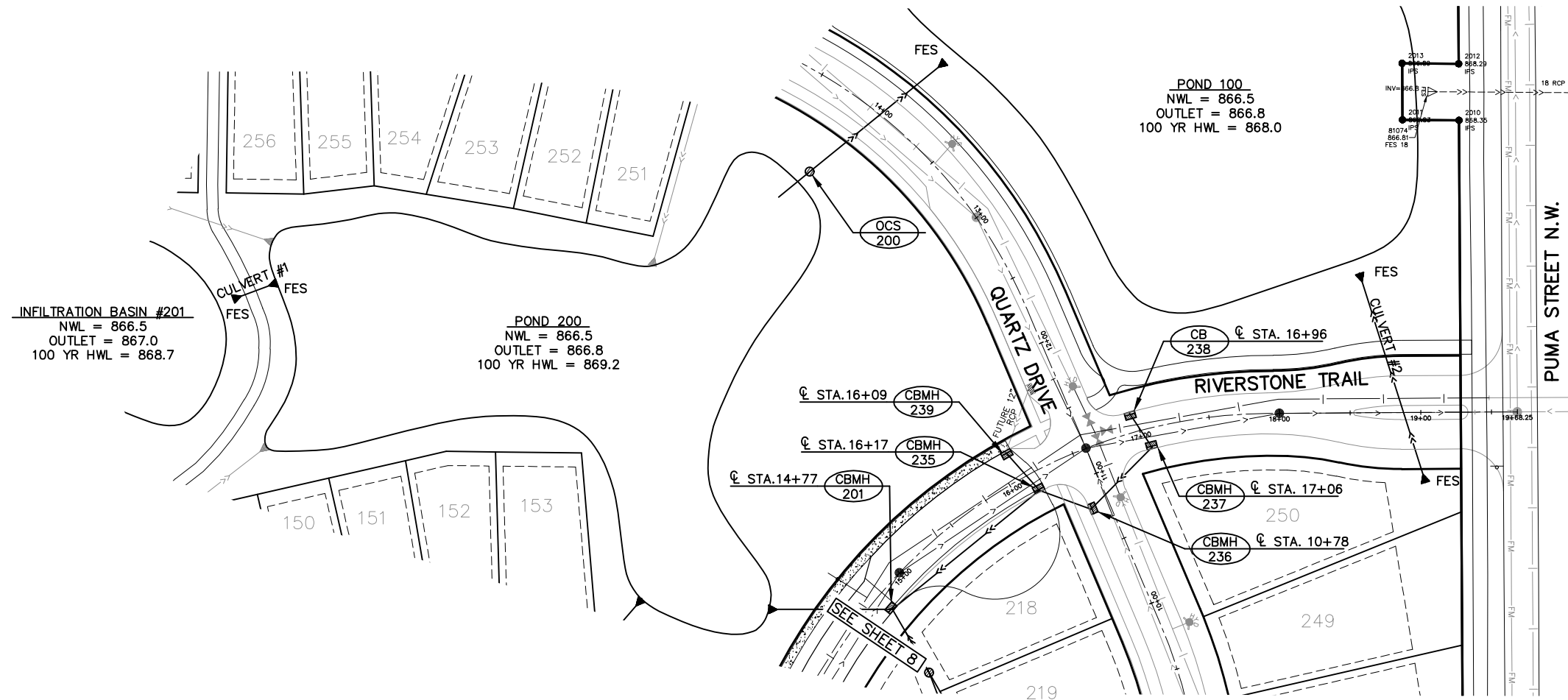
STORM SEWER



GENERAL NOTES:
1. INSTALL SEDIMENT CONTROL BARRIER INSERTS ON ALL CATCH BASINS (SEE DETAIL).

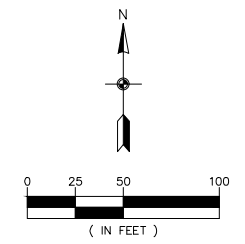
STORM SEWER SCHEDULE		
STRUCTURE	NEENAH CASTING or EQUAL	
CBMH-201	72" DIA.	R-3067
CBMH-202	60" DIA.	R-2570
CBMH-203	60" DIA.	R-2570
CBMH-204	60" DIA.	R-2570
STMH-205	60" DIA.	R-2570
CBMH-206	60" DIA.	R-2570
CBMH-207	60" DIA.	R-2570
CBMH-208	48" DIA.	R-3067
CBMH-223	60" DIA.	R-3067
CBMH-224	48" DIA.	R-3246R
CB-225	24"X36"	R-3246R
CBMH-231	48" DIA.	R-3067
CB-232	24"X36"	R-3067



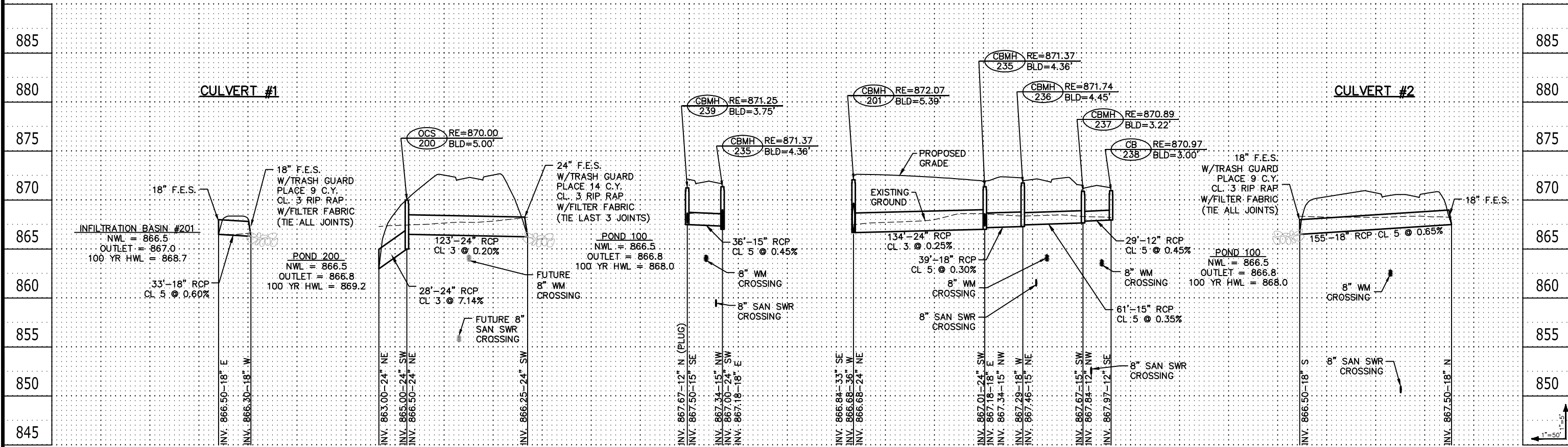


STORM SEWER SCHEDULE		
STRUCTURE	NEENAH CASTING or EQUAL	
TYPE & No.	SIZE	
OCS-200	48" DIA.	SEE DETAIL
CBMH-235	60" DIA.	R-3246R
CBMH-236	48" DIA.	R-3246R
CBMH-237	48" DIA.	R-3246R
CB-238	24"x36"	R-3246R
CBMH-239	48" DIA.	R-3246R

GENERAL NOTES:
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BENCHMARK	
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Carlson McCain
 environmental, engineering, surveying

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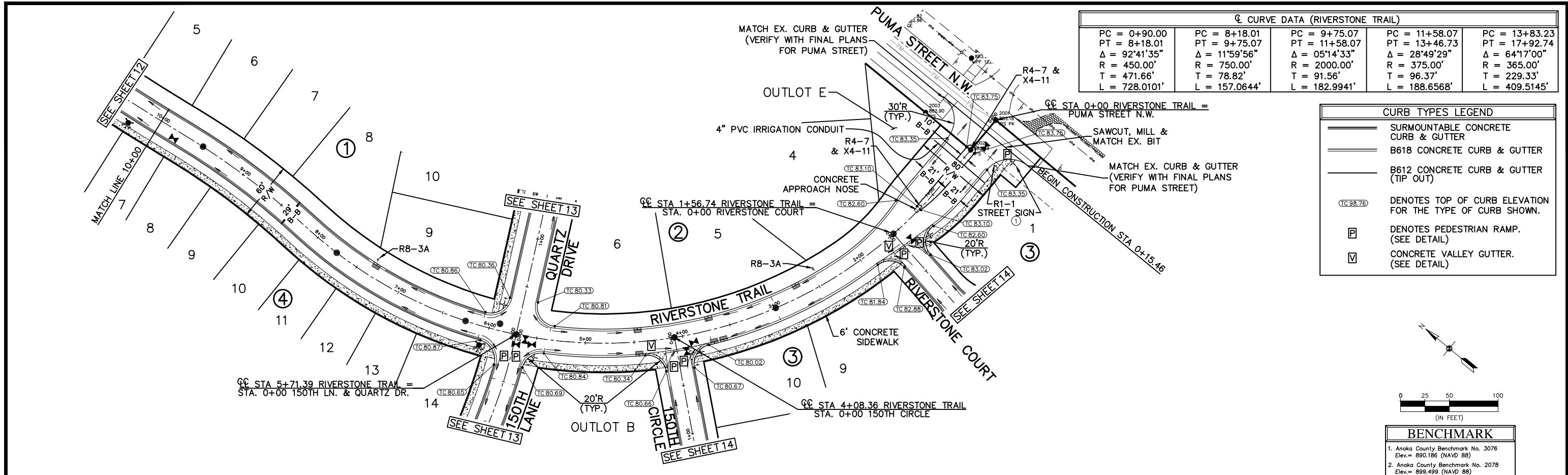
Print Name: Brian J. Krystofiak, P.E.
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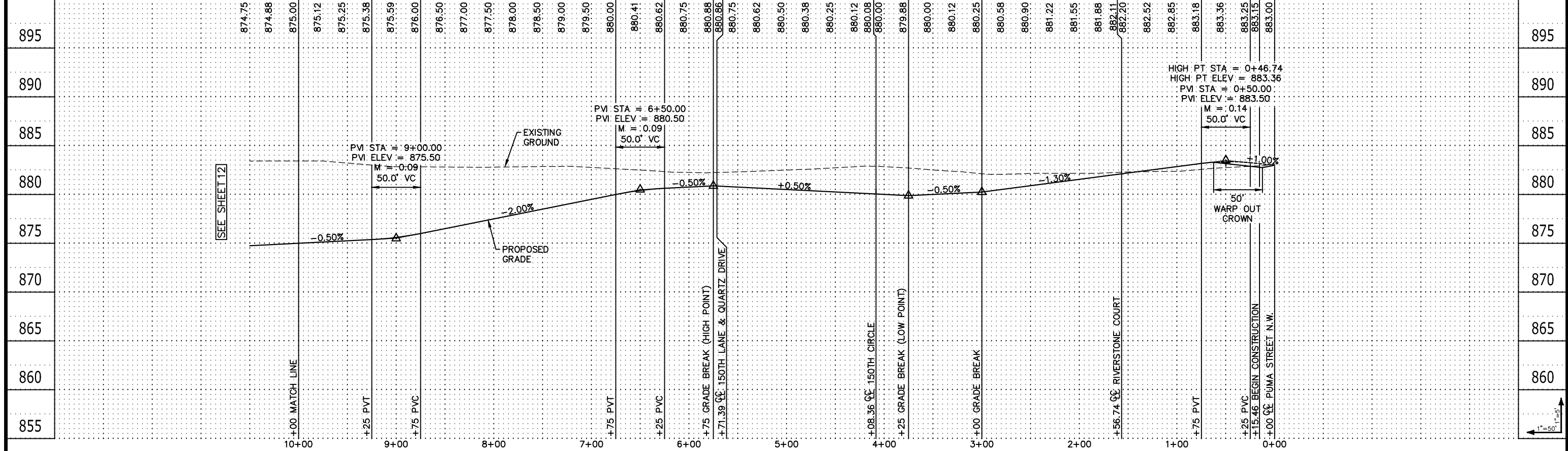
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RIVERSTONE 1ST ADDITION
 Ramsey, Minnesota



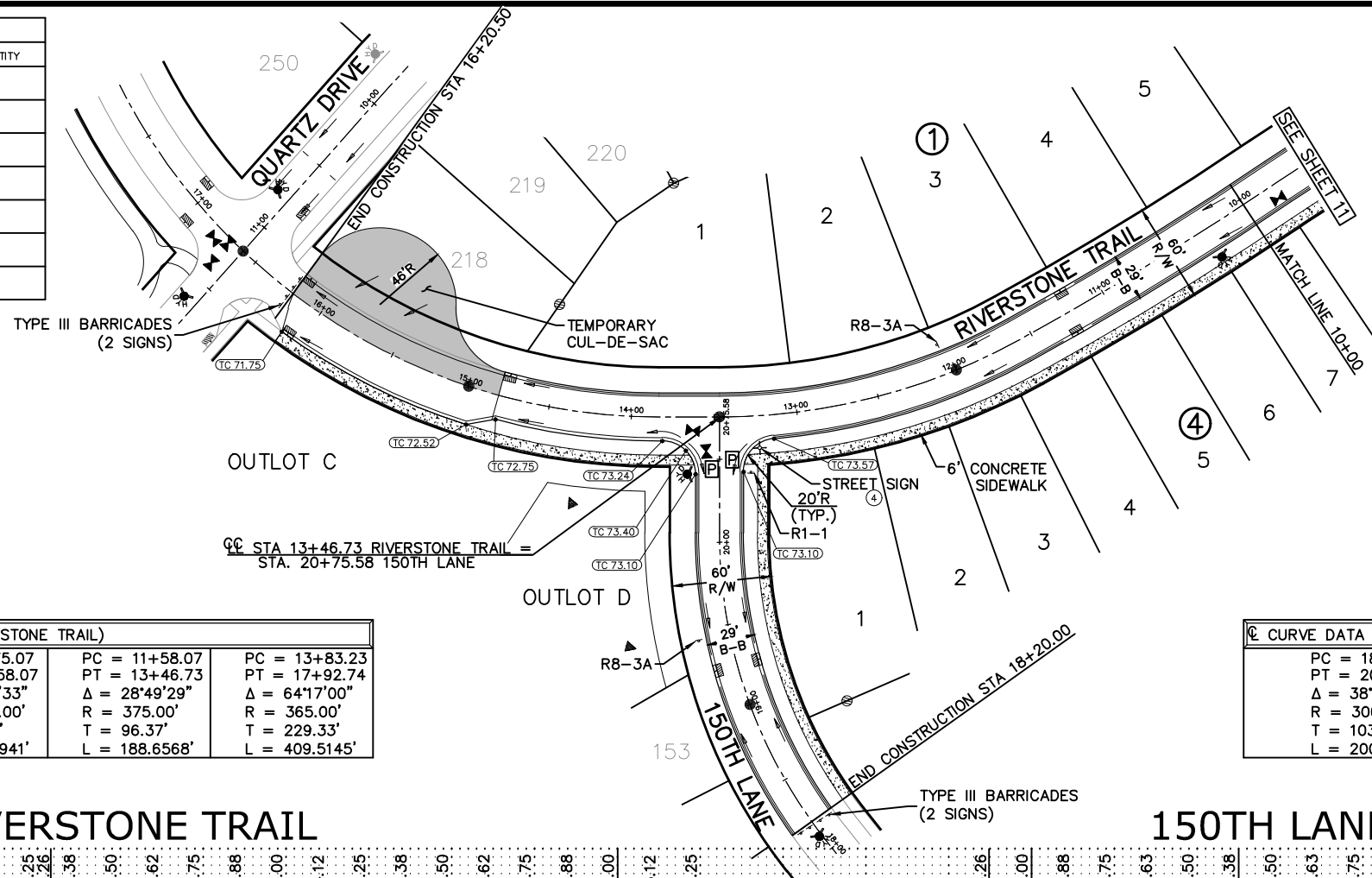
RIVERSTONE TRAIL



SIGN SCHEDULE			
SIGN	SIGN NO.	SIZE	QUANTITY
	R1-1	30" x 30"	7
	R4-7	24" x 30"	2
	X4-11	18" x 18"	2
	R8-3A	12" x 18"	9
	TYPE III BARRICADES		8
+	STREET SIGN		7

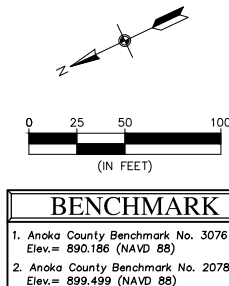
STREET NAME SIGNS	
STREET NAMES	QUANTITY
1 Riverstone Trail Puma Street N.W.	1
2 Riverstone Trail Riverstone Court	1
3 Riverstone Trail 150th Circle	1
4 Riverstone Trail 150th Lane	1
5 150th Circle 150th Lane	1
6 Riverstone Trail Quartz Drive	1
7 Quartz Drive Quartz Circle	1

CURB TYPES LEGEND	
	SURMOUNTABLE CONCRETE CURB & GUTTER
	B618 CONCRETE CURB & GUTTER
	B612 CONCRETE CURB & GUTTER (TIP OUT)
	DENOTES TOP OF CURB ELEVATION FOR THE TYPE OF CURB SHOWN.
	DENOTES PEDESTRIAN RAMP. (SEE DETAIL)
	CONCRETE VALLEY GUTTER. (SEE DETAIL)



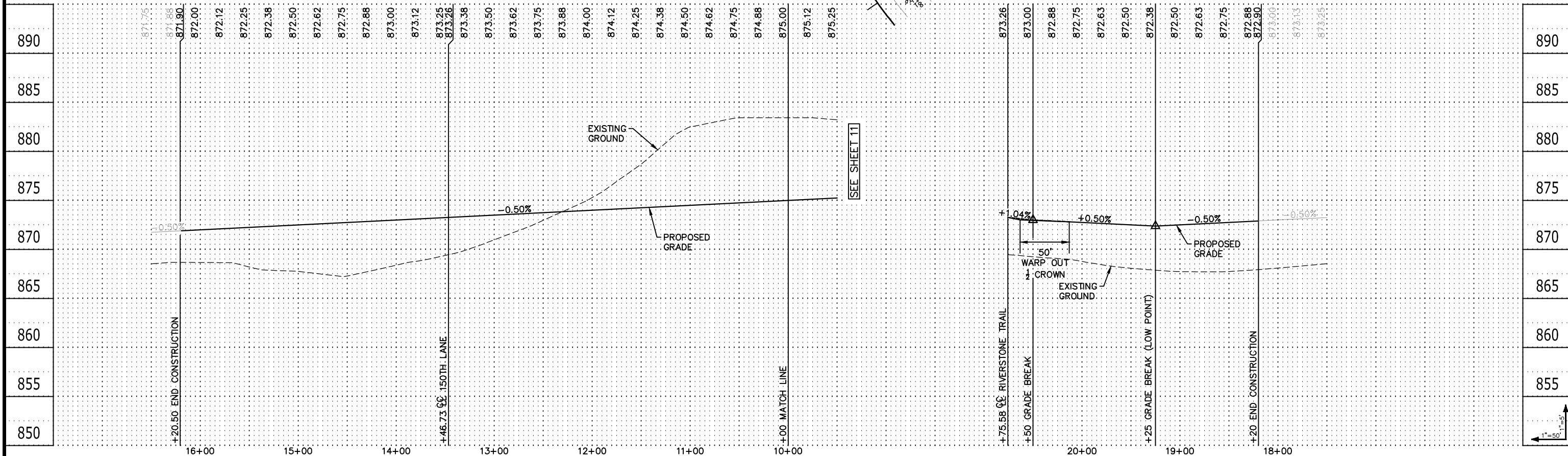
C CURVE DATA (RIVERSTONE TRAIL)				
PC = 0+90.00	PC = 8+18.01	PC = 9+75.07	PC = 11+58.07	PC = 13+83.23
PT = 8+18.01	PT = 9+75.07	PT = 11+58.07	PT = 13+46.73	PT = 17+92.74
Δ = 92°41'35"	Δ = 11°59'56"	Δ = 05°14'33"	Δ = 28°49'29"	Δ = 64°17'00"
R = 450.00'	R = 750.00'	R = 2000.00'	R = 375.00'	R = 365.00'
T = 471.66'	T = 78.82'	T = 91.56'	T = 96.37'	T = 229.33'
L = 728.0101'	L = 157.0644'	L = 182.9941'	L = 188.6568'	L = 409.5145'

C CURVE DATA (150TH LANE)	
PC = 18+05.64	PT = 20+05.78
Δ = 38°13'23"	R = 300.00'
T = 103.95'	L = 200.1349'



RIVERSTONE TRAIL

150TH LANE



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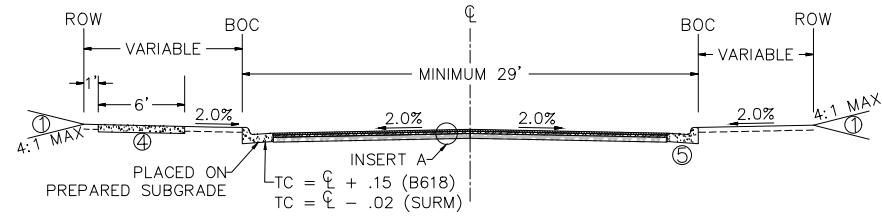
RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake Blvd., Suite 400
Ramsey, MN 55303

RIVERSTONE 1ST ADDITION
Ramsey, Minnesota

STREET CONSTRUCTION

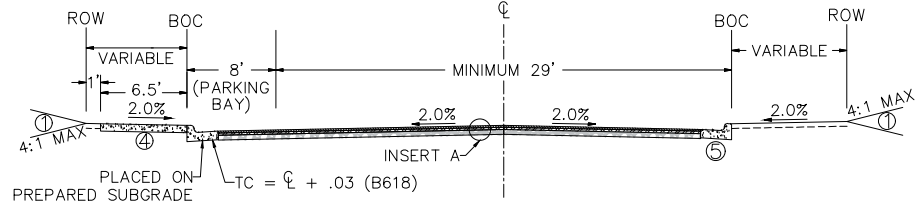
29' - URBAN STREET

NOTE: NOT TO SCALE

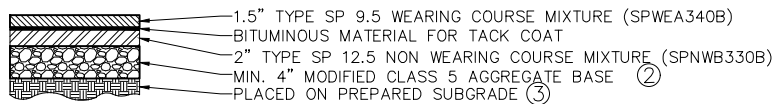


29' - URBAN STREET
W/ PARKING BAY

NOTE: NOT TO SCALE



INSERT A:

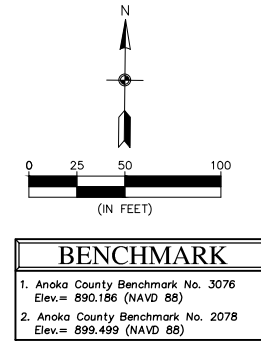


REFERENCE NOTES:

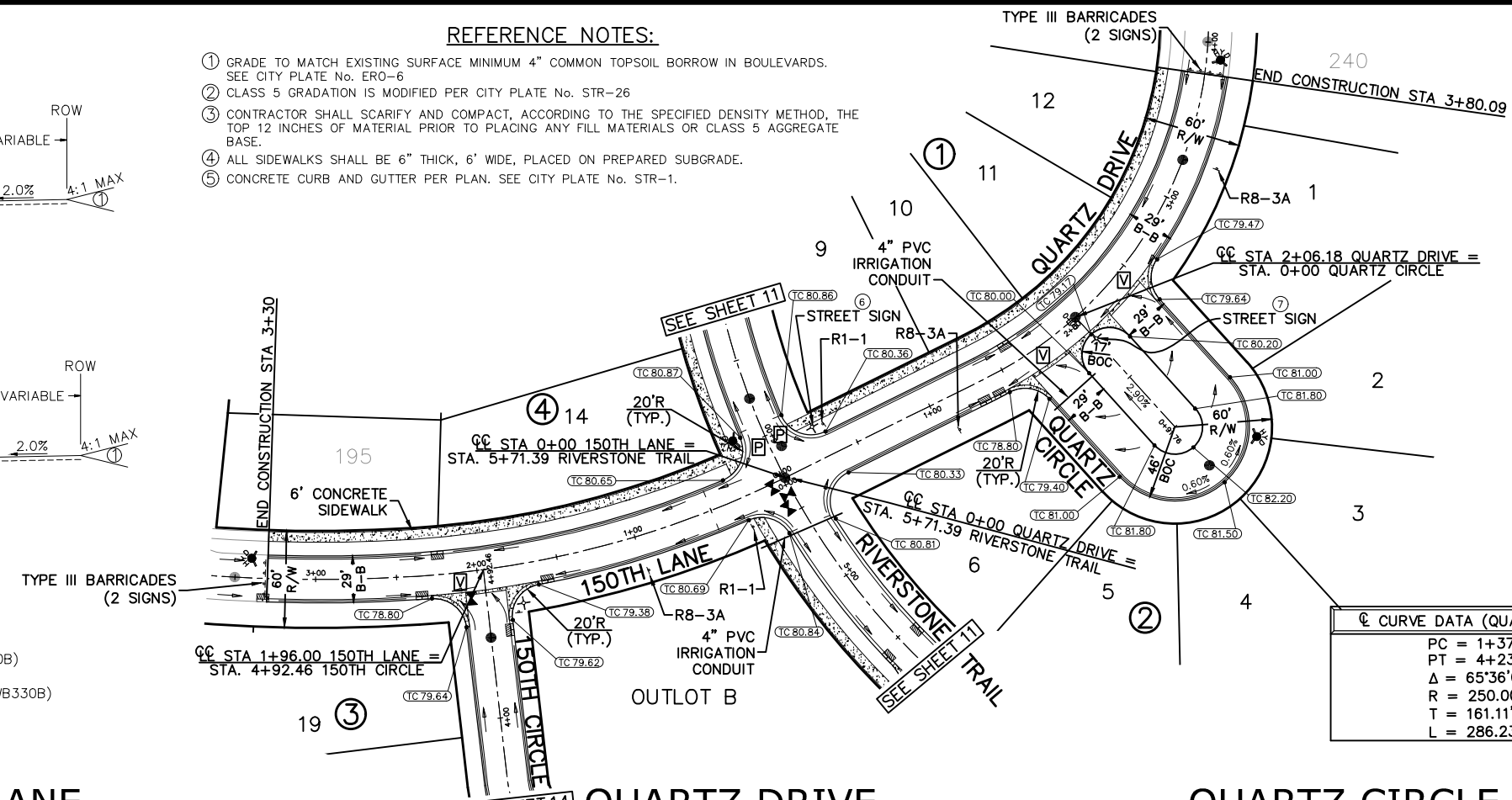
- GRADE TO MATCH EXISTING SURFACE MINIMUM 4" COMMON TOPSOIL BORROW IN BOULEVARDS. SEE CITY PLATE No. ERO-6
- CLASS 5 GRADATION IS MODIFIED PER CITY PLATE No. STR-26
- CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING ANY FILL MATERIALS OR CLASS 5 AGGREGATE BASE.
- ALL SIDEWALKS SHALL BE 6" THICK, 6' WIDE, PLACED ON PREPARED SUBGRADE.
- CONCRETE CURB AND GUTTER PER PLAN. SEE CITY PLATE No. STR-1.

C CURVE DATA (150TH LANE)	
PC = 0+00.00	PC = 2+37.41
PT = 2+37.41	PT = 6+51.98
Δ = 22°40'16"	Δ = 25°00'12"
R = 600.00'	R = 950.00'
T = 120.28'	T = 210.64'
L = 237.4105'	L = 414.5718'

CURB TYPES LEGEND	
	SURMOUNTABLE CONCRETE CURB & GUTTER
	B618 CONCRETE CURB & GUTTER
	B612 CONCRETE CURB & GUTTER (TIP OUT)
	TC 98.76 DENOTES TOP OF CURB ELEVATION FOR THE TYPE OF CURB SHOWN.
	P DENOTES PEDESTRIAN RAMP. (SEE DETAIL)
	V DENOTES CONCRETE VALLEY GUTTER. (SEE DETAIL)



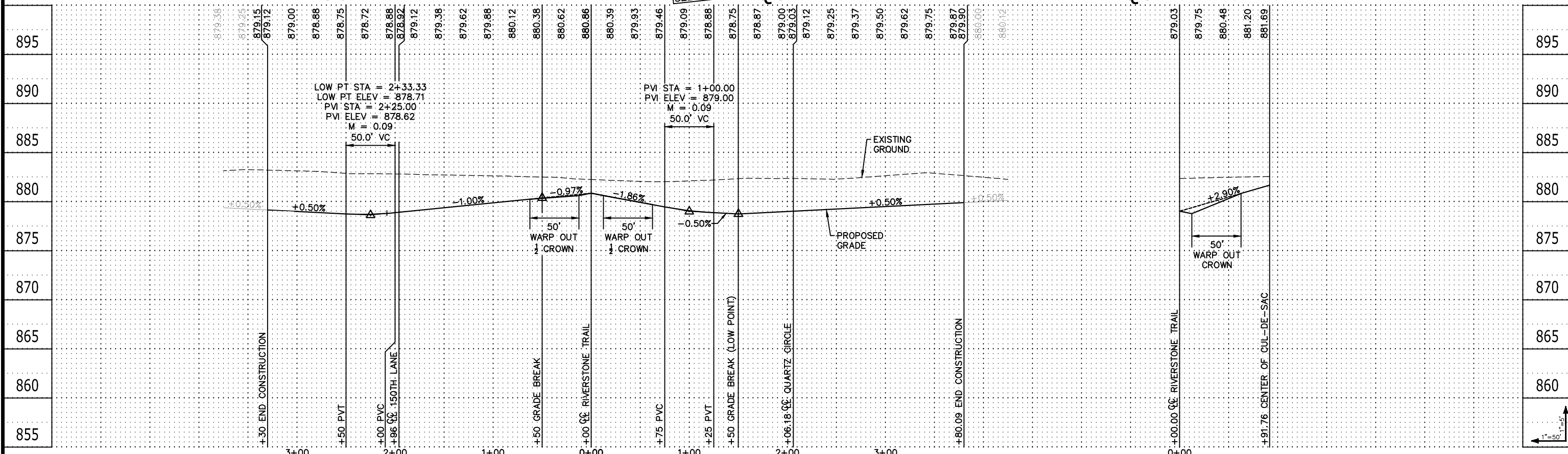
C CURVE DATA (QUARTZ DRIVE)	
PC = 1+37.46	PT = 4+23.69
Δ = 65°36'00"	R = 250.00'
T = 161.11'	L = 286.2340'



150TH LANE

QUARTZ DRIVE

QUARTZ CIRCLE



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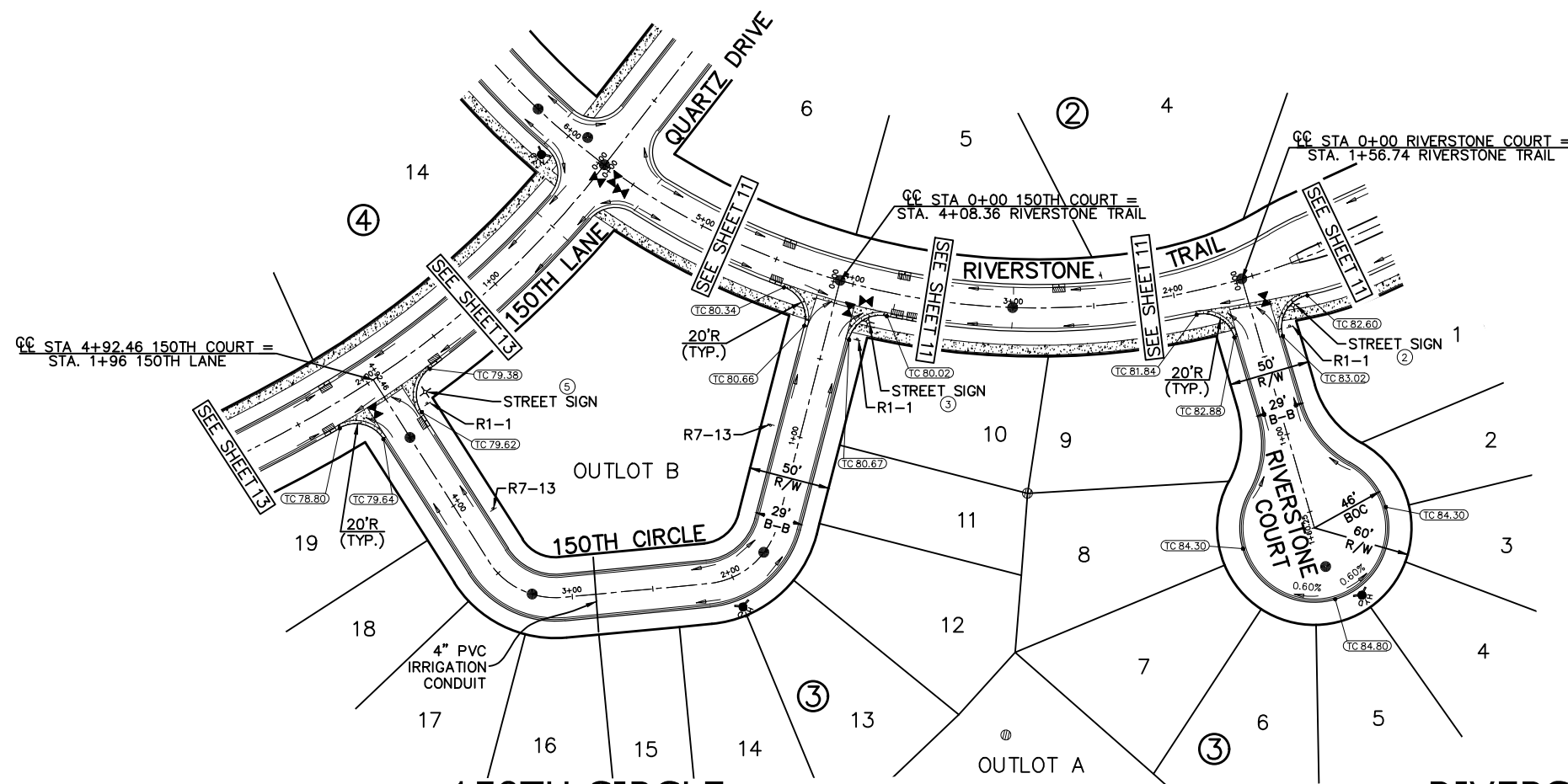
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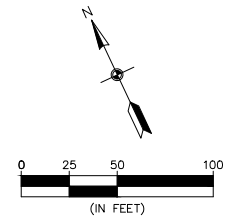
RIVERSTONE 1ST ADDITION
Ramsey, Minnesota

STREET CONSTRUCTION



C CURVE DATA (150TH CIRCLE)	
PC = 1+55.65	PC = 3+05.76
PT = 2+15.69	PT = 3+59.57
Δ = 70°12'17"	Δ = 062°55'43"
R = 49.00'	R = 49.00'
T = 34.44'	T = 29.99'
L = 60.0398'	L = 53.8173'

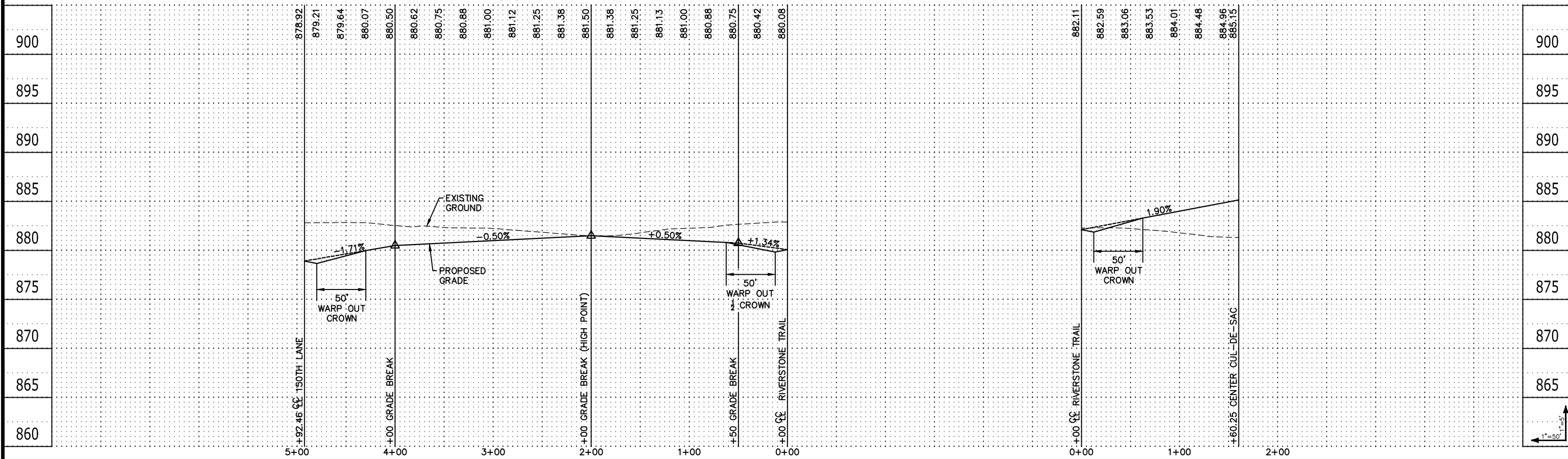
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	SURMOUNTABLE CONCRETE CURB & GUTTER
	B618 CONCRETE CURB & GUTTER
	B612 CONCRETE CURB & GUTTER (TIP OUT)
	TC 98.76 DENOTES TOP OF CURB ELEVATION FOR THE TYPE OF CURB SHOWN.
	P DENOTES PEDESTRIAN RAMP. (SEE DETAIL)
	V DENOTES CONCRETE VALLEY GUTTER. (SEE DETAIL)



BENCHMARK	
1.	Anoka County Benchmark No. 3076 Elev. = 890.186 (NAVD 88)
2.	Anoka County Benchmark No. 2078 Elev. = 899.499 (NAVD 88)

150TH CIRCLE

RIVERSTONE COURT



3890 Pheasant Ridge DR. NE,
Suite 100
Blaine, MN 55449
Phone: (763) 489-7900
Fax: (763) 489-7959
www.carlsonmccain.com

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
Print Name: Brian J. Krystofiak, P.E.
Signature: *Brian J. Krystofiak*
Date: 6/9/17 License #: 25063

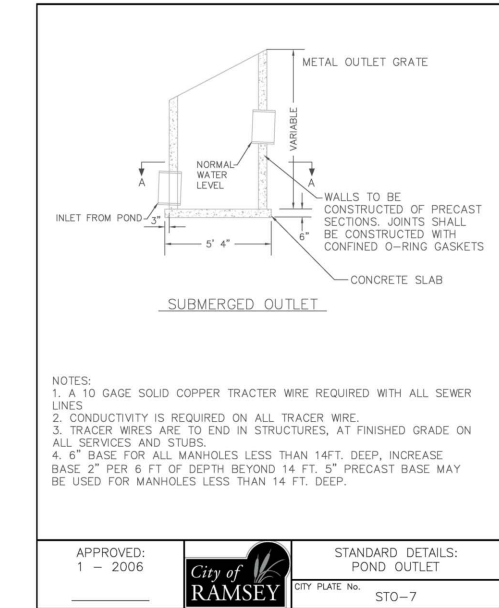
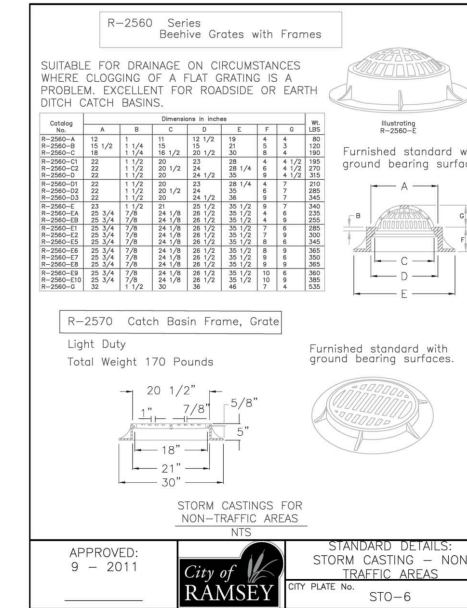
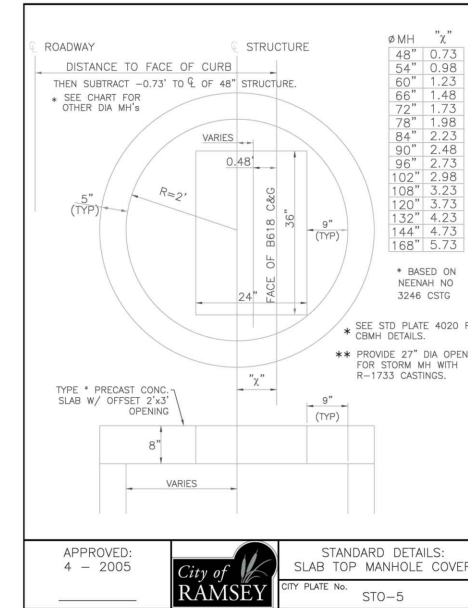
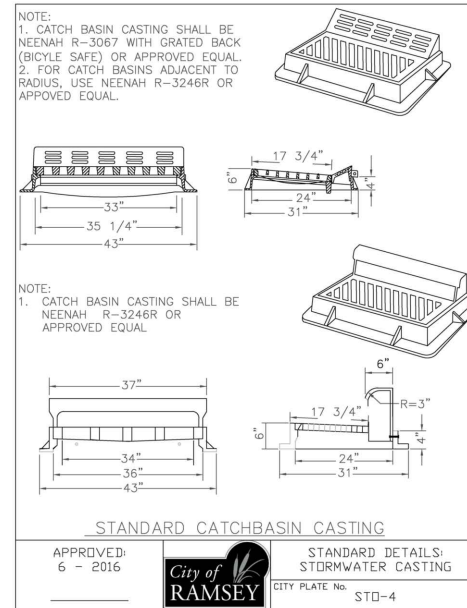
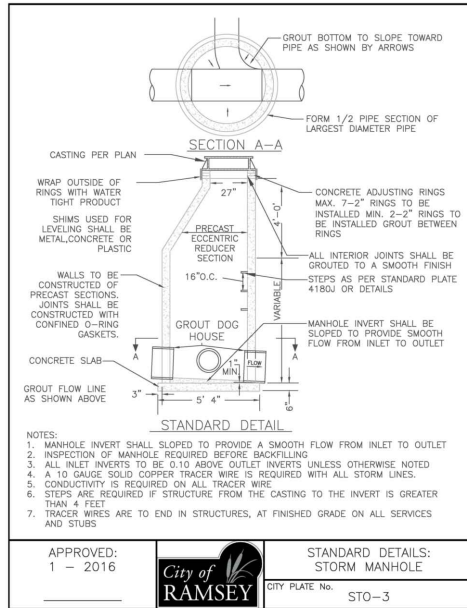
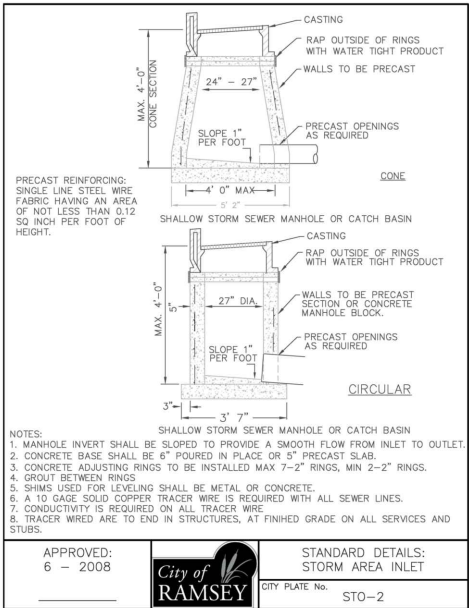
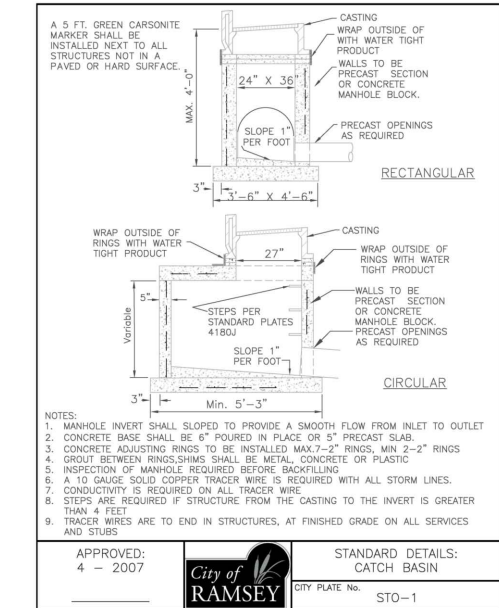
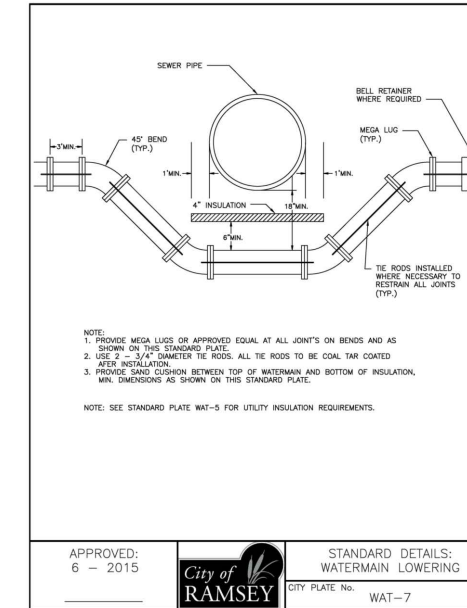
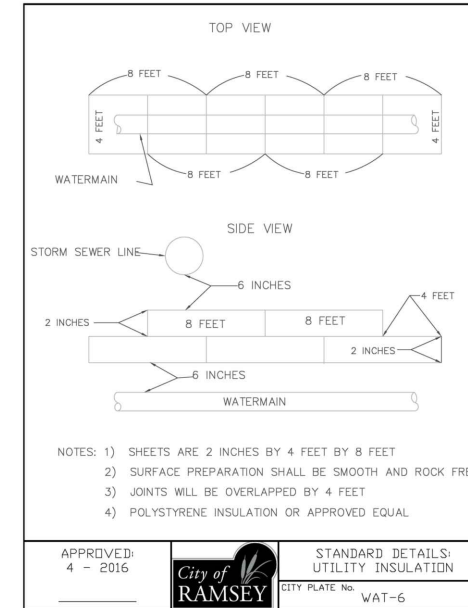
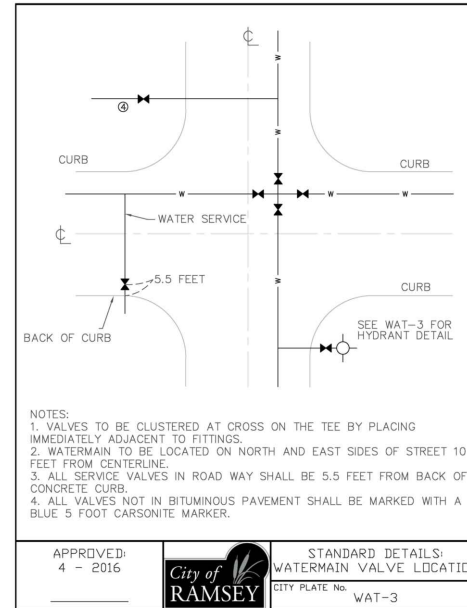
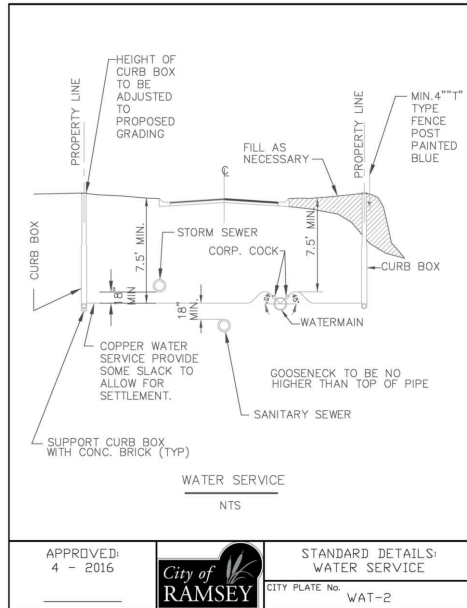
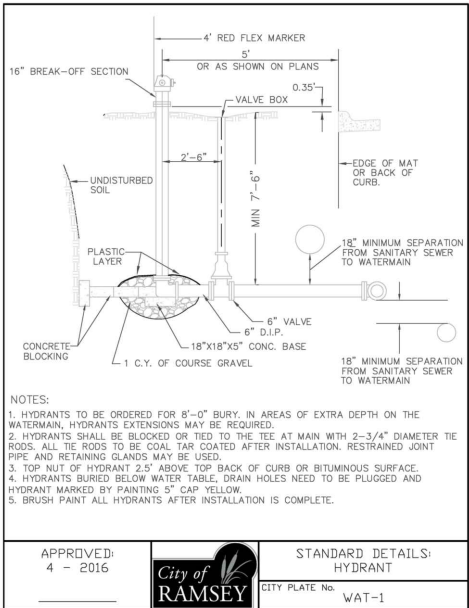
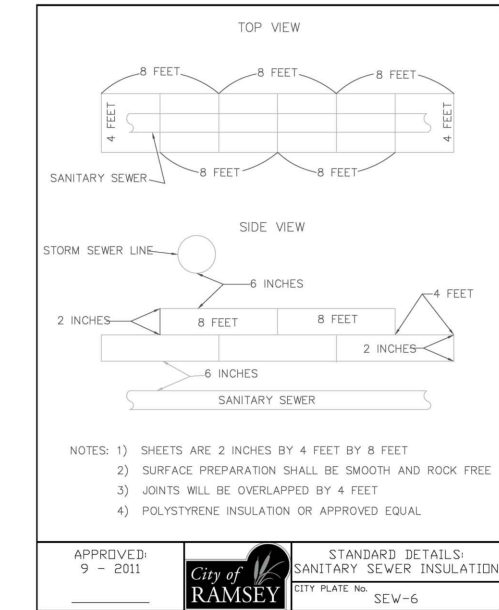
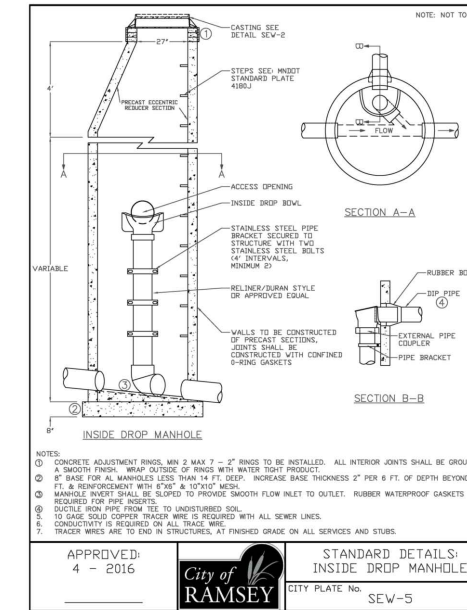
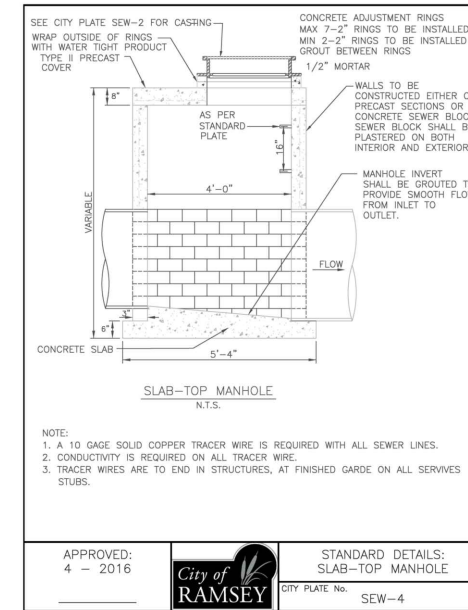
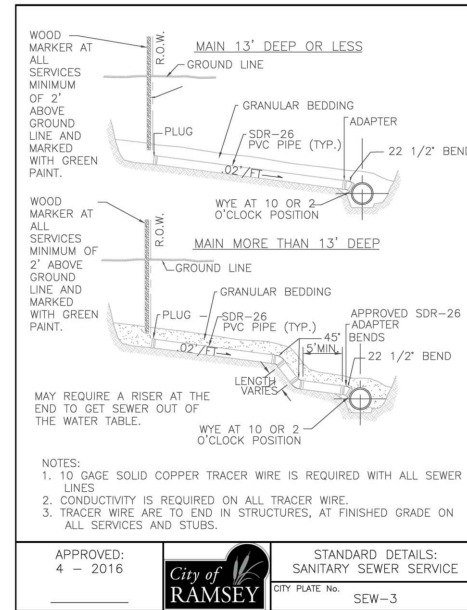
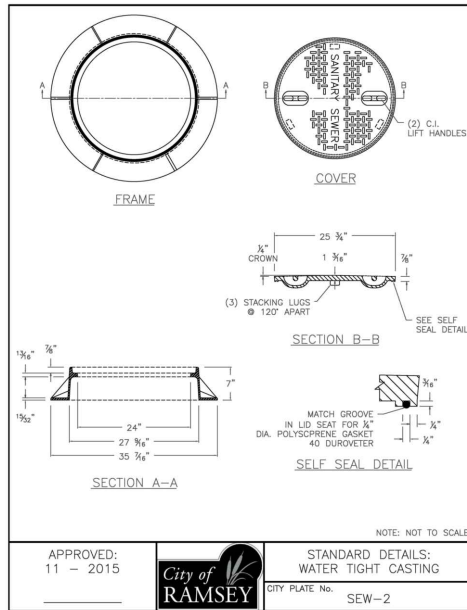
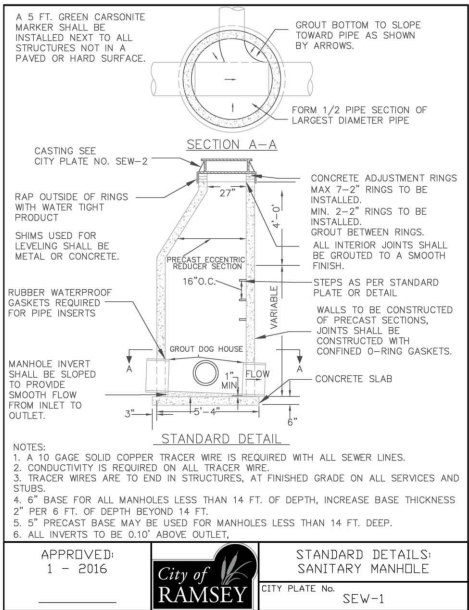
Drawn: KRO
Designed: BJK
Date: 6/9/17

Revisions:
1. 6/23/17 Per City Comments

RIVERSTONE DEVELOPMENT, LLC.
14015 Sunfish Lake Blvd., Suite 400
Ramsey, MN 55303

RIVERSTONE 1ST ADDITION
Ramsey, Minnesota

STREET CONSTRUCTION



Carlson McCain
 • environmental
 • engineering
 • surveying
 3890 Pheasant Ridge DR. NE,
 Suite 100
 Blaine, MN 55449
 Phone: (763) 489-7900
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 1. 6/23/17 Per City Comments

RIVERSTONE DEVELOPMENT, LLC.
 14015 Sunfish Lake Blvd., Suite 400
 Ramsey, MN 55303

RIVERSTONE 1ST ADDITION
 Ramsey, Minnesota

DETAILS
 15 of 17

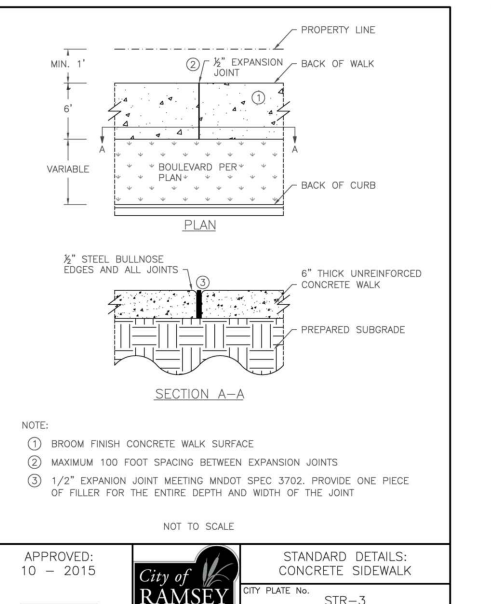
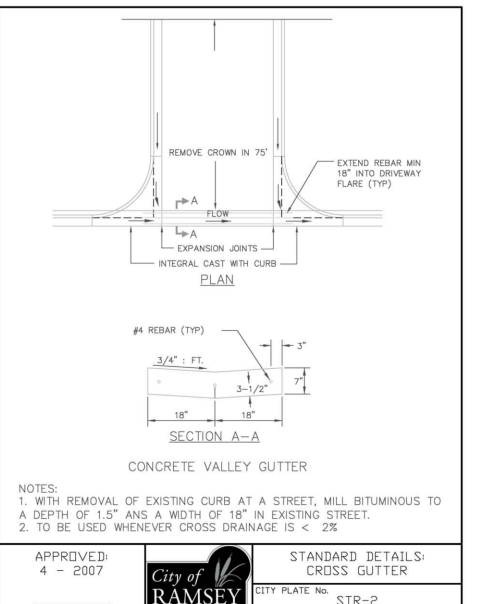
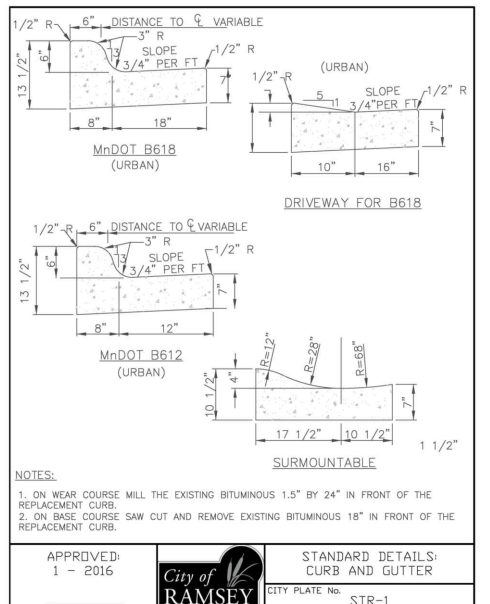
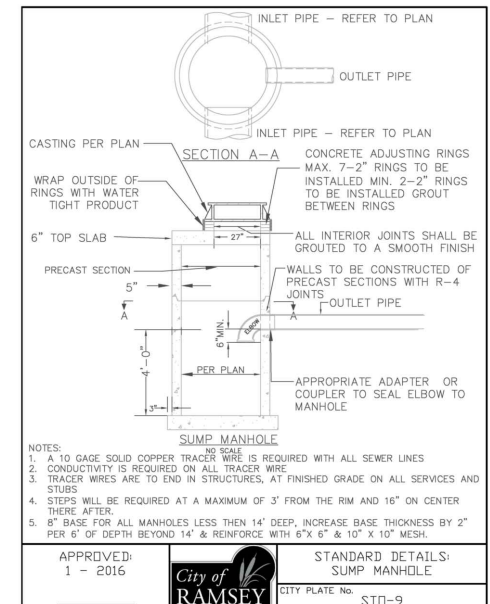
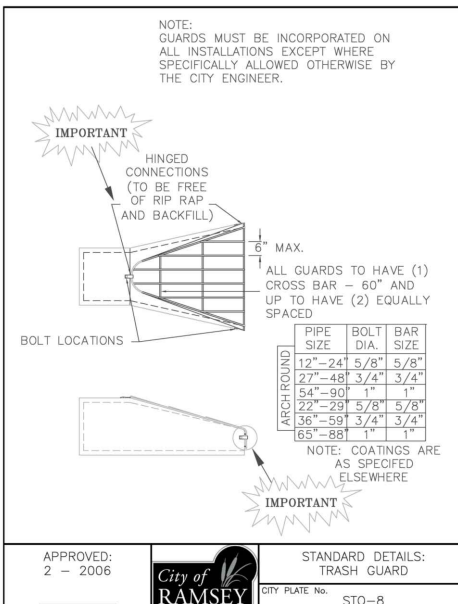


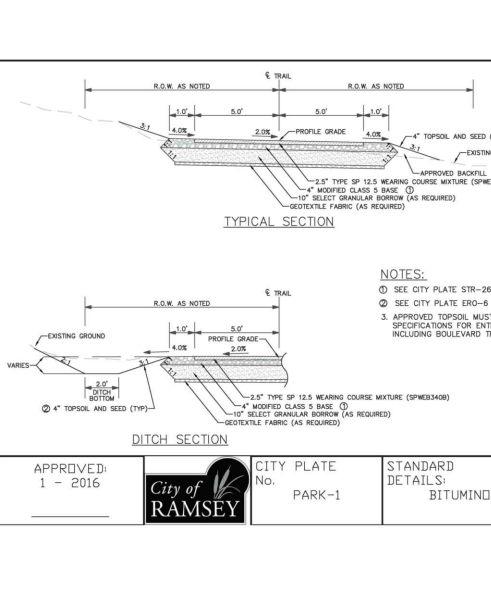
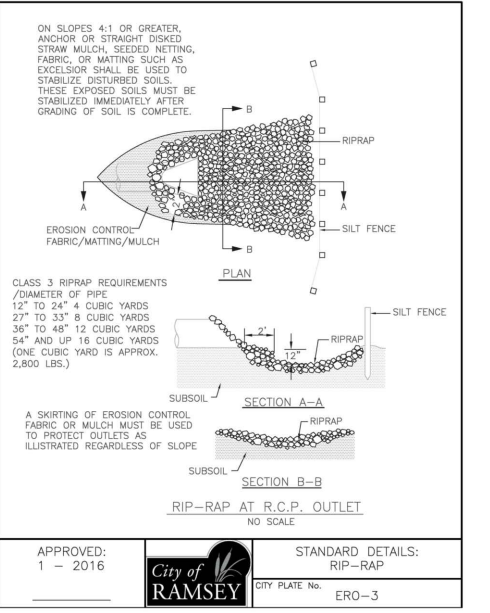
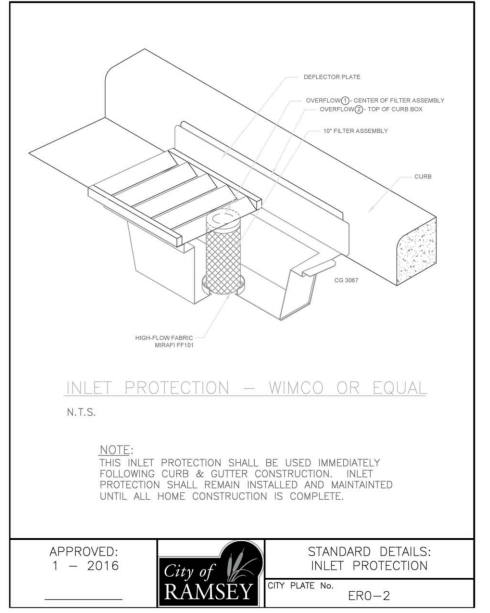
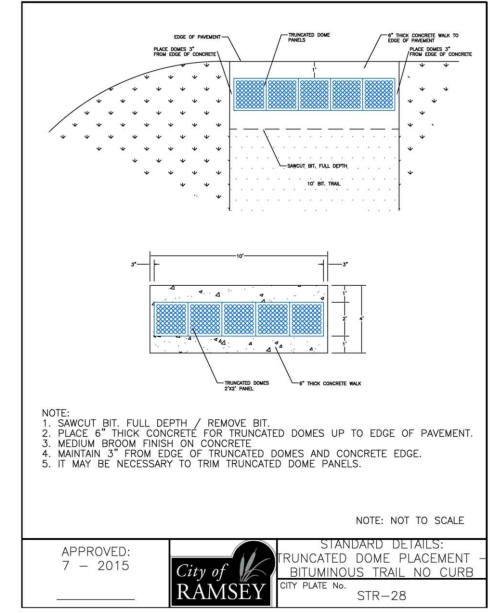
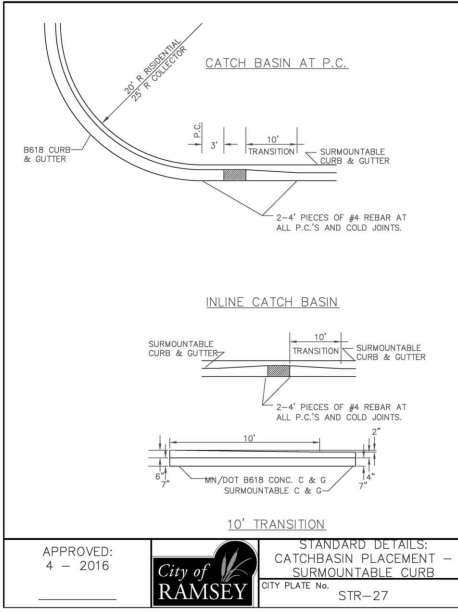
TABLE A
MODIFIED CLASS 5
SPECIFICATIONS

% PASSING

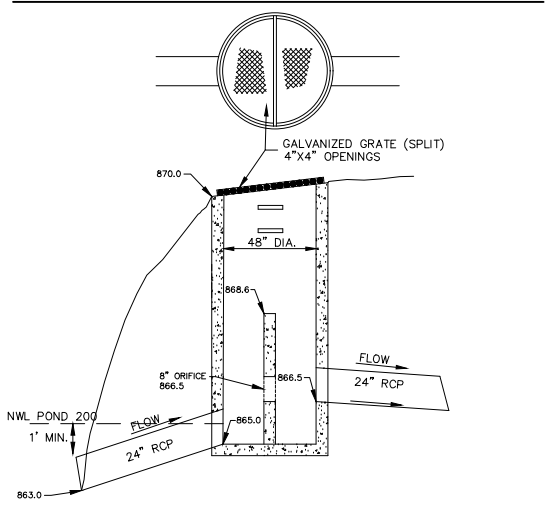
1"	100
3/4"	90 - 100
3/8"	50 - 80
No.4	35 - 70
No.10	20 - 60
No.40	10 - 35
No.200	5 - 10

NOTE: 1. THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
2. IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
3. IN THE EVENT THAT RECYCLED MATERIAL IS USED IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

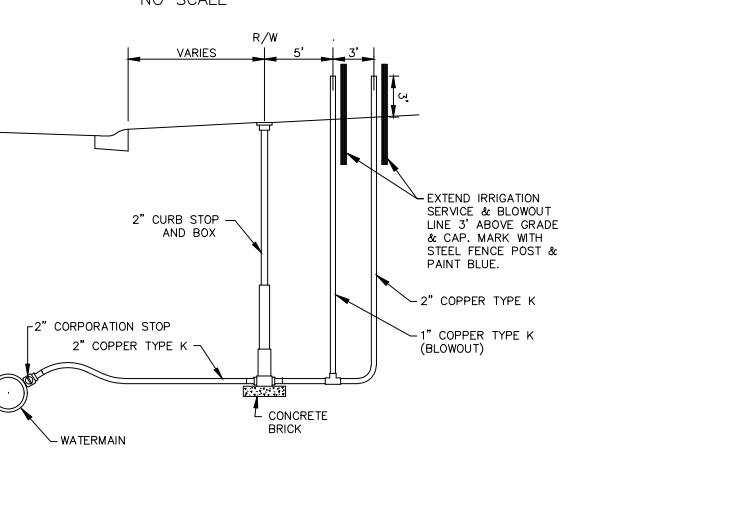
APPROVED: 2 - 2003
City of Ramsey
STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATIONS
CITY PLATE No. STR-26

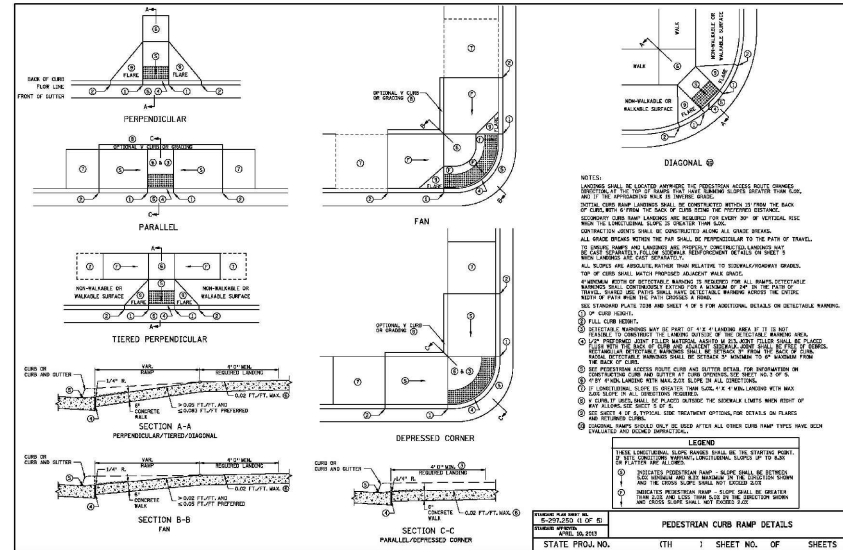


OUTLET CONTROL STRUCTURE POND 200

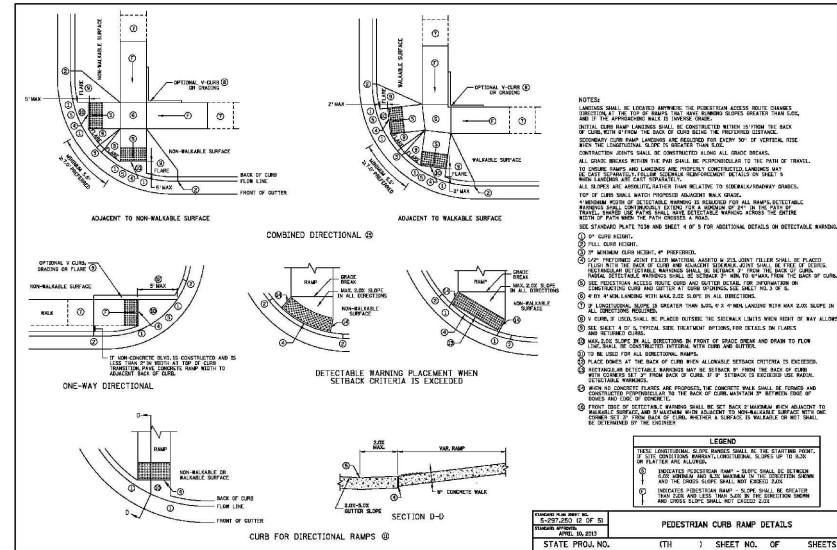


TEMPORARY IRRIGATION SERVICE

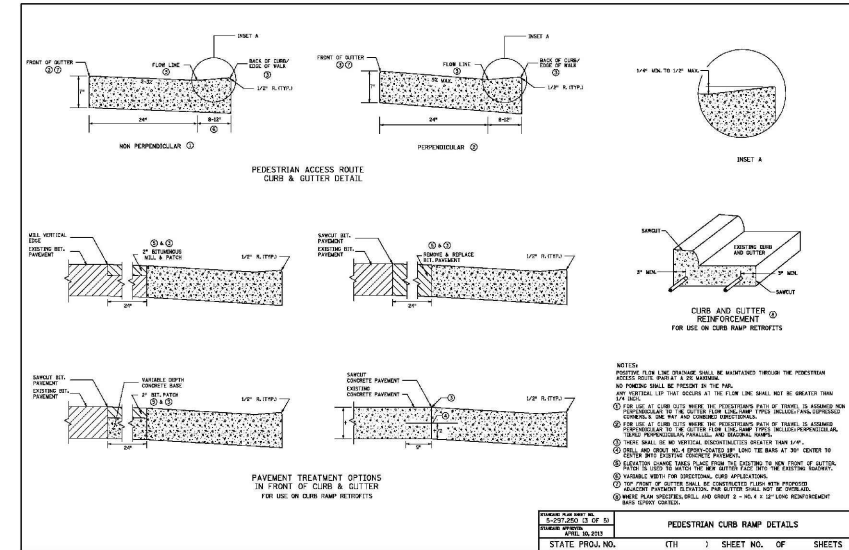




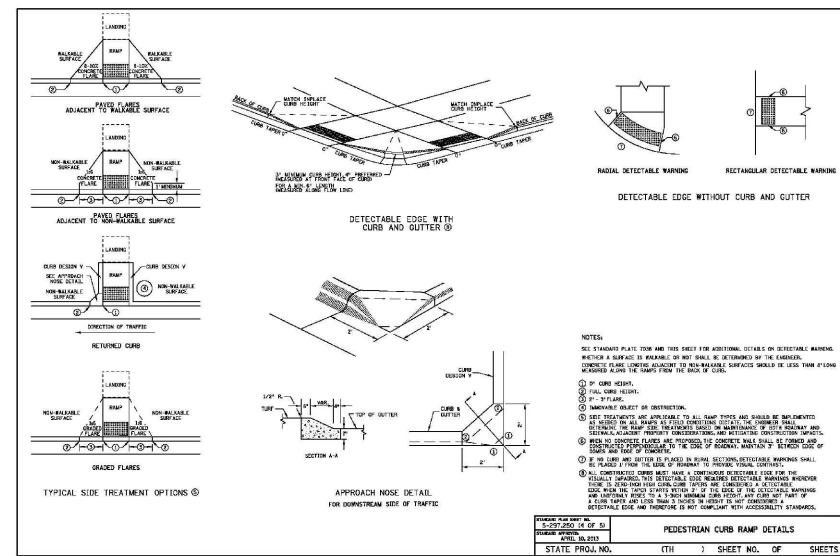
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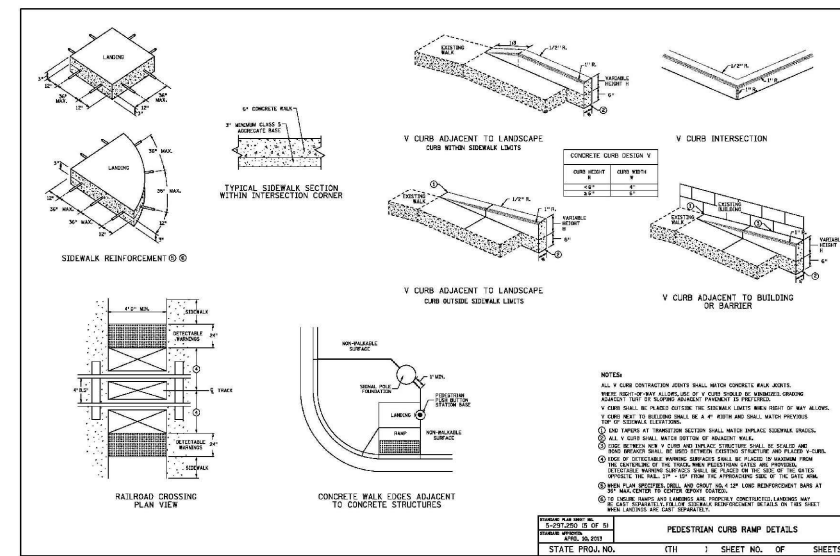
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APRIL 10, 2013 5-297.250 (3 OF 5)



APRIL 10, 2013 5-297.250 (4 OF 5)



APRIL 10, 2013 5-297.250 (5 OF 5)