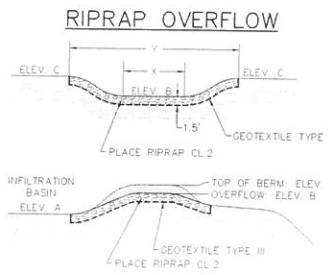
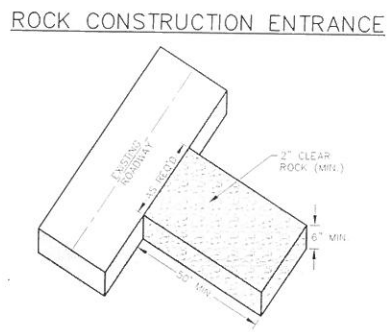


BASIN	FINISHED GRADE	SUBCUT ELEVATION
101	915.0	912.2
102	920.0	915.0
104	915.0	FIELD VERIFY
105	933.0	FIELD VERIFY
106	947.0	944.0
108	943.0	936.0
109	940.8	*938.8
110	939.0	*937.0
113	938.5	935.5
115	938.0	935.0
118	943.5	941.5
119	942.5	940.5
120	929.0	927.0
121	921.0	919.0
124	915.5	913.5
125	923.5	921.5
126	923.0	921.0

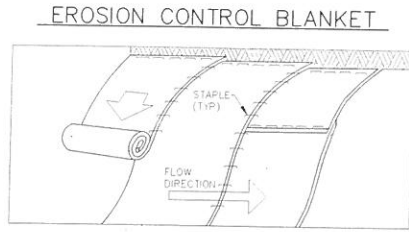
BASIN 109 AND 110 TO BE SUBCUT TWO FEET AND BACKFILLED WITH SAND/TOPSOIL MIX. SUBSOIL WILL NOT BE GRANULAR.



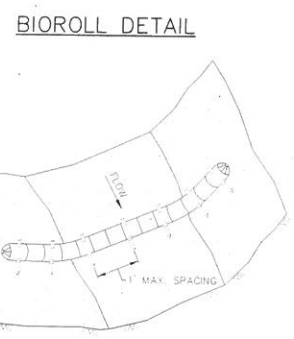
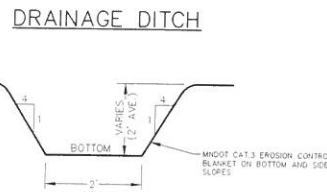
BASIN	ELEVATION A	ELEVATION B	ELEVATION C	DISTANCE X	DISTANCE Y
104	935.0	936.0	937.2	5.0	15.0
105	933.0	934.0	934.9	5.0	15.0
106	947.0	948.0	949.6	5.0	15.0
110	940.8	939.24	940.8	10.0	15.0
119	942.5	943.5	943.4	5.0	15.0
120	919.0	920.0	921.2	20.0	15.0
122	921.0	922.0	921.7	10.0	15.0
124	915.5	916.0	917.0	5.0	15.0
126	923.0	924.0	924.9	5.0	15.0



TURF ESTABLISHMENT
 TURF ESTABLISHMENT SHALL APPLY TO ALL DISTURBED AREAS AND SHALL BE ACCORDING TO MMDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION (LATEST EDITION) EXCEPT AS MODIFIED BELOW.
 TURF ESTABLISHMENT SHALL OCCUR AS SOON AS POSSIBLE BUT IN NO CASE MORE THAN 7 DAYS.
 SEED: MMDOT MIXTURE 25-141 AT 60 POUNDS PER ACRE.
 DORMANT SEED: SHALL BE APPLIED AT TWICE THE NORMAL RATE AFTER NOVEMBER 1ST.
 MULCH: TYPE 1 AT 2 TONS PER ACRE (DISK ANCHORED).
 FERTILIZER: TYPE 1 10-10-10 AT 200 POUNDS PER ACRE.

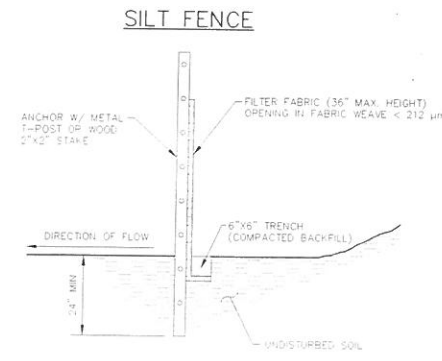


NOTES
 1. MMDOT CATEGORY 1 EROSION CONTROL BLANKET SHALL BE INSTALLED IN ALL ROADWAY DRAINAGE DITCHES AND ON ANY SLOPES STEEPER THAN 4:1.
 2. PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND/OR SEED.
 3. BEGIN AT THE TOP OF THE SLOPE (OR CHANNEL) BY ANCHORING THE BLANKET IN A 6\"/>



NOTES
 1. ENDS OF BIOROLL SHALL BE A MINIMUM OF 18\"/>

RECOMMENDED SPACING BETWEEN DITCH CHECKS	
DITCH GRADE (%)	SPACING (FT.)
2	100
4	75
6	50



NOTES
 1. DIG A 6\"/>

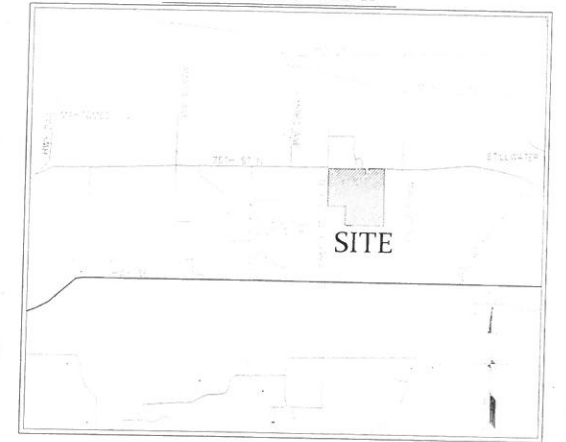
1. 3\"/>

THE FARMS OF GRANT

STORM SEWER AND STREET CONSTRUCTION PLANS

GRANT, MINNESOTA

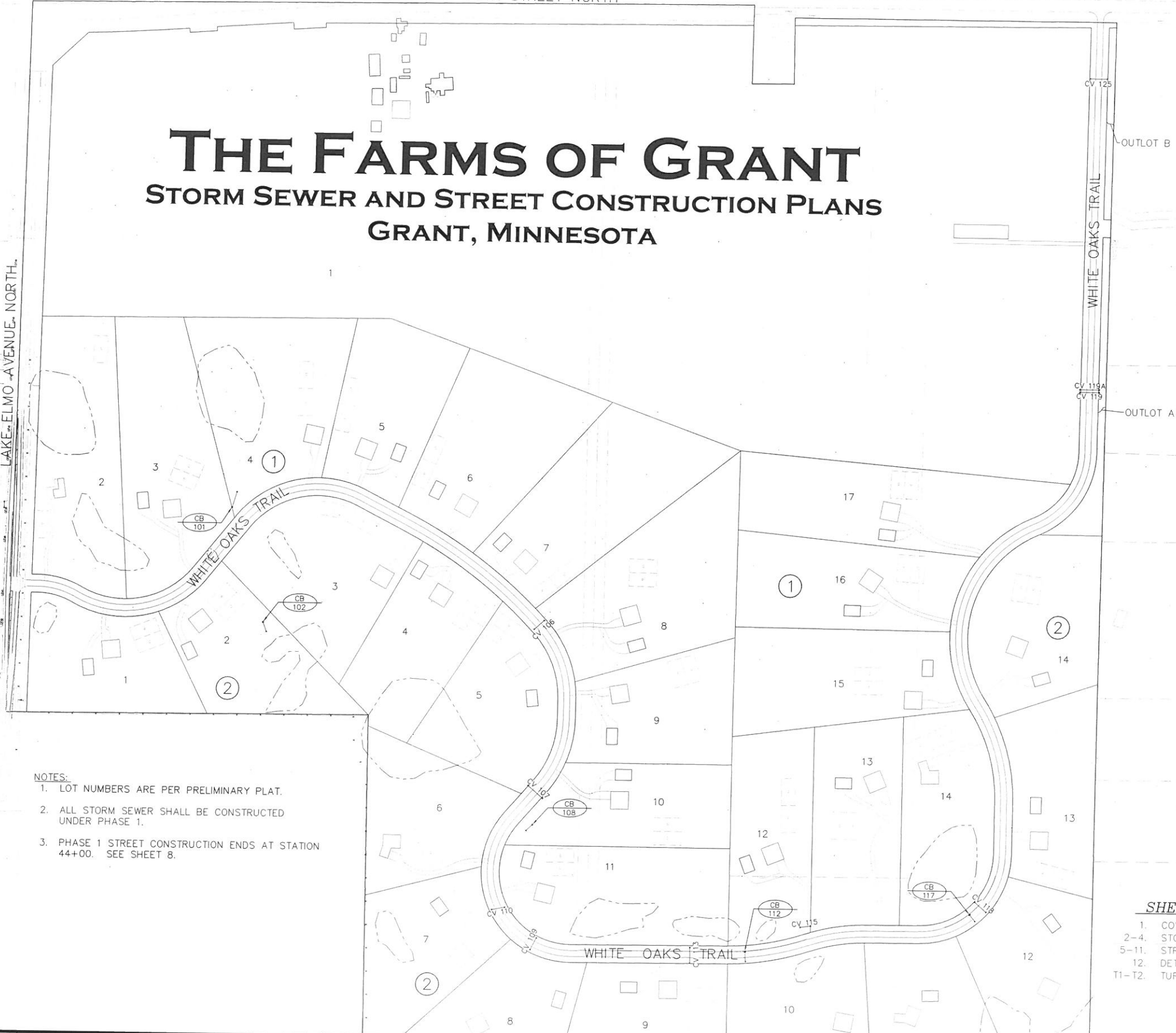
VICINITY MAP



NOT TO SCALE

LAKE ELMO AVENUE NORTH

75TH STREET NORTH



- NOTES:**
1. LOT NUMBERS ARE PER PRELIMINARY PLAT.
 2. ALL STORM SEWER SHALL BE CONSTRUCTED UNDER PHASE 1.
 3. PHASE 1 STREET CONSTRUCTION ENDS AT STATION 44+00. SEE SHEET 8.

BENCHMARKS	
1.	Minnesota Department of Transportation Geodetic Monument Station No. 55671, MnDot Name ALEX, ELEVATION: 944.84 (NAVD 88)
2.	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name AAM007 MNDT, ELEVATION: 1008.95 (NAVD 88)

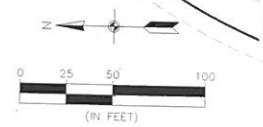
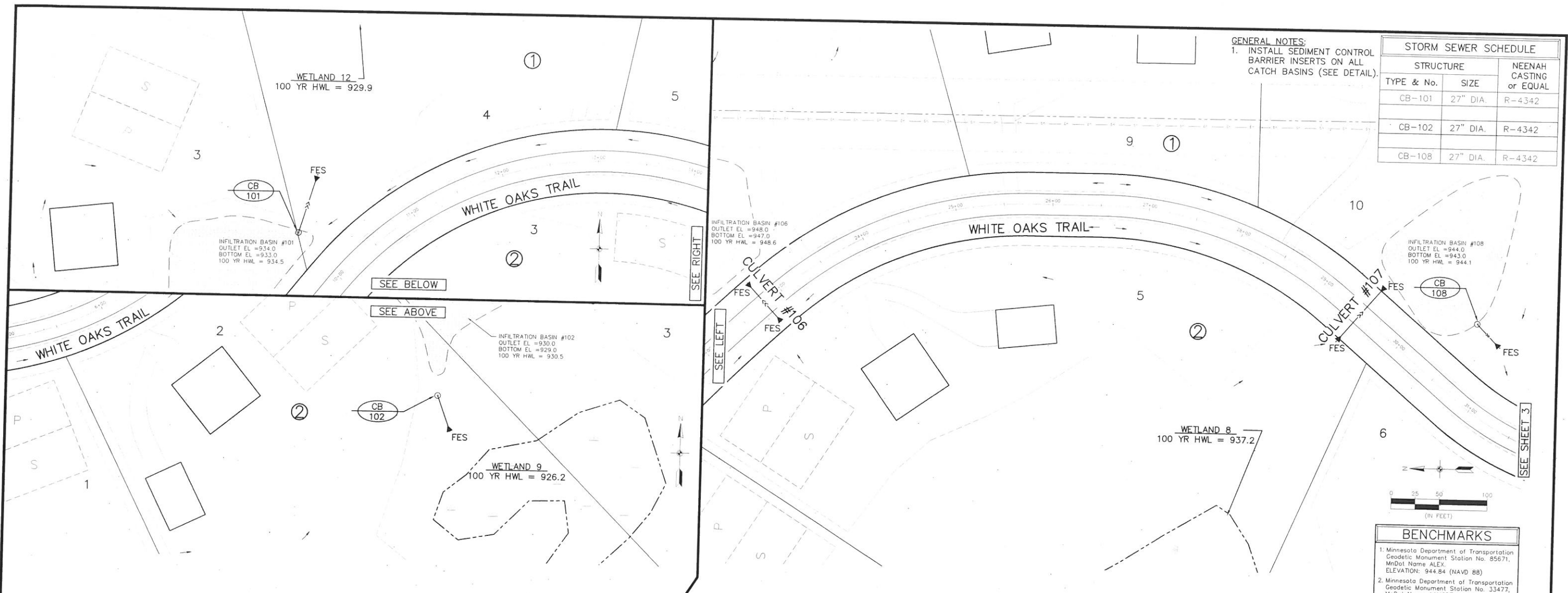
- SHEET INDEX**
- 1. COVER
 - 2-4. STORM SEWER
 - 5-11. STREET CONSTRUCTION
 - 12. DETAILS
 - T1-T2. TURN LANE

CALL BEFORE YOU DIG

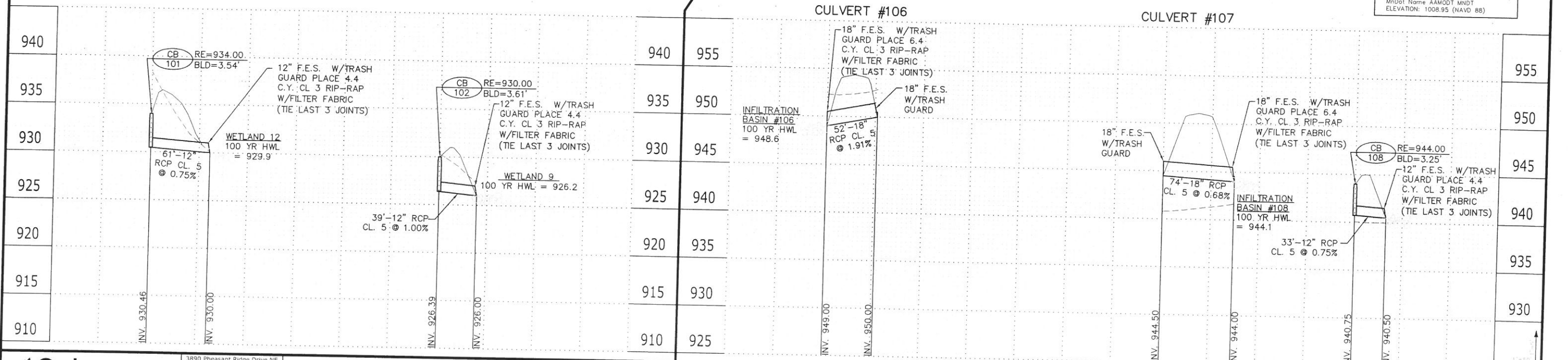
Know what's below.
Call before you dig.

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

STORM SEWER SCHEDULE		
STRUCTURE TYPE & No.	SIZE	NEENAH CASTING or EQUAL
CB-101	27" DIA.	R-4342
CB-102	27" DIA.	R-4342
CB-108	27" DIA.	R-4342



BENCHMARKS	
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 Signature: [Signature]
 Date: 1/26/18 License #: 45889

Drawn: JJO
 Designed: JTR
 Date: 1/26/18

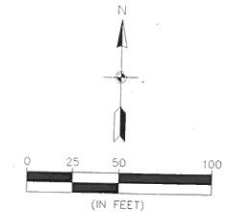
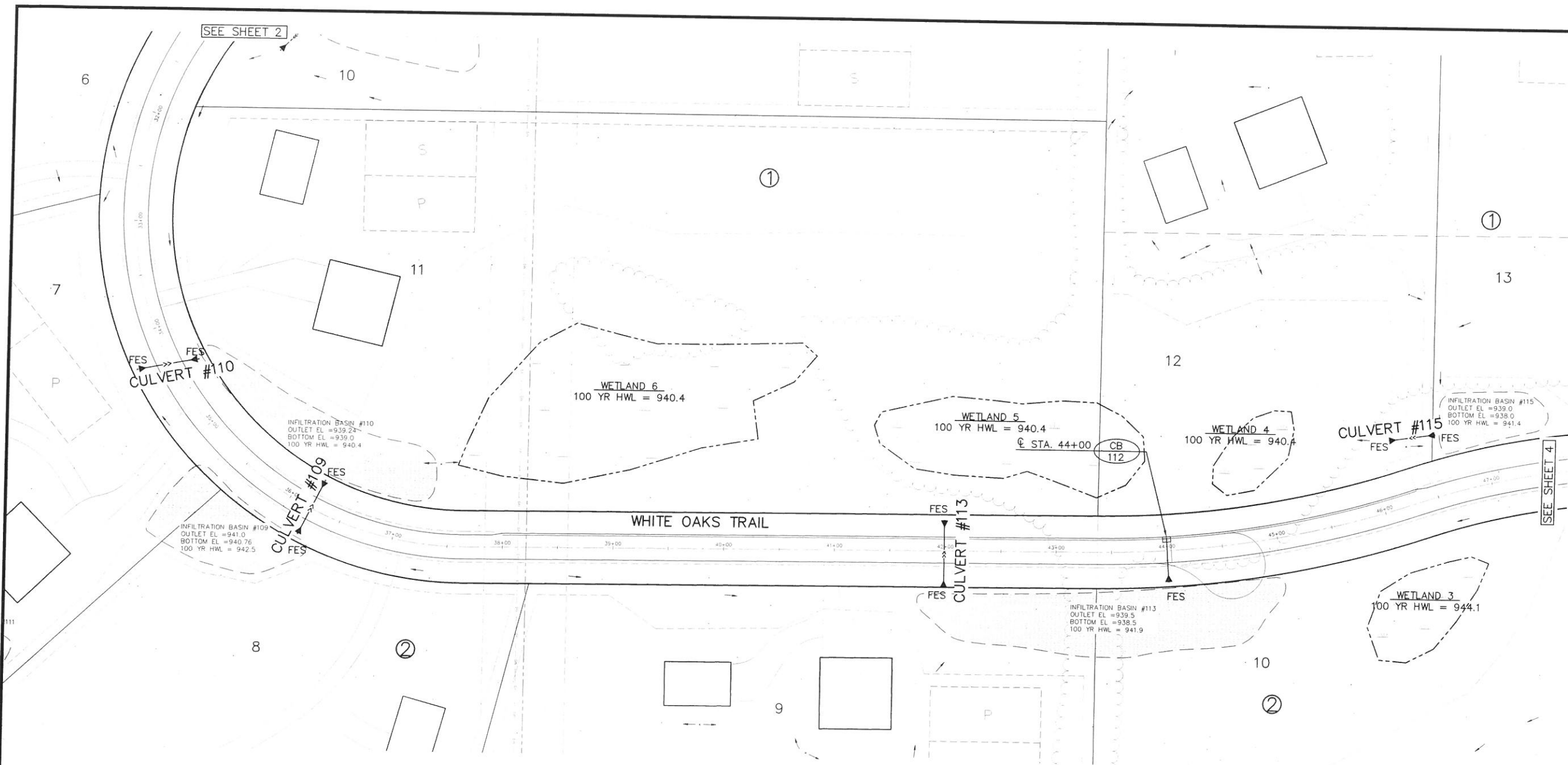
STREETCAR HOLDINGS, LLC
 4084 Oakbrooke Alcove
 Eagan, MN 55112

THE FARMS OF GRANT
 City of Grant, MN

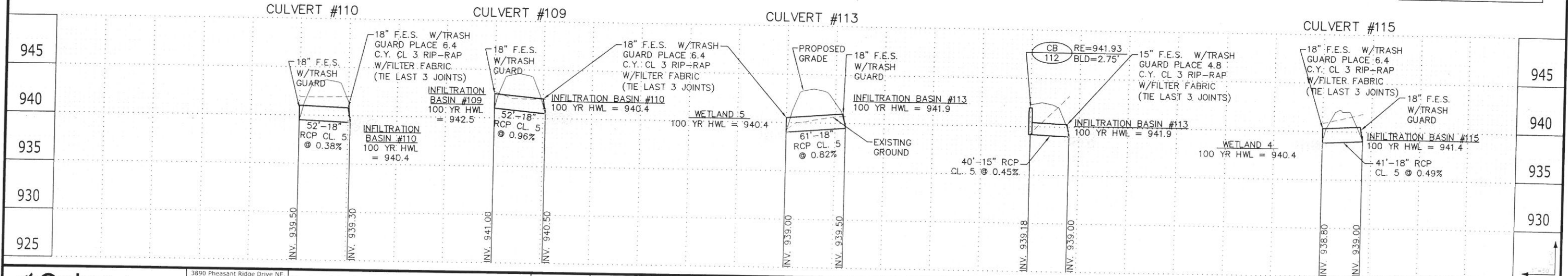
STORM SEWER
 2 of 12

STORM SEWER SCHEDULE		
STRUCTURE	NEENAH CASTING or EQUAL	
TYPE & No.	SIZE	
CB-112	24" X 36"	R-3067-VB

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



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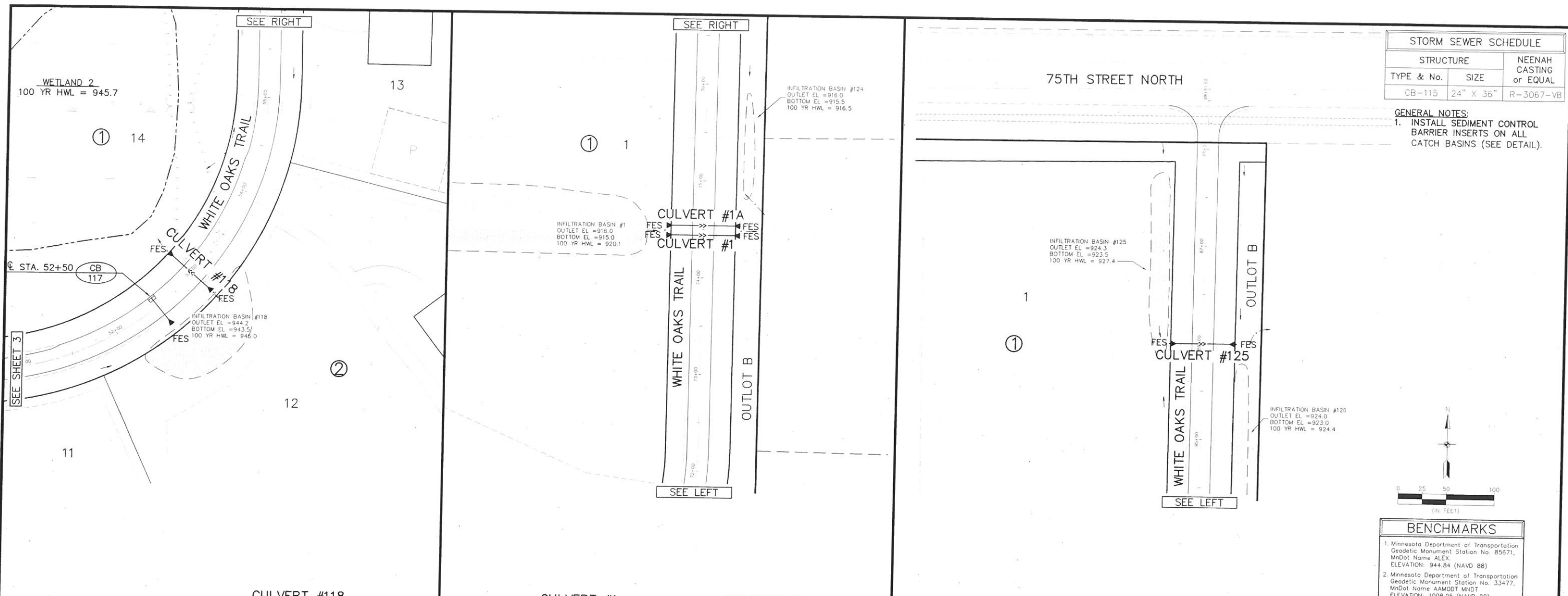
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Revisions:
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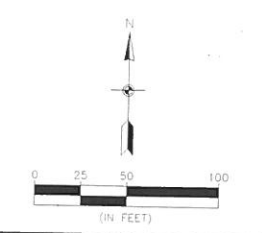
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 City of Grant, MN

STORM SEWER



STORM SEWER SCHEDULE		
STRUCTURE	NEENAH CASTING or EQUAL	
TYPE & No.	SIZE	
CB-115	24" X 36"	R-3067-VB

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



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CULVERT #118		CULVERT #1		CULVERT #1A		CULVERT #125	
955		955	930				930
950		950	925				925
945		945	920				920
940		940	915				915
935		935	910				910
930		930	905				905
925		925	900				900

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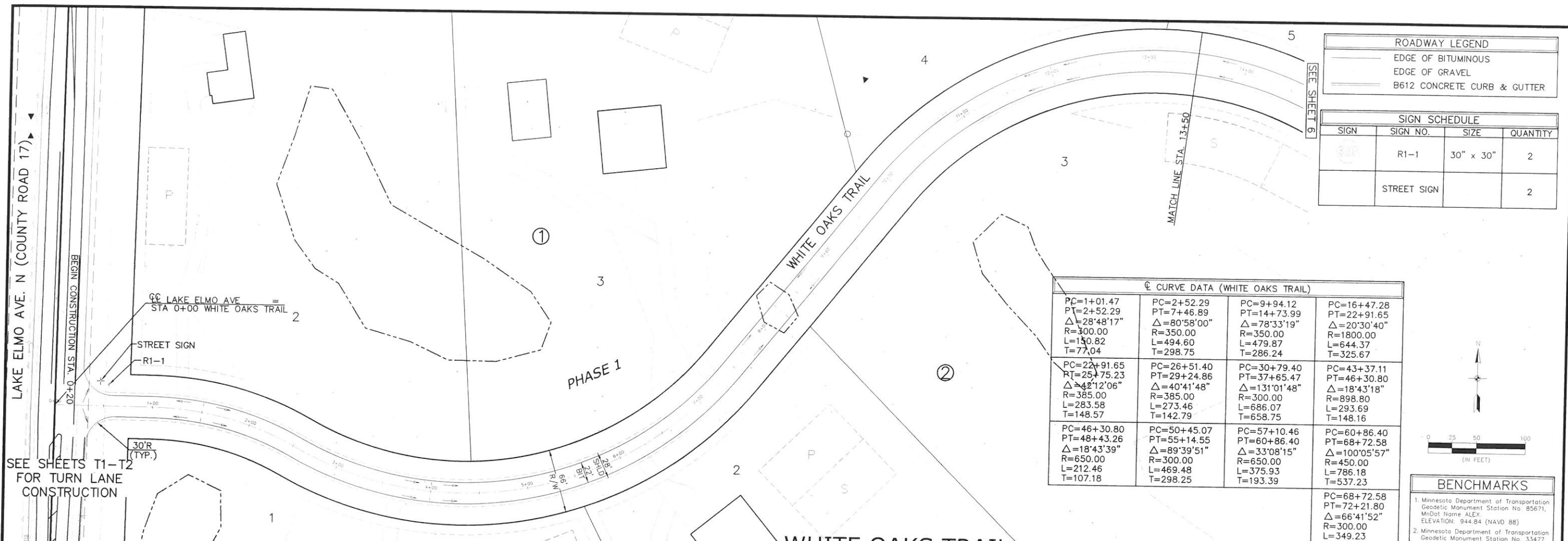
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City of Grant, MN

STORM SEWER

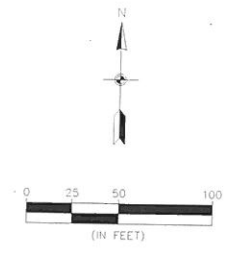
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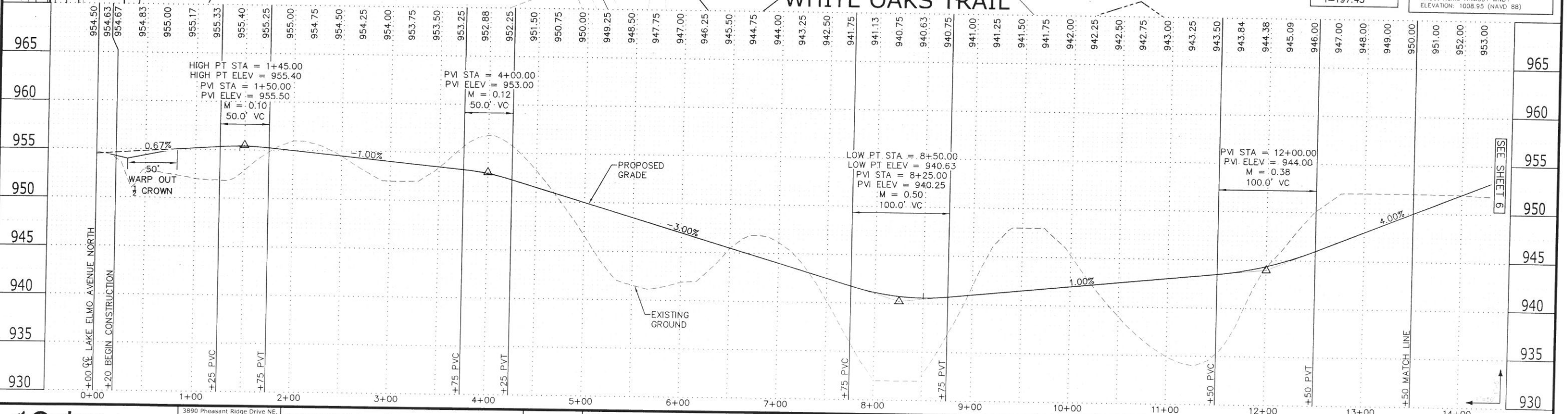
ROADWAY LEGEND			
	EDGE OF BITUMINOUS		
	EDGE OF GRAVEL		
	B612 CONCRETE CURB & GUTTER		

SIGN SCHEDULE			
SIGN	SIGN NO.	SIZE	QUANTITY
	R1-1	30" x 30"	2
	STREET SIGN		2

C CURVE DATA (WHITE OAKS TRAIL)			
PC=1+01.47 PT=2+52.29 Δ=28°48'17" R=300.00 L=150.82 T=77.04	PC=2+52.29 PT=7+46.89 Δ=80°58'00" R=350.00 L=494.60 T=298.75	PC=9+94.12 PT=14+73.99 Δ=78°33'19" R=350.00 L=479.87 T=286.24	PC=16+47.28 PT=22+91.65 Δ=20°30'40" R=1800.00 L=644.37 T=325.67
PC=22+91.65 PT=25+75.23 Δ=42°12'06" R=385.00 L=283.58 T=148.57	PC=26+51.40 PT=29+24.86 Δ=40°41'48" R=385.00 L=273.46 T=142.79	PC=30+79.40 PT=37+65.47 Δ=131°01'48" R=300.00 L=686.07 T=658.75	PC=43+37.11 PT=46+30.80 Δ=18°43'18" R=898.80 L=293.69 T=148.16
PC=46+30.80 PT=48+43.26 Δ=18°43'39" R=650.00 L=212.46 T=107.18	PC=50+45.07 PT=55+14.55 Δ=89°39'51" R=300.00 L=469.48 T=298.25	PC=57+10.46 PT=60+86.40 Δ=33°08'15" R=650.00 L=375.93 T=193.39	PC=60+86.40 PT=68+72.58 Δ=100°05'57" R=450.00 L=786.18 T=537.23
PC=68+72.58 PT=72+21.80 Δ=66°41'52" R=300.00 L=349.23 T=197.43			



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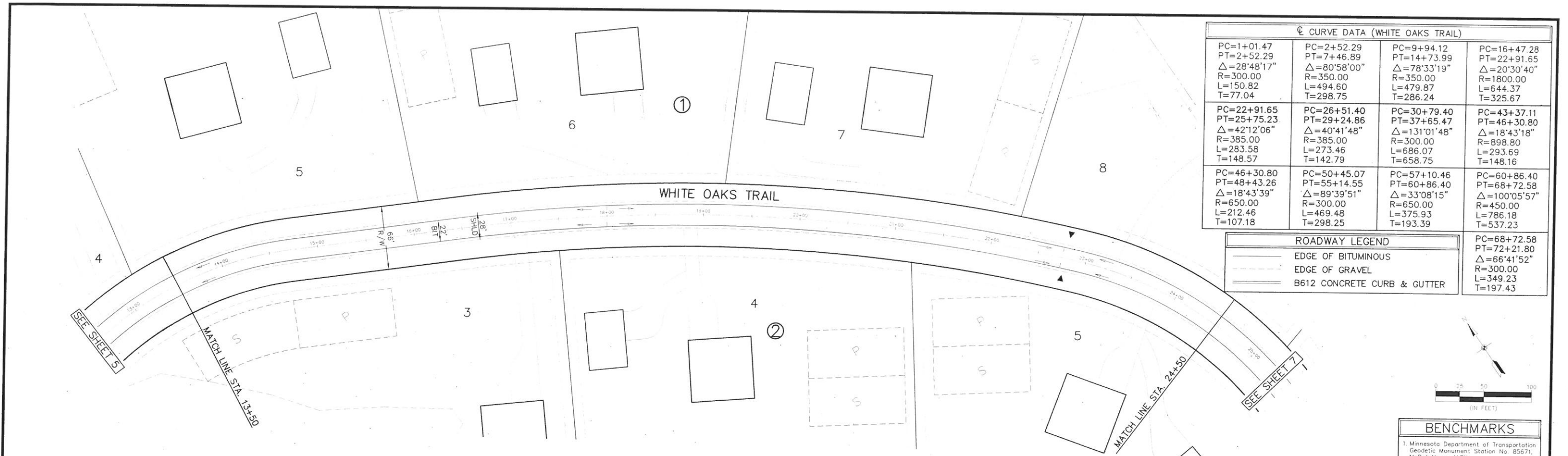
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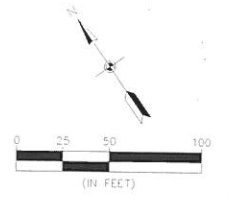
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 City of Grant, MN

STREET CONSTRUCTION



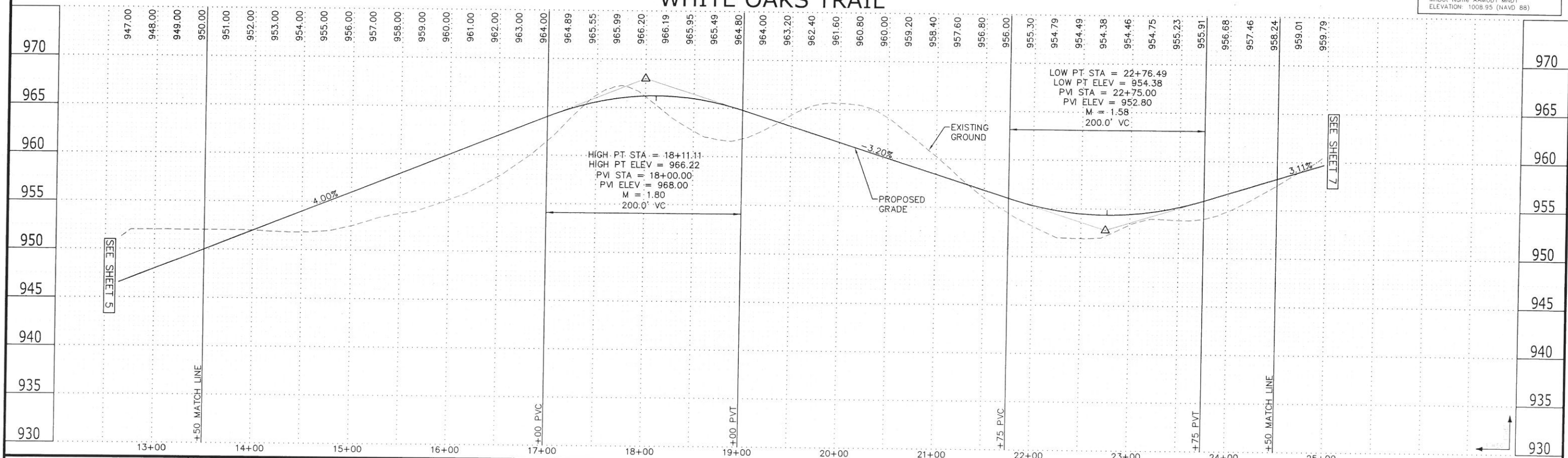
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ROADWAY LEGEND	
	EDGE OF BITUMINOUS
	EDGE OF GRAVEL
	B612 CONCRETE CURB & GUTTER



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WHITE OAKS TRAIL



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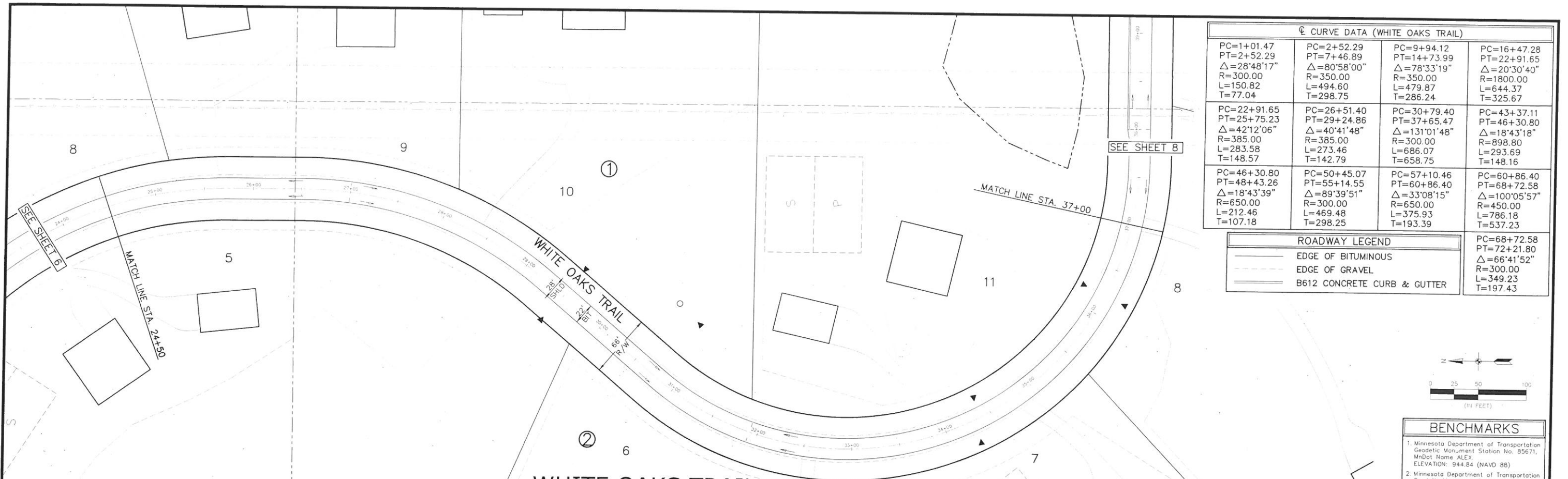
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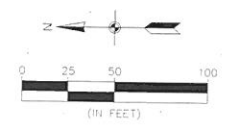
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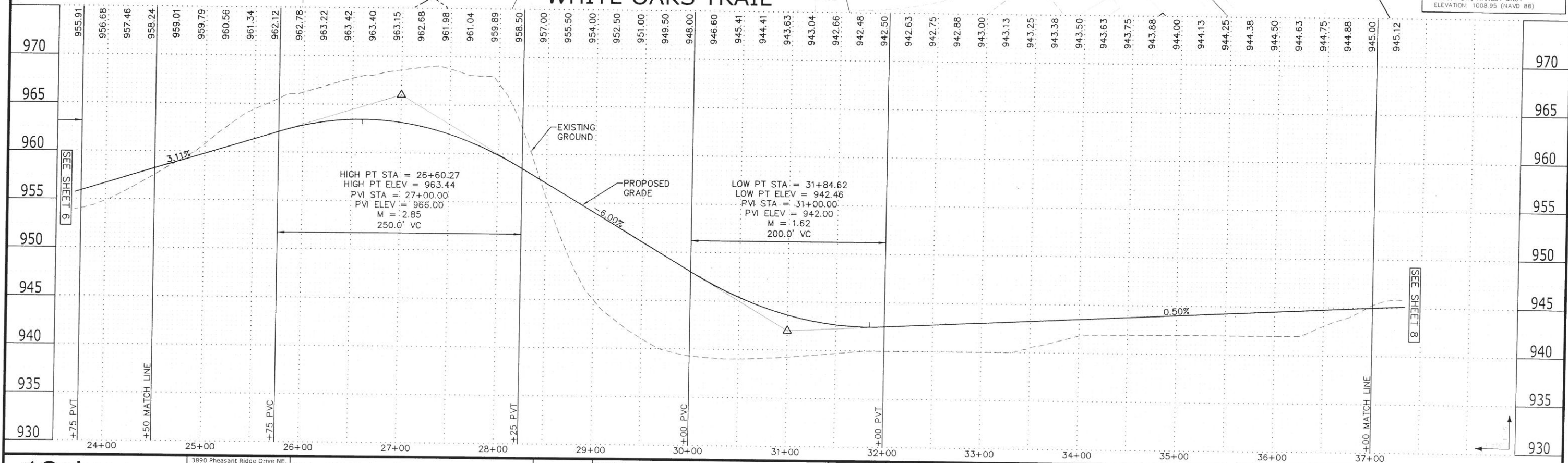
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ROADWAY LEGEND	
	EDGE OF BITUMINOUS
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WHITE OAKS TRAIL



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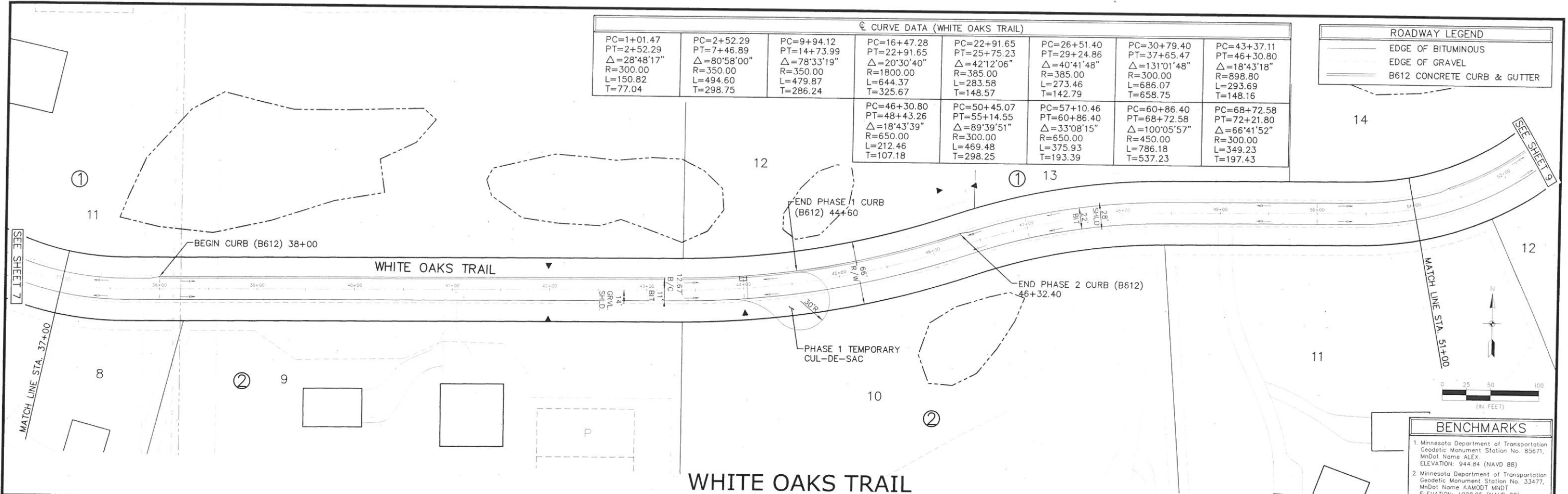
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 City of Grant, MN

STREET CONSTRUCTION

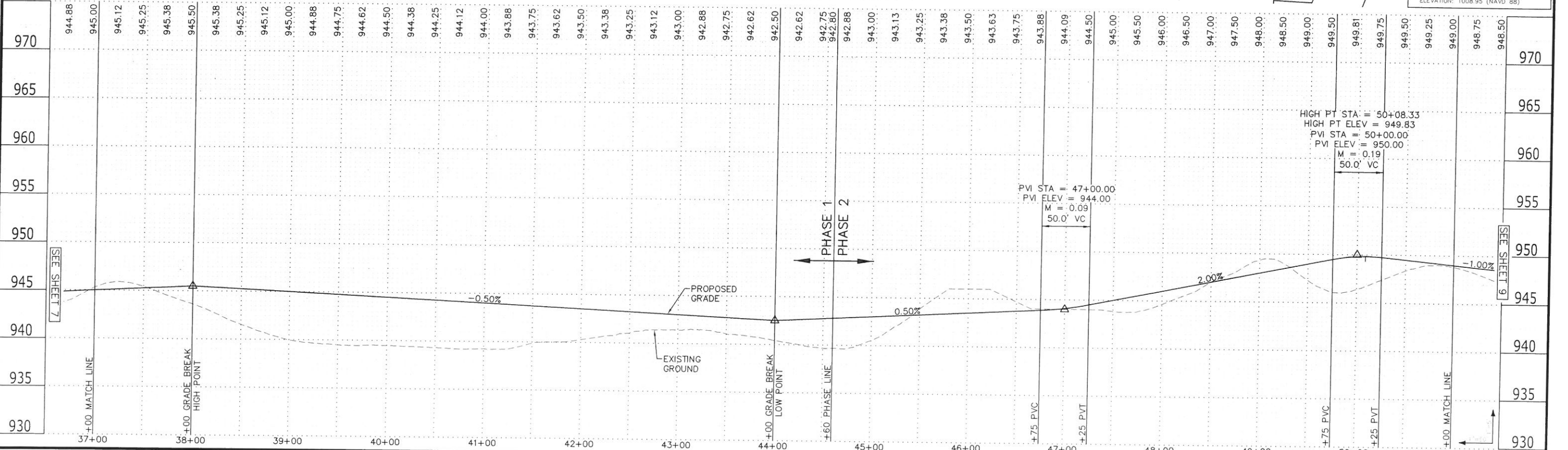
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PC=46+30.80 PT=48+43.26 Δ=18°43'39" R=650.00 L=212.46 T=107.18	PC=50+45.07 PT=55+14.55 Δ=89°39'51" R=300.00 L=469.48 T=298.25	PC=57+10.46 PT=60+86.40 Δ=33°08'15" R=650.00 L=375.93 T=193.39	PC=60+86.40 PT=68+72.58 Δ=100°05'57" R=450.00 L=786.18 T=537.23	PC=68+72.58 PT=72+21.80 Δ=66°41'52" R=300.00 L=349.23 T=197.43			

ROADWAY LEGEND	
	EDGE OF BITUMINOUS
	EDGE OF GRAVEL
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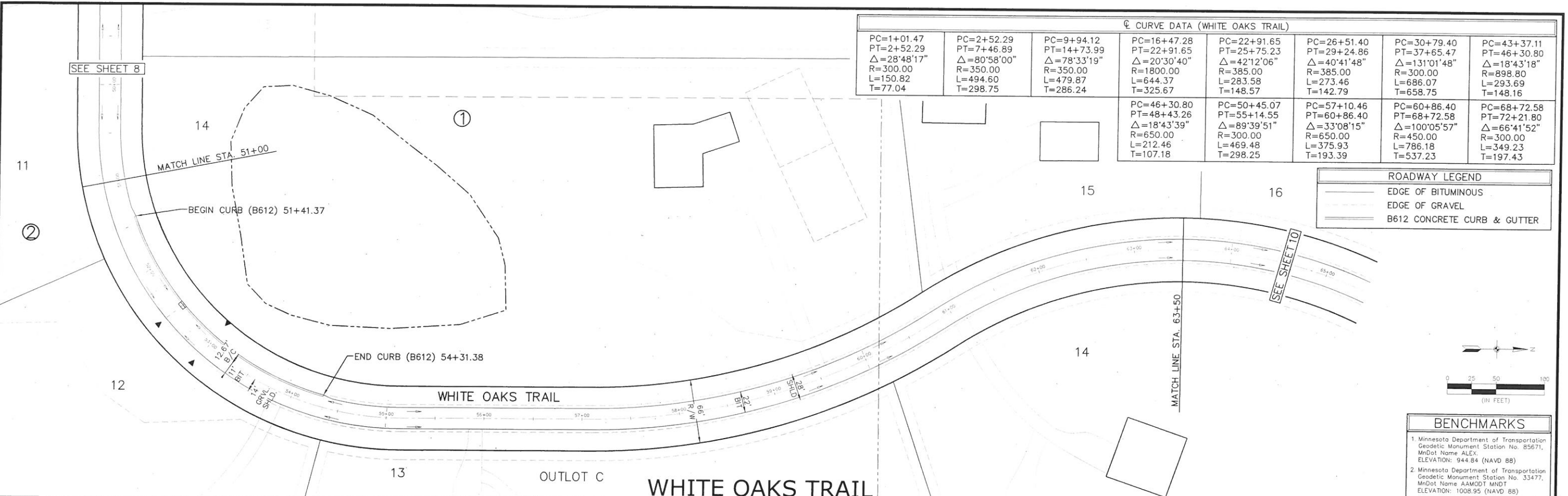


WHITE OAKS TRAIL

BENCHMARKS	
1.	Minnesota Department of Transportation Geodetic Monument Station No. 85671, MnDot Name ALEX, ELEVATION: 944.84 (NAVD 88)
2.	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name AAMODT MNDT, ELEVATION: 1008.95 (NAVD 88)



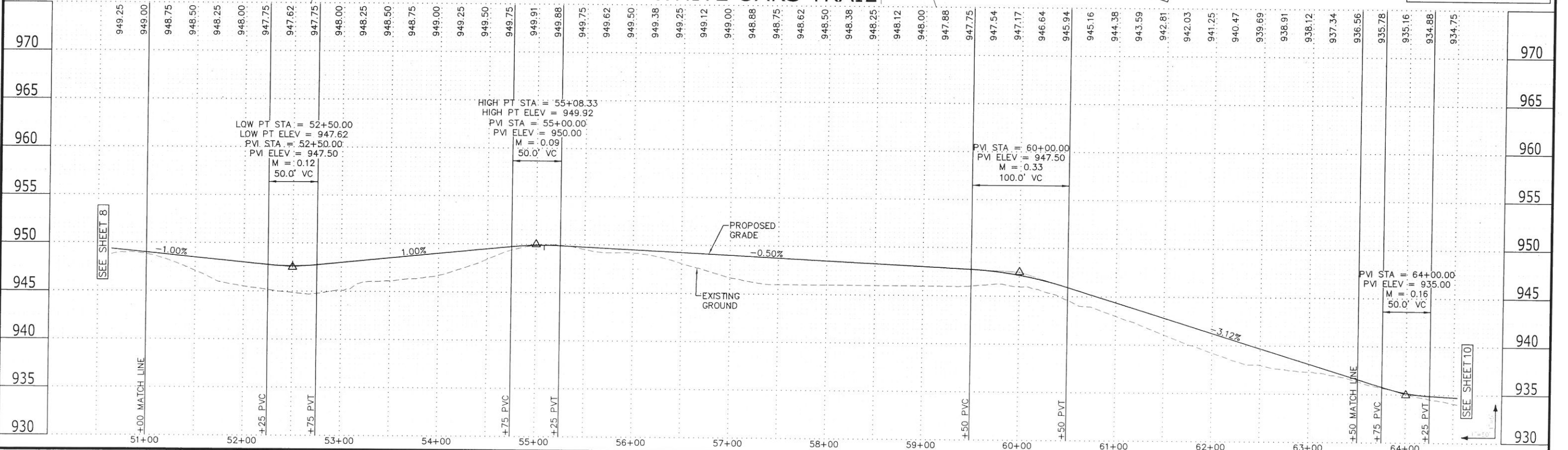
	3890 Pheasant Ridge Drive NE, Suite 100 Blaine, MN 55449 Phone: (763) 489-7900 Fax: (763) 489-7959 www.carlsonmccain.com	I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Signature: <i>Joseph T. Radach</i> Date: 1/26/18 License #: 45889	Drawn: JJD Designed: JTR Date: 1/26/18	Revisions: 1.	STREETCAR HOLDINGS, LLC 4084 Oakbrooke Alcove Eagan, MN 55112	THE FARMS OF GRANT City of Grant, MN	STREET CONSTRUCTION	8 of 12
	Date: 01/30/18 1:30pm 6531 - 65406333 - grant town property road c3c engineering final street 6533 street.dwg							



CURVE DATA (WHITE OAKS TRAIL)												
PC=1+01.47 PT=2+52.29 Δ=28°48'17" R=300.00 L=150.82 T=77.04	PC=2+52.29 PT=7+46.89 Δ=80°58'00" R=350.00 L=494.60 T=298.75	PC=9+94.12 PT=14+73.99 Δ=78°33'19" R=350.00 L=479.87 T=286.24	PC=16+47.28 PT=22+91.65 Δ=20°30'40" R=1800.00 L=644.37 T=325.67	PC=22+91.65 PT=25+75.23 Δ=42°12'06" R=385.00 L=283.58 T=148.57	PC=26+51.40 PT=29+24.86 Δ=40°41'48" R=385.00 L=273.46 T=142.79	PC=30+79.40 PT=37+65.47 Δ=131°01'48" R=300.00 L=686.07 T=658.75	PC=43+37.11 PT=46+30.80 Δ=18°43'18" R=898.80 L=293.69 T=148.16	PC=46+30.80 PT=48+43.26 Δ=18°43'39" R=650.00 L=212.46 T=107.18	PC=50+45.07 PT=55+14.55 Δ=89°39'51" R=300.00 L=469.48 T=298.25	PC=57+10.46 PT=60+86.40 Δ=33°08'15" R=450.00 L=375.93 T=193.39	PC=60+86.40 PT=68+72.58 Δ=100°05'57" R=300.00 L=786.18 T=537.23	PC=68+72.58 PT=72+21.80 Δ=66°41'52" R=300.00 L=349.23 T=197.43

ROADWAY LEGEND	
	EDGE OF BITUMINOUS
	EDGE OF GRAVEL
	B612 CONCRETE CURB & GUTTER

BENCHMARKS	
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2	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name AAMDOT MNDT, ELEVATION: 1008.95 (NAVD 88)



Carlson McCain
 • environmental
 • engineering
 • surveying

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 Signature: *[Signature]*
 Date: 1/26/18 License #: 45889

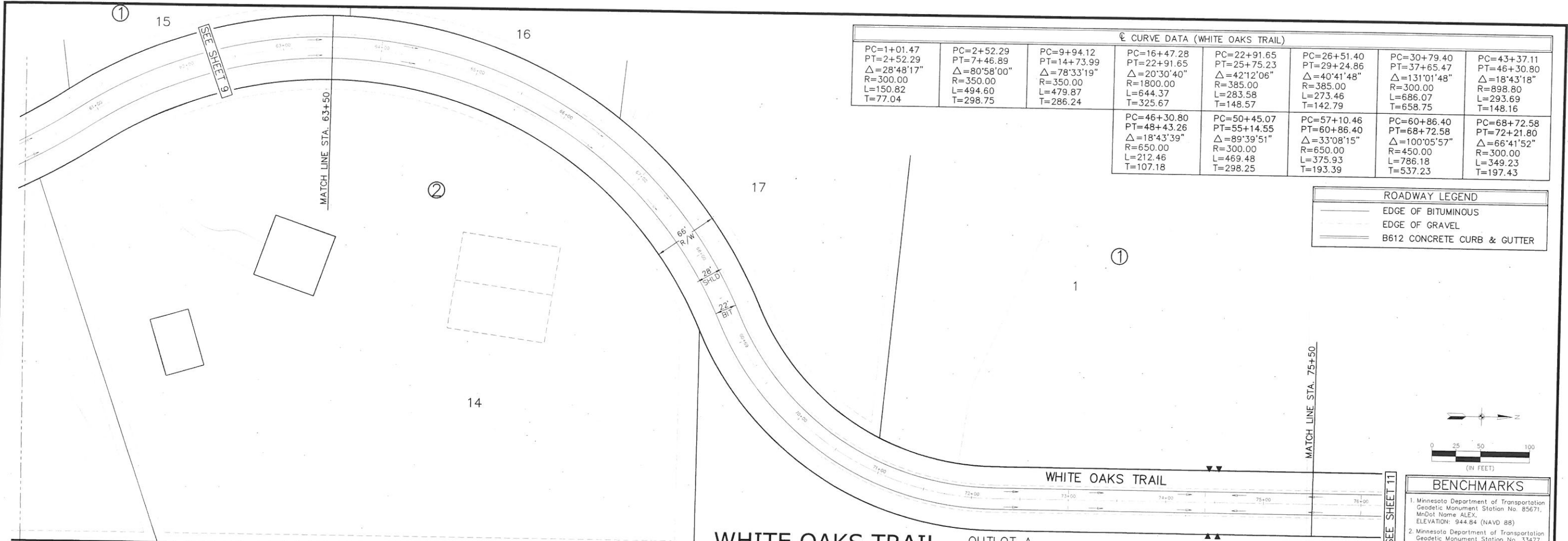
Drawn: JJO
 Designed: JTR
 Date: 1/26/18

Revisions:
 1.

STREETCAR HOLDINGS, LLC
 4084 Oakbrooke Alcove
 Eagan, MN 55112

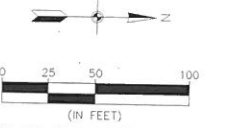
THE FARMS OF GRANT
 City of Grant, MN

STREET CONSTRUCTION



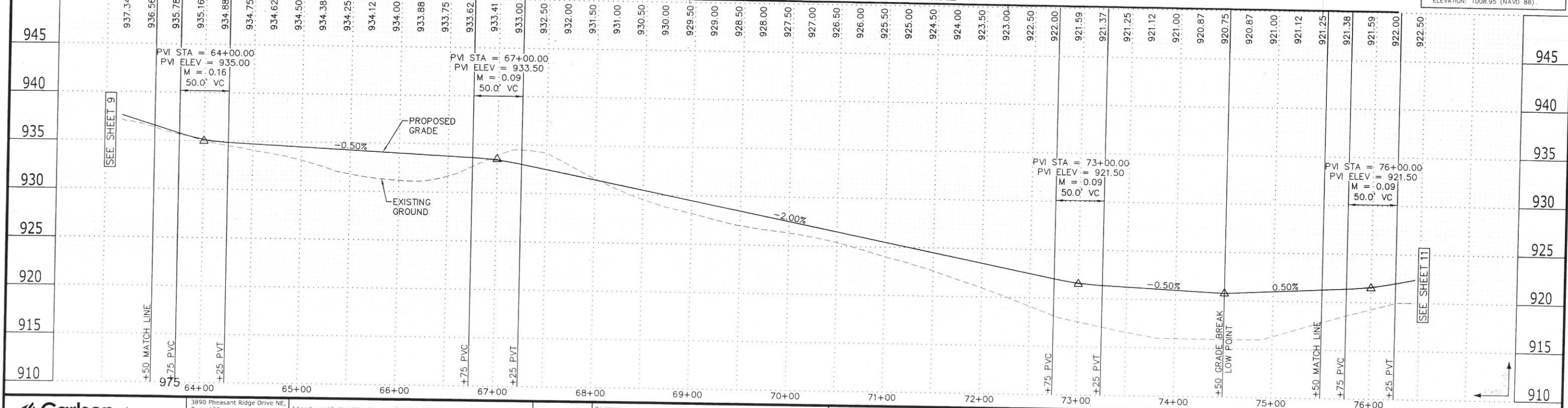
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WHITE OAKS TRAIL OUTLOT A



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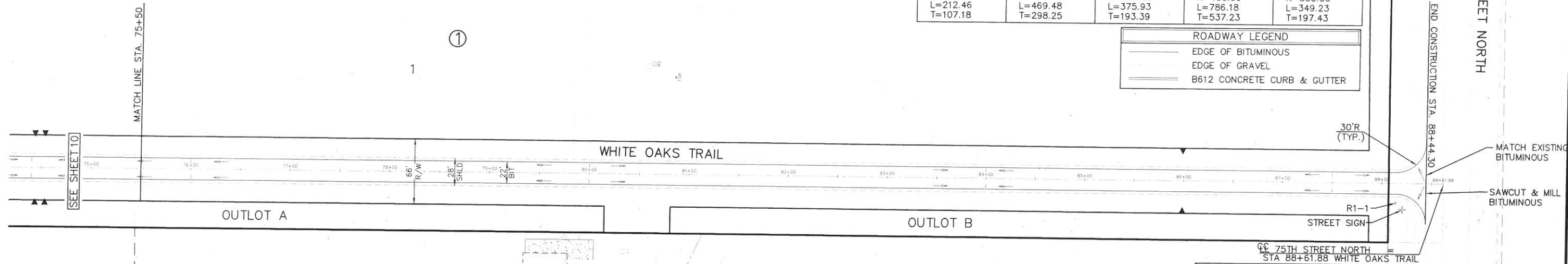
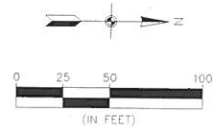
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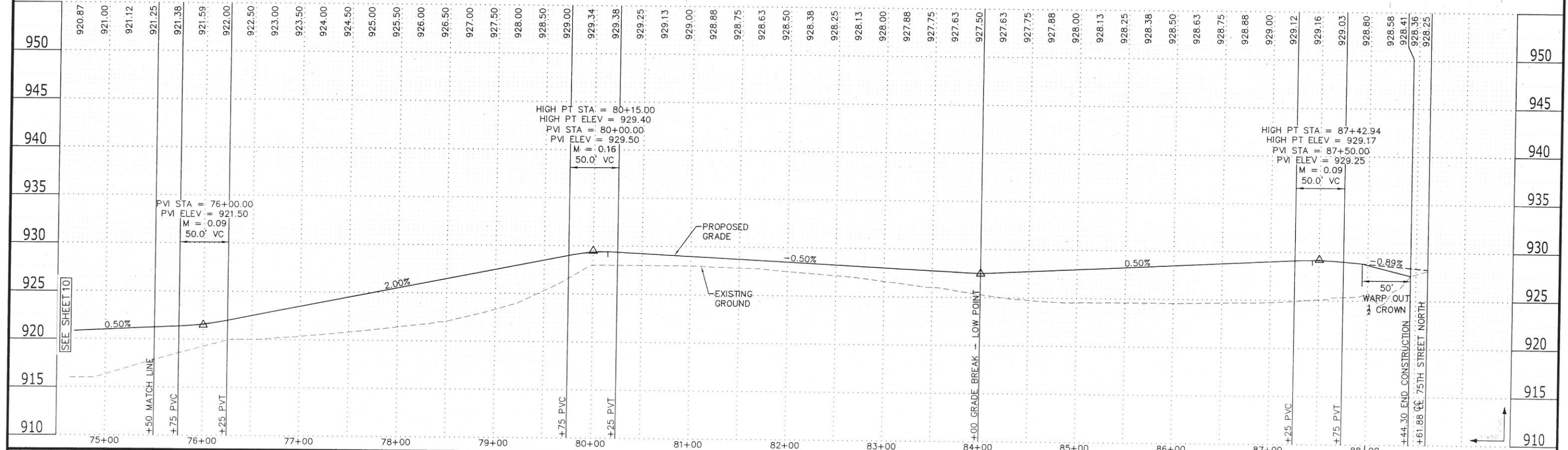
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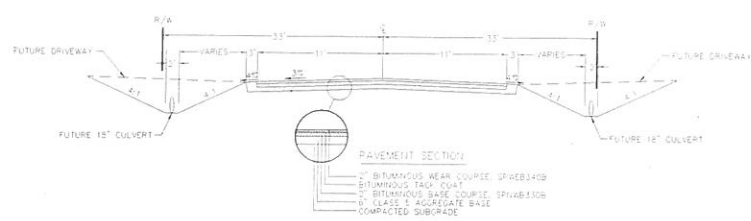


WHITE OAKS TRAIL

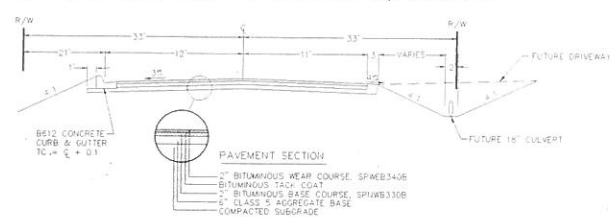


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	Carl's Home Inspection Services, LLC 10000 Highway 101, Suite 100, Blaine, MN 55449 Phone: (763) 489-7900 Fax: (763) 489-7959 www.carlsonmccain.com								

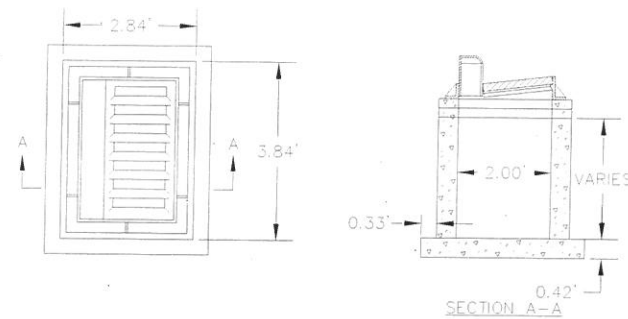
TYPICAL STREET SECTION



TYPICAL STREET SECTION W/CURB

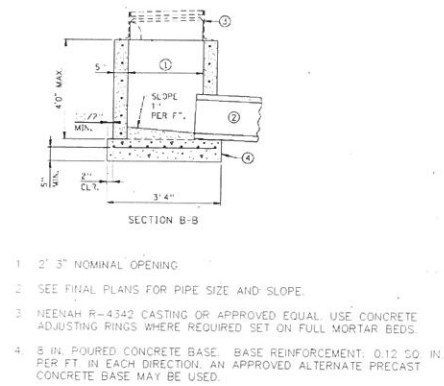
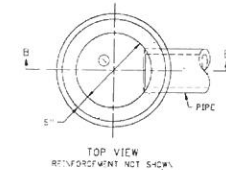


24" X 36" CATCH BASIN



- NOTES:
- INSIDE DIMENSIONS 2.00' X 3.00'
 - BASE TO BE GROUTED TO FORM A SMOOTH INVERT TO OUTLET.
 - PIPE CUT OUTS TO BE LOCATED WHERE REQUIRED.
 - STRENGTH DESIGN OF BASE SLAB AND STRUCTURE PER MANUFACTURER.
 - CASTING TO BE NEENAH R-3067 OR APPROVED EQUAL.

27" CATCH BASIN



- 2" 3" NOMINAL OPENING
- SEE FINAL PLANS FOR PIPE SIZE AND SLOPE.
- NEENAH R-4342 CASTING OR APPROVED EQUAL USE CONCRETE ADJUSTING RINGS WHERE REQUIRED SET ON FULL MORTAR BEDS.
- 8 IN. POURED CONCRETE BASE. BASE REINFORCEMENT: 0.12 50 IN. PER FT. IN EACH DIRECTION. AN APPROVED ALTERNATE PRECAST CONCRETE BASE MAY BE USED.

APPROVED MAY 8, 1996

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
CONCRETE APRON FOR
REINFORCED CONCRETE PIPE

APPROVED BY: *R.H. Sullivan*
DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
SPECIFICATION
REFERENCE: 2531
REVISION DATE: 2-29-25

STANDARD
PLATE NO.: 3100G

TABLE OF QUANTITIES

ITEM	DESCRIPTION	QTY	UNIT	PRICE	TOTAL
1	CONCRETE APRON FOR REINFORCED CONCRETE PIPE	1	LINEAL FOOT	100.00	100.00

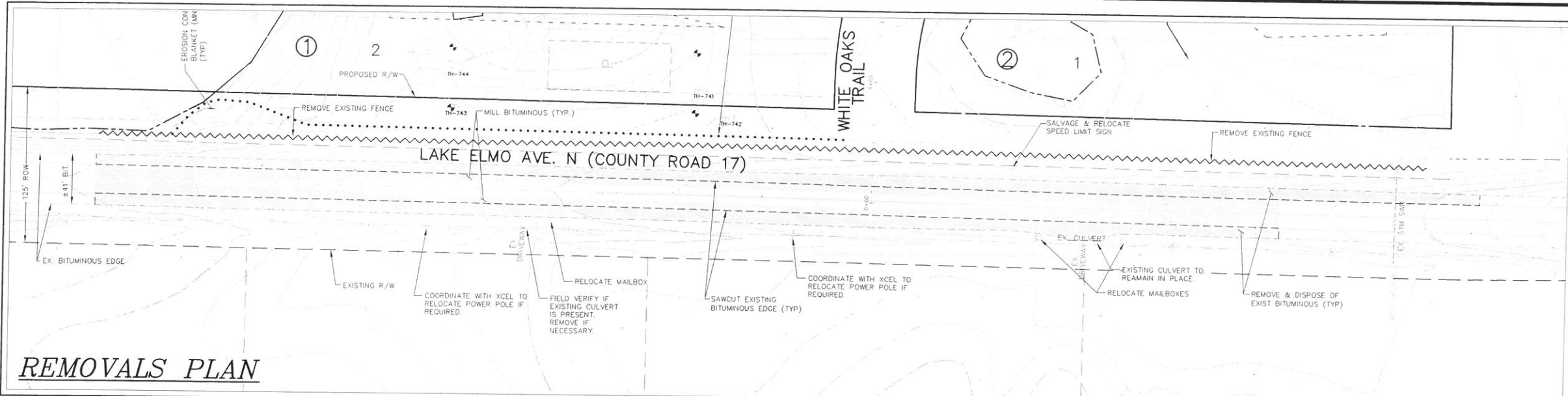
TRASH GUARD

ALL GUARDS TO HAVE (1) CROSS BAR AND UP TO HAVE (2) BARS EQUALLY SPACED.

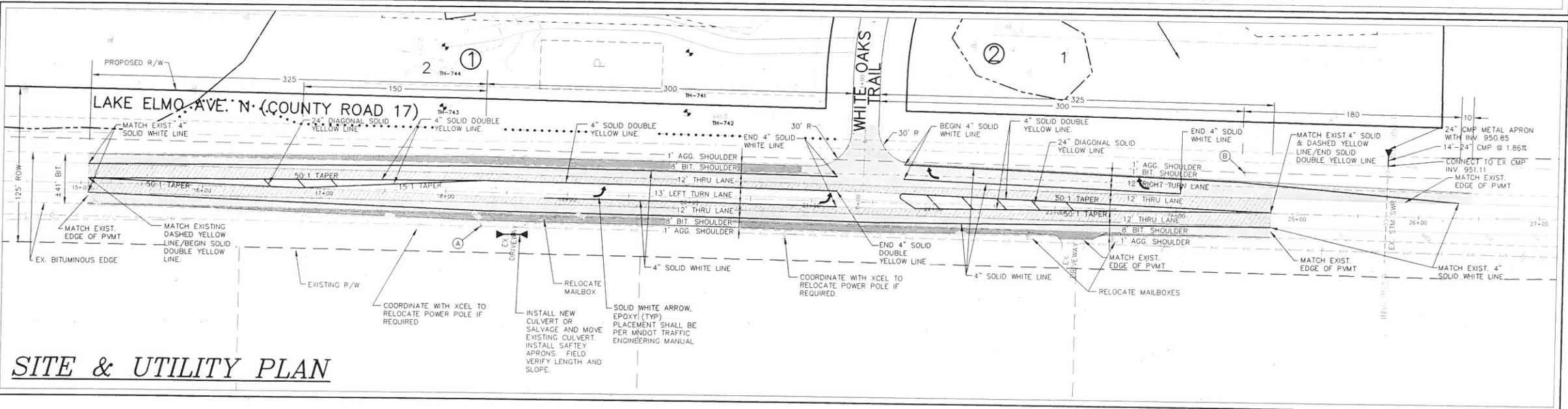
HINGED CONNECTIONS

STANDARD DESIGN

PIPE SIZE	W/OUT FILTER BAG	W/ FILTER BAG	W/OUT FILTER BAG	W/ FILTER BAG
18"	1.2	1.5	1.2	1.5
24"	1.5	1.8	1.5	1.8
30"	1.8	2.1	1.8	2.1
36"	2.1	2.4	2.1	2.4
42"	2.4	2.7	2.4	2.7
48"	2.7	3.0	2.7	3.0
54"	3.0	3.3	3.0	3.3
60"	3.3	3.6	3.3	3.6
66"	3.6	3.9	3.6	3.9
72"	3.9	4.2	3.9	4.2
78"	4.2	4.5	4.2	4.5
84"	4.5	4.8	4.5	4.8
90"	4.8	5.1	4.8	5.1
96"	5.1	5.4	5.1	5.4
102"	5.4	5.7	5.4	5.7
108"	5.7	6.0	5.7	6.0
114"	6.0	6.3	6.0	6.3
120"	6.3	6.6	6.3	6.6
126"	6.6	6.9	6.6	6.9
132"	6.9	7.2	6.9	7.2
138"	7.2	7.5	7.2	7.5
144"	7.5	7.8	7.5	7.8
150"	7.8	8.1	7.8	8.1
156"	8.1	8.4	8.1	8.4
162"	8.4	8.7	8.4	8.7
168"	8.7	9.0	8.7	9.0
174"	9.0	9.3	9.0	9.3
180"	9.3	9.6	9.3	9.6
186"	9.6	9.9	9.6	9.9
192"	9.9	10.2	9.9	10.2
198"	10.2	10.5	10.2	10.5
204"	10.5	10.8	10.5	10.8
210"	10.8	11.1	10.8	11.1
216"	11.1	11.4	11.1	11.4
222"	11.4	11.7	11.4	11.7
228"	11.7	12.0	11.7	12.0
234"	12.0	12.3	12.0	12.3
240"	12.3	12.6	12.3	12.6
246"	12.6	12.9	12.6	12.9
252"	12.9	13.2	12.9	13.2
258"	13.2	13.5	13.2	13.5
264"	13.5	13.8	13.5	13.8
270"	13.8	14.1	13.8	14.1
276"	14.1	14.4	14.1	14.4
282"	14.4	14.7	14.4	14.7
288"	14.7	15.0	14.7	15.0
294"	15.0	15.3	15.0	15.3
300"	15.3	15.6	15.3	15.6
306"	15.6	15.9	15.6	15.9
312"	15.9	16.2	15.9	16.2
318"	16.2	16.5	16.2	16.5
324"	16.5	16.8	16.5	16.8
330"	16.8	17.1	16.8	17.1
336"	17.1	17.4	17.1	17.4
342"	17.4	17.7	17.4	17.7
348"	17.7	18.0	17.7	18.0
354"	18.0	18.3	18.0	18.3
360"	18.3	18.6	18.3	18.6
366"	18.6	18.9	18.6	18.9
372"	18.9	19.2	18.9	19.2
378"	19.2	19.5	19.2	19.5
384"	19.5	19.8	19.5	19.8
390"	19.8	20.1	19.8	20.1
396"	20.1	20.4	20.1	20.4
402"	20.4	20.7	20.4	20.7
408"	20.7	21.0	20.7	21.0
414"	21.0	21.3	21.0	21.3
420"	21.3	21.6	21.3	21.6
426"	21.6	21.9	21.6	21.9
432"	21.9	22.2	21.9	22.2
438"	22.2	22.5	22.2	22.5
444"	22.5	22.8	22.5	22.8
450"	22.8	23.1	22.8	23.1
456"	23.1	23.4	23.1	23.4
462"	23.4	23.7	23.4	23.7
468"	23.7	24.0	23.7	24.0
474"	24.0	24.3	24.0	24.3
480"	24.3	24.6	24.3	24.6
486"	24.6	24.9	24.6	24.9
492"	24.9	25.2	24.9	25.2
498"	25.2	25.5	25.2	25.5
504"	25.5	25.8	25.5	25.8
510"	25.8	26.1	25.8	26.1
516"	26.1	26.4	26.1	26.4
522"	26.4	26.7	26.4	26.7
528"	26.7	27.0	26.7	27.0
534"	27.0	27.3	27.0	27.3
540"	27.3	27.6	27.3	27.6
546"	27.6	27.9	27.6	27.9
552"	27.9	28.2	27.9	28.2
558"	28.2	28.5	28.2	28.5
564"	28.5	28.8	28.5	28.8
570"	28.8	29.1	28.8	29.1
576"	29.1	29.4	29.1	29.4
582"	29.4	29.7	29.4	29.7
588"	29.7	30.0	29.7	30.0
594"	30.0	30.3	30.0	30.3
600"	30.3	30.6	30.3	30.6
606"	30.6	30.9	30.6	30.9
612"	30.9	31.2	30.9	31.2
618"	31.2	31.5	31.2	31.5
624"	31.5	31.8	31.5	31.8
630"	31.8	32.1	31.8	32.1
636"	32.1	32.4	32.1	32.4
642"	32.4	32.7	32.4	32.7
648"	32.7	33.0	32.7	33.0
654"	33.0	33.3	33.0	33.3
660"	33.3	33.6	33.3	33.6
666"	33.6	33.9	33.6	33.9
672"	33.9	34.2	33.9	34.2
678"	34.2	34.5	34.2	34.5
684"	34.5	34.8	34.5	34.8
690"	34.8	35.1	34.8	35.1
696"	35.1	35.4	35.1	35.4
702"	35.4	35.7	35.4	35.7
708"	35.7	36.0	35.7	36.0
714"	36.0	36.3	36.0	36.3
720"	36.3	36.6	36.3	36.6
726"	36.6	36.9	36.6	36.9
732"	36.9	37.2	36.9	37.2
738"	37.2	37.5	37.2	37.5
744"	37.5	37.8	37.5	37.8
750"	37.8	38.1	37.8	38.1
756"	38.1	38.4	38.1	38.4
762"	38.4	38.7	38.4	38.7
768"	38.7	39.0	38.7	39.0
774"	39.0	39.3	39.0	39.3
780"	39.3	39.6	39.3	39.6
786"	39.6	39.9	39.6	39.9
792"	39.9	40.2	39.9	40.2
798"	40.2	40.5	40.2	40.5
804"	40.5	40.8	40.5	40.8
810"	40.8	41.1	40.8	41.1
816"	41.1	41.4	41.1	41.4
822"	41.4	41.7	41.4	41.7
828"	41.7	42.0	41.7	42.0
834"	42.0	42.3	42.0	42.3
840"	42.3	42.6	42.3	42.6
846"	42.6	42.9	42.6	42.9
852"	42.9	43.2	42.9	43.2
858"	43.2	43.5	43.2	43.5
864"	43.5	43.8	43.5	43.8
870"	43.8	44.1	43.8	44.1
876"	44.1	44.4	44.1	44.4
882"	44.4	44.7	44.4	44.7
888"	44.7	45.0	44.7	45.0
894"	45.0	45.3	45.0	45.3
900"	45.3	45.6	45.3	45.6
906"	45.6	45.9	45.6	45.9
912"	45.9	46.2	45.9	46.2
918"	46.2	46.5	46.2	46.5
924"	46.5	46.8	46.5	46.8
930"	46.8	47.1	46.8	47.1
936"	47.1	47.4	47.1	47.4
942"	47.4	47.7	47.4	47.7
948"	47.7	48.0	47.7	48.0
954"	48.0	48.3	48.0	48.3
960"	48.3	48.6	48.3	48.6
966"	48.6	48.9	48.6	48.9
972"	48.9	49.2	48.9	49.2
978"	49.2	49.5	49.2	49.5
984"	49.5	49.8	49.5	49.8
990"	49.8	50.1	49.8	50.1
996"	50.1	50.4	50.1	50.4
1002"	50.4	50.7	50.4	50.7
1008"	50.7	51.0	50.7	51.0
1014"	51.0	51.3	51.0	51.3
1020"	51.3	51.6	51.3	51.6
1026"	51.6	51.9	51.6	51.9
1032"	51.9	52.2	51.9	52.2
1038"	52.2	52.5	52.2	52.5
1044"	52.5	52.8	52.5	52.8
1050"	52.8	53.1	52.8	53.1
1056"	53.1	53.4	53.1	53.4
1062"	53.4	53.7	53.4	53.7
1068"	53.7	54.0	53.7	54.0
1074"	54.0	54.3	54.0	54.3
1080"	54.3	54.6	54.3	54.6
1086"	54.6	54.9	54.6	54.9
1092"	54.9	55.2	54.9	55.2
1098"	55.2	55.5	55.2	55.5
1104"	55.5	55.8	55.5	55.8
1110"	55.8	56.1	55.8	56.1
1116"	56.1	56.4	56.1	56.4
1122"	56.4	56.7	56.4	56.7
1128"	56.7	57.0	56.7	57.0
1134"	57.0	57.3	57.0	57.3
1140"	57.3	57.6	57.3	57.6
1146"	57.6	57.9	57.6	57.9
1152"	57.9	58.2	57.9	58.2
1158"	58.2	58.5	58.2	58.5
1164"	58.5	58.8	58.5	58.8
1170"	58.8	59.1	58.8	59.1
1176"	59.1	59.4	59.1	59.4
1182"	59.4	59.7	59.4	59.7
1188"	59.7	60.0	59.7	60.0
1194"	60.0	60.3	60.0	60.3
1200"	60.3	60.6	60.3	60.6
1206"	60.6	60.9	60.6	60.9
1212"	60.9	61.2	60.9	61.2



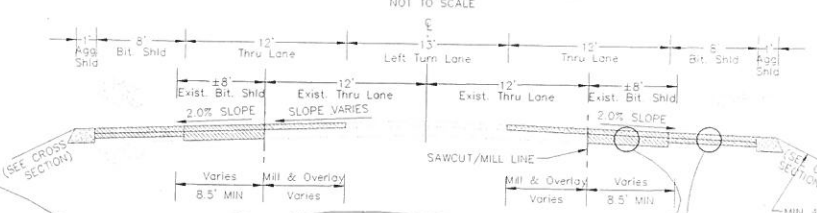
REMOVALS PLAN



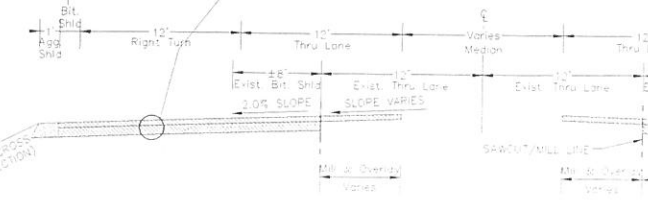
SITE & UTILITY PLAN

SIGN SCHEDULE			
SIGN	SIGN NO.	SIZE	QUANTITY
(A) ONLY	R3-30AC	36" X 30" (BLACK ON WHITE)	1
(B) RIGHT LANE MUST TURN RIGHT	R3-7R	30" X 30" (BLACK ON WHITE)	1

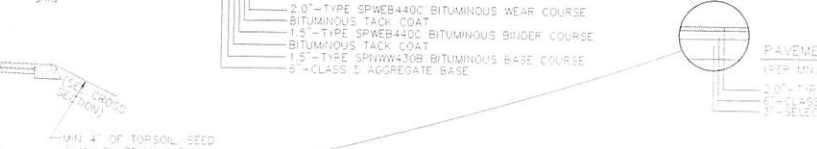
TYPICAL LEFT TURN LANE SECTION



TYPICAL RIGHT TURN LANE SECTION



PAVEMENT SECTION



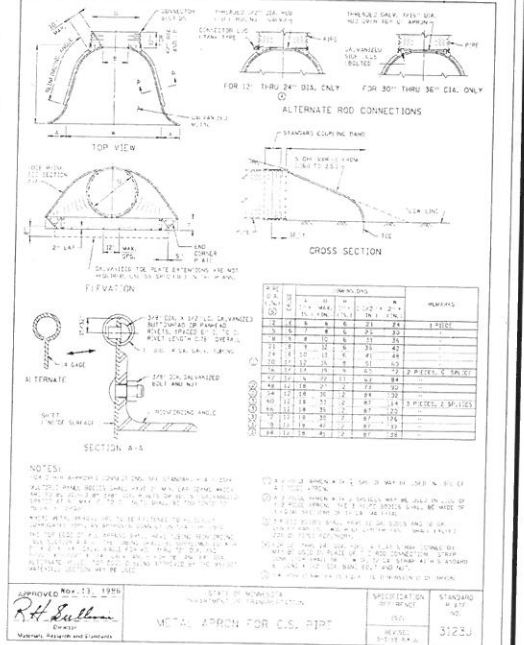
BENCHMARKS	
1.	TOP NUT HYDRANT APPROXIMATELY 218 FT. NORTH OF THE SOUTHWEST CORNER OF THE PROPERTY. ELEVATION: 928.99 (NAVD 88)
2.	TOP NUT HYDRANT APPROXIMATELY 1057 FT. NORTH OF THE SOUTHWEST CORNER OF THE PROPERTY. ELEVATION: 923.76 (NAVD 88)



REMOVALS LEGEND	
EXISTING	REMOVALS
PROPERTY LINE	---
EASEMENT LINE	---
SAWCUT	---
BITUMINOUS	---
GRAVEL	---
STORM SEWER	---
OVERHEAD UTILITY	---
SIGN	X
TELEVISION BOX	---
UTILITY POLE	---
FENCE	---
GRAVEL EDGE	---
STRIPING	---
10' CONTOUR	---
2' CONTOUR	---
WETLAND LINE	---
SPOT ELEVATION	---
SIGN	---
TREE	---
SOIL BORING	---

SITE LEGEND	
EXISTING	PROPOSED
PROPERTY LINE	---
EASEMENT LINE	---
CURB LINE	---
BITUMINOUS	---
GRAVEL	---
STORM SEWER	---
OVERHEAD UTILITY	---
TELEPHONE BOX	---
UTILITY POLE	---
FENCE	---
GRAVEL EDGE	---
STRIPING	---
WETLAND LINE	---
SIGN	---
TREELINE	---
SOIL BORING	---

- TURN LANE NOTES**
- ALL GRADES ARE TO FINISHED PAVEMENT UNLESS OTHERWISE NOTED.
 - GOVERNING SPECIFICATIONS SHALL BE THE LATEST EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION".
 - ALL TEMPORARY TRAFFIC CONTROL DEVICES AND ALL PERMANENT SIGNING & MARKINGS SHALL CONFORM TO THE MUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS, 2014".
 - CONTRACTOR SHALL NOTIFY WASHINGTON COUNTY HIGHWAY DEPARTMENT AND SUBMIT A TRAFFIC CONTROL PLAN FOR APPROVAL PRIOR TO PERFORMING ANY WORK WITHIN THE COUNTY RIGHT-OF-WAY.
 - CONTRACTOR SHALL REMOVE ALL CONFLICTING PAVEMENT MARKINGS.
 - ALL TURN LANE STRIPING SHALL BE COMPLETED USING EPOXY PAINT.
 - CONTRACTOR SHALL COORDINATE WORK AROUND AND RELOCATION OF SMALL UTILITIES.



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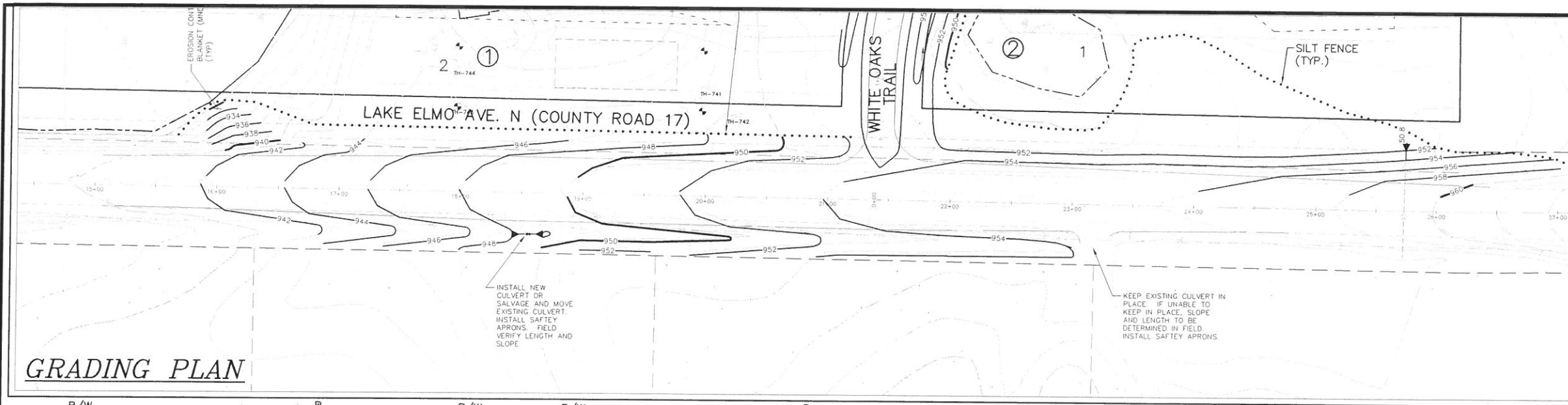
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 Print Name: Joseph T. Radach, P.E.
 Signature: [Signature]
 Date: 1/26/18 License #: 45889

Drawn: JJO
 Designed: JTR
 Revisions: 1.
 Date: 1/26/18

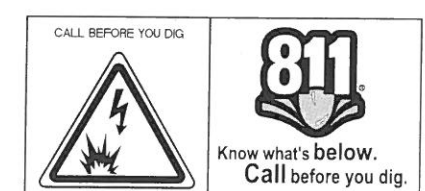
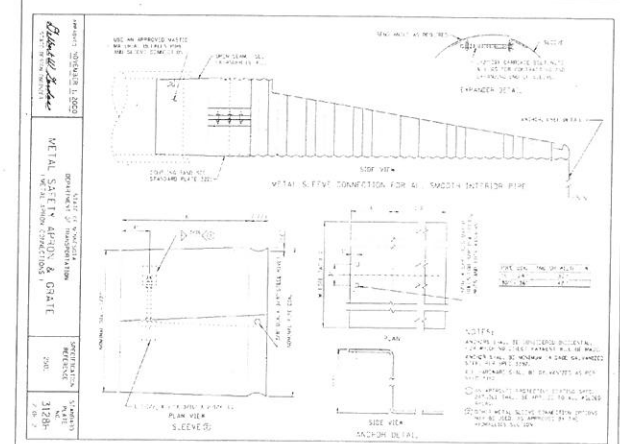
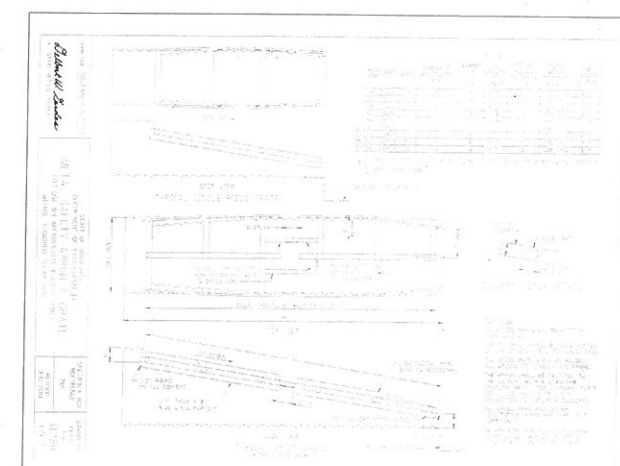
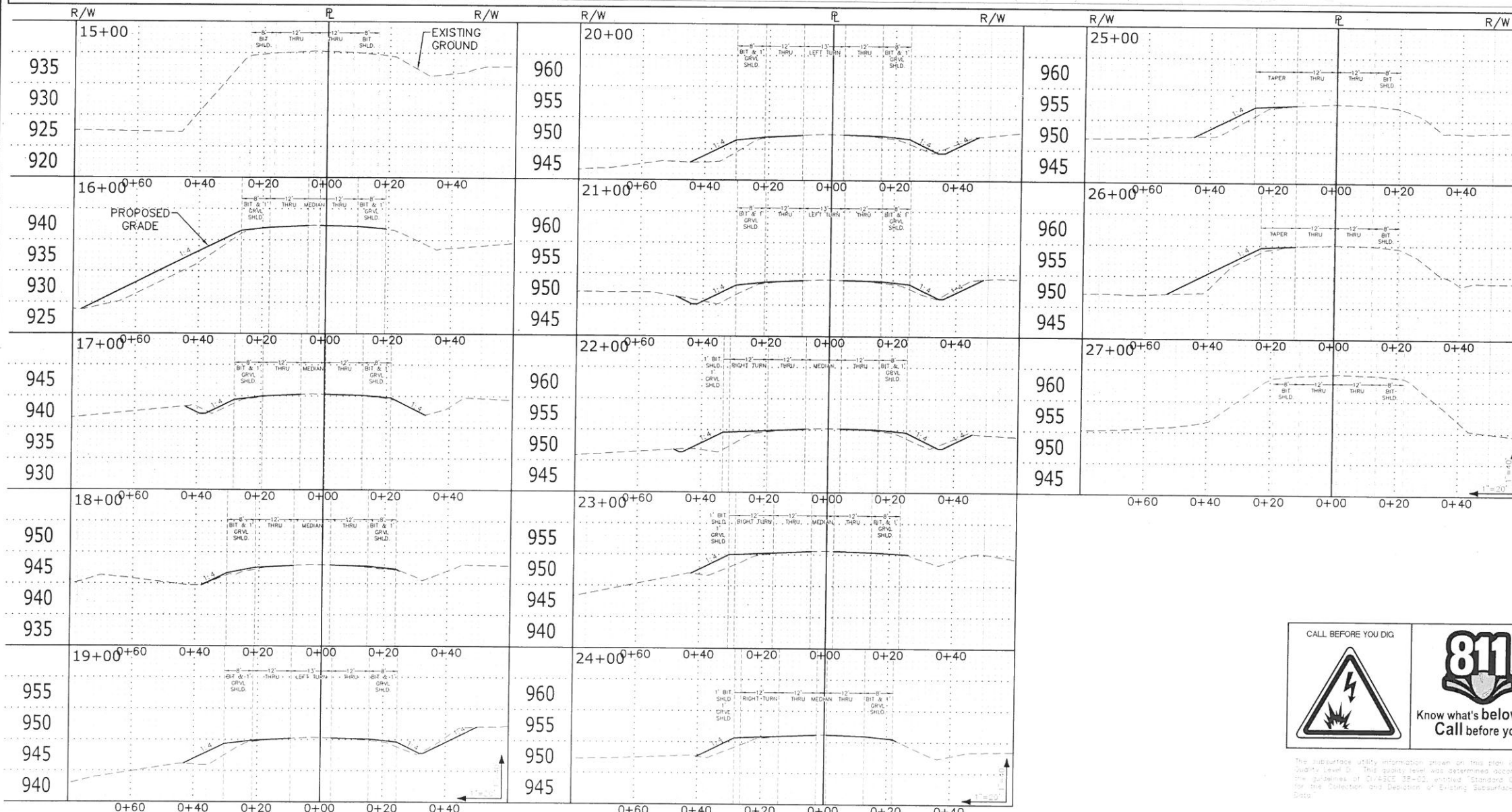
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 City of Grant, MN

TURN LANE REMOVALS & SITE PLAN
 T1 of 2



GRADING PLAN



The subsurface utility information shown on this plan is utility quality level 0. This quality level was determined according to the guidelines of DIVISION 35-02, entitled "Standard Guidelines for the Collection and Deposition of Existing Subsurface Utility Data."

BENCHMARKS	
1. TOP NUT HYDRANT APPROXIMATELY 218 FT. NORTH OF THE SOUTHWEST CORNER OF THE PROPERTY.	ELEVATION: 926.99 (NAVD 88)
2. TOP NUT HYDRANT APPROXIMATELY 1057 FT. NORTH OF THE SOUTHWEST CORNER OF THE PROPERTY.	ELEVATION: 923.76 (NAVD 88)

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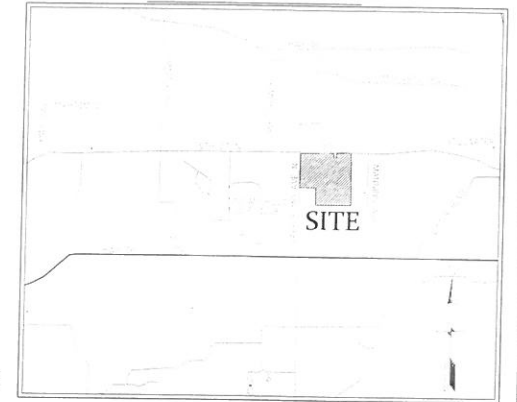
TURN LANE GRADING PLAN & CROSS SECTIONS
 T2 of 2

THE FARMS OF GRANT

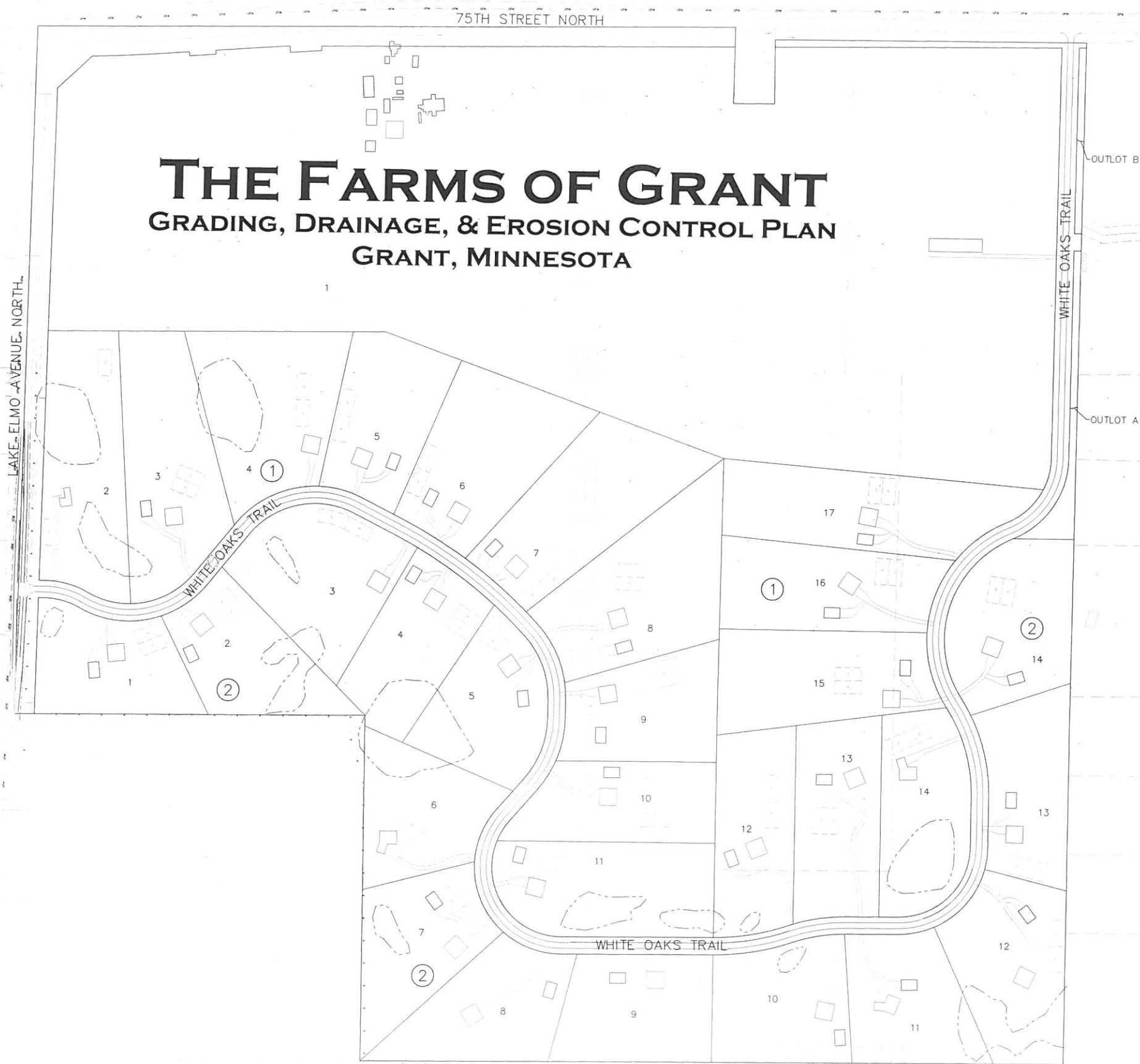
GRADING, DRAINAGE, & EROSION CONTROL PLAN

GRANT, MINNESOTA

VICINITY MAP



NOT TO SCALE



BENCHMARKS	
1	Minnesota Department of Transportation Geodetic Monument Station No. 85071, MnDot Name ALEX, ELEVATION: 944.84 (NAVD 88)
2	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name AAM001 MWD, ELEVATION: 1008.95 (NAVD 88)

SHEET INDEX	
1.	COVER
2.	GRADING INDEX
3-12.	GRADING & EROSION CONTROL PLAN
13.	GRADING, EROSION CONTROL & SEEDING NOTES
14.	DETAILS

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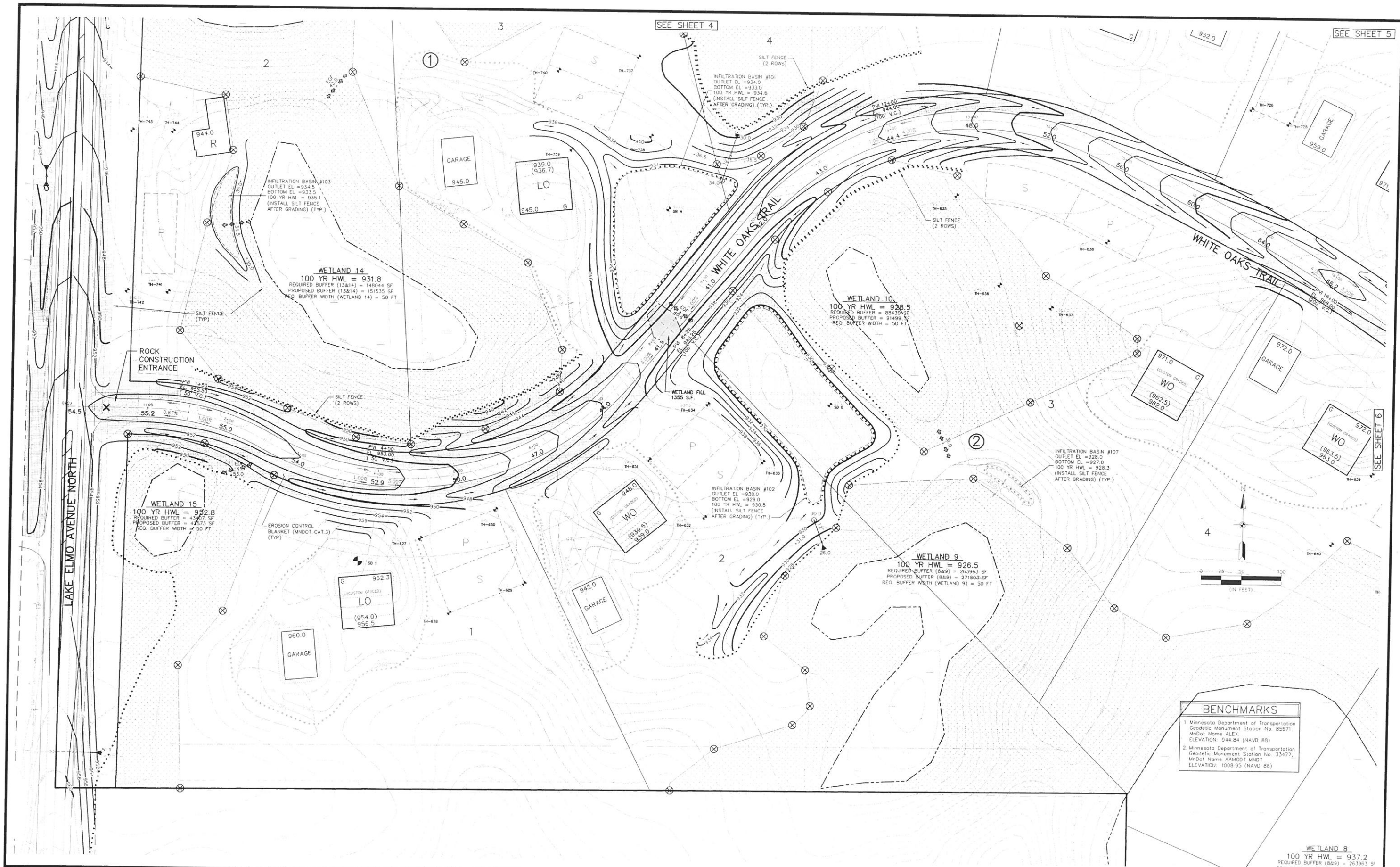
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COVER SHEET

1 of 14



BENCHMARKS	
1	Minnesota Department of Transportation Geodetic Monument Station No. 85671, MnDot Name: ALEX, ELEVATION: 944.84 (NAVD 88)
2	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name: AAMODT MNDT, ELEVATION: 1008.95 (NAVD 88)

WETLAND 8
 100 YR HWL = 937.2
 REQUIRED BUFFER (8&9) = 26,396.3 SF
 PROPOSED BUFFER (8&9) = 27,190.3 SF
 REG. BUFFER WIDTH (WETLAND 8) = 50 FT

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GRADING, DRAINAGE & EROSION CONTROL PLAN



BENCHMARKS	
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2.	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name: AAMODT MNDT ELEVATION: 1008.95 (NAVD 88)

SEE SHEET 5

SEE SHEET 6

INFILTRATION BASIN #104
OUTLET EL = 936.0
BOTTOM EL = 935.0
100 YR HWL = 936.7
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

INFILTRATION BASIN #105
OUTLET EL = 934.0
BOTTOM EL = 933.0
100 YR HWL = 934.4
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

WETLAND 12
100 YR HWL = 929.9
REQUIRED BUFFER = 173286 SF
PROPOSED BUFFER = 191287 SF
REQ. BUFFER WIDTH = 50 FT

WETLAND 13
100 YR HWL = 932.1
REQUIRED BUFFER (13&14) = 148044 SF
PROPOSED BUFFER (13&14) = 151535 SF
REQ. BUFFER WIDTH (WETLAND 13) = 25 FT

EROSION CONTROL
BLANKET (MNDOT CAT.3)
(TYP.)

INFILTRATION BASIN #101
OUTLET EL = 934.0
BOTTOM EL = 933.0
100 YR HWL = 934.6
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

INFILTRATION BASIN #103
OUTLET EL = 934.5
BOTTOM EL = 933.5
100 YR HWL = 935.1
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

WETLAND 14
100 YR HWL = 931.8
REQUIRED BUFFER (13&14) = 148044 SF
PROPOSED BUFFER (13&14) = 151535 SF
REQ. BUFFER WIDTH (WETLAND 14) = 50 FT

WETLAND 10
100 YR HWL = 928.5
REQUIRED BUFFER = 84433 SF
PROPOSED BUFFER = 91499 SF
REQ. BUFFER WIDTH = 50 FT

ROCK
CONSTRUCTION

SEE SHEET 3



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**GRADING, DRAINAGE &
 EROSION CONTROL PLAN**



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2	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name: AAMODT MNDT, ELEVATION: 1008.95 (NAVD 88)

INFILTRATION BASIN #107
 OUTLET EL = 928.0
 BOTTOM EL = 927.0
 100 YR HWL = 928.3
 (INSTALL SILT FENCE AFTER GRADING) (TYP.)

INFILTRATION BASIN #106
 OUTLET EL = 948.0
 BOTTOM EL = 947.0
 100 YR HWL = 949.1
 (INSTALL SILT FENCE AFTER GRADING) (TYP.)

EROSION CONTROL BLANKET (MNDOT CAT.3) (TYP.)



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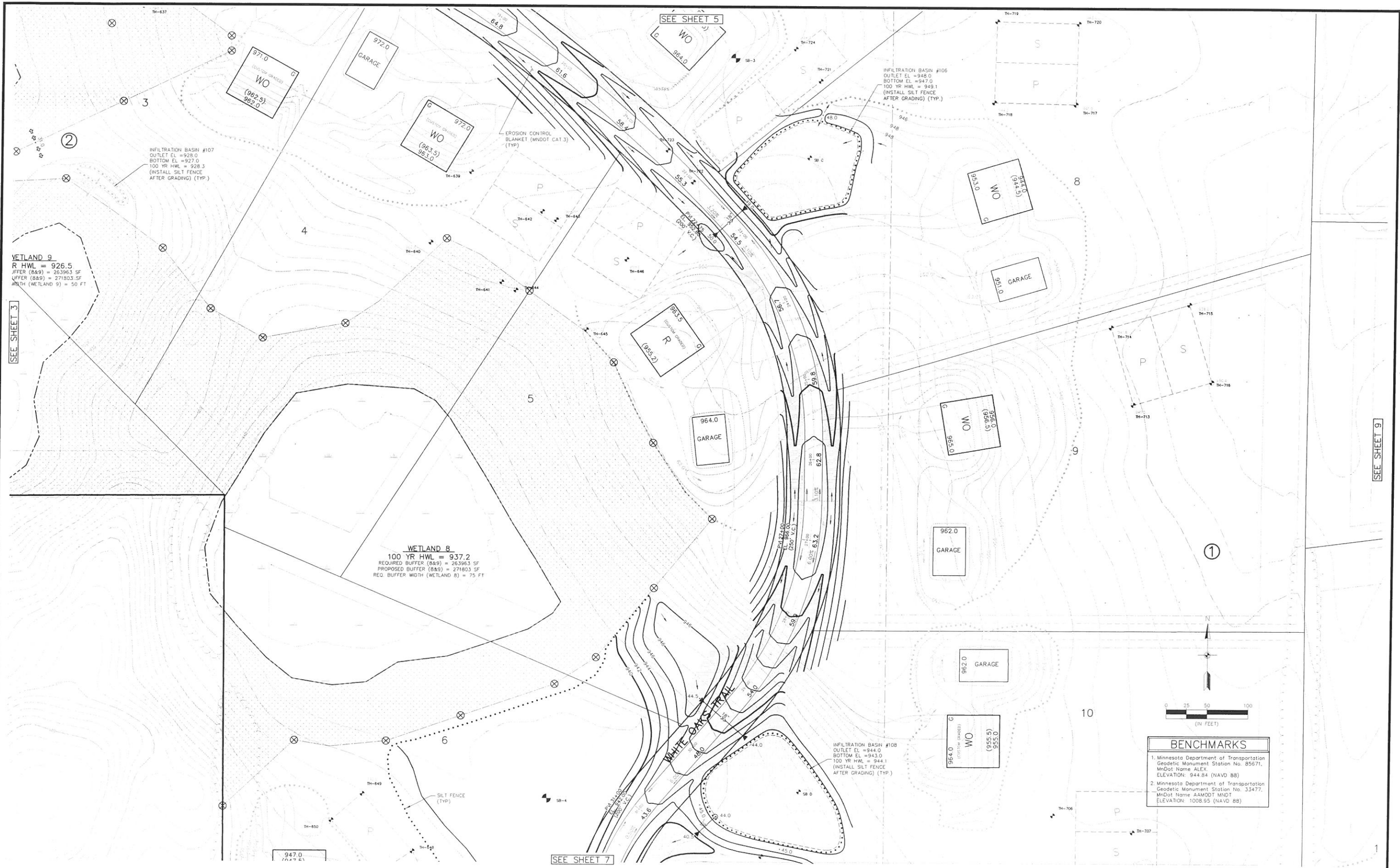
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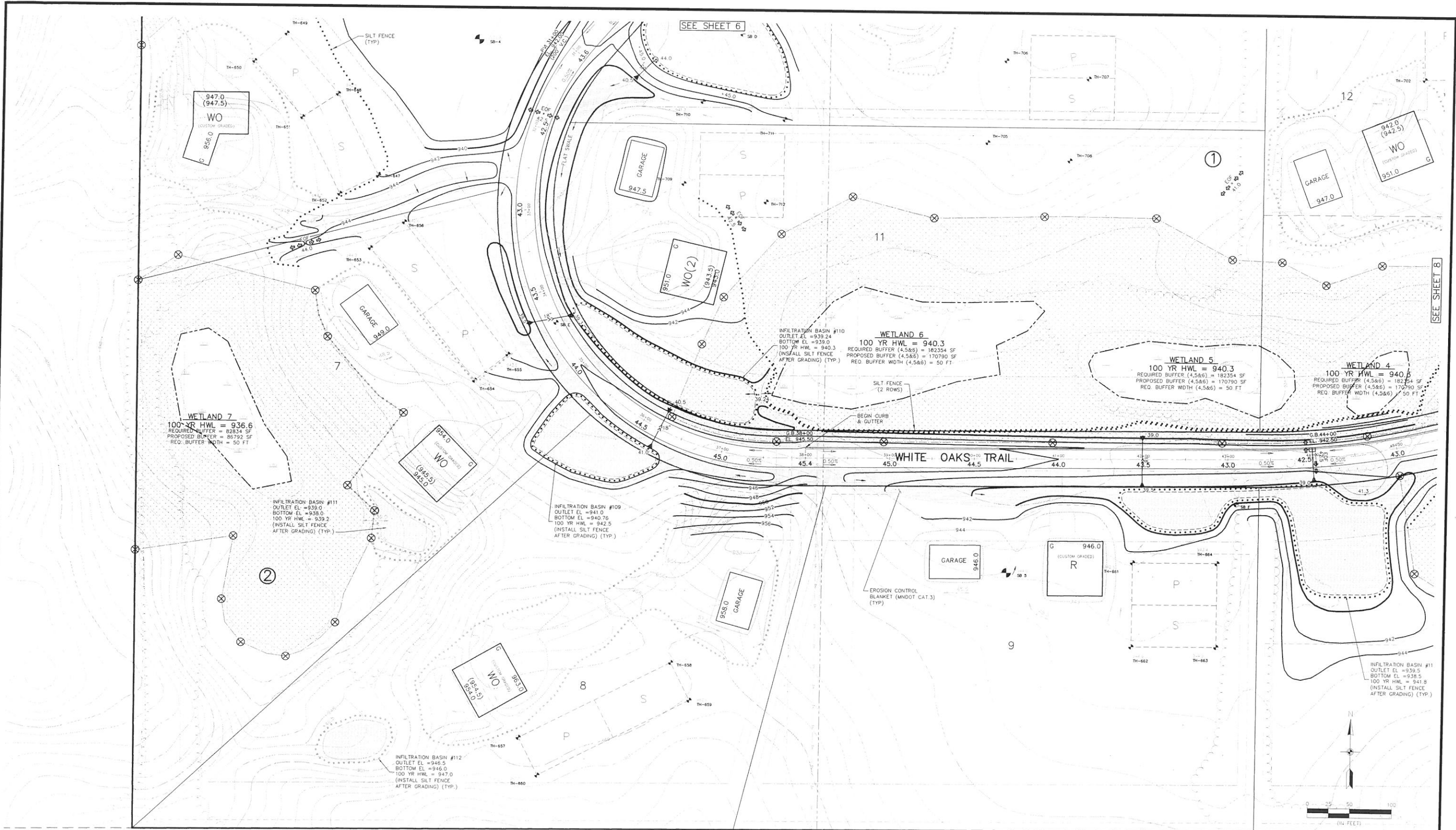
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GRADING, DRAINAGE & EROSION CONTROL PLAN

6 of 14



BENCHMARKS	
1	Minnesota Department of Transportation Geodetic Monument Station No. 85671, MNDot Name ALEX, ELEVATION: 944.84 (NAVD 88)
2	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MNDot Name AAM001 MNDT, ELEVATION: 1008.95 (NAVD 88)



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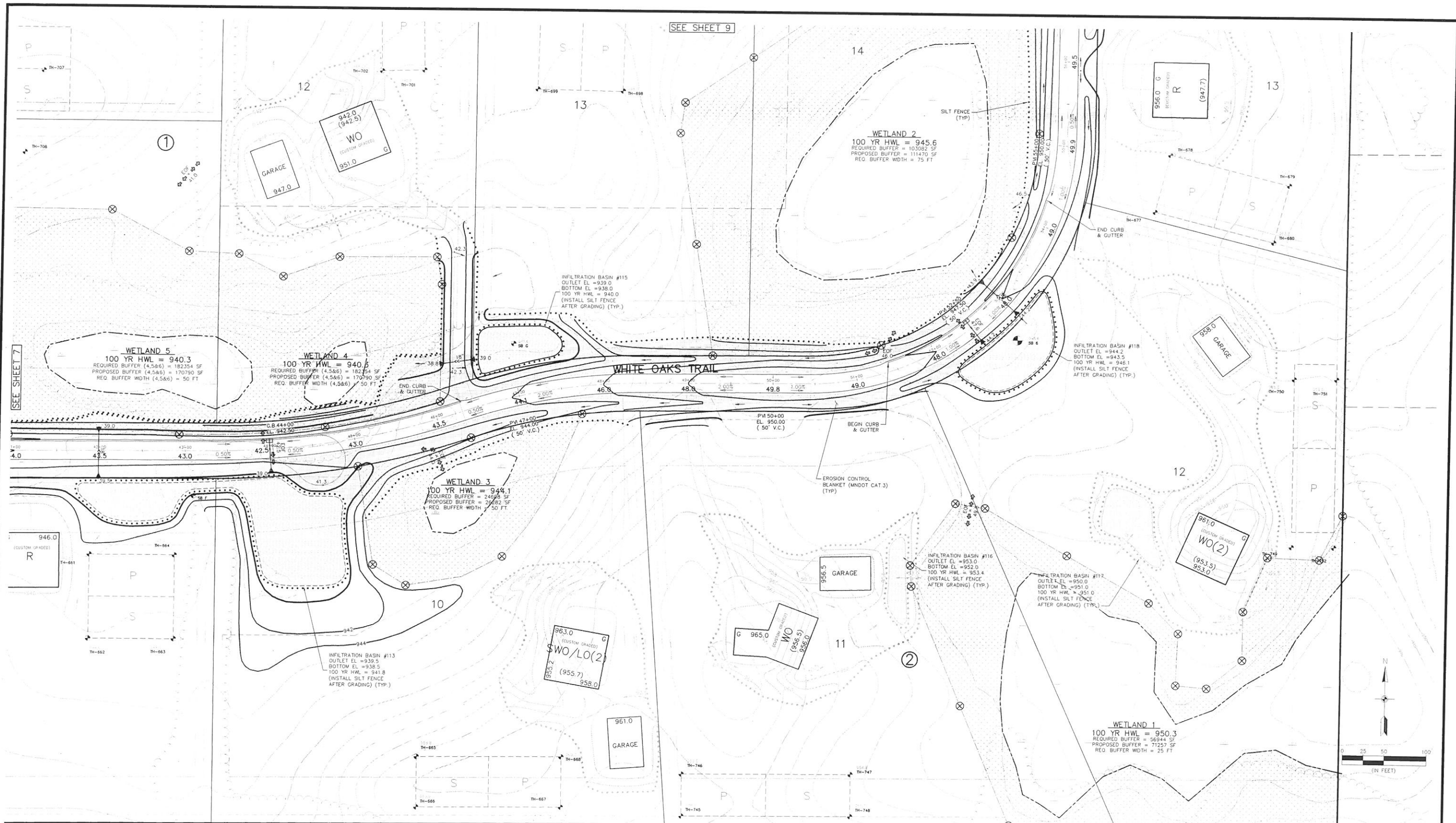
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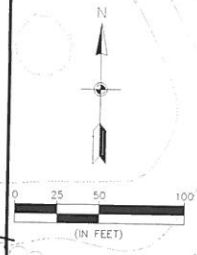
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GRADING, DRAINAGE & EROSION CONTROL PLAN



SEE SHEET 9

SEE SHEET 7



BENCHMARKS	
1.	Minnesota Department of Transportation Geodetic Monument Station No. 85671, Mdot Name: ALEX ELEVATION: 944.84 (NAVD 88)
2.	Minnesota Department of Transportation Geodetic Monument Station No. 33477, Mdot Name: AAMODT MNDOT ELEVATION: 1008.95 (NAVD 88)



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SEE SHEET 6

SEE SHEET 10

SEE SHEET 8



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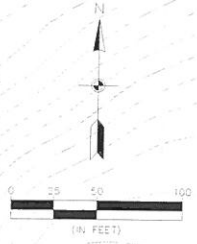
SEE SHEET 11

INFILTRATION BASIN #
OUTLET EL = 916.0
BOTTOM EL = 915.0
100 YR HWL = 920.1
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

INFILTRATION BASIN #120
OUTLET EL = 920.0
BOTTOM EL = 919.0
100 YR HWL = 921.7
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

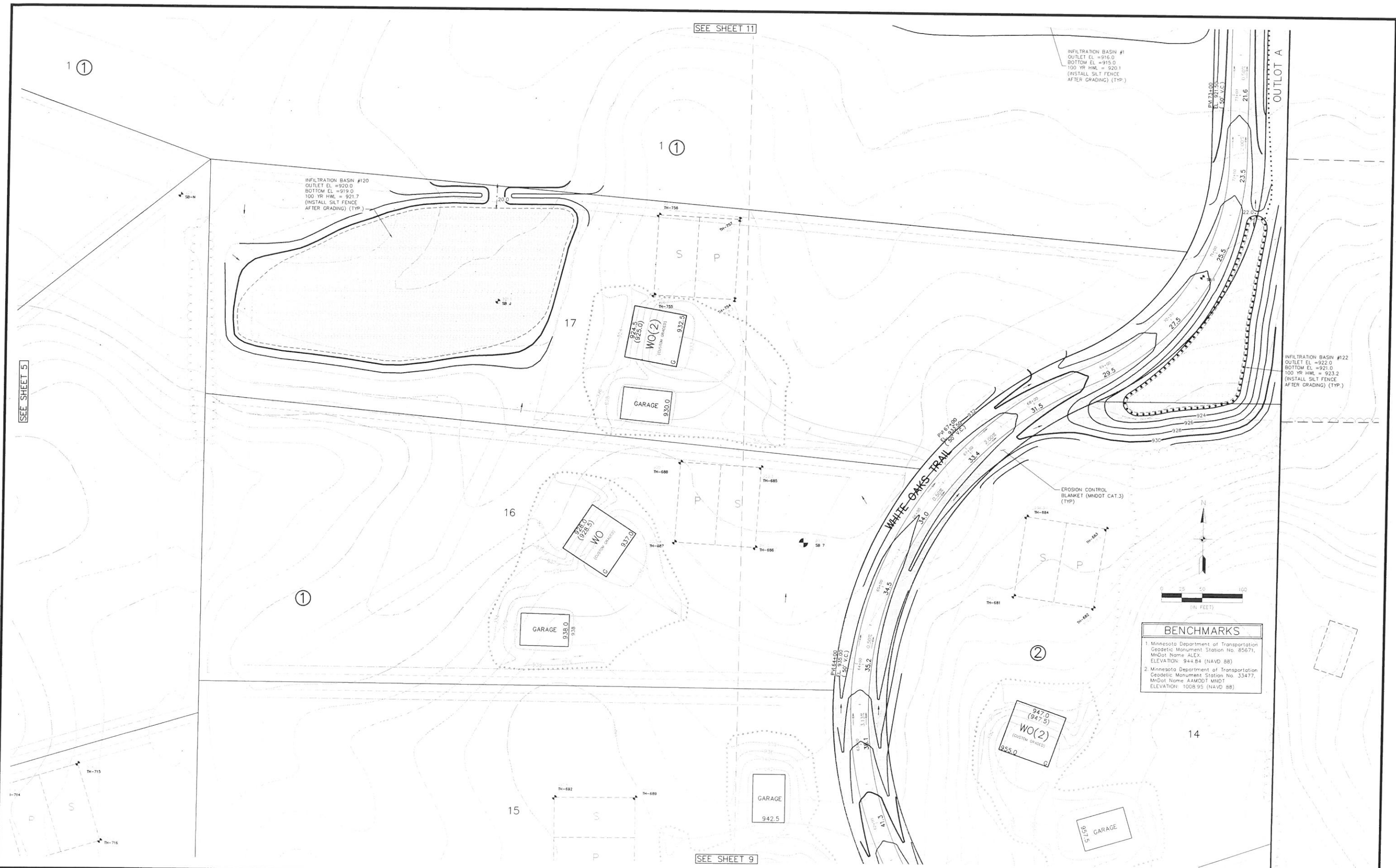
INFILTRATION BASIN #122
OUTLET EL = 922.0
BOTTOM EL = 921.0
100 YR HWL = 923.2
(INSTALL SILT FENCE
AFTER GRADING) (TYP.)

BENCHMARKS
1 Minnesota Department of Transportation
Geodetic Monument Station No. 85671,
MnDot Name ALEX,
ELEVATION: 944.84 (NAVD 88)
2 Minnesota Department of Transportation
Geodetic Monument Station No. 33477,
MnDot Name AAMODT MNDT
ELEVATION: 1008.95 (NAVD 88)



SEE SHEET 5

SEE SHEET 9



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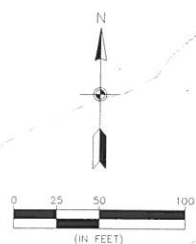
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**GRADING, DRAINAGE &
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SEE SHEET 12

1 ①



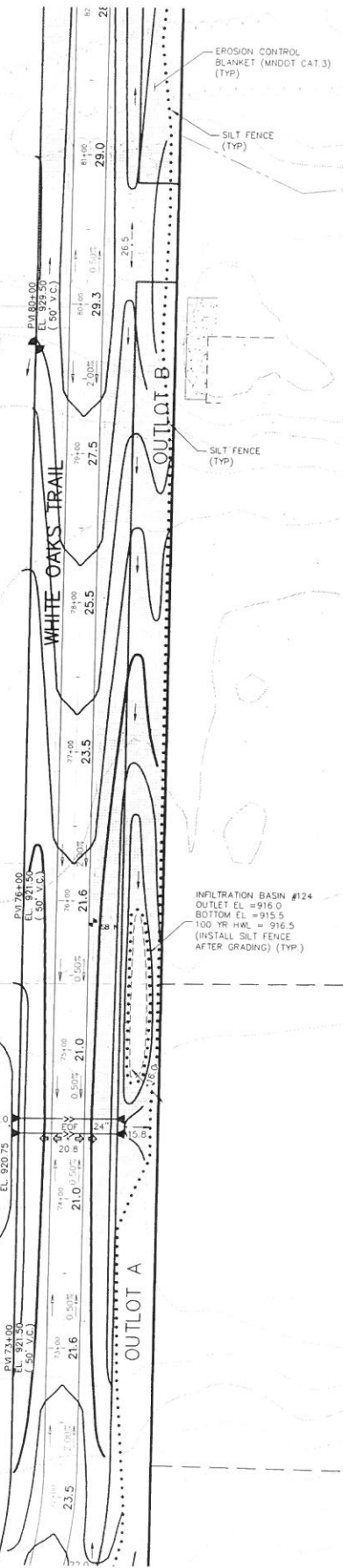
BENCHMARKS	
1.	Minnesota Department of Transportation Geodetic Monument Station No. 85671, MnDot Name ALEX, ELEVATION: 944.84 (NAVD 88)
2.	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name AAMODT MNDT, ELEVATION: 1009.95 (NAVD 88)

1 ①

1 ①

INFILTRATION BASIN #120
OUTLET EL = 920.0
BOTTOM EL = 919.0
100 YR HWL = 921.7
INSTALL SILT FENCE

SEE SHEET 10



INFILTRATION BASIN #1
OUTLET EL = 916.0
BOTTOM EL = 915.0
100 YR HWL = 920.1
(INSTALL SILT FENCE AFTER GRADING) (TYP.)



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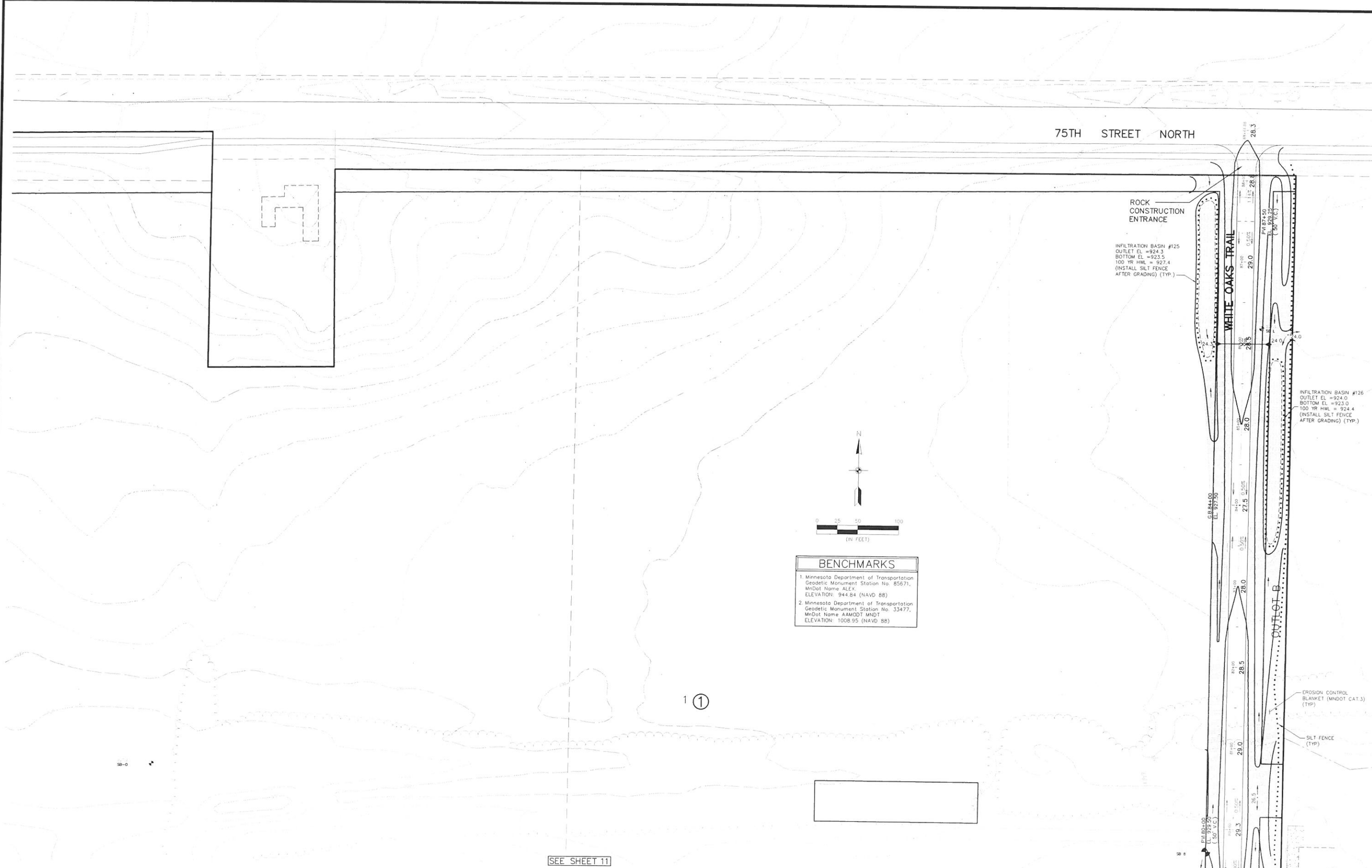
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GRADING, DRAINAGE & EROSION CONTROL PLAN



75TH STREET NORTH

ROCK CONSTRUCTION ENTRANCE

INFILTRATION BASIN #125
 OUTLET EL = 924.3
 BOTTOM EL = 923.5
 100 YR HWL = 927.4
 (INSTALL SILT FENCE AFTER GRADING) (TYP.)

WHITE OAKS TRAIL

INFILTRATION BASIN #126
 OUTLET EL = 924.0
 BOTTOM EL = 923.0
 100 YR HWL = 924.4
 (INSTALL SILT FENCE AFTER GRADING) (TYP.)

OUTLET B

EROSION CONTROL BLANKET (MNDOT CAT.3) (TYP.)

SILT FENCE (TYP.)



BENCHMARKS	
1	Minnesota Department of Transportation Geodetic Monument Station No. 65671, MnDot Name ALEX, ELEVATION: 944.84 (NAVD 88)
2	Minnesota Department of Transportation Geodetic Monument Station No. 33477, MnDot Name AAMQDT MNDT, ELEVATION: 1008.95 (NAVD 88)

1 ①

SEE SHEET 11

Carlson McCain
 • environmental
 • engineering
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 3890 Pheasant Ridge Drive, 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: Joseph T. Radach, P.E.
 Signature: *[Signature]*
 Date: 01/26/18 License #: 45889

Drawn: LOC
 Designed: JTR
 Date: 01/26/18

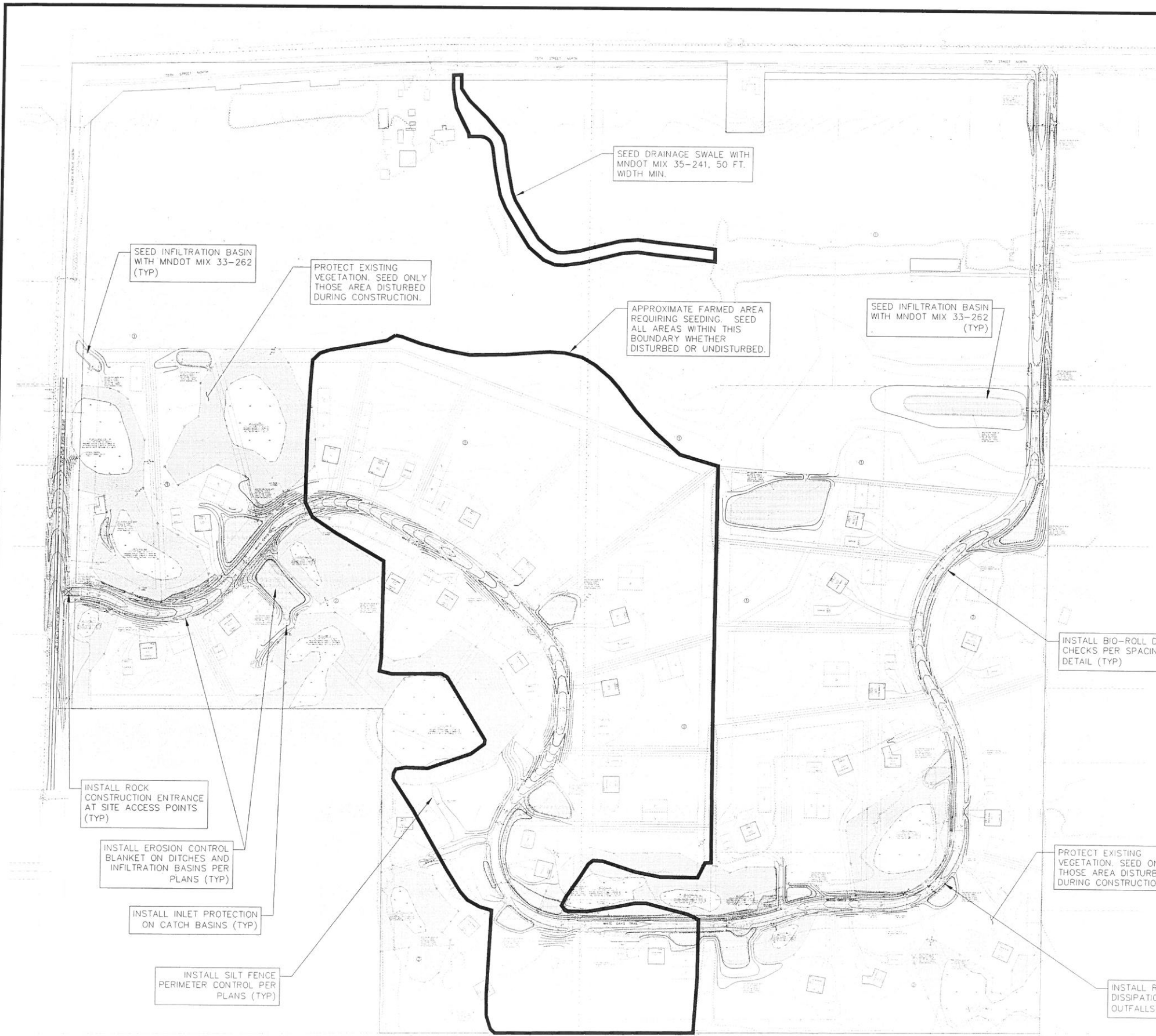
Revisions:

STREETCAR HOLDINGS, LLC.
 3432 Denmark Avenue, Suite 440
 Eagan, MN 55123

THE FARMS OF GRANT
 City of Grant, MN

GRADING, DRAINAGE & EROSION CONTROL PLAN

12 of 14



CONSTRUCTION SEQUENCING NOTES

PRIOR TO LAND DISTURBANCE:

1. VERIFY ALL UTILITIES AND RECORD THE EXISTING ELEVATIONS TO THE SITE.
2. VERIFY THE PERMITS AND THE LOCATION OF THE EXISTING SWALES TO THE PLANS. VERIFY THE LOCATION AND DEPTH OF EXISTING SWALES AND DITCHES AND RECORD THE EXISTING ELEVATIONS TO THE PLANS.
3. VERIFY THE EXISTING ELEVATIONS TO THE PLANS AND RECORD THE EXISTING ELEVATIONS TO THE PLANS.

DURING CONSTRUCTION:

1. TO THE EXTENT POSSIBLE, GRADING SHALL BE PHASED TO MINIMIZE THE AMOUNT OF DISTURBED AREAS DURING CONSTRUCTION.
2. STOCKPILE TOPSOIL AND OTHER EXCAVATED MATERIALS AT LEAST 50 FEET FROM ANY SETBACK BUFFER. EXCEPT AS NOTED OTHERWISE, STOCKPILE SHALL BE COVERED.
3. EXCAVATED AREAS SHALL BE PROTECTED FROM EROSION AND WEAR BY INSTALLING EROSION CONTROL MEASURES AS SHOWN ON THE PLANS.
4. AFTER THE GRADING OF AN AREA IS COMPLETE, THE AREA SHALL BE SEED OR PLANTED WITH TURF OR SOIL SEEDING MIXTURES AS SHOWN ON THE PLANS.
5. AFTER THE GRADING OF AN AREA IS COMPLETE, THE AREA SHALL BE SEED OR PLANTED WITH TURF OR SOIL SEEDING MIXTURES AS SHOWN ON THE PLANS.
6. AFTER THE GRADING OF AN AREA IS COMPLETE, THE AREA SHALL BE SEED OR PLANTED WITH TURF OR SOIL SEEDING MIXTURES AS SHOWN ON THE PLANS.
7. STORM SEWERS/OUTLETS SHALL BE INSTALLED DURING GRADING CONSTRUCTION TO PREVENT DISTURBED AREAS MULTIPLE TIMES DURING CONSTRUCTION. INSTALL ERRORS ON PIPE OUTFALLS AS SHOWN ON THE PLANS IMMEDIATELY AFTER CONSTRUCTION.
8. HIGH CONSTRUCTION ENTRANCES SHALL REMAIN PLACED UNTIL APPROPRIATE BARRIERS ARE IN PLACE ON THE ROAD.

POST CONSTRUCTION:

1. ALL DISTURBED AREAS WITHOUT PERMANENT COVER SHALL BE STABILIZED WITH TURF OR SOIL SEEDING MIXTURES AS SHOWN ON THE PLANS.
2. WHERE STABILIZED VEGETATION HAS BEEN ESTABLISHED OVER THE DISTURBED AREA, ALL EXISTING EROSION CONTROL MEASURES SHALL BE REMOVED. THE FILLING OF THE DISTURBED AREA WITH TURF OR SOIL SEEDING MIXTURES SHALL BE COMPLETED.

TURF ESTABLISHMENT

SOIL PREPARATION:

1. PREPARE THE AREAS TO BE ESTABLISHED WITH TURF PER MNDOT DATA. TOPSOIL SHALL BE REPREPARED TO A MINIMUM DEPTH OF SIX INCHES ON AREAS TO BE ESTABLISHED WITH TURF.
2. ALL AREAS SHALL BE FERTILIZED WITH TYPE 2 FERTILIZER 15-0-0-0 PLACED AT A RATE OF 200 LB PER ACRE.

TURF ESTABLISHMENT:

1. TURF ESTABLISHMENT SHALL BE PER MNDOT DATA, EXCEPT AS MODIFIED BELOW AND SHALL BE COMPLETED AS SOON AS POSSIBLE AFTER GRADING CONSTRUCTION. RAPID ESTABLISHMENT METHODS TYPE 1 AND TYPE 4 SHALL APPLY TO ALL DISTURBED AREAS.
2. ALL AREAS THAT DO NOT REQUIRE EROSION CONTROL BLANKET SHALL BE SEEDING AND MULCHED WITH MULCH-CRETE AT A RATE OF 2 TONS PER ACRE.
3. EROSION CONTROL BLANKET SHALL BE PLACED WITHIN 24 HOURS AFTER SOILING OF SEED. INSTALL EROSION CONTROL BLANKET PER MNDOT DATA AT THE LOCATIONS SHOWN ON THE PLANS.

SEED MIXES:

1. GENERAL AREAS: MNDOT 35-241 OR APPROVED EQUAL.
2. INFILTRATION AREAS: MNDOT 33-262 OR APPROVED EQUAL.
3. WETLAND BUFFERS: MNDOT 35-241 OR APPROVED EQUAL.

MAINTENANCE:

ESTABLISHMENT / SPRING SEEDING:

1. PREPARE SITE - LATE APRIL - MAY 1.
2. SEED - MAY 1 - JUNE 1.

MAINTENANCE:

1. MOW (5-8 INCHES) - EVERY 30 DAYS AFTER PLANTING UNTIL SEPTEMBER 30.
2. WEED CONTROL - MOWING SHOULD HELP CONTROL ANNUAL WEEDS. SPOT SPRAY THistles ETC.

ESTABLISHMENT / FALL SEEDING:

1. PREPARE SITE - LATE AUGUST - EARLY SEPTEMBER.
2. SEED - LATE SEPTEMBER TO NOVEMBER.

MAINTENANCE / FOLLOWING SEASON:

1. MOW (5-8 INCHES) - EVERY 30 DAYS UNTIL LATE MAY AND EARLY JUNE.
2. WEED CONTROL - MOWING SHOULD HELP CONTROL ANNUAL WEEDS. SPOT SPRAY THistles ETC.

SEEDING:

1. COVER WITH GRASSING WITH 2 INCHES OF PLANTING (EXCEPT EXCEPT PLANTING).
2. SEED AND GRASSING - 1-2 INCHES APART IN DRILL ROWS.
3. MAKE SURE SEEDING IS AT LEAST 4 INCHES DEEP.
4. IF THERE IS A FLUSH OF GROWTH FROM FERTILIZER ETC. MOW AS NECESSARY.

YEAR 2 MAINTENANCE:

1. MOW (5-8 INCHES) - EVERY 30 DAYS BETWEEN JUNE 1 - AUGUST 15 BEFORE SEED SET IN.
2. WEED CONTROL - MOWING SHOULD HELP CONTROL ANNUAL WEEDS. SPOT SPRAY THistles ETC.
3. WEED CONTROL - MOWING SHOULD HELP CONTROL ANNUAL WEEDS. SPOT SPRAY THistles ETC.

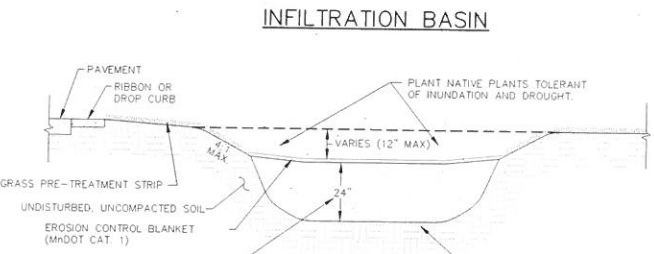
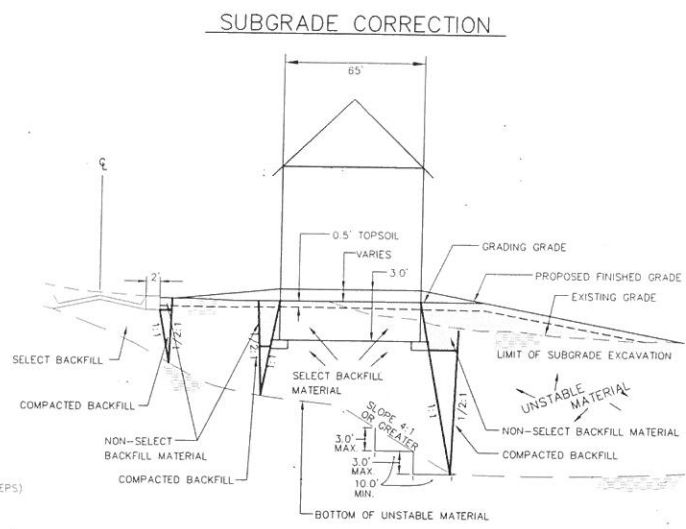
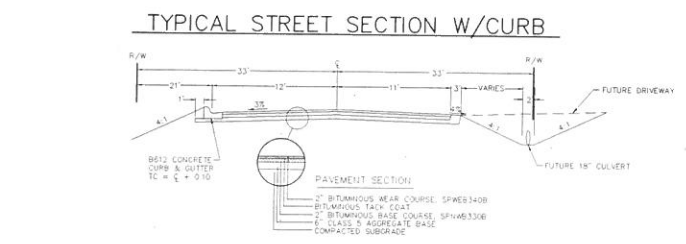
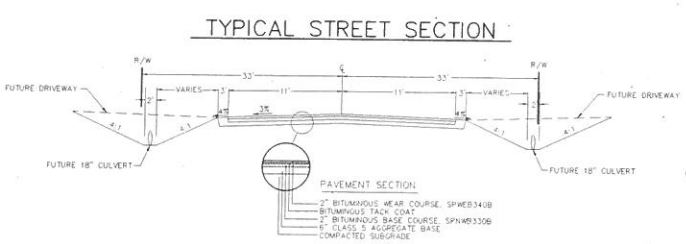
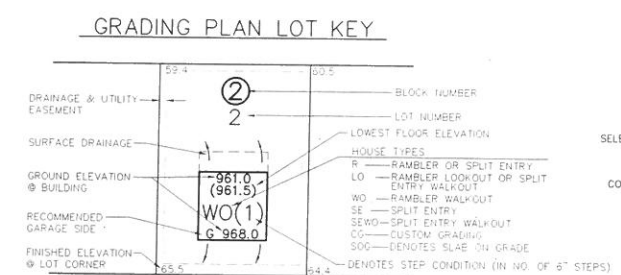
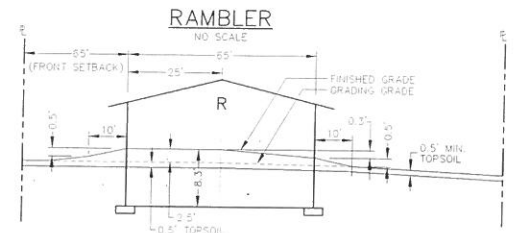
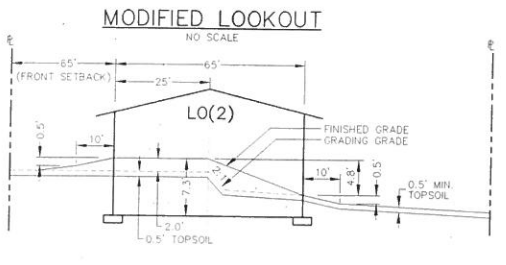
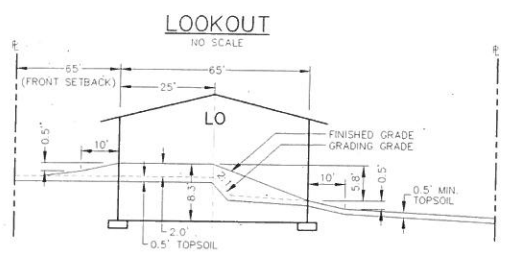
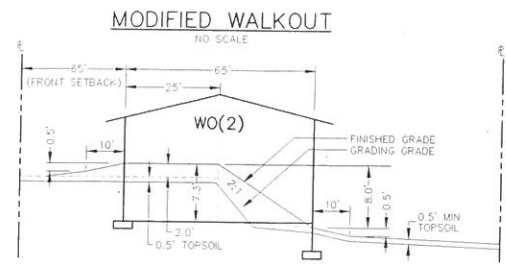
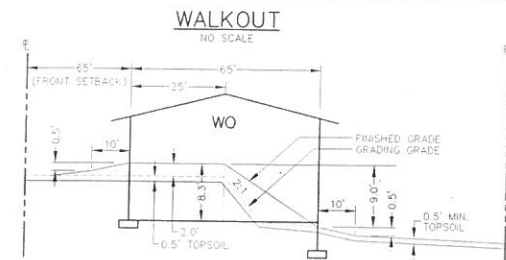
SEEDING:

1. COVER WITH GRASSING WITH 2 INCHES OF PLANTING (EXCEPT EXCEPT PLANTING).
2. SEED AND GRASSING - 1-2 INCHES APART IN DRILL ROWS.
3. MAKE SURE SEEDING IS AT LEAST 4 INCHES DEEP.
4. IF THERE IS A FLUSH OF GROWTH FROM FERTILIZER ETC. MOW AS NECESSARY.

LONG-TERM MAINTENANCE:

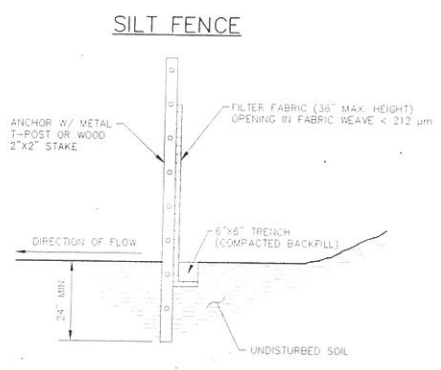
1. WEED CONTROL - SPOT SPRAY THistles ETC.
2. MOW (5-8 INCHES) - EVERY 30 DAYS UNTIL LATE MAY AND EARLY JUNE.
3. WEED CONTROL - MOWING SHOULD HELP CONTROL ANNUAL WEEDS. SPOT SPRAY THistles ETC.
4. WEED CONTROL - MOWING SHOULD HELP CONTROL ANNUAL WEEDS. SPOT SPRAY THistles ETC.



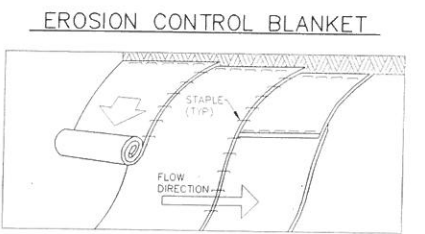


BASIN	FINISHED GRADE	SUBCUT ELEVATION
1	935.0	912.2
101	933.0	931.0
102	929.0	927.0
104	935.0	FIELD VERIFY
105	933.0	FIELD VERIFY
106	947.0	944.0
108	943.0	936.0
109	940.8	938.8
110	939.0	937.0
113	938.5	935.5
115	938.0	936.0
118	943.5	941.5
119	942.5	940.5
120	939.0	937.0
122	923.0	919.0
124	915.5	913.5
125	923.5	921.5
126	923.0	921.0

BASIN 109 AND 110 TO BE SUBCUT TWO FEET AND BACKFILLED WITH SAND/TOPSOIL MIX. SUBSOIL WILL NOT BE GRANULAR.



- NOTES:
- DIG A 6"x6" TRENCH ALONG THE INTENDED SILT FENCE LINE.
 - DRIVE ALL ANCHOR POSTS INTO THE GROUND AT THE DOWNHILL SIDE OF THE TRENCH.
 - POSTS SHALL BE SPACED A MAXIMUM OF 5 FEET APART.
 - LAY OUT SILT FENCE ALONG THE UPHILL SIDE OF THE ANCHOR POSTS AND BACK FILL 6"x6" TRENCH.
 - SECURELY ATTACH SILT FENCE TO ANCHOR POSTS W/ MINIMUM OF THREE ATTACHMENTS PER POST.
 - SEE MNDOT SPECIFICATIONS 2573 & 3886.



- NOTES:
- MNDOT CATEGORY 1 EROSION CONTROL BLANKET SHALL BE INSTALLED IN ALL ROADWAY DRAINAGE DITCHES AND ON ANY SLOPES STEEPER THAN 4:1.
 - PREPARE SOIL BEFORE INSTALLING BLANKETS, INCLUDING APPLICATION OF LIME, FERTILIZER AND/OR SEED.
 - BEGIN AT THE TOP OF THE SLOPE (OR CHANNEL) BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
 - ROLL THE BLANKETS DOWN (STARTING DOWNSTREAM PROCEEDING UPSTREAM) HORIZONTALLY ACROSS THE SLOPE.
 - THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH A MINIMUM 4" OVERLAP.
 - WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH MINIMUM 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
 - IN HIGH FLOW CHANNEL APPLICATIONS, A STAPLE CHECK SLOT IS RECOMMENDED AT 30 TO 40 FOOT INTERVALS. USE A ROW OF STAPLES 4" APART OVER ENTIRE WIDTH OF THE CHANNEL. PLACE A SECOND ROW 4" BELOW THE FIRST ROW IN A STAGGERED PATTERN.
 - THE TERMINAL ENDS OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

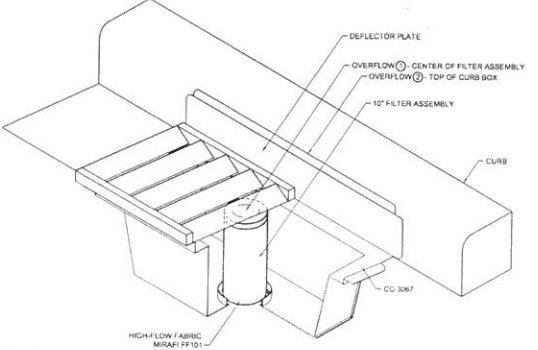
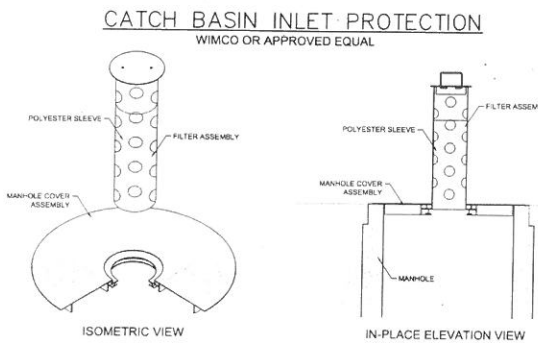
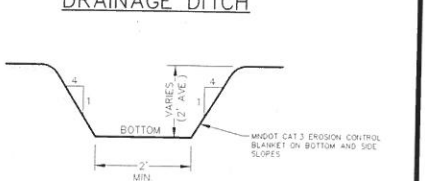
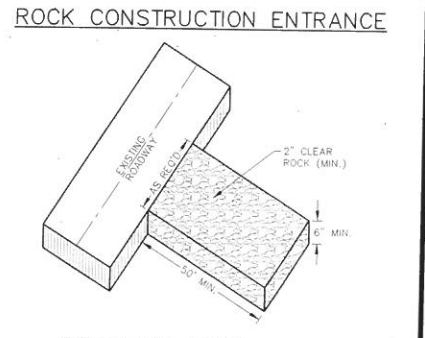
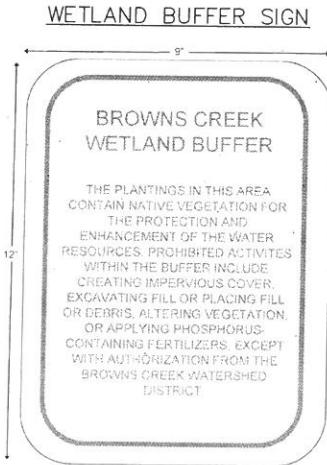
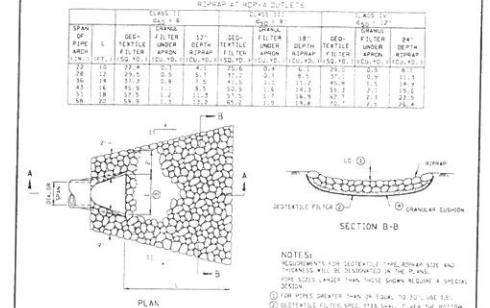


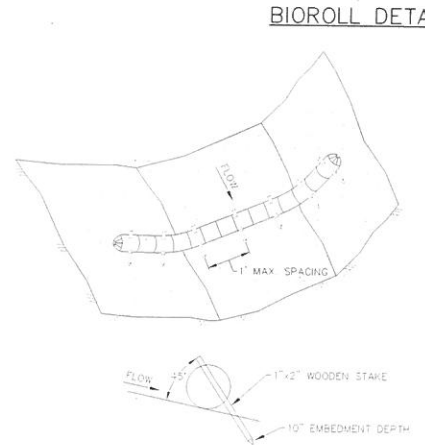
TABLE OF QUANTITIES

REPAIR AT RCP OUTLETS

LINE NO.	DESCRIPTION	QUANTITY
1	18" RCP	1.00
2	18" RCP	1.00
3	18" RCP	1.00
4	18" RCP	1.00
5	18" RCP	1.00
6	18" RCP	1.00
7	18" RCP	1.00
8	18" RCP	1.00
9	18" RCP	1.00
10	18" RCP	1.00
11	18" RCP	1.00
12	18" RCP	1.00
13	18" RCP	1.00
14	18" RCP	1.00
15	18" RCP	1.00
16	18" RCP	1.00
17	18" RCP	1.00
18	18" RCP	1.00
19	18" RCP	1.00
20	18" RCP	1.00
21	18" RCP	1.00
22	18" RCP	1.00
23	18" RCP	1.00
24	18" RCP	1.00
25	18" RCP	1.00
26	18" RCP	1.00
27	18" RCP	1.00
28	18" RCP	1.00
29	18" RCP	1.00
30	18" RCP	1.00
31	18" RCP	1.00
32	18" RCP	1.00
33	18" RCP	1.00
34	18" RCP	1.00
35	18" RCP	1.00
36	18" RCP	1.00
37	18" RCP	1.00
38	18" RCP	1.00
39	18" RCP	1.00
40	18" RCP	1.00
41	18" RCP	1.00
42	18" RCP	1.00
43	18" RCP	1.00
44	18" RCP	1.00
45	18" RCP	1.00
46	18" RCP	1.00
47	18" RCP	1.00
48	18" RCP	1.00
49	18" RCP	1.00
50	18" RCP	1.00



BASIN	ELEVATION A	ELEVATION B	ELEVATION C	DISTANCE X	DISTANCE Y
104	935.0	936.0	937.2	5.0	15.0
105	933.0	934.0	934.9	5.0	15.0
106	947.0	948.0	949.6	5.0	15.0
110	939.0	939.24	943.8	10.0	25.0
119	942.5	943.5	944.2	5.0	15.0
120	939.0	920.0	922.2	5.0	15.0
122	923.0	923.0	927.7	10.0	15.0
124	915.5	916.0	917.0	5.0	15.0
126	923.0	924.0	924.9	5.0	15.0



RECOMMENDED SPACING BETWEEN DITCH CHECKS

DITCH GRADE (%)	SPACING (FT.)
2	100
4	75
6	50

- NOTES:
- ENDS OF BIOROLL SHALL BE A MINIMUM OF 18" HIGHER THAN BOTTOM OF FLOW PATH.
 - STAKES SHALL BE DRIVEN THROUGH THE BACK HALF OF THE BIOROLL.
 - SEE MNDOT SPECS 2573 & 3897.

Carlson McCain
 • environmental
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 3890 Pheasant Ridge Drive NE, Suite 100
 Blaine, MN 55449
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 Fax: (763) 489-7959
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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.
 Print Name: Joseph T. Radach, P.E.
 Signature: [Signature]
 Date: 01/26/18 License #: 45889

Drawn: JJO
 Designed: JTR
 Date: 01/26/18
 Revisions:

STREETCAR HOLDINGS, LLC.
 3432 Denmark Avenue, Suite 440
 Eagan, MN 55123

THE FARMS OF GRANT
 City of Grant, MN

DETAILS
 14 of 14

Tradewell Soil Testing
 18330 Dahlia Street NW
 Cedar, MN 55011

Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #627	Boring #628	Boring #629	Boring #630
0"- 12" Topsoil Loam 10YR 3/2	0"- 12" Topsoil Loam 10YR 3/1 3/2	0"- 8" Topsoil Loam 10YR 3/2	0"- 6" Topsoil Sandy Loam 10YR 3/2
12"- 28" Fine Sandy Loam 10YR 4/4	12"- 26" Fine Sandy Loam 10YR 4/4	8"- 26" Sandy Loam 7.5YR 4/4 4/6	6"- 20" Coarse Sand & Gravel 10YR 4/6
28"- 44" Silty Loam 10YR 4/4 4/6	26"- 50" Silty Loam 10YR 4/6 4/4 4/3	26"- 56" Coarse Loamy Sand & Gravel 5YR 3/4 3/3	**Hit Large Rock
44"- 60" Coarse Loamy Sand & Gravel 5YR 4/4		**Hit Large Rock	
Faint Mottles @ 50" Dry Hole	Mottles @ 46" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



Mark Tradewell
 MPCA #307

Tradewell Soil Testing
 18330 Dahlia Street NW
 Cedar, MN 55011

Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #631	Boring #632	Boring #633	Boring #634
0"- 8" Topsoil Loam 10YR 3/2	0"- 10" Topsoil Fine Sandy Loam 10YR 3/2	0"- 8" Topsoil Loamy Fine Sand 10YR 3/2	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2 3/3
8"- 32" Sandy Loam & Gravel 7.5YR 4/4	10"- 48" Fine Sandy Loam 10YR 3/4 4/4	8"- 18" Loamy Fine Sand 10YR 3/4 4/4	12"- 28" Loamy Fine Sand 10YR 3/3 4/3
*Hit Large Rock	48"- 52" Sandy Loam & Gravel 10YR 4/6	18"- 28" Sandy Loam & Gravel 10YR 4/6	28"- 48" Fine Sandy Loam 10YR 4/4
	*Hit Large Rock	*Hit Large Rock	48"- 64" Coarse Loamy Sand & Gravel 7.5YR 3/4
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Tradewell Soil Testing
 18330 Dahlia Street NW
 Cedar, MN 55011

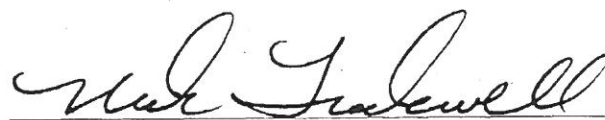
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #635	Boring #636	Boring #637	Boring #638
0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Loam 10YR 3/2	0"- 8" Topsoil Loam 10YR 3/2 3/3	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2
8"- 20" Sandy Loam & Gravel 7.5YR 4/4	10"- 22" Sandy Loam & Gravel 7.5YR 4/4	8"- 30" Fine Sandy Loam 7.5YR 4/6	8"- 26" Fine Sandy Loam 10YR 4/6
*Hit Large Rock	*Hit Large Rock	30"- 36" Sandy Loam & Gravel 7.5YR 4/4	26"- 40" Loamy Sand & Gravel 7.5YR 4/4
		*Hit Large Rock	*Hit Large Rock
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



Mark Tradewell
 MPCA #307

Tradewell Soil Testing
 18330 Dahlia Street NW
 Cedar, MN 55011

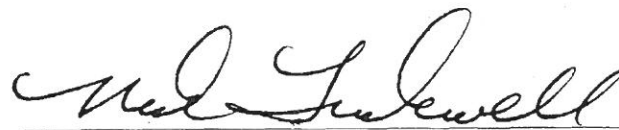
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #639	Test Pit #640	Test Pit #641	Test Pit #642
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 16" Topsoil Loam 10YR 3/2
12"- 30" Loamy Fine Sand 10YR 3/4 4/4	8"- 24" Fine Sandy Loam 10YR 4/6	8"- 30" Fine Sandy Loam 10YR 4/6	16"- 36" Fine Sandy Loam 10YR 4/6
30"- 42" Fine Sandy Loam 10YR 4/6	24"- 72" Medium Sand 10YR 4/4 5/4	30"- 70" Medium Sand 10YR 4/4 5/4 5/3	36"- 54" Silt Loam 2.5Y 4/4
42"- 64" Medium Fine Sand 10YR 4/4 5/4			54"- 64" Sandy Loam 10YR 4/6
64"- 77" Medium Sand 10YR 5/3			
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 54" Dry Hole



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SOIL BORING TEST REPORT

Test Pit #643	Test Pit #644	Test Pit #645	Test Pit #646
0"- 16" Topsoil Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 14" Topsoil Loam/ Fine Sandy Loam 10YR 3/2	0"- 20" Topsoil Loam 10YR 3/2
16"- 34" Fine Sandy Loam 10YR 4/6	8"- 30" Fine Sandy Loam 10YR 4/6	14"- 36" Fine Sandy Loam 10YR 4/6	20"- 44" Silt Loam 10YR 4/4 4/6
34"- 56" Silt Loam 2.5Y 4/4	30"- 72" Medium Sand 10YR 4/4 5/4 5/3	36"- 56" Medium Sand 7.5YR 4/4	44"- 60" Sandy Loam & Gravel 7.5YR 4/4
56"- 64" Sandy Loam 10YR 4/6		56"- 70" Coarse Sand 10YR 4/4 5/4	
Mottles @ 56" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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 18330 Dahlia Street NW
 Cedar, MN 55011

Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #647	Test Pit #648	Test Pit #649	Test Pit #650
0"- 12" Topsoil Loam 10YR 3/2	0"- 12" Topsoil Loam 10YR 3/2	0"- 10" Topsoil Sandy Loam 10YR 3/2	0"- 10" Topsoil Sandy Loam 10YR 3/2
12"- 36" Silty Loam 7.5YR 4/4 4/6	12"- 24" Fine Sandy Loam 10YR 4/6 4/4	10"- 20" Loamy Sand 10YR 3/4	10"- 22" Loamy Sand 10YR 3/4
36"- 60" Silt 10YR 4/3	24"- 36" Coarse Loamy Sand & Gravel 10YR 4/6	20"- 64" Coarse Sand & Gravel 10YR 4/4 4/6	22"- 66" Coarse Sand & Gravel 10YR 4/4 4/6
	36"- 60" Silt 10YR 4/3 4/2	With Silt Band @ 42"	With Silt Band @ 48"
Mottles @ 36" Dry Hole	Mottles @ 36" Dry Hole	Mottles @ 42" Dry Hole	Mottles @ 48" Dry Hole



Mark Tradewell
 MPCA #307

Tradewell Soil Testing
 18330 Dahlia Street NW
 Cedar, MN 55011

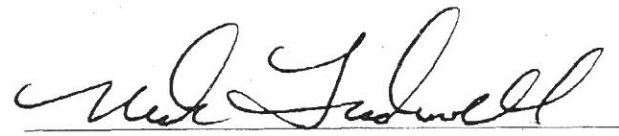
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #651	Test Pit #652	Test Pit #653	Test Pit #654
0"- 10" Topsoil Sandy Loam 10YR 3/2	0"- 14" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 14" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2
10"- 22" Fine Sandy Loam 10YR 4/6	14"- 56" Silty Loam 7.5YR 4/4	14"- 56" Silty Loam 7.5YR 4/4	12"- 24" Loamy Sand 10YR 3/4 4/4
22"- 50" Coarse Sand & Gravel 7.5YR 4/4	56"- 66" Silt 10YR 4/3 4/2	56"- 66" Silt 10YR 4/3 4/2	24"- 56" Sandy Loam & Gravel 7.5YR 3/3 3/4
50"- 64" Silt 5YR 4/4			*(Cemented)
Mottles @50" Dry Hole	Mottles @ 56" Dry Hole	Mottles @ 56" Dry Hole	Mottles @ 36" Dry Hole


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Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #655	Test Pit #656	Test Pit #657	Test Pit #658
0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam 10YR 3/2	0"- 20" Topsoil Loam/ Fine Sandy Loam 10YR 3/1 3/2	0"- 10" Topsoil Sandy Loam 10YR 3/2
12"- 24" Loamy Sand 10YR 3/4 4/4	12"- 36" Silty Loam 7.5YR 4/6	20"- 48" Silt 2.5Y 4/3 4/2 5/2	10"- 42" Coarse Sand & Gravel 10YR 4/4 4/6
24"- 54" Sandy Loam & Gravel 7.5YR 3/3 3/4	36"- 62" Silt 10YR 4/3 4/2		42"- 66" Sandy Loam/ Loam 5YR 4/4
*(Cemented)			
Mottles @36" Dry Hole	Mottles @ 36" Dry Hole	Mottles @ 20" Dry Hole	No Mottles Found Dry Hole



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Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #659	Test Pit #660	Test Pit #661	Test Pit #662
0"- 14" Topsoil Loam 10YR 3/2	0"- 16" Topsoil Loam/ Fine Sandy Loam 10YR 3/1 3/2	0"- 20" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2	0"- 24" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2
14"- 30" Fine Sandy Loam 10YR 4/6 4/4	16"- 32" Fine Sandy Loam 10YR 4/6 4/4	20"- 38" Silt Loam 2.5Y 4/4 4/3	24"- 48" Silt Loam 2.5Y 4/4 4/3
20"- 62" Silt Loam 10YR 4/6	32"- 54" Silt 2.5Y 4/4 4/3 4/2	38"- 58" Sandy Loam & Gravel 5YR 4/4	48"- 60" Sandy Loam & Gravel 5YR 4/4
		*(Cemented)	*(Cemented)
Mottles @ 48" Dry Hole	Mottles @ 32" Dry Hole	Mottles @ 38" Dry Hole	Mottles @ 30" Dry Hole



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Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #663	Test Pit #664	Test Pit #665	Test Pit #666
0"- 22" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2	0"- 20" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2	0"- 12" Topsoil Fine Sandy Loam 120YR 3/2	0"- 14" Topsoil Fine Sandy Loam 10YR 3/2
22"- 48" Silt Loam 2.5Y 4/4 4/3	20"- 36" Silt Loam 10YR 4/6	12"- 36" Sandy Loam & Gravel 2.5Y 4/4	14"- 40" Sandy Loam & Gravel 2.5Y 4/4
48"- 58" Sandy Loam & Gravel 5YR 4/4	36"- 48" Sandy Loam & Gravel 5YR 4/4	36"- 60" Sandy Loam & Gravel 5YR 4/4	40"- 64" Sandy Loam & Gravel 5YR 4/4
*(Cemented)	*(Cemented)		
Mottles @ 32" Dry Hole	Mottles @ 32" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Date: January 16th, 2017

Name: One Grant Holdings, LLC

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SOIL BORING TEST REPORT

Test Pit #667	Test Pit #668		
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	**No borings or test pits were recorded	
12"- 26" Sandy Loam & Gravel 10YR 3/6 4/6	12"- 26" Sandy Loam & Gravel 10Yr 3/6 4/6	on numbers #669- #676	
26"- 60" Coarse Sand & Gravel 10YR 4/6 4/4	26"- 64" Coarse Sand & Gravel 10YR 4/4 5/4		
No Mottles Found Dry Hole	No Mottles Found Dry Hole		



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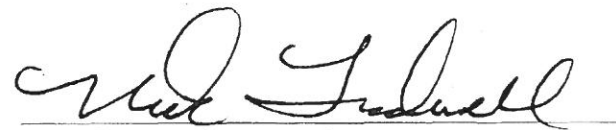
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #677	Test Pit #678	Test Pit #679	Test Pit #680
0"- 12" Topsoil Loamy Fine Sand 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2
12"- 26" Loamy Fine Sand 10YR 4/6	12"- 24" Fine Sandy Loam 10YR 4/6	12"- 34" Fine Sandy Loam 7.5YR 4/4	12"- 30" Fine Sand 10YR 4/6
26"- 58" Medium Sand 7.5YR 4/4	24"- 40" Medium Fine Sand 10YR 4/6	34"- 56" Medium Sand 10YR 4/6 4/4 5/4	30"- 60" Medium Sand 10YR 4/6 4/4 5/4
	40"- 60" Coarse Sand & Gravel 10YR 4/4 4/3		
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole


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Name: One Grant Holdings, LLC

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SOIL BORING TEST REPORT

Test Pit #681	Test Pit #682	Test Pit #683	Test Pit #684
0"- 14" Topsoil Fine Sandy Loam 10YR 3/2	0"- 18" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2	0"- 30" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2	0"- 16" Topsoil Loam/ Sandy Loam 10YR 3/2
14"- 26" Fine Sandy Loam 10YR 4/6	18"- 36" Fine Sandy Loam 10YR 4/6 4/4	30"- 44" Fine Sandy Loam 10YR 4/6 4/4 4/3	16"- 28" Fine Sandy Loam 10YR 4/6
26"- 48" Coarse Sand & Gravel 7.5YR 4/4 4/6	36"- 44" Silt Loam 10YR 4/3 4/2		28"- 54" Coarse Sand & Gravel 7.5YR 4/4 4/6
48"- 62" Fine Sandy Loam 5YR 4/4			
No Mottles Found Dry Hole	Mottles @ 36" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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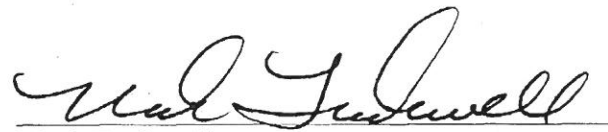
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #685	Test Pit #686	Test Pit #687	Test Pit #688
0"- 14" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 18" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 20" Topsoil Loam/ Fine Sandy Loam 10YR 3/2	0"- 24" Topsoil Loam/ Fine Sandy Loam 10YR 3/2
14"- 40" Fine Sandy Loam 10YR 4/4 4/6	18"- 42" Fine Sandy Loam 10YR 4/6 4/4	20"- 56" Fine Sandy Loam 10YR 4/6 4/4	24"- 36" Fine Sandy Loam 7.5YR 4/4
40"- 48" Fine Sandy Loam 5YR 3/4 4/4	42"- 60" Loamy Sand 10YR 4/4		36"- 50" Coarse Loamy sand & Gravel 10YR 4/6
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Name: One Grant Holdings, LLC

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SOIL BORING TEST REPORT

Test Pit #689	Test Pit #690	Test Pit #691	Test Pit #692
0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 14" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 15" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2
12"- 40" Fine Sandy Loam 10YR 4/4 4/6	14"- 48" Silt Loam 10YR 4/6 4/4	15"- 48" Silt Loam 10YR 4/6 4/4	12"- 42" Fine Sandy Loam 10YR 4/6 4/4
40"- 48" Very Fine Sand 10YR 4/3 4/2	48"- 64" Fine Sandy Loam 10YR 4/4	48"- 62" Fine Sandy Loam 10YR 4/4	
Mottles @ 40" Dry Hole	Mottles @ 60" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Tradewell Soil Testing
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Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #693	Boring #694	Boring #695	Boring #686
0'' - 8'' Topsoil Sandy Loam 10YR 3/2	0'' - 8'' Topsoil Sandy Loam 10YR 3/2 3/3	0'' - 8'' Topsoil Loamy Sand 10YR 3/2	0'' - 10'' Topsoil Loamy Sand 10YR 3/2
8'' - 20'' Coarse Sand & Gravel 10YR 3/4	8'' - 28'' Sandy Loam & Gravel 10YR 3/4 4/4 4/6	8'' - 30'' Sandy Loam 10YR 3/4	10'' - 30'' Medium Loamy Sand 10YR 3/4
20'' - 58'' Sandy Loam & Gravel 10YR 3/4 4/4	*Hit Large Rock	30'' - 38'' Loamy Sand 10YR 4/6	30'' - 64'' Coarse Sand 10YR 3/4 4/4
*Hit Large Rock		*Hit Large Rock	*Hit Large Rock
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #697	Boring #698	Boring #699	Boring #700
0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Loamy Fine Sand 10YR 3/2	0"- 8" topsoil Loamy Fine Sand 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2
8"- 24" Fine Sandy Loam 10YR 3/4 4/4	10"- 36" Loamy Sand 10YR 3/3 3/4	8"- 24" Loamy Fine Sand 10YR 3/4	8"- 30" Sandy Loam 10YR 4/4 4/6
*Hit Large Rock	36"- 54" Fine Sandy Loam 10YR 4/6	24"- 36" Fine Sandy Loam 10YR 4/6	30"- 68" Loamy Fine Sand 10YR 4/6
	*Hit Large Rock	36"- 77" Medium Coarse Sand 10YR 4/6 4/4 4/3 With Loamy Bands 10YR 3/4	68"- 77" Coarse Sand 10YR 4/4 With Loamy Bands 10YR 3/4
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found. Dry Hole



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MPCA #307

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18330 Dahlia Street NW
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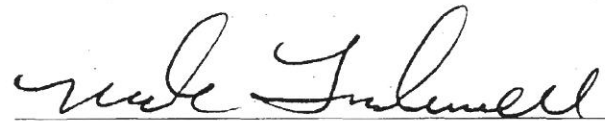
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #701	Test Pit #702	Test Pit #703	Test Pit #704
0"- 12" Topsoil Loamy Fine Sand 10Yr 3/2	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2	0"- 10" Topsoil Sandy Loam 10YR 3/2	0"- 12" Topsoil Sandy Loam 10YR 3/2
12"- 30" Fine Sandy Loam 10YR 4/6	12"- 60" Loamy Fine Sand 10YR 4/6 4/4	10"- 30" Sandy Loam 10YR 3/4 4/4	12"- 36" Sandy Loam 10YR 3/4 4/4
30"- 52" Loamy Fine Sand 10YR 4/6		30"- 50" Medium Sand 10YR 4/6	36"- 58" Medium Coarse Sand & Gravel 10YR 4/6 4/4
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Name: One Grant Holdings, LLC

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SOIL BORING TEST REPORT

Test Pit #705	Test Pit #706	Test Pit #707	Test Pit #708
0"- 12" Topsoil Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2
12"- 40" Fine Sandy Loam 7.5YR 4/6	12"- 34" Fine Sandy Loam 10YR 4/6	10"- 42" Fine Sandy Loam 10YR 4/6	12"- 44" Fine Sandy Loam 10YR 4/6
40"- 58" Coarse Sand 10YR 4/4	34"- 48" Silt Loam 2.5Y 4/4 4/3	42"- 54" Coarse Loamy Sand 10YR 4/6 4/4	44"- 50" Silt Loam 10YR 4/3
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 44" Dry Hole



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Name: One Grant Holdings, LLC

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SOIL BORING TEST REPORT

Test Pit #709	Test Pit #710	Test Pit #711	Test Pit #712
0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 14" Topsoil Loam 10YR 3/1 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2
12"- 30" Fine Sandy Loam 10YR 4/4 4/6	14"- 28" Fine Sandy Loam 10YR 4/3 4/4	12"- 36" Fine Sandy Loam 10YR 4/4 4/6	12"- 30" Loamy Fine Sand 10YR 4/6 4/4
30"- 54" Sandy Loam & Gravel 10YR 4/6	28"- 44" Silt Loam 5YR 4/4 4/3 4/2	36"- 52" Loam/ Sandy Loam 10YR 4/6	30"- 60" Coarse Sand & Gravel 10YR 4/4 4/3
Mottles @ 48" Dry Hole	Mottles @ 28" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole


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SOIL BORING TEST REPORT

Test Pit #713	Test Pit #714	Test Pit #715	Test Pit #716
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 20" Topsoil Loam/ Sandy Loam 10YR 3/1 3/2
12"- 30" Coarse Loamy Sand & Gravel 10YR 3/4 4/	12"- 30" Fine Sandy Loam 10YR 4/4	12"- 42" Fine Sandy Loam 10YR 4/4 4/6	20"- 32" Loamy Fine Sand 10YR 3/3 4/3
30"- 72" Coarse Sand 10YR 4/4 5/4 With Loamy Bands 10YR 3/4	30"- 56" Silt Loam 10YR 4/6	42"- 52" Very Fine Sand 10YR 4/4 4/3 4/2	32"- 52" Fine Sandy Loam 10YR 4/6
	56"- 70" Medium Coarse Sand 10YR 4/4 4/6		
No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 38" Dry Hole	No Mottles Found Dry Hole



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SOIL BORING TEST REPORT

Test Pit #717	Test Pit #718	Test Pit #719	Test Pit #720
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2
12"- 24" Fine Sandy Loam 10YR 3/4 4/4	12"- 36" Fine Sandy Loam 10YR 4/6	12"- 44" Fine Sandy Loam 10YR 4/6	12"- 36" Fine Sandy Loam 7.5YR 4/4 4/6
24"- 42" Coarse Sandy Loam & Gravel 10YR 4/6	36"- 48" Sandy Loam & Gravel 10YR 4/6 4/4	44"- 52" Silt Loam 10YR 4/4 4/3	36"- 48" Loamy Fine Sand 10YR 4/6
42"- 54" Fine Sandy Loam 10YR 4/6			
No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 44" Dry Hole	No Mottles Found Dry Hole



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SOIL BORING TEST REPORT

Test Pit #721	Test Pit #722	Test Pit #723	Test Pit #724
0"- 20" Topsoil Fine Sandy Loam 10YR 3/1 3/2	0"- 18" Topsoil Loam 10YR 3/2	0"- 14" Topsoil Loam 10YR 3/2	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2
20"- 32" Fine Sandy Loam 10YR 4/4	18"- 42" Silty Loam 10YR 4/6	14"- 36" Silt Loam 10YR 4/6	12"- 36" Loamy Fine Sand 10YR 4/6
32"- 48" Sandy Loam & Gravel 7.5YR 3/4 4/4	42"- 56" Sandy Loam & Gravel 10YR 4/6 4/4	36"- 66" Medium Coarse Sand & Gravel 10YR 4/6 4/4	36"- 54" Medium Fine Sand 10YR 4/4
No Mottles Found Dry Hole	Mottles @ 48" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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SOIL BORING TEST REPORT

Test Pit #725	Test Pit #726	Test Pit #727	Test Pit #728
0"- 16" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 16" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 12" Topsoil Loam/ Sandy Loam 10YR 3/2
16"- 32" Fine Sandy Loam 10YR 4/6 4/4	16"- 36" Silty Loam 10YR 4/6 4/4	12"- 36" Fine Sandy Loam 10YR 4/6	12"- 34" Fine Sandy Loam 10YR 4/6
32"- 58" Coarse Sand & Gravel 10YR 4/6 3/6	36"- 60" Loamy Sand & Gravel 10YR 4/6 4/4	36"- 64" Coarse Sand & Gravel 10YR 4/4 4/6	34"- 60" Coarse Sand & Gravel 10YR 4/4 4/3
	60"- 68" Medium Sand 10YR 4/4 5/4		
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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Name: One Grant Holdings, LLC

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SOIL BORING TEST REPORT

Boring #729	Boring #730	Boring #731	Boring #732
0"- 10" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Fine Sandy Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2
10"- 30" Fine Sandy Loam 10YR 4/6	10"- 32" Fine Sandy Loam 10YR 4/6	8"- 24" Fine Sandy Loam 10YR 4/6	8"- 18" Coarse Loamy Sand & Gravel 10YR 4/6
30"- 36" Loamy Sand & Gravel 7.5YR 4/4 4/6	32"- 54" Loamy Fine Sand 7.5YR 4/4	*Hit Large Rock	*Hit Large Rock
*Hit large Rock	54"- 62" Loamy Fine Sand 10YR 4/4 4/3		
No Mottles Found Dry Hole	Mottles @ 56" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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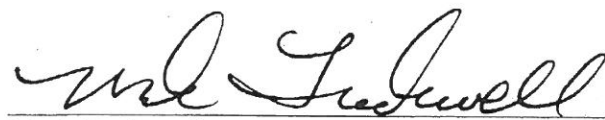
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #733	Boring #734	Boring #735	Boring #736
0"- 8" Topsoil Loam/ Sandy Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Loamy Fine Sand 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2
8"- 22" Fine Sandy Loam 10YR 4/6	8"- 28" Fine Sandy Loam 10Yr 4/6	10"- 20" Loamy Fine Sand 10YR 3/4 4/4	8"- 24" Fine Sandy Loam 10YR 4/6
22"- 48" Medium Coarse Sand 7.5YR 4/4 4/6	28"- 48" Coarse Sand & Gravel 7.5YR 4/4 4/6	20"- 32" Loamy Sand & Gravel 7.5YR 3/4	24"- 36" Coarse Sand & Gravel 7.5YR 4/4 4/6
*Hit Large Rock	*Hit Large Rock	*Hit Large Rock	*Hit Large Rock
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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SOIL BORING TEST REPORT

Boring #737	Boring #738	Boring #739	Boring #740
0"- 12" Topsoil Loam 10YR 3/1	0"- 6" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Fine Sandy Loam 10YR 3/2	0"- 8" Topsoil Fine Sandy Loam 10YR 3/2
12"- 26" Fine Sandy Loam 10YR 3/4 4/4	6"- 18" Coarse Sandy Loam & Gravel 10YR 3/4 4/4	10"- 36" Fine Sandy Loam 10YR 3/4 4/4	8"- 20" Loamy Fine Sand 10YR 3/4 4/4
26"- 44" Coarse Sandy Loam & Gravel 7.5YR 3/3 3/4	*Hit Large Rock	36"- 48" Silty Clay Loam 2.5Y 4/4	20"- 40" Sandy Loam & Gravel 7.5YR 3/4
44"- 50" Silt Loam 2.5Y 4/4			40"- 52" Coarse Sand & Gravel 10YR 4/4
*Hit Large Rock			*Hit Large Rock
No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 36" Dry Hole	No Mottles Found Dry Hole



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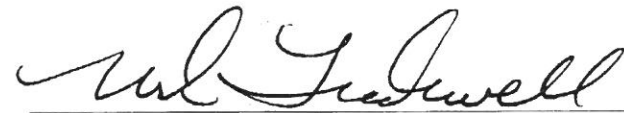
Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Boring #741	Boring #742	Boring #743	Boring #744
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Fine Sandy Loam 10YR 3/2	0"- 10" Topsoil Loamy Fine Sand 10YR 3/2	0"- 10" Topsoil Loamy Fine Sand 10YR 3/2
12"- 26" Fine Sandy Loam 10YR 3/4 4/4	10"- 26" Fine Sandy Loam 10YR 3/4 4/4 4/6	10"- 26" Sandy Loam & Gravel 7.5YR 3/4	10"- 38" Fine Sandy Loam 10YR 3/4 4/4
26"- 40" Sandy Loam & Gravel 7.5YR 3/4 4/4	26"- 60" Sandy Loam & Gravel 7.5YR 3/4	*Hit Large Rock	38"- 52" Silty Loam 10YR 4/6 4/4
40"- 66" Coarse Sand & Gravel 10YR 3/4 4/4	*Hit Large Rock		*Hit Large Rock
*Hit Large Rock			
No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



Mark Tradewell
 MPCA #307

Tradewell Soil Testing
18330 Dahlia Street NW
Cedar, MN 55011

Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #745	Test Pit #746	Test Pit #747	Test Pit #748
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Fine Sandy Loam 10YR 3/2
12"- 36" Loamy Fine Sand 10YR 4/4 4/3	12"- 28" Loamy Sand & Gravel 10YR 3/4 3/6	12"- 32" Fine Sandy Loam 10YR 4/6	12"- 36" Fine Sandy Loam 7.5YR 4/4 4/6
36"- 64" Coarse Sand & Gravel 10YR 3/4 3/6	28"- 62" Coarse Sand & Gravel 10YR 4/6 4/4	32"- 44" Silt Loam 2.5Y 4/3	36"- 50" Coarse Loamy Sand & Gravel 7.5YR 4/4
No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 32" Dry Hole	No Mottles Found Dry Hole



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SOIL BORING TEST REPORT

Test Pit #749	Test Pit #750	Test Pit #751	Test Pit #752
0"- 12" Topsoil Fine Sandy Loam 10YR 3/2	0"- 12" Topsoil Loamy Sand 10YR 3/2	0"- 12" Topsoil Loamy Sand 10YR 3/2	0"- 14" Topsoil Loamy Sand 10YR 3/2
12"- 36" Fine Sandy Loam 10YR 3/3 3/4	12"- 30" Fine Sand 10YR 4/4 4/6	12"- 24" Loamy Fine Sand 10YR 4/4 4/6	14"- 24" Fine Sand 10YR 4/4 4/6
36"- 44" Fine Sandy Loam 10YR 4/4 4/3	30"- 56" Coarse Sand & Gravel 7.5YR 4/4	24"- 50" Medium Coarse Sand 7.4YR 4/4	24"- 36" Coarse Sand & Gravel 7.5YR 4/6
Mottles @ 16" Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole	No Mottles Found Dry Hole



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SOIL BORING TEST REPORT

Test Pit #753	Test Pit #754	Test Pit #755	Test Pit #756
	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2 3/3	0"- 12" Topsoil Loamy Fine Sand 10YR 3/2 3/3	0"- 14" Topsoil Loamy Fine Sand 10YR 3/2 3/3
*No Boring	12"- 48" Fine Sandy Loam 7.5YR 4/4 4/6	12"- 24" Fine Sandy Loam 10YR 4/6	14"- 32" Coarse Sand & Gravel 7.5YR 4/6
		24"- 42" Silt Loam 7.5YR 4/4 5YR 4/4	32"- 48" Silt Loam 10YR 4/4 4/3
No Mottles Found Dry Hole	No Mottles Found Dry Hole	Mottles @ 30" Dry Hole	Mottles @ 40" Dry Hole



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Date: January 16th, 2017

Name: One Grant Holdings, LLC

Address: Grant Township Property, Grant, MN

SOIL BORING TEST REPORT

Test Pit #757			
0"- 16" Topsoil Loamy Fine Sand 10YR 3/2 3/3			
16"- 30" Coarse Sand & Gravel 7.5YR 4/6			
30"- 50" Silt Loam 10YR 4/4 4/3			
Mottles @ 44" Dry Hole			



Mark Tradewell
MPCA #307

**Tradewell Soil Testing
18330 Dahlia Street NW
Cedar, MN 55011**

Date: January 25th, 2018

Name: Streetcar Holdings, Inc.

Address: The Farms of Grant, Stillwater, MN (Washington County)

SOIL BORING TEST REPORT

Test Pit #900	Test Pit #901	Test Pit #902	Test Pit #903
0"- 14" Topsoil Loam 10YR 2/2 3/2	0"- 18" Topsoil Loam 10YR 2/2	0"- 22" Topsoil Loam 10YR 2/2	0"- 14" Topsoil Loam 10YR 2/2 3/2
14"- 26" Fine Sandy Loam 10YR 4/6 4/4	18"- 30" Fine Sandy Loam 10YR 4/4 4/3	22"- 32" Fine Sandy Loam 10YR 4/4 4/3	14"- 26" Fine Sandy Loam 10YR 4/4 5/4
26"- 40" Silt 2.5Y 4/4	30"- 46" Silt 2.5Y 4/4 4/3	32"- 42" Sandy Loam & Gravel 7.5YR 3/4 4/4 (35%)	26"- 46" Silt 2.5Y 4/4 4/3
40"- 70" Sandy Loam 7.5YR 4/4	46"- 66" Sandy Loam 5YR 3/4 4/4	42"- 68" Sandy Loam & Gravel 5YR 4/4 (10%)	46"- 70" Sandy Loam & Gravel 5YR 4/4 (25%)
Mottles @ 26" Dry Hole	Mottles @ 30" Dry Hole	Mottles @ 42" Dry Hole	Mottles @ 26" Dry Hole

Test Pits were performed due to very large rocks in the area. Could not reach depths of mottling without encountering large rocks.



Mark Tradewell
MPCA #307

Tradewell Soil Testing
 18330 Dahlia Street NW
 Cedar, MN 55011

Date: January 25th, 2018

Name: Streetcar Holdings, Inc.

Address: The Farms of Grant, Stillwater, MN (Washington County)

SOIL BORING TEST REPORT

Test Pit #904	Test Pit #905	Test Pit #906	Test Pit #907
0"- 12" Topsoil Loam 10YR 3/2	0"- 12" Topsoil Loam 10YR 3/2	0"- 16" Topsoil Loam 10YR 3/2	0"- 12" Topsoil Loam 10YR 3/2
12"- 24" Fine Sandy Loam 10YR 4/6	12"- 24" Fine Sandy Loam 10YR 4/6	16"- 26" Sandy Loam & Gravel 10YR 4/6 (15%)	12"- 24" Fine Sandy Loam 10YR 4/6 5/6
24"- 44" Coarse Sand & Gravel 10YR 4/4 (>50%)	24"- 32" Silt 2.5Y 4/4	26"- 40" Loamy Sand 10YR 4/6	24"- 40" Coarse Sand & Gravel 10YR 4/6 4/4 (>50%)
44"- 68" Medium Sand 10YR 5/4 With Loamy Bands 10YR 3/4	32"- 70" Medium Coarse Sand 10YR 4/4 4/6 (No Bands)	40"- 68" Fine Sandy Loam 10YR 3/4 4/4 With Medium Sand Bands 10YR 4/6 5/6	40"- 72" Loamy Fine Sand 10YR 4/4 5/4
Mottles @ 24" Dry Hole	Mottles @ 24" Dry Hole	Mottles @ 38" Dry Hole	Mottles @ 40" Dry Hole



Mark Tradewell
 MPCA #307