ANOKA COUNTY
HIGHWAY DEPARTMENT

CONSTRUCTION PLAN FOR GRADING, DRAINAGE, AGGREGATE BASE, AND BITUMINOUS SURFACING.

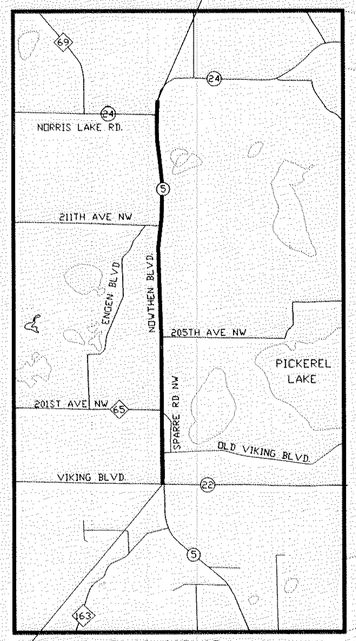
LOCATED ON C.S.A.H. 5 (NOWTHEN BLVD.) BETWEEN C.S.A.H. 22 (VIKING BLVD.) AND C.S.A.H. 24 (NORRIS LAKE BLVD.) (Geographic Description)

FROM A POINT BEING THE N.W. COR. SEC. 28, T.33 N., R.25 W. TO A POINT 151.087 m N. & 0.742 m E. OF THE W.1/4 COR. OF SEC. 9, T.33 N., R.25 W. (Legal Description)

CONSTRUCTION
STATE AID PROJ. NO. 02-605-05

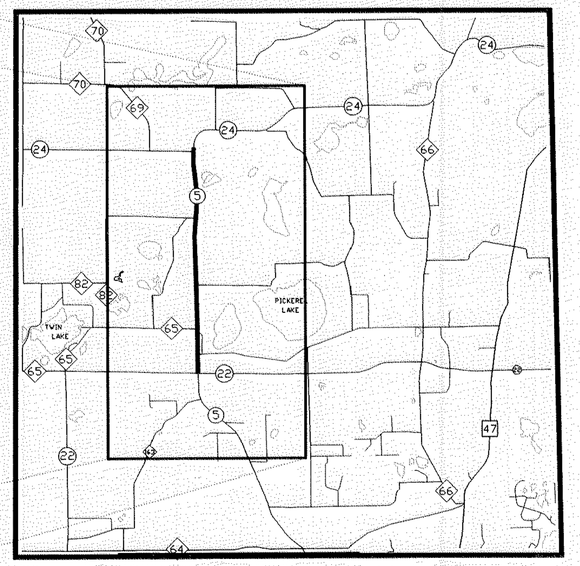
GROSS LENGTH	4161.00	m	4.161	km
BRIDGES-LENGTH		m		km
EXCEPTIONS-LENGTH		m		km
NET LENGTH	4161.00	m	4.161	km

END S.A.P. 02-605-05
STA. 5+167.00



BEGIN S.A.P. 02-605-05
STA. 1+006.00

VICINITY MAP



INDEX MAP

MINN. PROJ. NO.
MINN. PROJ. NO.

GOVERNING SPECIFICATIONS

THE 1995 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MMUTCD, INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS APRIL 1995".

INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	STATEMENT OF ESTIMATED QUANTITIES
3 - 5	TABULATION CHARTS
6	EARTHWORK SUMMARY & CONSTRUCTION NOTES
7 - 8	EROSION CONTROL DETAILS
9 - 10	TYPICAL SECTIONS
11 - 16	EXISTING CONDITIONS AND REMOVAL PLAN
17	SUPERELEVATION CHARTS
18 - 29	PLAN AND PROFILE
30	DETENTION POND
31 - 33	EARTHWORK QUANTITIES
34 - 51	CROSS-SECTION
52	SHORT TERM ROAD CLOSURES
53 - 54	DETOUR PLANS

THIS PLAN CONTAINS 54 SHEETS

DESIGN DESIGNATION

$\leq N18_{20}$ 420,412
R VALUE 55
ADT (1998) = 1955
Proj. ADT (2018) = 3324
Proj. HCADT (2018) = 250
Soil Factor
9.1 METRIC TON DESIGN
Shoulder Width 2.4 m

Functional Classification ARTERIAL (LOW DENSITY)
No. of Traffic Lanes 2 No. of Parking Lanes 0
Design Speed 90 km/h
Based on Stopping Sight Distance 170 m
Height of eye 1070mm Height of object 150mm
Design Speed not achieved at: N/A

STA.	TO STA.	MPH
STA.	TO STA.	MPH
STA.	TO STA.	MPH

Approved 5/4 1998 ANOKA COUNTY ENGINEER

Recommended for Approval METRO ASSISTANT DIVISION ENGINEER-STATE AID. REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY. DATE: 5/5/98

Approved APPROVED FOR STATE AID FUNDING: STATE AID ENGINEER DATE: 5/5/98

PLAN SYMBOLS

COUNTY LINE
TOWNSHIP OR RANGE LINE
SECTION LINE
QUARTER LINE
SIXTEENTH LINE
RIGHT OF WAY LINE
SLOPE EASEMENT
PRESENT RIGHT OF WAY
PROPERTY LINE
CORPORATE OR CITY LIMITS
RETAINING WALL
RAILROAD
RAILROAD RIGHT OF WAY
RIVER OR CREEK
DRAINAGE DITCH
CULVERT
DROP INLET
GAURD RAIL
BARBED WIRE FENCE
WOVEN WIRE FENCE
CHAIN LINK FENCE
WOOD FENCE
STONE WALL OR FENCE
HEDGE
LOWLAND
TIMBER
ORCHARD
BRUSH
NURSERY
CATTLE GAURD
OVERPASS (Highway Over)
UNDERPASS (Highway Under)
BRIDGE
BUILDING (One Story Frame)
F-FRAME C-CONCRETE
S-STONE T-TILE
B-BRICK ST-STUCCO
RAILROAD CROSSING BELL
RAILROAD CROSSING GATE
MANHOLE
CATCH BASIN
FIRE HYDRANT
CAST IRON MONUMENT
IRON PIN
GRAVEL PIT
SAND PIT
BORROW PIT
ROCK QUARRY

UTILITY SYMBOLS

POWER POLE LINE
TELEPHONE OR TELEGRAPH POLE LINE
JOINT TELEPHONE & POWER ON POWER POLES
ON TELEPHONE POLES
ANCHOR
STEEL TOWER
STREET LIGHT
PEDESTAL (Cable Terminal)
GAS MAIN
WATERMAIN
TELEPHONE CABLE IN CONDUIT
ELECTRIC CABLE IN CONDUIT
TELEPHONE MANHOLE
ELECTRIC MANHOLE
BURIED TELEPHONE CABLE
BURIED ELECTRIC CABLE
AERIAL TELEPHONE CABLE
SEWER (Sanitary or Storm)
SEWER MANHOLE

SCALES (IN METERS)

PLAN 10 0 5 10 20
PROFILE
HORIZONTAL 10 0 5 10 20
VERTICAL 2 0 1 2 4
X-SECTIONS
HORIZONTAL 4 0 2 4 8
VERTICAL 4 0 2 4 8
INDEX MAP. 2000 0 1000 2000 4000

N
W ANOKA COUNTY E
S

NO	DATE	BY	CKD	APPR	REVISION

NAME: C:\SDSKPROJ\0260505\PLAN\CR05C01.DWG MN (02-07-97)

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 5/1/98 REG. NO. 20235

DRAWN BY DATE
DESIGN BY DATE
CHECKED BY DATE

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO.
COUNTY PROJECT NO.

TITLE SHEET

Sheet 1 of 54 Sheets

Fed. Project No. _____

STATEMENT OF ESTIMATED QUANTITIES

CHART NO.	ITEM NO.	ITEM	UNIT	ANOKA COUNTY S.A.P. 02-605-05 ESTIMATED	ANOKA COUNTY S.A.P. 02-605-05 FINAL
	2013.601	CELLULAR MOBILE TELEPHONE	LUMP SUM	1	
	2015.601	COMPUTER EQUIPMENT	LUMP SUM	1	
	2021.501	MOBILIZATION	LUMP SUM	1	
	2031.501	FIELD OFFICE TYPE D	EACH	1	
A	2101.501	CLEARING	ha	0.94	
A	2101.502	CLEARING	TREE	176	
A	2101.506	GRUBBING	ha	0.94	
A	2101.507	GRUBBING	TREE	141	
(1) I	2104.501	REMOVE FENCE	m	95	
(1) H	2104.501	REMOVE PIPE CULVERT	m	424	
(2) D	2104.503	REMOVE BITUMINOUS PAVEMENT	m²	27195	
E	2104.513	SAWING BITUMINOUS PAVEMENT	m	221	
(1) I	2104.521	SALVAGE FENCE	m	1884	
(11)	2104.523	SALVAGE SIGN TYPE C	EACH	57	
(3)	2104.523	SALVAGE SIGN TYPE SPECIAL	EACH	11	
N	2105.501	COMMON EXCAVATION	m³	17813 (P)	
N	2105.505	MUCK EXCAVATION	m³	12577	
N	2105.607	EXCAVATION SPECIAL	m³	11241	
N	2105.522	SELECT GRANULAR BORROW (LV)	m³	31405	
(12)	2123.509	DOZER	HOUR	20	
(4)	2130.501	WATER	m³	2300	
(5) C	2211.503	AGGREGATE BASE (CV) CLASS 5A	m³	7245 (P)	
B	2232.501	MILL BITUMINOUS SURFACE	m²	2433	
(9)	2331.603	SAWED/SEALED JOINT	m	4348	
(7) J	2350.604	TYPE MV 4 WEARING COURSE MIXTURE, 50 mm THICKNESS	m²	648	
G	2350.609	TYPE MV 4 WEARING COURSE MIXTURE	t	5164	
(6) G	2350.609	TYPE MV 3 NON WEARING COURSE MIXTURE	t	3600	
(6) G	2350.609	TYPE LV 3 NON WEARING COURSE MIXTURE	t	4541	
G	2357.502	BITUMINOUS MATERIAL FOR TACK COAT	L	15284	
	2451.609	AGGREGATE FOUNDATION	t	560	
H	2501.511	375 mm CS PIPE CULVERT	m	433	
H	2501.511	450 mm CS PIPE CULVERT	m	16	
H	2501.515	600 mm RC PIPE APRON	EACH	12	
H	2501.561	600 mm RC PIPE CULVERT, DES 3006	m	121	
H	2501.561	1500 mm RC PIPE CULVERT, DES 3006 CLASS III	m	53.6	
H	2501.567	375 mm CS SAFETY APRON & GRATE, DES 3128	EACH	60	
H	2501.567	450 mm CS SAFETY APRON & GRATE, DES 3128	EACH	2	
H	2501.602	1500 mm RC CONCRETE END SECTION, DES 3022	EACH	4	
	2511.502	RANDOM RIPRAP, CLASS III	t	140	
	2540.602	INSTALL MAIL BOX SUPPORT	EACH	16	
(1) I	2557.603	INSTALL FENCE	m	1878	
I	2557.603	TEMPORARY FENCING	m	160	
	2563.601	DETOUR SIGNING	LUMP SUM	1	
(13)	2563.602	TRAFFIC CONTROL (SPECIAL)	EACH	7	
(3)	2564.602	INSTALL SIGN TYPE SPECIAL	EACH	11	
(8)	2573.501	BALE CHECK	EACH	100	
(8) F	2573.502	SILT FENCE, TYPE PREASSEMBLED	m	1511	
(8)	2573.508	BITUMINOUS LINED FLUME	m²	20	
K	2575.501	SEEDING	ha	7.18	
K	2575.502	SEED MIXTURE 90A	kg	360	
K	2575.505	SODDING TYPE LAWN	m²	5640	
K	2575.511	MULCH MATERIAL TYPE 1	t	33	
	2575.519	DISK ANCHORING	ha	7.18	
(10) K	2575.523	EROSION CONTROL BLANKETS CATEGORY 2	m²	536	
K	2575.532	COMMERCIAL FERTILIZER ANALYSIS 10-10-10	kg	3590	
	2580.501	TEMPORARY LANE MARKING	m	940	

MN/DOT STANDARD PLATES

THESE STANDARD PLATES AS APPROVED BY THE FHWA SHALL APPLY.

PLATE NO.	DESCRIPTION
M3000 L	REINFORCED CONCRETE PIPE
M3006 G	GASKET JOINT FOR R.C. PIPE
M3022 B	PRECAST CONCRETE END SECTIONS
M3040 F	CORRUGATED METAL PIPE CULVERT
M3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
M3128 F	SAFETY APRON
M3133 C	RIPRAP AT RCP OUTLETS
M3145 E	CONCRETE PIPE TIES
M3221 C	CORRUGATED STEEL PIPE COUPLING BAND
M8000 I	STANDARD BARRICADES
M9102 D	TURF ESTABLISHMENT AREAS (AT PIPE CULVERT ENDS)

NOTE: IF METRIC STANDARD PLATE IS NOT AVAILABLE CONVERT ENGLISH STANDARD PLATE TO NEAREST 0.0001 m.

INDEX OF TABULATION CHARTS

CHART	SHEET No.	DESCRIPTION
A	3	CLEARING AND GRUBBING
B	3	MILL BITUMINOUS SURFACE
C	3	SAWED/SEALED JOINT
D	3	BITUMINOUS REMOVAL
E	3	SAWING BITUMINOUS PAVEMENT
F	3	SILT FENCE
G	4	BASE AND BITUMINOUS QUANTITIES CHART
H	4	CULVERT TABULATION
I	4	FENCE CONSTRUCTION AND REMOVAL
J	5	ENTRANCES REMOVAL AND CONSTRUCTION
K	5	TURF ESTABLISHMENT
L	5	RIGHT TURN LANE AND BYPASS LOCATION
N	32 - 34	EARTHWORK SUMMARY

BASIS OF PLANNED QUANTITIES

2350	TYPE MV 4 WEARING COURSE 60 kg/m² /25 mm THICKNESS
2350	TYPE MV 3 NON WEARING COURSE 60 kg/m² /25 mm THICKNESS
2350	TYPE LV 3 NON WEARING COURSE 60 kg/m² /25 mm THICKNESS
2357	BITUMINOUS MATERIAL FOR TACK 0.23 L/m² PER LIFT APPLIED
2575	MULCH MATERIAL TYPE 1, 4.5 t/ha
2575	COMMERCIAL FERTILIZER, ANALYSIS 10-10-10 (OR EQUIVALENT) 500 kg/ha ON ALL SEED AREAS
2575	ROADSIDE SEEDING BASED ON HORIZONTAL MEASUREMENT +10% SEED MIXTURE NO. 90A, 50 kg/ha

NOTES

(1) INCLUDES ALL TYPES AND SIZES. (INCLUDING APRONS)
(2) INCLUDES ALL BITUMINOUS PAVEMENTS IRREGARDLESS OF DEPTH AND WIDTH.
(3) MUNICIPAL STREET SIGNS.
(4) FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.
(5) INCLUDES QUANTITY FOR AGGREGATE APPROACHES AND ENTRANCES.
(6) INCLUDES QUANTITY FOR ADDITIONAL 5 mm TO DESIGN PAVEMENT THICKNESS.
(7) FOR DRIVEWAY CONSTRUCTION, SEE CHART J.
(8) FOR EROSION CONTROL AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER.
(9) JOINTS TO BE PLACED AT 10 m SPACING ACROSS LANES OF TRAFFIC AND EXTEND 0.3 m.
(10) FOR USE AT CULVERT ENDS AND AS DIRECTED BY THE ENGINEER. SEE STD. PLATE M9102 D.
(11) SALVAGE TO ANOKA COUNTY HIGHWAY MAINTENANCE.
(12) FOR OBLITERATION OF ABANDONED SECTION OF SPARRE RD. N.W.
(13) SHORT TERM ROAD CLOSURE PER LAYOUT ON SHEET NO. 52; FOR CENTERLINE CULVERT INSTALLATION.

NO	DATE	BY	CKD	APPR	REVISION
1	4-24-98	PL	KJ	DF	EATHWORK QUAN.

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C02.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.
DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

STATEMENT OF ESTIMATED QUANTIES

Sheet 2 of 54 Sheet

Fed. Project No. _____

CLEARING AND GRUBBING (A)

STATION – STATION	LOCATION	CLEARING TREE	CLEARING ha	GRUBBING TREE	GRUBBING ha
1+374 – 1+398	13 m–18.25 m LT.		0.04		0.04
1+468	11m RT.	3		1	
1+476	11m RT.	1		1	
1+478	13m RT.	1		1	
1+467 – 1+499	11 m–18.25 m LT.		0.02		0.02
1+524 – 1+564	14 m–18.25 m LT.		0.04		0.04
1+522 – 1+604	13 m–18.25 m RT.		0.10		0.10
1+692 – 1+761	10 m–18.25 m RT.		0.10		0.10
1+777	17 m RT.	1		1	
1+779	16 m RT.	1		1	
1+782	17 m RT.	1		1	
1+786	16 m RT.	1		1	
1+789	16 m RT.	1		1	
1+790	13 m RT.	1		1	
1+791	11 m RT.	1		1	
1+792	16 m RT.	1		1	
1+794	15 m RT.	1		1	
1+795	11 m RT.	1		1	
1+796	11 m RT.	1		1	
1+797	16 m RT.	1		1	
1+799	13 m RT.	1		1	
1+797 – 1+822	10 m–18.25 m RT.		0.04		0.04
2+299 – 2+311	12 m–18.25 m LT.		0.02		0.02
2+324 – 2+333	11 m–18.25 m LT.		0.02		0.02
2+420	15 m LT.	4		1	
2+542	17 m RT.	1		1	
2+543	13 m RT.	1		1	
2+545	15 m RT.	1		1	
2+547	13 m RT.	1		1	
2+552	17 m RT.	4		1	
2+557	17 m RT.	1		1	
2+559	11 m RT.	1		1	
2+569	11 m RT.	1		1	
2+574	11 m RT.	1		1	
2+579	11 m RT.	1		1	
2+586	11 m RT.	3		1	
2+590	14 m RT.	1		1	
2+876 – 2+946	15 m–18.25 m LT.		0.02		0.02
3+249	12 m LT.	1		1	
3+251	12 m LT.	1		1	
3+253	12 m LT.	1		1	
3+317	17 m LT.	4		1	
3+376 – 3+394	15 m–18.25 m LT.		0.02		0.02
3+385 – 3+395	17 m–18.25 m RT.		0.02		0.02
3+424 – 3+457	15 m–18.25 m LT.		0.04		0.04
3+403	14 m RT.	1		1	
3+534	13 m LT.	1		1	
3+537	12 m LT.	1		1	
3+545	11 m LT.	1		1	
3+555	10 m LT.	1		1	
3+563	10 m LT.	1		1	
3+572	11 m LT.	1		1	
3+578	11 m LT.	1		1	
3+590	10 m LT.	1		1	
3+601	11 m LT.	1		1	
3+609	11 m LT.	1		1	
3+621	11 m LT.	1		1	
3+629	11 m LT.	1		1	
3+645	11 m LT.	1		1	
3+654	12 m LT.	1		1	
3+671	11 m LT.	1		1	
3+679 – 3+697	10 m–13 m LT.	10		10	
3+707 – 3+738	12 m–14 m LT.		0.02		0.02
3+754	13 m LT.	5		1	
3+776	13 m LT.	1		1	
3+782 – 3+796	15 m–17 m LT.	7		7	
3+837	17 m LT.	0		1	
3+858	15 m LT.	1		1	
3+856 – 3+880	15 m–18.25 m LT.		0.02		0.02
3+887 – 3+926	13 m–18.25 m RT.		0.04		0.04
3+945	16 m LT.	1		1	
3+957	12 m–14 m RT.	3		3	
3+987	13 m RT.	1		1	
3+960 – 3+984	14 m–18.25 m RT.		0.02		0.02
3+966	14 m LT.	0		1	
3+998	11 m RT.	0		1	
4+002 – 4+037	14 m–18.25 m RT.		0.04		0.04
4+046 – 4+121	8 m–18.25 m RT.		0.10		0.10
4+139	11 m RT.	1		1	
4+169	12 m RT.	1		1	
4+175	13 m RT.	0		1	
4+213 – 4+276	10 m–18.25 m RT.		0.10		0.10
4+414	11 m RT.	1		1	
4+433 – 4+477	8 m–12 m RT.	31		34	
4+448	14 m LT.	0		1	

CLEARING AND GRUBBING (A)

STATION – STATION	LOCATION	CLEARING TREE	CLEARING ha	GRUBBING TREE	GRUBBING ha
4+453	13 m LT.	0		1	
4+457	17 m LT.			1	
4+460	13 m LT.	1		1	
4+462	13 m LT.	1		1	
4+463	17 m LT.	1		1	
4+466	13 m LT.	3		1	
4+481	17 m RT.	1		1	
4+485	11 m RT.	1		1	
4+487 – 4+499	11 m–18.25 m LT.		0.02		0.02
4+497 – 4+509	14 m–17 m RT.	7		8	
4+551	11 m RT.	6		1	
4+561	10 m RT.	6		1	
4+567	10 m RT.	6		1	
4+576	11 m RT.	6		1	
4+598	10 m RT.	6		1	
4+807	14 m RT.	1		1	
4+837	12 m RT.	1		1	
4+845	10 m RT.	1		1	
4+847	10 m RT.	2		1	
4+854 – 4+921	10 m–18.25 m RT.		0.10		0.10
TOTAL		176	0.94	141	0.94

MILL BITUMINOUS SURFACE (B)

STATION	LOCATION	REMARKS	m²
5+164.000 – 5+167.000	LT – RT	MATCH EXISTING	21.60
1+006.000 – 1+377.000	LT – RT	MILL EDGE	2411.00
TOTAL			2432.60

SAWED/SEALED JOINT (C)

STATION	LOCATION	REMARKS	m
1+377.000 – 5+160.000	LT – RT	EVERY 10 m	4348
TOTAL			4348

BITUMINOUS REMOVAL (D)

STATION–STATION	LOCATION	DESCRIPTION	m²
1+377.30 – 1+710	3.65 m LT & RT	MAINLINE	2617.94
1+710 – 2+070	3.65 m LT & RT	MAINLINE	2679.45
2+070 – 2+430	3.65 m LT & RT	MAINLINE	2710.18
2+430 – 2+790	3.65 m LT & RT	MAINLINE	2651.68
2+790 – 3+150	3.65 m LT & RT	MAINLINE	2595.28
3+150 – 3+510	3.65 m LT & RT	MAINLINE	2640.68
3+510 – 3+870	3.65 m LT & RT	MAINLINE	2579.16
3+870 – 4+230	3.65 m LT & RT	MAINLINE	2562.77
4+230 – 4+590	3.65 m LT & RT	MAINLINE	2534.98
4+590 – 4+950	3.65 m LT & RT	MAINLINE	2515.21
4+950 – 5+027.245	3.65 m LT & RT	MAINLINE	558.16
1+803.000	LT	C.S.A.H. 65	304.89
5+006.335	LT	C.S.A.H. 24	244.61
TOTAL			27194.99

SAWING BITUMINOUS PAVEMENT (E)

STATION	LOCATION	REMARKS	m.
1+377.000	LT & RT	MAINLINE	13.44
1+803.654	LT	C.A.S.H. 65	8.74
3+322.123	LT	ENT.	6
5+006.335	LT	C.S.A.H. 24	8
5+027.422 – 5+082.241	RT	MAINLINE	54.82
5+027.422 – 5+157.241	LT	MAINLINE	129.82
TOTAL			220.82

SILT FENCE (F)

STATION	LOCATION	REMARKS	m.
1+408 – 1+653	9m to 16m LT		245
1+950 – 2+011	14m RT		61
1+951 – 2+116	15m LT		65
2+171 – 2+293	15m RT		160
2+185 – 2+344	15m LT		122
2+406 – 2+453	17m LT		47
2+769 – 2+916	14m LT		148
3+318 – 3+532	15m RT		214
3+326 – 3+543	15m LT		217
3+888 – 3+964	13m to 18m LT		74
4+073 – 4+112	17m RT		43
4+076 – 4+121	17m LT		48
4+326 – 4+393	17m LT		67
TOTAL			1511

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C03.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Finch

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

TABULATION CHARTS

Sheet 3 of 54 Sheets

Fed. Project No. _____

BASE AND BITUMINOUS QUANTITIES CHART (G)

STATION – STATION	LOCATION	DESCRIPTION	BIT. SURFACE CONSTRUCTION	BITUMINOUS WEAR DEPTH	BITUMINOUS WEAR t	BITUMINOUS BINDER ① DEPTH	BITUMINOUS BINDER ① t	BITUMINOUS BASE ① DEPTH	BITUMINOUS BASE ① t	TACK COAT	AGGREGATE BASE CL-5A
			m^2							liter	m^3
1+377.266 – 1+484.115	3.6 m LT & RT	MAINLINE	769.31		74		87		110	376	85
1+377.266 – 1+484.115	7.2 m LT	BY-PASS LANE	384.66		37		42		51	177	58
1+377.266 – 1+484.115	6 m RT	SHOULDER	256.44		25						60
1+484.115 – 1+695.221	3.6 m LT & RT	MAINLINE	1519.96		146		171		218	743	167
1+484.115 – 1+695.221	6 m RT	SHOULDER	506.65		49						118
1+484.115 – 1+695.221	6 m LT	SHOULDER	506.65		49						118
1+695.221 – 1+804.162	3.6 m LT & RT	MAINLINE	784.37		75		88		112	368	86
1+695.221 – 1+804.162	7.2 m RT	BY-PASS LANE	392.19		38		43		52	90	59
1+695.221 – 1+804.162	6 m LT	SHOULDER	261.46		25		7		8	28	61
1+804.162 – 1+880.197	3.6 m LT & RT	MAINLINE	547.45		53		62		78	257	60
1+804.162 – 1+880.197	7.2 m LT	RT TURN LANE	273.73		26		29		36	126	41
1+804.162 – 1+880.197	7.2 m RT	BY-PASS LANE	273.73		26		29		36	126	41
1+880.197 – 1+955.197	3.6 m LT & RT	MAINLINE	540.00		52		61		77	254	59
1+880.197 – 1+955.197	7.2 m LT	RT TURN LANE	270.00		26		29		35	124	41
1+880.197 – 1+955.197	6 m RT	SHOULDER	180.00		17						42
1+955.197 – 2+458.031	3.6 m LT & RT	MAINLINE	3620.41		348		407		518	1700	398
1+955.197 – 2+458.031	6 m RT	SHOULDER	1206.80		116						281
1+955.197 – 2+458.031	6 m LT	SHOULDER	1206.8		116						281
2+458.031 – 2+536.689	3.6 m LT & RT	MAINLINE	566.34		54		63		81	266	62
2+458.031 – 2+536.689	7.2 m RT	RT TURN LANE	283.17		27		30		37	130	43
2+458.031 – 2+536.689	6 m LT	SHOULDER	188.78		18						44
2+536.689 – 2+606.706	3.6 m LT & RT	MAINLINE	566.34		48		56		73	237	55
2+536.689 – 2+606.706	7.2 m RT	RT TURN LANE	188.78		24		27		33	116	38
2+536.689 – 2+606.706	7.2 m LT	BY-PASS LANE	566.34		24		27		33	116	38
2+606.706 – 2+718.017	3.6 m LT & RT	MAINLINE	801.44		77		90		114	376	88
2+606.706 – 2+718.017	7.2 m LT	BY-PASS LANE	400.72		38		43		53	184	60
2+606.706 – 2+718.017	6m RT	SHOULDER	267.146		26		5		6	9	62
2+718.017 – 2+790	3.6m LT & RT	MAINLINE	518.28		50		58		73	243	57
2+718.017 – 2+790	6 m RT	SHOULDER	172.76		17						40
2+718.017 – 2+790	6 m LT	SHOULDER	172.76		17						40
2+790 – 3+150	3.6 m LT & RT	MAINLINE	2592.00		249		291		371	1217	285
2+790 – 3+150	6 m RT	SHOULDER	864.00		83		8		10	17	202
2+790 – 3+150	6 m LT	SHOULDER	864.00		83						202
3+150 – 3+510	3.6 m LT & RT	MAINLINE	2592.00		249		291		371	1217	285
3+150 – 3+510	6 m RT	SHOULDER	864.00		83						202
3+150 – 3+510	6 m LT	SHOULDER	864.00		83						202
3+510 – 3+701.674	3.6 m LT & RT	MAINLINE	1380.06		132		155		197	648	152
3+510 – 3+701.674	6 m RT	SHOULDER	460.02		44						107
3+510 – 3+701.674	6 m LT	SHOULDER	460.02		44						107
3+701.674 – 3+807.829	3.6 m LT & RT	MAINLINE	764.32		73		85		109	359	84
3+701.674 – 3+807.829	7.2 m RT	BY-PASS LANE	382.16		37		42		51	176	58
3+701.674 – 3+807.829	6 m LT	SHOULDER	254.77		24		5		6	18	59
3+807.829 – 3+891.775	3.6 m LT & RT	MAINLINE	604.41		58		67		86	283	66
3+807.829 – 3+891.775	7.2 m LT	RT TURN LANE	302.21		29		33		40	139	46
3+807.829 – 3+891.775	7.2 m RT	BY-PASS LANE	302.21		29		33		40	139	46
3+891.775 – 3+966.878	3.6 m LT & RT	MAINLINE	540.74		52		61		62	254	59
3+891.775 – 3+966.878	7.2 m LT	RT TURN LANE	270.37		26		29		35	124	41
3+891.775 – 3+966.878	6 m RT	SHOULDER	180.25		17						42
3+966.878 – 4+230	3.6 m LT & RT	MAINLINE	1894.48		182		213		271	890	208
3+966.878 – 4+230	6 m RT	SHOULDER	631.49		61						147
3+966.878 – 4+230	6 m LT	SHOULDER	631.49		61						147
4+230 – 4+590	3.6 m LT & RT	MAINLINE	2592.00		249		291		371	1217	285
4+230 – 4+590	6 m RT	SHOULDER	864.00		83						202
4+230 – 4+590	6 m LT	SHOULDER	864.00		83						202
4+590 – 4+897.210	3.6 m LT & RT	MAINLINE	2211.92		212		249		316	1038	243
4+590 – 4+897.210	6 m RT	SHOULDER	737.30		71						172
4+590 – 4+897.210	6 m LT	SHOULDER	737.30		71						172
4+897.210 – 5006.335	3.6 m LT & RT	MAINLINE	785.70		75		88		112	369	86
4+897.210 – 5006.335	7.2 m RT	BY-PASS LANE	392.85		38		43		52	180	59
4+897.210 – 5006.335	6 m LT	SHOULDER	261.90		25		7		8	27	61
5+006.335 – 5+027.242	3.6 m LT & RT	MAINLINE	150.55		14		17		22	71	17
5+006.335 – 5+027.242	7.2 m RT	BY-PASS LANE	75.28		7		8		10	35	11
5+006.335 – 5+027.242	7.2 m LT	RT TURN LANE	75.28		7		8		10	35	12
5+027.242 – 5+082.241	7.2 m RT	BY-PASS LANE	197.99		19		22		29	92	31
5+027.242 – 5+082.241	7.2 m LT	RT TURN LANE	197.99		19		22		29	92	31
5+082.241 – 5+157.241	7.2 m RT	RT TURN LANE	270.00		26		30		39	126	41
5+082.241 – 5+157.241	6 m LT	SHOULDER	180.00		17						42
5+157.241 – 5+167.000	6 m RT	SHOULDER	23.42		2						5
5+157.241 – 5+167.000	6 m LT	SHOULDER	23.42		2						5
1+803.65	22 m LT	CSAH 65	293.00		12		13		14	138	38
1+689.00	12 m RT	SPARRE RD	114		4		6		7	52	16
2+607.13	10 m RT	205th AVE	120.00		5		6		8	57	18
3+007.73	10 m RT	207th AVE	78.00		3		4		5	37	12
3+807.83	10 m LT	211th AVE	120.00		5		6		8	57	17
5+006.33	20 m LT	CSAH 24	285.00		11		13		18	134	37
① 1+006.00 – 1+377.00	7 m RT & LT	MAINLINE OVERLAY	5363.00		579						5
① 5+157.241 – 5+167.000	3.6 m LT & RT	MAINLINE OVERLAY	1000.00		108						5
		TOTALS	47532		5164		3600		4541	15284	7245

① INCLUDES AN ADDITIONAL 5 mm THICKNESS TO THE PLANNED QUANTITY.

CULVERT TABULATION (H)

STATION	LOC	INPLACE	REMARKS	REMOVE CULV.PIPE	FURNISH AND INSTALL 375mm CMP	AP.	450mm CMP	AP.	600mm RCP	AP.	1500mm RCP	AP.	EROSION BLANKET CULV. PIPE
				m	m	AP.	m	AP.	m	AP.	m	AP.	m^2
1+400	LT.	375 mm X 12.35 m CMP	FIELD ENTRANCE	12.35	14	2							14
1+614	C/L	450 mm X 18.83 m CMP	C/L PIPE CROSSING	18.83					19	2			24
1+689	RT.		SPARRE RD				16	2					
1+773	LT.	300 mm X 9.54 m CMP	FIELD ENTRANCE	9.54									
1+826	RT.	375 mm X 7.41 m CMP	FIELD ENTRANCE	7.41	14	2							14
1+859	RT.	375 mm X 9.47 m CMP	FIELD ENTRANCE	9.47	14	2							14
1+983	C/L	450 mm X 14.25 m CMP	C/L PIPE CROSSING	14.25					19	2			24
2+037	RT.	300 mm X 6.93 m CMP	FIELD ENTRANCE	6.93	14	2							14
2+062	LT.	375 mm X 9.19 m CMP	FIELD ENTRANCE	9.19	14	2							14
2+203	C/L	300 mm X 15.75 m CMP	C/L PIPE CROSSING	15.75					19	2			24
2+293	RT.	375 mm X 5.56 m CMP	FIELD ENTRANCE	5.56	14	2							14
2+472	RT.	375 mm X 8.97 m CMP	FIELD ENTRANCE	8.97	14	2							14
2+757	LT.	375 mm X 9.24 m CMP	DRIVEWAY	9.24	15	2							14
2+872	C/L	450 mm X 15.75 m CMP	C/L PIPE CROSSING	15.75					19	2			24
2+976	LT.	375 mm X 7.72 m CMP	FIELD ENTRANCE	7.72	14	2							14
3+009	LT.	375 mm X 17.70 m CMP	DRIVEWAY	17.70									
3+145	RT.	375 mm X 12.56 m CMP	FIELD ENTRANCE	12.56	14	2							14
3+225	LT.		FIELD ENTRANCE		14	2							
3+322	LT.		FIELD ENTRANCE		14	2							14
3+408	C/L	450 mm X 13.98 m CMP	C/L PIPE CROSSING	13.98					20	2			24
3+552	RT.	375 mm X 11.81 m CMP	FIELD ENTRANCE	11.81	14	2							14
3+674	RT.		FIELD ENTRANCE		18	2							
3+763	LT.		FIELD ENTRANCE		14	2							14
3+952	RT.	300 mm X 12.90 m CMP	DRIVEWAY	12.90	15	2							14
3+957	RT.		FIELD ENTRANCE		14	2							14
3+992	RT.	300 mm X 12.31 m CMP	DRIVEWAY	12.31	14	2							14
4+042	RT.	375 mm X 12.35 m CMP	DRIVEWAY	12.35	14	2							14
4+102	C/L	1525 mm X 31.00 m CMP	C/L PIPE CROSSING	33.36							26.8	2	
4+104	C/L	1825 mm X 33.36 m CMP	C/L PIPE CROSSING	31.00							26.8	2	
4+132	RT.		FIELD ENTRANCE		14	2							14
4+195	RT.		DRIVEWAY		15	2							14
4+243	LT.	375 mm X 11.83 m CMP	FIELD ENTRANCE	11.83	14	2							14
4+259	RT.	375 mm X 12.50 m CMP	DRIVEWAY	12.50									
4+379	RT.	375 mm X 16.40 m CMP	DRIVEWAY	16.40	16	2							14
4+391	LT.	300 mm X 10.71 m CMP	FIELD ENTRANCE	10.71	14	2							14
4+428	RT.		FIELD ENTRANCE		14	2							14
4+489	RT.	300 mm X 11.33 m CMP	DRIVEWAY	11.33									
4+500	LT.	300 mm X 11.56 m CMP	DRIVEWAY	11.56	14	2							14
4+517	RT.		FIELD ENTRANCE		18	2							14
4+526	C/L	450 mm X 21.86 m CMP	C/L PIPE CROSSING	21.86					25	2			24
4+611	RT.	300 mm X 9.44 m CMP	FIELD ENTRANCE	9.44	14	2							14
4+843	RT.		FIELD ENTRANCE		14	2							14
4+935	RT.	300 mm X 9.25 m CMP	DRIVEWAY	9.25	14	2							14
			TOTALS	423.81	433	60	16	2	121	12	53.6	4	536

FENCE CONSTRUCTION AND REMOVAL (I)

STATION–STATION	LOCATION	SALVAGE	REMOVE	INSTALL	TEMPORARY	REMARKS
2+616 – 2+790	14.80 m – 13.47 m RT	174	10	174		
2+790 – 2+829	13.47 m – 15.39 m RT.	39	3	39		
2+829 – 3+003	15.39 m – 15.11 m RT.	174	6	174		
3+408 – 3+699	15.39 m – 15.11 m RT.	291	6	285		
3+540 – 3+700	15.00 m – 15.00 m LT.	160	6	160		
3+699 – 3+759	16.37 m – 16.83 m LT.	60	3	60		
3+765 – 3+796	17.11 m – 18.94 m LT.	31	1	31		
3+820 – 3+986	16.23 m – 12.78 m LT.	166	7.5	166		
3+996 – 4+061	12.71 m – 11.78 m LT.	65	12	65		
4+061 – 4+406	9.6 m – 7.14 m LT.	345	12	345		
4+092 – 4+192	12.11 m – 13.00 m RT.	100	12.5	100		
4+199 – 4+211	13.18 m – 17.00 m RT.	12	1	12		
4+250 – 4+274	RT.	24		24		
4+615 – 4+786	12.88 m – 12.16 m RT.	171		171		
4+854 – 4+926	10.39 m – 10.79 m RT.	72	15	72		
① PROJECT					160	
		1884	95	1878	160	

① LOCATIONS TO BE AS DIRECTED BY THE ENGINEER

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CROSC04.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas McTavish

DATE 5/11/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

TABULATION CHARTS

Sheet 4 of 54 Sheets

Fed. Project No. _____

ENTRANCES REMOVAL AND CONSTRUCTION CHART (J)

STATION	ADDRESS	LOCATION	DESCRIPTION	REMOVAL LENGTH	REMOVAL WIDTH	REPLACEMENT LENGTH	REPLACEMENT WIDTH	REMOVAL CONC. m²	REMOVAL BIT. m²	REMOVAL AGREGATE m²	REPLACEMENT CONC. m²	REPLACEMENT BIT. m²	REPLACEMENT 100mm AGREGATE m²	REPLACEMENT AGREGATE m³
1+400	PARCEL 1	LT.	FIELD ENT.	3	3	11	3.6						50	5
1+773	PARCEL 2	LT.	FIELD ENT.	3	3	12	3.6						53	5.3
1+826	PARCEL 8	RT.	DRIVEWAY	3	3	10	3.6					29	27	2.7
1+859	PARCEL 8	RT.	DRIVEWAY	3	3	10	3.6					29	27	2.7
2+037	PARCEL 10	RT.	FIELD ENT.	3	3	10	3.6						48	4.8
2+062	PARCEL 3	LT.	FIELD ENT.	3	3	10	3.6						50	5
2+301	PARCEL 11	RT.	FIELD ENT.	3	3	10	3.6						50	5
2+472	PARCEL 11	RT.	FIELD ENT.	3	3	10	5.5						50	5
2+757	20580	LT.	DRIVEWAY	10	4	7	3.6			30		29	27	5
2+776	PARCEL 15	LT.	FIELD ENT.	3	3	10	3.6						50	5
3+009	PARCEL 16	LT.	DRIVEWAY	10	5	10	4.0			12		29	30	3
3+145	PARCEL 25	RT.	FIELD ENT.	3	3	10	3.6						44	4.4
3+225	PARCEL 16	LT.	FIELD ENT. NEW				3.6						30	3
3+322	PARCEL 17	LT.	DRIVEWAY	7	6	5	4.5					29	34	3.4
3+552	PARCEL 27	LT.	FIELD ENT.	3	3								50	5
3+670	PARCEL 27	RT.	FIELD ENT.			10	8.0						80	8
3+763	PARCEL 19	LT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
3+952	21141	RT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
3+990	PARCEL 21	LT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
3+992	21155	RT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
4+042	PARCEL 30	RT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
4+133	PARCEL 30	RT.	FIELD ENT.	3	3	10	3.6						44	4.4
4+195	PARCEL 32	RT.	DRIVEWAY	8	5	5	3.6			12		29	30	3
4+243	PARCEL 33	LT.	FIELD ENT.	3	5	10	3.6						50	5
4+258	PARCEL 39	RT.	DRIVEWAY	8	5	5	3.6			12		29	26	2.6
4+379	PARCEL 40	RT.	DRIVEWAY	8	5	5	3.6			12		29	38	3.8
4+391	PARCEL 34	LT.	FIELD ENT.	3	5	10	3.6						50	5
4+427	21413	RT.	DRIVEWAY	8	5	5	3.6			12		29	34	3.4
4+430	21414	LT.	DRIVEWAY	8	10	5	8.5			40		39	55	5.5
4+489	PARCEL 41	RT.	DRIVEWAY	8	5	5	3.6			12		29	26	2.6
4+500	21414	LT.	DRIVEWAY	8	5	5	3.6			12		29	28	2.8
4+518	PARCEL 42	RT.	DRIVEWAY	8	5	5	3.6			12		29	26	2.6
4+611	PARCEL 42	RT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
4+742	PARCEL 37	LT.	FIELD ENT.	3	3	10	3.6					29	28	2.8
4+843	21611	RT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
4+935	PARCEL 44	RT.	DRIVEWAY	8	5	5	3.6			12		29	27	2.7
5+120	PARCEL 45	RT.	FIELD ENT.	3	3	10	3.6						36	3.6
										262		648	1357	136

TURF ESTABLISHMENT (K)

STA. TO STA.	LOCATION	SOD m²	BLANKET m²	SEEDING ha	SEED kg	MULCH t	FERTILIZER kg
1+377.00 – 5+167.00	RT & LT			7.18	360	33	3590
*			536				
2+535.00 – 2+595.00	RT	660					
2+720.00 – 2+770.00	LT	540					
3+880.00 – 3+920.00	RT	480					
3+960.00 – 3+990.00	RT	360					
4+200.00 – 4+250.00	RT	600					
4+385.00 – 4+425.00	RT	480					
4+430.00 – 4+480.00	RT	600					
4+390.00 – 4+425.00	LT	420					
4+435.00 – 4+485.00	LT	600					
4+490.00 – 4+410.00	RT	240					
4+800.00 – 4+855.00	RT	660					
TOTAL		5640	536	7.18	360	33	3590

*SEE CULVERT TABULATION CHART (H)

RIGHT TURN LANE AND BYPASS LOCATION (L)

STA. TO STA.	LOCATION	REMARKS
1+377.000 – 1+484.115	LT.	BY-PASS LANE
1+705.000 – 1+883.042	RT.	BY-PASS LANE
1+822.901 – 1+955.197	LT.	RIGHT TURN LANE
2+458.032 – 2+593.335	RT.	RIGHT TURN LANE
2+536.689 – 2+718.017	LT.	BY-PASS LANE
3+701.674 – 3+891.775	RT.	BY-PASS LANE
3+794.356 – 3+966.878	LT.	RIGHT TURN LANE
4+897.210 – 5+082.242	RT.	BY-PASS LANE
4+987.250 – 5+157.242	LT.	RIGHT TURN LANE

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C04A.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

TABULATION CHARTS

Sheet 5 of 54 Sheets

Fed. Project No. _____

EARTHWORK SUMMARY (N)

EXCAVATION (EV)

(1) COMMON EXCAVATION ..... 17,813 m^3
- REGULAR ..... 3,346 m^3
- SUBCUT ..... 5,390 m^3
- TOPSOIL ..... 9,158 m^3

(2) SPECIAL EXCAVATION ..... 11,241 m^3
- SEDIMENTATION POND EXCAVATION ..... 10,473 m^3
- SEDIMENTATION POND TOPSOIL REMOVAL ..... 768 m^3

MUCK EXCAVATION .....12,577 m^3

NOTE:

(1) EXCAVATION QUANTITIES ARE BASED ON ALL EXISTING BITUMINOUS OR CONCRETE AND BASE MATERIAL (TOTAL BIT. OR CONCRETE & BASE THICKNESS OF 150 mm) (4,173 m^3) HAVE BEEN REMOVED DURING REMOVAL OF THE EXISTING ROAD SURFACE. AND THEY ARE NOT INCLUDED IN THE EXCAVATION QUANTITIES.

(2) LIMITS OF SPECIAL EXCAVATION SUBJECT TO BE INCREASED AS DIRECTED BY THE ENGINEER, CONSEQUENTLY REDUCING THE SELECT GRANULAR BORROW QUANTITY.

EMBANKMENT (CV)

REGULAR FILL .....10,168 m^3

SUBCUT .....14,859 m^3

SELECT GRANULAR FILL ..... 12,577 m^3

TOPSOIL ..... 7,187 m^3

MUCK FILL (ROADWAY)..... 3,265 m^3

MUCK FILL (SEDIMENTION POND)..... 2,602 m^3

SOIL FACTORS:

1.) REGULAR GRADING AND TOPSOIL DRESSING (EV TO CV): 70% SHRINKAGE
2.) SUBCUT COMPACTION (EV TO CV): 70% SHRINKAGE
3.) MUCK FILL COMPACTION (EV TO CV) : 70% SHRINKAGE
4.) SELECT GRANULAR BORROW (CV TO LV): 130% SWELL

BALANCE

TOPSOIL

TOPSOIL DRESSING (CV) – [SED. POND TOPSOIL STRIPING (EV) + REG.TOPSOIL (EV) x SHRINKAGE FACTOR] = EXCESS(–) OR SHORTAGE(+)

7,187 m^3 – [9,158 m^3 X 0.80] = – 139 m^3 (EXCESS)

MUCK

MUCK FILL (CV) – [MUCK EXCAVATION (EV) X SHRINKAGE FACTOR] = EXCESS (–) OR SHORTAGE (+)

5867 m^3 – [12,577 m^3 X 0.70] = –2973 m^3 (EXCESS)

GRANULAR

[REGULAR FILL (CV) + SUBCUT (CV)] – [REGULAR EXCAVATION (EV) x SHRINKAGE FACTOR] – [SUBCUT EXCAVATION (EV) x SHRINKAGE FACTOR] – [SED. POND EXCAVATION (EV) X SHINKAGE FACTOR] = EXCESS (–) OR SHORTAGE (+)

[10,168 m^3 + 14,859 m^3] – [3,346 m^3 x 0.70] – [5,390 m^3 x 0.70] – [10,473 m^3 x 0.70] =
25,027 m^3 – 2,342 m^3 – 3,773 m^3 – 7,331 m^3
+11,581 m^3 (SHORTAGE)

(2) SELECT GRANULAR BORROW = [SELECT GRANULAR FILL (CV) + GRANULAR SHORTAGE (CV)] X SWELL FACTOR

[12,577 m^3+ 11,581 m^3] X 1.3 = 31,405 m^3(LV)

SOILS AND CONSTRUCTION NOTES

1. TOP OF PROFILE GRADE IS DEFINED AS THE TOP OF THE BITUMINOUS WEARING COURSE.
2. IN FILL AREAS, THE SUBGRADE SHALL BE CONSTRUCTED WITH SELECTED GRADING MATERIAL.
3. SELECTED GRADING MATERIALS SHALL CONSIST OF SELECT GRANULAR MATERIALS.
4. GRANULAR MATERIAL, REGARDLESS OF SOURCE, SHALL MEET THE REQUIREMENTS OF SPEC. 3149.2B1.
5. SELECT GRANULAR MATERIAL SHALL MEET THE REQUIREMENTS OF SPEC 3149.2B2.
6. COMPACTION OF THE GRADING PORTION OF THIS PROJECT SHALL BE BY THE "SPECIFIED DENSITY METHOD".
7. TEST ROLLING WILL NOT BE REQUIRED.
8. BITUMINOUS AND/OR CONCRETE ITEMS REMOVED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED OR DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF 2104.3C3 WITH NO DIRECT COMPENSATION MADE THEREFORE.
9. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH SPEC. 2105.3D WITH NO DIRECT COMPENSATION MADE THEREFORE.
10. WHERE MATCHING INTO THE INPLACE ROADWAY AT THE ENDS OF CONSTRUCTION, CUT VERTICALLY TO THE TOP OF THE GRADING SUBGRADE AND THEN AT A 20:1 TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
11. WHERE CONNECTING NEW SURFACING TO AN INPLACE PAVEMENT, THE EXCAVATION SHALL BE BACKFILLED PROMPTLY TO AVOID UNDERMINING THE INPLACE PAVEMENT.
12. USE TACK COAT BETWEEN ALL BITUMINOUS MIXTURES PRIOR TO PLACING BITUMINOUS MIXTURES AND PRIOR TO PLACING ANY BITUMINOUS MIXTURES ON EXISTING CONCRETE OR BITUMINOUS SURFACES. THE BITUMINOUS TACK COAT MATERIAL SHALL BE APPLIED AT A UNIFORM RATE OF 0.23 L/m^2 BETWEEN BITUMINOUS LAYERS. THE APPLICATION RATES ARE FOR UNDILUTED EMULSIONS (AS SUPPLIED FROM THE REFINERY); ASPHALT EMULSION MAY BE FURTHER DILUTED IN THE FIELD IN ACCORDANCE WITH SPEC. 2357.
13. COMPACTION OF THE BITUMINOUS BASE, BINDER, AND WEAR SHALL BE BY THE "MODIFIED SPECIFIED DENSITY METHOD".
14. COMPACTION OF THE AGGREGATE BASE LAYERS SHALL BE BY THE "SPECIFIED DENSITY METHOD".
15. IN AREAS TO BE DISTURBED BY CONSTRUCTION, STRIP AND RE–USE AS SLOPE DRESSING ALL TOPSOIL AND INPLACE SLOPE DRESSING. REFER TO THE CROSS–SECTIONS FOR THE LIMITS OF TOPSOIL STRIPPING. GENERAL DEPTHS OF TOPSOIL LAYER ARE ASSUMED TO BE 100 mm.
16. SLOPE DRESSING ON THIS PROJECT IS DEFINED AS THE TOPSOIL OR OTHER SOIL PLACED DURING CONSTRUCTION TO PROVIDE A MEDIUM FOR ESTABLISHING TURF.
17. PLACE A MINIMUM OF 100 mm TOPSOIL OR SLOPE DRESSING ON ALL AREAS DISTURBED BY CONSTRUCTION AND SCHEDULED FOR PERMANENT TURF ESTABLISHMENT. FERTILIZE WITH COMMERCIAL FERTILIZER, ANALYSIS 10–10–10, AT A RATE OF 500 kg/ha OR EQUIVALENT.
18. ON ALL DISTURBED AREAS, USE MIXTURE 90A SEED WITH TYPE 1 MULCH, AND DISK ANCHORING, UNLESS SPECIFIED FOR SOD.
19. SOD ALL PERMANENT BOULEVARD AREAS, AND DISTURBED LAWNS.
20. ALL SOD UTILIZED WITHIN THE PROJECT LIMITS SHALL MEET THE REQUIREMENTS OF SPEC. 3878.2A (LAWN SOD).
21. EXCESS TOPSOIL AND MUCK EXC. MAY BE USED IN EMBANKMENT CONSTRUCTION IN AREAS OUTSIDE OF A 1:1 1/2 SLOPE FROM THE GRADING SHOULDER P.I.
22. EXISTING STABILIZED SUBGRADE MUST BE PULVERIZED PRIOR TO USE AS EMBANKMENT MATERIAL.
23. GEOTEXTILE FABRIC SHALL BE UTILIZED, WHEN DIRECTED BY THE ENGINEER, IN AREAS WHERE THE SUBCUT AND SUBGRADE EXCAVATION OPERATIONS ENCOUNTER UNSUITABLE UNDERLYING SUBSOILS. THE FABRIC SHALL BE PLACED AND MEET THE REQUIREMENTS AS PROVIDED IN THE SPECIAL PROVISIONS.
24. EXCESS MUCK EXCAVATION TO BE DISPOSED OF BY THE CONTRACTOR OUTSIDE OF THE RIGHT–OF–WAY LIMITS AS APPROVED BY THE ENGINEER.
25. BITUMINOUS REMOVAL QUANTITY BASED ON 150 mm BITUMINOUS SURFACING. CONTRACTOR SHALL INVESTIGATE AND MAKE THEIR OWN DETERMINATION OF ACTUAL PAVEMENT DEPTH.

NO	DATE	BY	CKD	APPR	REVISION
1	4–24–98	PL	KJ	DF	EARTHWORK QUAN.

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C06.DWG

minnesota mn/dot

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Kruse

DATE 5/1/98 REG. NO. 20235

DRAWN BY_____ DATE _____
DESIGN BY_____ DATE _____
CHECKED BY_____ DATE _____

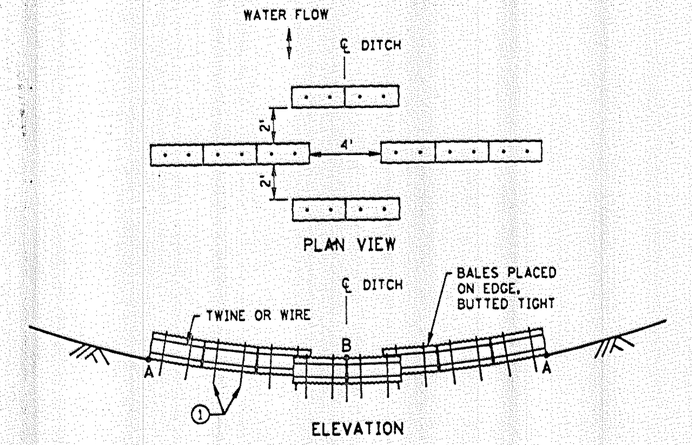
ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02–605–05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

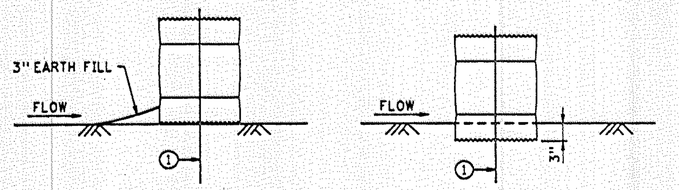
EARTHWORK SUMMARY AND CONSTRUCTION NOTES

Sheet 6 of 54 Sheets

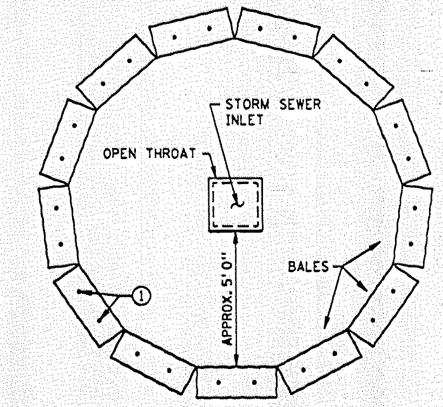


NOTE:
POINT A MUST BE HIGHER THAN POINT B

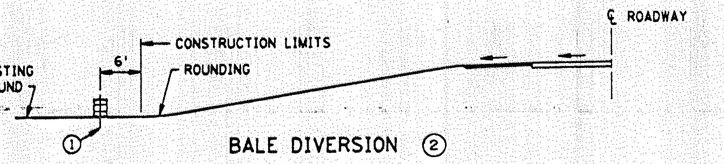
BALE DITCH VELOCITY CHECKS
(WILL REQUIRE A MINUMUM OF 10 BALES PER SITE)



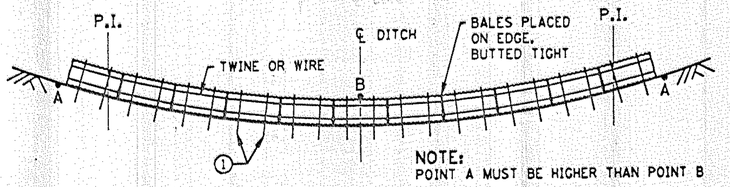
BALE CHECK DETAILS



BALE CHECK TO PROTECT STORM SEWER INLETS



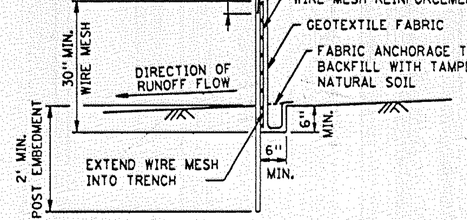
BALE DIVERSION ②



NOTE:
POINT A MUST BE HIGHER THAN POINT B

BALE DITCH SEDIMENT CHECK

RECOMMENDED SPACING BETWEEN BALE DITCH CHECKS	
DITCH GRADE (%)	SPACING (FT.)
2	100
4	75
6	50
8	40
10	25



SILT FENCE DETAIL

NOTE:
① TWO 2" X 2" WOOD STAKES OR REINFORCING BARS IN EACH BALE AND EMBEDDED IN THE GROUND 10" MINIMUM.

② SILT FENCE MAY ALSO BE USED AS A DEVERSION DEVICE.

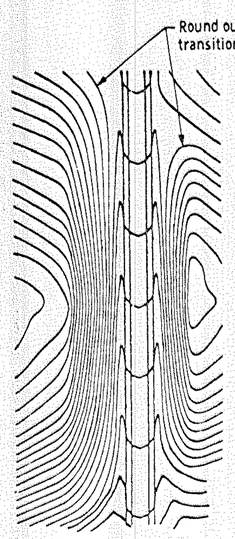
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STANDARD SHEET NO. 5-297.405 (MODIFIED)
STANDARD APPROVED: AUGUST 2, 1993
TITLE: TEMPORARY EROSION CONTROL

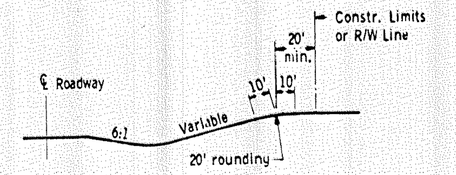
CERTIFIED BY Douglas M. Fisher P.E. REG NO. 20235 5/1 19 98

CO. PROJ. NO. 02-605-05 SHEET NO. 7 OF 54 SHEETS

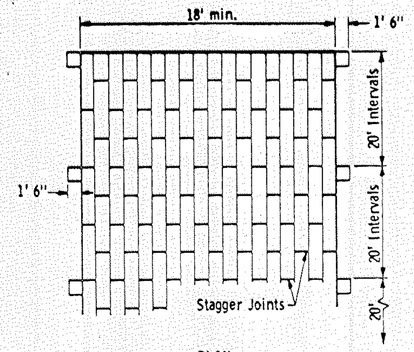
Fed. Proj. No.



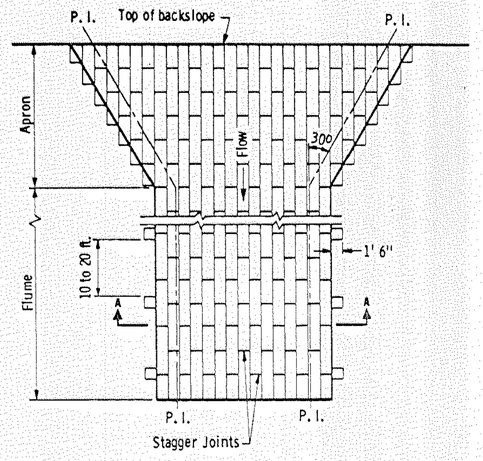
CONTOURING ROAD CUTS



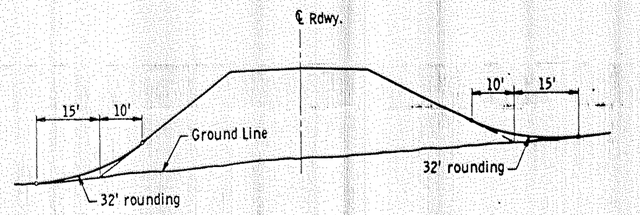
ROUNDING BACK SLOPES



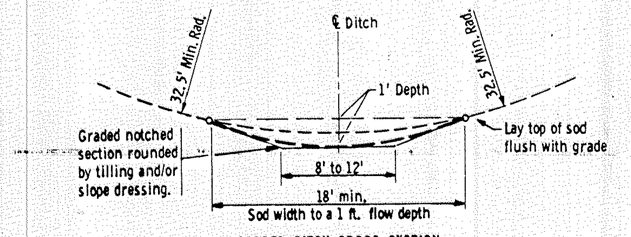
PLAN



PLAN

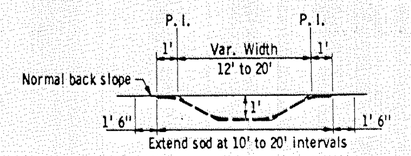


SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES

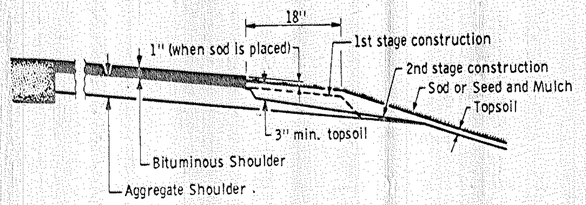


SODDED DITCH CROSS SECTION

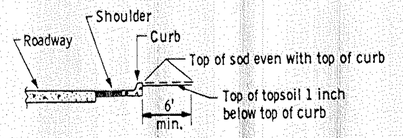
Ditches having a minimum radius of 32.5 feet and requiring sod shall be constructed according to the above details. Where ditch radius is less than 32.5 feet, notching is not required. Sod a minimum of 18 feet in width.



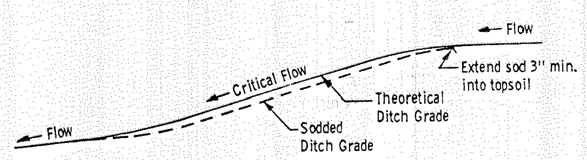
SECTION A-A



SHAPING AND TOPSOILING INSLOPES



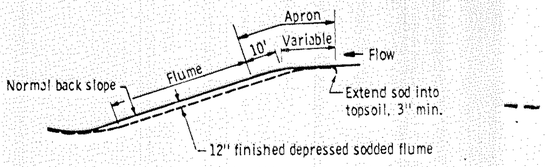
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



NOTE: APPLIES TO DITCH GRADES 2.0% OR GREATER.

DITCH PROFILE

SODDED DITCH DETAILS



LONGITUDINAL CROSS SECTION

SODDED FLUME DETAILS

APPROVED Dec. 17, 1974
Leonard R. Etter
Engineering Standards Engineer
MATERIALS, RESEARCH AND STANDARDS DIVISION

CERTIFIED BY: Dwight M. Finch P.E. REG. NO. 20235

5/1/98

EROSION CONTROL

State Proj. No. CP 05-605-05 **Sheet No.** 8 **of** 54 **Sheets**

Fed. Project No. _____

① FOR SPECIAL DITCHES SEE PROFILE SHEETS AND CROSS SECTIONS

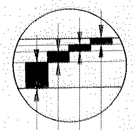
② SEE CROSS SECTIONS FOR MODIFIED BACK SLOPE

③ GRADING SLOPE IN RIGHT TURN / BY-PASS LANE TO MATCH FINISH LANE SLOPE

④ ALL UTILITY POLES AND UNYIELDING OBJECTS SHALL BE REMOVED AND RELOCATED OUTSIDE THE RECOVERY AREA.

⑤ 7.85 m IN RIGHT TURN / BY-PASS LANE

DESIGN F-1
(ALL TRAVEL LANES)



40 mm TYPE MV 4 WEARING COURSE MIXTURE-SPEC. 2350
BITUMINOUS MIXTURE DESIGNATION: MVWE45035B

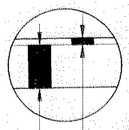
40 mm TYPE MV 3 NON WEARING COURSE MIXTURE-SPEC. 2350
BITUMINOUS MIXTURE DESIGNATION: MVNW35035B

50 mm TYPE LV 3 NON WEARING COURSE MIXTURE-SPEC. 2350
BITUMINOUS MIXTURE DESIGNATION: LVNW35030B

110 mm AGGREGATE BASE CLASS 5A-SPEC. 2211

TACK COAT-SPEC. 2357, TO BE APPLIED BETWEEN ALL BITUMINOUS LIFTS.

DESIGN F-2
(ALL SHOULDERS)

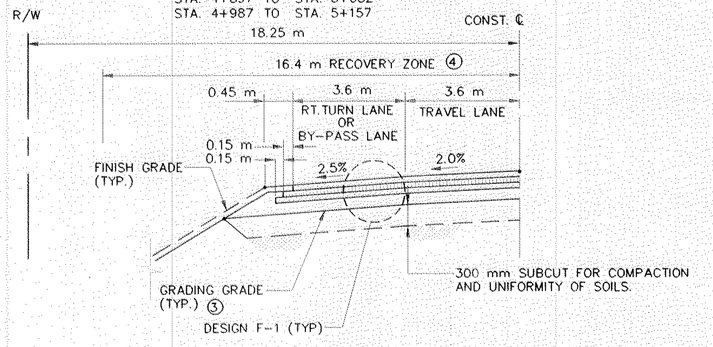


40 mm TYPE MV 4 WEARING COURSE MIXTURE-SPEC. 2350
BITUMINOUS MIXTURE DESIGNATION: MVWE45035B

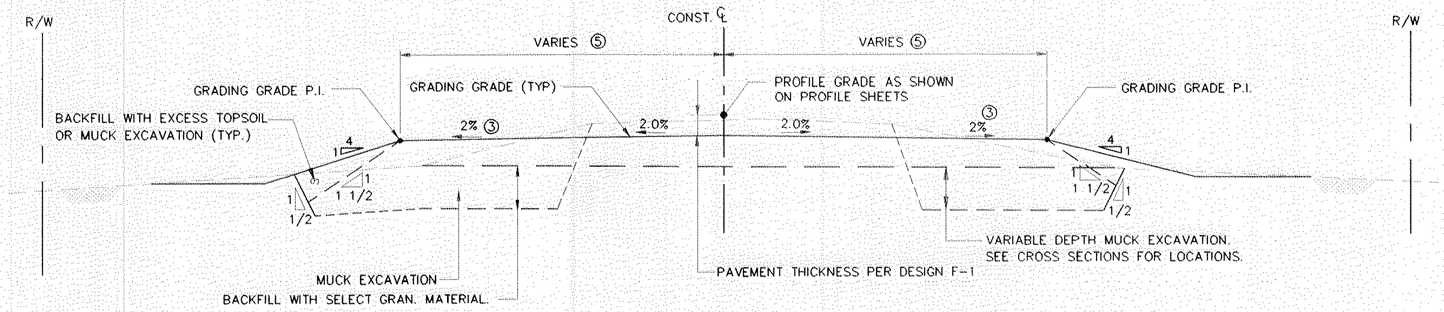
VARIABLE DEPTH AGGREGATE BASE CLASS 5A
SPEC. 2211

BASE AND BITUMINOUS SECTION
TYPICAL TURN LANE \ BY-PASS

STA. 1+377 TO STA. 1+484
STA. 1+705 TO STA. 1+883
STA. 1+823 TO STA. 1+955
STA. 2+458 TO STA. 2+593
STA. 2+537 TO STA. 2+718
STA. 3+701 TO STA. 3+892
STA. 3+794 TO STA. 3+967
STA. 4+897 TO STA. 5+082
STA. 4+987 TO STA. 5+157

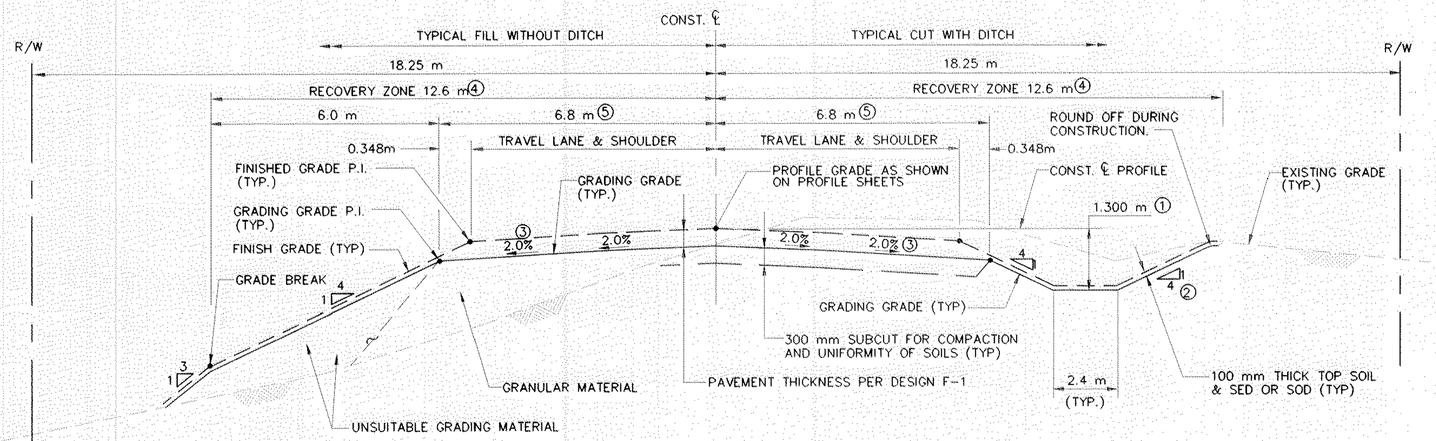


MUCK EXCAVATION

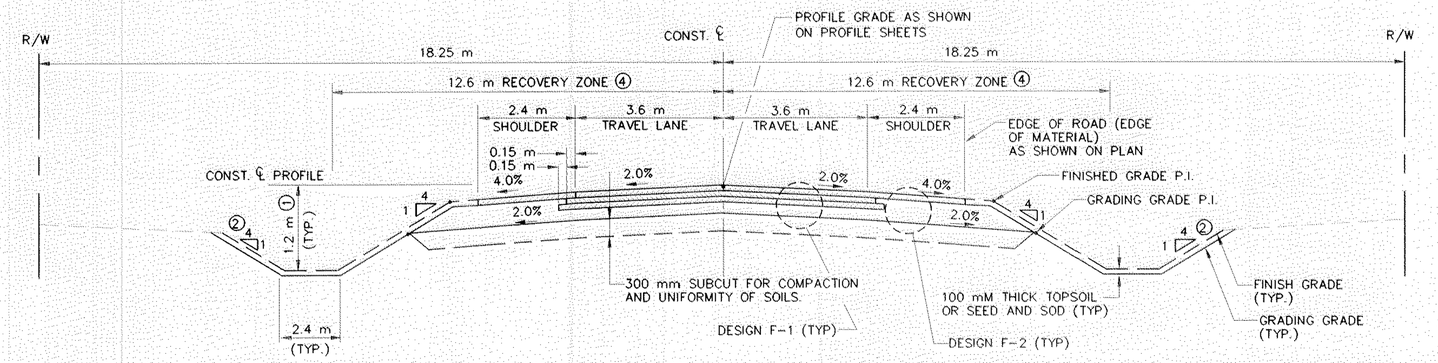


TYPICAL GRADING SECTION

STA. 1+377 TO STA. 5+027



BASE AND BITUMINOUS SECTION
TYPICAL TWO LANES WITH SHOULDERS



NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C08A.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fine

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

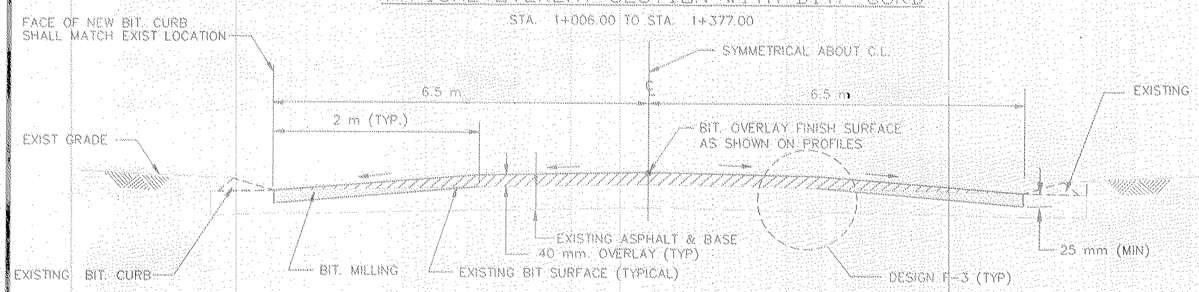
TYPICAL SECTIONS

Sheet 9 of 54 Sheets

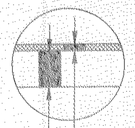
Fed. Project No.

TYPICAL OVERLAY SECTION WITH BIT. CURB

STA. 1+006.00 TO STA. 1+377.00



DESIGN F-3
(BITUMINOUS OVERLAY)



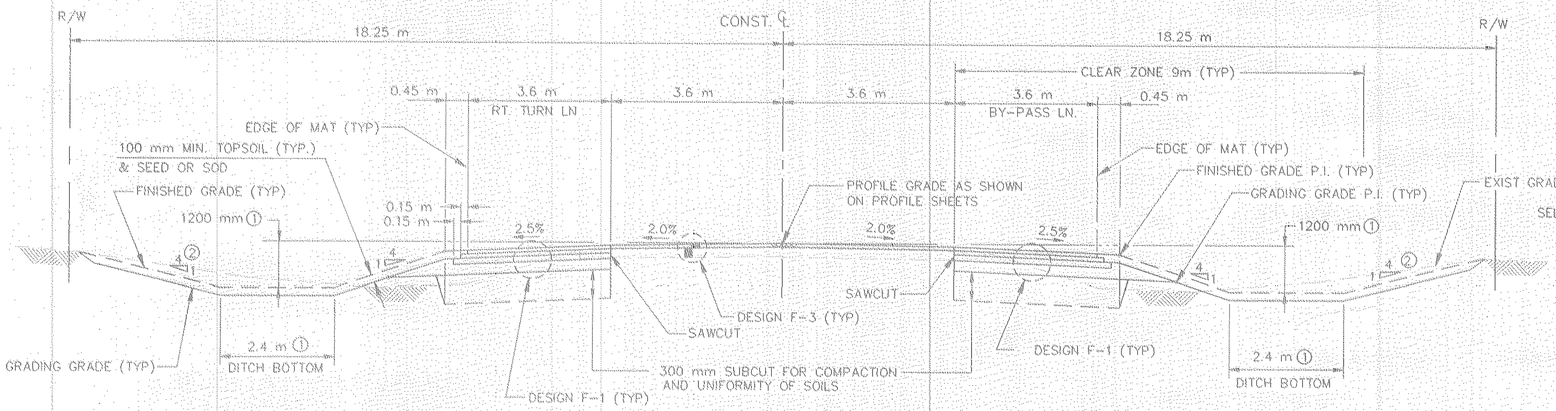
40 mm TYPE MV 4 WEARING COURSE MIXTURE-SPEC. 2350
BITUMINOUS MIXTURE DESIGNATION: MVWE45035B
INPLACE BASE AND BITUMINOUS SURFACE
TACK COAT-SPEC. 2357, TO BE APPLIED BETWEEN ALL BITUMINOUS LIFTS.

NOTES:

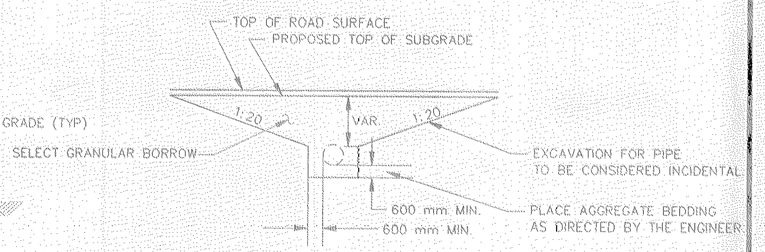
1. FOR SPECIAL DITCHES SEE PROFILE SHEETS AND CROSS SECTIONS
2. SEE CROSS SECTIONS FOR MODIFIED BACK SLOPE
3. GRADING SLOPE IN RIGHT TURN / BY-PASS LANE TO MATCH FINISH LANE SLOPE

BITUMINOUS OVERLAY SECTION & LANE WIDENING

STA. 5+027 TO STA. 5+167



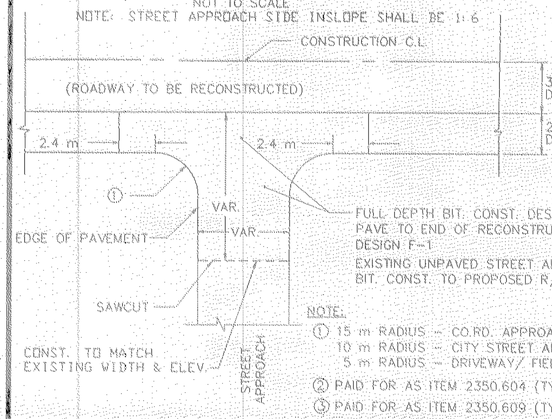
CENTERLINE CULVERT INSTALLATION



NOTE: 1. FILL AND COMPACT GRANULAR TO 50 mm ABOVE FLOWLINE BEFORE PLACING CULVERT.
2. EXCAVATION TO EXTEND 1 m BEYOND END OF APRON.

STREET APPROACHES

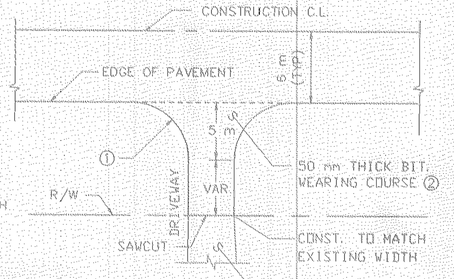
NOT TO SCALE
NOTE: STREET APPROACH SIDE INSLOPE SHALL BE 1:6



NOTE:
① 15 m RADIUS – CO.RD. APPROACH
10 m RADIUS – CITY STREET APPROACH
5 m RADIUS – DRIVEWAY/ FIELD ENTRANCE
② PAID FOR AS ITEM 2350.604 (TYPE MV 4 WEARING COURSE MIXTURE, 50 mm THICKNESS)
③ PAID FOR AS ITEM 2350.609 (TYPE MV 4 WEARING COURSE MIXTURE)

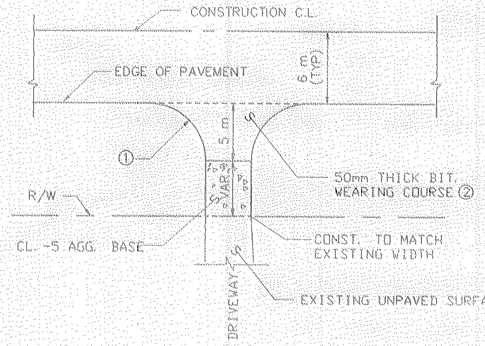
TYPICAL PAVED ENTRANCE

NOT TO SCALE
NOTE: ENTRANCE SIDE INSLOPE SHALL BE 1:6.



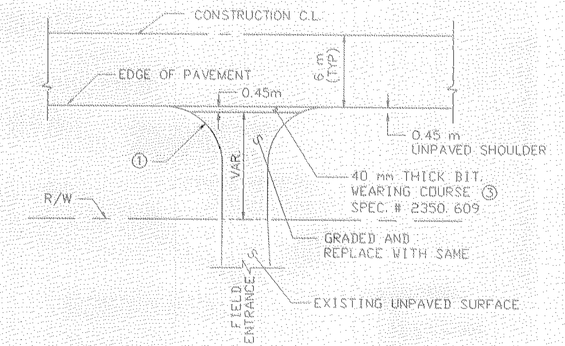
TYPICAL UNPAVED ENTRANCE

NOT TO SCALE
NOTE: ENTRANCE SIDE INSLOPE SHALL BE 1:6.



TYPICAL FIELD ENTRANCE

NOT TO SCALE
NOTE: ENTRANCE SIDE INSLOPE SHALL BE 1:6.



NO.	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPRO\0260505\PLAN\CR05C08B.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/4/98 REG. NO. 20235

DRAWN BY ____ DATE ____
DESIGN BY ____ DATE ____
CHECKED BY ____ DATE ____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. ____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. ____
COUNTY PROJECT NO. ____

TYPICAL SECTIONS

Sheet 10 of 54 Sheets

Fed. Project No. _____

STA. 1+000
N 45458.149799
E 253801.724300

VIKING BLVD N.W.
C.S.A.H. NO. 22

B.M. # 10 ELEV. 287.164
COVERED TUBE STAMPED B.M. #20
IN FRONT OF TOWN HALL

CONSTRUCTION ℄
EXISTING R/W

18.25 m
10.06 m
10.06 m
2 m

1+000
1+100
1+200
C.S.A.H. NO. 5 (NOWTHEN BLVD.)
1+300

MATCH LINE STA 1+350

B.M. # 11 ELEV. 285.744
R.R. SPIKE IN PP CSAH 5 & CR 22
STA. 1+353 23 m RT.

EXISTING R/W

BEGIN S.A.P. 02-605-05
STA. 1+006.000
BEGIN ASPHALT MILLING
PER DETAIL ON SHEET 10

NOTE:
1. CONTRACTOR SHALL PROTECT EXISTING DRAINAGE INLETS FROM DAMAGE DURING MILLING OPERATIONS.

LEGEND
- BITUMINOUS REMOVAL
- WETLANDS
- ASPHALT MILLING

STA. 1+377.000
END MILLING
BEGIN FULL WIDTH
BITUMINOUS REMOVAL

PARCEL 1

REMOVE INPLACE
375 mm X 12.35 m

NEW R/W
EXISTING R/W

CONSTRUCTION ℄

PARCEL 2

LIMITS OF GRADING
(TYP.)

REMOVE INPLACE
450 mm X 18.83 m

MATCH LINE STA 1+350

18.25 m
18.25 m

1+400
1+500
1+600
1+700

C.S.A.H. NO. 5 (NOWTHEN BLVD.)

MATCH LINE STA 1+710

OLD VIKING BLVD N.W.

EXISTING R/W
NEW R/W

LIMITS OF GRADING
(TYP.)

GRAPHIC SCALE
(IN METERS)
10 0 5 10 20

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C09.DWG

minnesotametric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Thiele
DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY
HIGHWAY DEPT.

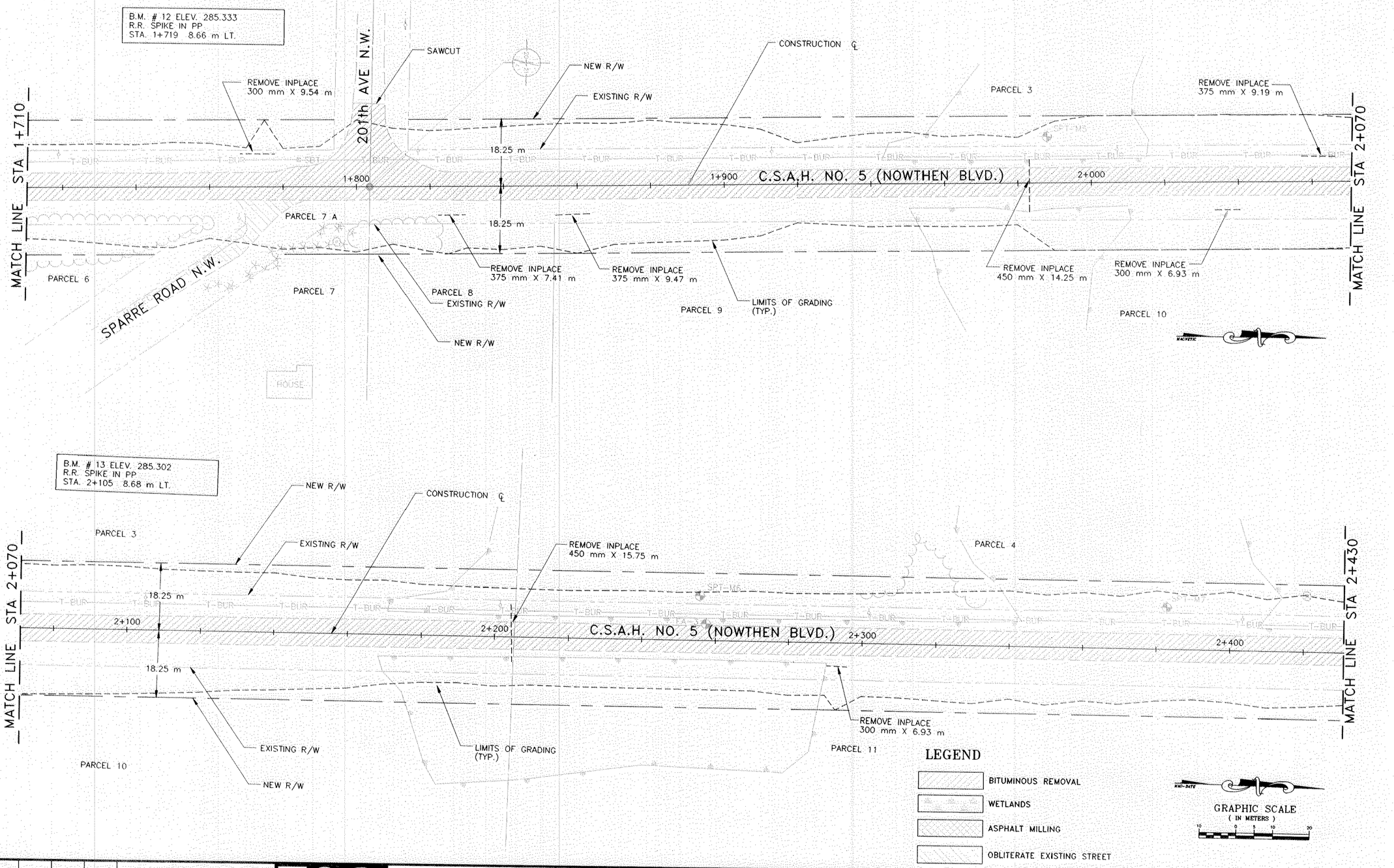
STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

EXISTING CONDITION AND REMOVAL PLAN
STA. 1+000 TO STA. 1+710

Sheet 11 of 54 Sheets

Fed. Project No. _____

B.M. # 12 ELEV. 285.333
R.R. SPIKE IN PP
STA. 1+719 8.66 m LT.



B.M. # 13 ELEV. 285.302
R.R. SPIKE IN PP
STA. 2+105 8.68 m LT.

LEGEND

- BITUMINOUS REMOVAL
- WETLANDS
- ASPHALT MILLING
- OBLITERATE EXISTING STREET

GRAPHIC SCALE
(IN METERS)
10 0 5 10 20

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPRO\...\0260505\PLAN\CR05C10.DWG

minnesota metric

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Douglas M. Erickson

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY

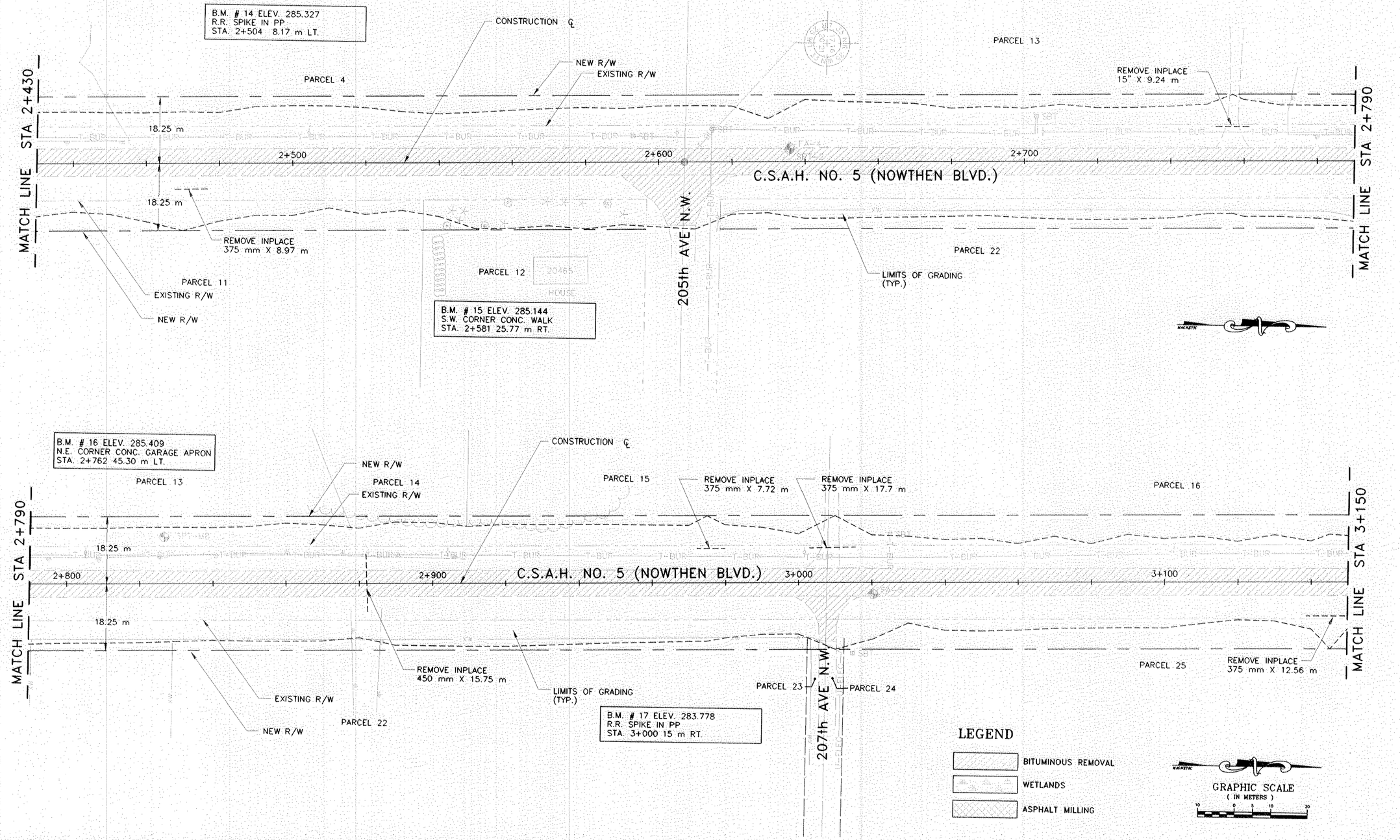
ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

EXISTING CONDITION AND REMOVAL PLAN
STA. 1+710 TO STA. 2+430

Sheet 12 of 54 Sheets

Fed. Project No. _____



NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C11.DWG

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DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

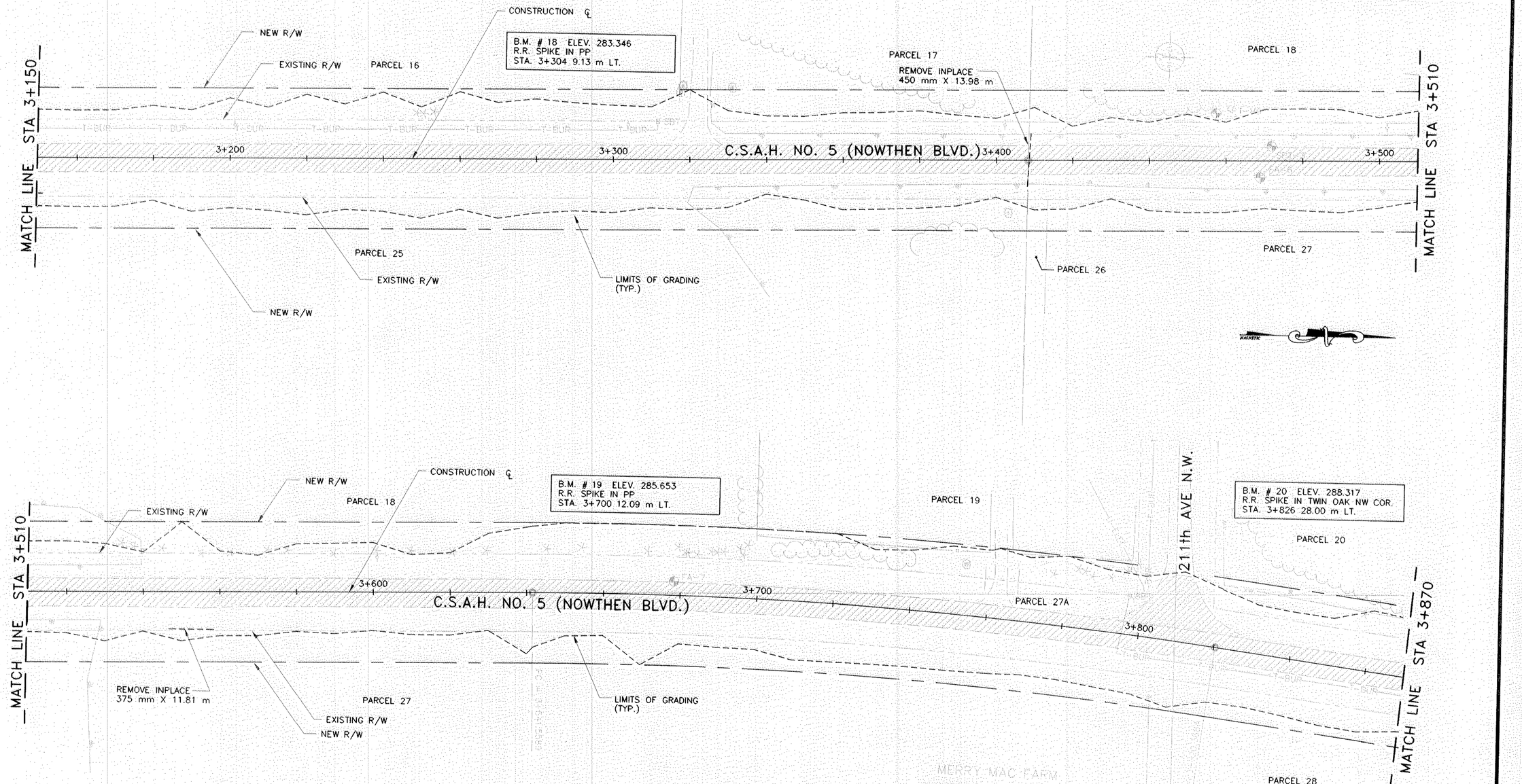
COUNTY PROJECT NO. _____

EXISTING CONDITION AND REMOVAL PLAN

STA. 2+430 TO STA. 3+150

Sheet 13 of 54 Sheets

Fed. Project No. _____



LEGEND

- BITUMINOUS REMOVAL
- WETLANDS
- ASPHALT MILLING

GRAPHIC SCALE
(IN METERS)
10 0 5 10 20

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C12.DWG

minnesota metric

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Douglas M. Trunk

DATE 5/1/98 REG. NO. 20235

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CHECKED BY _____ DATE _____

ANOKA COUNTY

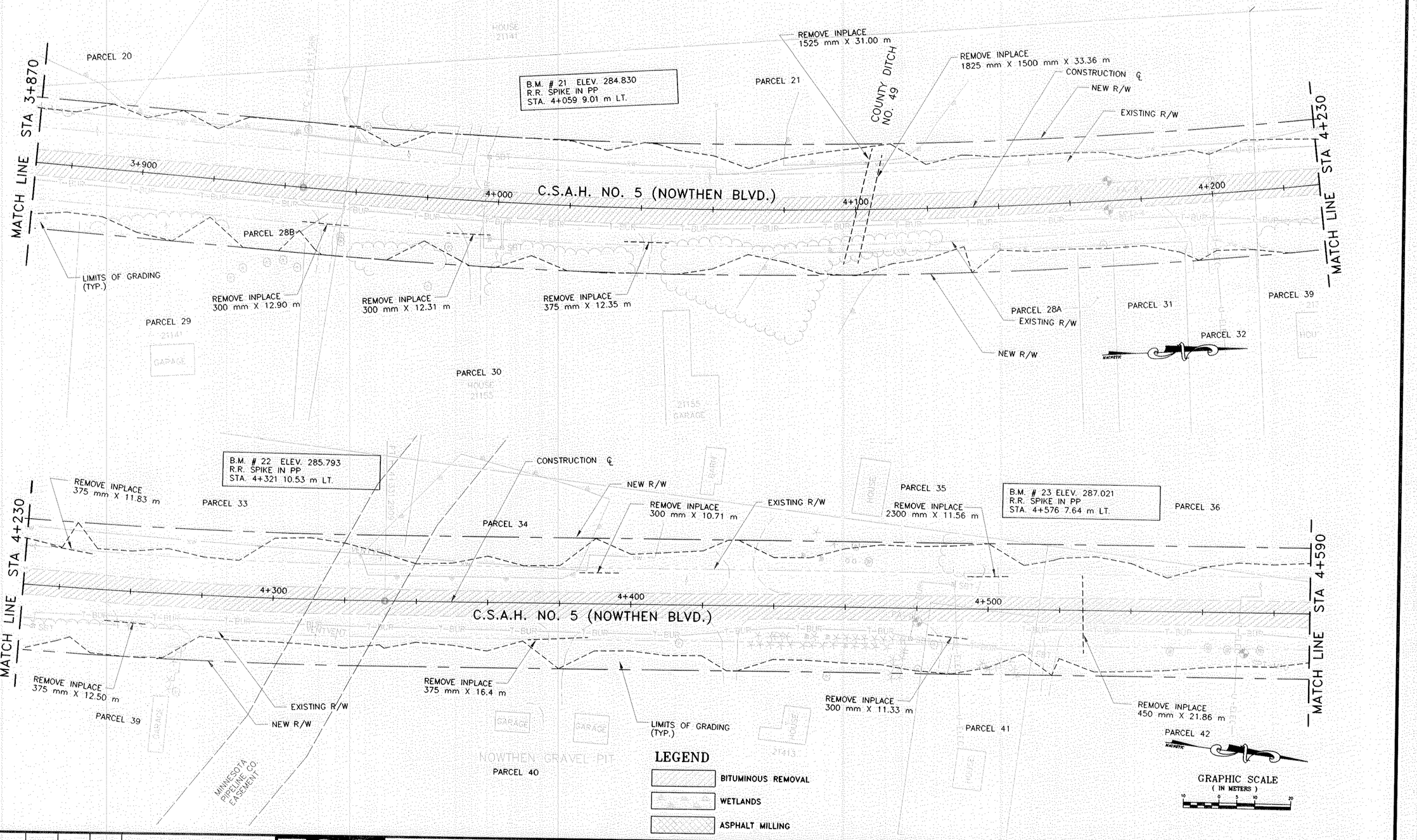
ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

EXISTING CONDITION AND REMOVAL PLAN
STA. 3+150 TO STA. 3+870

Sheet 14 of 54 Sheets

Fed. Project No. _____



LEGEND

- BITUMINOUS REMOVAL
- WETLANDS
- ASPHALT MILLING

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C13.DWG

minnesota limited

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Dwight M. Zarwell

DATE 5/1/98 REG. NO. 20235

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ANOKA COUNTY

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STATE AID PROJECT NO. 02-605-05

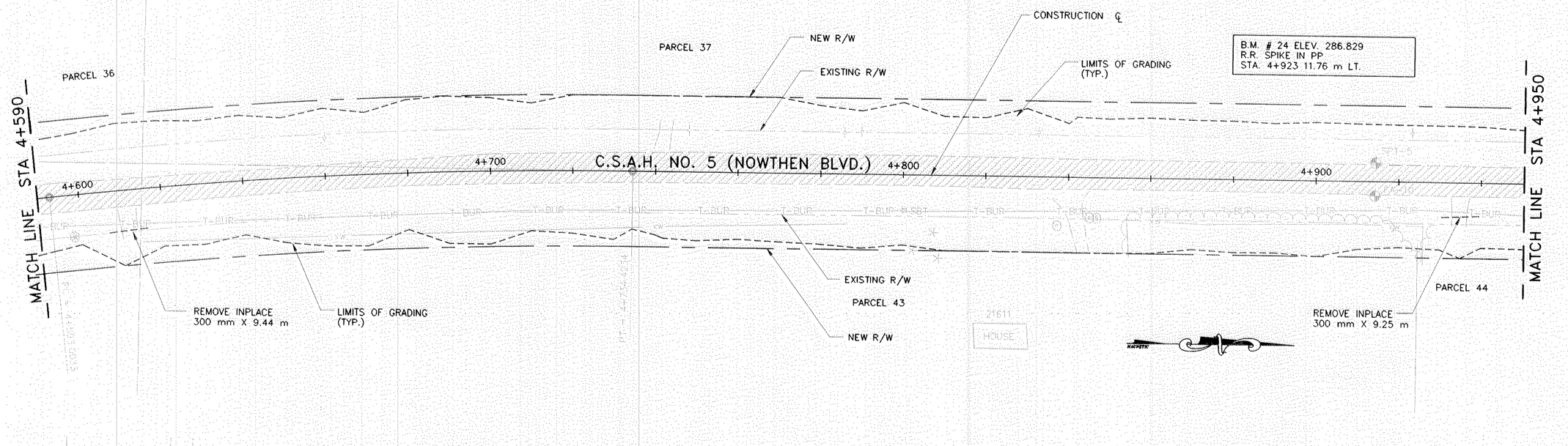
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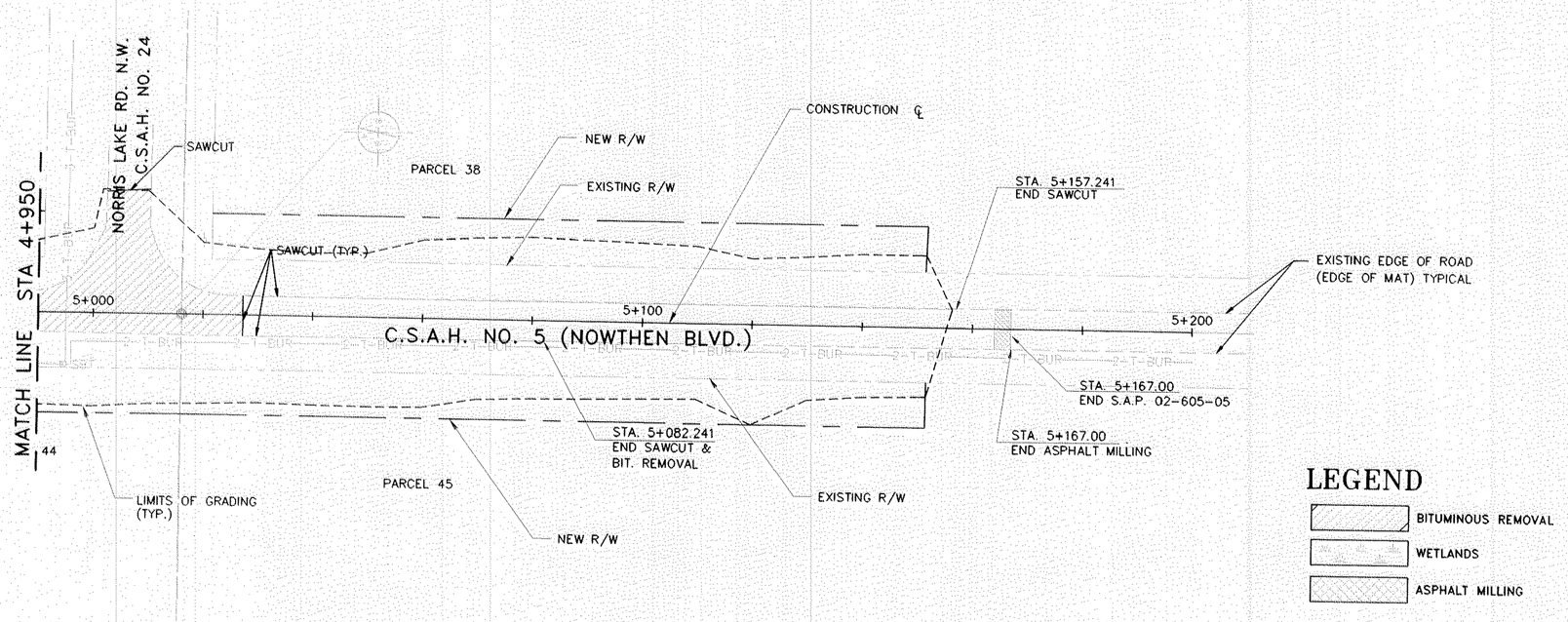
COUNTY PROJECT NO. _____

EXISTING CONDITION AND REMOVAL PLAN
STA. 3+870 TO STA. 4+590

Sheet 15 of 54 Sheets

Fed. Project No. _____





LEGEND

- BITUMINOUS REMOVAL
- WETLANDS
- ASPHALT MILLING

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C14.DWG

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DATE 5/1/98 REG. NO. 20235

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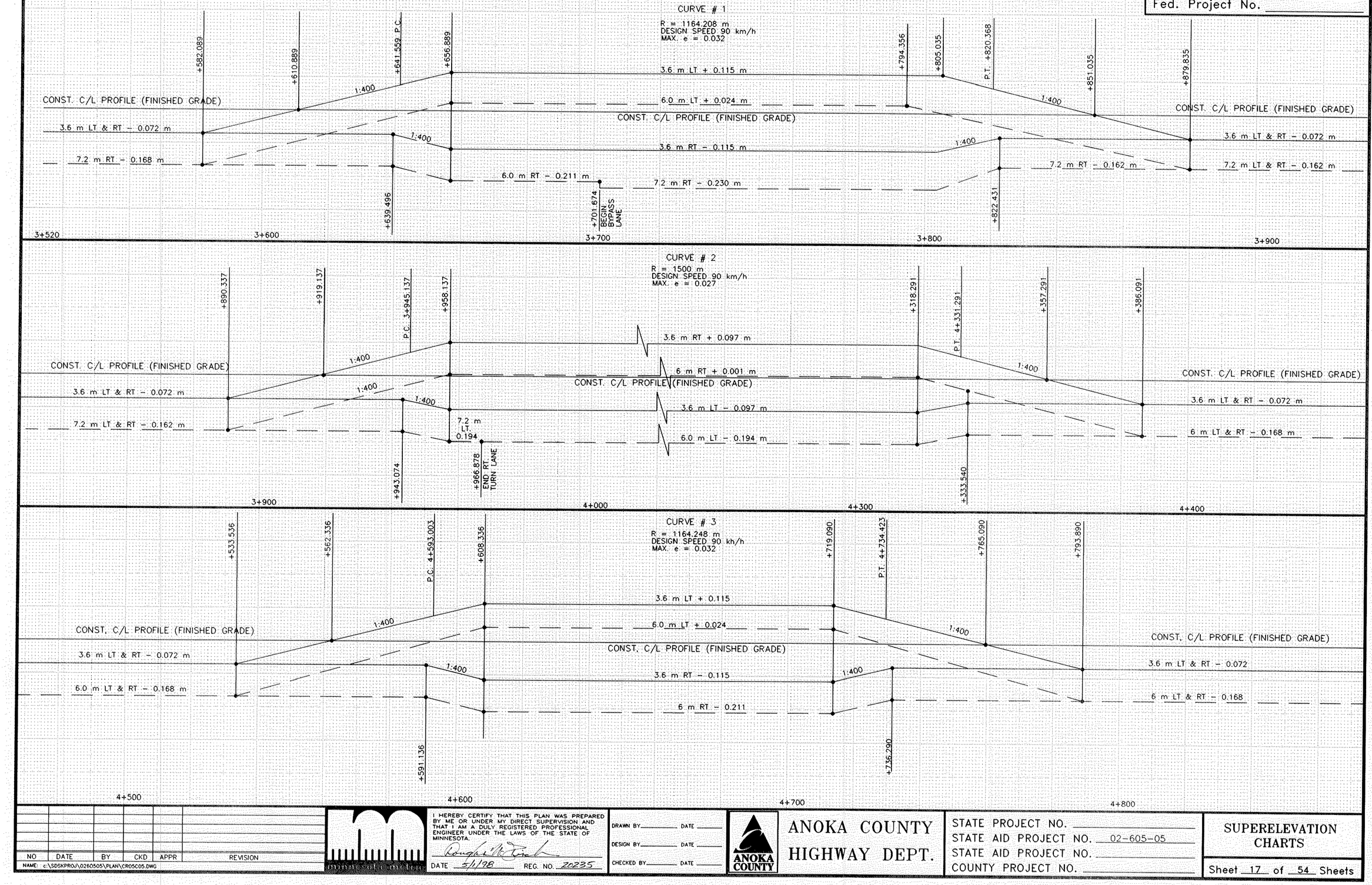
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STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

EXISTING CONDITION AND REMOVAL PLAN
STA. 4+590 TO STA. 5+167.242

Sheet 16 of 54 Sheets

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NO	DATE	BY	CKD	APPR	REVISION

NAME: c:\SDSKPROJ\0260505\PLAN\CR05C05.DWG

minnesota metro

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DATE 5/1/98 REG. NO. 20235

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ANOKA COUNTY

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STATE AID PROJECT NO. 02-605-05

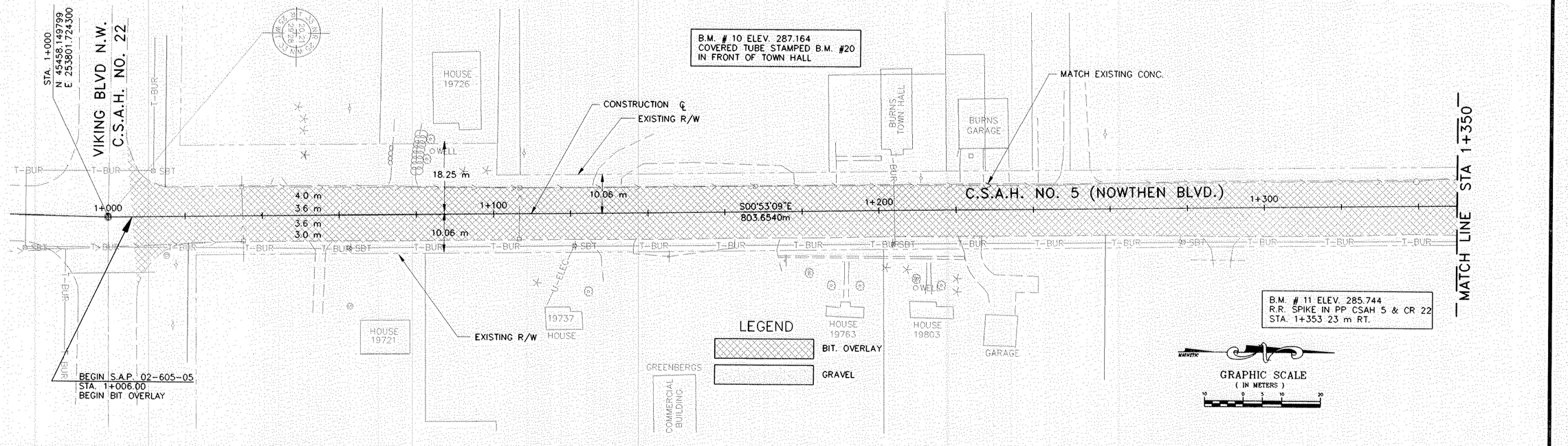
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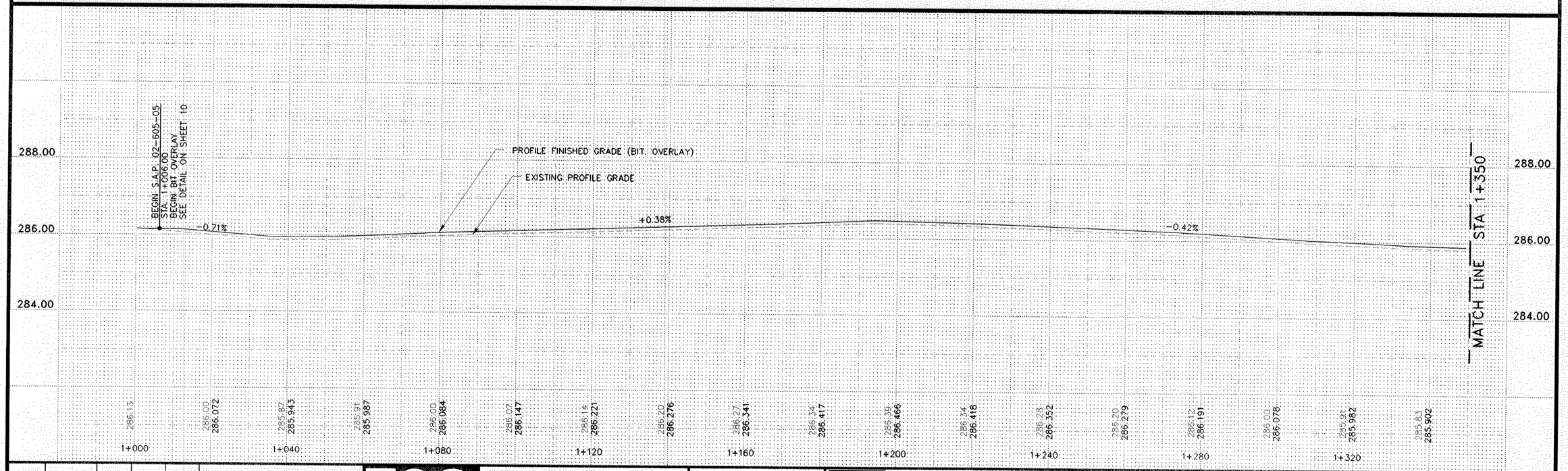
COUNTY PROJECT NO. _____

SUPERELEVATION CHARTS

Sheet 17 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

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DATE 5/1/98 REG. NO. 20235

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DESIGN BY _____ DATE _____
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ANOKA COUNTY HIGHWAY DEPT.

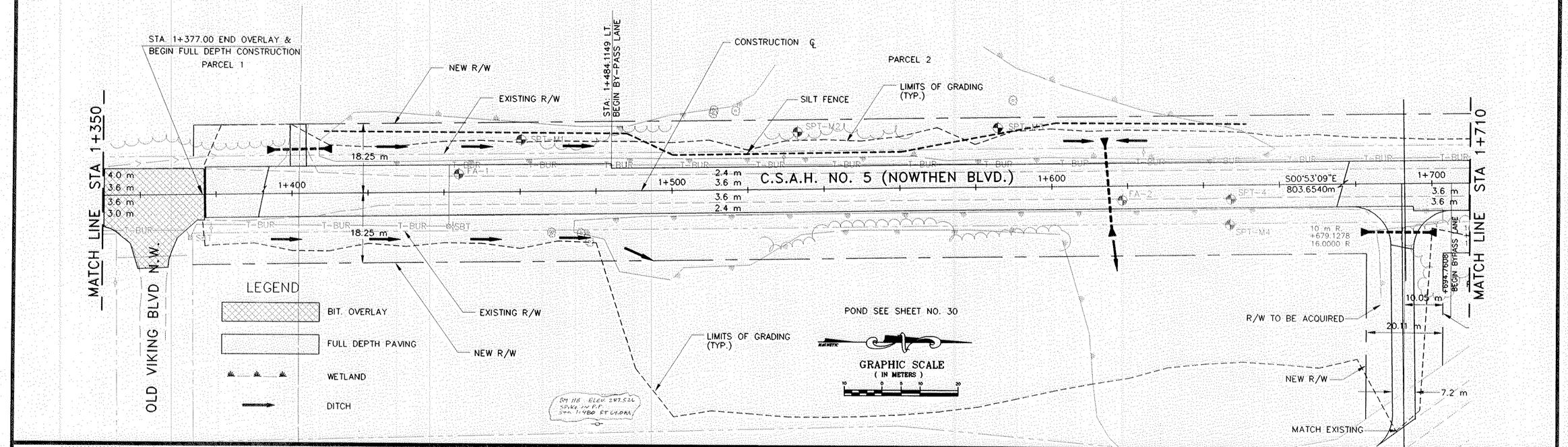
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STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

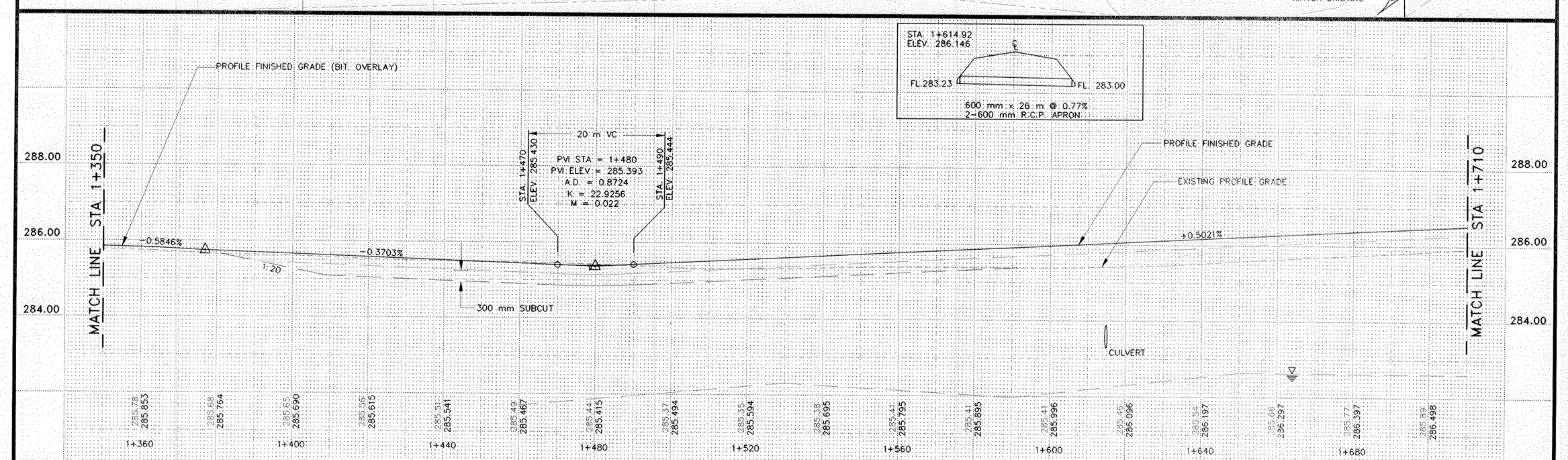
PLAN AND PROFILE
STA. 1+000 TO STA. 1+350

Sheet 18 of 54 Sheets

CR05C15.dwg 4298 1435

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\026050\PLAN\CR05C18.DWG

minnesota metric

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DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
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ANOKA COUNTY

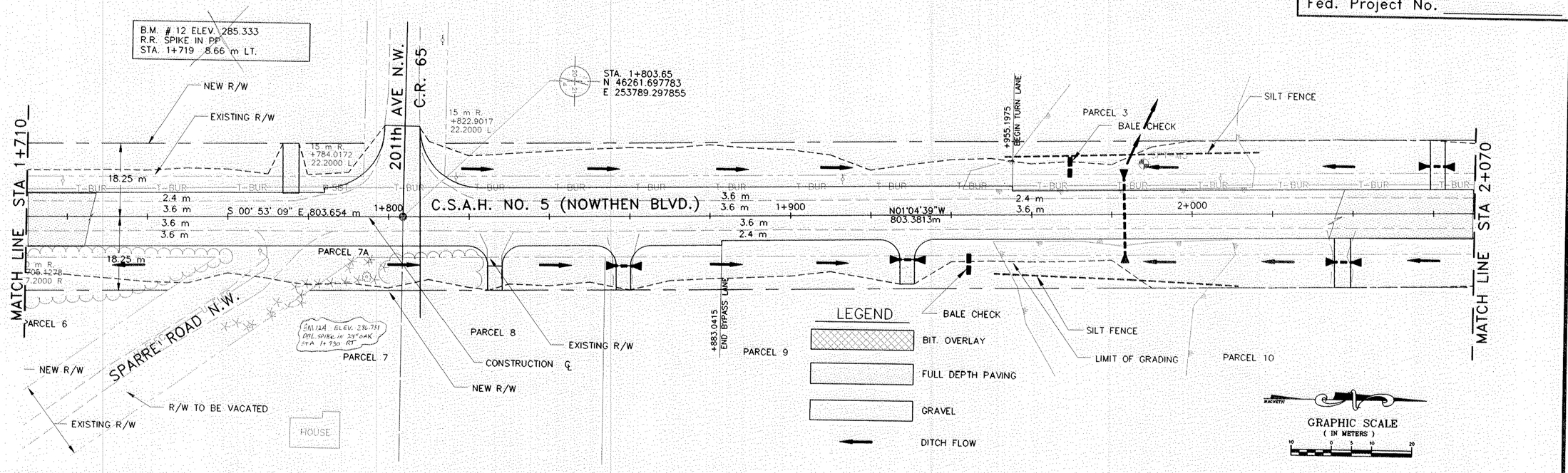
ANOKA COUNTY HIGHWAY DEPT.

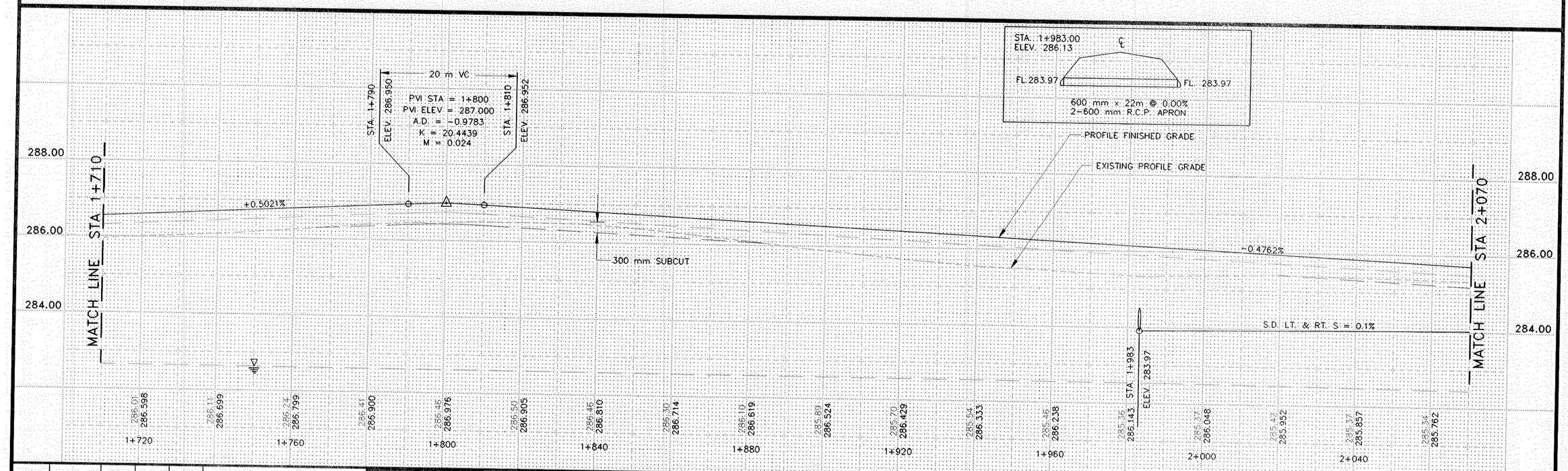
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STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 1+350 TO STA. 1+710

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DATE 5/1/98 REG. NO. 20235

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DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

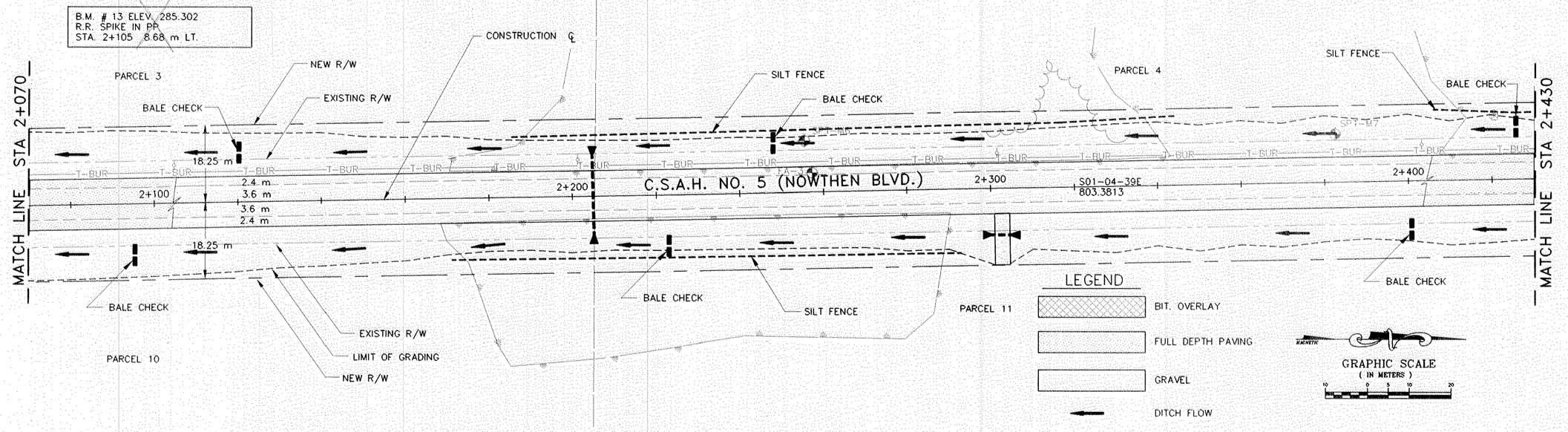
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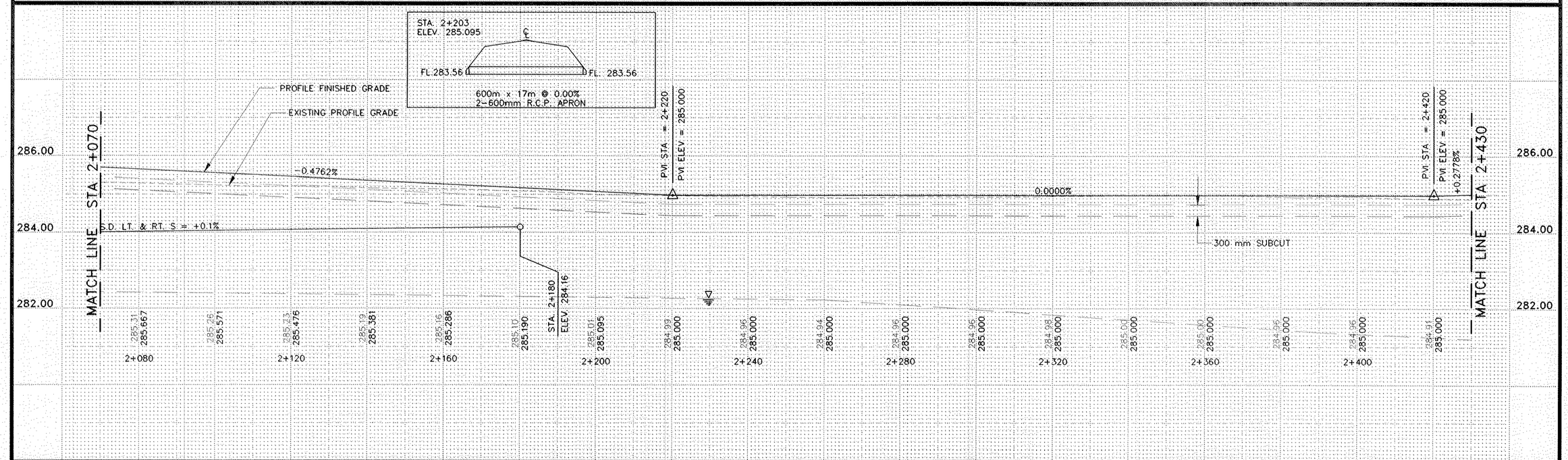
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 1+710 TO STA. 2+070

Sheet 20 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C18.DWG

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DATE 5/1/98 REG. NO. 20235

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DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

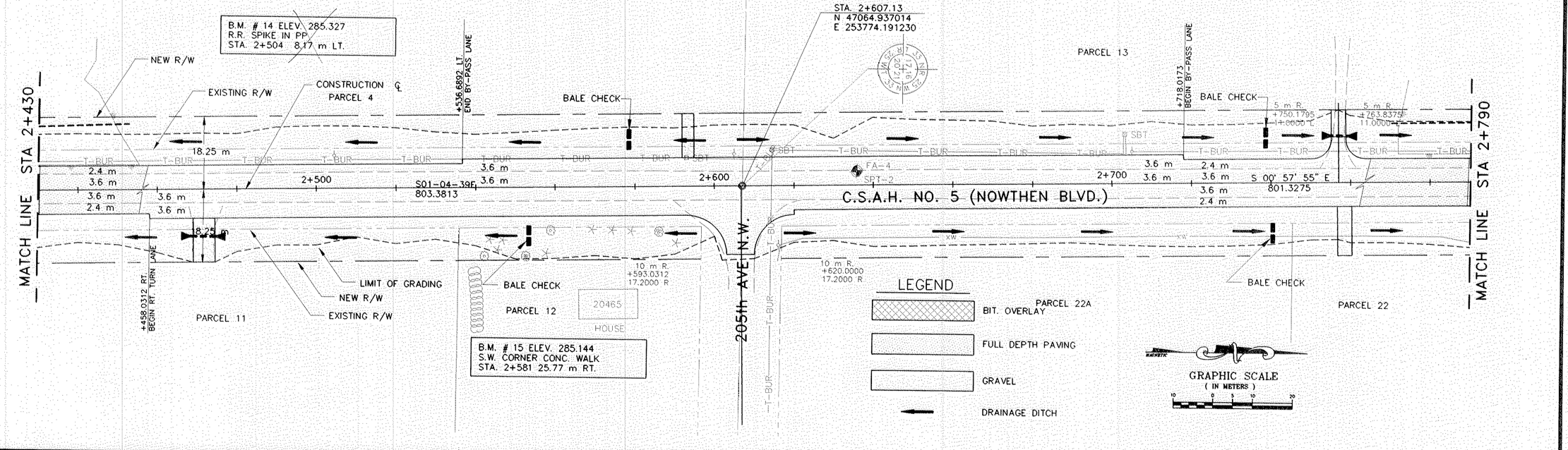
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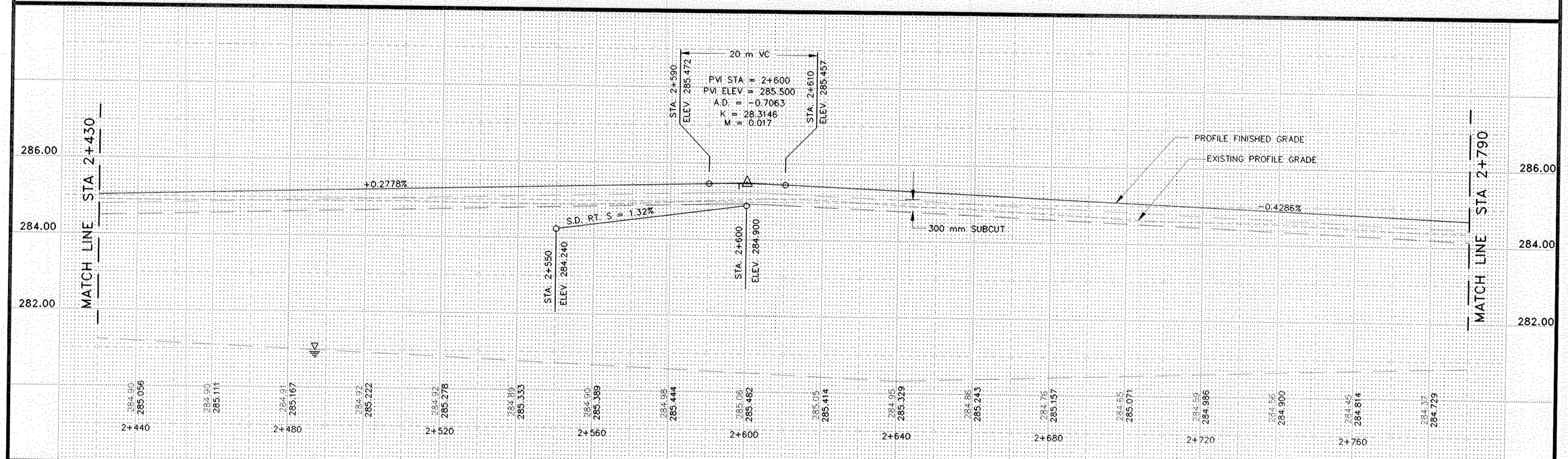
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 2+070 TO STA. 2+430

Sheet 21 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C19.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fischer

DATE 5/1/98 REG. NO. 20235

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DESIGN BY _____ DATE _____

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ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

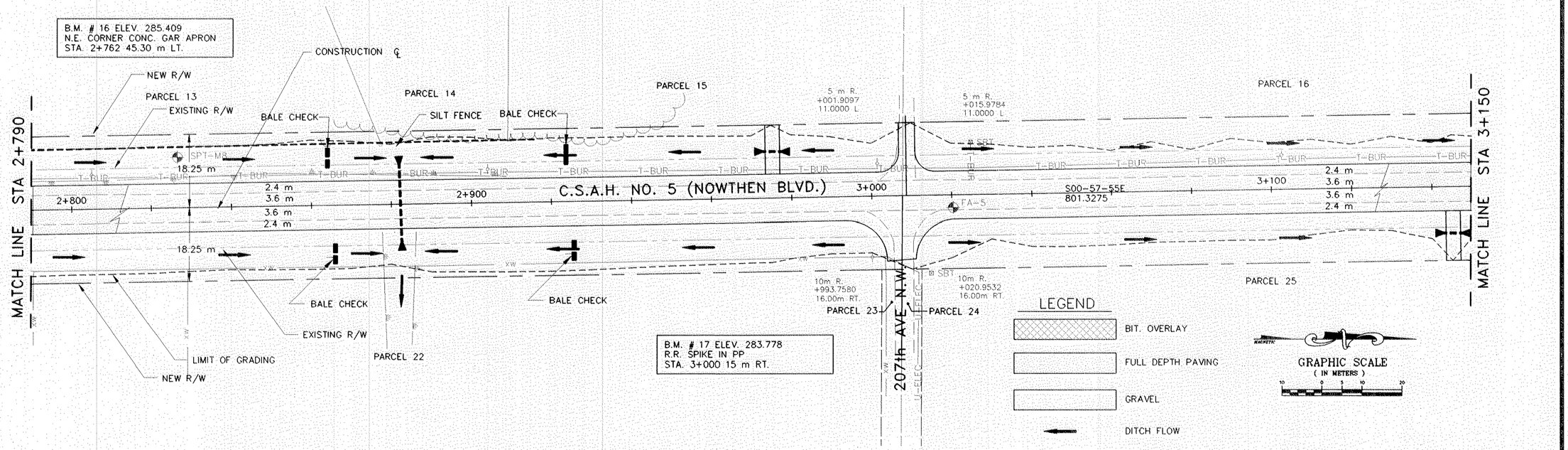
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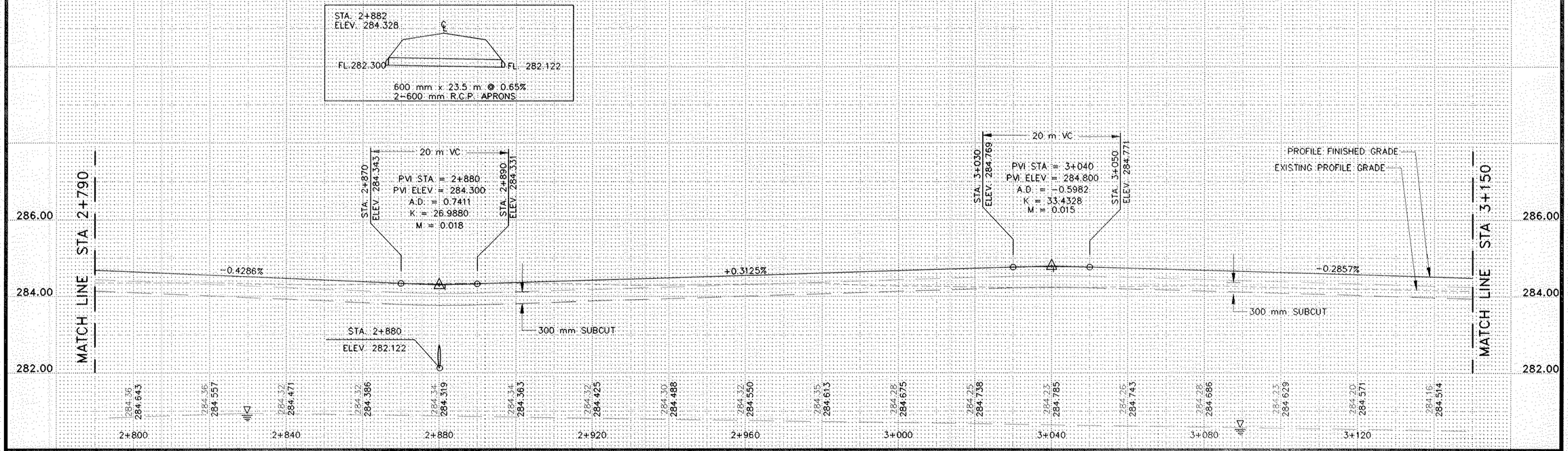
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 2+430 TO STA. 2+790

Sheet 22 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C20.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Dwight W. Brunel

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

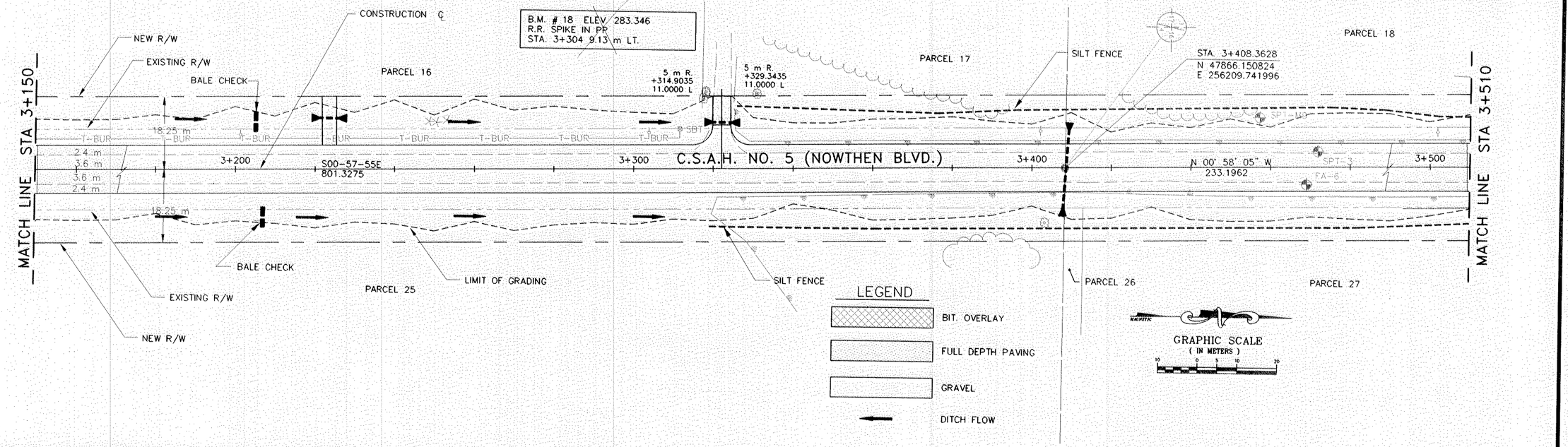
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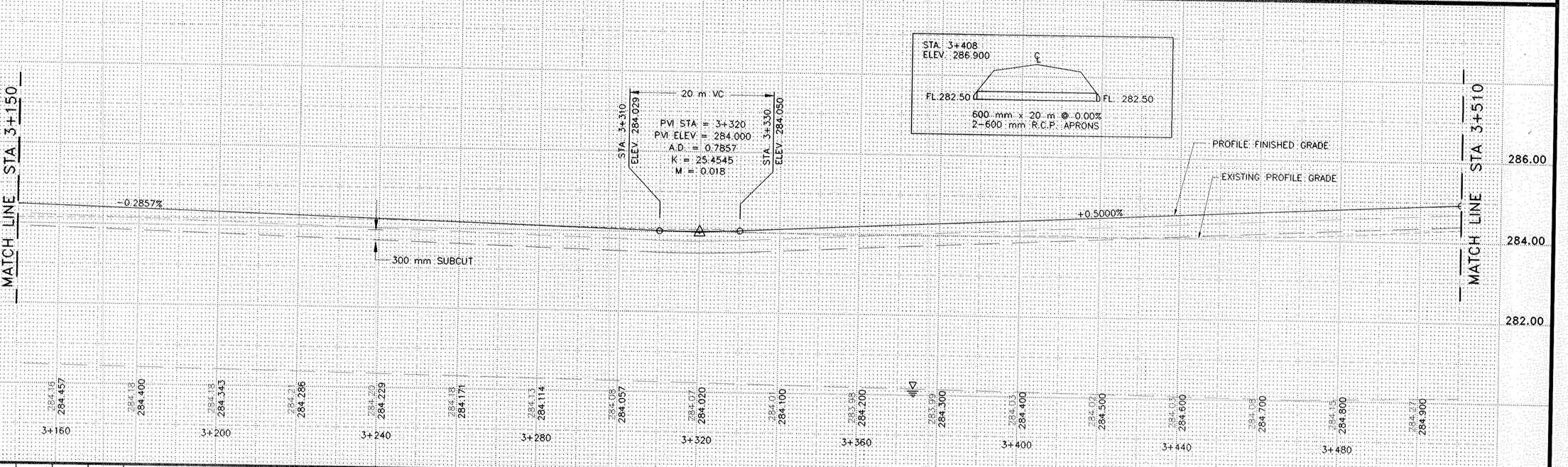
PLAN AND PROFILE
STA. 2+790 TO STA. 3+150

Sheet 23 of 54 Sheets

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Fed. Project No.





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C21.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Kral

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

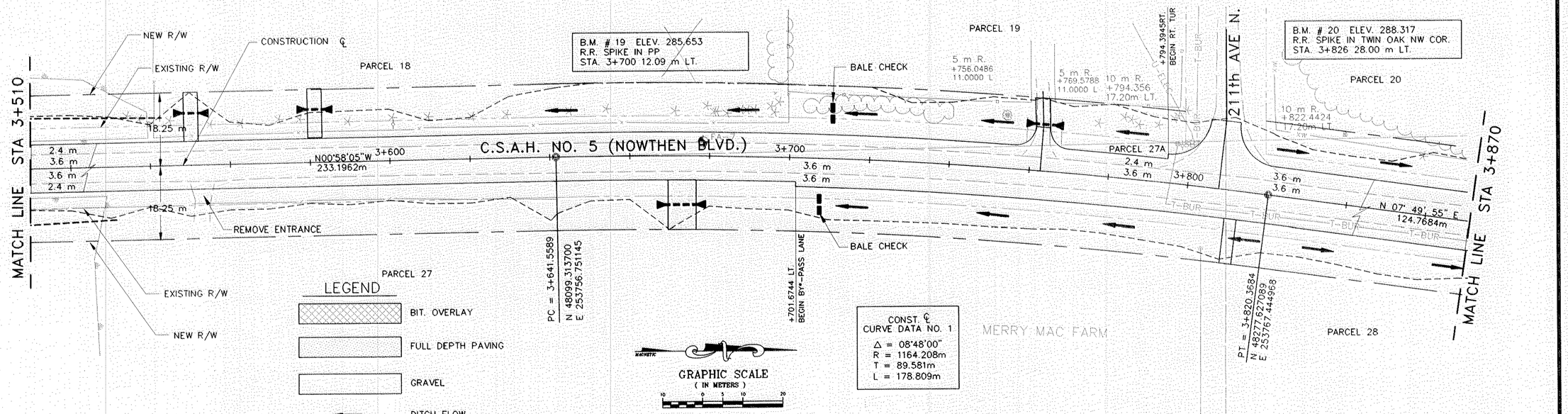
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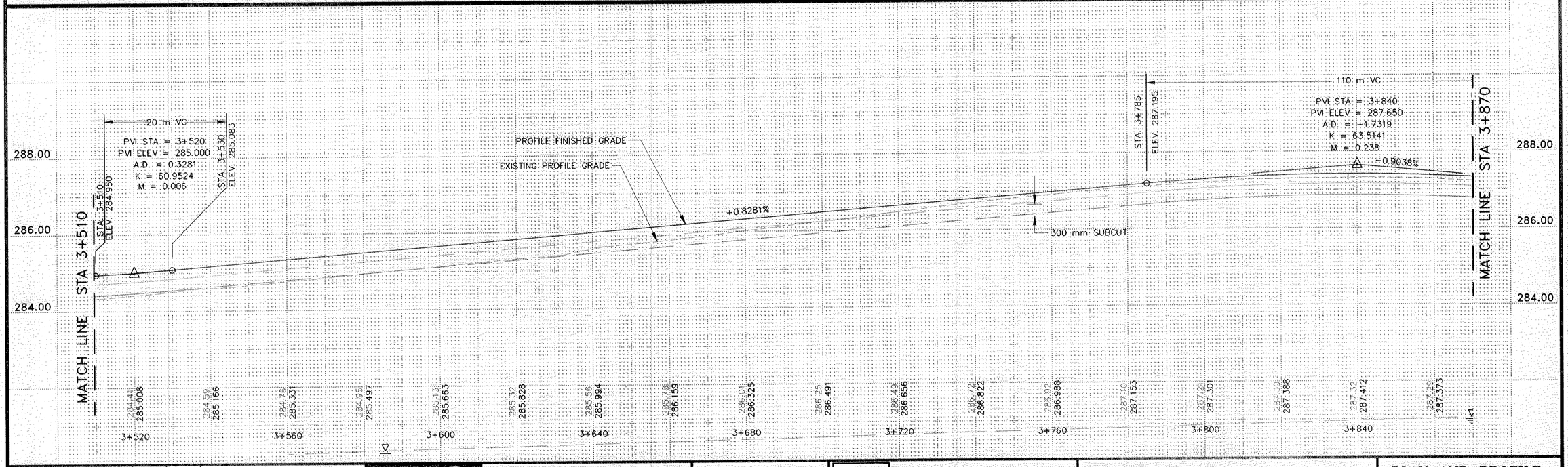
PLAN AND PROFILE
STA. 3+150 TO STA. 3+510

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CR05C21.DWG 42298 42044

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C22.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Rund

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

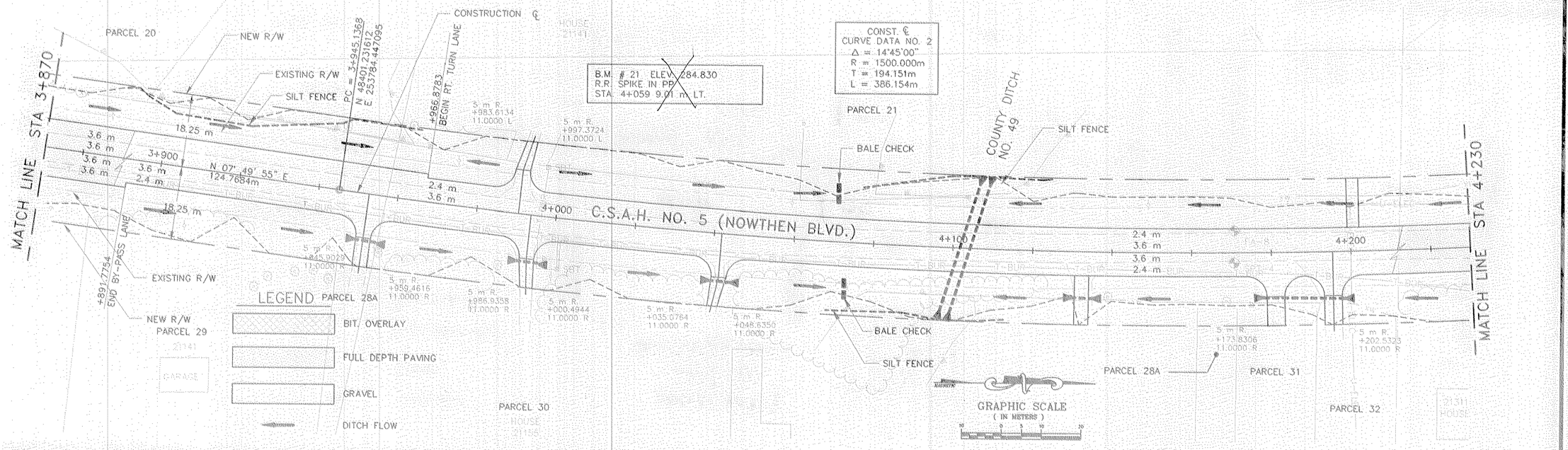
STATE AID PROJECT NO. _____

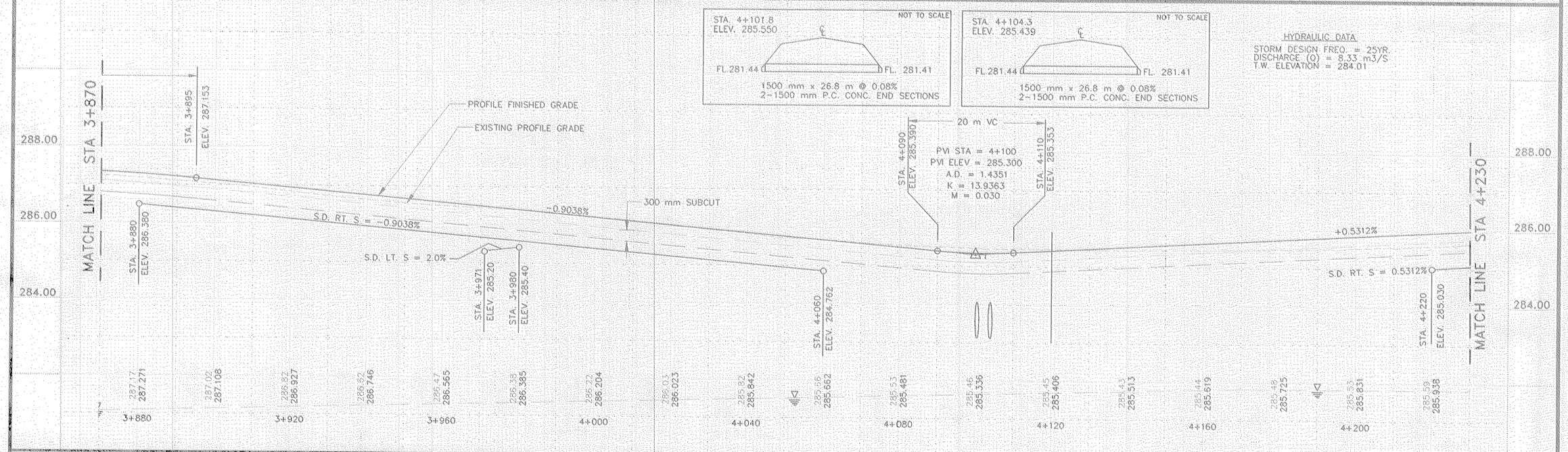
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 3+510 TO STA. 3+870

Sheet 25 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME S:\SDSKPROJ\0260505\PLAN\CR05C25.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/4/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

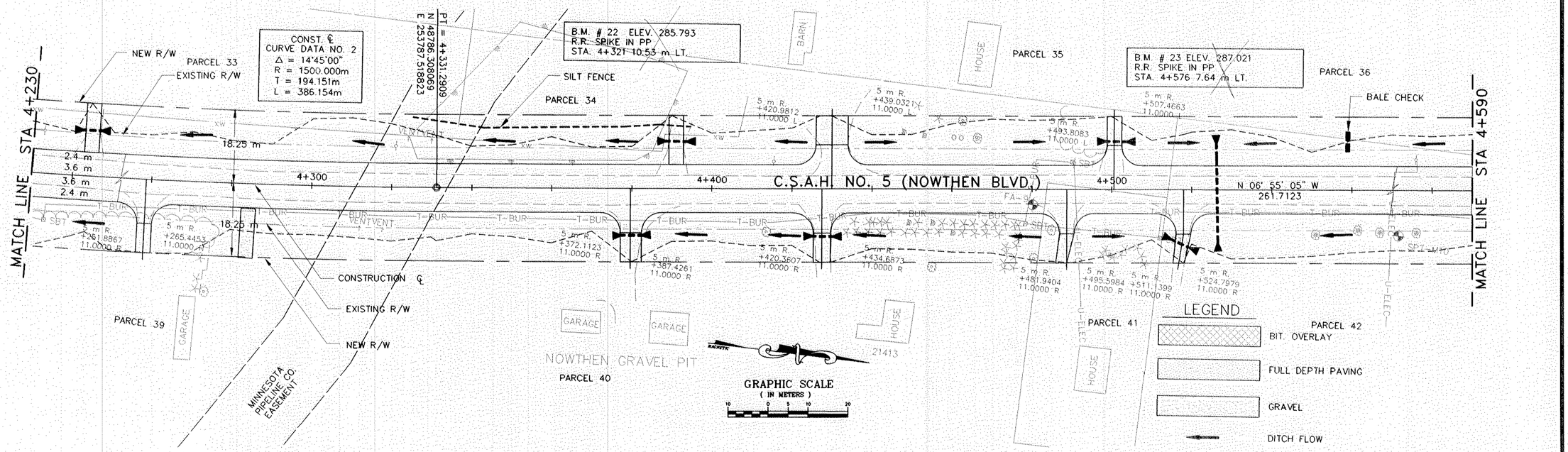
STATE AID PROJECT NO. _____

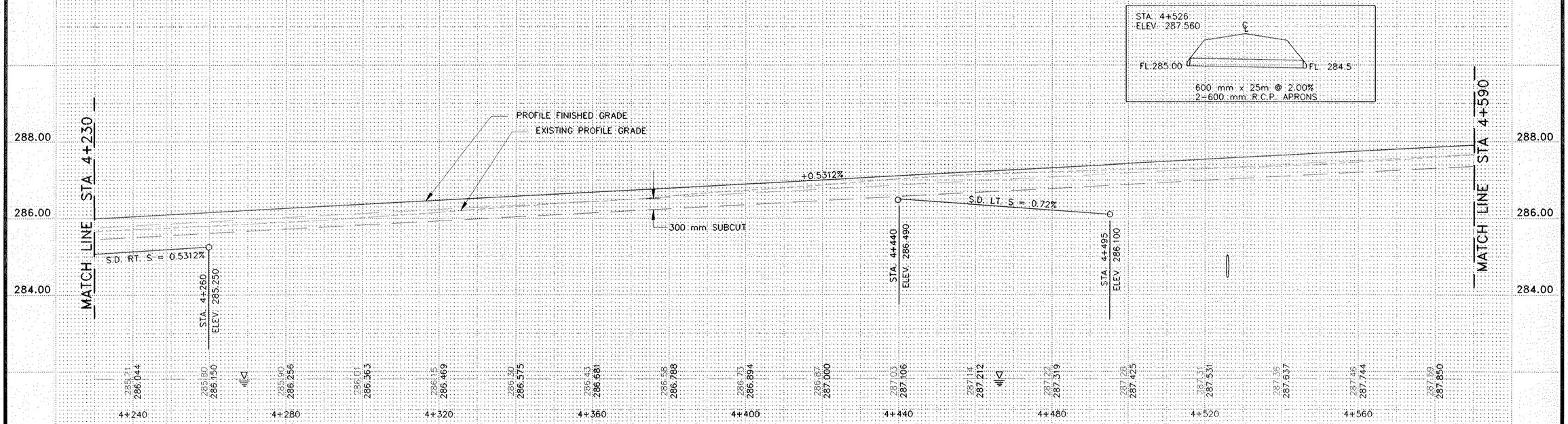
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 3+870 TO STA. 4+230

Sheet 26 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C24.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/08 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

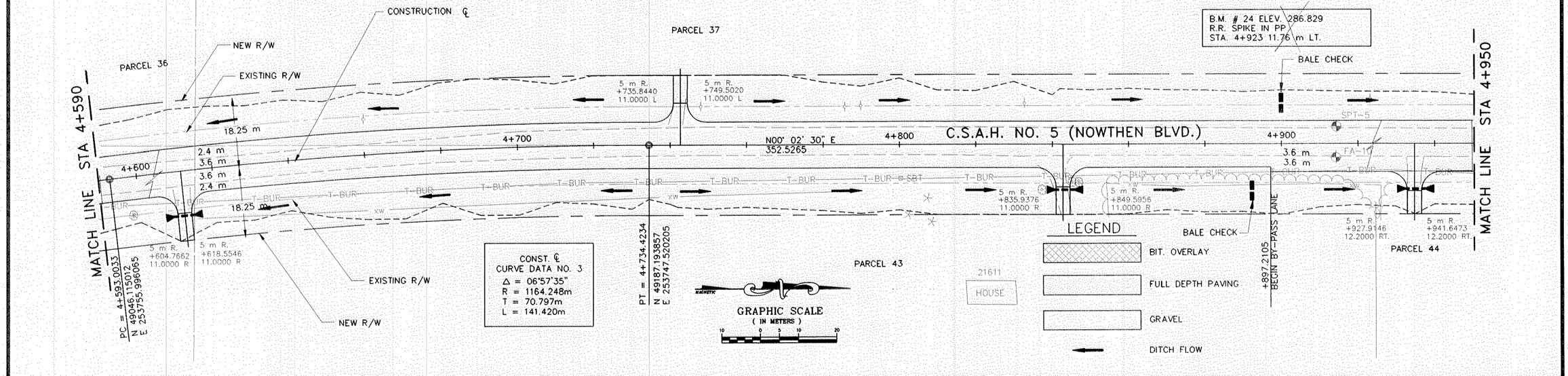
STATE AID PROJECT NO. _____

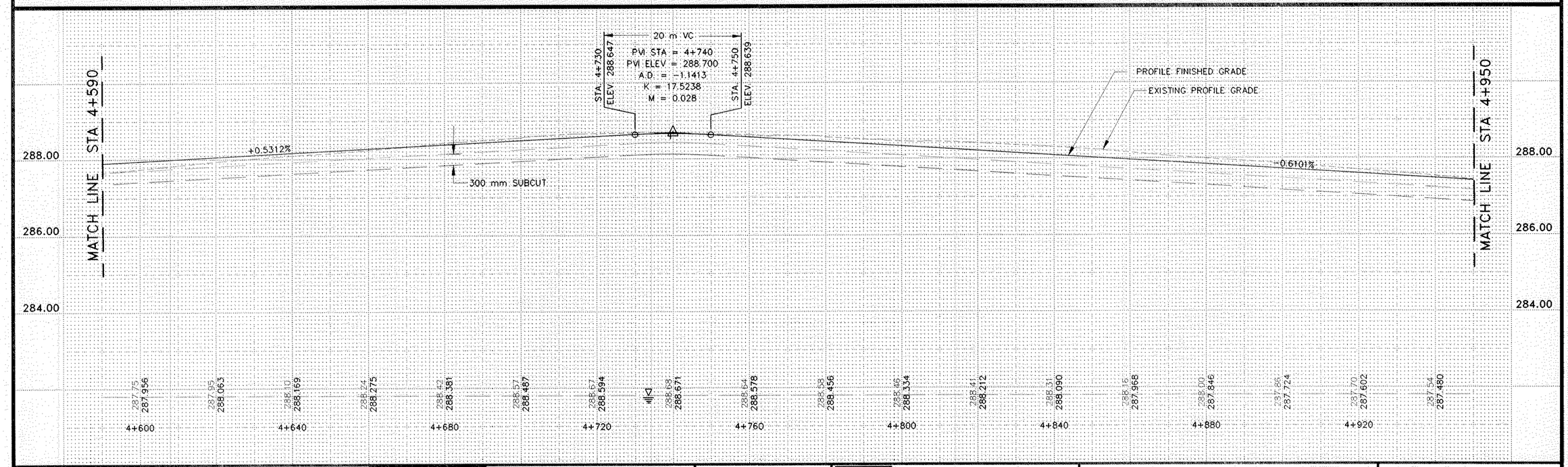
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 4+230 TO STA. 4+590

Sheet 27 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05C25.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

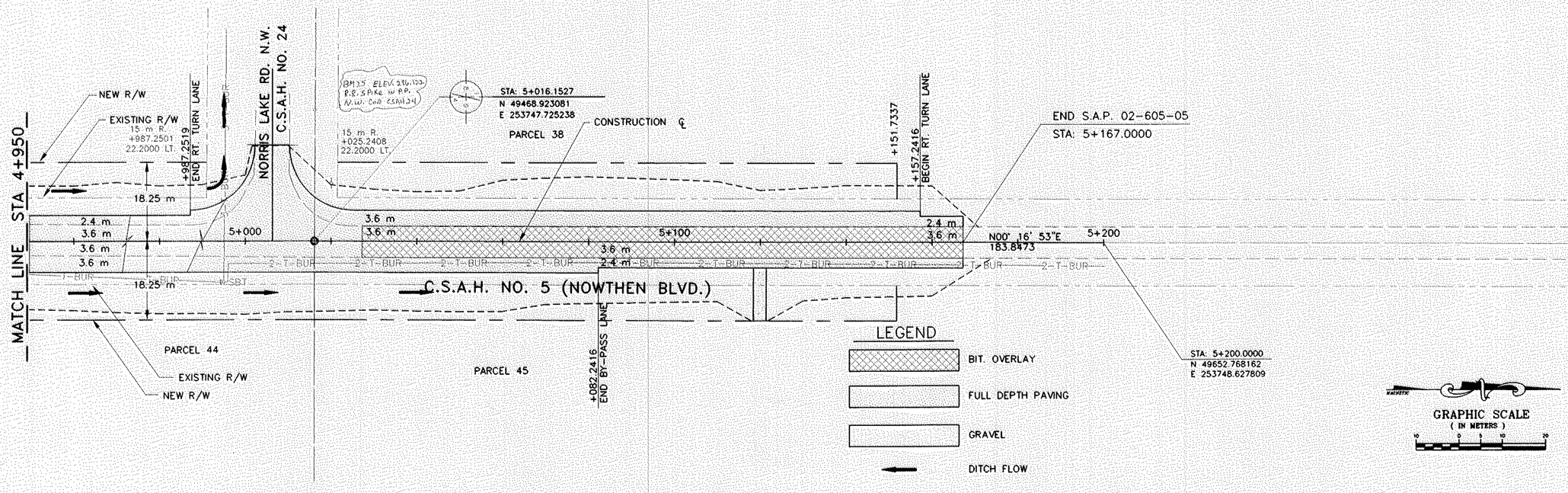
STATE AID PROJECT NO. _____

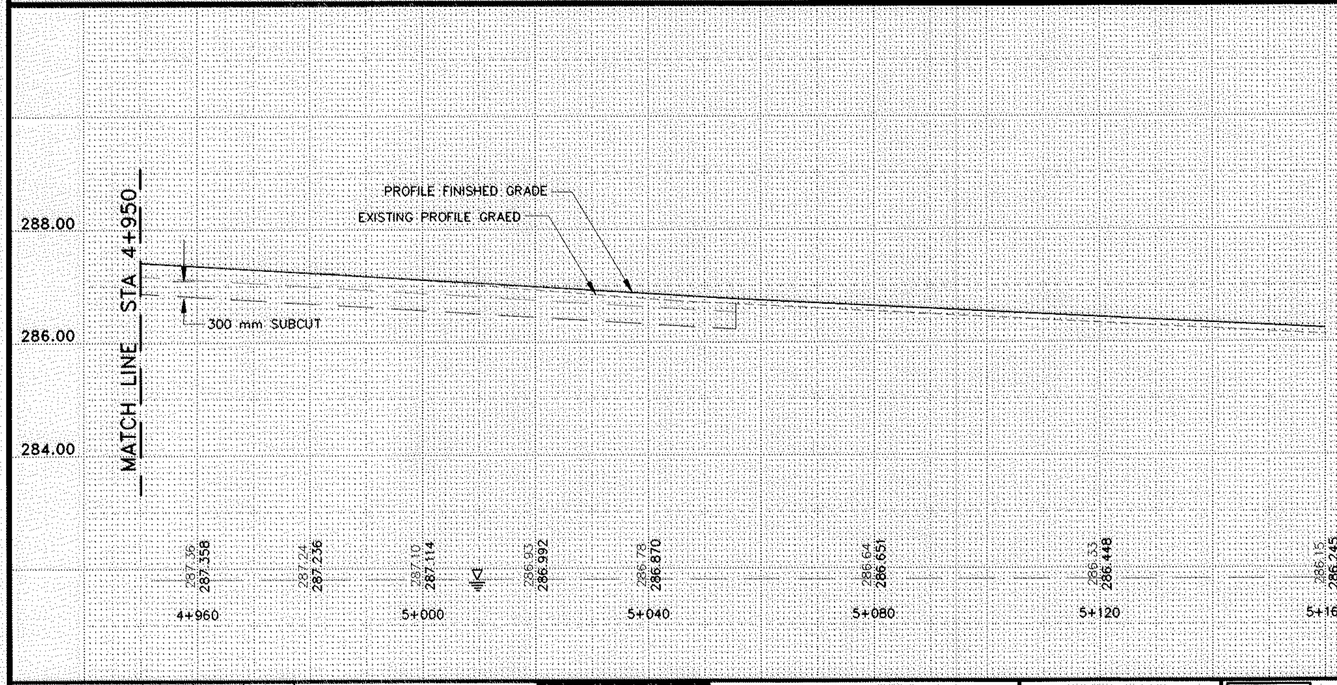
COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA. 4+590 TO STA. 4+950

Sheet 28 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\02605005\PLAN\CR05C26.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Bruce

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

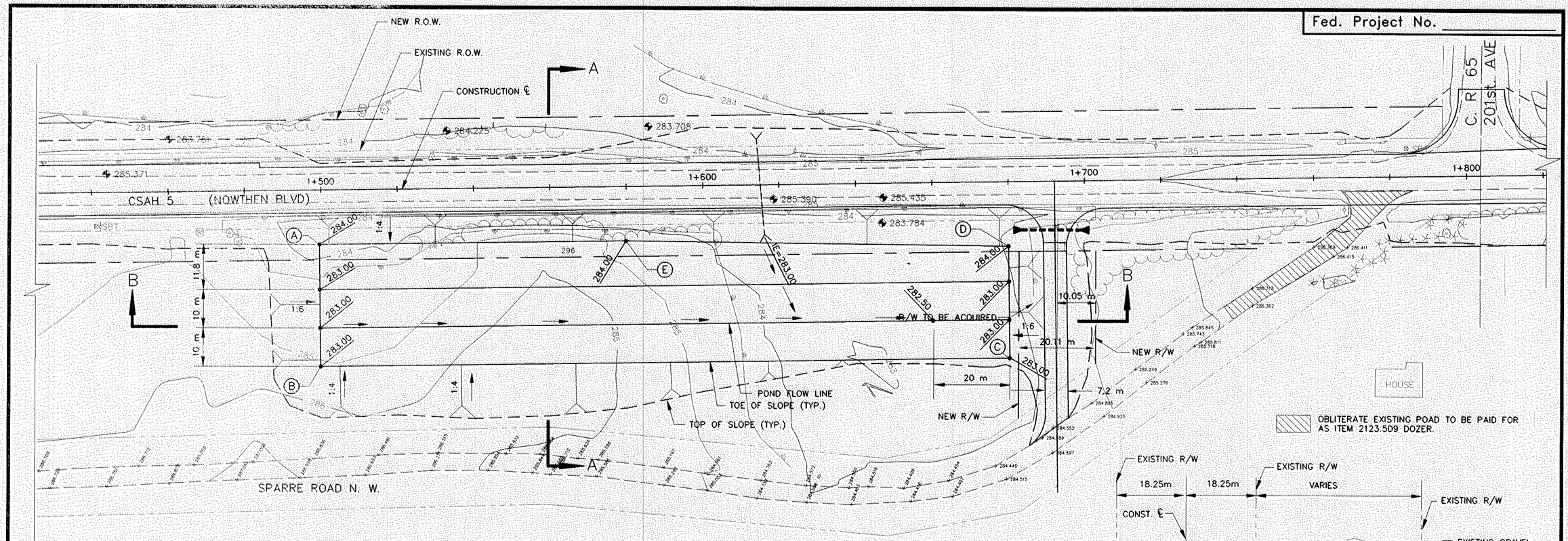
STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

PLAN AND PROFILE
STA.4+950 TO STA.5+167.242

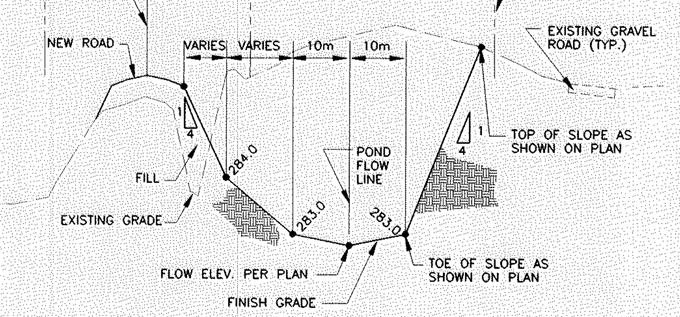
Sheet 29 of 54 Sheets

Fed. Project No. _____



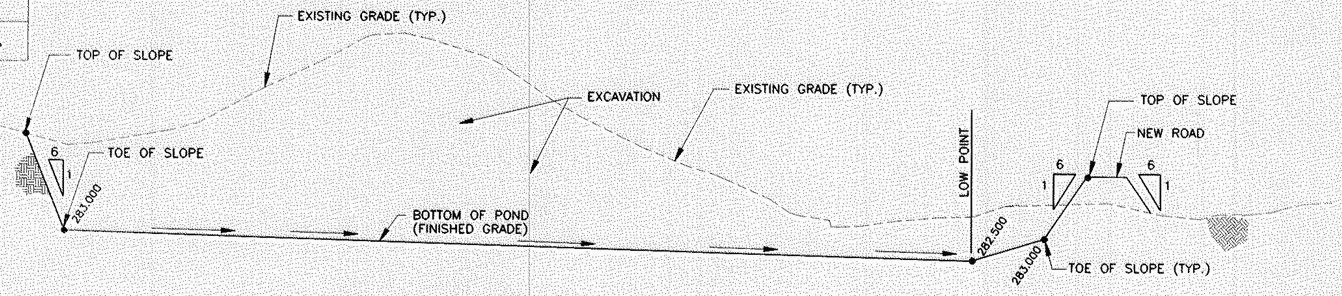
COORDINATE TABLE		
I.D.	NORTHING	EASTING
Ⓐ	N 45957.824400	E 253808.198736
Ⓑ	N 45958.316105	E 253839.994934
Ⓒ	N 46138.769305	E 253837.204356
Ⓓ	46138.317868	E 253808.012135
Ⓔ	N 46038.112055	E 253806.957145

NOTE: CONTRACTOR SHALL PLACE 300mm MUCK EXCAVATION OVER ENTIRE POND AREA FOR TOPSOIL DRESSING.



SECTION A–A

NOT TO SCALE



SECTION B–B

NOT TO SCALE

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\605POND1.DWG

minnesota metro

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

DETENTION POND

Sheet 30 of 54 Sheets

Fed. Project No. _____

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
1+377	12.30	0.12	35.11	0.71	35.11	0.71
1+380	11.10	0.35	102.72	1.77	137.83	2.48
1+390	9.44	0.00	96.03	24.39	233.86	26.87
1+400	9.76	4.88	97.27	35.11	331.13	61.98
1+410	9.69	2.14	70.71	23.41	401.83	85.39
1+420	4.45	2.54	55.60	16.73	457.44	102.12
1+430	6.67	0.81	55.02	20.61	512.46	122.73
1+440	4.33	3.31	44.95	33.93	557.41	156.66
1+450	4.66	3.47	71.25	19.45	628.66	176.11
1+460	9.59	0.42	77.46	10.98	706.11	187.09
1+470	5.90	1.78	66.80	15.00	772.91	202.09
1+480	7.46	1.22	70.54	18.17	843.45	220.26
1+490	6.65	2.41	340.61	20.88	1184.07	241.14
1+500	61.48	1.76	610.88	58.75	1794.94	299.89
1+510	60.70	9.99	649.20	58.46	2444.14	358.35
1+520	69.14	1.71	783.30	38.65	3227.45	397.00
1+530	87.52	6.02	955.09	74.31	4182.54	471.30
1+540	103.50	8.84	1135.58	65.70	5318.12	537.01
1+550	123.62	4.30	1306.35	37.27	6624.47	574.28
1+560	137.65	3.15	1282.16	163.29	7906.63	737.57
1+570	118.78	29.51	1064.63	177.33	8971.26	914.90
1+580	94.15	5.96	828.33	102.70	9799.59	1017.61
1+590	71.52	14.58	623.43	165.39	10423.03	1183.00
1+600	53.17	18.50	459.14	193.60	10882.17	1376.60
1+610	38.66	20.22	325.41	254.88	11207.58	1631.48
1+620	26.42	30.75	201.03	261.59	11408.61	1893.07
1+630	13.78	21.57	116.67	225.69	11525.28	2118.76
1+640	9.55	23.57	104.37	255.03	11629.65	2373.79
1+650	11.33	27.43	128.18	241.23	11757.82	2615.02
1+660	14.31	20.81	159.08	202.10	11916.90	2817.12
1+670	17.51	19.61	95.94	183.00	12012.83	3000.12
1+680	1.68	16.99	8.73	384.80	12021.56	3384.92
1+690	0.06	59.97	0.32	351.77	12021.89	3736.69
1+700	0.00	10.38	0.00	112.62	12021.89	3849.31
1+710	0.00	12.14	0.76	120.02	12022.65	3969.32
1+720	0.15	11.86	13.03	99.05	12035.68	4068.37
1+730	2.45	7.95	17.05	89.20	12052.73	4157.58
1+740	0.95	9.89	12.45	101.29	12065.17	4258.87
1+750	1.54	10.36	8.47	90.46	12073.65	4349.33
1+760	0.16	7.73	14.30	51.68	12087.94	4401.02
1+770	2.70	2.61	16.35	16.64	12104.29	4417.65
1+775	3.84	4.05	15.15	19.01	12119.44	4436.67
1+780	2.22	3.56	21.91	29.66	12141.34	4466.33
1+790	2.16	2.37	36.43	21.72	12177.78	4488.05
1+800	5.13	1.97	51.17	23.32	12228.95	4511.37
1+810	5.11	2.69	70.20	21.77	12299.14	4533.14
1+820	8.93	1.66	32.78	7.52	12331.93	4540.66
1+825	4.18	1.35	31.00	8.80	12362.92	4549.47
1+830	8.22	2.17	99.22	10.90	12462.15	4560.37
1+840	11.63	0.01	103.53	6.27	12565.68	4566.64
1+850	9.08	1.25	77.65	15.84	12643.32	4582.48
1+860	6.45	1.92	66.75	15.03	12710.07	4597.51
1+870	6.90	1.08	85.64	11.71	12795.71	4609.22
1+880	10.23	1.26	109.77	6.30	12905.49	4615.52
1+890	11.73	0.00	87.01	15.39	12992.49	4630.91
1+900	5.67	3.08	39.73	52.42	13032.22	4683.33
1+910	2.27	7.41	11.36	81.83	13043.59	4765.16
1+920	0.00	8.96	0.00	102.91	13043.59	4868.06
1+930	0.00	11.62	0.00	140.58	13043.59	5008.64
1+940	0.00	16.49	0.00	149.26	13043.59	5157.91
1+950	0.00	13.36	0.00	141.59	13043.59	5299.50
1+960	0.00	14.96	0.00	153.80	13043.59	5453.29
1+970	0.00	15.80	0.00	149.12	13043.59	5602.41
1+980	0.00	14.02	15.58	126.87	13059.16	5729.28
1+990	3.12	11.35	50.15	85.15	13109.31	5814.43
2+000	6.91	5.68	82.04	72.61	13191.35	5887.04
2+010	9.50	8.84	82.71	74.38	13274.06	5961.42
2+020	7.05	6.04	77.93	62.70	13351.99	6024.13
2+030	8.54	6.51	57.69	42.29	13409.68	6066.42
2+037	7.94	5.58	28.62	13.72	13438.30	6080.14
2+040	11.14	3.57	106.24	43.00	13544.55	6123.14
2+050	10.11	5.03	183.96	31.89	13728.50	6155.03
2+060	26.68	1.35	169.14	31.59	13897.64	6186.63
2+070	7.15	4.97	76.80	33.12	13974.44	6219.74
2+080	8.21	1.65	102.76	10.19	14077.20	6229.93
2+090	12.34	0.38	98.02	28.43	14175.21	6258.37
2+100	7.27	5.30	87.50	29.77	14262.72	6288.13
2+110	10.24	0.65	86.36	12.94	14349.08	6301.07
2+120	7.04	1.94	77.74	17.27	14426.82	6318.34
2+130	8.51	1.52	105.36	8.01	14532.17	6326.35
2+140	12.56	0.09	92.09	5.36	14624.26	6331.71
2+150	5.86	0.99	73.00	9.13	14697.26	6340.84
2+160	8.75	0.84	85.16	8.39	14782.43	6349.23
2+170	8.29	0.84	61.95	7.31	14844.38	6356.55
2+180	4.10	0.62	36.11	14.94	14880.49	6371.48
2+190	3.12	2.36	48.98	19.60	14929.47	6391.08
2+200	6.68	1.56	59.47	16.38	14988.95	6407.46
2+210	5.22	1.72	62.04	10.64	15050.99	6418.11
2+220	7.19	0.41	48.65	11.93	15099.64	6430.04
2+230	2.54	1.98	41.90	21.99	15141.54	6452.03
2+240	5.84	2.42	57.17	19.98	15198.71	6472.01
2+250	5.60	1.58	50.72	13.70	15249.43	6485.70
2+260	4.55	1.16	51.83	12.55	15301.26	6498.26
2+270	5.82	1.35	66.42	6.73	15367.68	6504.99
2+280	7.47	0.00	68.08	8.94	15435.76	6513.93
2+290	6.15	1.79	17.07	5.23	15452.83	6519.16
2+293	5.23	1.70	45.95	8.77	15498.78	6527.93
2+300	7.90	0.81	63.77	15.26	15562.55	6543.19
2+310	4.85	2.25	82.49	11.38	15645.04	6554.58
2+320	11.65	0.03	109.93	4.01	15754.97	6558.58
2+330	10.34	0.77	111.29	6.93	15866.26	6565.51
2+340	11.92	0.61	122.40	3.77	15988.66	6569.28
2+350	12.56	0.14	120.35	6.32	16109.01	6575.60
2+360	11.51	1.12	111.12	7.11	16220.13	6582.71
2+370	10.72	0.30	123.03	2.05	16343.16	6584.76
2+380	13.89	0.11	98.16	6.72	16441.32	6591.47
2+390	5.74	1.23	91.46	6.63	16532.78	6598.10
2+400	12.55	0.10	107.93	0.63	16640.71	6598.73
2+410	9.03	0.03	81.32	3.40	16722.03	6602.13
2+420	7.23	0.65	75.38	3.77	16797.41	6605.90
2+430	7.85	0.10	68.77	7.53	16866.17	6613.43
2+440	5.91	1.40	61.80	10.66	16927.97	6624.08
2+450	6.45	0.73	64.62	15.08	16992.59	6639.16
2+460	6.47	2.29	52.89	49.32	17045.48	6688.48
2+470	4.11	7.58	52.01	42.65	17097.50	6731.14
2+480	6.30	0.95	63.17	16.52	17160.66	6747.66
2+490	6.34	2.35	67.83	19.80	17228.50	6767.46
2+500	7.23	1.61	64.70	29.05	17293.19	6796.51
2+510	5.71	4.20	52.93	28.82	17346.12	6825.32
2+520	4.88	1.56	35.81	57.28	17381.94	6882.60
2+530	2.29	9.90	25.63	59.67	17407.56	6942.27
2+540	2.84	2.04	59.81	24.34	17467.37	6966.61
2+550	9.12	2.83	69.84	23.76	17537.21	6990.37
2+560	4.85	1.92	74.22	14.27	17611.43	7004.64
2+570	10.00	0.93	125.40	11.82	17736.83	7016.45
2+580	15.08	1.43	125.42	13.87	17862.25	7030.33
2+590	10.00	1.34	70.90	7.78	17933.15	7038.11
2+600	4.18	0.21	52.76	1.93	17985.91	7040.04
2+610	6.37	0.17	50.68	9.15	18036.59	7049.18
2+620	3.76	1.66	29.21	23.95	18065.80	7073.14
2+630	2.08	3.13	35.73	41.89	18101.53	7115.02
2+640	5.07	5.24	57.29	38.80	18158.82	7153.82
2+650	6.39	2.52	48.49	31.28	18207.30	7185.10
2+660	3.31	3.74	32.64	39.88	18239.94	7224.98
2+670	3.22	4.24	42.75	24.04	18282.69	7249.02
2+680	5.33	0.57	42.94	20.65	18325.63	7269.67
2+690	3.26	3.56	27.47	42.53	18353.10	7312.20
2+700	2.24	4.95	23.66	41.34	18376.76	7353.54
2+710	2.50	3.32	33.34	34.74	18410.10	7388.28
2+720	4.17	3.63	42.36	25.39	18452.46	7413.67
2+730	4.30	1.45	39.87	25.57	18492.33	7439.24
2+740	3.67	3.66	34.22	37.37	18526.56	7476.60
2+750	3.17	3.81	21.20	16.90	18547.76	7493.50
2+757	2.89	1.02	14.68	2.10	18562.44	7495.60

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSJPRDJ\0260505\PLAN\CR0527

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Peterson

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

EARTHWORK QUANTITY CHARTS

Sheet 31 of 54 Sheets

Fed. Project No. _____

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
2+760	6.90	0.38	46.33	31.70	18608.77	7527.30
2+770	2.36	5.96	34.41	42.15	18643.18	7569.45
2+780	4.52	2.47	58.68	15.75	18701.87	7585.20
2+790	7.22	0.68	82.97	3.83	18784.84	7589.03
2+800	9.38	0.09	78.72	9.87	18863.56	7598.90
2+810	6.37	1.88	75.39	11.51	18938.95	7610.41
2+820	8.71	0.42	68.92	13.14	19007.87	7623.54
2+830	5.07	2.21	58.92	17.36	19066.79	7640.90
2+840	6.71	1.26	73.36	9.76	19140.15	7650.66
2+850	7.96	0.69	87.07	9.16	19227.22	7659.83
2+860	9.46	1.14	79.90	18.30	19307.13	7678.12
2+870	6.53	2.52	55.04	49.45	19362.16	7727.57
2+880	4.48	7.37	68.01	46.85	19430.18	7774.42
2+890	9.12	2.00	90.80	16.16	19520.98	7790.58
2+900	9.04	1.23	80.36	25.25	19601.34	7815.83
2+910	7.03	3.81	79.52	33.35	19680.86	7849.18
2+920	8.87	2.86	74.22	32.14	19755.08	7881.31
2+930	5.97	3.57	62.56	24.90	19817.64	7906.22
2+940	6.54	1.41	58.64	26.35	19876.28	7932.57
2+950	5.19	3.86	50.63	39.34	19926.92	7971.91
2+960	4.94	4.01	47.34	37.87	19974.26	8009.78
2+970	4.53	3.56	30.69	9.47	20004.95	8019.25
2+975	7.75	0.23	32.25	8.24	20037.20	8027.49
2+980	5.16	3.07	53.45	29.23	20090.65	8056.72
2+990	5.53	2.77	33.01	37.24	20123.65	8093.96
3+000	1.07	4.67	15.44	33.02	20139.10	8126.98
3+010	2.02	1.93	10.97	45.67	20150.06	8172.66
3+020	0.17	7.20	0.86	69.76	20150.92	8242.42
3+030	0.00	6.75	0.40	81.33	20151.33	8323.75
3+040	0.08	9.52	0.92	76.27	20152.25	8400.02
3+050	0.10	5.73	2.40	48.33	20154.65	8448.35
3+060	0.38	3.93	6.44	41.65	20161.09	8489.99
3+070	0.91	4.40	8.35	30.19	20169.44	8520.19
3+080	0.76	1.64	8.94	34.90	20178.38	8555.08
3+090	1.03	5.34	7.36	53.34	20185.73	8608.43
3+100	0.44	5.33	4.59	46.26	20190.32	8654.69
3+110	0.48	3.92	7.59	39.78	20197.91	8694.47
3+120	1.04	4.03	16.68	29.77	20214.59	8724.24
3+130	2.29	1.92	18.54	26.92	20233.13	8751.16
3+140	1.42	3.46	11.12	13.71	20244.25	8764.88
3+145	3.03	2.02	15.85	10.26	20260.10	8775.14
3+150	3.31	2.08	21.56	33.99	20281.66	8809.13
3+160	1.01	4.72	18.76	36.96	20300.42	8846.09
3+170	2.75	2.67	38.48	24.70	20338.90	8870.79
3+180	4.95	2.27	43.68	23.09	20382.58	8893.88
3+190	3.78	2.35	42.59	18.42	20425.18	8912.31
3+200	4.73	1.33	43.47	18.89	20468.65	8931.20
3+210	3.96	2.45	69.13	15.05	20537.78	8946.25
3+220	9.87	0.56	93.71	3.10	20631.49	8949.35

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
3+230	8.88	0.06	90.09	10.68	20721.57	8960.02
3+240	9.14	2.08	105.15	10.60	20826.72	8970.63
3+250	11.89	0.04	105.49	2.43	20932.20	8973.06
3+260	9.21	0.44	72.20	13.46	21004.40	8986.52
3+270	5.23	2.25	86.14	11.27	21090.54	8997.78
3+280	12.00	0.00	104.49	4.01	21195.03	9001.79
3+290	8.90	0.80	93.60	4.03	21288.63	9005.82
3+300	9.82	0.01	89.59	2.32	21378.22	9008.14
3+310	8.10	0.46	83.89	8.18	21462.11	9016.32
3+320	8.68	1.18	83.04	5.97	21545.15	9022.29
3+330	7.93	0.01	56.59	14.58	21601.74	9036.87
3+340	3.39	2.90	34.18	28.21	21635.92	9065.08
3+350	3.45	2.74	28.56	36.03	21664.49	9101.12
3+360	2.27	4.47	16.50	67.21	21680.98	9168.33
3+370	1.03	8.98	21.77	47.88	21702.76	9216.20
3+380	3.32	0.60	16.60	69.83	21719.36	9286.03
3+390	0.00	13.37	6.79	77.68	21726.14	9363.71
3+400	1.36	2.17	6.79	107.53	21732.93	9471.24
3+410	0.00	19.34	2.04	122.05	21734.97	9593.29
3+420	0.41	5.07	2.28	49.03	21737.26	9642.31
3+430	0.05	4.73	0.46	52.91	21737.71	9695.23
3+440	0.04	5.85	0.21	68.03	21737.93	9763.26
3+450	0.00	7.75	0.00	75.84	21737.93	9839.10
3+460	0.00	7.41	0.00	75.19	21737.93	9914.29
3+470	0.00	7.62	0.00	95.99	21737.93	10010.28
3+480	0.00	11.58	0.00	106.44	21737.93	10116.72
3+490	0.00	9.71	0.00	99.07	21737.93	10215.79
3+500	0.00	10.10	19.94	50.51	21757.87	10266.30
3+510	3.99	0.00	44.88	0.00	21802.75	10266.30
3+520	4.99	0.00	35.79	4.02	21838.54	10270.31
3+530	2.17	0.80	11.10	22.71	21849.65	10293.03
3+540	0.05	3.74	3.41	55.36	21853.05	10348.39
3+550	0.63	7.33	3.16	67.58	21856.22	10415.97
3+560	0.00	6.18	0.00	62.21	21856.22	10478.18
3+570	0.00	6.26	0.42	46.23	21856.64	10524.41
3+580	0.08	2.99	2.01	37.13	21858.65	10561.54
3+590	0.32	4.44	2.49	38.42	21861.14	10599.95
3+600	0.18	3.24	2.18	39.56	21863.32	10639.52
3+610	0.25	4.67	1.55	42.02	21864.87	10681.54
3+620	0.06	3.74	3.57	31.17	21868.43	10712.71
3+630	0.66	2.50	10.98	67.12	21879.41	10779.83
3+640	1.54	10.93	2.73	13.19	21882.14	10793.02
3+641.56	1.96	6.00	19.11	42.06	21901.26	10835.09
3+650	2.52	4.00	28.85	34.05	21930.10	10869.13
3+660	3.19	2.82	32.07	46.24	21962.17	10915.37
3+670	3.16	6.46	28.70	47.26	21990.87	10962.63
3+680	2.53	3.01	53.77	20.80	22044.64	10983.43
3+690	8.15	1.15	79.25	12.73	22123.88	10996.16
3+700	7.59	1.40	76.08	23.40	22199.97	11019.56

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
3+710	7.53	3.29	91.80	21.82	22291.76	11041.38
3+720	10.71	1.09	81.67	16.80	22373.44	11058.19
3+730	5.54	2.29	56.94	20.98	22430.38	11079.16
3+740	5.81	1.92	78.62	14.38	22509.00	11093.55
3+750	9.84	0.97	118.66	5.82	22627.66	11099.36
3+760	13.76	0.20	21.48	0.33	22649.14	11099.70
3+762	7.66	0.13	57.00	6.26	22706.14	11105.95
3+770	6.57	1.43	58.87	18.54	22765.01	11124.49
3+780	5.19	2.26	69.89	12.92	22834.90	11137.40
3+790	8.77	0.32	94.06	2.95	22928.96	11140.35
3+800	10.01	0.27	85.76	44.60	23014.73	11184.95
3+810	7.10	8.73	71.88	44.41	23086.61	11229.37
3+820	7.25	0.20	2.57	0.10	23089.18	11229.47
3+820.37	6.73	0.34	47.81	26.39	23136.99	11255.86
3+830	3.19	5.14	40.05	42.81	23177.04	11298.67
3+840	4.82	3.42	45.39	32.74	23222.43	11331.41
3+850	4.26	3.13	47.02	32.73	23269.45	11364.14
3+860	5.14	3.42	42.34	37.77	23311.79	11401.91
3+870	3.32	4.14	35.43	45.25	23347.22	11447.16
3+880	3.76	4.91	31.74	66.51	23378.97	11513.67
3+890	2.59	8.39	46.57	57.19	23425.54	11570.86
3+900	6.73	3.05	53.62	84.37	23479.15	11655.23
3+910	4.00	13.83	37.57	82.58	23516.72	11737.81
3+920	3.52	2.69	32.95	87.20	23549.68	11825.01
3+930	3.07	14.75	33.29	103.69	23582.97	11928.70
3+940	3.59	5.99	18.16	47.30	23601.13	11976.00
3+945.14	3.49	12.43	30.31	59.08	23631.44	12035.08
3+950	8.97	12.04	13.92	25.44	23645.36	12060.52
3+952	4.91	13.58	35.81	99.68	23681.17	12160.19
3+960	4.03	11.50	46.71	84.12	23727.87	12244.31
3+970	5.28	5.41	76.98	31.56	23804.86	12275.88
3+980	10.11	0.90	126.54	4.50	23931.40	12280.38
3+990	15.23	0.00	49.96	0.00	23981.36	12280.38
3+993	18.11	0.00	122.97	1.55	24104.34	12281.92
4+000	17.09	0.44	137.65	7.87	24241.99	12289.79
4+010	10.49	1.13	130.88	5.76	24372.87	12295.55
4+020	15.74	0.02	125.52	5.55	24498.39	12301.10
4+030	9.35	1.09	107.55	5.53	24605.94	12306.63
4+040	12.18	0.02	108.20	8.26	24714.14	12314.90
4+050	9.48	1.63	92.55	19.73	24806.69	12334.62
4+060	9.00	2.31	66.49	27.05	24873.18	12361.68
4+070	4.29	3.09	44.02	48.88	24917.21	12410.56
4+080	4.51	6.69	40.90	96.33	24958.10	12506.89
4+090	3.67	12.56	36.11	162.12	24994.22	12669.01
4+100	3.56	19.81	24.95	163.57	25019.17	12832.59
4+110	1.43	12.92	26.52	104.88	25045.69	12937.46
4+120	3.87	8.04	42.40	53.36	25088.08	12990.83
4+130	4.61	2.63	8.81	6.93	25096.89	12997.76
4+132	4.20	4.31	30.31	46.90	25127.20	13044.66

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSJPROJ\0260505\PLAN\CR0528

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fischer

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

EARTHWORK QUANTITY CHARTS

Sheet 32 of 54 Sheets

Fed. Project No. _____

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
4+140	3.38	7.40				
4+150	1.79	10.29	25.80	88.65	25153.00	13133.31
4+160	2.16	7.87	19.72	91.07	25172.72	13224.38
4+170	2.32	4.92	22.41	64.17	25195.13	13288.55
4+180	2.63	4.80	24.76	48.76	25219.89	13337.31
4+190	6.20	0.37	44.22	25.97	25264.11	13363.28
4+195	2.41	2.48	21.58	7.16	25285.68	13370.44
4+200	5.76	0.98	20.50	8.65	25306.19	13379.09
4+210	2.05	9.20	39.21	50.85	25345.40	13429.94
4+220	1.86	6.05	19.57	76.20	25364.97	13506.14
4+230	4.47	6.48	31.77	62.62	25396.75	13568.75
4+240	1.27	4.91	28.82	57.07	25425.57	13625.83
4+244	1.38	6.57	5.31	22.99	25430.87	13648.82
4+250	2.24	3.85	10.88	31.27	25441.76	13680.08
4+260	1.42	4.77	18.36	43.09	25460.11	13723.18
4+270	1.94	7.48	16.86	61.23	25476.98	13784.41
4+280	0.27	3.78	11.06	56.36	25488.04	13840.77
4+290	1.05	5.60	6.57	47.01	25494.61	13887.77
4+300	2.96	4.89	19.98	52.61	25514.59	13940.38
4+310	4.13	3.39	35.27	41.57	25549.86	13981.95
4+320	3.66	4.59	38.73	40.09	25588.59	14022.04
4+330	1.74	4.74	26.90	46.79	25615.49	14068.83
4+331.29	1.68	5.46	2.20	6.60	25617.70	14075.43
4+340	1.90	3.94	15.59	40.93	25633.29	14116.36
4+350	0.47	8.73	11.84	63.36	25645.12	14179.72
4+360	2.99	4.99	17.26	68.63	25662.38	14248.35
4+370	2.22	3.31	26.03	41.53	25688.41	14289.88
4+380	2.76	2.00	24.92	26.56	25713.32	14316.44
4+390	5.68	0.97	42.22	14.85	25755.54	14331.30
4+400	5.13	0.59	54.05	7.80	25809.59	14339.09
4+410	6.18	1.70	56.52	11.44	25866.12	14350.53
4+420	7.59	1.62	68.83	16.60	25934.95	14367.13
4+427	7.34	0.00	52.24	5.68	25987.19	14372.81
4+430	7.25	0.00	21.88	0.00	26009.07	14372.81
4+440	8.74	0.23	79.99	1.13	26089.05	14373.94
4+450	8.42	11.17	85.83	56.98	26174.88	14430.92
4+460	18.04	0.00	132.29	55.86	26307.17	14486.78
4+470	15.10	0.12	165.71	0.58	26472.88	14487.35
4+480	14.61	0.89	148.57	5.05	26621.45	14492.40
4+490	9.66	2.20	121.35	15.46	26742.79	14507.86
4+500	6.90	1.96	82.81	20.79	26825.60	14528.65
4+510	2.21	7.74	45.58	48.50	26871.18	14577.15
4+518	2.35	8.15	18.24	63.54	26889.41	14640.69
4+520	3.51	7.39	5.86	15.54	26895.27	14656.23
4+530	1.48	17.47	24.95	124.32	26920.22	14780.55
4+540	1.28	10.71	13.78	140.94	26934.00	14921.49
4+550	2.23	8.09	17.53	94.00	26951.53	15015.50
4+560	2.10	9.80	21.65	89.45	26973.18	15104.95
			25.21	79.34	26998.39	15184.29

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
4+570	2.94	6.07				
4+580	1.76	8.40	23.51	72.33	27021.90	15256.62
4+590	4.80	4.66	32.79	65.28	27054.69	15321.90
4+593	2.29	5.70	10.64	15.56	27065.33	15337.45
4+600	5.54	3.57	27.46	32.25	27092.79	15369.70
4+610	6.99	1.63	62.90	25.82	27155.69	15395.52
4+620	7.65	1.78	73.51	16.99	27229.19	15412.51
4+630	6.88	1.36	72.92	15.63	27302.11	15428.14
4+640	5.24	0.68	60.79	10.15	27362.90	15438.30
4+650	8.33	1.37	67.82	10.30	27430.72	15448.59
4+660	11.19	1.77	97.36	15.79	27528.07	15464.38
4+670	13.12	1.34	121.19	15.60	27649.27	15479.98
4+680	14.73	0.63	139.27	9.82	27788.54	15489.81
4+690	15.44	0.16	151.32	3.92	27939.86	15493.72
4+700	22.31	0.00	188.80	0.80	28128.66	15494.52
4+710	12.32	0.08	173.16	0.38	28301.82	15494.90
4+720	19.19	0.09	157.66	0.85	28459.48	15495.75
4+730	15.63	0.27	174.30	1.81	28633.78	15497.56
4+734.42	12.71	0.40	62.84	1.47	28696.62	15499.03
4+740	19.12	0.01	88.75	1.14	28785.37	15500.17
4+742	12.13	0.10	31.26	0.11	28816.63	15500.28
4+750	17.16	0.33	117.19	1.71	28933.82	15502.00
4+760	24.98	0.00	210.71	1.63	29144.53	15503.63
4+770	22.46	0.01	237.16	0.03	29381.69	15503.66
4+780	17.57	0.35	200.14	1.78	29581.83	15505.44
4+790	15.91	0.18	167.42	2.67	29749.24	15508.10
4+800	19.50	0.06	177.03	1.22	29926.28	15509.33
4+810	18.65	0.00	190.73	0.33	30117.00	15509.65
4+820	14.79	0.34	167.22	1.71	30284.23	15511.37
4+830	18.06	2.55	164.29	14.43	30448.52	15525.79
4+840	20.02	0.01	190.42	12.77	30638.95	15538.57
4+842	14.37	0.39	34.39	0.39	30673.34	15538.96
4+850	18.01	0.14	129.53	2.11	30802.86	15541.07
4+860	17.25	0.02	176.31	0.80	30979.17	15541.87
4+870	15.72	0.00	164.83	0.09	31144.00	15541.96
4+880	14.43	0.65	150.74	3.25	31294.75	15545.21
4+890	15.98	0.26	152.04	4.56	31446.79	15549.77
4+900	10.45	1.16	132.12	7.10	31578.91	15556.87
4+910	10.26	0.32	103.52	7.39	31682.43	15564.26
4+920	9.31	0.47	97.83	3.96	31780.27	15568.22
4+930	10.44	0.95	98.75	7.09	31879.02	15575.31
4+935	10.24	0.59	51.69	3.85	31930.71	15579.16
4+940	9.07	0.81	48.28	3.51	31978.99	15582.67
4+950	9.57	0.00	93.23	4.07	32072.22	15586.74
4+960	6.29	0.23	79.31	1.14	32151.53	15587.88
4+970	11.80	0.10	90.44	1.66	32241.97	15589.54
4+980	6.02	1.26	89.07	6.84	32331.04	15596.38
4+990	9.65	0.24	78.35	7.50	32409.39	15603.88
			112.61	2.65	32522.00	15606.53

STATION	AREAS Square Meters		VOLUMES Cubic Meters		CUMULATIVE VOLUMES Cubic Meters	
	CUT	FILL	CUT	FILL	CUT	FILL
5+000	12.87	0.29				
5+010	11.65	0.47	122.59	3.80	32644.59	15610.33
5+020	8.47	0.16	100.58	3.10	32745.17	15613.43
5+030	3.94	2.69	62.03	14.24	32807.20	15627.67
5+040	4.16	2.12	40.50	24.05	32847.70	15651.72
5+050	4.28	3.58	42.17	28.48	32889.87	15680.20
5+060	4.38	3.44	43.29	35.09	32933.16	15715.30
5+070	4.09	3.04	42.36	32.40	32975.52	15747.69
5+080	4.21	2.62	41.50	28.28	33017.01	15775.98
5+090	3.59	1.88	38.97	22.49	33055.99	15798.47
5+100	3.17	2.50	33.78	21.92	33089.77	15820.39
5+110	2.30	3.54	27.35	30.22	33117.11	15850.61
5+120	1.88	2.54	20.89	30.44	33138.01	15881.04
5+130	2.39	3.57	21.32	30.56	33159.33	15911.60
5+140	2.26	4.20	23.24	38.86	33182.57	15950.46
5+150	2.21	4.21	22.34	42.09	33204.91	15992.55
5+160	2.23	4.34	22.18	42.78	33227.10	16035.33
			0.00	0.00	33227.10	16035.33

NOTE: SUBCUT FILL NOT REFLECTED IN FILL QUANTITY.
SUBCUT FILL CALCULATION BASED ON LENGTH & WIDTH.
(CALC. IS 14,859 m3)

NO	DATE	BY	CKD	APPR	REVISION
1	4-24-98	PL	KJ	DF	NOTE FOR CUT & FILL

NAME: S:\SDSJPROJ\0260505\PLAN\CR0528

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/11/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY
HIGHWAY DEPT

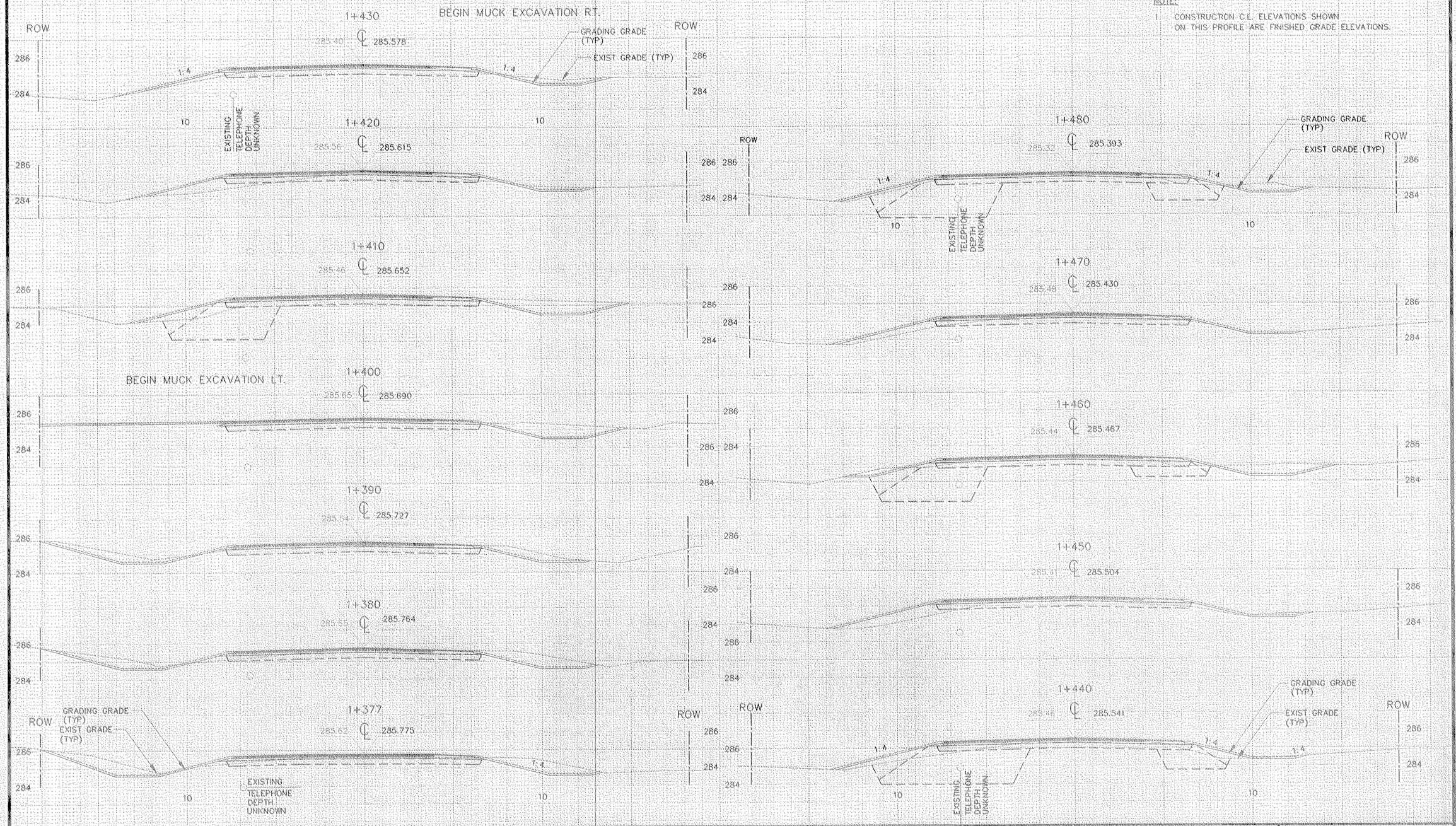
STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

EARTHWORK QUANTITY CHARTS

Sheet 33 of 54 Sheets

Fed. Project No.

NOTE:
1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.



NO.	DATE	BY	CKD	APPR	REVISION

NAME: S:\SOSKPROJ\0260505\PLAN\CROSX01.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY ..... DATE
DESIGN BY ..... DATE
CHECKED BY ..... DATE

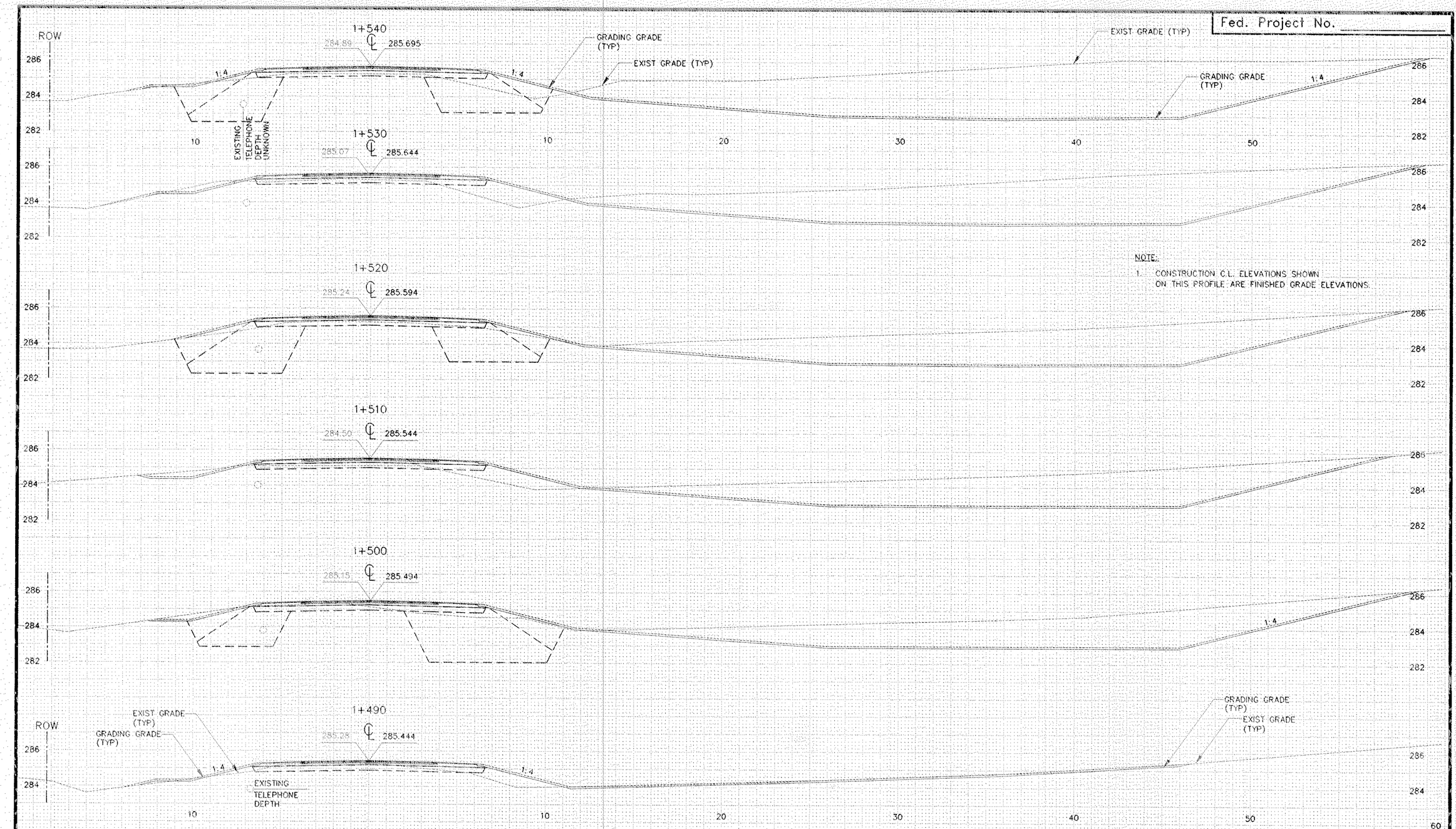
ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO.
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO.
COUNTY PROJECT NO.

CROSS- SECTION
STA. 1+377.00 TO 1+480.00

Sheet 34 of 54 Sheets

Fed. Project No. _____



NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X02.DWG

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Bruns

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

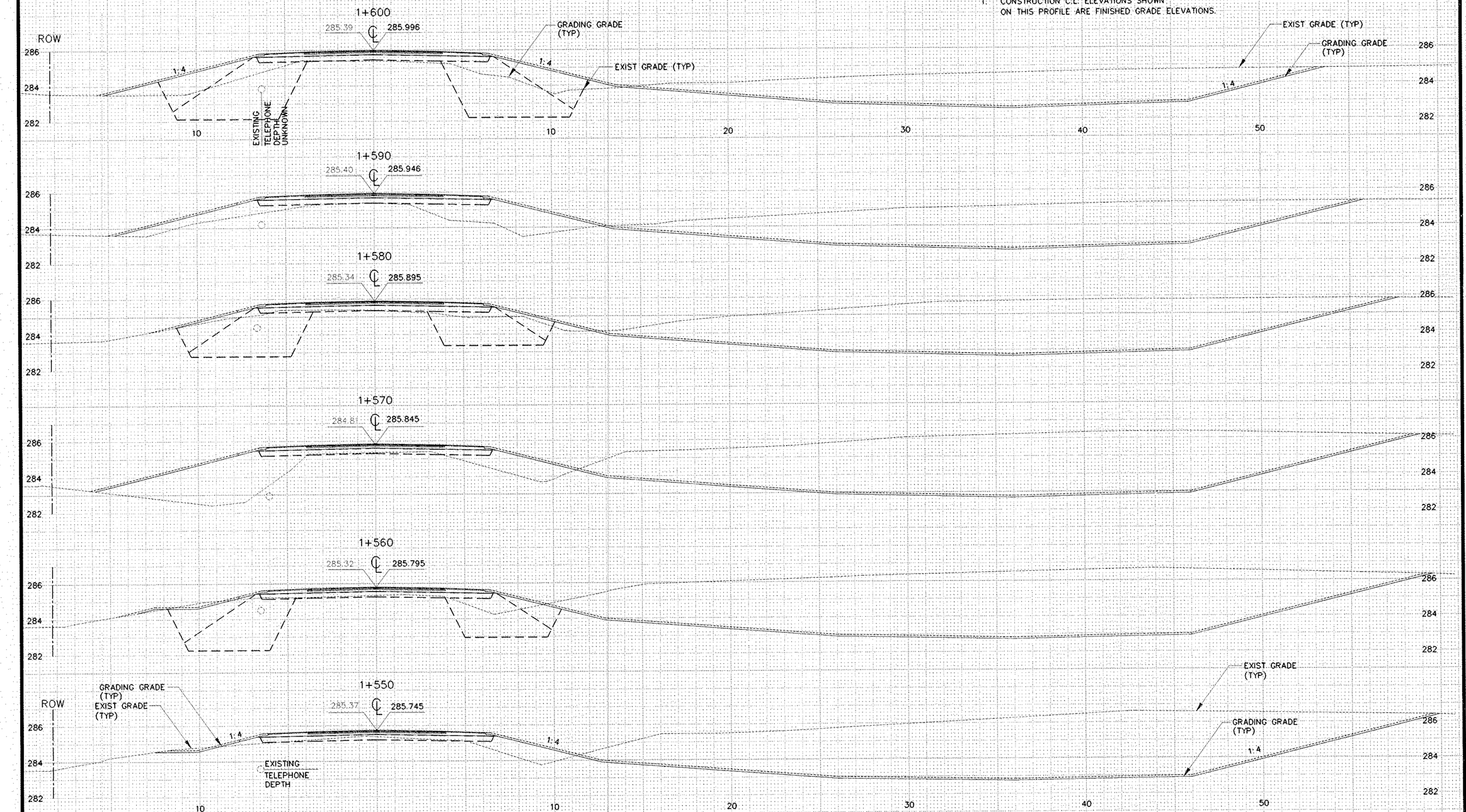
CROSS-SECTION
STA. 1+490.00 TO 1+540.00

Sheet 35 of 54 Sheets

Fed. Project No. _____

NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X03.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Brink

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

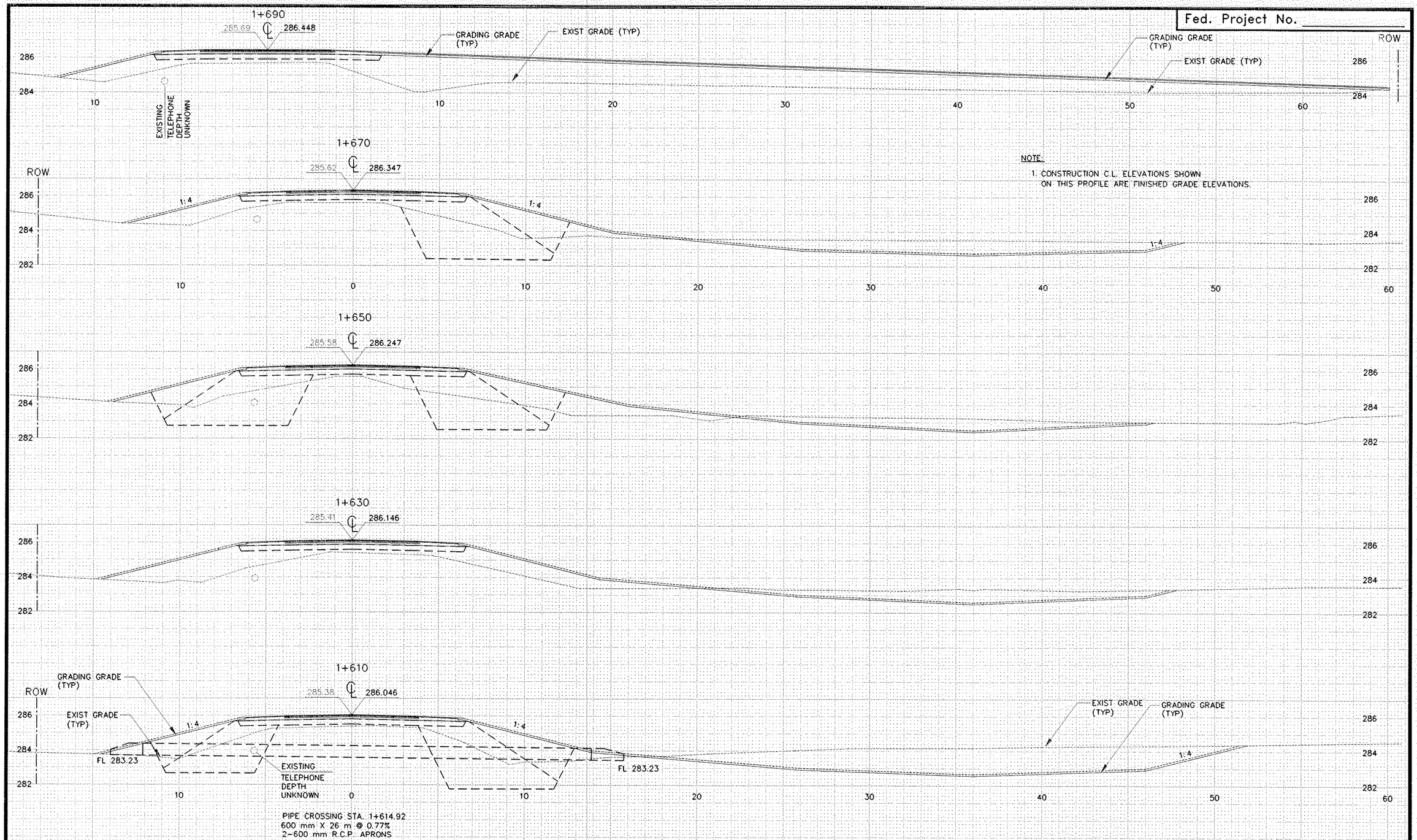
STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 1+550.00 TO 1+600.00

Sheet 36 of 54 Sheets

Fed. Project No. _____



NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

PIPE CROSSING STA. 1+614.92
600 mm X 26 m @ 0.77%
2-600 mm R.C.P. APRONS

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X04.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Bruch

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY

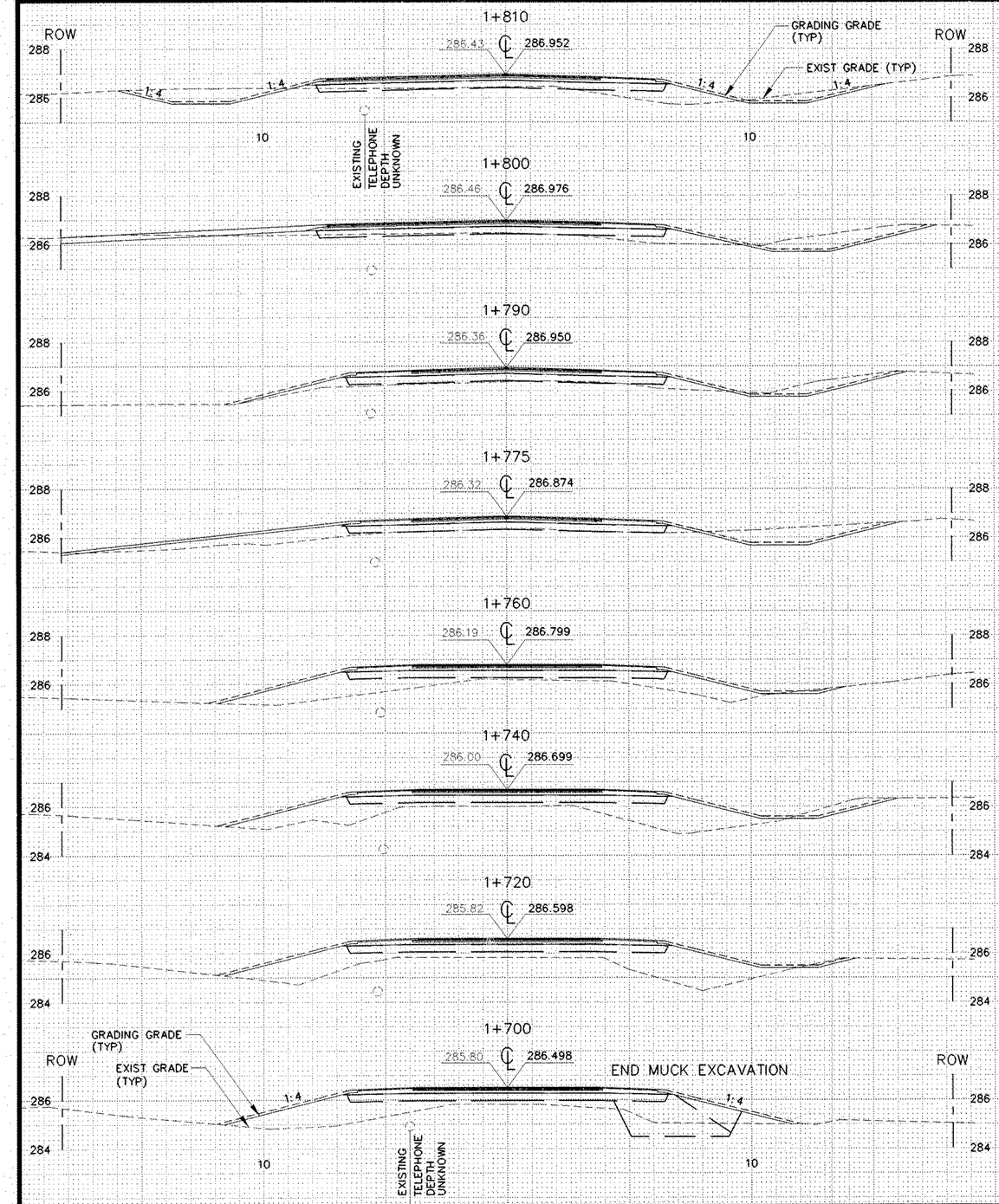
ANOKA COUNTY HIGHWAY DEPT.

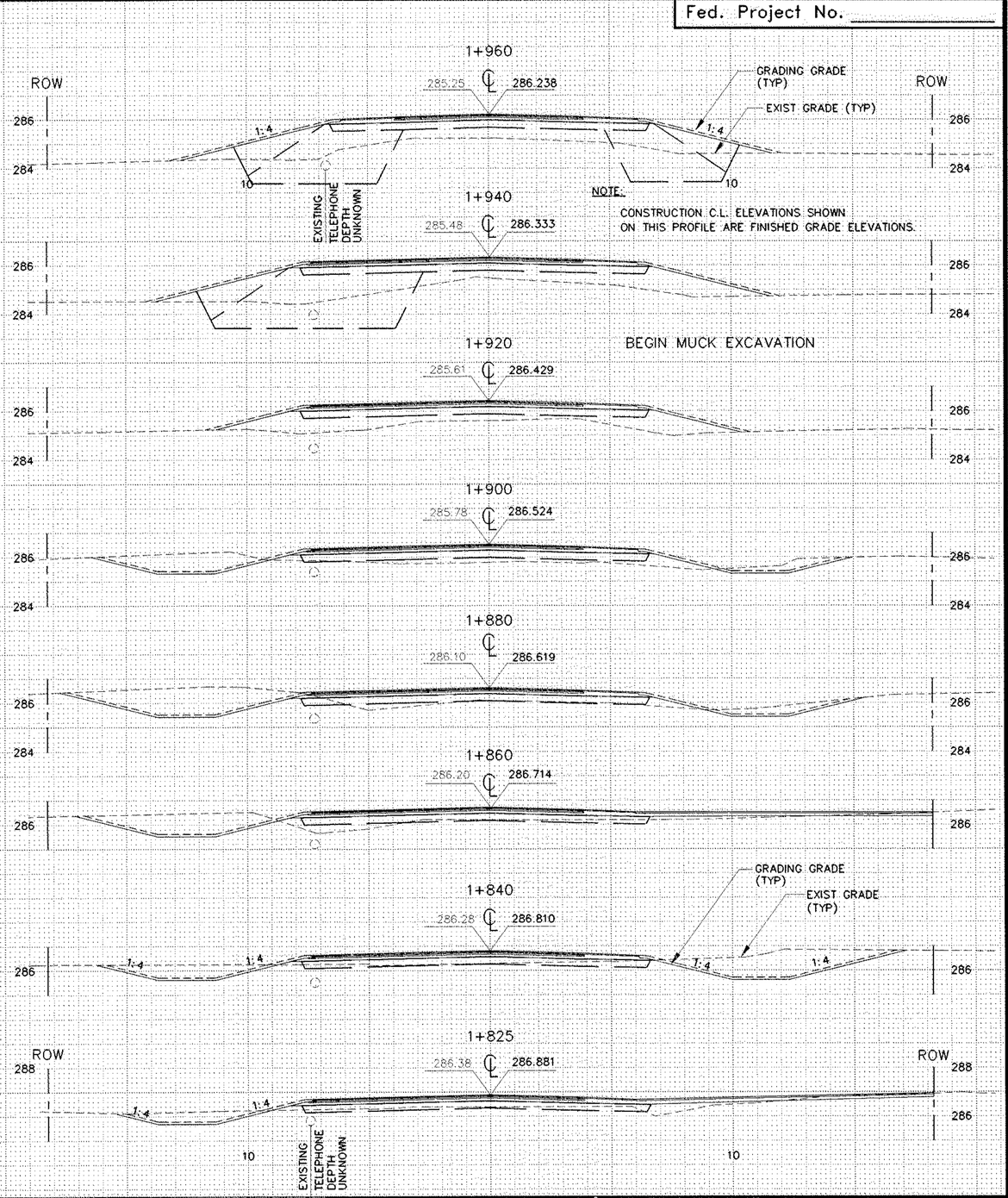
STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 1+610.00 TO 1+690.00

Sheet 37 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X05.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fuss

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

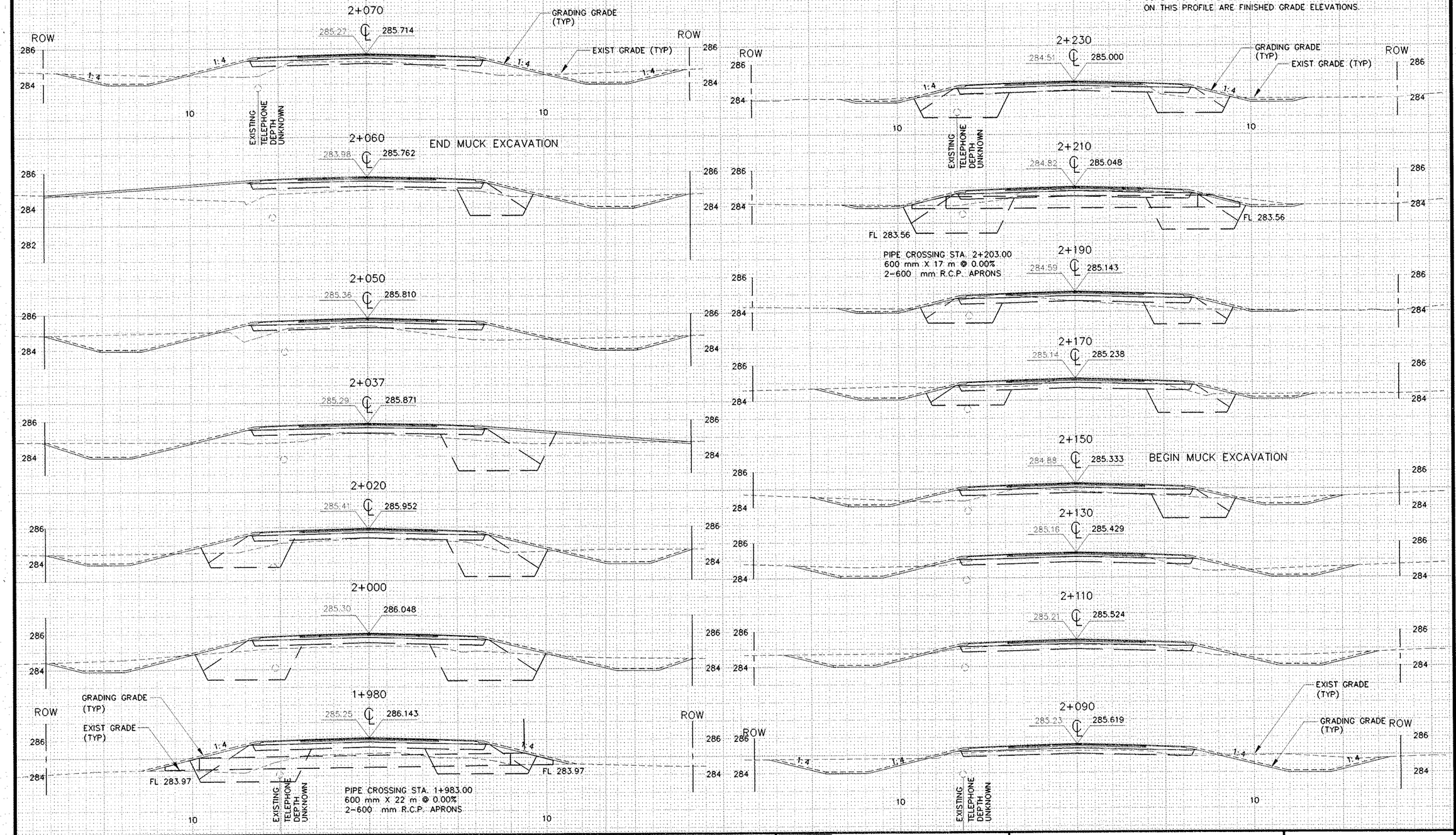
CROSS-SECTION
STA. 1+700.00 TO 1+960.00

Sheet 38 of 54 Sheets

Fed. Project No. _____

NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.



NO.	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X06.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Turnbull

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

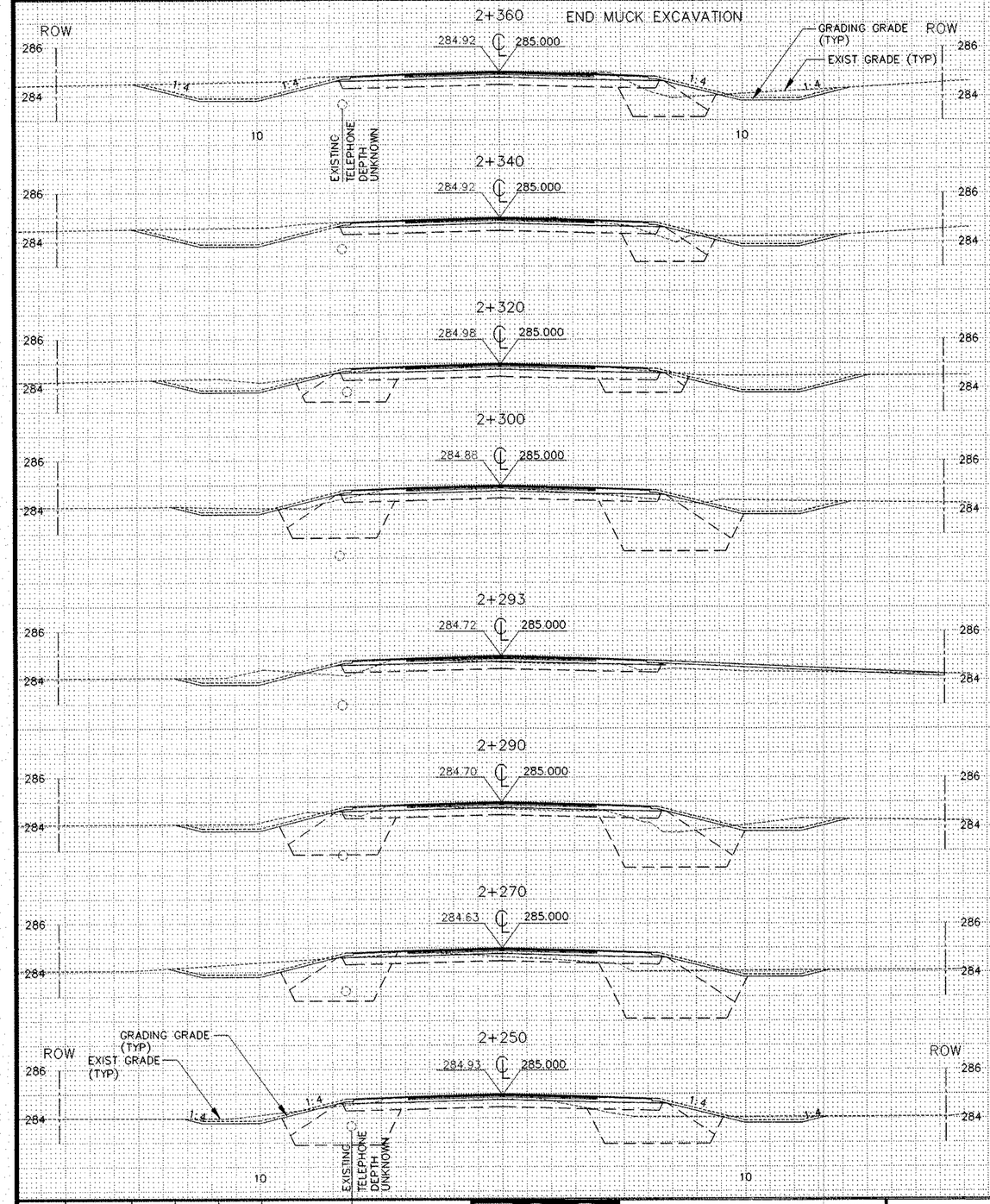
COUNTY PROJECT NO. _____

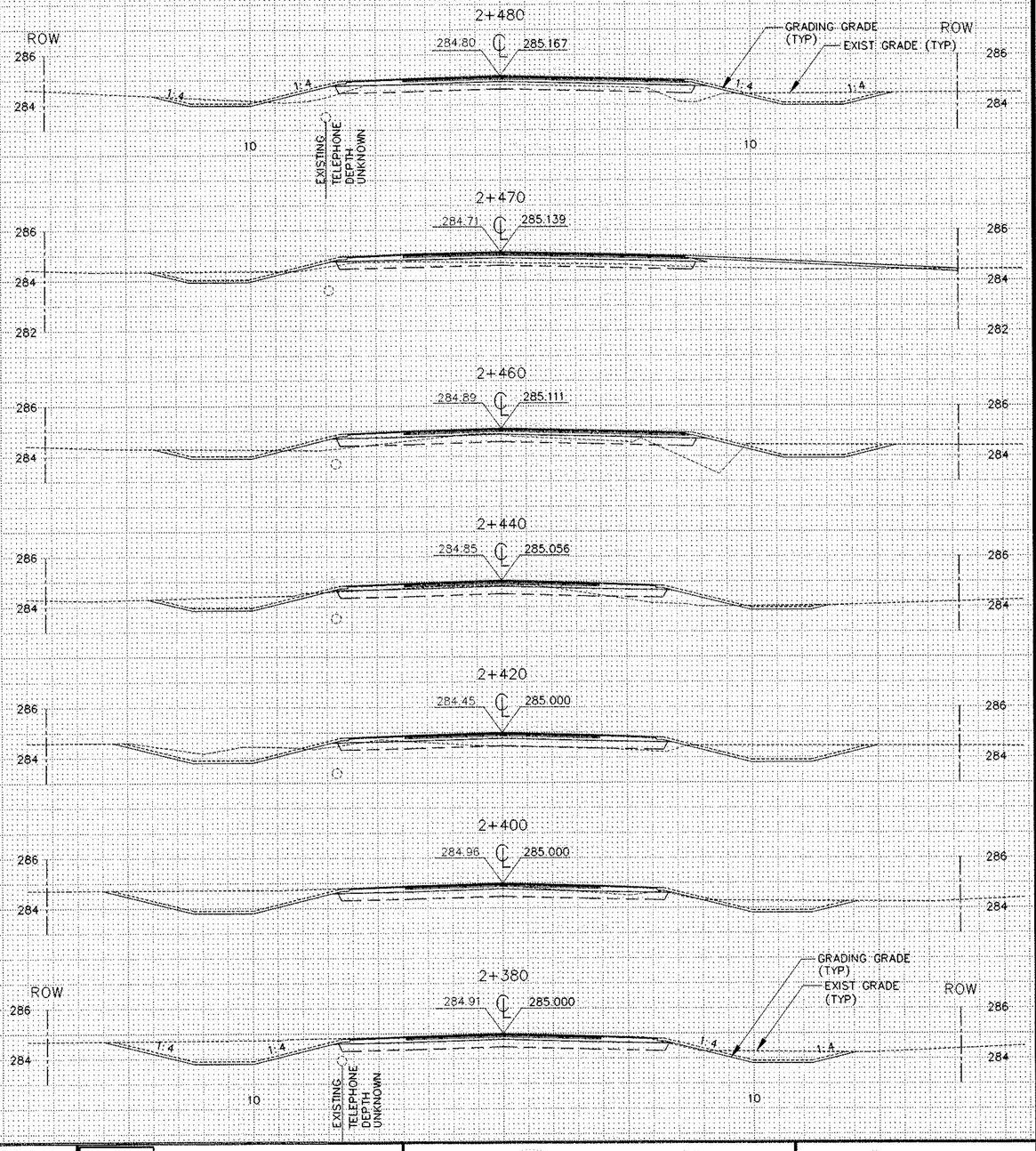
CROSS-SECTION
STA. 1+980.00 TO 2+230.00

Sheet 39 of 54 Sheets

Fed. Project No. _____

NOTE:
1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X07.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Fruth

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY

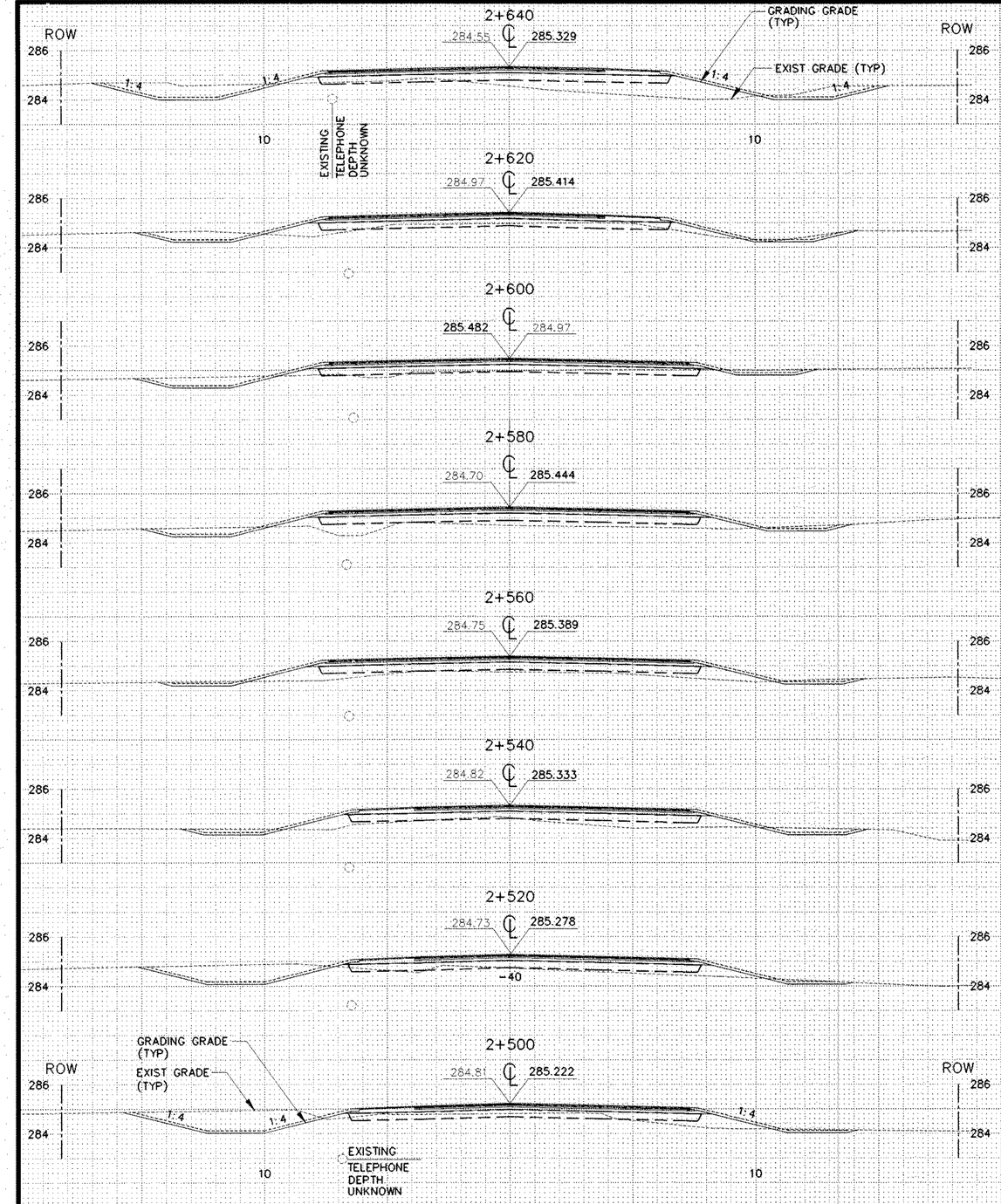
ANOKA COUNTY HIGHWAY DEPT.

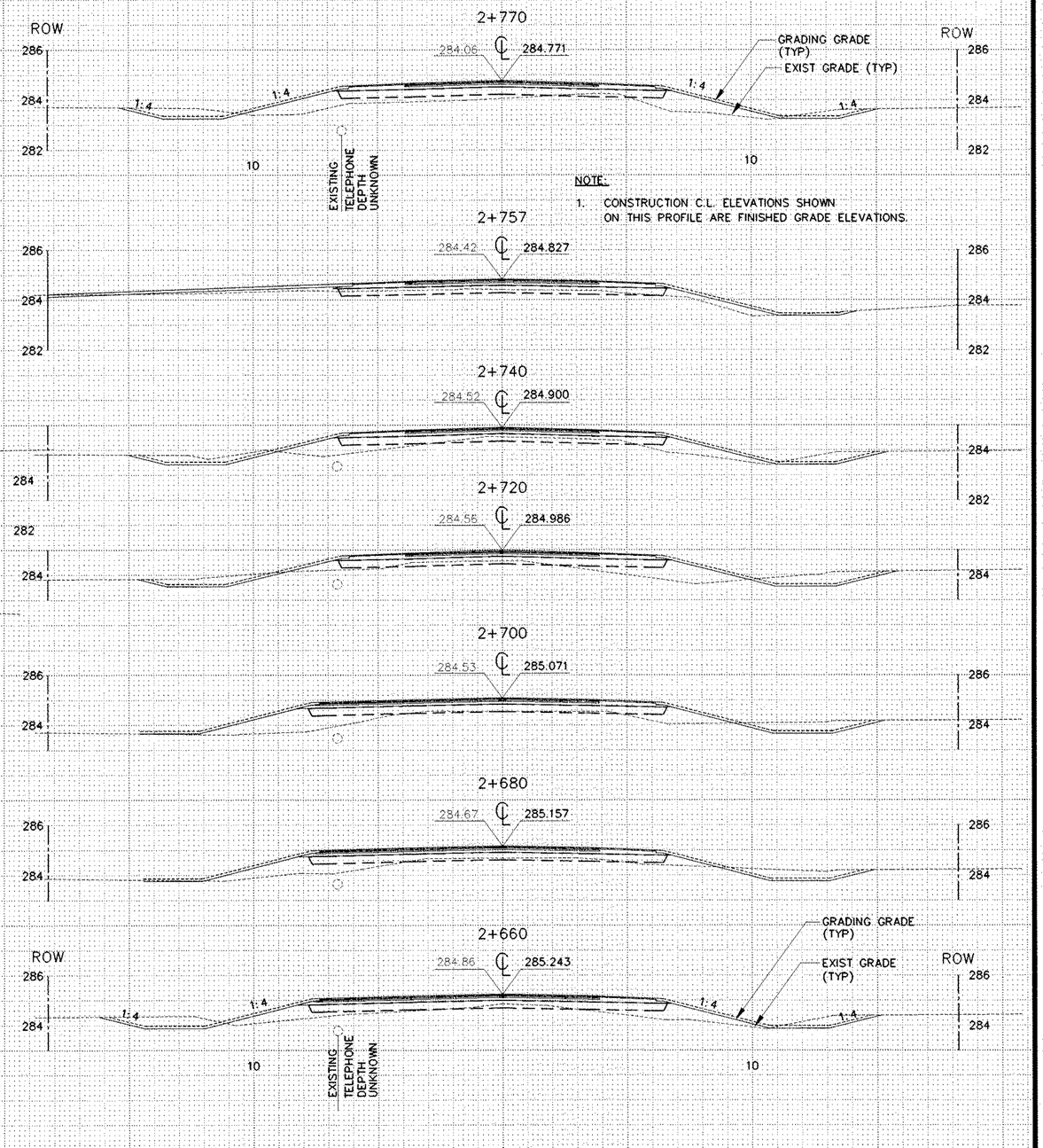
STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 2+250.00 TO 2+470.00

Sheet 40 of 54 Sheets

Fed. Project No. _____





NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X08.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

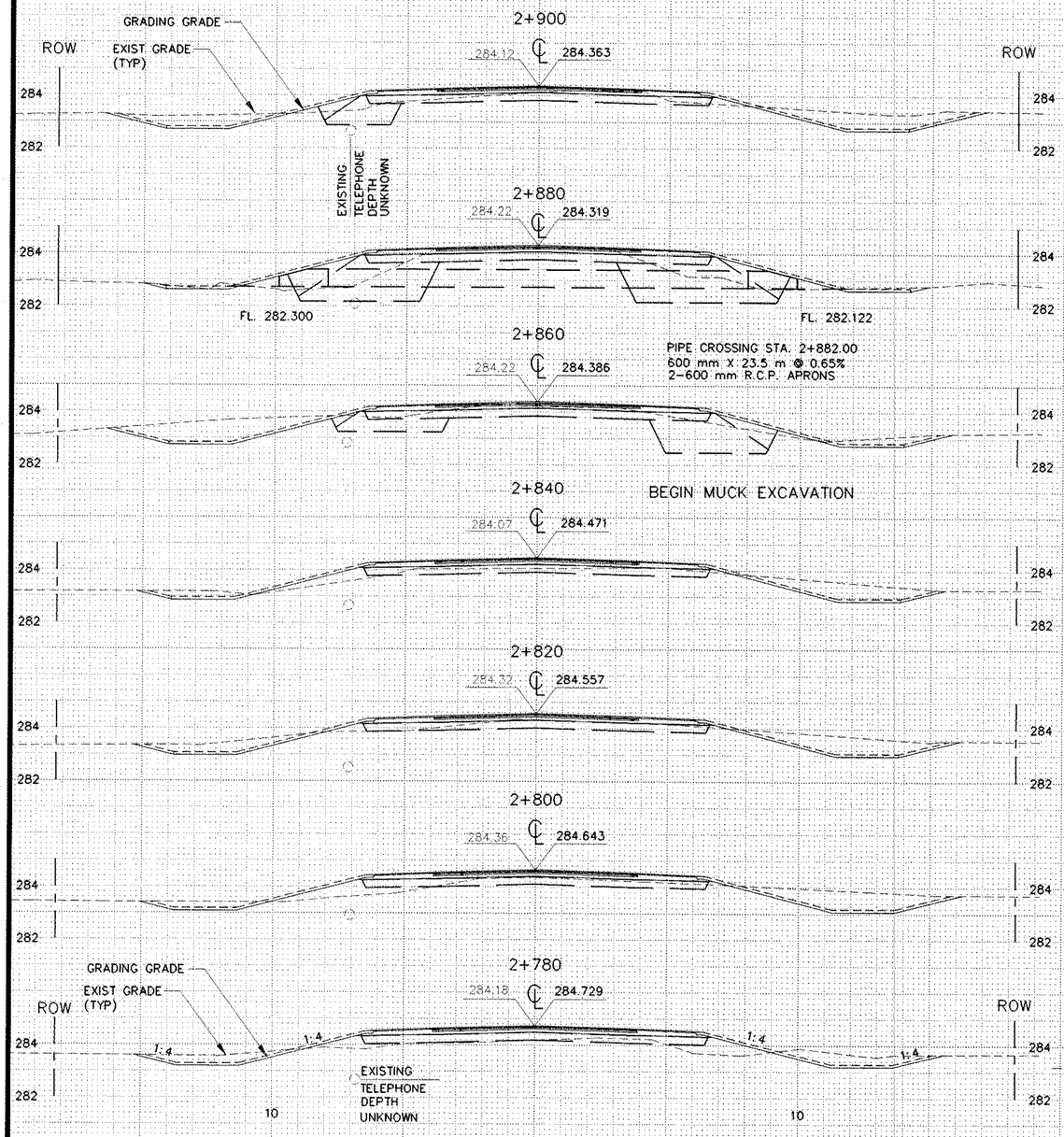
STATE AID PROJECT NO. _____

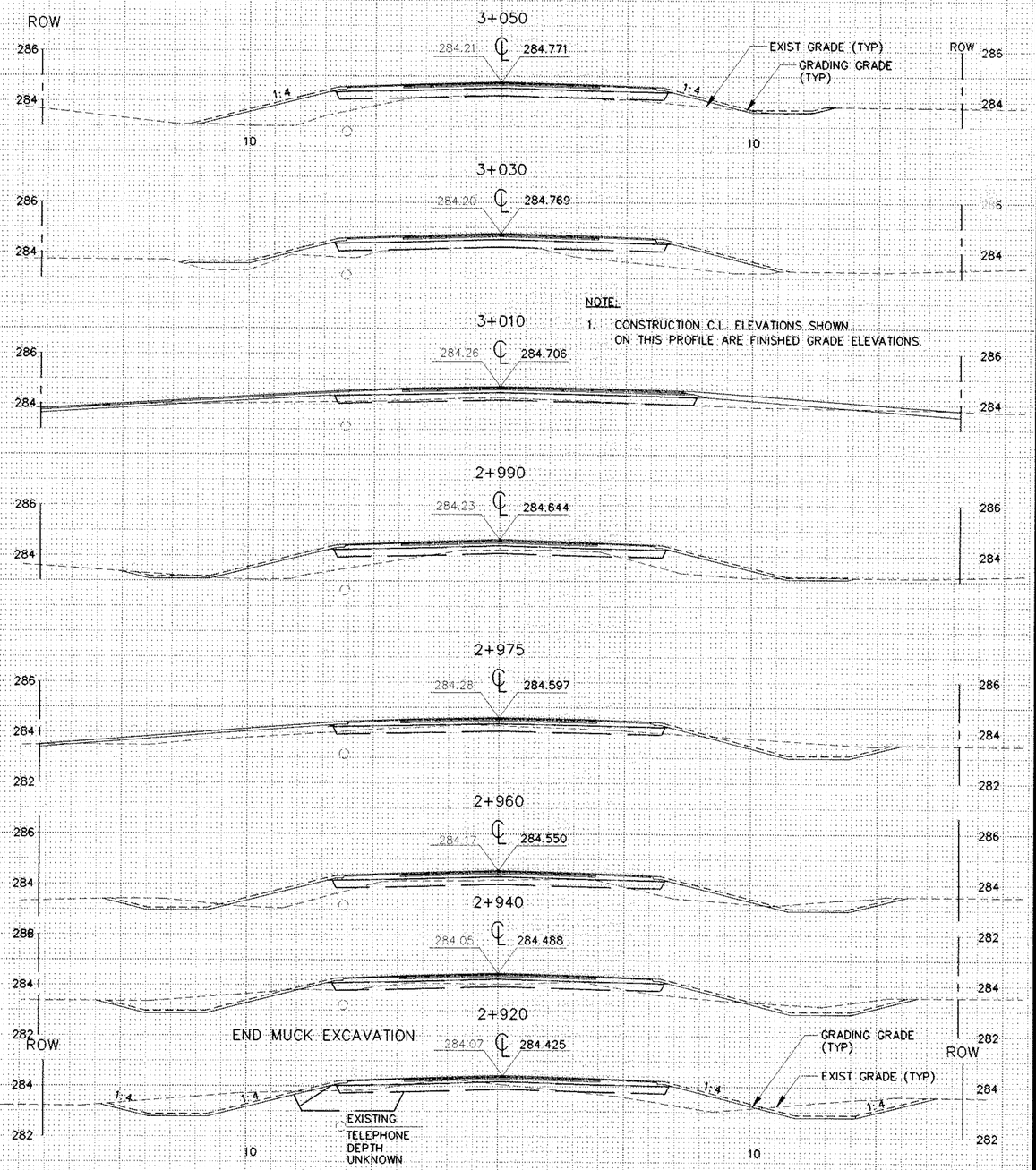
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 2+500.00 TO 2+770.00

Sheet 41 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X09.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Swanson

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

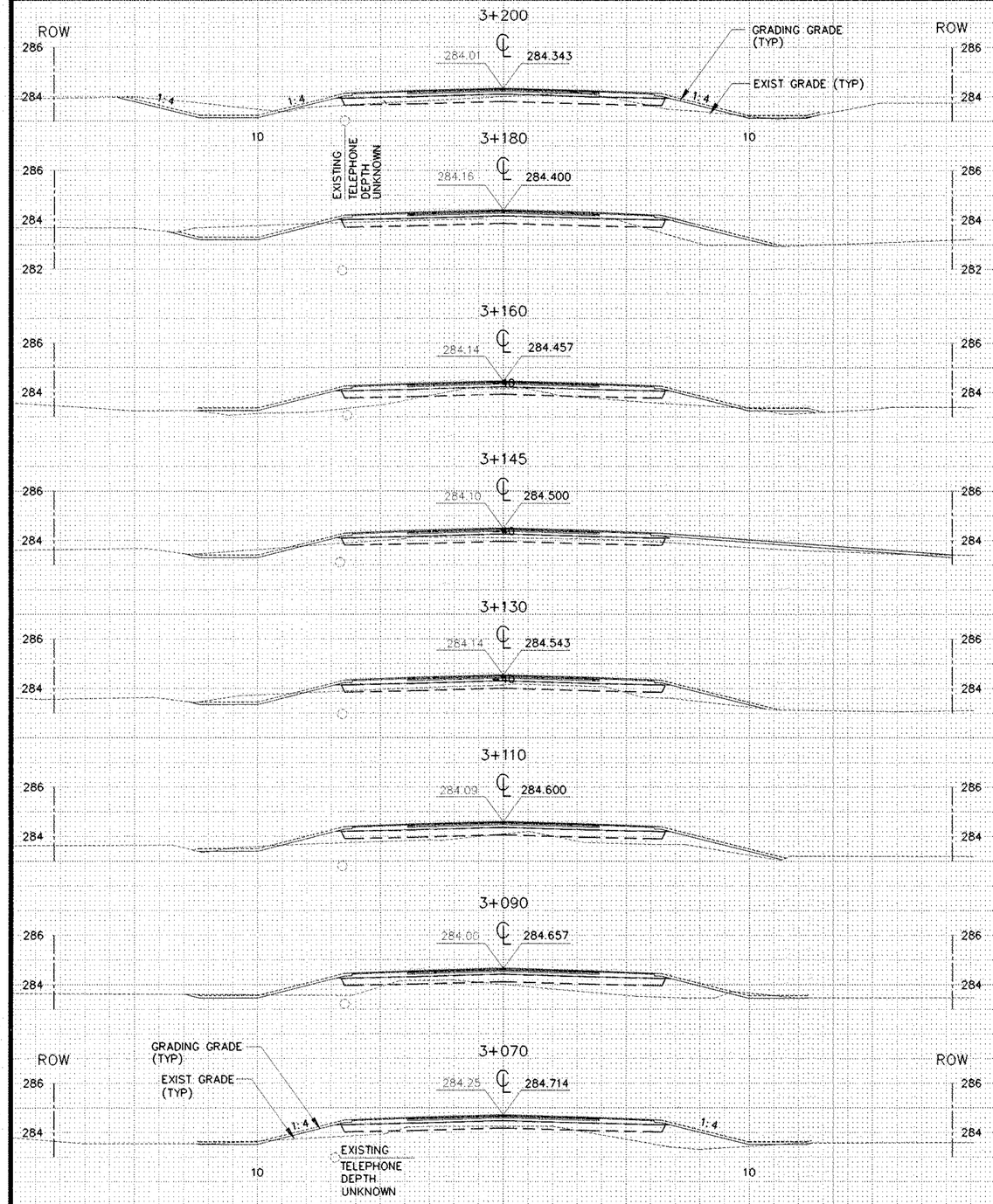
STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 2+780.00 TO 3+050.00

Sheet 42 of 54 Sheets

Fed. Project No. _____



NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X10.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fischer

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

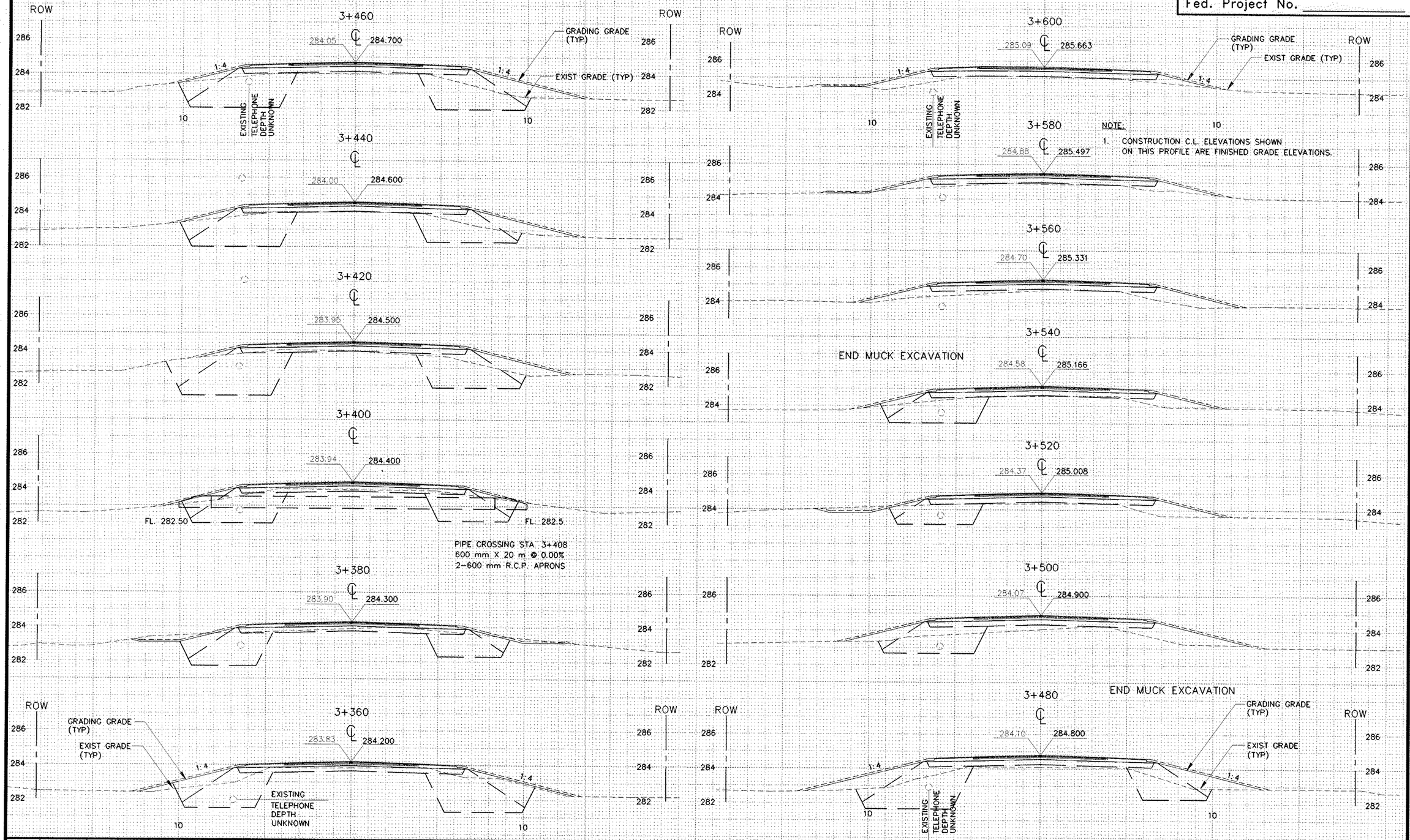
COUNTY PROJECT NO. _____

CROSS-SECTION

STA. 3+070.00 TO 3+340.00

Sheet 43 of 54 Sheets

Fed. Project No. _____



NOTE:
1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X11.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY

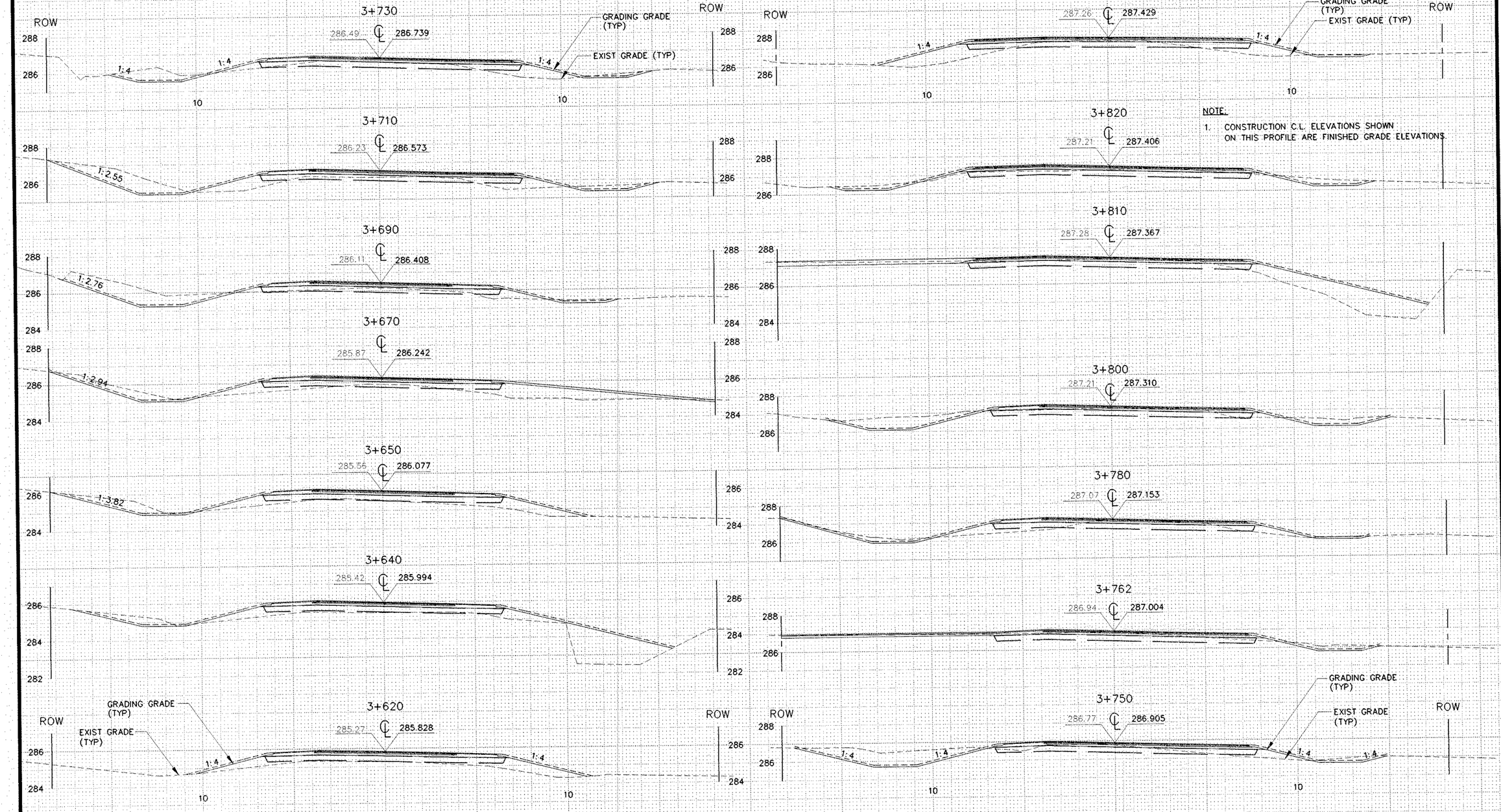
ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 3+360.00 TO 3+600.00

Sheet 44 of 54 Sheets

Fed. Project No. _____



NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X12.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Krook

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

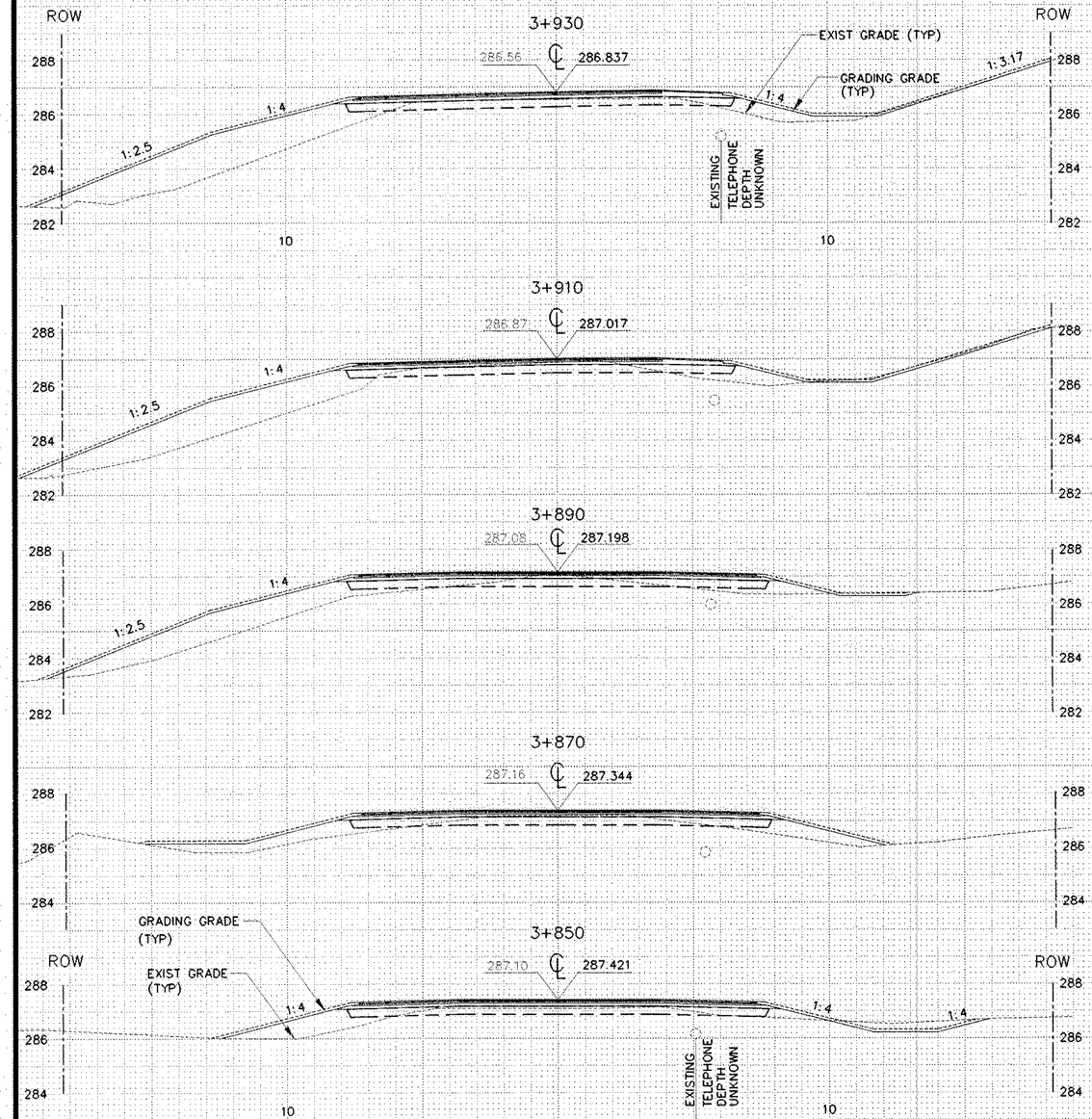
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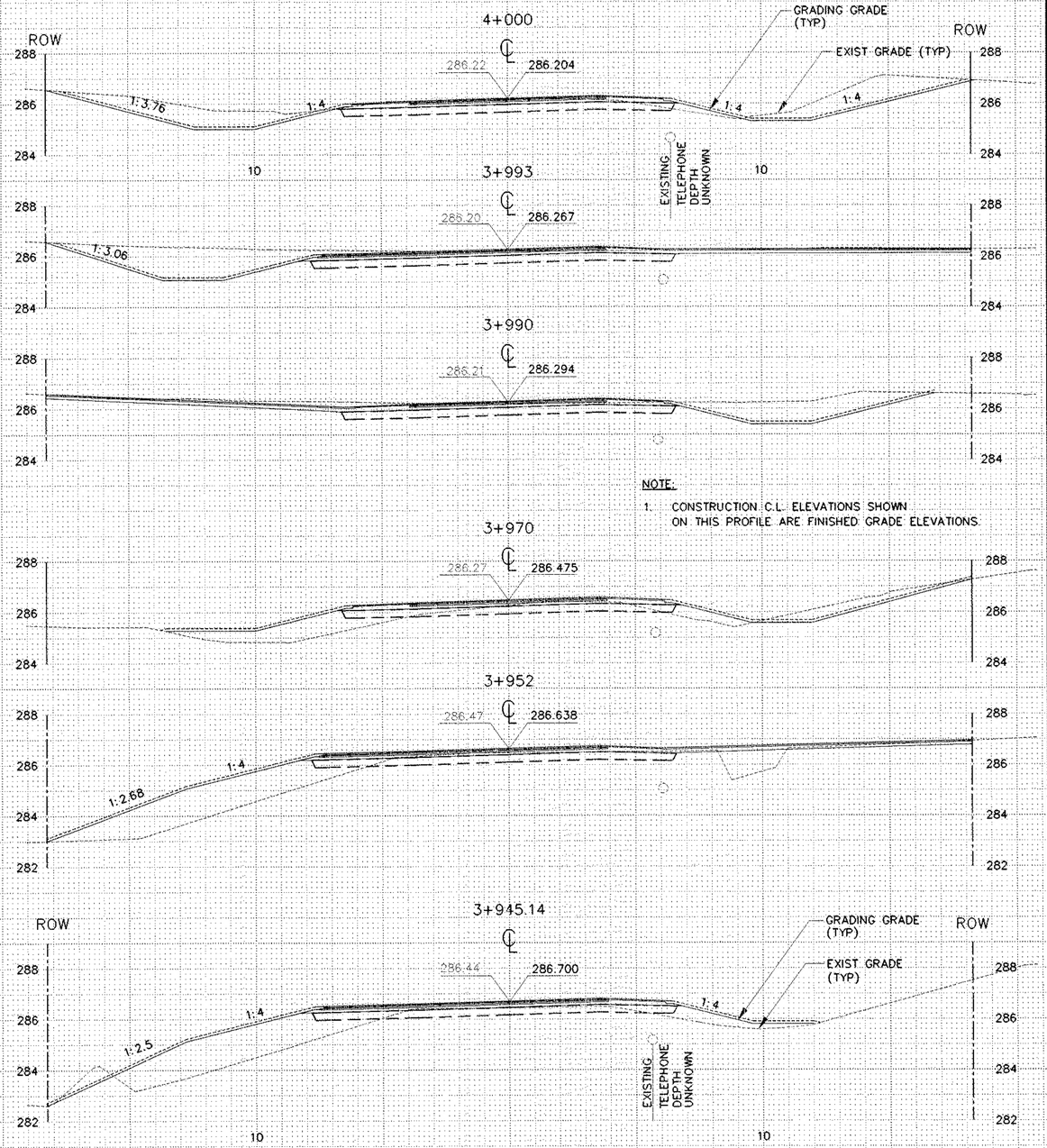
CROSS-SECTION

STA. 3+620.00 TO 3+830.00

Sheet 45 of 54 Sheets

Fed. Project No. _____





NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X13.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas W. Brooks

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

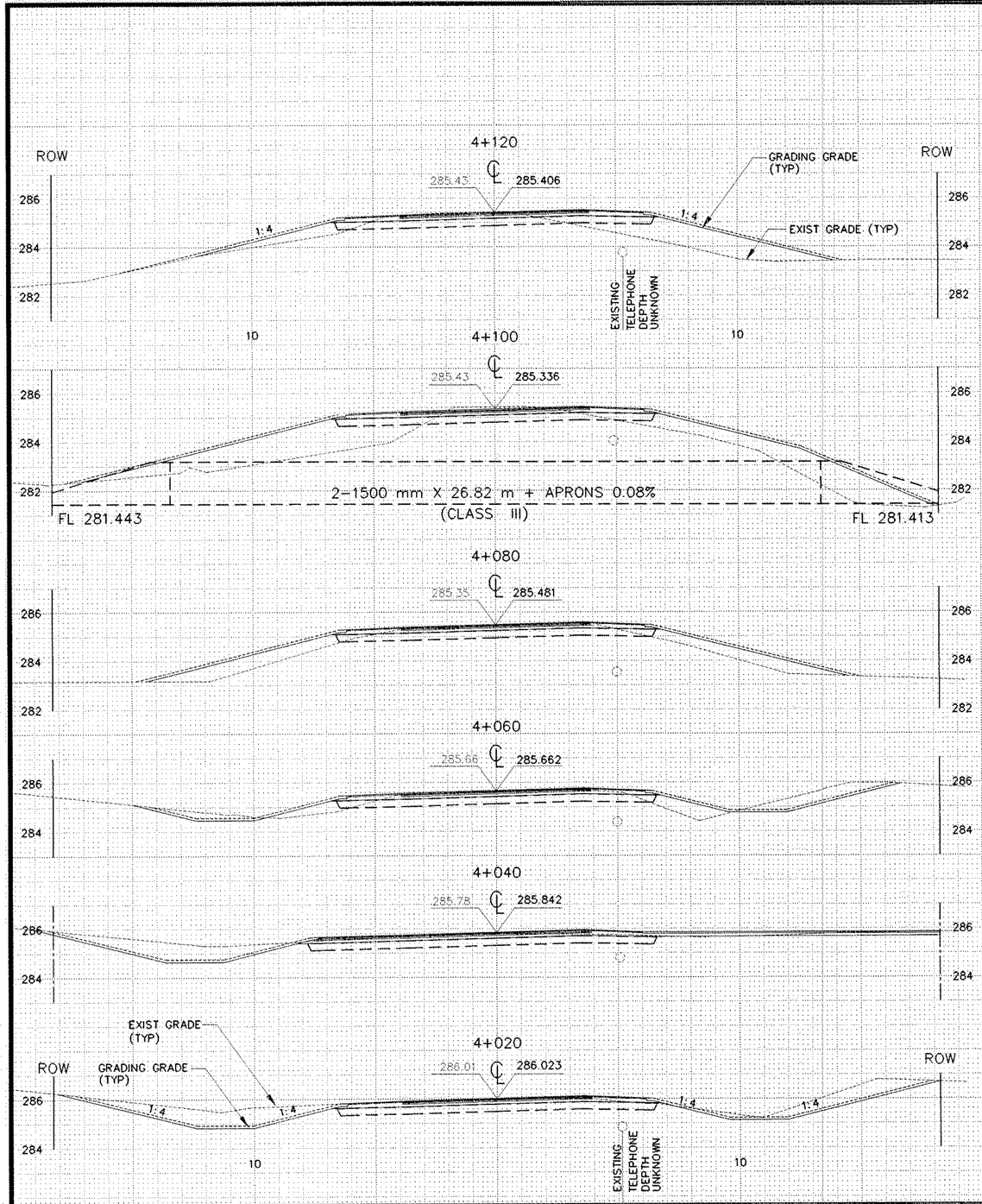
STATE AID PROJECT NO. _____

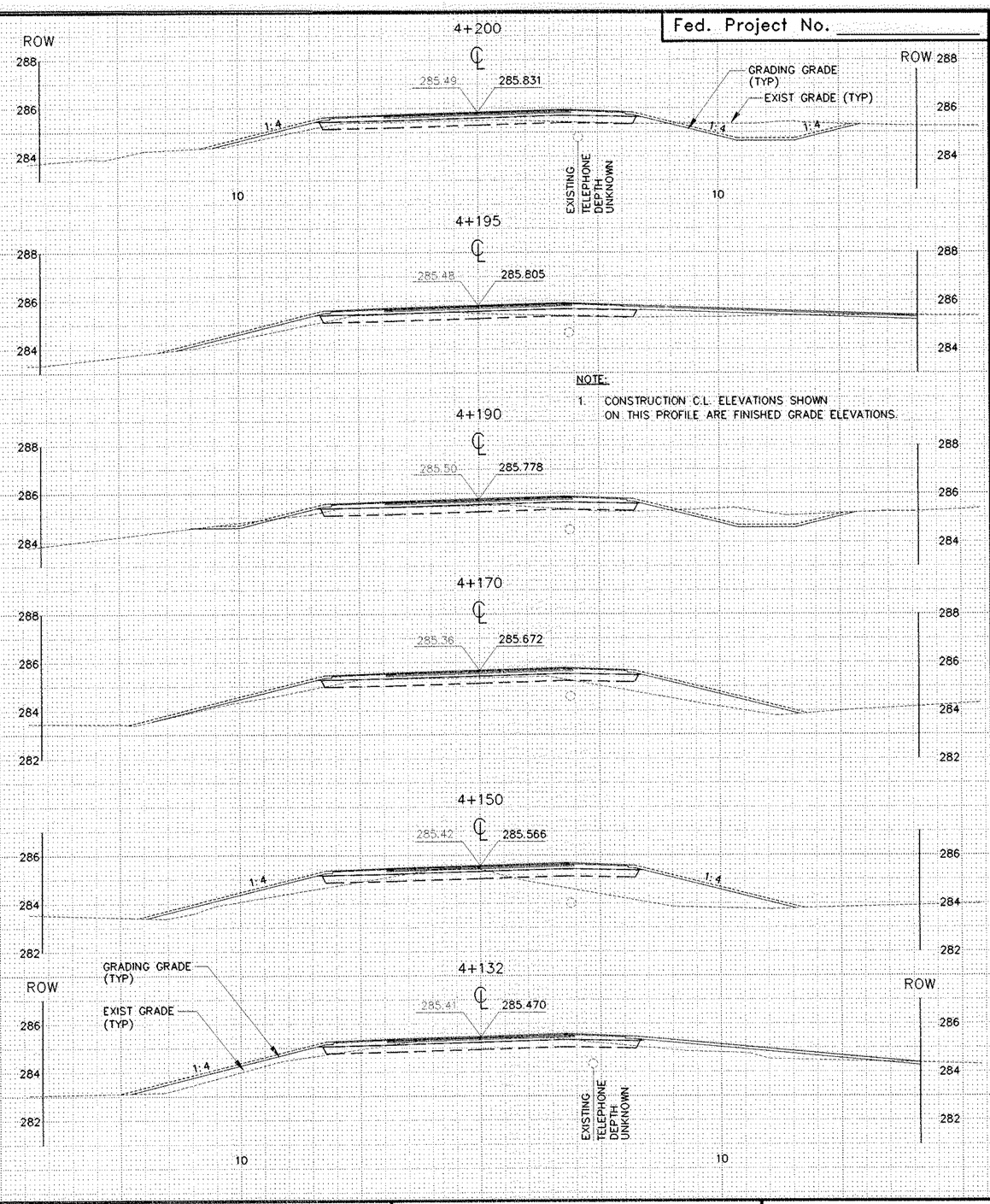
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 3+850.00 TO 4+000.00

Sheet 46 of 54 Sheets

Fed. Project No. _____





NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X14.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

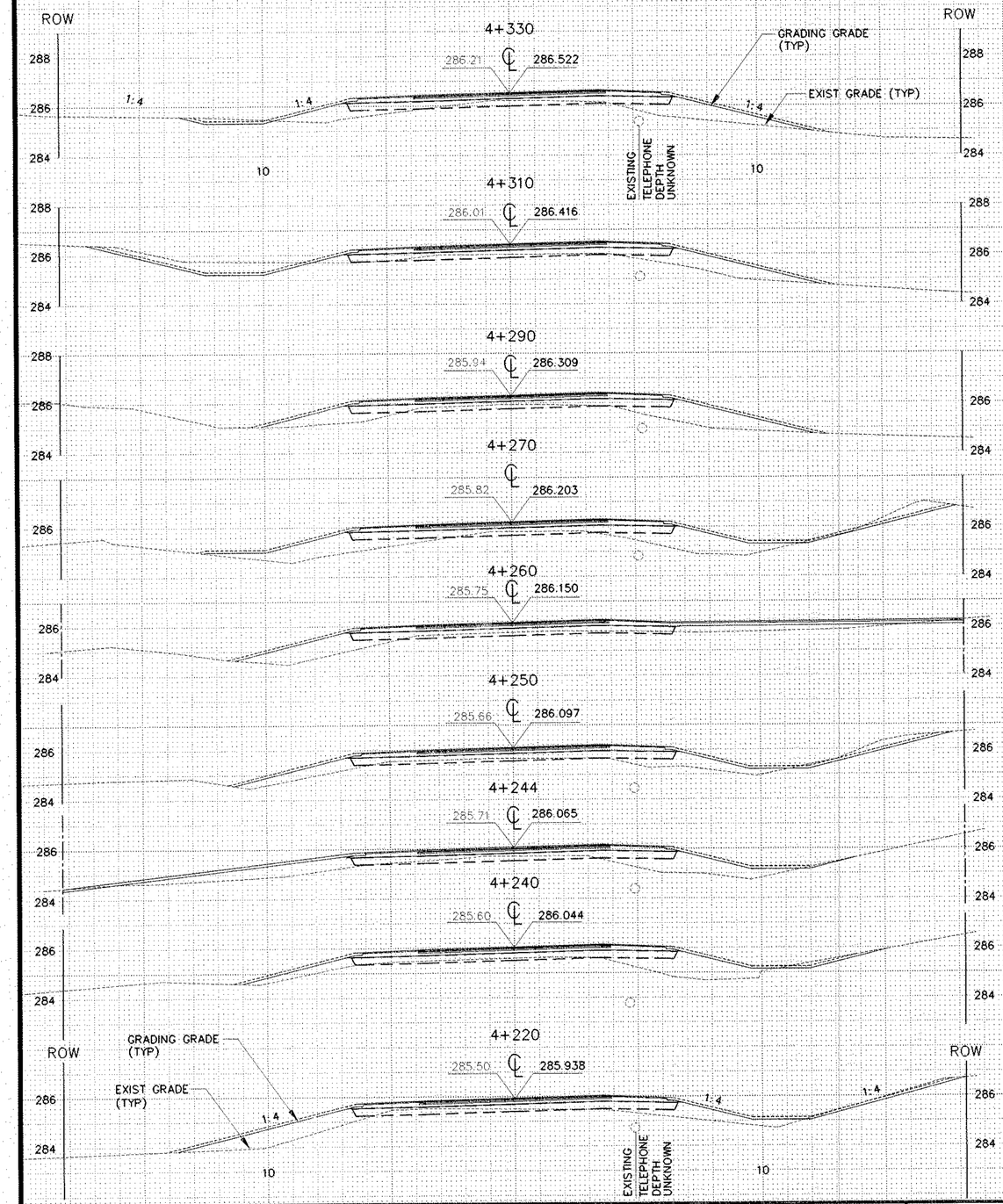
STATE AID PROJECT NO. _____

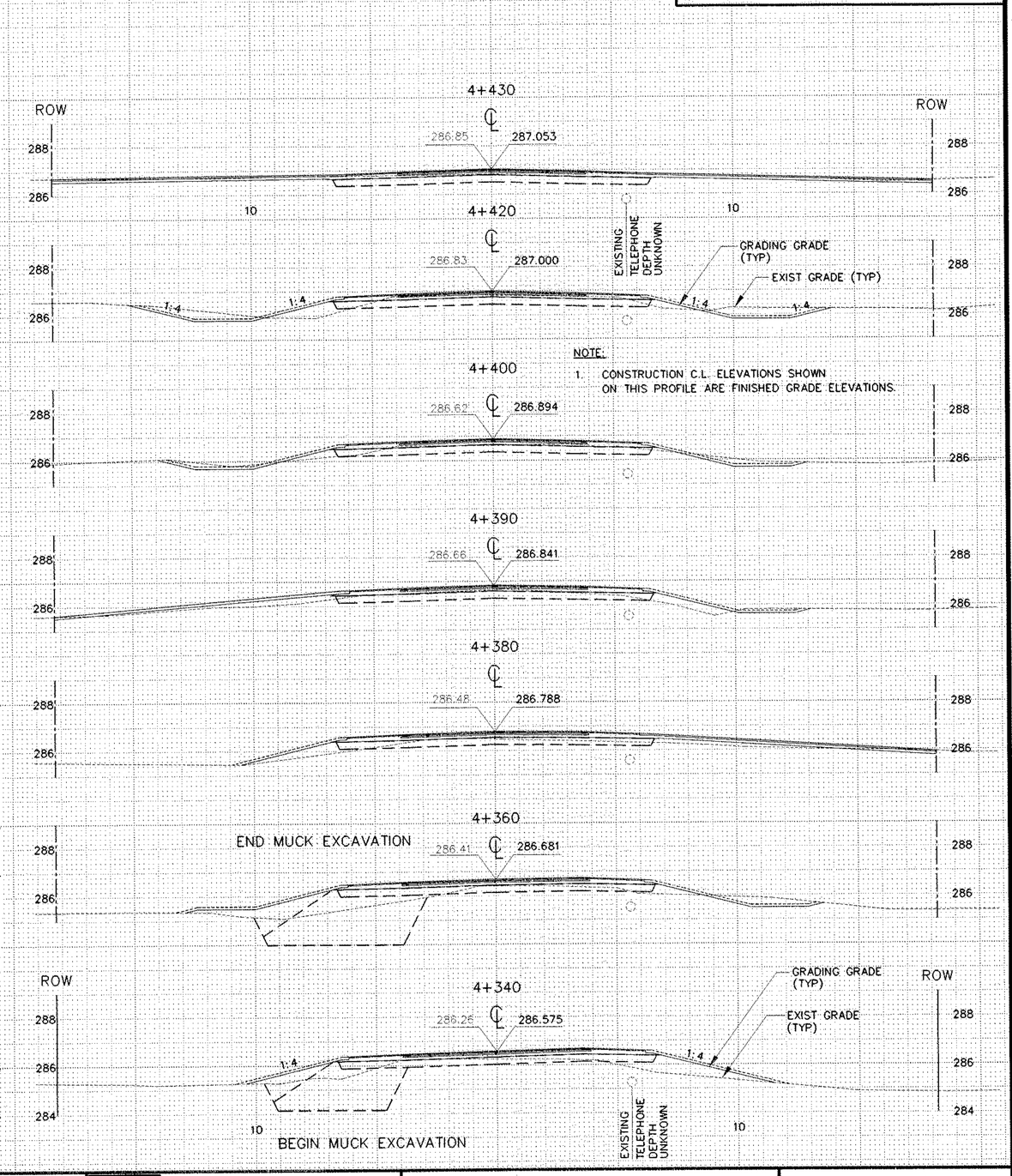
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 4+020.00 TO 4+200.00

Sheet 47 of 54 Sheets

Fed. Project No. _____





NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X15.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fischer

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

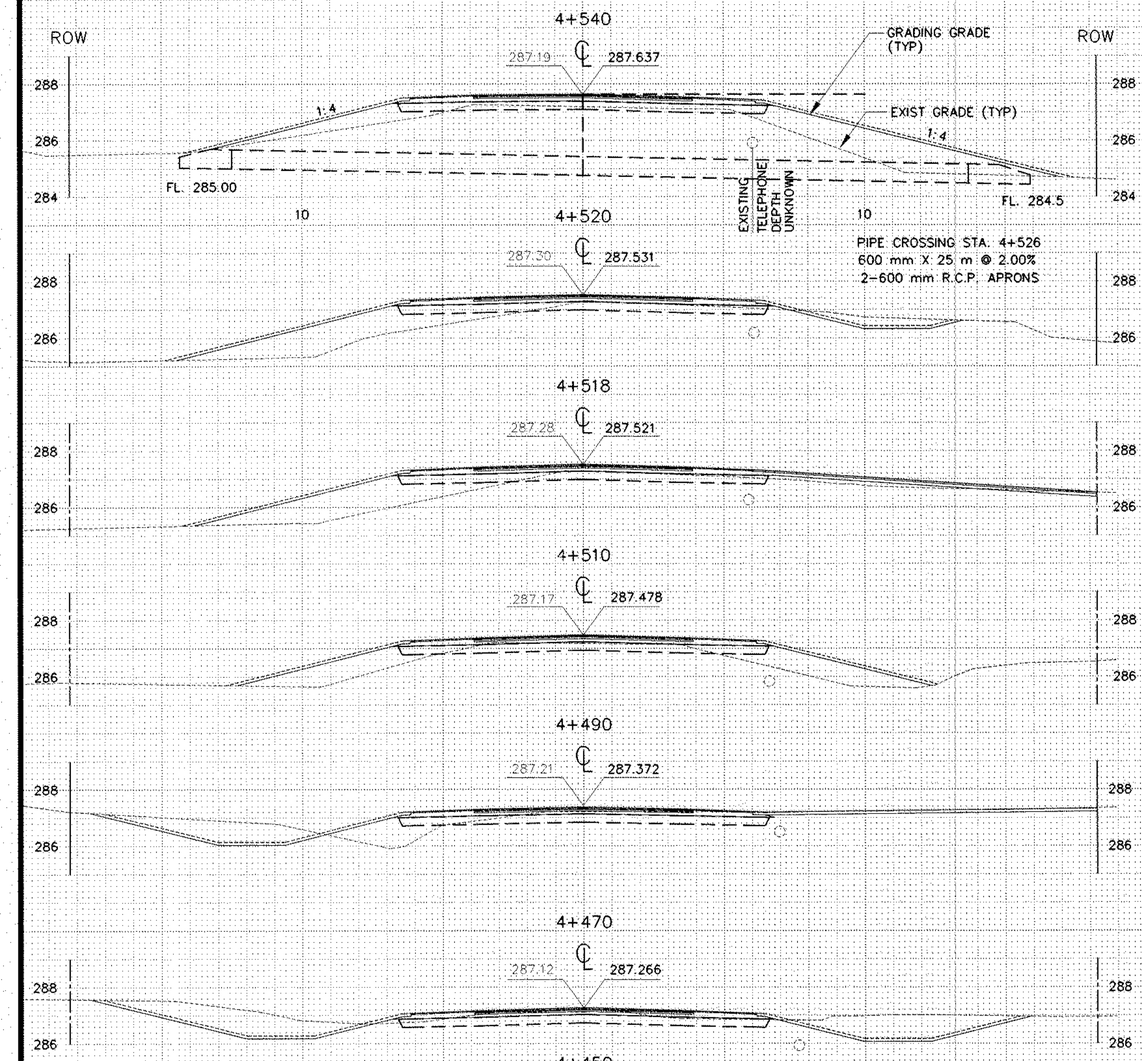
COUNTY PROJECT NO. _____

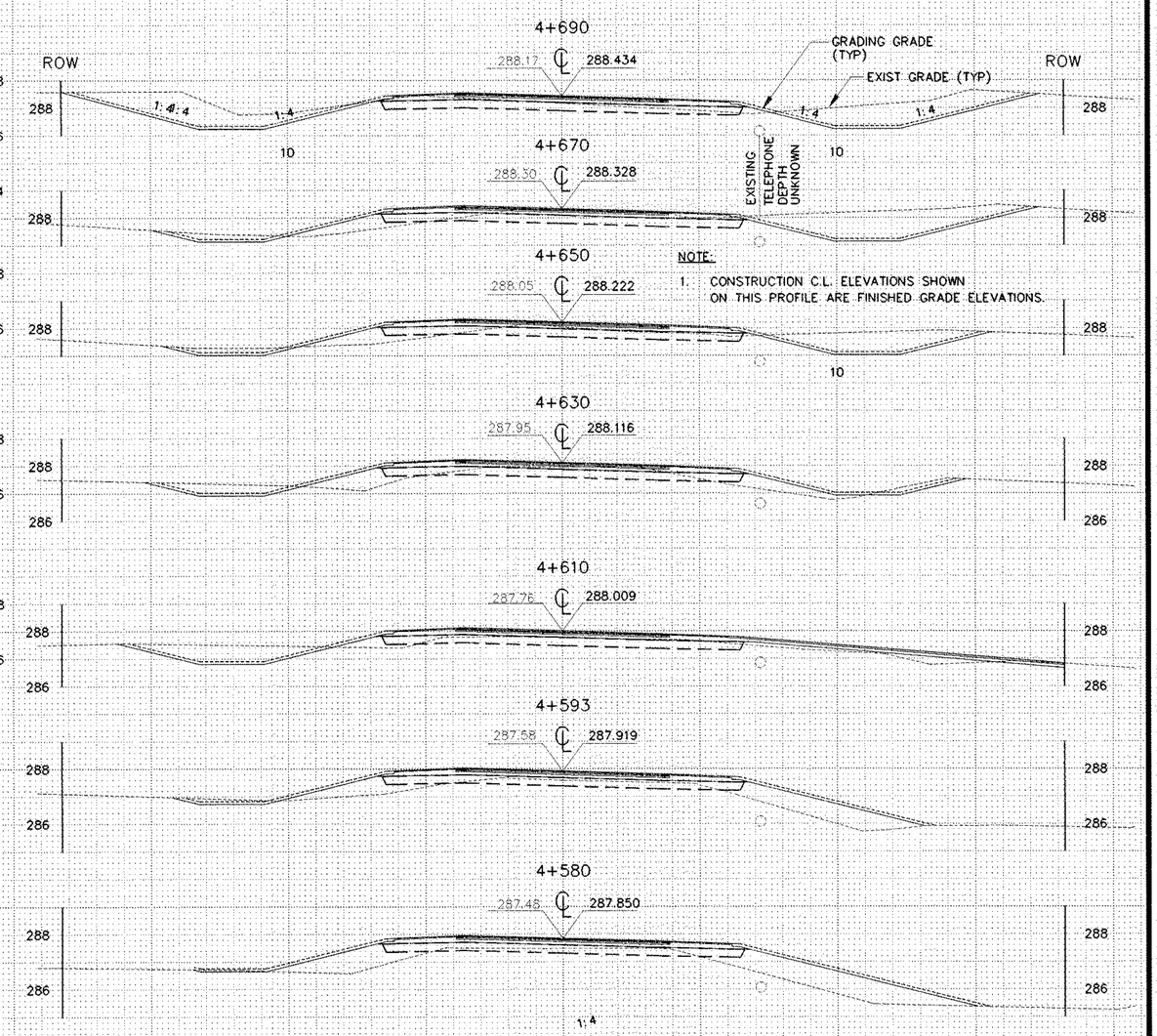
CROSS-SECTION

STA. 4+220.00 TO 4+430.00

Sheet 48 of 54 Sheets

Fed. Project No. _____





NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X16.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Bruce

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

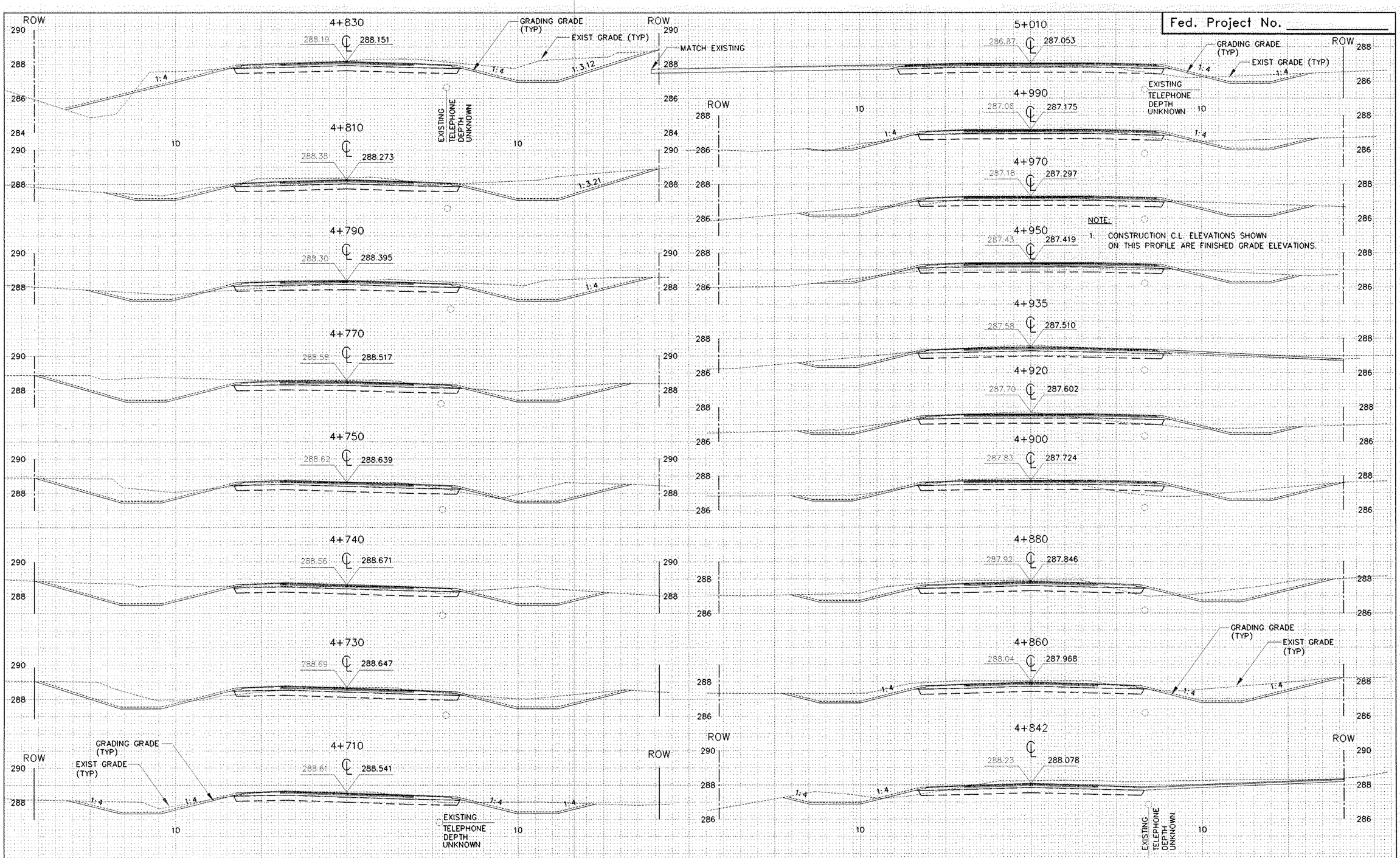
STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 4+450.00 TO 4+690.00

Sheet 49 of 54 Sheets

Fed. Project No. _____



NOTE:
1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.

NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X17.DWG

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Bird

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____
DESIGN BY _____ DATE _____
CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____
STATE AID PROJECT NO. 02-605-05
STATE AID PROJECT NO. _____
COUNTY PROJECT NO. _____

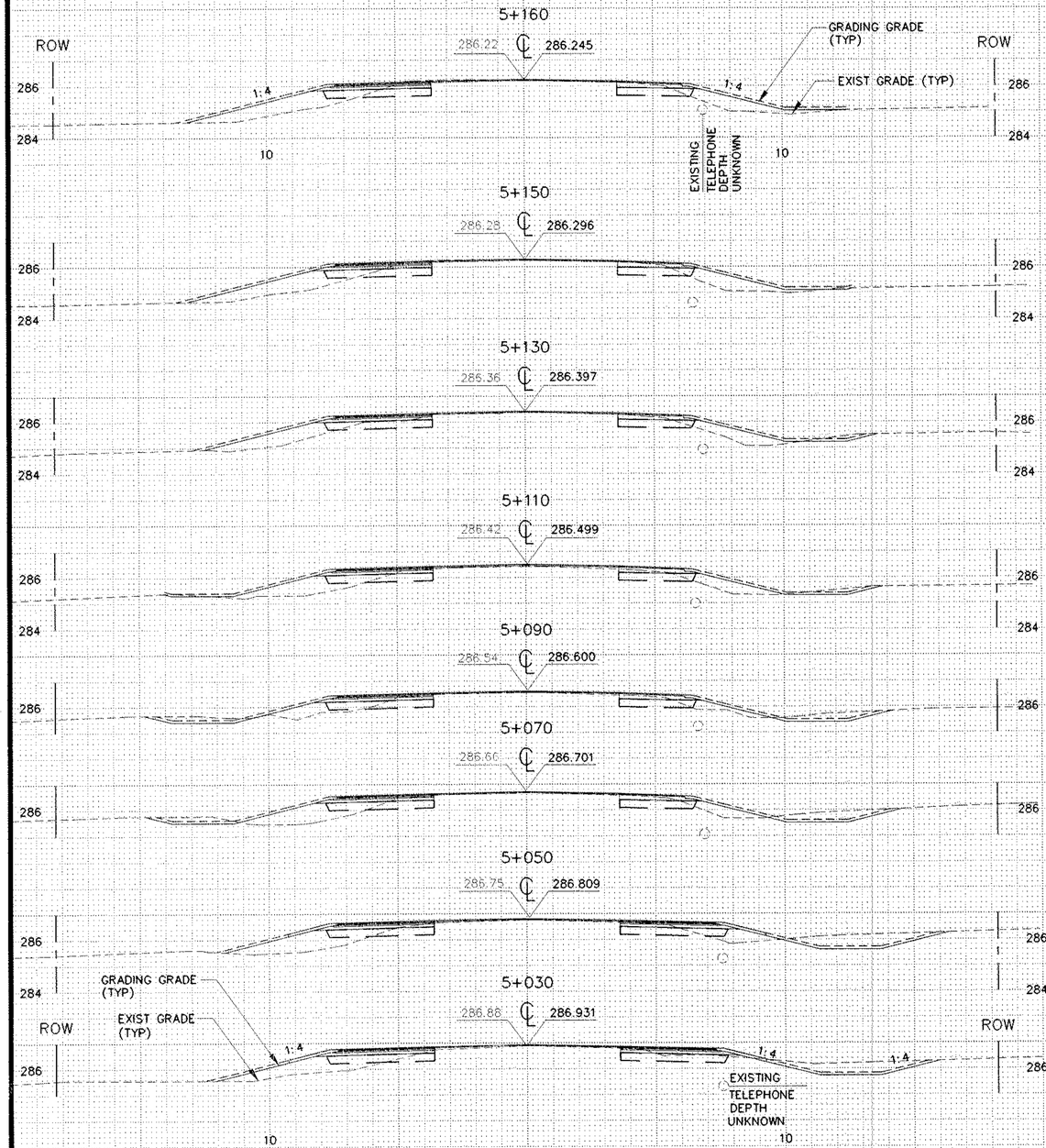
CROSS-SECTION
STA. 4+710.00 TO 5+010.00

Sheet 50 of 54 Sheets

Fed. Project No. _____

NOTE:

1. CONSTRUCTION C.L. ELEVATIONS SHOWN ON THIS PROFILE ARE FINISHED GRADE ELEVATIONS.



NO	DATE	BY	CKD	APPR	REVISION

NAME: S:\SDSKPROJ\0260505\PLAN\CR05X18.DWG

minnesota metric

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DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

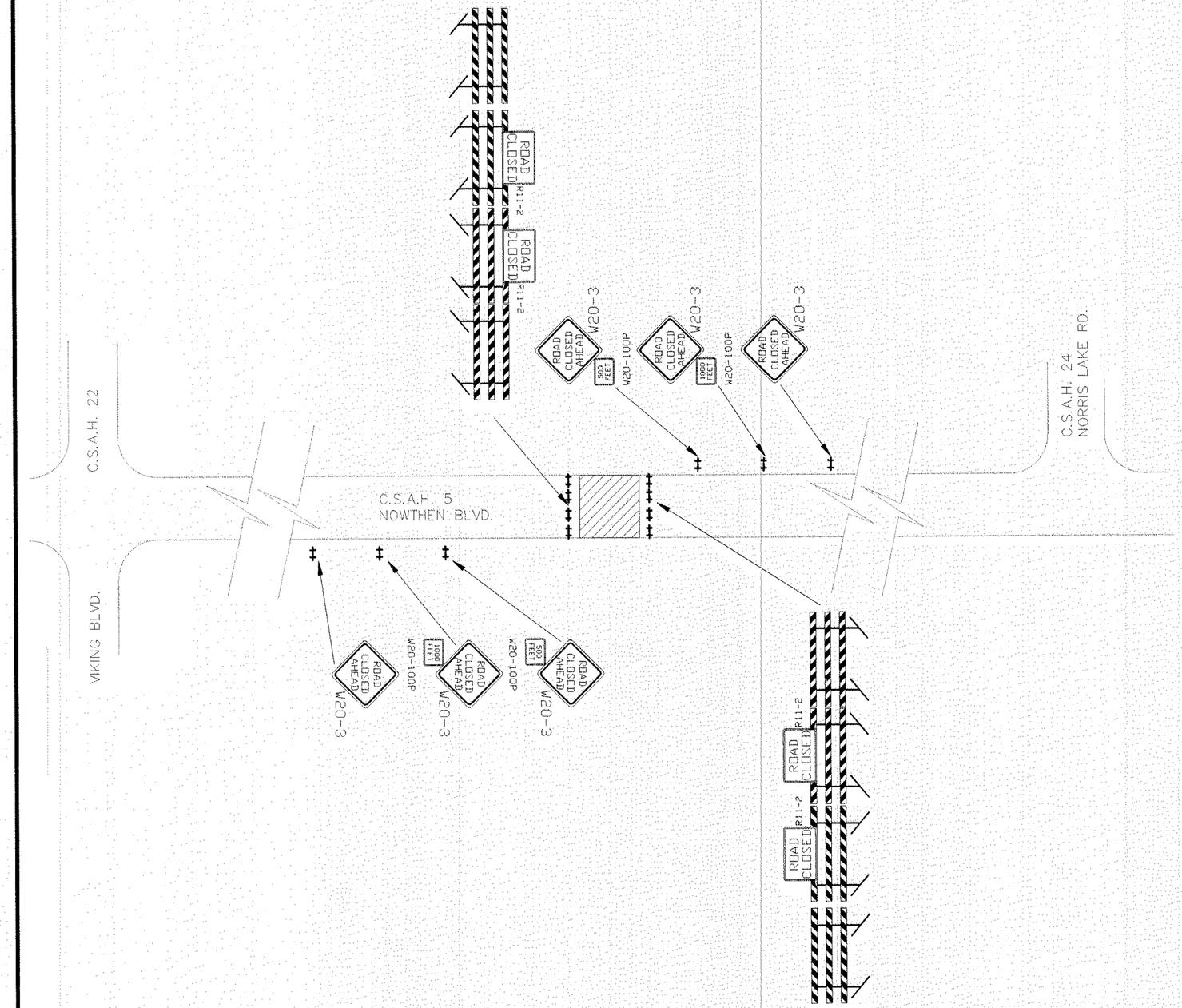
COUNTY PROJECT NO. _____

CROSS-SECTION
STA. 5+030.00 TO 5+160.00

Sheet 51 of 54 Sheets

C:\SDSKPROJ\0260505\WORK\CR05X18 3-9-98 15813 pm EST

Fed. Project No. _____



M.U.T.C.D. CODE	SIZE	PANEL AREA FT.²	PANEL AREA m²	INSERT	QTY
W20-3	48" x 48"	16.00	1.472	ROAD CLOSED AHEAD	6
W20-100P	24" x 18"	3.00	.276	500 FEET	2
W20-100P	24" x 18"	3.00	.276	1000 FEET	2
TYPE III	8 FOOT				4
R11-2	48" x 30"	10.0	.920	ROAD CLOSED	4
TYPE III	8 FOOT				

SHORT TERM CLOSURE No.	LOCATION OF CLOSURE C.S.A.H. 5 NOWTHEN BLVD.
1	STA. 1+584 TO STA. 1+645
2	STA. 1+952 TO STA. 2+013
3	STA. 2+172 TO STA. 2+264
4	STA. 2+851 TO STA. 2+912
5	STA. 3+017 TO STA. 3+078
6	STA. 4+069 TO STA. 4+130
7	STA. 4+495 TO STA. 4+556

NO	DATE	BY	CKD	APPR	REVISION

NAME: C:\SDSKPRO\XXXXXXX\XXXXXXX.DWG MN (02-07-97)

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Fischer

DATE 5/1/98 REG. NO. 20235

DRAWN BY _____ DATE _____

DESIGN BY _____ DATE _____

CHECKED BY _____ DATE _____

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

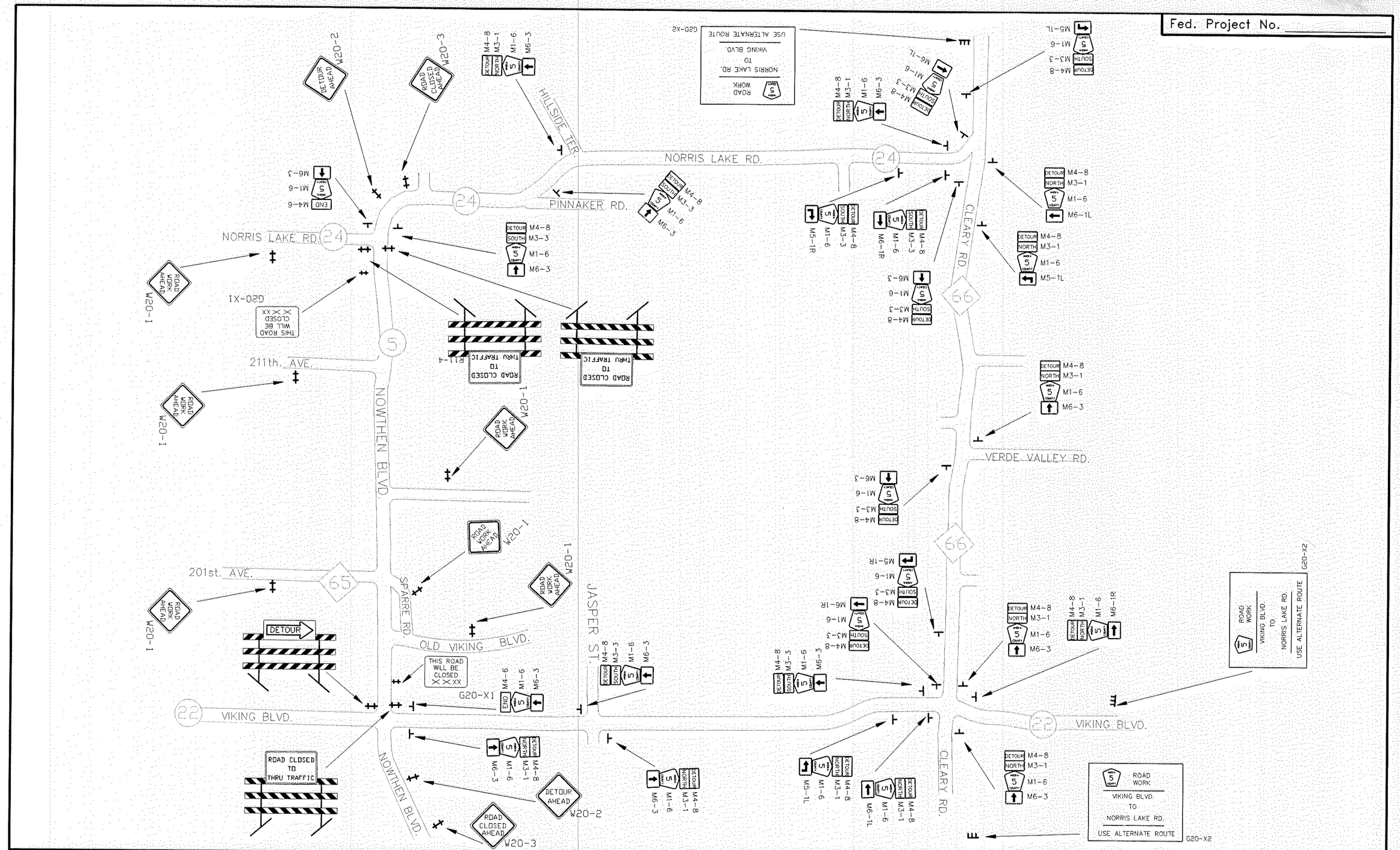
ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

SHORT TERM ROAD CLOSURES

Sheet 52 of 54 Sheets

Fed. Project No. _____



NO	DATE	BY	CKD	APPR	REVISION
NAME:					

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

Douglas M. Bosak

DATE 5/11/98 REG. NO. 20235

DRAWN BY D.M. DATE 4/98

DESIGN BY D.M. DATE 4/98

CHECKED BY _____ DATE _____

ANOKA COUNTY

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

DETOUR
C.S.A.H. 5

Sheet 53 of 54 Sheets

Fed. Project No. _____

M.U.T.C.D. CODE	SIZE INCHES	SIZE mm	PANEL AREA FT²	PANEL AREA m²	INSERT	QTY
W20-1	48"x48"	1.219mm X 1.219mm	16.00	1.486	ROAD WORK AHEAD	6
W20-2	48"x48"	1.219mm X 1.219mm	16.00	1.486	DETOUR AHEAD	2
W20-3	48"x48"	1.219mm X 1.219mm	16.00	1.486	ROAD CLOSED AHEAD	2
R11-4	48"x48"	1.219mm X 1.219mm TYPE III 8 FOOT	12.50	1.161	ROAD CLOSED TO THRU TRAFFIC	3
M4-10R	48"x18"	1.219 mm X .457mm TYPE III 8 FOOT	6.00	.557	DETOUR	1
G20-X2	96"x84"	1.219 mm X .457mm	56.00	5.202	5 ROAD WORK VIKING BLVD. TO NORRIS LAKE RD. FOLLOW DETOUR	2
G20-X2	96"x84"	1.219 mm X .457mm	56.00	5.202	5 ROAD WORK NORRIS LAKE RD. TO VIKING BLVD. FOLLOW DETOUR	1

M.U.T.C.D. CODE	SIZE INCHES	SIZE mm	PANEL AREA FT²	PANEL AREA m²	INSERT	QTY
G20-X1	60"x48"	1.524mm X 1.219mm	20.00	1.858	THIS ROAD WILL BE CLOSED MONTH DAY	2
M4-8	24"x12"	1.219mm X 1.219mm	16.00	1.486	DETOUR NORTH ANOKA 5 COUNTY	11
M3-1	24"x12"	1.219mm X 1.219mm	16.00	1.486		
M1-6	24"x24"	610mm X 610mm	4.00	0.368		
M5-1L	21"x15"	530mm X 380mm	2.18	0.200		2
M6-1L	21"x15"	530mm X 380mm	2.18	0.200		2
M6-3	21"x15"	530mm X 380mm	2.18	0.200		7
M4-8	24"x12"	1.219mm X 1.219mm	16.00	1.486	DETOUR SOUTH ANOKA 5 COUNTY	12
M3-3	24"x12"	1.219mm X 1.219mm	16.00	1.486		
M1-6	24"x24"	610mm X 610mm	4.00	0.368		
M5-1L	21"x15"	530mm X 380mm	2.18	0.200		1
M5-1R	21"x15"	530mm X 380mm	2.18	0.200		2
M6-1L	21"x15"	530mm X 380mm	2.18	0.200		1
M6-1R	21"x15"	530mm X 380mm	2.18	0.200		2
M6-3	21"x15"	530mm X 380mm	2.18	0.200		6
M4-6	24"x12"	1.219mm X 1.219mm	16.00	1.486	END ANOKA 5 COUNTY	2
M1-6	24"x24"	610mm X 610mm	4.00	0.368		

SIGN TO BE INSTALLED A MINIMUM OF SEVEN DAYS PRIOR TO ACTUALL CLOSING DATE OF ROAD CLOSURE AND IMPLEMENTATION OF DETOUR SIGNING SIGNS TO BE REMOVED ATIME OF DETOUR INSTALLATION.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST RECENT EDITION OF THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL DATED APRIL 1995.

NO	DATE	BY	CKD	APPR	REVISION
NAME:					

minnesota metric

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

DATE 5/11/98 REG. NO. 20235

DRAWN BY D.M. DATE 4/98

DESIGN BY D.M. DATE 4/98

CHECKED BY _____ DATE _____

ANOKA COUNTY HIGHWAY DEPT.

STATE PROJECT NO. _____

STATE AID PROJECT NO. 02-605-05

STATE AID PROJECT NO. _____

COUNTY PROJECT NO. _____

SIGN QUANTITIES

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