

# PLAN SYMBOLS

COUNTY LINE  
TOWNSHIP OR RANGE LINE  
SECTION LINE  
QUARTER LINE  
SIXTEENTH LINE  
RIGHT OF WAY LINE  
SLOPE EASEMENT  
EXISTING RIGHT OF WAY  
PROPERTY LINE  
CORPORATE OR CITY LIMITS  
RETAINING WALL  
RAILROAD  
RAILROAD RIGHT OF WAY  
RIVER OR CREEK  
DRAINAGE DITCH  
CULVERT  
DROP INLET  
GUARD RAIL  
BARBED WIRE FENCE  
WOVEN WIRE FENCE  
CHAIN LINK FENCE  
WOOD FENCE  
STONE WALL OR FENCE  
HEDGE

LOWLAND  
TIMBER  
ORCHARD  
BRUSH  
NURSERY

CATTLE GUARD

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  
SEWER (Sanitary or Storm)  
SEWER MANHOLE

## SCALES

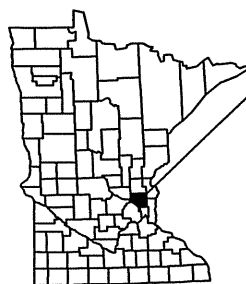
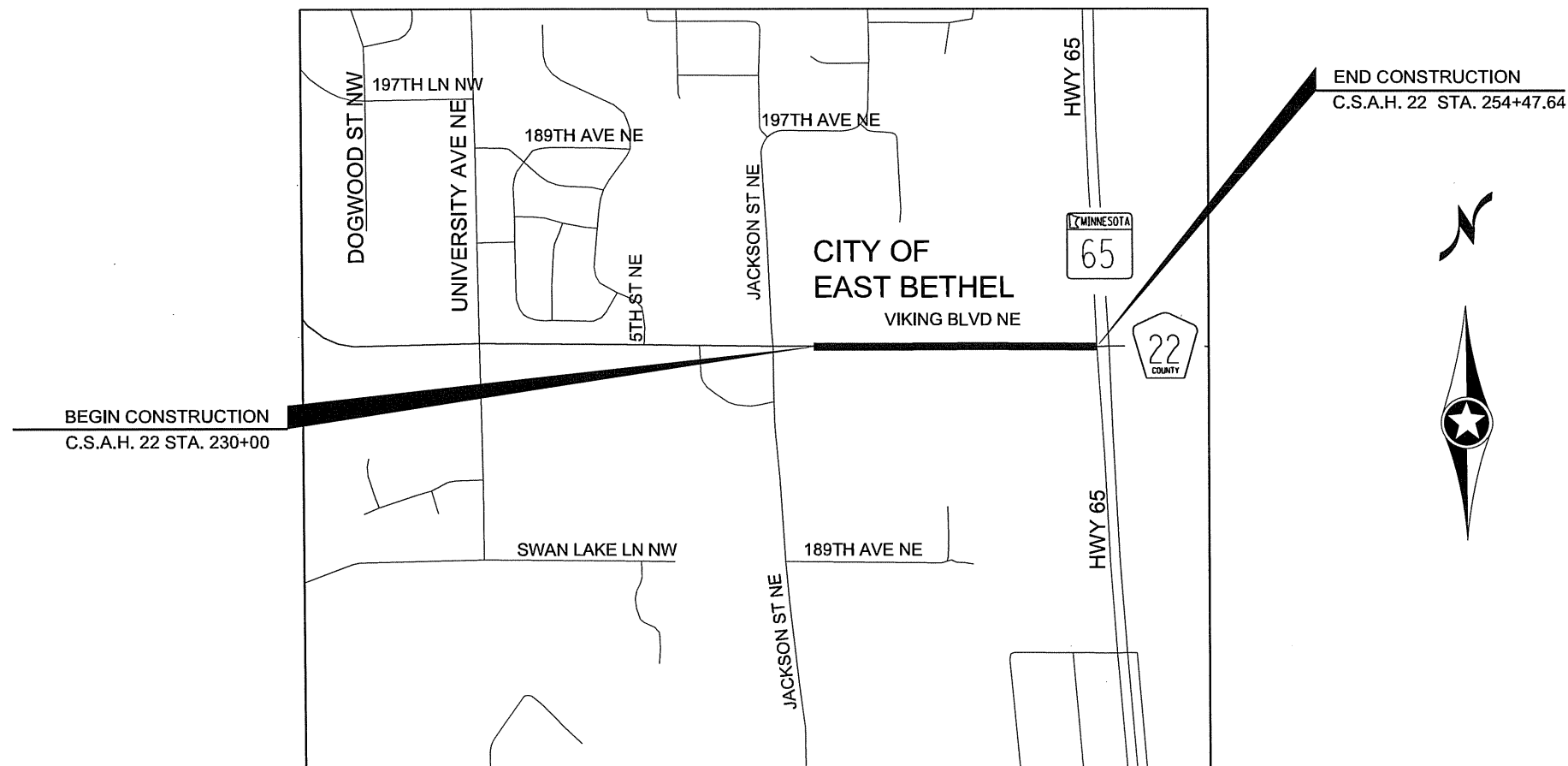
PLAN  
PROFILE  
HORIZONTAL  
VERTICAL  
X-SECTIONS  
HORIZONTAL  
VERTICAL  
INDEX MAP

# MINNESOTA DEPARTMENT OF TRANSPORTATION ANOKA COUNTY

## CONSTRUCTION GRADING PLAN FOR

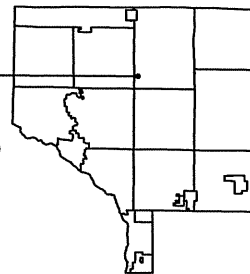
LOCATED ON C.S.A.H. 22 BETWEEN 1,400' E OF JACKSON STREET AND TRUNK HIGHWAY 65

C.S.A.H. 22  
GROSS LENGTH 2,400 FEET 0.455 MILES  
BRIDGES-LENGTH 0.00 FEET 0.000 MILES  
EXCEPTIONS-LENGTH 0.00 FEET 0.000 MILES  
NET LENGTH 2,400 FEET 0.455 MILES



### PROJECT LOCATION

CITY OF EAST BETHEL  
ANOKA COUNTY  
MN/DOT TRANSPORTATION DISTRICT - METRO  
SECTION 29,30  
TOWNSHIP 33 NORTH  
RANGE 23 WEST



THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CIASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

## GOVERNING SPECIFICATIONS

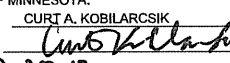
THE 2005 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE TO THE "MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MNMUTCD), AND PART VI, "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

## INDEX

SHEET NO.	DESCRIPTION
1	TITLE SHEET
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6	SOILS & CONSTRUCTION NOTES MUCK TABULATION
7	GRADING TYPICAL SECTIONS
8	MISCELLANEOUS DETAILS
9	UTILITY PLAN
10	ALIGNMENT TABULATION
11	EXISTING SIGNING & STRIPING PLAN
12	REMOVAL PLAN
13	CSAH 22 (Viking Blvd) DETOUR
14	CSAH 22 (Viking Blvd) DETOUR SIGN QUANTITIES
15 - 16	GRADING PLAN & PROFILE
17	SWPPP NARRATIVE
18 - 21	EROSION CONTROL & TURF EST. PLAN AND DETAILS
22 - 29	CROSS SECTIONS

Approved  12/21/12  
ANOKA COUNTY ENGINEER

NO	DATE	BY	CKD	APPR	REVISION

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.  
PRINT NAME: CURT A. KOBILARCSIK  
SIGNATURE:   
DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY ZDC DATE 12-07-12  
DESIGN BY NJD DATE 12-07-12  
CHECKED BY GMP DATE 12-07-12



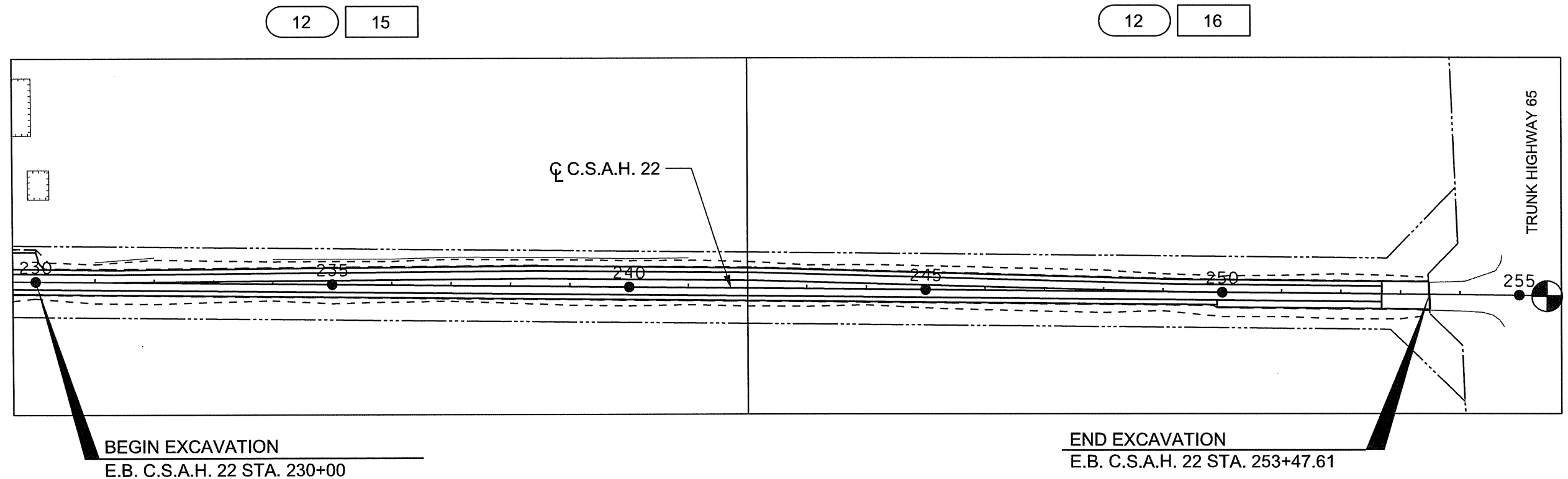
ANOKA COUNTY  
HIGHWAY DEPT.

CP 12-18-22

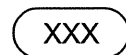
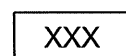

TITLE SHEET

Sheet 1 of 29 Sheets

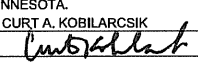




### LEGEND

-  INPLACE TOPOGRAPHY AND REMOVAL PLAN SHEET NUMBER  
 CONSTRUCTION PLAN SHEET NUMBER  
 INPLACE SIGNAL SYSTEM

NO	DATE	BY	CKD	APPR	REVISION

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ANOKA COUNTY  
 HIGHWAY DEPT.

STATE PROJECT NO. CP 12-18-22  
 STATE PROJECT NO. -  
 STATE PROJECT NO. -  
 STATE PROJECT NO. -

GENERAL LAYOUT

Sheet 2 of 29 Sheets



TAB / NOTE	ITEM NO.	ITEM DESCRIPTION	UNIT	TOTAL PROJECT QUANTITIES ESTIMATED	ROADWAY QUANTITIES		
					LUMP SUM ITEMS	ADDITIONAL ITEMS [1]	ADDITIONAL ITEMS [2]
A [6]	2101.502	CLEARING	EACH	13		13	
B	2104.501	REMOVE PIPE CULVERTS	LIN FT	148		148	
B [4]	2104.505	REMOVE BITUMINOUS PAVEMENT	SQ YD	10,669		10,669	
[5]	2104.601	HAUL SALVAGED MATERIALS	LUMP SUM	1		1	
E	2105.501	COMMON EXCAVATION (CV)	CU YD	4,515		4,515	
E	2105.505	MUCK EXCAVATION (CV)	CU YD	219,063	219,063		
E	2105.522	GRANULAR BORROW (CV)	CU YD	138,333	138,333		
	2563.601	TRAFFIC CONTROL	LUMP SUM	1		1	
C	2501.511	15" CS PIPE CULVERT	LIN FT	32		32	
C	2501.511	30" RC PIPE CULVERT CLASS II	LIN FT	116		116	
C	2501.515	15" CS PIPE APRON	EACH	2		2	
C	2501.515	30" RC PIPE APRON	EACH	2		2	
	2550.602	REMOVE CONDUIT	EACH	1		1	
D	2573.502	SILT FENCE TYPE MACHINE SLICED	LIN FT	4,846		2,414	2,432
[7]	2573.512	TEMPORARY DITCH CHECK TYPE 2	LIN FT	12		12	
D	2573.601	CULVERT PROTECTION	SQ YD	54		54	
D , [3]	2575.502	SEED MIXTURE 325	ACRE	7.7		5	3
D	2575.571	RAPID STABILIZATION METHOD 3	MGAL	46.2		31.2	15.0

SEQ NOTES:

- [1] QUANTITY NORTH OF SOUTHERN RIGHT OF WAY LINE
- [2] QUANTITY SOUTH OF SOUTHERN RIGHT OF WAY LINE
- [3] SEEDING, MULCHING & DISC ANCHORING INCIDENTAL - SEE TAB D FOR MULCH TYPE
- [4] SAWING BITUMINOUS PAVEMENT INCIDENTAL TO PAVEMENT REMOVAL
- [5] SALVAGING SIGNS INCIDENTAL
- [6] GRUBBING INCIDENTAL TO CLEARING
- [7] TYPE 2 (BIOROLL) QUANTITY FOR CULVERT INLET PROTECTION

THE FOLLOWING STANDARD PLATES APPROVED BY THE DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION SHALL APPLY ON THIS PROJECT.

STANDARD PLATES	
PLATE NO.	DESCRIPTION
3000L	REINFORCED CONCRETE PIPE
3006G	GASKET JOINT FOR R.C. PIPE
3022C	PRECAST CONCRETE SAFETY APRON
9102D	TURF ESTABLISHMENT AREAS (AT PIPE CULVERT ENDS)

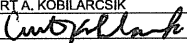
BASIS OF QUANTITIES		
SPEC NO	DESCRIPTION	RATE
2575.502	SEED MIXTURE 325	126 LBS / ACRE
2575.511	MULCH MATERIAL TYPE 3	2 TONS / ACRE
2575.571	RAPID STABILIZATION METHOD 3	6 M GALLONS / ACRE
2575.532	FERTILIZER (22-5-10)	400 LBS / ACRE

TAB.	DESCRIPTION	SHEET NO.
A	CLEARING AND GRUBBING	4
B	REMOVALS, SAWING, AND MILLING	4
C	CULVERT SUMMARY	4
D	TURF ESTABLISHMENT AND EROSION CONTROL	4
E	EARTHWORK TABULATION	6
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G	SOUNDING DATA	8
H	UTILITY CONTACTS	5
I	CENTERPOINT	5
J	CONNEXUS	5
K	CENTURYLINK	5
L	MID-CONTINENT	5

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-32\Plan\00262232_SEQ-M.dgn					
12/27/2012 10:47:23 AM					

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SIGNATURE: 

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CHECKED BY GMP DATE 12-07-12



ANOKA COUNTY  
HIGHWAY DEPT.

CP 12-18-22

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STATEMENT OF ESTIMATED  
QUANTITIES & INDEX  
OF TABS

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CLEARING & GRUBBING					A
ALIGNMENT	STATION OR TO		OFFSET	CLEARING (TREE)	NOTES
	STATION	STATION			
EB 22	243+62	- 244+00	RT	2	
EB 22	244+73	- 244+93	RT	3	
EB 22	245+32	- 245+41	RT	2	
EB 22		245+87	RT	1	
EB 22	246+21	- 246+50	RT	5	
PROJECT TOTAL				13	

**CLEARING & GRUBBING GENERAL NOTES:**  
TREES WITHIN THE CONSTRUCTION LIMITS WILL BE DESIGNATED FOR REMOVAL BY THE ENGINEER.  
REMOVAL OF MISCELLANEOUS SHRUBS AND LANDSCAPING SHALL BE CONSIDERED INCIDENTAL.  
  
GRUBBING SHALL BE INCIDENTAL TO CLEARING.

REMOVALS, SAWING AND MILLING				B
ALIGNMENT	STATION TO STATION	SPEC 2104		NOTES
		REMOVE	SAWCUT [1]	
		BITUMINOUS PAVEMENT	BITUMINOUS	
		[SQ YD]	[LIN FT]	
EB 22	230+00 - 253+47.62	10,669	47	
PROJECT TOTAL		10,669	47	

**REMOVALS NOTES:**  
[1] SAWCUT INCIDENTAL TO REMOVE BITUMINOUS PAVEMENT

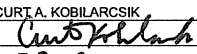
CULVERT SUMMARY															C	
ALIGNMENT	INVERT A [1]		INVERT B [1]		OFFSET	REMOVE (SPEC. 2104)	UPSTREAM INVERT	DOWNSTREA M INVERT	LENGTH	SLOPE	30" RC PIPE CULVERT CLASS II [LIN FT]	15" CS PIPE CULVERT [LIN FT]	30" RC PIPE APRON [EACH]	15" CS PIPE APRON [EACH]	NOTES	
	STATION	OFFSET	-	STATION		OFFSET										CULVERTS
																[2] [LIN FT]
EB 22	241+73.99	58.12 [L]	-	241+74.83	58.34 [R]	L/R	116	887.91	886.46	116	1.25%	116		2		
EB 22	241+60.33	88.50	-	241+71.84	87.83	L	32	888.73	888.52	32	0.66%		32		2	
PROJECT TOTAL							148			148		116	32	2	2	

**CULVERT NOTES:**  
[1] STATION, OFFSET, & ELEVATION OF CENTER LIP OF APRON.  
[2] REMOVAL OF APRONS INCIDENTAL (APRONS INCLUDED IN REMOVAL LENGTH)

TURF ESTABLISHMENT AND EROSION CONTROL												D
ALIGNMENT	LOCATION	OFFSET	TEMPORARY EROSION CONTROL		PERMANENT EROSION CONTROL						CULVERT PROTECTION [4], [10], [11]	NOTES
			RAPID STABILIZATION METHOD 3 [1]	SILT FENCE TYPE MACHINE SLICED [5]	SEED MIXTURE 325 [2]	SEEDING	MULCH MATERIAL [6]	DISC ANCHORING	FERTILIZER [3]			
										[9]		
	STATION TO STATION		MGAL	LIN FT	ACRE	ACRE	TON	ACRE	POUND	SQ YD		
EB 22	230+00 - 253+47.61	L	22.2	2414	3.7	3.7	7.4	3.7	1498	35		
EB 22	230+00 - 253+47.61	R	9.0		1.5	1.5	3.0	1.5	593	19	[7]	
EB 22	230+00 - 253+47.61	R	15.0	2432	2.5	2.5	5.0	2.5	982		[8]	
EB 22	230+00 - 230+50	L/R										
EB 22	252+94.56 - 253+47.61	L/R										
PROJECT TOTAL			46.2	4846	7.7	7.7	3073	54	15	8		

[1] RAPID STABILIZATION METHOD 3 (6 MGAL / AC) - MULCH ONLY - NO SEED  
[2] SEEDING MIX 325 (126 LBS / AC)  
[3] FERTILIZER (22-5-10 @ 400 LBS / AC)  
[4] EROSION CONTROL BLANKET CATEGORY 3 TO BE USED AT EACH CULVERT INLET AND OUTLET - SEE STANDARD PLATE 9102D  
[5] SILT FENCE TO BE USED AT THE OUTSIDE BOTTOM OF MUCK SPOIL PILES, AS NECESSARY  
[6] MULCH MATERIAL TYPE 1 TO BE APPLIED AT A RATE OF 2 TONS PER ACRE  
[7] QUANTITY FOR AREA NORTH OF SOUTHERN COUNTY RIGHT OF WAY  
[8] QUANTITY FOR AREA SOUTH OF SOUTHERN COUNTY RIGHT OF WAY  
[9] SEEDING, MULCH, AND DISC ANCHORING INCIDENTAL TO SEED MIX 325  
[10] EROSION CONTROL BLANKET CATEGORY 1 WOOD FIBER 1S, RD (SEE STD PLATE 9102D)  
[11] SEED MIX 325 PRIOR TO PLACING FIBER BLANKET (INCIDENTAL)

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-32\Plan I\0262232_SEQ-M.dgn 12/27/2012 10:47:34 AM					

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ANOKA COUNTY  
HIGHWAY DEPT.

CP 12-18-22  
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TABULATIONS  
  
Sheet 4 of 29 Sheets



SALVAGE SIGNS			F
STATION	SALVAGE SIGN TYPE C	SIGN NUMBER	SIGN LEGEND
	EACH		
245+00	1	W3-3	SIGNAL AHEAD
248+00	1	W8-2	DIP
		W13-1	20 MPH
249+80	1	M2-1A	JCT
		M1-5A	Rt 65
250+40	1	delineator	DELINEATOR
251+90	1	R3-X1	Rt Turn Lane
252+40	1	R2-1	SPEED LIMIT 55
253+70	1	M3-4A	WEST
		M1-6A	ROUTE MARKER 22
PROJECT TOTAL	7		
CONSTRUCTION NOTES:			
1. FOR RELOCATING TRAFFIC SIGNS DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER.			
2. SALVAGING SIGNS INCIDENTAL TO HAUL SALVAGED MATERIALS (ITEM 2104.601)			

UTILITY CONTACTS		H
CITY OF EAST BETHEL BOLTON & MENK CONTACT JOHN SWANSON PROJECT ENGINEER TEL: 612-508-6968		CONNEXUS ENERGY 14601 RAMSEY BLVD RAMSEY, MN 55303 CONTACT TOM KELLER TEL 763-323-2762
CENTURYLINK 425 MONROE ST ANOKA, MN 55303 CONTACT SCOTT KUNZMAN TEL. 763-712-5019		CENTERPOINT ENERGY 700 WEST LINDEN AVE P.O. BOX 1165 MINNAPOLIS, MN 55440-1165 CONTACT STEVE GUHANICK TEL 612-321-5421
MIDCONTINENT COMMUNICATIONS PO BOX 5010 SIOUX FALLS, SD 57117 CONTACT JERRY OWENS TEL. 763-221-6455		MNDOT TRAFFIC SIGNAL METRO DISTRICT  CONTACT PETE ELLWANGER TEL. 651.775.1279

GAS - CENTERPOINT ENERGY					I
STATION		OFFSET FROM C/L	SIZE & ITEM	DEPTH	REMARK
BEGIN	END				
215+47	228+54	40' LEFT	4" MAIN	UNK	REMAIN


POWER - CONNEXUS					J
STATION		OFFSET FROM C/L	SIZE & ITEM	DEPTH	REMARK
BEGIN	END				
230+30	230+32	CROSSING	POLE		RELOCATE
230+63	230+73	CROSSING	UNDERGROUND		RELOCATE
231+06		49' LEFT	UNDERGROUND		RELOCATE
233+32		42' LEFT	POLE		RELOCATE
236+34		43' LEFT	POLE		RELOCATE
239+33		42' LEFT	POLE		RELOCATE
242+22		42' LEFT	POLE		RELOCATE
245+18		43' LEFT	POLE		RELOCATE
248+05		44' LEFT	POLE		RELOCATE
251+02		44' LEFT	POLE		RELOCATE
253+50		44' LEFT	POLE		RELOCATE
253+83		43' LEFT	POLE		RELOCATE
254+56		43' LEFT	POLE		RELOCATE
230+71	254+56	35' - 43' LEFT	UNDERGROUND		RELOCATE

TELEPHONE - CENTURYLINK					K
STATION		OFFSET FROM C/L	SIZE & ITEM	DEPTH	REMARK
BEGIN	END				
227+15	231+89	35' LEFT - 34' LEFT	BURIED LINE		RELOCATE
227+93	231+78	83' LEFT - 84' LEFT	BURIED LINE		RELOCATE
251+06	251+06	300' LEFT - 65' RIGHT	BURIED LINE		RELOCATE
251+06	254+46	65' RIGHT - 67' RIGHT	BURIED LINE		RELOCATE
250+85	251+05	300' LEFT - 71' RIGHT	BURIED LINE		RELOCATE
251+05	254+46	71' RIGHT - 71' RIGHT	BURIED LINE		RELOCATE
227+42	254+06	35' LEFT - 40' LEFT	BURIED LINE		RELOCATE
253+04		45' LEFT	SPLICE BOX		RELOCATE
254+15		65' LEFT	SPLICE BOX		RELOCATE

CABLE/FIBER - MIDCONTINENT					L
STATION		OFFSET FROM C/L	SIZE & ITEM	DEPTH	REMARK
BEGIN	END				
228+08	250+67	78' LEFT - 75' LEFT	BURIED FIBER LINE		RELOCATE
229+54	254+28	40' LEFT - 33' LEFT	BURIED CABLE		RELOCATE
250+59	251+01	57' LEFT - 96' RIGHT	BURIED FIBER LINE		RELOCATE
250+68	251+00	300' LEFT - 87' RIGHT	BURIED FIBER LINE		RELOCATE
250+76	251+03	300' LEFT - 81' RIGHT	BURIED FIBER LINE		RELOCATE
251+15	251+17	300' LEFT - 60' RIGHT	BURIED FIBER LINE		RELOCATE
251+01	254+27	96' RIGHT - 94' RIGHT	BURIED FIBER LINE		RELOCATE
251+00	254+26	87'RIGHT - 87' RIGHT	BURIED FIBER LINE		RELOCATE
251+03	254+29	81' RIGHT - 81' RIGHT	BURIED FIBER LINE		RELOCATE
251+03	254+50	74' RIGHT - 73' RIGHT	BURIED FIBER LINE		RELOCATE
251+17	254+44	60' RIGHT - 57' RIGHT	BURIED FIBER LINE		RELOCATE

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NAME: P:\02-622-32\Plan I\0262232_SEQ-M.dgn 12/27/2012 10:47:48 AM					

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STATION	MUCK REMOVAL	GRANULAR BACKFILL	MUCK EXPORT	MUCK REUSE	E
	[CV][CY]	[CV][CY]	[CV][CY]	[CV][CY]	
231+00					
232+00	3,483	2,569	2,569	915	
233+00	4,831	3,411	3,411	1,419	
234+00	3,447	2,507	2,507	940	
235+00	3,822	2,759	2,759	1,063	
236+00	5,606	3,876	3,876	1,730	
237+00	7,043	4,739	4,739	2,304	
238+00	8,431	5,572	5,572	2,859	
239+00	9,807	6,363	6,363	3,444	
240+00	11,294	7,156	7,156	4,139	
241+00	13,011	7,972	7,972	5,039	
242+00	14,830	8,856	8,856	5,974	
243+00	15,687	9,311	9,311	6,376	
244+00	14,819	8,815	8,815	6,004	
245+00	13,483	8,100	8,100	5,383	
246+00	12,291	7,591	7,591	4,700	
247+00	11,152	7,007	7,007	4,144	
248+00	10,278	6,430	6,430	3,848	
249+00	9,854	6,100	6,100	3,754	
250+00	9,341	5,819	5,819	3,522	
251+00	8,387	5,356	5,356	3,031	
252+00	7,330	4,859	4,859	2,470	
253+00	9,963	6,311	6,311	3,652	
254+00	10,874	6,856	6,856	4,019	
PROJECT TOTALS	219,063	138,333	138,333	80,730	

STATION	COMMON EXCAVATION	E
	[CV][CY]	
231+00		
232+00	152	
233+00	181	
234+00	246	
235+00	220	
236+00	239	
237+00	298	
238+00	309	
239+00	226	
240+00	169	
241+00	200	
242+00	211	
243+00	204	
244+00	256	
245+00	226	
246+00	107	
247+00	67	
248+00	67	
249+00	107	
250+00	181	
251+00	206	
252+00	204	
253+00	272	
254+00	167	
PROJECT TOTAL	4,515	

EARTHWORK TABULATION NOTES

THE COMMON EXCAVATION QUANTITY IS THE MATERIAL TO BE EXCAVATED THAT LIES ABOVE THE PROPOSED SUBGRADE. THE PAYMENT FOR THIS MATERIAL WAS NOT INCLUDED IN THE LUMP SUM PAYMENT.

EXACT LIMITS OF THE MUCK ARE ESTIMATED. IT WAS ASSUMED FROM PUSH SOUNDINGS AND SOIL BORINGS THAT MUCK WILL BE ENCOUNTERED BETWEEN STATIONS 230+00 AND 254+00. THE EXACT EXCAVATION LIMITS MAY VARY.

THE CONTRACTOR SHOULD STRIVE TO RESTORE EXISTING CONDITIONS TO THE AREAS OUTSIDE THE ROADWAY CORE. THIS INCLUDES USING NATIVE SOILS (MUCK) AND GRADING DISTURBED AREAS TO PRE-EXISTING ELEVATIONS.


SOILS AND CONSTRUCTION NOTES

1. GRANULAR BORROW ON THIS PROJECT SHALL MEET THE GRADATION REQUIREMENTS OF MN/DOT SPEC. 3149.2B1
2. ALL TOPSOIL STRIPPING IS INCIDENTAL TO MUCK REMOVAL.
3. SLOPE DRESSING SHALL BE DEFINED AS EXISTING SOILS INCLUDING MUCK SUITABLE TO BE REUSED AS A MEDIUM FOR ESTABLISHING VEGETATION, EITHER PERMANENT OR TEMPORARY
4. UNLESS OTHERWISE SPECIFICALLY ALLOWED OR REQUIRED BY THE CONTRACT, BITUMINOUS AND CONCRETE ITEMS DISTURBED BY CONSTRUCTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE RECYCLED TO THE EXTENT ALLOWED IN BASE AND SURFACING ITEMS OR DISPOSED OF OUTSIDE THE RIGHT-OF-WAY IN ACCORDANCE WITH SPEC. 2104.3C3.
5. STRIP ALL TOPSOIL AND INPLACE SLOPE DRESSING WHERE PRESENT IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. FOR ESTIMATING PURPOSES, THE DEPTH OF TOPSOIL AVAILABLE IS CONSIDERED TO BE 4 INCHES. CONTRACTOR TO VERIFY PRIOR TO PLACING BID
6. EMBANKMENT QUANTITIES SHOWN ON THE EARTHWORK TABULATION REPRESENT ALL EARTHWORK QUANTITIES BELOW THE TOP OF PROPOSED SUBGRADE.
7. THE CONSTRUCTION LIMITS AS SHOWN IN THE PLANS REPRESENT THE POINT OF INTERSECTION BETWEEN THE REQUIRED FILL OR CUT SLOPE PLUS 20 FT AND THE EXISTING GROUND LINE AS DEPICTED ON THE CROSS SECTIONS.
8. DITCH BOTTOMS, TOE OF FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
9. ANY DEBRIS WHICH MAY BE ENCOUNTERED DURING GRADING SHALL BECOME PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE PROJECT RIGHT OF WAY IN A SUITABLE DISPOSAL AREA AS APPROVED BY THE ENGINEER.
10. UNSUITABLE SOILS NOT USED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM THE PROJECT AND DISPOSED OF IN ACCORDANCE WITH MN/DOT SPECIFICATIONS.
11. INPLACE BITUMINOUS PAVEMENT RANGES FROM 9" TO 16" THICK. (AVERAGE 12.6"). FOR INFORMATION ONLY, CONTRACTOR TO VERIFY PAVEMENT DEPTH PRIOR TO PLACING BID. SEE BORING REPORTS
12. COMPACTION OF ALL GRANULAR MATERIAL SHOULD BE IN ACCORDANCE WITH MN/DOT "SPECIFIED DENSITY METHOD"
13. EMBANKMENT CONSTRUCTION SHALL BE PERFORMED AS REQUIRED BY MN/DOT SPECIFICATION 2105

NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-32\Plan\0262232-EWK-M.dgn12/27/201210:54:19 AM					

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: 

DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY ZDC DATE 12-07-12

DESIGN BY NJD DATE 12-07-12

CHECKED BY GMP DATE 12-07-12



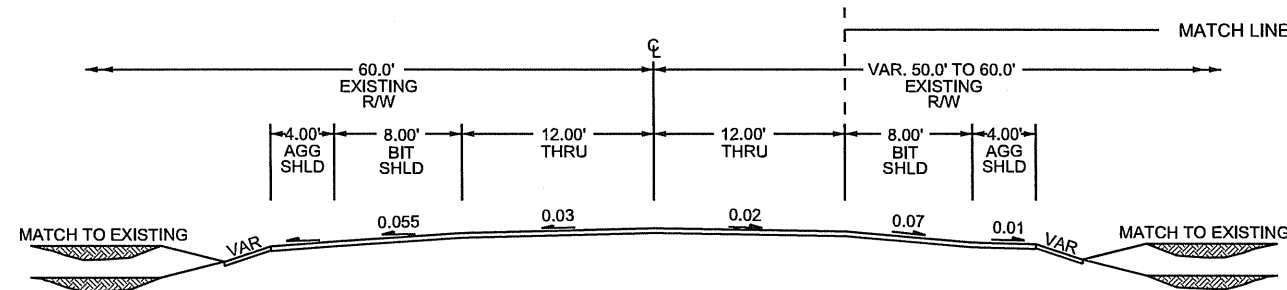
ANOKA COUNTY  
HIGHWAY DEPT.

CP 12-18-22  
-  
-  
-

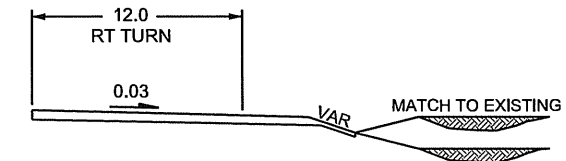


# EXISTING C.S.A.H. 22 (VIKING BOULEVARD)

STA. 230+00 - STA. 248+93



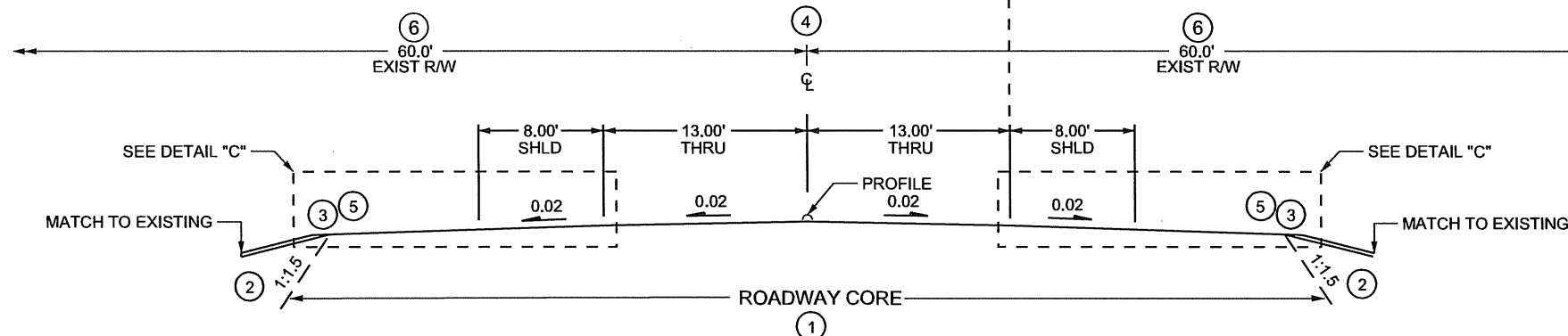
STA. 249+91 - 252+69



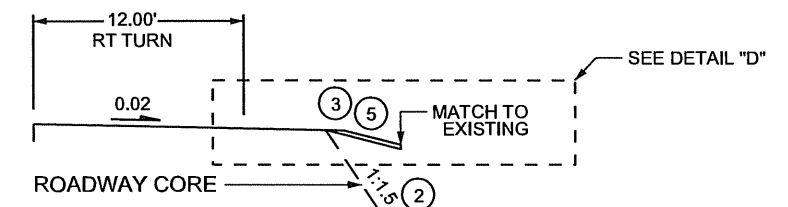
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GRADING - MAINLINE ROADWAY

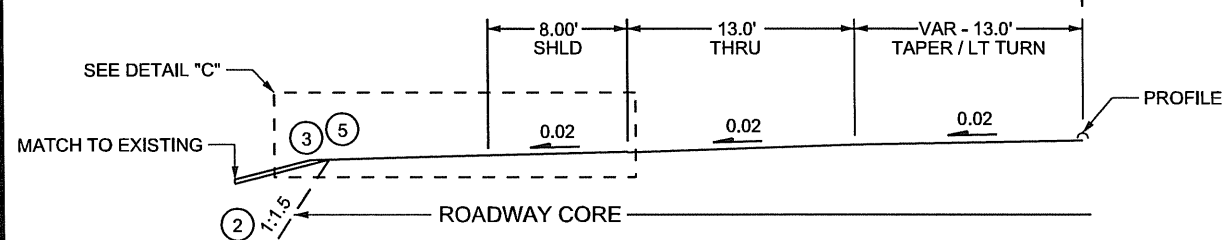
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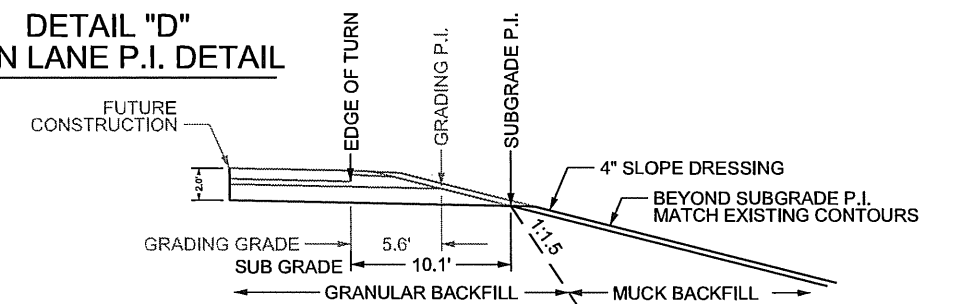
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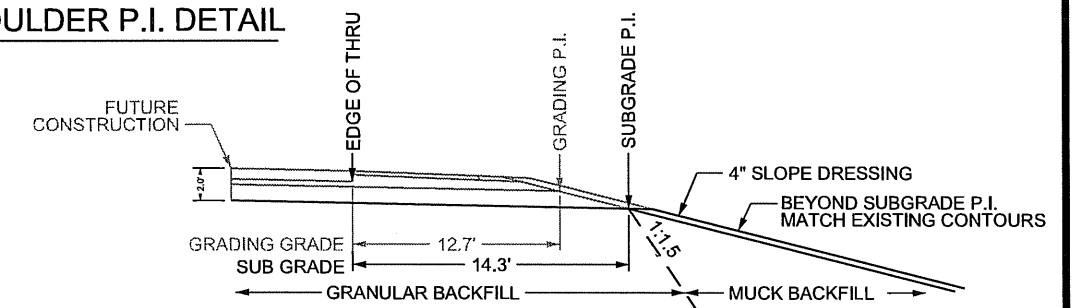
STA. 231+31 - STA. 249+25



## DETAIL "D" TURN LANE P.I. DETAIL



## DETAIL "C" SHOULDER P.I. DETAIL



### SPECIFIC NOTES:

- ① GRANULAR BACKFILL WITHIN ROADWAY CORE
- ② AREAS OUTSIDE ROADWAY CORE CAN BE BACKFILLED WITH MUCK
- ③ 4" PROPOSED SLOPE DRESSING ON ALL BACKSLOPES
- ④ PROPOSED CENTERLINE IS IN THE SAME LOCATION AS THE EXISTING CENTERLINE.
- ⑤ MAINTAIN 1 : 4 SLOPE WITHIN CLEAR ZONE AND A 1 : 3 SLOPE MINIMUM OUTSIDE CLEAR ZONE UNLESS OTHERWISE INDICATED IN PLAN
- ⑥ 60' OF RIGHT OF WAY FOR THE MAJORITY OF THE PROJECT. SEE CONSTRUCTION PLAN AND CROSS SECTIONS FOR EXACT RIGHT OF WAY LOCATION.

NO	DATE	BY	CKD	APPR	REVISION

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PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 12-18-12 LICENSE NO. 24756

DRAWN BY ZDC DATE 12-07-12

DESIGN BY NJD DATE 12-07-12

CHECKED BY GMP DATE 12-07-12



ANOKA COUNTY  
HIGHWAY DEPT.

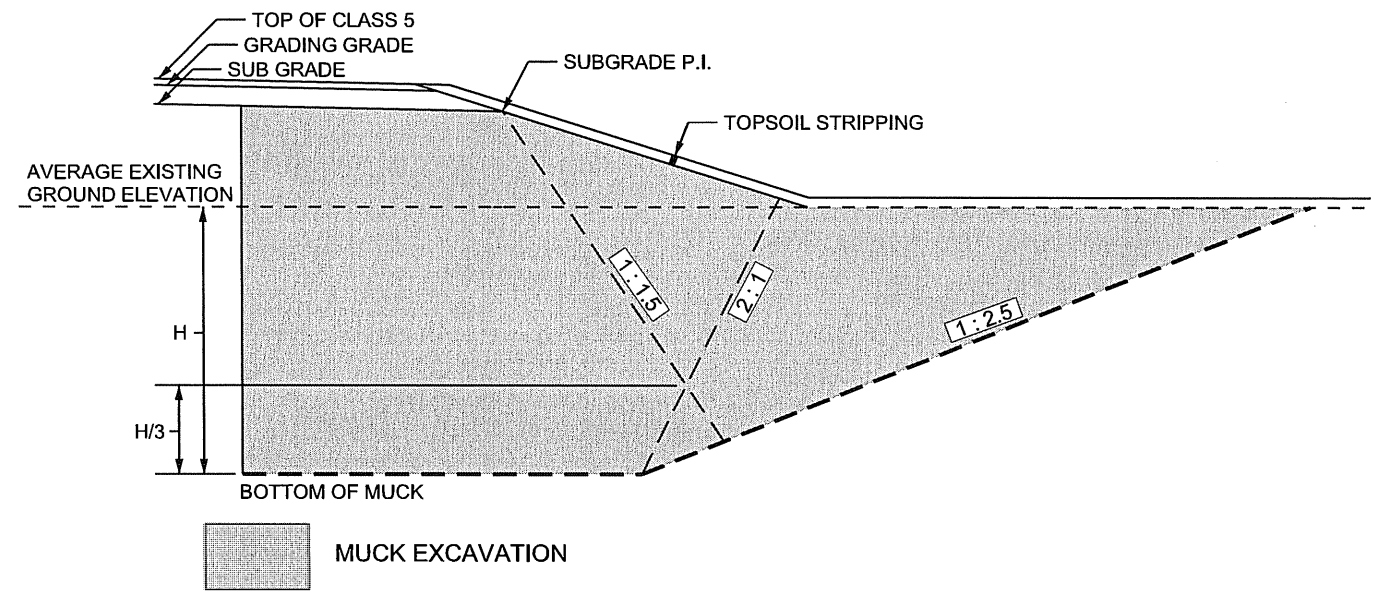
CP 12-18-22

GRADING  
TYPICAL SECTIONS

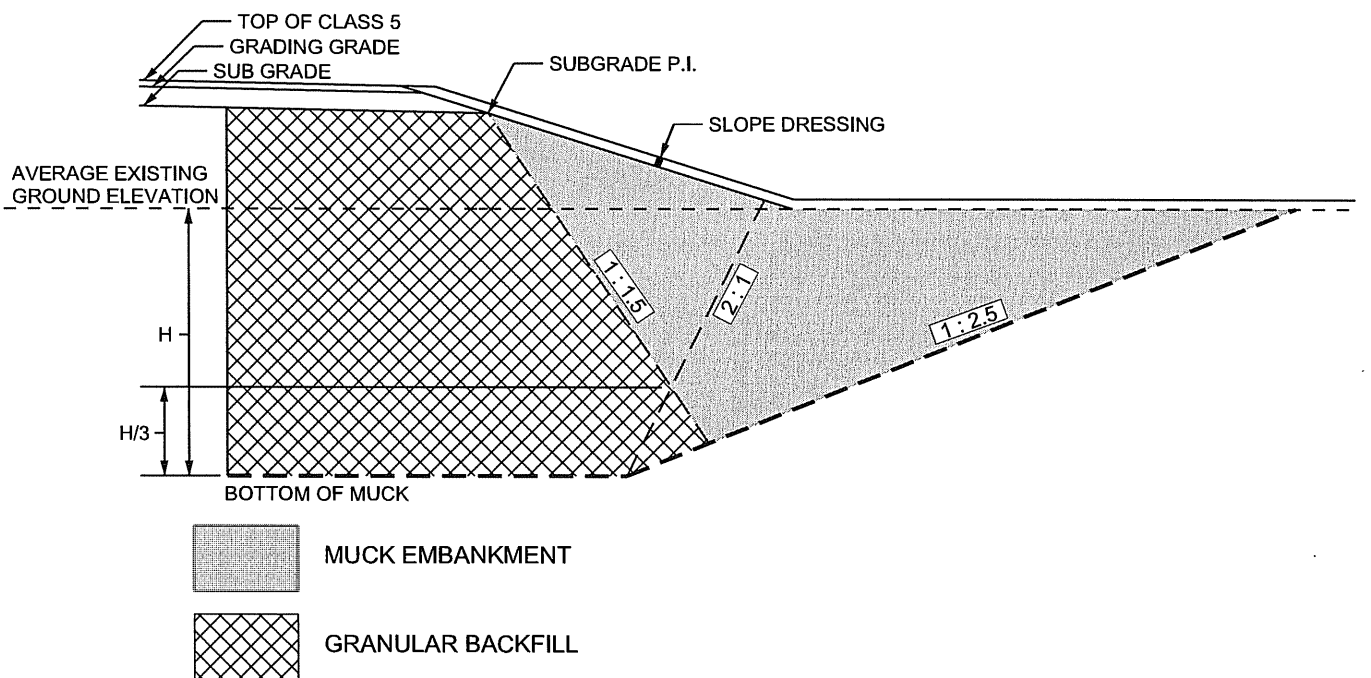
Sheet 7 of 29 Sheets



MUCK EXCAVATION



MUCK EMBANKMENT



SOUNDING DATA							G
ALIGNMENT	SOUNDING NUMBER	STATION	OFFSET	EXISTING GROUND	DEPTH	ESTIMATED MUCK DEPTH	NOTES
EB 22	S43	230+14	49 RT	894.9	3.2	891.7	
EB 22	S44	230+13	75 RT	894.0	2.9	891.1	
EB 22	S41	231+27	41 LT	895.0	4.0	891.0	
EB 22	S42	231+26	66 LT	896.1	4.4	891.7	
EB 22	S37	231+91	44 LT	893.9	16.8	877.1	
EB 22	S38	231+92	68 LT	893.7	16.2	877.5	
EB 22	S39	231+88	45 RT	893.5	10.0	883.5	
EB 22	S40	231+88	69 RT	892.3	14.0	878.3	
EB 22	S33	231+24	43 LT	894.5	4.5	890.0	
EB 22	S34	233+23	65 LT	894.6	4.5	890.1	
EB 22	S35	233+28	49 RT	893.7	3.7	890.0	
EB 22	S36	233+29	68 RT	892.7	2.9	889.8	
EB 22	S29	233+46	42 LT	893.4	13.1	880.3	
EB 22	S30	235+47	66 LT	893.7	12.3	881.4	
EB 22	S31	235+43	44 RT	892.5	12.5	880.0	
EB 22	S32	235+41	69 RT	891.6	12.1	879.5	
EB 22	S25	238+02	41 LT	893.1	17.0	876.1	
EB 22	S26	238+02	63 LT	892.9	12.8	880.1	
EB 22	S27	238+09	46 RT	892.9	19.2	873.7	
EB 22	S28	238+09	65 RT	891.1	17.3	873.8	
EB 22	S21	240+13	44 LT	892.6	17.7	874.9	
EB 22	S22	240+11	68 LT	892.6	20.6	872.0	
EB 22	S23	240+12	45 RT	891.5	23.8	867.7	
EB 22	S24	240+11	61 RT	888.9	21.3	867.6	
EB 22	S17	242+47	43 LT	891.0	26.9	864.1	
EB 22	S18	242+48	55 LT	889.3	22.7	866.6	
EB 22	S19	242+45	49 RT	890.3	24.8	865.5	
EB 22	S20	242+47	78 RT	890.6	18.6	872.0	

SOUNDING DATA							G
ALIGNMENT	SOUNDING NUMBER	STATION	OFFSET	EXISTING GROUND	DEPTH	ESTIMATED MUCK DEPTH	NOTES
EB 22	S13	244+76	41 LT	891.3	24.5	866.8	
EB 22	S14	244+75	55 LT	889.6	25.7	863.9	
EB 22	S15	244+65	23 RT	890.7	18.8	871.9	
EB 22	S16	244+62	81 RT	890.9	18.8	872.1	
EB 22	S09	247+71	50 LT	889.8	15.8	874.0	
EB 22	S10	247+72	68 LT	891.4	15.9	875.5	
EB 22	S11	247+71	49 RT	890.8	21.0	869.8	
EB 22	S12	247+71	67 RT	890.1	21.0	869.1	
EB 22	S05	250+11	51 LT	892.1	7.1	885.0	
EB 22	S06	250+11	66 LT	892.6	6.6	886.0	
EB 22	S07	250+06	55 RT	891.0	23.7	867.3	
EB 22	S08	250+17	93 RT	891.1	23.6	867.5	
EB 22	S01	250+69	46 LT	892.6	9.7	882.9	
EB 22	S02	252+69	67 LT	891.8	10.7	881.1	
EB 22	S03	252+73	49 RT	892.0	15.6	876.4	
EB 22	S04	252+75	76 RT	892.1	12.6	879.5	

**SOUNDING DATA GENERAL NOTES:**

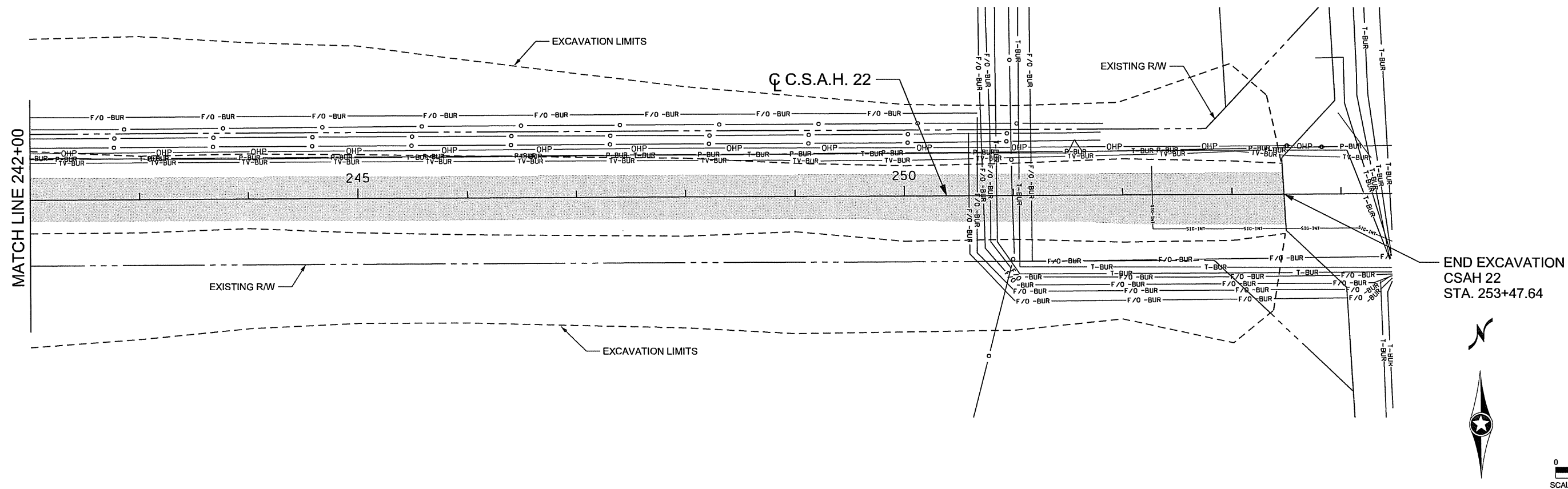
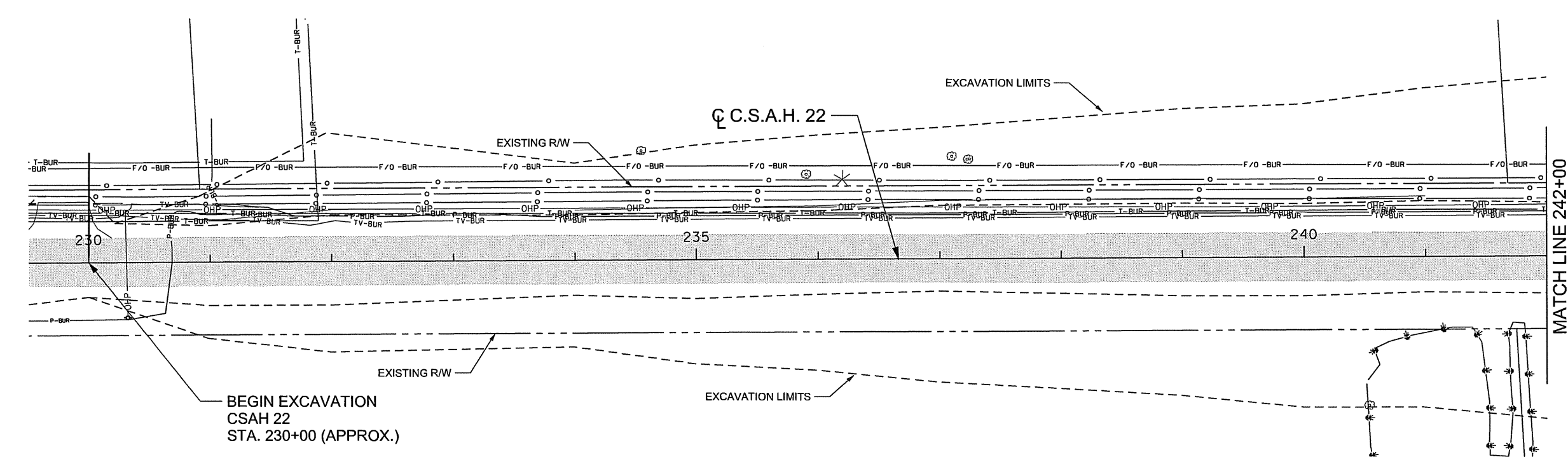
BORING LOGS & CPT SOUNDINGS AVAILABLE IN THE SPECIAL PROVISIONS FOR THIS PROJECT

ESTIMATED MUCK DEPTHS FOR ESTIMATING PURPOSES ONLY. ACTUAL MUCK DEPTH TO BE DETERMINED IN THE FIELD BY ANOKA COUNTY ENGINEER ASSIGNED TO THIS PROJECT

(NOT TO SCALE)



LEGEND	
— 0 —	ABANDOND LINE
— TV-BUR —	MIDCONTINENT COMMUNICATIONS
— OHU —	
— P-BUR —	CONNEXUS ENERGY
— OHP —	
— T-BUR —	CENTURY LINK
— OHU —	
— SIG-INT —	TRAFFIC SIGNAL
---	EXISTING R/W
	EXISTING ROADWAY



NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-32\Plan I\0262232_UT-M.dgn					
01/04/2013 8:49:36 AM					

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

PRINT NAME: CURT A. KOBILARCIK

SIGNATURE:

DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY ZDC DATE 12-07-12

DESIGN BY NJD DATE 12-07-12

CHECKED BY GMP DATE 12-07-12

**ANOKA COUNTY**  
**HIGHWAY DEPT.**

SP 002-622-032

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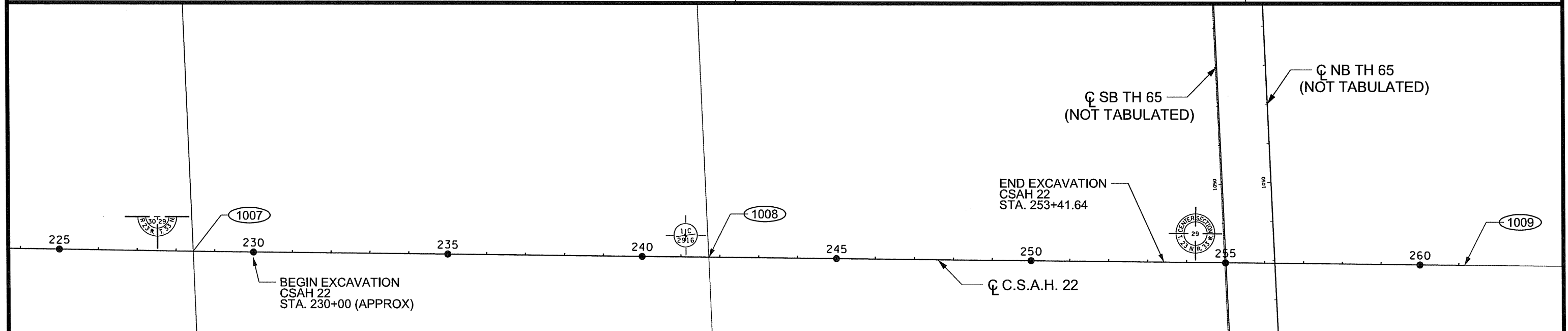
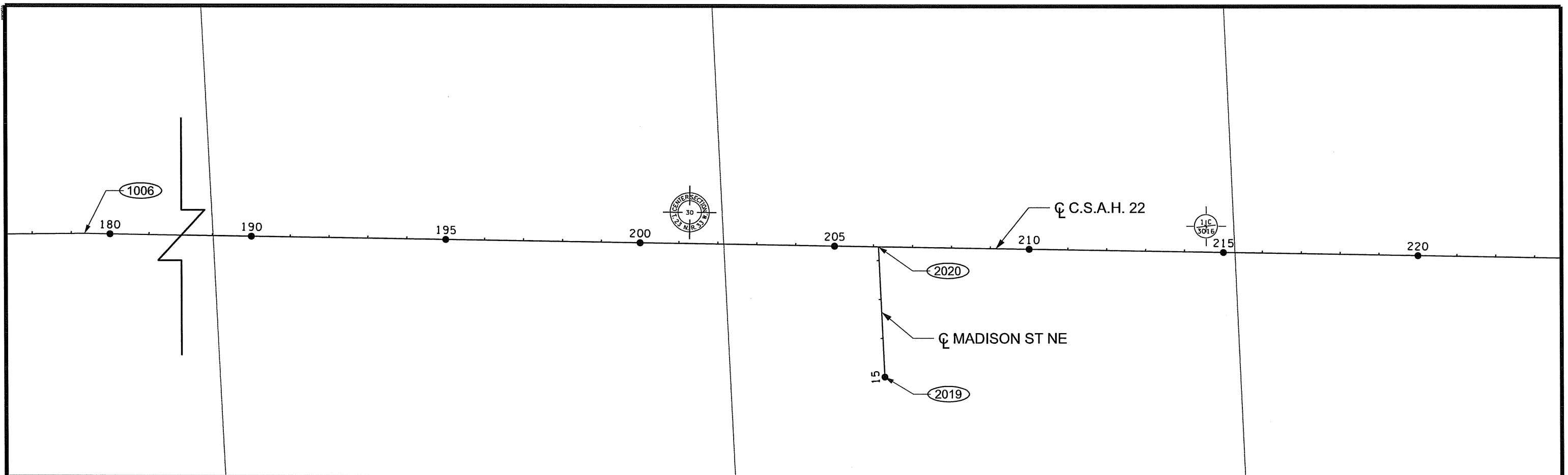
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UTILITY PLAN

STA 230+00 TO 253+47.61

Sheet 9 of 29 Sheets





ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
C C.S.A.H. 22 <22E_2>										
1006	POT	C C.S.A.H. 22	179+34.662					500,248.8681	203,798.5864	
1007	POT		228+44.570					505,158.1689	203,721.3611	
1008	POT		241+71.649					506,485.1822	203,708.1375	
1009	POT		261+15.282					508,428.7184	203,688.7705	

ALIGNMENT TABULATION										
POINT NUMBER	POINT	ALIGNMENT	CIRCULAR CURVE DATA					COORDINATES		AZIMUTH
			DELTA	DEGREE	RADIUS	TANGENT	LENGTH	E	N	
CL MADISON ST NE <CL_MADISON>										
2019	POT	CL MADISON ST NE	15+00.000					502,942.1958	203,421.4645	
2020	POT		18+35.359					502,926.6587	203,756.4637	

NO	DATE	BY	CHKD	APPR	REVISION

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SIGNATURE: *Curt A. Kobilarsik*

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DESIGN BY NJD DATE 12-07-12

CHECKED BY GMP DATE 12-07-12



ANOKA COUNTY  
HIGHWAY DEPT.

CP 12-18-22

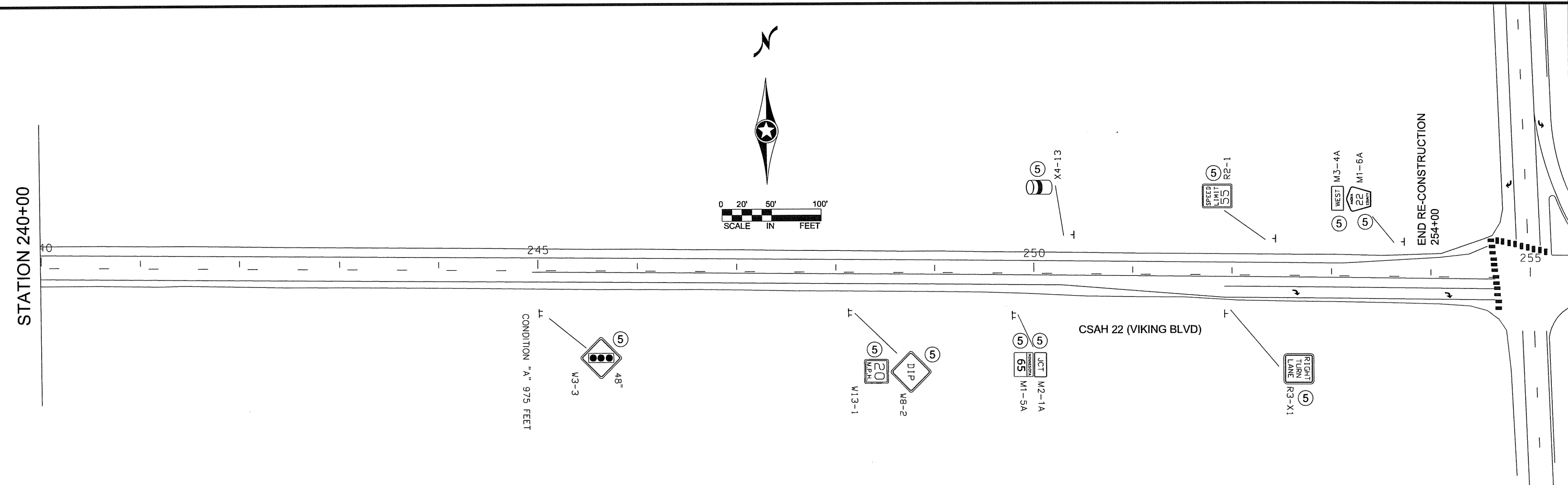
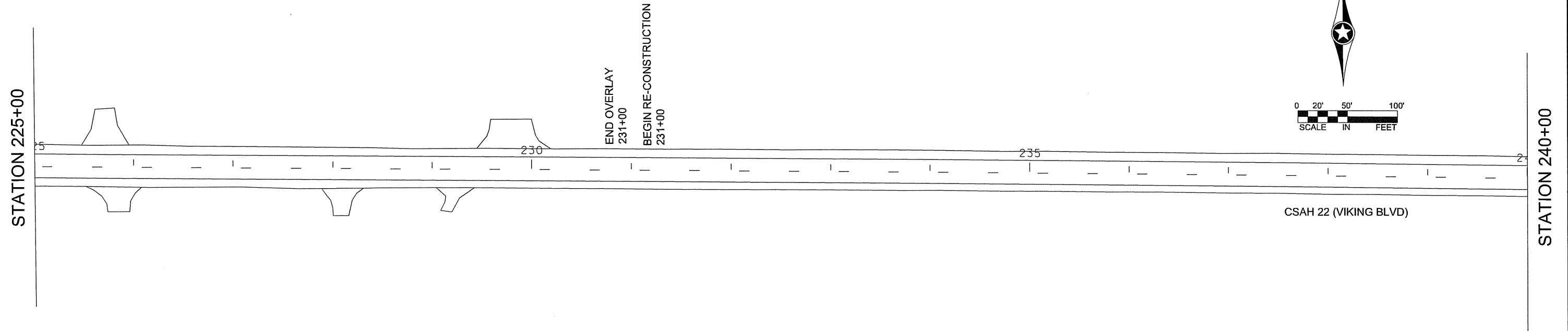
ALIGNMENT PLAN

Sheet 10 of 29 Sheets



NOTES:

- ② INPLACE
- ③ SALVAGE FOR RE-USE ON THIS PROJECT
- ⑤ SALVAGE TO ANOKA COUNTY
- ⑧ SALVAGE SIGN TYPE SPECIAL FOR RE-USE ON THIS PROJECT
- ⑨ RETAIN INPLACE SIGN



NO	DATE	BY	CKD	APPR	REVISION

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY: MTH DATE: 11/28/12

DESIGN BY: MTH DATE: 11/28/12

CHECKED BY: JR DATE: 11/21/12



ANOKA COUNTY  
HIGHWAY DEPT.

STATE PROJECT NO. \_\_\_\_\_

STATE AID PROJECT NO. \_\_\_\_\_

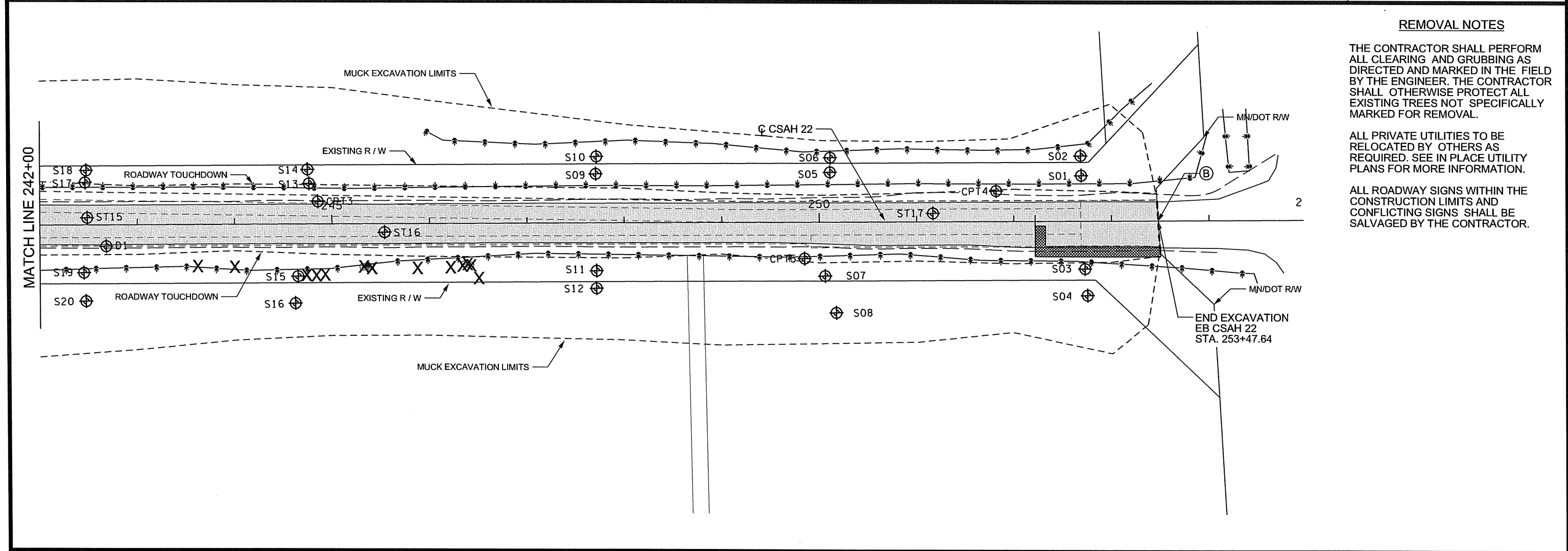
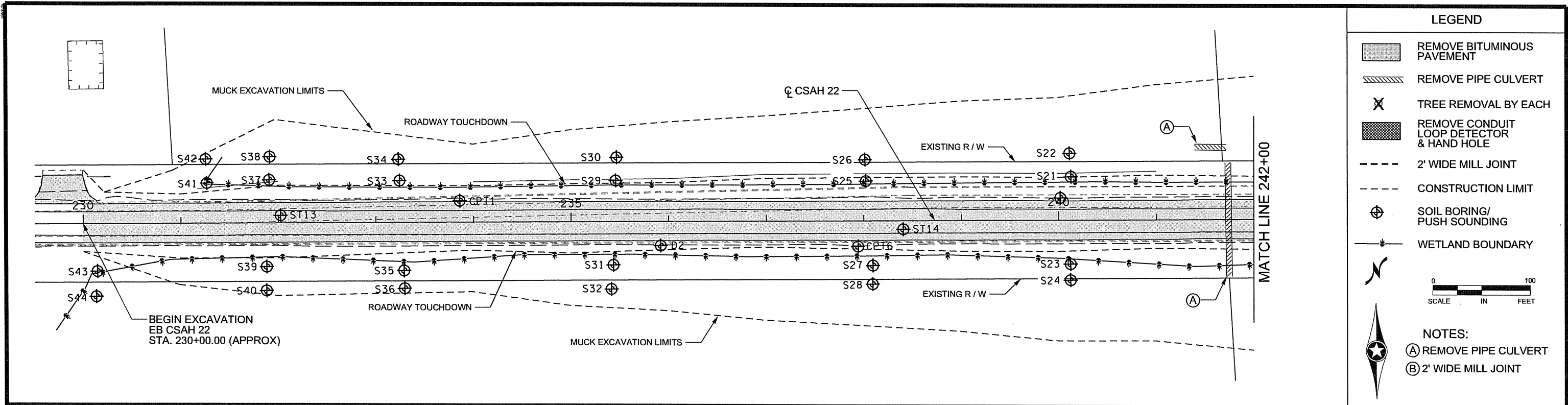
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COUNTY PROJECT NO. CP 12-18-22

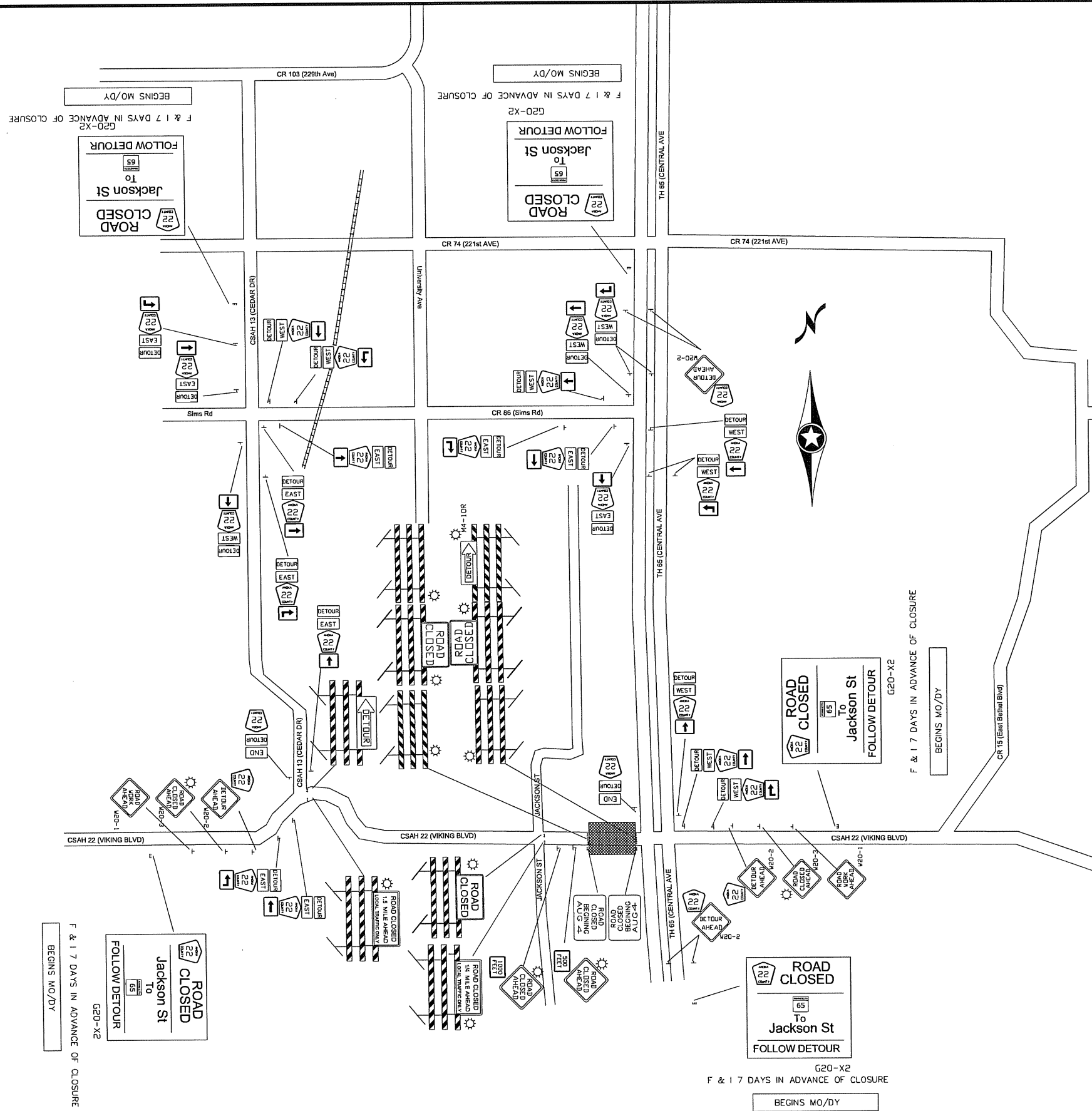
EXISTING SIGNING &  
STRIPING PLAN

Sheet 11 of 29 Sheets









NO	DATE	BY	CKD	APPR	REVISION
NAME: P:\02-622-32\Plan 11\0262232 Detour Muck.dwg					

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

PRINT NAME: CURT A. KOBIARCSIK  
 SIGNATURE: *[Signature]*  
 DATE: 11/28/11 LICENSE NO. 24756

DRAWN BY: MTH DATE 11/28/12  
 DESIGN BY: MTH DATE 11/28/12  
 CHECKED BY: JR DATE 11/21/12



ANOKA COUNTY  
 HIGHWAY DEPT.

CP 12-18-22

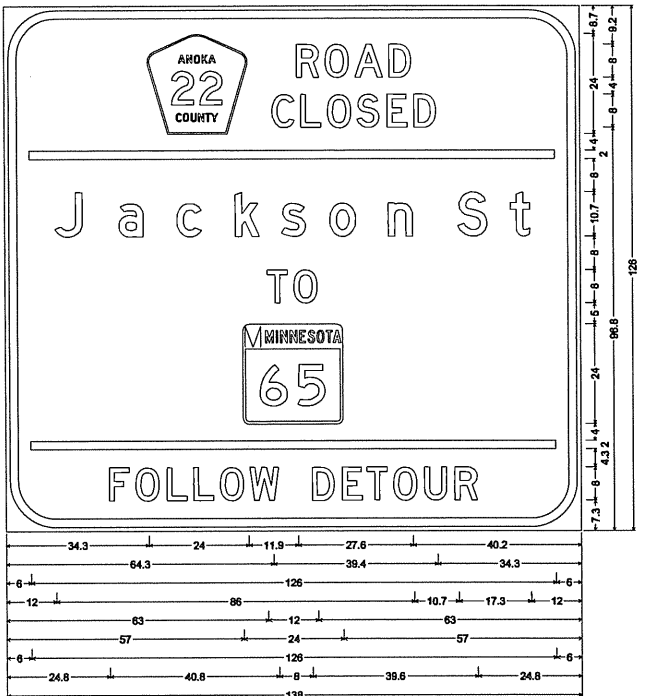
CSAH 22 (VIKING BLVD)  
 DETOUR

Sheet 13 of 29 Sheets

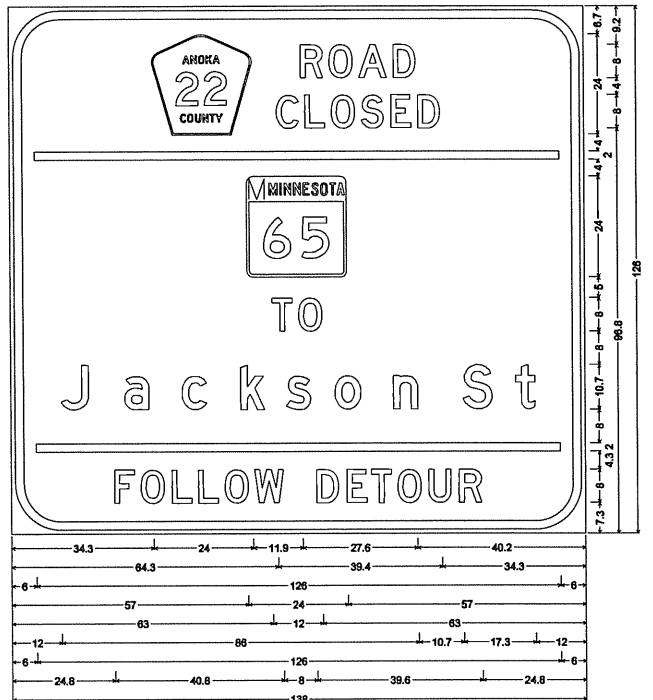


M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
W20-1	48" x 48"		• 2
M1-6A	24" x 24"		• 6
W20-2	48" x 48"		• 6
W20-3	48" x 48"		• 4
W20-100P	24" x 18"		• 1
W20-100P	24" x 18"		• 1
M4-10R	48" x 18"		SEE NOTE ②
TYPE III	8 FOOT		• 1
M4-10L	48" x 18"		SEE NOTE ②
TYPE III	8 FOOT		• 1
R11-2	48" x 30"		SEE NOTE ②
TYPE III	8 FOOT		• 3
R11-3	48" x 30"		SEE NOTE ②
TYPE III	8 FOOT		• 1
R11-3	48" x 30"		SEE NOTE ②
TYPE III	8 FOOT		• 1

M.U.T.C.D. CODE	SIZE	INSERT	QUANTITY
TYPE III	8 FOOT		• 2
TYPE III	8 FOOT		• 1
G20-X2	132"x 108"		• 3
G20-X2	132"x 108"		• 2
M4-8A	24" x 12"		• 2
M3-4A	24" x 12"		• 2
M1-6A	24" x 24"		• 2
	21" x 15"		• 2
M4-8A	24" x 12"		• 3
M3-2A	24" x 12"		• 2
M1-6A	24" x 24"		• 3
	21" x 15"		• 2
M4-6A	24" x 12"		• 2
M4-8A	24" x 12"		• 2
M1-6A	24" x 24"		• 2
	21" x 15"		• 2
G20-X1	60" x 48"		• 2



G20-X2, 132x108; 12.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;  
[ROAD] D; [CLOSED] D; [Jackson St] D specified length; [TO] D; [FOLLOW] D; [DETOUR] D;



G20-X2, 132x108; 12.0" Radius, 2.0" Border, 1.0" Indent, Black on Orange;  
[ROAD] D; [CLOSED] D; [TO] D; [Jackson St] D specified length; [FOLLOW] D; [DETOUR] D;

NOTES:

- 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 FEBRUARY 2011
- ALL TYPE III BARRICADES SHALL BE REFLECTORIZED ON BOTH SIDES. BARRICADE MARKINGS SHALL BE SLANTED IN ACCORDANCE WITH THE M.U.T.C.D.



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

1	4/27/2012	MTH			MN/DOT redline edits
2	5/09/2012	RLB			JR redlines
NO	DATE	BY	CKD	APPR	REVISION
NAME:	P:\02-622-32\Plan I\0262232 Detour muck.dwg				

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA  
PRINT NAME: CURT A. KOBIARCSIK  
SIGNATURE:   
DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY: MTH DATE: 11/30/12  
DESIGN BY: MTH DATE: 11/30/12  
CHECKED BY: JR DATE: 11/21/12



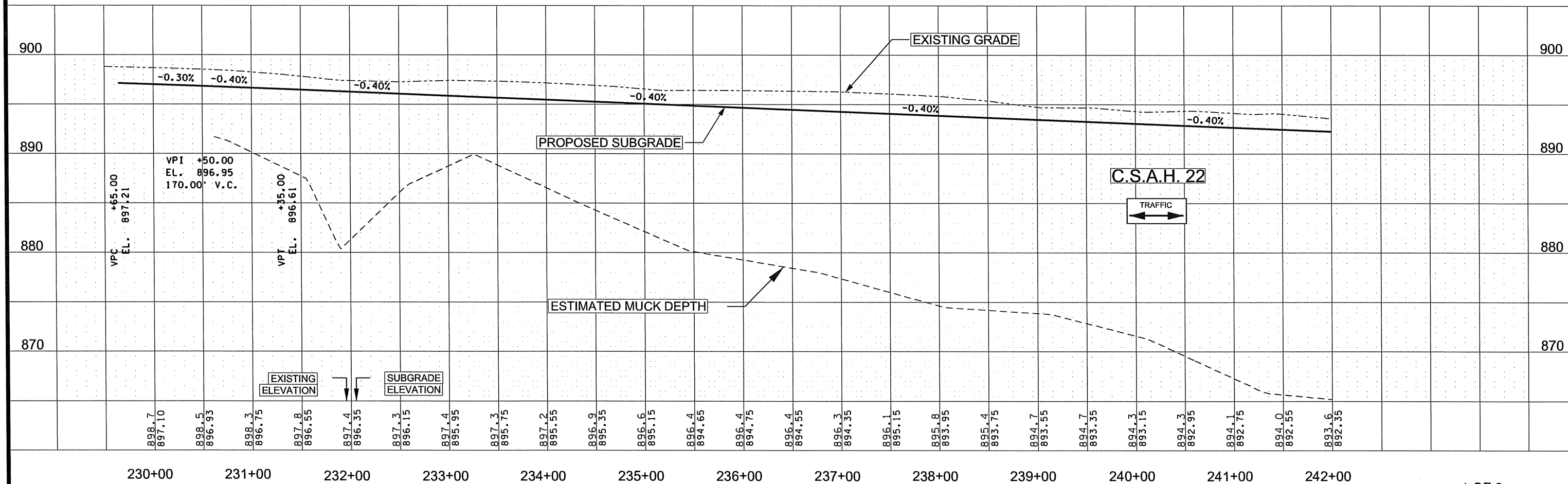
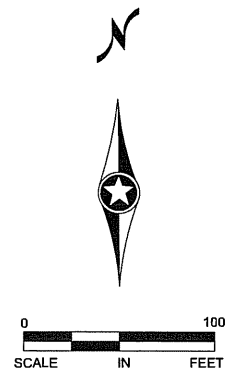
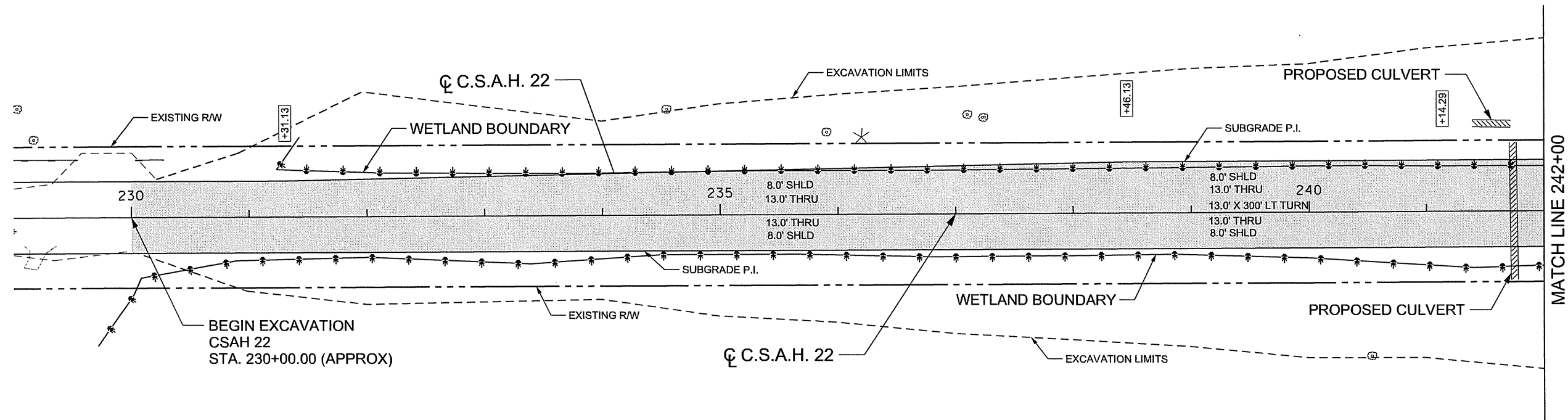
ANOKA COUNTY  
HIGHWAY DEPT.

CP 12-18-22

CSAH 22 (VIKING BLVD)  
DETOUR  
SIGN QUANTITIES

Sheet 14 of 29 Sheets





1 OF 2

NO	DATE	BY	CKD	APPR	REVISION

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SIGNATURE: *Curt A. Kobiarsik*

DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY: ZDC DATE: 12-07-12

DESIGN BY: NJD DATE: 12-07-12

CHECKED BY: #ZCC DATE: 12-07-12



ANOKA COUNTY  
HIGHWAY DEPT.

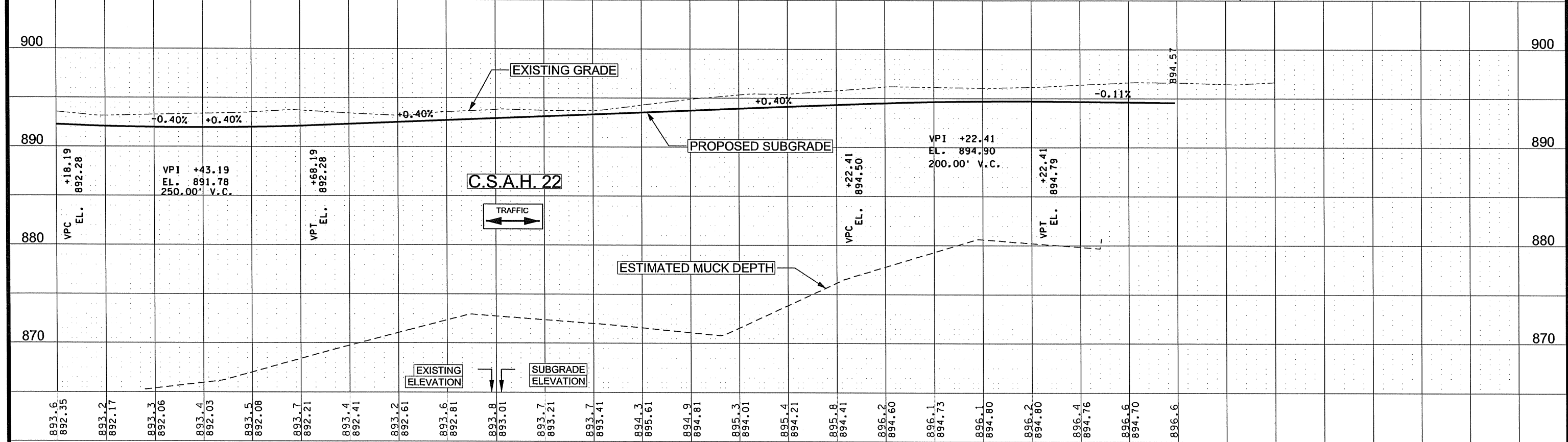
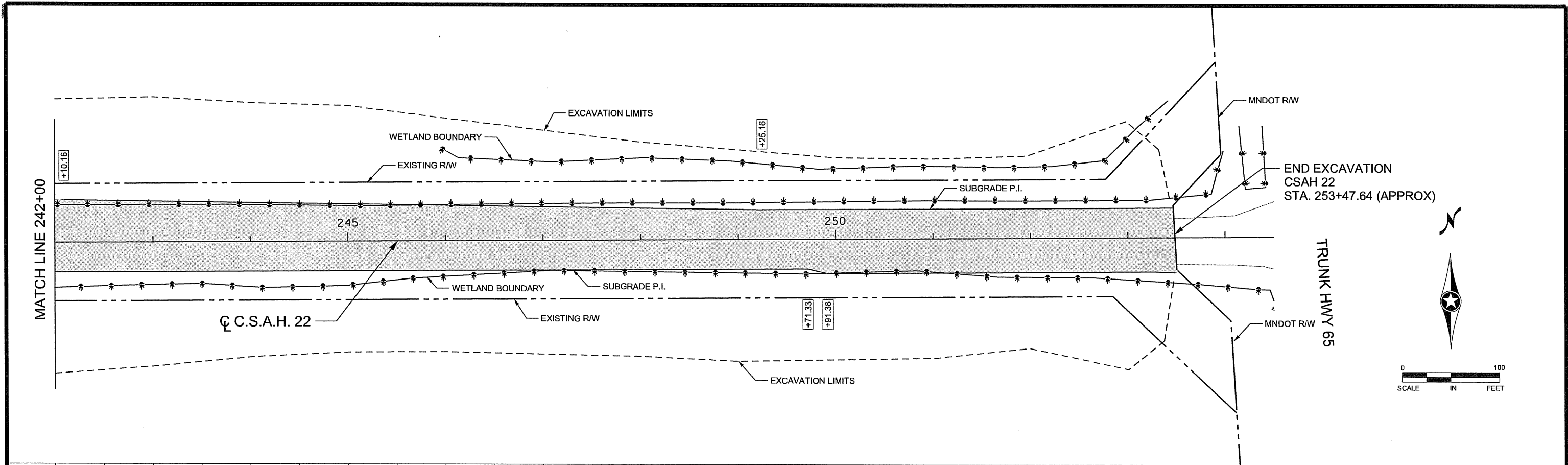
C.P. 12-18-22

GRADING PLAN AND  
PROFILE

STA 230+00 TO 242+00

Sheet 15 of 29 Sheets





893.6 892.35	893.2 892.17	893.3 892.06	893.4 892.03	893.5 892.08	893.7 892.21	893.4 892.41	893.2 892.61	893.6 892.81	893.8 893.01	893.7 893.21	893.7 893.41	894.3 895.61	894.9 894.81	895.3 894.01	895.4 894.21	895.8 894.41	896.2 894.60	896.1 894.75	896.1 894.80	896.2 894.80	896.4 894.76	896.6 894.70	896.6
242+00	243+00	244+00	245+00	246+00	247+00	248+00	249+00	250+00	251+00	252+00	253+00												



THE ADDITIONAL IMPERVIOUS AREA FOR THIS PROJECT INCLUDE THE ADDITION OF 8' BITUMINOUS SHOULDERS, RIGHT TURN LANES AT 5TH ST AND JACKSON ST, AND A 12' BYPASS LANE AT 5TH ST. A LEFT TURN LANE FOR FUTURE DEVELOPMENT HAS ALSO BEEN DEVELOPED WEST OF TH 65 AND VIKING BLVD.

## TRAINING REQUIREMENTS

THE INDIVIDUALS TRAINED AND THE TRAINING RECEIVED WILL BE RECORDED IN THE SWPPP BEFORE THE START OF CONSTRUCTION OR AS SOON AS PERSONNEL FOR THE PROJECT HAVE BEEN DETERMINED.

THE COUNTY OF ANOKA HIGHWAY DEPARTMENT WILL BE RESPONSIBLE FOR THE LONG TERM OPERATION AND MAINTENANCE OF THE PERMANENT STORMWATER MANAGEMENT AND SNOW REMOVAL OPERATIONS WITHIN THE PROPOSED MUCK AREA

### RECEIVING SURFACE WATERS, DISCHARGE TO IMPAIRED WATERS & SPECIAL WATERS

STORMWATER FROM A DISCHARGE POINT ON THE PROJECT THAT FLOWS TO A SURFACE WATER BODY IDENTIFIED AS IMPAIRED AND/OR SPECIAL MUST INCLUDE THE FOLLOWING ADDITIONAL BMP REQUIREMENTS:

- 1) ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN SEVEN (7) DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED.
- 2) TEMPORARY SEDIMENT BASINS MUST BE USED FOR COMMON DRAINAGE LOCATIONS THAT SERVE AN AREA WITH FIVE (5) OR MORE ACRES DISTURBED AT ONE TIME. THIS PROJECT AS DESIGNED DOES NOT HAVE FIVE (5) DISTURBED ACRES DRAINING TO A COMMON LOCATION AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

**DISTURBED SOIL AREA**

IMPERVIOUS SOIL AREA

### SOIL TYPES

MILLERVILLE MUCKY PEAT	69.6%
ZIMMERMAN FINE SAND, 2 TO 6 PERCENT SLOPES	12.3%
ISANTI FINE SANDY LOAM	12.4%
RIFLE MUCKY PEAT	5.6%

SILT FENCE AND/OR OTHER SUITABLE PERIMETER BMP'S AS PROVIDED IN THE PLANS WILL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY. CONSTRUCTION WILL BE REQUIRED TO BE PHASED SO THAT ALL DOWN GRADIENT SEDIMENT CONTROL MEASURES ARE INSTALLED PRIOR TO OR IN CONJUNCTION WITH ANY SOIL DISTURBING ACTIVITIES.

WHEN TOPSOIL IS DISTURBED, THE TOPSOIL WILL BE STRIPPED AND STOCKPILED IN SOIL BERMS AT THE TOE OF THE STRIPPED SLOPES ALONG THE PROJECT LIMITS. TEMPORARY VEGETATION WILL BE ESTABLISHED ON THE STOCKPILED TOPSOIL BERMS WITH SEED MIXTURE 150, TYPE 1 FERTILIZER, AND DISK ANCHORED TYPE 1 MULCH AS PROVIDED IN THE PLAN.

STOCKPILED TOPSOIL BERMS WILL NOT BE PLACED IN ANY STORMWATER CONVEYANCES.

AFTER STRIPING THE TOPSOIL THE EXPOSED SOIL INSLOPES WILL BE STABILIZED WITH DISK ANCHORED TYPE 1 MULCH WITHIN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS BEEN TEMPORARILY OR PERMANENTLY CEASED.

THIS ROAD CONSTRUCTION PROJECT AS DESIGNED DOES NOT MEET ANY OF THE TEMPORARY SEDIMENT BASIN DISTURBED AREA THRESHOLD REQUIREMENTS AND TEMPORARY SEDIMENT BASINS WILL NOT BE REQUIRED.

ALL STORMWATER MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING WATERS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING A SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

THIS ROAD CONSTRUCTION PROJECT HAS LESS THAN A 1 ACRE INCREASE IN IMPERVIOUS AREA.

ALL EXPOSED SOIL AREAS MUST BE STABILIZED AS SOON AS POSSIBLE TO LIMIT SOIL EROSION BUT IN NO CASE LATER THEN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CEASED. FOR ALL AREAS WHERE DISTURBED SOILS DRAIN TO AN IMPAIRED OR SPECIAL WATER THE EXPOSED SOIL MUST BE STABILIZED NO LATER THEN 7 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT AREA CEASED. SEE THE IMPAIRED & SPECIAL WATERS SECTION OF THIS SWPPP FOR ADDITIONAL BMP REQUIREMENTS FOR DISTURBED AREAS THAT DRAIN TO A SPECIAL OR IMPAIRED WATER

THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH OR SWALE THAT DRAIN WATER FROM ANY PORTION OF THE CONSTRUCTION SITE, OR DIVERTS WATER AROUND THE SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE POINT OF DISCHARGE INTO ANY SURFACE WATER. STABILIZATION OF THE LAST 200 FEET MUST BE COMPLETED WITHIN 24 HOURS AFTER CONNECTING TO A SURFACE WATER.

PIPE CULVERT OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS AFTER CONNECTION TO A SURFACE WATER. THIS WILL INCLUDE DRAINAGE DITCHES THAT DRAIN WATER FROM ANY PORTION OF THE CONSTRUCTION SITE

REQUIREMENT	PLAN		/DOT SPECIFICATION	SPECIAL PROVISION
	TITLE	LOCATION		
NPDES PERMIT COMPLIANCE			1701, 1702, & 1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CERTIFIED PERSONNEL IN EROSION AND SEDIMENT CONTROL SITE MANAGEMENT			1506, 1717, & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
CHAIN OF RESPONSIBILITY	AGENCY CONTACTS		1506, 1717, & 2573	
PROJECT SCHEDULE / WEEKLY EROSION & SEDIMENT CONTROL SCHEDULE / COMPLETING INSPECTION / MAINTENANCE LOG	AGENCY CONTACTS		1717 & 2573	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
SWPPP PREPARATION	AGENCY CONTACTS			
SITE MAP / RECEIVING WATERS / DIRECTION OF FLOW			1717	
PROJECT SPECIFIC CONSTRUCTION STAGING			1717	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 1806 (DETERMINATION AND EXTENSION OF CONTRACT TIME)
TEMPORARY EROSION AND SEDIMENT CONTROL BMP LOCATIONS, INSTALLATION, TIMING OF INSTALLATION AND TYPE OF BMP	QUANTITY TABULATIONS		2573 & 2525	2575 (RAPID STABILIZATION SPECIFICATION)
ADDITIONAL TEMPORARY AND OR PERMANENT EROSION AND SEDIMENT CONTROL BMP'S NOT PROVIDED OR SHOWN IN THE PLAN			1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT) 2575 (RAPID STABILIZATION SPECIFICATION)
MAINTENANCE OF EROSION AND SEDIMENT CONTROL DEVICES, REMOVAL OF TRACKED SEDIMENT, REMOVAL OF DEVICES			1717 & 2573	1514 (MAINTENANCE DURING CONSTRUCTION) 1717 (LAND AIR & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
DEWATERING			2105.3B, & 2451.3C	DEWATERING
FINAL STABILIZATION	QUANTITY TABULATIONS EROSION CONTROL PLAN		1717, 2573, & 2575	1717 (AIR, LAND & WATER) 1717 (NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT)
TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS	QUANTITY TABULATIONS EROSION CONTROL PLAN		2575	2575 (RAPID STABILIZATION SPECIFICATION)
PERMANENT EROSION CONTROL DETAILS	EROSION CONTROL DETAILS		2575	2575 (CONTROLLING EROSION AND ESTABLISHING VEGETATION)

## SEDIMENT CONTROL PRACTICES

TEMPORARY STOCKPILED TOPSOIL BERMS MUST INCLUDE PERIMETER BMP'S AS PROVIDED  
IN THE PLAN AT LOCATIONS WHERE CONSTRUCTION STORMWATER DRAINS FROM THE PROJECT

IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE RILLS AND/OR GULLIES, THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GRATER THEN 75 FEET FOR SLOPES WITH A GRADE OF 1:3 OR STEEPER

ALL STORM DRAIN INLETS MUST BE PROTECTED BY APPROPRIATE BMP'S DURING CONSTRUCTION  
UNTIL ALL SOURCES WITH POTENTIAL DISCHARGE TO THE INLET HAVE BEEN STABILIZED

VEHICLE TRACKING OF SEDIMENT FROM THE CONSTRUCTION SITE MUST BE MINIMIZED. TEMPORARY GRAVEL CONSTRUCTION ENTRANCES MUST BE CONSTRUCTED AT A MINIMUM OF 100' X 30'. STREET SWEEPING MUST BE USED IF SEDIMENT IS BEING TRACKED OFF THE CONSTRUCTION SITE


THE CONTRACTOR WILL IMPLEMENT THE POLLUTION PREVENTION MANAGEMENT MEASURES AS DIRECTED IN THE NPDES PERMIT PART IV.F AS PERTAINING TO SOLID WASTE, HAZARDOUS MATERIALS EXTERNAL TRUCK WASHING, AND CONCRETE WASHOUT ONSITE.

THESE MANAGEMENT MEASURES FOR POLLUTION PREVENTION WILL BE STRICTLY ENFORCED.

[illegible]

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: 

DATE: 12-25-12 LICENSE NO. 24756

DRAWN BY ZDC DATE 12-07-12

DESIGN BY NJD DATE 12-07-12

CHECKED BY GMP DATE 12-07-12



ANOKA COUNTY  
HIGHWAY DEPT.

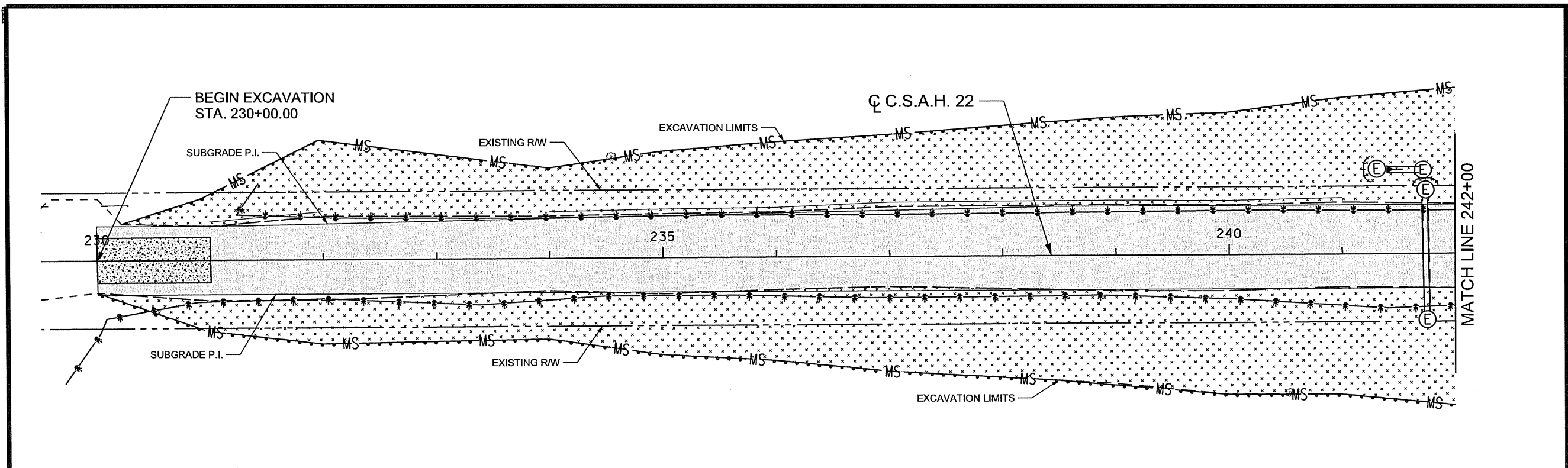
CP 12-18-22

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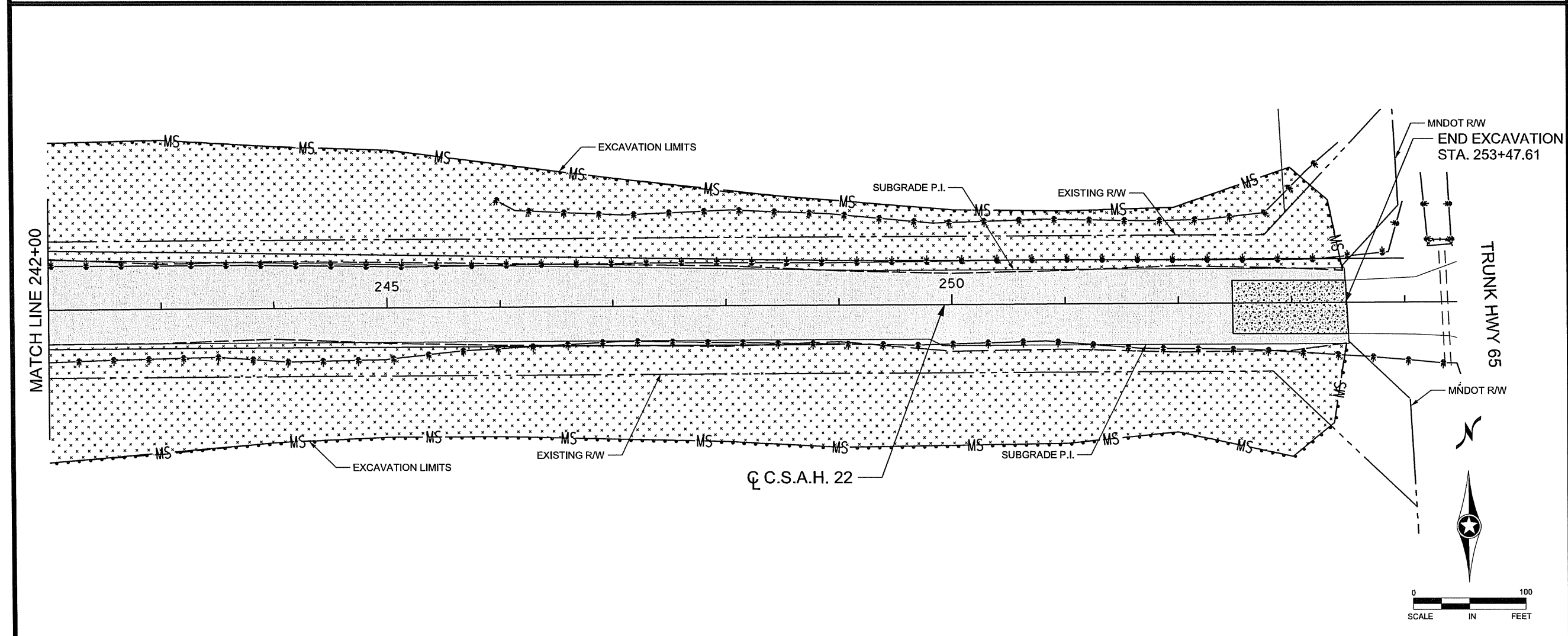
SWPPP

Sheet 17 of 29 Sheets





- LEGEND**
- ▶ PROPOSED APRON
  - INPLACE CULVERT
  - ==== PROPOSED CULVERT
  - SILT FENCE TYPE MACHINE SLICED
  - (E) CULVERT END PROTECTION
  - ~ INLET PROTECTION
  - WETLAND BOUNDARIES
  - SEEDING MIX 325 FERTILIZER 22-5-10 MULCH AND DISC ANCHORING
  - ROCK CONSTRUCTION ENTRANCE
  - PROPOSED SUBGRADE



- NOTES**
- 1.) THE CONTRACTOR SHALL CONSTRUCT WASHED GRAVEL ENTRANCES AT POINTS OF EXIT FROM THE WORK AREA ONTO EXISTING BITUMINOUS PAVEMENT AS DIRECTED BY THE ENGINEER.
  - 2.) TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE AT THE OUTSIDE BOTTOM OF MUCK SPOIL PILES AS NECESSARY
  - 3.) DISCHARGE POINTS FROM DEWATERING ACTIVITIES MUST BE ADEQUATELY PROTECTED FROM EROSION AND SCOUR
  - 4.) ALL EXPOSED AREAS ARE TO BE STABILIZED WITHIN 7 DAYS OF LAST DISTURBANCE

NO	DATE	BY	CKD	APPR	REVISION

NAME: P:\02-622-32\Plan I\0262232\_EC-M.dgn 12/27/2012 10:49:37 AM

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

PRINT NAME: CURT A. KOBILARCSIK

SIGNATURE: *Curt A. Kobilarsik*

DATE: 12-28-12 LICENSE NO. 24756

DRAWN BY: ZDC DATE: 12-07-12

DESIGN BY: NJD DATE: 12-07-12

CHECKED BY: DFF DATE: 12-07-12

**ANOKA COUNTY**  
HIGHWAY DEPT.

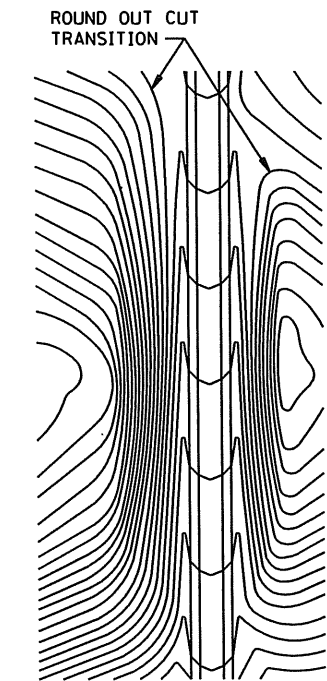
CP 12-18-22

**EROSION CONTROL AND TURF ESTABLISHMENT PLAN**

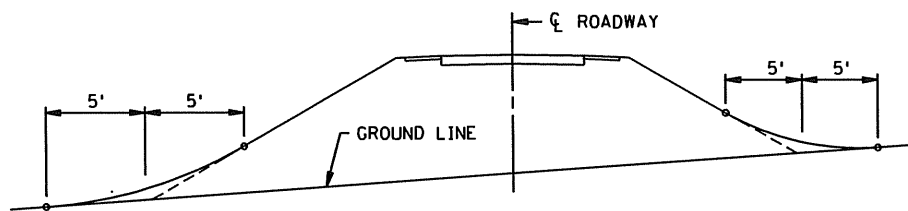
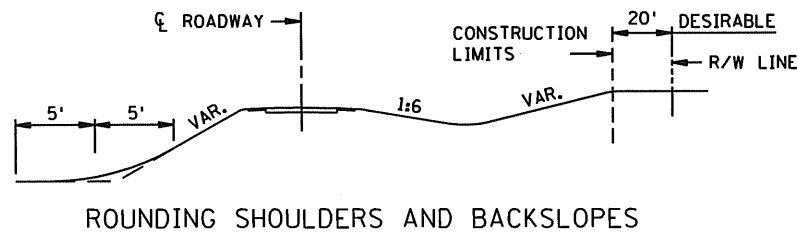
STA 231+00 TO 253+47.61

Sheet 18 of 29 Sheets

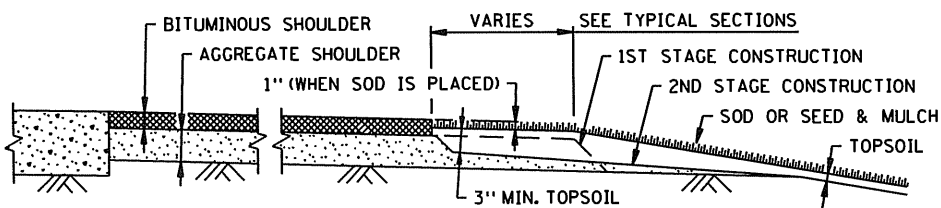




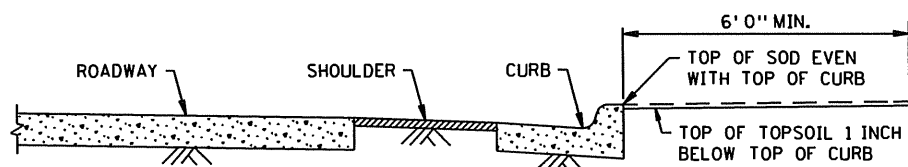
CONTOURING ROAD CUTS



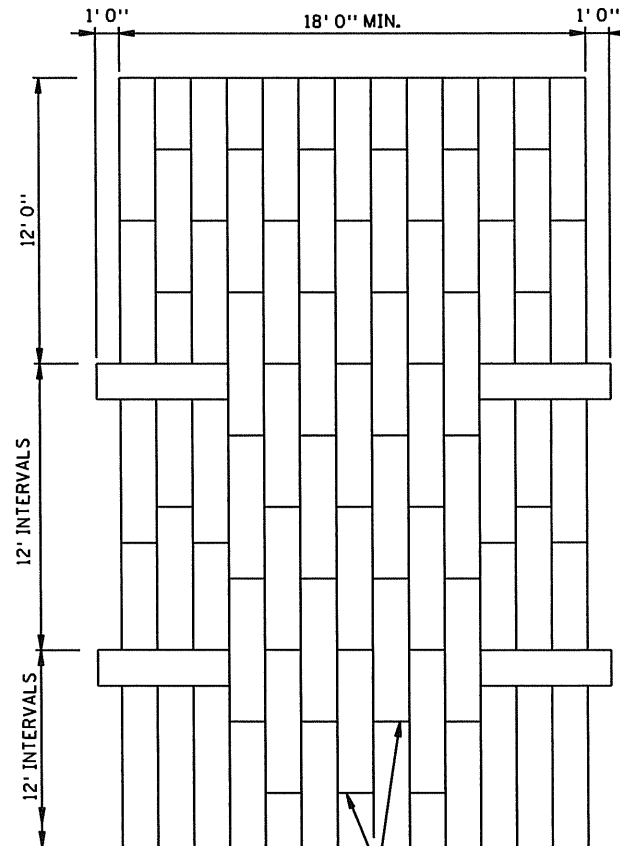
SHAPING FOR DRAINAGE ALONG THE TOE OF FILL SLOPES



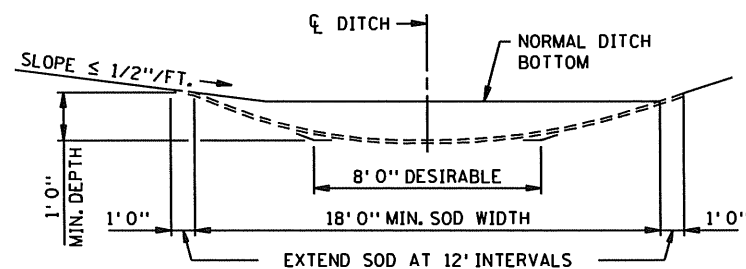
SHAPING AND TOPSOILING INSLOPES



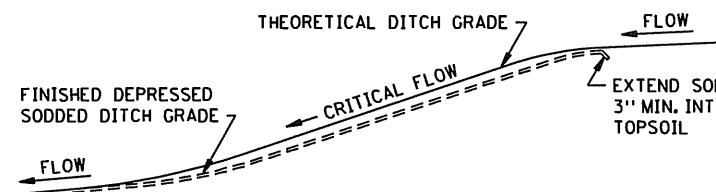
SHAPING ADJACENT TO CURBS WHEN SOD IS PLACED



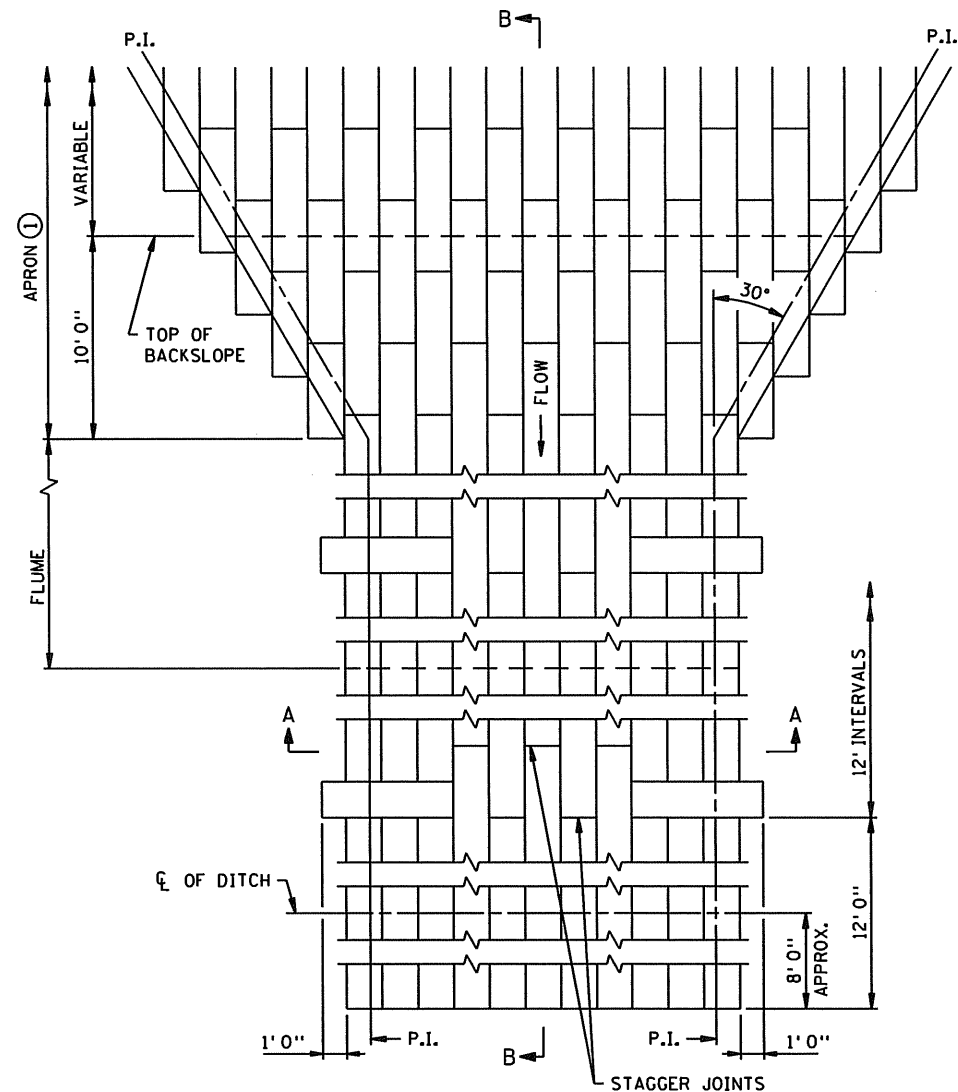
STAGGER JOINTS  
PLAN VIEW



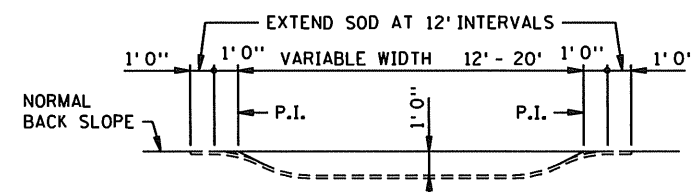
SODDED DITCH CROSS SECTION  
WHERE FRONT OR BACK SLOPE IS FLAT (LESS THAN 1/2"/FT.),  
FIRST NOTCH DITCH AND THEN PROVIDE ROUNDING.



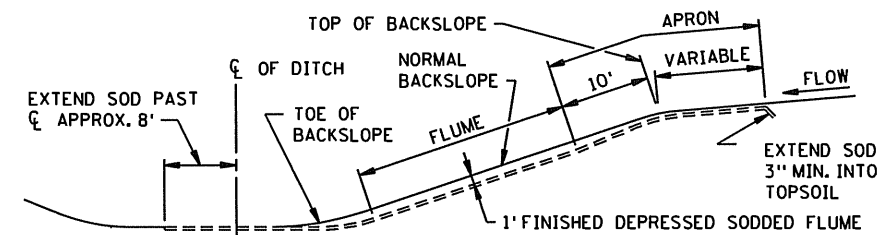
DITCH PROFILE  
SODDED DITCH DETAILS



PLAN VIEW



SECTION A-A



SECTION B-B  
SODDED FLUME DETAILS

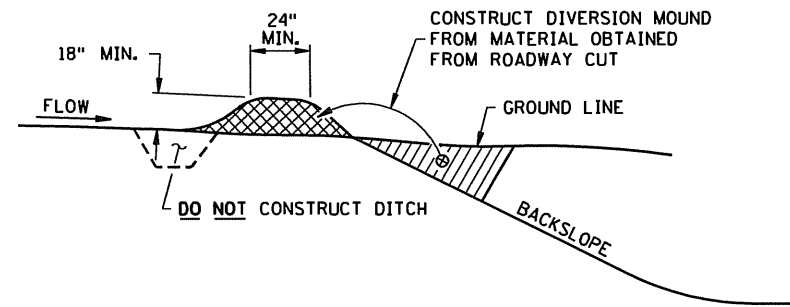
- NOTES:  
SEE SPEC. 2575.3 FOR ADDITIONAL INFORMATION.  
① CONSTRUCT TAPER AS DIRECTED BY THE ENGINEER.

STANDARD SHEET NO. 5-297.404	TITLE: PERMANENT EROSION CONTROL ALONG ROADWAYS, DITCHES AND FLUMES
STANDARD APPROVED: NOVEMBER 20, 2002	
SHEET NO. 19 OF 29 SHEETS	



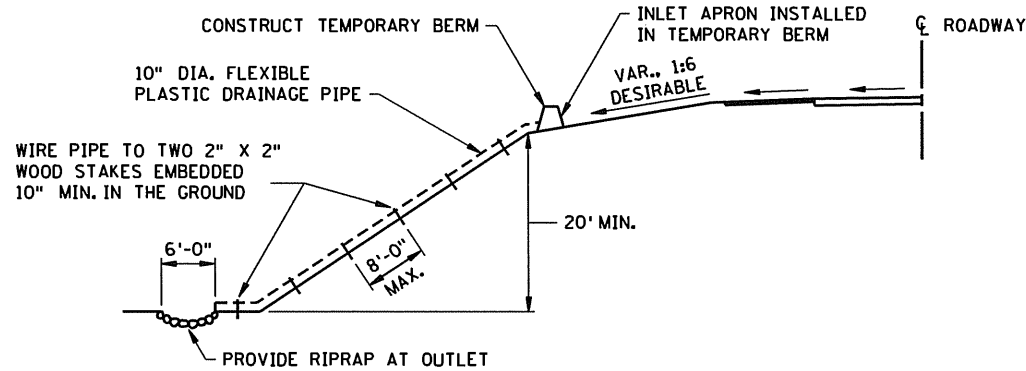
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FILE NAME:  
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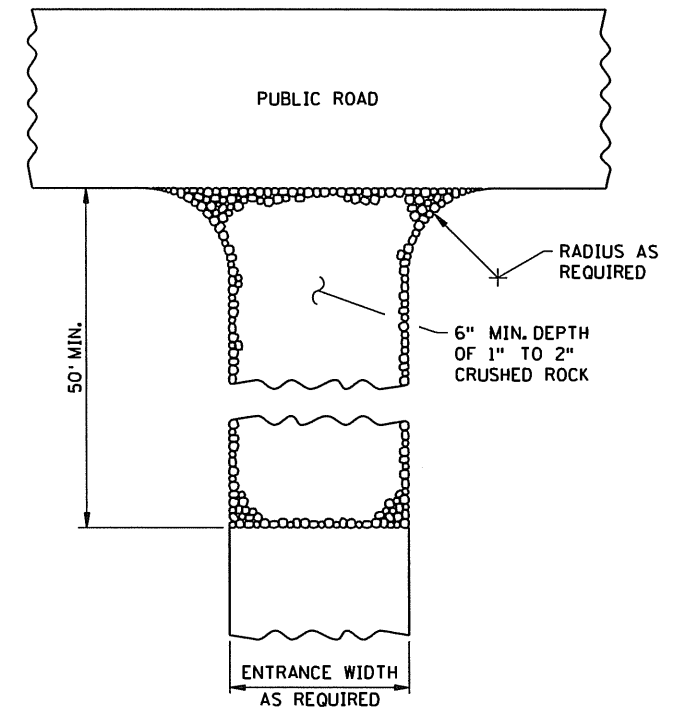
### DIVERSION MOUND

DESIGN GUIDELINES:  
STORM FREQUENCY: 10 YEAR - 24 HOUR  
MAXIMUM DRAINAGE AREA: 5 ACRES  
MAXIMUM DIVERSION: GRADE 5%

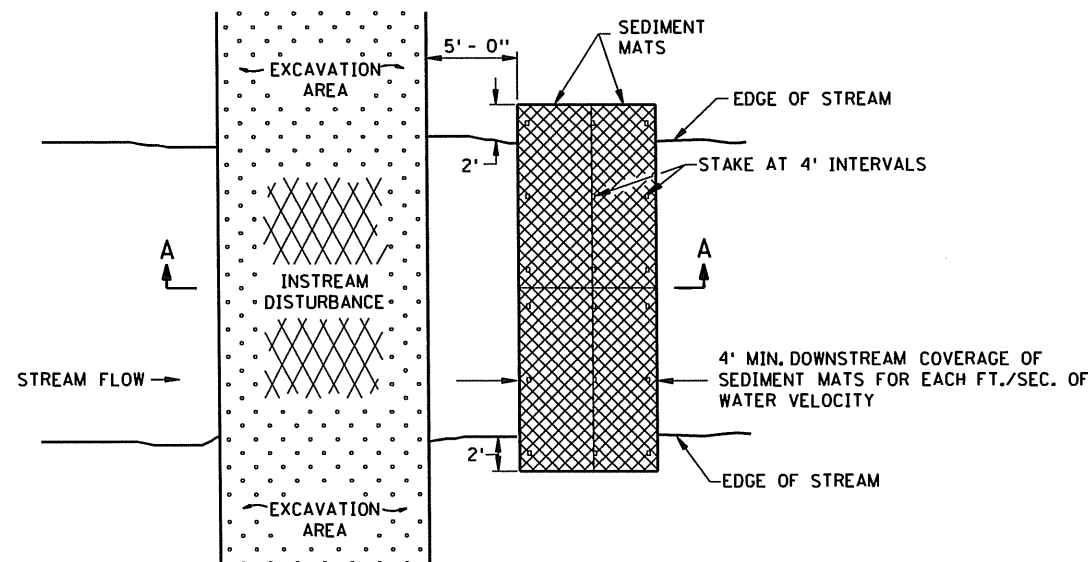


### TEMPORARY DOWN DRAIN ON FILL SLOPE

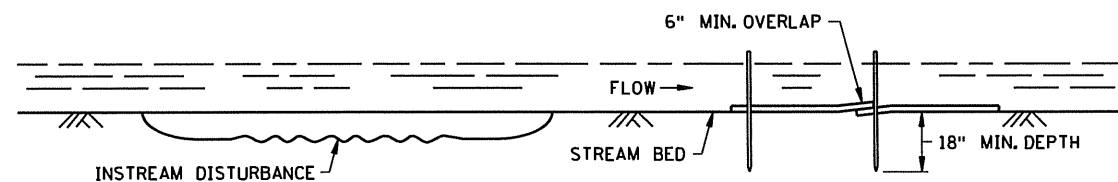
DESIGN GUIDELINES:  
STORM FREQUENCY: 2 YEAR - 24 HOUR  
MAXIMUM DRAINAGE AREA: 3 ACRES



### ROCK CONSTRUCTION ENTRANCE ①



PLAN VIEW

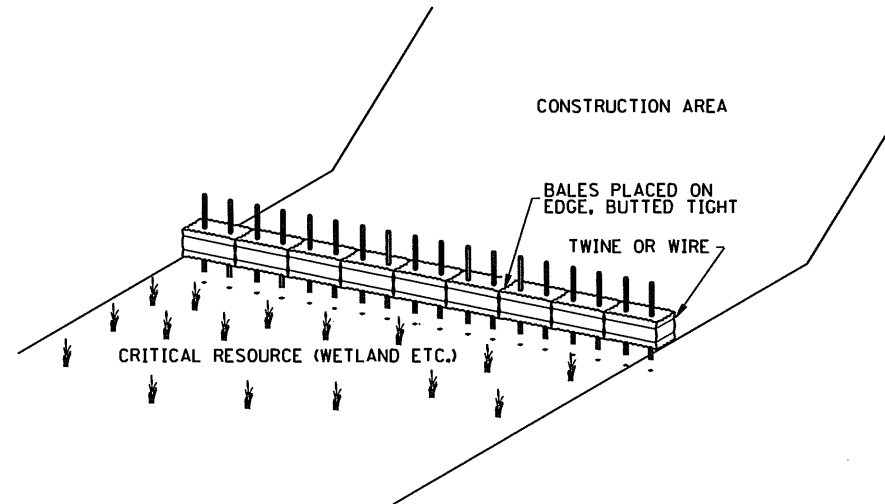


SECTION A-A

### SEDIMENT MAT ⑥

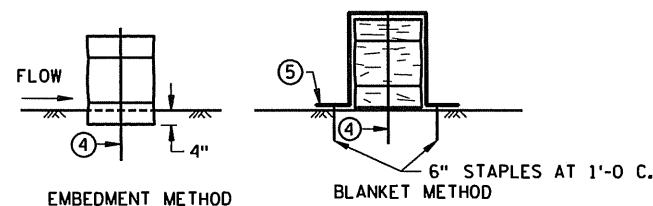
TYPICAL STREAM BED INSTALLATION

DESIGN GUIDELINES:  
MAXIMUM FLOW VELOCITY: 5 FT./SEC.  
MAXIMUM FLOW DEPTH: 2 FT.



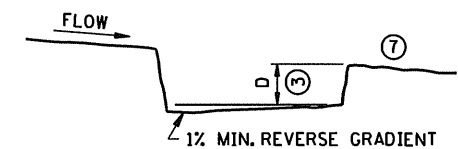
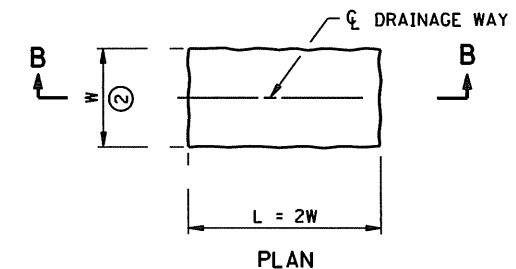
### BALE BARRIERS

TO BE USED FOR CRITICAL PERIMETER CONTROL AREAS



### BALE BARRIER DETAIL

APPROX. BALE SIZE: 14" X 18" X 36" LONG



### SECTION B-B SEDIMENT TRAP DETAIL

### NOTES:

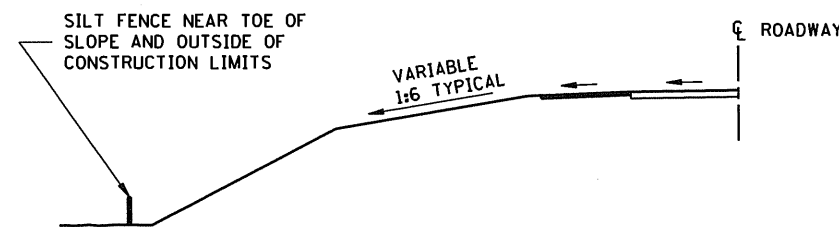
SEE SPECS. 2573, 3892, & 3894.

- ① ROCKS AT ENTRANCE CLEAN WORKSITE MUD OFF OF TRUCK TIRES BEFORE TRUCKS ENTER MAIN ROAD. KEEPING MUD OFF THE ROAD WILL PREVENT AUTO DAMAGE AND KEEP CONSTRUCTION SEDIMENT OUT OF DRAINAGE SYSTEMS AND WETLANDS. GEOTEXTILE MAY BE PLACED UNDER THE ROCK TO KEEP ROCKS SEPARATE FROM SOIL.
- ② W = 10 FT. MIN., 20 FT. MAX.
- ③ D = 2 FT.
- ④ TWO 2 IN. X 2 IN. WOOD STAKES OR REINFORCING BARS IN EACH BALE EMBEDDED 10 INCHES MINIMUM IN THE GROUND.
- ⑤ PLACE A CATEGORY 3 EROSION CONTROL BLANKET, 6 FT. WIDE MINIMUM, OVER THE BALE INSTEAD OF TRENCHING.
- ⑥ THIS DETAIL MAY NOT BE ACCEPTABLE FOR WORK ON PUBLIC WATERS, SEE GENERAL PUBLIC WATERS PERMIT (GP) 2004-0001.
- ⑦ LOCATION OF DOWNSTREAM TEMPORARY SEDIMENT CONTROL DEVICE.

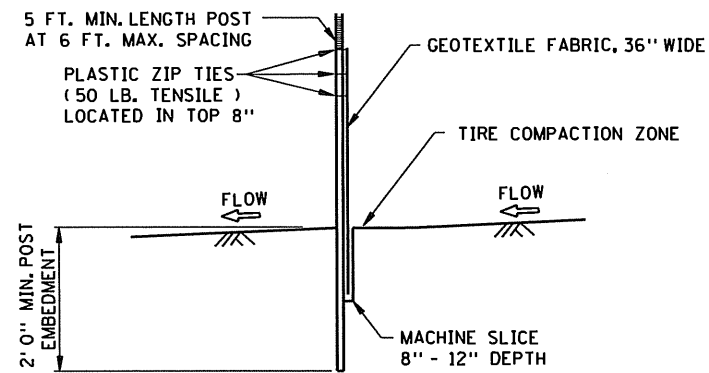
STANDARD SHEET NO. 5-297.405 ( 2 OF 4 )
STANDARD APPROVED: MARCH 29, 2012

TITLE: TEMPORARY SEDIMENT CONTROL MISCELLANEOUS DETAILS
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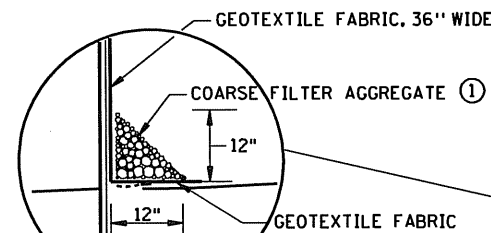




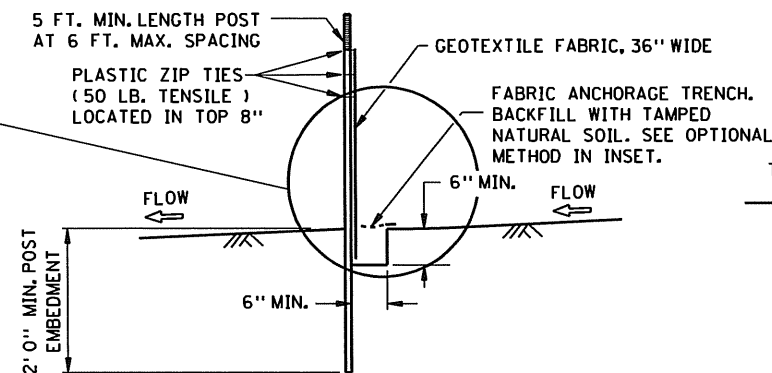
LOCATION OF SILT FENCE  
AT TOE OF ROADWAY EMBANKMENT



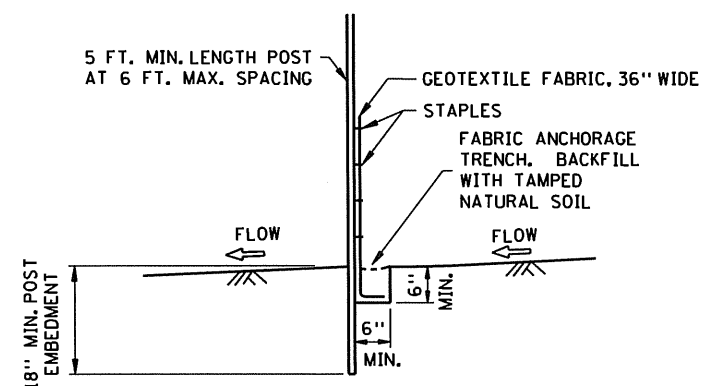
SILT FENCE, MACHINE SLICED  
DESIGN GUIDELINES:  
TO PROTECT AREAS FROM SHEET FLOW.  
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



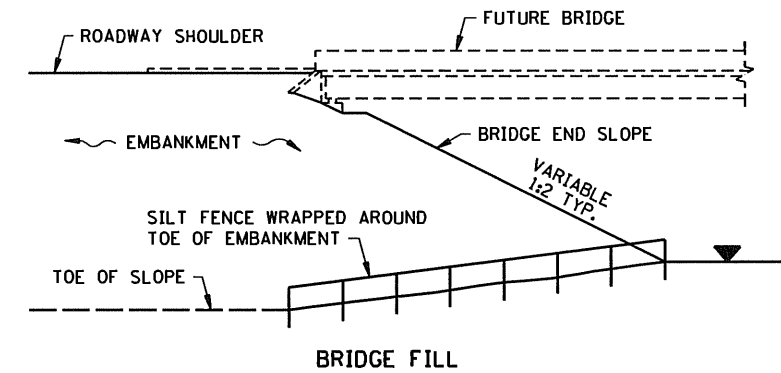
OPTIONAL METHOD  
FOR SILT FENCE, HEAVY DUTY



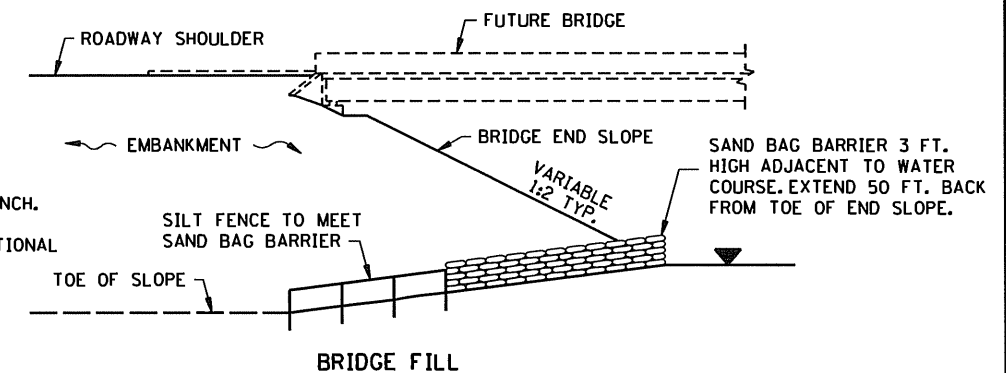
SILT FENCE, HEAVY DUTY  
(HAND INSTALLED)  
DESIGN GUIDELINES:  
TO PROTECT AREAS FROM SHEET FLOW.  
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



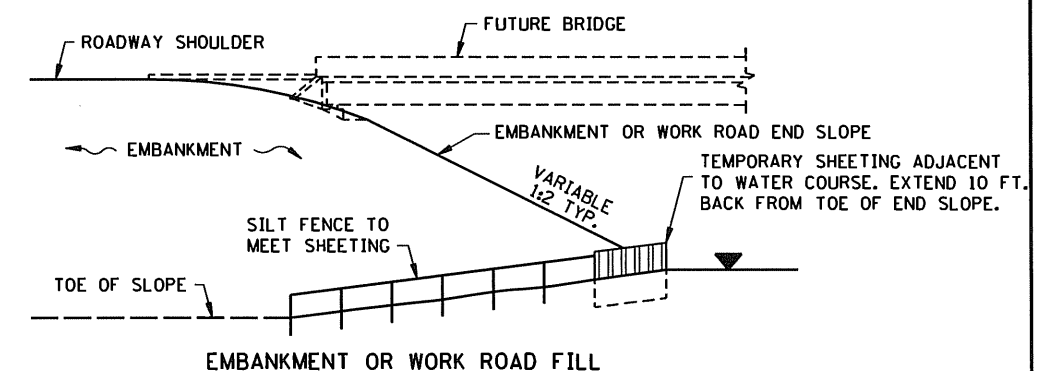
SILT FENCE, PREASSEMBLED  
DESIGN GUIDELINES:  
TO PROTECT AREAS FROM SHEET FLOW.  
MAXIMUM CONTRIBUTING AREA: 1 ACRE.



DESIGN GUIDELINES:  
WATER COURSE FLOW VELOCITY: STAGNANT  
CONTRIBUTING SLOPE AREA: 1/2 ACRE

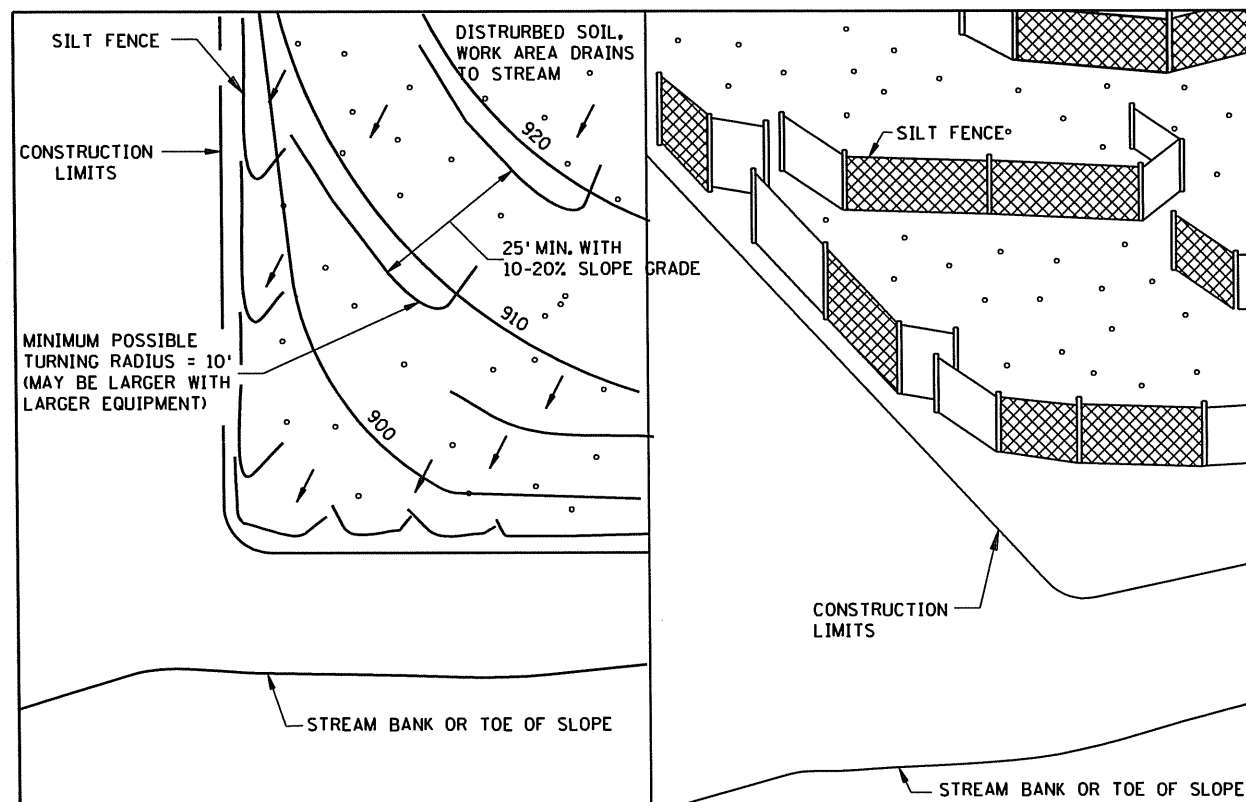


DESIGN GUIDELINES:  
WATER COURSE FLOW VELOCITY: 1 TO 7 FT./SEC.  
CONTRIBUTING SLOPE AREA: 1 ACRE



DESIGN GUIDELINES:  
WATER COURSE FLOW VELOCITY: 8 TO 15 FT./SEC.  
CONTRIBUTING SLOPE AREA: 3 ACRES  
SILT FENCE AT BRIDGE EMBANKMENT ADJACENT TO WATER

NOTES:  
SEE SPECS. 2573, 3149 & 3886.  
① COARSE FILTER AGGREGATE (SPEC. 3149) SHALL BE INCIDENTAL.



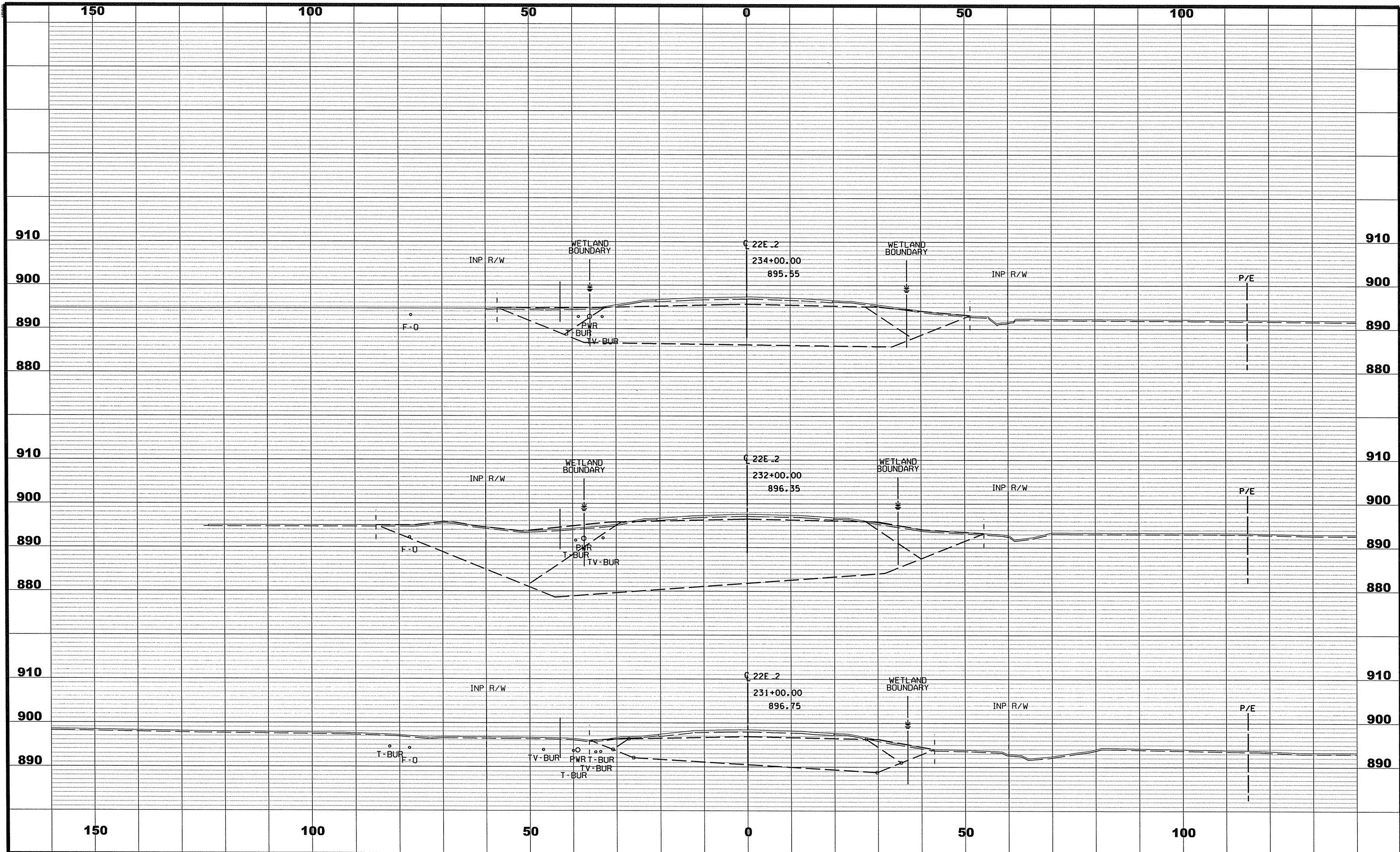
PLAN VIEW

SIDE VIEW

SILT FENCE, J-HOOK INSTALLATION

STANDARD SHEET NO. 5-297.408 (1 OF 2)	TITLE: TEMPORARY SEDIMENT CONTROL SILT FENCE
STANDARD APPROVED: SEPTEMBER 27, 2006	
SHEET NO. 21 OF 29 SHEETS	



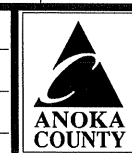


NO	DATE	BY	CKD	APPR	REVISION
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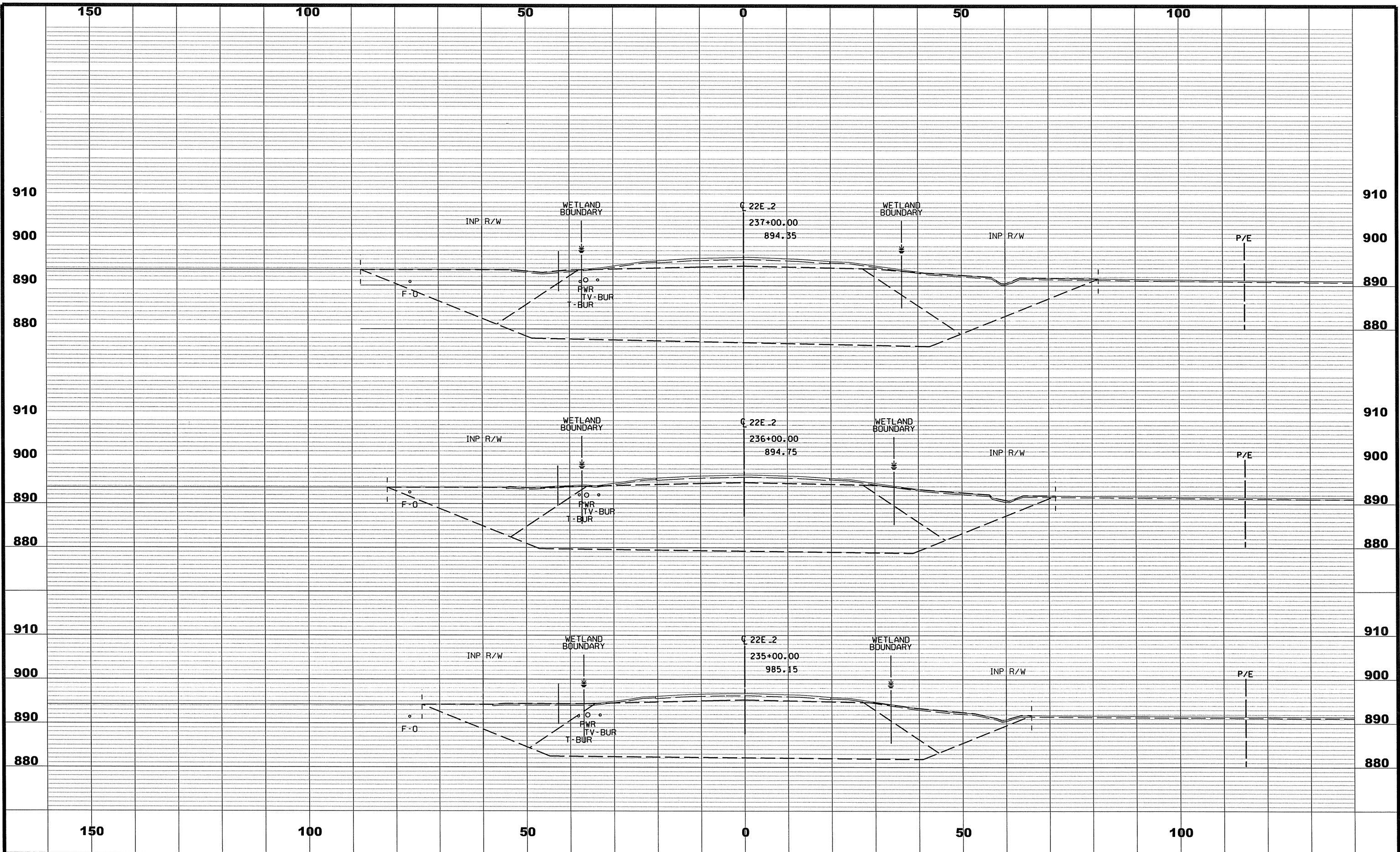
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HIGHWAY DEPT.



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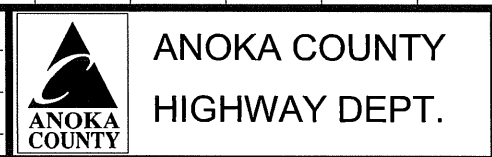
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Sheet 22 of 29 Sheets





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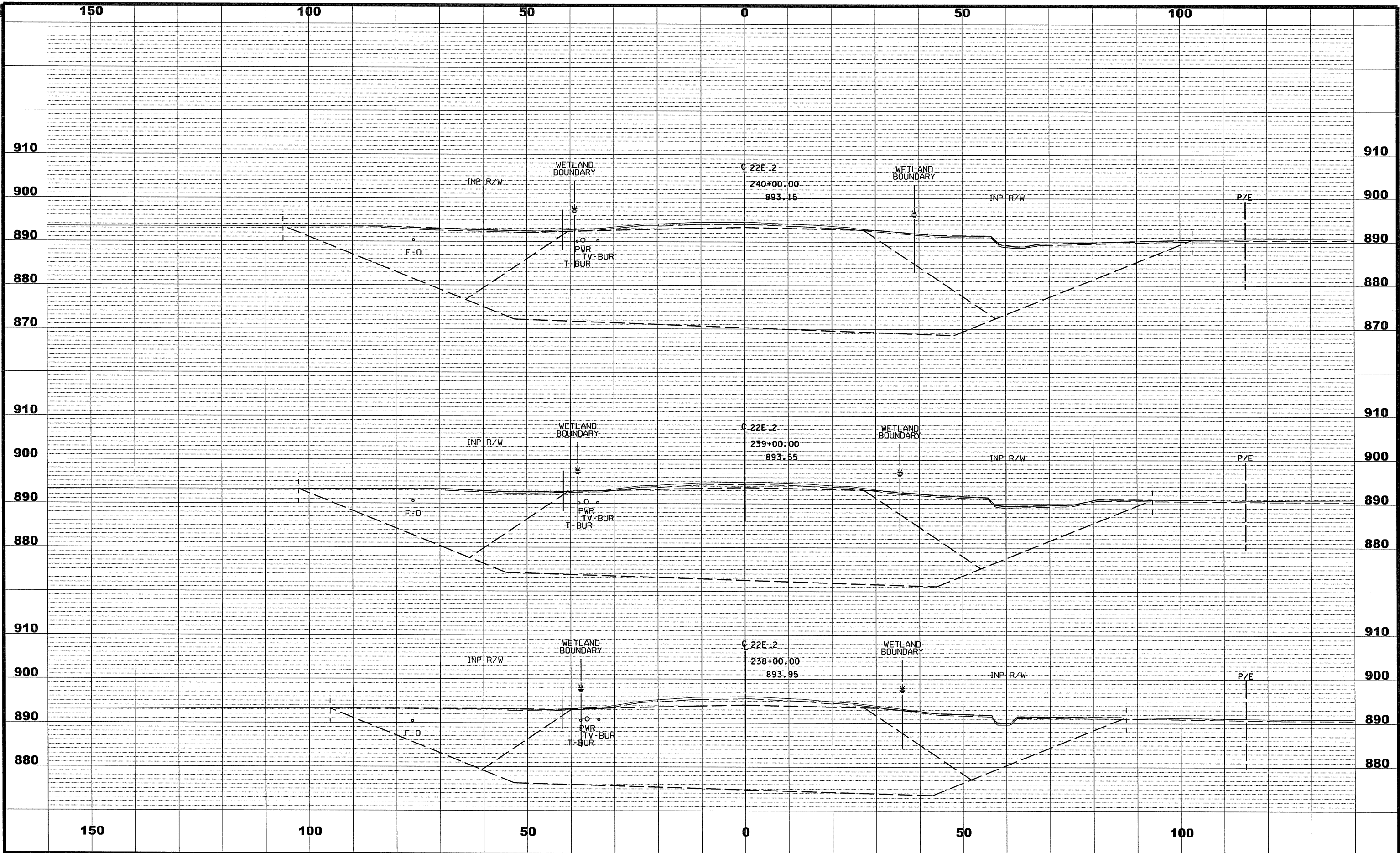
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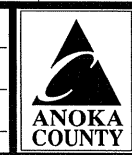




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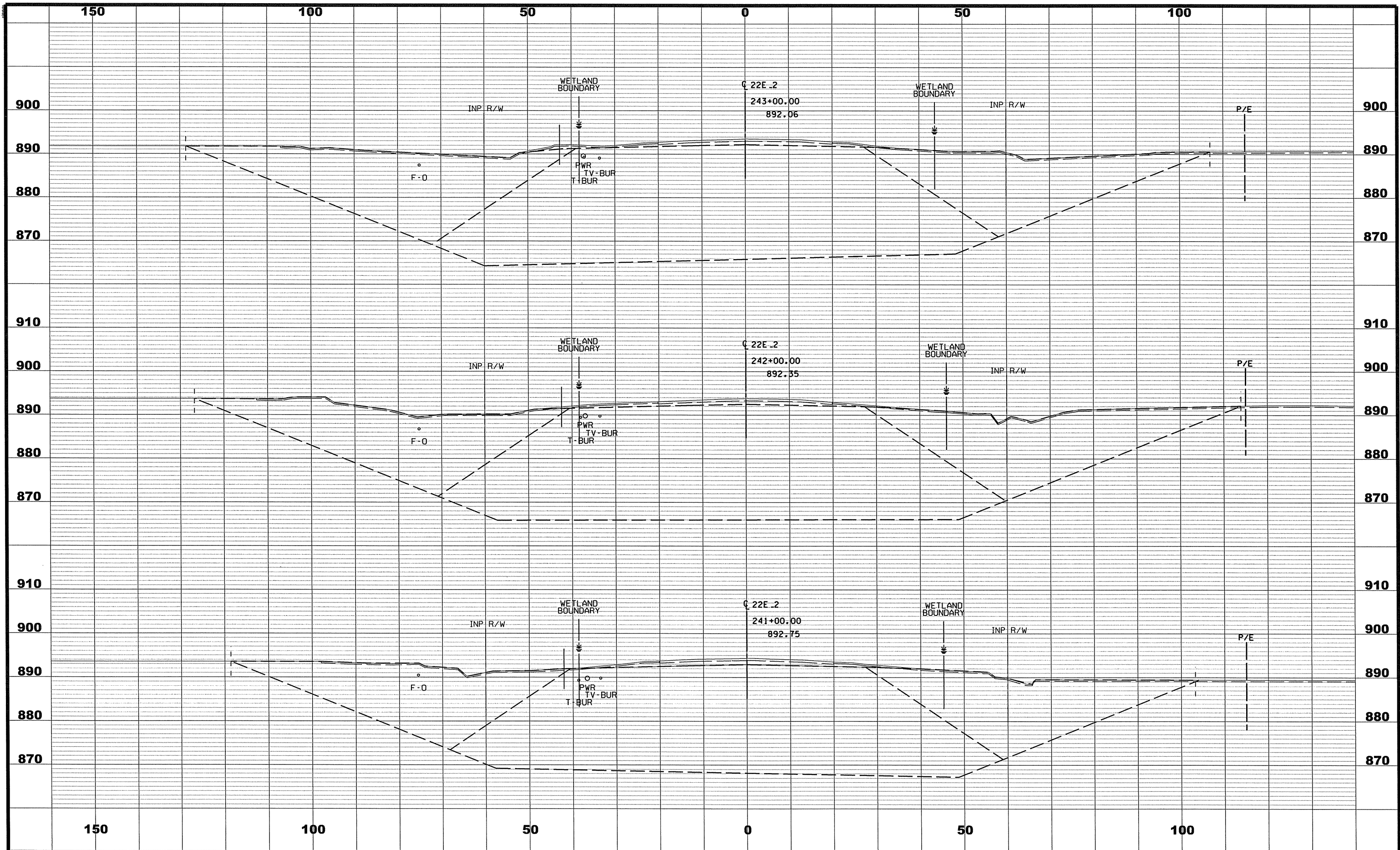
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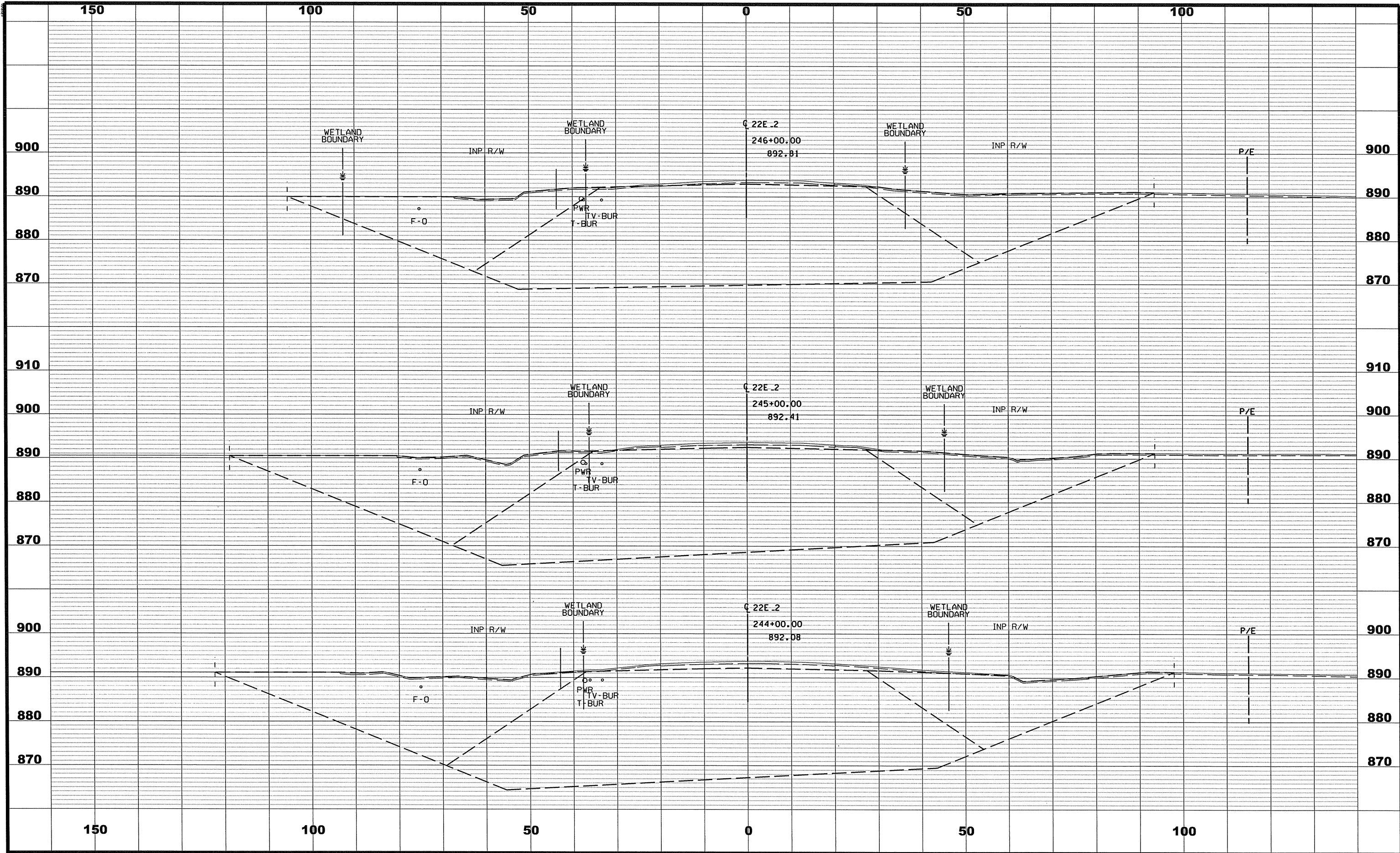


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Sheet 25 of 29 Sheets





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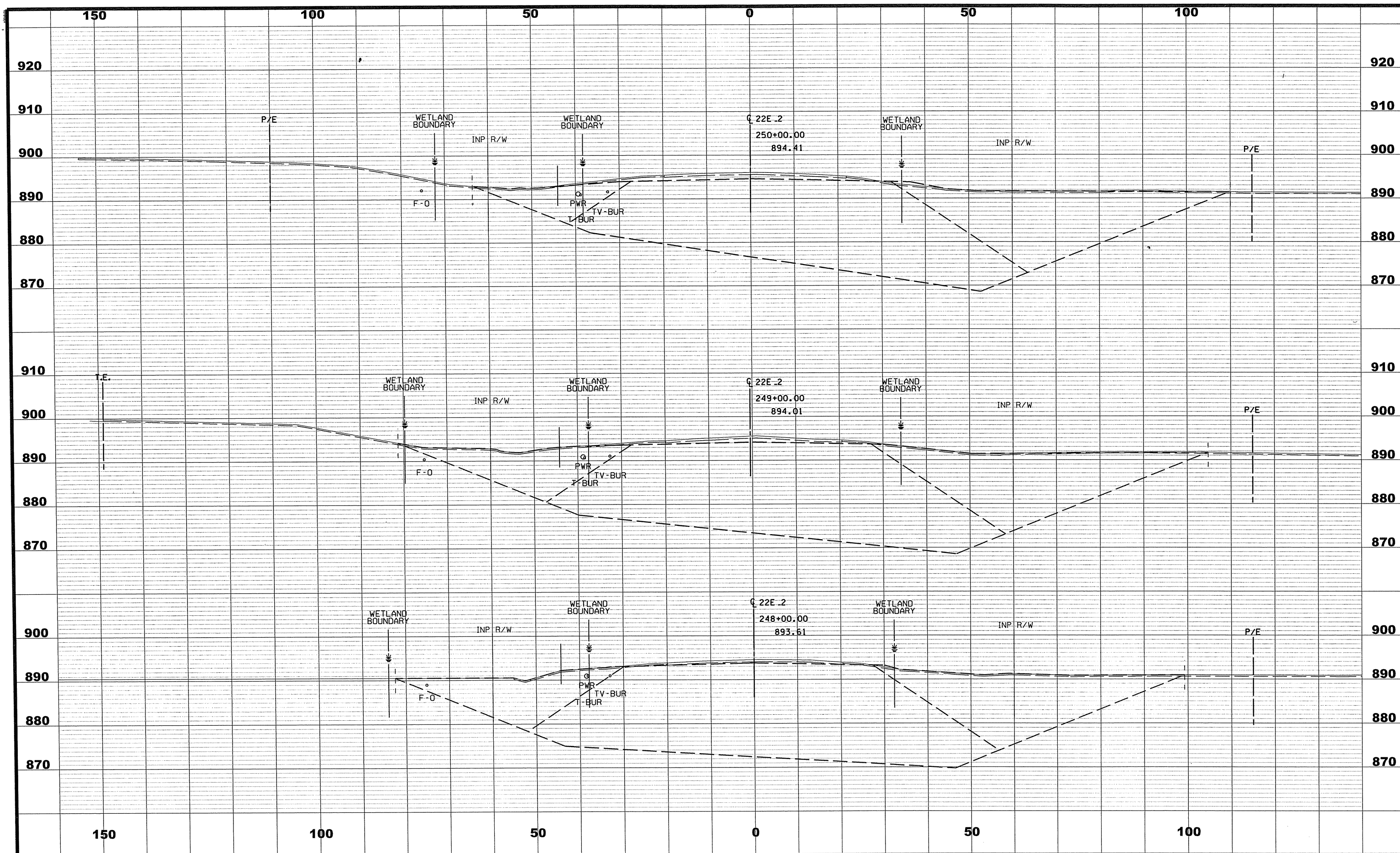


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Sheet 26 of 29 Sheets





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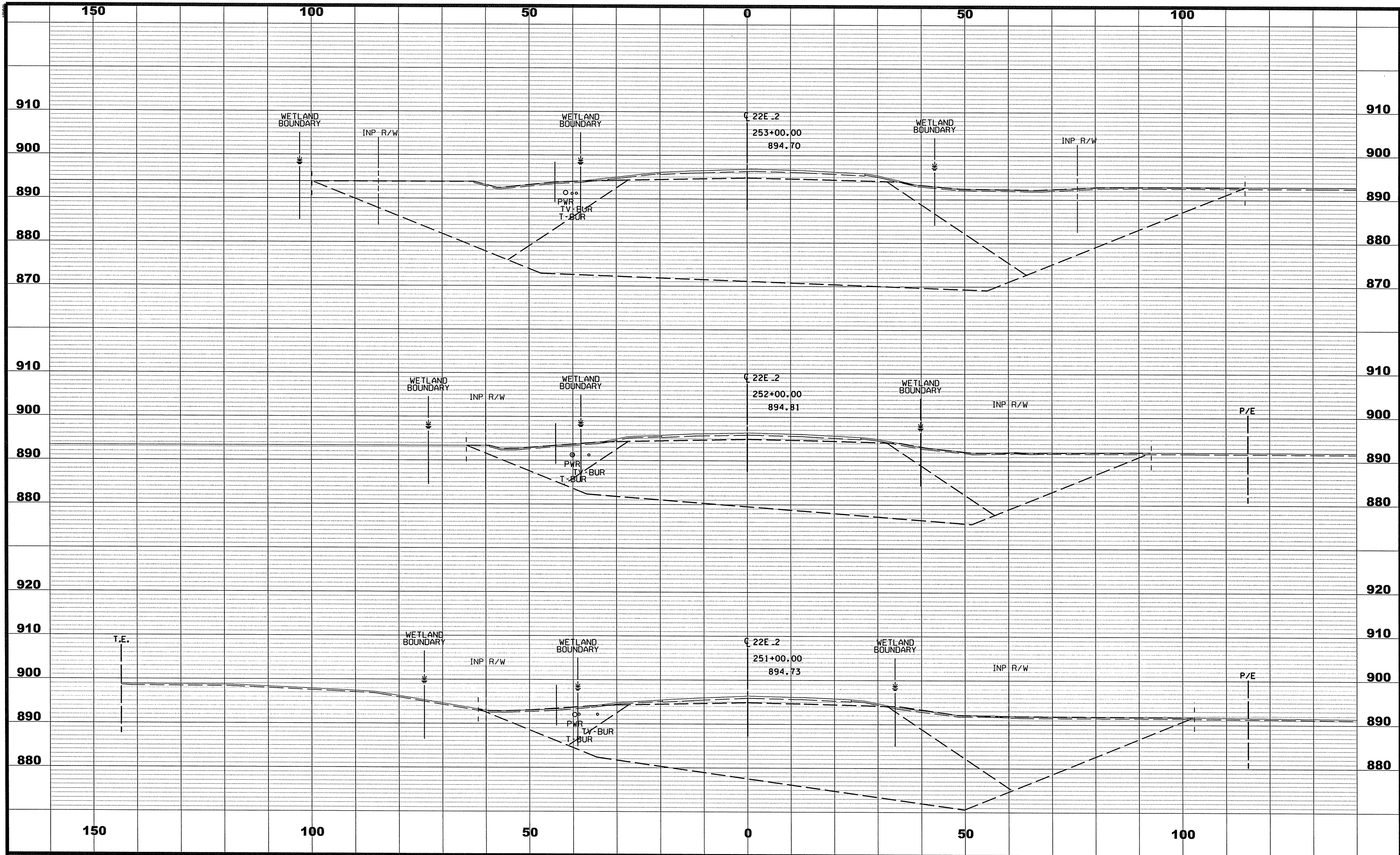
**ANOKA COUNTY**  
**HIGHWAY DEPT.**

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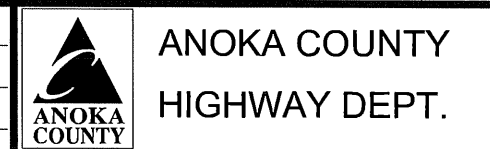
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CROSS SECTIONS  
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