

Apr 02

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NOTE: SHEET 9.1 HAS
 EARTHWORK YARDAGE
 LISTING.

* SEE PLAN SHEETS

TOTAL SHEETS = 50

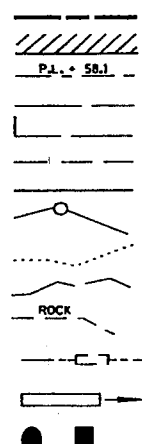


DESIGN DESIGNATION

A.D.T. 1998 = 2800
 A.D.T. 2020 = 5200
 D.H.V. 2020 = 520
 D. = 50-50
 T. = 7.6%
 DESIGN SPEED = 35 M.P.H.
 ESALS = 1102,300

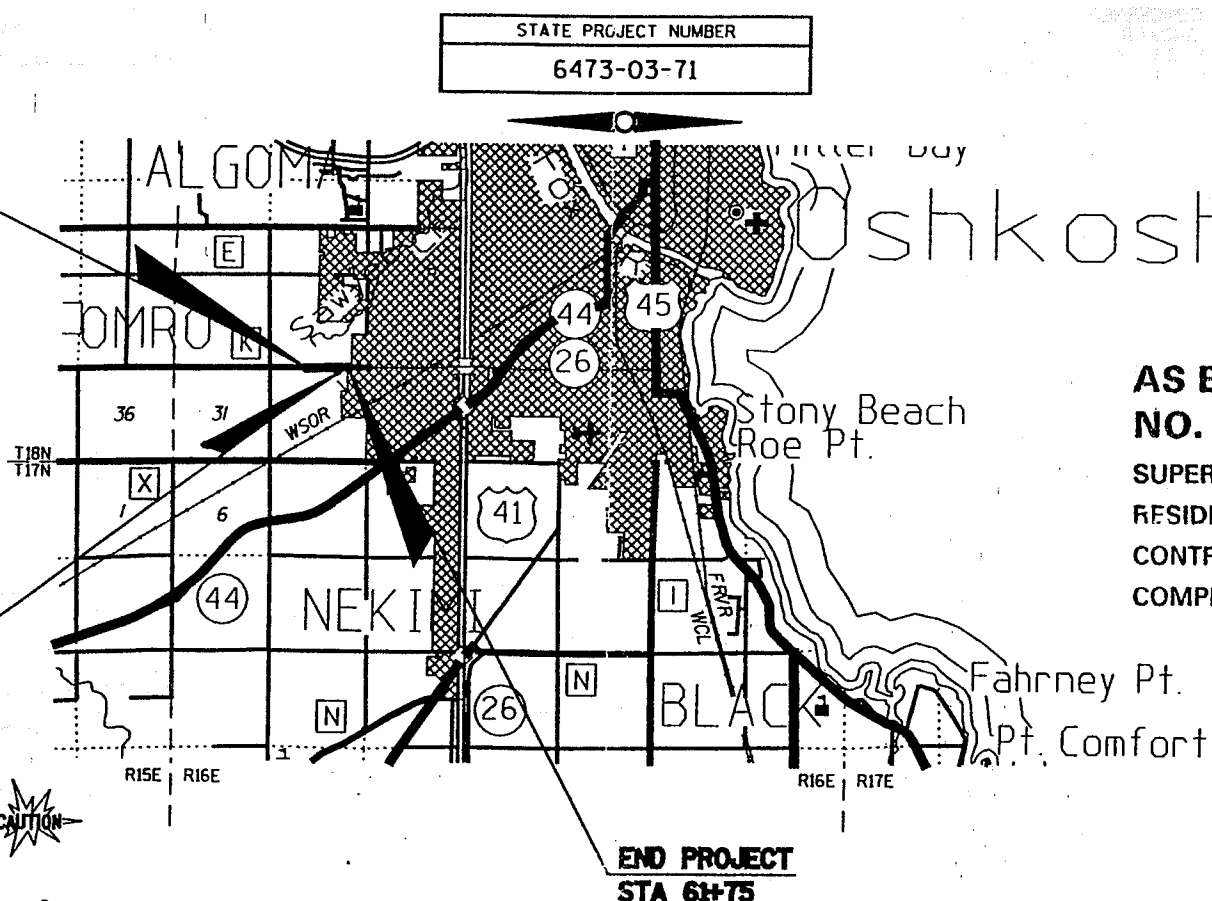
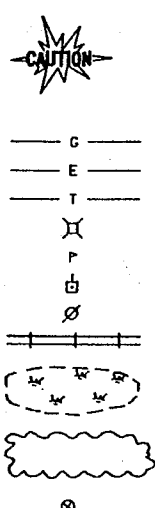
CONVENTIONAL SYMBOLS

COUNTY LINE
 CORPORATE LIMITS
 PROPERTY LINE
 LOT LINE
 LIMITED EASEMENT
 EXISTING RIGHT OF WAY
 PROPOSED OR NEW R/W LINE
 SURVEY LINE
 SLOPE INTERCEPT
 ORIGINAL GROUND
 MARSH OR ROCK PROFILE
 (To be noted as such)
 EXISTING CULVERT
 PROPOSED CULVERT
 (Box or Pipe)
 CULVERT (Profile View)



COMBUSTIBLE FLUIDS

UNDERGROUND UTILITIES
 GAS
 ELECTRIC
 TELEPHONE OR TELEGRAPH
 SERVICE PEDESTAL
 CABLE MARKER
 POWER POLE
 TELEPHONE POLE
 RAILROAD
 MARSH AREA
 WOODED OR SHRUB AREA
 PULL BOX



TOTAL NET LENGTH OF CENTERLINE = 0.536 MI.(URBAN)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 PLAN OF PROPOSED IMPROVEMENT
20th STREET ROAD, TOWN OF ALGOMA
 (CLAIRVILLE ROAD - WEST CORPORATE LIMITS)
 CTH K
 WINNEBAGO COUNTY

STATE PROJECT NUMBER

6473-03-71

AS BUILT PLAN
 NO.

SUPERVISOR _____
 RESIDENT _____
 CONTRACTOR _____
 COMPLETED _____

COORDINATES ON THIS PLAN ARE
 REFERENCED TO THE WISCONSIN COORDINATE
 SYSTEM SOUTH ZONE AND SCALED FROM THE
 VAN DYNE, WISCONSIN QUADRANGLE FOR
 IDENTIFICATION PURPOSES ONLY.

ELEVATIONS SHOWN ON THIS PLAN
 ARE REFERENCED TO WIS DOT
 BM ON NE CORNER OF BOX CULVERT
 AT STA 33+38.6, 43.2' LT
 WITH THE ELEVATION OF 798.71

STATE PROJECT

6473-03-71

FEDERAL PROJECT

PROJECT

STP 2002353

ACCEPTED FOR
 WINNEBAGO COUNTY

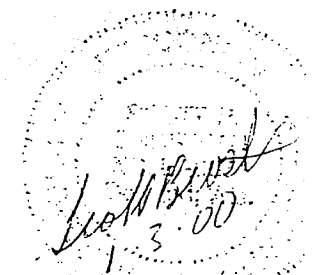
DATE: 01/02/2000

ACCEPTED FOR

WINNEBAGO COUNTY

ORIGINAL PLANS PREPARED
 BY

MEAD & HUNT



Mead & Hunt, Inc.
 1345B North Road Green Bay, Wisconsin

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY
 Surveyor _____ MEAD & HUNT
 Designer _____ MEAD & HUNT
 District Examiner _____ T. AHPLENS
 District Supervisor _____ HBE
 Proj. Dev. Engineer _____
 C.O. Examiner _____ N.R. AFFELDT

APPROVED FOR DISTRICT OFFICE
 DATE: 12/8/01 H. Bruce (Signature)

6473-03-71

6473-03-00

WINNEBAGO COUNTY

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE USGS DATUM.

CONSTRUCTION PERMITS FOR DRIVEWAY CONSTRUCTION HAVE BEEN OBTAINED AND SUCH RIGHTS WILL BE EXTENDED TO THE CONTRACTOR.

BEARINGS SHOWN ON THE PLANS ARE ASSUMED.

CURVE DATA IS BASED ON THE ARC DEFINITION.

NO TREES AND SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

ALL RADII ARE MEASURED TO THE FACE OF CURB UNLESS OTHERWISE SHOWN OR NOTED.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED. MUNICIPAL OWNED STORM SEWER, SANITARY SEWER, AND WATER MANHOLES AND/OR BOXES WILL BE ADJUSTED TO WITHIN 6 INCHES OF FINISHED GRADE BY THE CITY OF OSHKOSH. FINAL ADJUSTMENTS TO FINISHED GRADE WILL BE COMPLETED BY THE CONTRACTOR AND PAID FOR AS CONTRACT ITEM.

THE EXACT LOCATION OF DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER.

WHEN THE QUANTITY OF CRUSHED AGGREGATE BASE COURSE OR ASPHALTIC PAVEMENT IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLAN IS APPROXIMATE. THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

DISTURBED DRIVEWAYS SHALL BE REPLACED IN KIND.

SHRINKAGE VARIABLE, ESTIMATED AT 30 PERCENT.

REMOVAL ITEMS REQUIRING RESTORATION OF ASPHALT OR CONCRETE ROADWAYS, DRIVEWAYS, AND SIDEWALKS SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER OR SHOWN ON THE PLANS. THE COST OF SAWING WILL BE MEASURED AND PAID FOR AS A BID ITEM.

ALL CONCRETE PAVEMENT JOINTS SHALL BE SEALED WITH HOT-POURED ELASTIC SEALANT.

THE LAST ADJOINING THREE SECTIONS OF CONCRETE PIPE SHALL BE TIED TOGETHER AS SHOWN ON THE STANDARD DETAIL DRAWINGS AND AS LOCATED IN THE MISCELLANEOUS QUANTITIES. JOINT TIES SHALL BE INCIDENTAL TO VARIOUS ITEMS.



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN

CALL DIGGERS HOTLINE

1-800-242-8511

TOLL FREE

FAX A LOCATE 1-800-338-3860

TDD (FOR HEARING IMPAIRED) 1-800-642-2289

WISCONSIN STATUTE 182.0175 (1974)
REQUIRES MINIMUM OF 3 WORK DAYS
NOTICE BEFORE YOU EXCAVATE.

STANDARD DETAIL DRAWINGS

8A5-16a
8A5-16b
8A5-16d
8B6-3
8C1-5

8D1-13
8E9-5
8E10-1
8F1-11
8F4-5

8F5-1
13C1-10
13C4-12
15C2-3
15C8-9a

16A1-6
12A3-7

INLET COVERS TYPE A, H, A-S AND H-S
INLET COVERS TYPE B, B-A, C, MS, MS-A AND WM
INLET COVER, TYPE Z MANHOLE COVERS, TYPE K, J, J-S, L AND M
MANHOLE, TYPE 1
INLETS, TYPES 1, 2, 3 AND 4

CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES
SILT FENCE
INLET PROTECTION TYPE A, B AND C
APRON ENDWALLS FOR CULVERT PIPE
JOINT TIES FOR CONCRETE PIPE

CLASS "B" BEDDING FOR CULVERT PIPE AND STORM SEWER
CONCRETE PAVEMENT LONGITUDINAL JOINTS AND PAVEMENT TIES
URBAN NON-DOWELED CONCRETE PAVEMENT
BARRICADES AND SIGNS FOR ROAD CLOSURES
PAVEMENT MARKING (MAINLINE)

LANDMARK REFERENCE MONUMENTS AND COVERS
NAME PLATE FOR STRUCTURES

UTILITIES

WISCONSIN PUBLIC SERVICE CORP. (GAS)
3300 NORTH MAIN ST
OSHKOSH, WI 54902
MR. DARRIN VREUGDENHIL
920-236-5908

AMERITECH (TELEPHONE)
70 EAST DIVISION ST
FOND DU LAC, WI 54935
MS. MARY ATKINSON
920-929-1008

WISCONSIN PUBLIC SERVICE
700 NORTH ADAMS ST
P.O. BOX 19001
GREEN BAY, WI 54307-9001
MR. MICHAEL CERKAS
920-433-4942 FAX 920-433-1360
MR. TOM FISHER
920-617-5151

CITY OF OSHKOSH (SEWER-WATER)
215 CHURCH AVE.
PO BOX 1130
OSHKOSH, WI 54901
MR. DAVID PATEK
920-236-5065

WISCONSIN PUBLIC SERVICE CORP. (ELECTRIC)
3300 NORTH MAIN ST
OSHKOSH, WI 54902
MR. WICK DAVIS
920-236-5915 FAX 920-236-5969

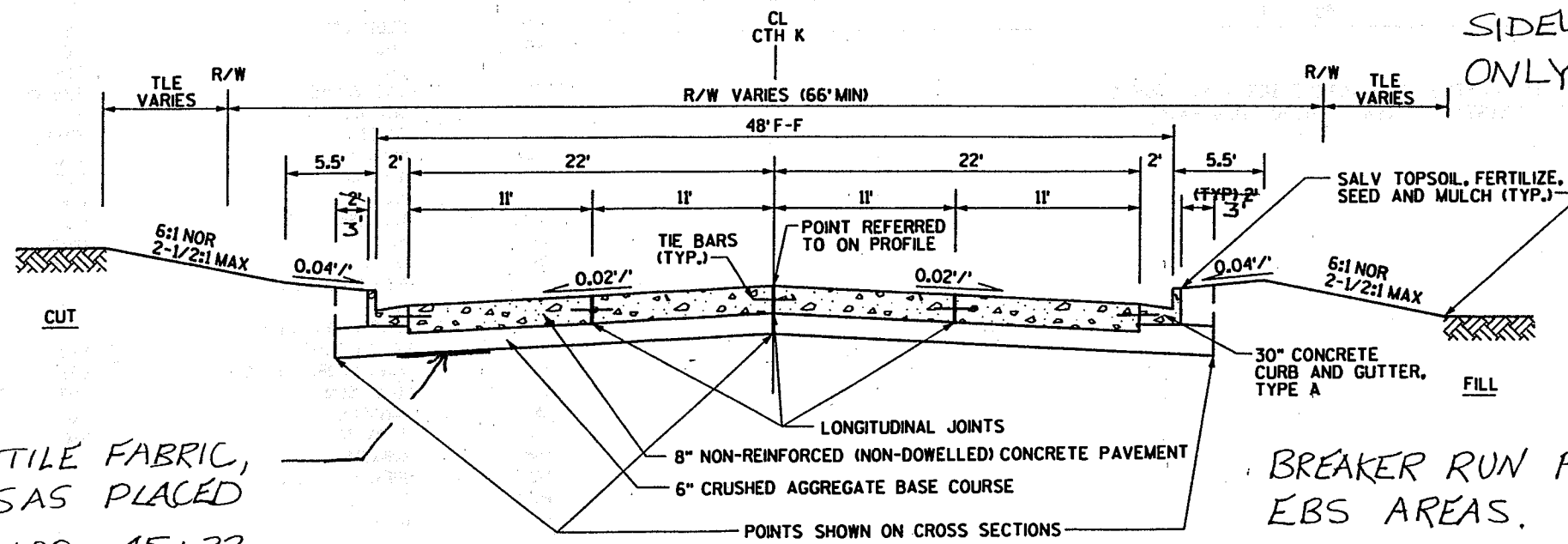
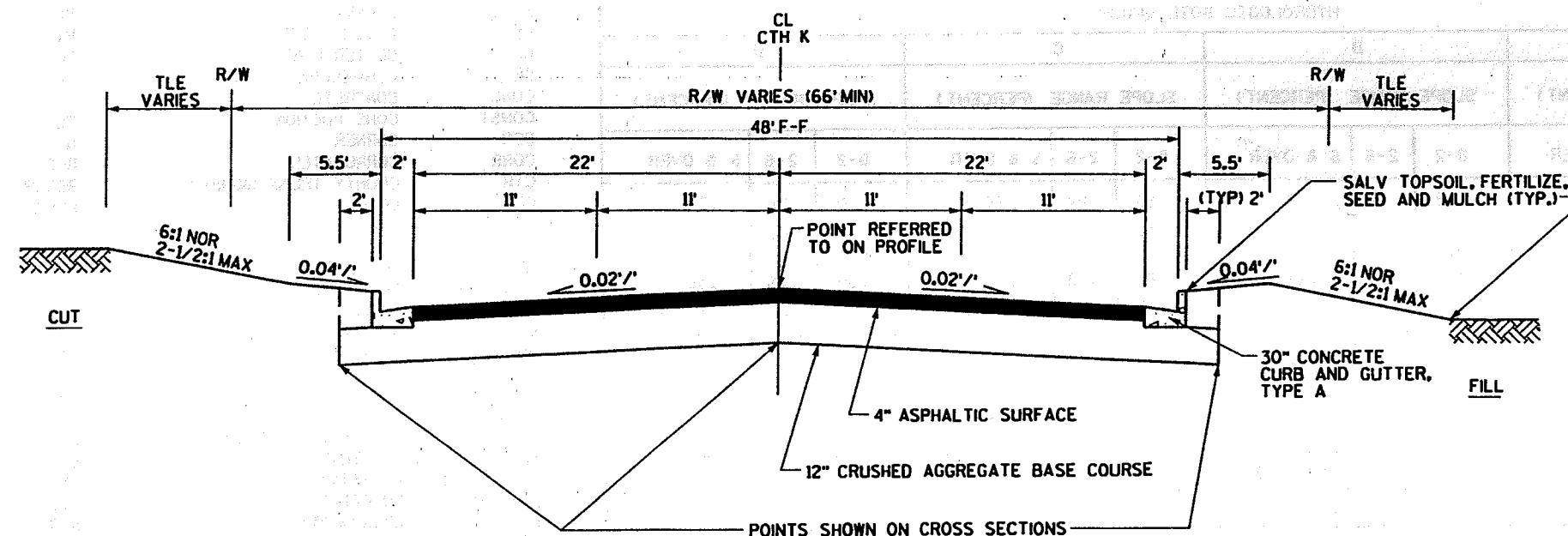
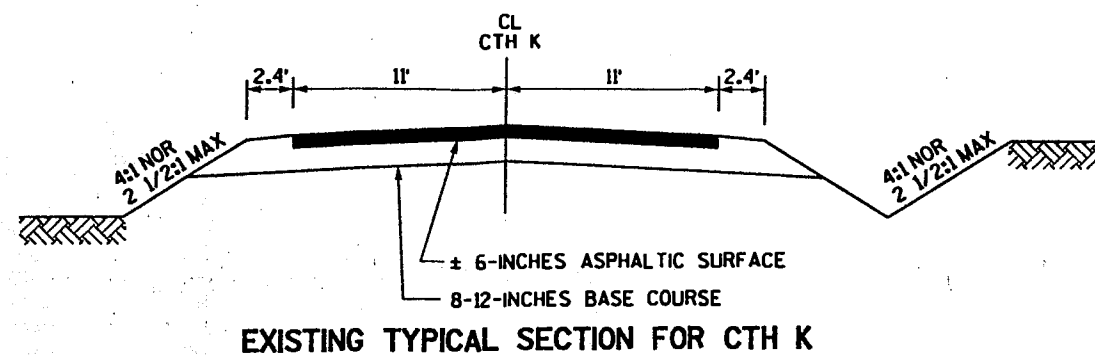
PLANS PREPARED BY
MEAD & HUNT, INC.
1345B NORTH RD.
GREEN BAY, WI 54313
MR. SCOTT BROSTEAU
920-496-0500

STANDARD ABBREVIATIONS

AGG	AGGREGATE	Y	NORTH GRID COORDIANTE
AH	AHEAD	NO	NUMBER
ASPH	ASPHALTIC	PAV'T	PAVEMENT
AVG	AVERAGE	PT	POINT
ADT	AVERAGE DAILY TRAFFIC	PC	POINT OF CURVATURE
BK	BACK	PI	POINT OF INTERSECTION
B/O/C	BACK OF CURB	PT	POINT OF TANGENCY
BM	BENCH MARK	POC	POINT ON CURVE
BLDG	BUILDING	POT	POINT ON TANGENT
CB	CATCH BASIN	PVC	POLYVINYL CHLORIDE
C/L	CENTER LINE	LB	POUND
CE	COMMERCIAL ENTRANCE	PP	POWER POLE
CONC	CONCRETE	PE	PRIVATE ENTRANCE
CONST	CONSTRUCTION	PL	PROPERTY LINE
COR	CORNER	R	RADIUS
CORR	CORRUGATED	RCCP	REINFORCED CONCRETE CULVERT PIPE
CTH	COUNTY TRUNK HIGHWAY	RCHEP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE
CR	CREEK	REQ'D	REQUIRED
CY	CUBIC YARD	RT	RIGHT
CMP	CULVERT METAL PIPE	R/W	RIGHT-OF-WAY
CP	CULVERT PIPE	RD	ROAD
C&G	CURB AND GUTTER	RDWY	ROADWAY
D	DEGREE OF CURVE	RO	RUNOFF
DHV	DESIGN HOUR VOLUME	SAN	SANITARY SEWER
DIA	DIAMETER	SALV	SALVAGED
DWY	DRIVEWAY	SEC	SECTION
EA	EACH	SHLDR	SHOULDER
E	EAST	SW	SIDEWALK
X	EAST GRID COORDINATE	S	SOUTH
ELEC	ELECTRIC	SF	SOARE FEET
EL	ELEVATION	SY	SQUARE YARD
ENT	ENTRANCE	STD	STANDARD
EXC	EXCAVATION	SDD	STANDARD DETAIL DRAWINGS
EBS	EXCAVATION BELOW SUBGRADE	STA	STATION
EXIST	EXISTING	SSD	STOPPING SIGHT DISTANCE
F-F	FACE TO FACE	SS	STORM SEWER
FERT	FERTILIZE	STM	STORM
FE	FIELD ENTRANCE	SE	SUPERELEVATION
F	FILL	T	TANGENT
FL	FLOW LINE	TEL	TELEPHONE
FT	FOOT	TEMP	TEMPORARY
G	GAS	TLE	TEMPORARY LIMITED EASEMENT
GV	GAS VALVE	T/O/C	TOP OF CURB
GRAY	GRAVEL	TN	TOWN
H	HOUSE	TRANS	TRANSITION
HOR	HORIZONTAL	T/L	TRANSIT LINE
HYD	HYDRANT	TYP	TYPICAL
IN	INCH	UNCL	UNCLASSIED
IN DIA	INCH DIAMETER	UG	UNDERGROUND
INL	INLET	USGS	UNITED STATES GEOLOGICAL SURVEY
INV	INVERT	VAR	VARIABLE
IP	IRON PIPE OR PIN	V	VELOCITY OR DESIGN SPEED
LT	LEFT	VERT	VERTICAL
L	LENGTH OF CURVE	VC	VERTICAL CURVE
LF	LINEAR FOOT	VPC	VERTICAL POINT OF CURVATURE
LC	LONG CHORD OF CURVE	VPI	VERTICAL POINT OF INTERSECTION
LS	LUMP SUM	VPT	VERTICAL POINT OF TANGENCY
MH	MANHOLE	VOL	VOLUME
MAX	MAXIMUM	WM	WATER MAIN
MIN	MINIMUM	WV	WATER VALVE
NC	NORMAL CROWN	W	WELL
NOR	NORMAL	W	WEST
N	NORTH	YD	YARD

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIP-TURF	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPE-TURF			.25			.27			.28			.30
			.32			.34			.36			.38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

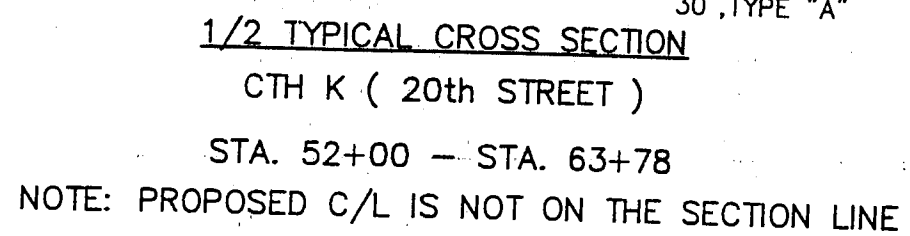
TOTAL PROJECT AREA = 4.9 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 4.5 ACRES
RUNOFF COEFFICIENT FOR THIS PROJECT: EXISTING PAVEMENT 0.80, NEW PAVEMENT 0.87



GEOTEXTILE FABRIC,
TYPE SAS PLACED
STA. 34+00 - 45+33
FULL WIDTH.

SIDEWALK ADDED RT. SIDE
ONLY. SEE SHEET 2.3A.

BREAKER RUN PLACED IN
EBS AREAS.



CTH K (20th STREET)

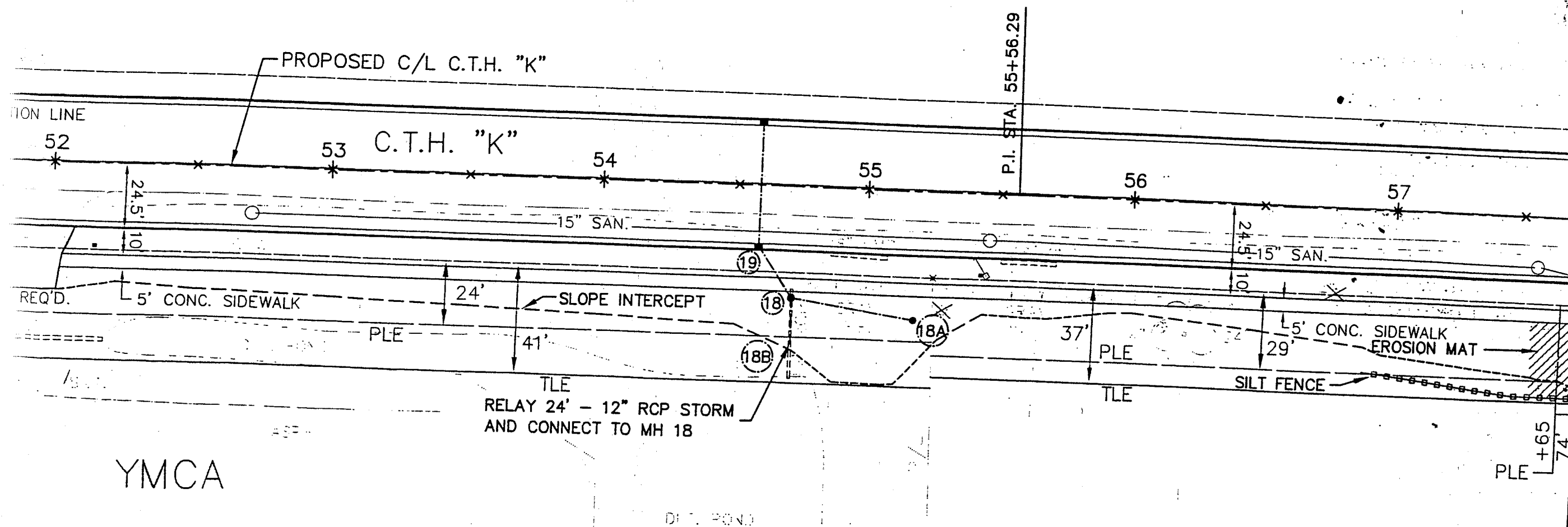
STA. 52+00 - STA. 63+78

NOTE: PROPOSED C/L IS NOT ON THE SECTION LINE



20 0 40

SCALE - FEET



C.T.H. K - 20TH AVENUE
PROPOSED SIDEWALK

SCALE	DATE	PROJECT NO.
1" = 40'	MAY, 2002	6473-03-71

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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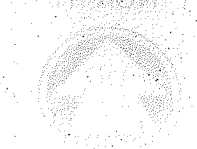
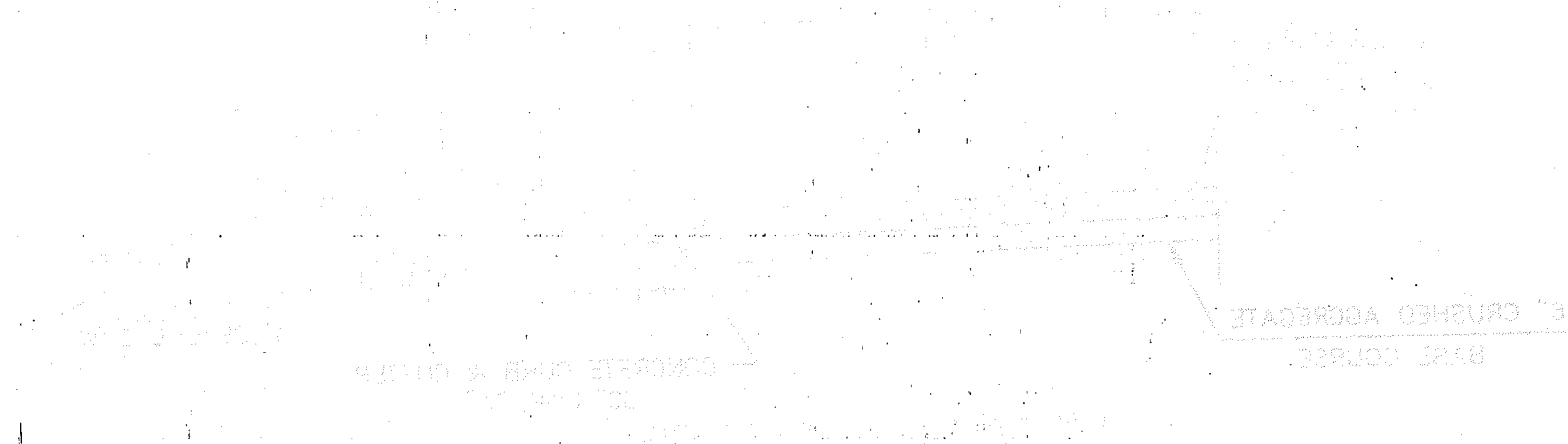
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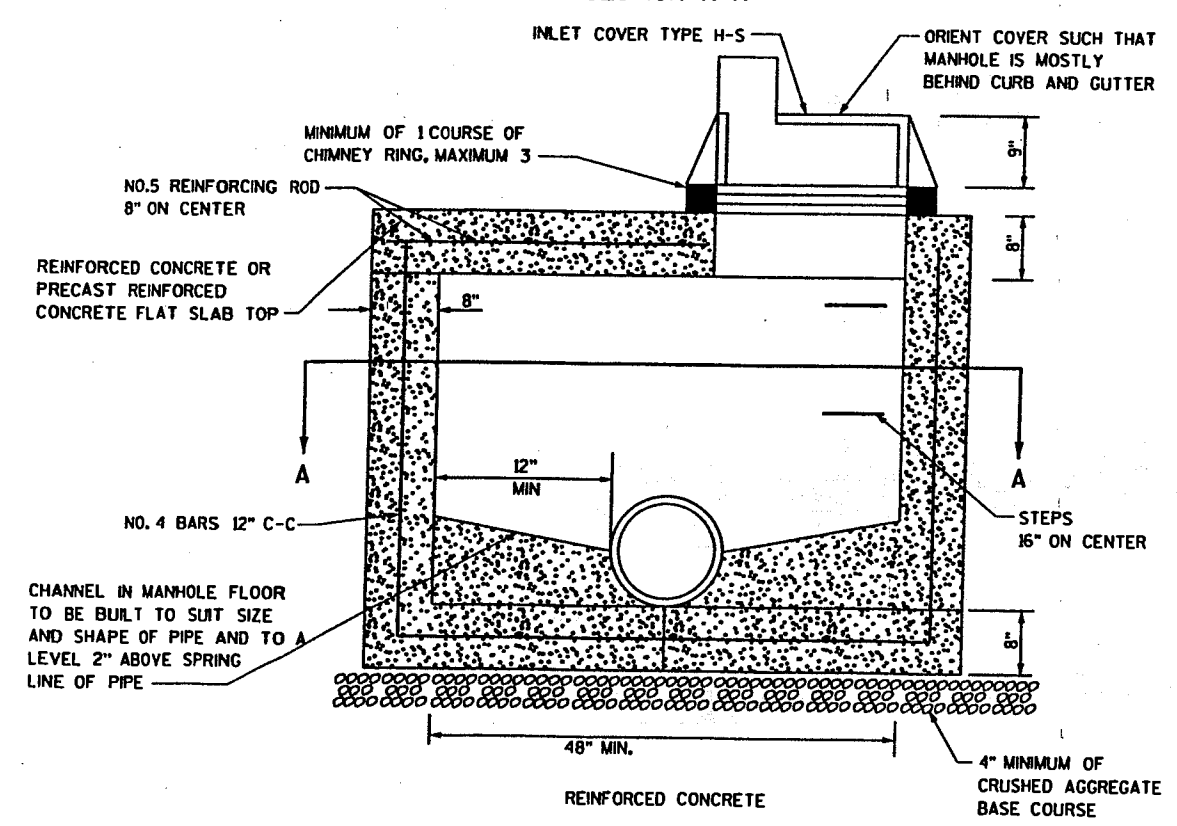
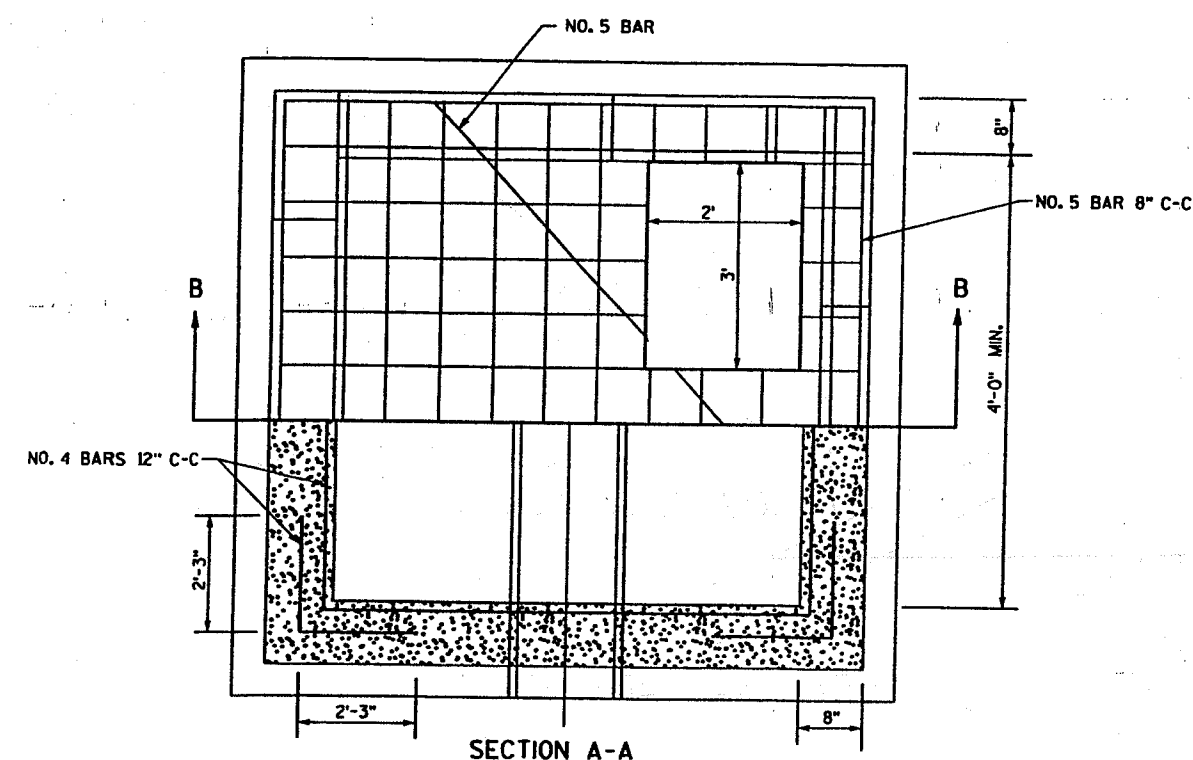
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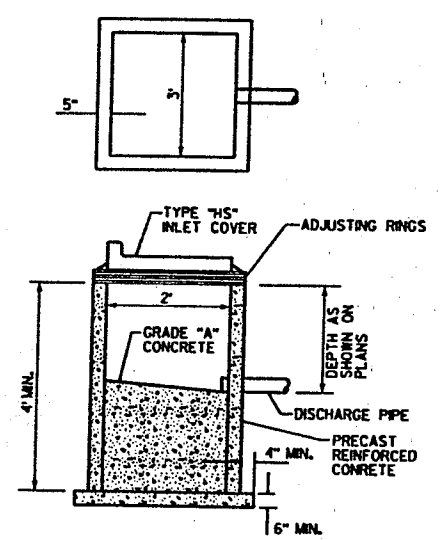
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2.3 A

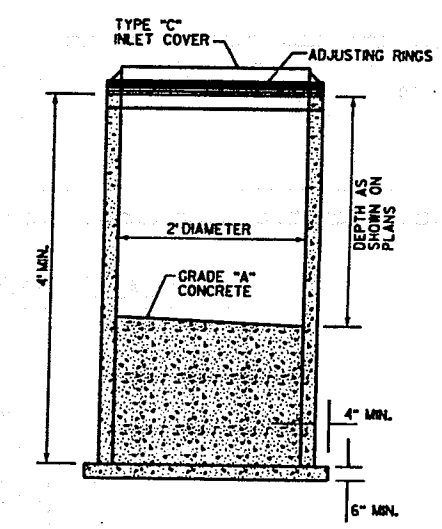




SECTION B-B
MANHOLE, TYPE 1, MODIFIED
SEE S.D.D. FOR ADDITIONAL INFORMATION NOT NOTED HERE



INLET, TYPE 3, SPECIAL
SEE MISCELLANEOUS QUANTITIES FOR LOCATION AND
S.D.D. FOR ADDITIONAL INFORMATION
NOT SHOWN ON THIS DETAIL



INLET, TYPE 1, SPECIAL
SEE MISCELLANEOUS QUANTITIES FOR LOCATION AND
S.D.D. FOR ADDITIONAL INFORMATION
NOT SHOWN ON THIS DETAIL

DATE 13FEB02

ESTIMATE OF QUANTITIES

SHEET: 3.1

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	6473-03-71 QUANTITY
0010	20101	CLEARING	STA.	2.00	2.00
0020	20102	CLEARING	I.D.	70.00	70.00
0030	20104	GRUBBING	STA.	2.00	2.00
0040	20105	GRUBBING	I.D.	70.00	70.00
0050	20330	REMOVING OLD CULVERTS	EACH	15.00	15.00
0060	20351	REMOVING OLD BRIDGE, STATION 57+90	LS	1.00	1.00
0070	20501	COMMON EXCAVATION	C.Y.	9,510.00	9,510.00
0080	21301	FINISHING ROADWAY	LS	1.00	1.00
0090	30404	CRUSHED AGGREGATE BASE COURSE	TON	7,650.00	7,650.00
0100	30426	BREAKER RUN STONE	TON	800.00	800.00
0110	41101	ASPHALTIC SURFACE	TON	130.00	130.00
0120	41508	CONCRETE PAVEMENT, 8-INCH	S.Y.	13,570.00	13,570.00
0130	41518	H.E.S. CONCRETE PAVEMENT, 8-INCH	S.Y.	50.00	50.00
0140	41605	CONCRETE DRIVEWAY, 6-INCH	S.Y.	20.00	20.00
0150	41653	PAVEMENT TIES	EACH	16.00	16.00
0160	41665	CONCRETE PAVEMENT GAPS	EACH	1.00	1.00
0170	52262	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 18-INCH	EACH	2.00	2.00
0180	52266	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 30-INCH	EACH	1.00	1.00
0190	52267	REINFORCED CONCRETE APRON ENDWALLS FOR CULVERT PIPE, 36-INCH	EACH	1.00	1.00
0200	52344	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE, CLASS HE-III, 43X68-INCH	L.F.	264.00	264.00
0210	60123	CONCRETE CURB AND GUTTER, 30-INCH, TYPE A	L.F.	5,550.00	5,550.00
0220	60133	CONCRETE CURB AND GUTTER, 30-INCH, TYPE D	L.F.	115.00	115.00
0230	60604	MEDIUM RANDOM RIPRAP	C.Y.	51.00	51.00
0240	60825	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 12-INCH	L.F.	368.00	368.00
0250	60827	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 18-INCH	L.F.	1,006.00	1,006.00
0260	60829	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 24-INCH	L.F.	697.00	697.00
0270	60831	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 30-INCH	L.F.	61.00	61.00
0280	60833	REINFORCED CONCRETE PIPE, CLASS III, STORM SEWER, 36-INCH	L.F.	23.00	23.00
0290	61121	INLETS, TYPE 1	EACH	1.00	1.00

DATE 13FEB02

ESTIMATE OF QUANTITIES

SHEET: 3.2

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	6473-03-71 QUANTITY
0300	61122	INLETS, TYPE 3	EACH	7.00	7.00
0310	61151	MANHOLE COVERS, TYPE J	EACH	1.00	1.00
0320	61156	INLET COVERS, TYPE H-S	EACH	18.00	18.00
0330	61163	INLET COVERS, TYPE C	EACH	3.00	3.00
0340	61182	ADJUSTING MANHOLE COVERS	EACH	6.00	6.00
0350	61910	MOBILIZATION	LS	1.00	1.00
0360	62101	LANDMARK REFERENCE MONUMENTS	EACH	4.00	4.00
0370	62401	WATER	MGAL	74.00	74.00
0380	62505	SALVAGED TOPSOIL	S.Y.	8,420.00	8,420.00
0390	62702	MULCHING	S.Y.	8,420.00	8,420.00
0400	62815	SILT FENCE, DELIVERED	L.F.	610.00	610.00
0410	62816	SILT FENCE, INSTALLED	L.F.	610.00	610.00
0420	62817	SILT FENCE MAINTENANCE	L.F.	305.00	305.00
0430	62822	EROSION MAT, DELIVERED, CLASS I, TYPE A	S.Y.	350.00	350.00
0440	62823	EROSION MAT, INSTALLED, CLASS I, TYPE A	S.Y.	350.00	350.00
0450	62870	INLET PROTECTION, TYPE A	EACH	22.00	22.00
0460	62872	INLET PROTECTION, TYPE C	EACH	17.00	17.00
0470	62905	FERTILIZER, TYPE B	CWT.	5.30	5.30
0480	63003	SEEDING, TEMPORARY	LB.	115.00	115.00
0490	63011	SEEDING, MIXTURE NO. 40	LB.	310.00	310.00
0500	64220	FIELD OFFICE, TYPE C	LS	1.00	1.00
0510	64301	TRAFFIC CONTROL	LS	1.00	1.00
0520	64313	TRAFFIC CONTROL, DRUMS	DAYS	1,200.00	1,200.00
0530	64505	GEOTEXTILE FABRIC, TYPE R	S.Y.	153.00	153.00
0540	64602	PAVEMENT MARKING, 4-INCH, EPOXY	L.F.	7,075.00	7,075.00
0550	65040	CONSTRUCTION STAKING, STORM SEWER SYSTEM	EACH	26.00	26.00
0560	65045	CONSTRUCTION STAKING, SUBGRADE	L.F.	2,830.00	2,830.00
0570	65070	CONSTRUCTION STAKING, CONCRETE PAVEMENT	L.F.	2,775.00	2,775.00
0580	65099	CONSTRUCTION STAKING, INITIAL LAYOUT	L.F.	2,830.00	2,830.00
0590	66501	SAWING EXISTING PAVEMENT	L.F.	110.00	110.00
0600	90005	MISC 90005A, INLET, TYPE 1, SPECIAL	EACH	2.00	2.00
0610	90005	MISC 90005B, INLET, TYPE 3, SPECIAL	EACH	5.00	5.00
0620	90005	MISC 90005C, MANHOLES, TYPE 1, MODIFIED	EACH	7.00	7.00
0630	90033	MISC 90033A, SEALING JOINTS	S.Y.	13,570.00	13,570.00

DATE 13FEB02

ESTIMATE OF QUANTITIES

SHEET: 3.3

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	6473-03-71 QUANTITY
0640	90365	QMP, BASE COURSES	TON	7,650.00	7,650.00
0650	90401	QMP, PLACEMENT OF CONCRETE	DAY	2.00	2.00
0660	90421	QMP, AGGREGATE FOR CONCRETE PAVEMENT	S.Y.	13,570.00	13,570.00
0670	90905	POLYSTYRENE INSULATION BOARD, 2-INCH	S.F.	96.00	96.00

NOTE:
ALL ITEMS ARE PART
OF GROUP CODE 010
UNLESS OTHERWISE NOTED.

CLEARING AND GRUBBING

STATION	LOCATION	CLEARING		GRUBBING	
		STA	ID	STA	ID
39+00 - 42+00	CTH K		20		20
42+00 - 44+00	CTH K	2		2	
44+00 - 61+75	CTH K		50		50
		---	---	---	---
		2	70	2	70

CONCRETE PAVEMENT, 8-INCH

LOCATION	STATION	QUANTITY S.Y.
CTH K	34+00 - 61+75	13570

ASPHALTIC SUMMARY

LOCATION	ASPHALTIC SURFACE TON
CTH K 33+45-34+00 PE's & FE's	70 60
TOTAL	130

PAVEMENT TIES

LOCATION	STATION	QUANTITY EACH
CTH K	61+75	16

CULVERT PIPES (GROUP CODE 0020)

STATION	LOCATION	DIAMETER INCHES	LENGTH L.F.	TYPE	CLASS	INLET ELEVATION	OUTLET ELEVATION	*JOINT TIES EACH	REMARKS
57+90	CTH K	68 X 43	264	RHECP	III	798.80	798.60	12	STR. B-70-246 (3 PIPES EACH 88' AT 5° SKEW RHF)

* NON-BID ITEM (FOR INFORMATION ONLY)

REMOVING OLD BRIDGE (GROUP CODE 0020)

STATION	LOCATION	QUANTITY L.S.	REMARKS
57+90	CTH K	1	SINGLE SPAN, 20', CONC. SLAB (STR. HAS NO NUMBER)

EARTHWORK SUMMARY

LOCATION	*COMMON EXC C.Y.	FILL C.Y.	EXPANSION FACTOR	WASTE C.Y.	*EBS C.Y.
CTH K UNDISTRIBUTED	8010	2850	30%	5160	1500
TOTAL	8010	2850		5160	1500

* COMMON EXC. TOTAL = 9510 C.Y.

CRUSHED AGGREGATE BASE COURSE

LOCATION	QUANTITY TONS	WATER MGAL
CTH K	7400	74
PE's & FE's	250	-
TOTAL	7650	74

BREAKER RUN STONE

LOCATION	QUANTITY TONS	REMARKS
UNDISTRIBUTED	800	BACKFILLING EBS

CONCRETE CURB AND GUTTER

LOCATION	STA-STA	30-INCH TYPE A L.F.	30-INCH TYPE D L.F.
CTH K	33+45-34+00	-	115
CTH K	34+00-61+75	5550	-
TOTAL		5550	115

CONCRETE DRIVEWAY, 6-INCH

LOCATION	QUANTITY S.Y.
36+90 RT, CTH K	20

MEDIUM RANDOM RIPRAP

LOCATION	STA	MEDIUM RANDOM RIPRAP C.Y.	GEOTEXTILE FABRIC TYPE R S.Y.
CTH K	33+70 LT/RT	8	24
CTH K	57+90 LT/RT	43	129
TOTAL		51	153

LANDSCAPING SUMMARY

LOCATION	SALVAGED TOPSOIL S.Y.	FERTILIZER TYPE B CWT	MULCHING S.Y.	SEEDING NO. 40 lb	TEMPORARY SEEDING lb
CTH K	8420	5.3	8420	310	115

H.E.S. CONCRETE PAVEMENT, 8-INCH

LOCATION	STATION	QUANTITY S.Y.
CTH K	51+00	50

CONCRETE PAVEMENT GAPS

LOCATION	STATION	QUANTITY EACH
CTH K	51+00, RT	1

STORM SEWER SUMMARY

LOCATION		DIAMETER					TYPE	INLET	DISCHARGE	REMARKS
FROM	TO	12-IN L.F.	18-IN L.F.	24-IN L.F.	30-IN L.F.	36-IN L.F.				
2 3 4 6 5	1 4 2 2 6	11		255	14 47	23	RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER	793.50 795.90 795.30 794.10 796.00	793.20 795.40 794.00 793.50 795.50	1 IS A 36" CONC. ENDWALL 3 IS A 30" CONC. ENDWALL
9 7 8 12 10	6 8 9 9 11	12 47 20		262 180			RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER	794.75 796.00 795.70 795.20 796.00	794.10 795.70 795.40 794.75 795.80	
11 14 13 16 15	12 12 14 14 16	48 46 46	74 346				RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER	795.80 795.40 796.00 798.30 799.00	795.50 795.20 795.70 795.60 798.40	
18 19 20 21 22	19 20 22 22 23	46	11 46 287 20				RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER	800.50 800.30 800.00 799.90 799.30	800.30 800.00 799.30 799.50 799.00	23 IS AN 18" CONC. ENDWALL
25 24 28 27	26 25 25 28	46 46	17 205				RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER RCP CLASS III STORM SEWER	800.00 800.50 801.50 802.00	799.00 800.20 799.50 801.50	26 IS AN 18" CONC. ENDWALL
TOTAL		368	1006	697	61	23				

NOTE:
ALL ITEMS ARE PART
OF GROUP CODE 010
UNLESS OTHERWISE NOTED.

MANHOLES, INLETS AND COVERS

STRUCTURE NUMBER	STATION	LOCATION	STRUCTURE	DISTANCE LT/RT	TYPE	COVER	ELEVATIONS		DEPTH FEET	REMARKS
							PAVEMENT	FLOWLINE		
1 2 3 4 5	33+70 33+83 33+70 33+75 36+38	CTH K CTH K CTH K CTH K CTH K	ENDWALL MANHOLE ENDWALL MANHOLE INLET	52.0' LT 23.5' LT 44.0' RT 23.5' RT 35.0' LT	TYPE 1, MOD. TYPE 1, MOD. 1	H-S H-S C	800.93 800.90 801.00	793.20 793.50 795.90 795.30 796.00	6.4 4.6 4.0	36" CONC. ENDWALL 30" CONC. ENDWALL
6 7 8 9 10	36+38 39+03 39+00 39+00 40+66	CTH K CTH K CTH K CTH K CTH K	MANHOLE INLET INLET MANHOLE INLET	23.5' LT 35' RT 23.5' RT 23.5' LT 36' RT	TYPE 1, MOD. 1 S.P. 3 TYPE 1, MOD. 1 S.P.	J C H-S H-S C	801.95 800.00 801.40 801.40 799.10	794.10 796.00 795.70 794.75 796.00	6.9 3.0 4.7 5.6 2.1	
11 12 13 14 15	40+85 40+80 41+54 41+54 45+00	CTH K CTH K CTH K CTH K CTH K	INLET INLET INLET INLET INLET	23.5' RT 23.5' LT 23.5' RT 23.5' LT 23.5' RT	3 TYPE 1, MOD. 3 S.P. TYPE 1, MOD. 3	H-S H-S H-S H-S H-S	800.66 800.68 800.45 800.45 804.52	795.80 795.20 796.00 795.40 799.00	3.9 4.5 3.5 4.1 4.5	
16 18 19 20 21	45+00 54+60 54+58 54+58 57+45	CTH K CTH K CTH K CTH K CTH K	INLET STUB INLET INLET INLET	23.5' LT 33' RT 23.5' RT 23.5' LT 23.5' RT	3 3 3 3 S.P.	H-S H-S H-S H-S	804.52 806.06 806.06 804.37	798.30 800.50 800.30 800.00 799.90	5.2 4.8 5.1 3.5	STUB FOR FUTURE YMCA
22 23 24 25 26	57+45 57+60 58+20 58+20 58+10	CTH K CTH K CTH K CTH K CTH K	MANHOLE ENDWALL INLET INLET ENDWALL	23.5' LT 45' LT 23.5' RT 23.5' LT 45' LT	TYPE 1, MOD. 3 S.P. 3	H-S H-S H-S	804.37 804.52 804.52	799.30 799.00 800.50 799.50 799.00	4.1 3.0 4.0	18" CONC. ENDWALL 18" CONC. ENDWALL
27 28	60+25 60+25	CTH K CTH K	INLET INLET	23.5' RT 23.5' LT	3 S.P. 3 S.P.	H-S H-S	806.30 806.30	802.00 801.50	3.3 3.8	

S.P. = SPECIAL
MOD. = MODIFIED

STORM SEWER ITEM SUMMARY

TOTALS	
REINFORCED CONCRETE APRON ENDWALL	
FOR CULVERT PIPE, 18"	EACH 2
FOR CULVERT PIPE, 30"	1
FOR CULVERT PIPE, 36"	1
REINFORCED CONCRETE PIPE, CLASS III	
STORM SEWER 12"	L.F. 368
STORM SEWER 18"	1006
STORM SEWER 24"	697
STORM SEWER 30"	61
STORM SEWER 36"	23
INLET, TYPE 1	EACH 1
INLET, TYPE 1, SPECIAL	2
INLET, TYPE 3	7
INLET, TYPE 3, SPECIAL	5
TYPE 1, MODIFIED	7
INLET COVER, TYPE C	3
INLET COVER, TYPE H-S	18
MANHOLE COVER, TYPE J	1

*** ADJUSTING MANHOLE COVERS (GROUP CODE 0030)**

STATION	LOCATION	TYPE	QUANTITY EACH
52+43	CTH K, LT	WATER	1
52+64	CTH K, RT	SANITARY	1
55+45	CTH K, RT	SANITARY	1
58+30	CTH K, RT	SANITARY	1
61+15	CTH K, RT	SANITARY	1
61+50	CTH K, LT	WATER	1
* NON-PARTICIPATING			TOTAL 6

SILT FENCE, DELIVERED, INSTALLED AND MAINTENANCE

LOCATION	INSTALLED AND DELIVERED L.F.	MAINTENANCE L.F.
33+45-34+50 LT/RT	200	100
57+00-58+50 LT/RT	260	130
VARIOUS	150	75
TOTAL	610	305

PAVEMENT MARKING, 4 INCH, EPOXY

LOCATION	DOUBLE YELLOW CENTERLINE L.F.	DASHED WHITE L.F.
33+45-61+75	5660	1415
TOTAL	7075	

SAWING EXISTING PAVEMENT

LOCATION	L.F.
33+45	48
45+62, LT	36
46+72, RT	26
TOTAL	110

EROSION MAT, DELIVERED AND INSTALLED

LOCATION	EROSION MAT, CLASS I, TYPE A S.Y.
STA 33+45 - 34+20 LT/RT	100
STA 57+50 - 58+50 LT/RT	200
MISCELLANEOUS	50
TOTAL	350

INLET PROTECTION

LOCATION	TYPE A EACH	TYPE C EACH
CTH K	22	17

*** SEALING JOINTS (GROUP CODE 0030)**

STATION-STATION	LOCATION	QUANTITY S.Y.
34+00-61+75	CTH K	13570
* NON-PARTICIPATING		

LANDMARK REFERENCE MONUMENTS

STATION	LOCATION	SECTION	QUANTITY EACH
60+12.852	0.329' RT, CTH K	S 1/4 COR. SEC 29	4

CONSTRUCTION STAKING

STATION-STATION	LOCATION	INITIAL LAYOUT L.F.	SUBGRADE L.F.	CONCRETE PAVEMENT L.F.	STORM SEWER EACH
33+45-61+75	CTH K	2830	2830	-	-
34+00-61+75	CTH K	-	-	2775	26

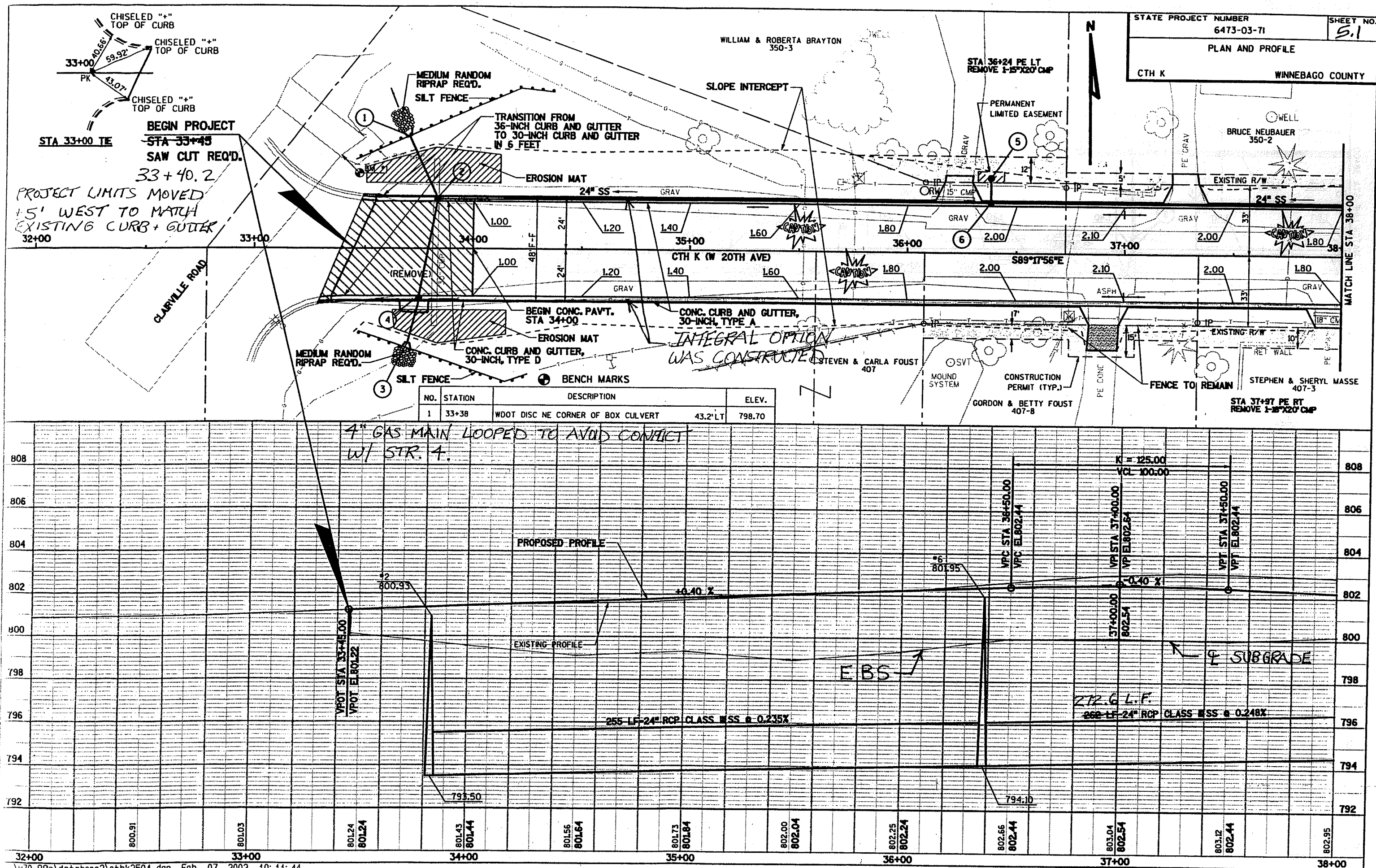
POLYSTYRENE INSULATION BOARD, 2-INCH

STATION	LOCATION	QUANTITY S.F.	REMARKS
54+58	CTH K, LT	32	BETWEEN WATERMAIN AND STORM SEWER
57+45	CTH K, LT	32	BETWEEN WATERMAIN AND STORM SEWER
60+25	CTH K, LT	32	BETWEEN WATERMAIN AND STORM SEWER
TOTAL		96	

TRAFFIC CONTROL, DRUMS

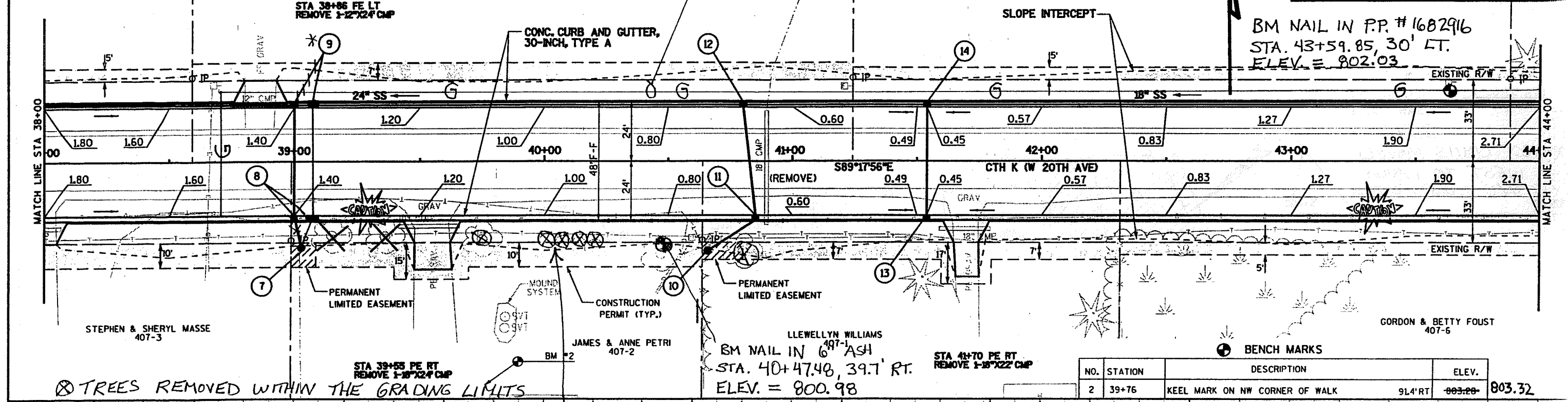
LOCATION	SERVICE PERIOD	DRUMS EACH	QUANTITY DAYS
CTH K	30	40	1200

NOTE:
TRAFFIC CONTROL DRUMS SHALL ONLY BE USED WITHIN THE PROJECT LIMITS. TRAFFIC CONTROL FOR "ROAD CLOSED TO THRU TRAFFIC" SHALL BE ACCORDING TO S.D.D. 15C2-3 AND PAID FOR UNDER THE LUMP SUM ITEM.

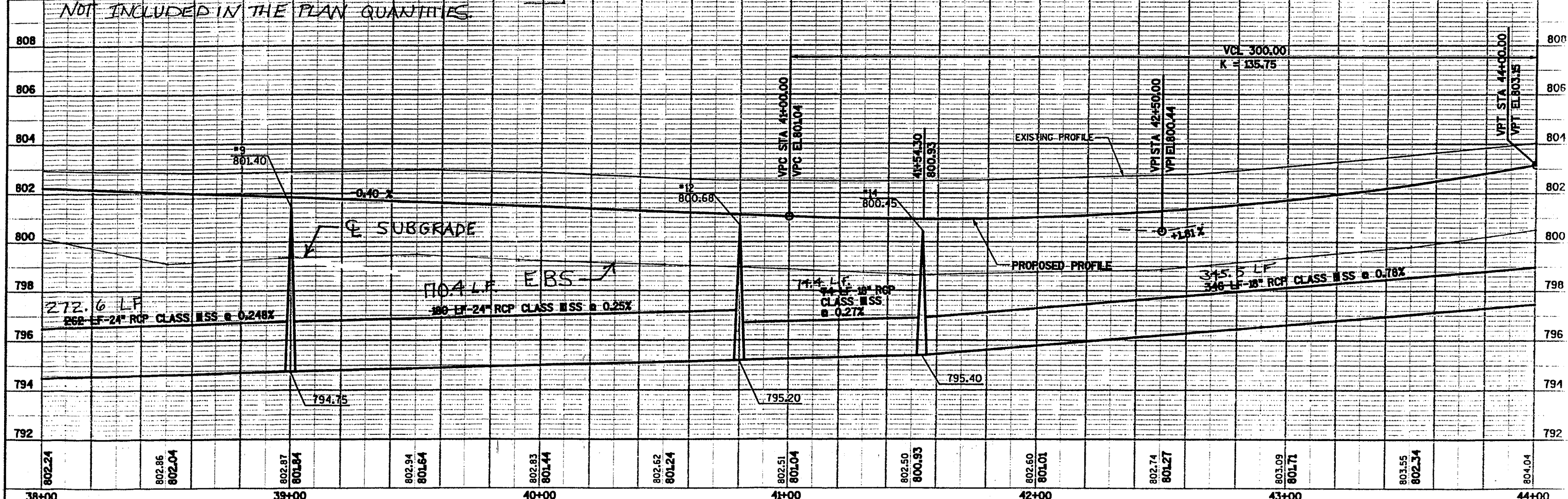


* STR. 8+9 MOVED 10' EAST AS A RESULT OF A CONFLICT WITH THE C.E., STA. 38+86 LT.

RELOCATED 4" GAS MAIN PLACED 4'-5' BEHIND CURB + GUTTER.



NO.	STATION	DESCRIPTION	ELEV.
2	39+76	KEEL MARK ON NW CORNER OF WALK	803.28



\\w70-98a\dotphase2\cthk2503.dgn Feb. 07, 2002 10: 12: 31

BM TAG BOLT OF HYDRANT
STA. 53+80 LT.
ELEV. = 808.61

Hydrant and WV MH
SHOWN IN WRONG
LOCATION. CORRECT
LOCATION @ STA. 53+80.

THOMAS RUSCH

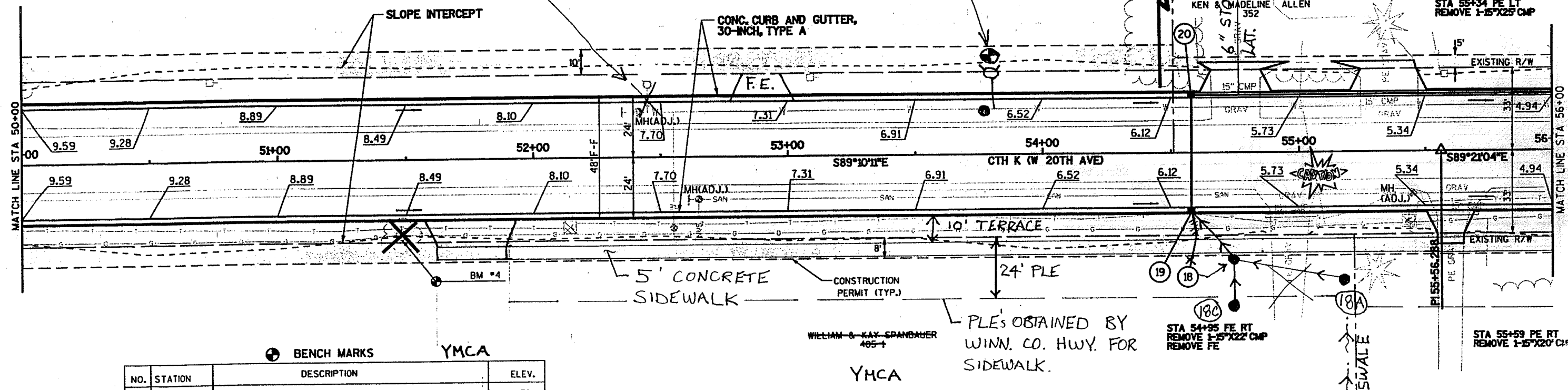
F.E. STA. 52+90, LT.

STA 54+73 PE LT
REMOVE 1-15"x22" CMP

(20A)

KEN & MADELINE
352
16" ST.
LAT.

STA 55+34 PE LT
REMOVE 1-15"x25" CMP



BENCH MARKS

YMCA

YMCA

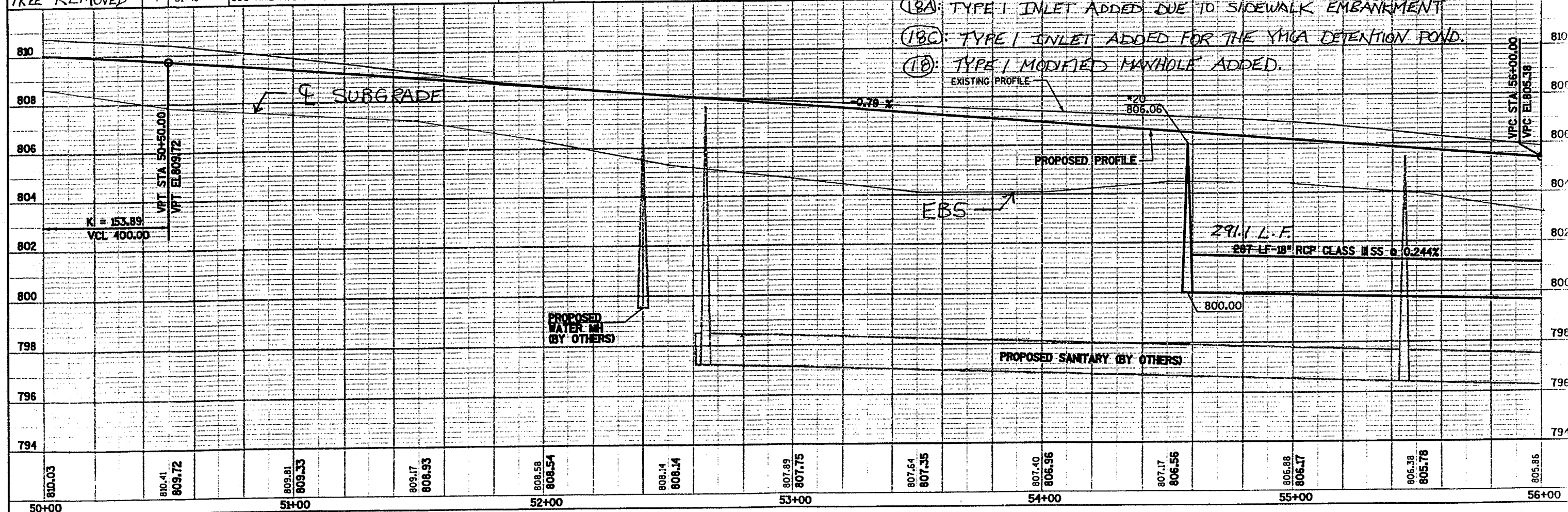
PLE'S OBTAINED BY
WINN. CO. HWY. FOR
SIDEWALK.

STA 54+95 FE RT
REMOVE 1-15"x22" CMP
REMOVE FE

STA 55+59 PE RT
REMOVE 1-15"x20" CMP

NO.	STATION	DESCRIPTION	ELEV.
1	51+48	60d NAIL IN 3" DIA OAK	32.2' RT 810.39

TREE REMOVED



- (18A): TYPE 1 INLET ADDED DUE TO SIDEWALK EMBANKMENT
- (18B): TYPE 1 INLET ADDED FOR THE YMCA DETENTION POND.
- (18C): TYPE 1 MODIFIED MANHOLE ADDED.

BM TAG BOLT HYDRANT
STA. 56+95.32, LT.
ELEV. = 805.16

MEDIUM RANDOM
RIPRAP (TYP.)

SILT FENCE

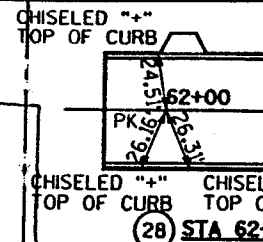
PERMANENT
LIMITED EASEMENT

SILT FENCE

CONC. CURB AND GUTTER,
30-INCH, TYPE A

TOM RUSCH
351

S. 1/4 COR. SEC. 29



STATE PROJECT NUMBER 6473-03-71	SHEET NO. 5.5
PLAN AND PROFILE	
CTH K	WINNEBAGO COUNTY

LYLE & ELLA BECK
355

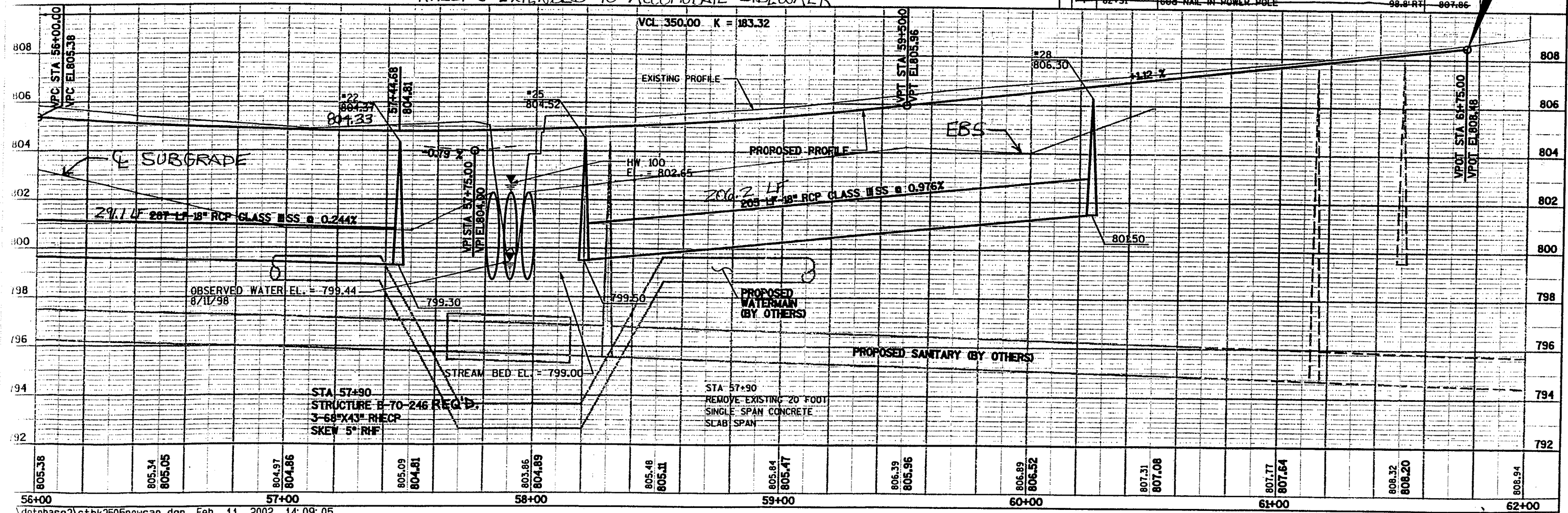
EXISTING R/W

END PROJECT
STA 61+75

NO.	STATION	DESCRIPTION	ELEV.
5	56+39	60d NAIL IN 3" DIA OAK	44.0' LT 804.80
6	57+04	1/2" INCH DIA NUT IN CONC. SW CORNER OF BRIDGE 17.7' RT	804.73
7	62+31	60d NAIL IN POWER POLE	98.8' RT 807.86

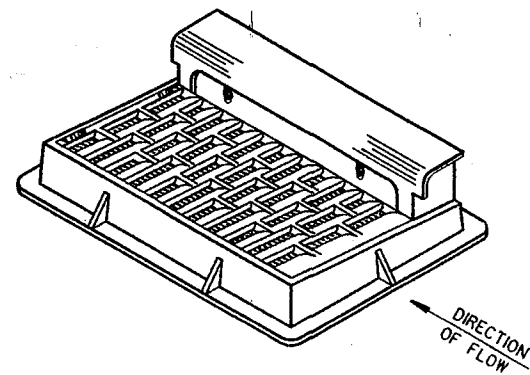
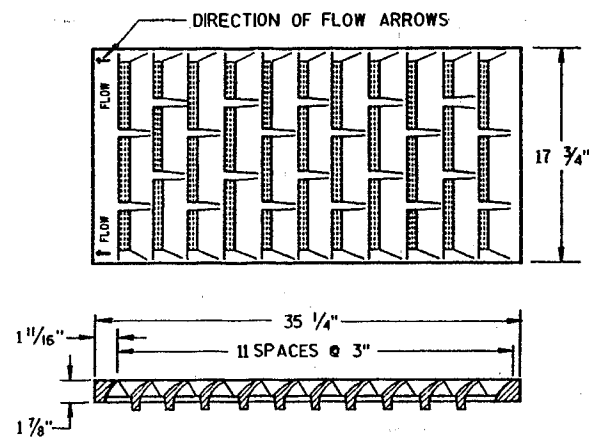
804.89

RHECP'S EXTENDED TO ACCOMMODATE SIDEWALK

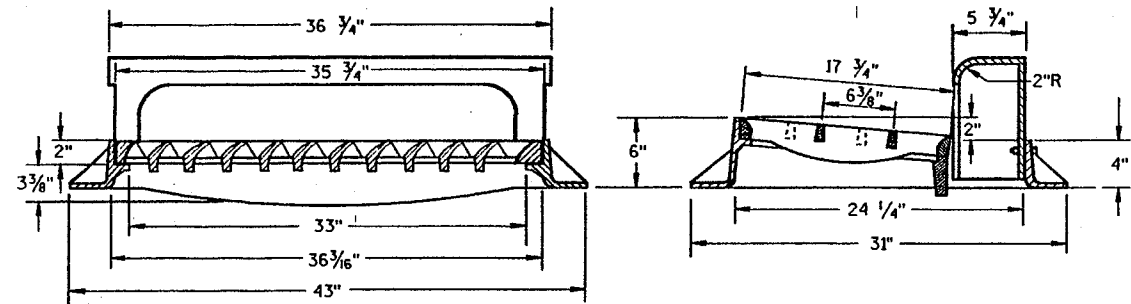


56+00 57+00 58+00 59+00 60+00 61+00 62+00

NOTE:
GRATE IS REVERSIBLE.



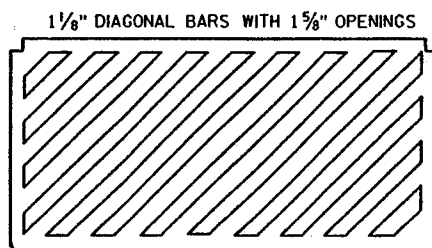
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



TYPE "H"

(APPROXIMATE WEIGHT 422 LBS.)

FRAME..... 175 LBS.
GRATE..... 138 LBS.
CURB BOX..... 109 LBS.



SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(APPROXIMATE WEIGHT 172 LBS.)

GRATE..... 172 LBS.

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

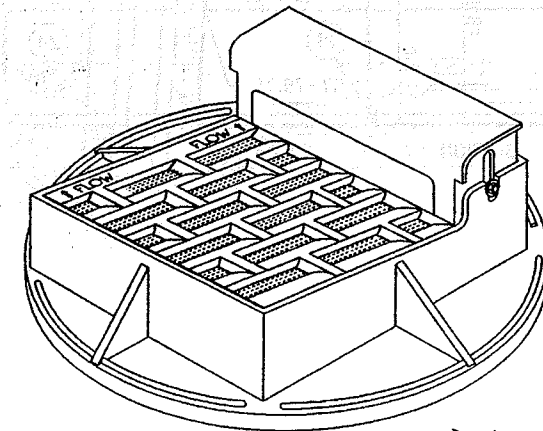
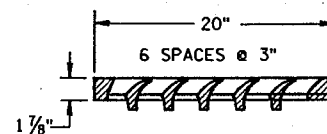
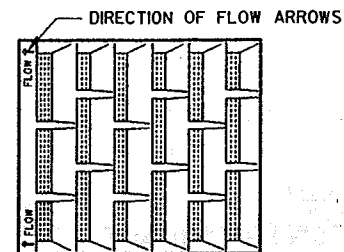
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

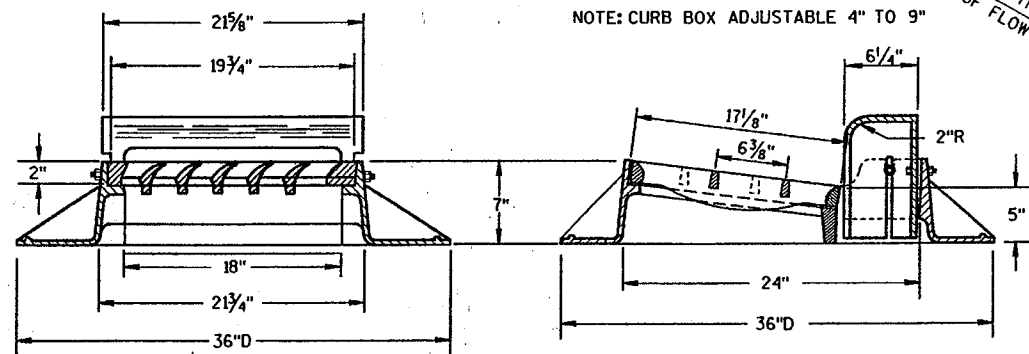
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



NOTE: CURB BOX ADJUSTABLE 4" TO 9"



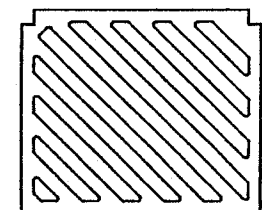
TYPE "A"

(APPROXIMATE WEIGHT 325 LBS.)

FRAME..... 157 LBS.
GRATE..... 84 LBS.
CURB BOX..... 84 LBS.

NOTE:
GRATE IS REVERSIBLE.

1" DIAGONAL BARS
WITH 1 1/2" OPENINGS



SPECIAL GRATE FOR TYPE "A" COVER

(MEASURES 19 3/4" X 17" X 1 1/8")

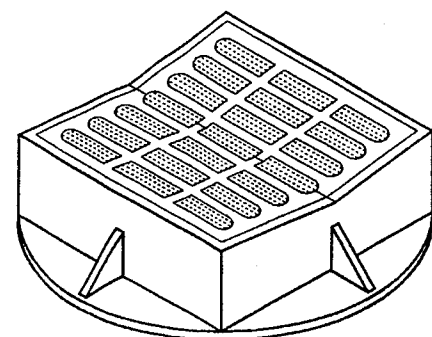
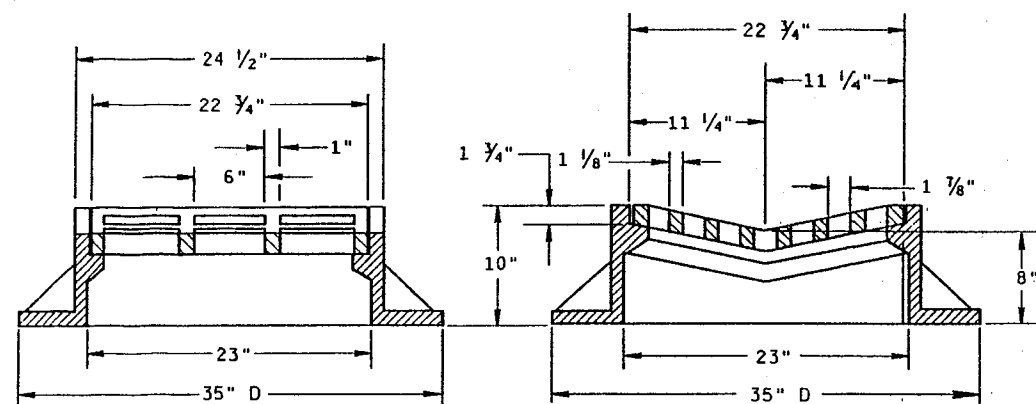
GRATE..... 84 LBS.

(NOTED AS TYPE A-S ON DRAINAGE TABLE)

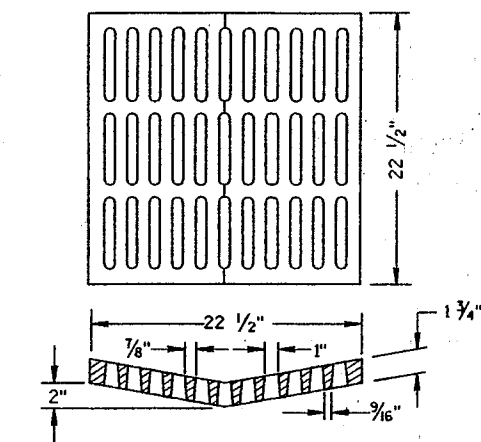
INLET COVERS
TYPE A, H, A-S, & H-S

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/04/99
DATE
FHW
Chief Roadway Development Engineer

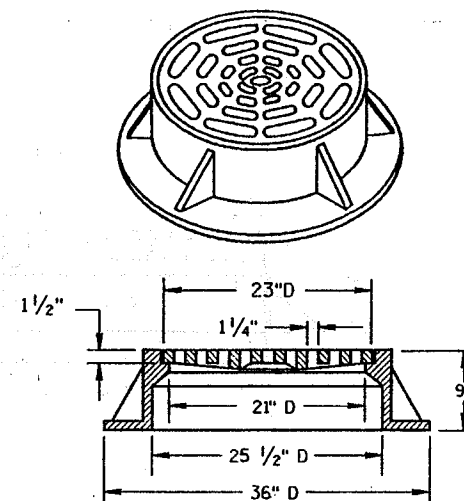


TYPE "B"
(APPROXIMATE WEIGHT 395 LBS.)
FRAME..... 285 LBS.
GRATE..... 110 LBS.



**ALTERNATIVE GRATE FOR
TYPE "B" COVER**

(APPROXIMATE GRATE WEIGHT 125 LBS.)
GRATE.....125 LBS.
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"
(APPROXIMATE WEIGHT 340 LBS.)
FRAME..... 235 LBS.
GRATE..... 105 LBS.

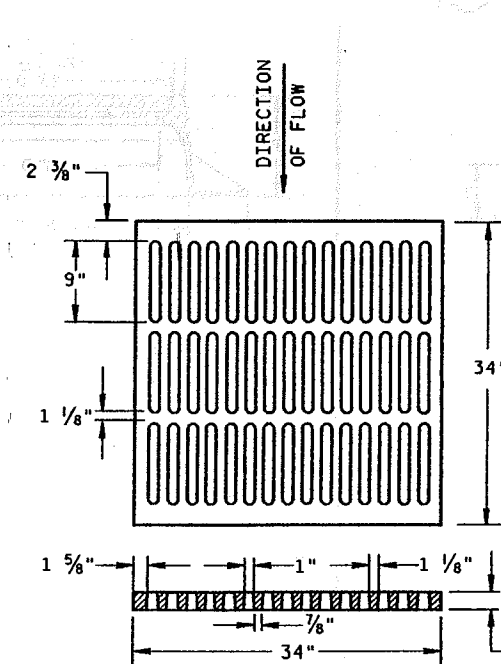
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

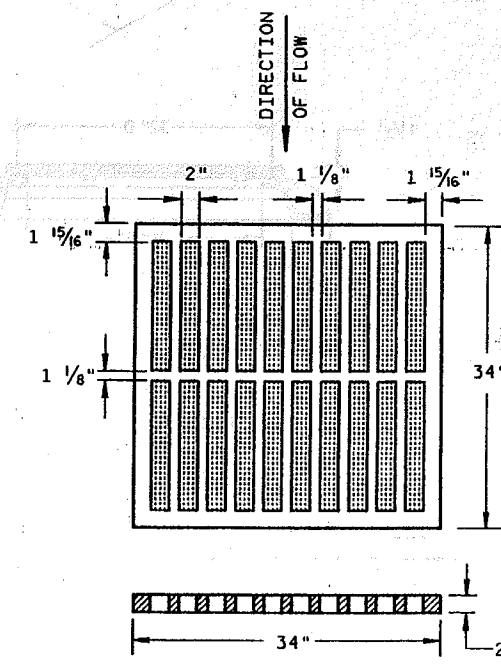
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.

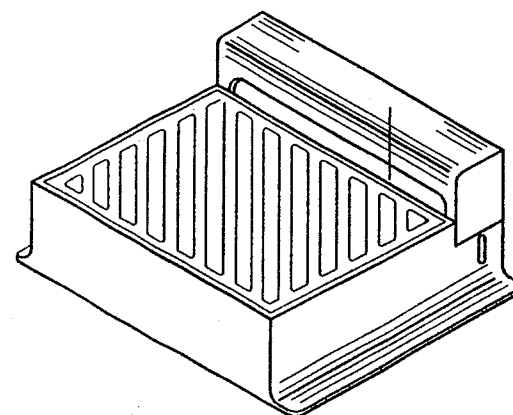


ALTERNATIVE TYPE "MS"
(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE.....365 LBS.

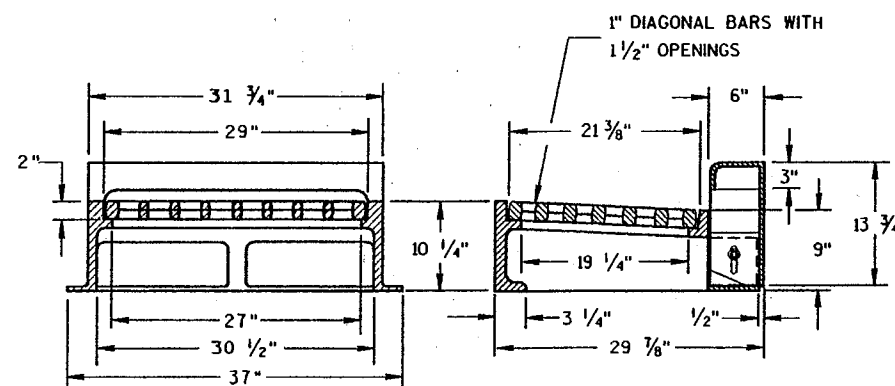
USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE



TYPE "MS"
(APPROXIMATE GRATE WEIGHT 270 LBS.)
GRATE.....270 LBS.
USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED
TO THE DIRECTION OF FLOW AS ILLUSTRATED.
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



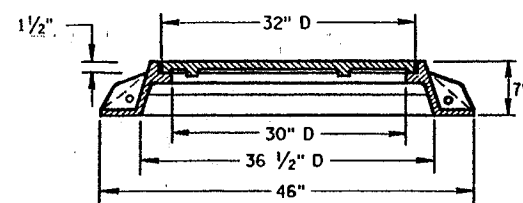
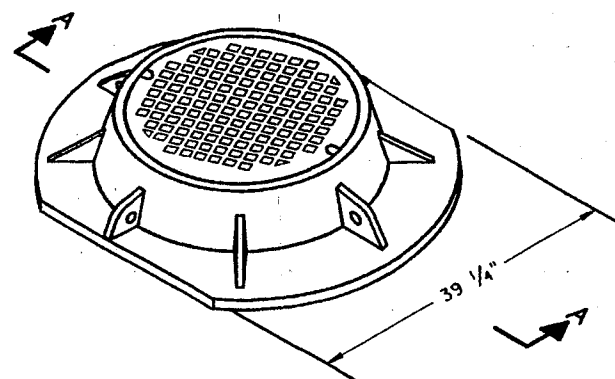
TYPE "WM"
(APPROXIMATE WEIGHT 670 LBS.)
FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

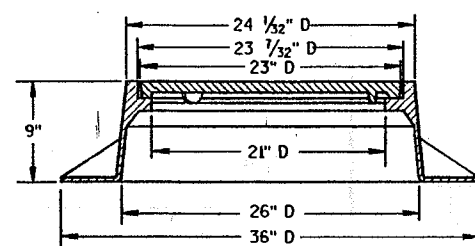
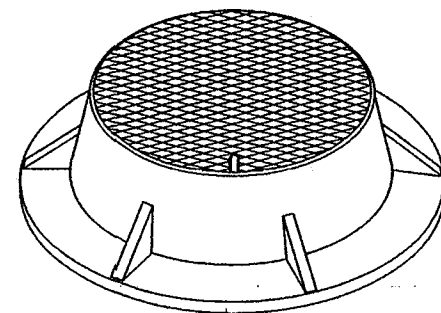
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

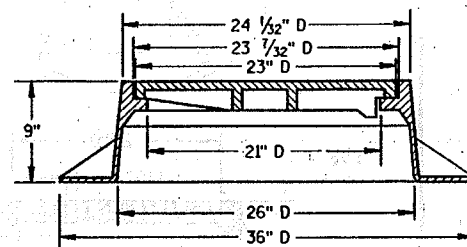
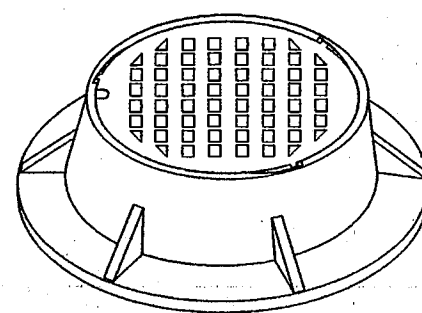
APPROVED
10/04/99
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



SECTION A-A
TYPE "K"
(APPROXIMATE WEIGHT 415 LBS.)
FRAME.....210 LBS.
LID.....205 LBS.



TYPE "J"
(APPROXIMATE WEIGHT 250 LBS.)
FRAME.....135 LBS.
LID.....115 LBS.



TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(APPROXIMATE WEIGHT 245 LBS.)
FRAME.....145 LBS.
LID.....100 LBS.
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

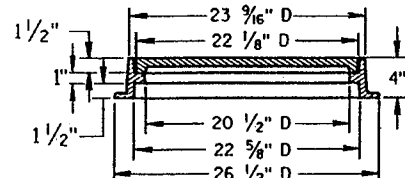
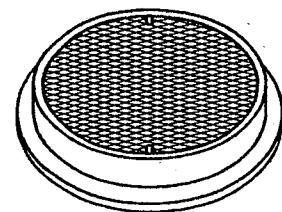
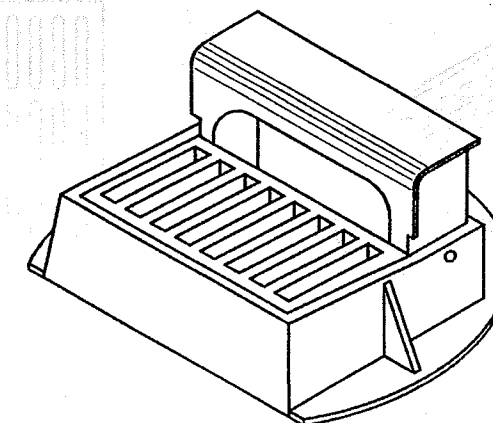
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

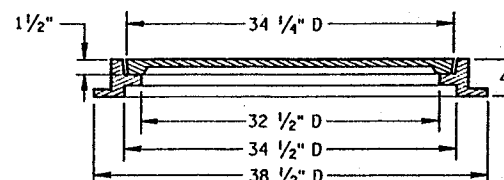
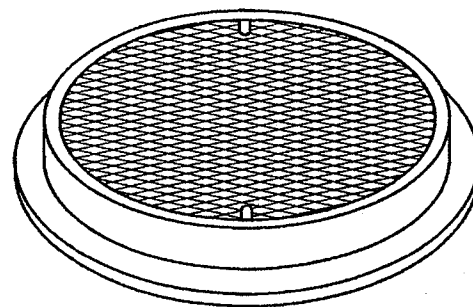
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

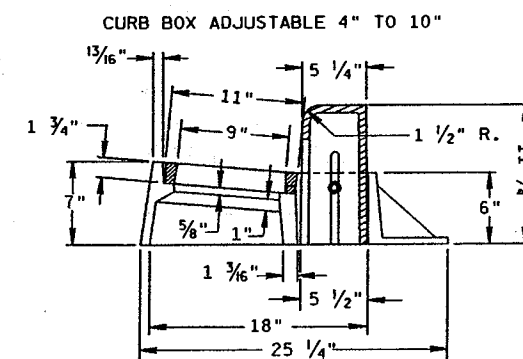
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



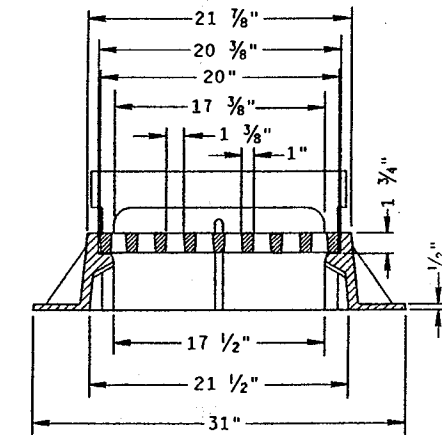
TYPE "L"
(APPROXIMATE WEIGHT 145 LBS.)
FRAME.....75*
LID.....70*



TYPE "M"
(APPROXIMATE WEIGHT 385 LBS.)
FRAME.....125*
LID.....260*



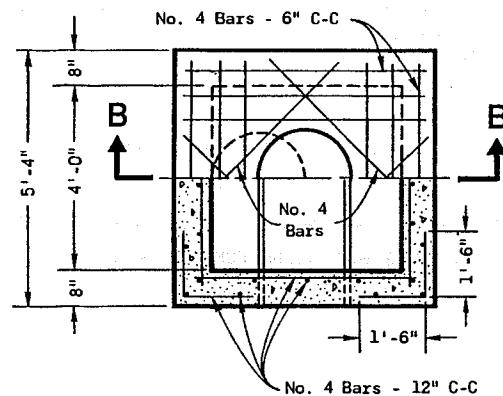
INLET COVER TYPE "Z"
(APPROXIMATE WEIGHT 340 LBS.)
FRAME.....198 LBS.
GRATE.....50 LBS.
CURB BOX.....92 LBS.



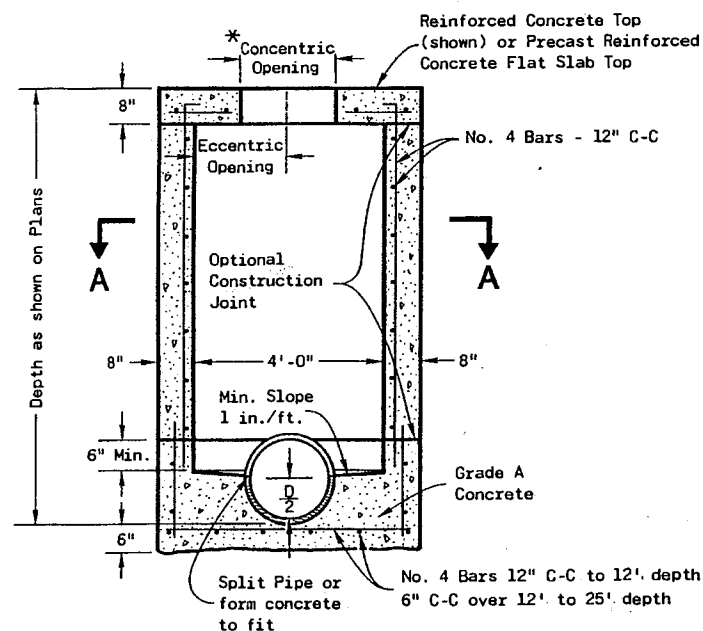
INLET COVER, TYPE Z
MANHOLE COVERS, TYPE
K, J, J-S, L & M

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

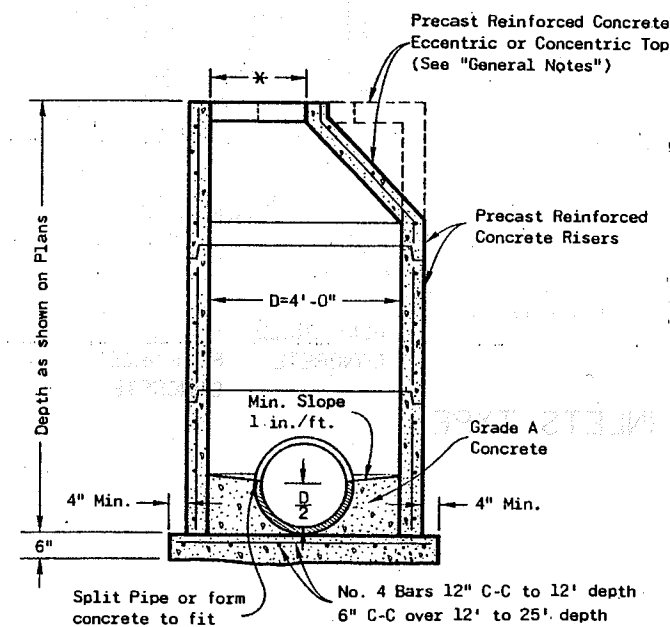
APPROVED
10/04/99
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



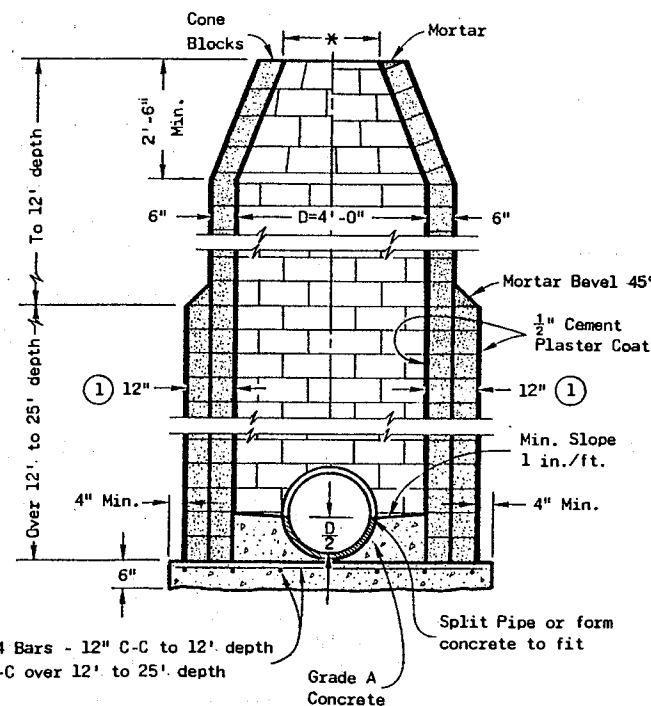
HALF SECTION A-A



SECTION B-B
REINFORCED CONCRETE



PRECAST REINFORCED CONCRETE



CONCRETE BLOCK

GENERAL NOTES

Details of construction, materials and workmanship not shown on this drawing shall conform to the pertinent requirements of the Standard Specifications and the applicable Special Provisions.

Detailed drawings for proposed alternate designs for underground drainage structures shall be submitted to the Engineer for approval providing that such alternate designs make provision for equivalent capacity and strength.

All drainage structures are designated on the plans as "Manholes 1-C", "Catch Basins 1-B", "Inlets 3-H", etc. The first digit designates the masonry portion of the structure, and the following letter designates the type of cover to be used to comprise the complete unit.

Precast Reinforced Bases shall be placed on a bed of material at least 6 inches in depth, which meets the requirements for Granular Backfill. This bedding shall be compacted and provide uniform support for the entire area of the base.

Precast Reinforced Concrete Cone Tops (Eccentric or Concentric) may be used on concrete block structures. The Cone Tops shall be installed on a bed of mortar.

Eccentric Cone Tops may be used on all structures, and Concentric Cone Tops shall be used only on structures 5 feet or less in depth, unless otherwise directed by the Engineer.

Steps meeting the following requirements shall be installed in all structures over 5 feet in depth: 16 inch C-C maximum spacing; project a minimum clear distance of 4 inches from the wall at the point of embedment; minimum length of 10 inches; minimum wall embedment of 3 inches; and be capable of supporting a concentrated load of 300 lbs. Ferrous metal steps not painted or treated to resist corrosion shall have a minimum cross sectional dimension of 1 inch.

Solid Aluminum steps shall have a minimum cross sectional dimension of 0.75 inch. Aluminum surfaces to be embedded in concrete shall be given one coat of suitable quality paint, such as zinc chromate primer conforming to Federal Specification TT-P-645 or equivalent. Steps of approved Polypropylene plastic coated reinforcement bar will be acceptable.

All bar steel reinforcement shall be embedded 2 inches clear unless otherwise shown or noted.

Precast Reinforced Concrete Risers may be placed with tongue up or down.

All Precast Inlet Units shall conform to the pertinent requirements of AASHTO Designation M 199.

* Use 2'-0" diameter opening with Type "C", "L" and "J" covers, or 3'-0" diameter with Type "K" and "M" covers.

① 2 courses 6" block.

MANHOLES TYPE 1

MANHOLES TYPE 1

State of Wisconsin
Department of Transportation

APPROVED
4-13-82
DATE

D. J. Strand
CHIEF DESIGN ENGINEER

FWA

S.D.D. 8 B 6-3

The image contains three technical drawings of manhole construction methods, each with detailed dimensions and labels.

- MONOLITHIC CONCRETE:** Shows a cross-section of a manhole wall and base. The wall thickness is 6 inches. The base is 6 inches thick. A discharge pipe is shown with a 6-inch minimum clearance from the wall. The construction joint is only on the cast-in-place concrete.
- CONCRETE BLOCK:** Shows a cross-section of a manhole wall and base. The wall is constructed from concrete blocks with a 1/2-inch cement plaster coat. The block height is 6 inches minimum. The base is 6 inches thick. A discharge pipe is shown with a 6-inch minimum clearance from the wall. The construction joint is only on the cast-in-place concrete.
- REINFORCED CONCRETE:** Shows a cross-section of a manhole wall and base. The wall thickness is 6 inches. The base is 6 inches thick. A discharge pipe is shown with a 6-inch minimum clearance from the wall. The construction joint is only on the cast-in-place concrete.
- PRECAST REINFORCED CONCRETE:** Shows a cross-section of a manhole wall and base. The wall thickness is 6 inches. The base is 6 inches thick. A discharge pipe is shown with a 6-inch minimum clearance from the wall. The construction joint is only on the cast-in-place concrete.

Common dimensions and labels across the drawings include:

- 6" MIN. (wall and base thicknesses)
- 6" (discharge pipe clearance)
- CONSTRUCTION JOINT ONLY ON CAST-IN-PLACE
- WELDED WIRE FABRIC 6 X 6- W2.9 X W2.9
- 1'-0" (overall height)
- 5" (overall width)
- 4" MIN. (discharge pipe offset)
- 1'-3" (discharge pipe diameter)
- MORTAR (around discharge pipe)
- SEE DETAIL (pointing to a specific joint)

PRECAST REINFORCED
CONCRETE FLAT SLAB TOP

A

2

NO. 4 BARS 4" C-C

PLAN VIEW

PRECAST REINFORCED
CONCRETE FLAT SLAB TOP

B

2

NO. 4 BARS 4" C-C

PLAN VIEW

PLAN VIEW

PLAN VIEW

PLAN VIEW

PLAN VIEW

[illegible]

SECTION A-A

SECTION B-B

INLETS TYPE 2, 3 & 4

[illegible]

SECTION C-C

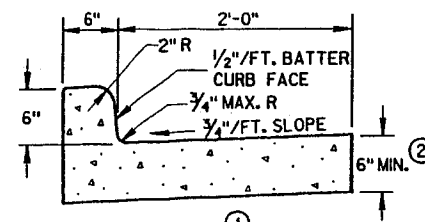
SECTION D-D

② USE 2'-0" OPENING FOR TYPE 1, 2 & 3 INLETS, 2'-6 1/2" OPENING FOR TYPE 4 INLETS.

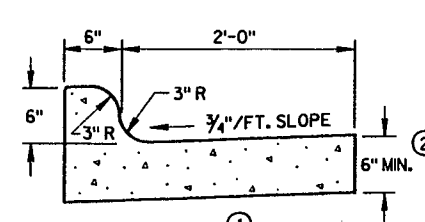
APPROVED
8/26/94
DATE

Roy L. Thomsen
CHIEF, ROADWAY DEVELOPMENT ENGINEER

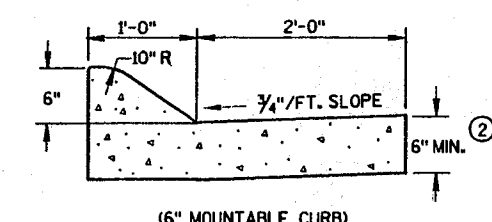
S.D.D. 8 C 1



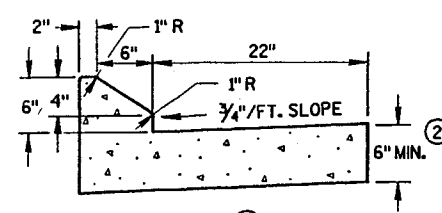
TYPES A & D



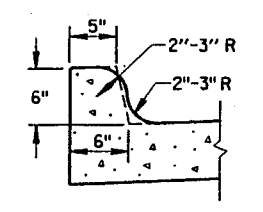
TYPES K & L



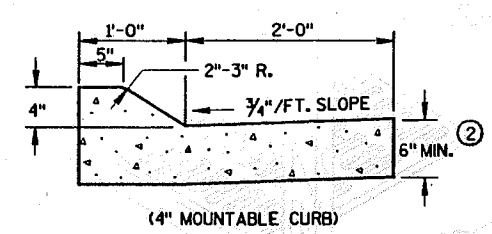
(6" MOUNTABLE CURB)



TYPES G & J



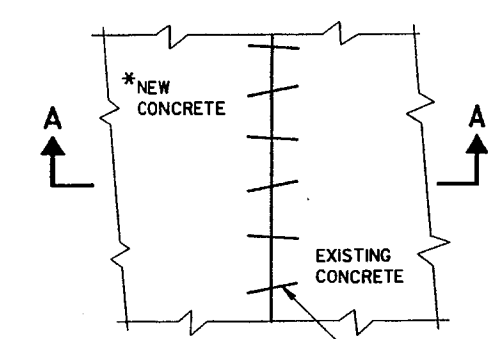
OPTIONAL CURB SHAPE
FOR TYPES K & L



(4" MOUNTABLE CURB)

TYPES A & D
CONCRETE CURB & GUTTER 36"

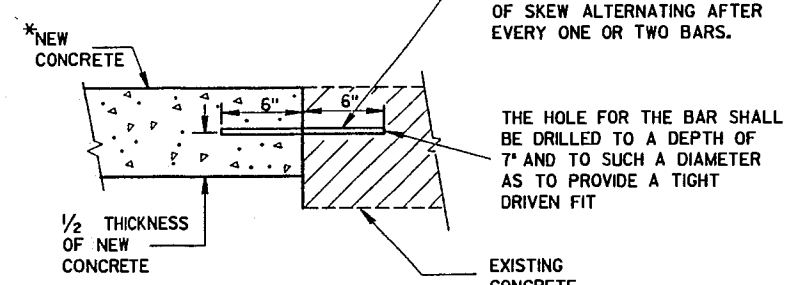
CONCRETE CURB & GUTTER 30"



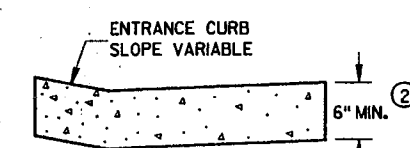
PLAN VIEW

*NEW CURB & GUTTER,
SURFACE DRAINS,
CONCRETE PAVEMENT
OR OTHER NEW CONCRETE.

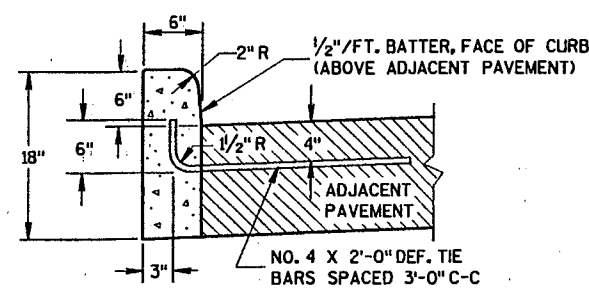
NO. 6 X 12" DEF. BARS
SPACED 3'-0" C-C,
INSTALLED ON 6:1 SKEW
HORIZONTALLY. DIRECTION
OF SKEW ALTERNATING AFTER
EVERY ONE OR TWO BARS.



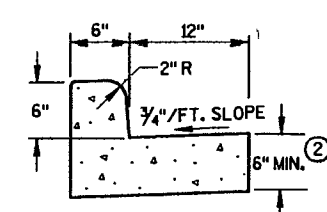
SECTION A-A
PAVEMENT TIES



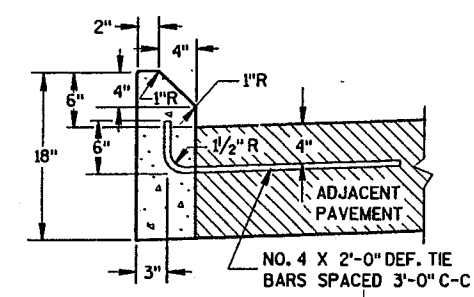
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



TYPES A & D



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J

CONCRETE CURB

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

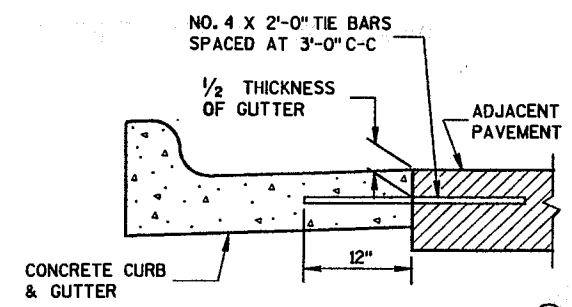
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

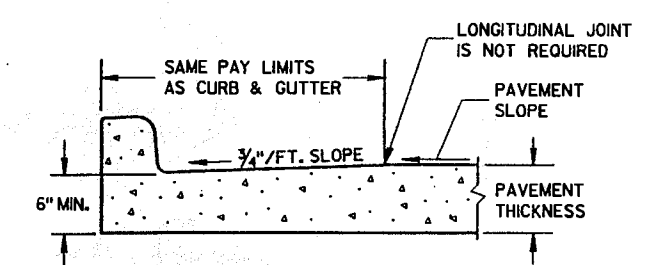
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE COURSE AND UNCLASSIFIED EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

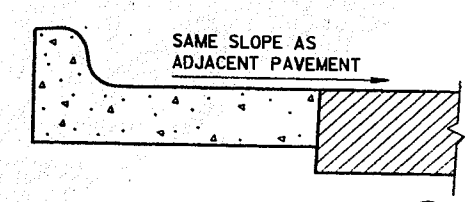
- TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G AND K.
- THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE COURSE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



TYPICAL TIE BAR LOCATION



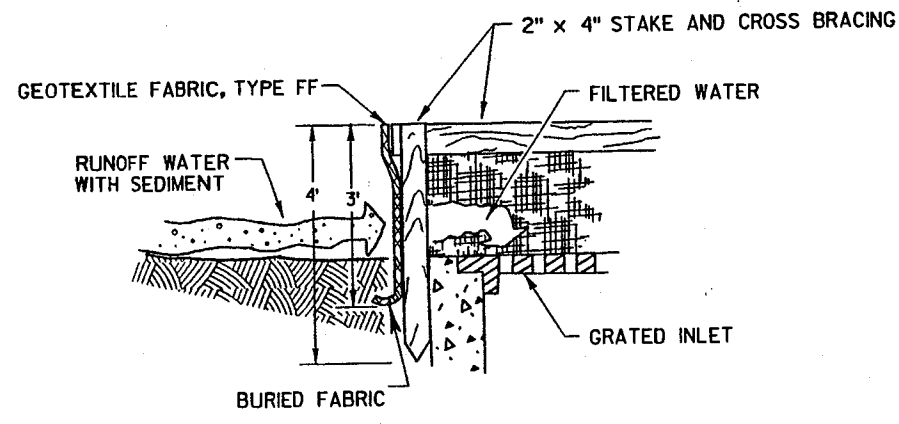
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



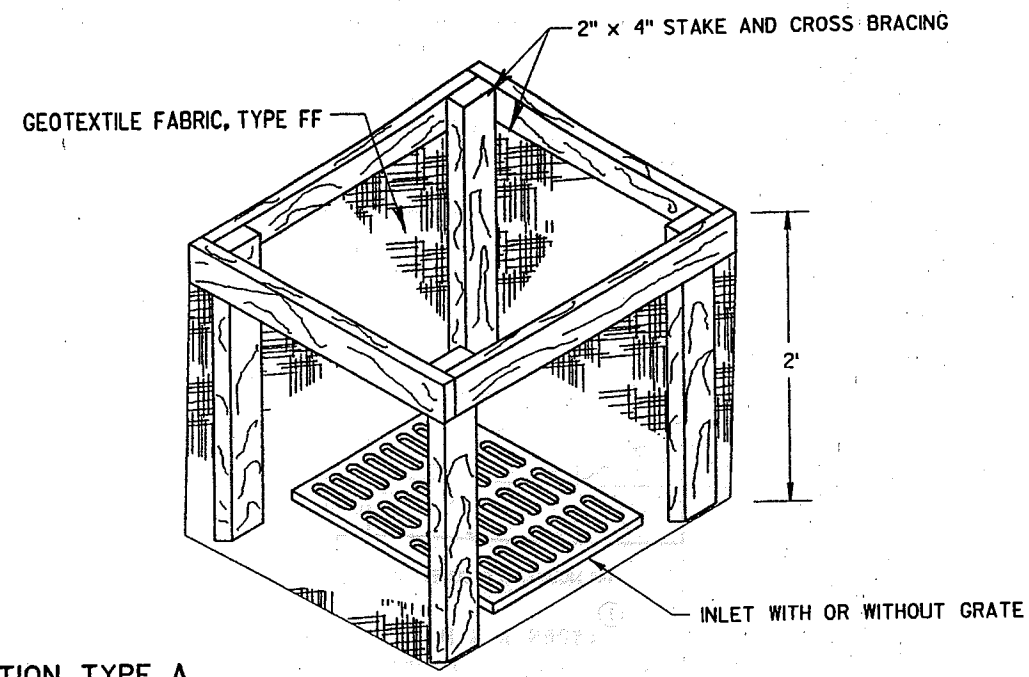
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 04/16/99 DATE	CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

NOTE: ATTACH GEOTEXTILE FABRIC, TYPE FF TO THE TOP OF STAKES AND CROSS BRACINGS.



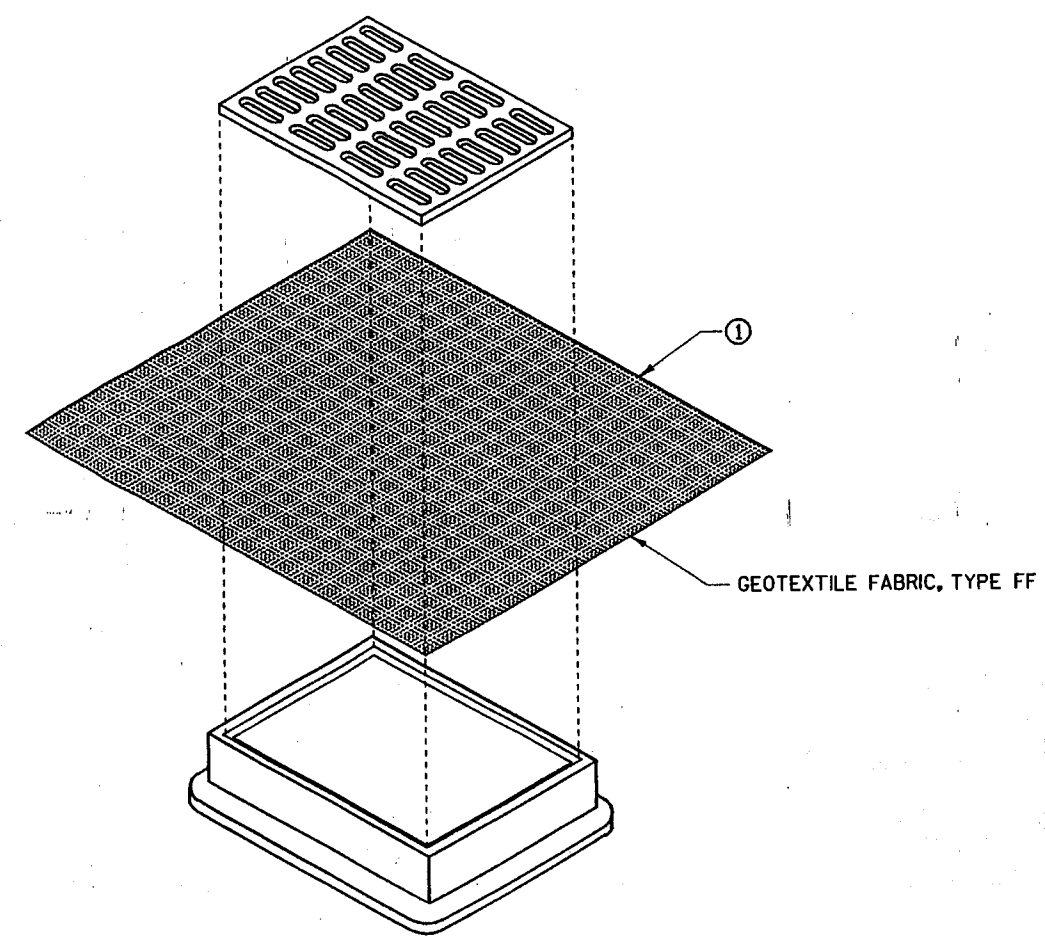
INLET PROTECTION, TYPE A



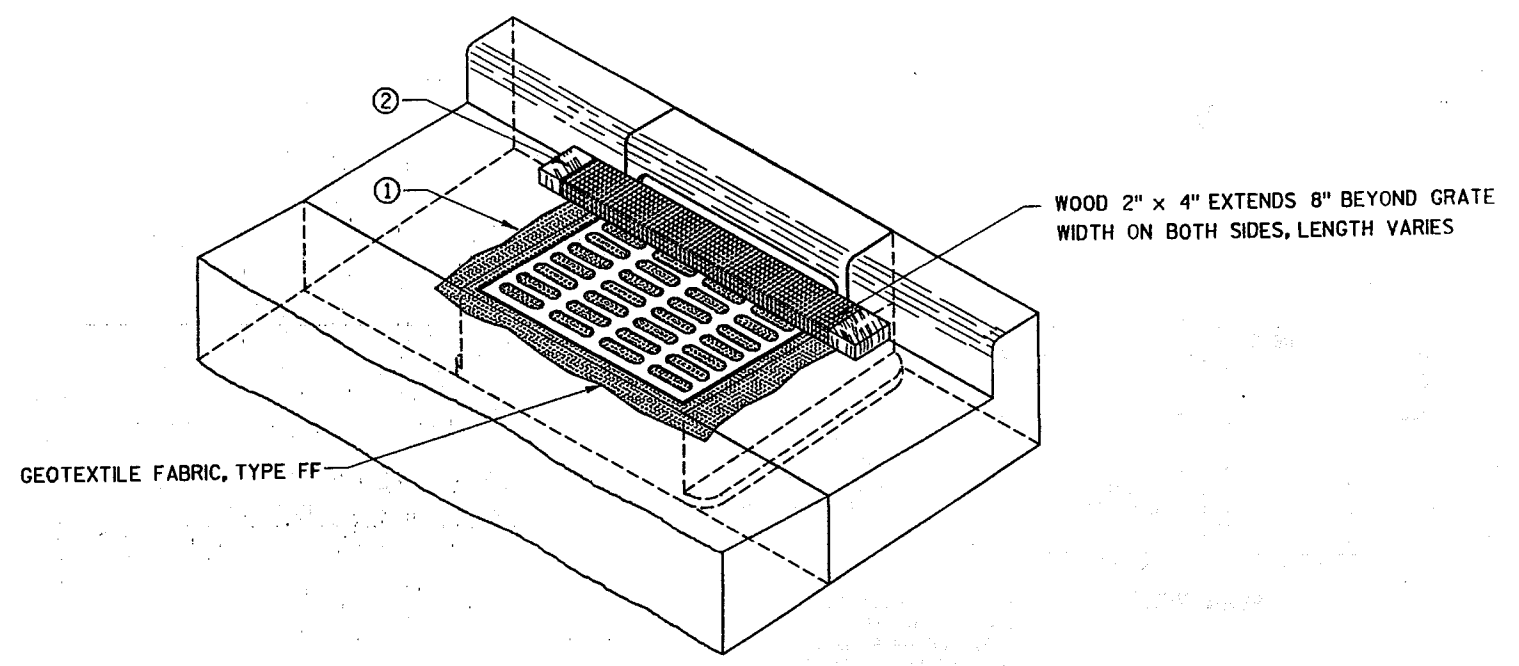
GENERAL NOTES:

FABRIC SHALL BE REPLACED AT THE ENGINEERS DISCRETION.
THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX.
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FABRIC SIZE SHALL BE 8" (MIN) GREATER ON ALL SIDES OF THE INLET COVER TO PROVIDE A HAND HOLD WHEN MAINTENANCE OR REMOVAL IS REQUIRED.
- ② FOR INLET PROTECTION, TYPE C, WITH A CURB BOX, AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES.

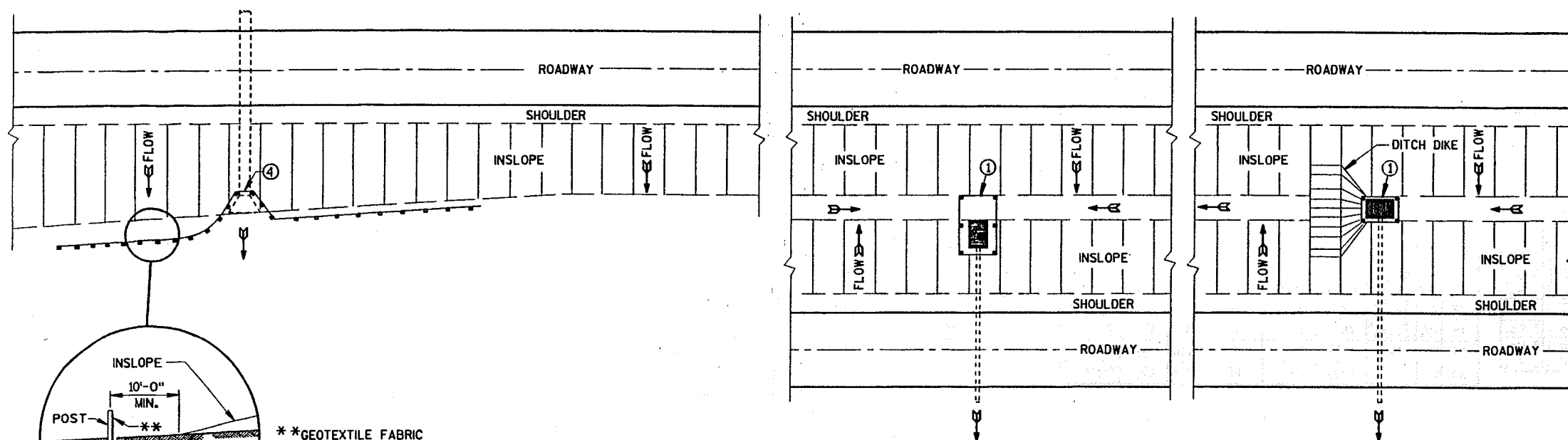


INLET PROTECTION, TYPE B (WITHOUT CURB BOX)
(CAN BE INSTALLED ON ANY INLET TYPE)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INLET PROTECTION TYPE A, B AND C	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 03/06/00 DATE	<i>Joey L. Johnson</i> CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



SITUATION 1

SITUATION 2

PLAN VIEW

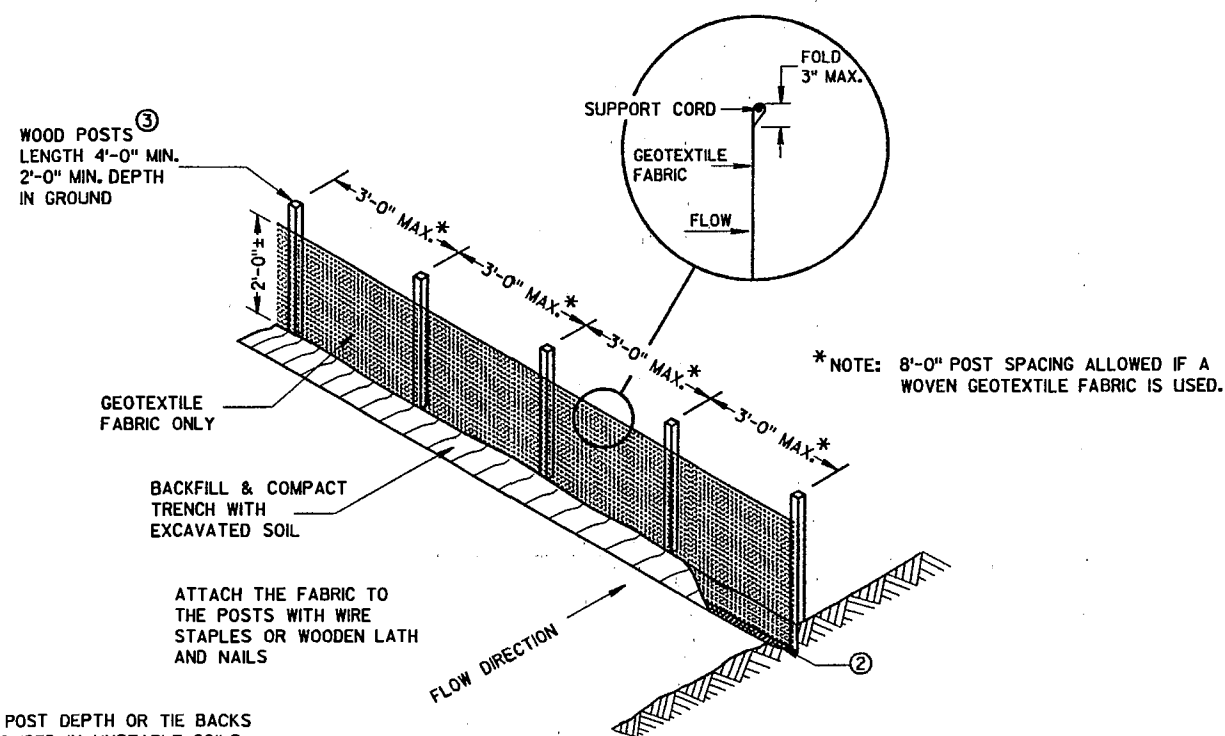
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

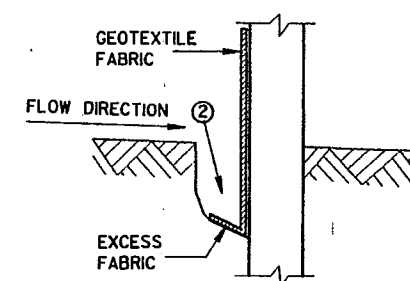
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

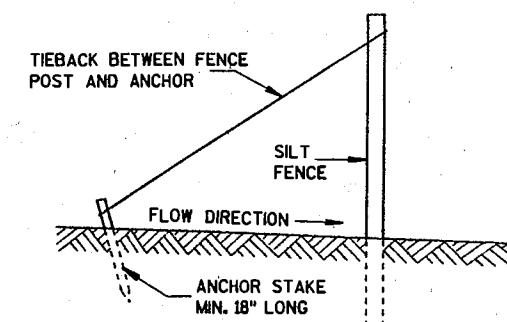
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 03/06/00
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

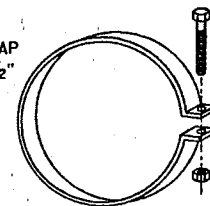
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.	

* EXCEPT CENTER PANEL
SEE GENERAL NOTES

REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)						APPROX. SLOPE	
	T	A	B	C	D	E		G
12	2	4	24	48 $\frac{1}{8}$	72 $\frac{7}{8}$	24	2	3 to 1
15	2 $\frac{1}{4}$	6	27	46	73	30	2 $\frac{1}{4}$	3 to 1
18	2 $\frac{1}{2}$	9	27	46	73	36	2 $\frac{1}{2}$	3 to 1
21	2 $\frac{3}{4}$	9	36	37 $\frac{1}{2}$	73 $\frac{1}{2}$	42	2 $\frac{3}{4}$	3 to 1
24	3	9 $\frac{1}{2}$	43 $\frac{1}{2}$	30	73 $\frac{1}{2}$	48	3	3 to 1
27	3 $\frac{1}{4}$	10 $\frac{1}{2}$	49 $\frac{1}{2}$	24	73 $\frac{1}{2}$	54	3 $\frac{1}{4}$	3 to 1
30	3 $\frac{1}{2}$	12	54	19 $\frac{1}{4}$	73 $\frac{1}{2}$	60	3 $\frac{1}{2}$	3 to 1
36	4	15	63	34 $\frac{3}{4}$	97 $\frac{3}{4}$	72	4	3 to 1
42	4 $\frac{1}{2}$	21	63	35	98	78	4 $\frac{1}{2}$	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 $\frac{1}{2}$	27	65	* 33 $\frac{1}{4}$ -35	* 98 $\frac{1}{4}$ -100	90	5 $\frac{1}{2}$	2 $\frac{1}{2}$ to 1
60	6	* 30-35	60	39	99	96	5	2 to 1
66	6 $\frac{1}{2}$	* 24-30	* 72-78	* 21-27	99	102	5 $\frac{1}{2}$	2 to 1
72	7	* 24-36	78	21	99	108	6	2 to 1
78	7 $\frac{1}{2}$	* 24-36	78	21	99	114	6 $\frac{1}{2}$	2 to 1
84	8	36	90 $\frac{1}{2}$	21	111 $\frac{1}{2}$	120	6 $\frac{1}{2}$	1 $\frac{1}{2}$ to 1
90	8 $\frac{1}{2}$	41	87 $\frac{1}{2}$	24	111 $\frac{1}{2}$	132	6 $\frac{1}{2}$	1 $\frac{1}{2}$ to 1

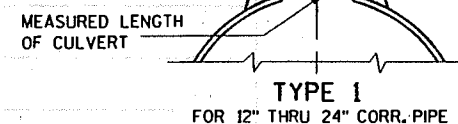
* MINIMUM
** MAXIMUM

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT

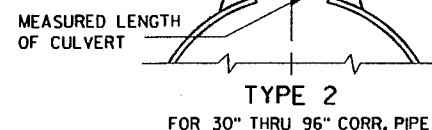


ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP

THREADED 3/16" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



MEASURED LENGTH OF CULVERT



MEASURED LENGTH OF CULVERT

TYPE 3
FOR 42" THRU 96" CORR. PIPE

DIMPLED OR CORRUGATED COUPLING BAND

RIVETED OR BOLTED AT DIMPLES (6" C-C FOR CORRUGATED BAND)

TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

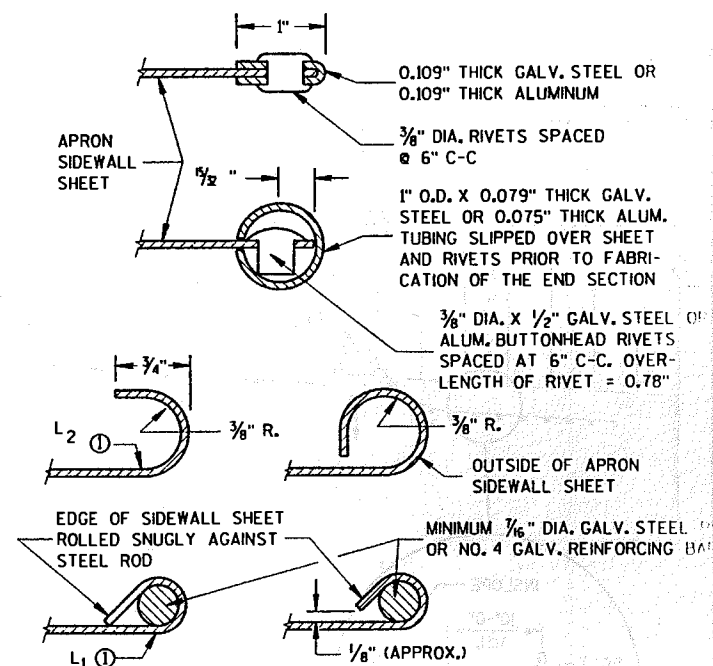
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

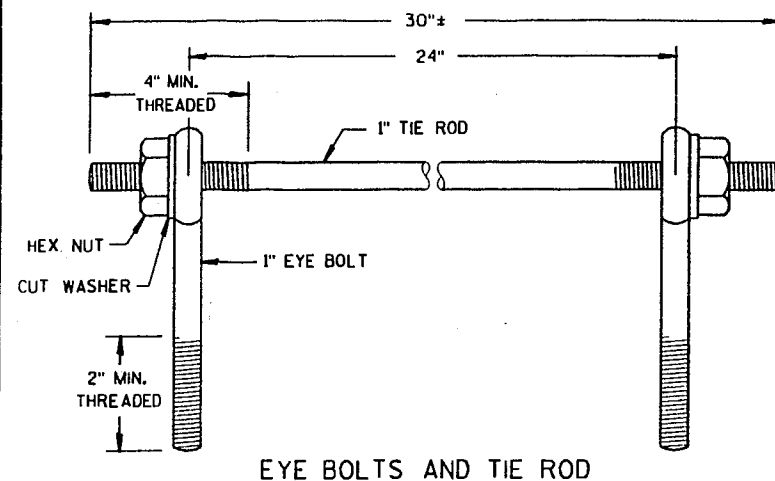
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

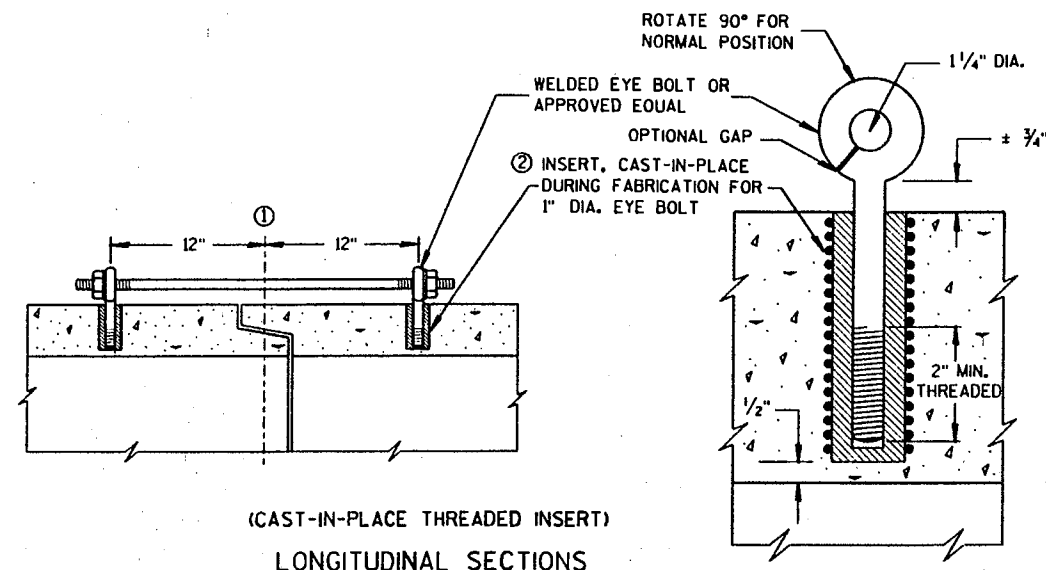
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

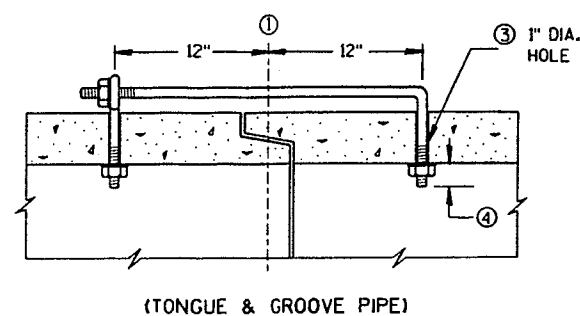
GENERAL NOTES

CONCRETE CULVERT PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED ON THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES. UNLESS OTHERWISE STATED IN THE CONTRACT THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE CULVERT PIPE AS INDICATED ON THE PLANS AND BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO CULVERT PIPE, REINFORCED CONCRETE CULVERT PIPE, OR REINFORCED CONCRETE PIPE CATTLE PASS.

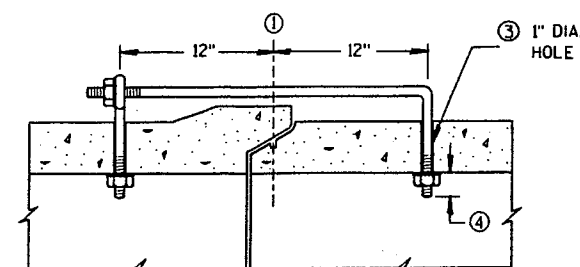
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12" FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2".
- ⑤ ROD DIAMETER + 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN $\frac{1}{2}$ INCH OF THE INNER SURFACE OF THE PIPE.

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(TONGUE & GROOVE PIPE)



(MODIFIED BELL PIPE)
LONGITUDINAL SECTION

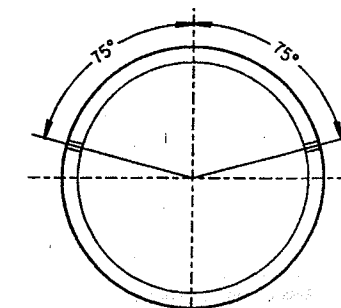
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 $\frac{1}{2}$ "	6 $\frac{1}{4}$ "
30"	5"	7"
36"	5 $\frac{1}{2}$ "	7"
42"	6"	
48"	6 $\frac{1}{2}$ "	
60"	7 $\frac{1}{2}$ "	
66"	8"	

ADJUSTABLE TIE ROD TABLE

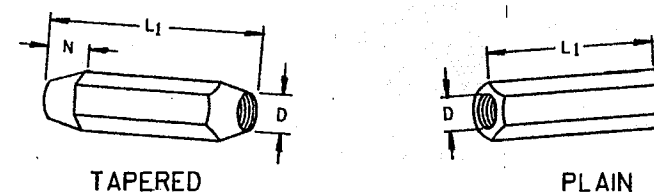
PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	$\frac{5}{8}$	$\frac{5}{8}$	5	$\frac{1}{2}$
66-84	$\frac{3}{4}$	$\frac{3}{4}$	5	$\frac{1}{2}$
90-108	1	1	7	$1\frac{1}{8}$

DIMENSIONS SHOWN ARE IN INCHES

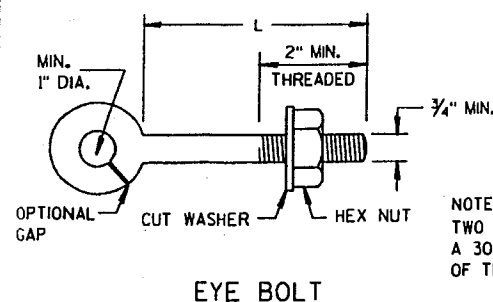


PLACEMENT OF (2) CAST-IN-PLACE
INSERTS OR HOLES DURING FABRICATION
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION

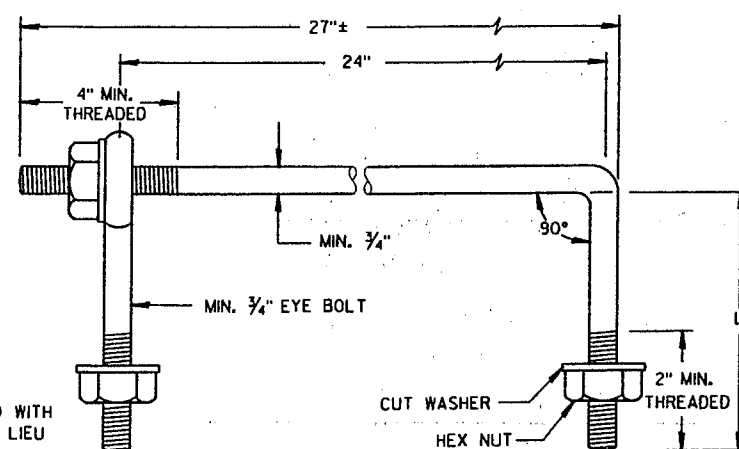


RIGHT AND LEFT THREADS
SLEEVE NUTS



EYE BOLT

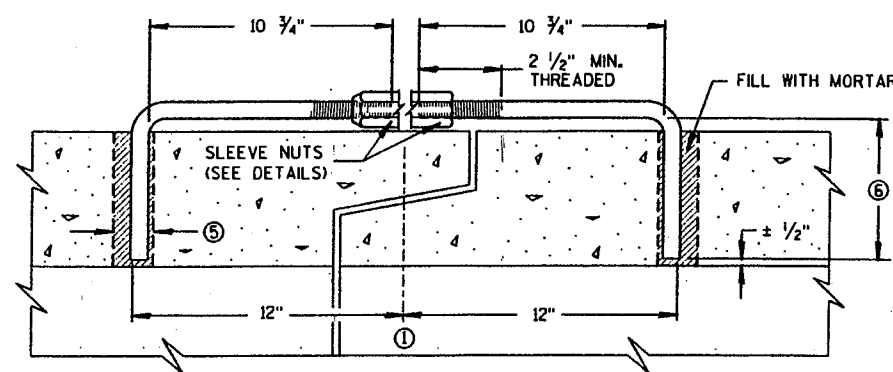
NOTE:
TWO EYE BOLTS MAY BE USED WITH
A 30" LONG THREADED ROD IN LIEU
OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)



LONGITUDINAL SECTION

(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)

JOINT TIES FOR CONCRETE PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/19/92
DATE
FWA

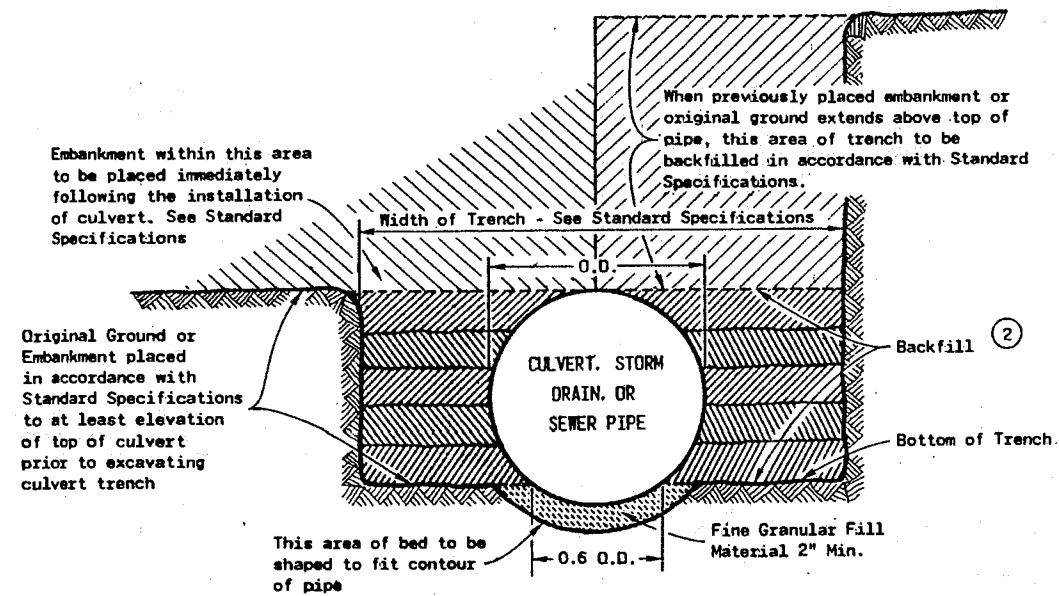
STATE DESIGN ENGINEER FOR HWYS

GENERAL NOTES

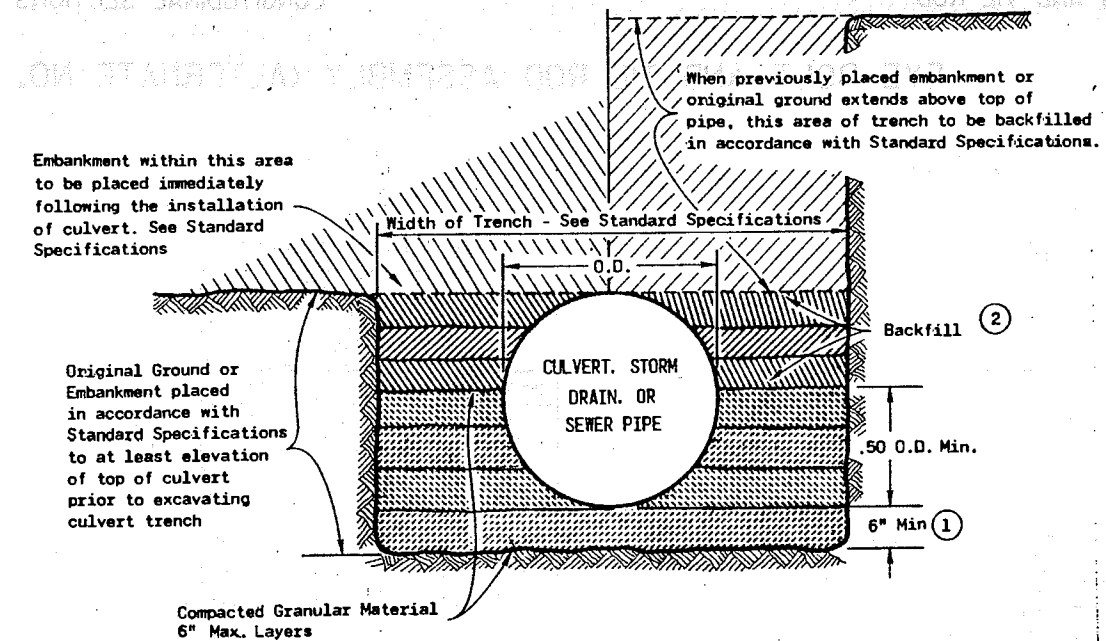
Details of construction, materials and workmanship not shown on this drawing shall conform to the Standard Specifications and the applicable Special Provisions.

The shaped subgrade with granular foundation is an equal alternate to the granular foundation except where rock is encountered.

- ① Where rock, hard pan or fragmented material is encountered, the trench shall be excavated below the bottom of the pipe an amount equal to $\frac{1}{2}$ inch per foot of proposed embankment above the top of the pipe, but not less than 6 inches.
- ② Trench shall be backfilled as required by Standard Specifications; Section 520 for pipe culverts and Section 607 for storm sewers.



SHAPED SUBGRADE WITH GRANULAR FOUNDATION



GRANULAR FOUNDATION

CLASS 'B' BEDDING

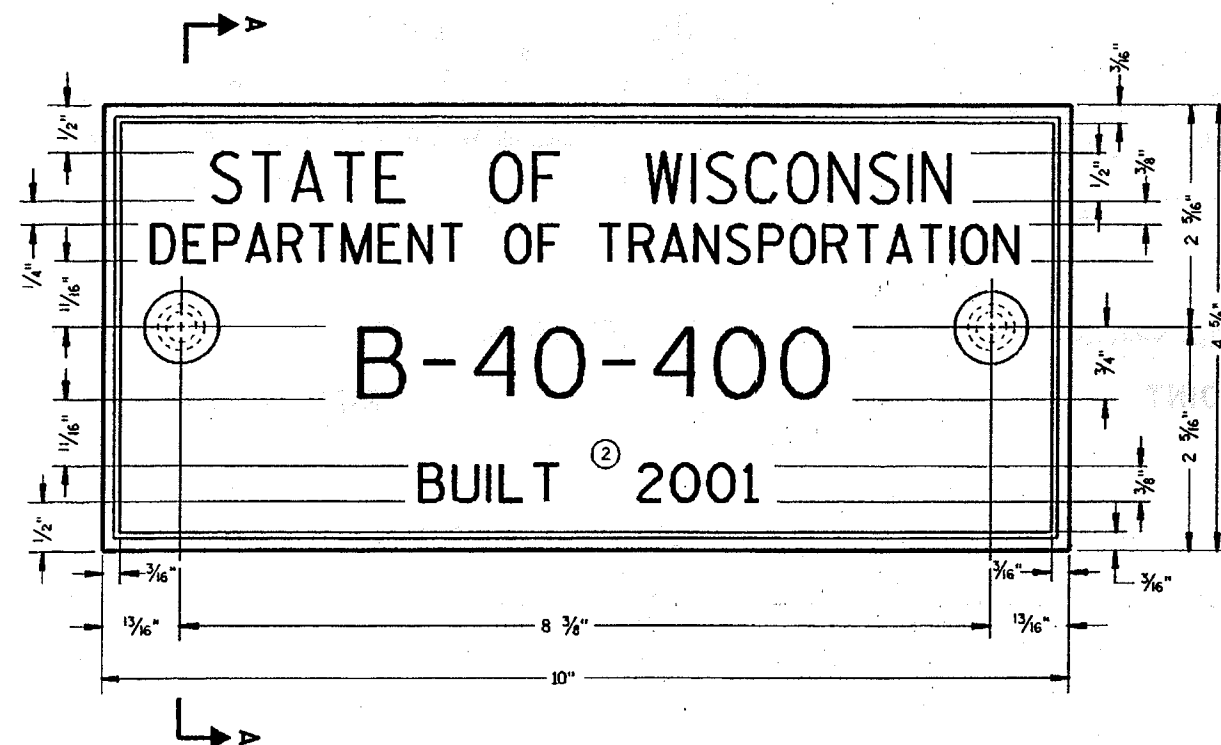
CLASS 'B' BEDDING FOR CULVERT PIPE OR STORM SEWER

State of Wisconsin
Department of Transportation

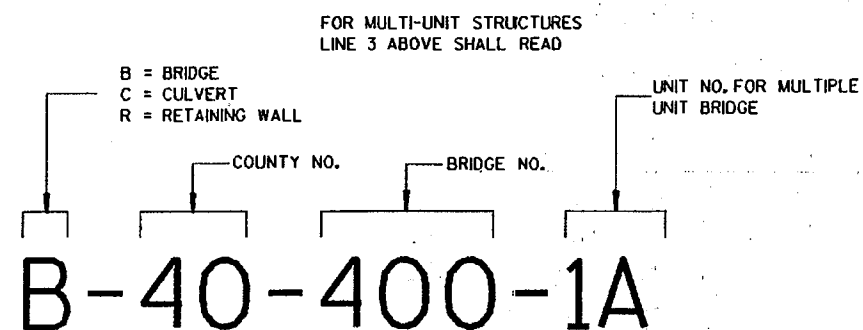
APPROVED
4-7-83
DATE
FHWA

D. J. Strand
CHIEF DESIGN ENGINEER

S.D.D. 8 F 5-



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



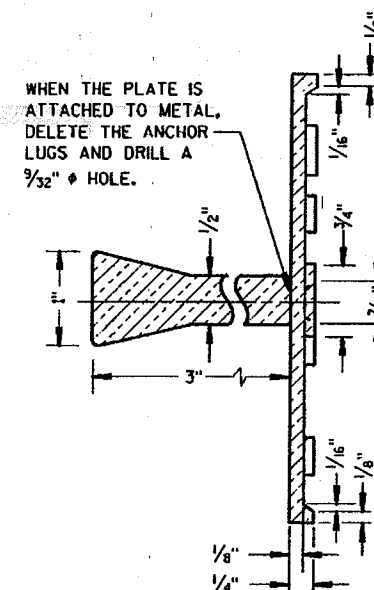
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

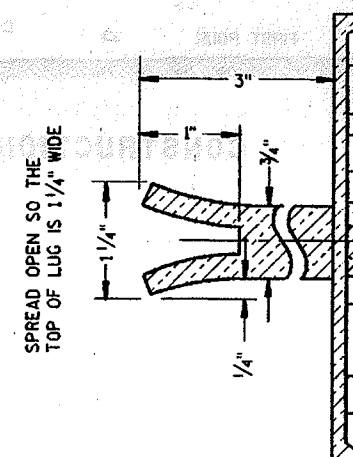
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 506.2.4 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

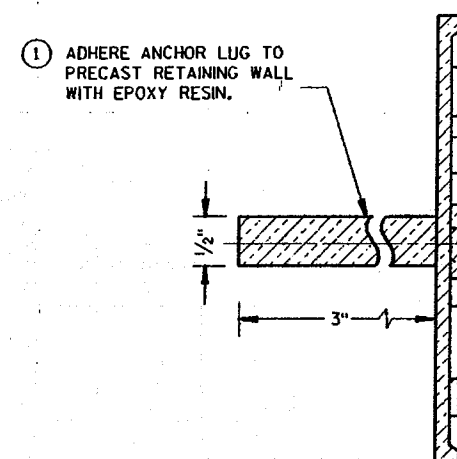
- 1 EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- 2 REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

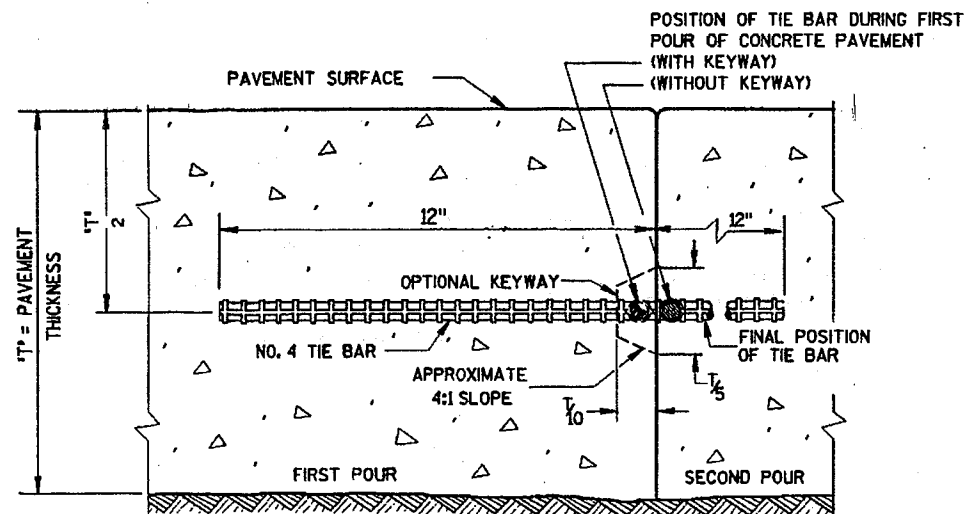
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

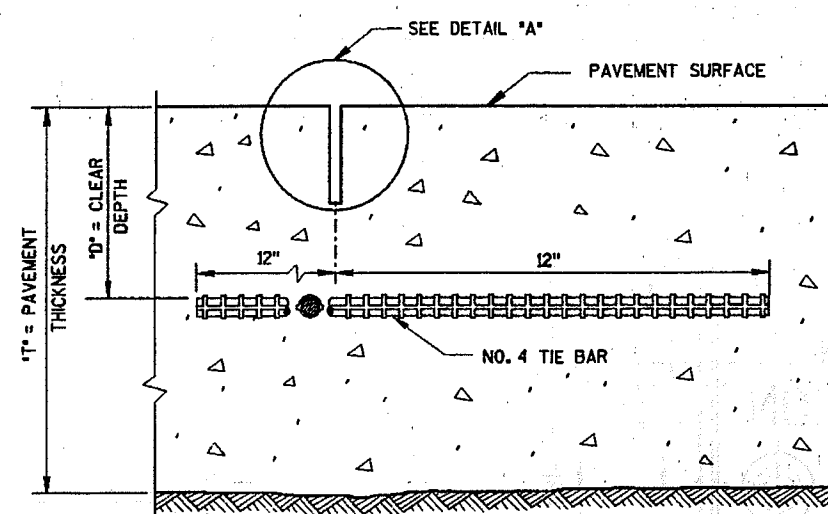
11/22/00
DATE

11/22/00
CHIEF STRUCTURAL DEVELOPMENT ENGINEER

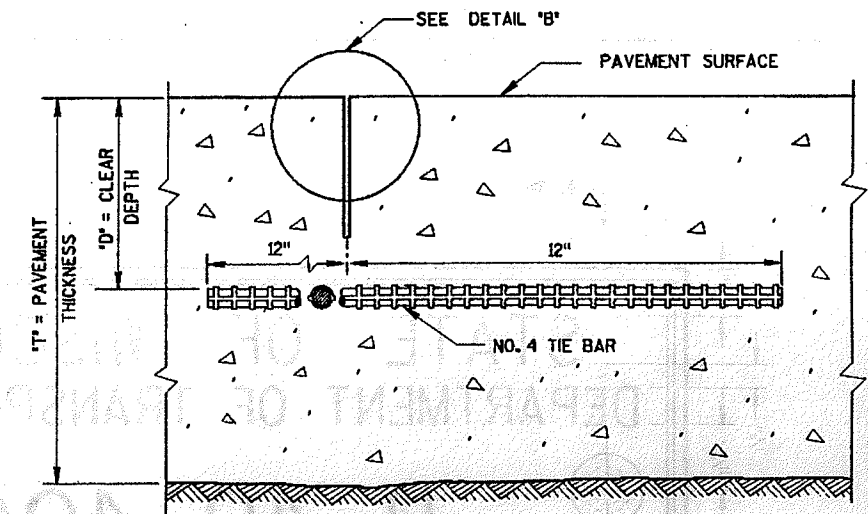
FHWA



CONSTRUCTION JOINT



SAWED JOINT



RIBBON JOINT

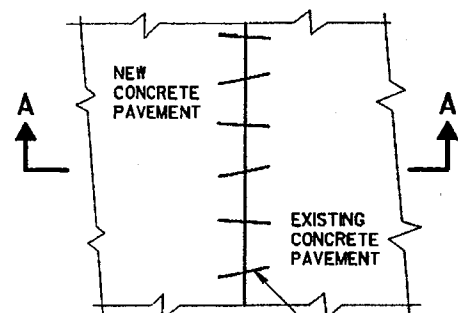
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILS "A" AND "B" ARE EQUAL ALTERNATES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

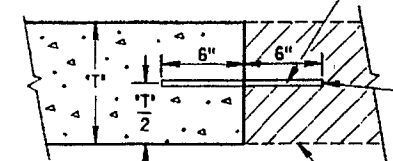
LONGITUDINAL JOINTS SHALL NOT BE SEALED OR FILLED.

TIE BAR SPACINGS ARE VALID ONLY FOR PAVEMENT WIDTHS IN THE TABLE. FOR WIDER PAVEMENTS, TIED CONCRETE SHOULDERS OR RAMPS, THE TIE BAR SPACING SHALL BE AS SHOWN ON THE PLANS.



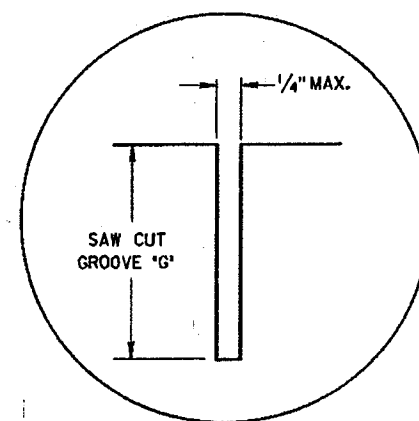
PLAN VIEW

NO. 6 TIE BARS SPACED 3'-0" C-C, INSTALLED ON 6:1 SKEW HORIZONTALLY. DIRECTION OF SKEW ALTERNATING AFTER EVERY ONE OR TWO BARS.

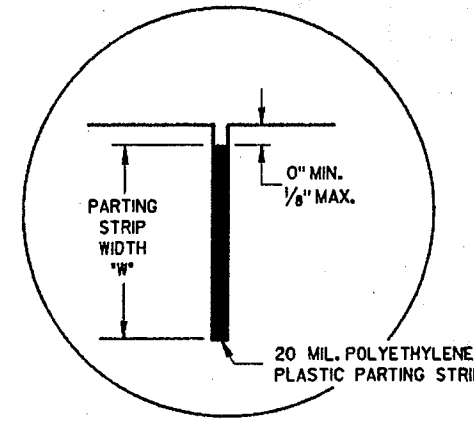


THE HOLE FOR THE BAR SHALL BE DRILLED TO A DEPTH OF 7" AND TO SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

SECTION A-A
PAVEMENT TIES

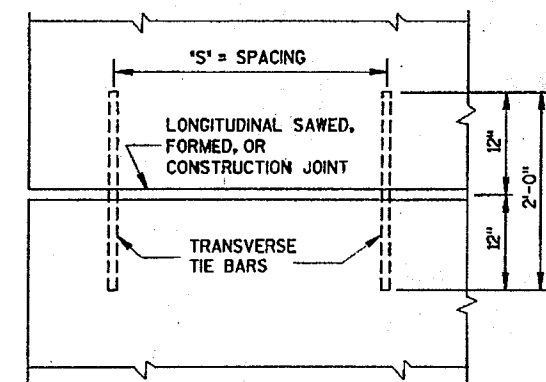


DETAIL "A"



DETAIL "B"

PAVEMENT THICKNESS "T"	CLEAR DEPTH "D"	SAW CUT GROOVE "G"	MAXIMUM TIE BAR SPACING "S"		PARTING STRIP WIDTH "W"
			24' OR 26'	30'	
6, 6 1/2"	3" ± 1/2"	2"	48"	42"	2"
7, 7 1/2"	3 1/4" ± 1"	2 1/4"	45"	36"	2 1/4"
8, 8 1/2"	3 3/4" ± 1"	2 1/2"	39"	30"	2 1/2"
9, 9 1/2"	4 1/4" ± 1"	3"	33"	27"	3"
10, 10 1/2"	4 3/4" ± 1"	3 1/4"	30"	24"	3 1/4"
11, 11 1/2"	5 1/4" ± 1"	3 3/4"	27"	21"	3 3/4"
12"	5 3/4" ± 1"	4"	24"	21"	4"



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT
LONGITUDINAL JOINTS
AND PAVEMENT TIES

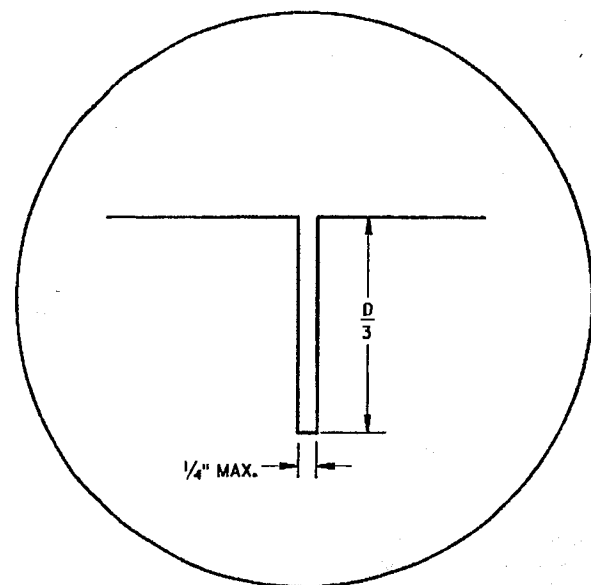
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

9-24-98
DATE

FHWA

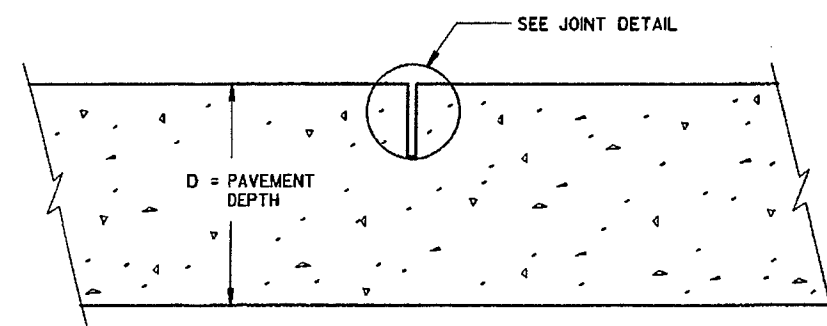
[Signature]
CHIEF PAVEMENTS & RESEARCH ENGINEER



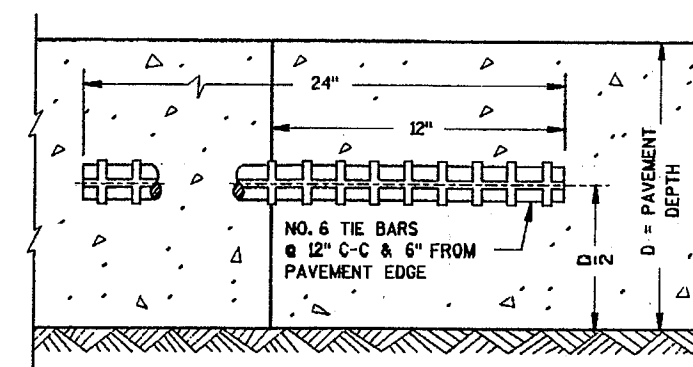
JOINT DETAIL

PAVEMENT DEPTH AND JOINT SPACING TABLE

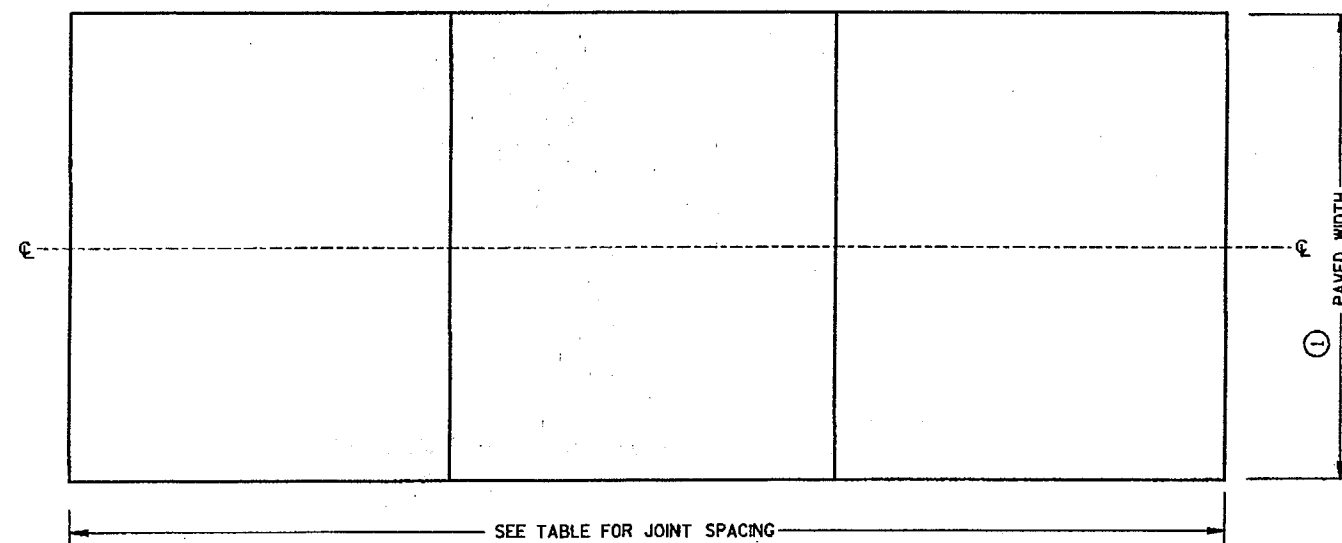
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8", 8 1/2"	15'
9", 9 1/2"	15'
10" & ABOVE	18'



CONTRACTION JOINT



CONSTRUCTION JOINT



CONTRACTION JOINT LOCATIONS

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

CONTRACTION JOINTS

THE LOCATION AND ORIENTATION OF CONTRACTION JOINTS THRU INTERSECTIONS SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

CONTRACTION JOINTS SHALL NOT BE SEALED OR FILLED.

CONSTRUCTION JOINTS

CONSTRUCTION JOINTS SHALL BE LOCATED A MINIMUM OF 4 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGNED EITHER PARALLEL TO THE CONTRACTION JOINTS OR AT 90° TO THE CENTERLINE.

TIE BARS MAY BE INSERTED THROUGH THE HEADER BOARD AFTER THE CONCRETE HAS BEEN POURED.

- REFER TO TYPICAL CROSS SECTIONS FOR PAVED WIDTH AND LOCATION OF LONGITUDINAL JOINTS.

**URBAN
NON-DOWELED CONCRETE PAVEMENT**

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

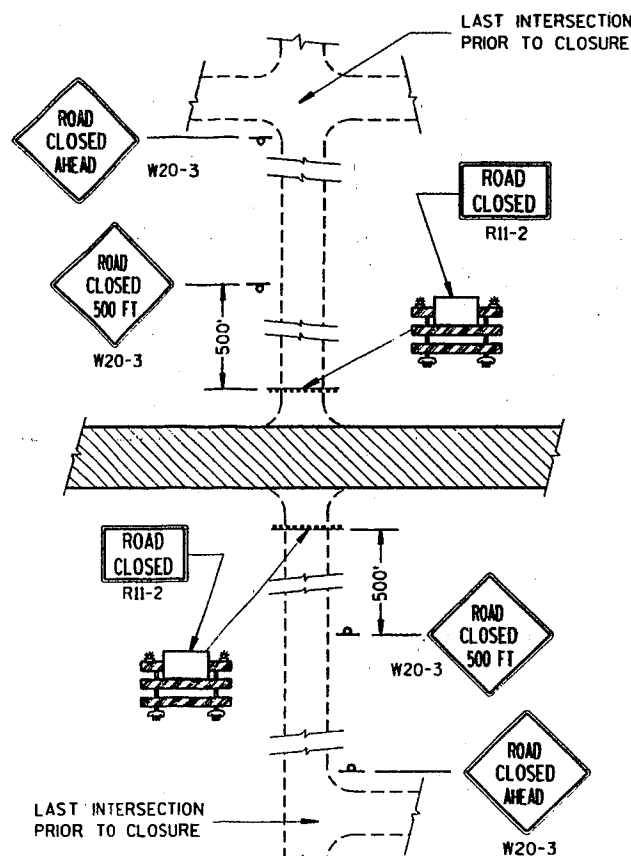
APPROVED

9-24-98

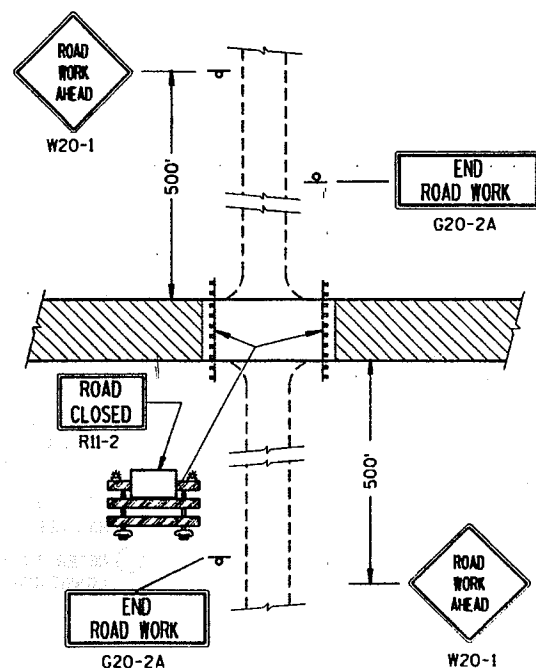
DATE

FHWA

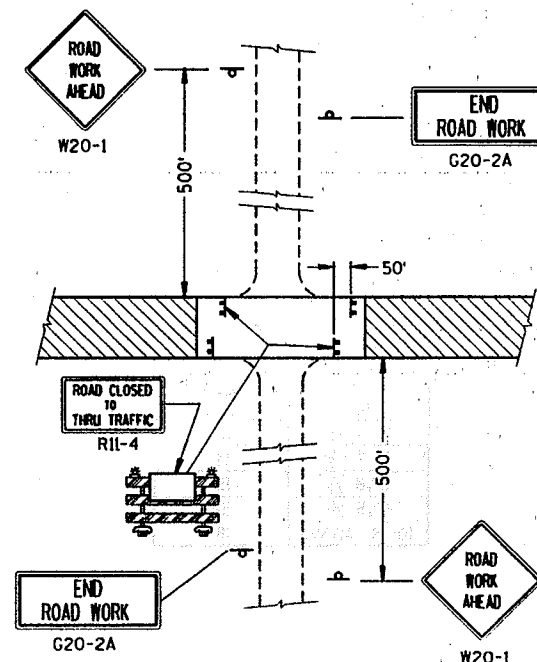
[Signature]
CHIEF PAVEMENTS & RESEARCH ENGINEER



DETAIL 1
(NO ACCESS TO PROJECT)

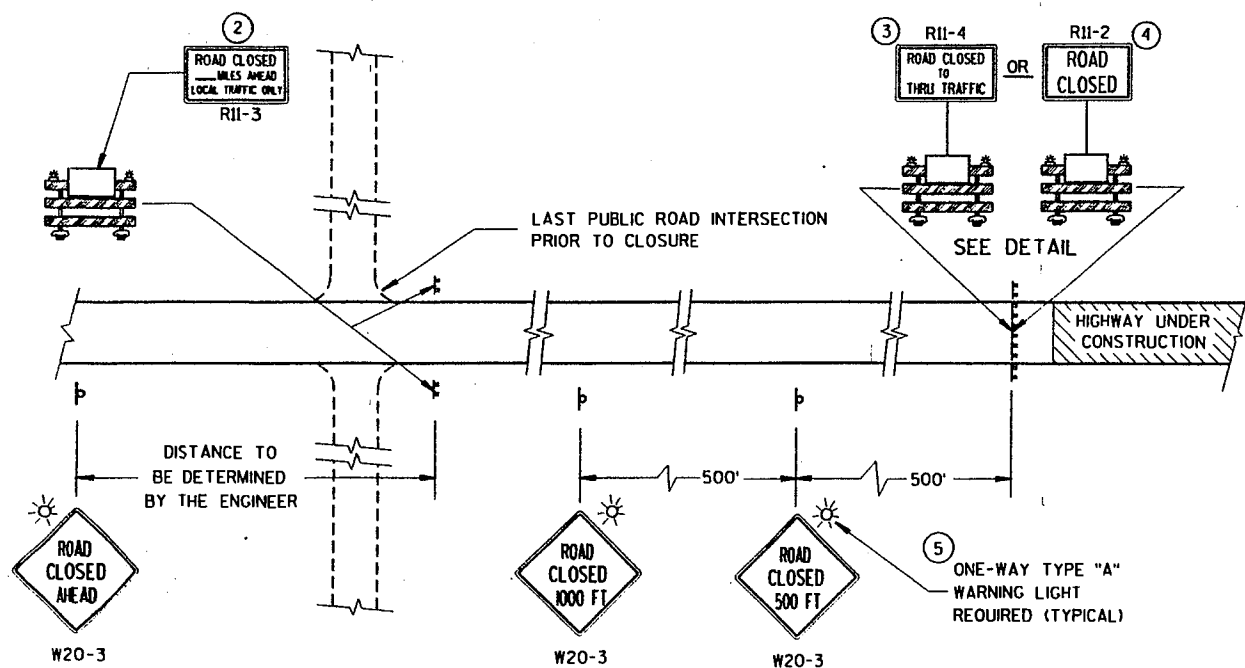


DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT).

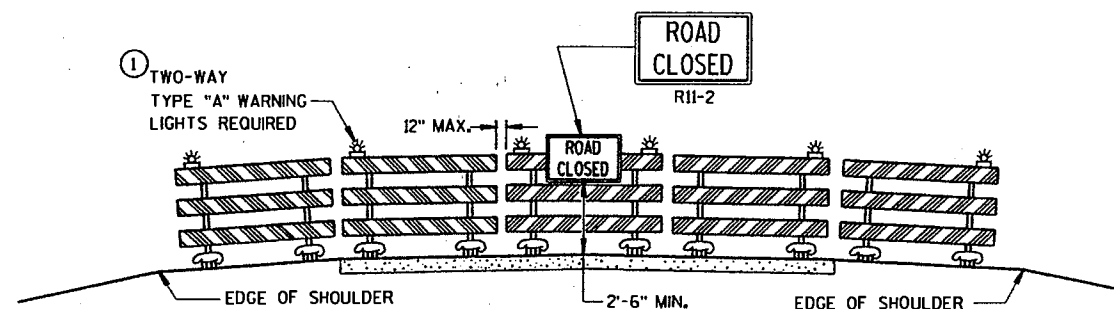


DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED. CONTRACTOR,
LOCAL BUSINESS AND RESIDENT ACCESS).

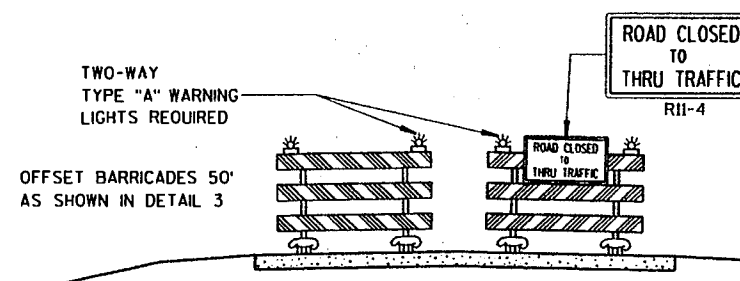
SIDEROAD CLOSURES



MAINLINE CLOSURE



ROAD CLOSURE BARRICADE DETAIL



LANE CLOSURE BARRICADE DETAIL

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND THEIR LOCATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES, THE PLANS, SPECIFICATIONS AND CONTRACT.

SIGN AND BARRICADE LOCATIONS MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER. ANY EXISTING TRAFFIC SIGNS THAT CONFLICT WITH THIS WORK SHALL BE COVERED AS DIRECTED BY THE ENGINEER. ALL "STOP" OR OTHER REGULATORY SIGNS ON THE SIDE ROADS SHALL NOT BE DISTURBED, EXCEPT WHEN NECESSARY TO COMPLETE THE WORK. THE SIGNS MUST THEN BE IMMEDIATELY REESTABLISHED.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL FOR FULL ROAD CLOSURES. TYPE "A" LOW INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE ROAD CLOSED SIGN (R11-2), ROAD CLOSED _____ MILES AHEAD SIGN (R11-3) AND THE ROAD CLOSED TO THRU TRAFFIC SIGN (R11-4) SHALL BE ATTACHED ONLY TO THE TOP RAIL OF THE TYPE III BARRICADE. THE SIGNS SHALL NOT COVER MIDDLE RAIL.

TYPE "H" REFLECTIVE SHEETING SHALL BE USED ON ALL BARRICADES, TYPE I, II AND III, AND ON ALL R11-2, R11-3 AND R11-4 SIGNS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2, "ROAD CLOSED" SIGNS SHALL BE 48" X 30".

R11-3, AND R11-4 SIGNS SHALL BE 60" X 30".

G20-2A SIGNS SHALL BE 48" X 24".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND AT LEAST ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN.
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT. SEE LANE CLOSURE BARRICADE DETAIL
- 4 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT. SEE ROAD CLOSURE BARRICADE DETAIL
- 5 ONE-WAY LIGHTS SHALL BE PROVIDED ON ALL ADVANCE WARNING SIGNS. THE UNIT SHALL BE POSITIONED SUCH THAT THE LIGHT SOURCE IS OUTSIDE THE SIGN FACE AND AT THE TOP OF THE SIGN.

LEGEND

- POST MOUNTED WARNING SIGN
- TYPE III BARRICADES WITH TYPE "H" REFLECTIVE SHEETING
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK AREA

BARRICADES AND SIGNS FOR ROAD CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

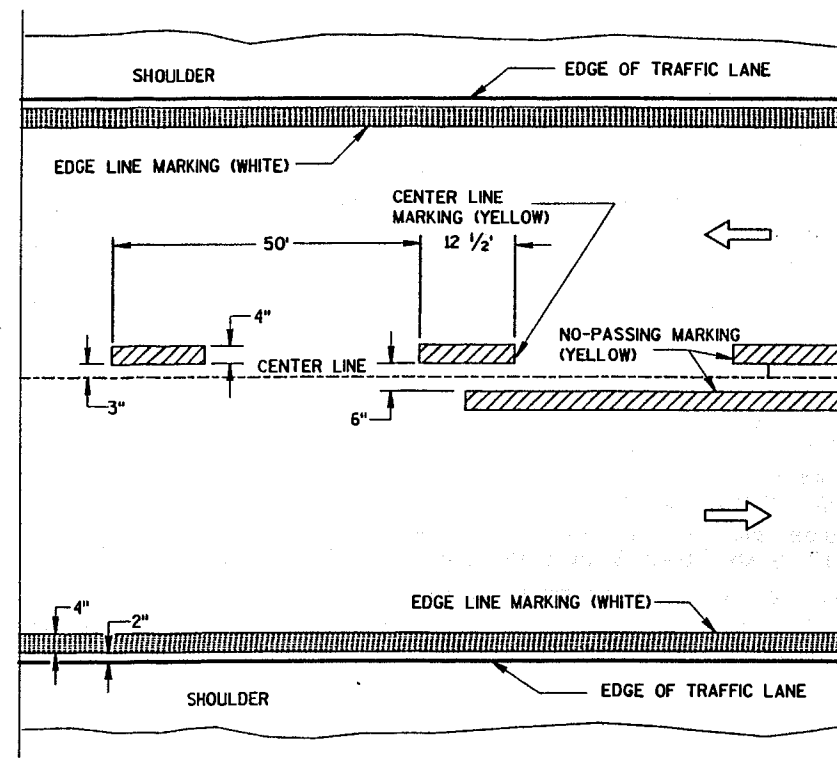
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8-10-95

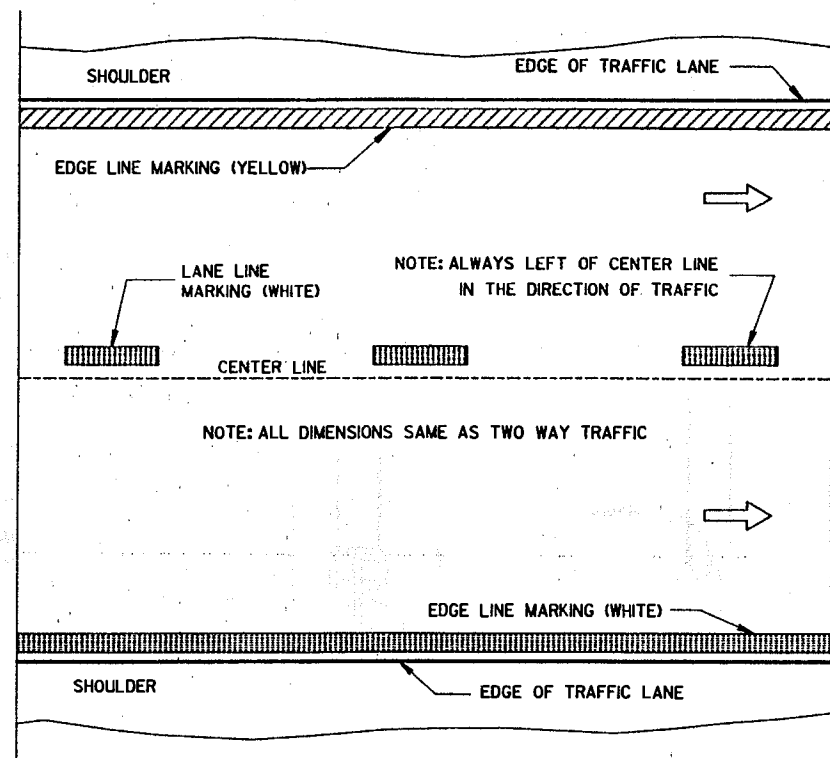
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FHWA

for *Christie J. Spang*
DIRECTOR, OFFICE OF TRAFFIC

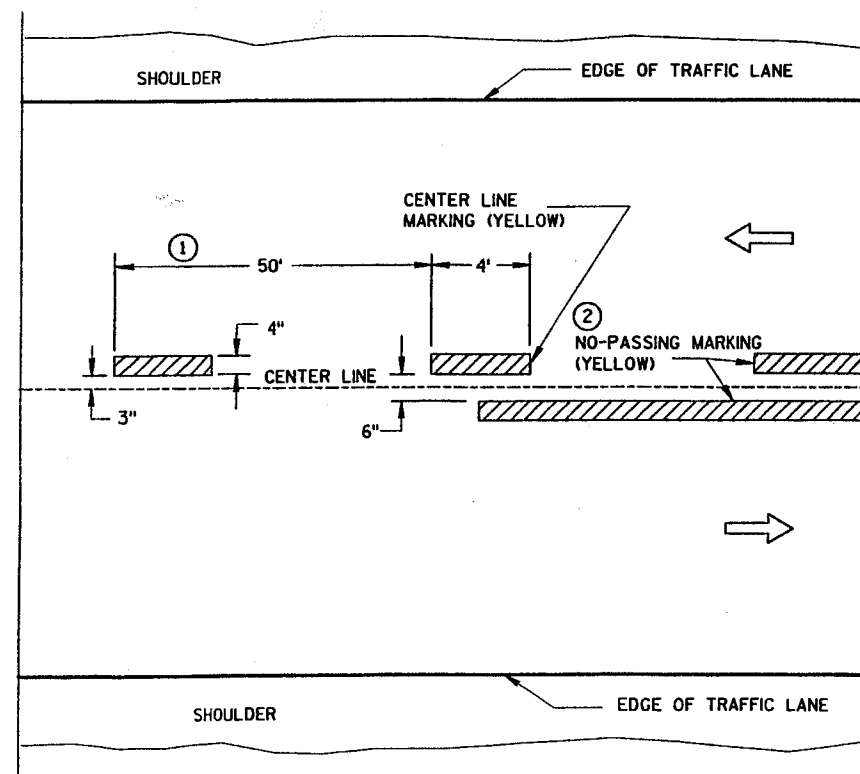


TWO WAY TRAFFIC

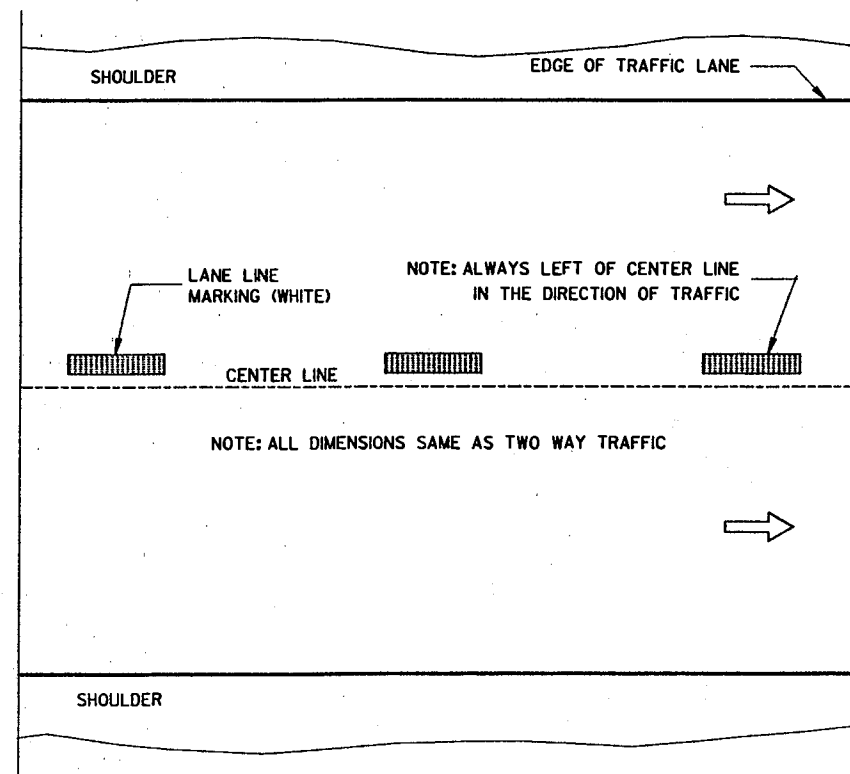


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING (SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(MAINLINE)

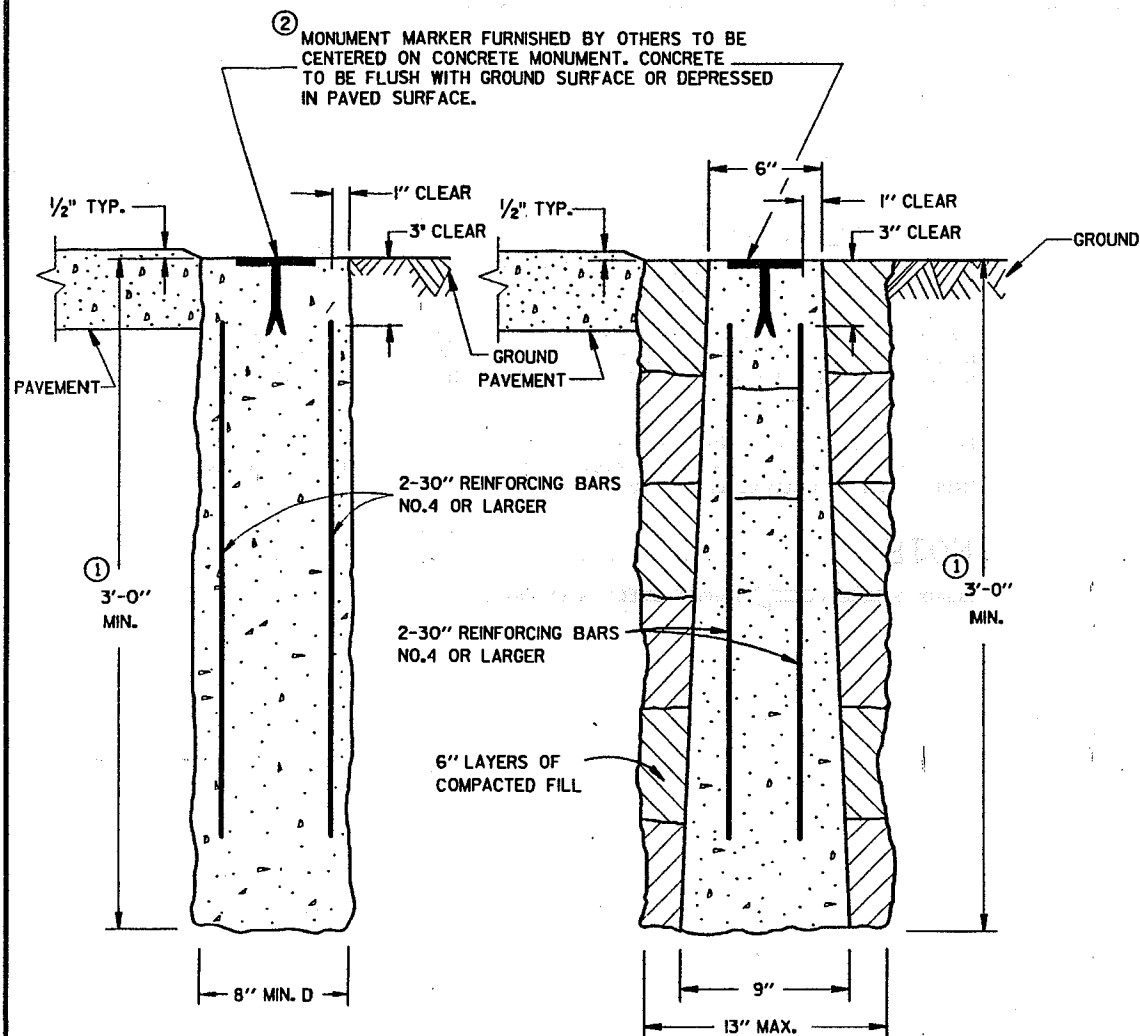
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

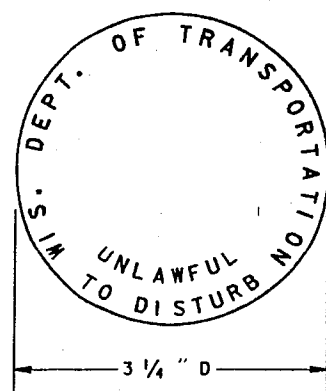
2-17-00
DATE

Chris J. Sney
CHIEF SIGNS AND MARKING ENGINEER

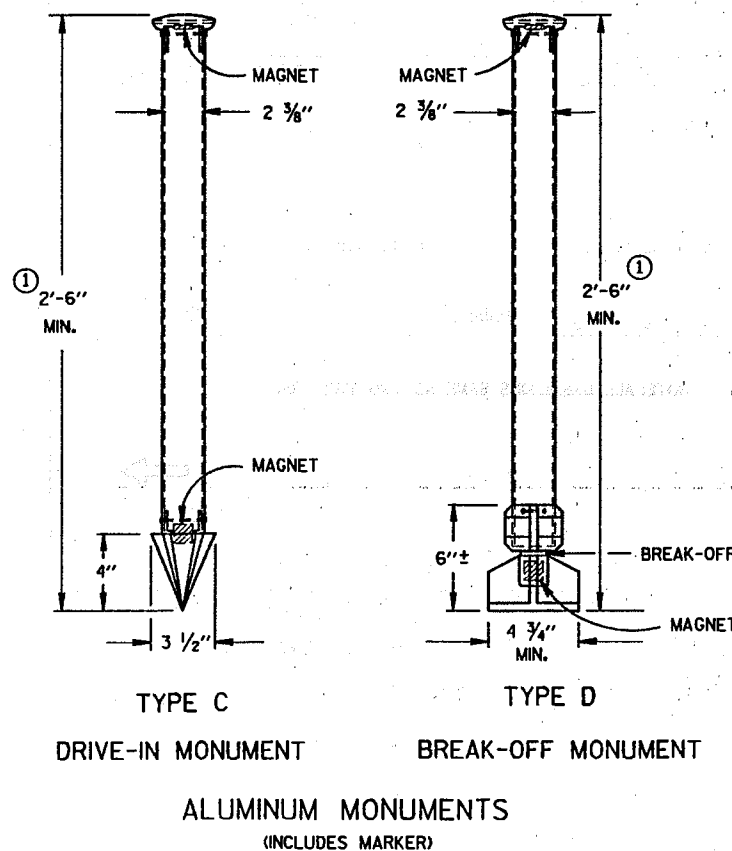
FHWA



CAST-IN-PLACE
CONCRETE MONUMENTS
TYPE A



② WIS DOT MONUMENT MARKER LOGO
FOR TYPES "A", "C" & "D"



GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAILED DRAWINGS OF PROPOSED ALTERNATE DESIGNS FOR METAL MONUMENTS OR MONUMENT COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

INSTALLED METAL MONUMENTS MUST BE EASILY DETECTED WITH A DIP NEEDLE. INSERT PERMANENT MAGNETS SHALL BE ATTACHED NEAR THE TOP AND BOTTOM OF THOSE MONUMENTS CONSTRUCTED OF A METAL ALLOY WHICH IS NOT ATTRACTIVE TO A DIP NEEDLE.

THE CAST IRON MONUMENT COVER SHALL BE A "NON-ROCKING" TYPE. ADJUSTMENT OF THE COVER TO GRADE MAY BE ACCOMPLISHED BY THE USE OF MORTAR AND BRICK, OR BY EITHER PRECAST OR CAST-IN-PLACE REINFORCED CONCRETE GRADE RINGS.

MONUMENTS SHALL BE LOCATED AND PLACED AT THE DIRECTION OF THE ENGINEER.

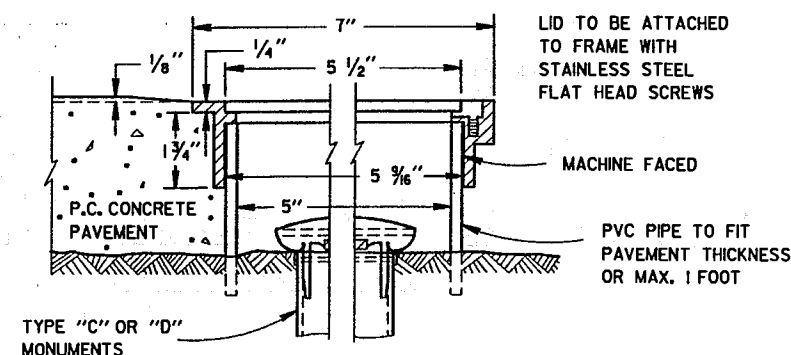
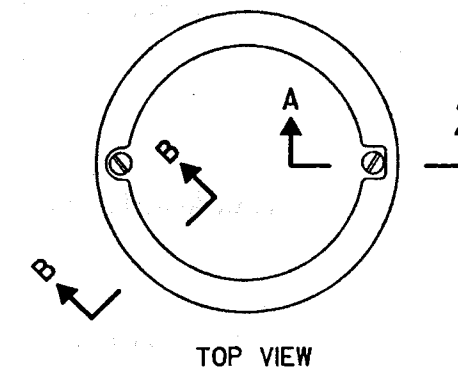
ALUMINUM MONUMENTS AND MONUMENT COVERS SHALL BE MADE FROM AN ALUMINUM AND MAGNESIUM ALLOY AS DETERMINED BY THE MANUFACTURER.

THE MONUMENT COVERS DETAILED ON THIS DRAWING ARE NOT EQUAL ALTERNATES. MONUMENT COVERS SHALL BE CAST IRON UNLESS ALUMINUM IS SPECIFIED ELSEWHERE IN THE CONTRACT.

MONUMENT SHALL BE CAST-IN-PLACE CONCRETE UNLESS PRECAST CONCRETE OR ALUMINUM MONUMENTS ARE SPECIFIED IN THE CONTRACT OR PERMITTED BY THE ENGINEER.

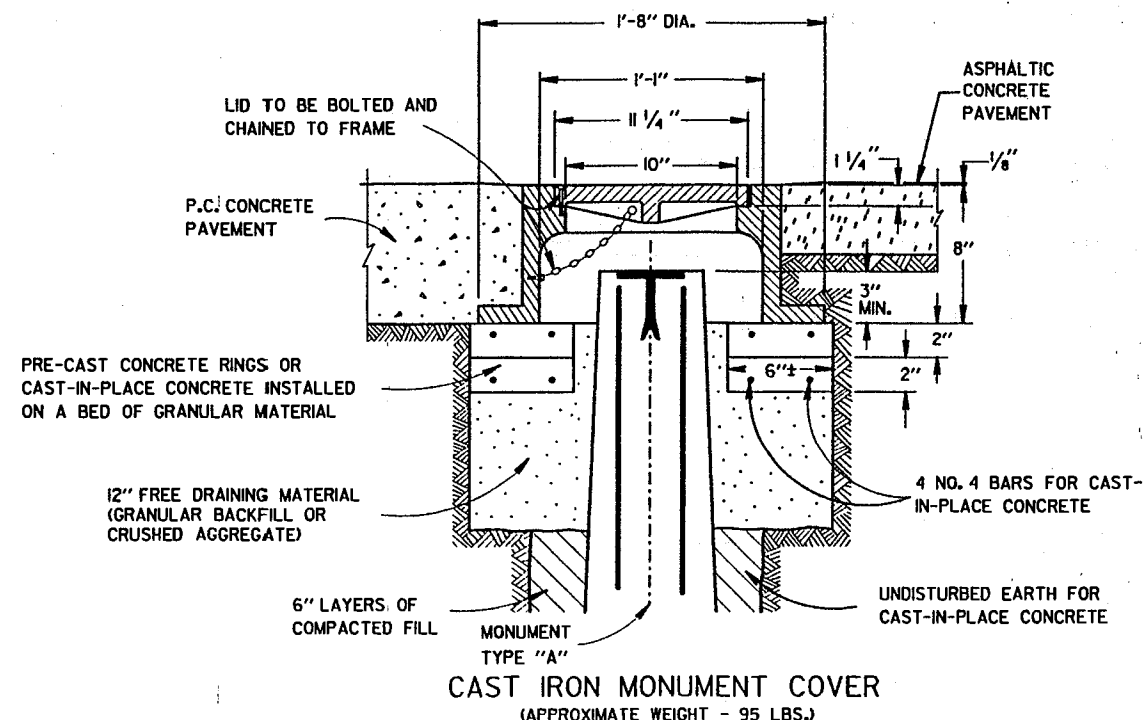
① MINIMUM LENGTH SHALL BE 4'-0" FOR MONUMENTS INSTALLED IN PAVED AREAS.

② AN OFFICIAL COUNTY MONUMENT MARKER SUPPLIED BY A COUNTY MAY BE REQUIRED FOR SOME SECTION CORNERS AND WITNESS MONUMENTS INSTEAD OF THIS WIS DOT MARKER.



SECTION B-B SECTION A-A
ALUMINUM MONUMENT COVER

(APPROXIMATE WEIGHT 2 LBS)
(FOR CONCRETE PAVEMENT ONLY)



LANDMARK REFERENCE MONUMENTS AND COVERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

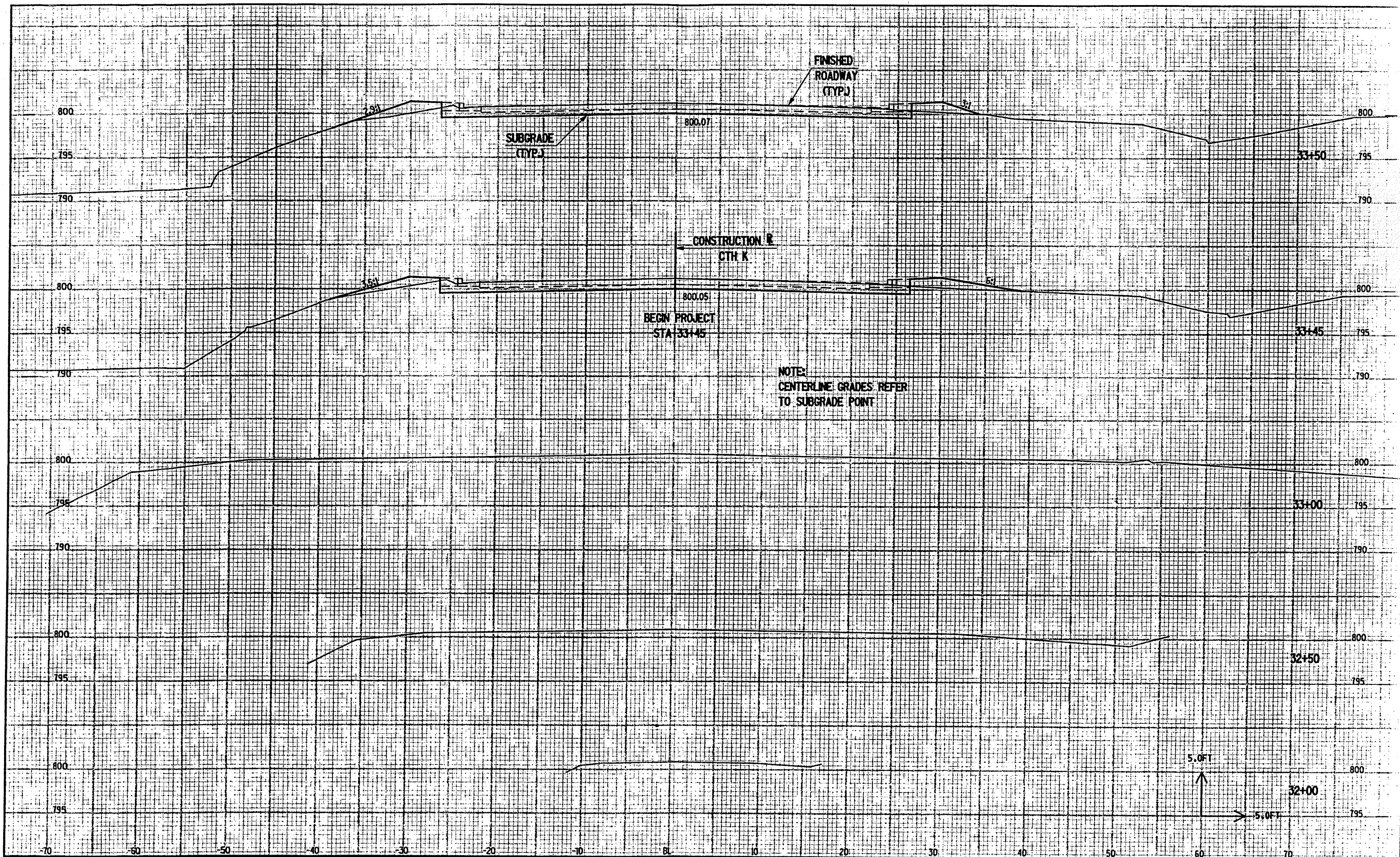
APPROVED
9/22/99
DATE
CHIEF ROADWAY DEVELOPMENT ENGINEER

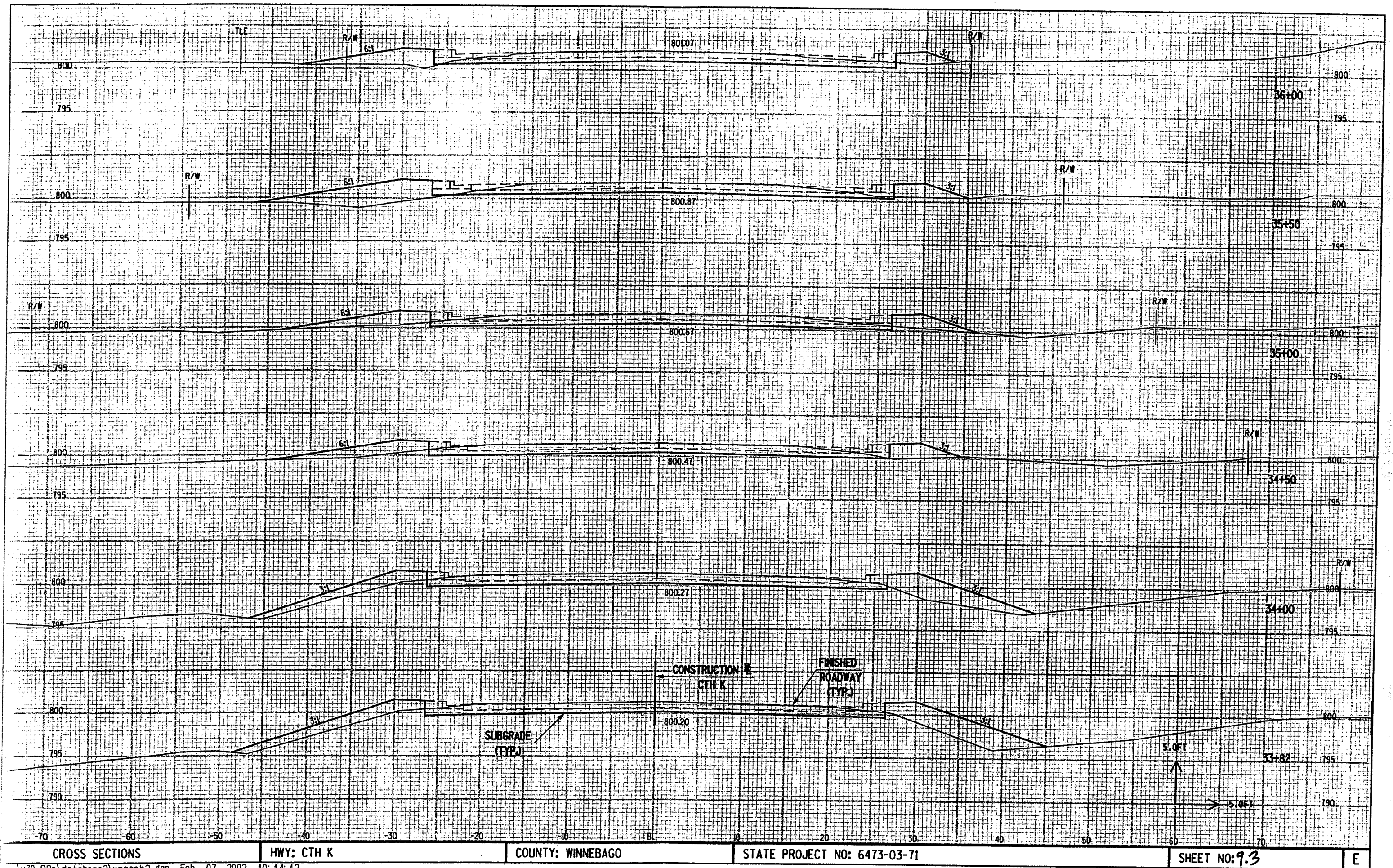
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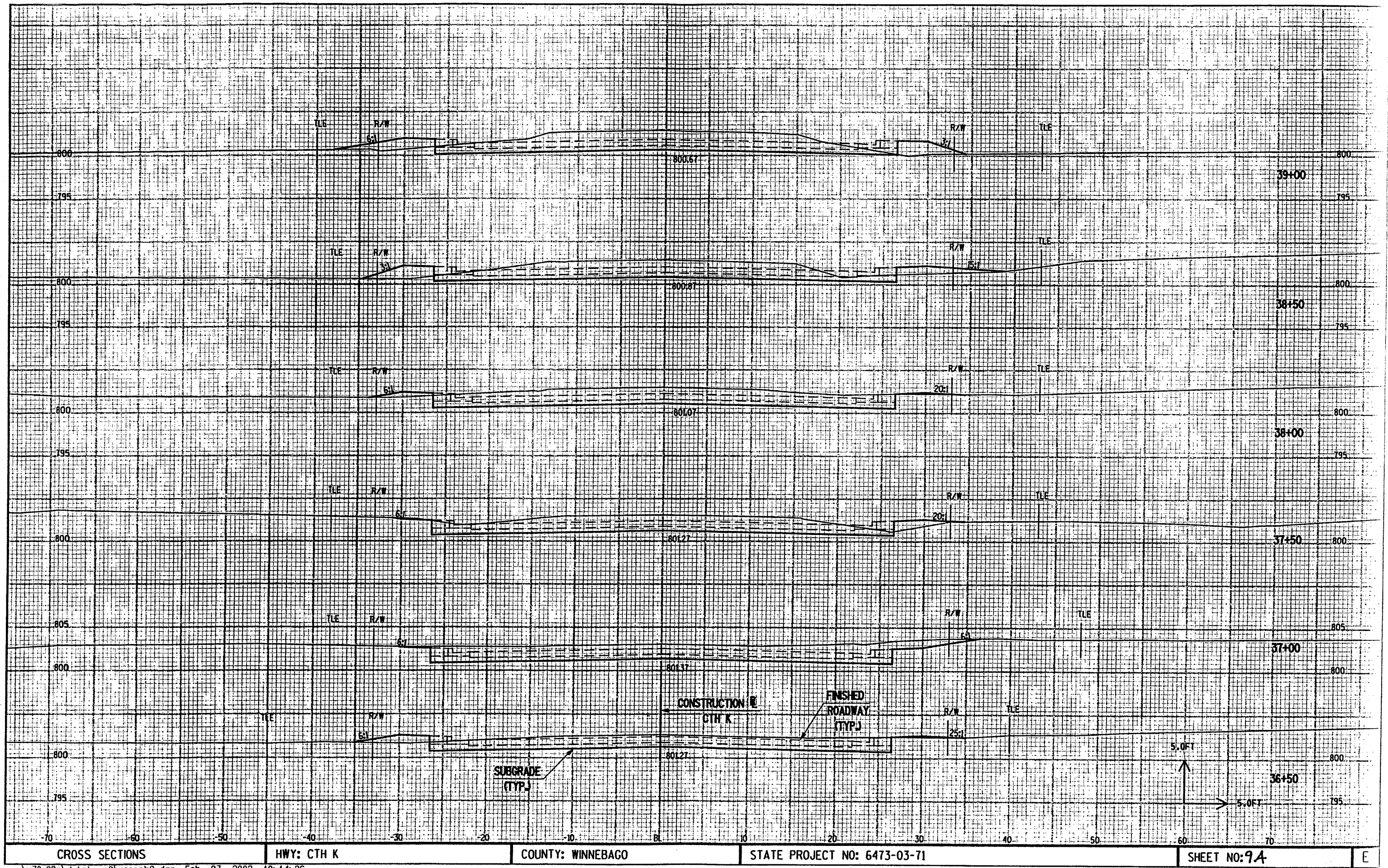
EARTHWORK SUMMARY

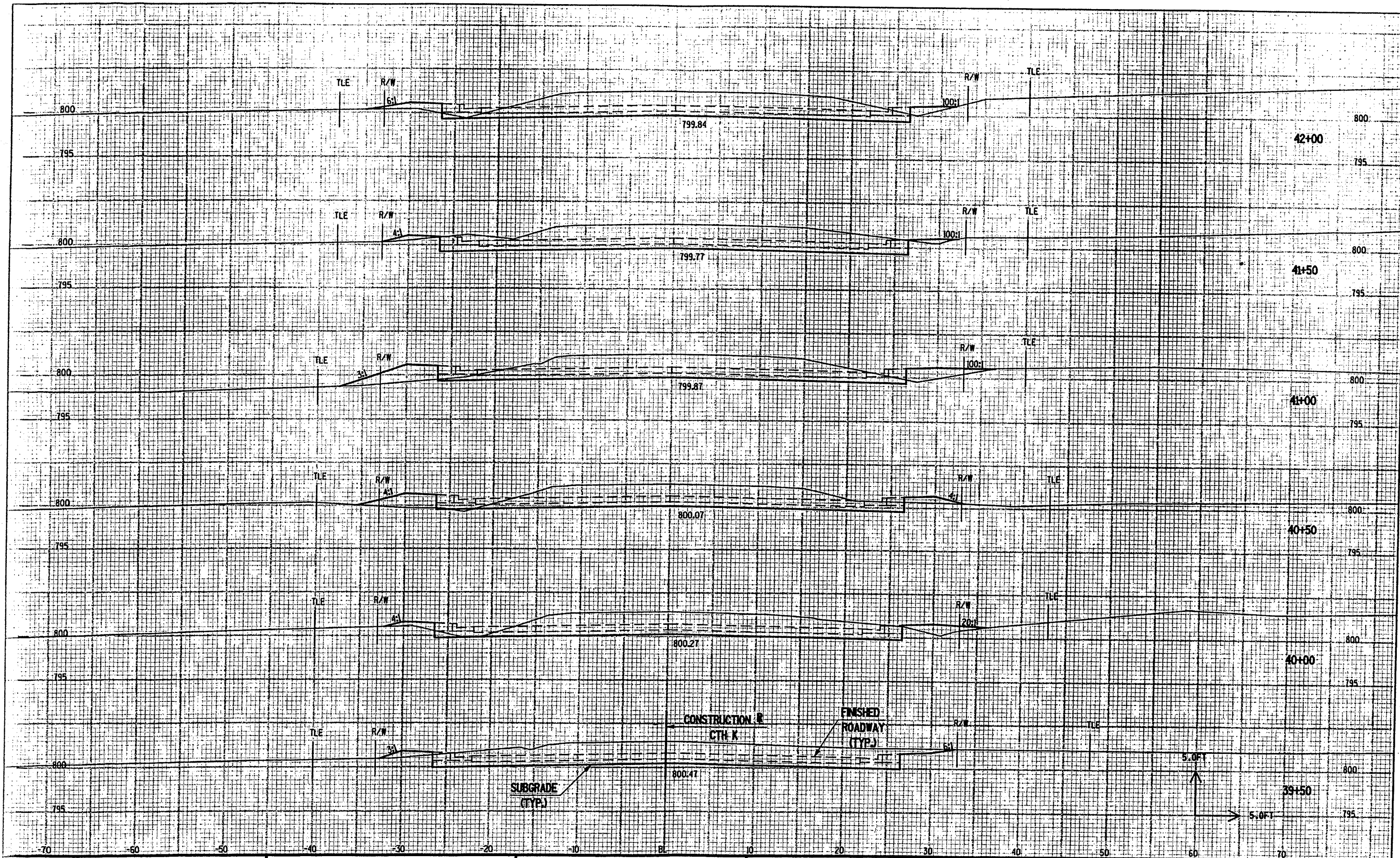
STATE PROJECT NUMBER		SHEET NO.
6473-03-7I		9.1
MISCELLANEOUS QUANTITIES		
CTH K		WINNEBAGO COUNTY

STATION	END AREA		INCREMENTAL VOL.		CUMM. VOL.		MASS HAUL
	CUT	FILL	CUT	FILL	CUT	FILL	
33+45	59	18	0	0	0	0	0
33+50	65	15	11	4	11	4	8
33+82	58	62	73	59	84	63	21
34+00	62	49	42	28	127	91	36
34+50	54	20	107	83	234	174	60
35+00	53	20	99	48	333	222	111
35+50	51	32	96	63	429	285	145
36+00	52	20	95	63	525	347	177
36+50	61	4	105	29	629	376	253
37+00	110	0	158	5	788	381	407
37+50	85	5	181	6	968	387	581
38+00	67	3	141	10	1109	397	712
38+50	82	16	138	23	1247	420	827
39+00	97	18	166	41	1413	461	952
39+50	125	3	206	25	1618	486	1133
40+00	105	9	213	14	1831	500	1331
40+50	101	16	191	30	2022	530	1492
40+90	100	36	149	50	2171	580	1591
41+00	105	27	38	10	2209	591	1618
41+50	130	4	218	37	2427	628	1799
42+00	115	8	227	14	2654	643	2011
42+50	113	8	211	19	2865	662	2203
43+00	107	14	204	26	3068	688	2380
43+50	119	9	209	28	3278	716	2562
44+00	85	16	189	30	3467	746	2720
44+50	47	20	122	43	3589	789	2799
45+00	74	12	112	39	3701	828	2873
45+50	84	3	146	18	3847	846	3001
46+00	84	10	156	16	4003	862	3141
46+50	68	14	141	29	4143	891	3253
47+00	75	10	132	29	4276	919	3356
47+50	94	18	156	34	4432	953	3479
48+00	92	3	172	25	4604	978	3626
48+50	104	2	181	6	4786	984	3802
49+00	99	0	188	2	4974	987	3987
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50+50	77	24	131	34	5454	1033	4421
51+00	75	16	141	48	5594	1081	4514
51+50	70	21	134	45	5729	1125	4603
52+00	52	25	113	55	5842	1181	4661
52+50	45	29	90	65	5931	1246	4686
53+00	65	16	102	54	6033	1300	4733
53+50	53	18	109	41	6142	1341	4802
54+00	77	23	120	49	6263	1390	4873
54+50	65	14	131	45	6394	1435	4960
55+00	58	2	114	19	6508	1454	5054
55+50	101	0	147	2	6655	1456	5199
56+00	81	6	169	7	6824	1463	5360
56+50	65	22	135	34	6959	1497	5462
57+00	43	60	100	99	7059	1596	5463
57+50	48	54	84	137	7143	1733	5410
57+90	64	395	83	432	7226	2165	5061
58+00	0	223	9	67	7235	2232	5003
58+50	53	49	49	327	7284	2560	4725
59+00	65	13	109	75	7394	2634	4759
59+50	67	20	122	40	7516	2674	4842
60+00	75	12	131	39	7647	2712	4935
60+50	57	10	122	26	7769	2739	5031
61+00	47	18	96	34	7866	2773	5093
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CROSS SECTIONS

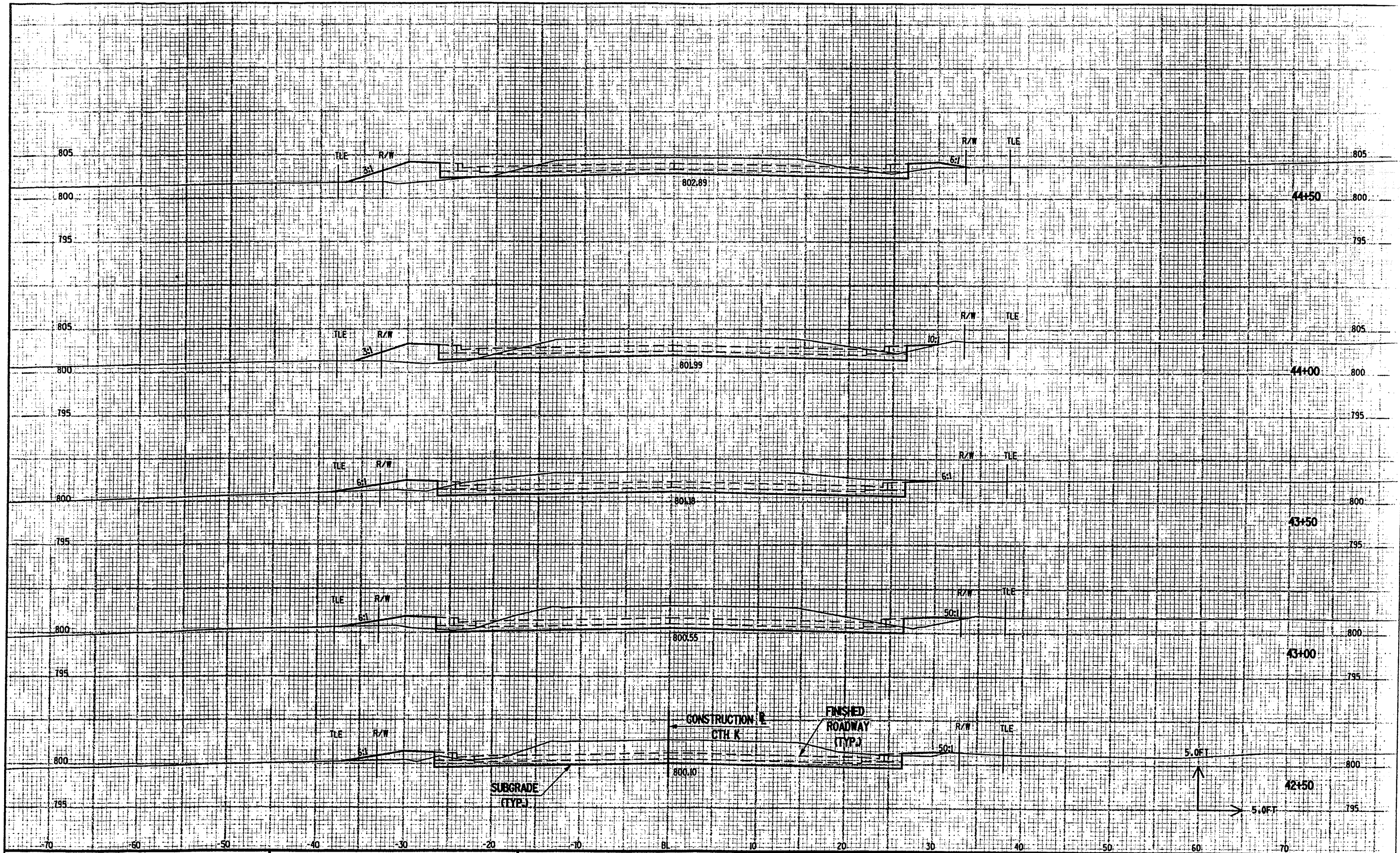
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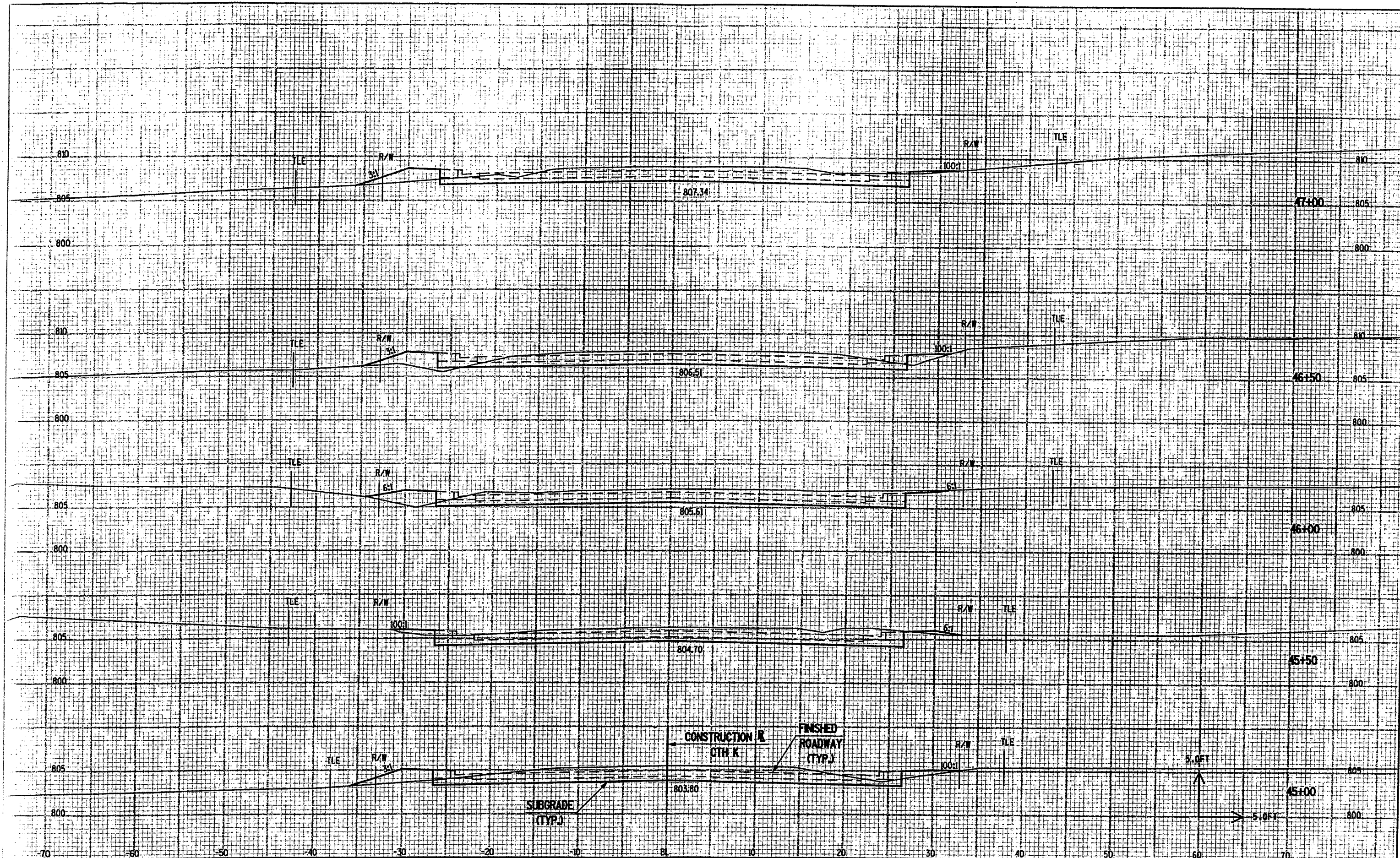
COUNTY: WINNEBAGO

STATE PROJECT NO: 6473-03-71

SHEET NO: 9.5

E





CROSS SECTIONS

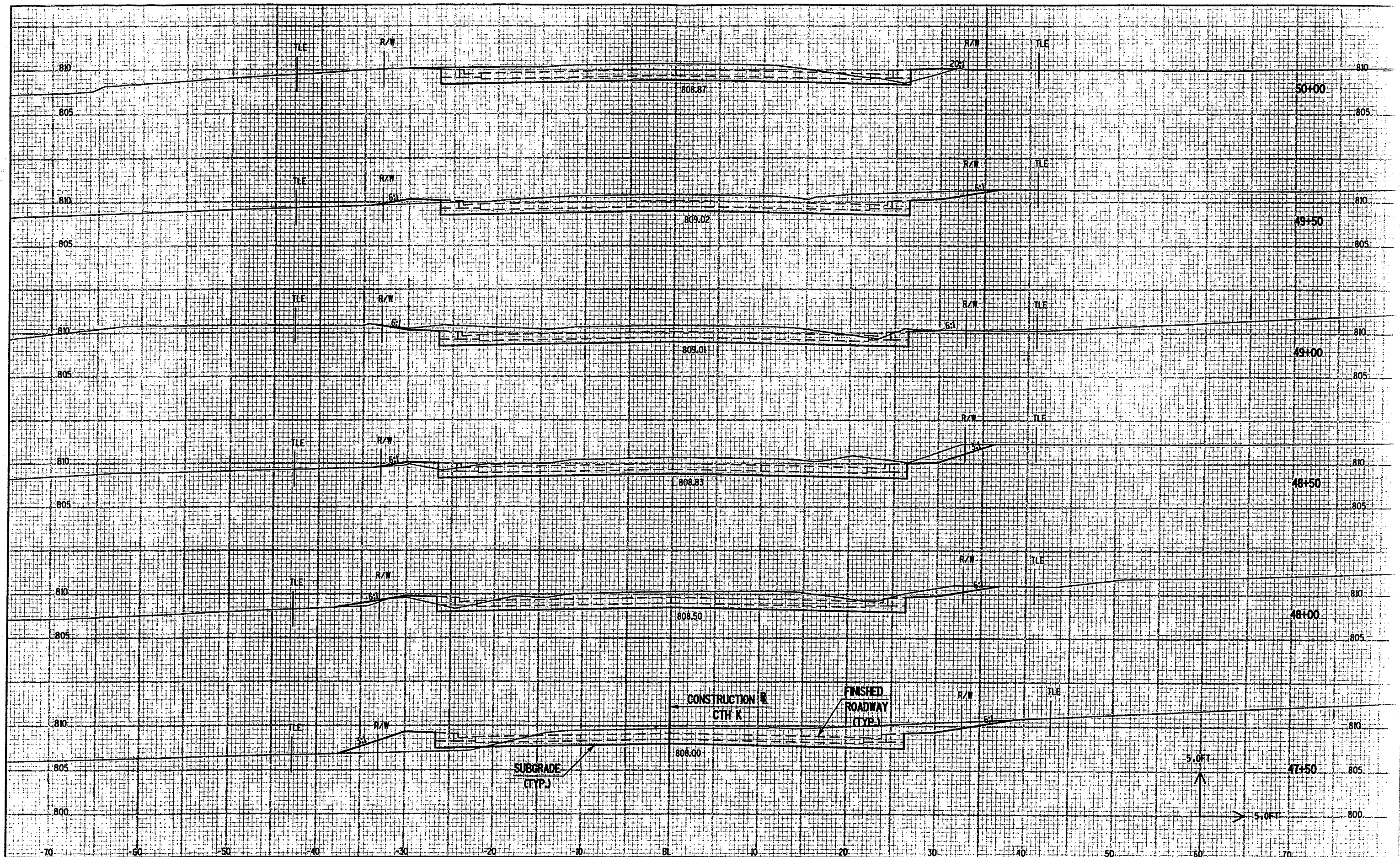
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COUNTY: WINNEBAGO

STATE PROJECT NO: 6473-03-71

SHEET NO: 9.7

E



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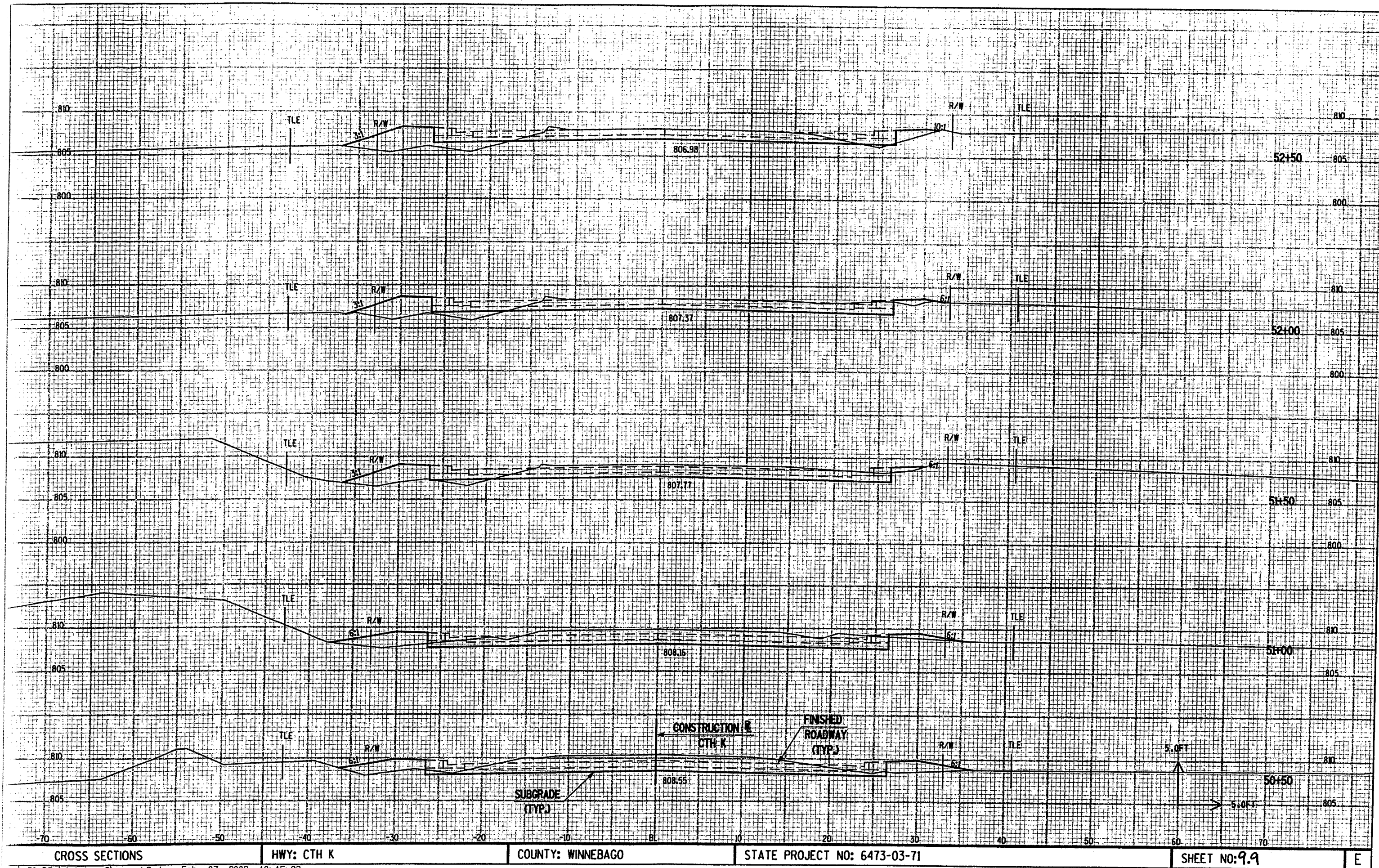
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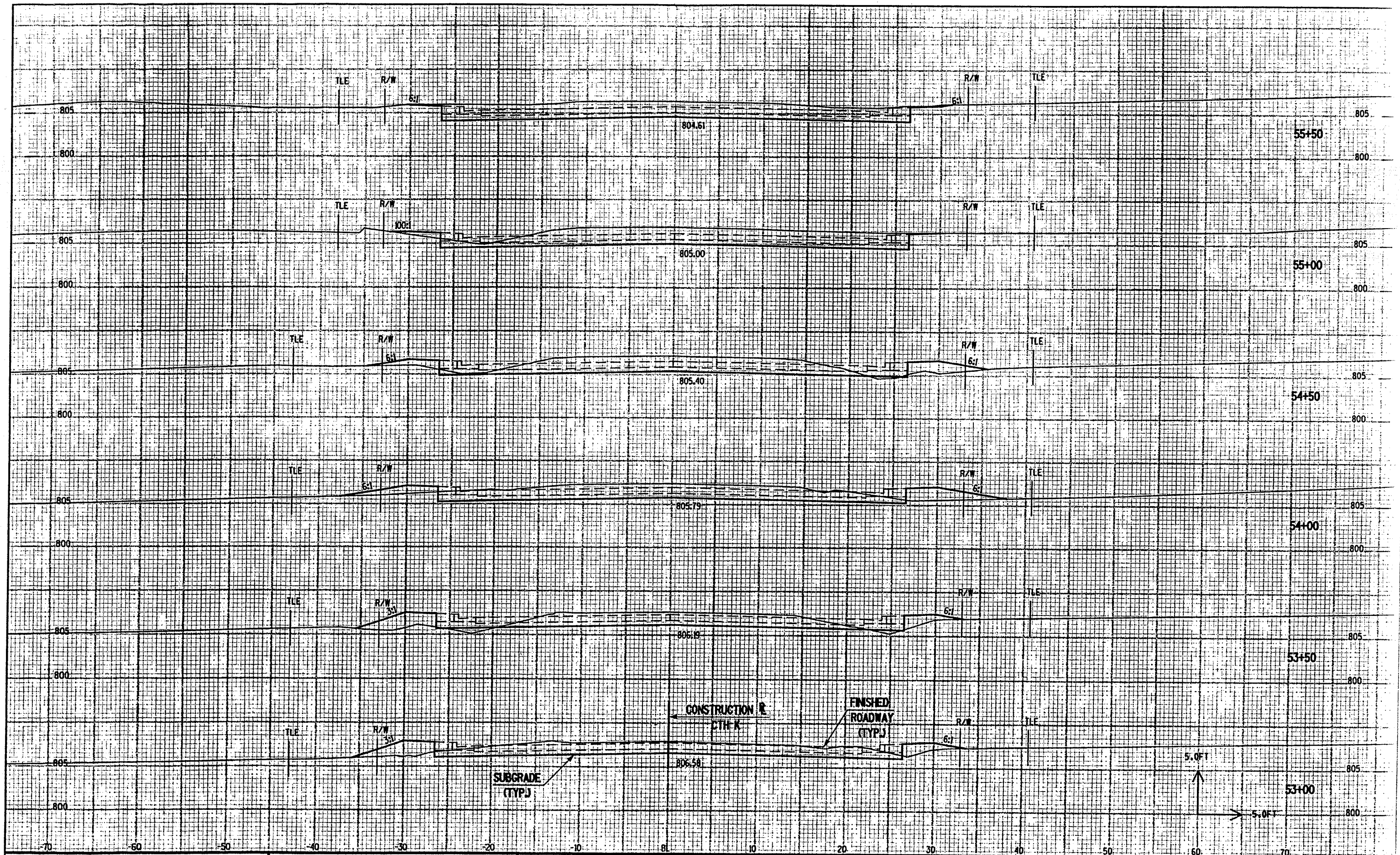
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STATE PROJECT NO: 6473-03-71

SHEET NO: 9.8

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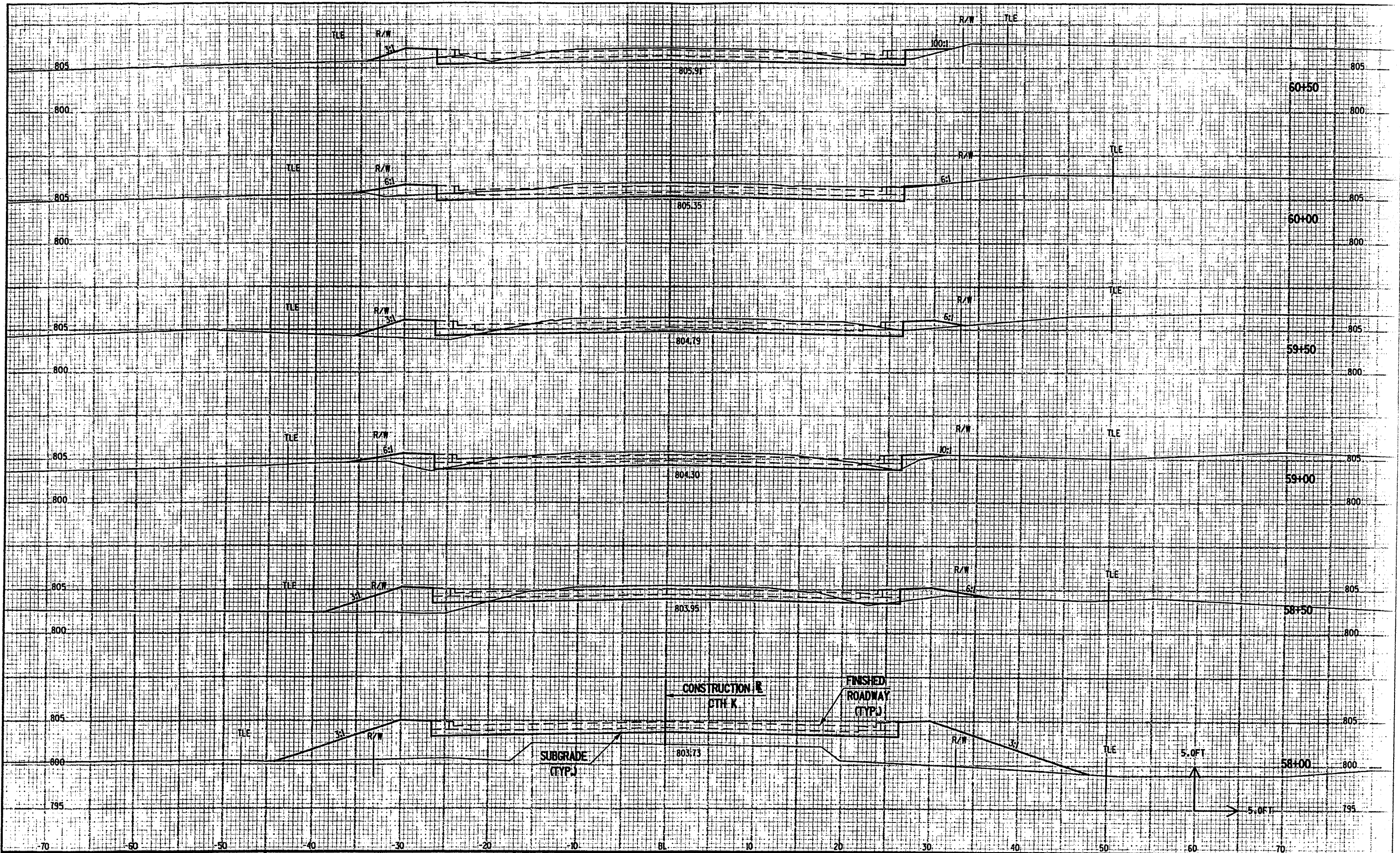
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COUNTY: WINNEBAGO

STATE PROJECT NO: 6473-03-71

SHEET NO: 9.10

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CROSS SECTIONS

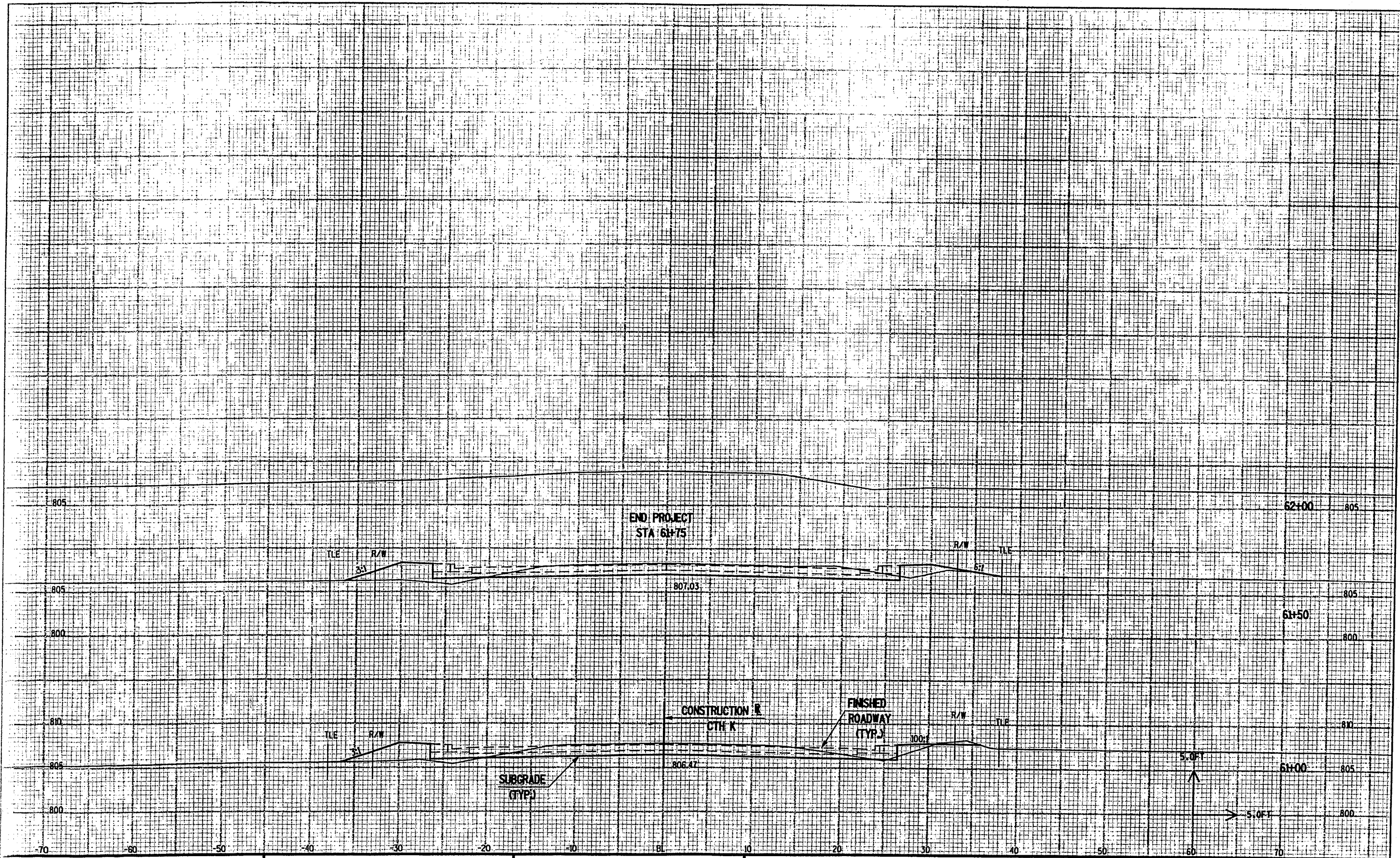
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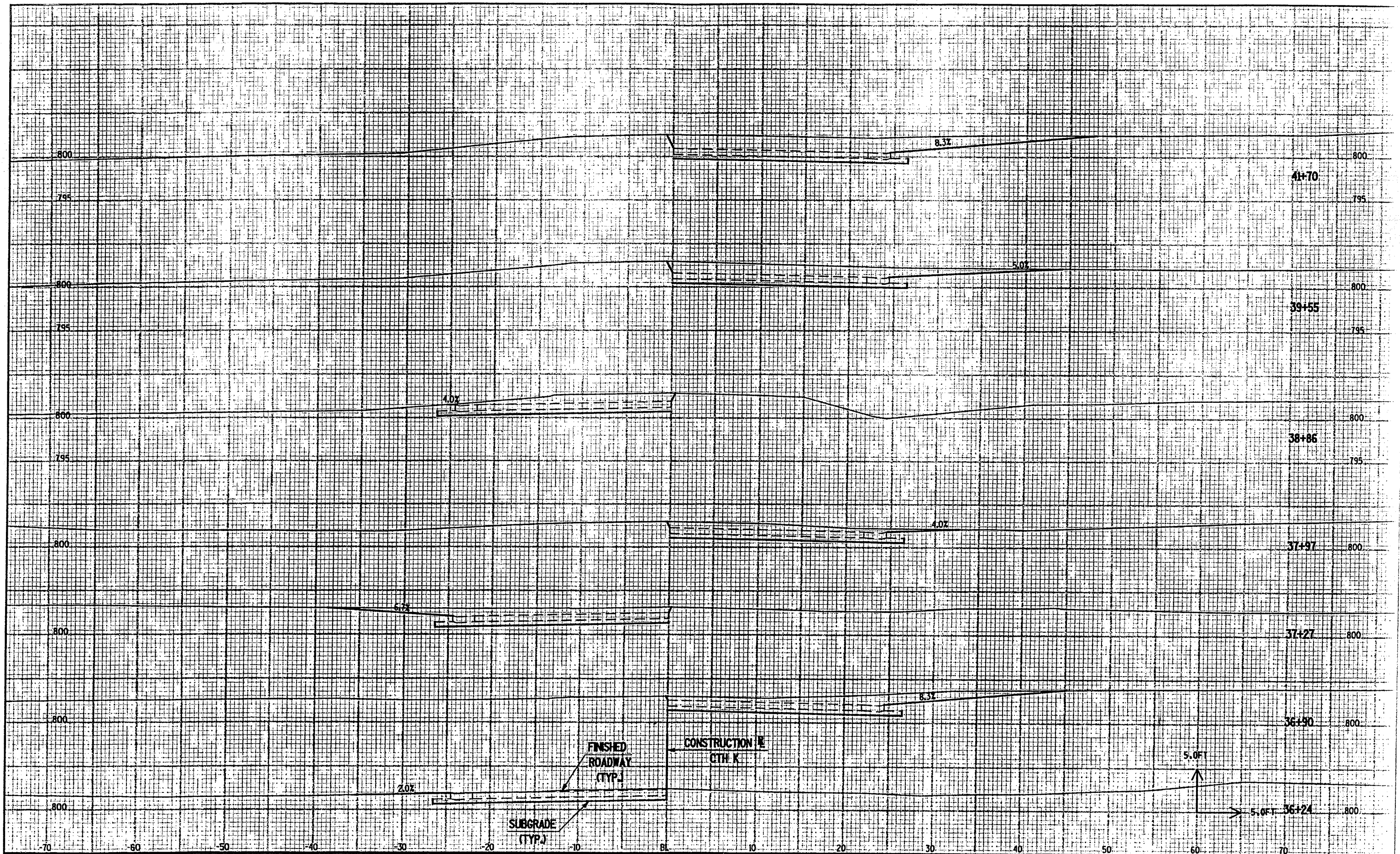
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STATE PROJECT NO: 6473-03-71

SHEET NO: 9.12

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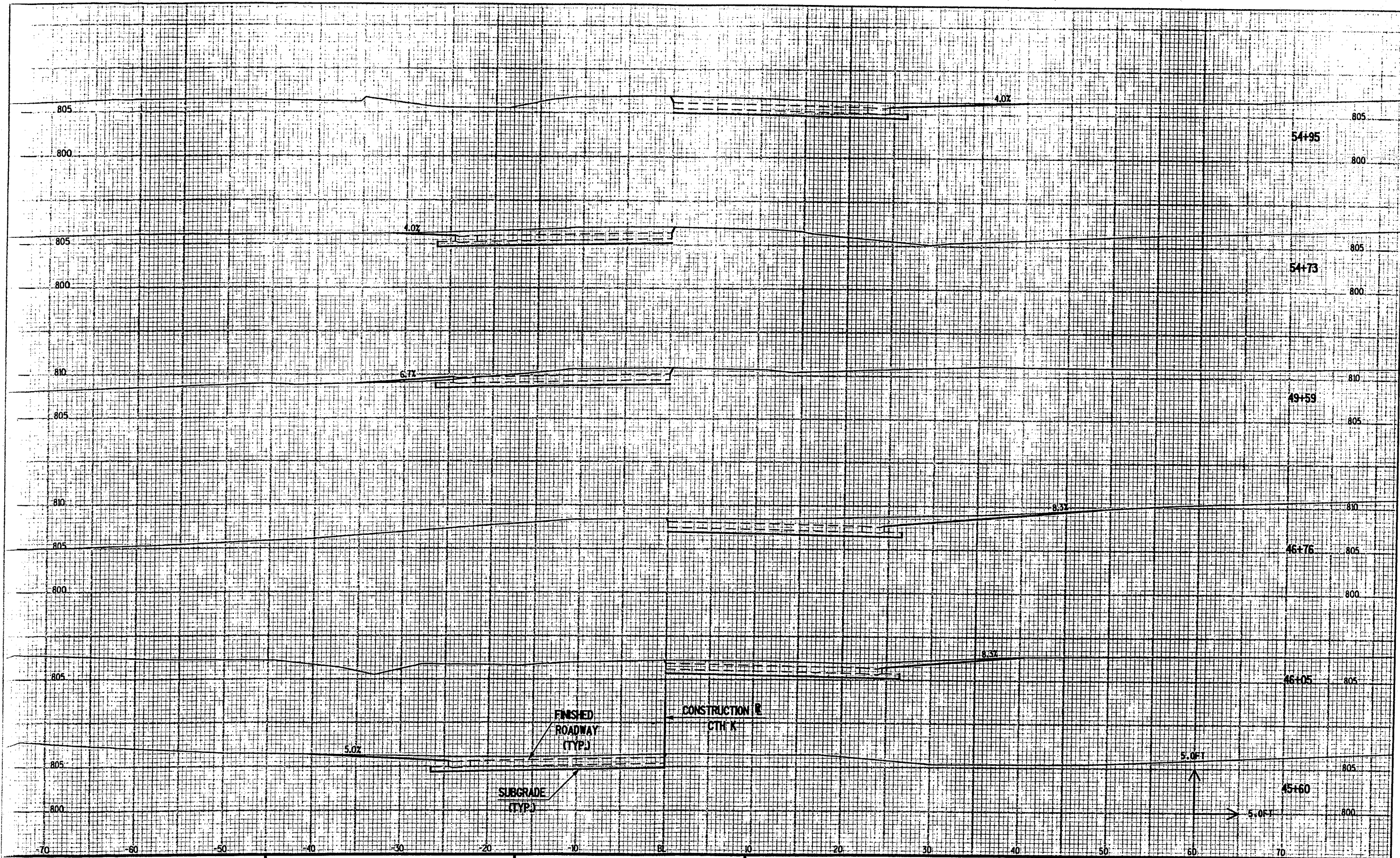
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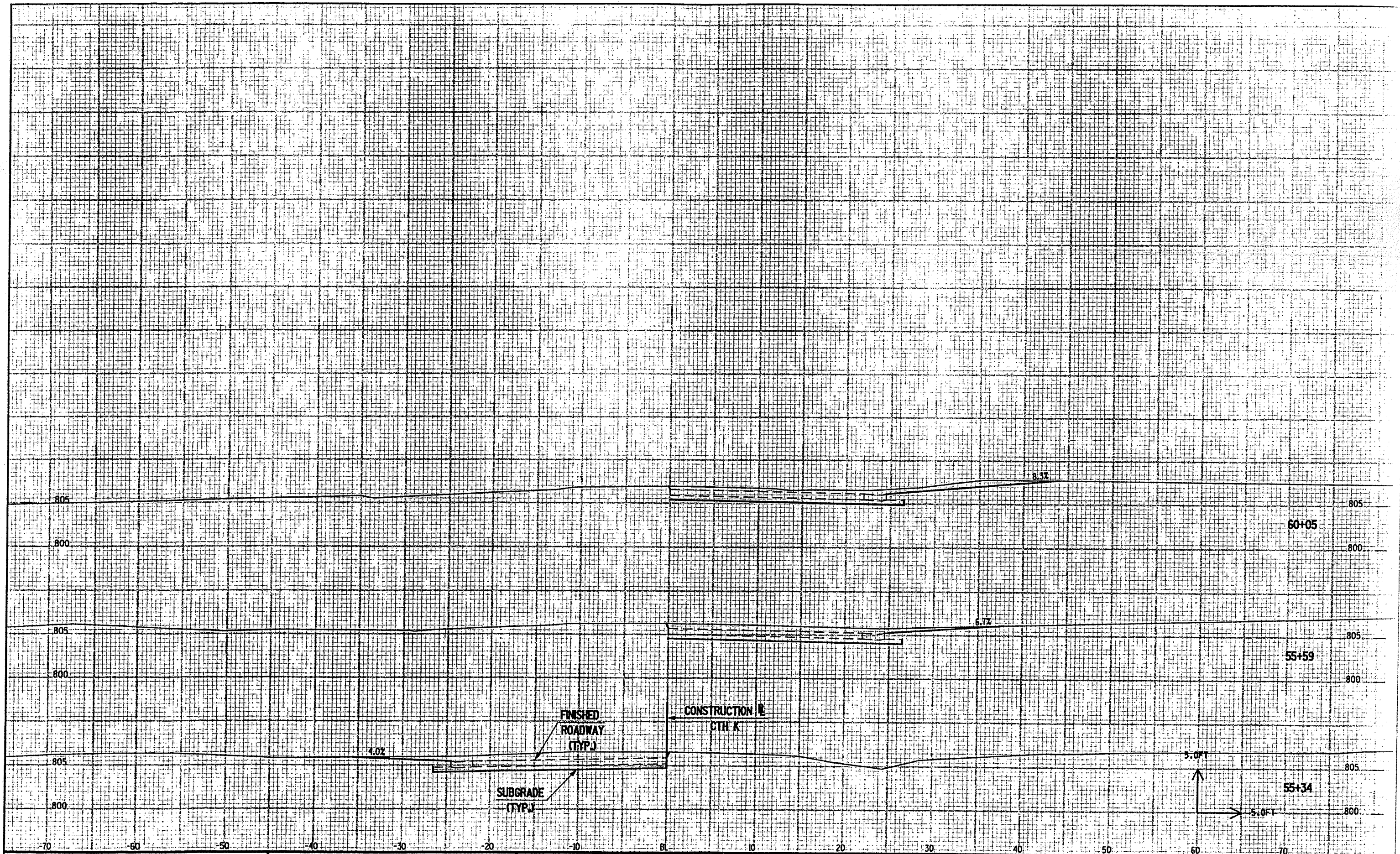
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STATE PROJECT NO: 6473-03-71

SHEET NO: 9.14

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CROSS SECTIONS

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COUNTY: WINNEBAGO

STATE PROJECT NO: 6473-03-71

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