STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7150-4-71	GR 048 (17)	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

WEST COUNTY LINE-CENTERVILLE ROAD

S.T.H. 35 & 54

TREMPEALEAU COUNTY

STATE PROJECT NUMBER
7150-4-71

Index of Sheets

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Sheet No.	5-5.1	Plan and Profile STA. 225+99.78-STA. 258+00
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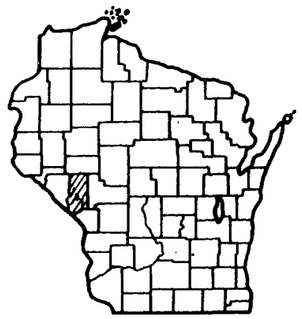
Sheet No.	9-9.1	Cross Sections

TOTAL SHEETS = 17



Design Designation

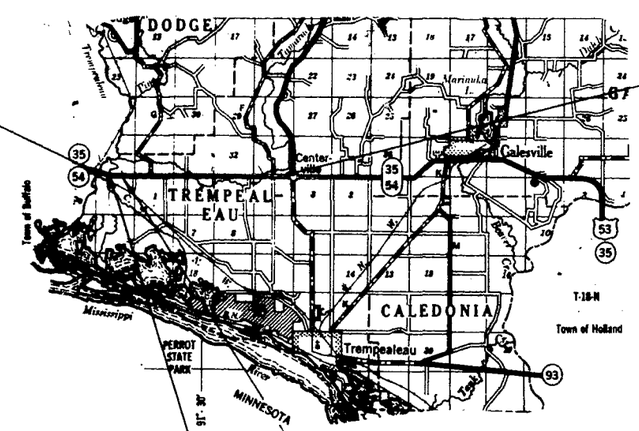
A.D.T. 1980	= 3200
A.D.T. 2000	= 5250
D.H.V.	= 635
D.	= 60-40
T.	= 11.5%
V.	= 55 M.P.H.
DESIGN CLASS	= S 2

Conventional Signs

County Line
Township or Range Line
Section Line
Corporate or City Limits
Property line
Lot Line
Existing Right of Way Line
New Right of Way Line
Base or Survey Line
Slope Intercept
Existing Roadway or Private Entrance
Caution Symbol (Combustible fluids under pressure)
Railroads
Fence (TYPE)
Culverts in Place
Culverts Required
Power Pole
Telephone or Telegraph Pole
Right of Way Markers
Marsh
Wooded Area
Grade Elevation

Scales PLAN 1" = 200'

R9W R8W



BEGIN PROJECT 7150-4-71
STA. 225+99.78

X=1,592,800 ±200'
Y=90,750 ±200'

±250' NORTH AND ±310' EAST OF THE SOUTHWEST COR. OF SEC. 35, T19N, R10W.

END PROJECT 7150-4-71
STA. 258+00

X=1,618,150 ±200'
Y=89,700 ±200'

±17' NORTH AND ±500' WEST OF THE SOUTHEAST COR. 33, T19N, R9W

EXCEPTION TO NET ℄ LENGTH
STA. 243+99.08-248+11.66

EQUATION STA. 261+12 BK = 39+46 AH

GN

CONTRACTOR: MATHY CONSTRUCTION CO.
SUB. CONTRACTORS: EDW. KRAEMER & SONS INC.
SWEENEY BROS. INC.
CENTURY FENCE CO.
PROJ. SUPERVISOR: LINUS J. KUJAK
AREA. " : JOE GRUTZIK
DATE STARTED: 6-30-80
DATE COMPLETED: 8-27-80

NOTE: ALL COORDINATES SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE SYSTEM, CENTRAL ZONE. COORDINATES ARE SCALED FROM U.S.G.S. TOPOGRAPHIC MAP FOR IDENTIFICATION ONLY.

Layout
Scale 0 2

Total Net Length of Centerline = 4.726 Mi.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Surveyor M.E.W. District Checker D.P.A.
Designer D.G.G. C.O. Checker J.L.B.
District Supervisor G.W.P. C.O. Coordinator [illegible]

Approved:
Date 1-5-80 T.R. Kinsey
District Transportation Director

Approved:
Date 2/18/80 D.L. Shand
Chief Design Engineer

Approved:
Date 2/20/80 E.J. Bystek
Director of Development

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
REGION 5 WISCONSIN DIVISION

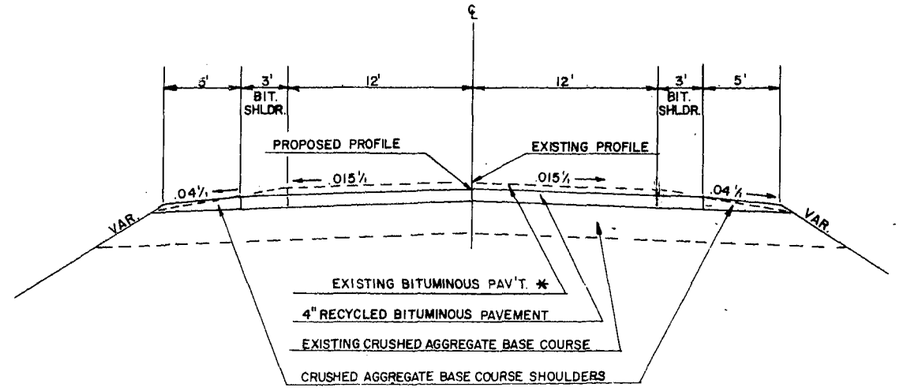
Approved:
Date
Division Administrator

Cat. No. 2130 – 010

STATE PROJECT NUMBER	SHEET NO.
7150-4-71	2

STANDARD ABBREVIATIONS

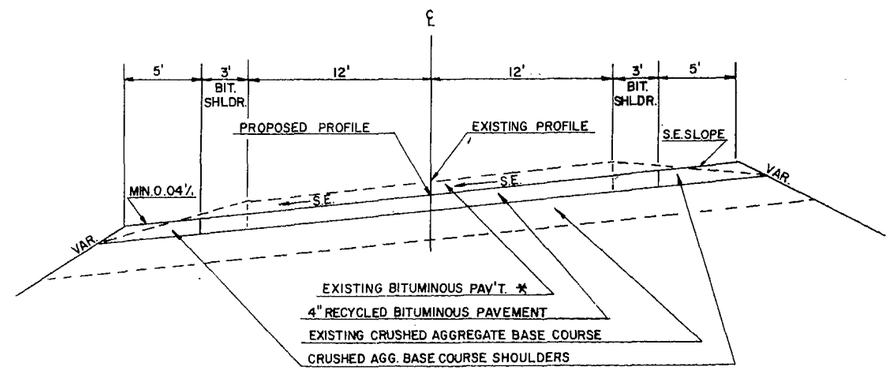
ADT	AVERAGE DAILY TRAFFIC
AH.	AHEAD
ET.AL.	AND OTHERS
BK.	BACK
B	BARN
B.M.	BENCH MARK
BIT.	BITUMINOUS
C.B.	CATCH BASIN
℄	CENTERLINE
Δ	CENTRAL ANGLE OR DELTA
CH.CH.	CHANNEL CHANGE
CL.	CLASS
C.M.C.P.	CORRUGATED METAL CULVERT PIPE
CONC.	CONCRETE
CONST.	CONSTRUCTION
C.P.	CULVERT PIPE
C.T.H.	COUNTY TRUNK HIGHWAY
CWT.	HUNDRED WEIGHT
C.Y.	CUBIC YARD
D	DEGREE OF CURVE
D	DIRECTIONAL DISTRIBUTION
D.H.V.	DESIGN HOUR VOLUME
DIS.	DISCHARGE
E	EAST
ELEV.	ELEVATION
EXC.	EXCAVATION
F F	FACE TO FACE
F.E.	FIELD ENTRANCE
F.L.	FLOW LINE
FT.	FOOT (FEET)
G.	GARAGE
GAL.	GALLON
H	HOUSE
HOR.	HORIZONTAL
IN.	INCHES
I	INTERSECTION ANGLE
I P	IRON PIN
L.F.	LINEAL FEET
LT.	LEFT
L.H.F.	LEFT HAND FORWARD
L	LENGTH OF CURVE
L.S.	LUMP SUM
L.H.E.	LIMITED HIGHWAY EASEMENT
M.H.	MANHOLE
MAX.	MAXIMUM
MI.	MILE
MIN.	MINIMUM
N	NORTH
PAV'T.	PAVEMENT
P.C.	POINT OF CURVATURE
P.I.	POINT OF INTERSECTION
P.T.	POINT OF TANGENCY
P.C.C.	PORTLAND CEMENT CONCRETE
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
P.P.	POWER POLE
PROJ.	PROJECT
R	RADIUS
R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
R.C.P.S.S.	REINFORCED CONCRETE PIPE, STORM SEWER
REQ'D.	REQUIRED
RT.	RIGHT
R.H.F.	RIGHT HAND FORWARD
R/W	RIGHT OF WAY
RD.	ROAD
SAN.	SANITARY
S	SOUTH
S.W.	SIDEWALK
STD.	STANDARD
STH	STATE TRUNK HIGHWAY
STA.	STATION
S.S.	STORM SEWER
S.E.	SUPERELEVATION
S.Y.	SQUARE YARD
SHR.	SHRINKAGE
SURF.	SURFACE
T	TRUCK PERCENTAGE"
T	TANGENT LENGTH OF CURVE
TAV.	TAVERN
T.P.	TELEPHONE POLE
⊥	TRANSIT LINE
UNCL.	UNCLASSIFIED EXCAVATION
V	DESIGN SPEED
VAR.	VARIABLE
V.C.	VERTICAL CURVE
VERT.	VERTICAL
W	WEST
CR.	CRUSHED
H.P.	HIGH POINT



TYPICAL TANGENT SECTION

5 FT. CRUSHED AGGREGATE SHOULDERS

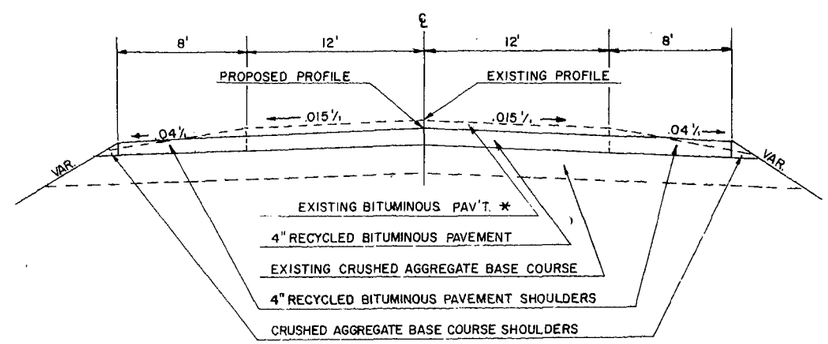
STA. 225 +99.78 — STA. 261 +12 BK.
STA. 39 +46 AH. — STA. 223 ±13.50



TYPICAL SUPERELEVATED SECTION

5 FT. CRUSHED AGGREGATE BASE COURSE SHOULDERS

STATION	* APPROXIMATE DEPTH (INCHES)
234+00	4
239+00	4-1/2
54+00	7
105+00	7-1/2
127+00	9-1/2
200+00	7-1/2



TYPICAL TANGENT SECTION

8 FT. RECYCLED BITUMINOUS PAVEMENT SHOULDERS

STA. 223 +13.5 — 258+00 LT. & RT.
(EAST)

GENERAL NOTES

1. CURVE DATA IS BASED ON ARC DEFINITION.
2. THE LOCATION OF SAW JOINTS AND THE AMOUNT OF "SALVAGED BITUMINOUS PAVEMENT" AT SIDE ROADS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.
3. ALL SIDE ROAD INTERSECTIONS TO BE TYPE "C" INTERSECTIONS, UNLESS OTHERWISE DESIGNATED.
4. EXACT SIZE AND LOCATION OF PRIVATE ENTRANCES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
5. SALVAGED TOPSOIL SHALL BE PLACED TO AN APPROXIMATE DEPTH OF 3 INCHES AT TIME OF PLACING.
6. WHEN THE QUANTITY OF THE ITEM OF BASE OR SURFACE COURSE IS MEASURED FOR PAYMENT BY THE TON THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER IN THE FIELD.
7. A SAWED JOINT WILL BE REQUIRED WHERE THE NEW BITUMINOUS CONCRETE MATCHES INTO THE EXISTING SURFACE.
8. PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED.
9. EXISTING SHOULDER MATERIAL SHALL BE SPREAD OVER THE EXISTING BASE COURSE AND SHAPED TO THE CROSS SLOPES AS SHOWN ON THE TYPICAL SECTIONS AND PLANS. COST OF THIS SHAPING WILL BE INCLUDED IN THE ITEM OF PREPARATION OF FOUNDATION FOR BITUMINOUS PAVING.
10. **LOCATION OF SOD FLUMES SHALL BE AS DIRECTED BY THE ENGINEER IN THE FIELD.**

UTILITIES

GENERAL TELEPHONE CO.
BLACK RIVER FALLS, WI 54615
REP: BOB TEEPLES
PHONE: 715-284-4379

TREMPEALEAU ELECTRIC CO-OP
ARCADIA, WI 54612
REP: BRUCE MIESTAD
PHONE: 323-3381

NORTHERN STATES POWER CO.
LA CROSSE, WI 54601
REP: JOHN RITTER
PHONE: 782-8110

STANDARD DETAIL DRAWINGS

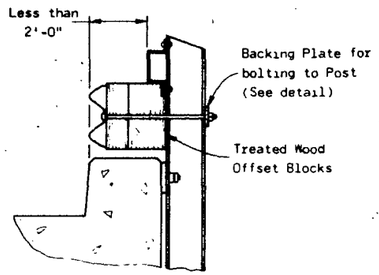
9A1-3	LAYOUT DETAILS FOR AT GRADE SIDE ROAD INTERSECTIONS.
13 B5-1	PAVEMENT MARKING
14B2-4a & b	CLASS "A" STEEL PLATE BEAM GUARD AND STEEL PLATE BEAM MEDIAN GUARD.
15A2-2	DELINEATOR POSTS, MARKER POSTS AND DELINEATORS.
15C1-5	CONSTRUCTION BARRICADES AND STANDARD SIGNS.

STATE PROJECT NUMBER	SHEET NO.
7150-4-71	2.1

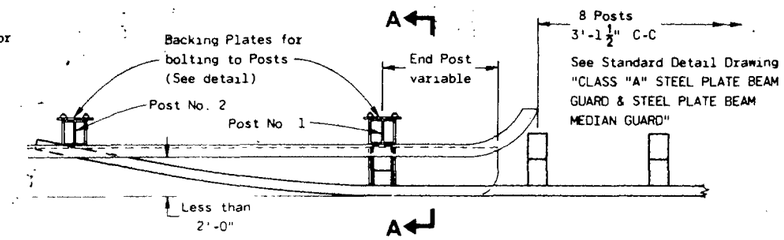
STEEL PLATE BEAM GUARD CONNECTIONS TO EXISTING STRUCTURES

NOTE NOTCH BEAM GUARD RAIL AND OR WOODEN OFFSET BLOCKS AS NECESSARY TO MAINTAIN REQUIRED RAIL HEIGHT.

B61-28 & 29

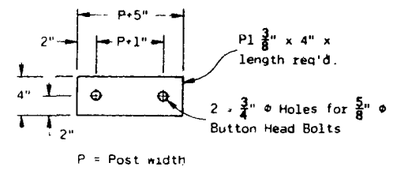


SECTION A - A



PLAN VIEW

TYPE "B"



BACKING PLATE

(Galvanized)

NOTES

Expansion and contraction of the bridge superstructure precludes a rigid connection between the existing structure and the guardrail installation. The guardrail splice at the terminal connection must permit any expansion or contraction to be absorbed within the splice. Bolt (splice) tension necessary to prevent the connection from becoming a rigid connection shall be determined by the Engineer.

The method illustrated for attaching guardrail to existing structures are TYPE SOLUTIONS ONLY. Specific dimensions must be based on the existing structure design, with guardrail height and post spacing meeting the requirements of the current Standard Detail Drawing for "CLASS "A" STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD".

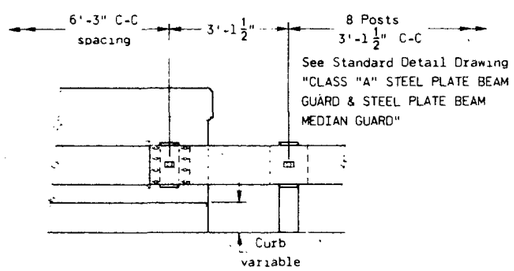
Bolts, studs, nuts and washers to be ASTM Specification A 325, and galvanized in accordance with ASTM A 153.

Maximum rate of flare for guardrail shall be 10:1 where normal guardrail alignment is outside the structure railing.

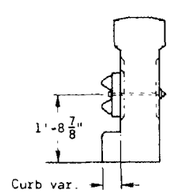
Type "B" structure connection shall be used only on traffic approach end of structure. Connect directly to structure end post on exit end of structure.

B61-12

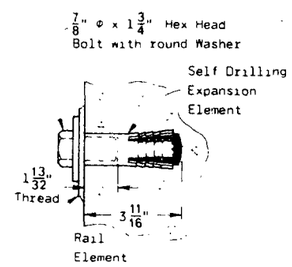
CONCRETE GIRDER



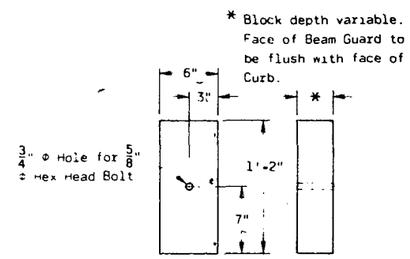
FRONT ELEVATION



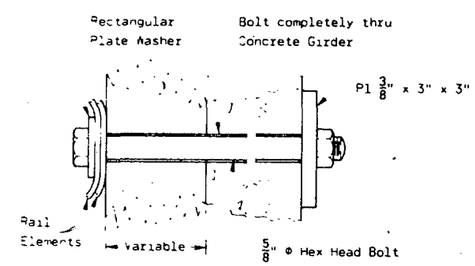
END ELEVATION



EXPANSION ELEMENT DETAIL



OFFSET BLOCK



MOUNTING BOLT DETAIL

NOTES

Expansion and contraction of the bridge superstructure precludes a rigid connection between the existing structure and the guardrail installation. The guardrail splice at the terminal connection must permit any expansion or contraction to be absorbed within the splice. Bolt (splice) tension necessary to prevent the connection from becoming a rigid connection shall be determined by the Engineer.

The methods illustrated for attaching guardrail to existing structures are TYPE SOLUTIONS ONLY. Specific dimensions must be based on the existing strucure design, with guardrail height and post spacing meeting the requirements of the current Standard Detail Drawing for "CLASS "A" STEEL PLATE BEAM GUARD & STEEL PLATE BEAM MEDIAN GUARD".

Bolts, studs, nuts and washers to be ASTM Specification A 325, and galvanized in accordance with ASTM A 153.

Maximum rate of flare for guardrail shall be 10:1 where normal guardrail alignment is outside the structure railing.

ESTIMATE OF QUANTITIES

PROJECT ID: 7150- 4-71
TREMPEALEAU COUNTY
WEST COUNTY LINE - CENTERVILLE ROAD
S.T.H. 35 AND S.T.H. 54

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	7150-04-71 QUANTITY
20411	REMOVING GUARDRAIL	L.F.	768.00	768.00
21101	PREPARATION OF FOUNDATION FOR BITUMINOUS PAVING	L.S.	1.00	1.00
21301	FINISHING ROADWAY	L.S.	1.00	1.00
30404	CRUSHED AGGREGATE BASE COURSE	TON	9,420.00	9,420.00
40602	BITUMINOUS MATERIAL FOR SURFACE COURSE	TON	775.00	775.00
60170	CONCRETE CURB AND GUTTER, 36-INCH, TYPE D	L.F.	282.00	282.00
61406	ANCHORAGES FOR STEEL PLATE BEAM GUARD	EACH	14.00	14.00
61408	STEEL PLATE BEAM GUARD, CLASS A	L.F.	1,850.00	1,850.00
61421	MARKER POSTS	EACH	23.00	23.00
61801	MAINTENANCE AND REPAIR OF HAUL ROADS	L.S.	1.00	1.00
61910	MOBILIZATION	L.S.	1.00	1.00
62301	CALCIUM CHLORIDE SURFACE TREATMENT	TON	30.00	30.00
62505	SALVAGED TOPSOIL	S.Y.	87.00	87.00
62901	FERTILIZER	CWT.	1.00	1.00
63002	SEEDING	LB.	5.00	5.00
63101	SODDING	S.Y.	60.00	60.00
63305	DELINEATORS	EACH	46.00	46.00
64202	FIELD OFFICE, TYPE B	L.S.	1.00	1.00
64210	FIELD LABORATORY	L.S.	1.00	1.00
64301	TRAFFIC CONTROL	L.S.	1.00	1.00
90001	SALVAGED BITUMINOUS PAVEMENT	S.Y.	69,207.00	69,207.00
90002	RECYCLED BITUMINOUS PAVEMENT	TON	22,130.00	22,130.00
90003	TEMPORARY PAVEMENT MARKING	L.F.	748.00	748.00
90004	CENTER LINE / NO PASSING MARKING, PAINT	MI.	1.99	1.99
90005	EDGE LINE MARKING, PAINT	MI.	9.39	9.39
90006	REMOVING MARKER POSTS	EACH	47.00	47.00

SHEET 3

ITEM	ITEM DESCRIPTION	UNIT	TOTAL	7150-04-71 QUANTITY
90007	STRUCTURE ATTACHMENT FOR STEEL PLATE BEAM GUARD, TYPE B	EACH	6.00	6.00
90008	FUEL,$60,000 MAXIMUM	L.S.	1.00	1.00

SHEET 3.1

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

Removing Guardrail

Sta. - Sta.	Location	L.F.	Remarks
225+99 - 227+28	Lt. & Rt.	258	B-61-28
242+73 - 244+01	Lt. & Rt.	256	B-61-29
248+42 - 249+39	Lt. & Rt.	254	B-61-29

Crushed Aggregate Base Course

Sta. - Sta.	Location	Tons	Remarks
225+99.78 - 258+00	C/L	3,624	Restore Base: Use only as directed by the engineer.
225+99.78-243+99.08	Lt. & Rt. Shldrs.	357	5 Ft. Shld.
248+11.6 - 261+12 BK	" "	258	"
39+46 AH - 222+72.75	" "	3,632	"
223+12.75-258+00	" "	125	Shoulder Inslope
52+68	Tn.Rd. Rt.	10	Shoulder
92+36	Tn.Rd. Rt.	10	"
117+92	Tn.Rd. Lt.	10	"
118+58	Tn.Rd. Rt.	10	"
157+91	Tn.Rd. Rt.	10	"
202+62	Tn.Rd. Rt.	10	"
236+68	Tn.Rd.	10	"
P.E. & F.E.	Project	500	
Undistributed		854	

Concrete Curb and Gutter 36 Inch Type "D"

Sta.	Location	L.F.	Remarks
74+17	Lt.	141	Radius Lt. & Rt. @ CTH "G"
236+68	Lt.	141	Radius Lt. & Rt. @ CTH "F"

Steel Plate Beam Guard Class "A"

Sta. - Sta.	Loc.	L.F.	Anchorages	Structure Attachment Plates	Remarks
225+99.78 - 227+28.78	Lt. & Rt.	266	2	2	B-61-28
242+72.3 - 244+01.3	Lt. & Rt.	266	2	2	B-61-29
248+12 - 249+41	Lt. & Rt.	266	2	2	B-61-29
130+94 - 133+12	Lt.	~~218~~ 329.0	2	-	B-61-27
130+28 - 132+47	Rt.	~~218~~ 229.0	2	-	B-61-27
221+38 - 224+46	Lt. & Rt.	616	4	-	B-61-12 *

* Beam Guard to run across bridge, See Detail

Marker Posts and Delineators

Sta. - Sta.	Location	Posts Each	Delineators Each	Remarks
70+00 - 84+00	Rt.	15	30	100' Spacing
77+00 - 84+00	Lt.	8	16	100' Spacing

Erosion Control

Sta.	Location	Salvaged Topsoil S.Y.	Seeding LB.	Fertilizer CWT	Remarks
74+17	Lt.	52	3	0.5	CTH "G"
236+68	Lt.	35	2	0.5	CTH "F"

Salvaged Bituminous Pavement

Sta. - Sta.	Location	S.Y.
225+99 - 258+00	Main Line	66,543
52+68	Rt. Klien Town Road	243
74+17	Lt. CTH "G"	479
92+36	Rt. West Prairie Tn. Road	248
117+92	Lt. Town Road	317
118+58	Rt. Stevens Twn.Rd.	81
157+91	Rt. Town Road	199
202+62	Rt. Sonsalla Town Rd.	279
236+68	Lt. CTH "F"	275
236+68	Rt. Harris Town Road	351
144+00	Lt. P.E.	113
184+75	Rt. P.E.	79

STATE PROJECT NUMBER 7150-4-71

SHEET NO 3A

DETAIL SUMMARY SHEET OF MISCELLANEOUS QUANTITIES

Recycled Bituminous Pavement

Sta. - Sta.	Location	Recycled Bit.Pav't. Ton	Depth	Ac @ 3.5% Tons	Remarks
225+99.78 - 243+99.08	Mainline	1,342	4"	47.0	30' wide
248+11.6 - 261+12BK	"	970	4"	34.0	"
39+46AH - 258+00	"	16,268	4"	569.4	"
223+12.75 - 258+00	Lt.& Rt.	867	4"	30.4	5 Ft. Shlds.
71+67 - 77+92	Rt.	86	4"	3.0	Passing Lane
92+83 - 93+35	Rt.	8	4"	0.3	5 Ft. Shld.
74+17 - CTH "G"	Lt.	84	4"	2.9	Type "B" Inter.
236+68 - CTH "F"	Lt.	72	4"	2.5	" "
52+68	Rt.	46	4"	1.6	Type "C" Inter.
92+36	Rt.	52	4"	1.8	" "
117+92	Lt.	49	4"	1.7	" "
118+58	Rt.	42	4"	1.5	" "
157+91	Rt.	50	4"	1.8	" "
202+62	Lt.	45	4"	1.6	" "
236+68	Rt.	58	4"	2.0	" "
144+00	Lt.	10	4"	0.4	P.E.
184+75	Rt.	6	4"	0.2	P.E.
93+57	Rt.	65	3"	2.3	Wayside
Undistributed		2,010		70.6	

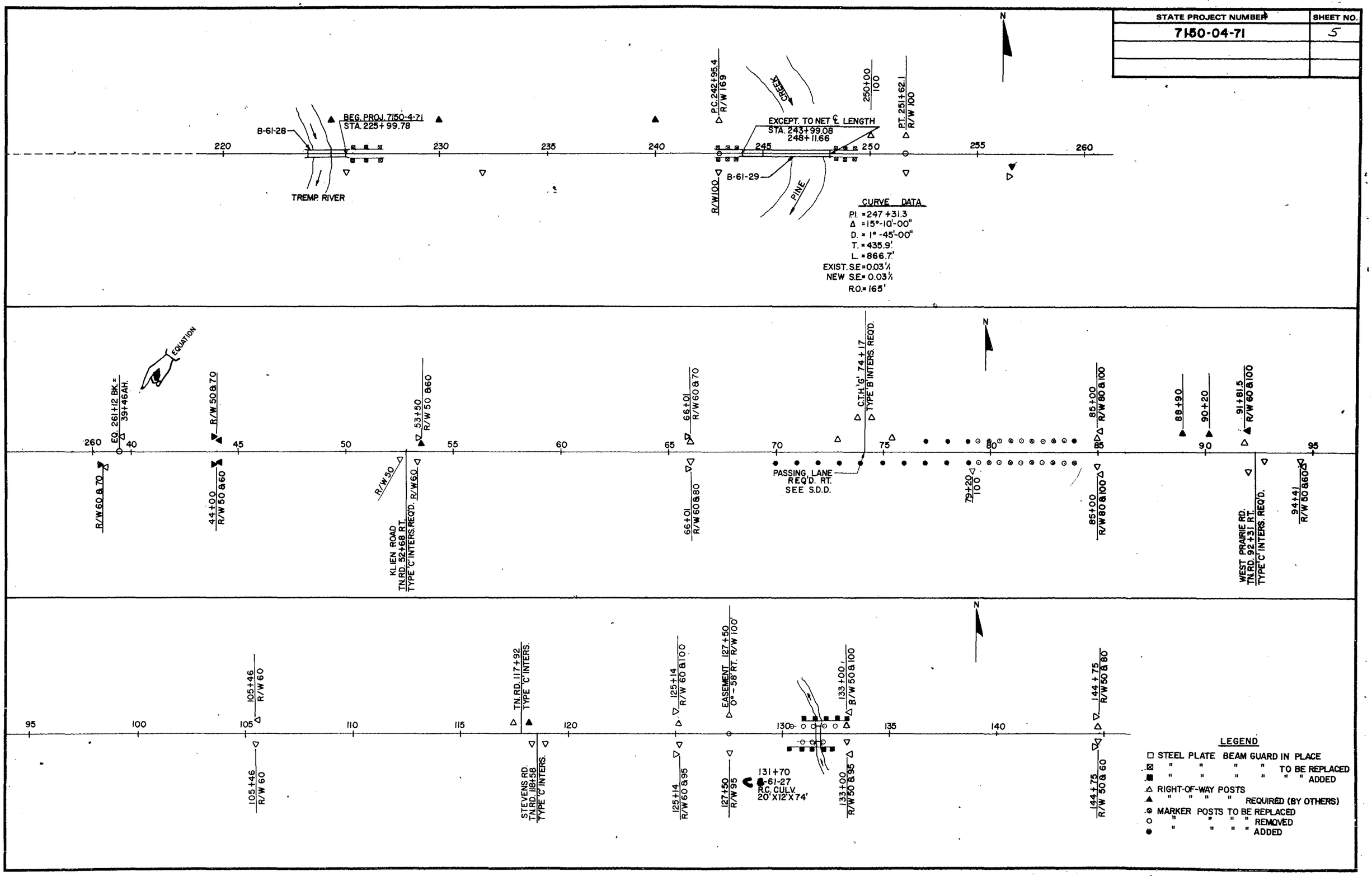
Removing Marker Posts

Sta. - Sta.	Location	Each	Remarks
79+47 84+50	Lt.	9	Wood
79+47 84+50	Rt.	10	"
131+00 133+50	Lt.	5	"
131+00 133+50	Rt.	3	"
222+32 222+22	Lt. & Rt.	10	6 Wood & 4 Metal
223+12 223+62	Lt. & Rt.	10	" "

STATE PROJECT NUMBER 7150-4-71

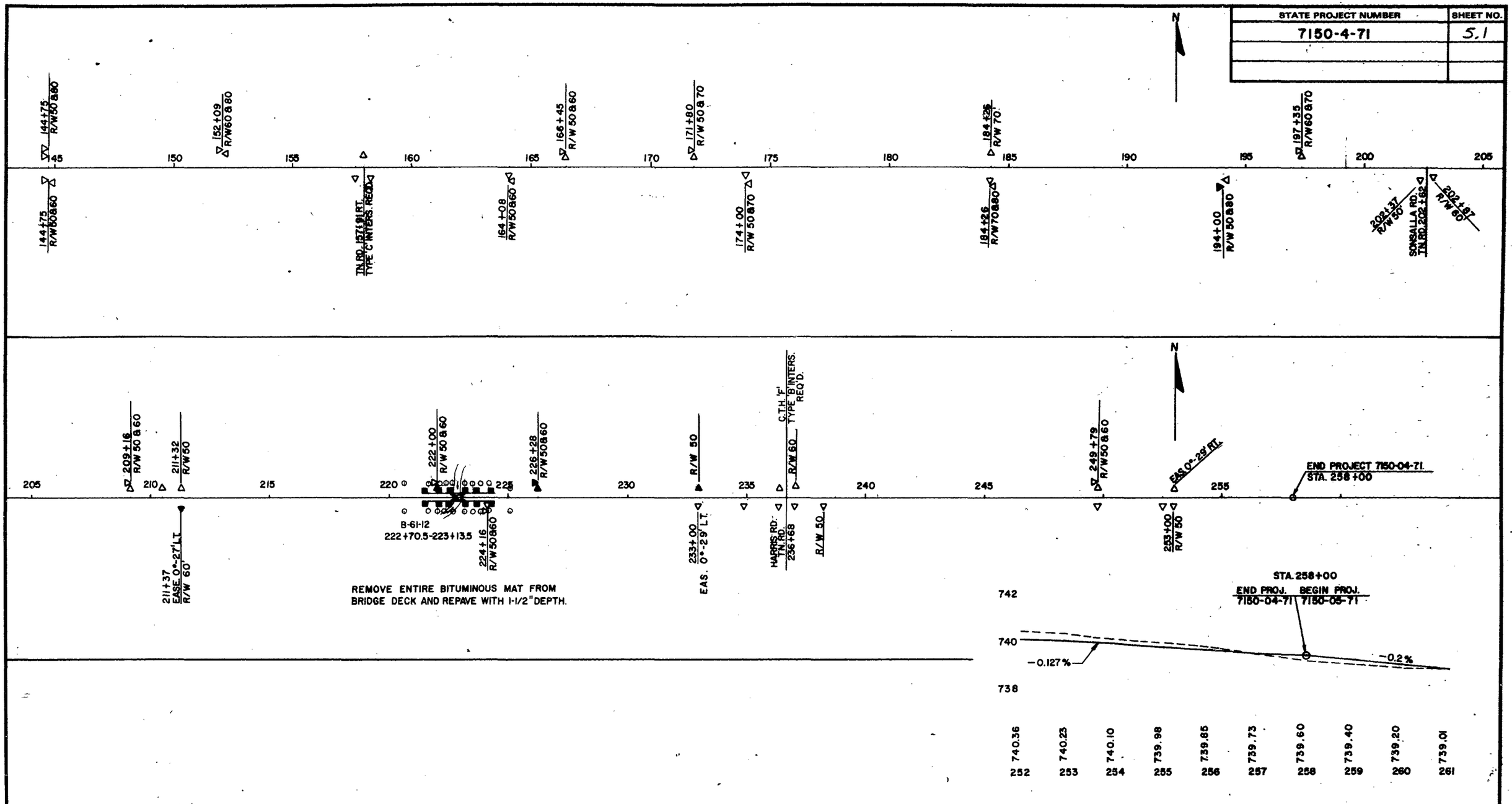
SHEET NO 38

STATE PROJECT NUMBER	SHEET NO.
7150-04-71	5



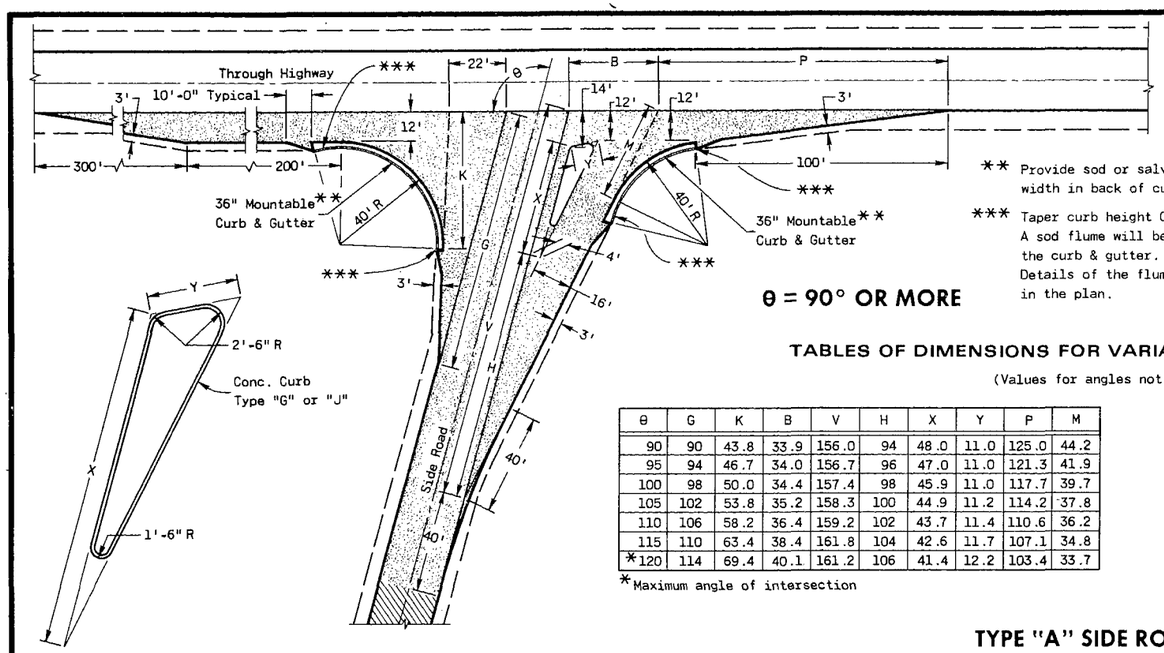
Catalog No. 2130-D142

STATE PROJECT NUMBER	SHEET NO.
7150-4-71	5.1



LEGEND

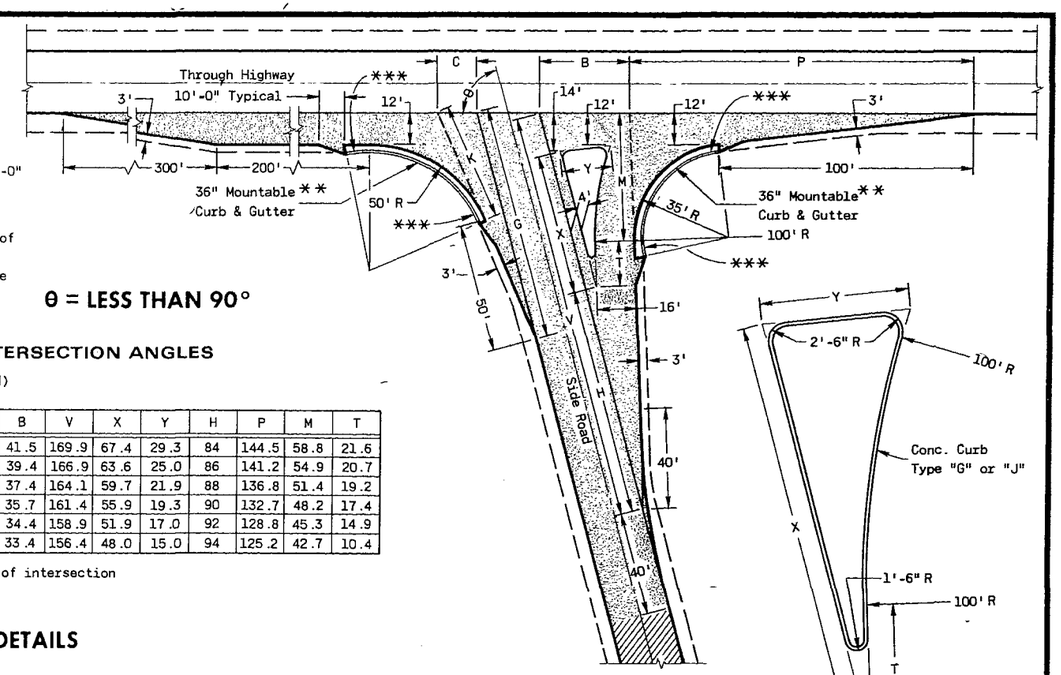
- □ STEEL PLATE BEAM GUARD IN PLACE
- ▣ " " " " TO BE REPLACED
- ■ " " " " " " ADDED
- ▲ R/W POST TO BE REQUIRED (BY OTHERS)
- ● MARKER POST TO BE REPLACED
- ○ " " " " REMOVED
- ⊕ " " " " ADDED



θ = 90° OR MORE

** Provide sod or salvaged topsoil & seed to a 3'-0" width in back of curb & gutter sections.

*** Taper curb height 0" to 6" in 10'-0". A sod flume will be required at discharge end of the curb & gutter. Details of the flume(s) will be shown elsewhere in the plan.



θ = LESS THAN 90°

TABLES OF DIMENSIONS FOR VARIABLE SIDE ROAD INTERSECTION ANGLES

(Values for angles not shown shall be interpolated)

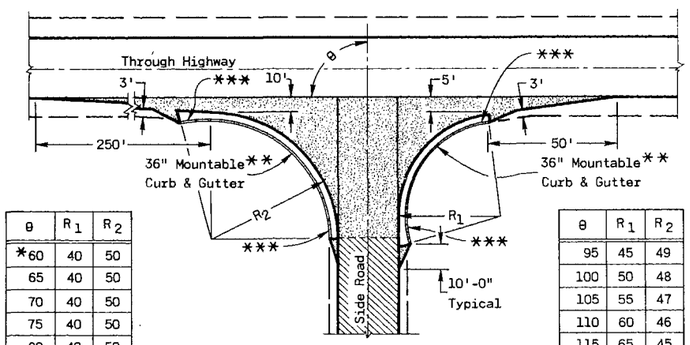
θ	G	K	B	V	H	X	Y	P	M
90	90	43.8	33.9	156.0	94	48.0	11.0	125.0	44.2
95	94	46.7	34.0	156.7	96	47.0	11.0	121.3	41.9
100	98	50.0	34.4	157.4	98	45.9	11.0	117.7	39.7
105	102	53.8	35.2	158.3	100	44.9	11.2	114.2	37.8
110	106	58.2	36.4	159.2	102	43.7	11.4	110.6	36.2
115	110	63.4	38.4	161.8	104	42.6	11.7	107.1	34.8
*120	114	69.4	40.1	161.2	106	41.4	12.2	103.4	33.7

*Maximum angle of intersection

θ	C	G	K	B	V	X	Y	H	P	M	T
*60	19.7	76.3	38.6	41.5	169.9	67.4	29.3	84	144.5	58.8	21.6
65	17.8	82.6	40.6	39.4	166.9	63.6	25.0	86	141.2	54.9	20.7
70	15.8	87.2	43.1	37.4	164.1	59.7	21.9	88	136.8	51.4	19.2
75	15.7	90.9	45.6	35.7	161.4	55.9	19.3	90	132.7	48.2	17.4
80	15.9	94.9	48.3	34.4	158.9	51.9	17.0	92	128.8	45.3	14.9
85	16.2	99.3	51.4	33.4	156.4	48.0	15.0	94	125.2	42.7	10.4

*Desirable minimum angle of intersection

TYPE "A" SIDE ROAD INTERSECTION DETAILS



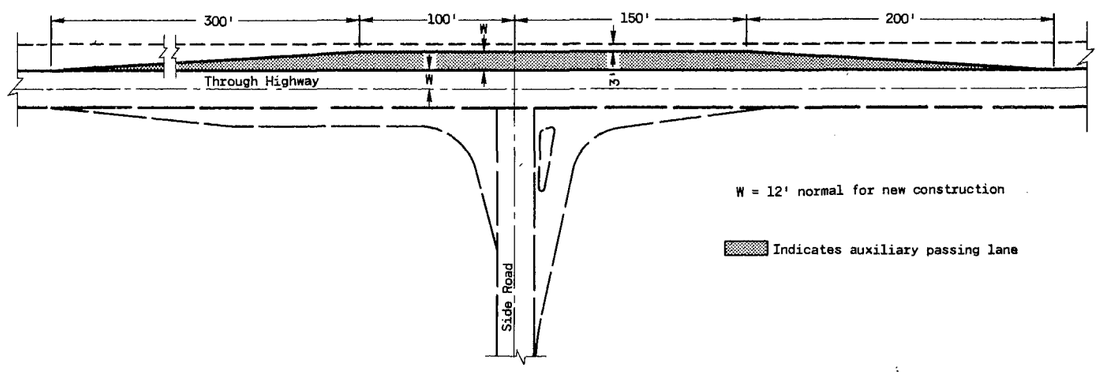
θ	R_1	R_2
*60	40	50
65	40	50
70	40	50
75	40	50
80	40	50
85	40	50
90	40	50

*Min. Angle of Intersection

θ	R_1	R_2
95	45	49
100	50	48
105	55	47
110	60	46
115	65	45
*120	70	44

*Max. Angle of Intersection

TYPE "B" SIDE ROAD INTERSECTION DETAILS



W = 12' normal for new construction

Indicates auxiliary passing lane

PASSING LANE DETAIL

GENERAL NOTES

Designs may be used interchangeably in combination or separately for any one complete intersection depending upon intersection angle and surfacing of each approach roadway.

Details on this drawing are for minimum design only, and not applicable to special conditions, as shown elsewhere on the plans.

SIDE ROAD SURFACING NOTE

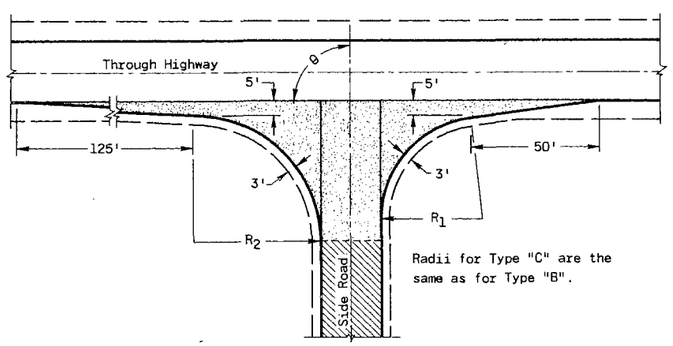
If the side road is not presently paved, pavement shall be placed to the limits shown. In the case where the construction limits are beyond the paving limits, gravel or crushed stone surfacing shall be placed between the paving limits and construction limits.

If the side road is presently paved, new pavement shall be placed to the limits of design as shown and beyond, if necessary, to meet existing pavement.

If the side road is the construction project, the intersection surfacing shall be the same as for the project.

New Pavement

Existing Surface

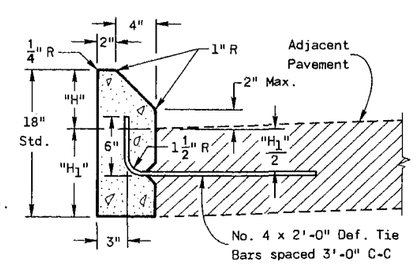


Radii for Type "C" are the same as for Type "B".

TYPE "C" SIDE ROAD INTERSECTION DETAILS

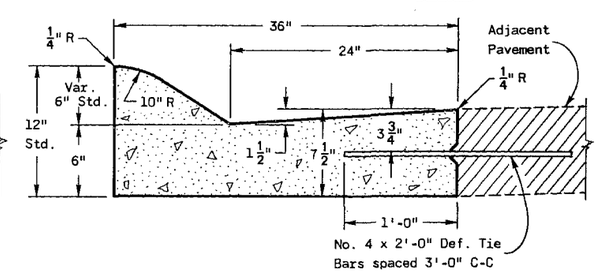
"H"= 6" Max. and 4" Min. and shall be 6" unless otherwise shown on the plans.

"H_1"= Same as adjacent pavement thickness for rigid pavement and 12" for non-rigid pavement (Tie Bars omitted).



TYPE "G" (INCLUDING TIE BARS)

TYPE "J" (EXCLUDING TIE BARS)



TYPE "A" (INCLUDING TIE BARS)

TYPE "D" (EXCLUDING TIE BARS)

MOUNTABLE CONCRETE CURB

MOUNTABLE CONCRETE CURB & GUTTER 36"

LAYOUT DETAILS FOR AT-GRADE SIDE ROAD INTERSECTIONS

State of Wisconsin
Department of Transportation
Division of Highways

RECOMMENDED FOR APPROVAL:

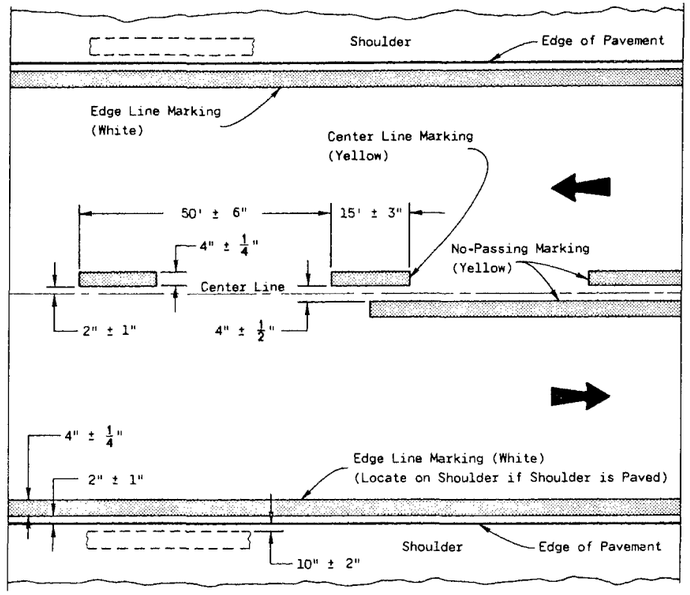
9-10-76 DATE — CHIEF OF FACILITIES DEVELOPMENT

APPROVED

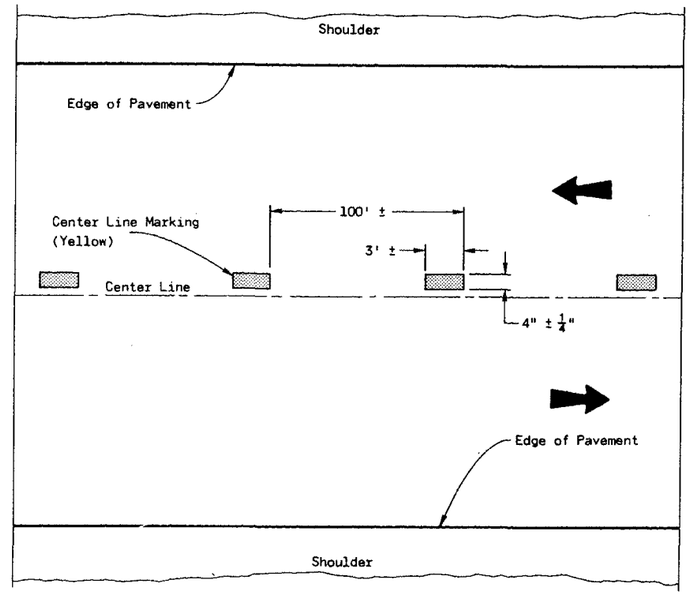
9-10-76 DATE — STATE HIGHWAY ENGINEER

S. D. D. 9A 1-3

S. D. D. 9A 1-3

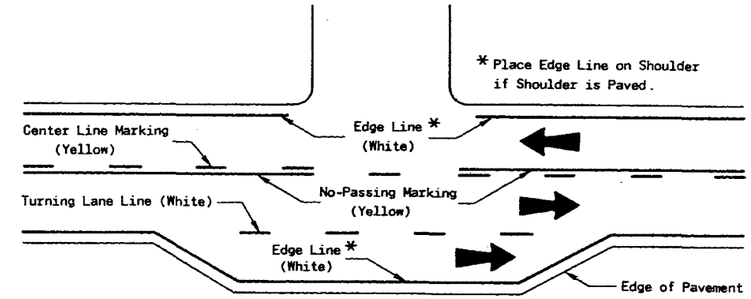


PERMANENT MARKING



TEMPORARY MARKING

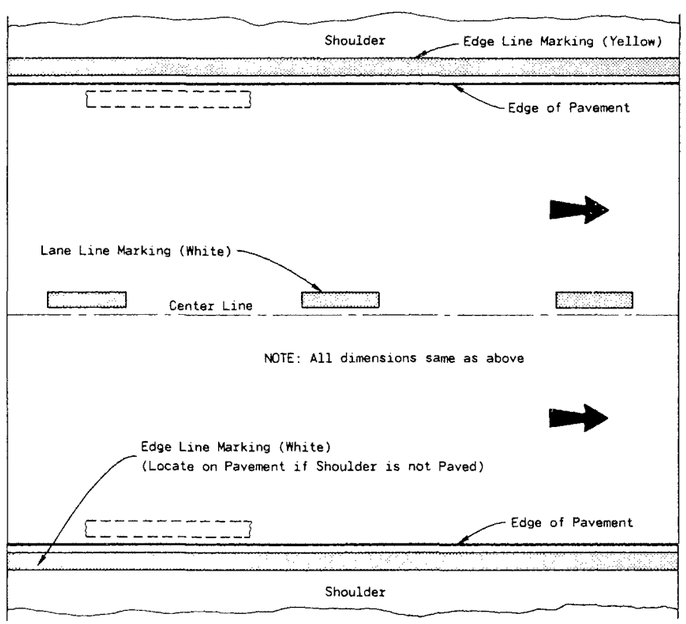
PAVEMENT MARKING - TWO WAY TRAFFIC



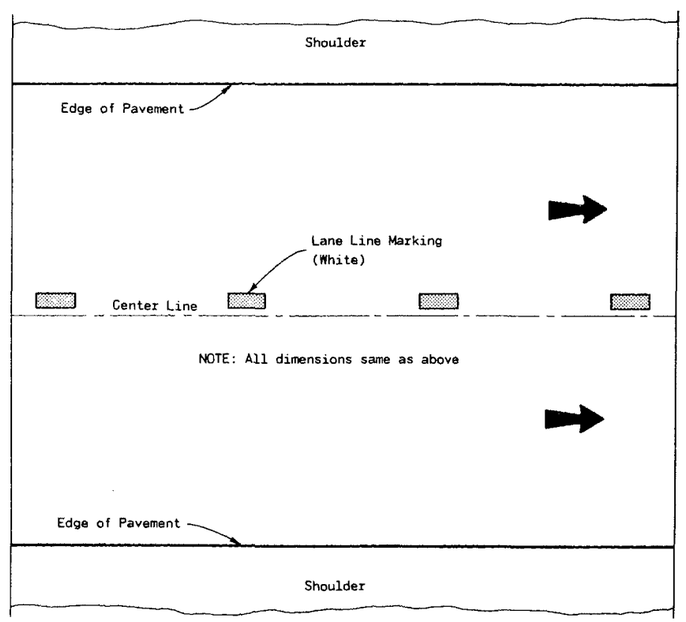
PASSING LANE MARKING

GENERAL NOTES

Details of construction not shown on this drawing shall conform to Standard Specifications and Special Provisions.



PERMANENT MARKING



TEMPORARY MARKING

PAVEMENT MARKING - ONE WAY TRAFFIC

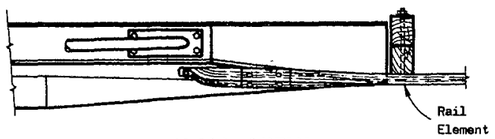
PAVEMENT MARKING

State of Wisconsin
Department of Transportation
Division of Transportation Facilities

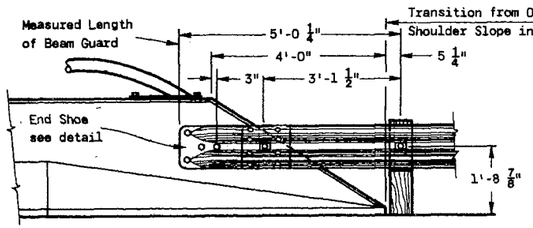
APPROVED
8-7-79
DATE
CHIEF DESIGN ENGINEER
FHWA

S.D.D. 13 B 5-1

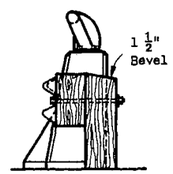
S.D.D. 13 B 5-1



PLAN VIEW



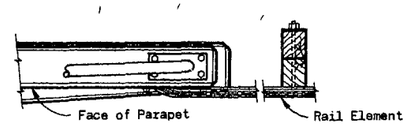
FRONT ELEVATION



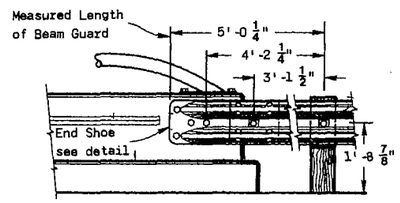
END ELEVATION

STRUCTURE MOUNTING DETAIL

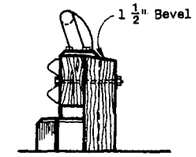
SLOPING TYPE PARAPET WALL



PLAN VIEW



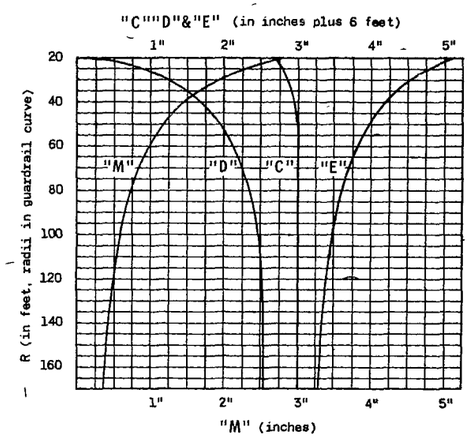
FRONT ELEVATION

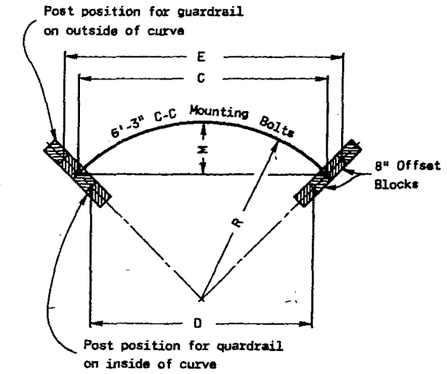


END ELEVATION

STRUCTURE MOUNTING DETAIL

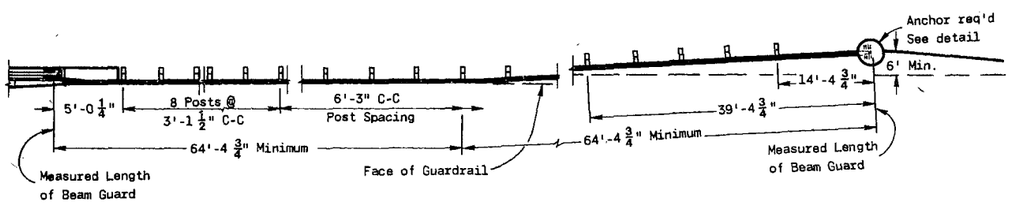
VERTICAL TYPE PAPAPET WALL



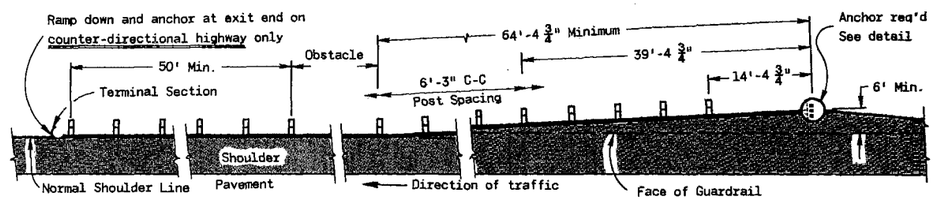


CHORD LENGTHS FOR POST SPACING AND MIDDLE ORDINATES FOR BEAM CURVING

CURVE DATA FOR POST SPACING AND BEAM CURVING

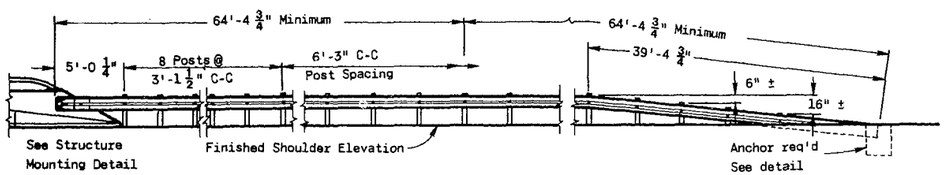


PLAN VIEW



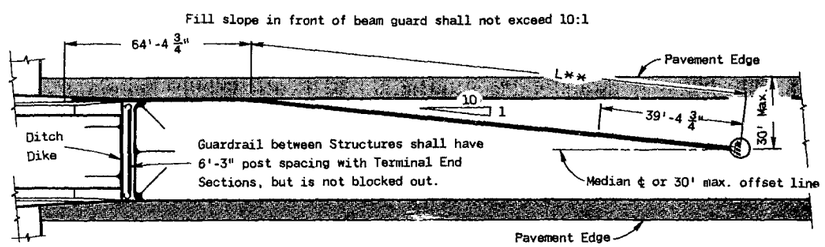
PLAN VIEW

TYPICAL INSTALLATION AT LOCATIONS OTHER THAN STRUCTURES



FRONT ELEVATION

TYPICAL INSTALLATION AT STRUCTURES



** Variable based on Median width or 30' max. offset

PLAN VIEW

MEDIAN PROTECTION

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.

The exact location of the beginning and end of each Guardrail installation shall be as shown on the plans or as directed by the Engineer.

Square anchor alternates will be permitted. Square anchors shall be a minimun of 24 inches x 24 inches.

The shoulder widening to accommodate the anchored end of the guardrail shall be accomplished at the rate of widening not to exceed 15 to 1.

Upon approval of the Engineer, the 6 foot anchor offset may be reduced to nothing for replacement installations where existing conditions will not permit the desirable offset. However, when no offset greater than or equal to 3 feet can be provided, the minimum length of guardrail in advance of an obstacle (obstacle to anchor) shall be 150 feet.

The minimum clearance from the front face of guardrail to obstacle shall be 3 feet unless otherwise shown on contract plans. When clearance is less than 3 feet post spacing shall be reduced to 3 feet - 1 1/2 inches C.C.

The "Post Footing Details At Piers" shall be used when guardrail posts are over structure footings and less than 3 feet - 6 inches of earth is provided over the top of the footing.

NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES, AND BOTH PLATES ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

CLASS "A"
STEEL PLATE BEAM GUARD &
STEEL PLATE BEAM MEDIAN GUARD

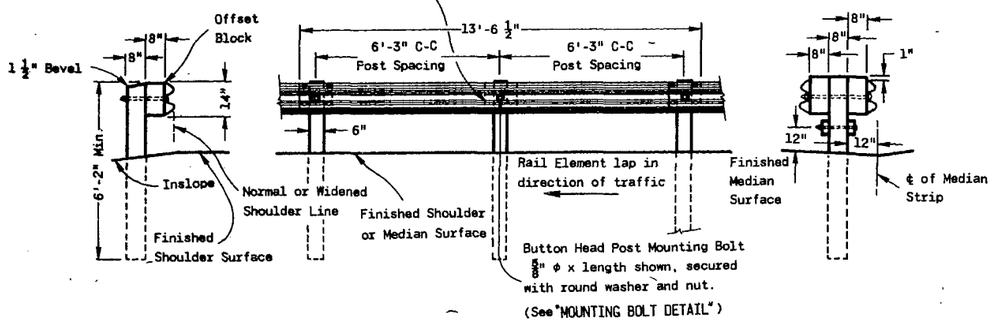
State of Wisconsin
Department of Transportation
Division of Highways

S.D.D. 14 B 2-4a

S.D.D. 14 B 2-4a

One foot long section of rail element, with a $\frac{3}{4}$" slotted hole for mounting, shall be placed behind the continuous rail element at the intermediate posts.

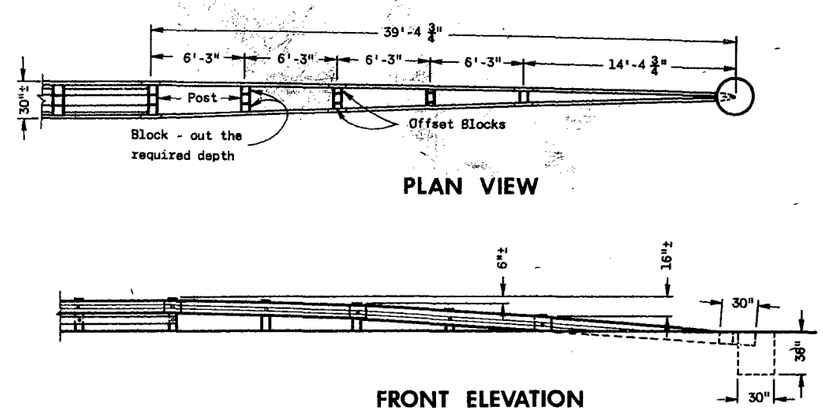
Sawed and treated timber posts and offset blocks shall be furnished and placed in accordance with Standard Specifacations. Posts shall be 6" x 8" x 6'-6" and have 6" x 8" x 14" offset blocks.



END ELEVATION — FRONT ELEVATION — END ELEVATION

STEEL PLATE BEAM GUARD — **STEEL PLATE BEAM MEDIAN GUARD**

STEEL PLATE BEAM GUARD OR STEEL PLATE BEAM MEDIAN GUARD



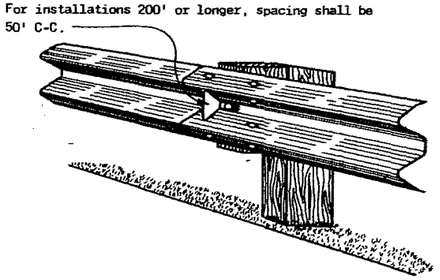
PLAN VIEW

FRONT ELEVATION

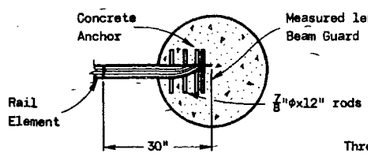
ANCHOR DETAIL FOR DOUBLE RAIL ELEMENT INSTALLATION

NOTE: (DIVIDED HIGHWAYS) Reflector spacing shall be 50' C-C on installations less than 200' long, with a minimum of 3 reflecters on any installation. For installations 200' or longer, spacing shall be 100' C-C.

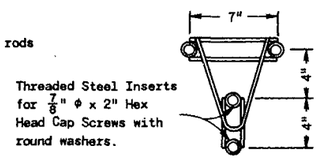
(COUNTER-DIRECTIONAL HIGHWAYS) Reflector spacing shall be 25' C-C on installations less than 200' long, with a minimum of 6 reflectors on any installation, and every other reflectorized surface shall be reversed. For installations 200' or longer, spacing shall be 50' C-C.



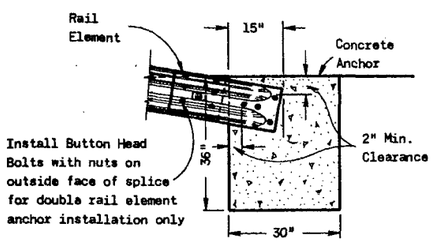
TYPICAL INSTALLATION



PLAN VIEW



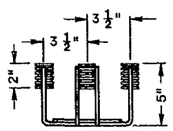
PLAN VIEW



SECTION VIEW

ANCHOR DETAIL

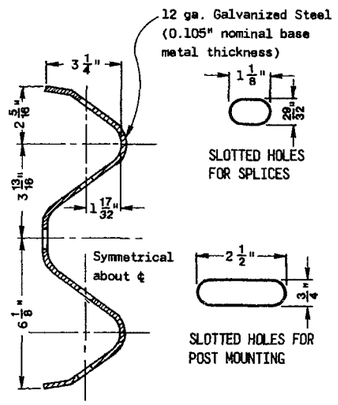
SINGLE RAIL ELEMENT INSTALLATION



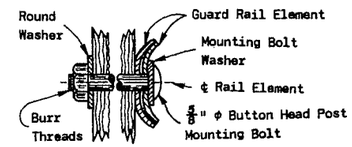
ELEVATION

4 BOLT INSERT ASSEMBLY

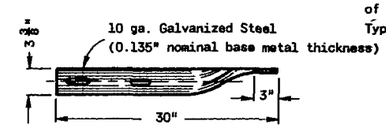
NOTE: Installation of 4 Bolt Insert Assembly (with Cap Screws inserted) to be part of Bridge Contract.

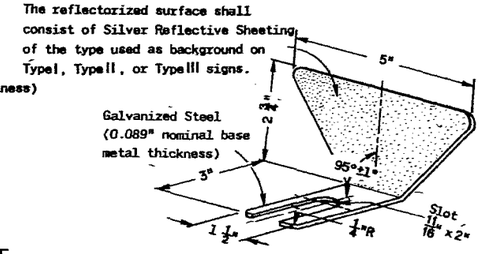


SECTION THRU RAIL ELEMENT

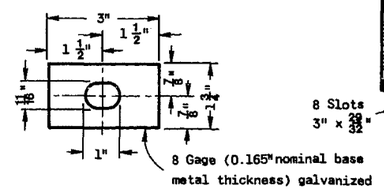


MOUNTING BOLT DETAIL

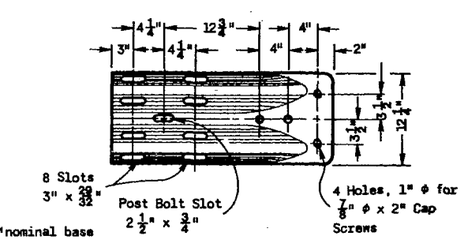




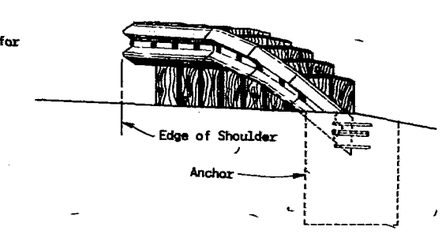
REFLECTOR DETAIL



MOUNTING BOLT WASHER

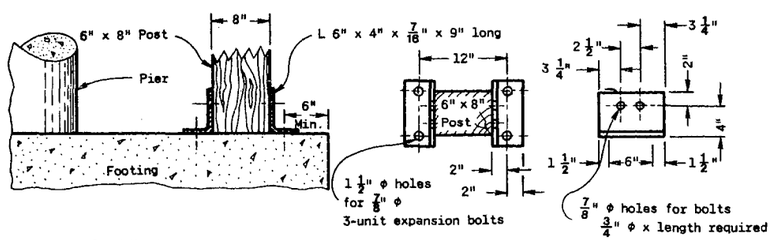


END SHOE DETAIL



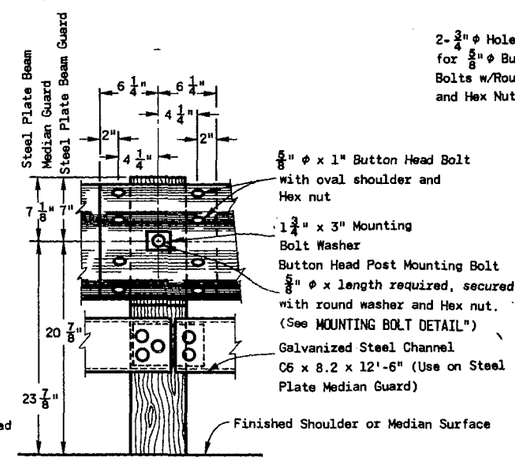
TYPICAL TERMINAL END ELEVATION

NOTE:
THIS STANDARD DETAIL DRAWING CONSISTS OF TWO PLATES. AND BOTH PLATES ARE REQUIRED WHEN THIS STANDARD IS CALLED FOR IN THE PLANS.

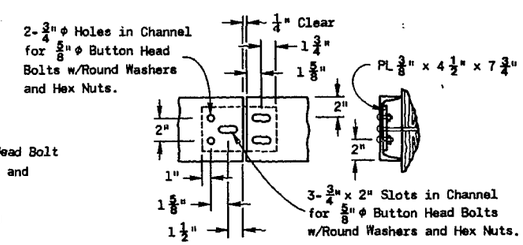


SECTION VIEW — PLAN VIEW — ELEVATION

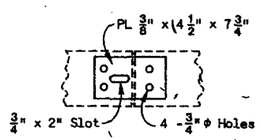
POST FOOTING DETAIL AT PIERS



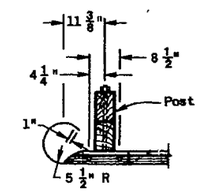
RAIL ELEMENT SPLICING AND POST MOUNTING DETAIL



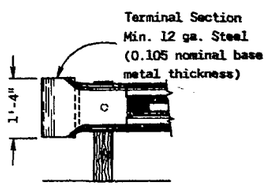
RUB RAIL SPLICE DETAIL



SPLICE PLATE



PLAN VIEW



FRONT ELEVATION

TERMINAL SECTION DETAILS

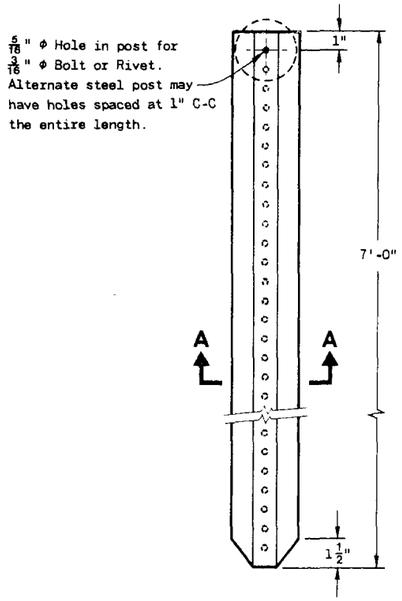
CLASS "A"
STEEL PLATE BEAM GUARD &
STEEL PLATE BEAM MEDIAN GUARD

State of Wisconsin
Department of Transportation
Division of Highways

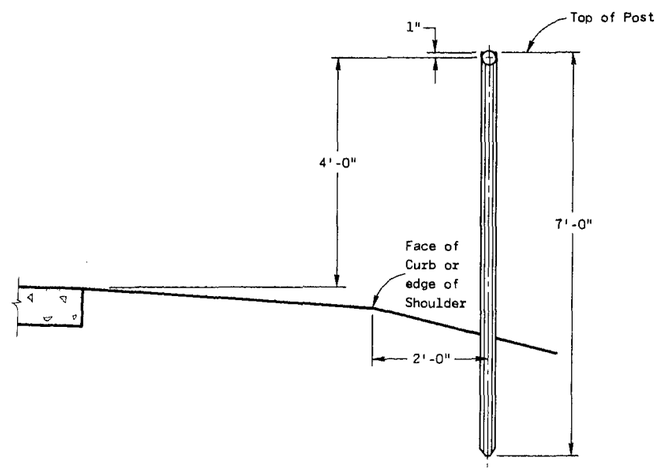
RECOMMENDED FOR APPROVAL
5-7-76 DATE — CHIEF of FACILITIES DEVELOPMENT
APPROVED
5-11-76 DATE — STATE HIGHWAY ENGINEER

S.D.D. 14 B 2-4b

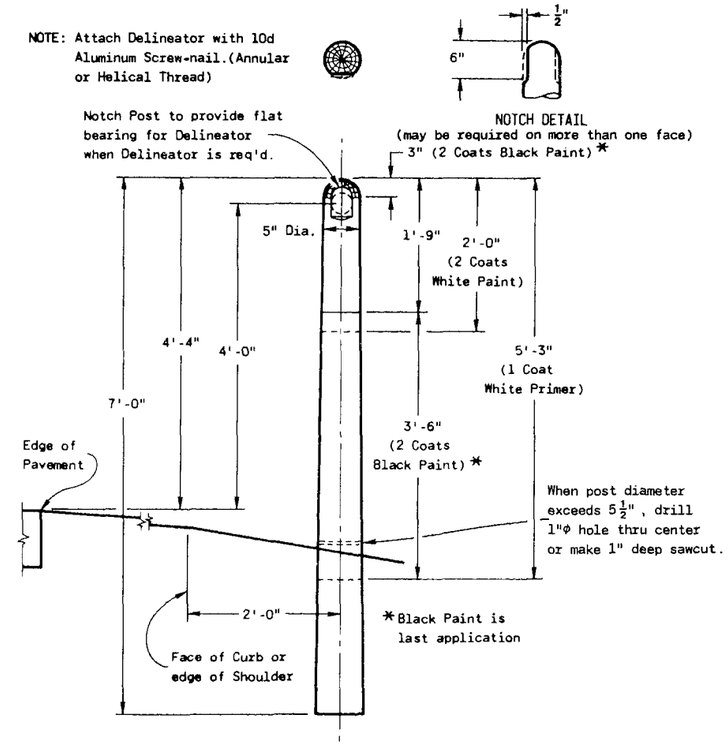
S.D.D. 14 B 2-4b



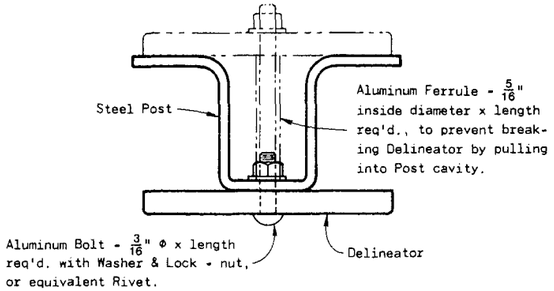
DELINEATOR POST



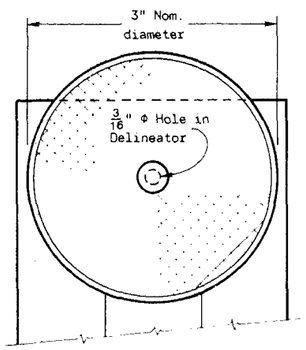
TYPICAL INSTALLATION OF DELINEATOR POSTS



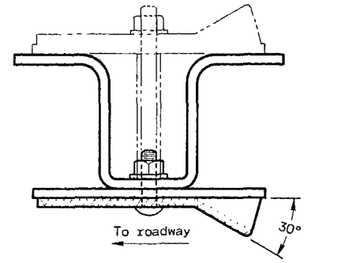
MARKER POST



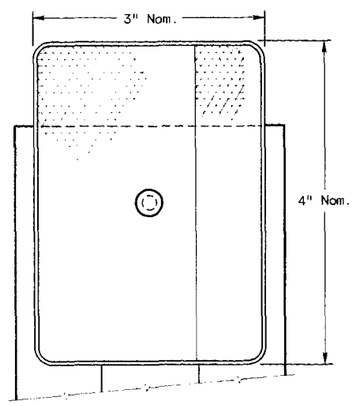
PLAN VIEW



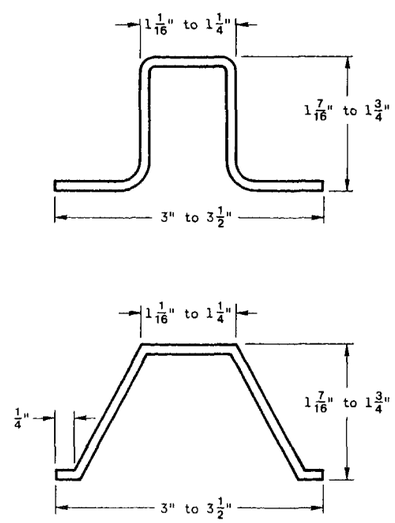
FRONT ELEVATION
3" CIRCULAR TYPE



PLAN VIEW



FRONT ELEVATION
3" X 4" RECTANGULAR TYPE



SECTION A-A

(Minimum weight 2.0 lbs. per ft.)

MOUNTING DETAILS FOR DELINEATORS

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.

The rectangular delineator shall consist of an acrylic plastic wide angle reflex reflector housed in a material such as acrylontrile butadiene styrene and shall be permanently sealed against dust, water and vapor, and will not warp, crack or corrode under field conditions.

Detailed requirements for delineators,not shown on this drawing shall conform to Section 633 of the Standard Specifications and the current "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". The reflectors in the delineators shall be clear.

When the cross sectional area of the Marker Post measured at the ground line exceeds 24 square inches (5 1/2 inch diameter) the post shall be weakened near the ground line by either drilling a 1 inch diameter hole transversely through the center of the post or by making a transverse saw cut to a depth of approximately 1 inch on the side of the post facing traffic.

DELINEATOR POSTS
MARKER POSTS AND DELINEATORS

State of Wisconsin
Department of Transportation
Division of Transportation Facilities

APPROVED 5-2-79 DATE
CHIEF DESIGN ENGINEER
FHWA

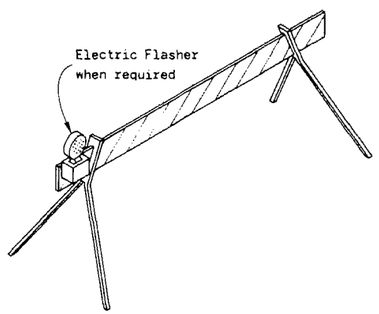
S.D.D. 15 A2-2

TABLE OF BARRICADE CHARACTERISTICS

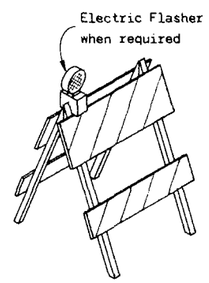
BARRICADE TYPE	I	II	III
Height	3' Minimum		5' Minimum
* Rail Width	8" Minimum to 12" Maximum		
Rail Length	2' Minimum to variable Maximum		
** Stripe Width	6" at 45° Angle		
Stripe Colors	Reflectorized Orange & White		

* Nominal dimensions when barricade is constructed of lumber.

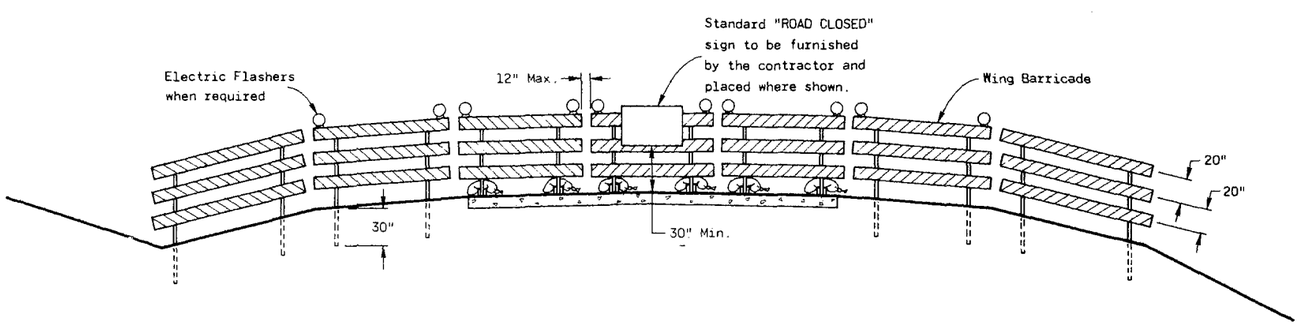
** May be 4" for rail lengths less than 3'.



TYPICAL TYPE I BARRICADE



TYPICAL TYPE II BARRICADE



TYPICAL INSTALLATION SHOWING TYPE III BARRICADE

CONSTRUCTION BARRICADES

R11-2

48" x 30"

Black Lettering on Reflective
White Background
Letter Series "D"
Letter height 8"

W20-3

48" x 48"

Black Lettering on Reflective
Orange Background
Letter Series "D"
Letter height 7"

STANDARD SIGNS-TYPE II

GENERAL NOTES

The contractor shall furnish, erect and maintain Barricades and Signs Details regarding location, spacing, dimensions, fabrication, material, sign lettering, lighting devices and color of Barricades and Signs shall conform to this drawing, the Wisconsin Manual on Uniform Traffic Control Devices, the Standard Specifications, Special Provisions and/or plans.

Type III Barricades and Signs shall be erected at the termini of projects and at other road or street locations where it is necessary to control or eliminate public access to the con - struction area.

Type I and II Barricades shall be used on projects when traffic is to be maintained through the construction area.

The actual field location of barricade installations and advance signs shall be as directed by the Engineer.

Each barricade shall have the name and telephone number of a person responsible for 24 hour emergency service printed in letters at least 3/4 inch in height.

CONSTRUCTION BARRICADES
& STANDARD SIGNS

State of Wisconsin
Department of Transportation
Division of Highways

APPROVED 10-1-76 DATE — D. L. Strand, CHIEF of FACILITIES DEVELOPMENT

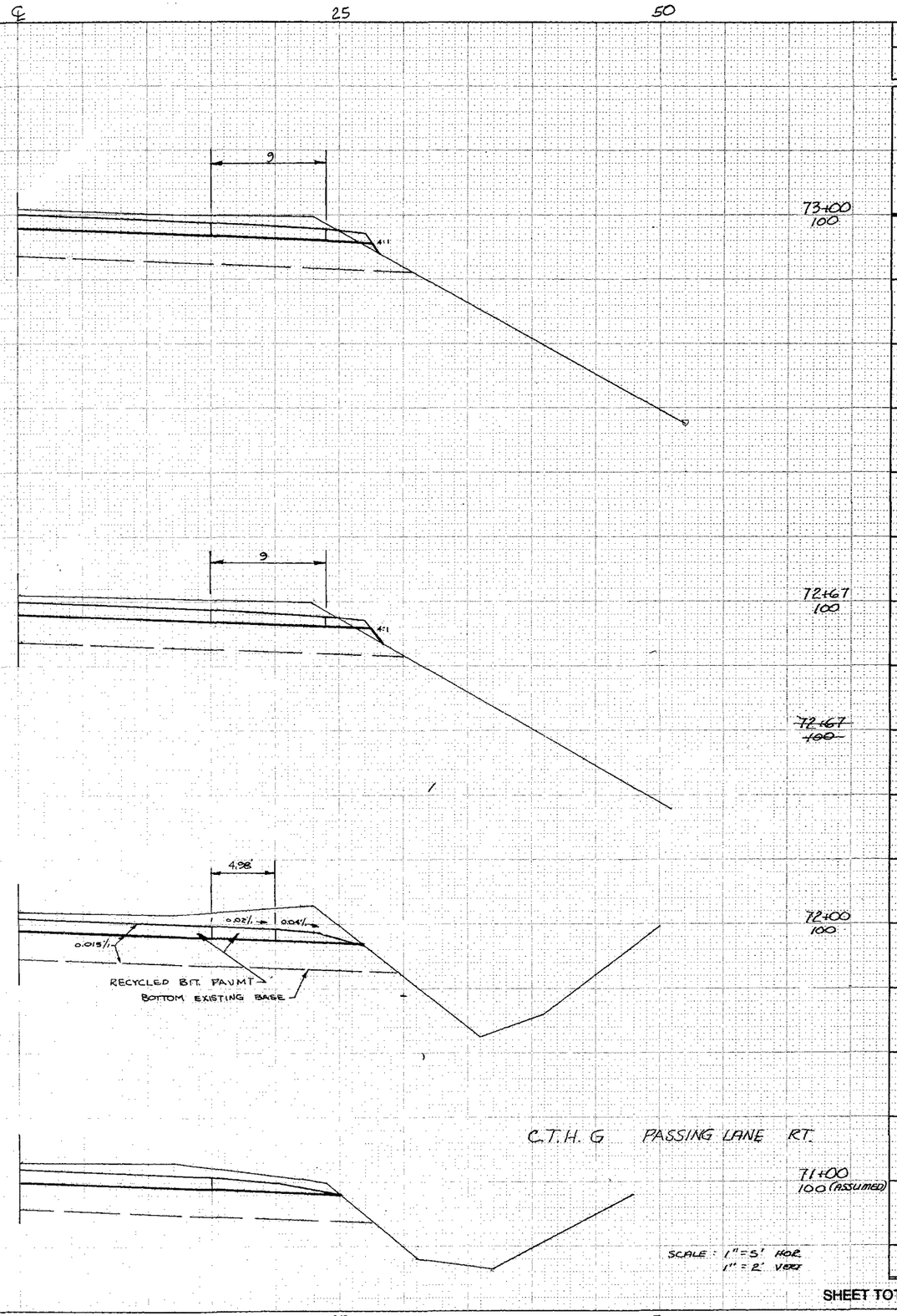
APPROVED 10-1-76 DATE — H. F. Seeder, STATE HIGHWAY ENGINEER

S.D.D. 15C1-5

S.D.D. 15C1-5

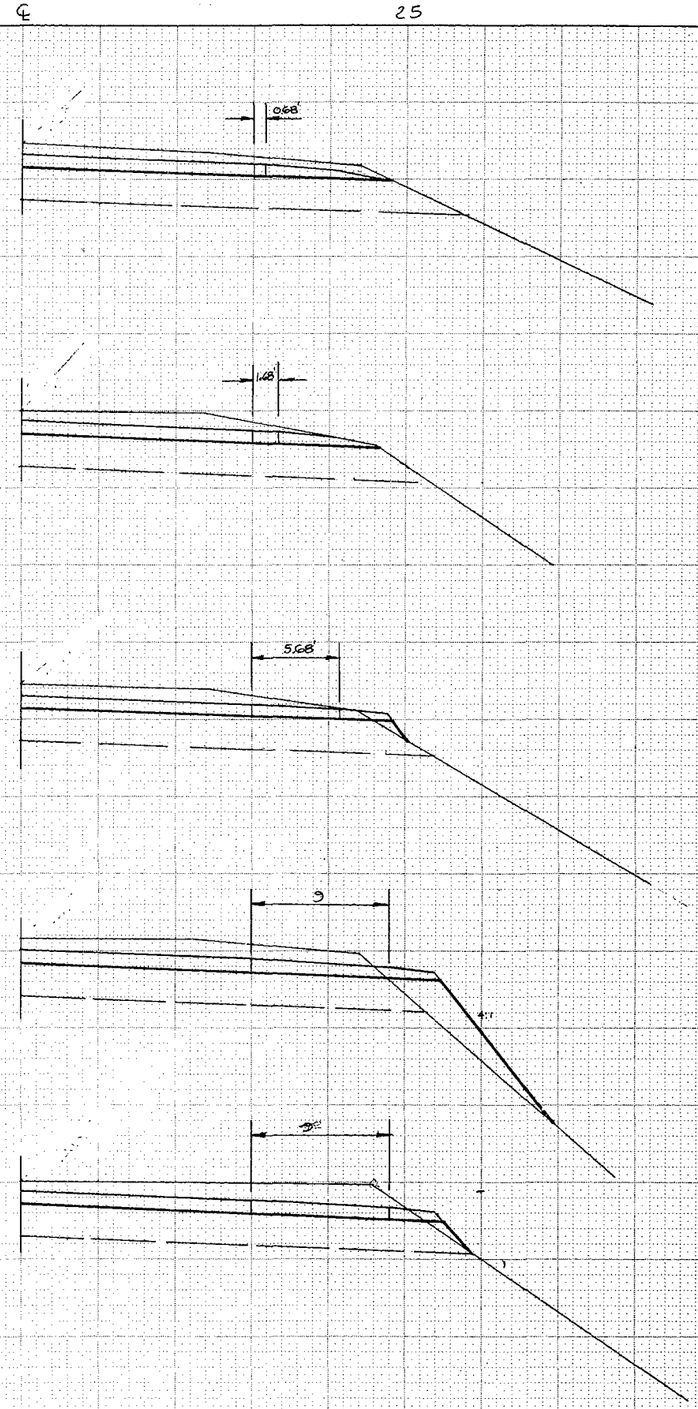
STATE PROJECT NUMBER	SHEET NUMBER
7150-4-71	9

STATION	DISTANCE	YARDAGE EXCAVATION	FILL
SHEET TOTAL			



Catalog No. 2130-C121

STATE PROJECT NUMBER	SHEET NUMBER
7150-4-71	9.1



C.T.H. G PASSING LANE R.T.

SCALE : 1" = 5' HOR.
1" = 2' VERT

STATION	DISTANCE	YARDAGE EXCAVATION					FILL

SHEET TOTAL

℄ 25 50

Catalog No. 2130-C121