

GRE

MAR 13

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plot
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 158

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SHAWANO - GREEN BAY

STH 29 & CTH U INTERSECTION

STH 29 & CTH VV

STH 29

STH 29

BROWN COUNTY

BROWN COUNTY

STATE PROJECT

FEDERAL PROJECT

PROJECT

CONTRACT

9200-05-71

WISC 2013084

1

9200-07-71

WISC 2013085

1

STATE PROJECT NUMBER

9200-05-71

STATE PROJECT NUMBER

9200-07-71

BEGIN PROJECT 9200-05-71

STA 479+68.98

N = 593054.50

E = 53497.93

R-18-E

R-19-E

BEGIN PROJECT 9200-07-71

STA 540+99.75

N = 589928.84

E = 58755.72

R-20-E

END PROJECT 9200-07-71

STA 579+40.98

T-25-N

T-24-N

DESIGN DESIGNATION

	CTH VV	CTH U	STH 29
A.A.D.T. (2014)	= 4000	2200	24600
A.A.D.T. (2034)	= 12500	3500	38000
D.H.V.	=	---	---
D.D.	=	---	---
T.	= 15.5%	9.2%	5.3%
DESIGN SPEED	= 45 MPH	50 MPH	70 MPH
ESALS	=	---	---

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS

PROPERTY LINE

LOT LINE

LIMITED HIGHWAY EASEMENT

EXISTING RIGHT OF WAY

PROPOSED OR NEW R/W LINE

SLOPE INTERCEPT

REFERENCE LINE

EXISTING CULVERT

PROPOSED CULVERT
(Box or Pipe)

COMBUSTIBLE FLUIDS

MARSH AREA

WOODED OR SHRUB AREA

PROFILE

GRADE LINE

ORIGINAL GROUND

MARSH OR ROCK PROFILE
(To be noted as such)

SPECIAL DITCH

GRADE ELEVATION

CULVERT (Profile View)

UTILITIES

ELECTRIC

FIBER OPTIC

GAS

SANITARY SEWER

STORM SEWER

TELEPHONE

WATER

UTILITY PEDESTAL

POWER POLE

TELEPHONE POLE

ROCK

LABEL

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

95.36

LAYOUT

SCALE 0 1 MI.

TOTAL NET LENGTH OF CENTERLINE (9200-05-71) = 0.288 MI.
TOTAL NET LENGTH OF CENTERLINE (9200-07-71) = 0.728 MI.

Coordinates on this plan are referenced to the Wisconsin
County Coordinate System (WCCS), Brown County.
All elevations on this project are referenced
to the North American Vertical Datum of NAVD 88.

ORIGINAL PLANS PREPARED BY

AYRES
ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54602



DATE: 10-19-2012

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	WISDOT
Designer	AYRES ASSOCIATES
Project Manager	JEREMY ASHAUER
Regional Examiner	
Regional Supervisor	DAN SEGERSTROM
C.O. Examiner	WISDOT BPD

APPROVED FOR DEPARTMENT OFFICE

DATE: 10/31/2012
(Signature)

E

GENERAL NOTES

REMOVALS

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

GRADING/EROSION CONTROL

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, WILL BE FERTILIZED, SEEDED AND HAVE EROSION MAT INSTALLED.

EXCAVATION BELOW SUBGRADE (EBS) IS MEASURED AND PAID FOR AS EXCAVATION COMMON. EXACT LOCATIONS OF EBS WILL BE DETERMINED BY THE ENGINEER.

THE WETLANDS SHOWN ON THE PLAN AND PROFILE SHEETS REPRESENT THOSE DELINEATED BY REPRESENTATIVES OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION. THE LIMITS SHOWN ARE APPROXIMATE. THESE AREAS SHALL BE AVOIDED DURING CONSTRUCTION ACTIVITIES AND NO MATERIALS SHALL BE STOCKPILED IN EXISTING WETLAND AREAS.

EROSION CONTROL FEATURES AS SHOWN ON THE PLANS ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND APPROVED BY THE ENGINEER IN CONSULTATION WITH THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, BORROW PITS, AND WASTE AREAS, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE SEEDED AS DIRECTED BY THE ENGINEER. ALL OTHER DISTURBED AREAS ARE TO BE SEEDED, FERTILIZED, AND HAVE EROSION MAT INSTALLED AT THE CONTRACTOR'S EXPENSE.

SEE EROSION CONTROL AND MISC QUANTITIES SHEETS FOR REQUIRED EROSION CONTROL ITEMS.

PAVING

SAWCUT LOCATIONS SHOWN ON THE PLAN ARE SUBJECTED TO ADJUSTMENT BY THE ENGINEER IN THE FIELD. DO NOT DAMAGE THE REMAINING PORTION OF EXISTING PAVEMENT. A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

MISCELLANEOUS

THE LOCATION 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.

ELEVATIONS SHOWN ON THE ROADWAY CROSS SECTIONS ARE SUBGRADE ELEVATIONS AT THE CONSTRUCTION REFERENCE LINES.

BOXOUTS WILL BE PROVIDED IN CONCRETE SIDEWALK BY THE CONTRACTOR FOR SIGN PLACEMENT. THE COST OF THE BOXOUTS SHALL BE INCIDENTAL TO CONCRETE SIDEWALK. LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CURVE DATA IS BASED ON RADIUS DEFINITION.

ALL RADII ARE MEASURED TO THE FLANGE (FLAG) LINE UNLESS OTHERWISE NOTED.

TEMPORARY WIDENING FOR STAGING WILL BE PAID FOR UNDER THE PERTINENT CONTRACT ITEMS OF SALVAGED TOPSOIL, EXCAVATION BORROW, EXCAVATION COMMON, BASE AGGREGATE DENSE, ASPHALTIC SURFACE TEMPORARY, AND TEMPORARY SEED.

ANY CONFLICTING SIGNS SHALL BE COVERED OR REMOVED.

DRAINAGE

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN ARE APPROXIMATE AND WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CROSS DRAIN PIPE LOCATIONS AND ELEVATIONS AS SHOWN ON THE CROSS SECTIONS SHEETS ARE APPROXIMATE AND SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR WILL VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER IN THE FIELD.

CONTRACTOR SHALL MAINTAIN ROADWAY DRAINAGE OF BASE COURSES DURING PAVEMENT REMOVAL AND/OR PLACEMENT OF BASE COURSES. THIS IS CONSIDERED INCIDENTAL TO BASE AGGREGATE DENSE ITEMS.

CONNECTION OF NEW UNDERDRAIN PIPE TO EXISTING PIPE IS INCIDENTAL TO THE INSTALLATION OF THE ITEM PIPE UNDERDRAIN.

UTILITIES

* ATC MANAGEMENT, INC.
801 O'KEEFE ROAD
P.O. BOX 6113
DE PERE, WI 54115-6113
(920) 338-6582
ATTN: MICHAEL OLSEN
molsen@atcllc.com

* NSIGHT TELSERVICES-PULASKI
P.O. BOX 860
PULASKI, WI 54162-0860
(920) 822-8895
ATTN: DENNIS BAER
dennis.baer@nsight.com

* QWEST
13057 SOUTH MONITOR AVENUE
PALOS HEIGHTS, IL 60463
(708) 837-7927
ATTN: KEVIN HUFF
kevin.huff@qwest.com

* WISCONSIN PUBLIC SERVICE CORPORATION - GAS
2850 SOUTH ASHLAND AVENUE
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 617-5129
ATTN: TERRY LUTTENEGGER
TDLuttenegger@integrysgroup.com

* WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRIC
2850 SOUTH ASHLAND AVENUE
P.O. BOX 19001
GREEN BAY, WI 54307-9001
(920) 617-5167
ATTN: RANDY STEIER
rdsteier@wisconsinpublicservice.com

* DENOTES DIGGERS HOTLINE MEMBER



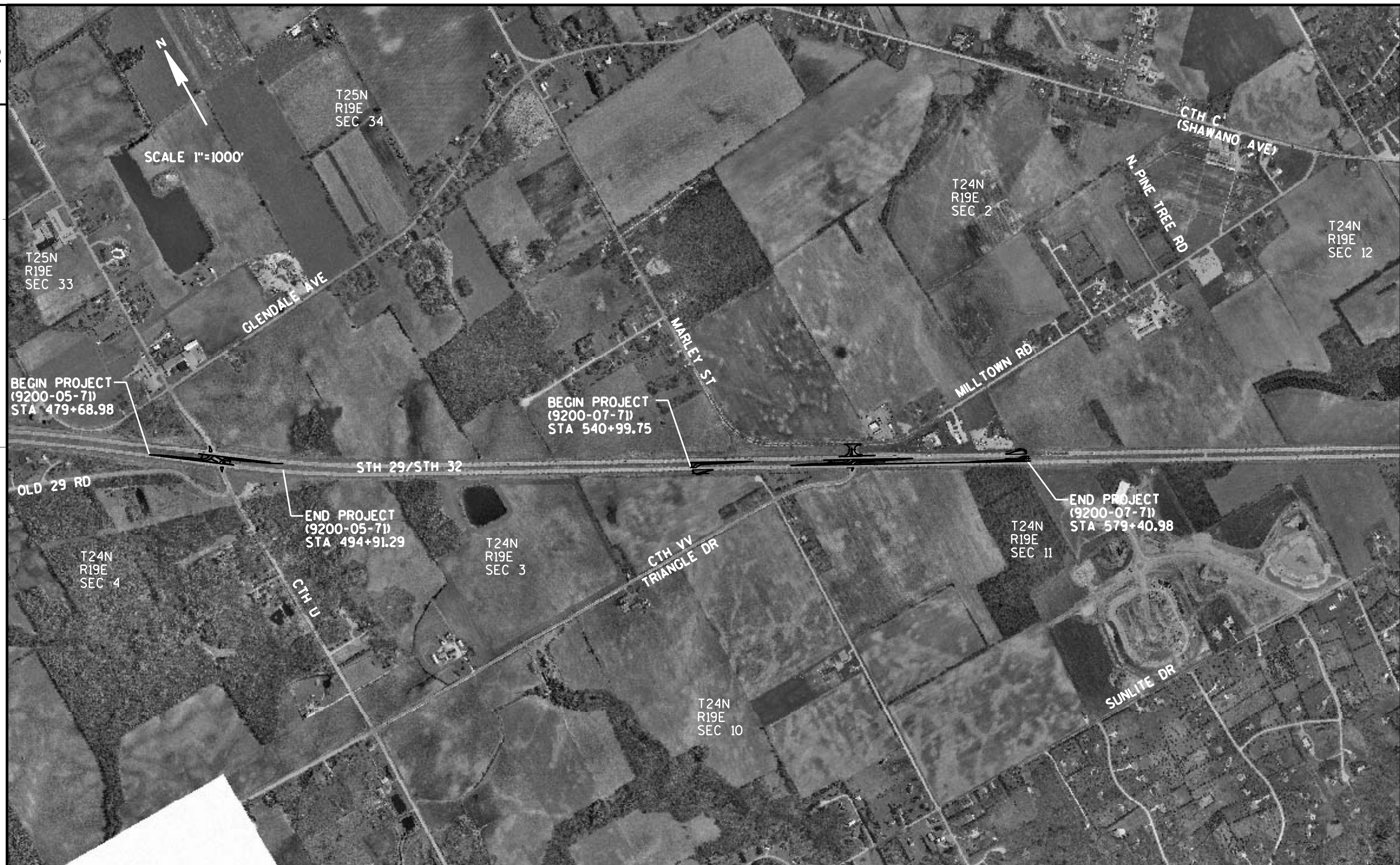
Call 811 3 Work Days Before You Dig
or Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

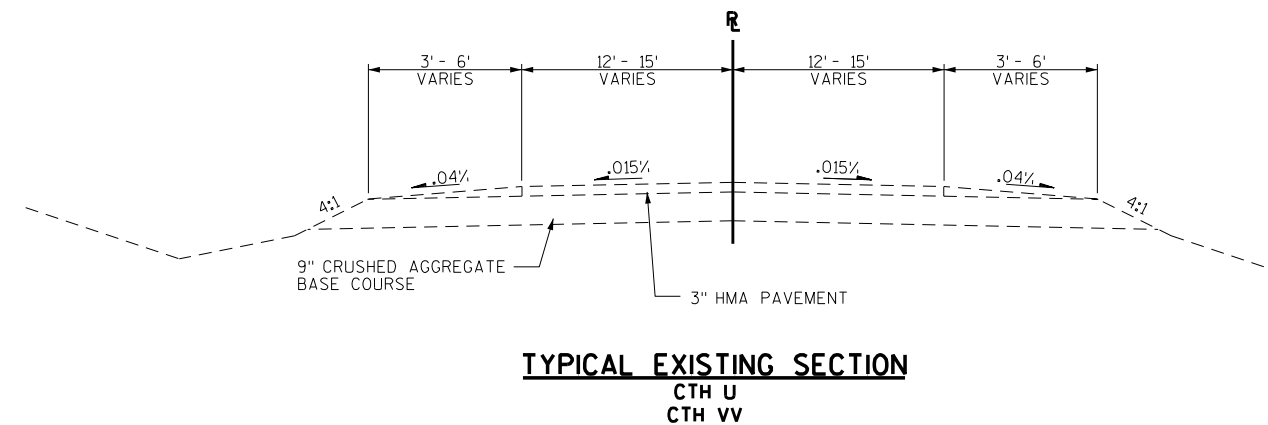
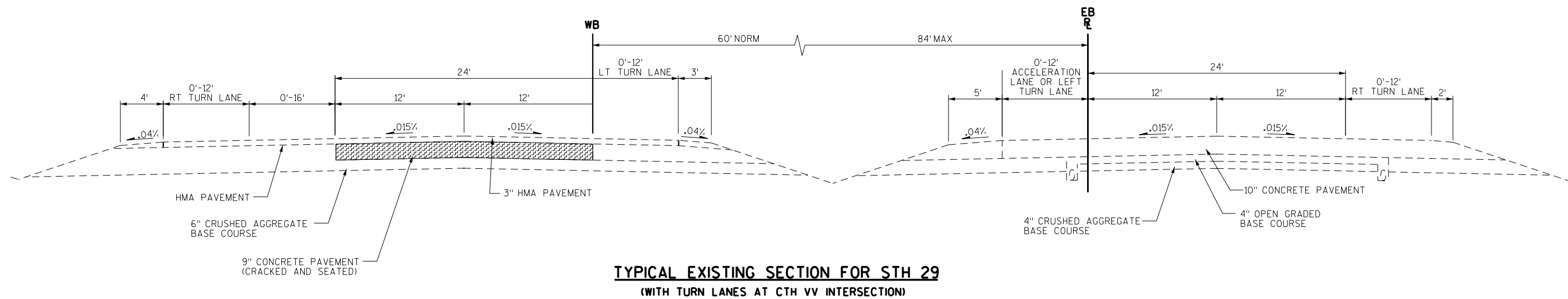
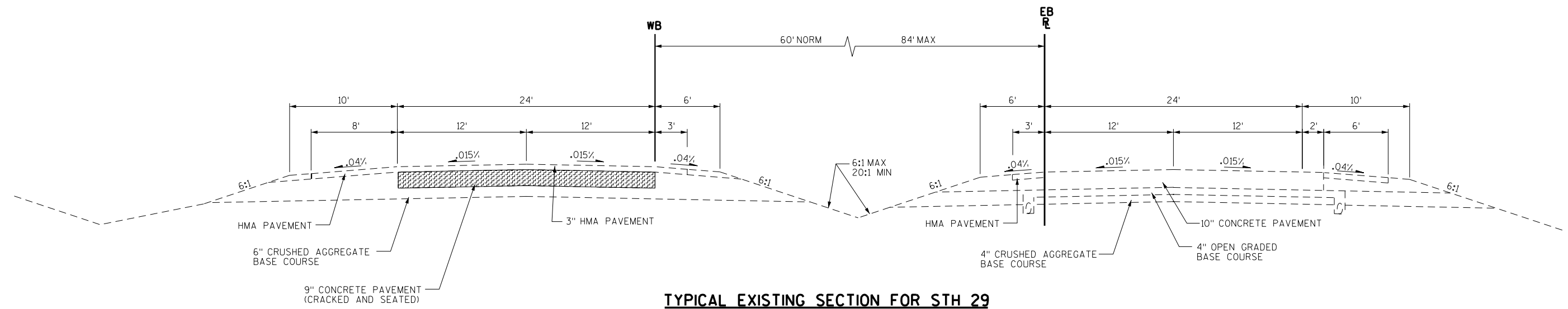
DESIGN CONTACT

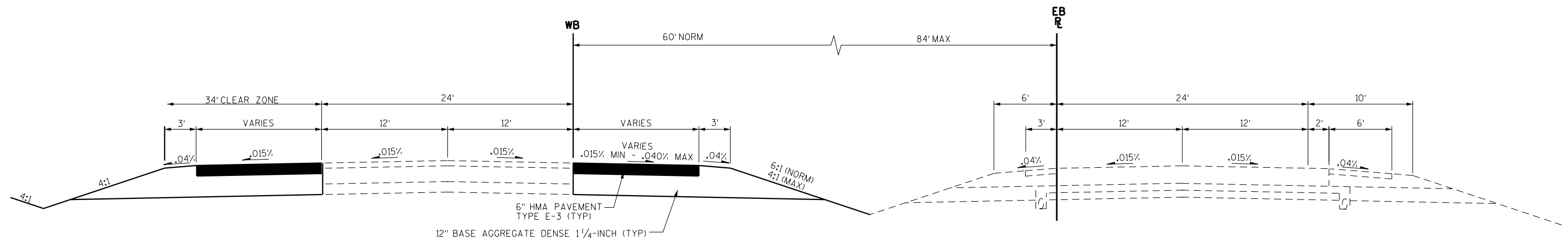
MARK PETERSEN, P.E.
AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
(715) 834-3161
petersenm@ayresassociates.com

DNR CONTACT

JIM DOPERALSKI
WISCONSIN DNR - NORTHEAST REGION
2984 SHAWANO AVENUE
GREEN BAY, WI 54313
(920) 662-5119
james.doperalski@wisconsin.gov

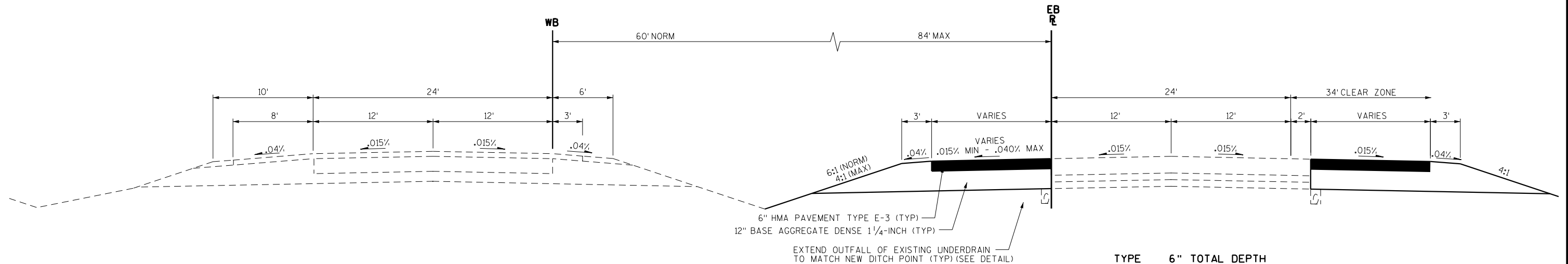




**TYPICAL FINISHED SECTION FOR STH 29**

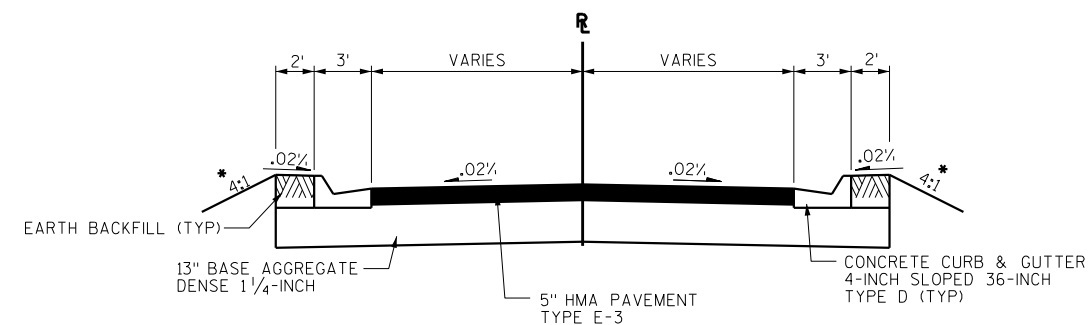
STA 540+98 - STA 547+66
STA 556+60 - STA 566+12
STA 576+74 - STA 579+28

TYPE	6" TOTAL DEPTH
E-3	3.5" LOWER LAYER
E-3	2.5" UPPER LAYER

**TYPICAL FINISHED SECTION FOR STH 29**

STA 541+00 - STA 543+56
STA 552+30 - STA 579+41

TYPE	6" TOTAL DEPTH
E-3	3.5" LOWER LAYER
E-3	2.5" UPPER LAYER



* NOTE: 6:1 MAX. SLOPE WITHIN STH 29 CLEAR ZONE

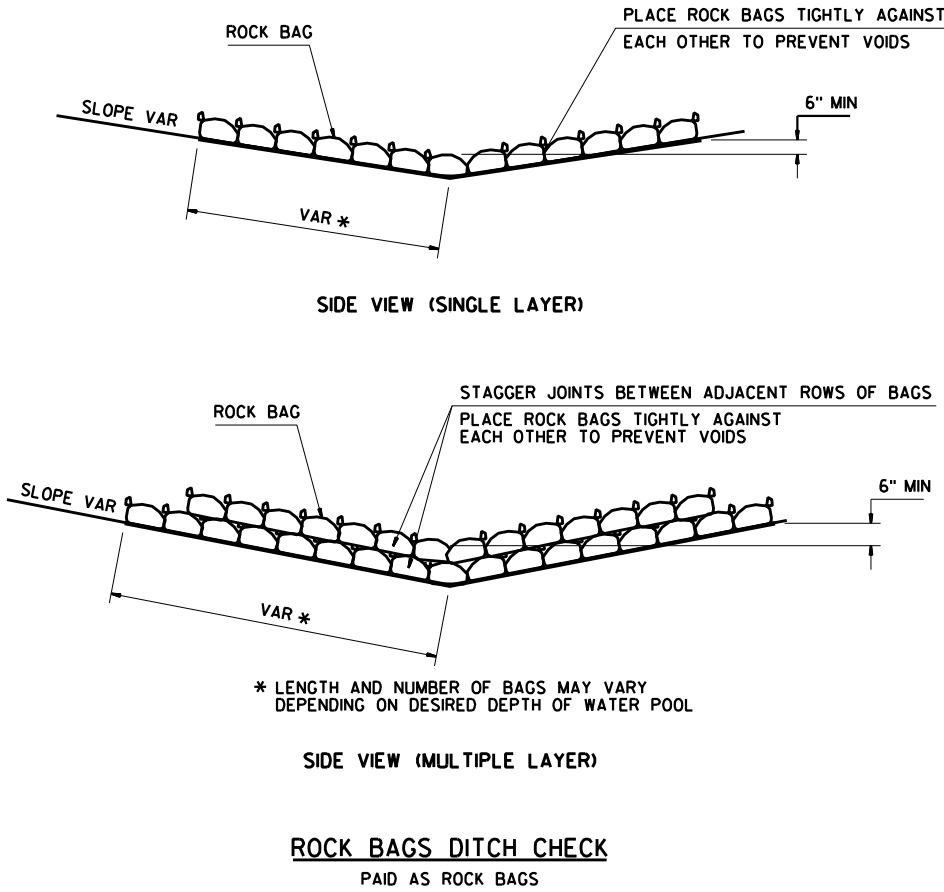
TYPICAL FINISHED SECTION FOR CTH VV

TYPE	5" TOTAL DEPTH
E-3	3" LOWER LAYER
E-3	2" UPPER LAYER

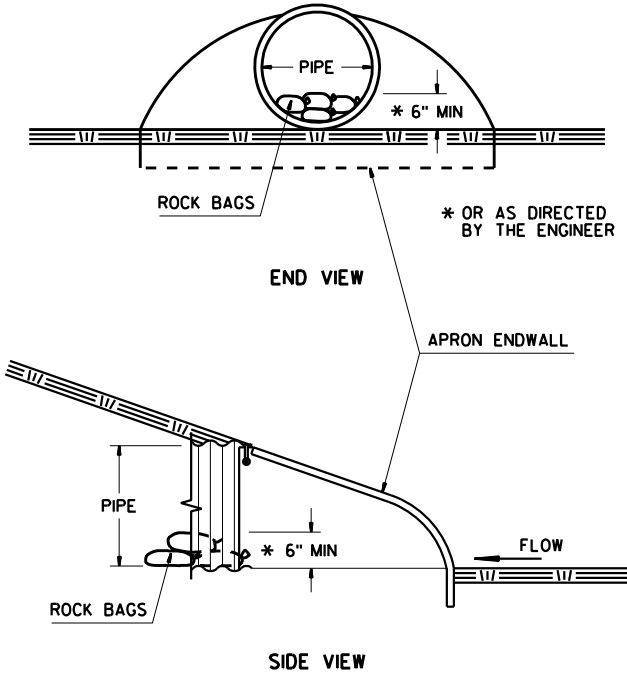
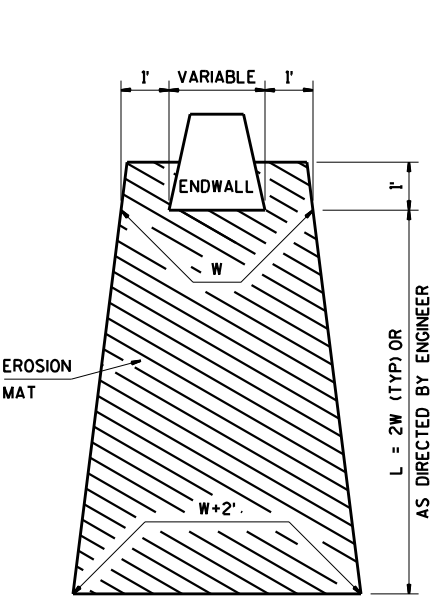
RUNOFF COEFFICIENT TABLE

	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											

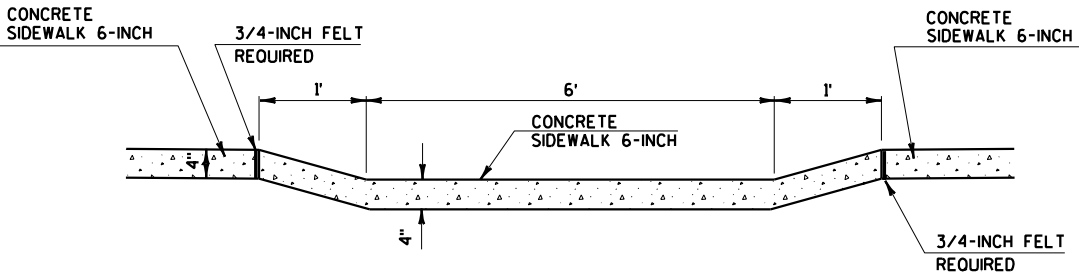
TOTAL PROJECT AREA = 32.51 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 5.68 ACRES



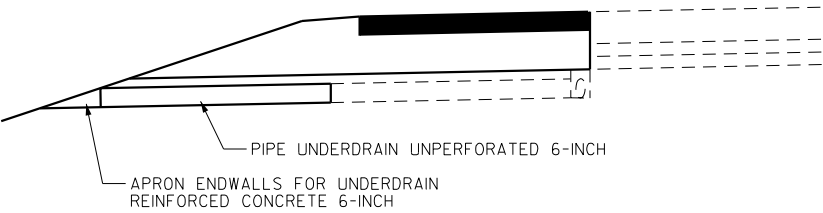
EROSION MAT TREATMENT AT CULVERTS



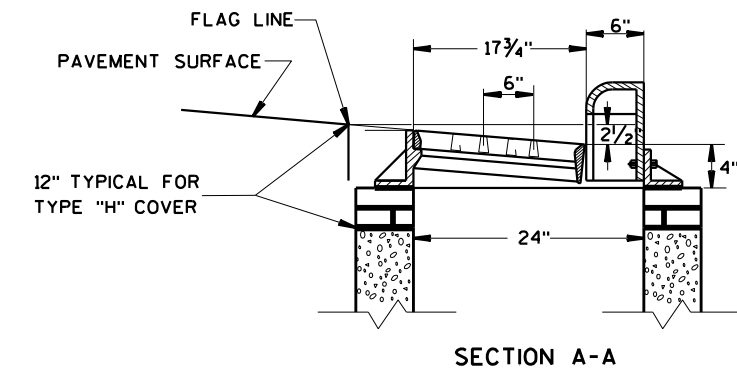
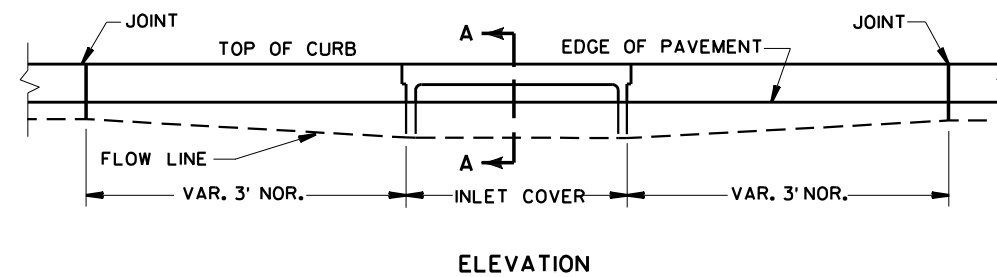
CULVERT PIPE CHECKS



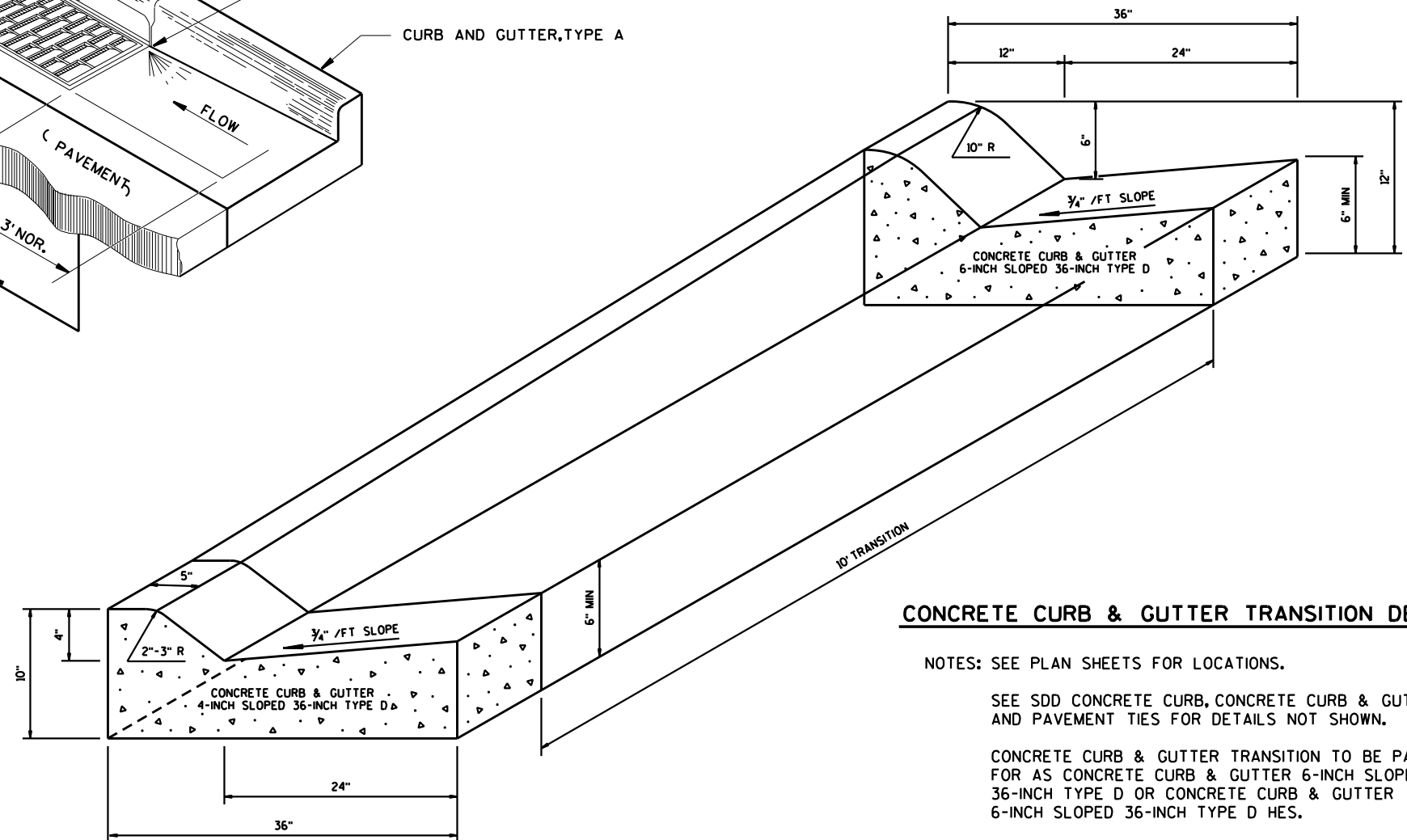
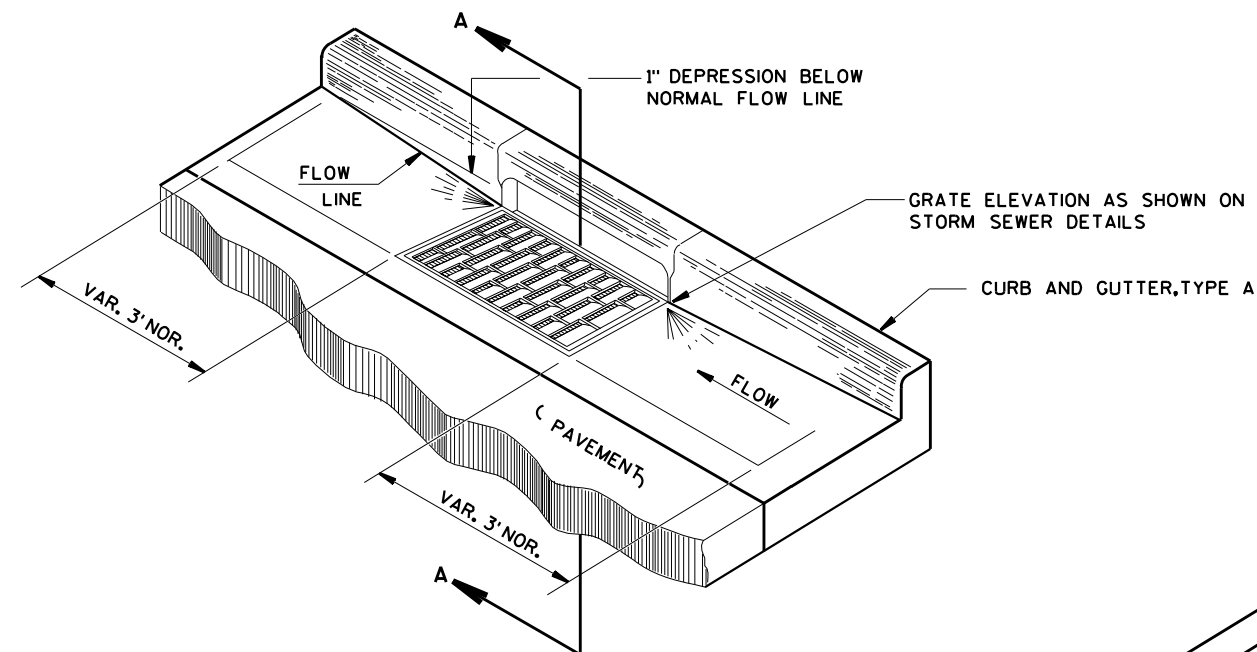
DEPRESSED SIDEWALK DETAIL



PIPE UNDERDRAIN DETAIL



DETAIL OF CURB AND GUTTER AT INLETS
(TYPE 3-H INLET SHOWN)



CONCRETE CURB & GUTTER TRANSITION DETAIL

NOTES: SEE PLAN SHEETS FOR LOCATIONS.

SEE SDD CONCRETE CURB, CONCRETE CURB & GUTTER AND PAVEMENT TIES FOR DETAILS NOT SHOWN.

CONCRETE CURB & GUTTER TRANSITION TO BE PAID FOR AS CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D OR CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE D HES.



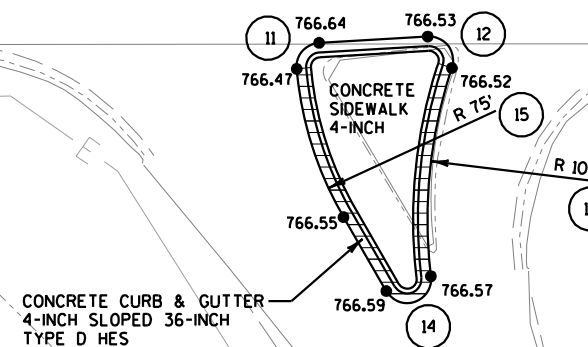
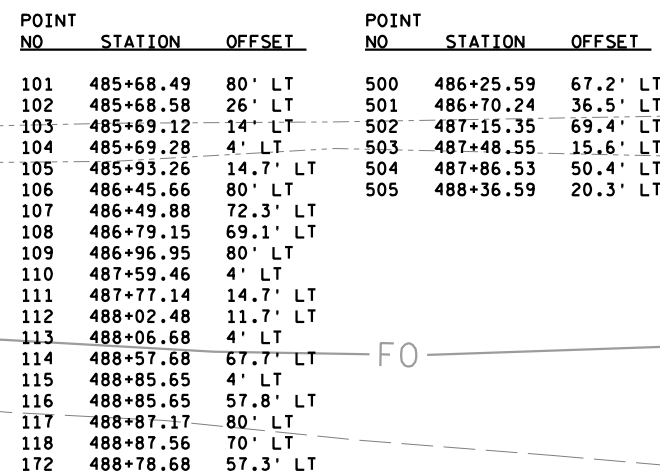
ISLAND SIGN LOCATION DETAIL (TYP)

NOTIFY THE REGIONAL TRAFFIC UNIT AT 920-492-5653
A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR
SIGN PLACEMENT TO ALLOW FOR STAKING OS ANY
PERMANENT SIGNING REQUIRED ON THE PROJECT.

* DISTANCE TO BE LAID OUT IN THE
FIELD BASED ON SIGN SIZE. TWO
FOOT MINIMUM CLEARANCE BETWEEN
THE EDGE OF THE SIGN AND THE
FACE OF CURB.

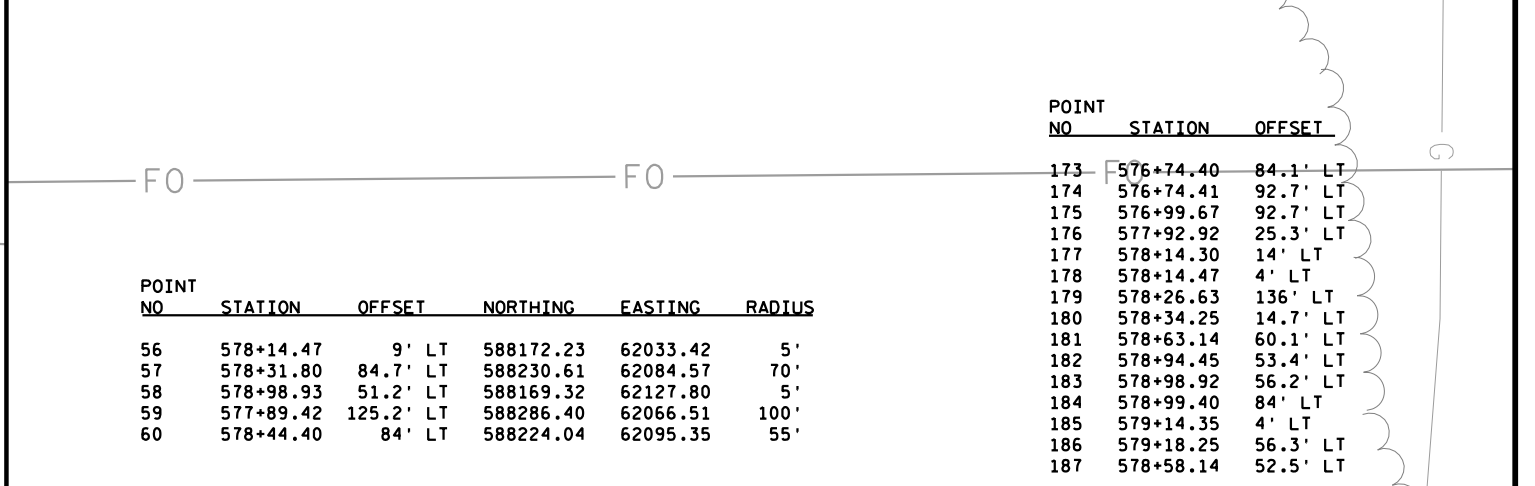
USE A 18-INCH MINIMUM INSIDE DIAMETER
PVC PIPE BOX OUT IN CONCRETE FOR SIGN
POST (TYP). THE NUMBER OF BOX OUTS
REQUIRED VARIES BY WIDTH OF THE SIGN
AND SHALL BE VERIFIED BEFORE PLACING
THE CONCRETE IN THE ISLAND.

2



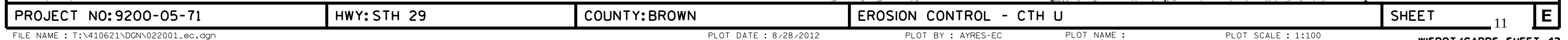


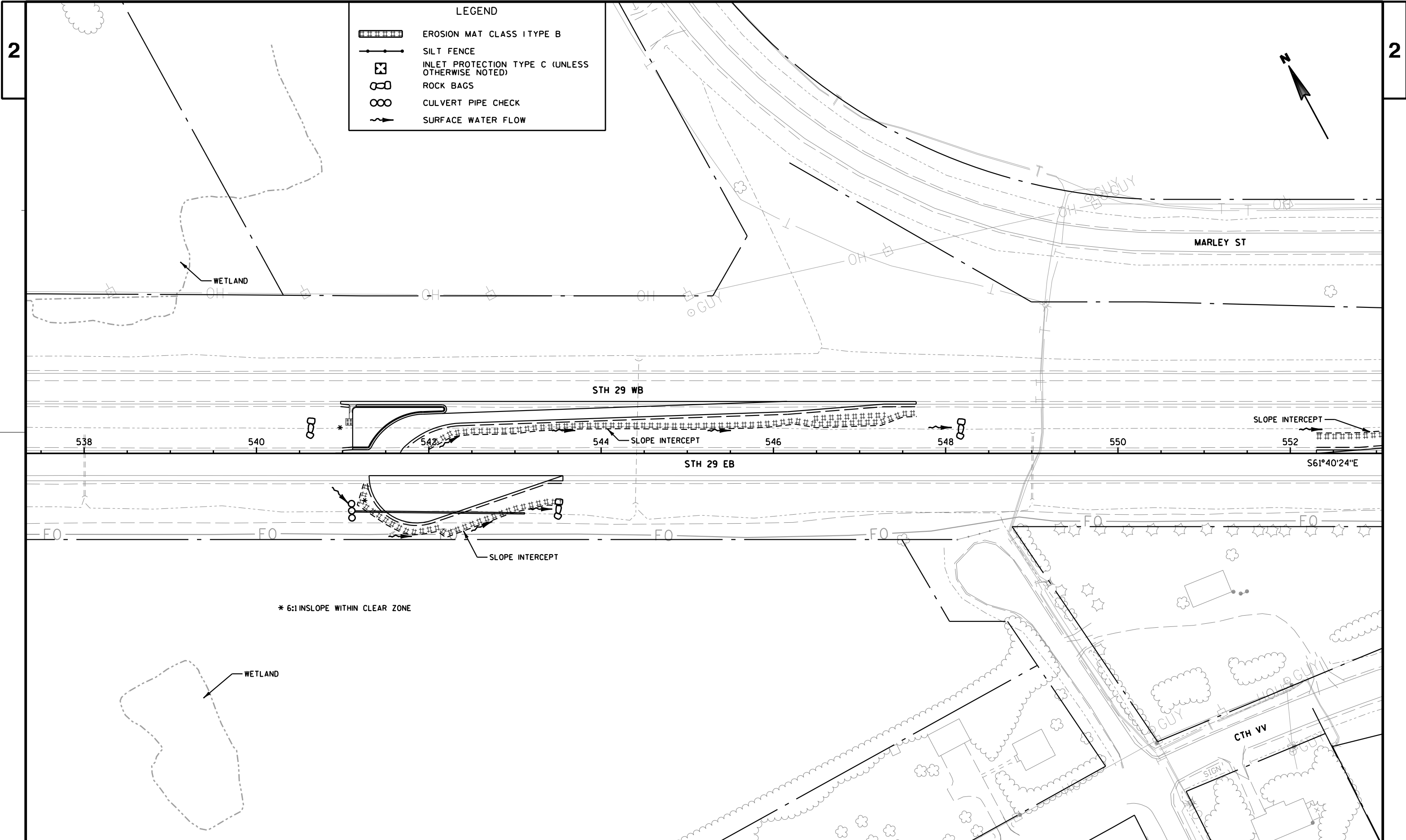
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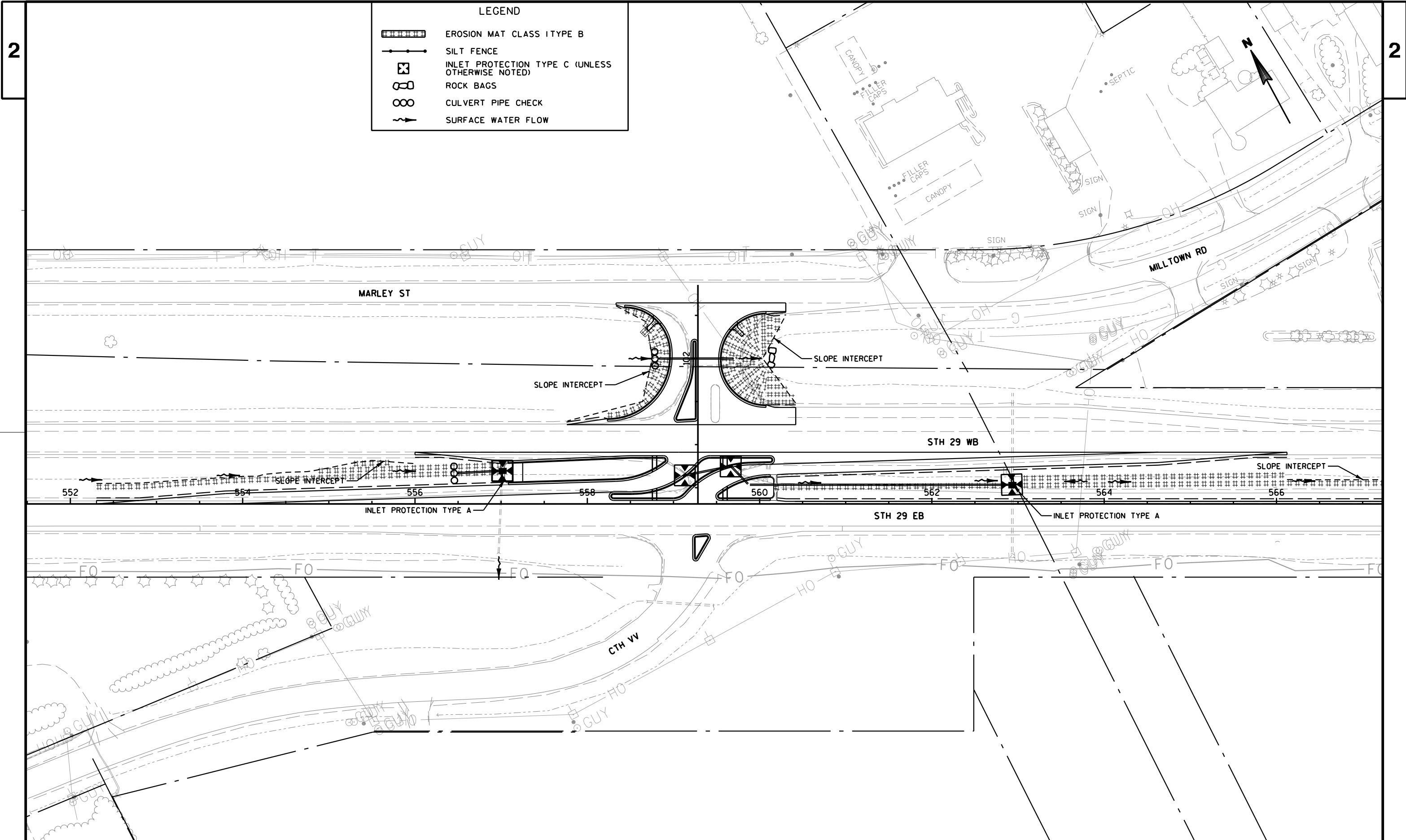
POINT NO	STATION	OFFSET
173	576+74.40	84.1' LT
174	576+74.41	92.7' LT
175	576+99.67	92.7' LT
176	577+92.92	25.3' LT
177	578+14.30	14' LT
178	578+14.47	4' LT
179	578+26.63	136' LT
180	578+34.25	14.7' LT
181	578+63.14	60.1' LT
182	578+94.45	53.4' LT
183	578+98.92	56.2' LT
184	578+99.90	84' LT
185	579+14.35	4' LT
186	579+18.25	56.3' LT
187	578+58.12	52.5' LT

2





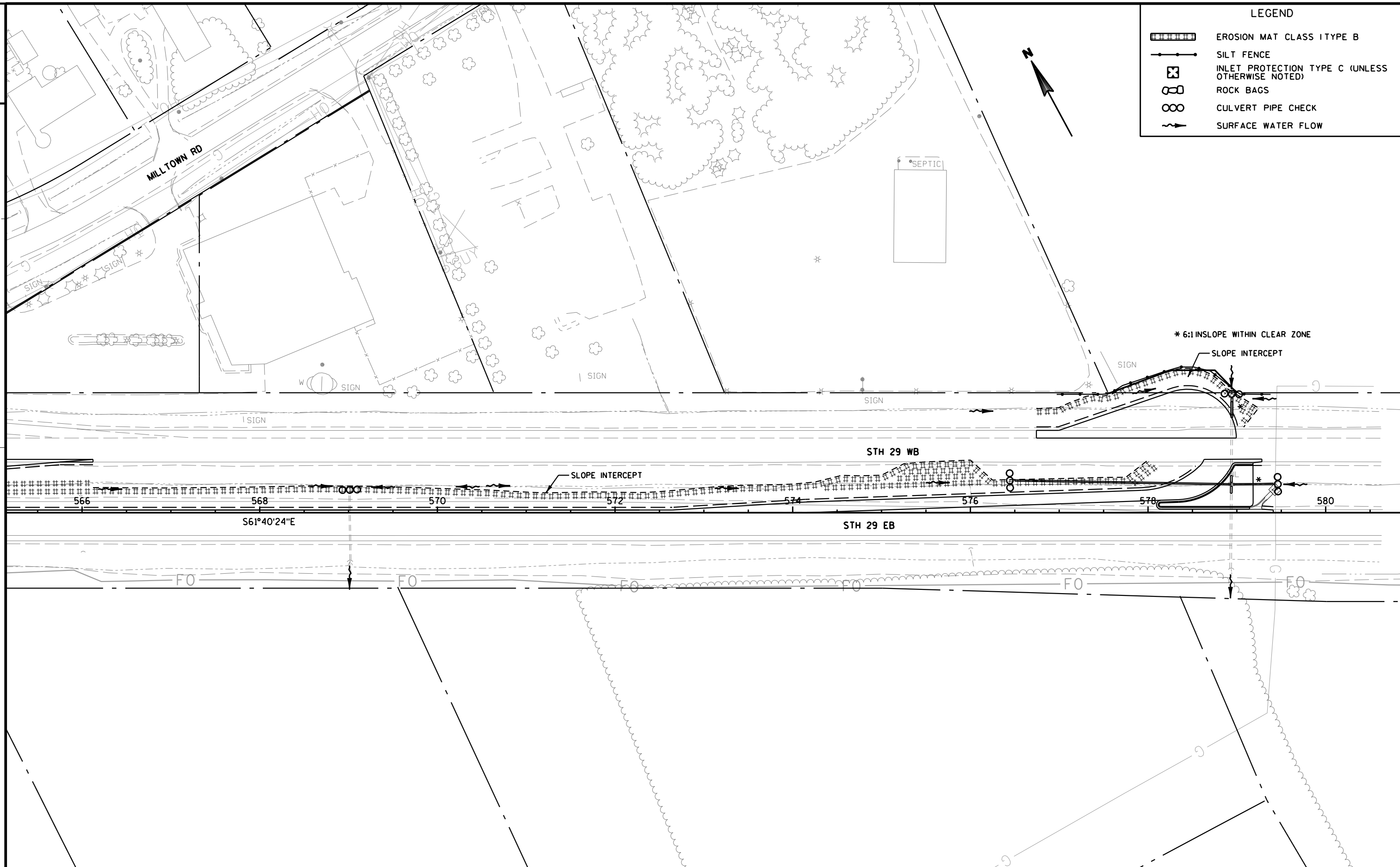
LEGEND	
	EROSION MAT CLASS I TYPE B
	SILT FENCE
	INLET PROTECTION TYPE C (UNLESS OTHERWISE NOTED)
	ROCK BAGS
	CULVERT PIPE CHECK
	SURFACE WATER FLOW



LEGEND	
	EROSION MAT CLASS I TYPE B
	SILT FENCE
	INLET PROTECTION TYPE C (UNLESS OTHERWISE NOTED)
	ROCK BAGS
	CULVERT PIPE CHECK
	SURFACE WATER FLOW

2

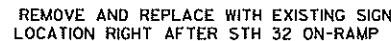
2



2

51

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT
ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE
REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND
ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE
SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN
ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.



PLAN SHEET PRODUCED
BY WisDOT-NE REGION

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.



Sanger B Powers
Correctional
Center

WRONG
WAY
R5-1A
428

Kunesh →

430

D1-3

431

JCT
COUNTY
U
JI-1
433

STH 29 WB

490

STH 29 EB

492

494

496

498

500

502

429

Brown Co
I2-2

432



155-56

434

Hobart
POPULATION 6492
I2-3

426
NORTH EAST SOUTH
COUNTY U 2932
J3-3

427
STOP
R1-1

↑ Kunesh
← Shawano
Green Bay →

D1-3
426
A

SIGN-REMOVE EXISTING

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO: 9200-05-71

HWY: STH 29

COUNTY: BROWN

SIGN REMOVALS

SHEET 16

E

FILE NAME : N:\spo\traffic\SIGNING\Projects\9200-05-00 STH 29 Brown County\023206.ps.dgn

PLOT DATE : 27-AUG-2012 08:59

PLOT BY : dot.jlf

PLOT NAME :

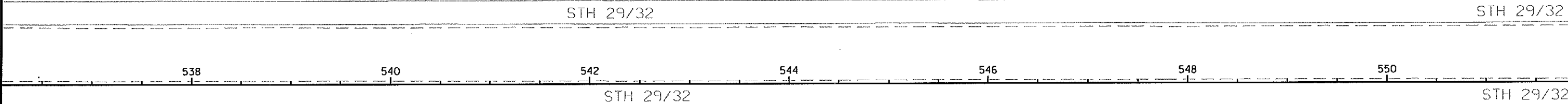
PLOT SCALE : 100:1

WISDOT/CADDs SHEET 42

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.



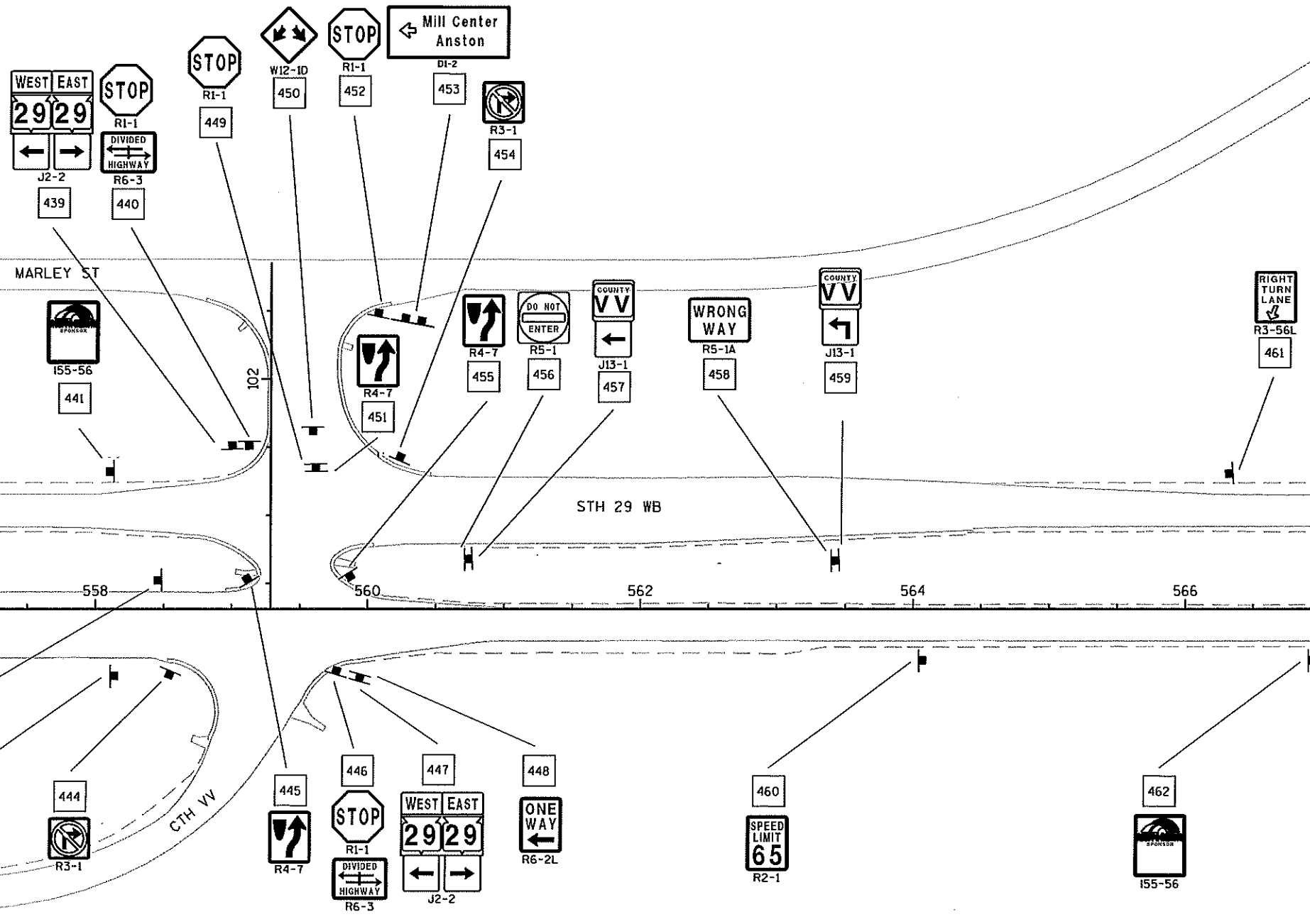
PLAN SHEET PRODUCED
BY WISDOT-NE REGION

SIGNING NOTES

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WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

N



☐ SIGN-REMOVE EXISTING

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

N



D1-3

463

MILE
2
5
3

D10-3

464

STH 29/32

STH 29/32

568

570

572

574

576

578

580

582

STH 29/32

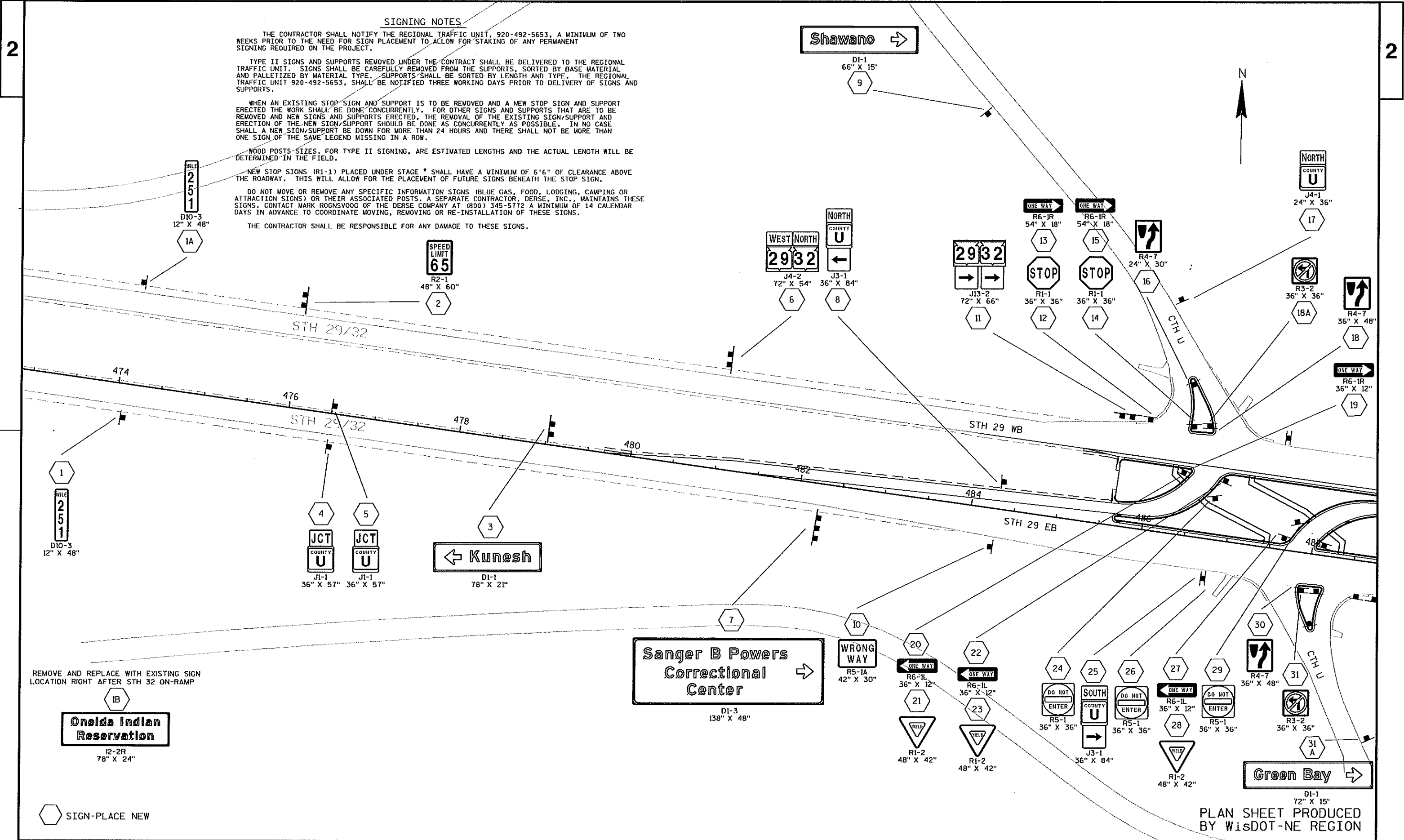
STH 29/32

465

MILE
2
5
3

D10-3

 SIGN-REMOVE EXISTINGPLAN SHEET PRODUCED
BY WISDOT-NE REGION



SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

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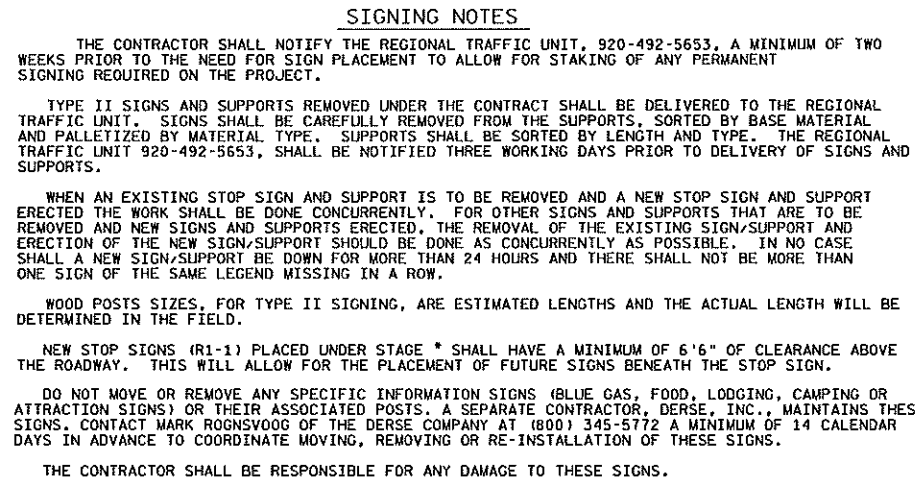
WOOD POSTS-SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.

DO NOT MOVE OR REMOVE ANY SPECIFIC INFORMATION SIGNS (BLUE GAS, FOOD, LODGING, CAMPING OR ATTRACTION SIGNS) OR THEIR ASSOCIATED POSTS. A SEPARATE CONTRACTOR, DERSE, INC., MAINTAINS THESE SIGNS. CONTACT MARK ROHNSVOOG OF THE DERSE COMPANY AT (800) 345-5772 A MINIMUM OF 14 CALENDAR DAYS IN ADVANCE TO COORDINATE MOVING, REMOVING OR RE-INSTALLATION OF THESE SIGNS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

REMOVE AND REPLACE WITH EXISTING SIGN LOCATION RIGHT AFTER STH 32 ON-RAMP



SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

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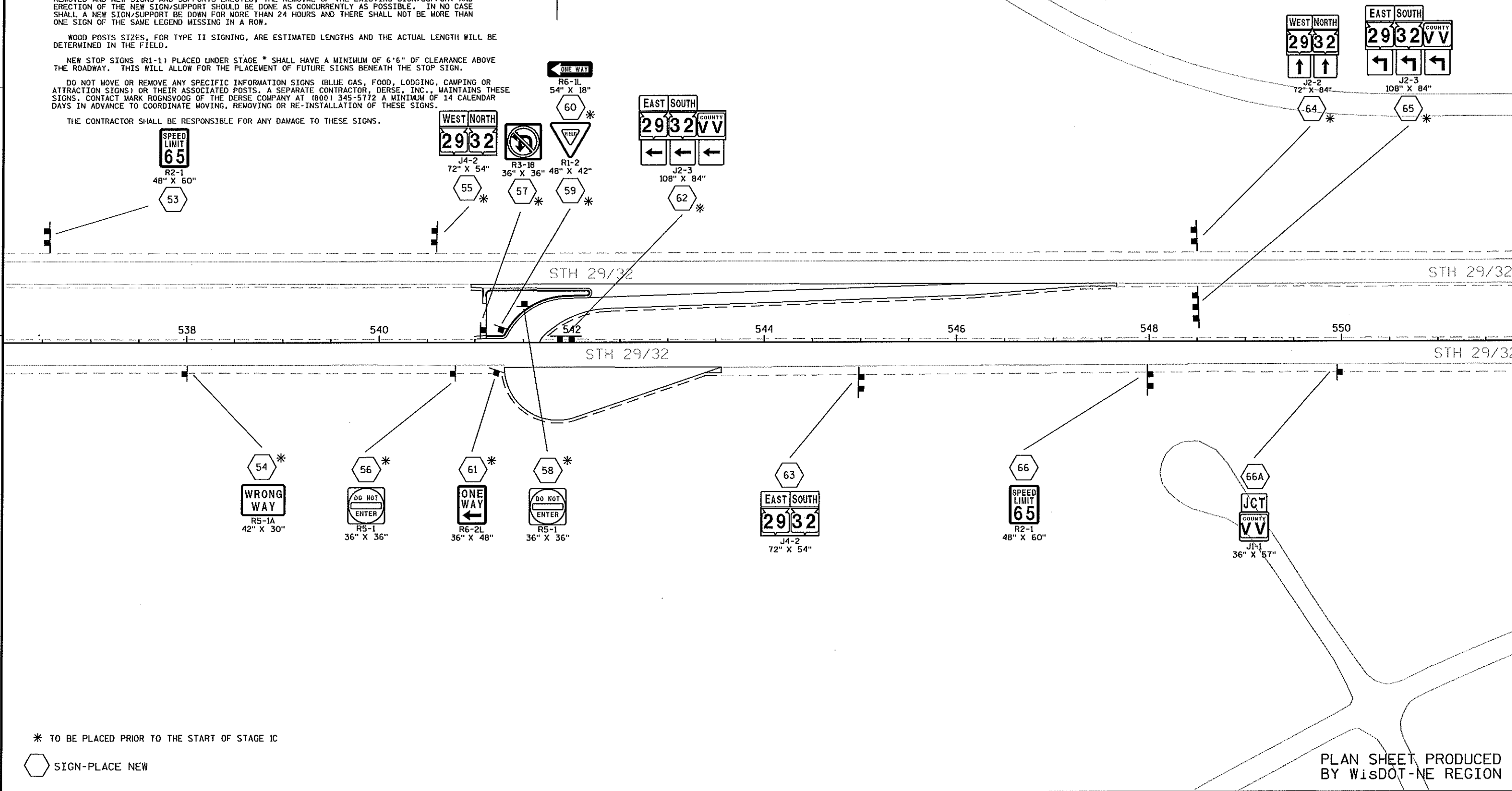
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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.



* TO BE PLACED PRIOR TO THE START OF STAGE IC

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

SIGNING NOTES

THE CONTRACTOR SHALL NOTIFY THE REGIONAL TRAFFIC UNIT, 920-492-5653, A MINIMUM OF TWO WEEKS PRIOR TO THE NEED FOR SIGN PLACEMENT TO ALLOW FOR STAKING OF ANY PERMANENT SIGNING REQUIRED ON THE PROJECT.

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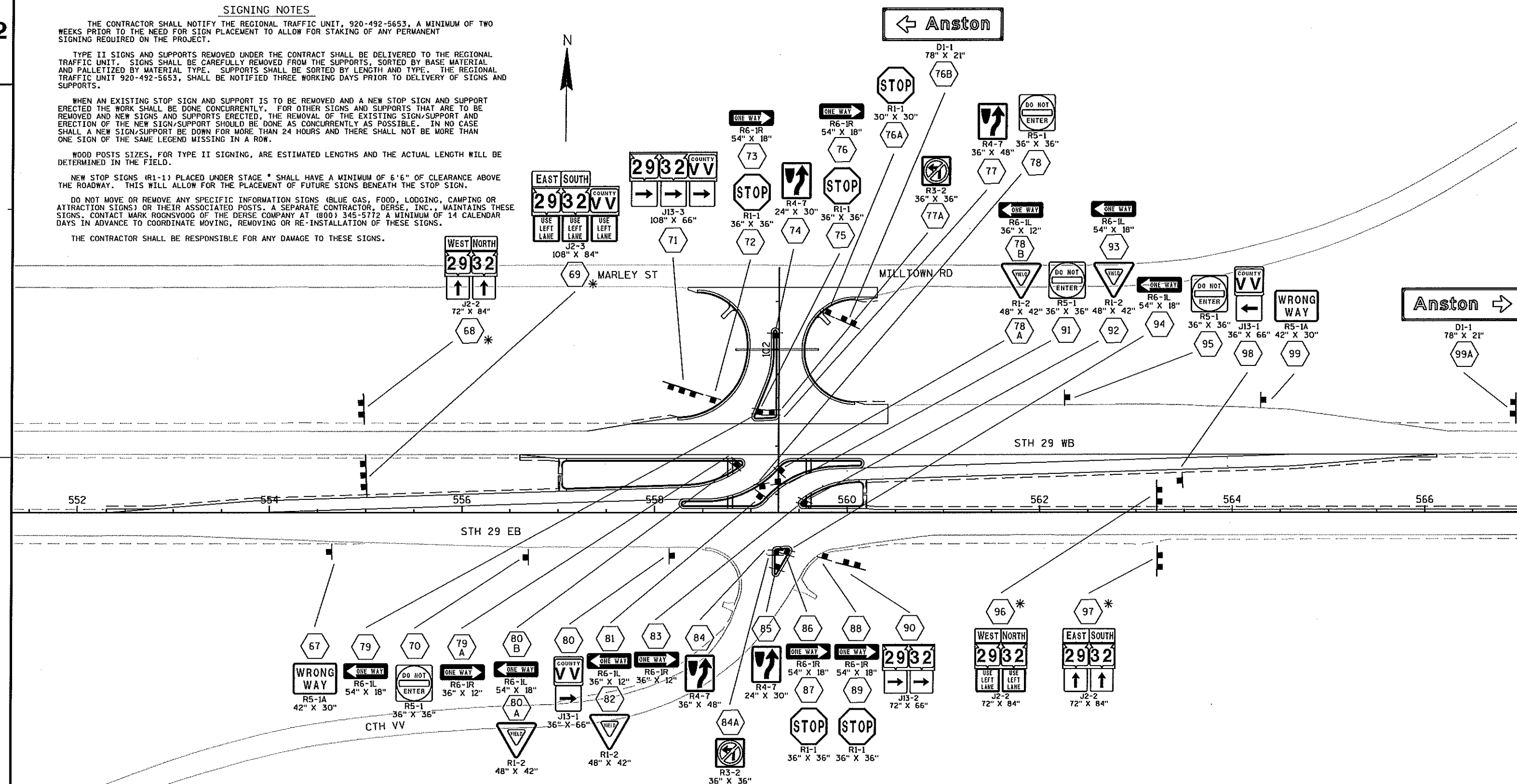
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THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

N



* TO BE PLACED PRIOR TO THE START OF STAGE IC

⬡ SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

SIGNING NOTES

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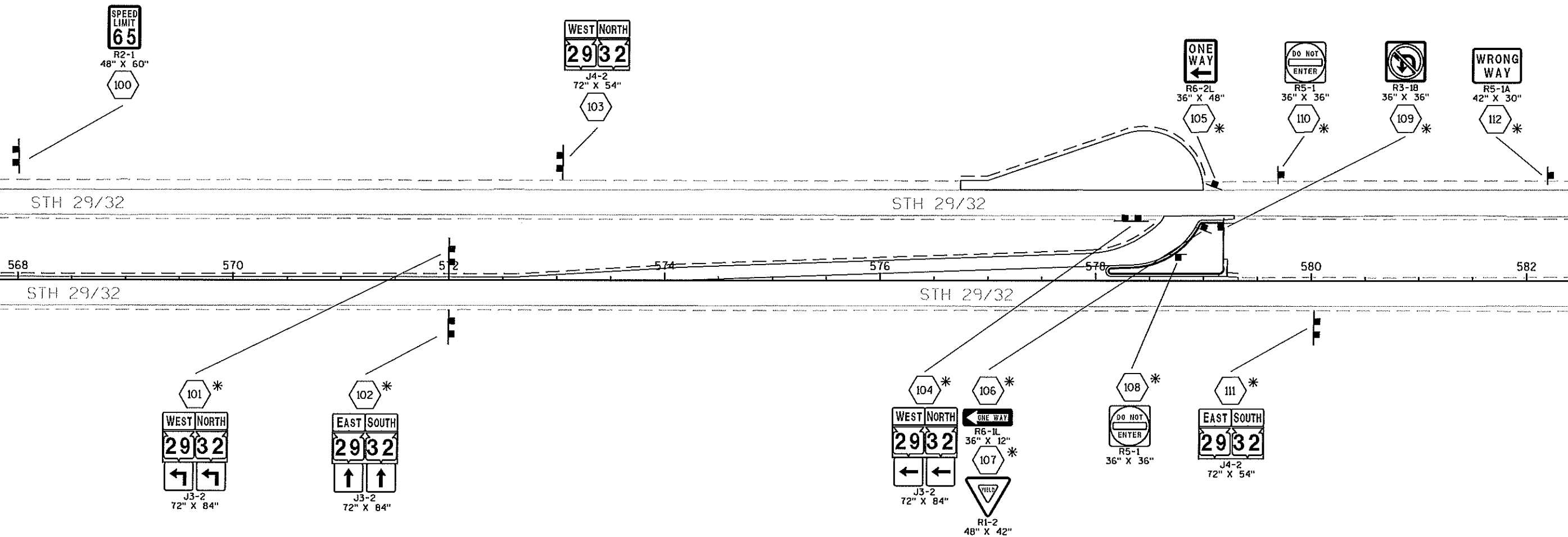
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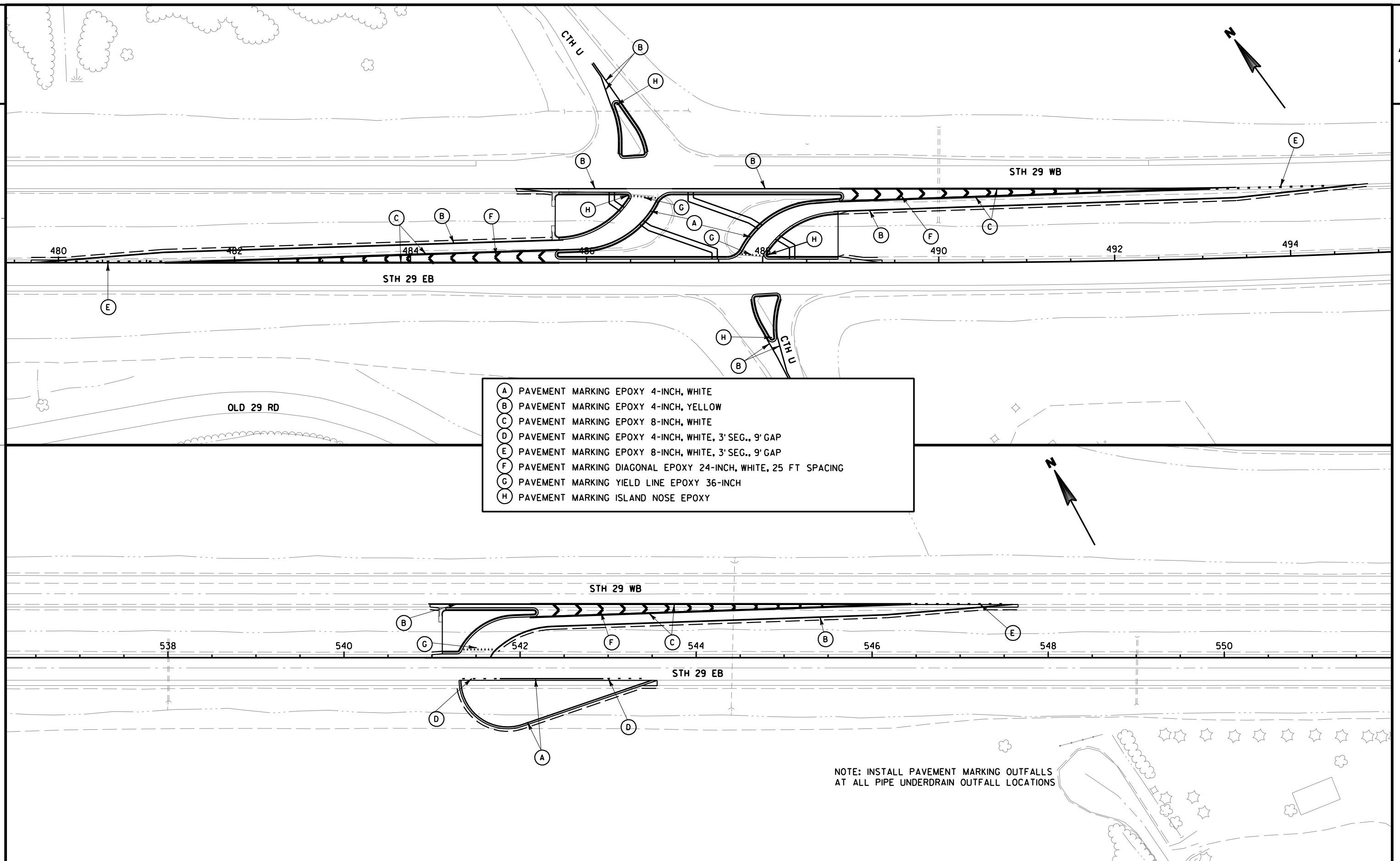
THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THESE SIGNS.

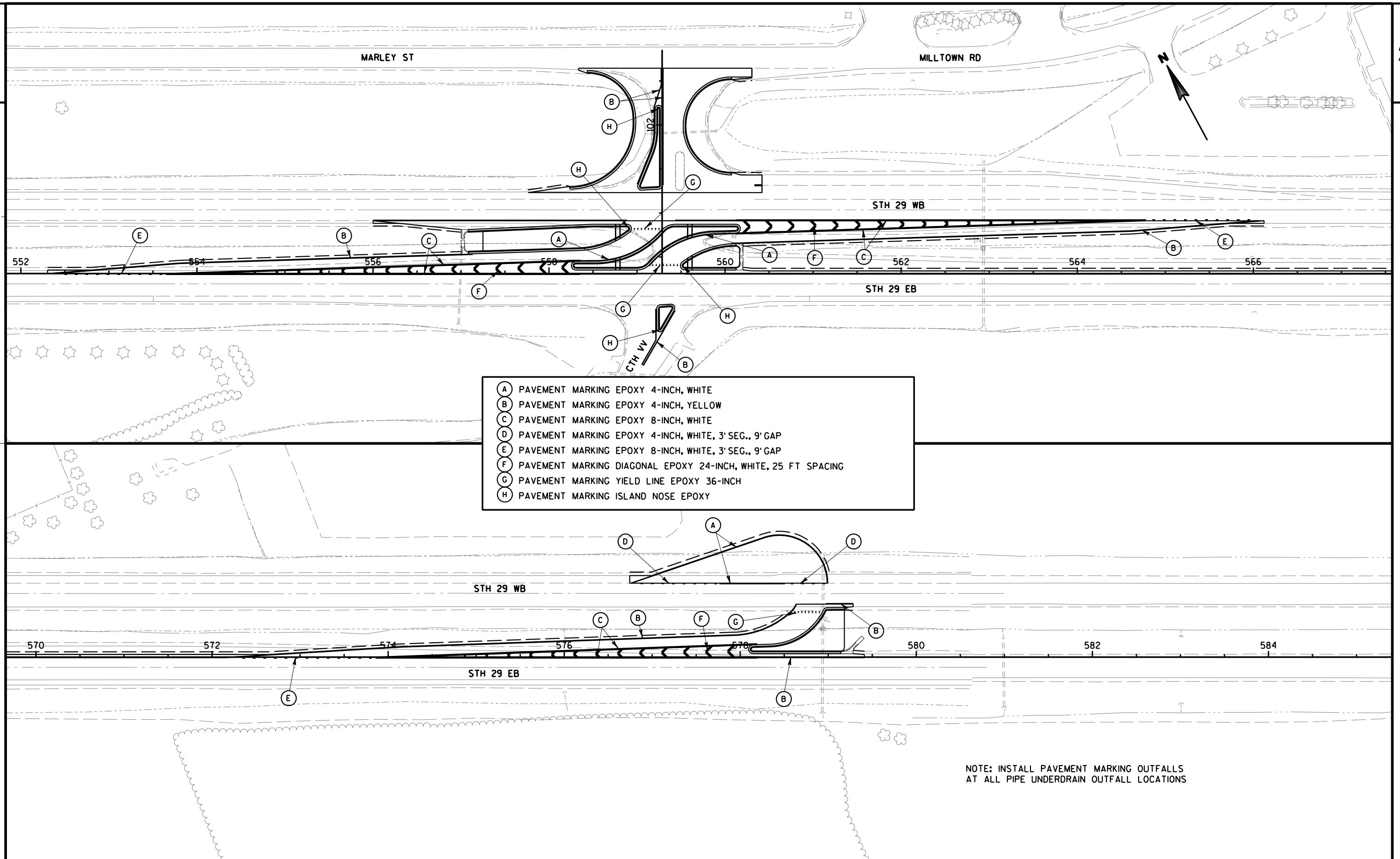


* TO BE PLACED PRIOR TO THE START OF STAGE 1C

SIGN-PLACE NEW

PLAN SHEET PRODUCED
BY WISDOT-NE REGION





STAGE 1A

TRAFFIC:

CLOSE THE OUTSIDE SHOULDER ALONG STH 29. CLOSE THE OUTSIDE LANE OF STH 29 DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED BY SHOULDER CLOSURES.

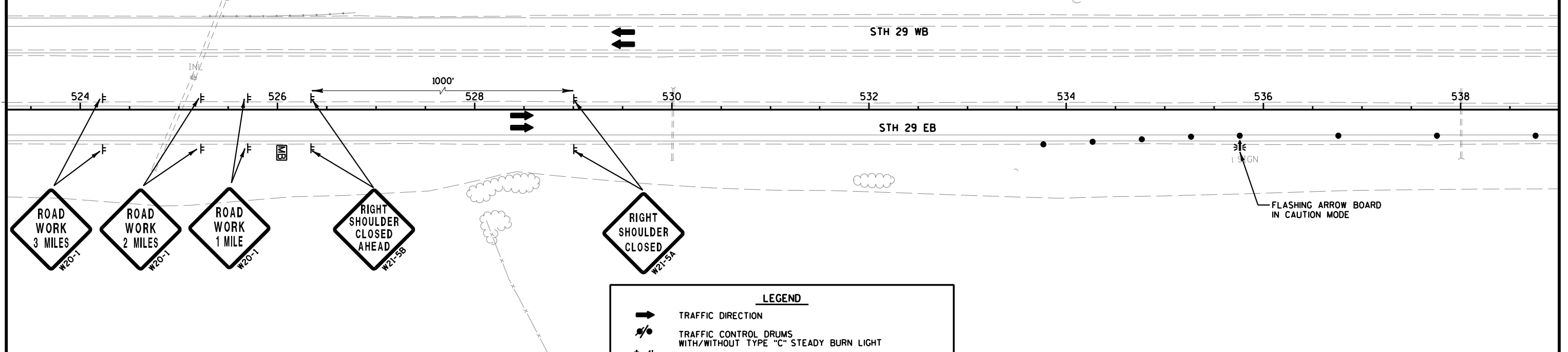
ALLOW ALL TURNING MOVEMENTS AT THE CTH VV INTERSECTION. KEEP CTH U INTERSECTION OPEN TO TRAFFIC.

CONSTRUCTION:

CONSTRUCT BULBS EAST AND WEST OF CTH VV.

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

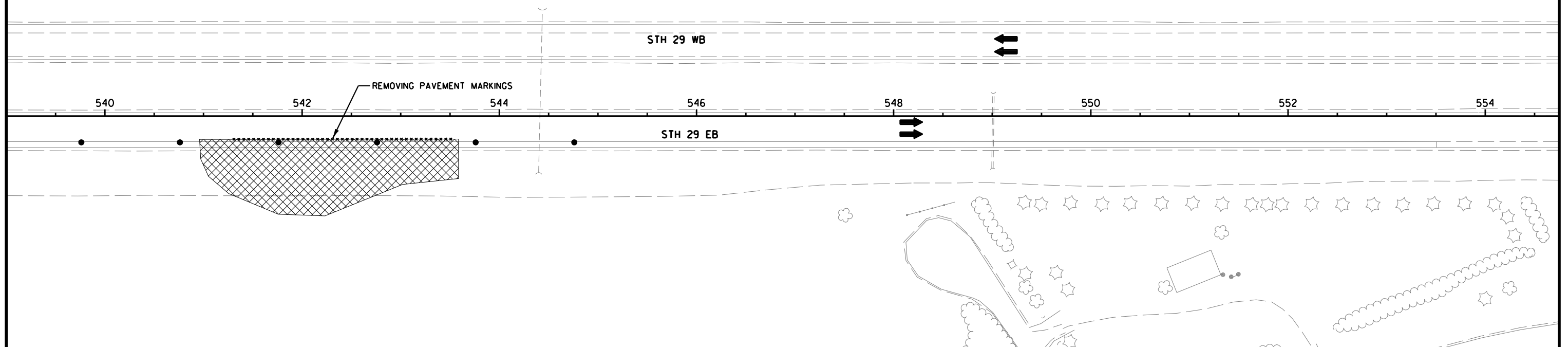
SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.



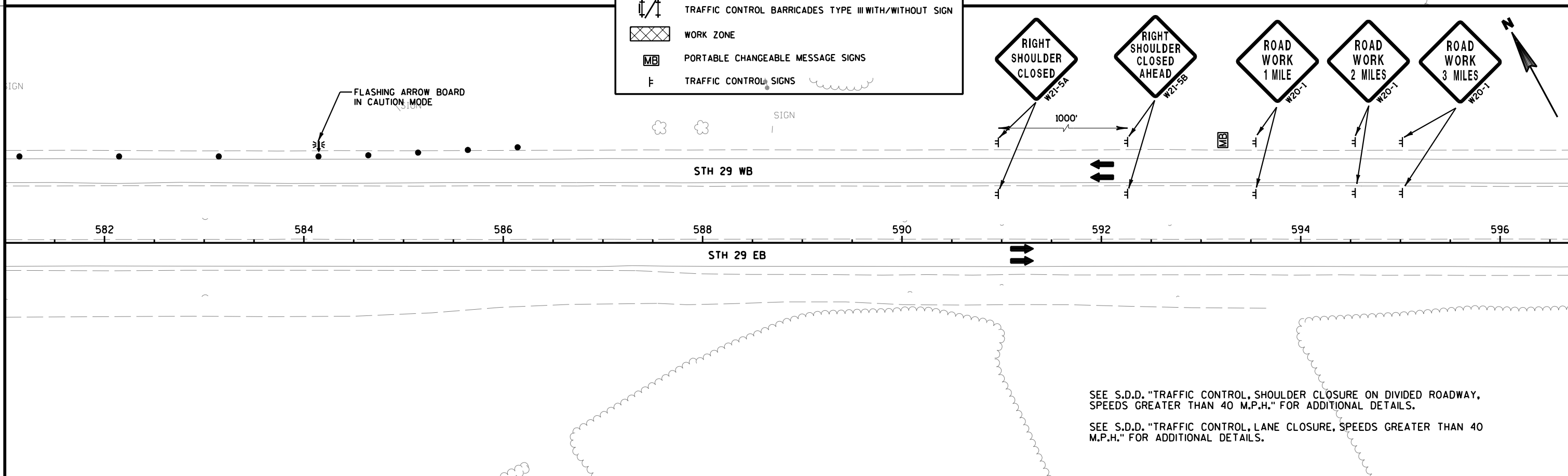
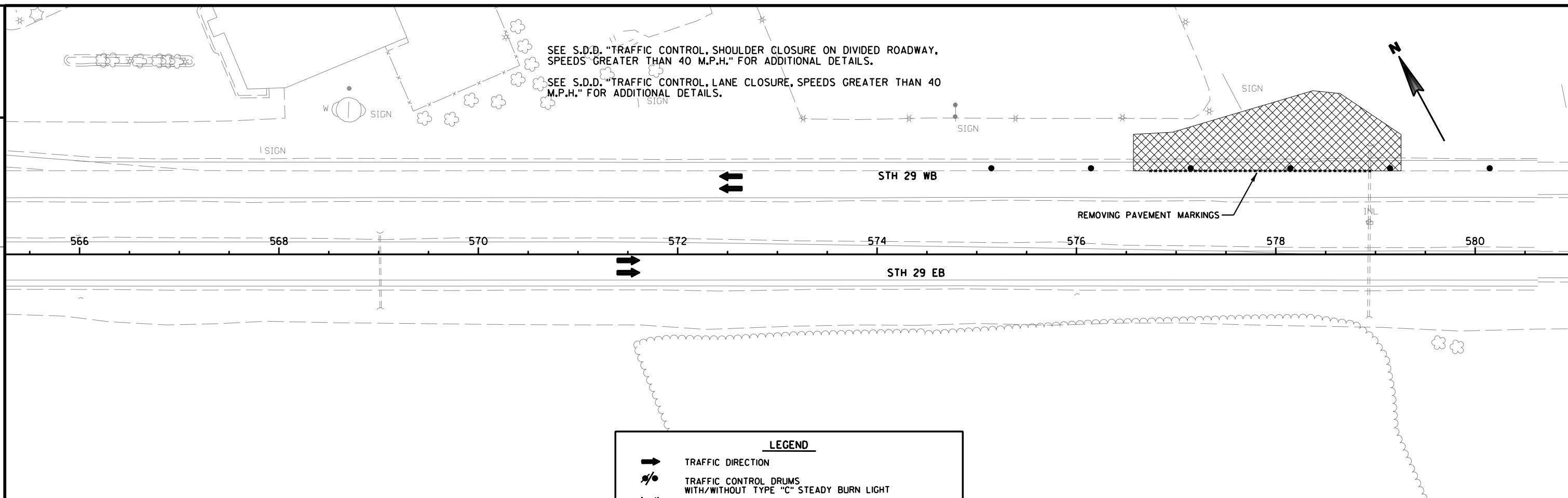
SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

LEGEND	
	TRAFFIC DIRECTION
	TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
	TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
	WORK ZONE
	PORTABLE CHANGEABLE MESSAGE SIGNS
	TRAFFIC CONTROL SIGNS



2



PROJECT NO: 9200-07-71

HWY: STH 29

COUNTY: BROWN

TRAFFIC CONTROL - STAGE 1A

SHEET

28

E

FILE NAME : T:\410621\NGN\026102_s1a.dgn

PLOT DATE : 8/28/2012

PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:100

WISDOT/CADDs SHEET 42

STAGE 1B

TRAFFIC:

CLOSE THE MEDIAN SHOULDER ALONG STH 29. CLOSE THE MEDIAN LANE OF STH 29 DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED BY SHOULDER CLOSURES.

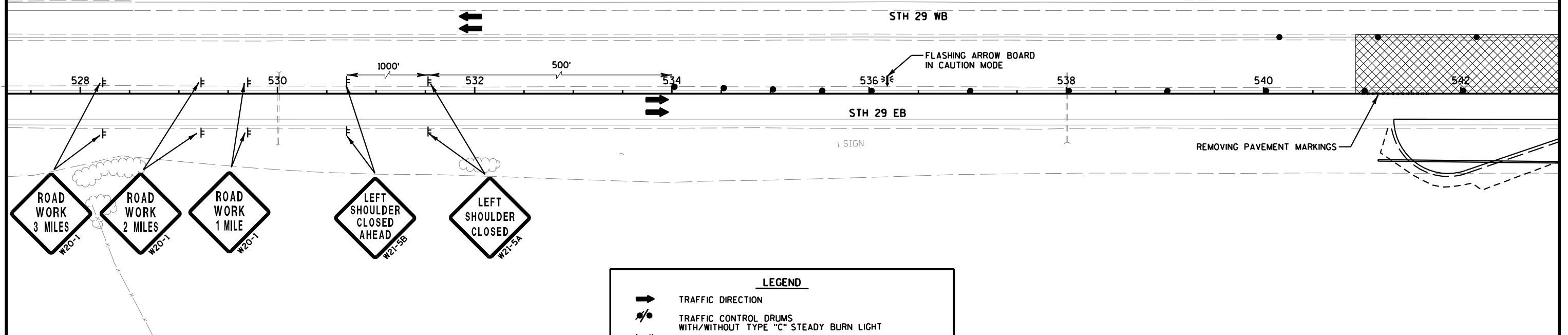
ALLOW ALL TURNING MOVEMENTS AT THE CTH VV INTERSECTION. KEEP CTH U INTERSECTION OPEN TO TRAFFIC.

CONSTRUCTION:

CONSTRUCT J-TURN LANES EAST AND WEST OF CTH VV.

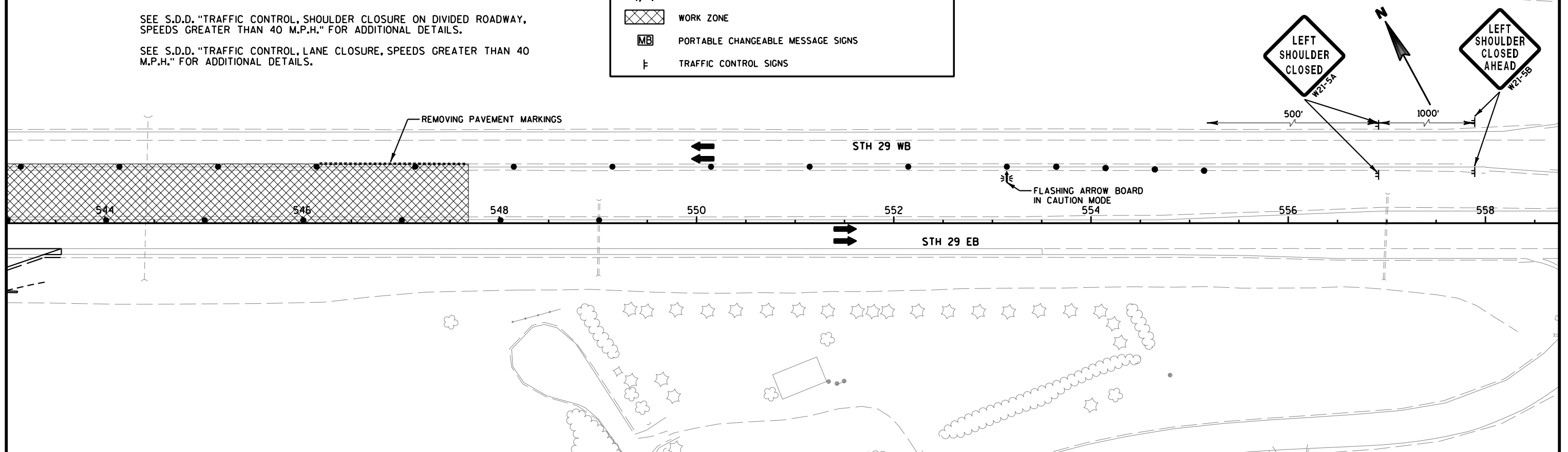
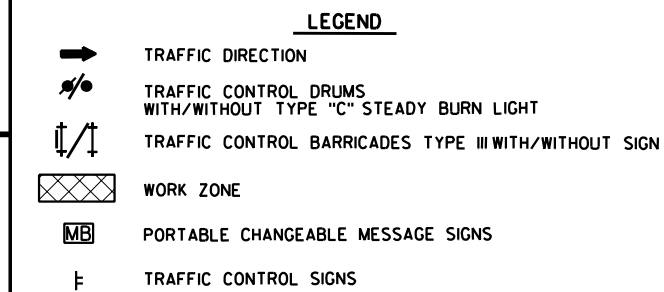
SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.



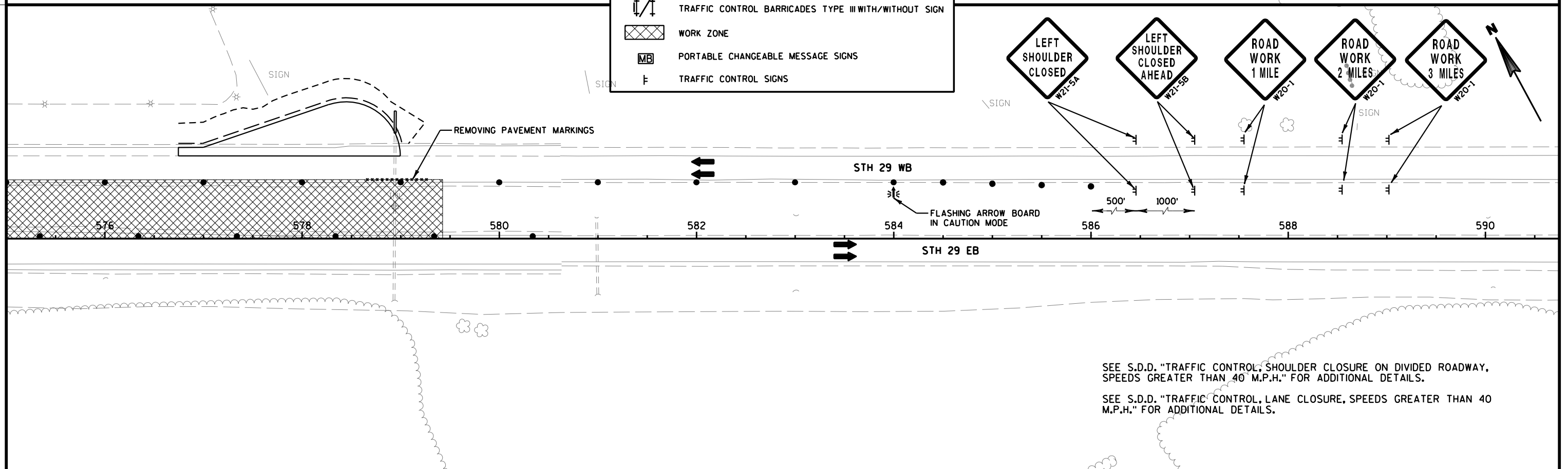
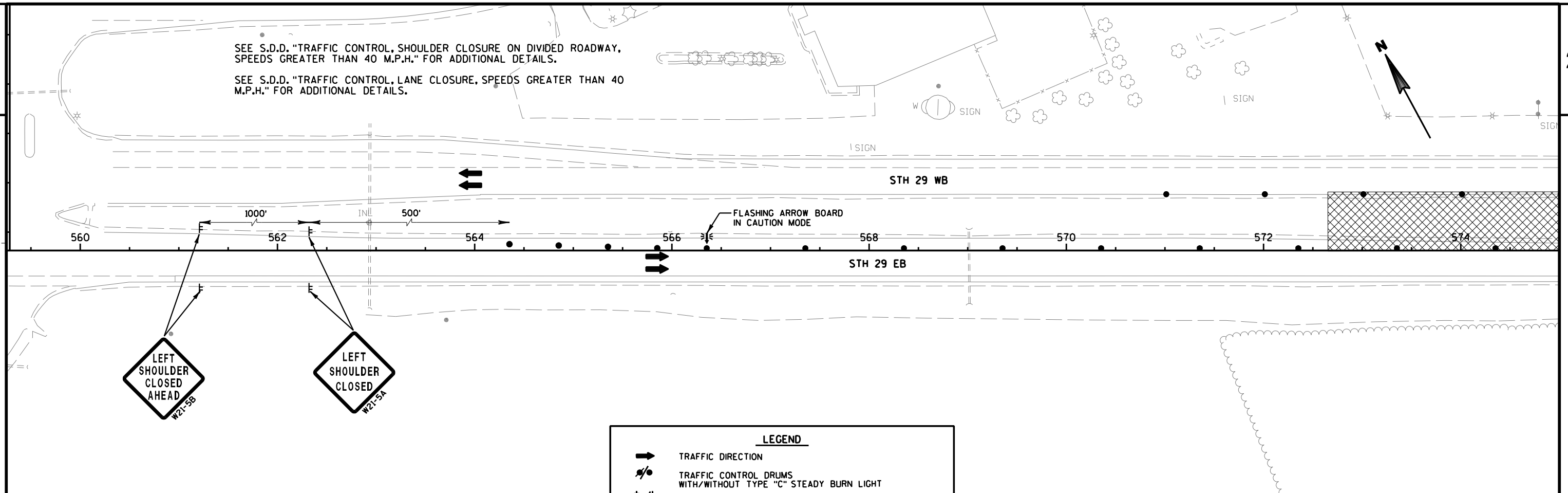
SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.



SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.



SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

STAGE 1C

TRAFFIC:
KEEP BOTH LANES OF CTH VV INTERSECTION OPEN. CLOSE THE RIGHT-TURN LANE ON STH 29 WESTBOUND DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED. ACCOMMODATE RIGHT-TURN MOVEMENTS FROM STH 29 WESTBOUND TRAFFIC DURING LANE CLOSURE.

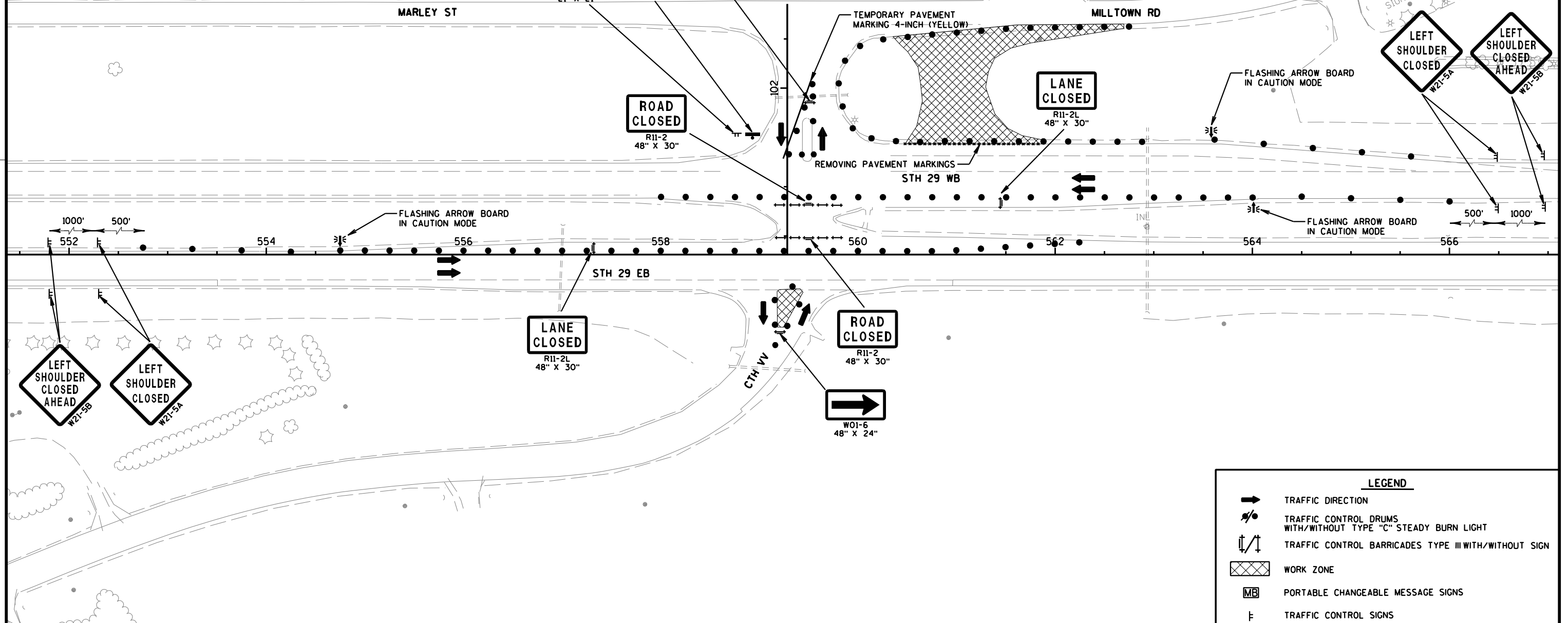
ALLOW ALL TURNING MOVEMENTS AT THE CTH VV INTERSECTION. FLAGGING OPERATIONS IS ALLOWED ON CTH VV FOR CONSTRUCTION OF ISLAND IN SOUTH LEG OF INTERSECTION. KEEP CTH U INTERSECTION OPEN TO TRAFFIC.

CONSTRUCTION:
CONSTRUCT TEMPORARY CONNECTION EAST OF CTH VV INTERSECTION. CONSTRUCT ISLAND ON CTH VV AT SOUTH LEG OF INTERSECTION.

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)" FOR ADDITIONAL DETAILS.



LEGEND	
	TRAFFIC DIRECTION
	TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
	TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
	WORK ZONE
	PORTABLE CHANGEABLE MESSAGE SIGNS
	TRAFFIC CONTROL SIGNS

STAGE 2A

TRAFFIC:
CLOSE THE MEDIAN SHOULDER ALONG STH 29. CLOSE THE MEDIAN LANE OF STH 29 DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED BY SHOULDER CLOSURES.

ALLOW NORTHBOUND AND SOUTHBOUND RIGHT-TURN MOVEMENTS FROM CTH VV TO STH 29. KEEP CTH U INTERSECTION OPEN TO TRAFFIC.

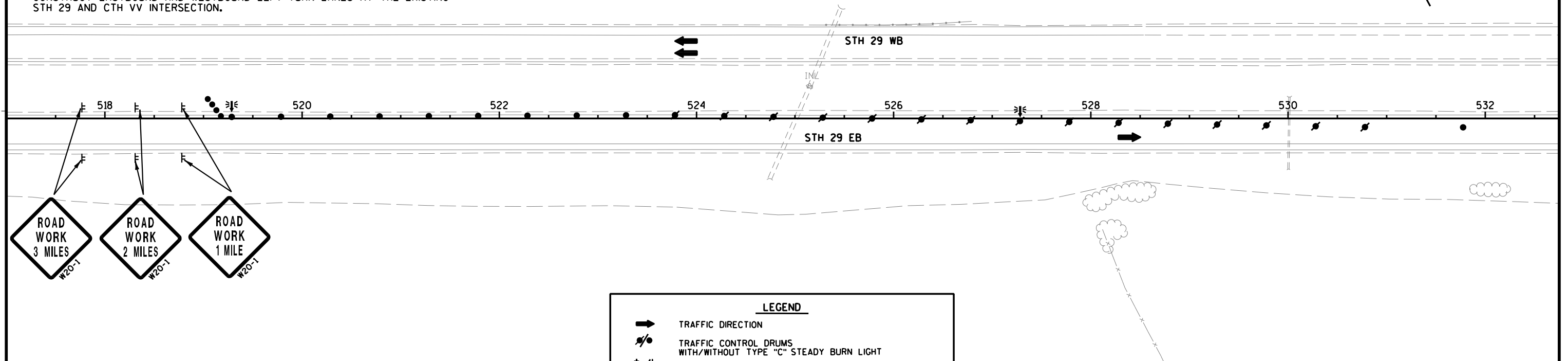
CONSTRUCTION:
CONSTRUCT EASTBOUND AND WESTBOUND LEFT-TURN LANES AT THE EXISTING STH 29 AND CTH VV INTERSECTION.

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS.

LANE CLOSURE SHOWN FOR NON-PEAK HOURS.

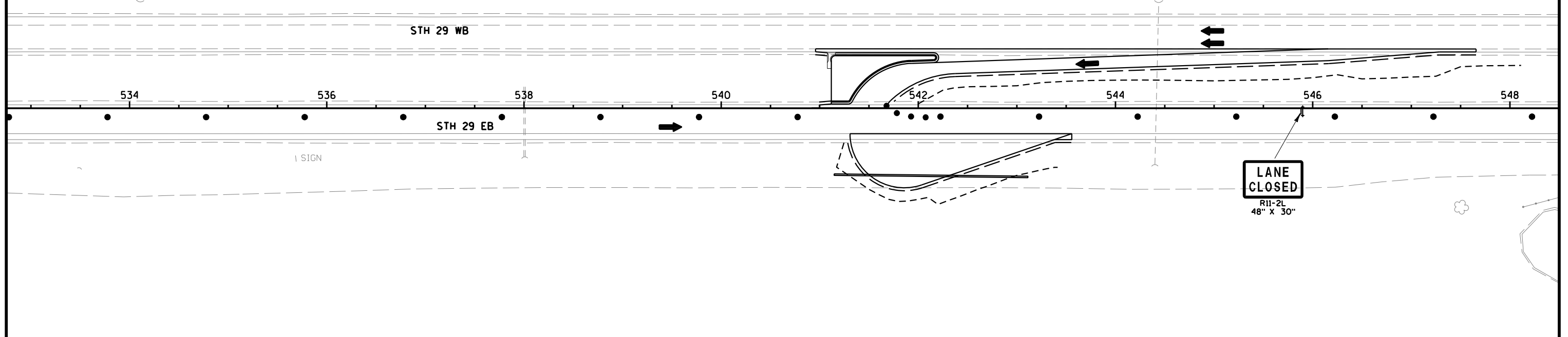


SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS.

LANE CLOSURE SHOWN FOR NON-PEAK HOURS.



2

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS.

LANE CLOSURE SHOWN FOR NON-PEAK HOURS.

MARLEY ST

COUNTY
VV
MI-5A
24" X 24"
ME-1
21" X 21"
ROAD CLOSED
R11-2
48" X 30"

W01-6
48" X 24"

ROAD CLOSED
R11-2
48" X 30"

TEMPORARY PAVEMENT
MARKING 4-INCH (YELLOW)

STH 29 WB

550

552

554

556

558

560

562

564

STH 29 EB

ROAD CLOSED
R11-2
48" X 30"

LEGEND

- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- FLASHING ARROW BOARD (UNLESS OTHERWISE NOTED)
- TRAFFIC CONTROL SIGNS

LANE CLOSED
R11-2L
48" X 30"

STH 29 WB

STH 29 EB

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS.

LANE CLOSURE SHOWN FOR NON-PEAK HOURS.

PROJECT NO: 9200-07-71

HWY: STH 29

COUNTY: BROWN

TRAFFIC CONTROL - STAGE 2A

SHEET

33

E

FILE NAME : T:\410621\NGN\026202_s2a.dgn

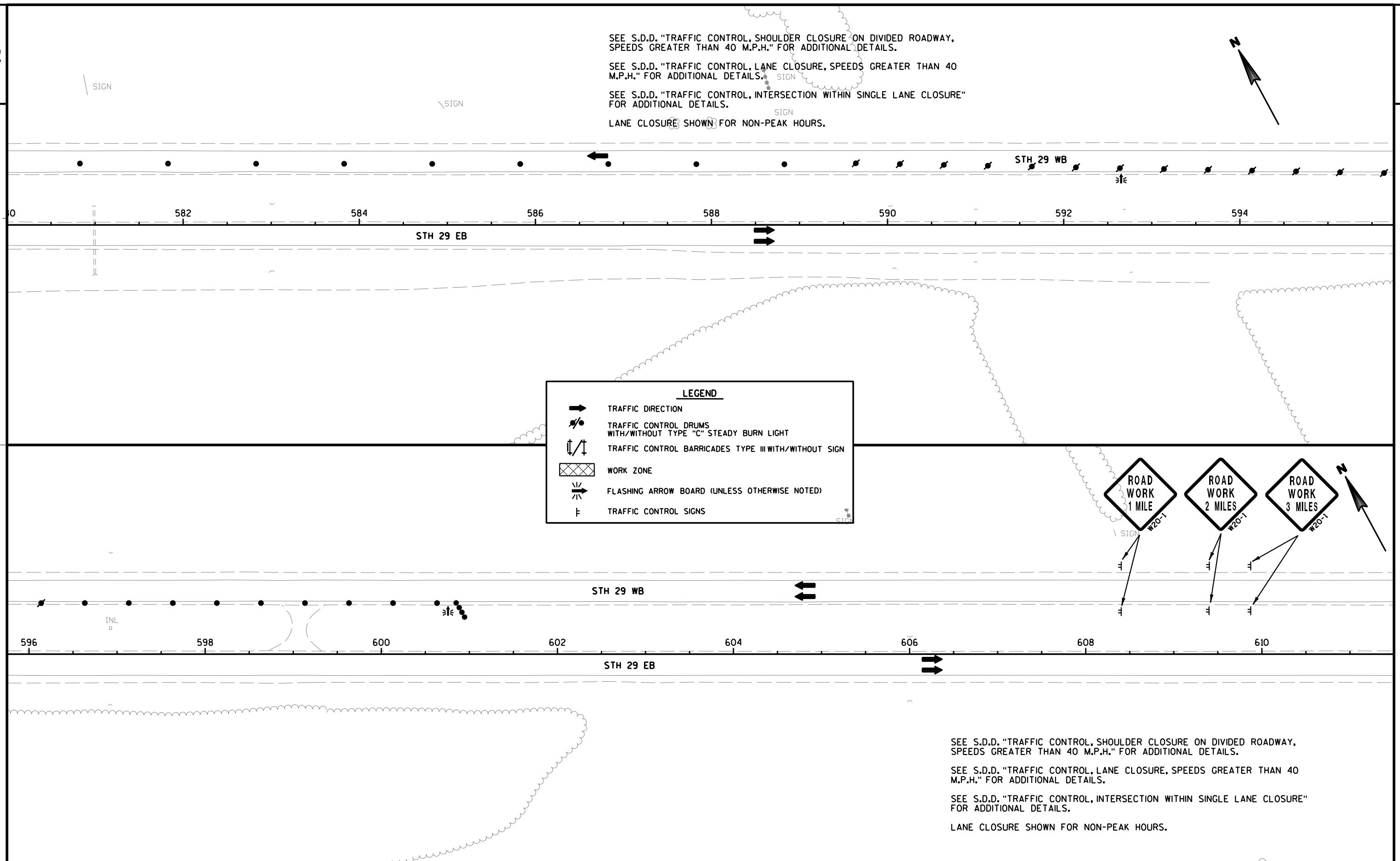
PLOT DATE : 8/28/2012

PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:100

WISDOT/CADDS SHEET 42



STAGE 2B

TRAFFIC:

CLOSE THE OUTSIDE SHOULDER ALONG STH 29 WESTBOUND. CLOSE THE OUTSIDE LANE OF STH 29 WESTBOUND DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED BY SHOULDER CLOSURES. CLOSE THE LEFT-TURN LANE TO CTH VV FROM EASTBOUND AND WESTBOUND STH 29 TRAFFIC.

ALLOW NORTHBOUND AND SOUTHBOUND RIGHT-TURN MOVEMENTS FROM CTH VV TO STH 29. KEEP CTH U INTERSECTION OPEN TO TRAFFIC. OPEN TEMPORARY ROAD CONNECTION FROM STH 29 TO MARLEY STREET/MILLTOWN ROAD.

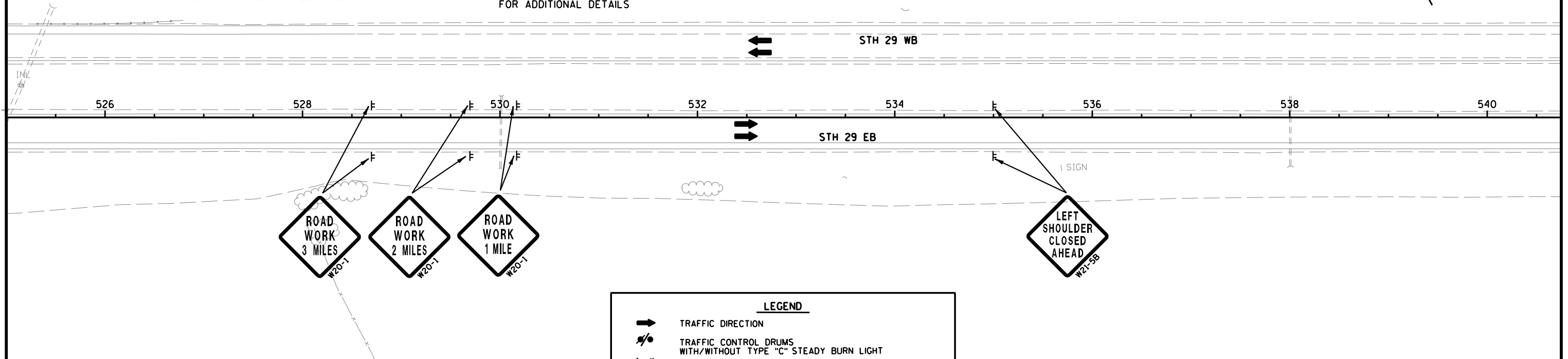
CONSTRUCTION:

CONSTRUCT THE NORTH LEG OF CTH VV INTERSECTION.

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

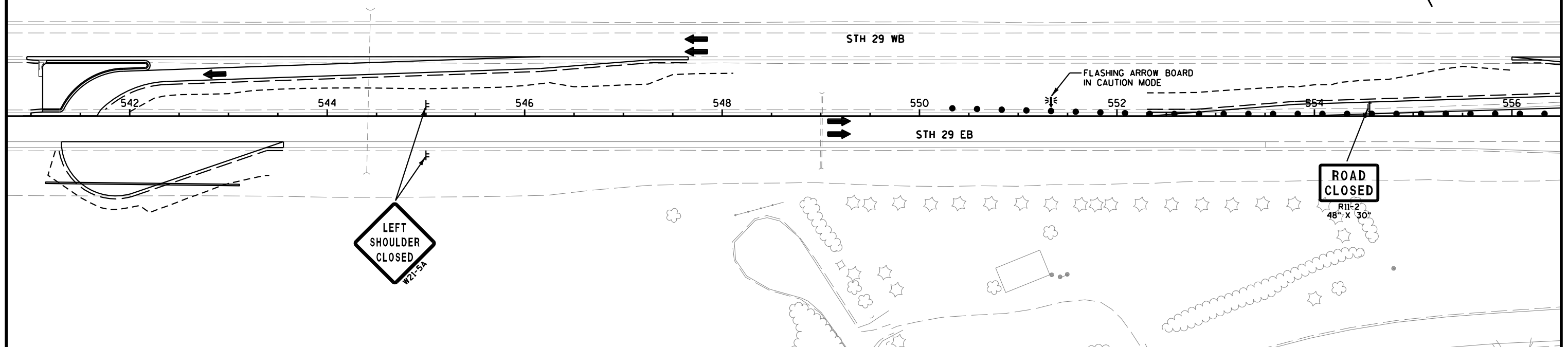
SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS

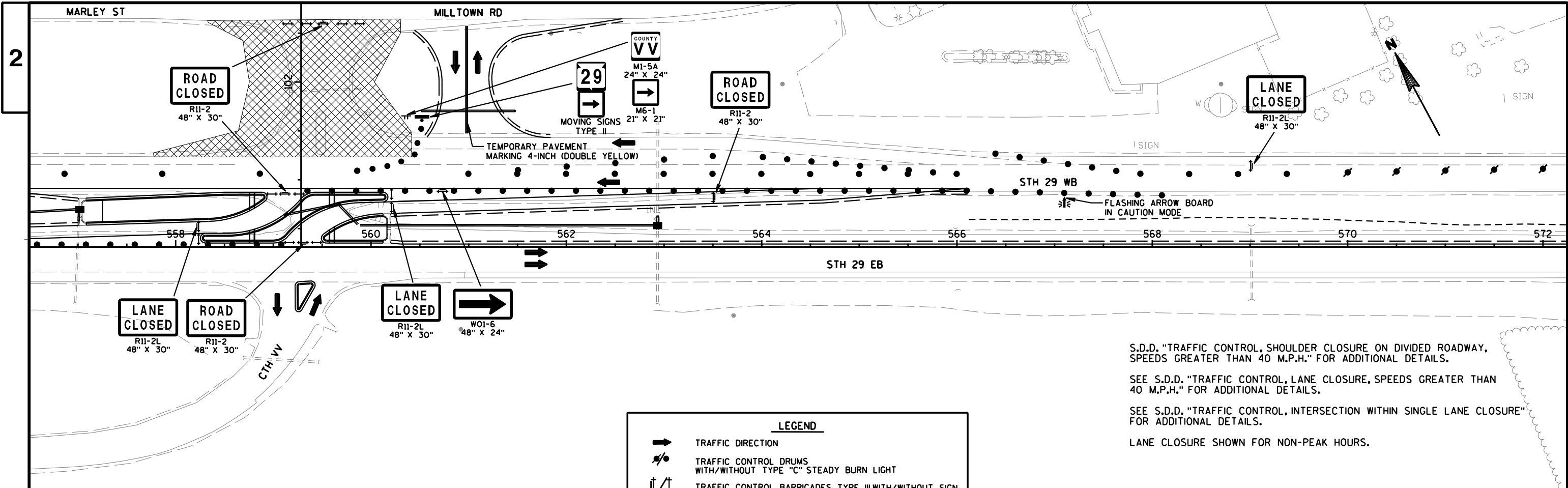


S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS





LEGEND

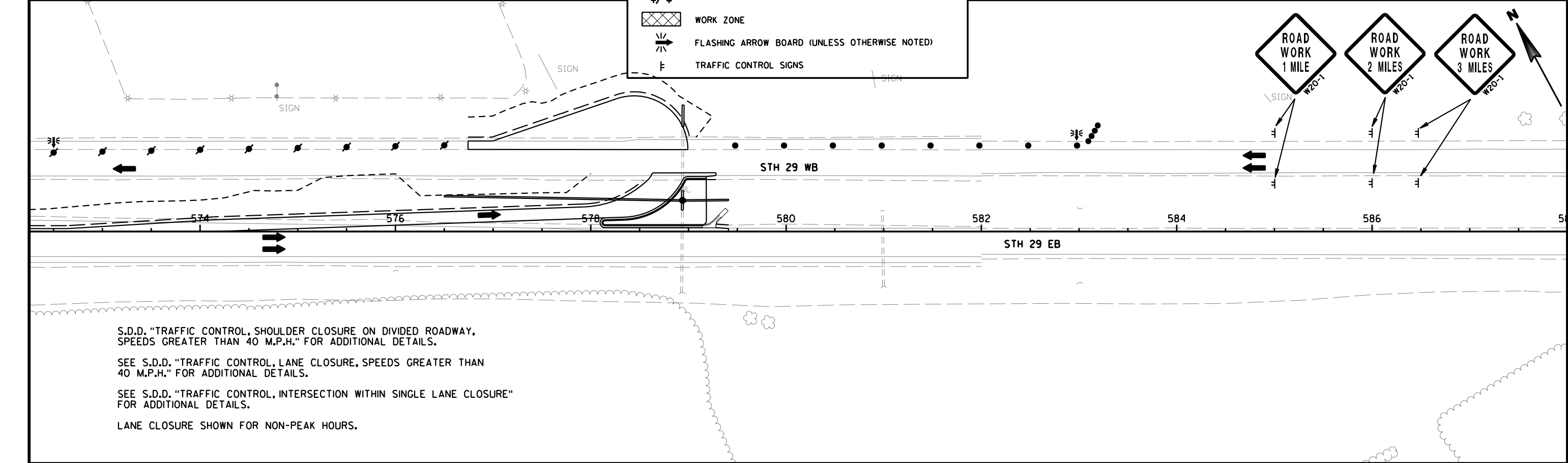
- TRAFFIC DIRECTION
- TRAFFIC CONTROL DRUMS
WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- WORK ZONE
- FLASHING ARROW BOARD (UNLESS OTHERWISE NOTED)
- TRAFFIC CONTROL SIGNS

S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS.

LANE CLOSURE SHOWN FOR NON-PEAK HOURS.



S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE" FOR ADDITIONAL DETAILS.

LANE CLOSURE SHOWN FOR NON-PEAK HOURS.

STAGE 3A

TRAFFIC:
CLOSE THE MEDIAN SHOULDER ALONG STH 29. CLOSE THE MEDIAN LANE OF STH 29 DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED BY SHOULDER CLOSURES.

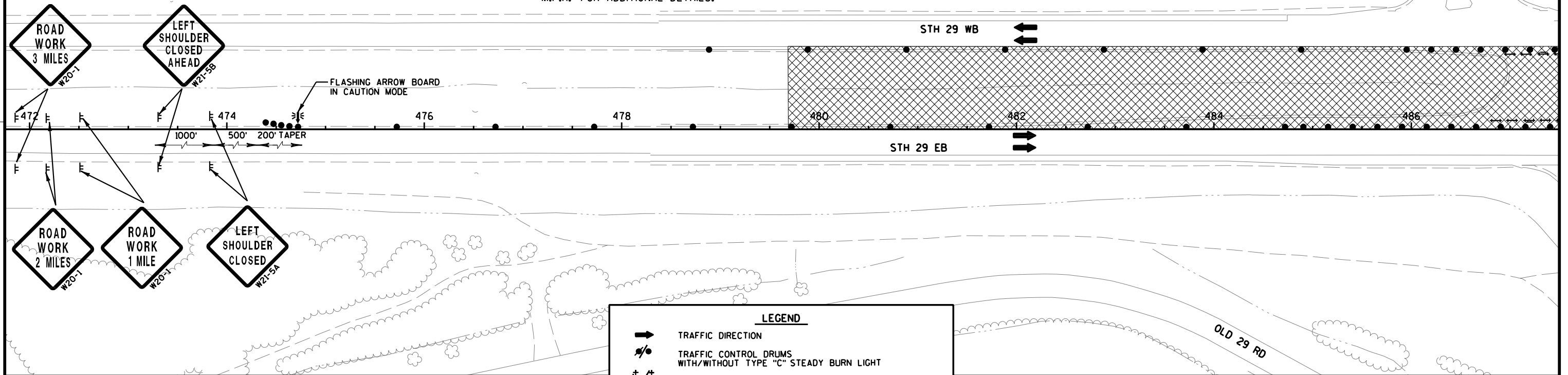
ALLOW RIGHT-TURN ONLY TURNING MOVEMENTS AT STH 29 AND CTH U INTERSECTION. OPEN CTH VV INTERSECTION TO TRAFFIC.

CONSTRUCTION:
CONSTRUCT EASTBOUND AND WESTBOUND LEFT-TURN LANES AT THE EXISTING STH 29 AND CTH U INTERSECTION.

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

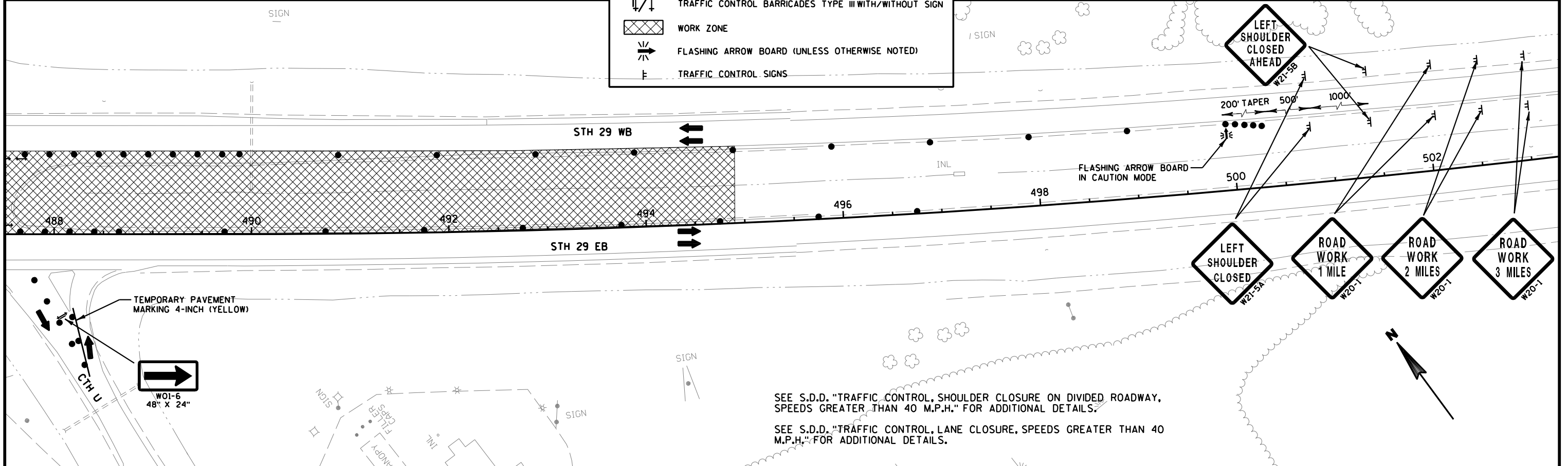
SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

TEMPORARY PAVEMENT MARKING 4-INCH (YELLOW)



LEGEND

- TRAFFIC DIRECTION
- /• TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
- ⚡ TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
- ▨ WORK ZONE
- ⚡ FLASHING ARROW BOARD (UNLESS OTHERWISE NOTED)
- ⚡ TRAFFIC CONTROL SIGNS



SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

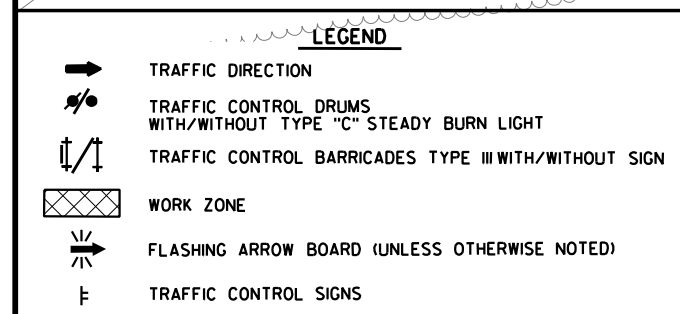
2

TRAFFIC:
CLOSE THE OUTSIDE SHOULDER ALONG STH 29. CLOSE THE MEDIAN LANE OF STH 29 DURING OFF-PEAK HOURS FOR WORK REQUIRING MORE ROOM THAN PROVIDED BY SHOULDER CLOSURE. CLOSE CTH U TO TRAFFIC.

SEE S.D.D. "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY,
SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.

SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL DETAILS.



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WISDOT/CADDS SHEET 42

3

DATE 18JAN13			E S T I M A T E O F Q U A N T I T I E S			
LINE					9200-05-71	9200-07-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	5.000	1.000	4.000
0020	204.0100	REMOVING PAVEMENT	SY	5,584.000	2,184.000	3,400.000
0030	204.0110	REMOVING ASPHALTIC SURFACE	SY	233.000	141.000	92.000
0040	204.0150	REMOVING CURB & GUTTER	LF	782.000	265.000	517.000
0050	204.0155	REMOVING CONCRETE SIDEWALK	SY	46.000		46.000
0060	204.0220	REMOVING INLETS	EACH	2.000		2.000
0070	205.0100	EXCAVATION COMMON **P**	CY	8,096.000	2,490.000	5,606.000
0080	208.0100	BORROW	CY	1,965.000		1,965.000
0090	213.0100	FINISHING ROADWAY (PROJECT) 01. 9200-05-71	EACH	1.000	1.000	
0100	213.0100	FINISHING ROADWAY (PROJECT) 02. 9200-07-71	EACH	1.000		1.000
0110	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	920.000	215.000	705.000
0120	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH	TON	16,215.000	5,220.000	10,995.000
0130	455.0105	ASPHALTIC MATERIAL PG58-28	TON	218.000	56.000	162.000
0140	455.0605	TACK COAT	GAL	573.000	150.000	423.000
0150	460.1103	HMA PAVEMENT TYPE E-3	TON	3,975.000	1,020.000	2,955.000
0160	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	2,560.000	660.000	1,900.000
0170	465.0105	ASPHALTIC SURFACE	TON	55.000		55.000
0180	465.0125	ASPHALTIC SURFACE TEMPORARY	TON	275.000		275.000
0190	465.0315	ASPHALTIC FLUMES	SY	158.000	26.000	132.000
0200	465.0400	ASPHALTIC SHOULDER RUMBLE STRIP	LF	1,234.000		1,234.000
0210	520.0118	CULVERT PIPE CLASS III 18-INCH	LF	340.000		340.000
0220	520.4018	CULVERT PIPE TEMPORARY 18-INCH	LF	100.000		100.000
0230	520.8000	CONCRETE COLLARS FOR PIPE	EACH	2.000		2.000
0240	521.1518	APRON ENDWALLS FOR CULVERT PIPE SLOPED	EACH	3.000		3.000
0250	522.0112	SIDE DRAINS STEEL 18-INCH 6 TO 1 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH	LF	64.000	64.000	
0260	522.0118	CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	LF	574.000	8.000	566.000
0270	522.0124	CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	LF	64.000	10.000	54.000
0280	522.0312	CULVERT PIPE REINFORCED CONCRETE CLASS IV 12-INCH	LF	46.000	46.000	
0290	522.0318	CULVERT PIPE REINFORCED CONCRETE CLASS IV 18-INCH	LF	158.000	42.000	116.000
0300	522.1012	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	EACH	1.000	1.000	
0310	522.1018	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	EACH	5.000	1.000	4.000
0320	522.1024	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	EACH	2.000	1.000	1.000
0330	601.0553	CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	LF	2,346.000	761.000	1,585.000
0340	601.0557	CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	LF	745.000	303.000	442.000
0350	602.0405	CONCRETE SIDEWALK 4-INCH	SF	2,600.000	1,695.000	905.000
0360	602.0415	CONCRETE SIDEWALK 6-INCH	SF	22,430.000	16,165.000	6,265.000
0370	602.0505	CURB RAMP DETECTABLE WARNING FIELD YELLOW	SF	160.000	80.000	80.000
0380	611.0530	MANHOLE COVERS TYPE J	EACH	2.000		2.000
0390	611.0636	INLET COVERS TYPE HM-S	EACH	6.000	4.000	2.000
0400	611.0642	INLET COVERS TYPE MS	EACH	4.000		4.000
0410	611.2003	MANHOLES 3-FT DIAMETER	EACH	1.000		1.000
0420	611.2005	MANHOLES 5-FT DIAMETER	EACH	1.000		1.000

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DATE 18JAN13		E S T I M A T E O F Q U A N T I T I E S				
LINE					9200-05-71	9200-07-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0430	611.3230	INLETS 2X3-FT	EACH	6.000	4.000	2.000
0440	611.3902	INLETS MEDIAN 2 GRATE	EACH	2.000		2.000
0450	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	56.000	23.000	33.000
0460	612.0806	APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	EACH	9.000	2.000	7.000
0470	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 9200-05-71	EACH	1.000	1.000	
0480	618.0100	MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 02. 9200-07-71	EACH	1.000		1.000
0490	619.1000	MOBILIZATION	EACH	1.000	0.500	0.500
0500	620.0300	CONCRETE MEDIAN SLOPED NOSE	SF	1,000.000	440.000	560.000
0510	624.0100	WATER	MGAL	265.000	86.000	179.000
0520	625.0500	SALVAGED TOPSOIL	SY	12,805.000	2,860.000	9,945.000
0530	628.1504	SILT FENCE	LF	320.000		320.000
0540	628.1520	SILT FENCE MAINTENANCE	LF	640.000		640.000
0550	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	7.000	2.000	5.000
0560	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	7.000	2.000	5.000
0570	628.2004	EROSION MAT CLASS I TYPE B	SY	9,100.000	2,200.000	6,900.000
0580	628.7005	INLET PROTECTION TYPE A	EACH	2.000		2.000
0590	628.7015	INLET PROTECTION TYPE C	EACH	6.000	4.000	2.000
0600	628.7504	TEMPORARY DITCH CHECKS	LF	20.000		20.000
0610	628.7555	CULVERT PIPE CHECKS	EACH	26.000	5.000	21.000
0620	628.7570	ROCK BAGS	EACH	64.000		64.000
0630	629.0210	FERTILIZER TYPE B	CWT	10.000	3.000	7.000
0640	630.0130	SEEDING MIXTURE NO. 30	LB	285.000	65.000	220.000
0650	630.0200	SEEDING TEMPORARY	LB	390.000	50.000	340.000
0660	633.5200	MARKERS CULVERT END	EACH	11.000	3.000	8.000
0670	634.0614	POSTS WOOD 4X6-INCH X 14-FT	EACH	37.000	15.000	22.000
0680	634.0616	POSTS WOOD 4X6-INCH X 16-FT	EACH	105.000	33.000	72.000
0690	634.0618	POSTS WOOD 4X6-INCH X 18-FT	EACH	26.000	7.000	19.000
0700	637.0202	SIGNS REFLECTIVE TYPE II	SF	2,275.660	689.970	1,585.690
0710	638.2102	MOVING SIGNS TYPE II	EACH	2.000		2.000
0720	638.2602	REMOVING SIGNS TYPE II	EACH	103.000	61.000	42.000
0730	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	75.000	45.000	30.000
0740	638.4000	MOVING SMALL SIGN SUPPORTS	EACH	1.000		1.000
0750	642.5001	FIELD OFFICE TYPE B	EACH	1.000		1.000
0760	643.0100	TRAFFIC CONTROL (PROJECT) 01. 9200-05-71	EACH	1.000	1.000	
0770	643.0100	TRAFFIC CONTROL (PROJECT) 02. 9200-07-71	EACH	1.000		1.000
0780	643.0300	TRAFFIC CONTROL DRUMS	DAY	10,300.000	3,150.000	7,150.000
0790	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,290.000	510.000	780.000
0800	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	1,730.000	710.000	1,020.000
0810	643.0715	TRAFFIC CONTROL WARNING LIGHTS TYPE C	DAY	1,750.000	920.000	830.000
0820	643.0800	TRAFFIC CONTROL ARROW BOARDS	DAY	235.000	65.000	170.000
0830	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,400.000	500.000	900.000
0840	643.0920	TRAFFIC CONTROL COVERING SIGNS TYPE II	EACH	4.000		4.000
0850	643.1050	TRAFFIC CONTROL SIGNS PCMS	DAY	20.000		20.000
0860	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	8,264.000	2,534.000	5,730.000
0870	646.0126	PAVEMENT MARKING EPOXY 8-INCH	LF	5,540.000	1,806.000	3,734.000
0880	646.0600	REMOVING PAVEMENT MARKINGS	LF	1,181.000	301.000	880.000
0890	646.0805.S	PAVEMENT MARKING OUTFALL	EACH	9.000	2.000	7.000
0900	647.0546	PAVEMENT MARKING YIELD LINE SYMBOLS EPOXY 36-INCH	EACH	47.000	14.000	33.000
0910	647.0606	PAVEMENT MARKING ISLAND NOSE EPOXY	EACH	8.000	4.000	4.000
0920	647.0746	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	LF	1,026.000	316.000	710.000

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DATE 18JAN13		E S T I M A T E O F Q U A N T I T I E S				
LINE					9200-05-71	9200-07-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	QUANTITY
0930	649.0100	TEMPORARY PAVEMENT MARKING 4-INCH	LF	445.000	140.000	305.000
0940	650.4000	CONSTRUCTION STAKING STORM SEWER	EACH	15.000	6.000	9.000
0950	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	5,166.000	1,522.000	3,644.000
0960	650.5000	CONSTRUCTION STAKING BASE	LF	5,166.000	1,522.000	3,644.000
0970	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	3,387.000	1,360.000	2,027.000
0980	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	4.000	1.000	3.000
0990	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 9200-05-71	LS	1.000	1.000	
1000	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 02. 9200-07-71	LS	1.000		1.000
1010	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	5,166.000	1,522.000	3,644.000
1020	690.0150	SAWING ASPHALT	LF	2,832.000	287.000	2,545.000
1030	690.0250	SAWING CONCRETE	LF	3,849.000	1,543.000	2,306.000
1040	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	HRS	1,200.000	600.000	600.000
1050	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT \$5.00/HR	HRS	600.000	300.000	300.000
1060	SPV.0090	SPECIAL 01. CONCRETE CURB AND GUTTER, 4-INCH SLOPED 36-INCH TYPE D HES	LF	265.000	265.000	
1070	SPV.0090	SPECIAL 02. CONCRETE CURB AND GUTTER, 6-INCH SLOPED 36-INCH TYPE D HES	LF	31.000	31.000	

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REMOVING SMALL PIPE CULVERTS								REMOVING ASPHALTIC SURFACE				BASE AGGREGATE DENSE			
STATION	LOCATION	TYPE	DIAMETER	LENGTH	STAGE	203.0100 EACH	COMMENTS	LOCATION	204.0110 SY	STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON		
490+00	LT	CPRC	24"	---	3A	1	REMOVE EXISTING ENDWALL	NORTH SAFETY ISLAND	80	479+69 - 494+91	LT	215	5220		
PROJECT ID 9200-05-71 SUMMARY						1		PROJECT ID 9200-05-71 SUMMARY				215	5220		
578+95	LT	CPRC	24"	---	1A	1	REMOVE EXISTING LT ENDWALL	PROJECT ID 9200-05-71 SUMMARY				100	1105		
557+01	LT	CPRC	18"	---	2A	1	REMOVE EXISTING ENDWALL					5	325		
562+93	LT	CPRC	24"	16'	2B	1		SOUTH SAFETY ISLAND				45	720		
101+91		CPRC	18"	72'	2B	1		PROJECT ID 9200-07-71 SUMMARY				490	5950		
PROJECT ID 9200-07-71 SUMMARY						4		PROJECT TOTAL				45	720		
PROJECT TOTAL						5		233				5	30		
REMOVING CONCRETE SIDEWALK								REMOVING INLETS				PROJECT ID 9200-07-71 SUMMARY			
STATION TO STATION	LOCATION	STAGE	204.0155 SY	STATION	LOCATION	STAGE	204.0220 EACH					705	10995		
101+26 - 101+70	RT	2B	46	578+94	LT	1B	1					920	16215		
PROJECT ID 9200-07-71 SUMMARY			46	562+93	LT	2A	1	PROJECT ID 9200-07-71 SUMMARY							
PROJECT TOTAL			46	PROJECT TOTAL		2									
EARTHWORK SUMMARY										REMOVING PAVEMENT					
DIVISION	STATION TO STATION	LOCATION	205.0100 **P** EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(6) AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 208.0100 BORROW CY	STATION TO STATION	LOCATION	204.0100 SY		
	480+00 - 494+91	STH 29 MEDIAN	2490	607	1883	164	205	-1678	-1678	---	479+69 - 494+91	MEDIAN	2184		
DIVISION 1 SUBTOTAL			2490	607	1883	164	205	-1678	-1678	---	PROJECT ID 9200-05-71 SUMMARY			2184	
PROJECT ID 9200-05-71 SUMMARY			2490							---	PROJECT ID 9200-07-71 SUMMARY			3400	
	540+50 - 543+50	EB STH 29 BULB	139	---	139	445	556	417	---	417	PROJECT ID 9200-07-71 SUMMARY			3400	
	576+50 - 579+50	WB STH 29 BULB	281	---	281	1094	1367	1086	---	1086	PROJECT TOTAL			5584	
DIVISION 2 SUBTOTAL			420	---	420	1538	1923	1503	---	1503					
	541+00 - 580+00	STH 29 MEDIAN	4521	944	3577	1538	1922	-1655	-1655	---					
	101+00 - 102+85	MARLEY/MILLTOWN CONNECTION	637	---	637	114	142	-495	-495	---					
	299+79 - 301+00	TEMPORARY ROADWAY	28	---	28	392	490	462	---	462					
DIVISION 3 SUBTOTAL			5186	944	4242	2043	2554	-1688	-2150	462					
PROJECT ID 9200-07-71 SUMMARY			5606							1965					
PROJECT TOTALS			8096							1965					
(1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)															
(2) EXPANSION FACTOR = 1.25															
(3) BORROW = EXPANDED FILL - EXCAVATION COMMON															
(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR															
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. MINUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. PLUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.															
(6) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL															
PROJECT NO: 9200-05/07-71				HWY: STH 29			COUNTY: BROWN			MISCELLANEOUS QUANTITIES				SHEET	
														42	E

3

HMA PAVEMENT ITEMS																	ASPHALTIC FLUME							ASPHALTIC SHOULDER RUMBLE STRIP															
STATION TO STATION			LOCATION		460.1103 HMA PAVEMENT TYPE E-3 TON	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON	455.0105 ASPHALTIC MATERIAL PG58-28 TON	455.0605 TACK COAT GAL								STATION	LOCATION		465.0315 SY																			
479+69 - 494+91			LT		1020	---	---	56	150								485+61	LT		13																			
485+61			LT														485+61	LT		13																			
PROJECT ID 9200-05-71 SUMMARY										1020	0	0	56	150								PROJECT ID 9200-05-71 SUMMARY										26							
540+96 - 547+66			LT		430	---	---	24	62								541+10	LT		13																			
541+12 - 542+18			LT		---	27	---	---	---								557+04 - 557+25	LT		48																			
541+31 - 543+56			RT (BULB)		280	---	---	15	40								557+05	LT		8																			
552+30 - 572+62			LT		1135	---	---	62	158								557+05	LT		8																			
572+62 - 579+32			LT		430	---	---	24	62								560+16	LT		8																			
576+74 - 578+99			LT (BULB)		280	---	---	15	42								560+16	LT		8																			
578+12 - 579+18			LT		---	28	---	---	---								579+18	LT		13																			
101+23 - 102+65			CTH VV		400	---	---	22	35								102+39	RT		13																			
299+79 - 301+00			TEMP CONNECTION		---	---	275	---	24								102+46	LT		13																			
PROJECT ID 9200-07-71 SUMMARY										2955	55	275	162	423								PROJECT ID 9200-07-71 SUMMARY										132							
PROJECT TOTALS										3975	55	275	218	573								PROJECT TOTAL										158							
DRAINAGE ITEMS																																							
																	522.0112	522.0118	522.0124	522.0312	522.0318	520.0118	521.1518	522.1012	522.1018														
																	CULVERT PIPE REINFORCED CONCRETE				CULVERT PIPE		APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS		APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE		650.4000 CONSTRUCTION STAKING												
																	CLASS III		CLASS IV		CLASS III																		
STRUCTURE NUMBER	STATION	OFFSET	2x3-FT EACH	GRATE EACH	3-FT DIAMETER EACH	5-FT DIAMETER EACH	INLET TYPE HM-S EACH	COVERS TYPE MS EACH	COVERS TYPE J EACH	FLOWLINE ELEV	BOX ELEV	DEPTH	INVERT ELEV	DISCHARGE FROM	ELEV	TO	12-INCH LF	18-INCH LF	24-INCH LF	12-INCH LF	18-INCH LF	18-INCH LF	SLOPE %	18-INCH EACH	12-INCH EACH	18-INCH EACH	STORM SEWER EACH												
101	485+71.8	12.6' LT	1	---	---	---	1	---	---	765.10	764.27	2.50	761.77	101	761.69	DTICH	---	---	---	---	42	---	0.2	---	---	1	2												
102	485+71.7	5.5' LT	1	---	---	---	1	---	---	765.25	764.42	2.50	761.92	102	761.77	101	---	8	---	---	---	---	1.9	---	---	---	1												
103	487+90.2	36' LT	1	---	---	---	1	---	---	765.70	764.87	2.00	762.87	103	762.80	104	---	---	---	46	---	0.2	---	---	---	1													
104	488+36.1	42.2 LT	1	---	---	---	1	---	---	765.63	764.80	2.00	762.80	104	762.75	DTICH	64	---	---	---	---	---	0.1	---	1	---	2												
SUBTOTALS			4	0	0	0	4	0	0								64	8	0	46	42	0		0	1	1	6												
PROJECT ID 9200-05-71 SUMMARY			4	0	0	0	4	0	0								64	8	10	46	42	0		0	1	1	6												
105	556+50	35.7' LT	---	---	---	---	---	---	---	---	---	---	757.33	DITCH	756.42	105	---	---	---	---	---	50	1.8	1	---	---	1												
106	557+00	38.6' LT	---	1	---	---	---	2	---	758.92	758.92	2.50	756.42	105	756.38	EX. PIPE	---	12	---	---	---	---	0.3	---	---	1													
107	559+13.2	33' LT	1	---	---	---	1	---	---	759.80	758.97	2.50	756.47	106	756.33	107	---	54	---	---	---	---	0.3	---	---	1													
108	559+66.4	44' LT	1	---	---	---	1	---	---	759.66	758.83	2.50	756.33	107	756.12	108	---	---	---	---	30	---	0.7	---	---	1													
109	559+87.4	22.5' LT	---	---	1	---	---	---	1	761.95	761.12	5.00	756.12	108	754.92	109	---	304	---	---	---	---	0.4	---	---	1													
110	562+93	22.2' LT	---	1	---	---	---	2	---	757.59	757.59	2.67	754.92	106	754.92	EX. PIPE	---	---	14	---	---	---	---	---	---	1													
	576+50	36.2' LT	---	---	---	---	---	---	---	---	---	---	754.00	DITCH	751.06	109	---	---	---	---	---	244	1.2	1	---	---	1												
	578+95	31.8' LT	---	---	---	1	---	---	1	756.50	756.50	5.44	751.06	107	751.06	EX. PIPE	---	---	16	---	---	---	---	---	---	1													
	579+50	32.6' LT	---	---	---	---	---	---	---	---	---	---	753.51	DITCH	753.00	109	---	---	---	---	---	46	1.1	1	---	---	1												
SUBTOTALS			2	2	1	1	2	4	2								0	370	30	0	30	340		3	0	0	9												
PROJECT ID 9200-07-71 SUMMARY			2	2	1	1	2	4	2								0	566	54	0	116	340		3	0	4	9												
PROJECT TOTALS			6	2	1	1	6	4	2								64	574	64	46	158	340		3	1	5	15												
1.) ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES. 2.) CALCULATED DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION. 3.) PIPE LENGTHS MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE. 4.) ALL STRUCTURES HAVE THE STATUS "NEW". 5.) CULVERT PIPE CLASS III MINIMUM THICKNESS FOR CORRUGATED STEEL = 0.064 INCHES. 6.) CULVERT PIPE CLASS III MINIMUM THICKNESS FOR ALUMINUM = 0.060 INCHES. * ADDITIONAL QUANTITIES FOUND ELSEWHERE IN PLAN																																							
PROJECT NO: 9200-05/07-71							HWY: STH 29					COUNTY: BROWN					MISCELLANEOUS QUANTITIES							SHEET			43	E											

3

3

CULVERT PIPE TEMPORARY 18-INCH

STATION	LOCATION	520.4018 LF
300+06	TEMP CONNECTION	100
PROJECT ID 9200-07-71 SUMMARY		100
PROJECT TOTAL		100

CONCRETE COLLARS FOR PIPE

STATION	LOCATION	520.8000 EACH
UNDISTRIBUTED	PROJECT LIMITS	2
PROJECT ID 9200-07-71 SUMMARY		2
PROJECT TOTAL		2

CONCRETE CURB AND GUTTER

STATION TO STATION	LOCATION	601.0553 4-INCH SLOPED 36-INCH	601.0557 6-INCH TYPE D
		LF	LF
485+64 - 486+48	NW ISLAND	95	84
485+67 - 488+89	MEDIAN ISLAND	484	219
488+05 - 488+86	SE ISLAND	182	---
PROJECT ID 9200-05-51 SUMMARY		761	303
101+29 - 102+19	LT	184	28
101+30 - 102+59	LT	203	---
101+46 - 102+52	RT	168	---
541+12 - 542+18	LT	120	109
557+08 - 558+91	LT	187	188
558+28 - 560+14	LT	313	94
559+25 - 559+40	RT	74	---
559+52 - 560+16	LT	130	---
578+12 - 579+18	LT	206	23
PROJECT ID 9200-07-71 SUMMARY		1585	442
PROJECT TOTALS		2346	745

NOTE: CONCRETE CURB AND GUTTER ADJACENT TO STH 29 WB LANES IS 6-INCH SLOPED 36-INCH TO ALLOW FOR FUTURE OVERLAY PROJECT (CONSTRUCTED BY OTHERS)

CULVERT PIPE REINFORCED CONCRETE

STATION TO STATION	LOCATION	522.0118 CLASS III 18-INCH LF	522.0124 24-INCH LF	522.0318 CLASS IV 18-INCH LF
		LF	LF	LF
490+00	LT	---	10	---
SUBTOTALS		0	10	0
PROJECT ID 9200-05-71 SUMMARY		8	10	42
102+00	CTH VV	---	---	86
541+15 - 543+11	RT	196	---	---
578+94	LT	---	24	---
SUBTOTALS		196	24	86
PROJECT ID 9200-07-71 SUMMARY		566	54	116
PROJECT TOTALS		574	64	158

* ADDITIONAL QUANTITIES FOUND ELSEWHERE IN PLAN

APRON ENDWALLS FOR
CULVERT PIPE REINFORCED CONCRETE

STATION	LOCATION	522.1018 18-INCH EACH	522.1024 24-INCH EACH
490+00	LT	---	1
SUBTOTALS		0	1
PROJECT ID 9200-05-71 SUMMARY		1	1
102+00	CTH VV	2	---
541+15	RT	1	---
543+11	RT	1	---
578+94	LT	---	1
SUBTOTALS		4	1
PROJECT ID 9200-07-71 SUMMARY		4	1
PROJECT TOTALS		5	2

* ADDITIONAL QUANTITIES FOUND ELSEWHERE IN PLAN

CURB RAMP DETECTABLE
WARNING FIELD YELLOW

STATION	LOCATION	602.0505 SF
486+29	LT	10
486+41	LT	10
486+62	LT	10
487+18	LT	10
487+46	LT	10
487+97	LT	10
488+17	LT	10
488+34	LT	10
PROJECT ID 9200-05-71 SUMMARY		80
558+78	LT	10
558+78	LT	10
558+78	LT	10
558+78	LT	10
559+60	LT	10
559+60	LT	10
559+60	LT	10
559+60	LT	10
PROJECT ID 9200-07-71 SUMMARY		80
PROJECT TOTAL		160

3

PIPE UNDERDRAIN UNPERFORATED 6-INCH

STATION	LOCATION	612.0206 LF
481+40	LT	10
485+30	LT	13
PROJECT ID 9200-05-71 SUMMARY		23
541+10	LT/RT	10
555+80	LT	10
576+00	LT	13
PROJECT ID 9200-07-71 SUMMARY		33
PROJECT TOTAL		56

MOBILIZATION

PROJECT	619.1000 EACH
9200-05-71	0.5
PROJECT ID 9200-05-71 SUMMARY	
9200-07-71	0.5
PROJECT ID 9200-07-71 SUMMARY	
PROJECT TOTAL	1

WATER

	624.0100
LOCATION	MGAL
BASE COMPACTION	80
DUST CONTROL	6
PROJECT ID 9200-05-71 SUMMARY	86
BASE COMPACTION	160
DUST CONTROL	19
PROJECT ID 9200-07-71 SUMMARY	179
PROJECT TOTAL	265

APRON ENDWALLS FOR UNDERDRAIN
REINFORCED CONCRETE 6-INCH

STATION	LOCATION	612.0806 EACH
481+40	LT	1
485+30	LT	1
PROJECT ID 9200-05-71 SUMMARY		2
541+10	LT/RT	2
555+80	LT	1
560+95	LT	1
562+80	LT	1
566+00	LT	1
576+00	LT	1
PROJECT ID 9200-07-71 SUMMARY		7
PROJECT TOTAL		9

CONCRETE MEDIAN SLOPED NOSE

STATION	LOCATION	TYPE	620.0300 SF
485+67	LT	1	60
486+33	LT, NORTH ISLAND	1	60
486+40	LT, NORTH ISLAND	2	20
486+48	LT	1	60
486+66	LT, NORTH ISLAND	2	20
487+91	RT, SOUTH ISLAND	2	20
488+05	LT	1	60
488+11	RT, SOUTH ISLAND	1	60
488+17	RT, SOUTH ISLAND	2	20
488+89	LT	1	60
PROJECT ID 9200-05-71 SUMMARY			440
101+29	LT, NORTH ISLAND	2	20
101+30	LT, NORTH ISLAND	2	20
102+19	LT, NORTH ISLAND	1	60
542+18	LT	1	60
558+28	LT	1	60
558+91	LT	1	60
559+25	RT, SOUTH ISLAND	2	20
559+26	RT, SOUTH ISLAND	1	60
559+40	RT, SOUTH ISLAND	2	20
559+52	LT	1	60
560+14	LT	1	60
578+12	LT	1	60
PROJECT ID 9200-07-71 SUMMARY			560
PROJECT TOTAL			1000

MAINTENANCE AND REPAIR OF HAUL ROADS

PROJECT	618.0100.01 EACH
9200-05-71	1
PROJECT ID 9200-05-71 SUMMARY	
	1
PROJECT	618.0100.02 EACH
9200-07-71	1
PROJECT ID 9200-07-71 SUMMARY	
	1
PROJECT TOTAL	2

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEEDING MIXTURE NO. 30 LB	630.0200 SEEDING TEMPORARY LB
479+69 - 485+64	LT	1155	0.7	21	16
488+86 - 494+91	LT	1705	1.1	31	23
UNDISTRIBUTED		---	1.2	13	11
PROJECT ID 9200-05-71 SUMMARY		2860	3	65	50
101+23 - 102+65	CTH VV	925	0.2	17	25
101+43 - 102+65	TEMP CONNECTION	275	---	---	7
540+95 - 548+11	LT	960	0.6	17	26
541+17 - 543+56	RT	465	0.3	8	13
552+30 - 558+33	LT	1510	1.0	27	41
560+14 - 578+54	LT	5245	3.3	94	142
576+74 - 579+25	LT	565	0.4	10	15
UNDISTRIBUTED		---	1.2	47	71
PROJECT ID 9200-07-71 SUMMARY		9945	7	220	340
PROJECT TOTAL		12805	10	285	390

SILT FENCE

STATION TO STATION	LOCATION	STAGE	628.1504 LF	628.1520 MAINTENANCE LF
576+97 - 579+38	LT	1A	256	512
UNDISTRIBUTED			64	128
PROJECT ID 9200-07-71 SUMMARY			320	640
PROJECT TOTALS			320	640

3

MOBILIZATIONS EROSION CONTROL
AND EMERGENCY EROSION CONTROL

PROJECT	628.1905 EACH	628.1910 EMERGENCY EACH
9200-07-71	2	2
PROJECT ID 9200-05-71 SUMMARY	2	2
9200-07-71	5	5
PROJECT ID 9200-07-71 SUMMARY	5	5
PROJECT TOTALS	7	7

TEMPORARY DITCH CHECKS

STATION	628.7504 LF
UNDISTRIBUTED	20
PROJECT ID 9200-07-71 SUMMARY	20
PROJECT TOTAL	20

CULVERT PIPE CHECKS

STATION	LOCATION	STAGE	628.7555 EACH
490+00	LT	3A	3
UNDISTRIBUTED			2
PROJECT ID 9200-05-71 SUMMARY			5
541+15	RT	1A	2
578+95	LT	1A	3
579+41	LT	1A	2
576+50	LT	1B	2
556+50	LT	2A	2
565+98	LT	2A	2
569+01	LT	2A	2
102+00	LT	2B	2
UNDISTRIBUTED			4
PROJECT ID 9200-07-71 SUMMARY			21
PROJECT TOTAL			26

EROSION MAT

STATION TO STATION	LOCATION	STAGE	628.2004 CLASS I TYPE B SY
479+69 - 485+64	LT	3A	673
488+86 - 494+91	LT	3A	1114
UNDISTRIBUTED			413
PROJECT ID 9200-05-71 SUMMARY			2200
541+17 - 543+53	RT	1A	250
541+75 - 547+66	LT	1B	337
552+30 - 557+00	LT	2B	628
560+14 - 578+54	LT	2B	3046
576+74 - 579+25	LT	1A	330
101+30 - 102+59	LT	2B	299
101+46 - 102+52	RT	2B	628
UNDISTRIBUTED			1382
PROJECT ID 9200-07-71 SUMMARY			6900
PROJECT TOTALS			9100

ROCK BAGS

STATION	LOCATION	STAGE	628.7570 EACH
543+50	RT	1A	12
540+60	LT	1B	12
548+20	LT	1B	16
102+00	RT	2B	12
UNDISTRIBUTED			12
PROJECT ID 9200-07-71 SUMMARY			64
PROJECT TOTAL			64

INLET PROTECTION

STATION	LOCATION	STAGE	628.7005 TYPE A EACH	628.7015 TYPE C EACH
485+72	LT	3A	---	1
485+72	LT	3A	---	1
487+90	LT	3A	---	1
488+36	LT	3A	---	1
PROJECT ID 9200-05-71 SUMMARY			0	4
557+02	LT	2A	1	---
559+13	LT	2A	---	1
559+66	LT	2A	---	1
562+93	LT	2A	1	---
PROJECT ID 9200-07-71 SUMMARY			2	2
PROJECT TOTALS			2	6

MARKERS CULVERT END

STATION	LOCATION	633.5200 EACH
485+72	LT	1
488+36	LT	1
490+00	LT	1
PROJECT ID 9200-05-71 SUMMARY		3
102+00	CTH VV	2
541+15	RT	1
543+11	RT	1
556+50	LT	1
576+50	LT	1
578+94	LT	1
579+50	LT	1
PROJECT ID 9200-07-71 SUMMARY		8
PROJECT TOTAL		11

3

ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.0202 SIGNS REFLECTIVE TYPE II S.F.	634.0614 POSTS WOOD 4X6X14 EACH	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	REMARKS
1	STH 29 / 32, W. OF CTH U	D10-3	12" X 48"	4.00	1			MILE 251
1A	"	D10-3	12" X 48"	4.00	1			MILE 251
1B	STH 29 / 32, E. OF STH 32 ON-RAMP	I2-2R	78" X 24"	13.00		2		SEE SIGN DETAIL SHEET
2	"	R2-1	48" X 60"	20.00		1	1	65 MPH
3	"	D1-1	78" X 21"	11.38	1	1		SEE SIGN DETAIL SHEET
4	"	J1-1	36" X 57"	14.25		1		JCT CTH U, SEE PLAN SHEET
5	"	J1-1	36" X 57"	14.25		1		JCT CTH U, SEE PLAN SHEET
6	"	J4-2	72" X 54"	27.00		1	1	WEST STH 29, NORTH STH 32, SEE PLAN SHEET
7	"	D1-3	138" X 48"	46.00	1	2		SEE SIGN DETAIL SHEET
8	"	J3-1	36" X 84"	21.00			1	NORTH CTH U, SEE PLAN SHEET
9	N. CTH U	D1-1	66" X 15"	6.88	1			SHAWANO, SEE SIGN DETAIL SHEET
10	STH 29 / 32, E. OF STH 32 ON-RAMP	R5-1A	42" X 30"	8.75		1		
11	N. CTH U	J13-2	72" X 66"	33.00		2		STH 29, STH 32, SEE PLAN SHEET
12	"	R1-1	36" X 36"	7.46		1		
13	"	R6-1R	54" X 18"	6.75				MOUNT ABOVE SIGN #12
14	CTH U SPLITTER ISLAND	R1-1	36" X 36"	7.46		1		
15	"	R6-1R	54" X 18"	6.75				MOUNT ABOVE SIGN #14
16	"	R4-7	24" X 30"	5.00	1			
17	N. CTH U	J4-1	24" X 36"	6.00	1			NORTH CTH U, SEE PLAN SHEET
18	CTH U SPLITTER ISLAND	R4-7	36" X 48"	12.00	1			
18A	"	R3-2	36" X 36"	9.00				MOUNT ON BACKSIDE OF SIGN #18
19	STH 29 / 32, MEDIAN AT CTH U	R6-1R	36" X 12"	3.00		1		
20	"	R6-1L	36" X 12"	3.00				MOUNT ON BACKSIDE OF SIGN #19
21	"	R1-2	48" X 42"	7.00				MOUNT BELOW SIGN #20
22	"	R6-1L	36" X 12"	3.00		1		
23	"	R1-2	48" X 42"	7.00				MOUNT BELOW SIGN #22
24	"	R5-1A	36" X 36"	9.00	1			
25	STH 29 / 32, W. OF CTH U	J3-1	36" X 84"	21.00		1		
26	"	R5-1	36" X 36"	9.00				MOUNT ON BACKSIDE OF SIGN #25
27	STH 29 / 32, MEDIAN AT CTH U	R6-1L	36" X 12"	3.00		1		
28	"	R1-2	48" X 42"	7.00				MOUNT BELOW SIGN #27
29	"	R5-1	36" X 36"	9.00	1			
30	CTH U SPLITTER ISLAND	R4-7	36" X 48"	12.00	1			
31	"	R3-2	36" X 36"	9.00				MOUNT ON BACKSIDE OF SIGN #30
31A	S. CTH U	D1-1	72" X 15"	7.50	1			GREEN BAY, SEE SIGN DETAIL SHEET
32	STH 29 / 32, E. OF CTH U	R5-1	36" X 36"	9.00		1		
33	"	J3-1	36" X 84"	21.00				MOUNT ON BACKSIDE OF SIGN #32, NORTH CTH U, SEE PLAN SHEET
34	CTH U SPLITTER ISLAND	R4-7	24" X 30"	5.00	1			
PROJECT SUBTOTALS				428.42	13	19	3	

ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.0202 SIGNS REFLECTIVE TYPE II S.F.	634.0614 POSTS WOOD 4X6X14 EACH	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	REMARKS
35	CTH U SPLITTER ISLAND	R6-1R	54" X 18"	6.75		1		
36	"	R1-1	36" X 36"	7.46				MOUNT BELOW SIGN #35
37	STH 29 / 32, MEDIAN AT CTH U	R1-2	48" X 42"	14.00		1		
38	"	R6-1L	36" X 12"	3.00				MOUNT ABOVE SIGN #37
39	S. CTH U	R6-1R	54" X 18"	6.75		1		
40	"	R1-1	36" X 36"	7.46				MOUNT BELOW SIGN #39
41	"	J13-2	72" X 66"	33.00		2		STH 29, STH 32, SEE PLAN SHEET
42	"	R6-1R	36" X 12"	3.00				MOUNT ON BACKSIDE OF SIGN #37
43	STH 29 / 32, E. OF CTH U	R5-1A	42" X 30"	8.75	1			
44	"	J3-1	36" X 84"	21.00		1		SOUTH CTH U, SEE PLAN SHEET
45	VACANT							
46	"	D1-1	78" X 21"	11.38		1	1	SEE SIGN DETAIL SHEET
47	"	J1-1	36" X 57"	14.25		1		JCT CTH U
48	"	J1-1	36" X 57"	14.25		1		JCT CTH U
49	"	J4-2	72" X 54"	27.00		1	1	EAST STH 29, SOUTH STH 32, SEE PLAN SHEET
50	"	I2-3A	84" X 30"	17.50		1	1	SEE PLAN SHEET
51	"	D1-3	138" X 48"	46.00	1	2		SEE SIGN DETAIL SHEET
52	"	R2-1	48" X 60"	20.00		1	1	65 MPH
PROJECT SUBTOTALS				261.55	2	14	4	
PROJECT ID 9200-05-71 SUMMARY				689.97	15	33	7	

ERECTION OF PERMANENT SIGNING, TYPE II

53	STH 29 / 32, W. OF CTH VV	R2-1	48" X 60"	20.00		1	1	65 MPH
54	"	R5-1A	42" X 30"	8.75		1		PLACE PRIOR TO STAGE 1C
55	"	J4-2	72" X 54"	27.00		1	1	W STH 29, N STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
56	"	R5-1	36" X 36"	9.00		1		PLACE PRIOR TO STAGE 1C
57	"	R3-18	36" X 36"	9.00		1		PLACE PRIOR TO STAGE 1C
58	"	R5-1	36" X 36"	9.00		1		PLACE PRIOR TO STAGE 1C
59	"	R1-2	48" X 42"	7.00		1		PLACE PRIOR TO STAGE 1C
60	"	R6-1L	54" X 18"	6.75				MOUNT ABOVE SIGN #59, PLACE PRIOR TO STAGE 1C
61	"	R6-2L	36" X 48"	12.00		1		PLACE PRIOR TO STAGE 1C
62	"	J2-3	108" X 84"	63.00		1		E STH 29, S STH 32, CTH VV, PLACE PRIOR TO STAGE 1C
63	"	J4-2	72" X 54"	27.00		1	1	EAST STH 29, SOUTH STH 32, SEE PLAN SHEET
64	"	J2-2	72" X 84"	42.00		1	1	W STH 29, N STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
65	"	J2-3	108" X 84"	63.00		2	1	E STH 29, S STH 32, CTH VV, PLACE PRIOR TO STAGE 1C
66	"	R2-1	48" X 60"	20.00		1	1	65 MPH
66A	"	J1-1	36" X 57"	14.25		1		JCT CTH VV
67	"	R5-1A	42" X 30"	8.75		1		
68	"	J2-2	72" X 84"	42.00		1	1	W STH 29, N STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
PROJECT SUBTOTALS				388.50	0	17	7	

ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.0202 SIGNS REFLECTIVE TYPE II S.F.	634.0614 POSTS WOOD 4X6X14 EACH	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	REMARKS
69	STH 29 / 32, W. OF CTH VV	J2-3	108" X 84"	63.00		2	1	E STH 29, S STH 32, CTH VV, PLACE PRIOR TO STAGE 1C
70	"	R5-1	36" X 36"	9.00		1		
71	MARLEY ST / MILLTOWN RD	J13-3	108" X 66"	49.50	2	1		STH 29, STH 32, CTH VV, SEE PLAN SHEET
72	"	R1-1	36" X 36"	7.46		1		
73	"	R6-1R	54" X 18"	6.75				MOUNT ABOVE SIGN #72
74	MARLEY ST / MILLTOWN RD SPLITTER ISLAND	R4-7	24" X 30"	5.00	1			
75	"	R1-1	36" X 36"	7.46		1		
76	"	R6-1R	54" X 18"	6.75				MOUNT ABOVE SIGN #75
76A	MARLEY ST / MILLTOWN RD	R1-1	30" X 30"	5.18	1			
76B	"	D1-1	78" X 21"	11.38		2		SEE SIGN DETAIL SHEET
77	MARLEY ST / MILLTOWN RD SPLITTER ISLAND	R4-7	36" X 48"	12.00	1			
77A	"	R3-2	36" X 36"	9.00				MOUNT ON BACKSIDE OF SIGN #77
78	"	R5-1	36" X 36"	9.00	1			
78A	STH 29 / 32, MEDIAN AT CTH VV	R1-2	48" X 42"	7.00		1		
78B	"	R6-1L	36" X 12"	3.00				MOUNT ABOVE SIGN #78A
79	"	R6-1L	54" X 18"	6.75				MOUNT ON BACKSIDE OF SIGN #75
79A	"	R6-1R	36" X 12"	3.00				MOUNT ON BACKSIDE OF SIGN #80B
80	STH 29 / 32, W. OF CTH VV	J13-1	36" X 66"	16.50		1		CTH VV, SEE PLAN SHEET
80A	STH 29 / 32, MEDIAN AT CTH VV	R1-2	48" X 42"	7.00		1		
80B	"	R6-1L	54" X 18"	6.75				MOUNT ABOVE SIGN #80A
81	STH 29 / 32, MEDIAN AT CTH VV	R6-1L	36" X 12"	3.00		1		
82	"	R1-2	48" X 42"	7.00				MOUNT BELOW SIGN #81
83	"	R6-1R	36" X 12"	3.00				MOUNT ON BACKSIDE OF SIGN #92
84	CTH VV SPLITTER ISLAND	R4-7	36" X 48"	12.00	1			
84A	"	R3-2	36" X 36"	9.00				MOUNT ON BACKSIDE OF SIGN #84
85	"	R4-7	24" X 30"	5.00	1			
86	"	R6-1R	54" X 18"	6.75		1		
87	"	R1-1	36" X 36"	7.46				MOUNT BELOW SIGN #86
88	CTH VV	R6-1R	54" X 18"	6.75		1		
89	"	R1-1	36" X 36"	7.46				MOUNT BELOW SIGN #88
90	"	J13-2	72" X 66"	33.00		1	1	STH 29, STH 32, SEE PLAN SHEET
91	STH 29 / 32, MEDIAN AT CTH VV	R5-1	36" X 36"	9.00	1			
92	"	R1-2	48" X 42"	7.00		1		
93	"	R6-1L	54" X 18"	6.75				MOUNT ABOVE SIGN #92
94	CTH VV SPLITTER ISLAND	R6-1L	54" X 18"	6.75				MOUNT ON BACKSIDE OF SIGN #86
95	STH 29 / 32, E. OF CTH VV	R5-1	36" X 36"	9.00		1		
96	"	J2-2	72" X 84"	42.00		1	1	W STH 29, N STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
97	"	J2-2	72" X 84"	42.00		1	1	E STH 29, S STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
98	"	J13-1	36" X 66"	16.50		1		CTH VV, SEE PLAN SHEET
99	"	R5-1A	42" X 30"	8.75		1		
PROJECT SUBTOTALS				499.65	9	21	4	

ERECTION OF PERMANENT SIGNING, TYPE II

SIGN NO.	LOCATION	SIGN CODE	W X H	637.0202 SIGNS REFLECTIVE TYPE II S.F.	634.0614 POSTS WOOD 4X6X14 EACH	634.0616 POSTS WOOD 4X6X16 EACH	634.0618 POSTS WOOD 4X6X18 EACH	REMARKS
99A	STH 29 / 32, E. OF CTH VV	D1-1	78" X 21"	11.38		1	1	SEE SIGN DETAIL SHEET
100	"	R2-1	48" X 60"	20.00		1	1	65 MPH
101	"	J3-2	72" X 84"	42.00		1	1	W STH 29, N STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
102	"	J3-2	72" X 84"	42.00		1	1	E STH 29, S STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
103	"	J4-2	72" X 54"	27.00		2		WEST STH 29, NORTH STH 32, SEE PLAN SHEET
104	"	J3-2	72" X 84"	42.00		2		W STH 29, N STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
105	"	R6-2L	36" X 48"	12.00		1		PLACE PRIOR TO STAGE 1C
106	"	R6-1L	36" X 12"	3.00		1		PLACE PRIOR TO STAGE 1C
107	"	R1-2	48" X 42"	7.00				MOUNT BELOW SIGN #106, PLACE PRIOR TO STAGE 1C
108	"	R5-1	36" X 36"	9.00		1		PLACE PRIOR TO STAGE 1C
109	"	R3-18	36" X 36"	9.00		1		PLACE PRIOR TO STAGE 1C
110	"	R5-1	36" X 36"	9.00		1		PLACE PRIOR TO STAGE 1C
111	"	J4-2	72" X 54"	27.00		1	1	E STH 29, S STH 32, SEE PLAN SHEET, PLACE PRIOR TO STAGE 1C
112	"	R5-1A	42" X 30"	8.75		1		PLACE PRIOR TO STAGE 1C
PROJECT SUBTOTALS				269.13	0	15	5	
PROJECT ID 9200-07-71 SUMMARY				1585.69	22	72	19	
PROJECT TOTALS				2275.66	37	105	26	

REMOVING, TYPE II SIGNS AND
REMOVING SMALL SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
400	STH 29 / 32, E. OF STH 32 ON-RAMP	I2-2R	1	2	ONEIDA NATION RESERVATION
400A	STH 29 / 32, W. OF CTH U	D10-3	1	1	MILE 251
401	"	I55-56	1	1	
402	"	D10-3	1	1	MILE 251
403	"	J1-1	2	1	
404	"	D1-1	1	2	KUNESH
405	"	M1-6	2	2	REMOVE M1-6 ALSO
406	"	D1-3	1	2	SANGER B POWERS CORRECTIONAL CENTER
407	"	R5-1A	1	1	
408	"	I2-2	1	2	OUTAGAMIE CO
409	"	R5-1	1	1	
410	"	R1-1	1	1	
411	N. CTH U	W12-1D	1	1	
412	"	R2-1	1	1	
412A	"	J3-3	9	2	
413	"	R1-1	2	1	REMOVE R6-3 ALSO
414	"	R1-1	1	1	
415	"	R3-1	1	1	
416	STH 29 / 32, E. OF CTH U	R5-1	1	1	
417	"	J13-1	2		ATTACHED ON BACK OF #416
418	"	R4-7	1	1	
419	"	R5-1	1	1	
420	STH 29 / 32, W. OF CTH U	R4-7	1	1	
421	"	J13-1	2	1	
422	"	R5-1	1		ATTACHED ON BACK OF #421
423	"	R3-1	1	1	
424	S. CTH U	R1-1	2	1	REMOVE R6-3 ALSO
425	N. CTH U	D1-3	1	1	
426	S. CTH U	J3-3	9	2	
426A	"	D1-3	1	1	
427	"	R1-1	1	1	
428	STH 29 / 32, E. OF CTH U	R5-1A	1	1	
429	"	I2-2	1	1	BROWN CO
430	"	D1-1	1	2	KUNESH
431	"	D1-3	1	2	SANGER B POWERS CORRECTIONAL CENTER
432	"	I55-56	1	1	
433	"	J1-1	2	1	
434	"	I2-3	1	1	HOBART

PROJECT ID 9200-05-71 SUMMARY

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REMOVING, TYPE II SIGNS AND
REMOVING SMALL SIGN SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
435	STH 29 / 32, W. OF CTH VV	J1-1	2	1	
436	"	D1-3	1	2	
437	"	R2-1	1	1	
438	"	R5-1A	1	1	
439	STH 29 / 32, AT MARLEY - MILLTOWN	J2-2	6	1	
440	"	R1-1	2	1	REMOVE R6-3 ALSO
441	STH 29 / 32, W. OF CTH VV	I55-56	1	1	
442	"	R5-1	1	1	
443	"	J13-1	2	1	
444	"	R3-1	1	1	
445	"	R4-7	1	1	
446	CTH VV	R1-1	2	1	REMOVE R6-3 ALSO
447	"	J2-2	1	1	
448	"	R6-2L	1		ATTACHED ON BACK OF #447
449	STH 29 / 32, AT MARLEY - MILLTOWN	R1-1	1	1	
450	"	W12-1D	1	1	
451	"	R4-7	1		ATTACHED ON BACK OF #449
452	MARLEY ST / MILLTOWN RD INTERSECTION	R1-1	1	1	
453	"	D1-2	1	2	
454	STH 29 / 32, AT MARLEY - MILLTOWN	R3-1	1	1	
455	STH 29 / 32, E. OF CTH VV	R4-7	1	1	
456	"	R5-1	1	1	
457	"	J13-1	2		ATTACHED ON BACK OF #456
458	"	R5-1A	1	1	
459	"	J13-1	2		ATTACHED ON BACK OF #458
460	"	R2-1	1	1	
461	"	R3-56L	1	1	
462	"	I55-56	1	1	
463	"	D1-3	1	2	
464	"	D10-3	1	1	MILE 253
465	"	D10-3	1	1	MILE 253

PROJECT ID 9200-07-71 SUMMARY	42	30
PROJECT TOTALS	103	75

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MOVING SIGNS AND SMALL SIGN SUPPORTS

SIGN NO.	LOCATION	STAGE	638.2102 TYPE II EACH	638.4000 SMALL SIGN SUPPORTS EACH
439	STH 29/32, AT MARLEY-MILLTOWN	2B	2	1
PROJECT ID 9200-07-71 SUMMARY			2	1
PROJECT TOTALS			2	1

TRAFFIC CONTOL SIGNS, LIGHTS, AND BARRICADES

LOCATION	643.0300 DRUMS		643.0420 BARRICADES TYPE III		643.0705 WARNING LIGHTS TYPE A		643.0715 LIGHTS TYPE C		643.0800 ARROW BOARDS		642.0900 SIGNS		643.1050 SIGNS PCMS	
	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS	EACH	DAYS
STAGE 3A	91	1911	12	252	16	336	30	630	2	42	16	336	---	---
STAGE 3B	133	931	30	210	44	308	30	210	2	14	16	112	---	---
UNDISTRIBUTED		308		48		66		80		9		52		---
PROJECT ID 9200-05-71 SUMMARY		3150		510		710		920		65		500		0
STAGE 1A	28	196	---	---	---	---	---	---	2	14	12	84	2	14
STAGE 1B	73	511	---	---	---	---	---	---	4	28	12	84	---	---
STAGE 1C	97	679	13	91	18	126	---	---	1	7	11	77	---	---
STAGE 2A	176	3696	23	483	30	630	29	609	4	84	19	399	---	---
STAGE 2B	142	1420	13	130	20	200	14	140	2	20	17	170	---	---
UNDISTRIBUTED		648		76		64		81		17		86		6
PROJECT ID 9200-07-71 SUMMARY		7150		780		1020		830		170		900		20
PROJECT TOTALS		10300		1290		1730		1750		235		1400		20

FIELD OFFICE TYPE B

PROJECT	642.5001 EACH
9200-07-71	1
PROJECT ID 9200-07-71 SUMMARY	1
PROJECT TOTAL	1

TRAFFIC CONTROL COVERING SIGNS

SIGN NO.	LOCATION	STAGE	CYCLES	643.0920 TYPE II EACH
439	STH 29/32, AT MARLEY-MILLTOWN	1C	1	4
PROJECT ID 9200-07-71 SUMMARY				4
PROJECT TOTAL				4

PAVEMENT MARKING EPOXY 4-INCH

STATION TO STATION	DESCRIPTION	646.0106 4-INCH		646.0126 8-INCH
		WHITE LF	YELLOW LF	WHITE LF
479+75 - 485+74	EDGE LINE	---	599	---
479+95 - 481+18	LANE LINE SKIPS	---	---	33
481+21 - 485+69	CHANNELIZING	---	---	898
485+18 - 486+46	EDGE LINE	---	127	---
485+69 - 486+82	EDGE LINE	136	---	---
485+69 - 487+59	EDGE LINE	---	190	---
486+06 - 486+70	CENTERLINE	---	229	---
486+97 - 488+76	EDGE LINE	---	197	---
487+73 - 488+87	EDGE LINE	137	---	---
487+87 - 488+21	CENTERLINE	---	195	---
488+76 - 494+78	EDGE LINE	---	595	---
488+07 - 489+36	EDGE LINE	---	129	---
488+87 - 493+11	CHANNELIZING	---	---	842
493+11 - 494+78	LANE LINE SKIPS	---	---	33

SUBTOTALS 273 2261 1806

PROJECT ID 9200-05-71 SUMMARY 2534 1806

101+31 - 102+65	CENTERLINE	---	270	---
540+92 - 541+31	EDGE LINE	---	39	---
540+96 - 542+11	EDGE LINE	---	116	---
541+33 - 543+50	EDGE LINE	398	---	---
541+67 - 547+59	EDGE LINE	---	605	---
542+11 - 546+44	CHANNELIZING	---	---	867
546+44 - 547+59	LANE LINE SKIPS	---	---	27
552+37 - 553+65	LANE LINE SKIPS	---	---	30
552+37 - 557+13	EDGE LINE	---	478	---
553+65 - 558+35	CHANNELIZING	---	---	942
556+60 - 558+89	EDGE LINE	---	288	---
558+35 - 559+30	EDGE LINE	106	---	---
558+35 - 559+00	EDGE LINE	---	65	---
559+05 - 559+43	CENTERLINE	---	140	---
559+14 - 560+12	EDGE LINE	110	---	---
559+43 - 560+12	EDGE LINE	---	69	---
560+07 - 566+06	EDGE LINE	---	599	---
559+54 - 572+14	EDGE LINE	---	1260	---
560+12 - 564+78	CHANNELIZING	---	---	932
564+78 - 566+06	LANE LINE SKIPS	---	---	30
572+14 - 573+86	LANE LINE SKIPS	---	---	39
572+14 - 578+64	EDGE LINE	---	661	---
573+86 - 578+19	CHANNELIZING	---	---	867
576+76 - 578+99	EDGE LINE	373	---	---
578+19 - 579+41	EDGE LINE	---	122	---
578+97 - 579+28	EDGE LINE	---	31	---

SUBTOTALS 987 4743 3734

PROJECT ID 9200-07-71 SUMMARY 5730 3734

PROJECT TOTAL 8264 5540

3

3

REMOVING PAVEMENT MARKINGS

STATION TO STATION		DESCRIPTION	STAGE	646.0600 LF
479+69 - 481+19		EDGE LINE	3A	150
493+40 - 494+91, LT		EDGE LINE	3A	151
PROJECT ID 9200-05-71 SUMMARY				301
541+32 - 543+56, RT		EDGE LINE	1A	224
576+74 - 578+99, LT		EDGE LINE	1A	225
541+00 - 541+67		EDGE LINE	1B	67
546+06 - 547+66, LT		EDGE LINE	1B	160
578+63 - 579+28, LT		EDGE LINE	1B	65
560+48 - 561+87, LT		EDGE LINE	1C	139
PROJECT ID 9200-07-71 SUMMARY				880
PROJECT TOTAL				1181

PAVEMENT MARKING ISLAND NOSE EPOXY

STATION	LOCATION	647.0606 YELLOW EACH
486+33	LT	1
486+48	LT	1
488+05	LT	1
488+11	RT	1
PROJECT ID 9200-05-71 SUMMARY		4
102+19	LT	1
558+91	LT	1
559+26	RT	1
559+52	LT	1
PROJECT ID 9200-07-71 SUMMARY		4
PROJECT TOTAL		8

PAVEMENT MARKING OUTFALL

STATION	LOCATION	646.0805.S EACH
481+40	LT	1
485+30	LT	1
PROJECT ID 9200-05-71 SUMMARY		2
541+10	LT/RT	2
555+80	LT	1
560+95	LT	1
562+80	LT	1
566+00	LT	1
576+00	LT	1
PROJECT ID 9200-07-71 SUMMARY		7
PROJECT TOTAL		9

PAVEMENT MARKING DIAGONAL EPOXY 24-INCH

STATION TO STATION	LOCATION	647.0746 WHITE LF
481+21 - 485+69	LT	160
488+87 - 493+11	LT	156
PROJECT ID 9200-05-71 SUMMARY		316
542+11 - 546+44	LT	164
553+65 - 558+35	LT	191
560+12 - 564+78	LT	191
573+86 - 578+19	LT	164
PROJECT ID 9200-07-71 SUMMARY		710
PROJECT TOTAL		1026

PAVEMENT MARKING YIELD LINE SYMBOLS EPOXY 36-INCH

STATION TO STATION	LOCATION	647.0546 EACH
486+50 - 486+82	LT	7
487+73 - 488+02	LT	7
PROJECT ID 9200-05-71 SUMMARY		14
541+33 - 541+72	LT	9
558+90 - 559+31	LT	8
559+13 - 559+49	LT	8
578+58 - 578+94	LT	8
PROJECT ID 9200-07-71 SUMMARY		33
PROJECT TOTAL		47

TEMPORARY PAVEMENT MARKING

STATION TO STATION	DESCRIPTION	STAGE	649.0100 4-INCH YELLOW LF
486+01 - 486+25, LT	EDGE LINE	3A	70
488+19 - 488+36, RT	EDGE LINE	3A	70
PROJECT ID 9200-05-71 SUMMARY			140
101+29 - 102+07, LT	EDGE LINE	1C	85
299+79 - 301+00, LT/RT	DOUBLE CENTERLINE	2B	220
PROJECT ID 9200-07-71 SUMMARY			305
PROJECT TOTAL			445

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CONSTRUCTION STAKING
CURB GUTTER AND CURB & GUTTER

CONSTRUCTION STAKING			
STATION TO STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.9920 SLOPE STAKES LF
479+69 - 494+91	1522	1522	1522
PROJECT ID 9200-05-71 SUMMARY	1522	1522	1522
101+23 - 102+65	142	142	142
299+79 - 301+00	121	121	121
540+96 - 547+66	670	670	670
552+30 - 579+41	2711	2711	2711
PROJECT ID 9200-07-71 SUMMARY	3644	3644	3644
PROJECT TOTALS	5166	5166	5166

STATION TO STATION	LOCATION	650.5500 LF
485+64 - 486+48	NW ISLAND	179
485+67 - 488+89	MEDIAN ISLAND	703
486+32 - 486+66	NORTH SAFETY ISLAND	160
487+91 - 488+17	SOUTH SAFETY ISLAND	136
488+05 - 488+86	SE ISLAND	182
PROJECT ID 9200-05-71 SUMMARY		1360
101+29 - 102+19	LT	212
101+30 - 102+59	LT	203
101+46 - 102+52	RT	168
541+12 - 542+18	LT	229
557+08 - 558+91	LT	375
558+28 - 560+14	LT	407
559+25 - 559+40	RT	74
559+52 - 560+16	LT	130
578+12 - 579+18	LT	229
PROJECT ID 9200-07-71 SUMMARY		2027
PROJECT TOTAL		3387

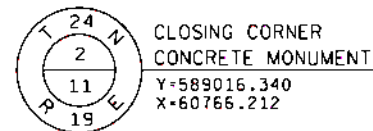
CONSTRUCTION STAKING PIPE CULVERTS		
STATION	LOCATION	650.6000 EACH
490+00	LT	1
PROJECT ID 9200-05-71 SUMMARY		1
102+00	CTH VV	1
300+06	TEMP CONNECTION	1
541+15 - 543+11	RT	1
PROJECT ID 9200-07-71 SUMMARY		3
PROJECT TOTAL		4

SAWING

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL		STATION TO STATION	LOCATION	STAGE	690.0150 ASPHALT LF	690.0250 CONCRETE LF
PROJECT	650.9910.01 LS	479+69 - 489+36		3A	6	735
9200-05-71	1	485+20 - 494+91	LT	3A	6	737
		486+27 - 486+71	LT, NORTH ISLAND	3B	150	35
		487+86 - 488+22	RT, SOUTH ISLAND	3B	125	36
		PROJECT ID 9200-05-71 SUMMARY			287	1543
		541+31	RT	1A	6	---
		543+56	RT	1A	6	---
		576+74 - 578+99	LT	1A	241	---
PROJECT	650.9910.02 LS	540+96 - 547+66	LT	1B	676	---
9200-07-71	1	541+00	LT	1B	3	---
		541+69	LT	1B	3	---
		578+62 - 579+28	LT	1B	71	---
		579+32	LT	1B	3	---
		559+20 - 559+45	RT, SOUTH ISLAND	1C	75	24
		552+30	LT	2A	3	---
		554+69 - 577+51		2A	---	2282
		556+60 - 566+12	LT	2A	958	---
		101+23	LT/RT CTH VV	2B	290	---
		102+65	LT/RT CTH VV	2B	210	---
		PROJECT ID 9200-07-71 SUMMARY			2545	2306
		PROJECT TOTALS			2832	3849

CONCRETE CURB AND GUTTER			
STATION TO STATION	LOCATION	SPV.0090.01 4-INCH SLOPED 36-INCH LF	SPV.0090.02 6-INCH TYPE D HES LF
		LF	LF
486+32 - 486+66	NORTH SAFETY ISLAND	129	31
487+91 - 488+17	SOUTH SAFETY ISLAND	136	---
PROJECT ID 9200-05-51 SUMMARY		265	31
PROJECT TOTALS		265	31

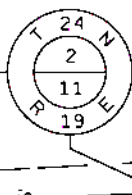
NOTE: CONCRETE CURB AND GUTTER ADJACENT TO STH 29 WB LANES
IS 6-INCH SLOPED 36-INCH TO ALLOW FOR FUTURE OVERLAY
PROJECT (CONSTRUCTED BY OTHERS)



CLOSING CORNER
CONCRETE MONUMENT
Y=589016.340
X=60766.212

SE-SW
02-24-19

QTR. CORNER
PK NAIL WITH WASHER
Y=589089.742
X=62097.614



TRANSPORTATION PROJECT PLAT NO: 9200-07-21 - 4.01

THAT PART OF GOVERNMENT LOT 1, SECTION 11, TOWNSHIP 24 NORTH, RANGE 19 EAST,
IN THE VILLAGE OF HOWARD, BROWN COUNTY, WISCONSIN.

RELOCATION ORDER STH 29/32 BROWN COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE,
THE STATE OF WISCONSIN, DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND
INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION
HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAYED OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SHOWN FOR THE ABOVE PROJECT.
2. THAT LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE
ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

OWNER NAMES ARE SHOWN FOR REFERENCE PURPOSES
ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE
TRANSFER OF LAND INTERESTS TO THE DEPARTMENT.

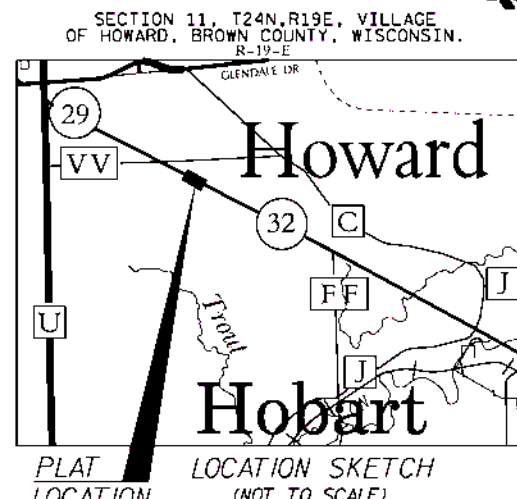
SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	R/W ACRES REQUIRED			PLE, TLE ACRES OR SF
			NEW	EXISTING	TOTAL	
1	ROBERT W. McALLISTER AND KATHLEEN M. McALLISTER, HUSBAND AND WIFE	FEE	0.08	0.00	0.08	-----

SCHEDULE OF UTILITIES & INTERESTS REQUIRED

UTILITY NUMBER	OWNER (S)	INTEREST REQUIRED
100	WISCONSIN PUBLIC SERVICE CORPORATION - ELECTRIC	RELEASE OF RIGHTS

POINT	STATION	OFFSET	Y	X
100	574+35.23	-846.73	589089.742	62097.614
101	566+28.64	-352.82	589037.678	61153.248
102	566+55.27	-309.82	588987.189	61156.286
103	563+71.86	-134.30	588967.167	60823.526
104	577+56.05	-134.14	588310.250	62041.904
105	577+76.05	-150.00	588314.723	62067.035
106	578+25.00	-170.00	588309.099	62119.620
107	578+75.00	-170.00	588285.375	62163.633
108	579+00.00	-134.12	588241.932	62168.613
109	587+00.00	-134.03	587862.264	62872.780
110	587+00.00	0.00	587744.285	62809.188
111	563+71.86	0.00	588848.943	60759.801



NOTES:
COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY
COORDINATE SYSTEM, BROWN COUNTY ZONE, NAD83 (2007) ADJUSTMENT. THE COORDINATES SHOWN ARE GRID
COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO
THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS
REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD".

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS
OF PUBLIC RECORD AND/OR EXISTING OCCUPANCY LINES. THIS PLAT MAY NOT BE A TRUE
REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE
USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
EXISTING HIGHWAY RIGHT-OF-WAY FOR STH 29 & 32 ESTABLISHED FROM TRANSPORTATION PROJECT PLAT
NO: 9202-10-00 4.12 RECORDED AS DOCUMENT NO. 252348.

EXISTING ACCESS CONTROL ALONG STH 29 ESTABLISHED FROM PREVIOUS PROJECT 9202-7-22 AND
IS RECORDED AS DOCUMENT NO. 2399256.

STH 29 IN THIS AREA OF BROWN COUNTY WAS DESIGNATED AS A FREEWAY UNDER SECTION 84.295 OF
THE WISCONSIN STATUTES BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION ON MARCH 18, 2008.

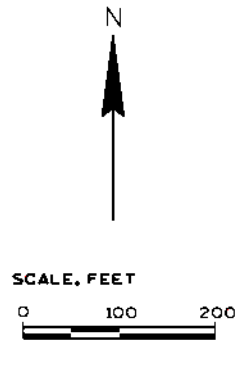
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

PARCEL 1				
COURSE	BEARING	DISTANCE	Y	X
100-101	S 86°50'40" W	945.80	589089.742	62097.614
101-102	S 03°26'36" E	50.58	589037.678	61153.248
102-103	S 86°33'24" W	333.36	588987.189	61156.286
103-104	S 61°40'04" E	1384.19	588967.167	60823.526
104-105	N 79°54'32" E	25.53	588310.250	62041.904
105-106	S 83°53'45" E	52.88	588314.723	62067.035
106-107	S 61°40'28" E	50.00	588309.099	62119.620
107-108	S 06°32'22" E	43.73	588285.375	62163.633
108-109	S 61°40'04" E	800.00	588241.932	62168.613
109-110	S 28°19'32" W	134.03	587862.264	62872.780
110-111	N 61°40'28" W	2328.14	587744.285	62809.188
111-103	N 28°19'32" E	134.30	588848.943	60759.801

CONVENTIONAL SYMBOLS	
FOUND IRON PIPE/PIN	UP (SET) NOTED
R/W MONUMENT	• (SET)
R/W STANDARD	▲ (SET)
STN	IS/GN
SECTION CORNER MONUMENT	• (SET)
SECTION CORNER SYMBOL	• (SET)
FEE (HATCH VARIES)	• (SET)
TEMPORARY LIMITED EASEMENT	• (SET)
PERMANENT LIMITED EASEMENT	• (SET)
R/W BOUNDARY POINT	• (SET)
PARCEL NUMBER	• (SET)
UTILITY INTEREST	• (SET)
SIGN NUMBER (OF F-PLATE)	• (SET)
BUILDING	• (SET)

CONVENTIONAL ABBREVIATIONS	
ACCESS POINT/ DRIVEWAY CONNECTION	AP
ACCESS RIGHTS	AR
ACRES	AC.
AND OTHERS	ET AL.
CENTERLINE	C/L
CERTIFIED SURVEY MAP CORNER	CSM
DOCUMENT	DOC.
EASEMENT	EASE.
HIGHWAY EASEMENT	H.E.
LAND CONTRACT	LC
MONUMENT	MON.
PAGE	P.
PERMANENT LIMITED EASEMENT	PLE
PROPERTY LINE	PL
RECORDED AS	REC'D

CONVENTIONAL UTILITY SYMBOLS	
WATER	W
GAS	G
TELEPHONE	T
OVERHEAD	OH
TRANSMISSION LINES	TL
ELECTRIC	E
CABLE TELEVISION	TV
FIBER OPTIC	FO
SANITARY SEWER	SAN
STORM SEWER	SS
NON COMPENSABLE	NC
COMPENSABLE	C
POWER POLE	PP
TELEPHONE POLE	TP
TELEPHONE PEDSTAL	TPD
ELECTRIC TOWER	ET



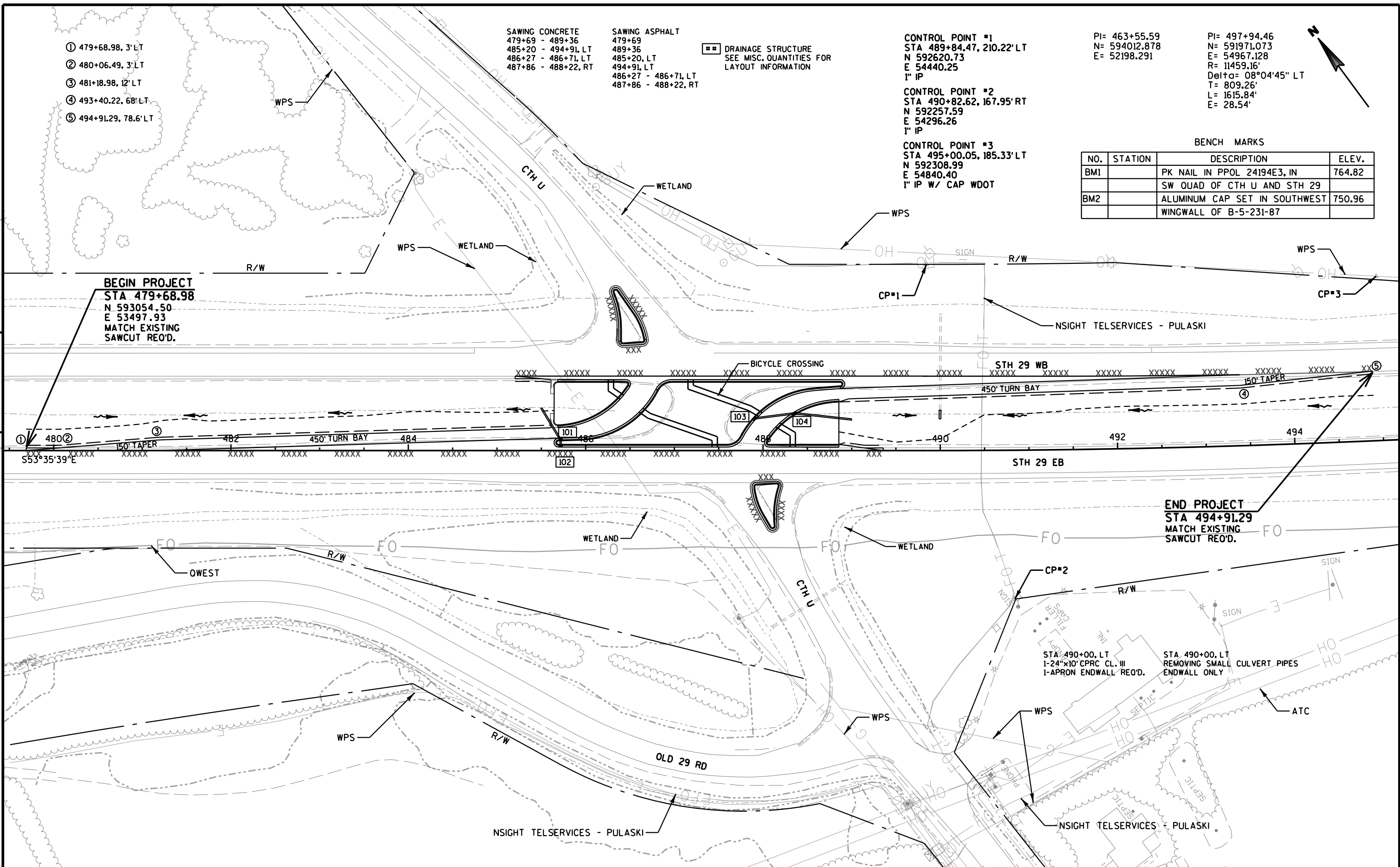
AYRES ASSOCIATES

JASON M. INGRAM, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 9200-07-21- 4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE LAND SURVEYED.

SIGNATURE: *Jason M. Ingram* DATE: 4-13-2012
PRINTED NAME: JASON M. INGRAM
REGISTRATION NUMBER: S-2630

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION

NORMAN H. PAWELCZYK *Norman H. Pawelczyk* 4-13-2012
PRINTED NAME: SIGNATURE: 56



- ① 479+68.98, 3' LT
- ② 480+06.49, 3' LT
- ③ 481+18.98, 12' LT
- ④ 493+40.22, 68' LT
- ⑤ 494+91.29, 78.6' LT

SAWING CONCRETE
479+69 - 489+36
485+20 - 494+91, LT
486+27 - 486+71, LT
487+86 - 488+22, RT

SAWING ASPHALT
479+69
489+36
485+20, LT
494+91, LT
486+27 - 486+71, LT
487+86 - 488+22, RT

DRAINAGE STRUCTURE
SEE MISC. QUANTITIES FOR
LAYOUT INFORMATION

CONTROL POINT #1
STA 489+84.47, 210.22' LT
N 592620.73
E 54440.25
1" IP

CONTROL POINT #2
STA 490+82.62, 167.95' RT
N 592257.59
E 54296.26
1" IP

CONTROL POINT #3
STA 495+00.05, 185.33' LT
N 592308.99
E 54840.40
1" IP W/ CAP WDOT

PI= 463+55.59
N= 594012.878
E= 52198.291

PI= 497+94.46
N= 591971.073
E= 54967.128
R= 11459.16'
Delta= 08°04'45" LT
T= 809.26'
L= 1615.84'
E= 28.54'

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM1		PK NAIL IN PPOL 24194E3, IN	764.82
BM2		SW QUAD OF CTH U AND STH 29	
		ALUMINUM CAP SET IN SOUTHWEST	750.96
		WINGWALL OF B-5-231-87	

BEGIN PROJECT
STA 479+68.98
N 593054.50
E 53497.93
MATCH EXISTING
SAWCUT REO'D.

END PROJECT
STA 494+91.29
MATCH EXISTING
SAWCUT REO'D.

PI= 497+94.46
N= 591971.073
E= 54967.128
R= 11459.16'
Delta= 08°04'45" LT
T= 809.26'
L= 1615.84'
E= 28.54'

SAWING ASPHALT
541+31, RT
543+56, RT
540+96 - 547+66, LT
541+00, LT
541+69, LT
552+30, LT

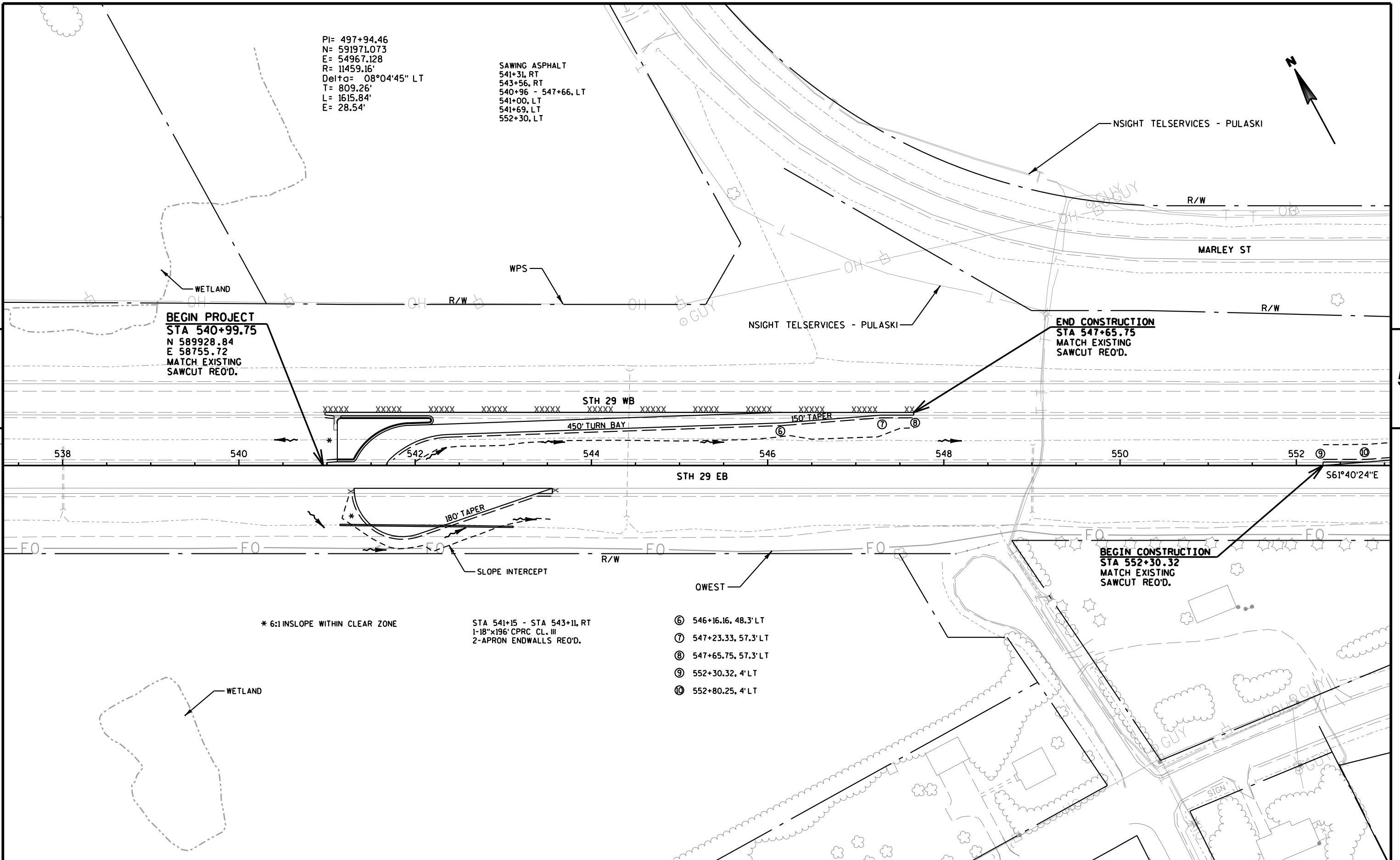
BEGIN PROJECT
STA 540+99.75
N 589928.84
E 58755.72
MATCH EXISTING
SAWCUT REQ'D.

END CONSTRUCTION
STA 547+65.75
MATCH EXISTING
SAWCUT REQ'D.

BEGIN CONSTRUCTION
STA 552+30.32
MATCH EXISTING
SAWCUT REQ'D.

STA 541+15 - STA 543+11, RT
1-18"x196' CPRC CL. III
2-APRON ENDWALLS REQ'D.

- ⑥ 546+16.16, 48.3' LT
- ⑦ 547+23.33, 57.3' LT
- ⑧ 547+65.75, 57.3' LT
- ⑨ 552+30.32, 4' LT
- ⑩ 552+80.25, 4' LT



CONTROL POINT #1
STA 554+73.64, 157.43' RT
N 589136.55
E 59894.44
¾" IP

CONTROL POINT #2
STA 560+99.48, 85.25' RT
N 588903.14
E 60479.59
1" IP W/ CAP WDOT

CONTROL POINT #3
STA 563+71.62, 134.44' LT
N 588967.39
E 60823.39
1" IP

- ⑨ 552+30.32, 4' LT
- ⑩ 552+80.25, 4' LT
- ⑪ 553+80.10, 12' LT
- ⑫ 564+62.78, 48' LT
- ⑬ 565+74.76, 57' LT
- ⑭ 566+12.19, 57' LT

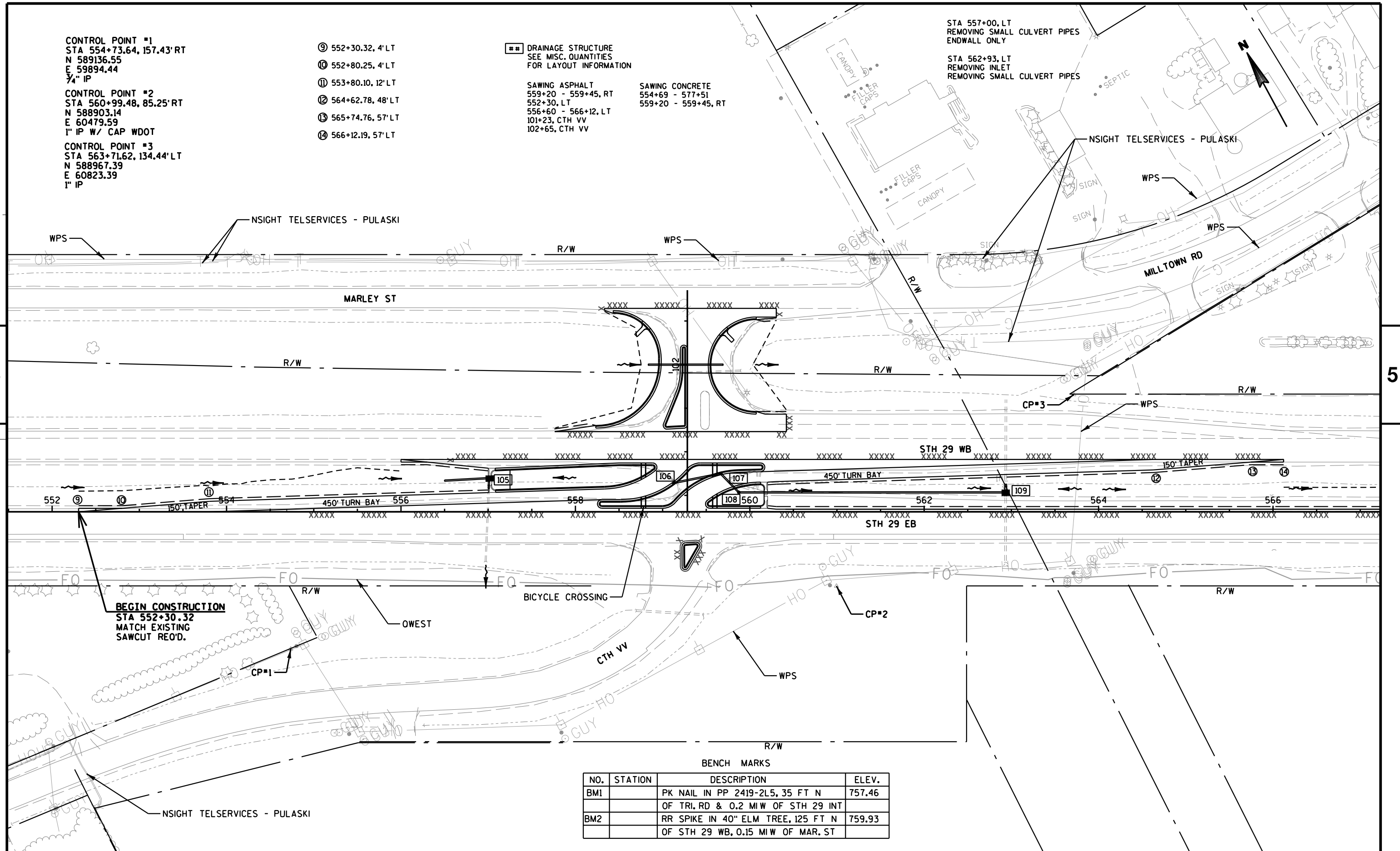
DRAINAGE STRUCTURE
SEE MISC. QUANTITIES
FOR LAYOUT INFORMATION

SAWING ASPHALT
559+20 - 559+45, RT
552+30, LT
556+60 - 566+12, LT
101+23, CTH VV
102+65, CTH VV

SAWING CONCRETE
554+69 - 577+51
559+20 - 559+45, RT

STA 557+00, LT
REMOVING SMALL CULVERT PIPES
ENDWALL ONLY

STA 562+93, LT
REMOVING INLET
REMOVING SMALL CULVERT PIPES



BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
BM1		PK NAIL IN PP 2419-2L5, 35 FT N OF TRI. RD & 0.2 MI W OF STH 29 INT	757.46
BM2		RR SPIKE IN 40" ELM TREE, 125 FT N OF STH 29 WB, 0.15 MI W OF MAR. ST	759.93

PROJECT NO: 9200-07-71

HWY: STH 29

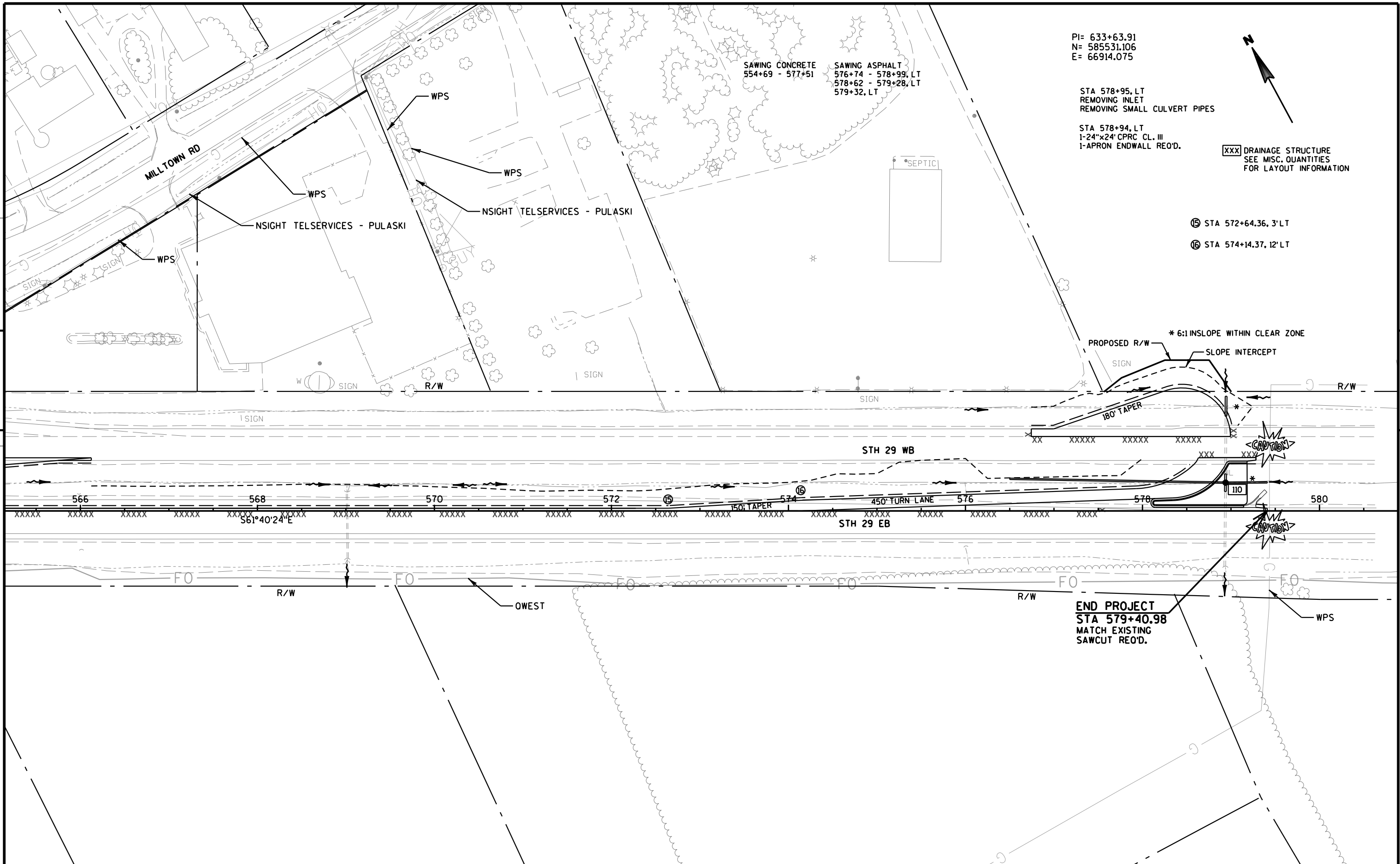
COUNTY: BROWN

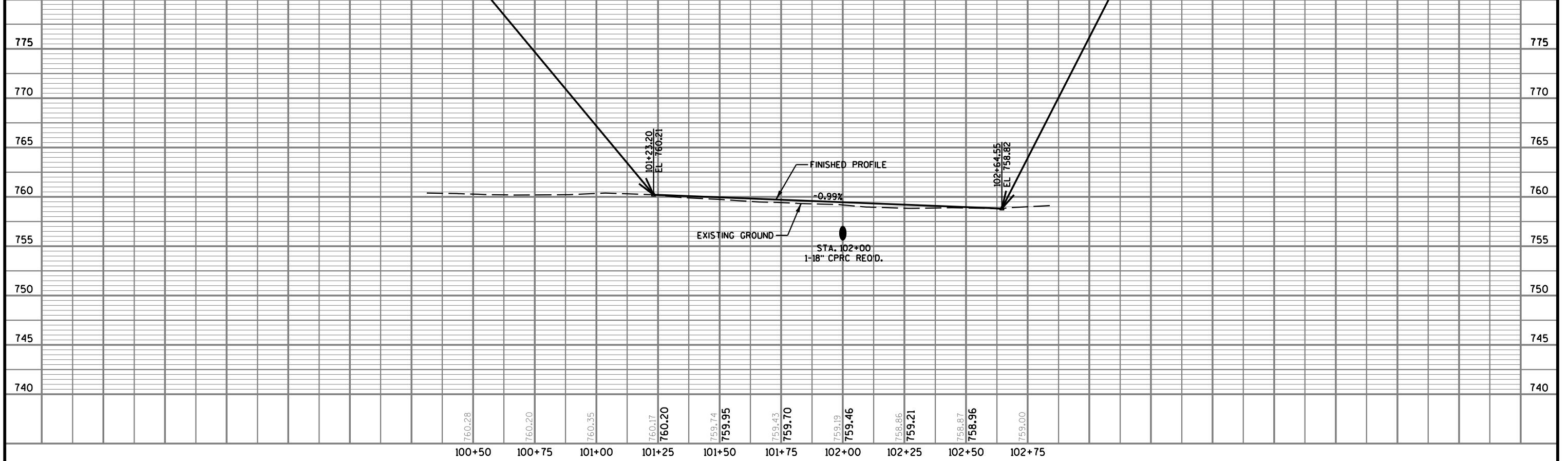
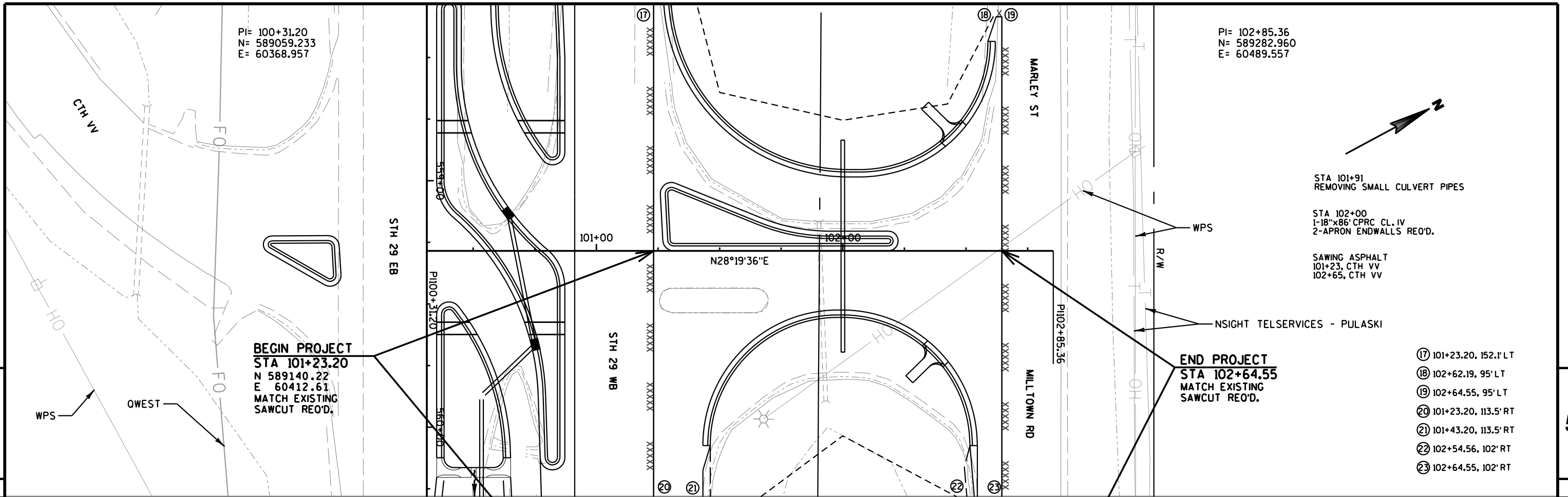
PLAN - CTH VV

SHEET

59

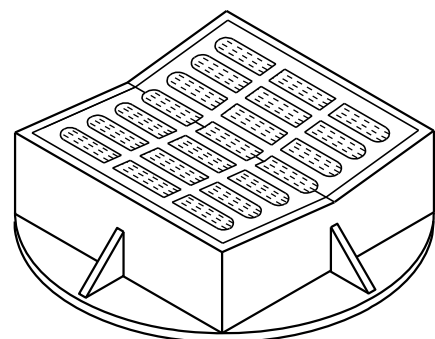
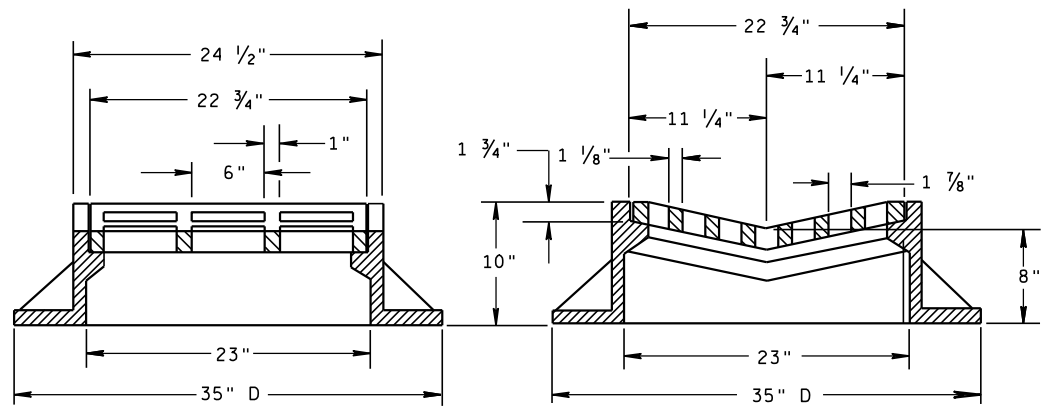
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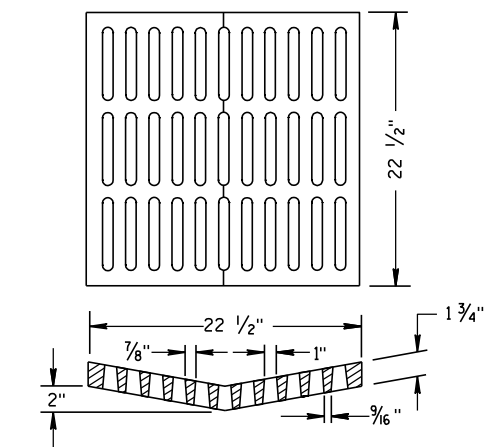


Standard Detail Drawing List

08A05-16B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08A05-17C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08A05-18D	INLET COVER, TYPE BW, Z MANHOLE COVERS, TYPE K, J, J-S, L & M
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-14A	CURB RAMPS TYPES 1 AND 1-A
08D05-14B	CURB RAMPS TYPES 2 AND 3
08D05-14C	CURB RAMPS TYPE 4A
08D05-14D	CURB RAMPS TYPE 4B
08D05-14E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D15-04A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-06	JOINT TIES FOR CONCRETE PIPE
08F06-04	REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN
08F07-04	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE FRAINS
09A01-12B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
11B02-02	CONCRETE MEDIAN NOSE
13A05-04A	SHOULDER RUMBLE STRIP, MILLING
13A05-04B	SHOULDER RUMBLE STRIP, MILLING
15A03-01	MARKER POSTS, FLEXIBLE, FOR CULVERT END
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C04-01	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-15A	PAVEMENT MARKING (MAINLINE)
15C08-15B	PAVEMENT MARKING (INTERSECTIONS)
15C08-15E	PAVEMENT MARKING (LEFT TURN LANE)
15C08-15F	PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)
15C12-03	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C20-01	YIELD MARKING
15C32-01A	J TURN MEDIAN PAVEMENT MARKING
15C32-01B	J TURN LANE PAVEMENT MARKING
15D12-02	TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.
15D21-01	TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE
15D27-01	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

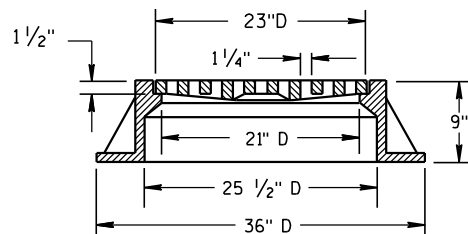
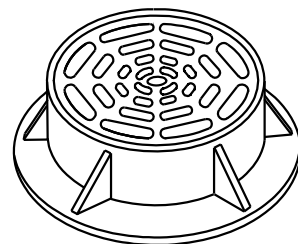


TYPE "B"
(APPROXIMATE WEIGHT 395 LBS.)
FRAME..... 285 LBS.
GRATE..... 110 LBS.



**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.

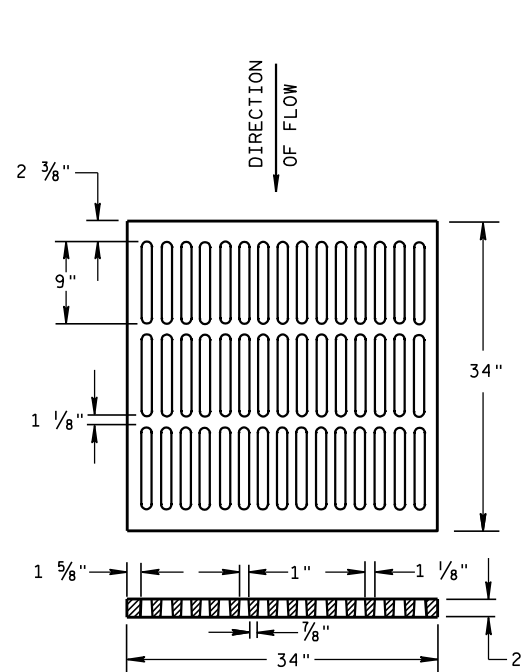
GENERAL NOTES

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.

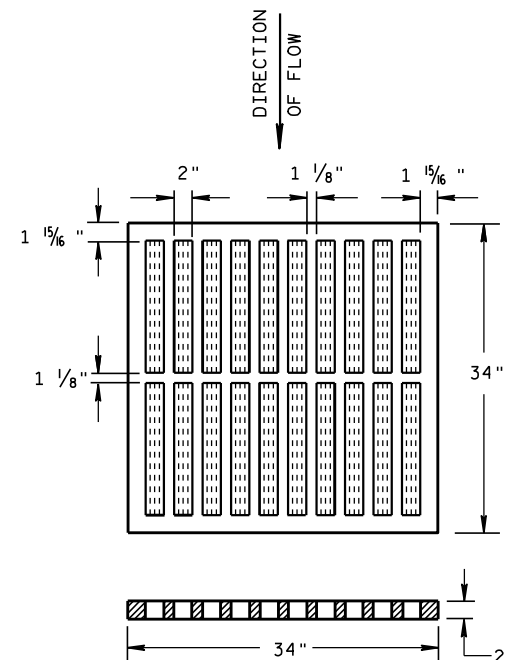
ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

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



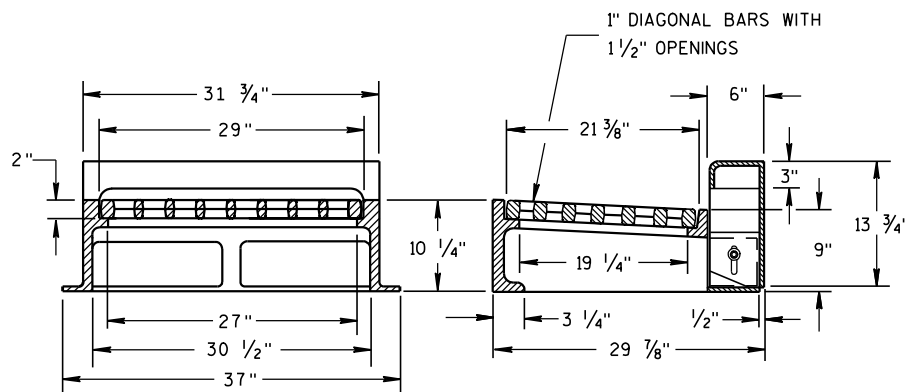
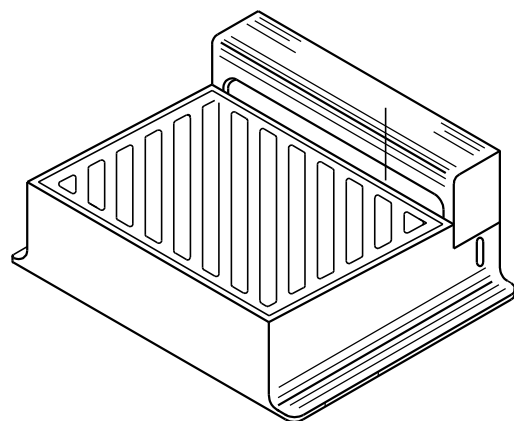
ALTERNATIVE TYPE "MS"
(APPROXIMATE GRATE WEIGHT 365 LBS.)
GRATE..... 365 LBS.

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



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"
(APPROXIMATE WEIGHT 670 LBS.)

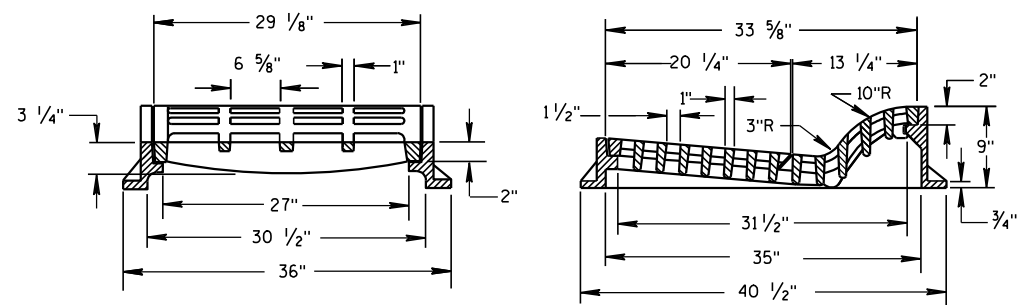
FRAME..... 360 LBS.
GRATE..... 160 LBS.
CURB BOX..... 150 LBS.

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

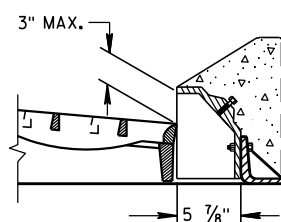
APPROVED
10/4/1999 /S/ Rory L. Rhinehart
DATE CHIEF ROADWAY DEVELOPER
FHWA



(APPROXIMATE WEIGHT 645 LBS.)

FRAME.....300 LBS.
GRATE.....165 LBS.
GRATE.....180 LBS.

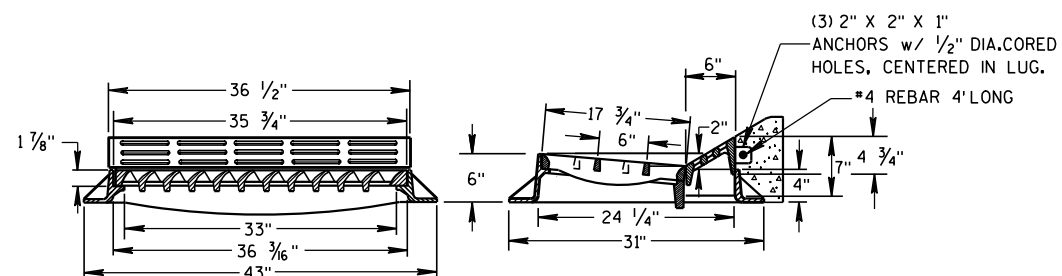
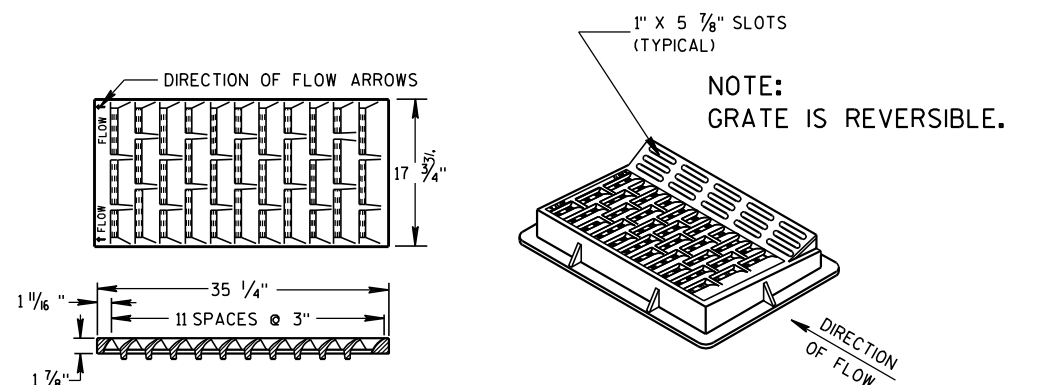
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



(APPROXIMATE WEIGHT 79 LBS.)

CURB BOX.....79 LBS.

USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

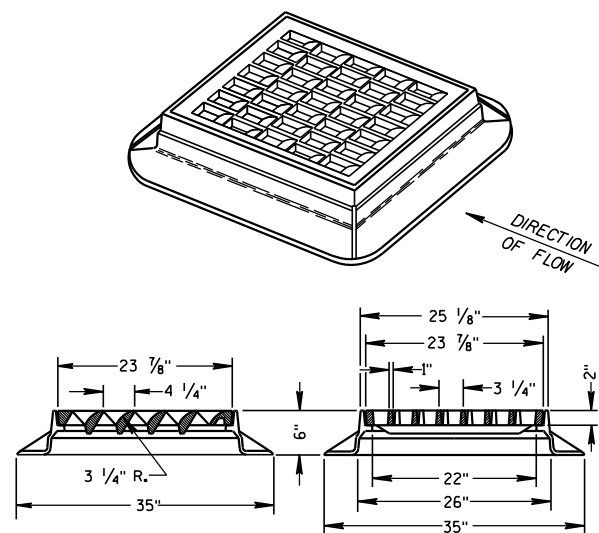


(APPROXIMATE WEIGHT 375 LBS.)

FRAME..... 175 LBS.
GRATE..... 138 LBS.
CURB BOX..... 62 LBS.

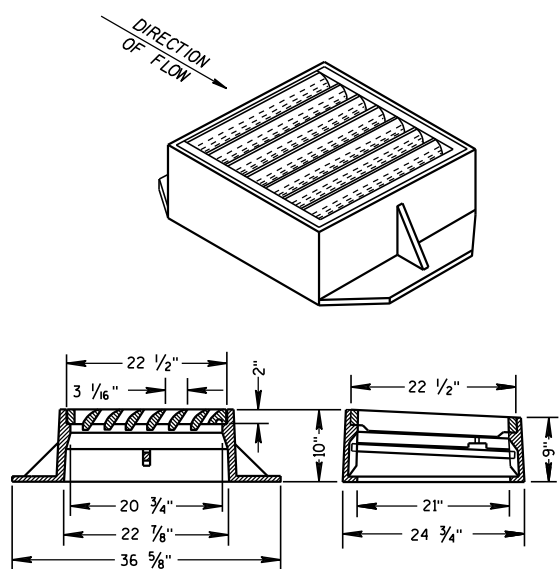
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



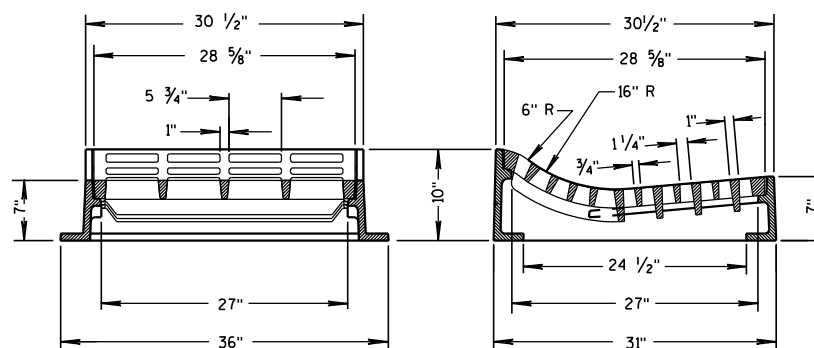
(APPROXIMATE WEIGHT 334 LBS.)

FRAME..... 165 LBS.
GRATE..... 169 LBS.



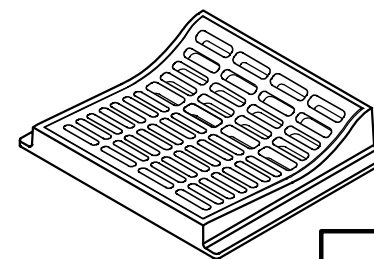
(APPROXIMATE WEIGHT 405 LBS.)

FRAME..... 270 LBS.
GRATE..... 130 LBS.
SAFETY BAR..... 5 LBS.



(APPROXIMATE WEIGHT 530 LBS.)

FRAME.....270 LBS.
GRATE.....260 LBS.
USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.



INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-S

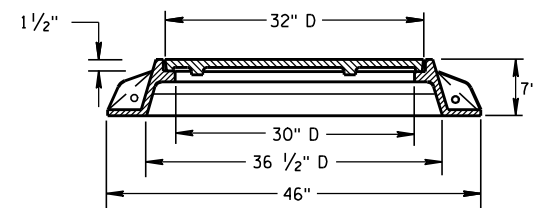
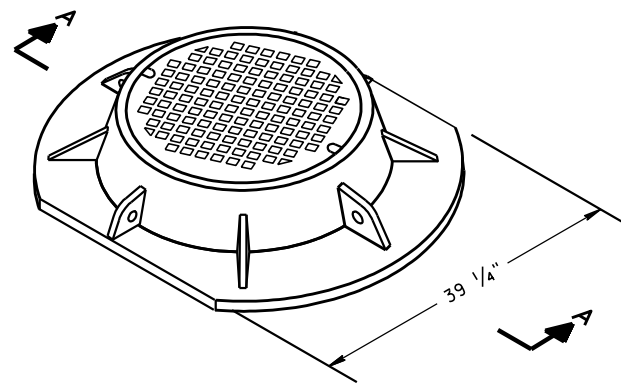
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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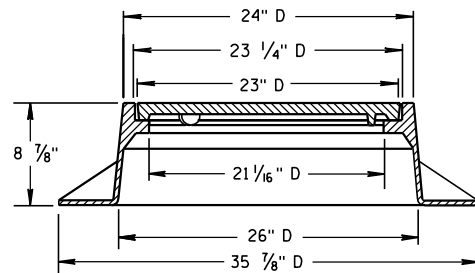
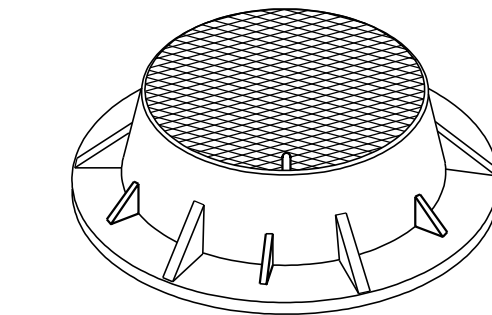
1/7/08 /S/ Jerry H. Z...

DATE ROADWAY STANDARDS ENGINEER. 65

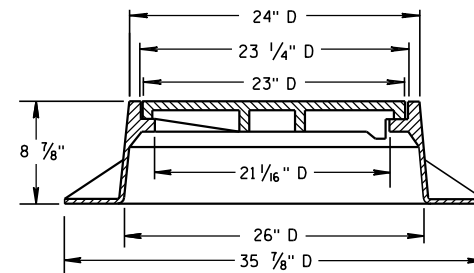
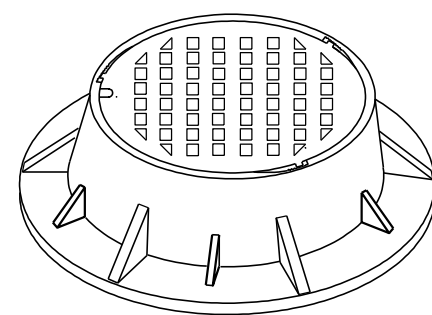
FHWA



SECTION A-A
TYPE "K"
(APPROXIMATE WEIGHT 439 LBS.)
FRAME.....216 LBS.
LID.....223 LBS.



TYPE "J"
(APPROXIMATE WEIGHT 267 LBS.)
FRAME.....152 LBS.
LID.....115 LBS.



TYPE "J" SPECIAL
TYPE "B" NON-ROCKING SELF-SEAL LID
(APPROXIMATE WEIGHT 267 LBS.)
FRAME.....158 LBS.
LID.....109 LBS.
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

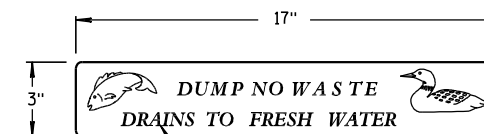
GENERAL NOTES

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.

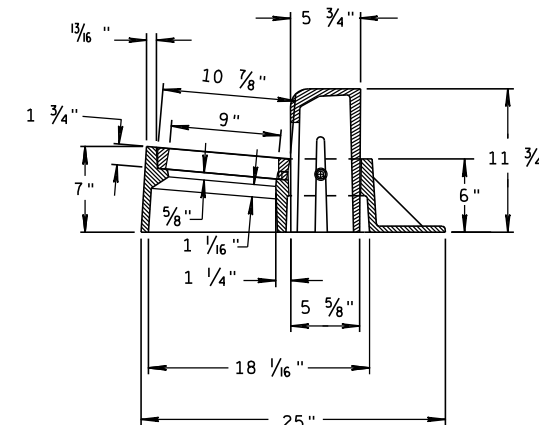
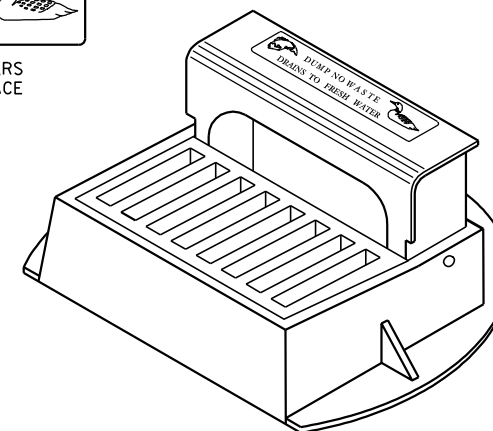
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

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

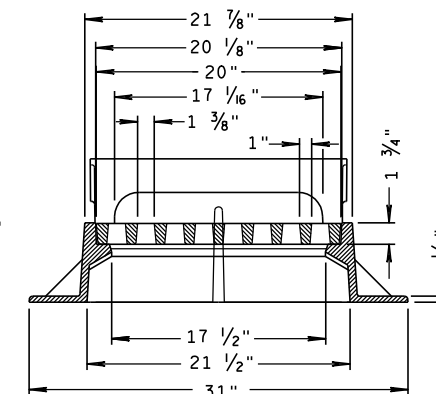
THE ACTUAL WEIGHT OF COVERS MAY VARY WITHIN 5 PERCENT, PLUS OR MINUS, OF THE APPROXIMATE WEIGHT.



LOGO DETAIL



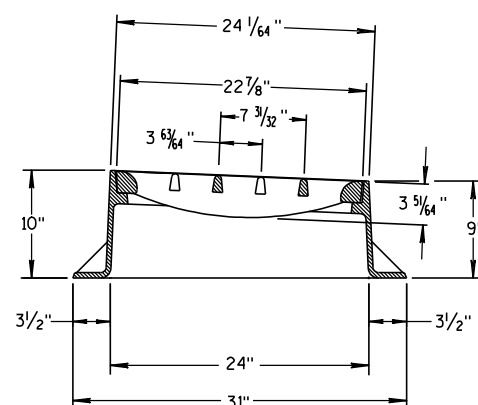
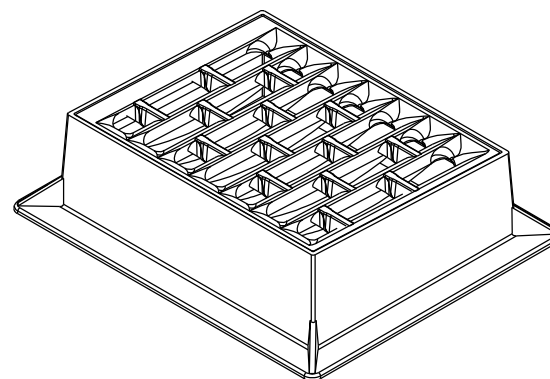
INLET COVER TYPE "Z"
(APPROXIMATE WEIGHT 344 LBS.)
FRAME.....206 LBS.
GRATE.....46 LBS.
CURB BOX.....92 LBS.



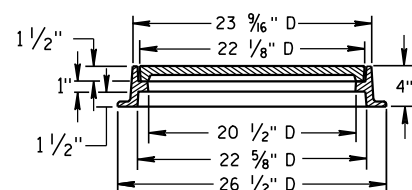
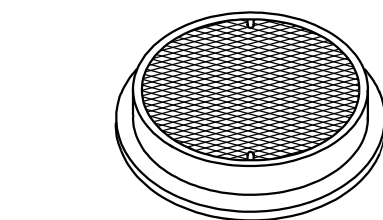
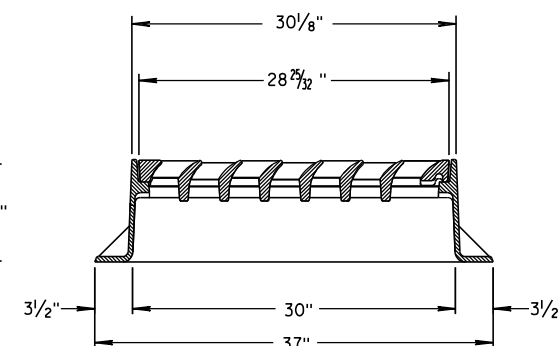
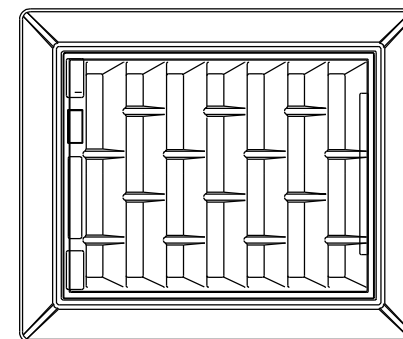
INLET COVERS, TYPE BW, Z
MANHOLE COVERS, TYPE
K, J, J-S, L & M

STATE OF WISCONSIN
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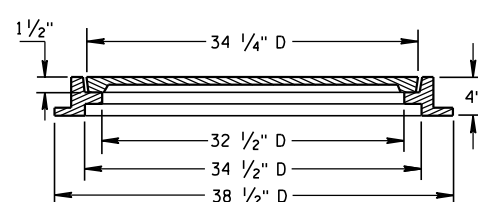
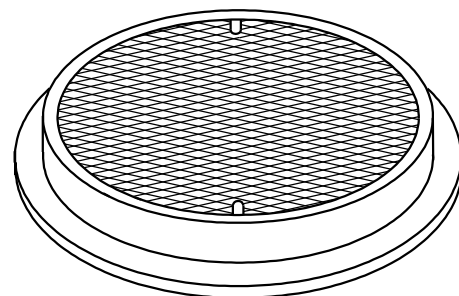
APPROVED
6/5/2012 /S/ Jerry H. Zopp
DATE ROADWAY STANDARDS 166 NT
FHWA ENGINEER



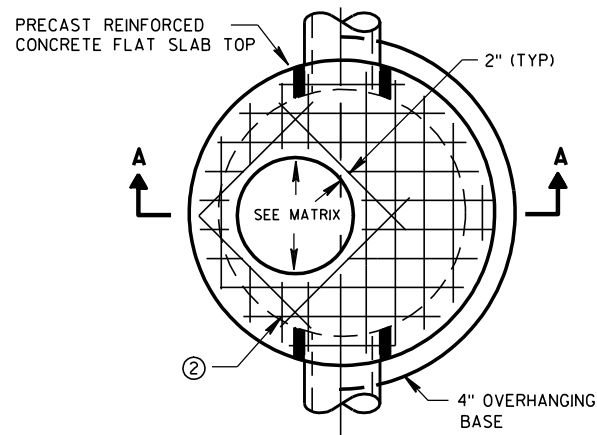
INLET COVER TYPE "BW"



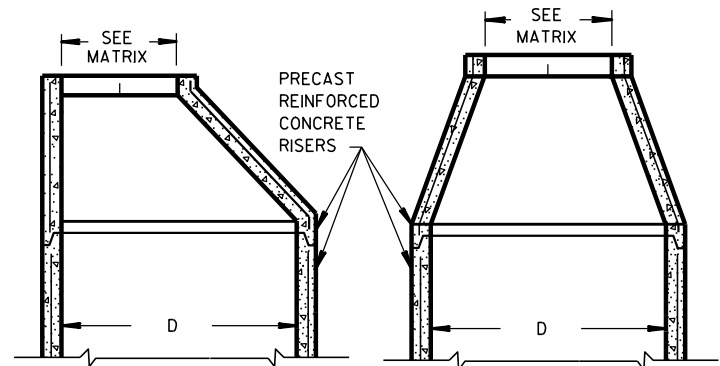
TYPE "L"
(APPROXIMATE WEIGHT 158 LBS.)
FRAME.....81 LBS.
LID.....77 LBS.



TYPE "M"
(APPROXIMATE WEIGHT 377 LBS.)
FRAME.....125 LBS.
LID.....252 LBS.

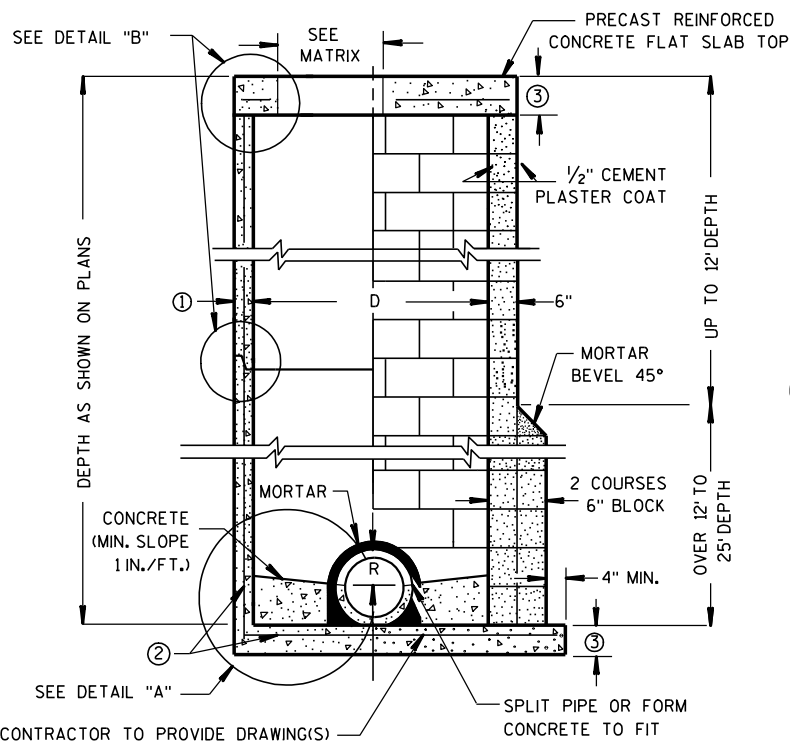


PLAN VIEW CIRCULAR OPENING

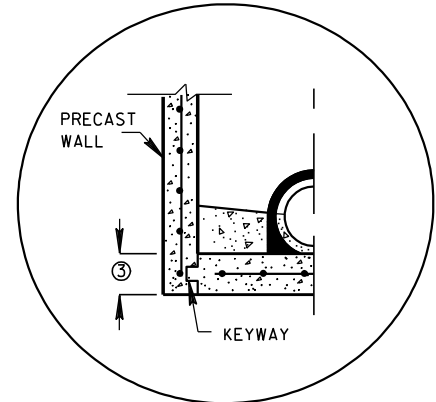


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

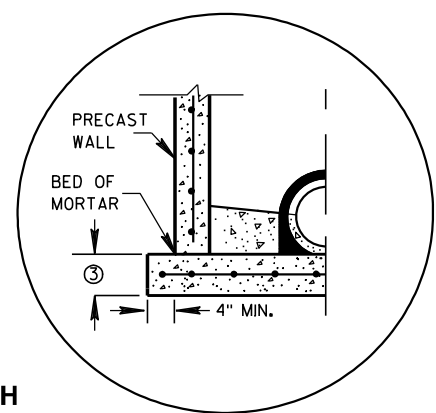
OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP



PRECAST REINFORCED CONCRETE BLOCK WITH CONCRETE WITH MONOLITHIC BASE CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

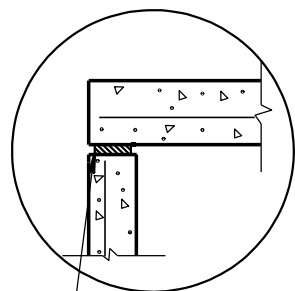


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

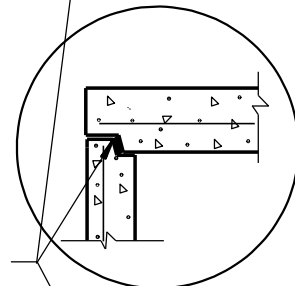


SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION
DETAIL "A"

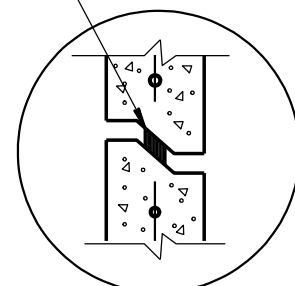
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



TOP WITH PLAIN END JOINT

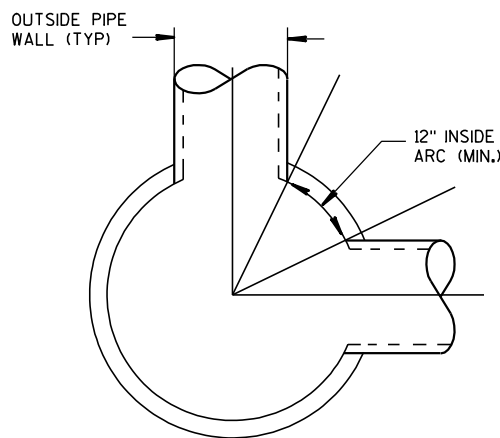


TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"



DETAIL "C"

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. UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS 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 AASHTO M199 AND 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. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED. CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.
- ② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

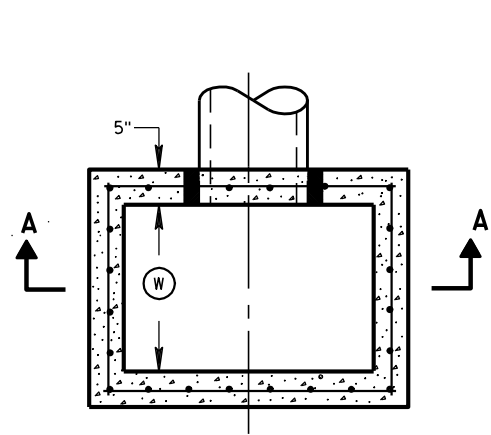
PIPE MATRIX

MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

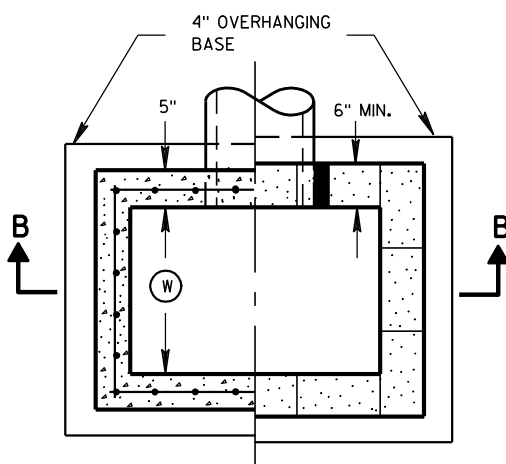
MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

STATE OF WISCONSIN
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6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEPARTMENT
FHWA ENGINEER 67

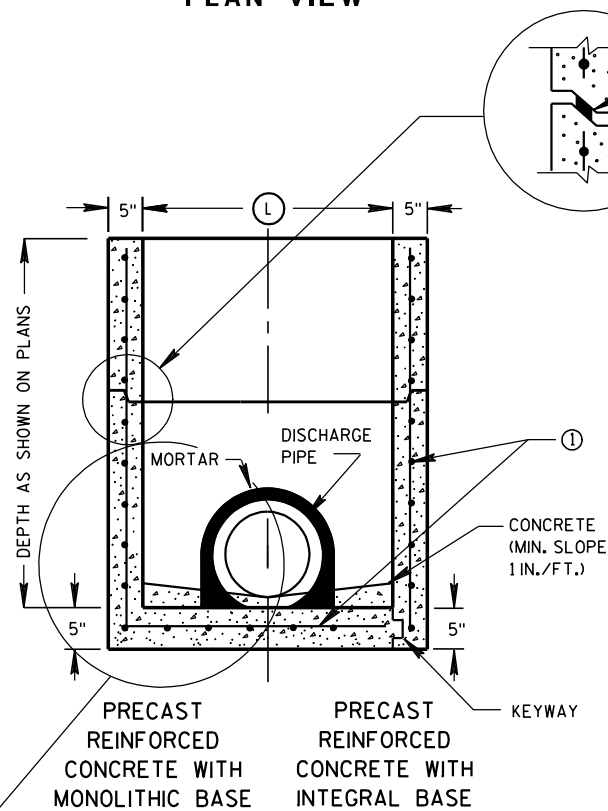


PLAN VIEW

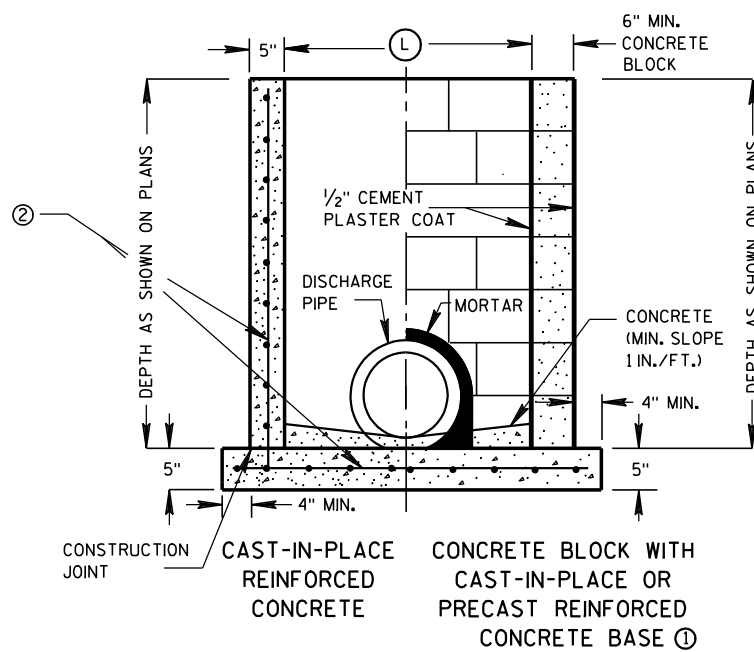


PLAN VIEW

RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B

SEPERATE PRECAST REINFORCED CONCRETE BASE OPTION

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

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 PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPERATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

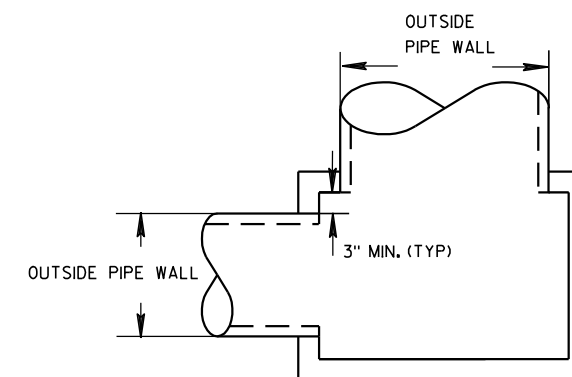
- FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE	WIDTH (FT)	INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
		LENGTH (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 6/5/2012
FHW
/S/ Jerry H. Zoaa
ROADWAY STANDARDS D 68
ENGINEER
IT



4" OVERHANGING BASE ON REINFORCED
CAST-IN-PLACE CONCRETE INLETS



INLETS MEDIAN 1 GRATE

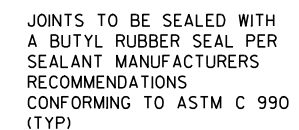


ING BASE ON REINFORCED PLACE CONCRETE INLETS



INLETS MEDIAN 2 GRATE

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



INLETS MEDIAN 1 AND 2 GRATE

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6/5/2012

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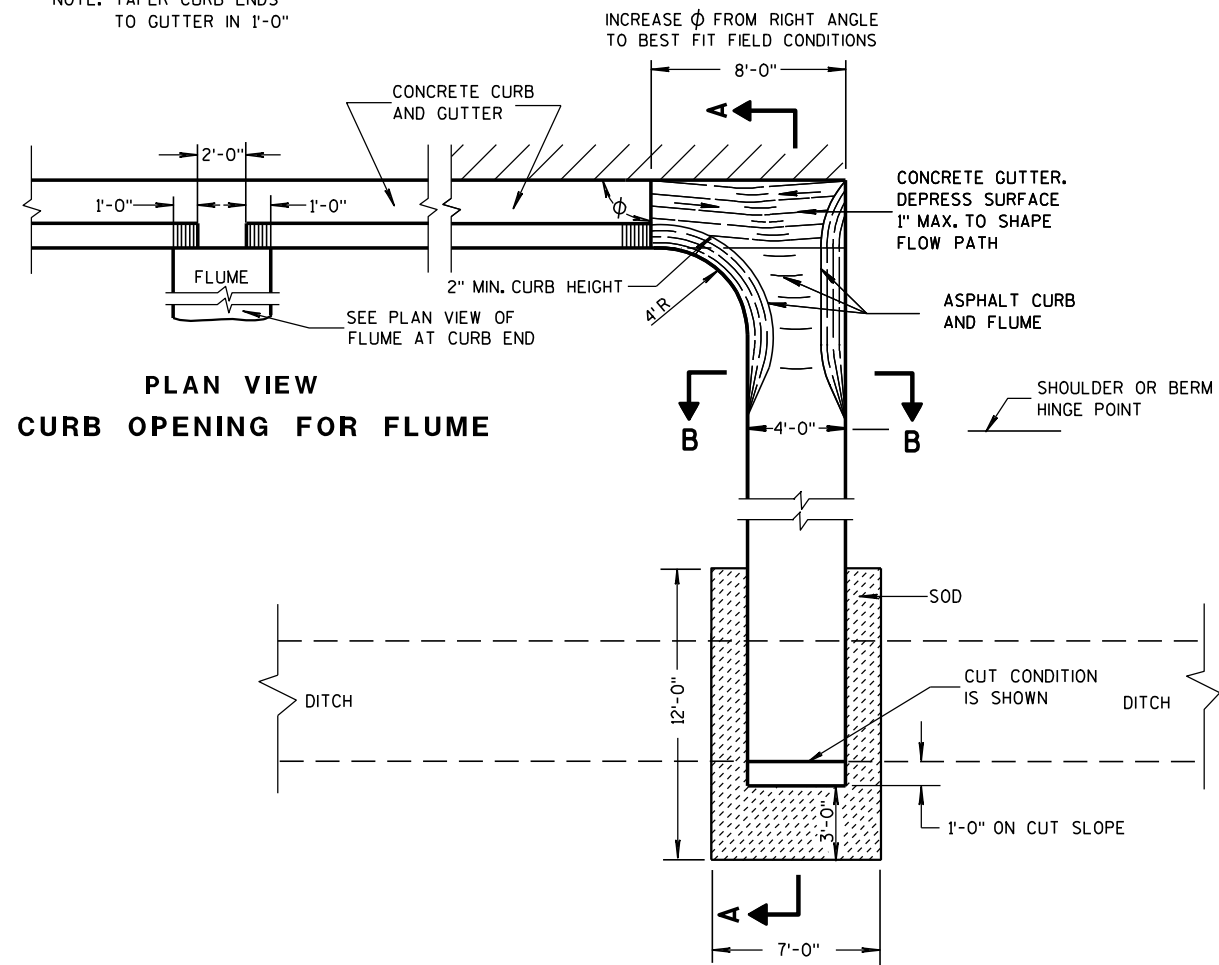
/S/ Jerry H. Zoon

ROADWAY STANDARDS [69]

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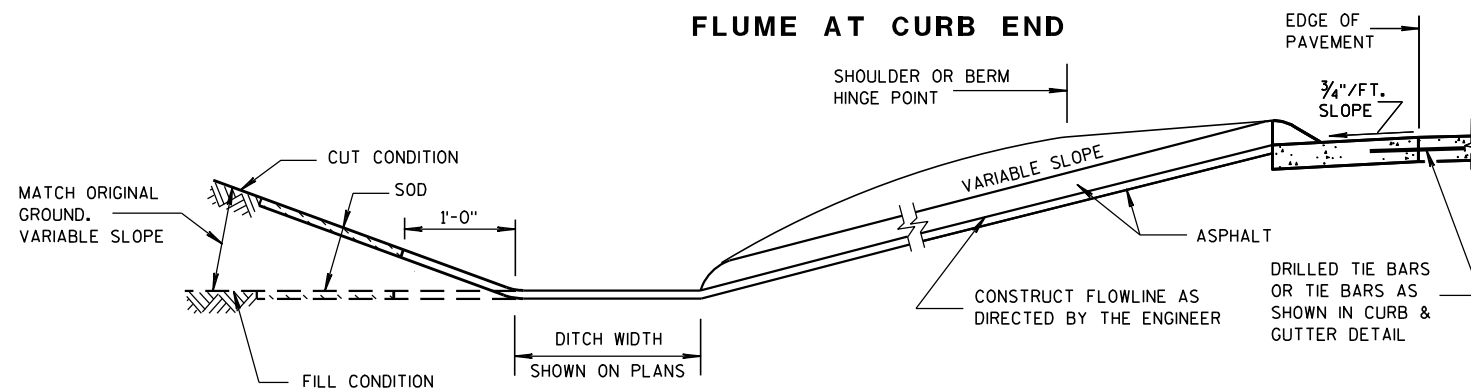
ASPHALTIC FLUME

NOTE: TAPER CURB ENDS
TO GUTTER IN 1'-0"

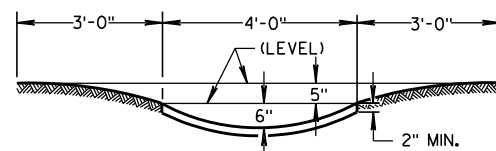


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

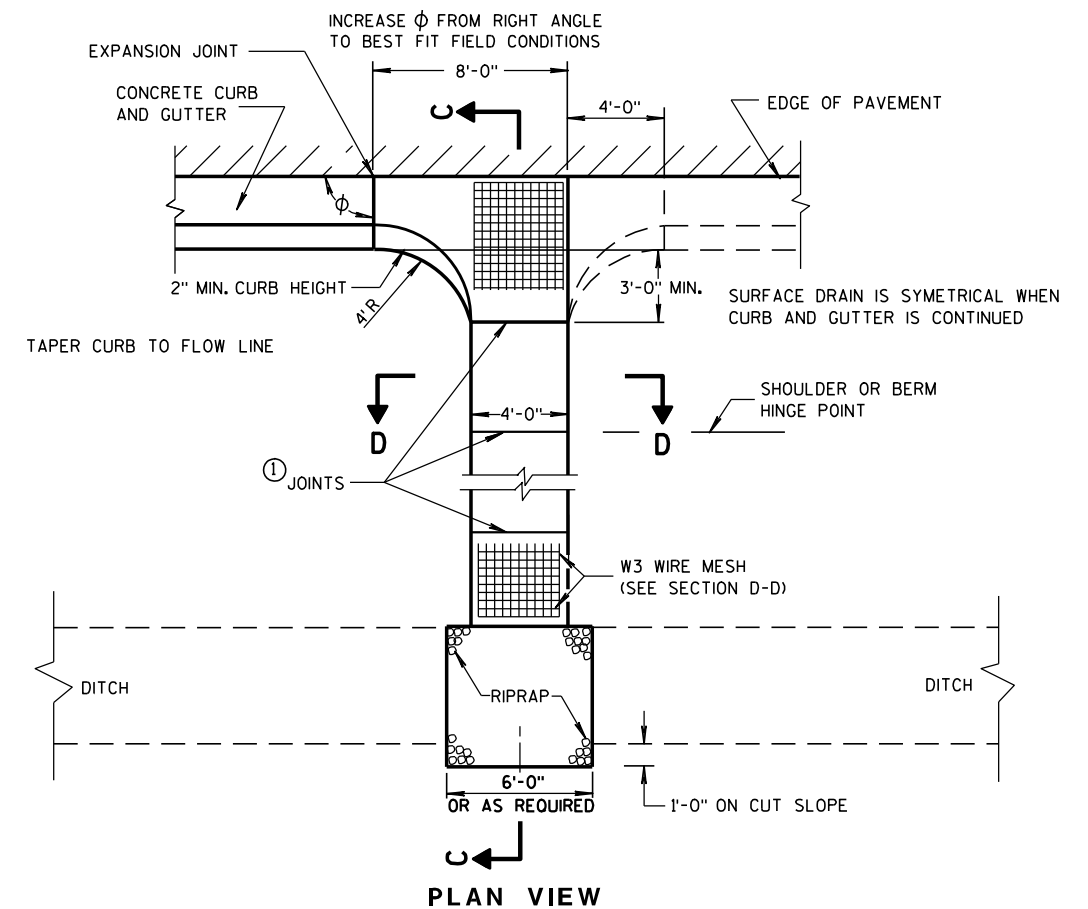
GENERAL NOTES

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

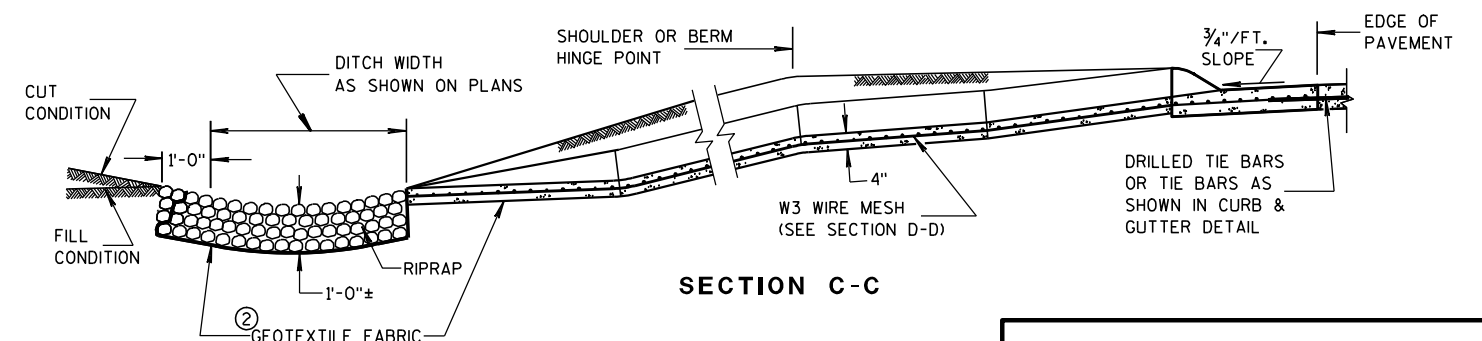
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

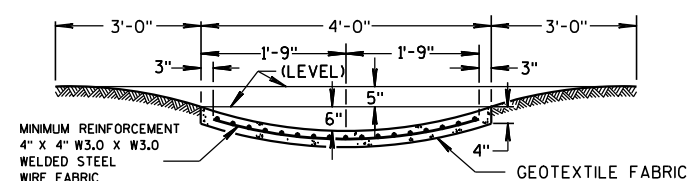
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C

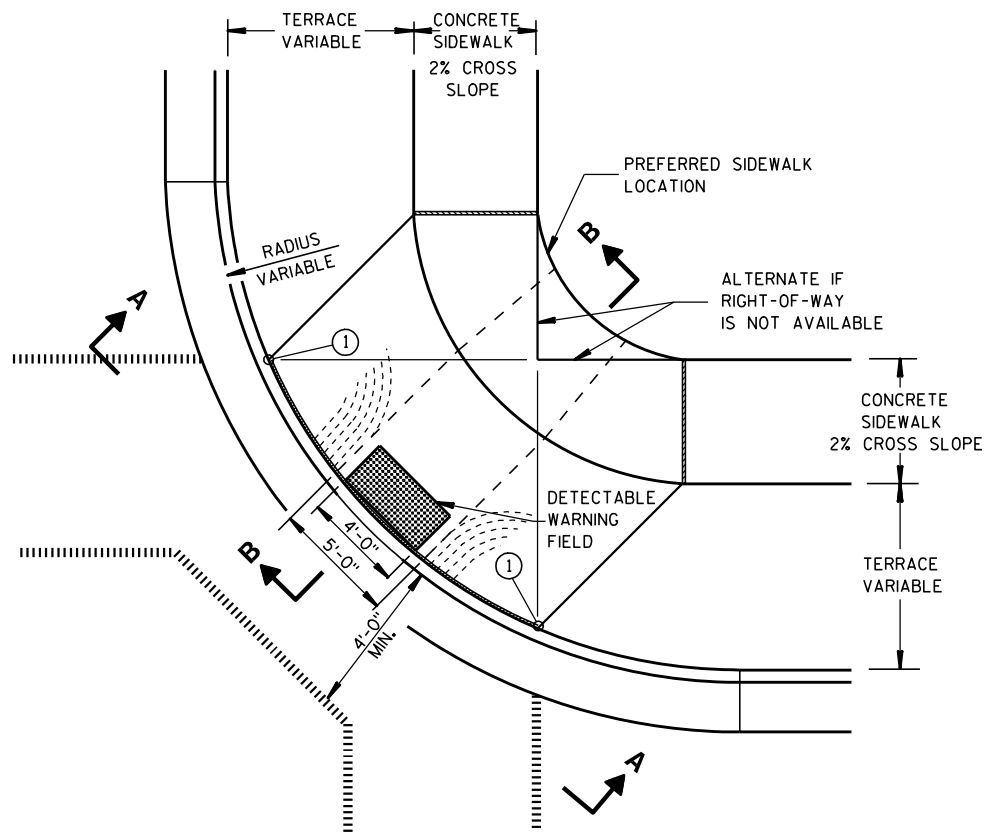


SECTION D-D

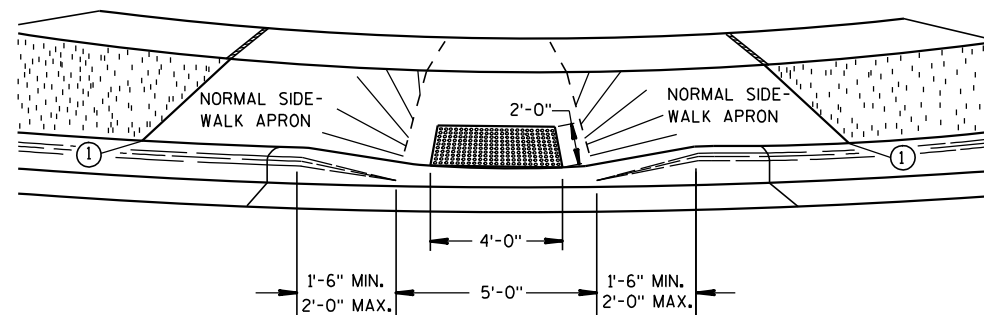
CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
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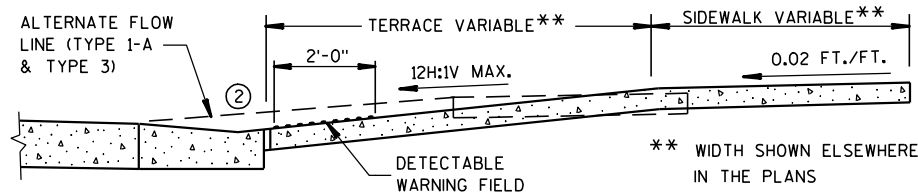
APPROVED
9-4-08 /S/ Jerry H. 7000
DATE ROADWAY STANDARDS 71 MENT
FHWA ENGINEER



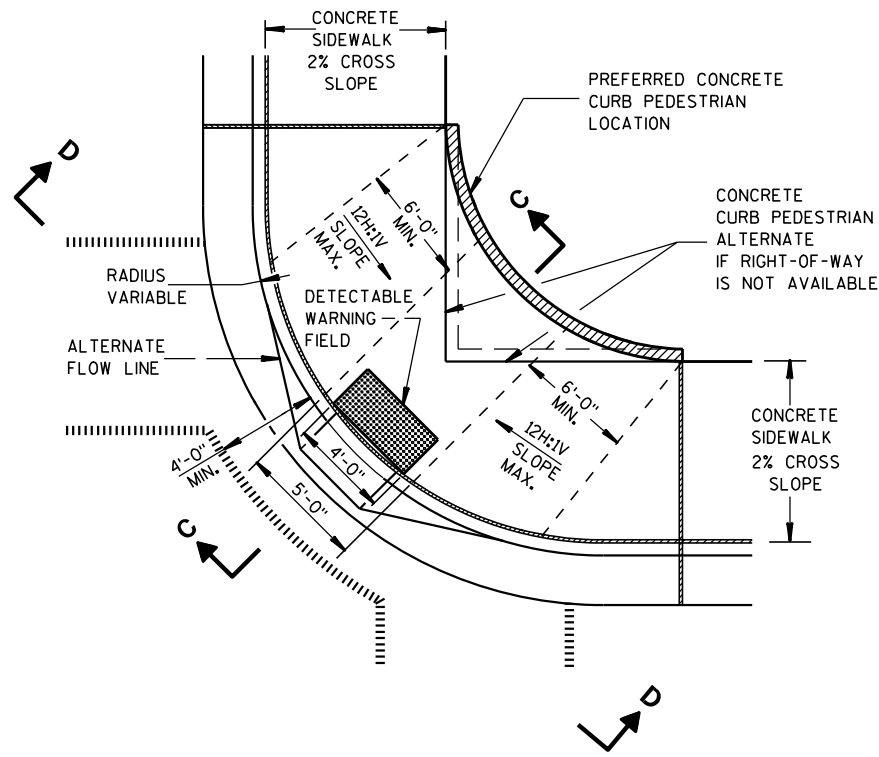
PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)



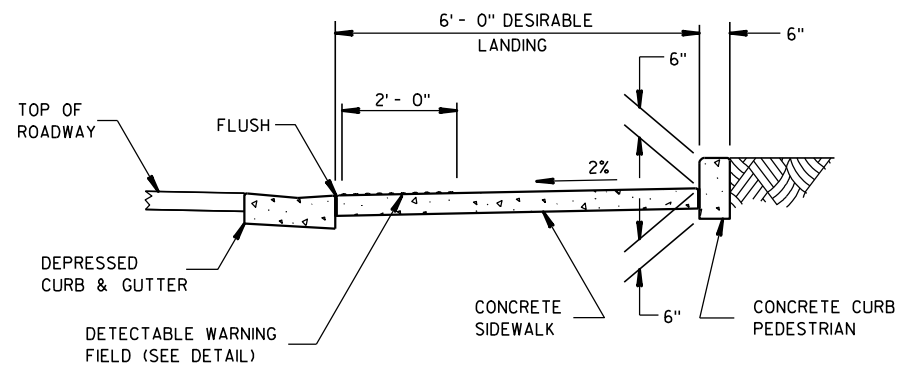
VIEW A-A



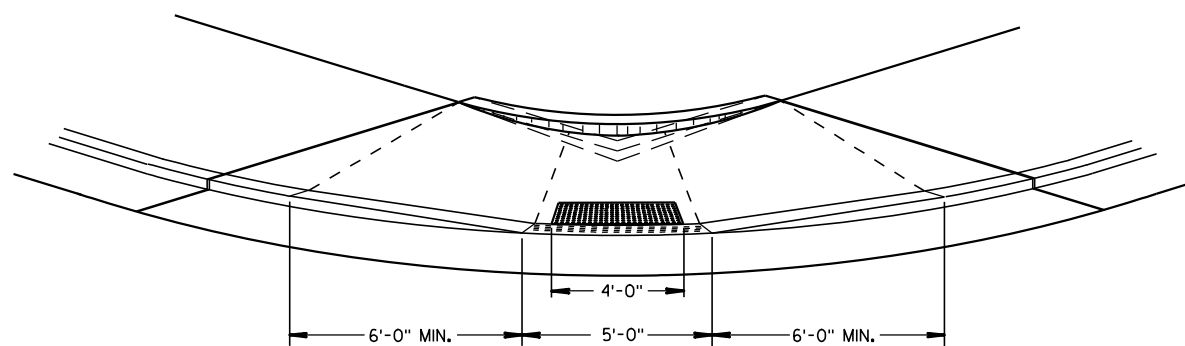
SECTION B-B



PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)



SECTION C-C



VIEW D-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.

RAMPS SHALL BE BUILT AT 12H:1V OR FLATTER. WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

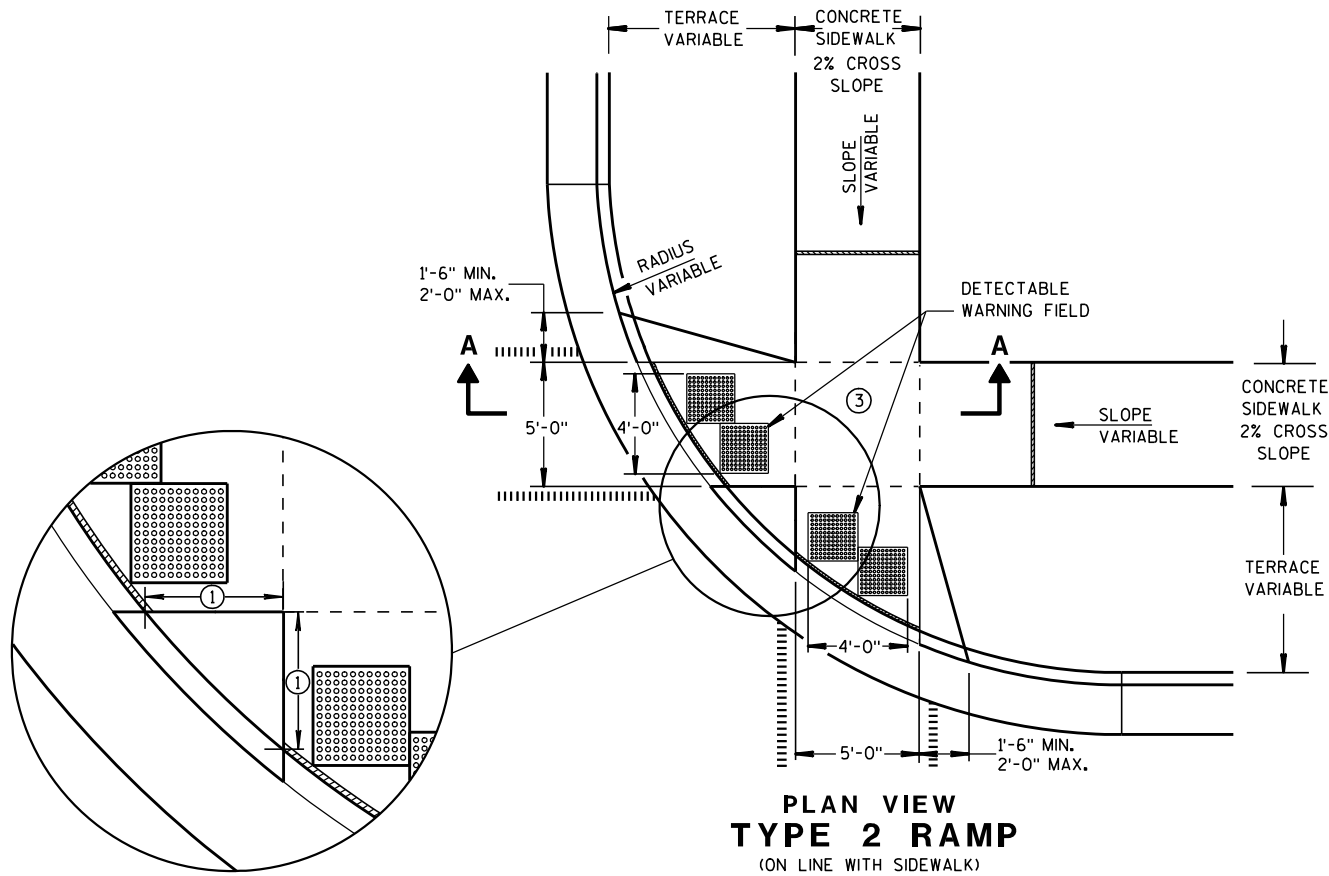
- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.

LEGEND

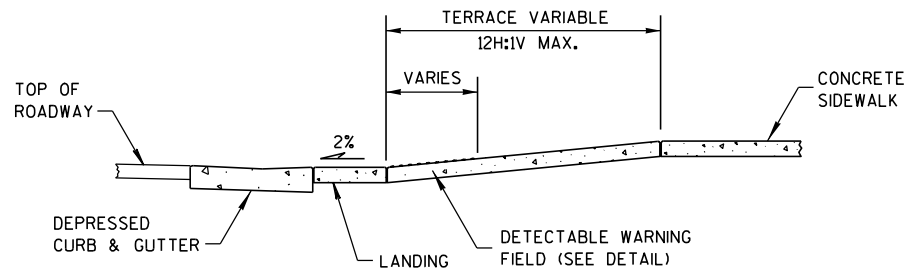
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

CURB RAMPS
TYPES 1 AND 1-A

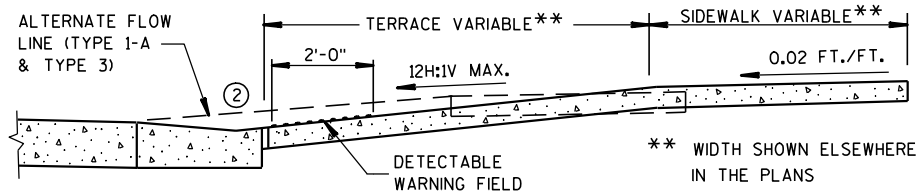
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)



SECTION A-A



SECTION B-B

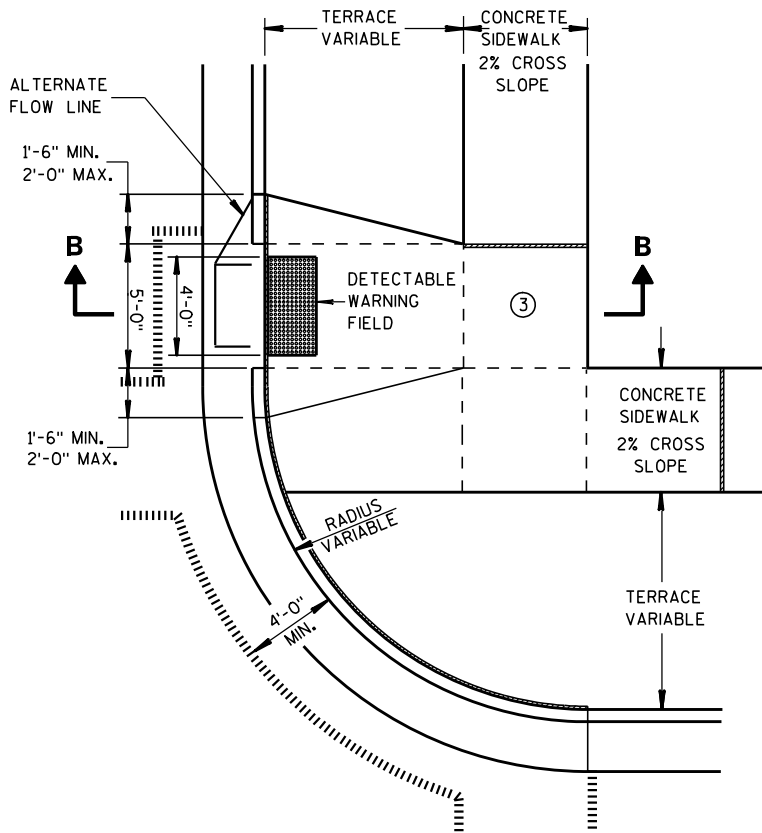
GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

- ① WHEN THIS DISTANCE IS LESS THAN 6'-0" IT MAY BE DIFFICULT TO ACHIEVE A 12H:1V SLOPE, OR FLATTER, ON THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 12H:1V SLOPE, OR FLATTER, ON RAMP. 2" MINIMUM CURB HEIGHT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE.
- ③ PROVIDE LANDING AT TOP OF RAMP WITH NO MORE THAN 2% SLOPE IN ANY DIRECTION.

LEGEND

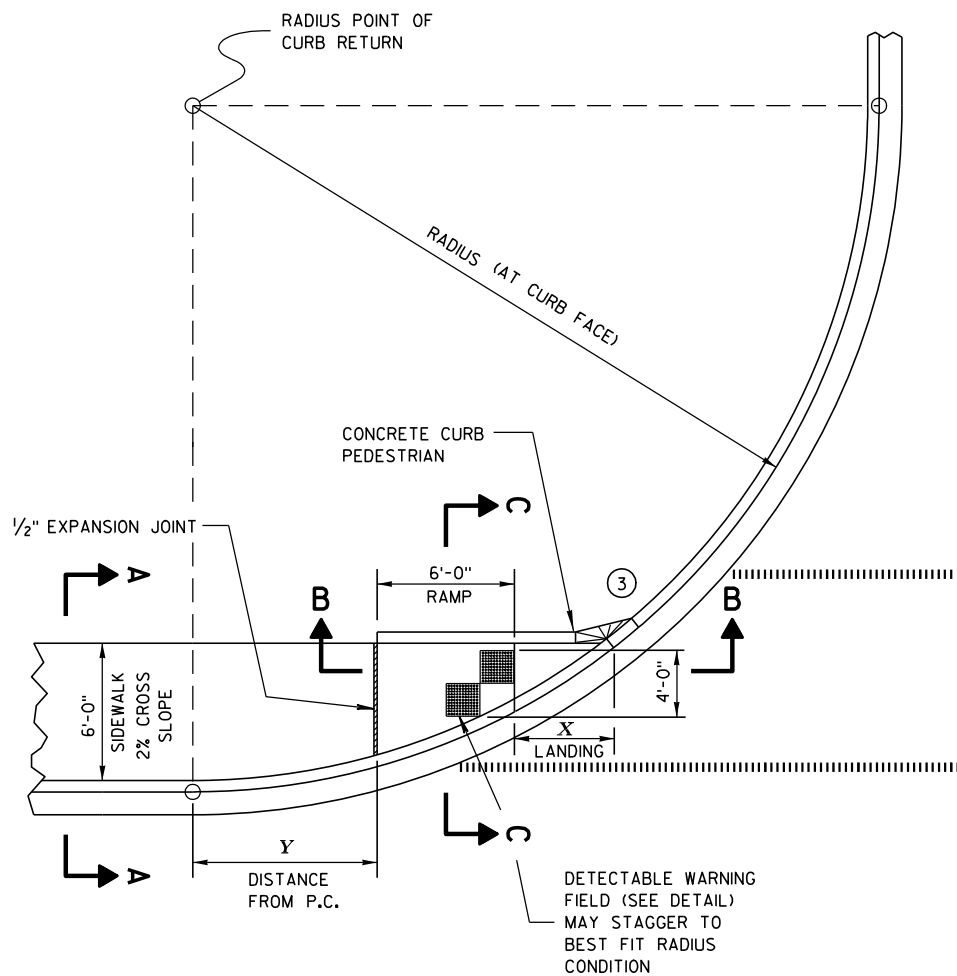
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



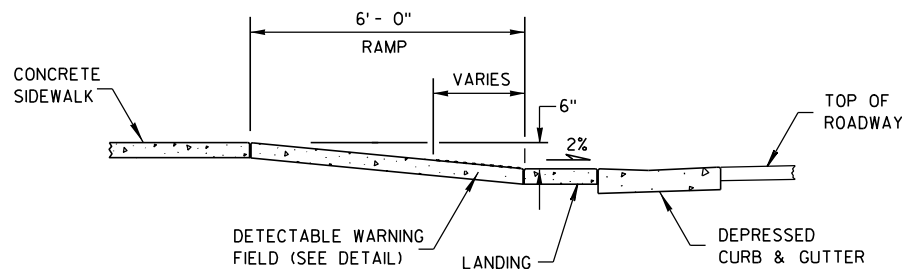
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS
TYPES 2 AND 3

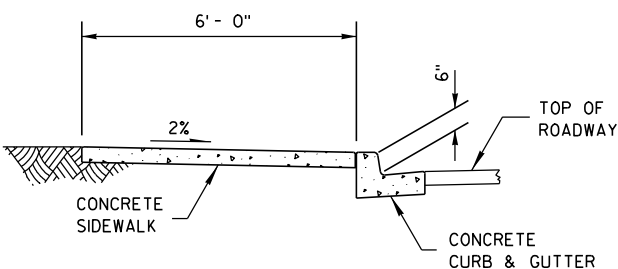
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



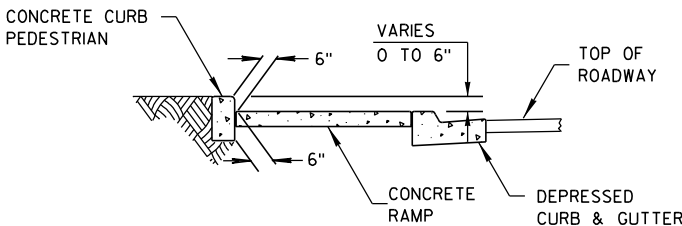
CURB RAMP TYPE 4A
PLAN VIEW



SECTION B-B



SECTION A-A



SECTION C-C

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1 $\frac{3}{4}$ "	2'-7 $\frac{1}{4}$ "
30 FEET	7'-11 $\frac{3}{4}$ "	4'-8 $\frac{1}{4}$ "
40 FEET	9'-5 $\frac{1}{4}$ "	6'-5"
50 FEET	10'-8 $\frac{3}{4}$ "	7'-11 $\frac{1}{4}$ "
60 FEET	11'-10 $\frac{1}{4}$ "	9'-3 $\frac{1}{2}$ "

INTERMEDIATE RADII CAN BE INTERPOLATED

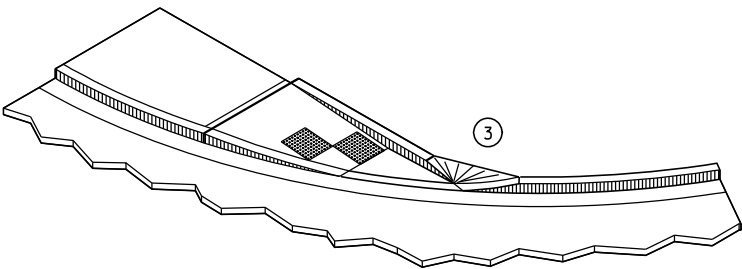
GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

- ③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.)
DO NOT MARK TRANSITION NOSE.



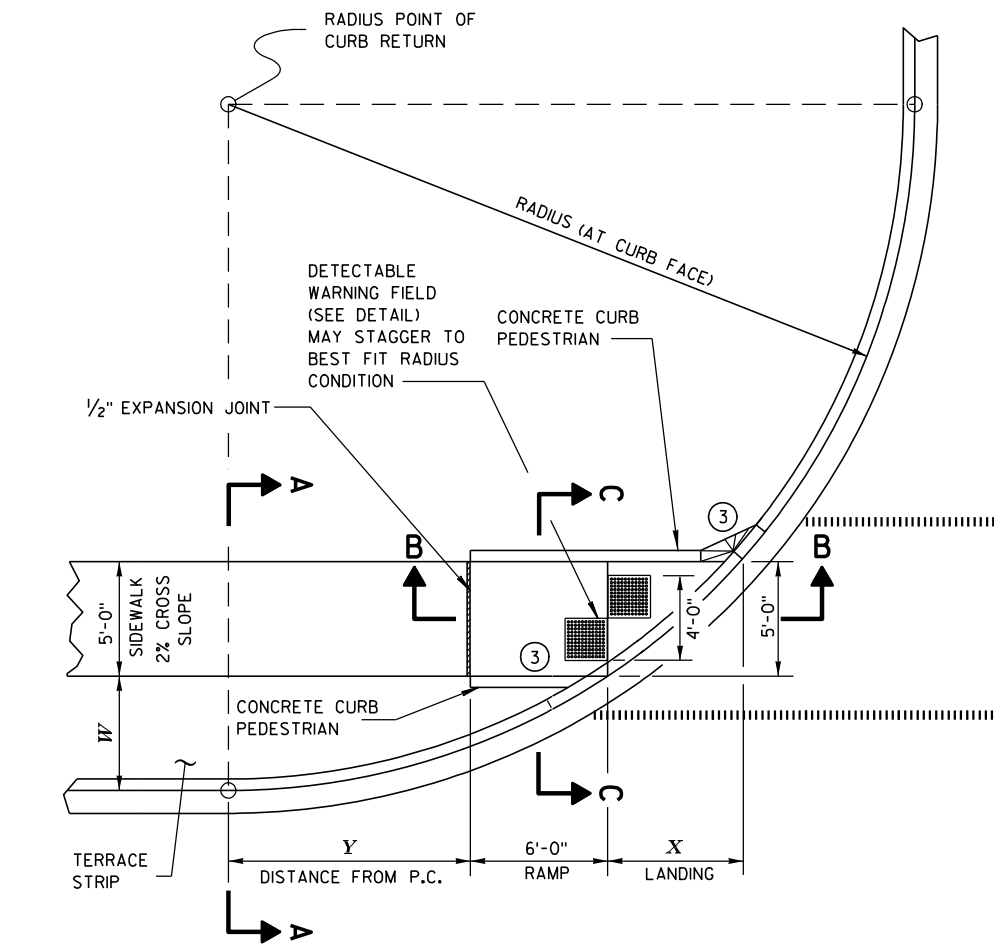
ISOMETRIC VIEW

LEGEND

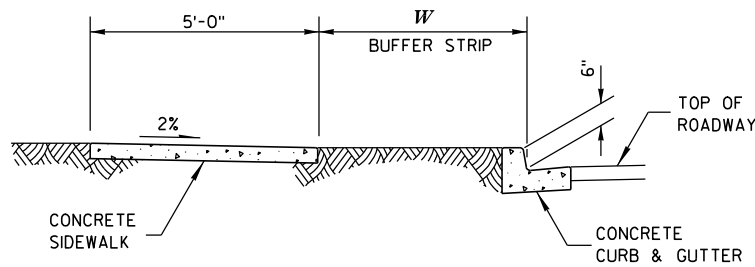
- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPE 4A

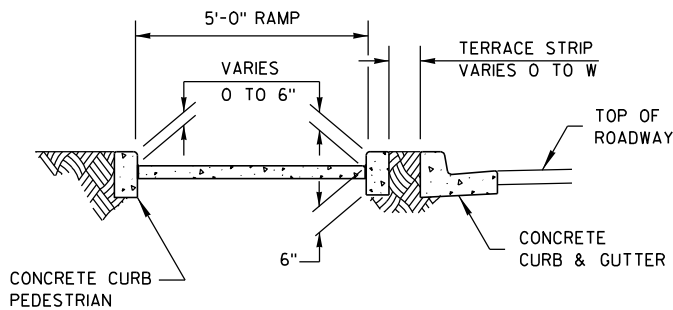
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



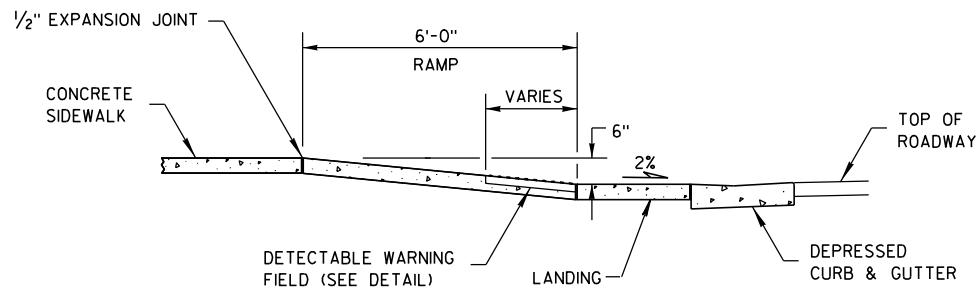
**CURB RAMP TYPE 4B
PLAN VIEW**



SECTION A-A



SECTION C-C



SECTION B-B

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

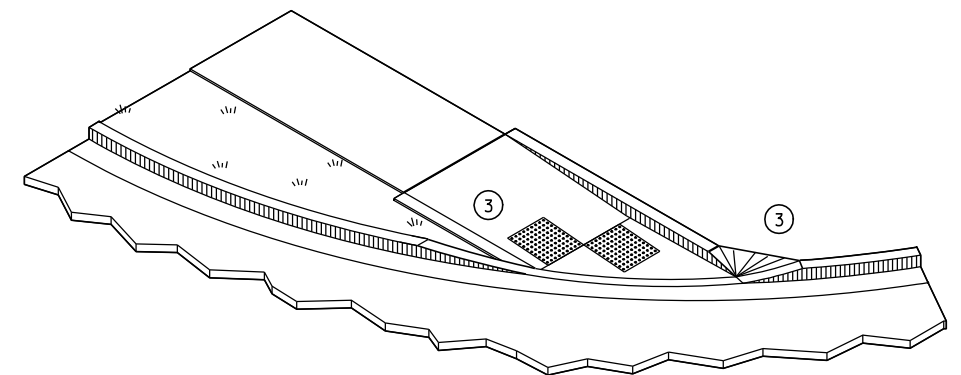
RAMP SLOPES SHALL NOT BE STEEPER THAN 12:1.

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

- ③ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS).
DO NOT MARK TRANSITION NOSE.

RADIUS (AT CURB FACE)	W = 3'- 0"		W = 4'- 0"		W = 5'- 0"		W = 6'- 0"		W = 7'- 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3 1/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3 1/4"	11'-3 1/4"	9'-1 1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3 1/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"
70 FEET	12'-2 3/4"	14'-3 1/4"	11'-1 1/4"	17'-4"	10'-1"	19'-11 3/4"	9'-3 3/4"	22'-4 1/4"	8'-8 1/4"	24'-6 1/4"
80 FEET	13'-2"	15'-8 1/2"	11'-10 1/2"	18'-11 3/4"	10'-10 3/4"	21'-10"	10'-1"	24'-4 3/4"	9'-5"	26'-8 3/4"
90 FEET	14'-1 1/2"	17'-1 1/2"	12'-8 1/4"	20'-6 1/2"	11'-7 3/4"	23'-7"	10'-9 3/4"	26'-3 3/4"	10'-1 1/4"	28'-9 1/2"
100 FEET	14'-10 1/2"	18'-3 3/4"	13'-5 1/2"	22'-0"	12'-4 1/4"	25'-2 3/4"	11'-5 3/4"	28'-1 1/2"	10'-9"	30'-9"

INTERMEDIATE RADII CAN BE INTERPOLATED



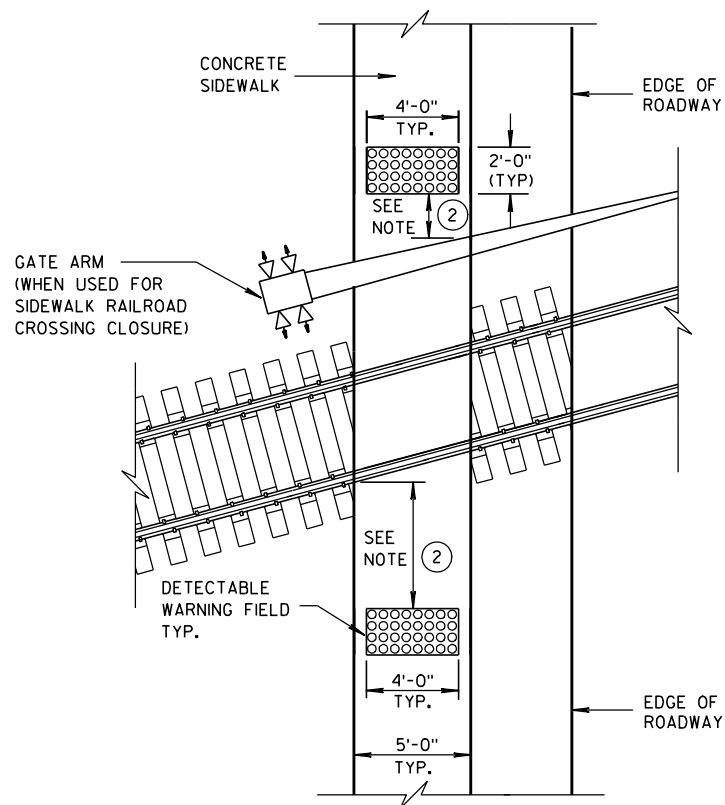
ISOMETRIC VIEW

LEGEND

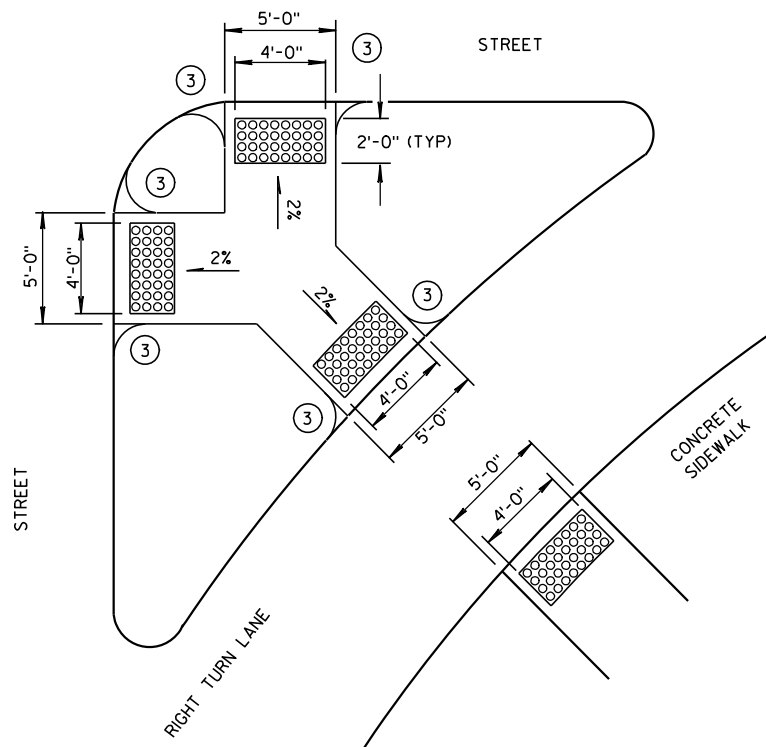
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

**CURB RAMPS
TYPE 4B**

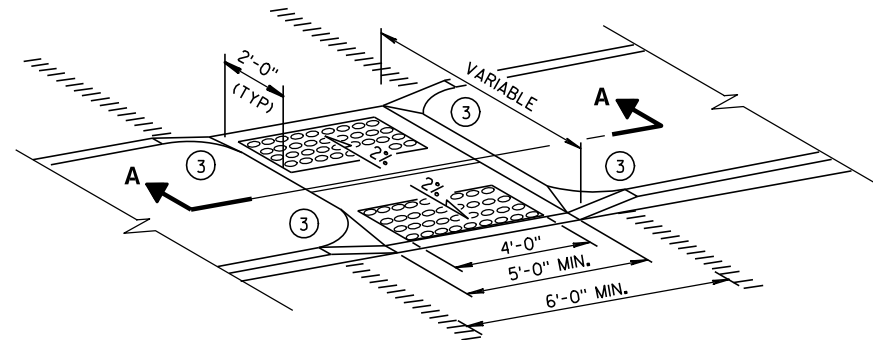
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



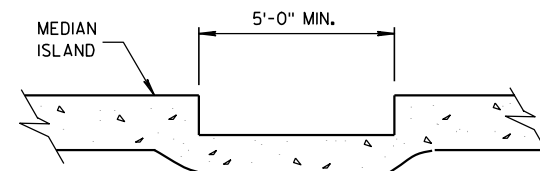
TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING



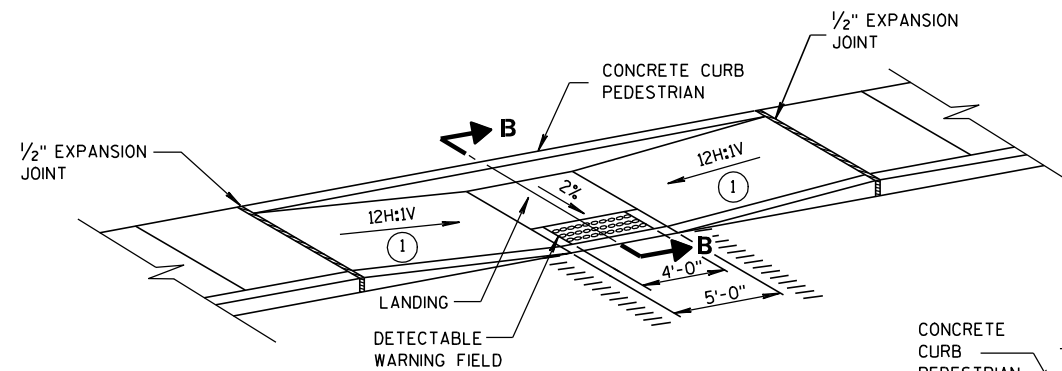
TYPE 6
DETECTABLE WARNING AT ISLANDS



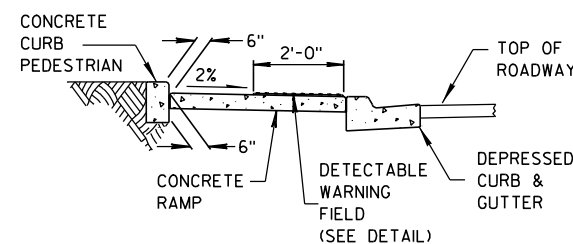
MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5



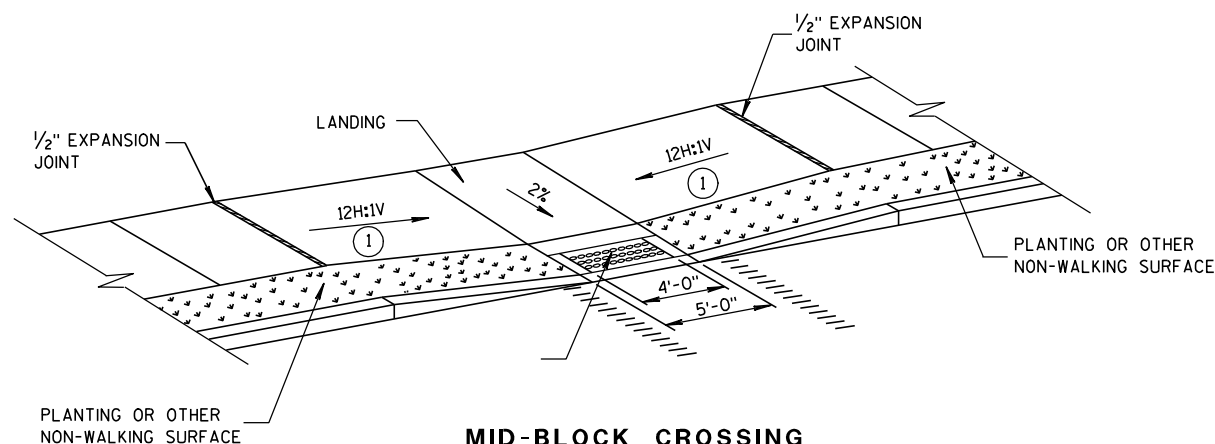
SECTION A-A



MID-BLOCK CROSSING
TYPE 7A



SECTION B-B



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

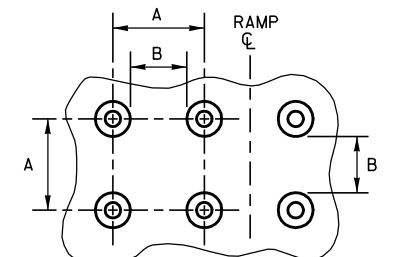
GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

- 1 SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- 2 THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- 3 INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS.) DO NOT MARK TRANSITION NOSE.

LEGEND

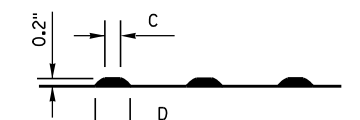
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



PLAN VIEW

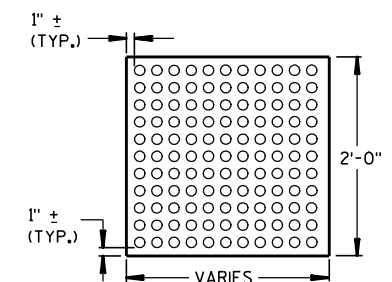
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING
PATTERN DETAIL



PLAN VIEW

DETECTABLE WARNING
FIELD (TYPICAL)

CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

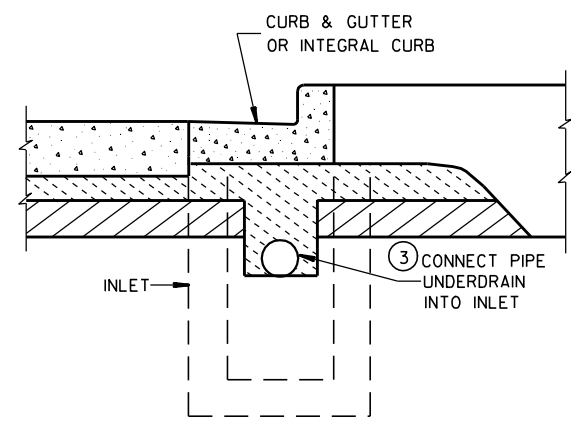
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 2-9-10
/S/ Jerry H. Zogg
ROADWAY STANDARDS 76 ENT
ENGINEER
FHWA

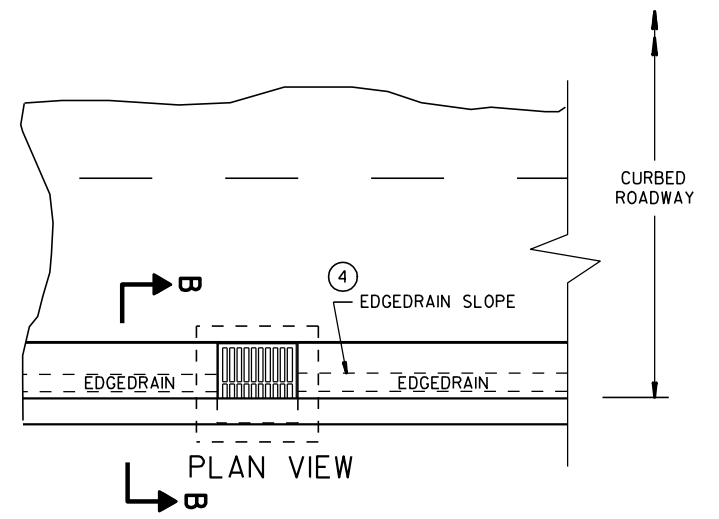
GENERAL NOTES

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.

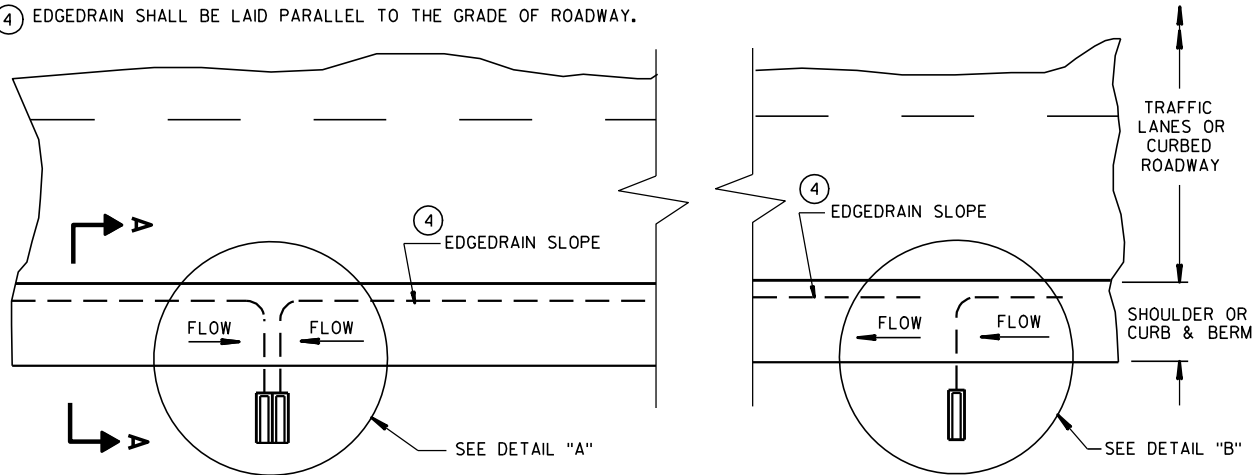
- ① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.
- ② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.
- ③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.
- ④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



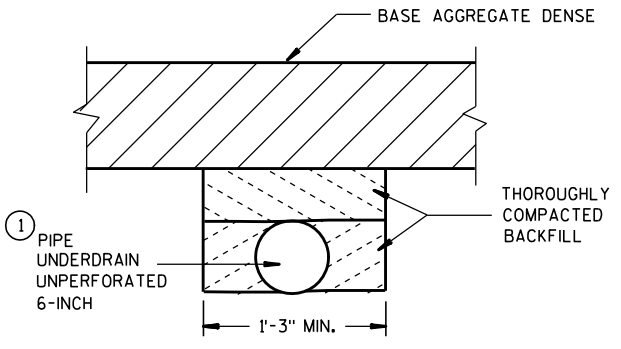
SECTION B-B
URBAN CROSS SECTION



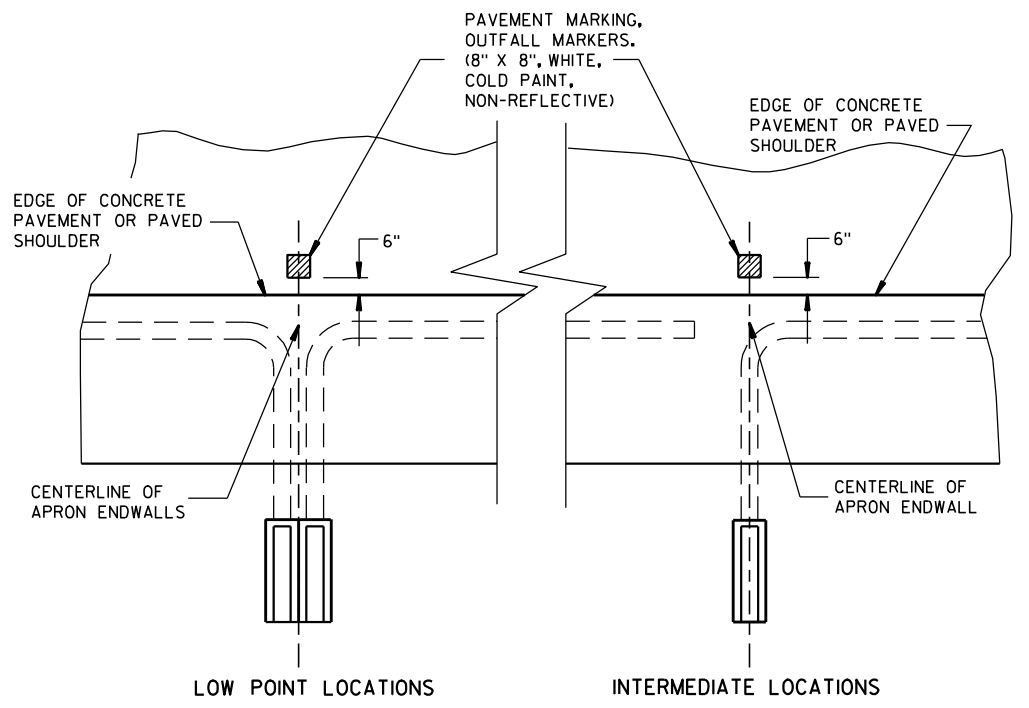
ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)



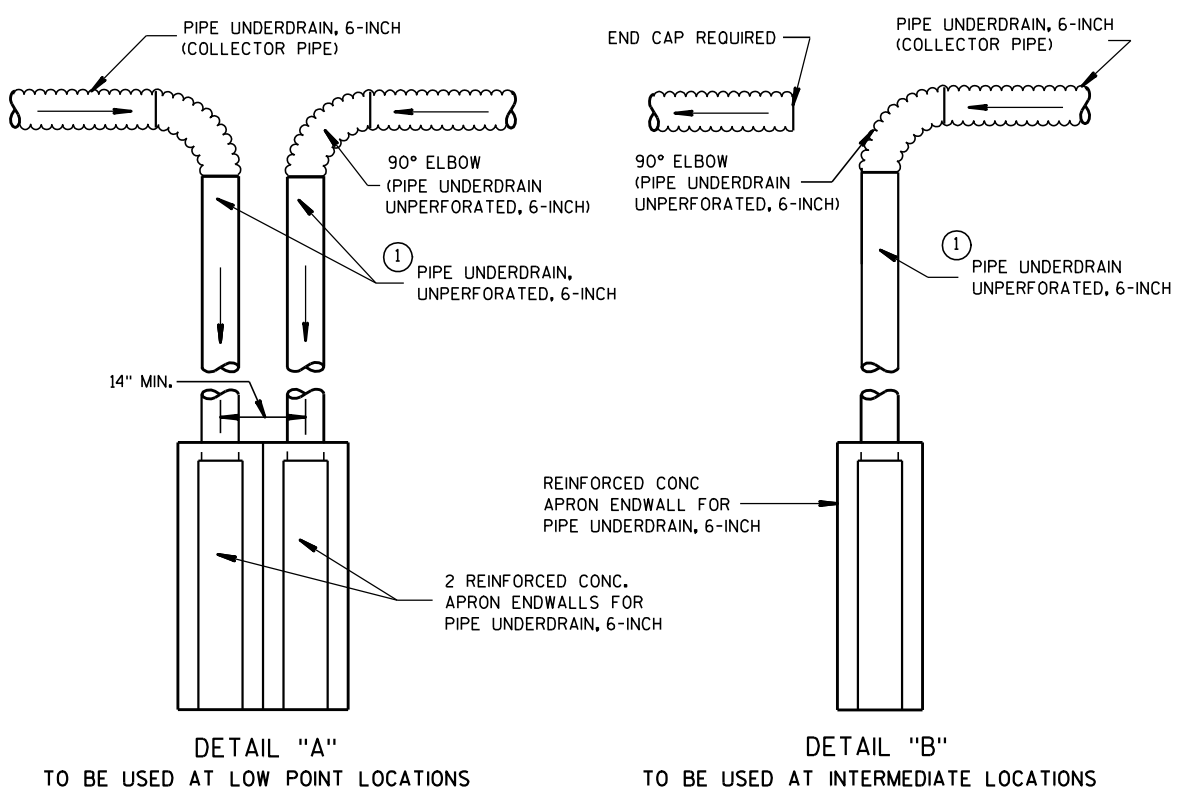
ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN OUTLETS TO ROADSIDE) ②



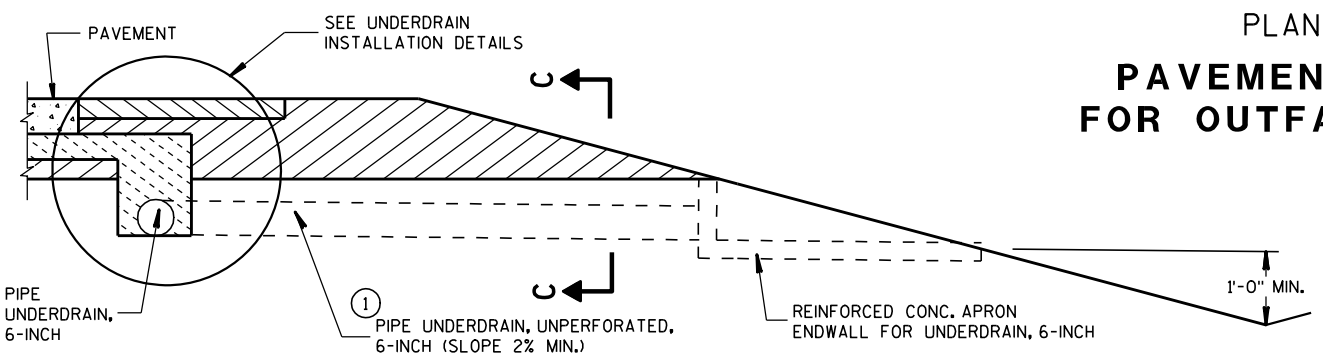
SECTION C-C
(TRENCH FOR OUTFALL PIPE)



PAVEMENT MARKING
FOR OUTFALL MARKERS



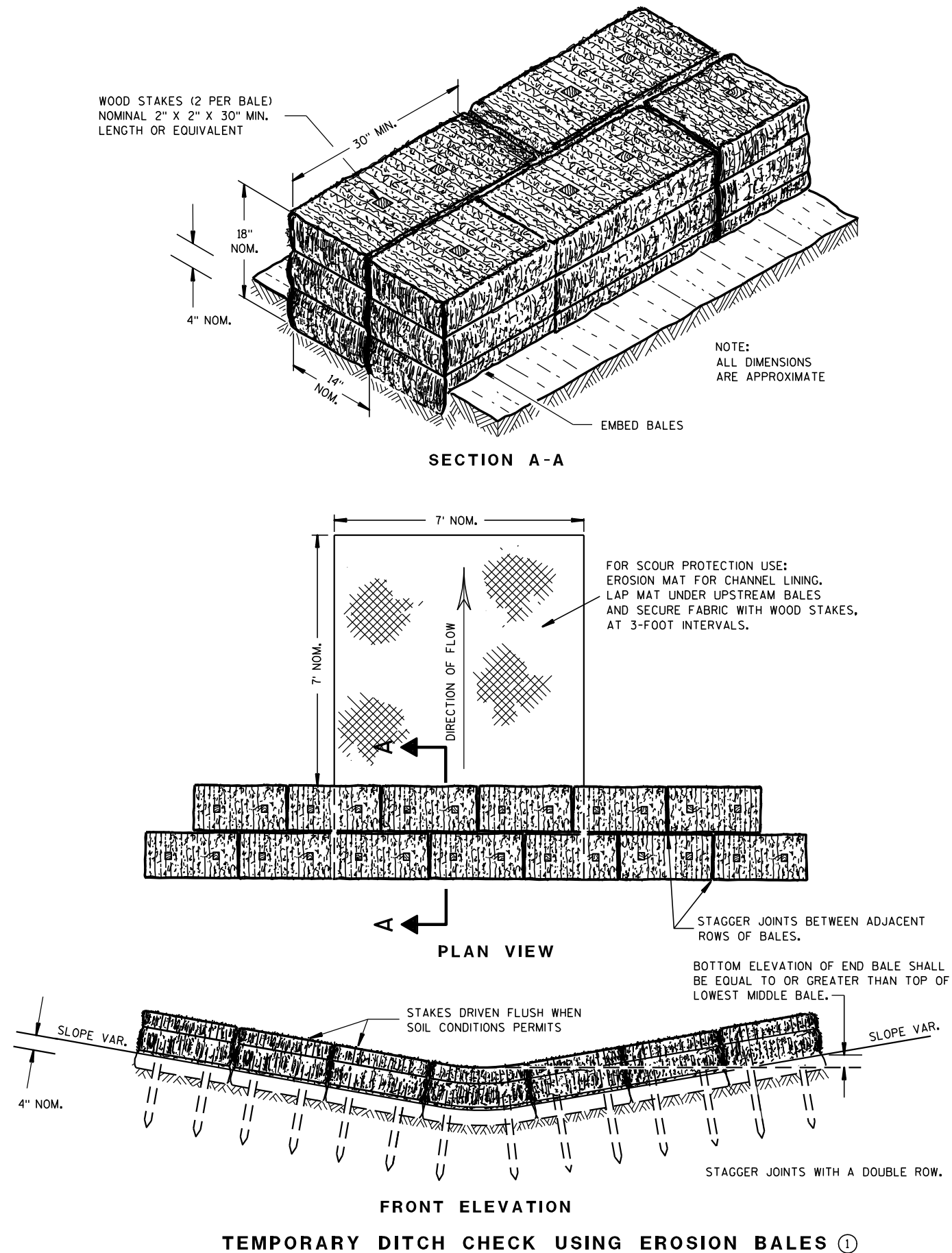
TYPICAL DRAIN OUT DETAILS



SECTION A-A
RURAL CROSS SECTION

EDGEDRAIN OUTLET
AND OUTFALL MARKERS

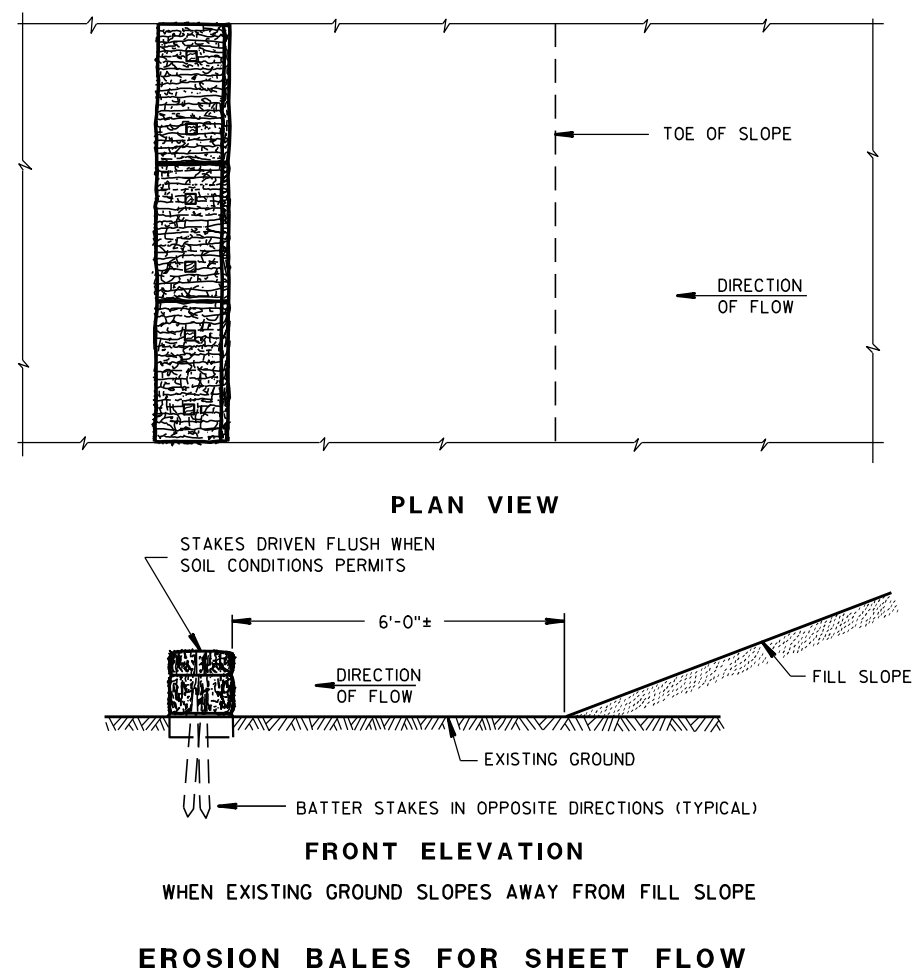
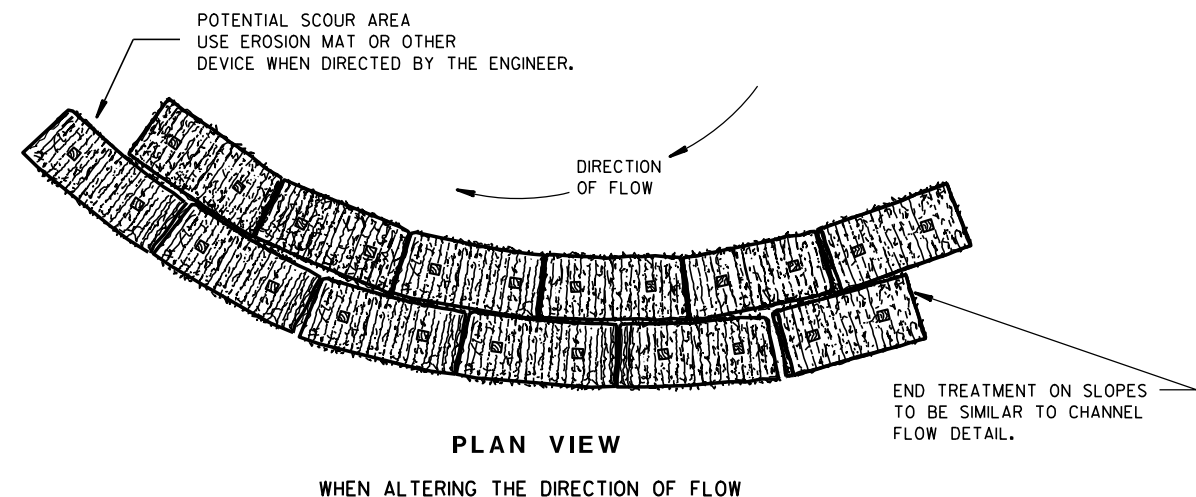
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

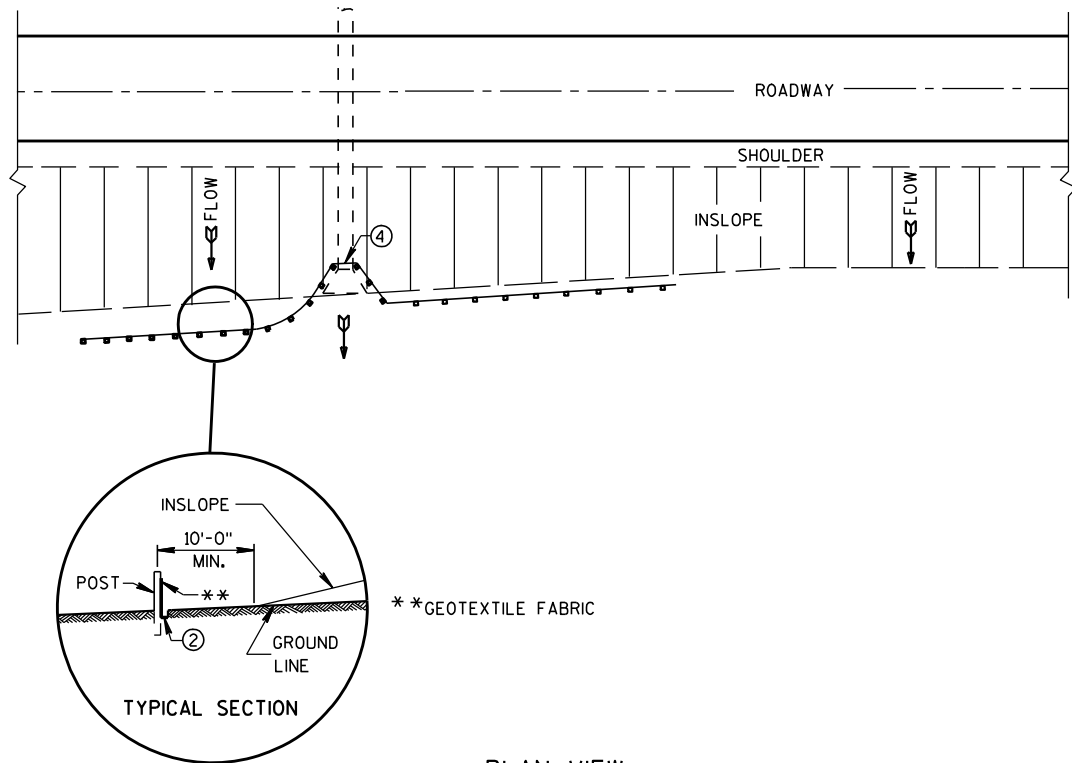
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

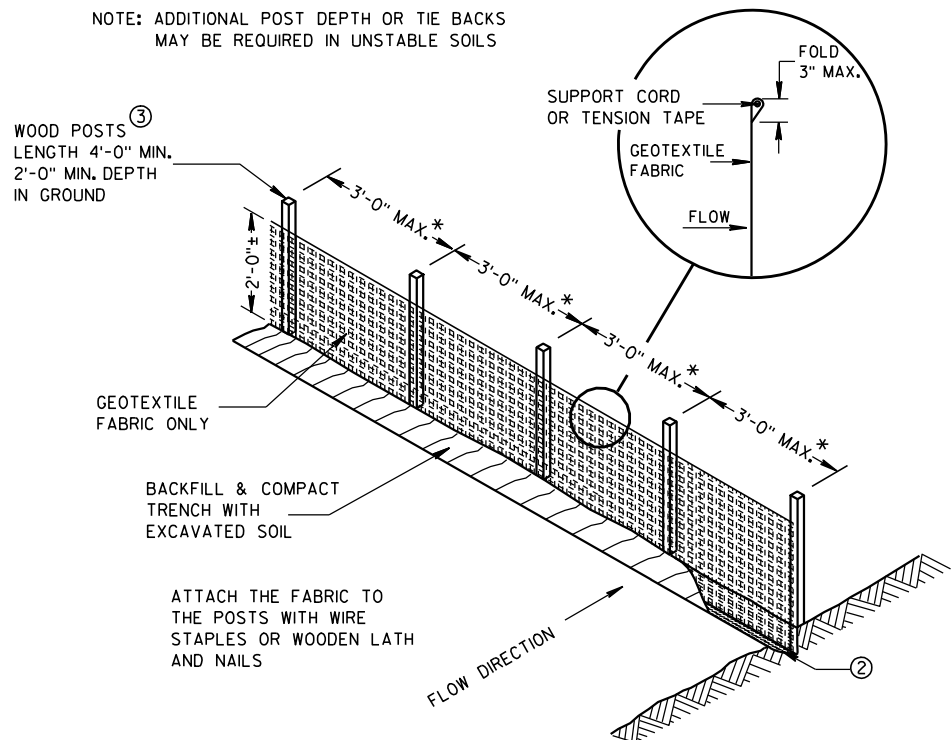
APPROVED

6/04/02
DATE/S/ Beth Conn-----
CHIEF ROADWAY DEVELOPER 78 ENGINEER

FHWA

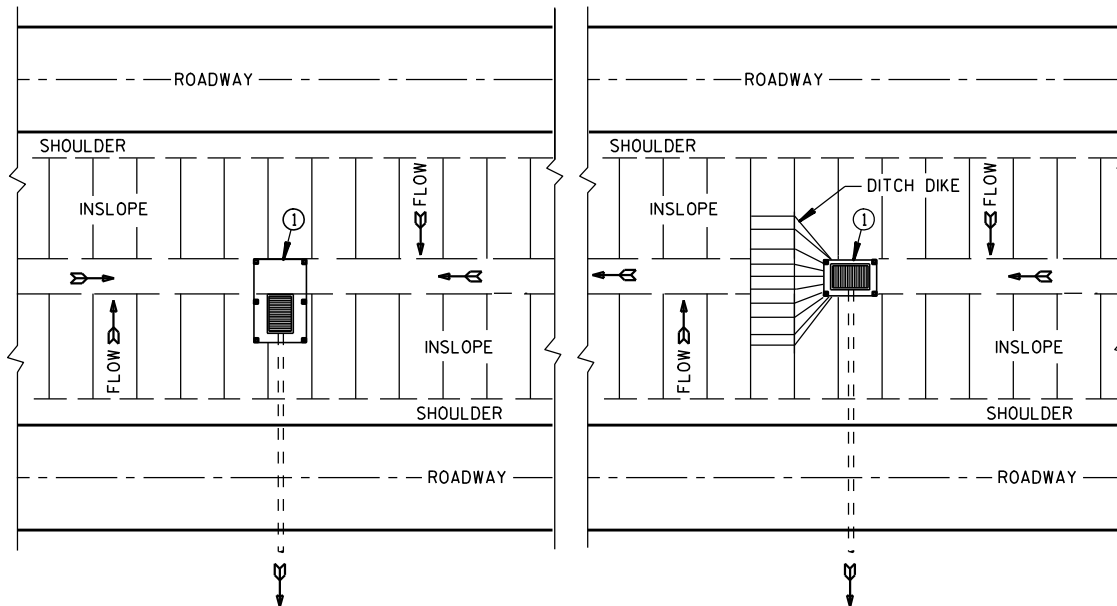


PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

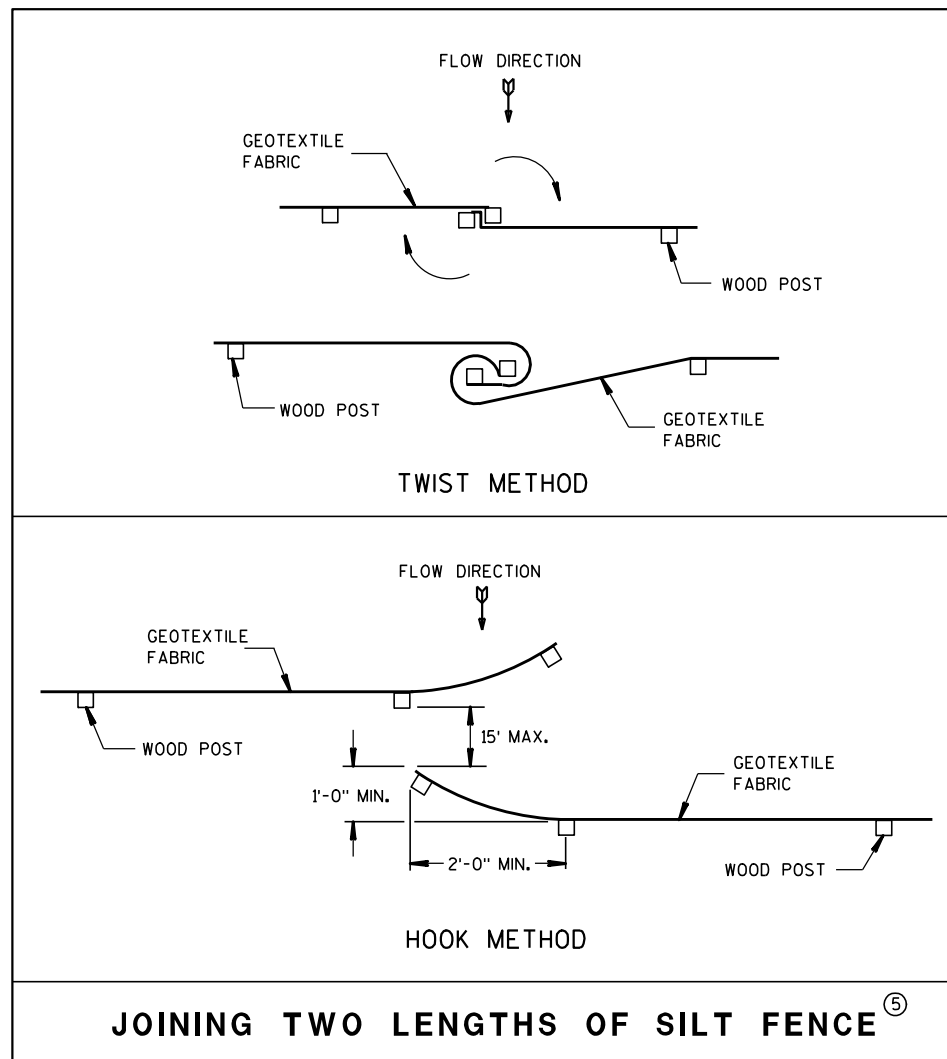


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



SITUATION 1
SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

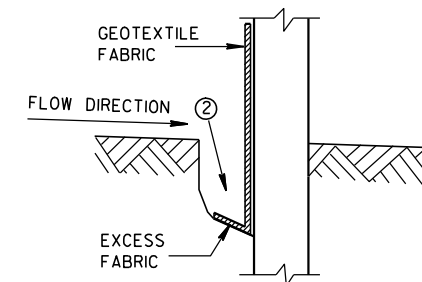


JOINING TWO LENGTHS OF SILT FENCE ⑤

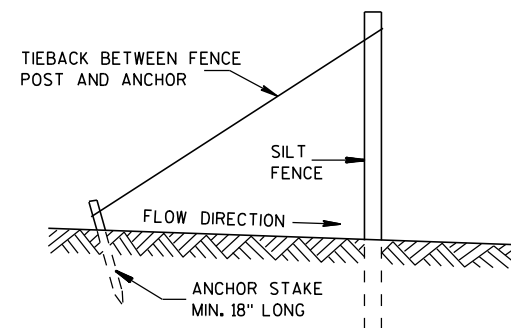
GENERAL NOTES

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 FOR MANUAL INSTALLATIONS THE 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.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

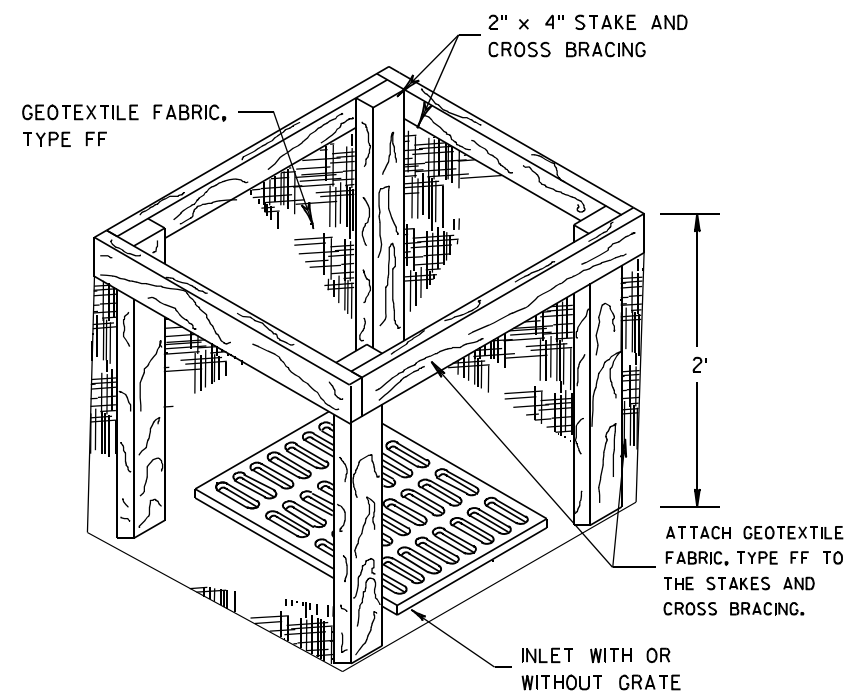
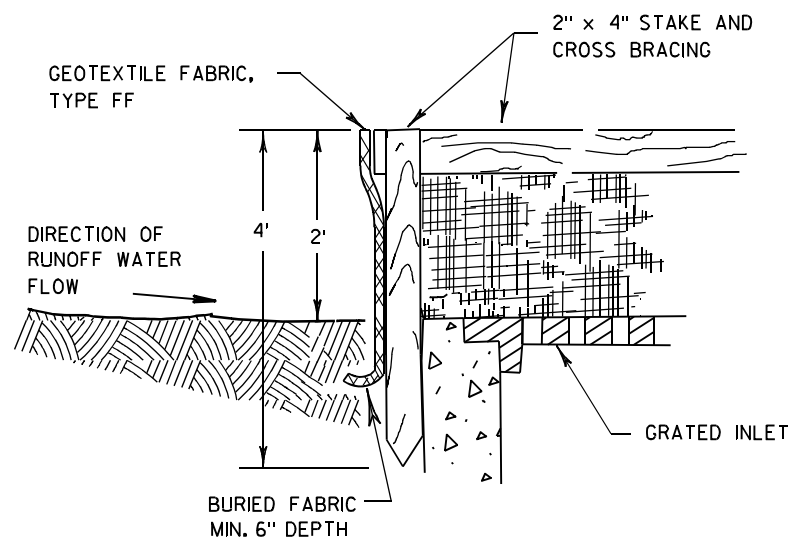


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Conn CHIEF ROADWAY DEVELOPER 79 ENGINEER
FHWA	



INLET PROTECTION, TYPE A

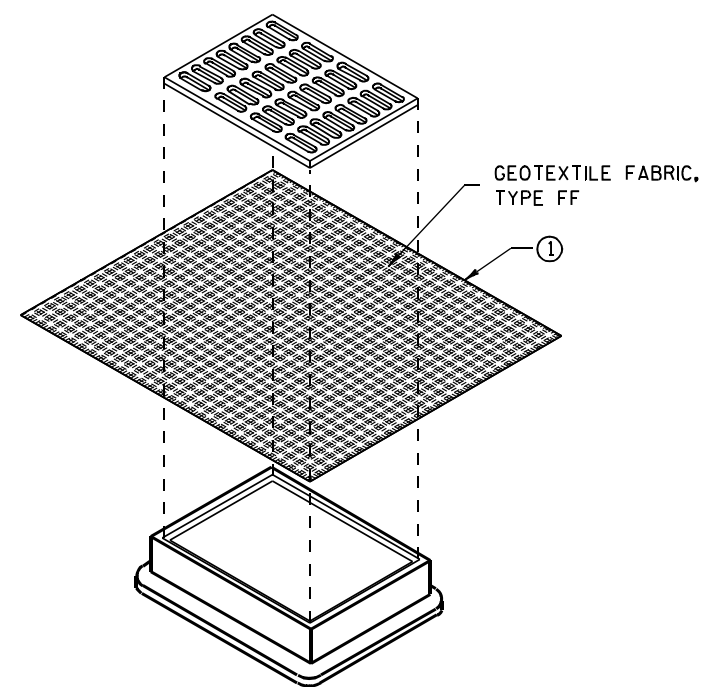
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

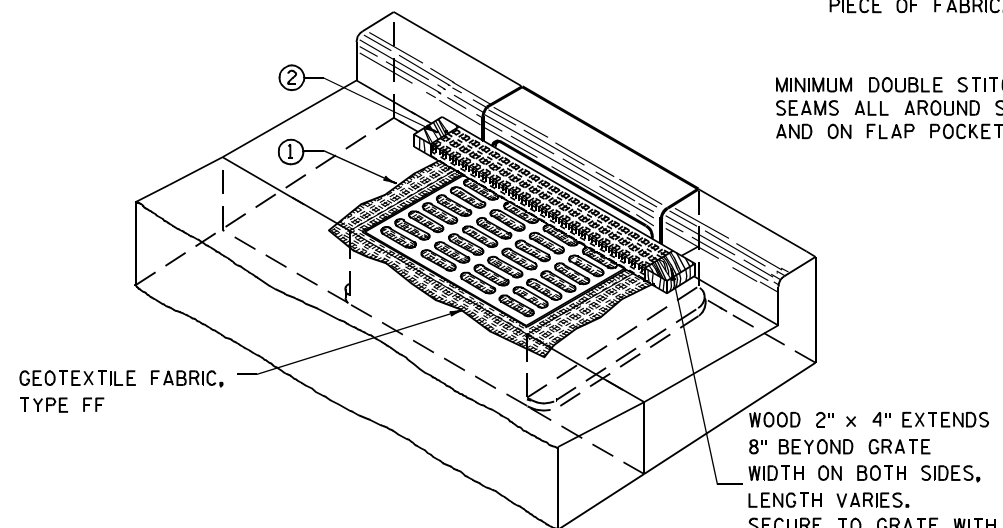
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

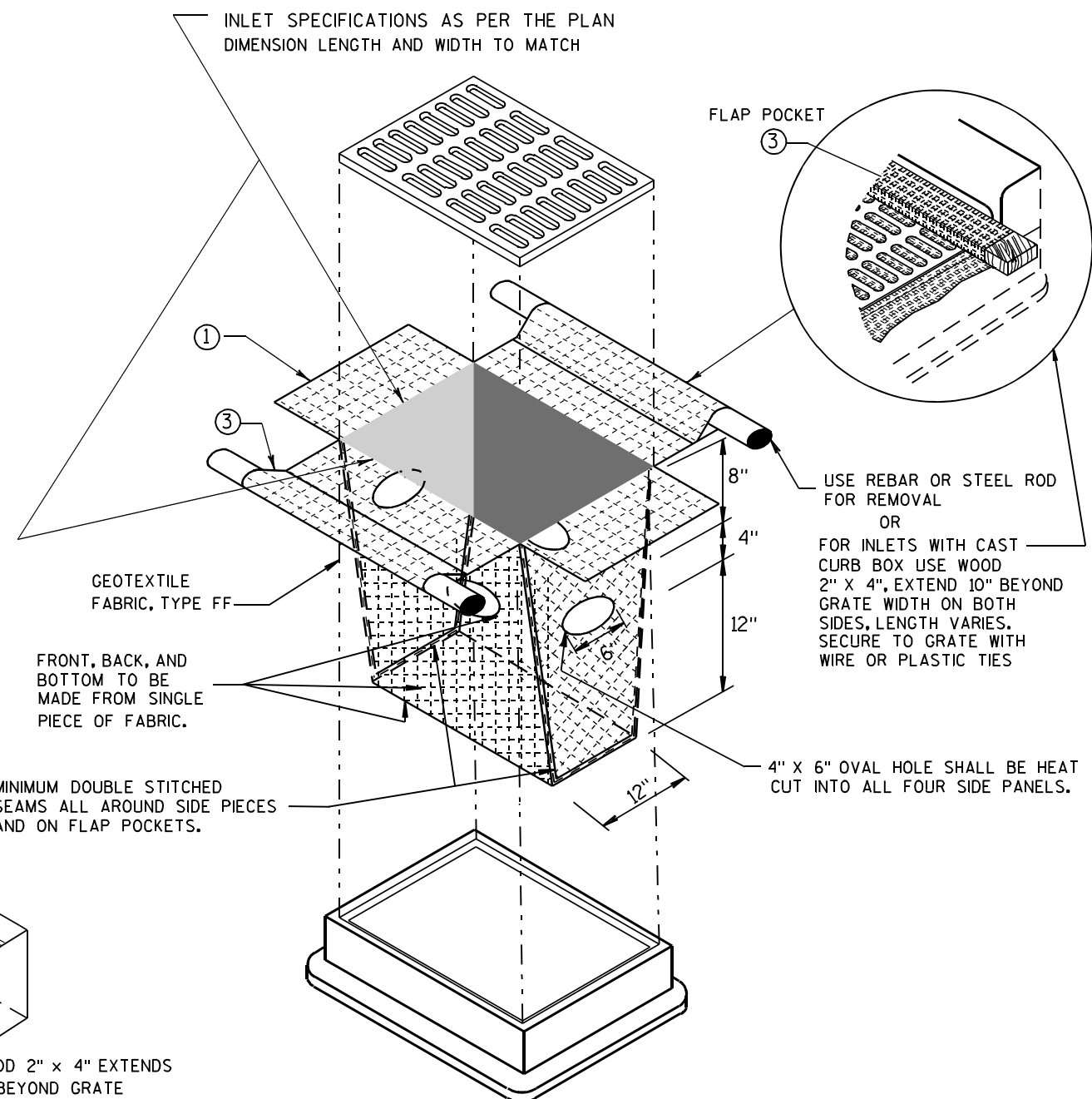
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

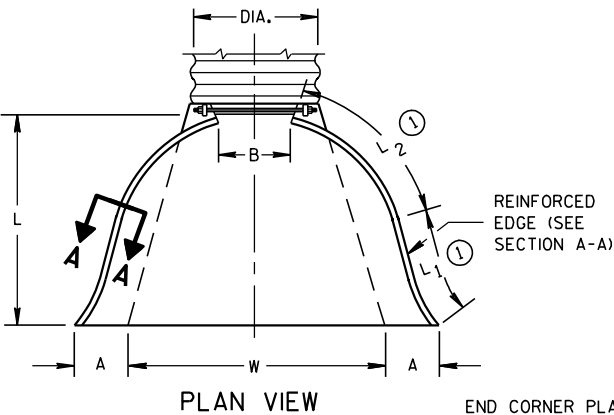
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

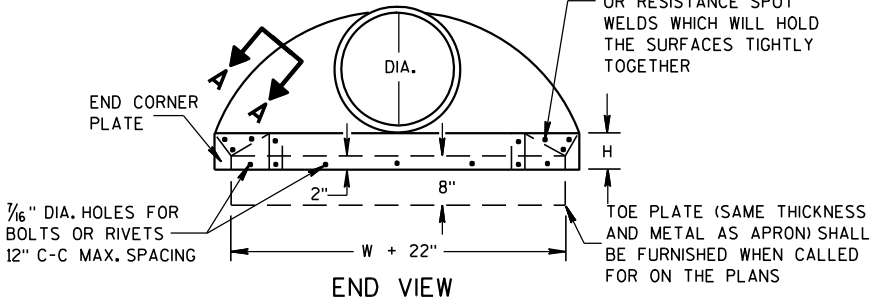
APPROVED
10/16/02 /S/ Beth Connolly
DATE 80
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1½")	L ₁ ①	L ₂ ①	W (±2")			
12	.064	.060	6	6	6	21	12	17½	24	2½ to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21¾	30	2½ to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28¼	36	2½ to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29⅝	42	2½ to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37¼	48	2½ to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52¼	60	2½ to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59¾	72	2½ to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75⅝	84	2½ to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2¼ to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85½	102	2¼ 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	1½ to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1½ to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1½ to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1½ to 1	3 Pc.	

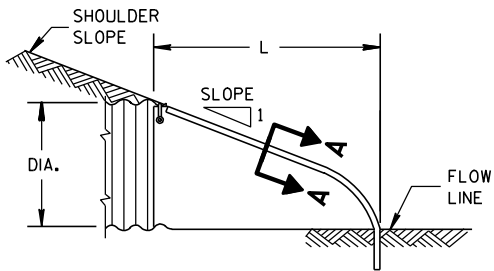
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



REINFORCED
EDGE (SEE
SECTION A-A)

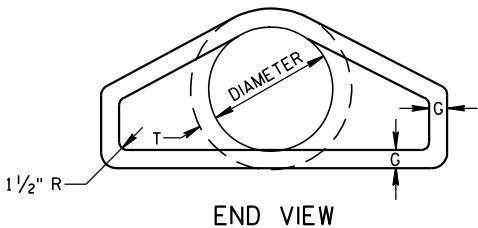
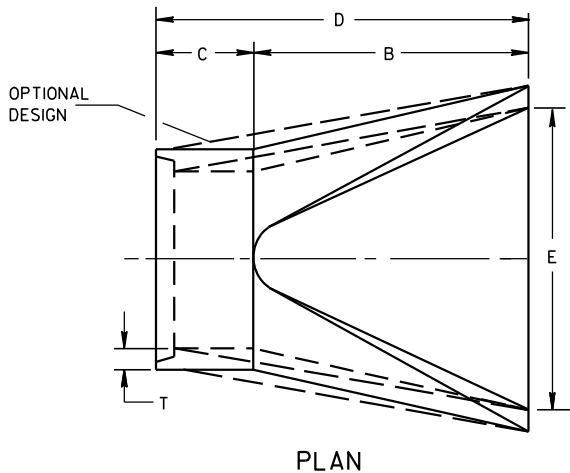


SIDE ELEVATION
METAL ENDWALLS

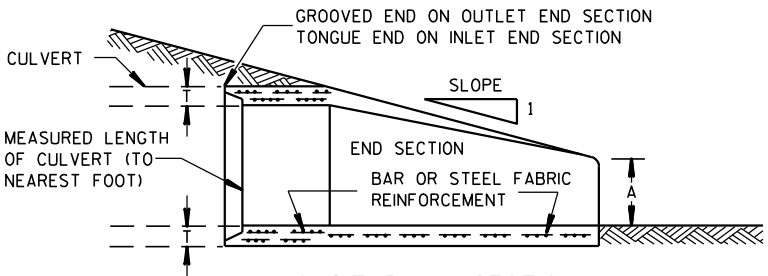


REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ¹ / ₈	72 ¹ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43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

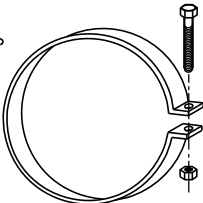
*MINIMUM
**MAXIMUM



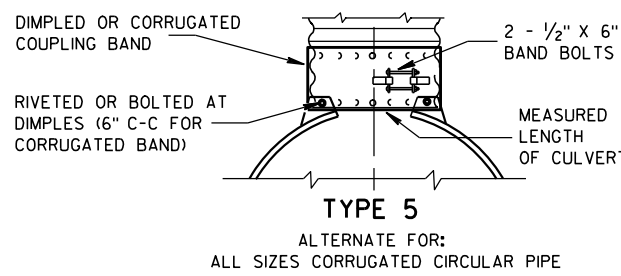
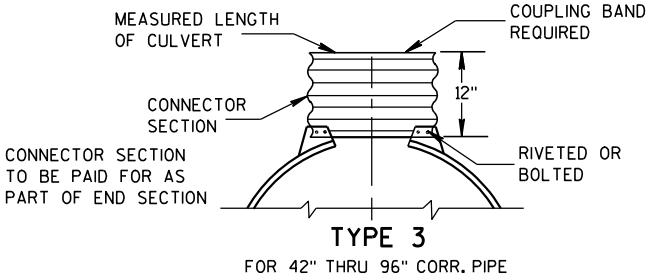
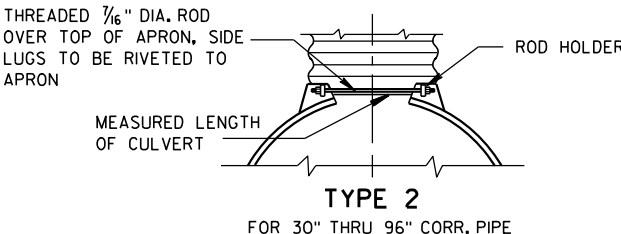
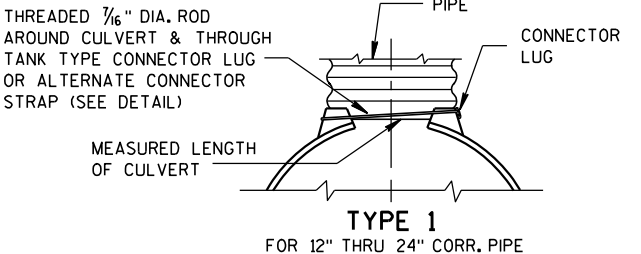
LONGITUDINAL SECTION
CONCRETE ENDWALLS



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



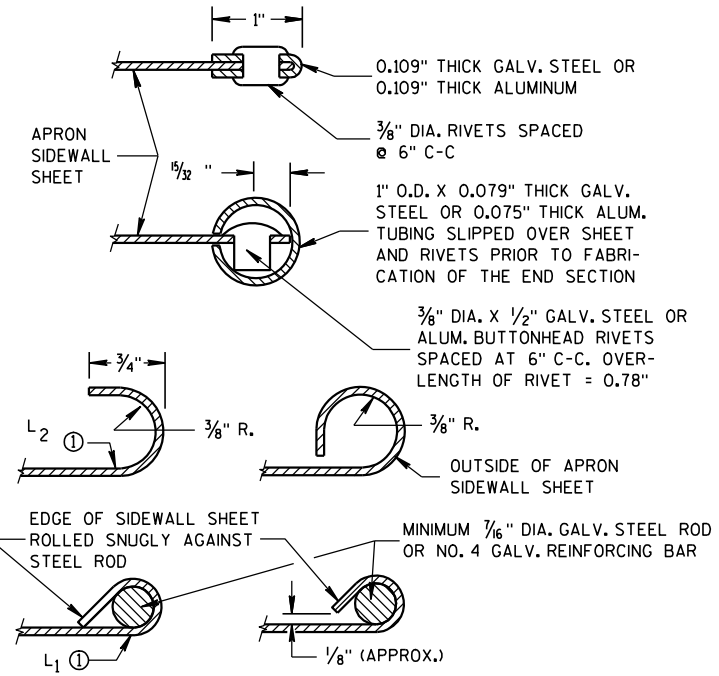
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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 VISE VERSA. GALVANIZED STEEL OR
ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE
OF THE SAME METAL.

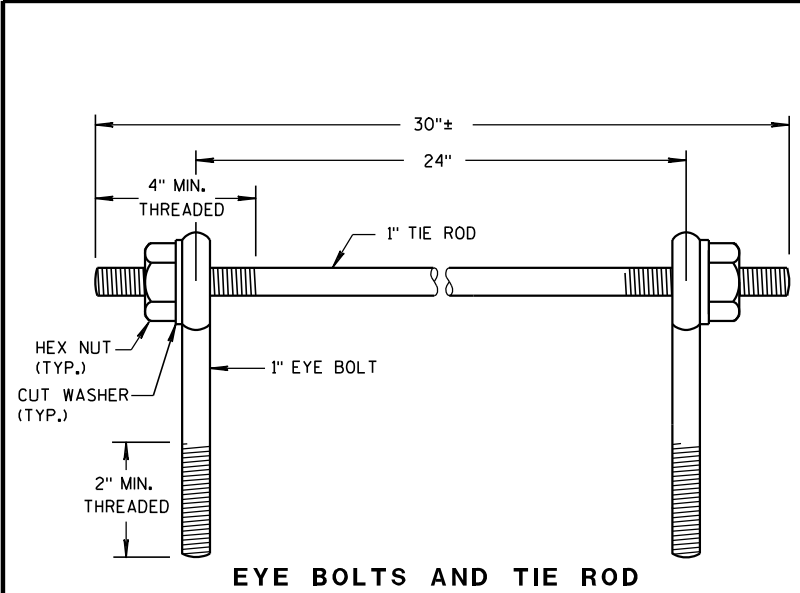
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

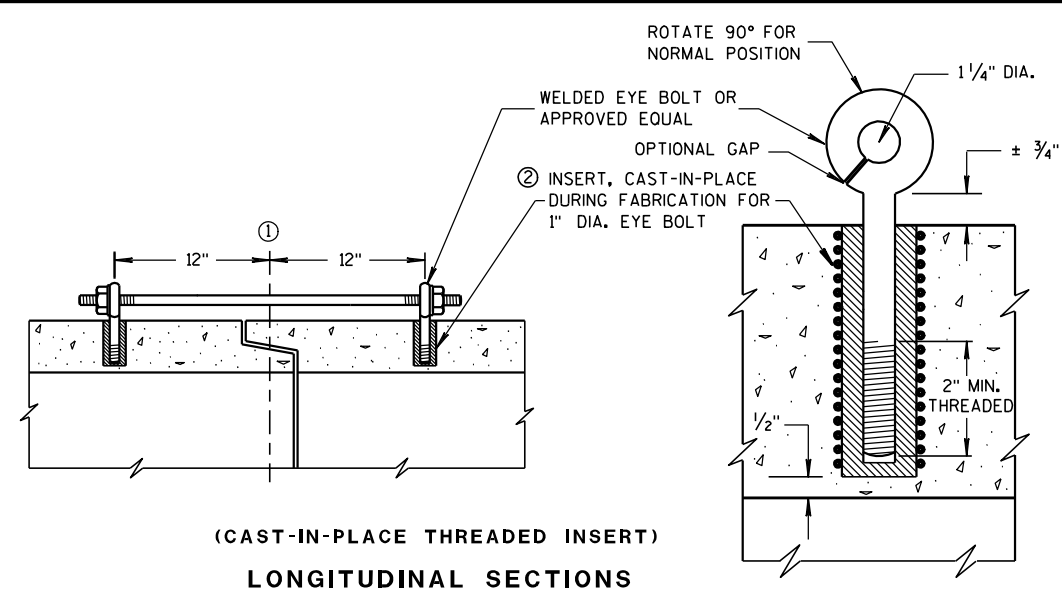
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOP	81	NEER
FHWA			



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)
LONGITUDINAL SECTIONS

GENERAL NOTES

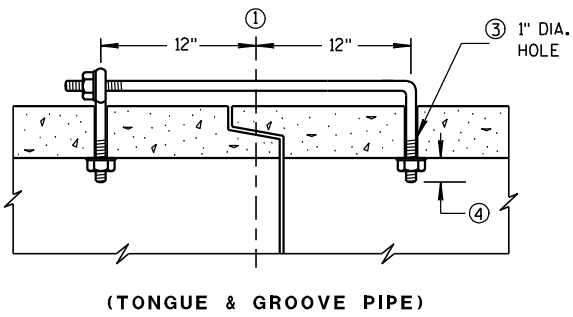
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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.

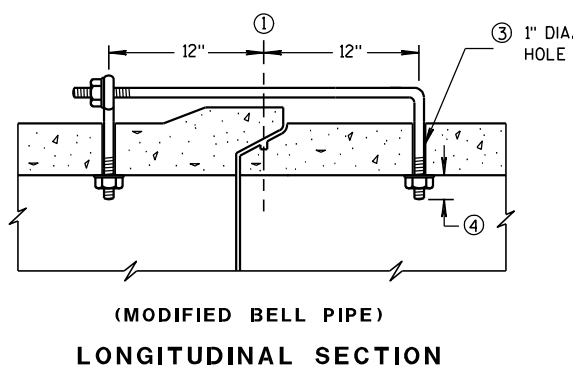
DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

- 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 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 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

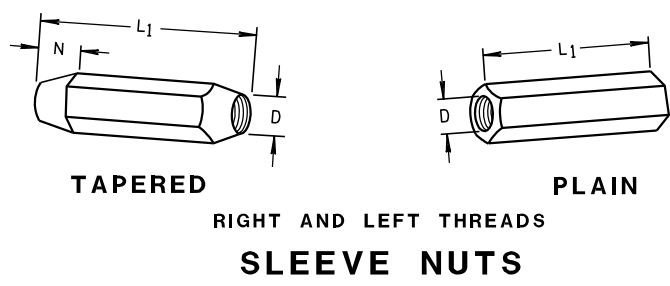
EYE BOLT DIMENSION TABLE

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

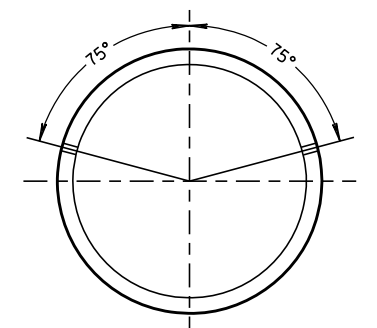
ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES

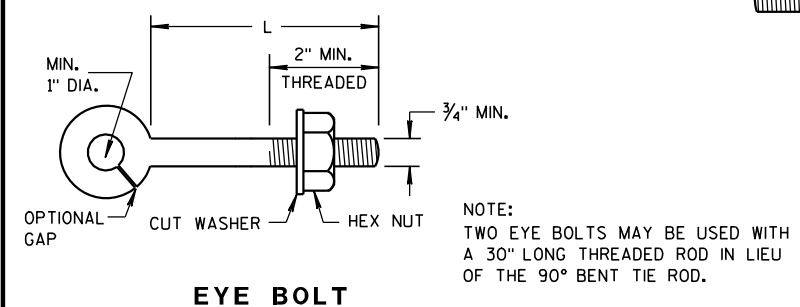


TAPERED
PLAIN
RIGHT AND LEFT THREADS
SLEEVE NUTS

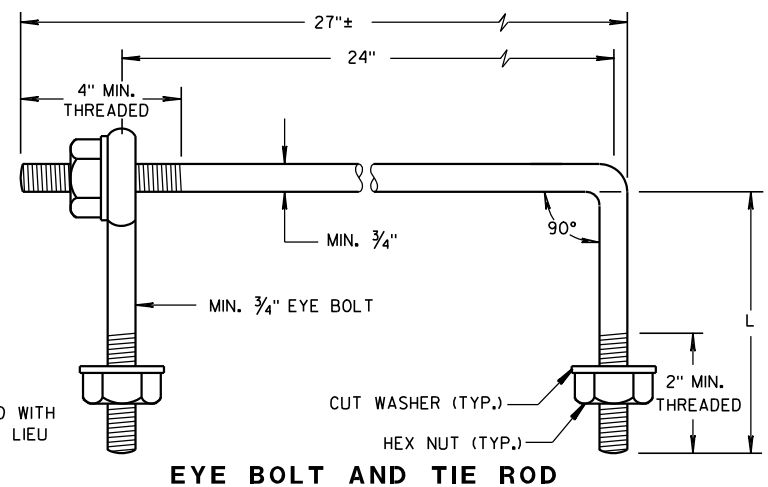


PLACEMENT OF (2) CAST-IN-PLACE
INSERTS OR HOLES DURING FABRICATION
FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



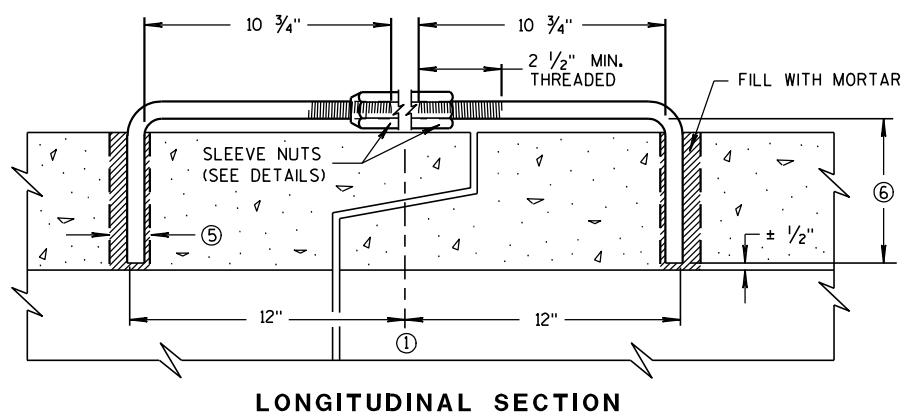
EYE BOLT



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)

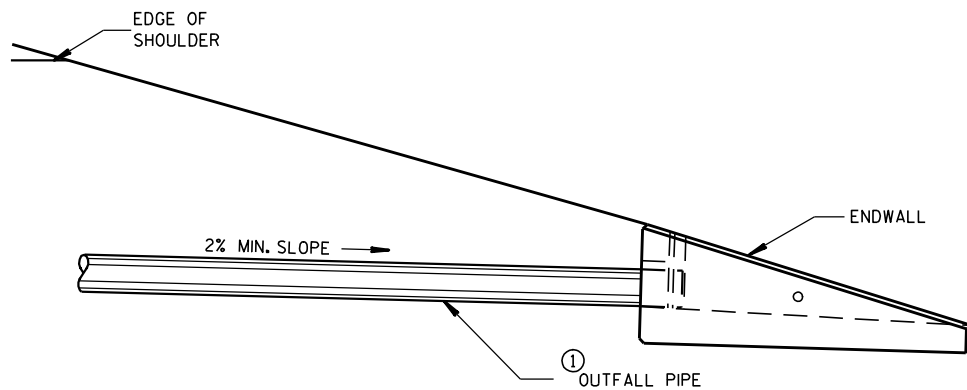
JOINT TIES FOR
CONCRETE PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

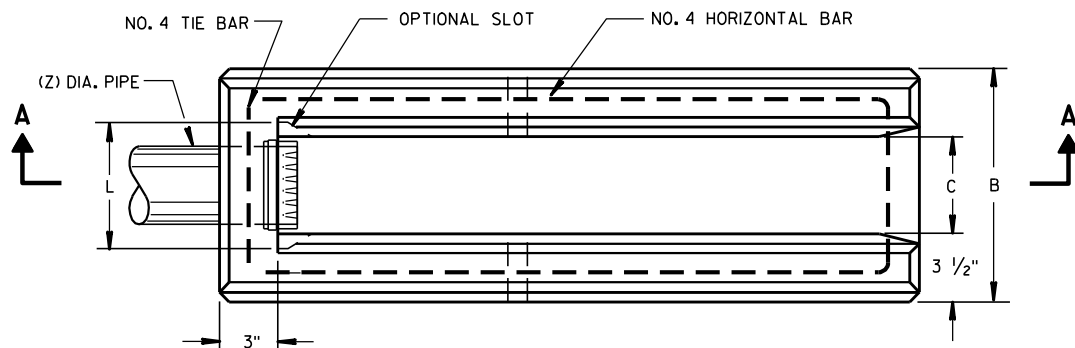
APPROVED
12/17/07
DATE
/S/ Jerry H. Zorn
ROADWAY STANDARDS 82
ENGINEER
FHWA

DIMENSIONS IN INCHES											
PIPE DIA.	A	B	C	D	E	F	G	H	J	L	Z
**4	6	12	5 1/4	9	8	32	36	11	2 3/8	6 1/2	4
6	8	14	7 1/4	11	10	42	44	13	3 5/8	8 1/2	6

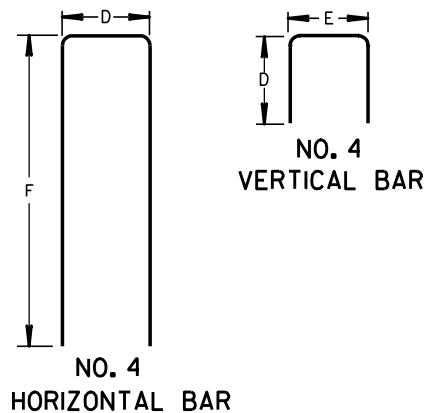
** APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



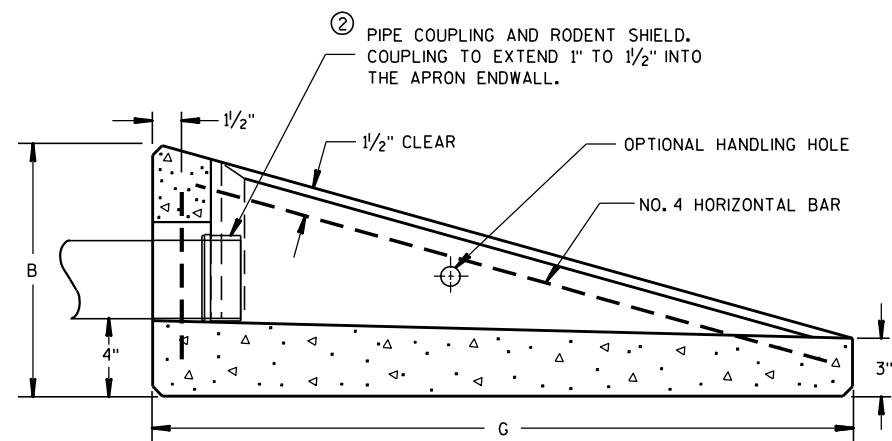
INSTALLATION DETAIL



PLAN VIEW

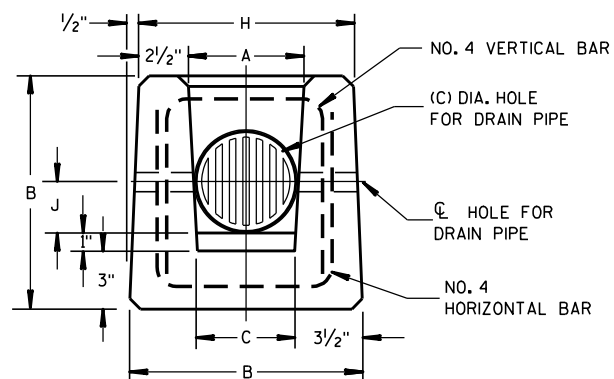


BAR STEEL REINFORCEMENT DETAILS



SECTION A-A

CONCRETE APRON ENDWALL FOR UNDERDRAIN



END VIEW

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.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

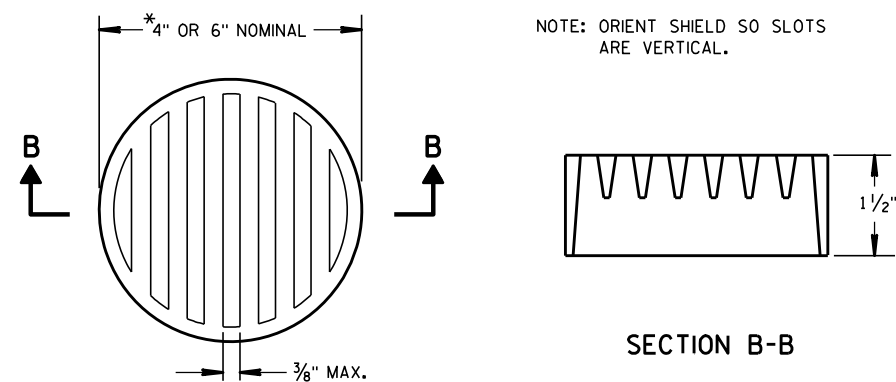
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

- ① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

- ② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



② RODENT SHIELD

*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

**REINFORCED
CONCRETE APRON ENDWALL
FOR PIPE UNDERDRAIN**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/10/98

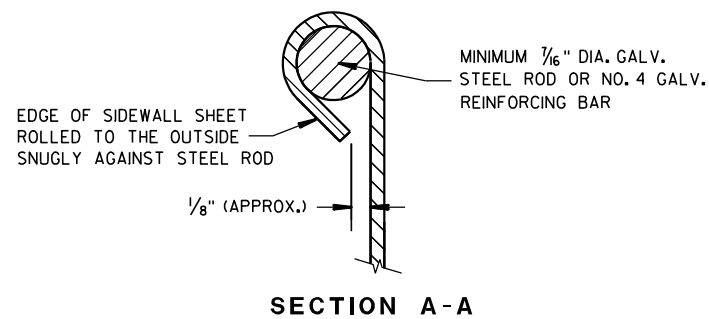
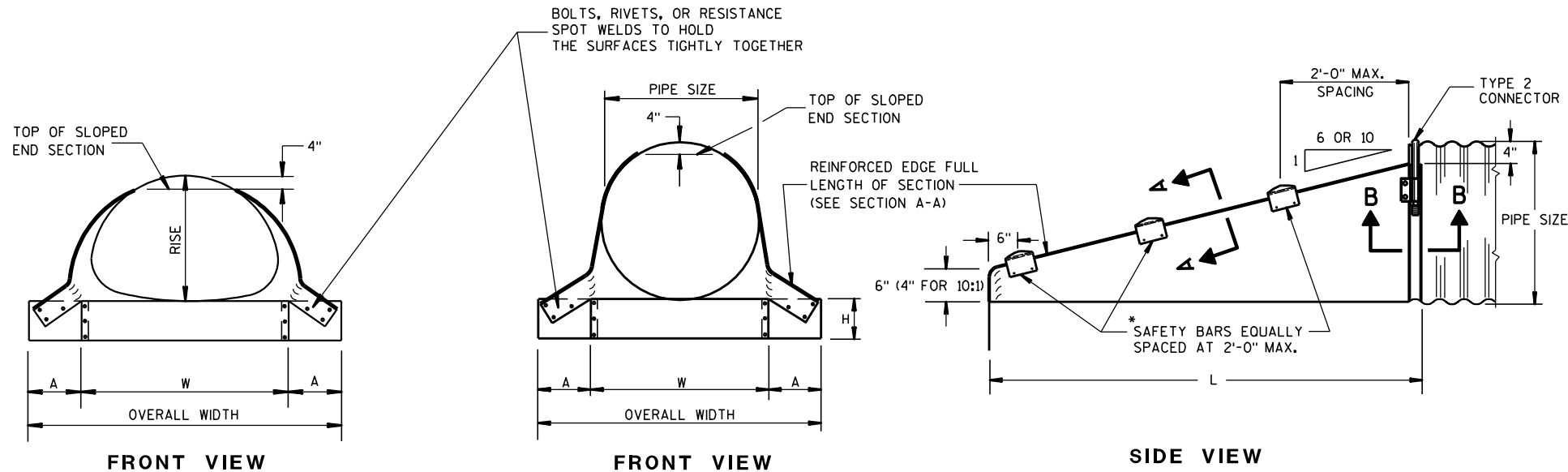
DATE

FHWA

/S/ Rory L. Rhinehart

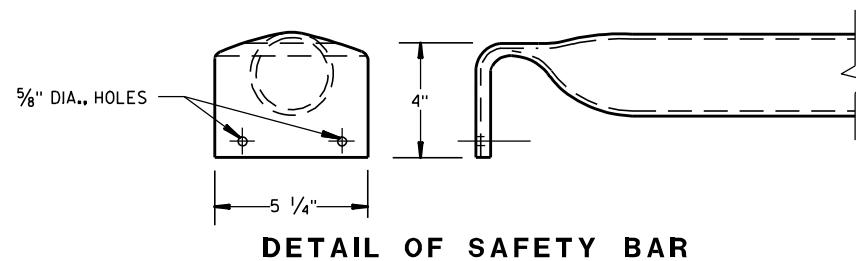
CHIEF ROADWAY DEVELOPER

83 INEER

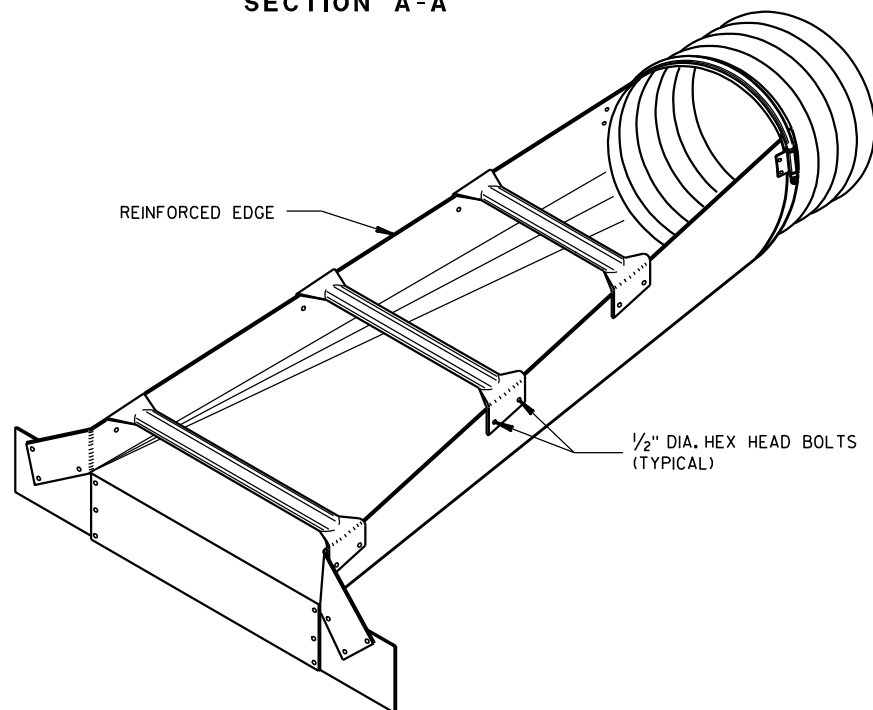


*NOTE: THREE SAFETY BARS ARE SHOWN. ACTUAL NUMBER OF BARS REQUIRED AT A 2'-0" C-C MAX. SPACING WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

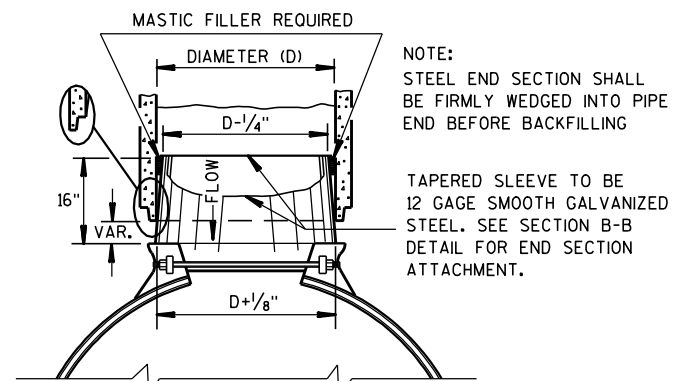
3" GALVANIZED PIPE, FLATTEN ENDS, THEN BEND OUTSIDE 4" TO MATCH END SECTION SIDES.



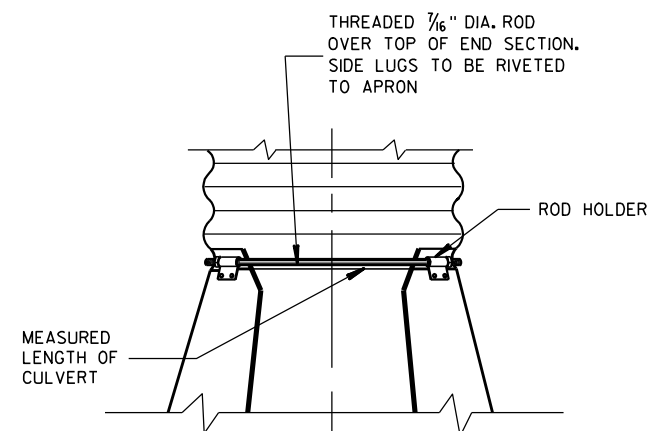
DETAIL OF SAFETY BAR



ISOMETRIC VIEW



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



TYPE 2 CONNECTION DETAIL

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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

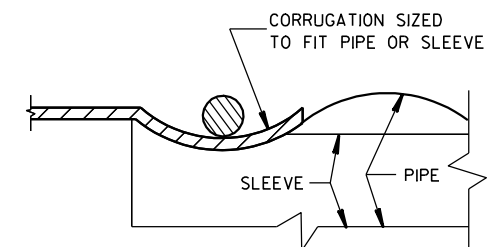
SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS									
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS			
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	6:1	30	10:1	70
18	.064	8	6	24	40	6:1	48	10:1	100
21	.064	8	6	27	43	6:1	66	10:1	130
24	.064	8	6	30	46	6:1	84	10:1	160
30	.109	12	9	36	60	6:1	120	10:1	220
36	.109	12	9	42	66	6:1	156	10:1	280
42	.109	16	12	48	80	6:1	192	—	—
48	.109	16	12	54	86	6:1	228	—	—
54	.109	16	12	60	92	6:1	264	—	—
60	.109	16	12	66	98	6:1	300	—	—

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS											
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS			
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	6:1	138	—	—
48	57	38	.109	16	12	63	95	6:1	168	—	—
54	64	43	.109	16	12	70	102	6:1	198	—	—

① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".

② ACTUAL SLOPE GREATER THAN 10:1.

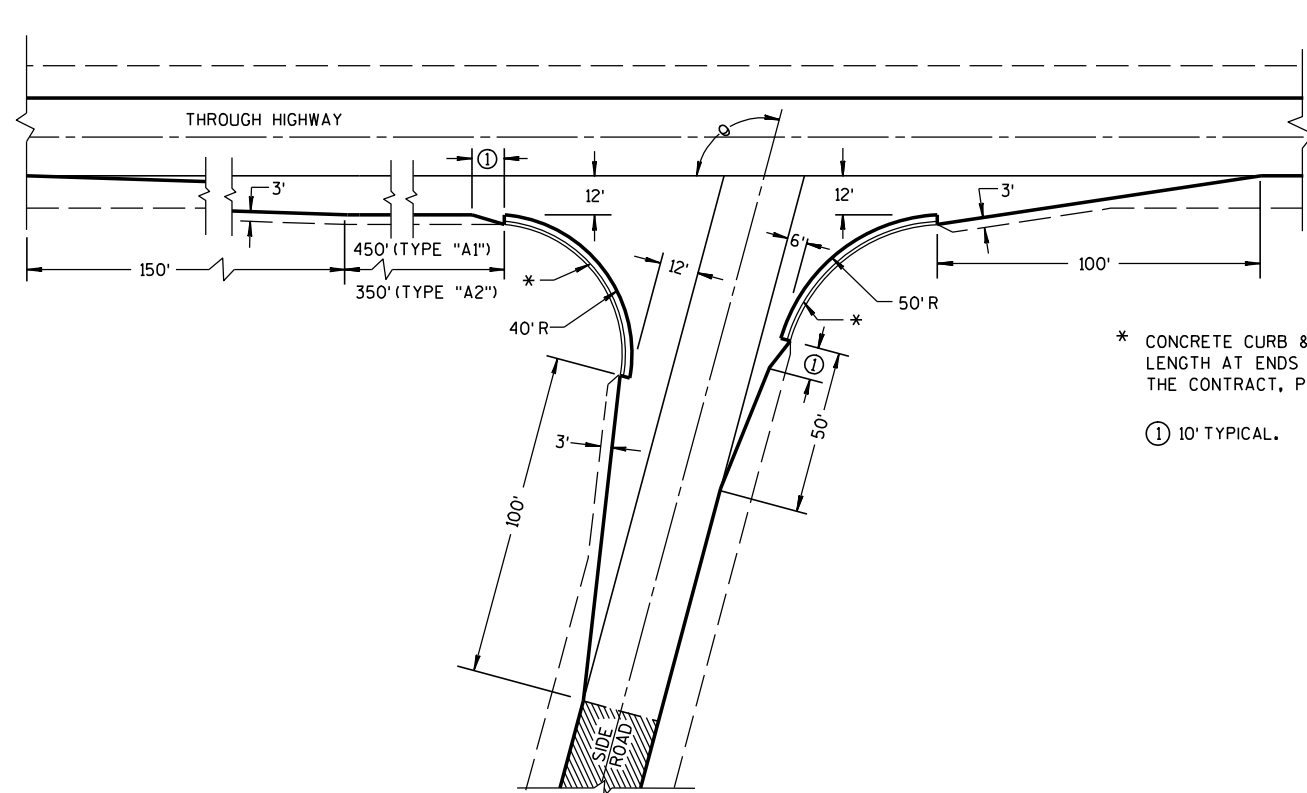


SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

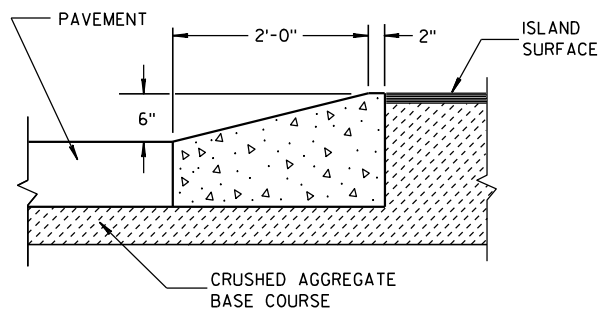
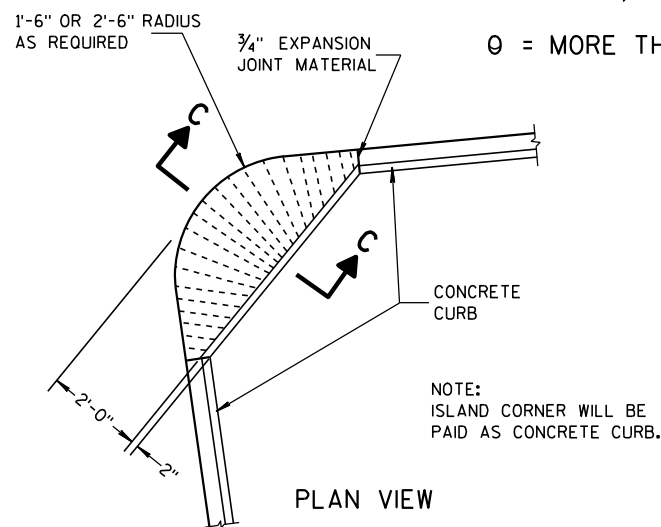
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 DATE /S/ Jerry H. 7-4-12
ROADWAY STANDARDS 184 ENT
FHWA ENGINEER



* CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.

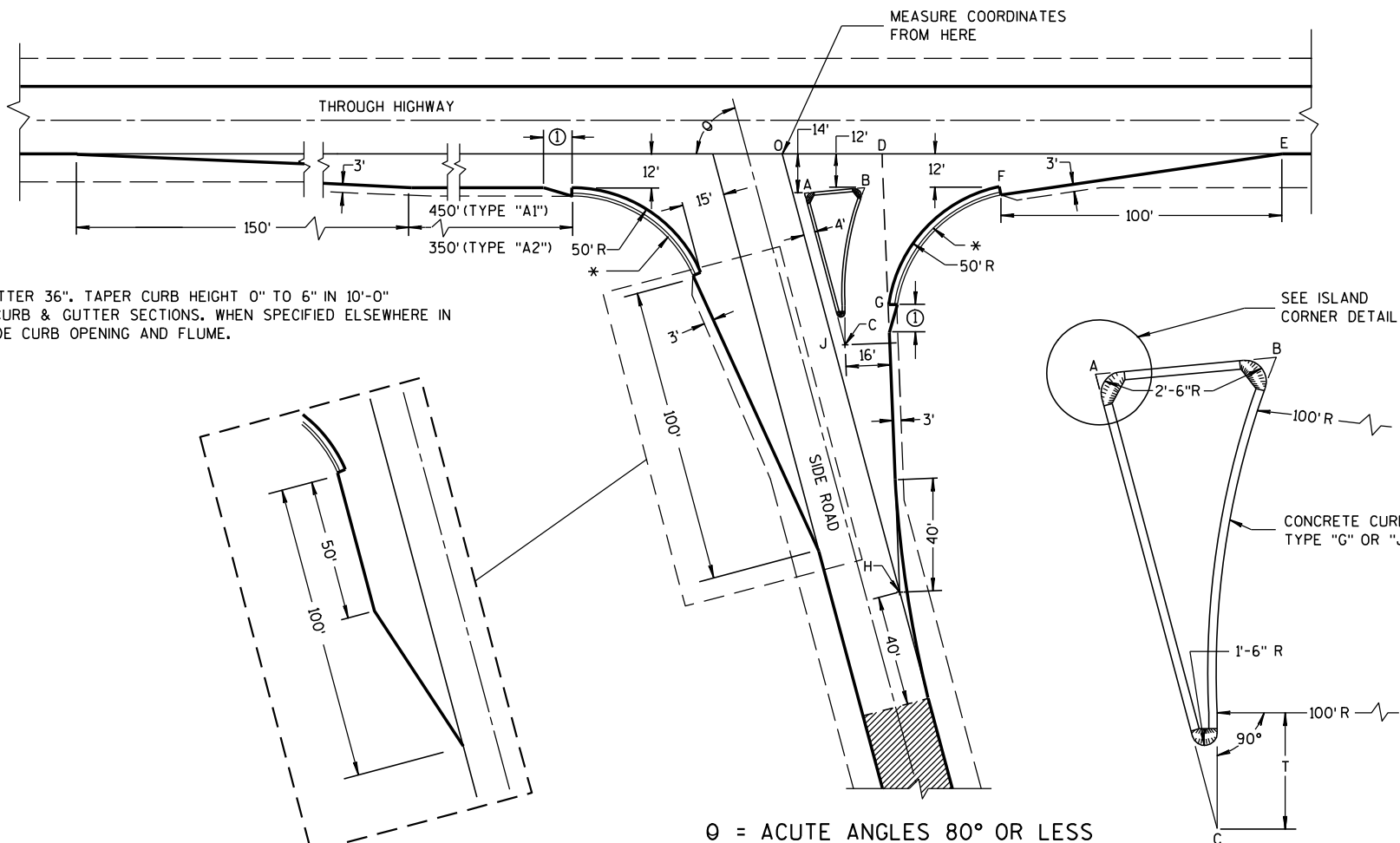
① 10' TYPICAL.



SECTION C-C

ISLAND CORNER DETAIL

(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)



SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 θ = ACUTE ANGLES 70° OR LESS

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 -14.0	44.9 -12.0	46.4 -72.4	41.9 0.0	205.0 0.0	104.6 -12.0	64.0 -75.5	85.0 -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 -14.0	39.0 -12.0	37.8 -71.6	39.4 0.0	196.1 0.0	95.7 -12.0	54.1 -71.5	70.5 -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 -14.0	33.9 -12.0	29.8 -70.1	37.4 0.0	188.3 0.0	87.8 -12.0	45.6 -67.5	56.1 -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 -14.0	29.3 -12.0	22.3 -67.9	35.7 0.0	181.2 0.0	80.7 -12.0	38.2 -63.4	41.8 -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 -14.0	25.4 -12.0	15.6 -65.2	34.4 0.0	174.8 0.0	74.4 -12.0	31.8 -59.3	27.6 -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"

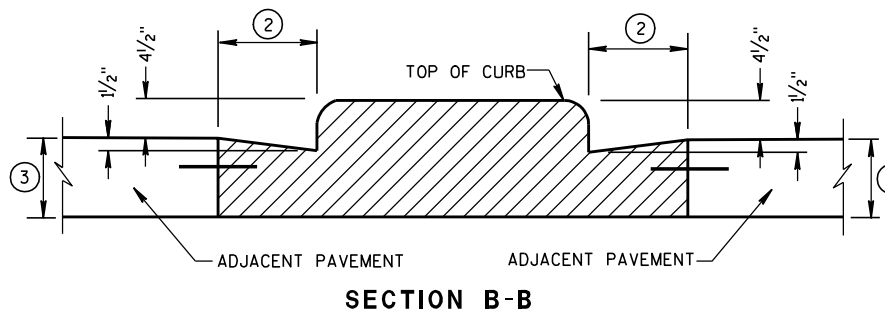
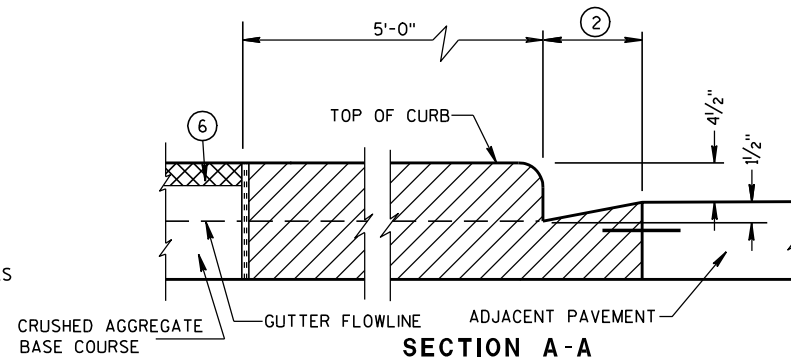
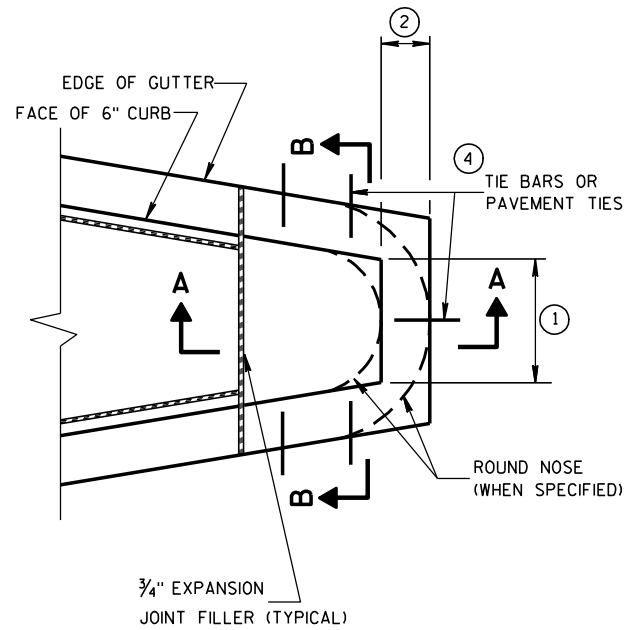
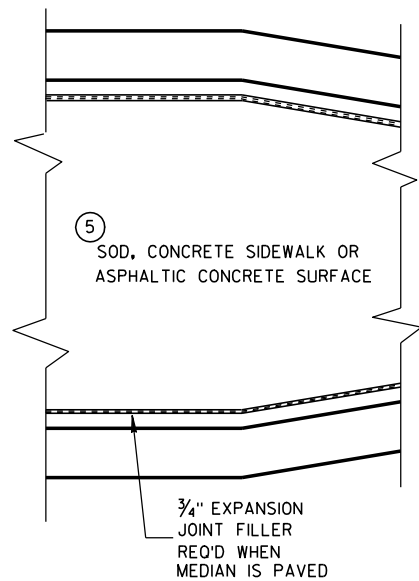
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

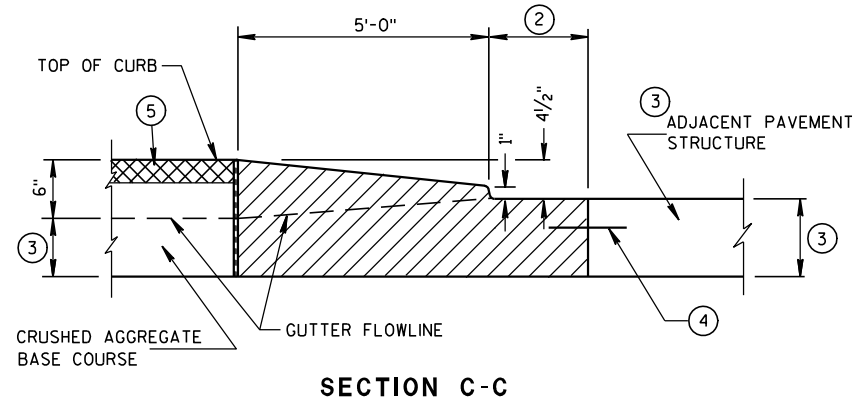
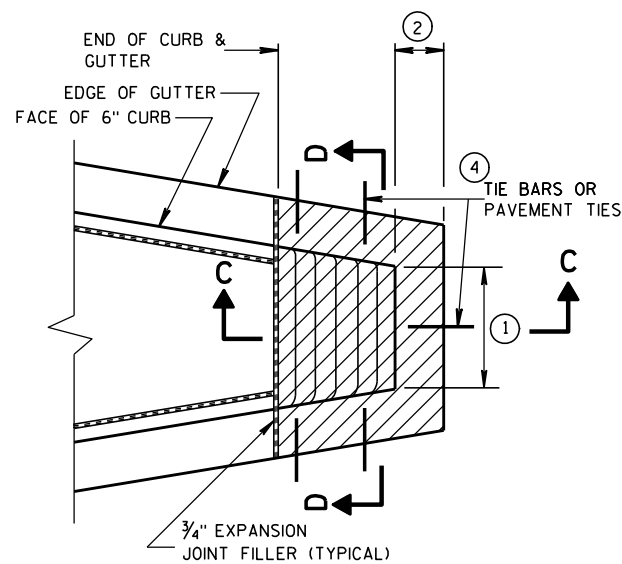
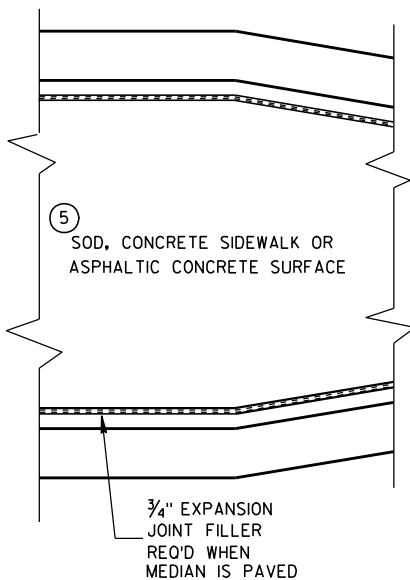
12/17/02
DATE

/S/ Beth Conn
CHIEF ROADWAY DEVELOPER

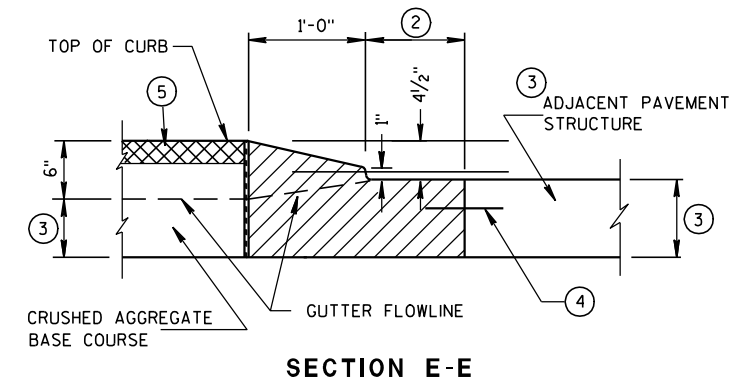
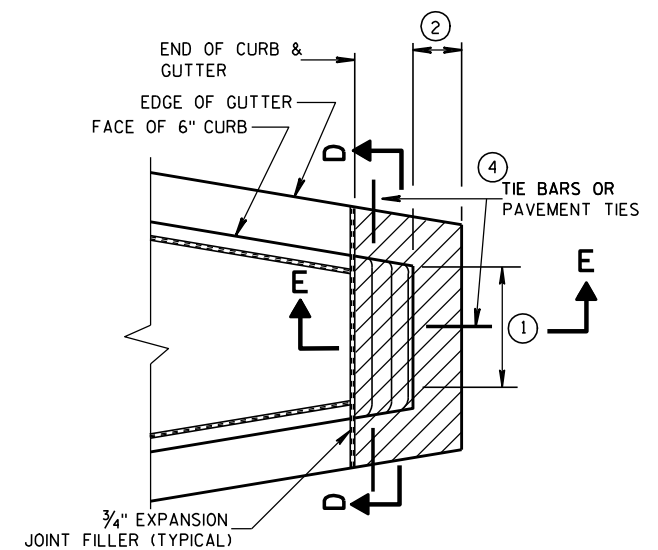
FHWA



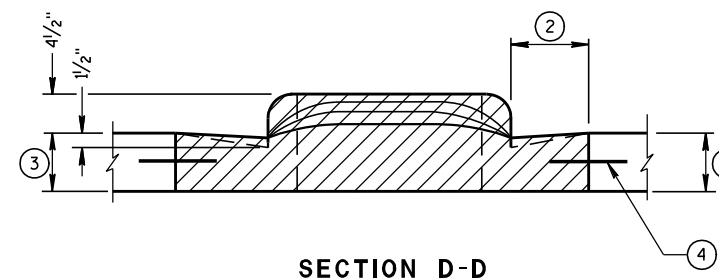
CONCRETE MEDIAN BLUNT NOSE DETAIL



CONCRETE MEDIAN SLOPED NOSE TYPE 1



CONCRETE MEDIAN SLOPED NOSE TYPE 2



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.

- ① SEE PLAN FOR MEDIAN NOSE WIDTH AND RADIUS (FOR ROUND NOSE ALTERNATE).
- ② WIDTH OF GUTTER TO MATCH EXISTING ADJACENT GUTTER OR AS SPECIFIED ELSEWHERE IN THE PLAN.
- ③ DEPTH EQUAL TO ADJACENT PAVEMENT. ADJACENT PAVEMENT STRUCTURE DETAILS ARE SHOWN ON THE PLAN. TYPICAL OPTIONS ARE:
 - (1) NEW OR EXISTING CONCRETE PAVEMENT.
 - (2) ASPHALTIC CONCRETE PAVEMENT OVER NEW OR EXISTING CONCRETE BASE COURSE.
 - (3) ASPHALTIC CONCRETE PAVEMENT OVER CRUSHED AGGREGATE BASE COURSE.

- ④ TIE BARS OR PAVEMENT TIES REQUIRED IN NEW CONCRETE PAVEMENT OR CONCRETE BASE COURSE. TIE BARS SHALL BE NO. 4 X 2'-0" SPACED AT 2'-0" C-C.

PAVEMENT TIES REQUIRED IN EXISTING CONCRETE BASE COURSE. PAVEMENT TIES SHALL BE NO. 6 X 1'-0" SPACED AT 3'-0" C-C INSTALLED ON A HORIZONTAL SKEW OF 6:1. THE DIRECTION OF SKEW SHALL ALTERNATE AFTER EVERY ONE OR TWO BARS.

- ⑤ SURFACE TYPE AND DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

CONCRETE MEDIAN NOSE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/8/2006

DATE

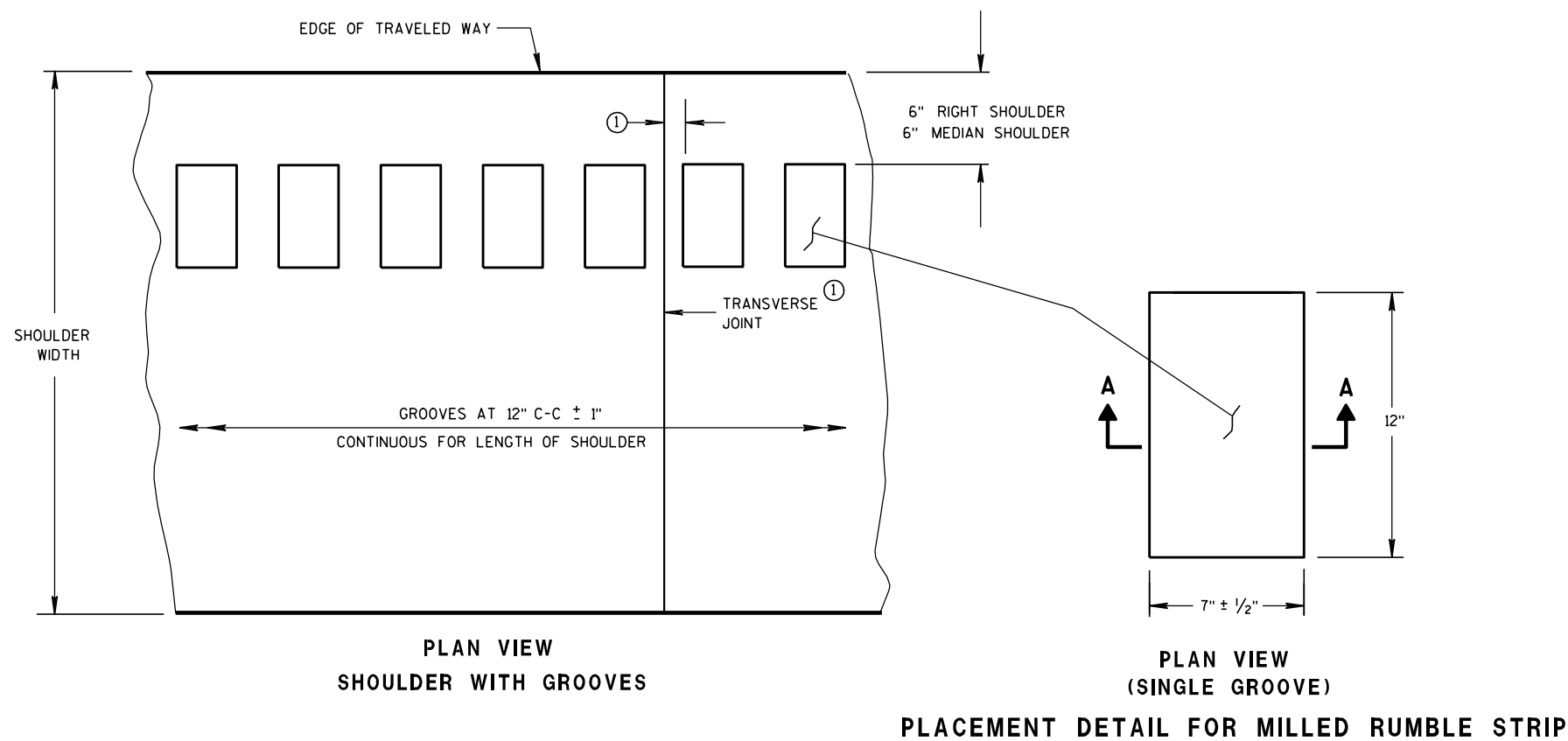
FHWA

/S/ Jerry H. 7----

ROADWAY STANDARDS 186

ENGINEER

NT



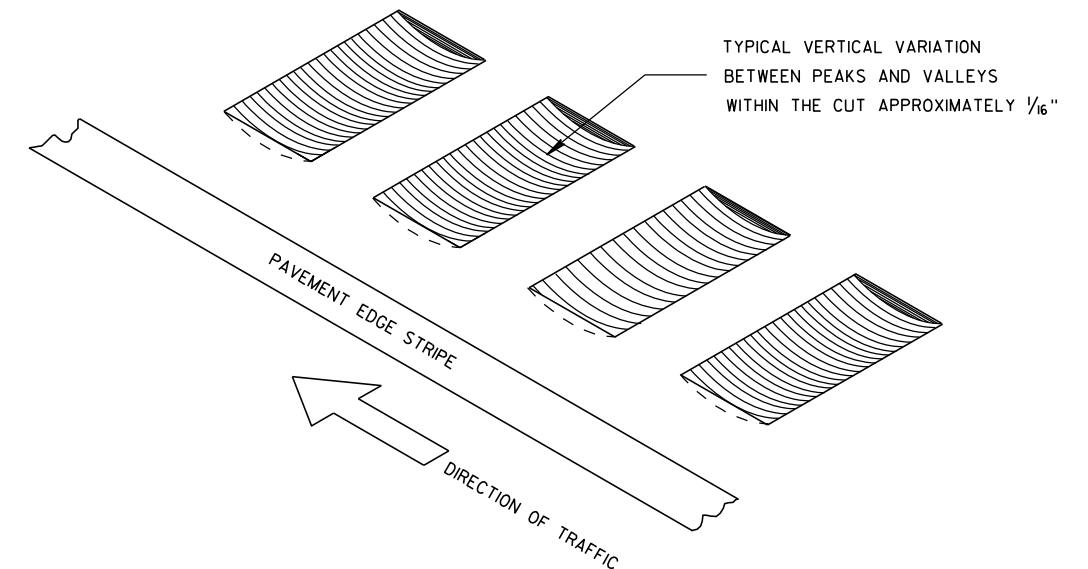
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

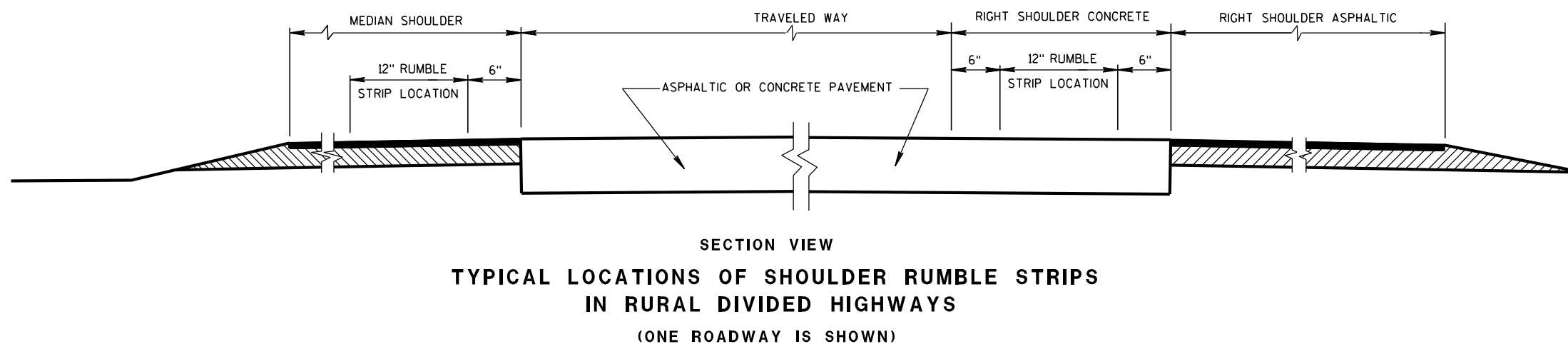
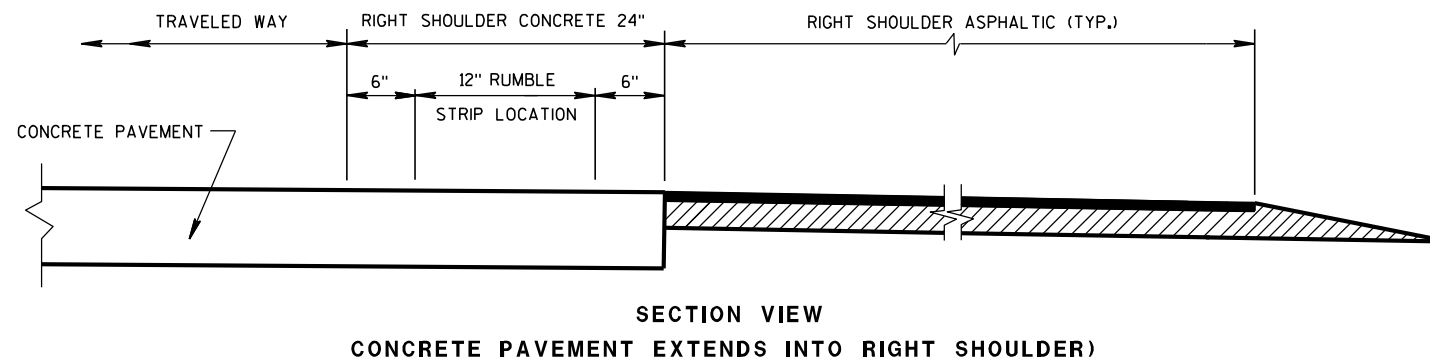
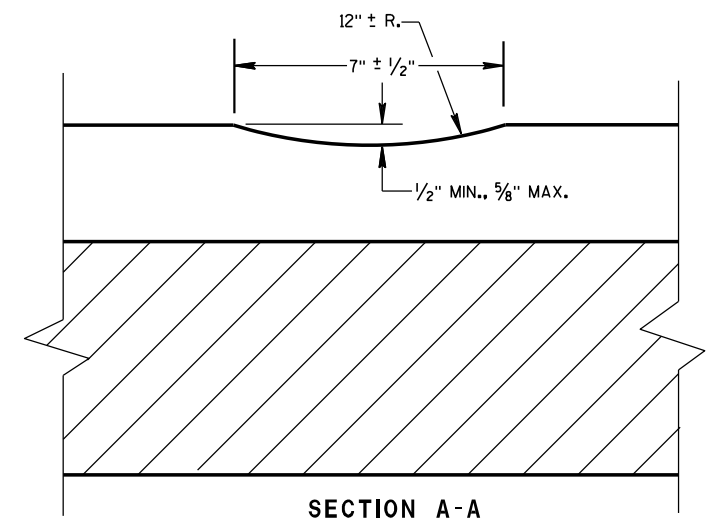
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES OR TURN LANE TAPERS. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

- ① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.

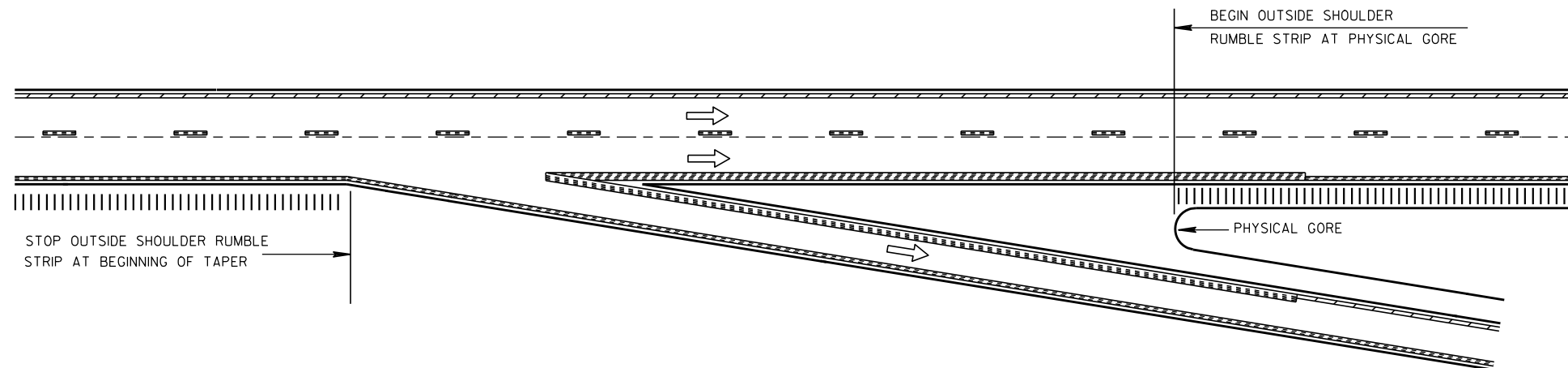


ISOMETRIC



**SHOULDER RUMBLE STRIP,
MILLING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

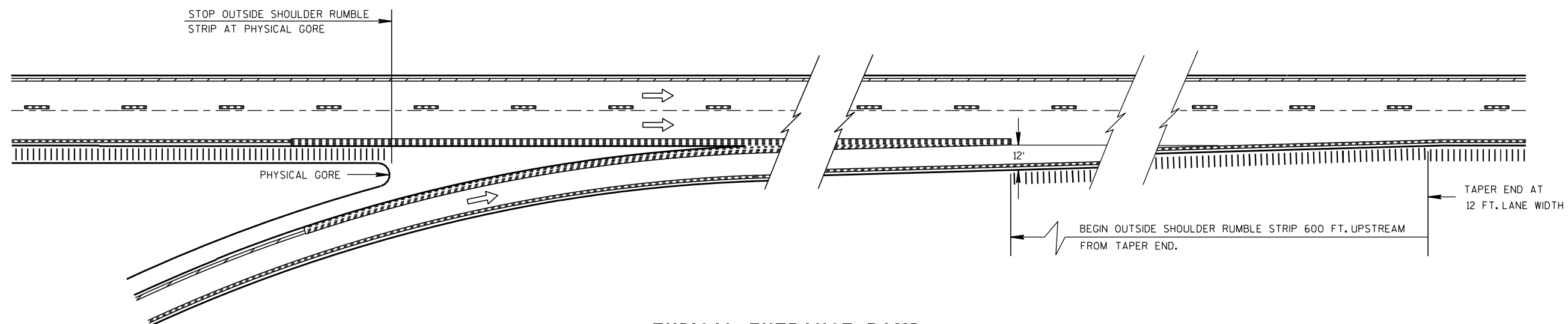


TYPICAL EXIT RAMP

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AS SHOWN.
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

TYPICAL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONSSHOULDER RUMBLE STRIP,
MILLINGSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/17/2011

DATE

/S/ Jerry H. Zogg

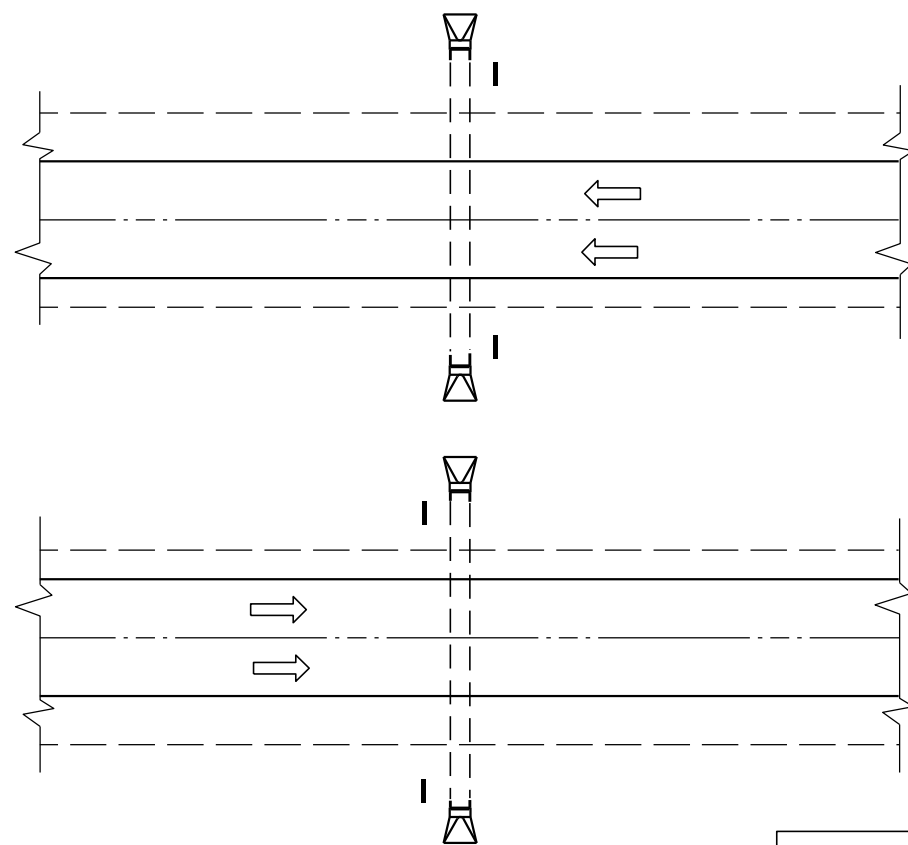
ROADWAY STANDARDS

88

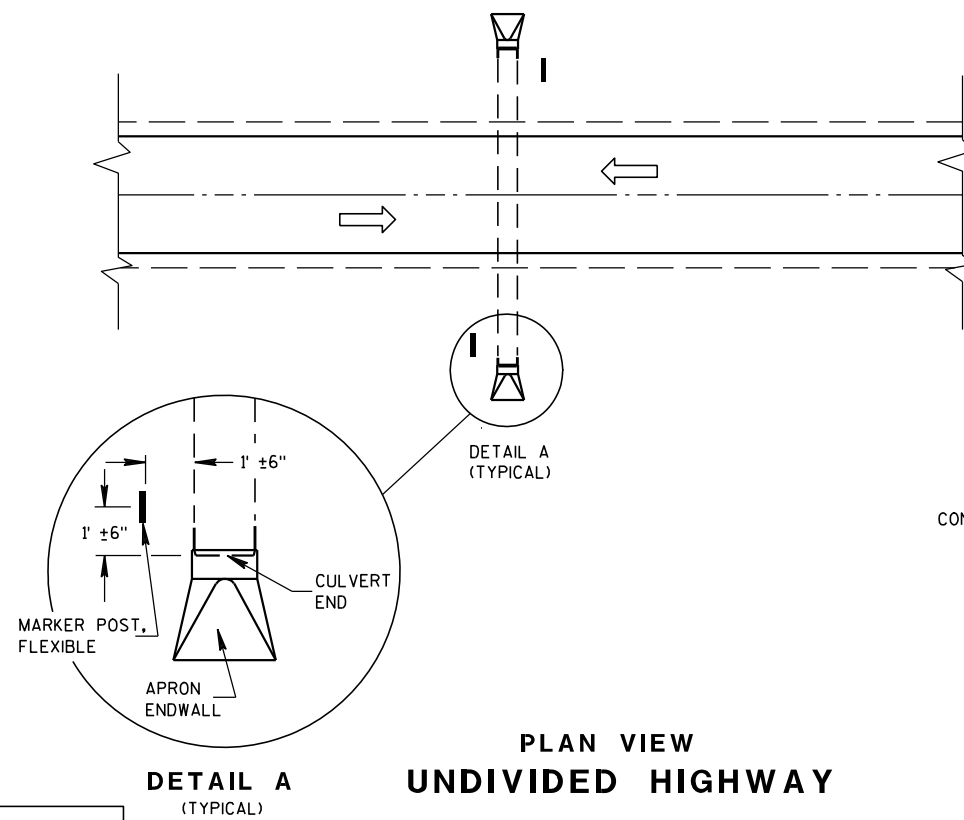
AGENT

FHWA

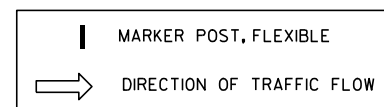
ENGINEER



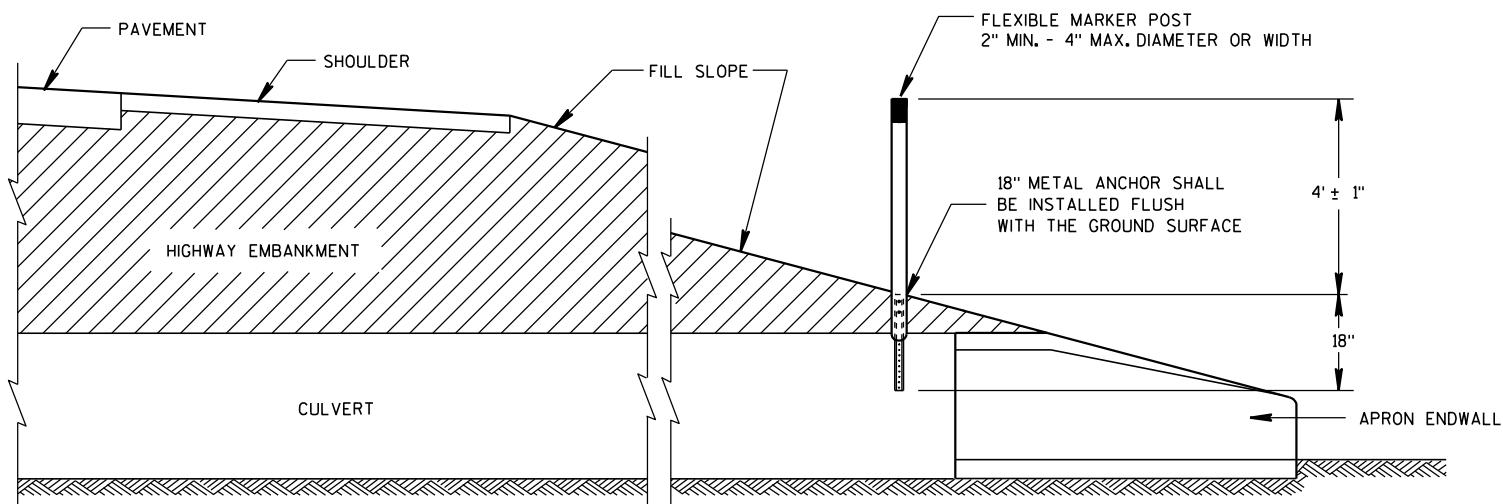
PLAN VIEW
DIVIDED HIGHWAY



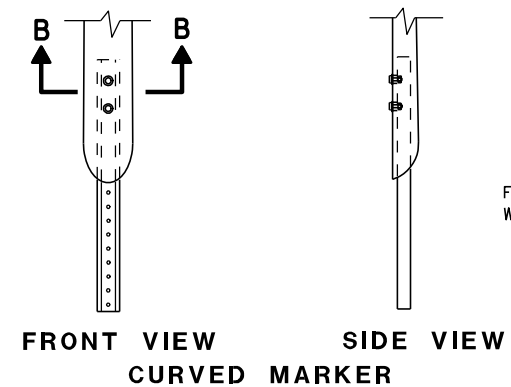
PLAN VIEW
UNDIVIDED HIGHWAY



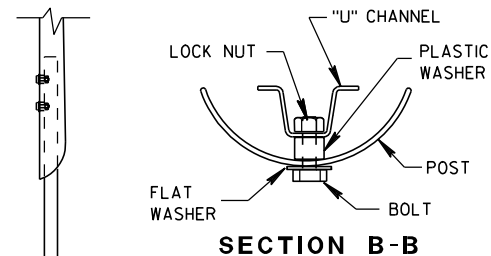
FLEXIBLE MARKER POST LOCATION



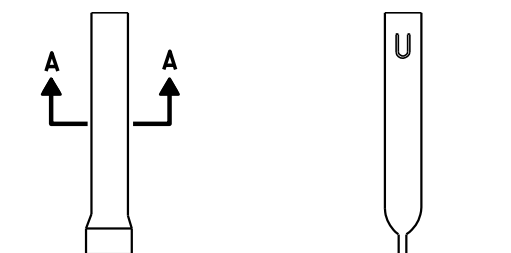
CROSS SECTION
FLEXIBLE MARKER POST



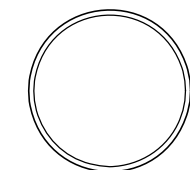
FRONT VIEW
CURVED MARKER



SECTION B-B



FRONT VIEW
ROUND MARKER

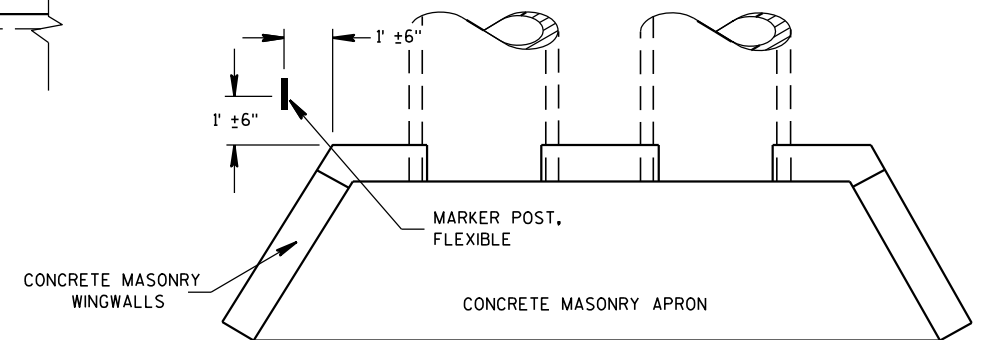


SECTION A-A

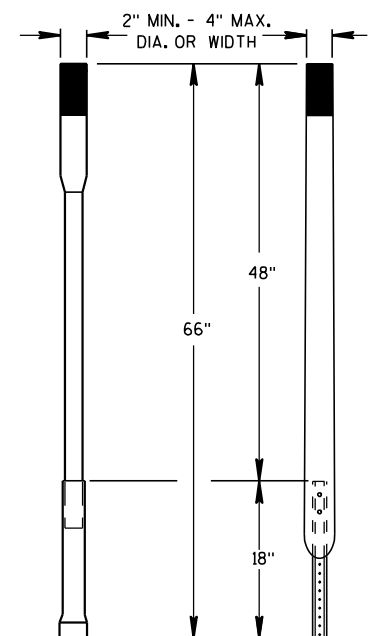
FLEXIBLE MARKER POST ANCHORS

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.



PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



ALTERNATE 1 ALTERNATE 2
FLEXIBLE MARKER POST

MARKER POST, FLEXIBLE,
FOR CULVERT END

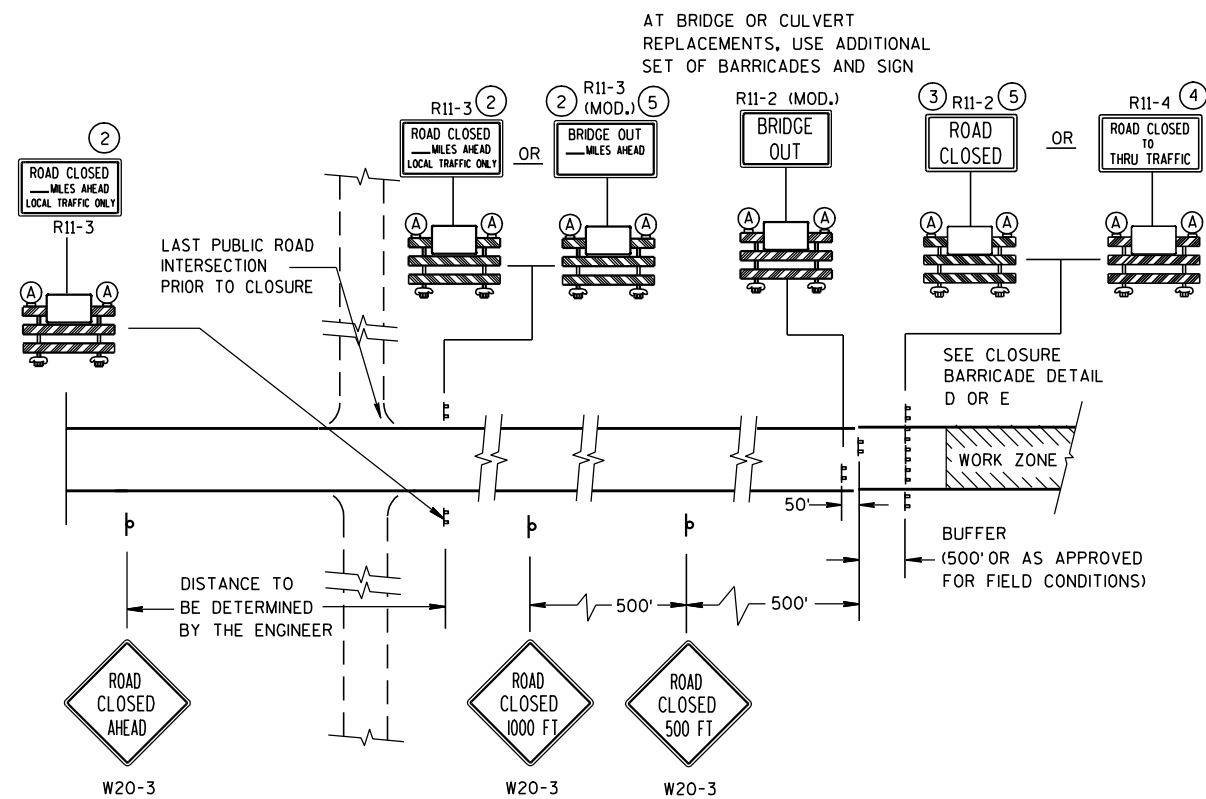
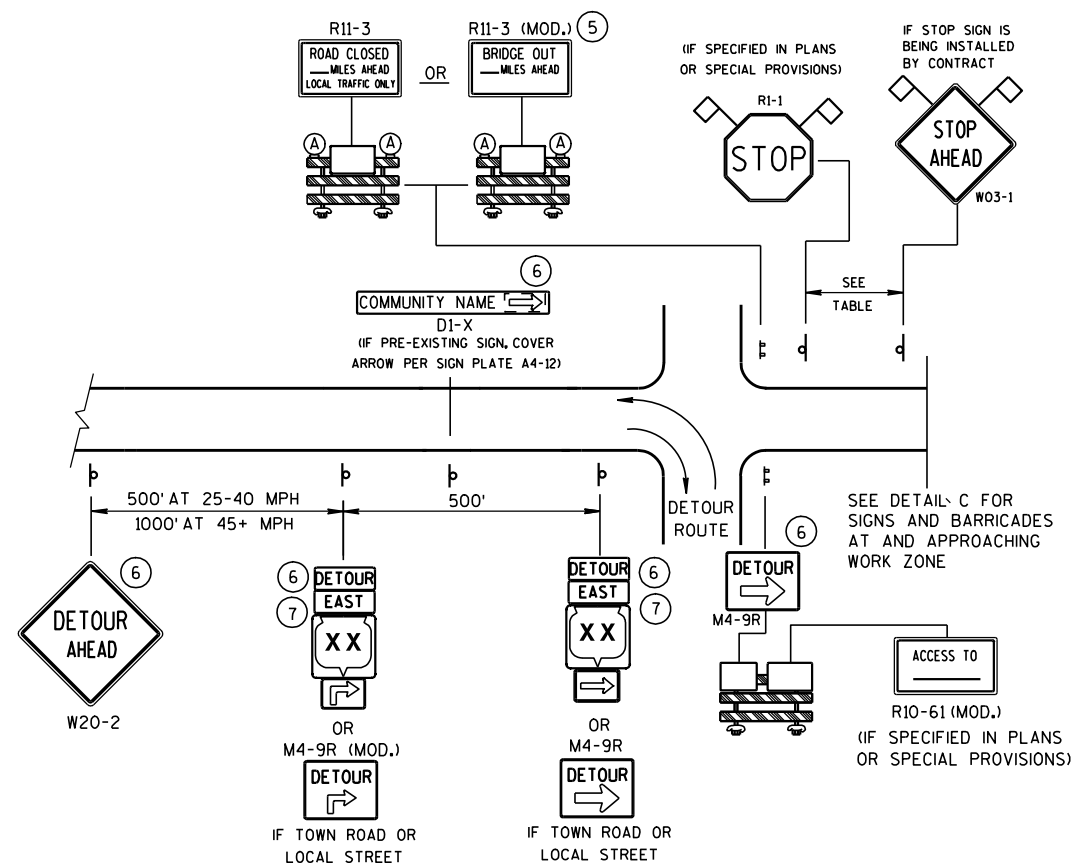
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/1/98
DATE

FHWA

/S/ Rory L. Rhin...
CHIEF ROADWAY DEVELOP...
ENGINEER

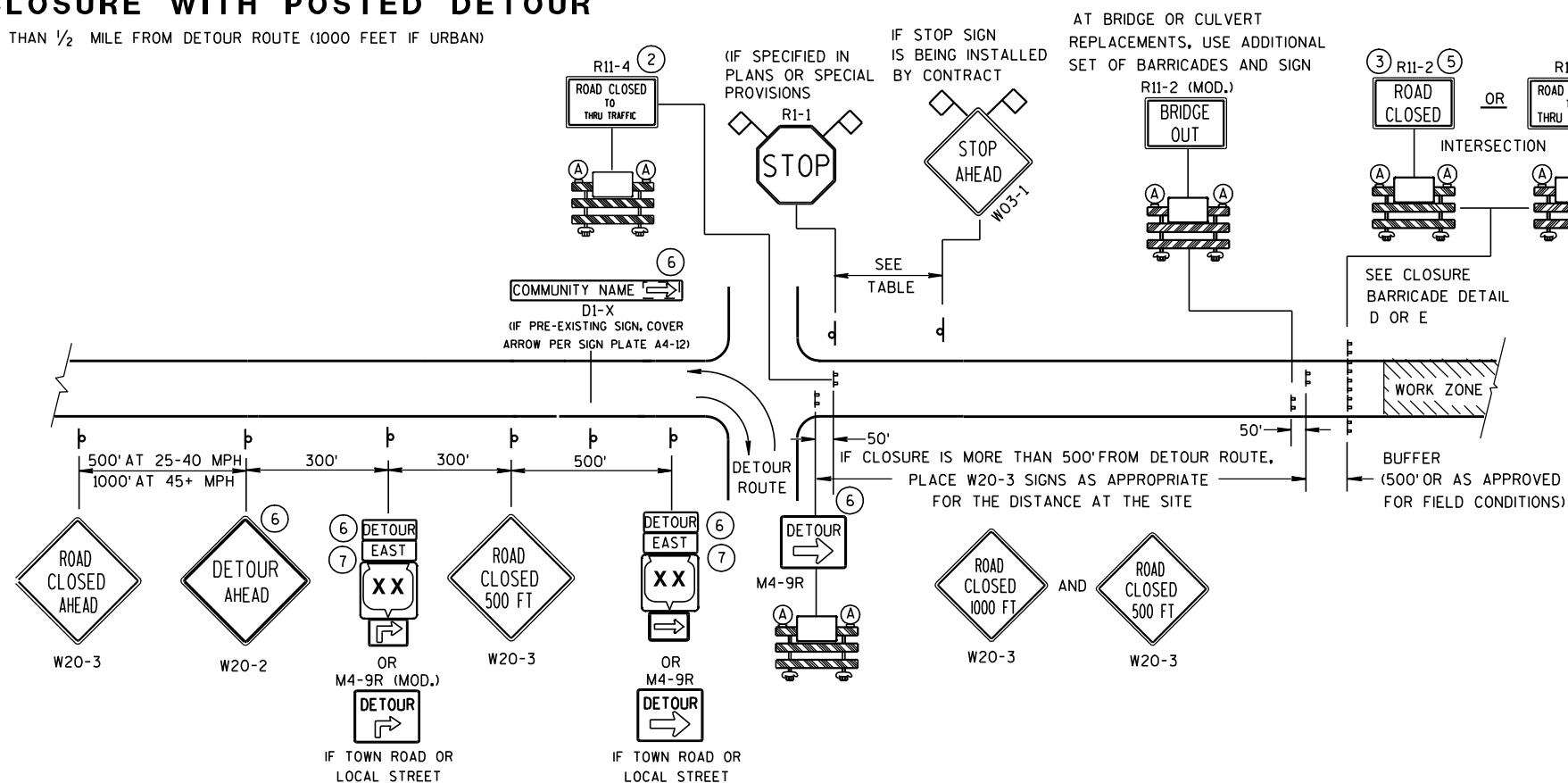


SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCING WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



LOCAL STREET LOCAL STREET
DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

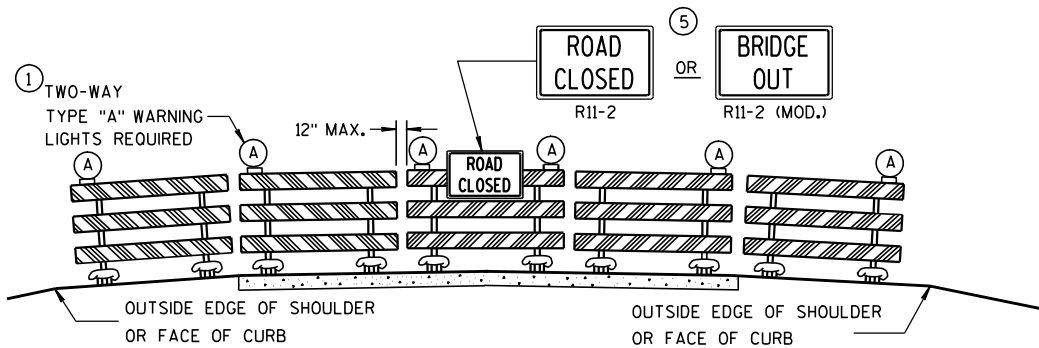
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

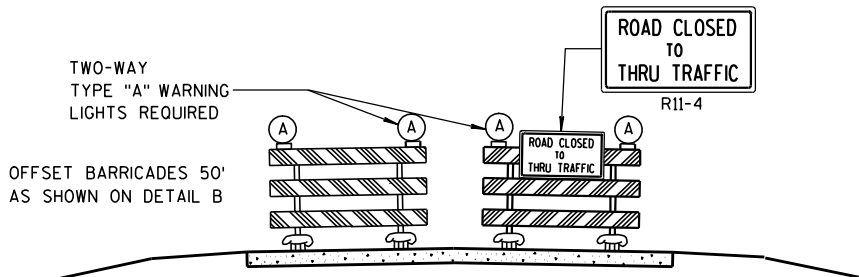
-  POST MOUNTED SIGN
 TYPE III BARRICADES
 (A) TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
 WORK ZONE
 M4-8
 M3-3
 M1-4
 OR
 M1-5A
 OR
 M1-6
 M05-1
 OR
 M06-1
 FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a FOR LEGEND

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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 D FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, M4-9, R11-4 AND R10-61 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

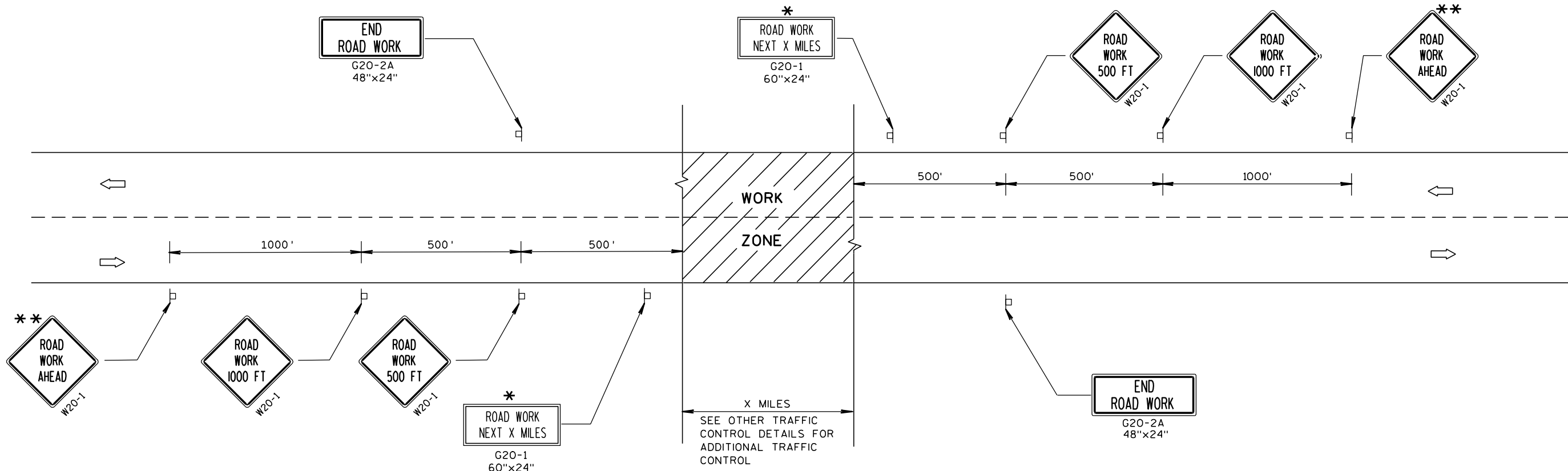
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X AND M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF 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 (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED		
9/16/03 DATE	/S/ Thomas N. N CHIEF SIGNS AND MAR 91	INEER
FHWA		



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

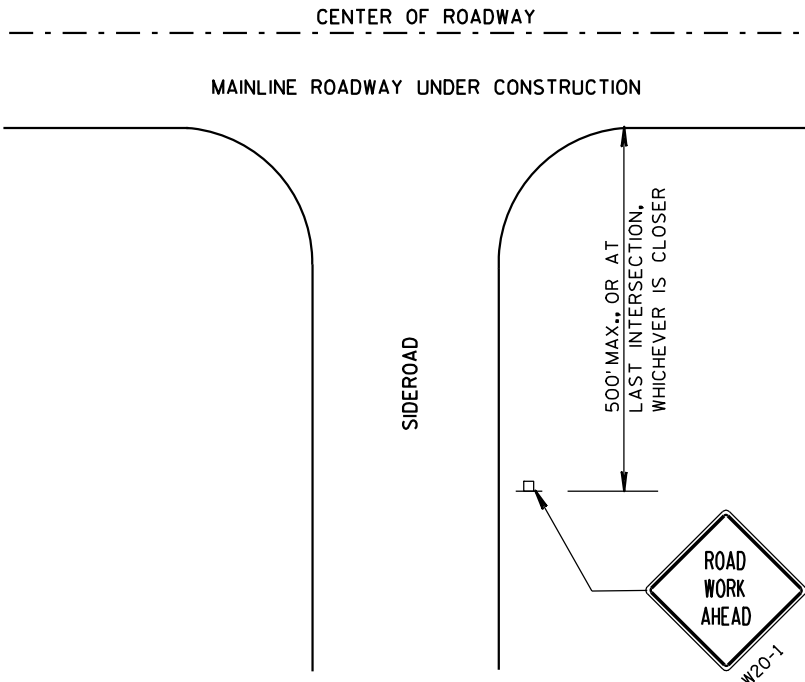
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

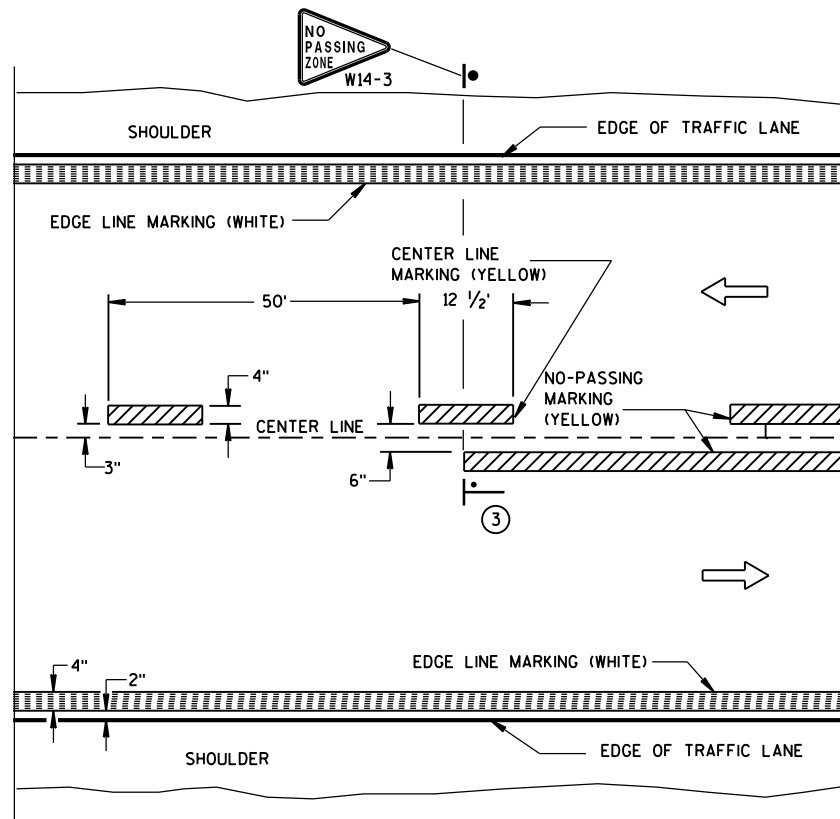
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.
- ** PLACE ADDITIONAL W20-1 "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA OR SIGNING.



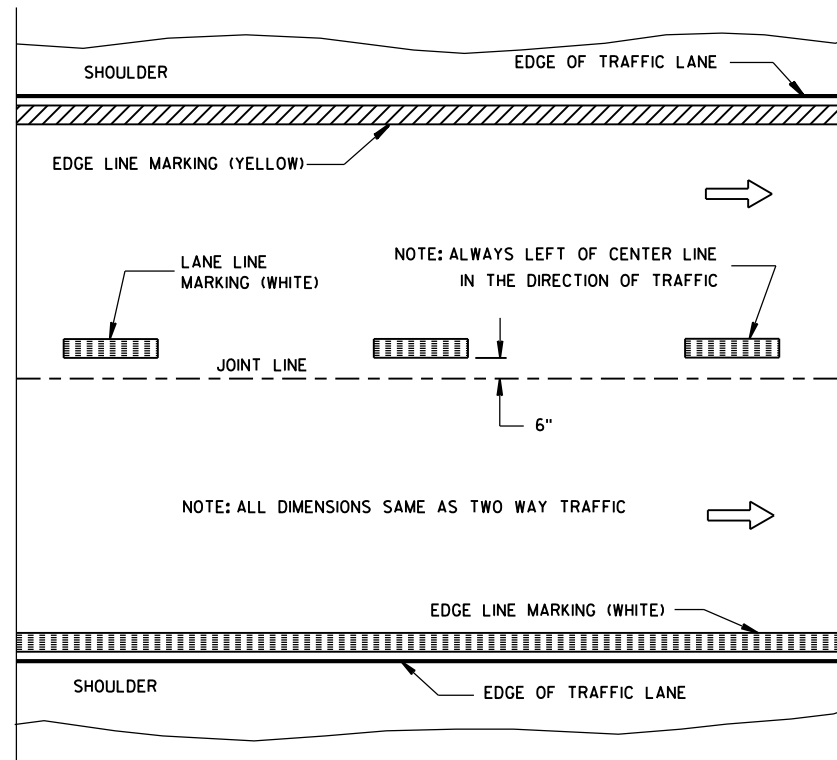
LEGEND

- POST MOUNTED SIGN
- DIRECTION OF TRAFFIC FLOW

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/23/00 DATE	/S/ Chester J. CHIEF SIGNS AND MARKINGS 92 NEER
FHWA	

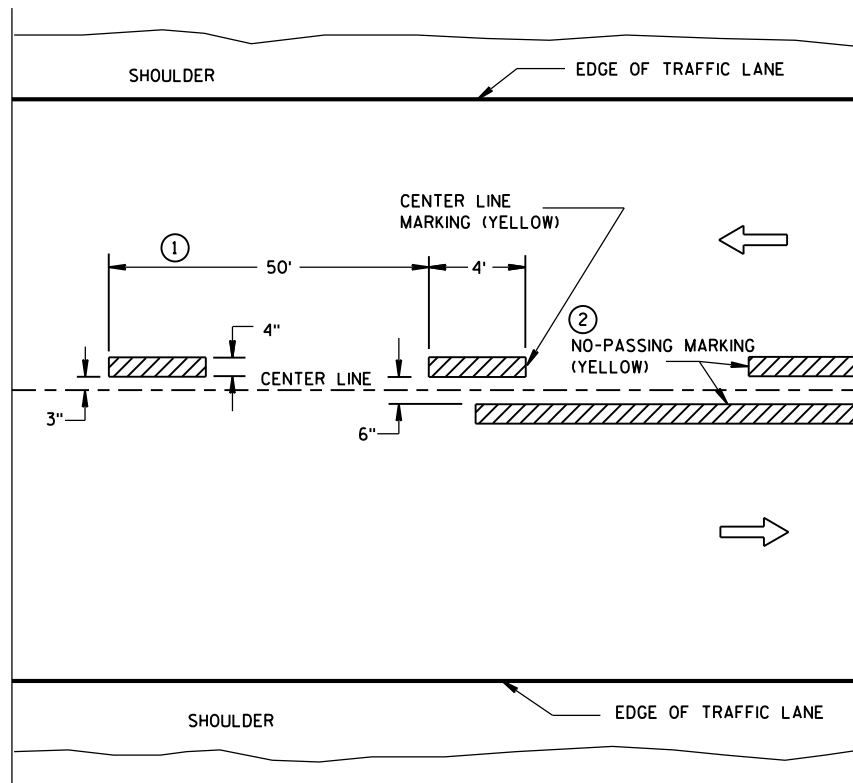


TWO WAY TRAFFIC

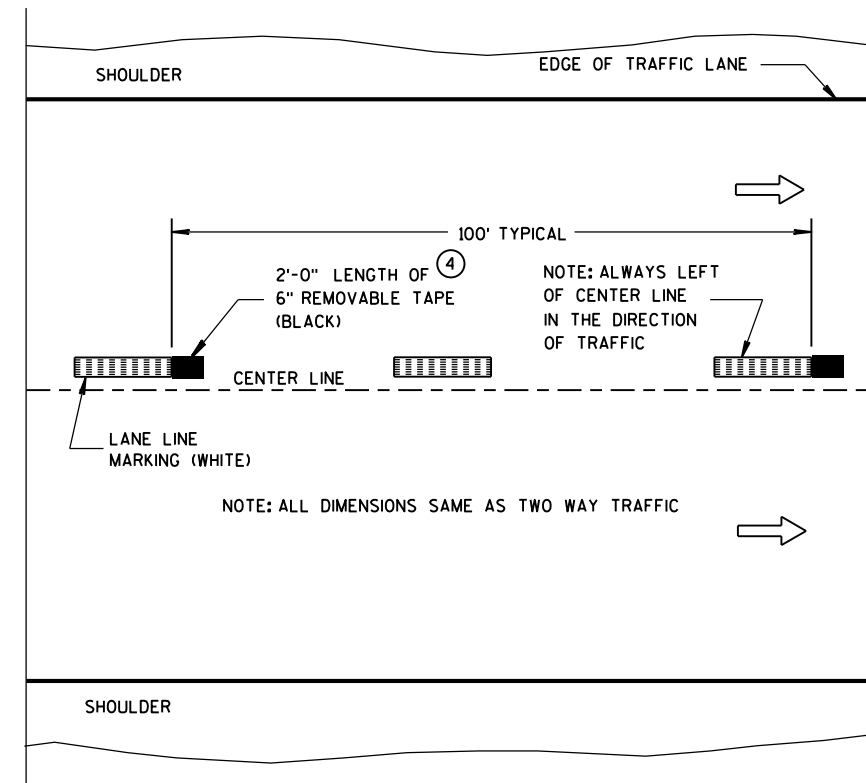


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

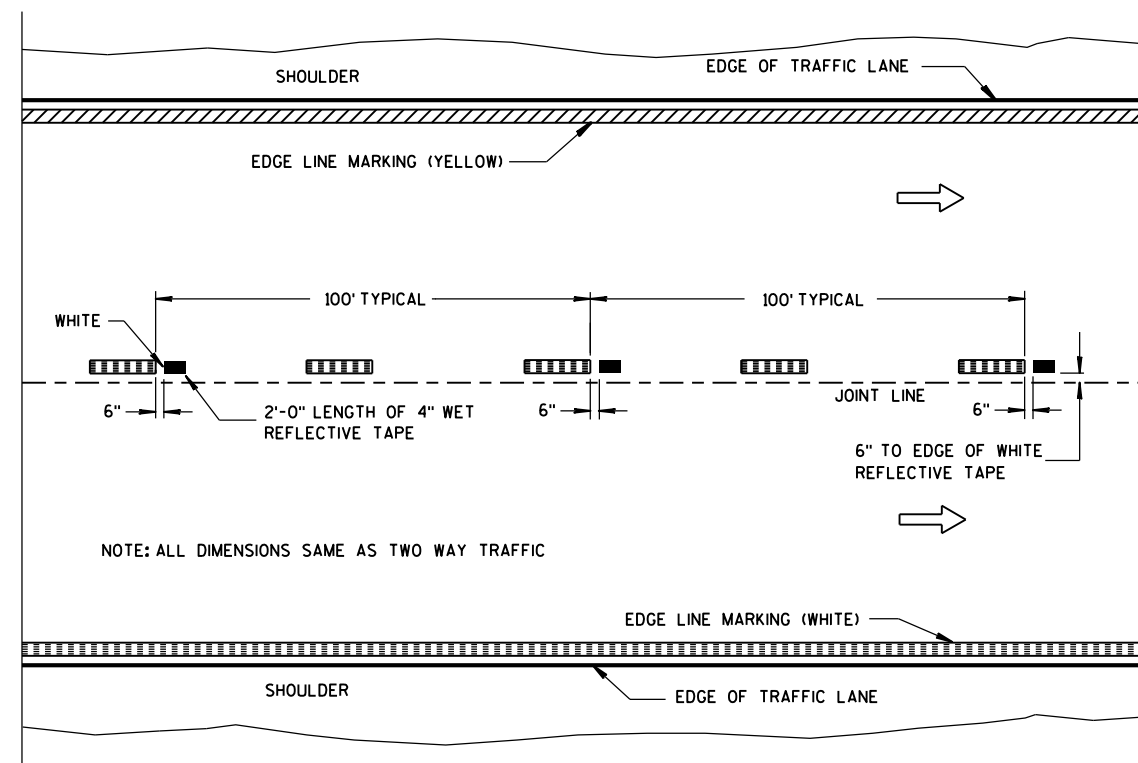
GENERAL NOTES

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.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

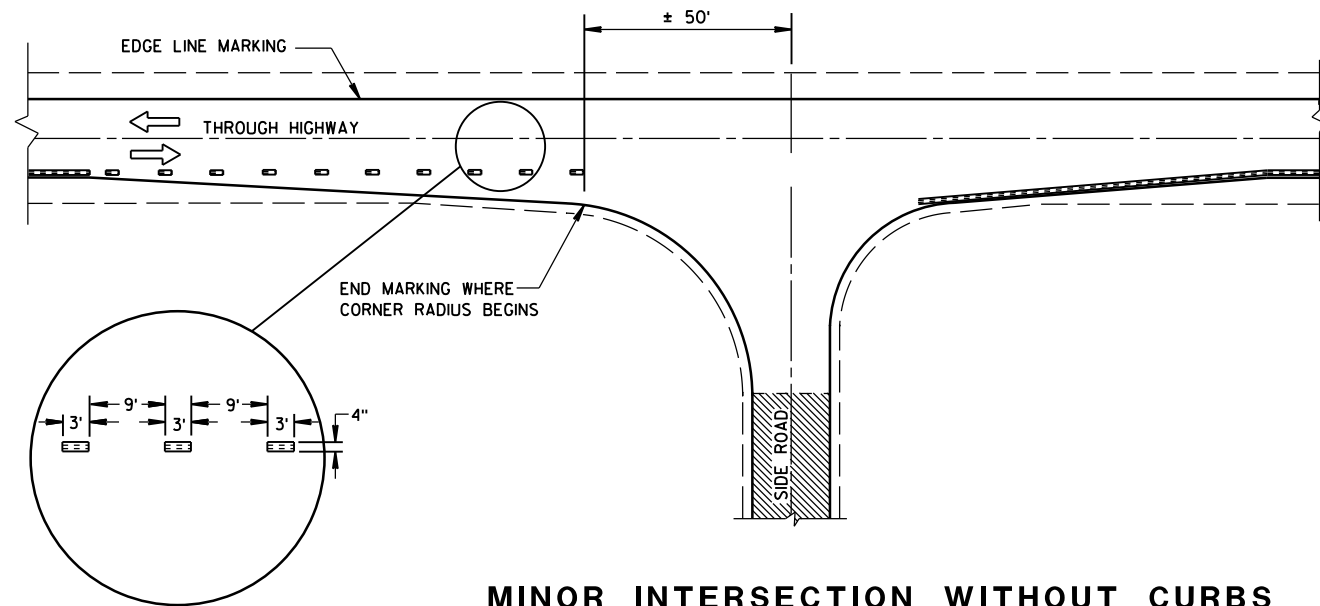
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10-1-2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER 93 :SIGN
FHWA



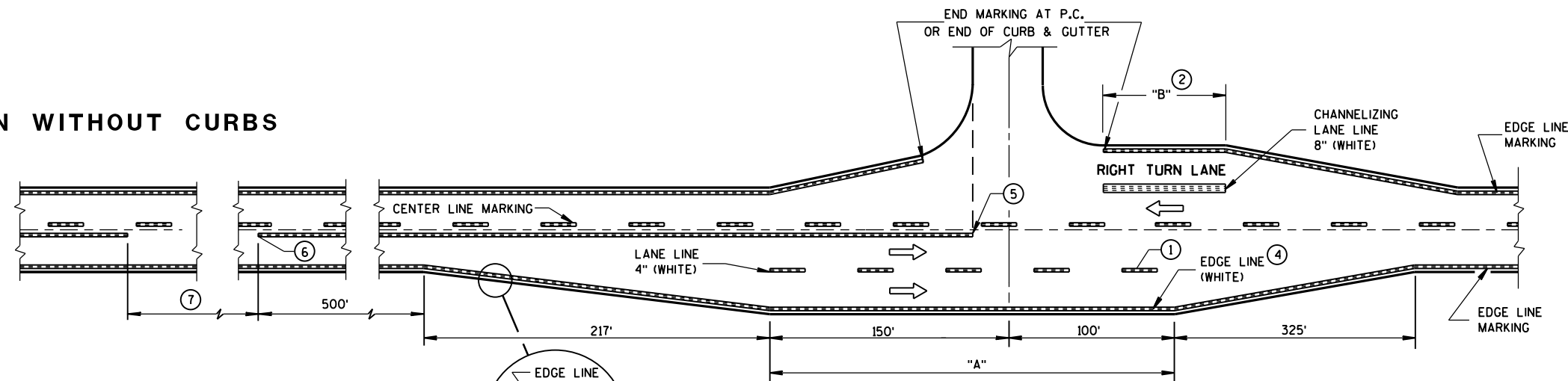
MINOR INTERSECTION WITHOUT CURBS

⑦

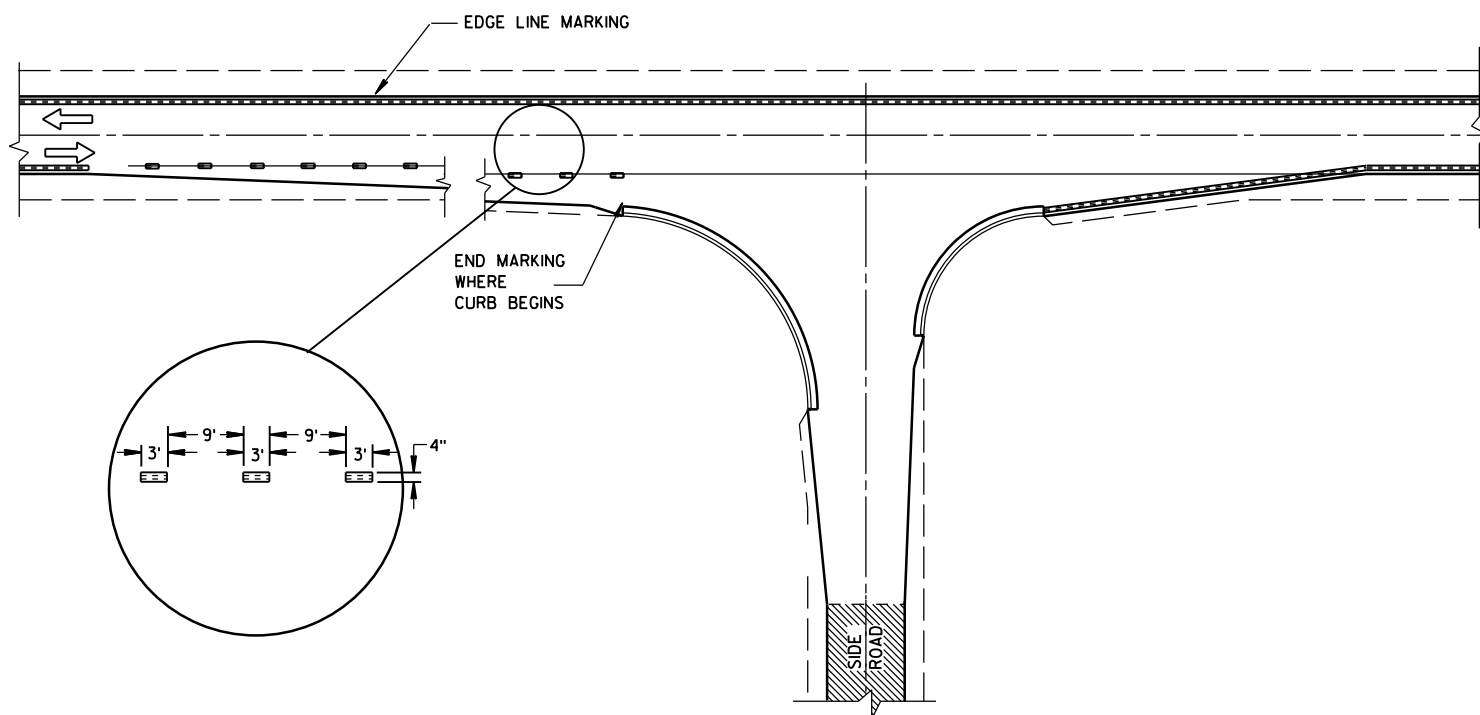
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792

GENERAL NOTES

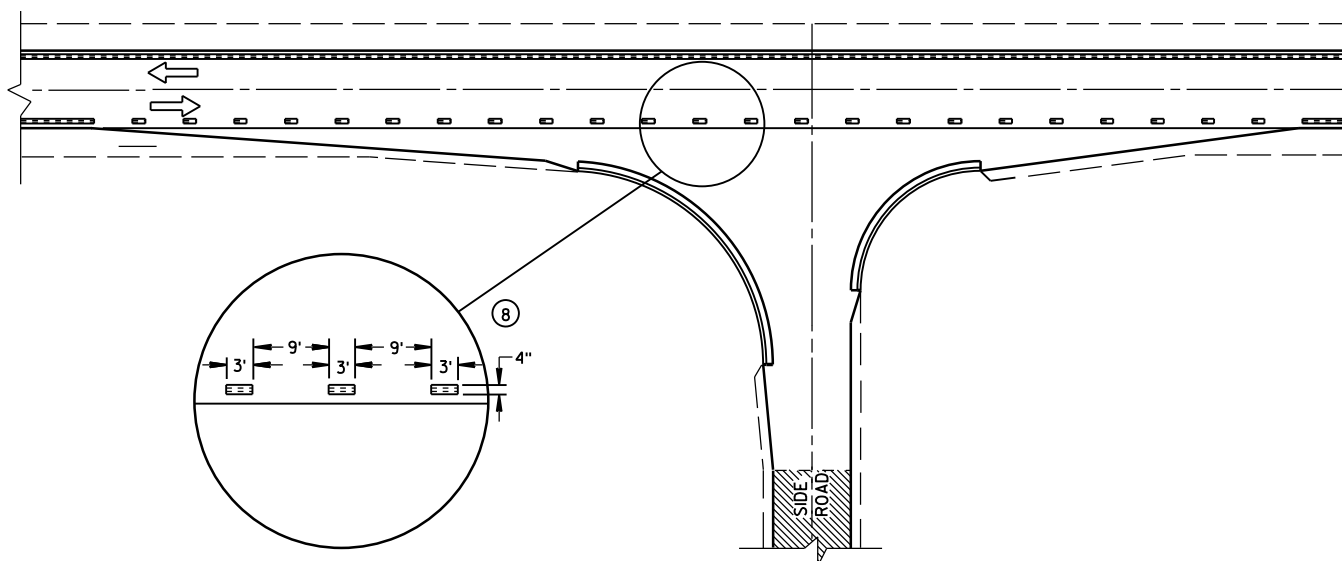
- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANES)



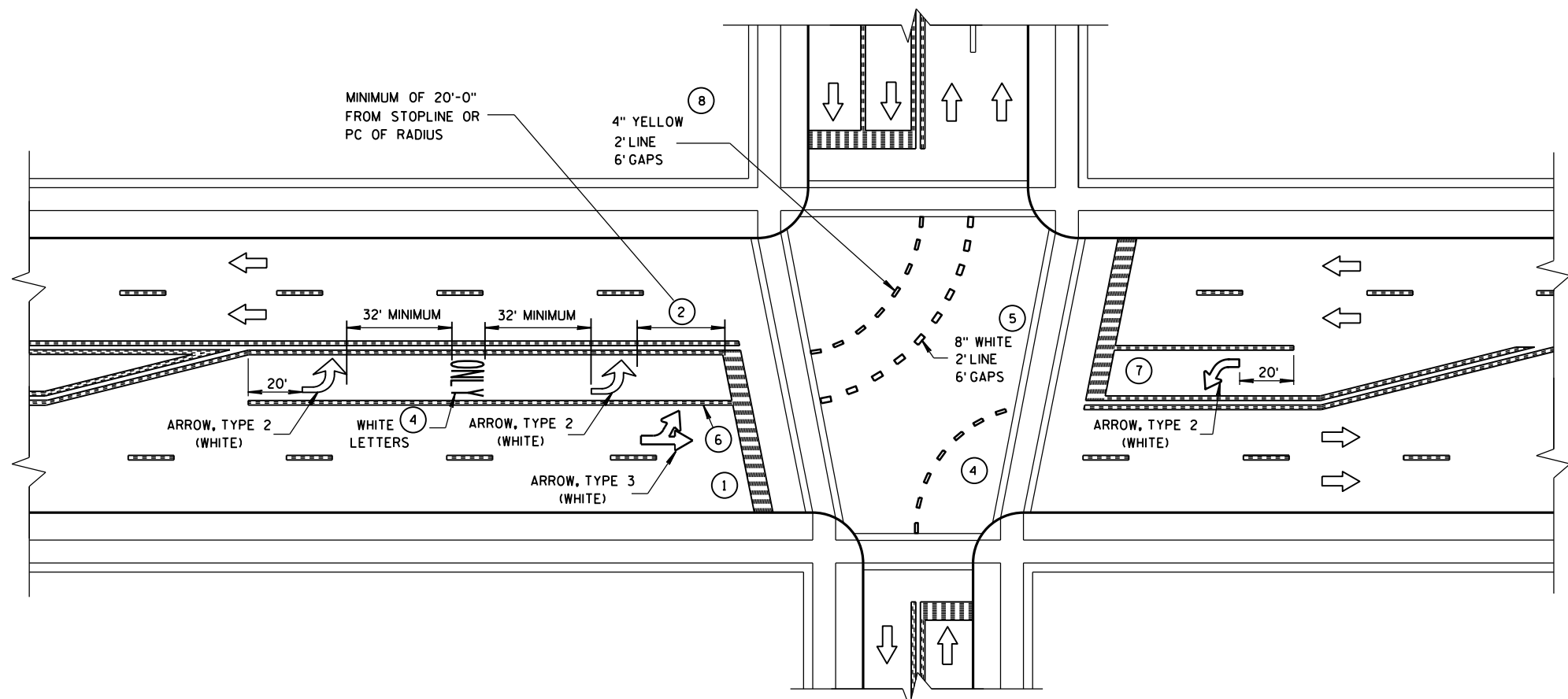
MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

PAVEMENT MARKING
(INTERSECTIONS)

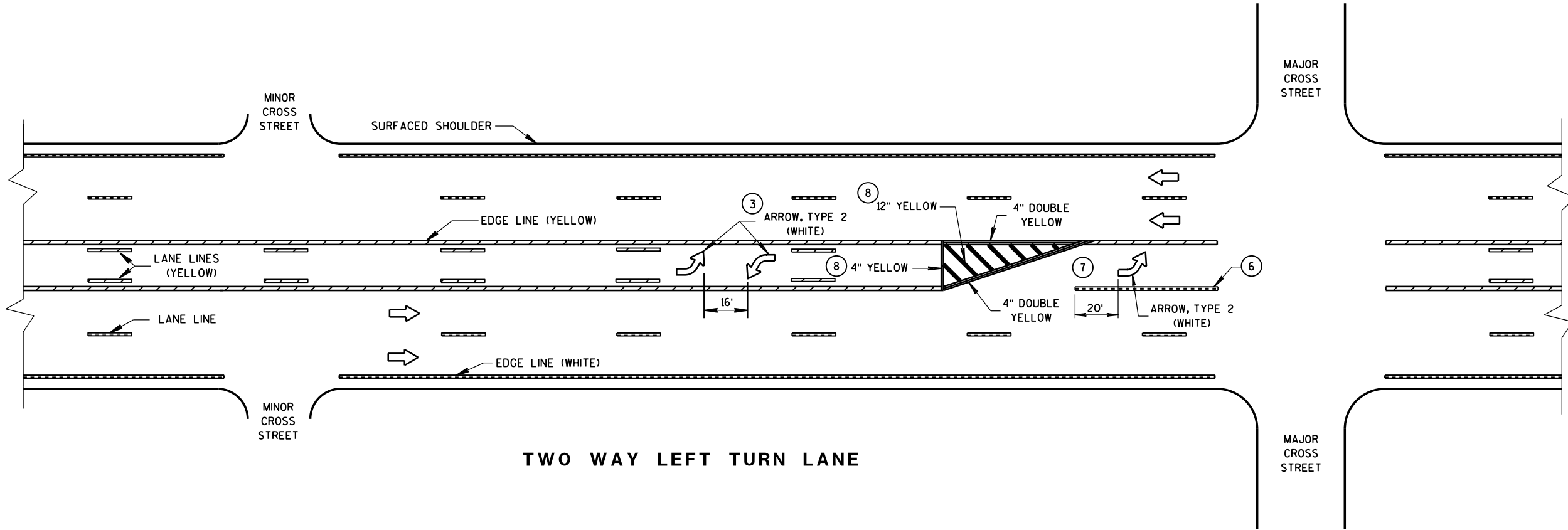
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



GENERAL NOTES

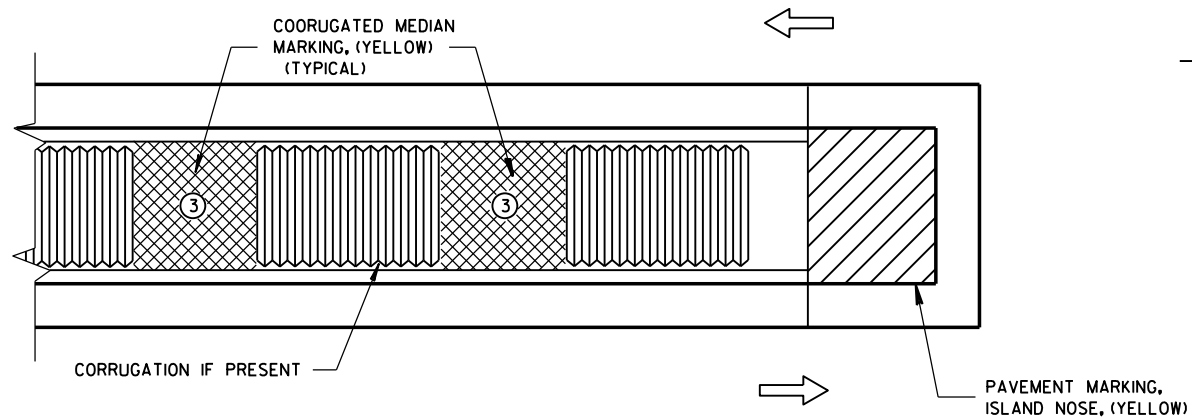
- 1 STOP BAR IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- 2 DISTANCE MAY BE ADJUSTED TO ACCOMODATE SHORT LEFT TURN LANES. AS APPROVED BY THE ENGINEER.
- 3 A SET OF ARROWS IS REQUIRED EVERY 400' OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 4 ADD EXTRA ARROW AND ONLY PER 160' OR WHEN ON A CURVE.
- 5 8" WHITE WITH 2' LINE 6' GAPS FOR DUAL TURN LANE.
- 6 8" WHITE
- 7 ADD SECOND ARROW WHEN TURN BAY IS GREATER THAN OR EQUAL TO 108'.
- 8 REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.

NOTE:
ARROW SYMBOL (➡)
SHOWS DIRECTION OF TRAVEL

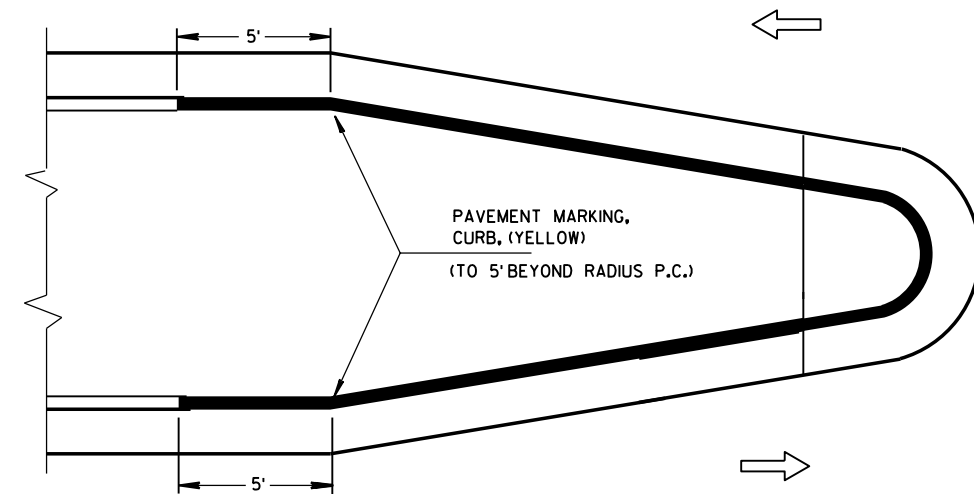


TWO WAY LEFT TURN LANE

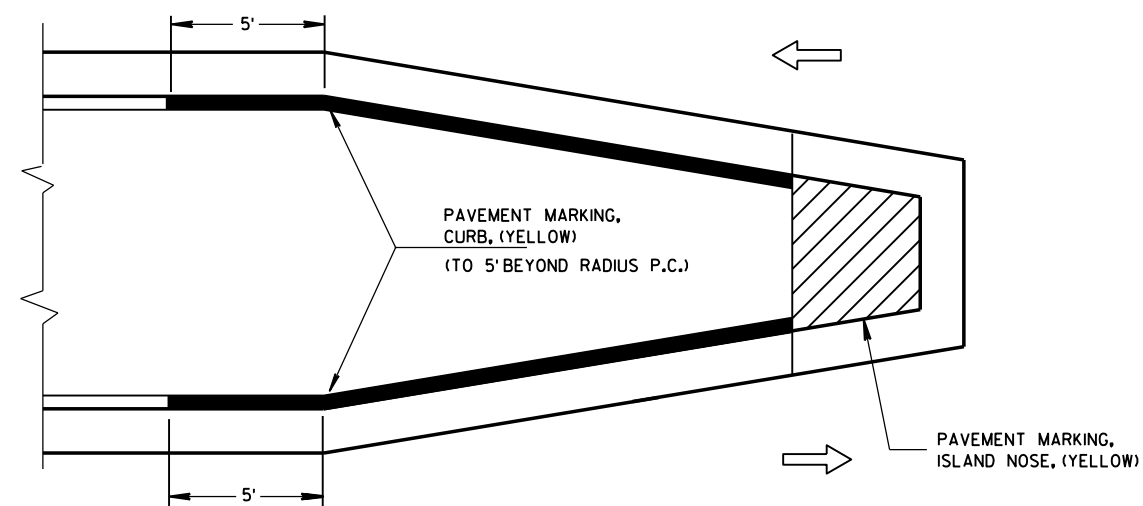
PAVEMENT MARKING (LEFT TURN LANE)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

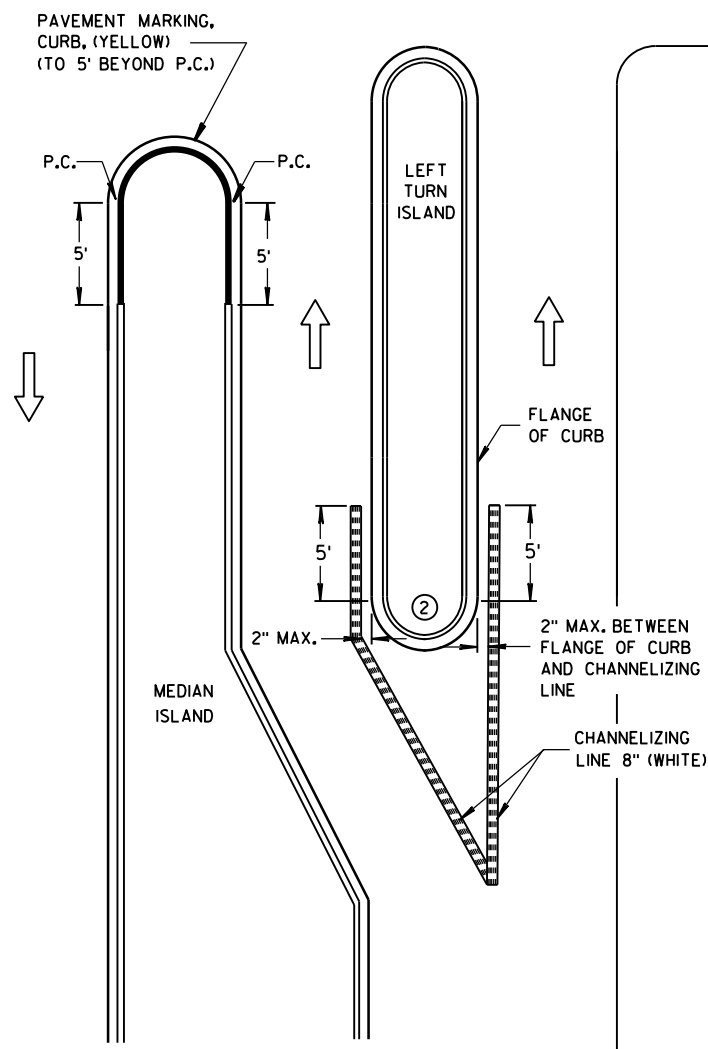


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

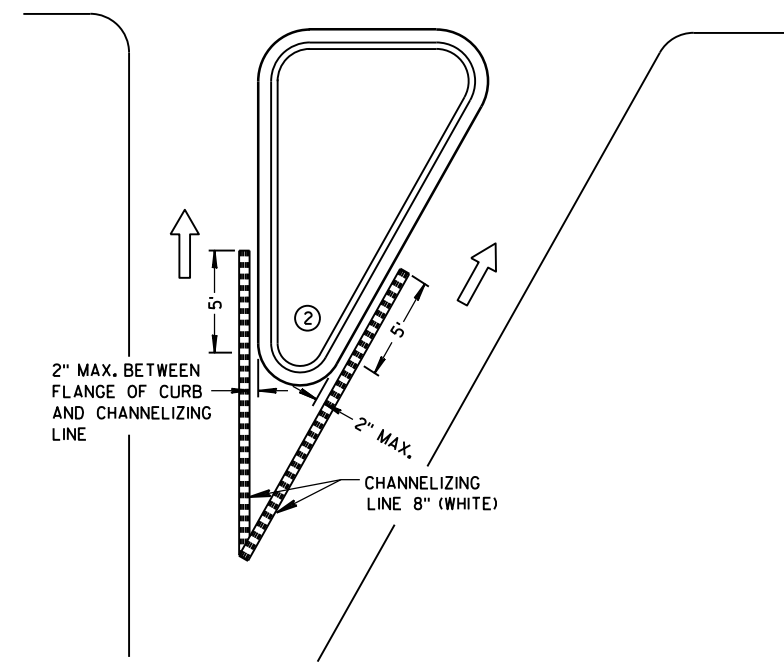
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

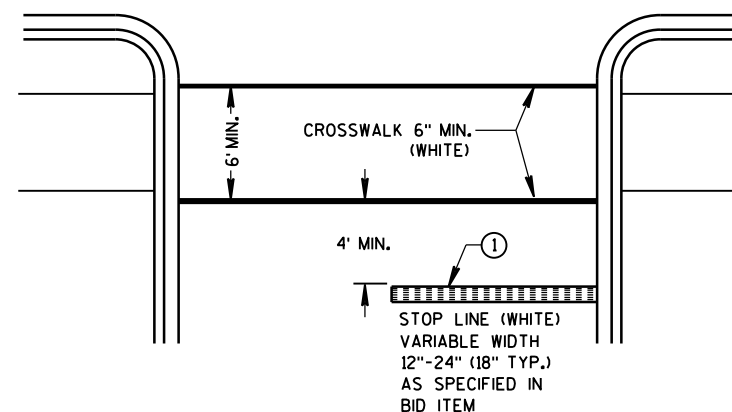
- ① STOP LINE IS REQUIRED ONLY WHEN SPECIFIED IN THE CONTRACT.
- ② DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- ③ WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



RIGHT TURN ISLAND

LEGEND

- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL



STOP LINE AND CROSSWALK

PAVEMENT MARKING (ISLANDS, STOP LINE & CROSS WALK)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TWO-LANE ROADWAY

SYMBOLS



WORK AREA



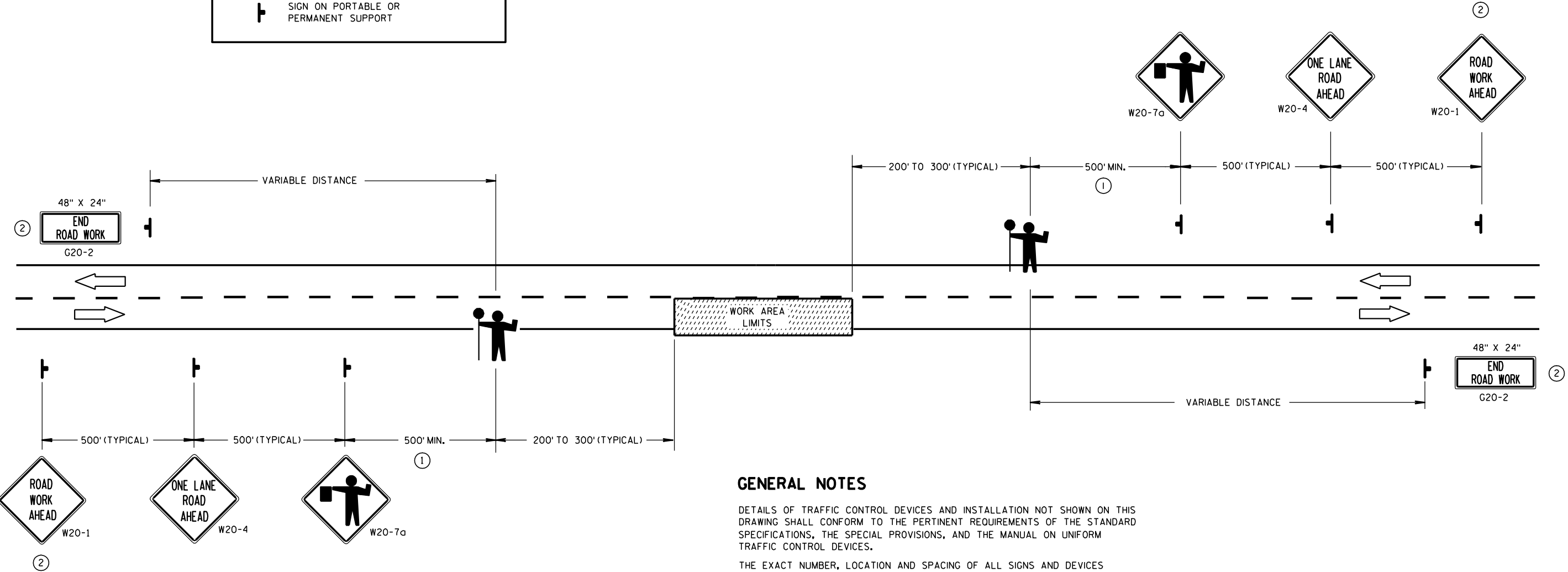
FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



SIGN ON PORTABLE OR PERMANENT SUPPORT



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, THE "FLAGGER AHEAD", THE "ROAD WORK AHEAD" AND THE ONE LANE ROAD AHEAD" SIGNS SHALL BE COVERED OR REMOVED AND THE HIGHWAY RESTORED TO NORMAL OPERATION.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

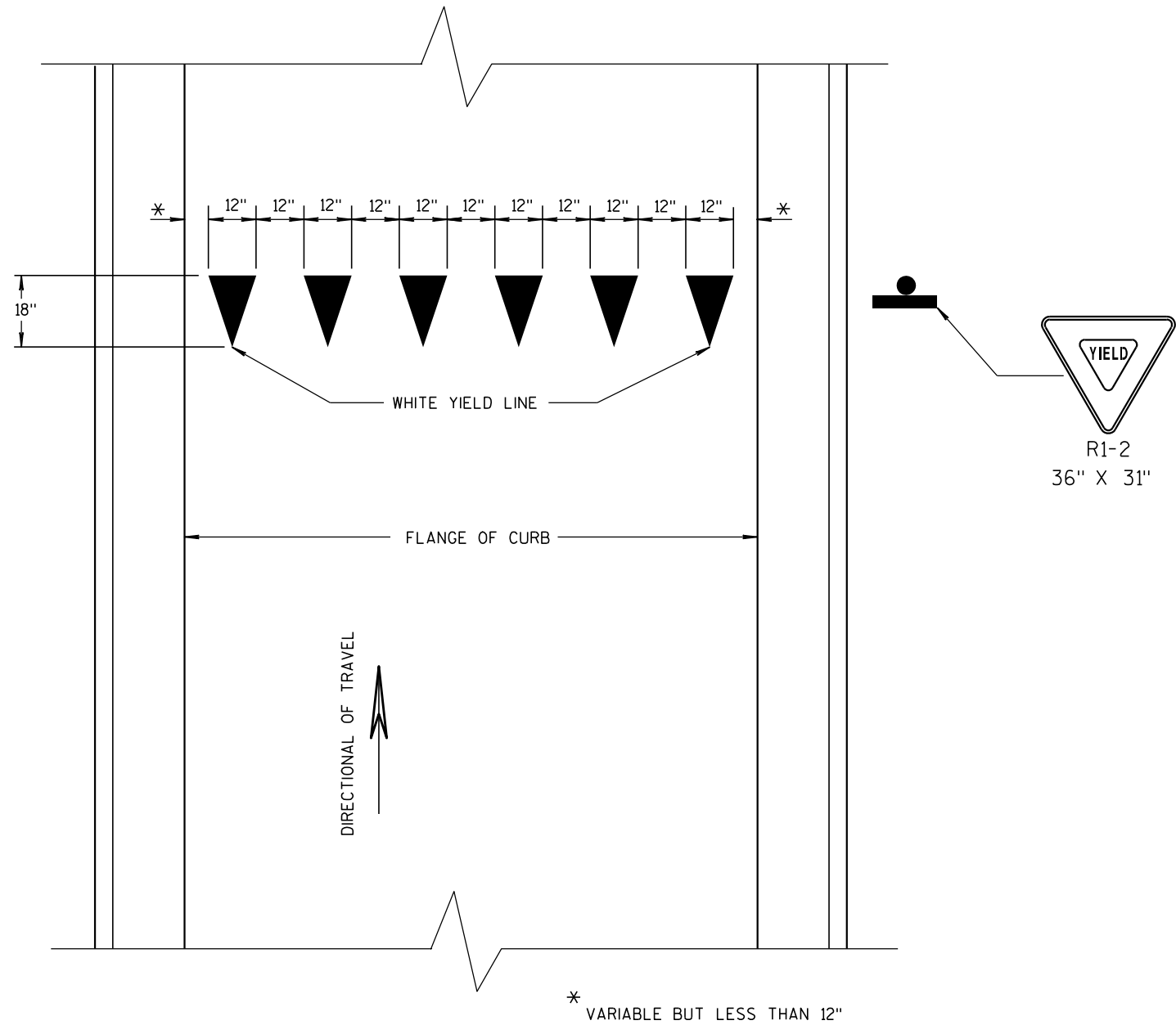
- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

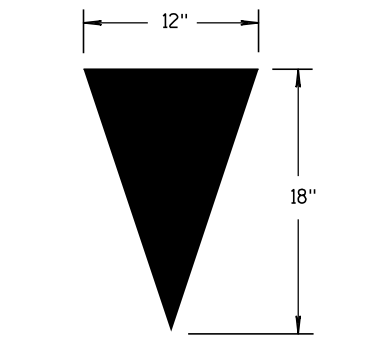
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED	/S/ Thomas N. Nothnau	
9/5/06	DATE	STATE TRAFFIC ENGINEER
FHWA	97	ESIGN

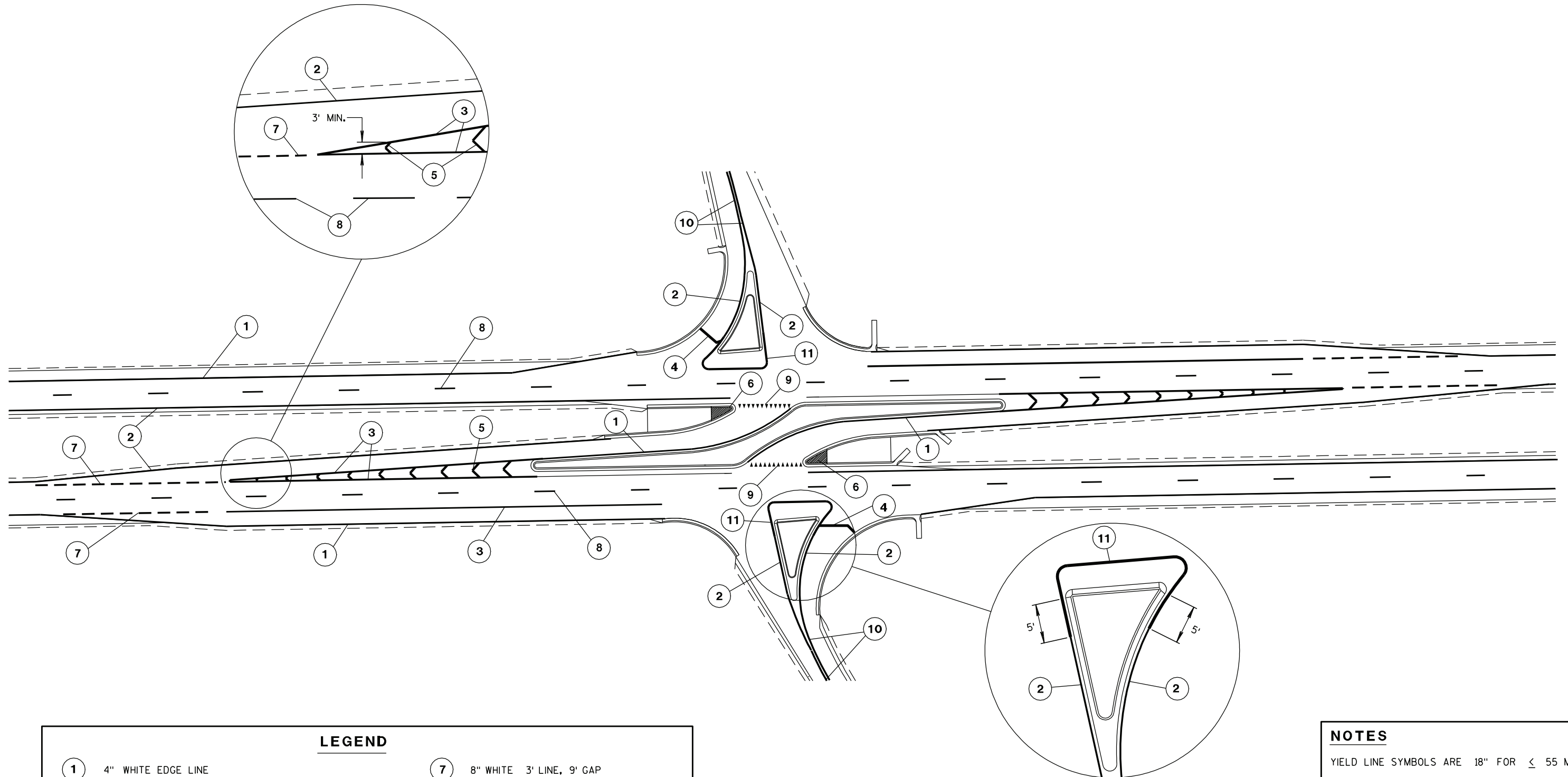


YIELD LINE



YIELD TRIANGLE

YIELD MARKINGS			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED			
1/28/05	/S/ Thomas N. Nothohm		
DATE	STATE TRAFFIC ENGINEER	98	GN
FHWA			



LEGEND

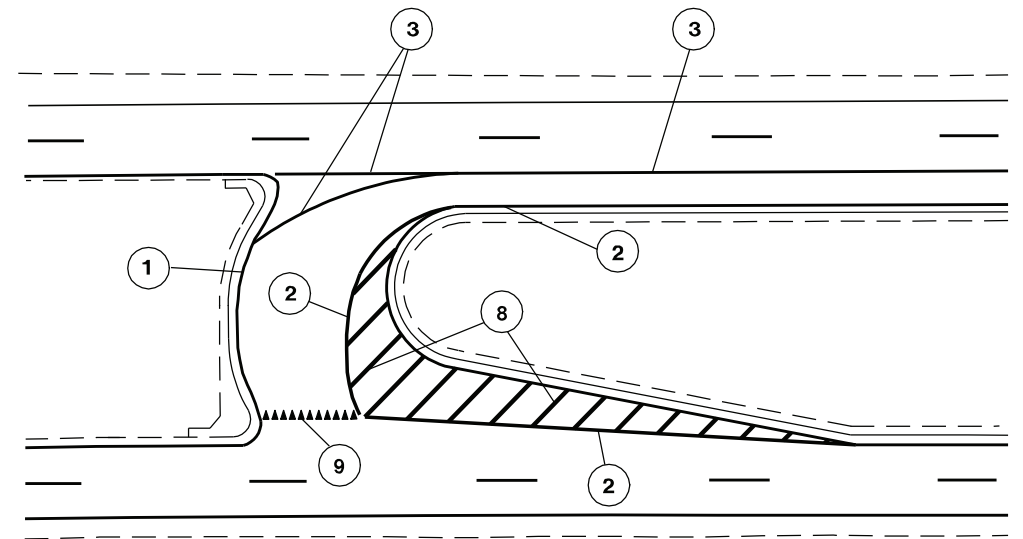
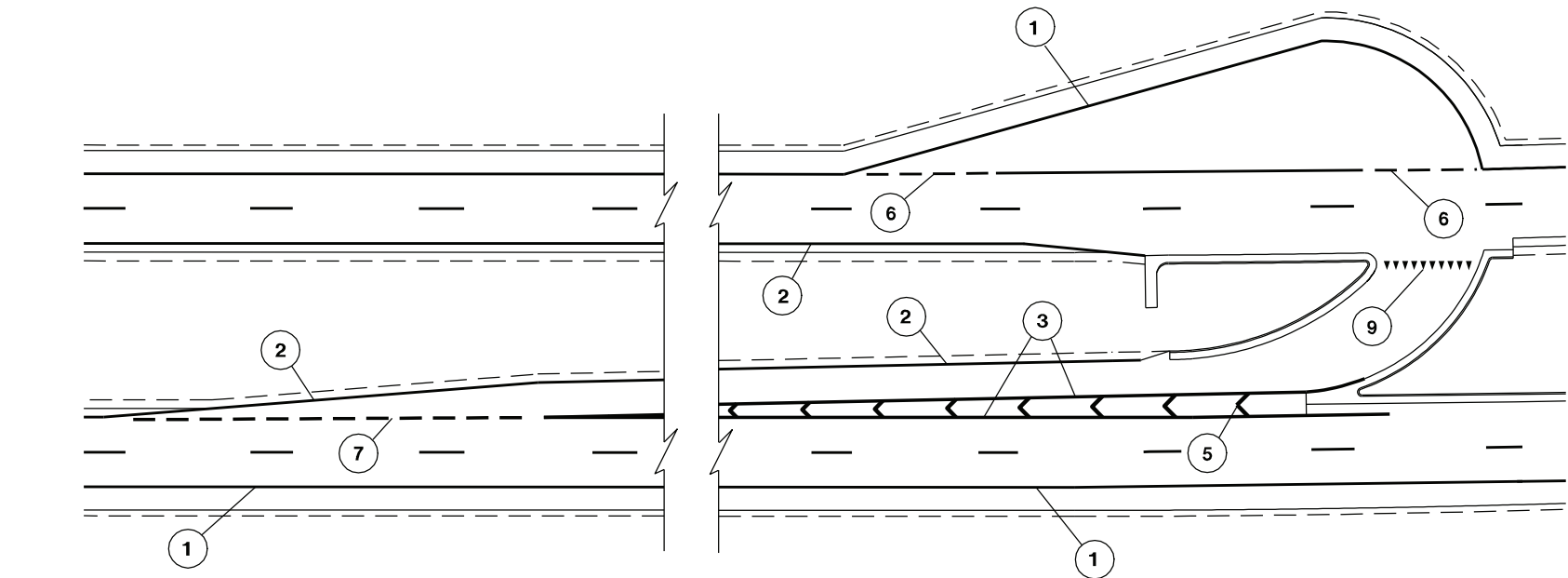
- | | |
|--|--|
| ① 4" WHITE EDGE LINE | ⑦ 8" WHITE 3' LINE, 9' GAP |
| ② 4" YELLOW EDGE LINE | ⑧ 4" WHITE WET REFLECTIVE TAPE LANE LINE |
| ③ 8" WHITE WET REFLECTIVE TAPE | ⑨ YIELD LINE SYMBOLS 18" OR 36" WHITE WHEN SPECIFIED IN THE CONTRACT |
| ④ 18" STOP LINE WHITE WHEN SPECIFIED IN THE CONTRACT | ⑩ 4" LINE YELLOW |
| ⑤ CHEVRON 24" WHITE 25' C-C | ⑪ 8" WHITE WHEN SPECIFIED IN THE CONTRACT |
| ⑥ ISLAND NOSE EPOXY (SOLID YELLOW) | |

NOTES

YIELD LINE SYMBOLS ARE 18" FOR ≤ 55 MPH.
YIELD LINE SYMBOLS ARE 36" FOR 65 MPH.

J TURN MEDIAN PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NOTES

YIELD LINE SYMBOLS ARE 18" FOR $\leq$ 55 MPH.
YIELD LINE SYMBOLS ARE 36" FOR 65 MPH.

LEGEND

- | | |
|--------------------------------|--|
| ① 4" WHITE EDGE LINE | ⑦ 8" WHITE 3' LINE, 9' GAP |
| ② 4" YELLOW EDGE LINE | ⑧ 12" YELLOW AT 10' C-C WHEN SPECIFIED IN THE CONTRACT |
| ③ 8" WHITE WET REFLECTIVE TAPE | ⑨ YIELD LINE SYMBOLS 18" OR 36" WHITE |
| ④ 18" STOP LINE WHITE | |
| ⑤ CHEVRON 24" WHITE 25' C-C | |
| ⑥ 4" WHITE 3' LINE, 9' GAP | |

**J TURN LANE
PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/15/2012
DATE

FHWA

/S/ Thomas N. [Signature]
STATE TRAFFIC ENGINE 100 SIGN

LEGEND

- POST WITH ATTACHED SIGN
- POST WITH ATTACHED SIGN IN DRUM
- DRUM WITH WARNING LIGHT (TYPE C)
- DRUM
- ARROW BOARD
- 8' TYPE III BARRICADE
- *-x-* REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC

GENERAL NOTES :

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

"WO" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

① CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

GENERAL NOTES CONTINUED:

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

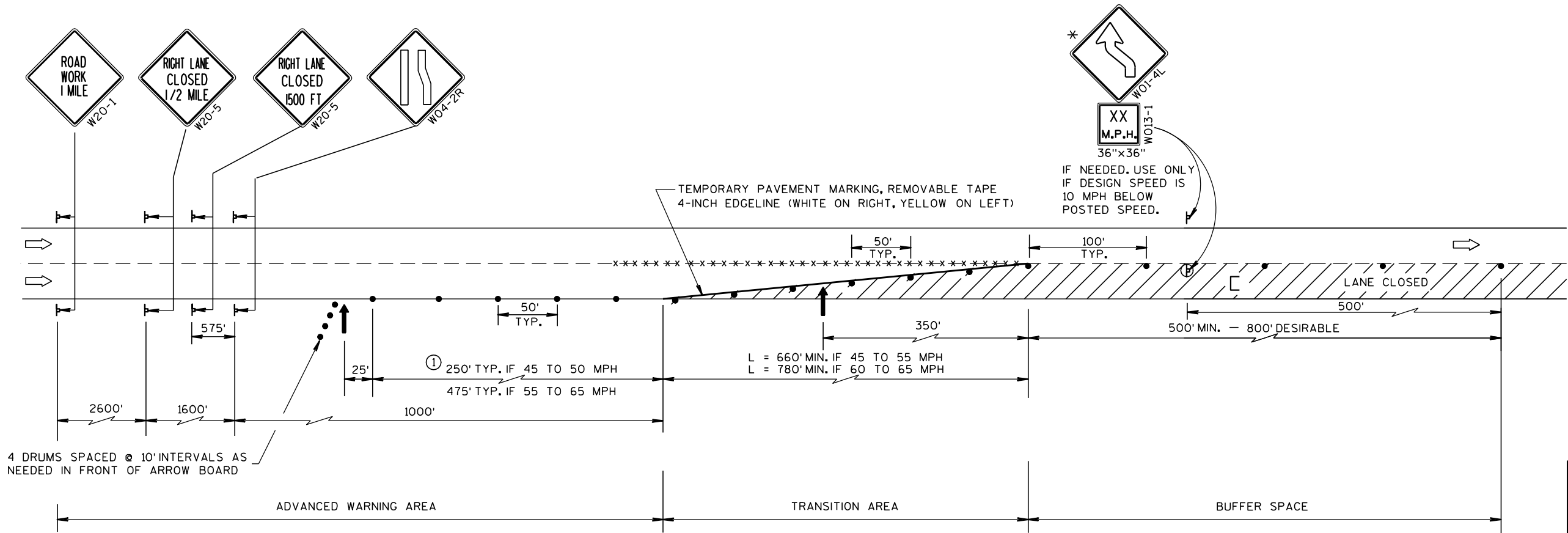
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

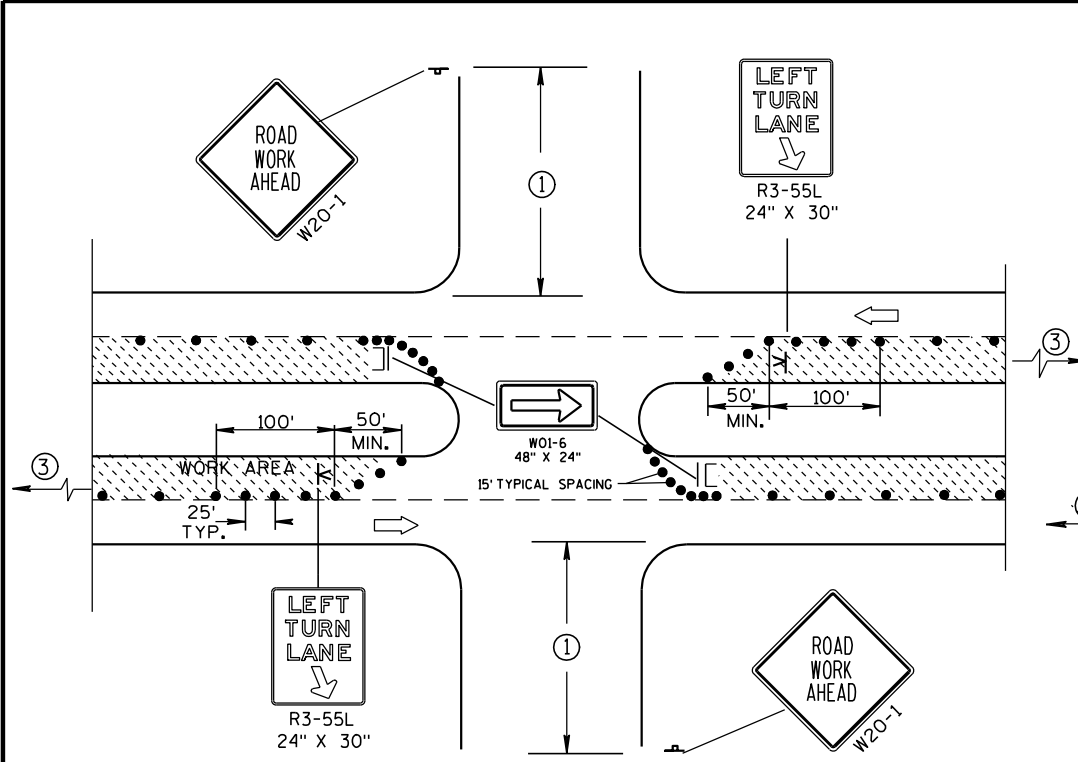
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/4 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (W01-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

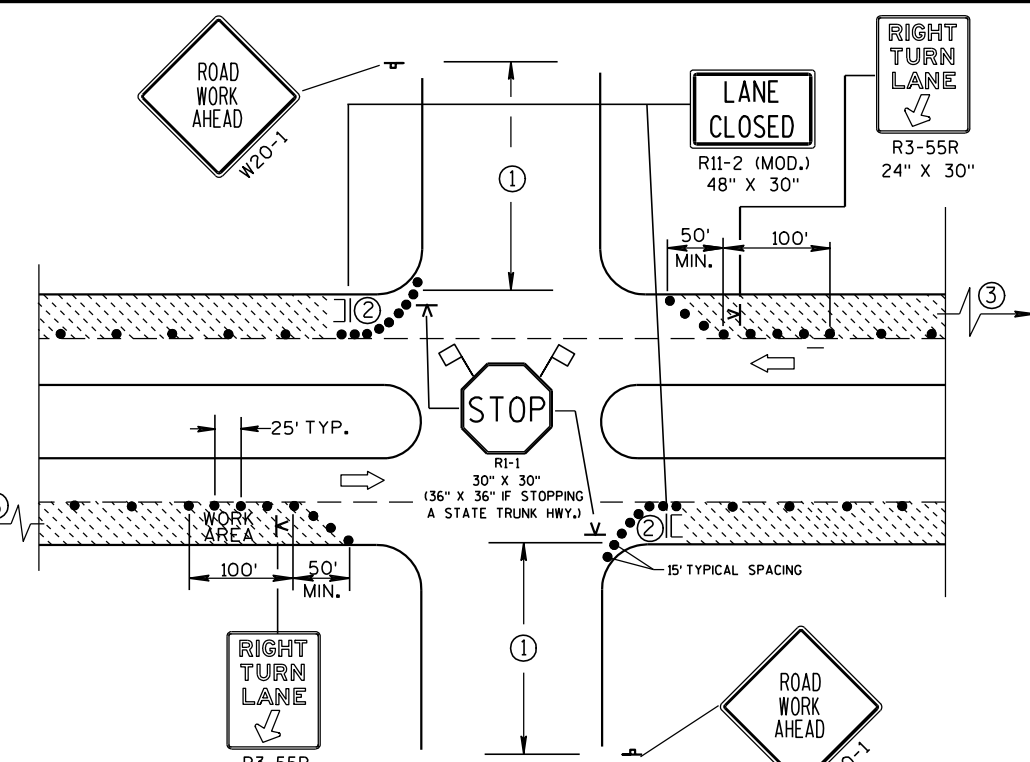


TRAFFIC CONTROL, LANE CLOSURE, SPEEDS GREATER THAN 40 M.P.H.	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8-7-95 DATE	/S/ Chester J. DIRECTOR, OFFICE OF 101 c
FHWA	



DETAIL A
FOR LEFT LANE CLOSURE AT
INTERSECTION OR MEDIAN OPENING

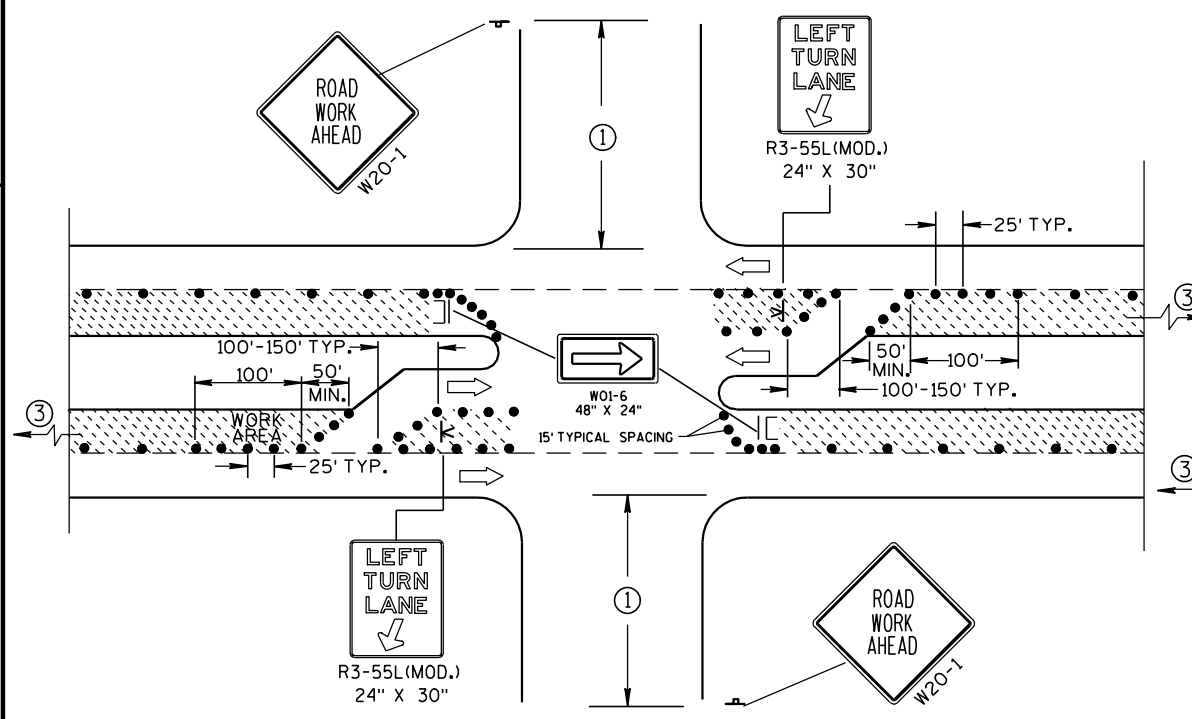
PROVIDE TURN LANES AT
INTERSECTIONS WHENEVER
STAGING OF WORK ALLOWS.
TAPER AND TURN LANE
LENGTHS BASED ON FIELD
CONDITIONS AS APPROVED
BY THE ENGINEER.



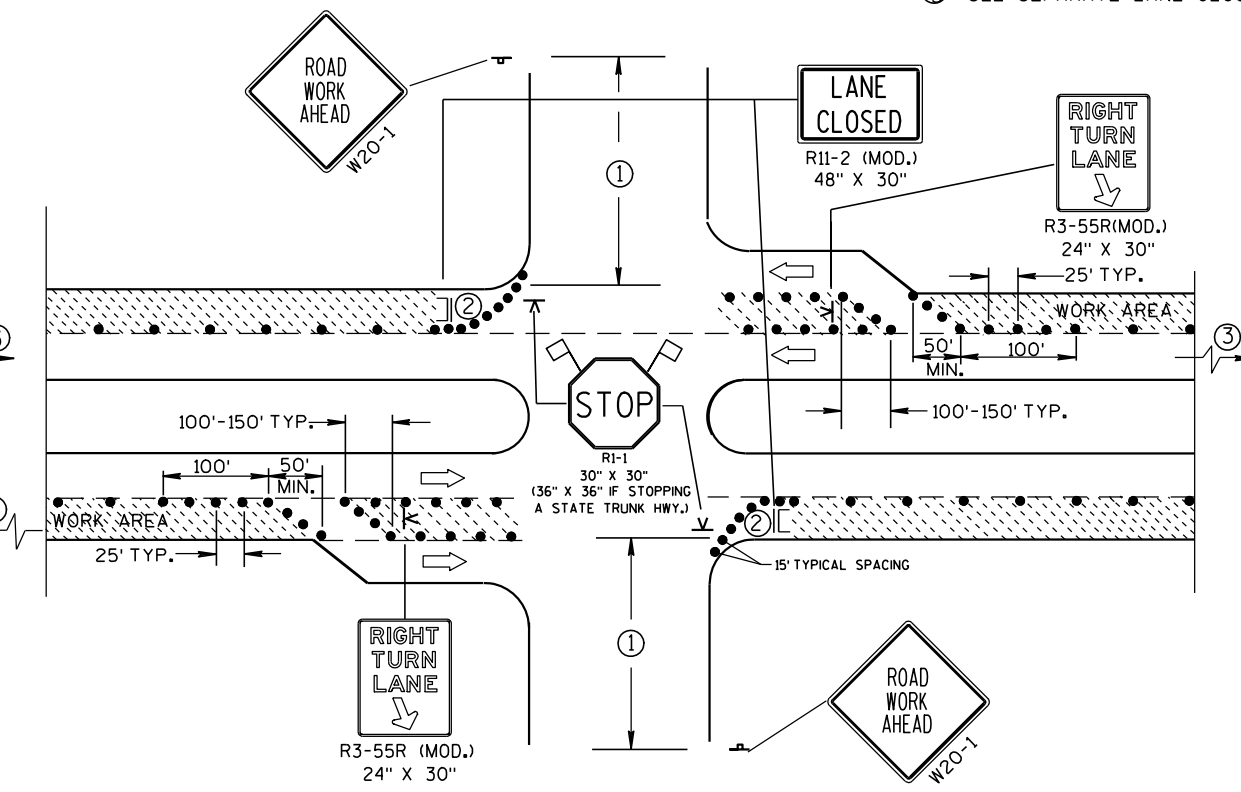
DETAIL B
FOR RIGHT LANE CLOSURE
AT INTERSECTION

GENERAL NOTES

- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.
- SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, OR THAT WILL BE PLACED IN A CLOSED LANE, MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.
- CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.
- BARRICADES IN A CLOSED LANE THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.
- ① 500' TYPICAL OR AT LAST INTERSECTION, WHICHEVER IS CLOSER.
350' IF 35-40 MPH.
200' IF 25-30 MPH.
 - ② ALSO USE BARRICADE AND 15' TYPICAL DRUM SPACING AT COMMERCIAL DRIVEWAYS.
 - ③ SEE SEPARATE LANE CLOSURE DETAIL FOR ADDITIONAL TRAFFIC CONTROL.



DETAIL C
FOR LEFT LANE CLOSURE AT INTERSECTION OR
MEDIAN OPENING (WITH LEFT TURN BAY OPEN)



DETAIL D
FOR RIGHT LANE CLOSURE AT INTERSECTION
(WITH RIGHT TURN BAY OPEN)

LEGEND

- DRUM
- ⌄ POST MOUNTED SIGN
- K SIGN ON PORTABLE SUPPORT (5' MIN. MOUNTING HEIGHT)
- || TYPE III BARRICADE (8' EQUIVALENT) AND WARNING LIGHT, TYPE A (FLASHING) WITH SIGN
- ➡ DIRECTION OF TRAFFIC FLOW
- 🚩 FLAGS, 16" X 16" MIN., ORANGE

TRAFFIC CONTROL, INTERSECTION WITHIN SINGLE LANE CLOSURE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 5/23/00 DATE	/S/ Chester J. Spang CHIEF SIGNS AND MAR 102 INEER		
FHWA			

SYMBOLS

- TRAFFIC CONTROL DRUM
- ┐ POST MOUNTED SIGN
- ➡ DIRECTION OF TRAFFIC FLOW
- ⓧ ARROW BOARD IN CAUTION MODE

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

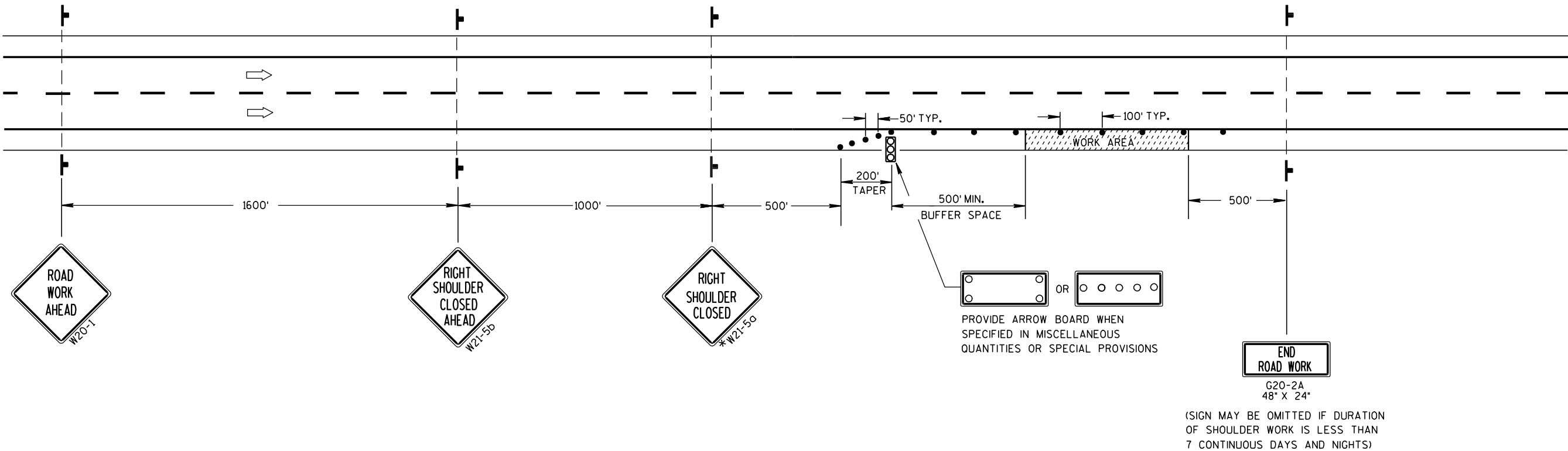
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



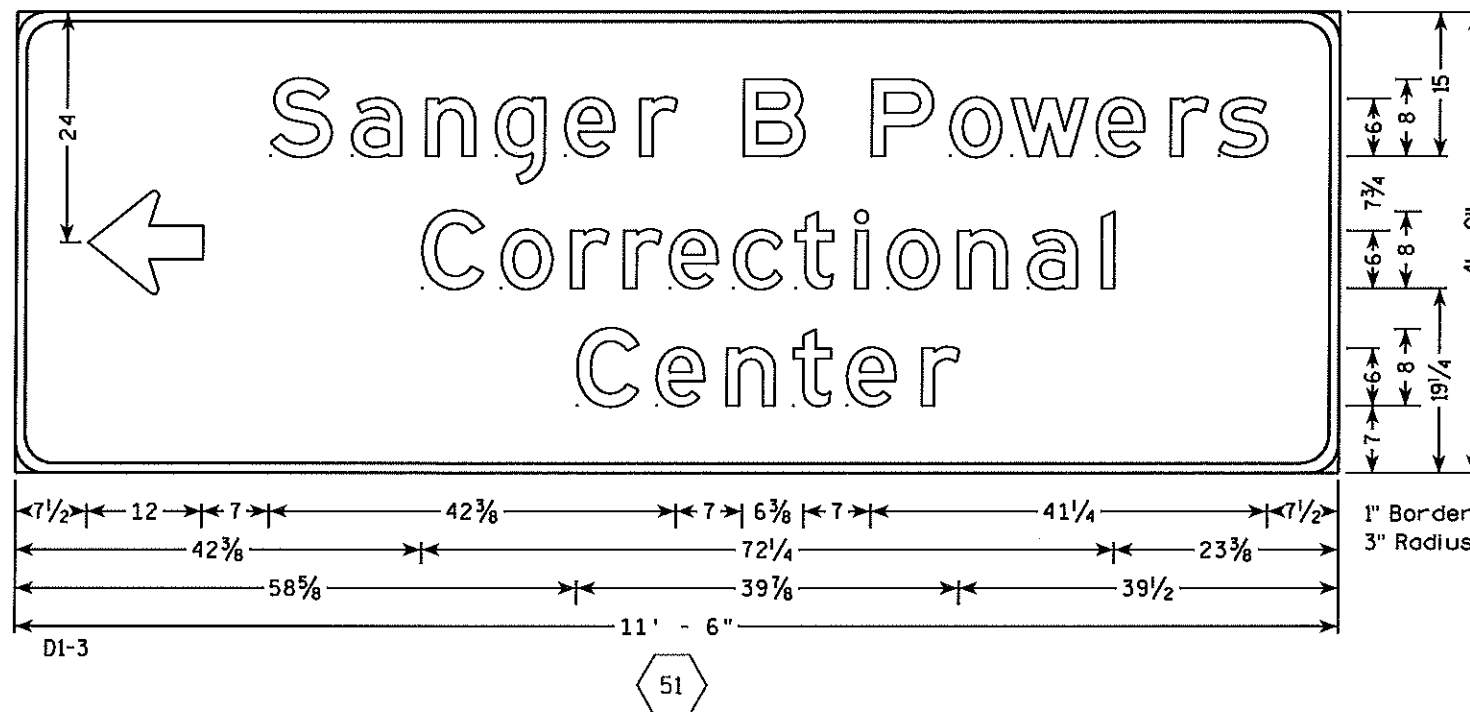
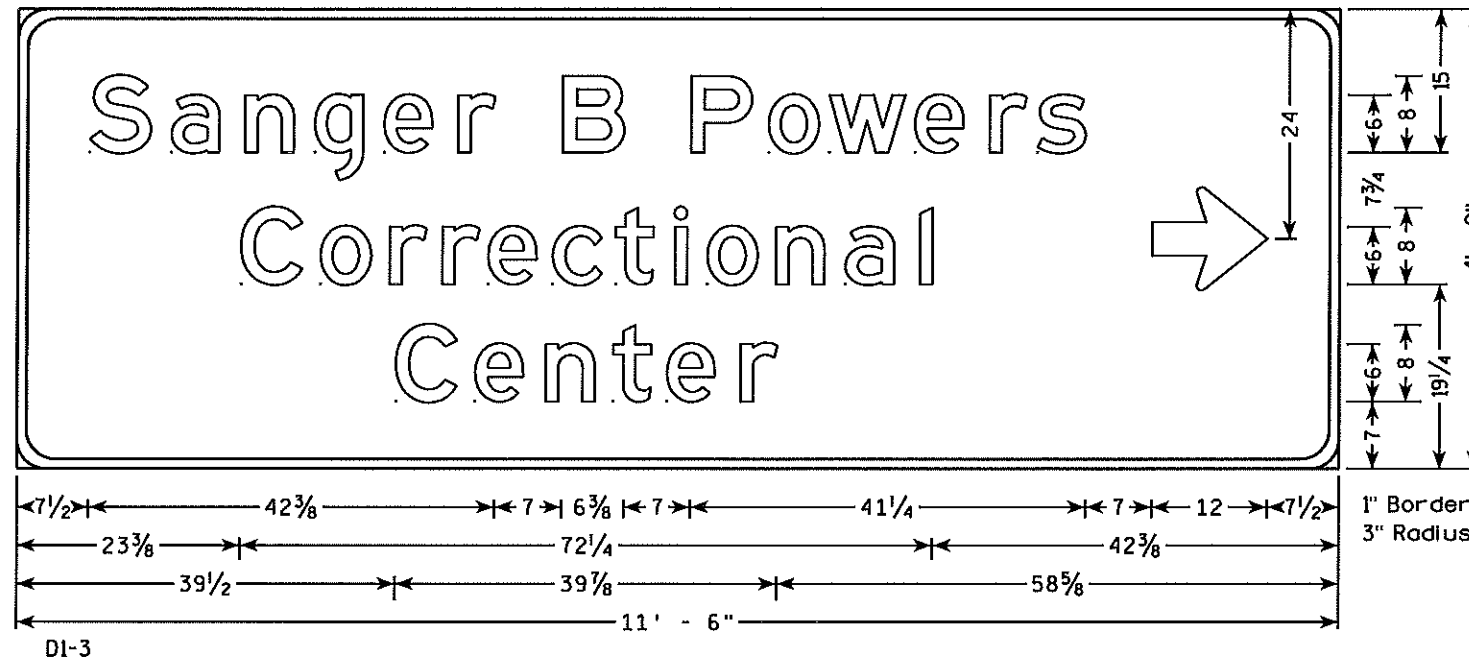
TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/23/00 /S/ Chester J. Sacco
DATE CHIEF SIGNS AND MAR 103 INEER
FHWA

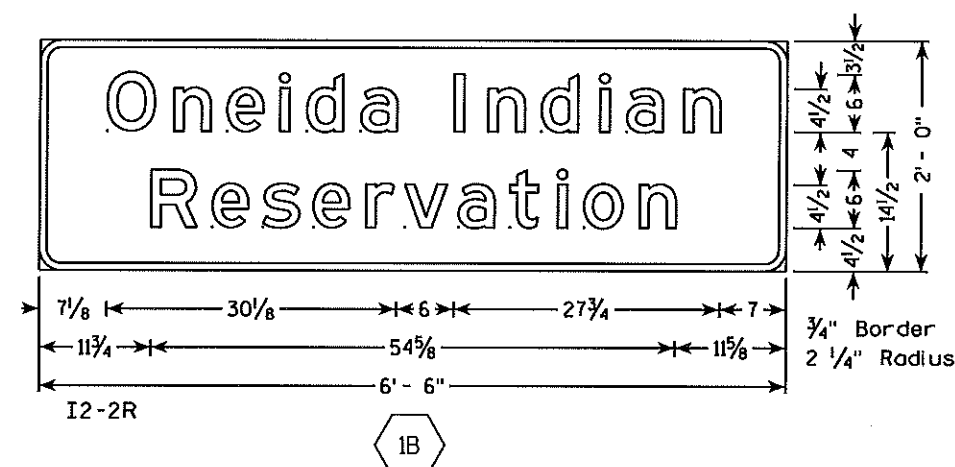
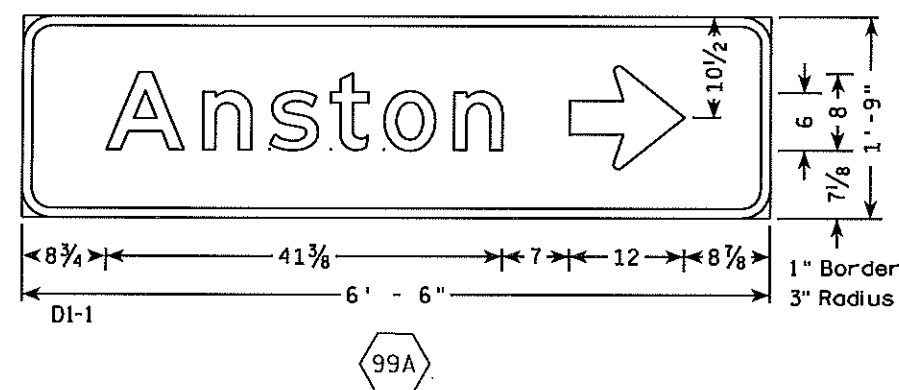
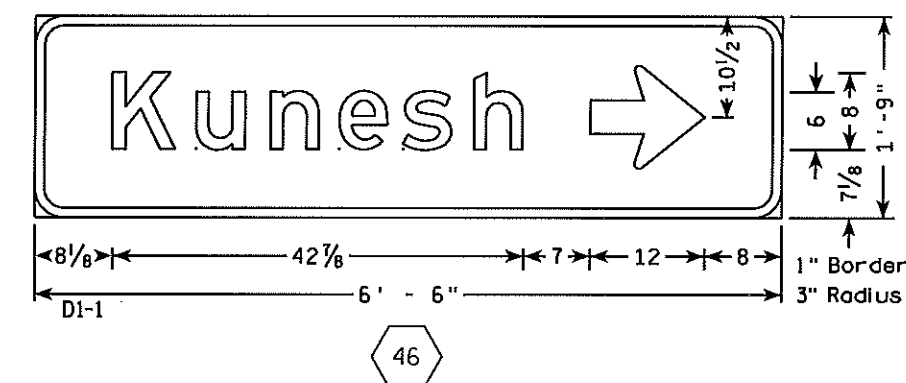
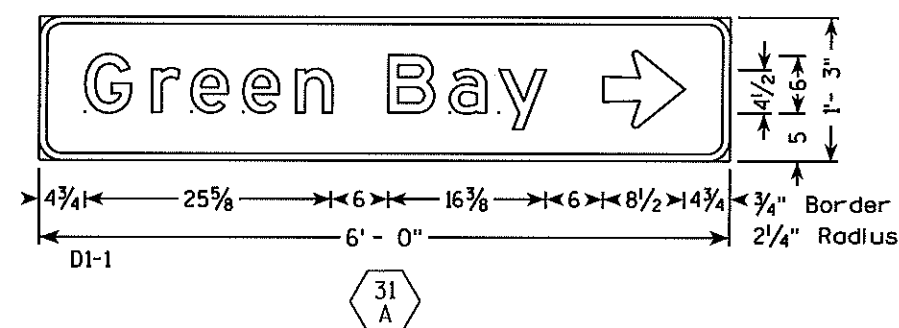
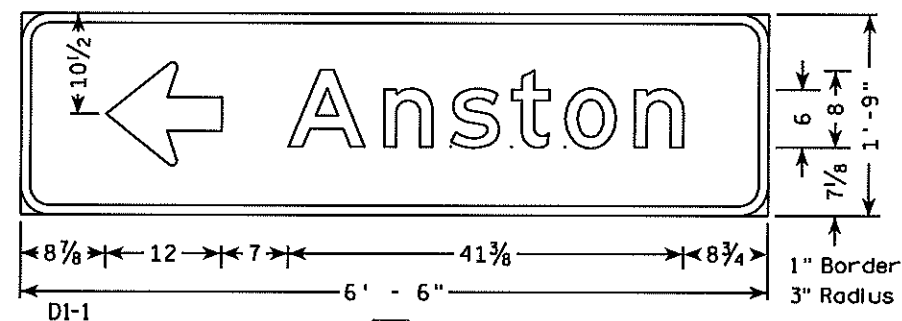
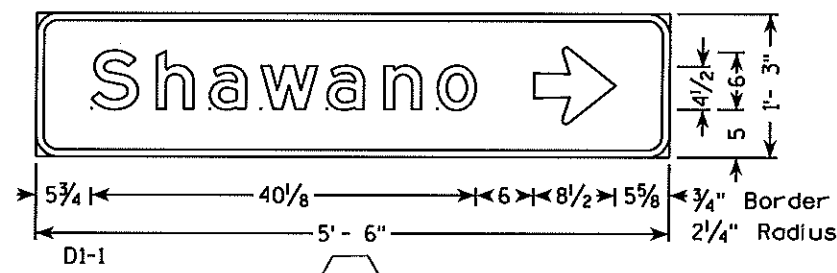
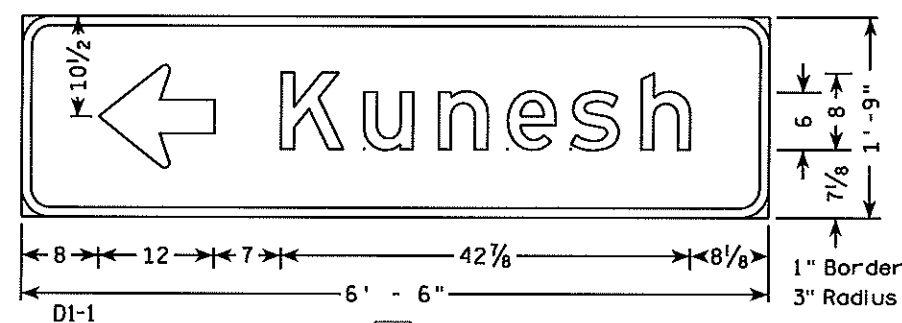
NOTES

1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E except as noted

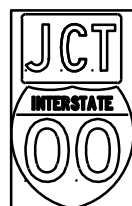


NOTES

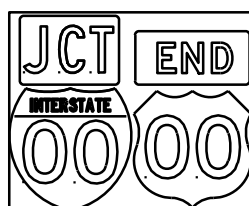
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E



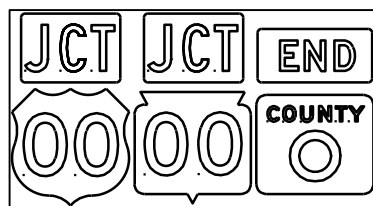
TYPICAL ASSEMBLIES



J1-1



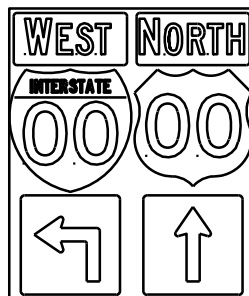
J1-2



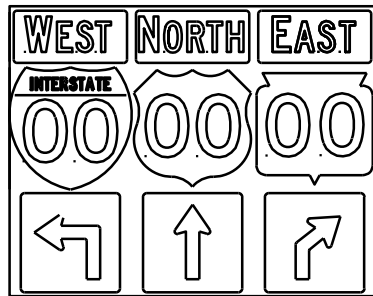
J1-3



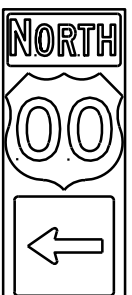
J2-1



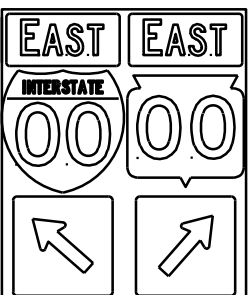
J2-2



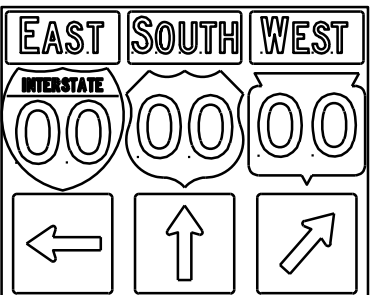
J2-3



J3-1



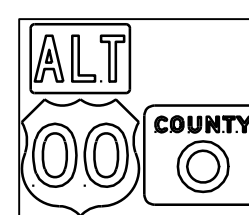
J3-2



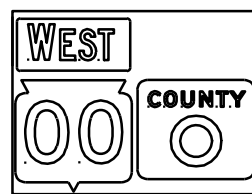
J3-3



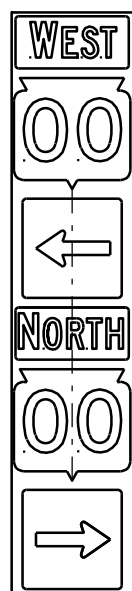
J4-1



J4-2

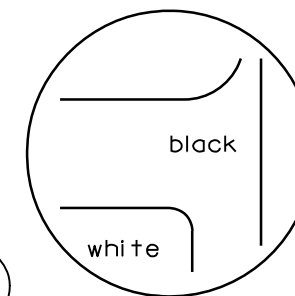
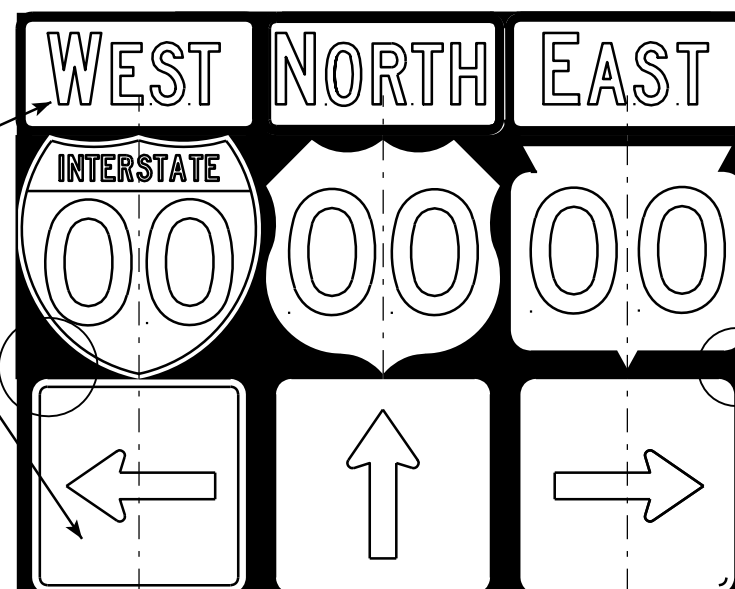
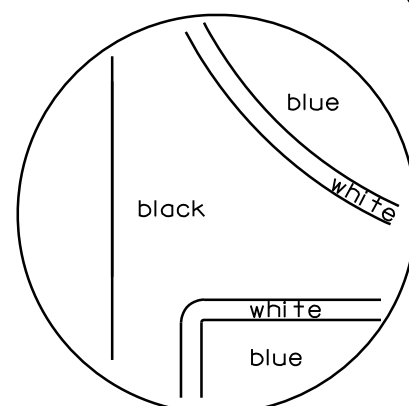


J4-2



JV

[blue background with interstate]



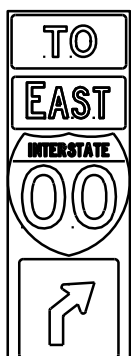
[black background]



J13-1



J12-1



J32-1



J33-1



J23-1



J22-1

NOTES

- Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Black Non-reflective
Message - see Note 5
- Message Series - See Note 5
- Corners shall be square since base material is plywood.
- The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
- Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
- Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
- Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
- Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.

ROUTE MARKERS & COMPONENTS IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
For State Traffic Engineer

DATE 10/21/09

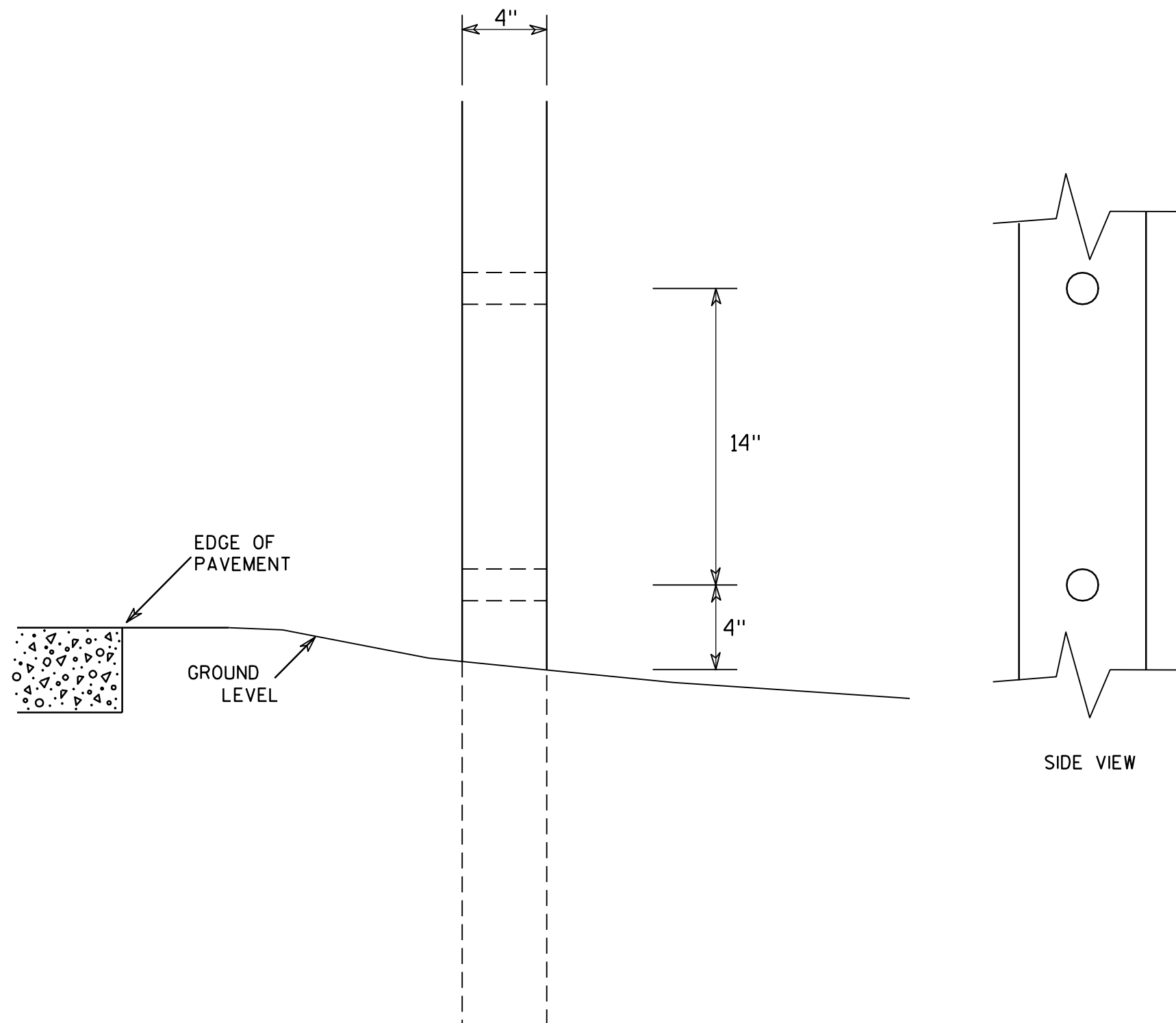
PLATE NO. A2-1S.6

PROJECT NO:

SHEET NO: 106

E

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

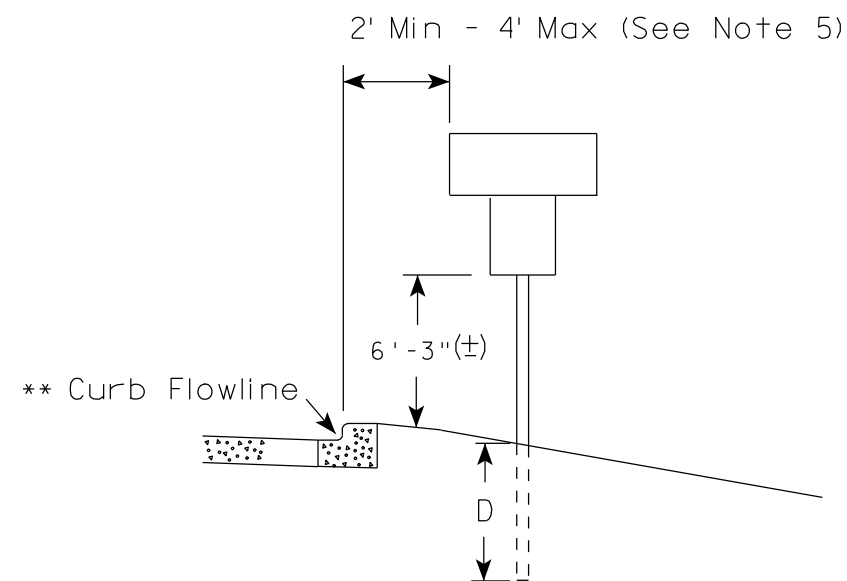
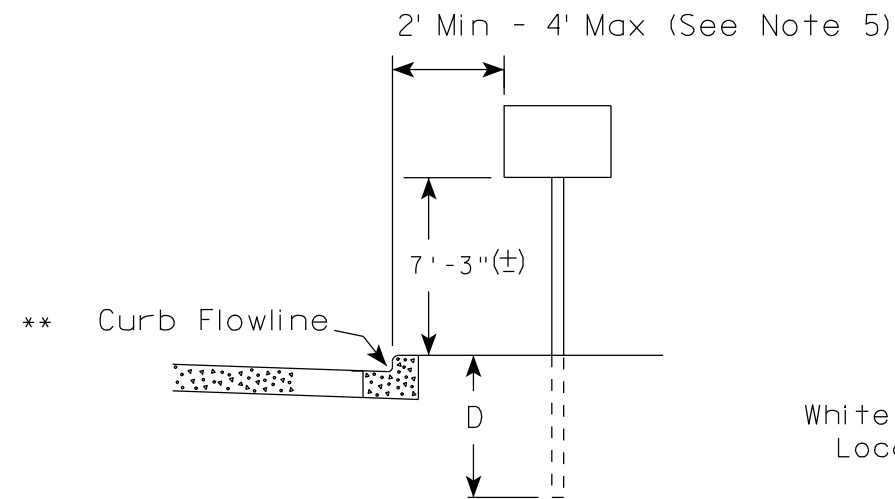
HWY:

COUNTY:

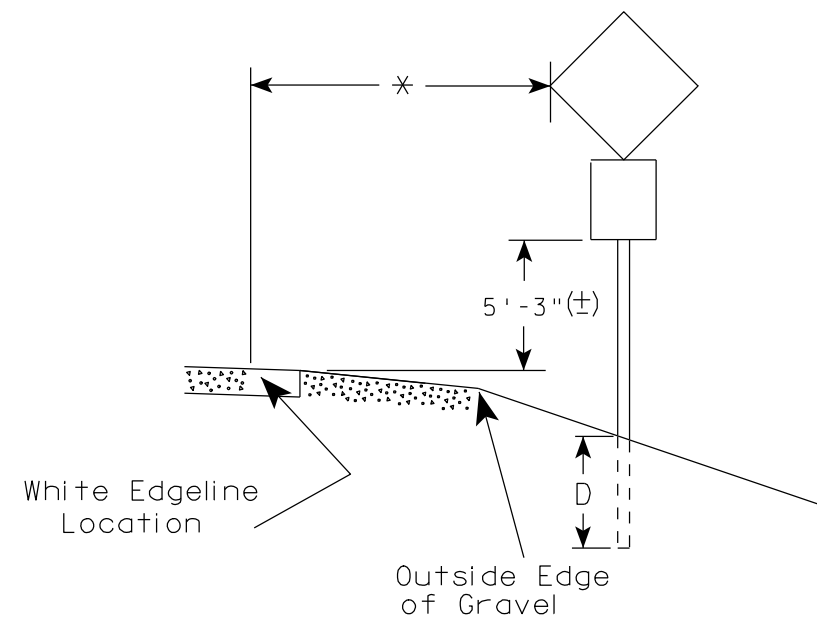
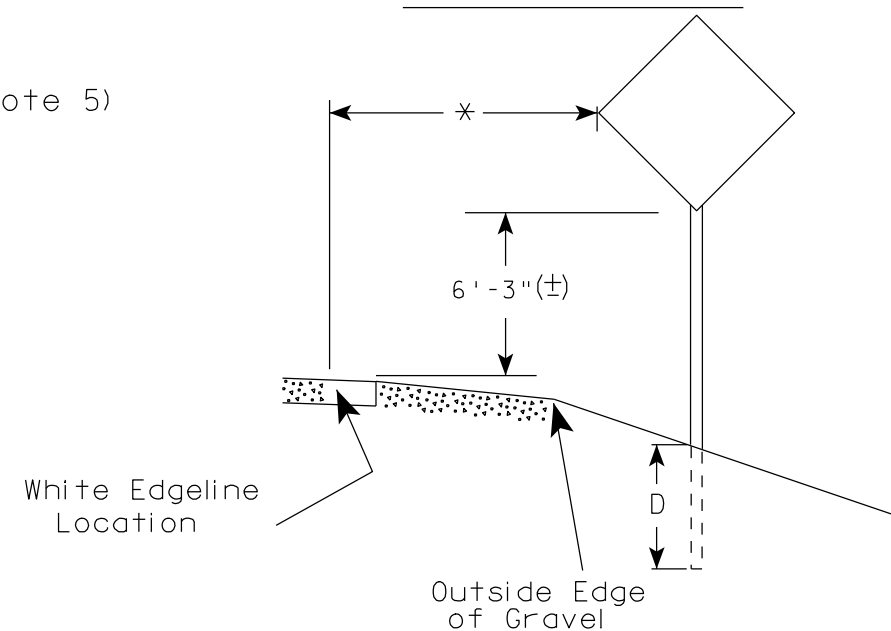
SHEET NO: 107

E

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4'-3" (±).

✱✱ The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

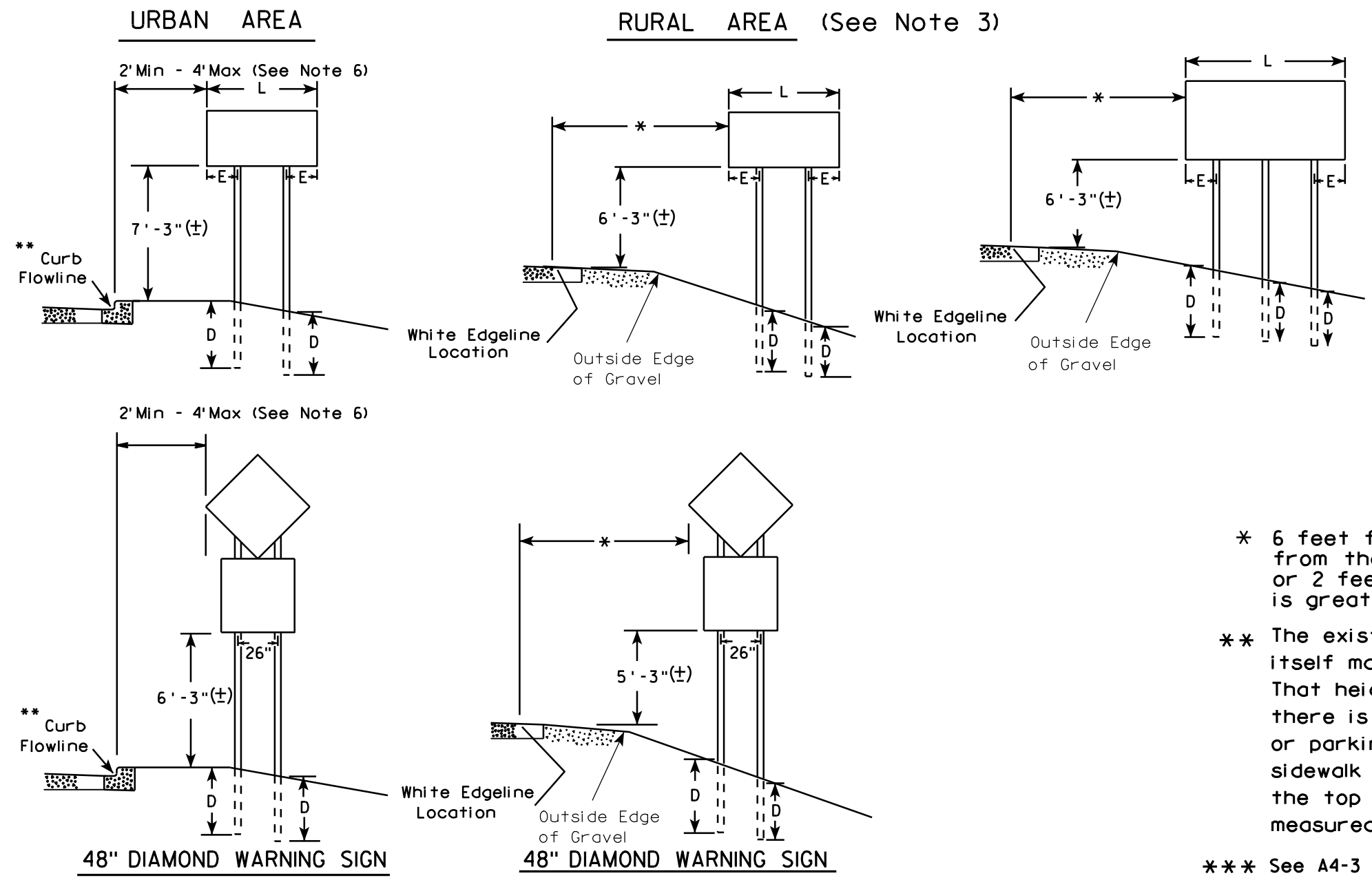
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 108

E



GENERAL NOTES

1. For multiple post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A4-5) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width or 20 S.F. or less in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

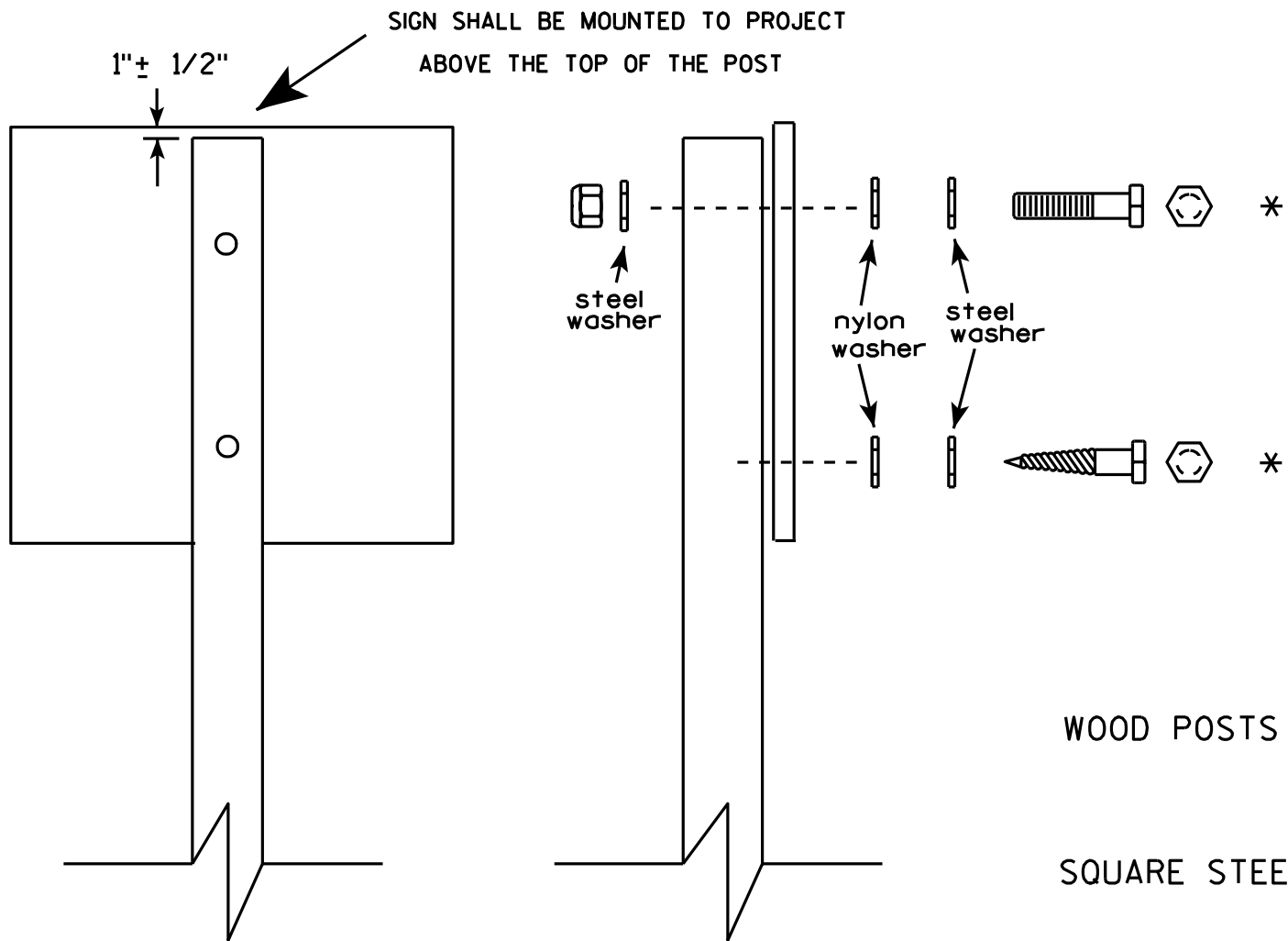
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH	
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/21/2011	PLATE NO. A4-4.11

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 109	E
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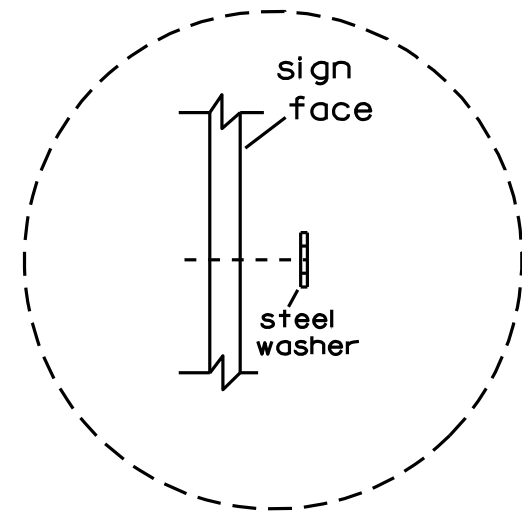


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.

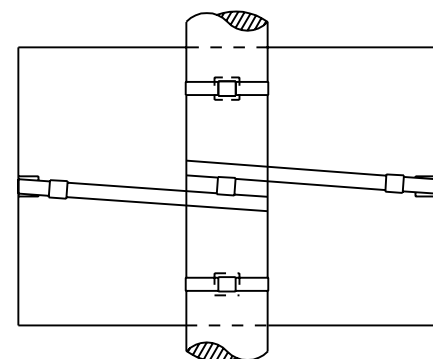
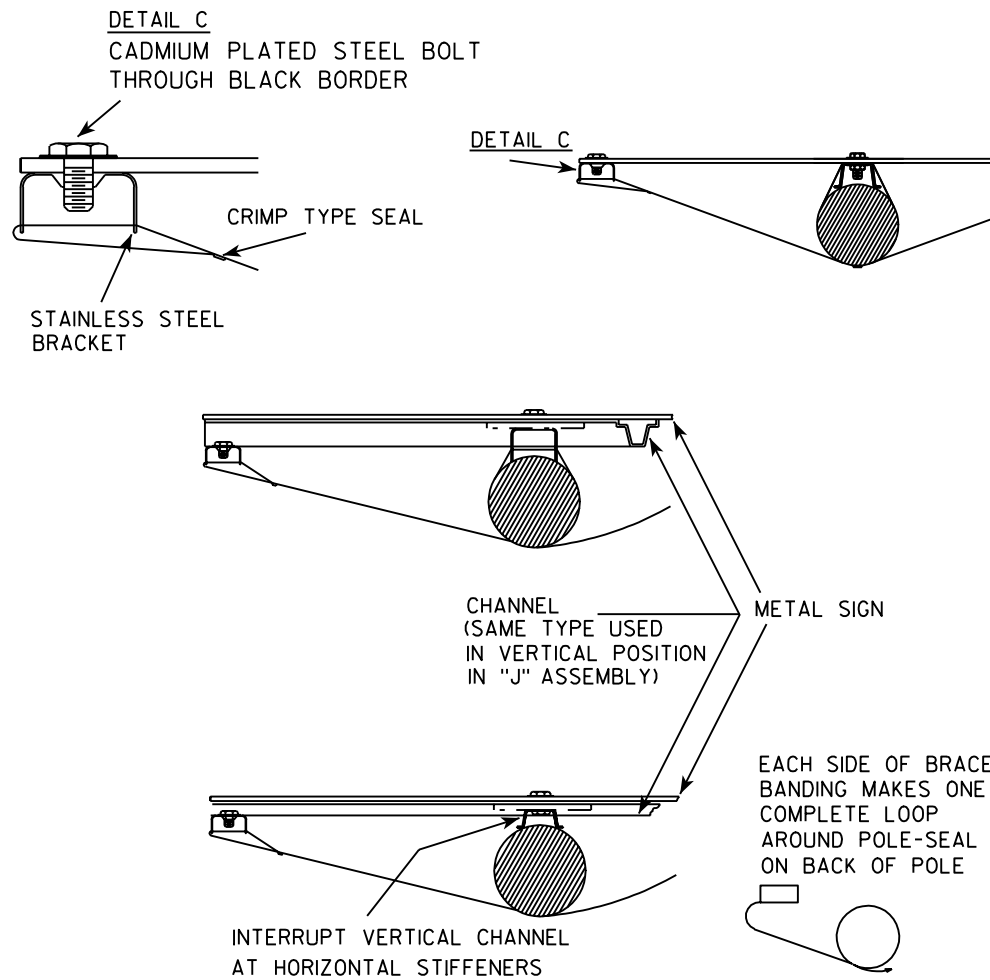


Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

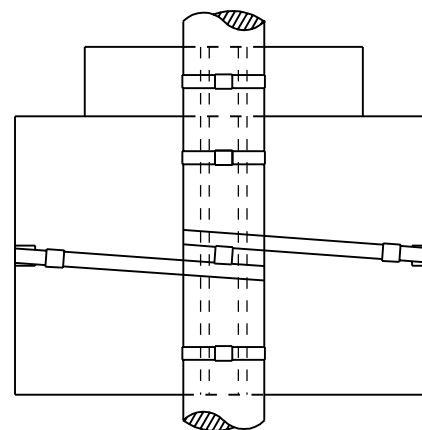
ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

BRACE BANDING



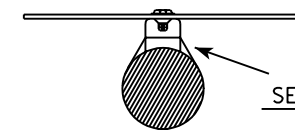
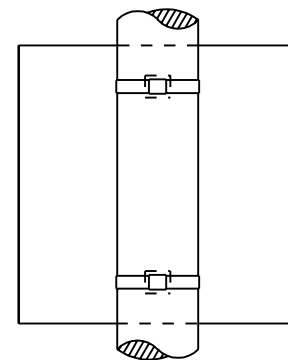
BRACE BANDING

BRACE BANDING SHALL BE TIGHTENED FIRMLY
BUT NOT SO TIGHT AS TO APPRECIABLY
CURVE FACE OF SIGN.



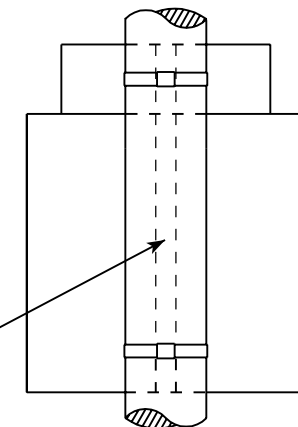
BRACKET BANDING

SINGLE SIGN

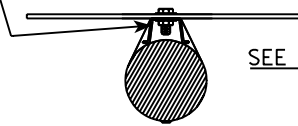


SEE DETAIL A

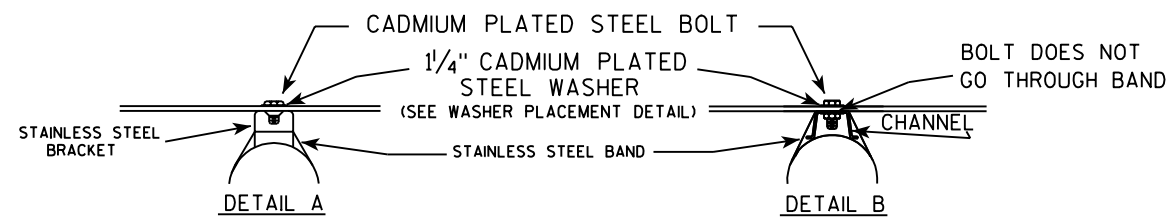
"J" ASSEMBLY



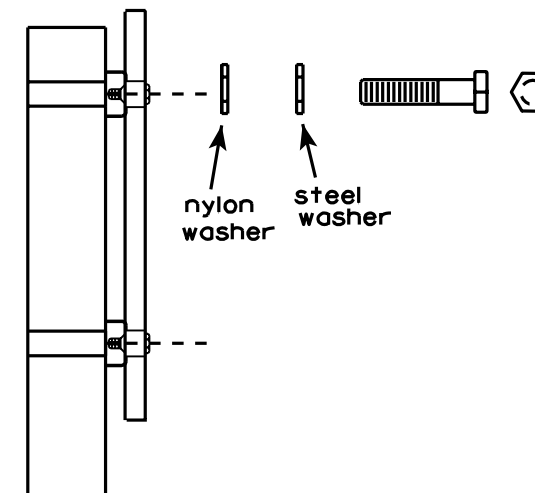
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



SEE DETAIL B



WASHER PLACEMENT



WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Signs 4' or greater in width shall have one brace band installed at the center of the sign.
2. Signs 3' or greater in height shall have three bracket bands installed. Signs less than 3' in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

STANDARD SIGN SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 11/08/05 PLATE NO. A5-9.2

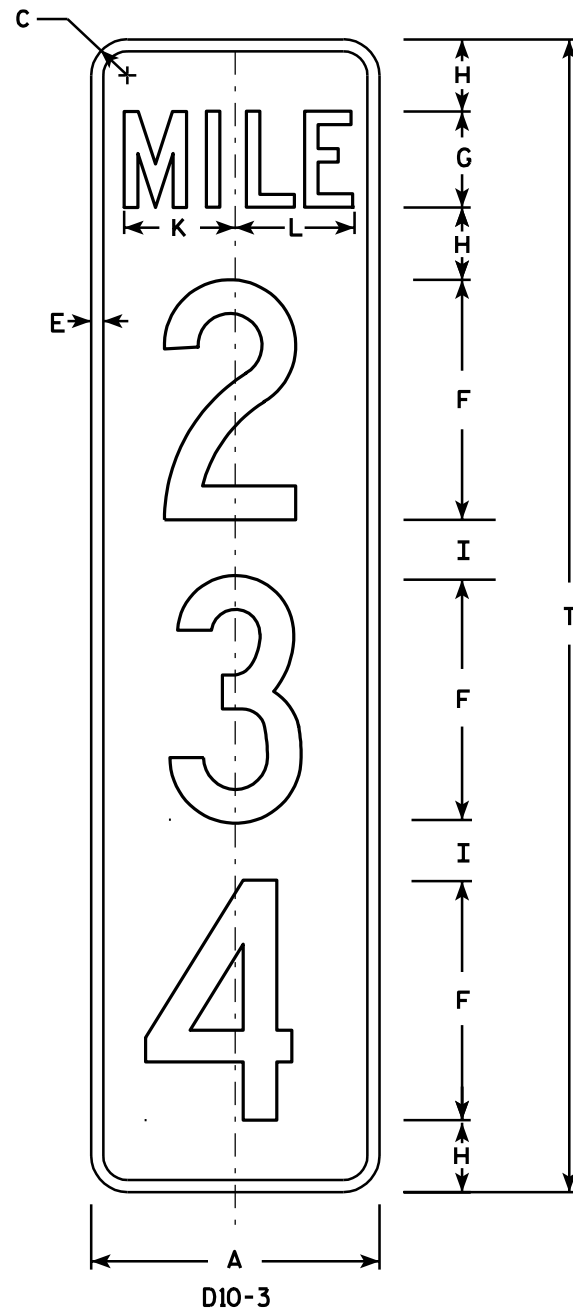
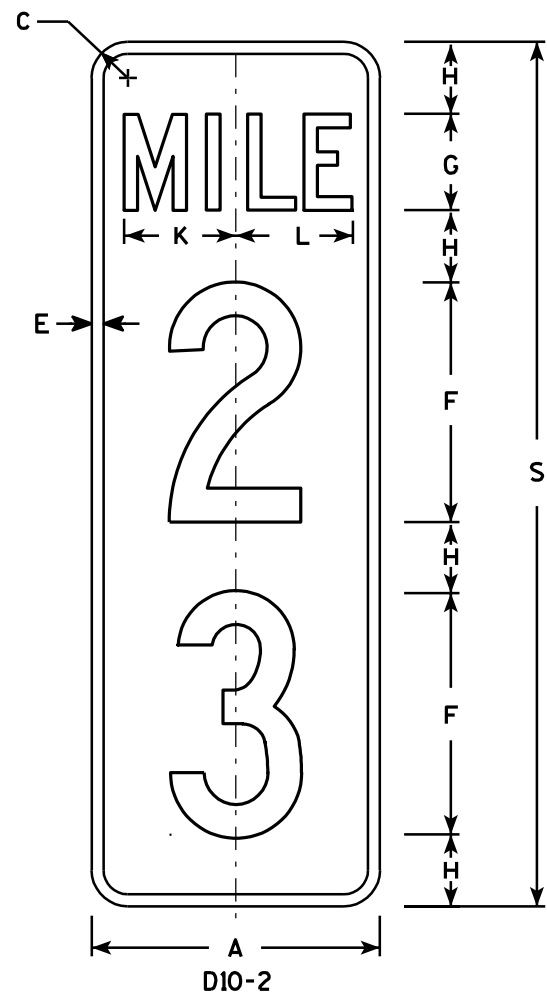
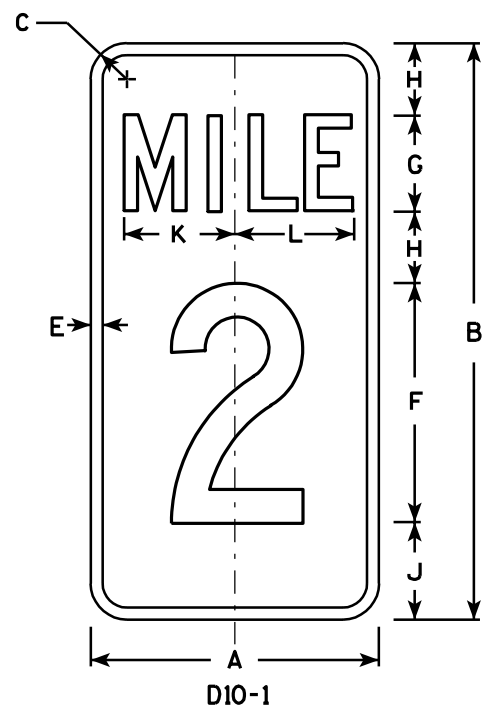
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 111

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White - Type H Reflective
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Optically adjust numerals about the centerline of the sign to achieve proper balance.

Metric equivalent
for this sign is:

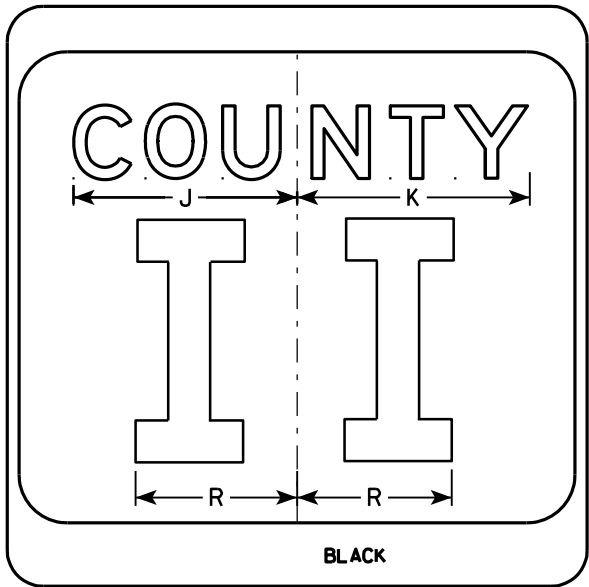
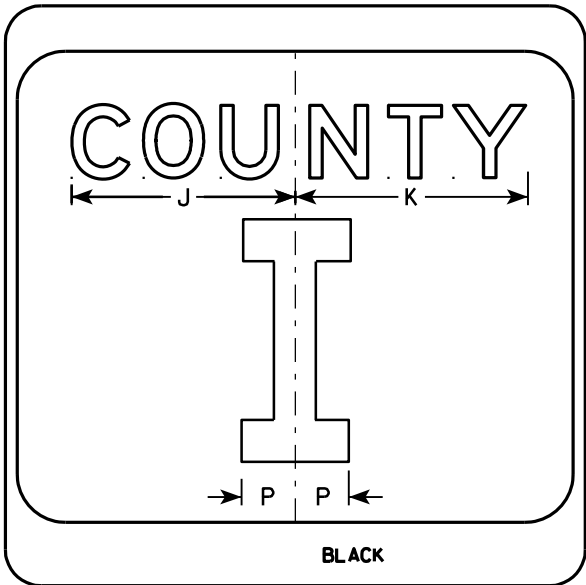
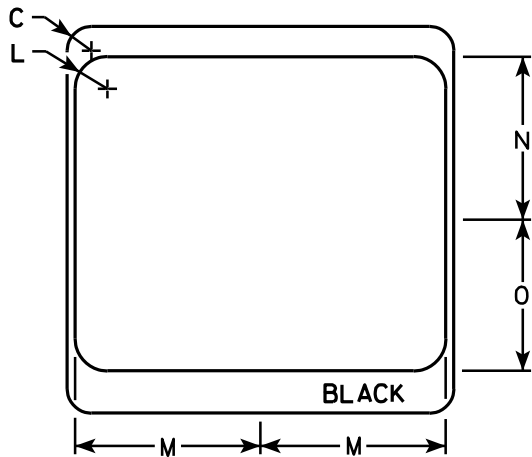
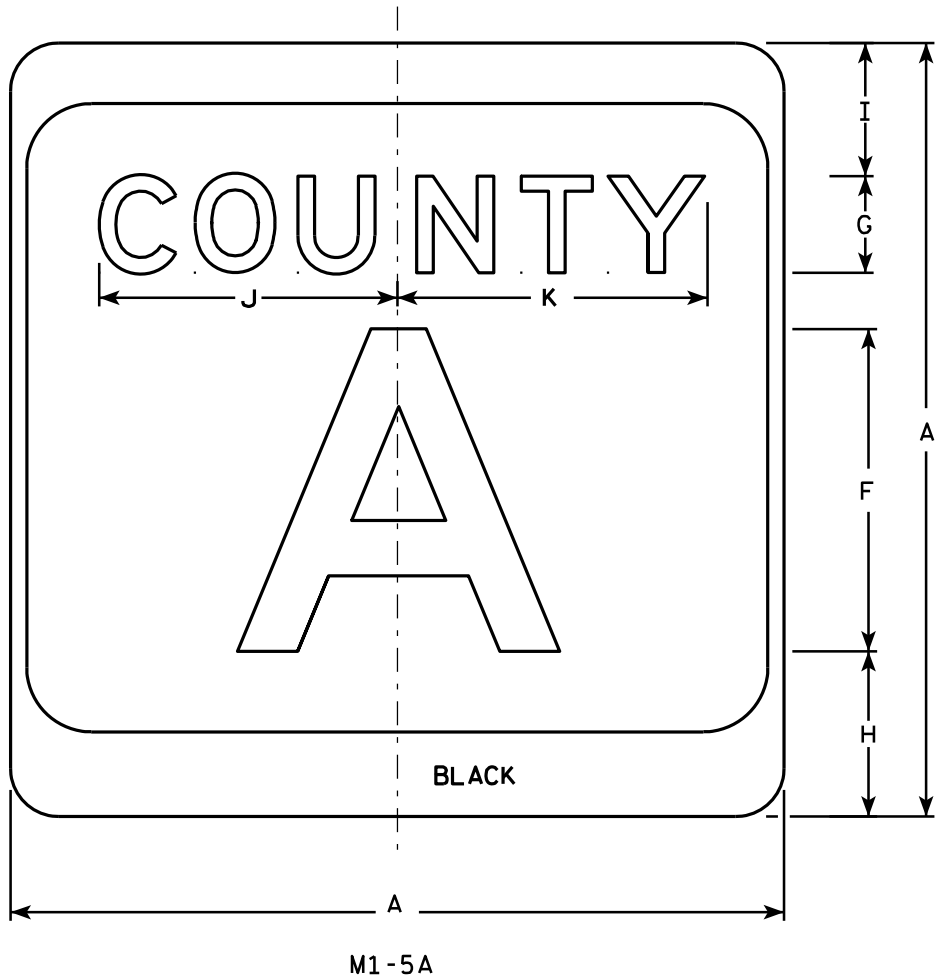
PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1																										
2																										
3																										
4	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						
5	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m2	Area m2	Area m2
.19	.28	.38

STANDARD SIGN D10-1 , D10-2 & D10-3	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Chester J. Sperry</i> for Director, Office of Traffic
DATE 1/16/02	PLATE NO. D10-3.2

7



NOTES

- 1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - White & Black - See Note 7
Message - Black
- 3. Message Series - see Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
- 6. Substitute appropriate letters & optically center to achieve proper balance.
- 7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 113

E

CTH MARKER

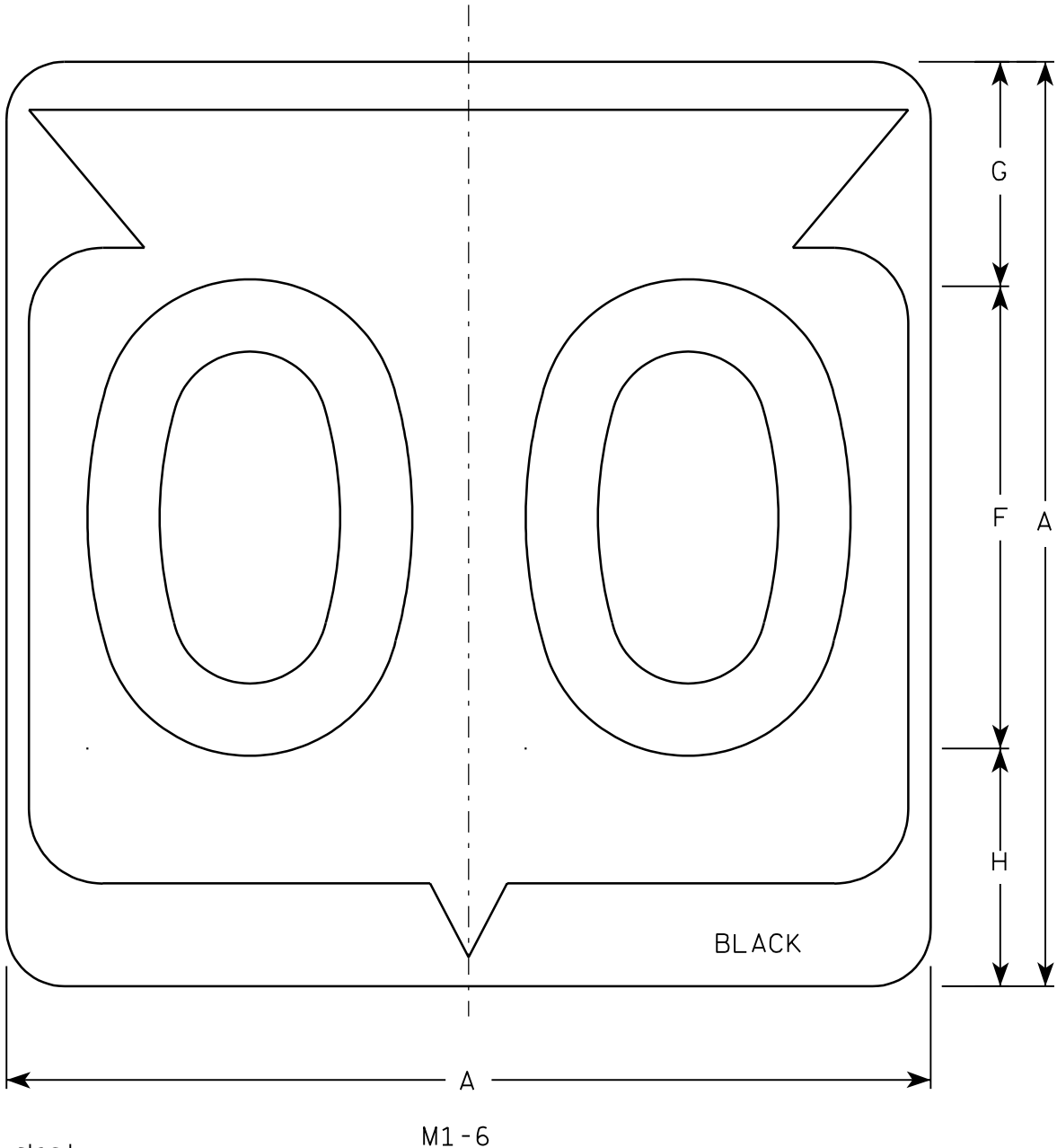
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8

7



Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 114

E

FILE NAME : C:\Users\Projects\tr_stdp\late\M16.DGN

PLOT DATE : 13-OCT-2005 14:55

PLOT BY : DITJPH

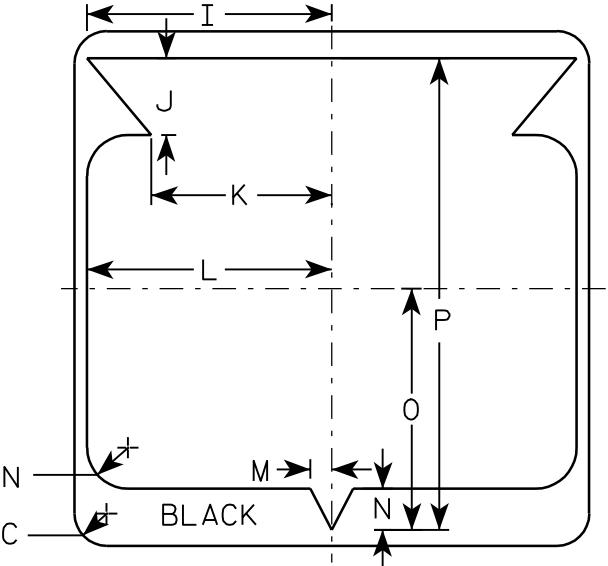
PLOT NAME :

PLOT SCALE : 6.715871:1.000000

WISDOT/CADDS SHEET 42

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

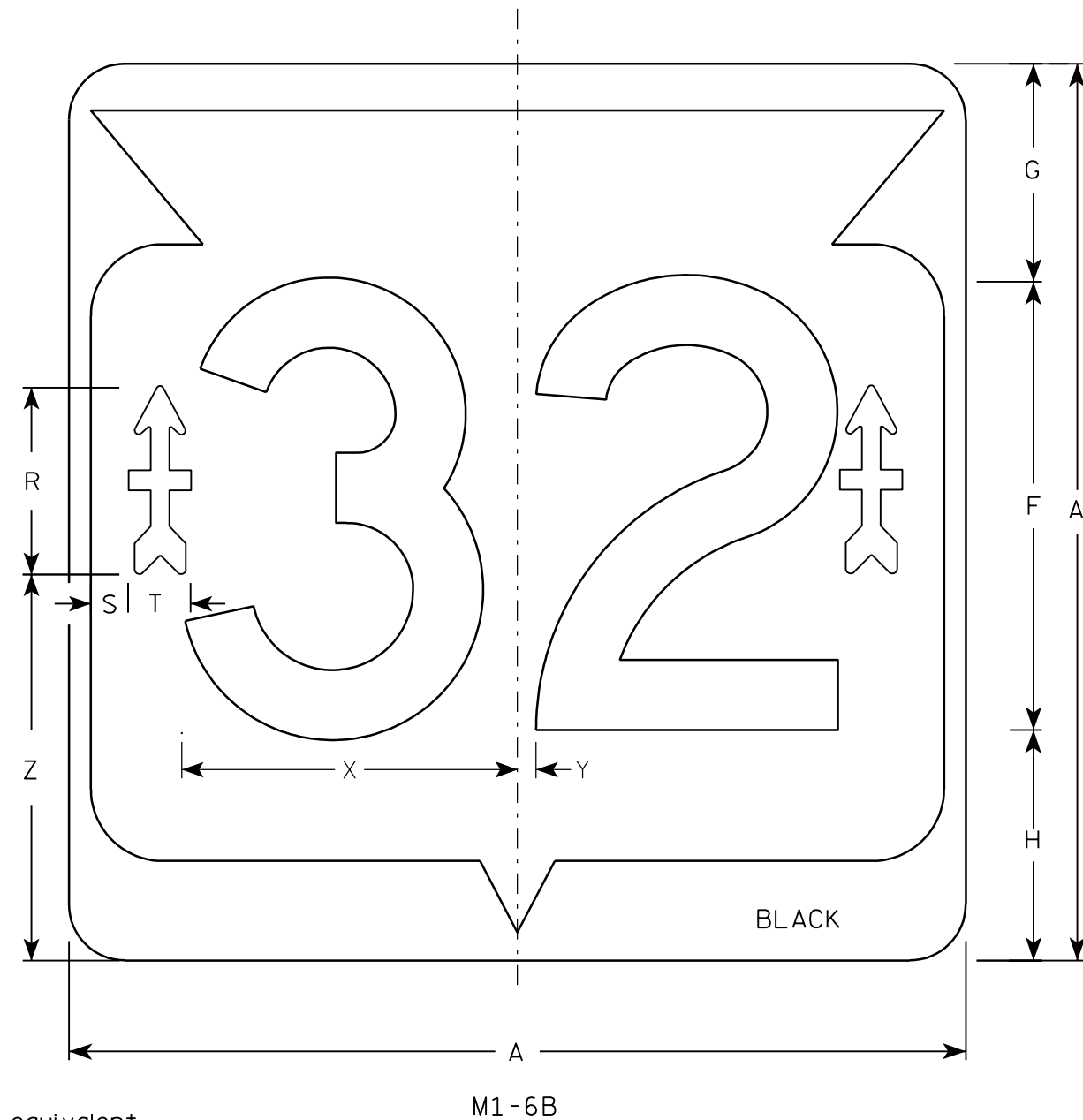
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9



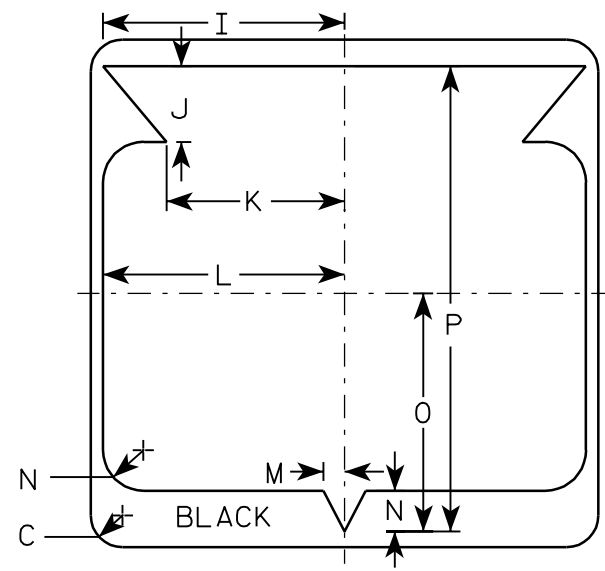
Metric equivalent for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

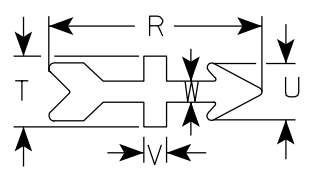
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81

NOTES

- 1. Sign is Type II - Type H - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - White & Black
 - Message - Black
 - Arrow - Type H Reflective Red
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



32nd DIVISION ARROW
ACTUAL SIZE



STATE ROUTE MARKER "32"
M1-6B FOR ASSEMBLIES

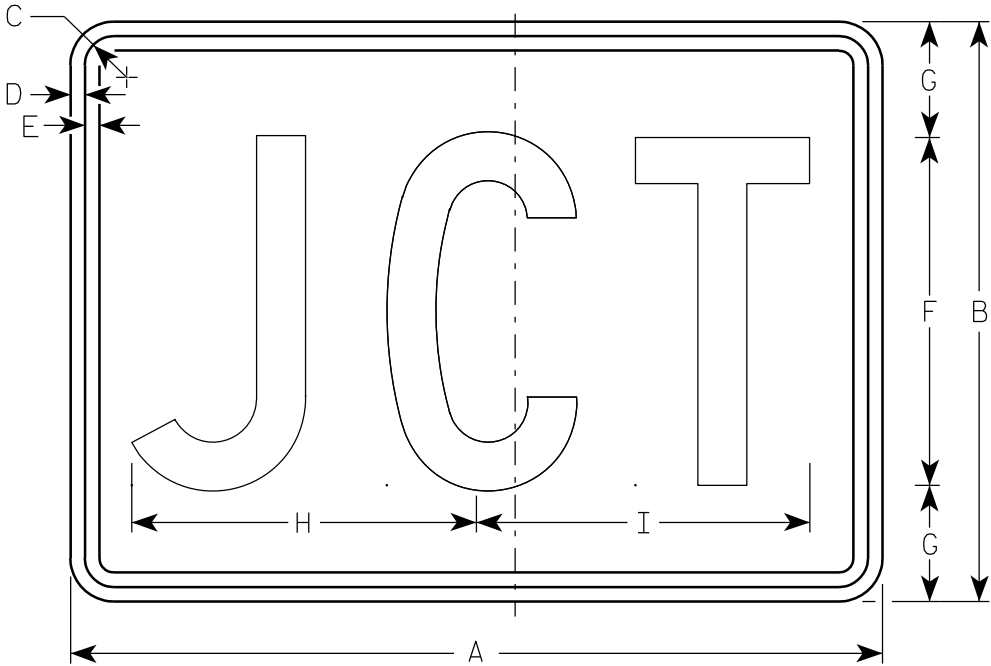
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

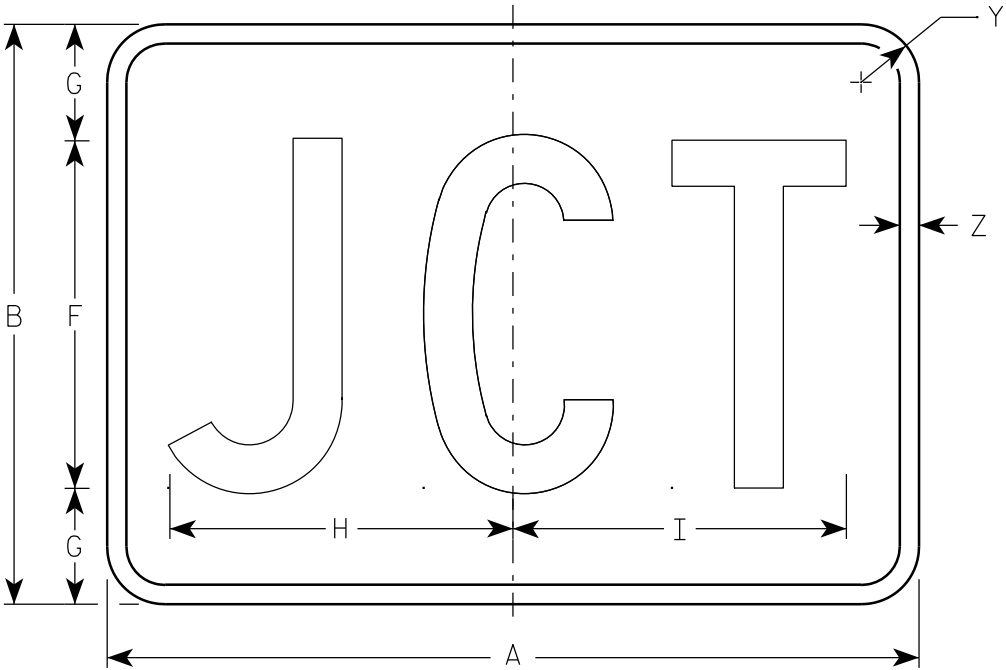
DATE 12/5/05 PLATE NO. M1-6B.2

NOTES

1. Sign is Type II - See Note 5 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
5. M2-1 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB2-1 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG2-1 Background - Green
Message - White - Type H Reflective
MK2-1 Background - Green
Message - White - Type H Reflective
MM2-1 Background - White - Type H Reflective
Message - Green
MN2-1 Background - Brown
Message - White - Type H Reflective
MR2-1 Background - Brown
Message - Yellow - Type H Reflective



M2-1
MK2-1
MM2-1
MR2-1



MB2-1
MG2-1
MN2-1

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 375 mm
3	750 mm X 525 mm
4	750 mm X 525 mm
5	750 mm X 525 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20	0.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40	0.20

STANDARD SIGN

M2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 3/16/10

PLATE NO. M2-1.10

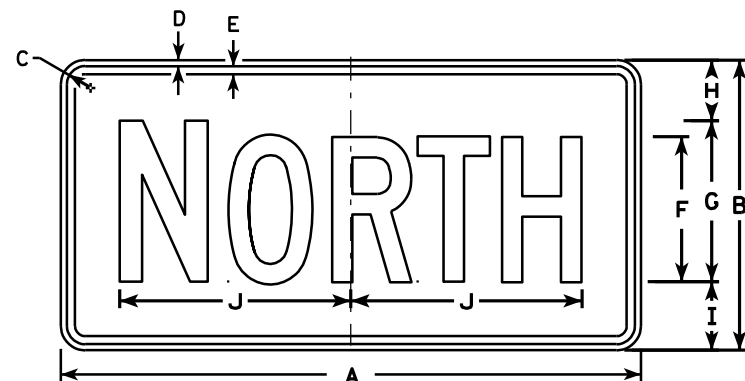
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 116

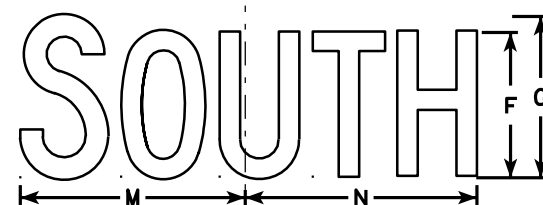
E



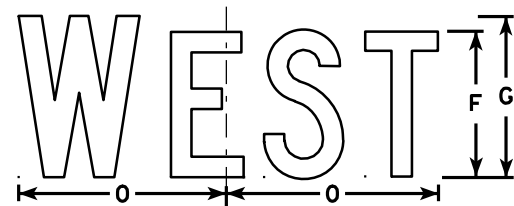
M3-1
MK3-1
M03-1



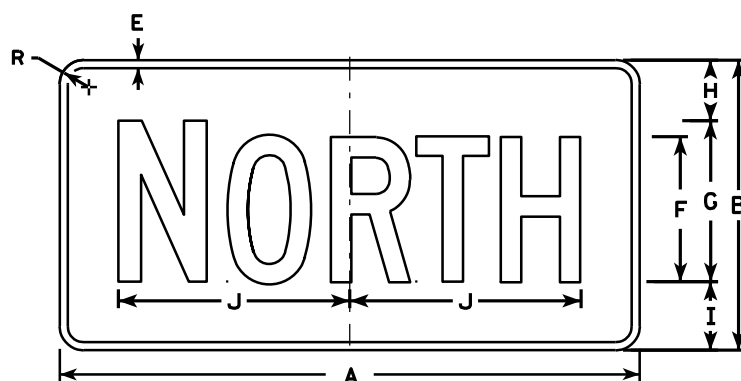
M3-2
MK3-2
M03-2



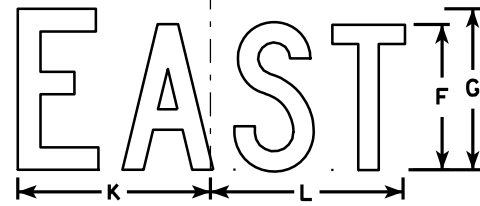
M3-3
MK3-3
M03-3



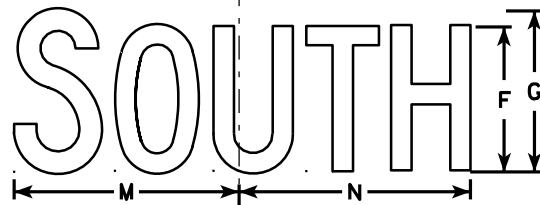
M3-4
MK3-4
M03-4



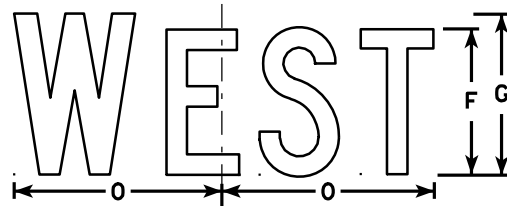
MB3-1
MG3-1
MM3-1
MN3-1



MB3-2
MG3-2
MM3-2
MN3-2



MB3-3
MG3-3
MM3-3
MN3-3



MB3-4
MG3-4
MM3-4
MN3-4

NOTES

1. All Signs Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White - Type H Reflective (Detour or temporary signs - Reflective)
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White - Type H Reflective (Detour or temporary signs - Reflective)
MG3-1 thru MG3-4 Background - Green
Message - White - Type H Reflective
MK3-1 thru MK3-4 Background - Green
Message - White - Type H Reflective
MM3-1 thru MM3-4 Background - White - Type H Reflective
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White - Type H Reflective
M03-1 thru M03-4 Background - Orange - Reflective
Message - Black
6. Note the first letter of each direction is larger than the remainder of the message.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

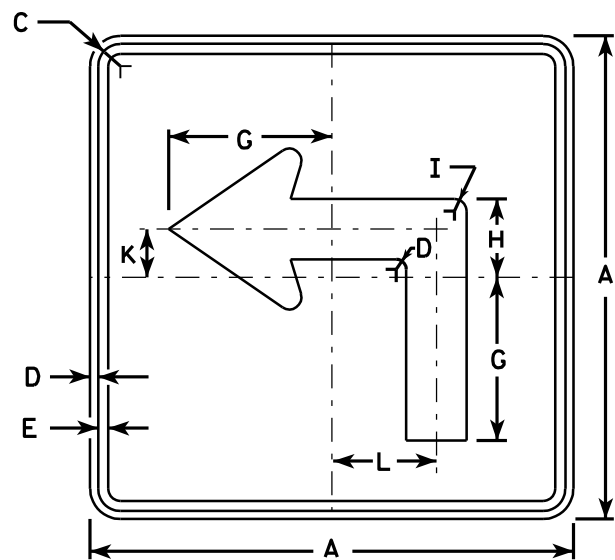
PROJECT NO: HWY: COUNTY: SHEET NO: 117 E

STANDARD SIGNS M3-1 thru M3-4 SERIES

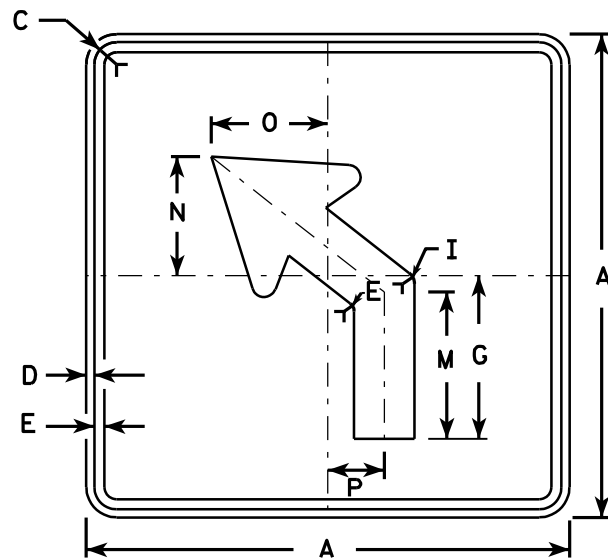
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

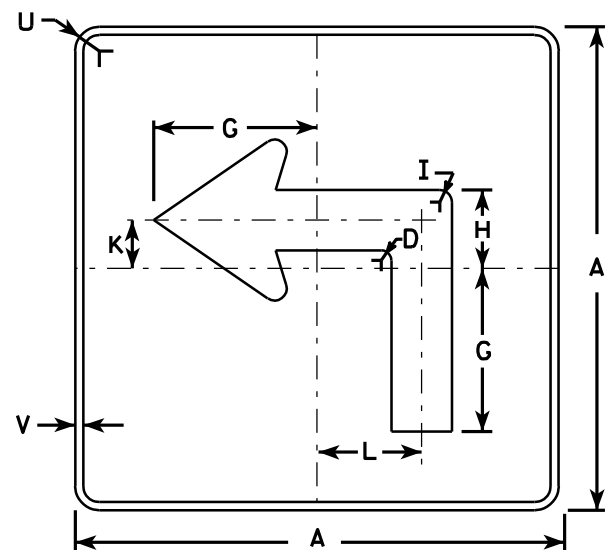
DATE 11/10/10 PLATE NO. M3-1.12



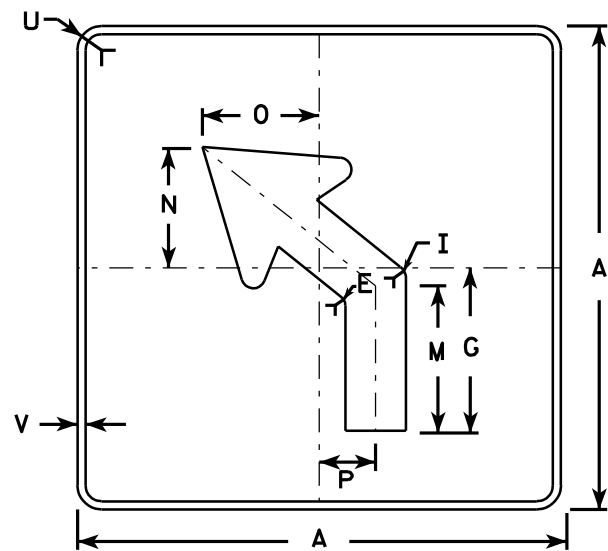
M5-1L
MK5-1L
MM5-1L
MO5-1L
MR5-1L



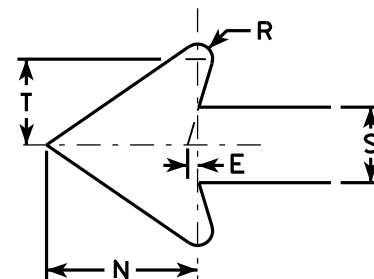
M5-2L
MK5-2L
MM5-2L
MO5-2L
MR5-2L



MB5-1L
MG5-1L
MN5-1L



MB5-2L
MG5-2L
MN5-2L



NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White - Type H Reflective (Detour or temporary Signs - Reflective)
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White - Type H Reflective (Detour or temporary Signs - Reflective)
MG5-1 and MG5-2 Background - Green
Message - White - Type H Reflective
MK5-1 and MK5-2 Background - Green
Message - White Type H Reflective
MM5-1 and MM5-2 Background - White - Type H Reflective
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White - Type H Reflective
MO5-1 and MO5-2 Background - Orange - Reflective
Message - Black
MR5-1 and MR5-2 Background - Brown
Message - Yellow - Type H Reflective
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25	0.56

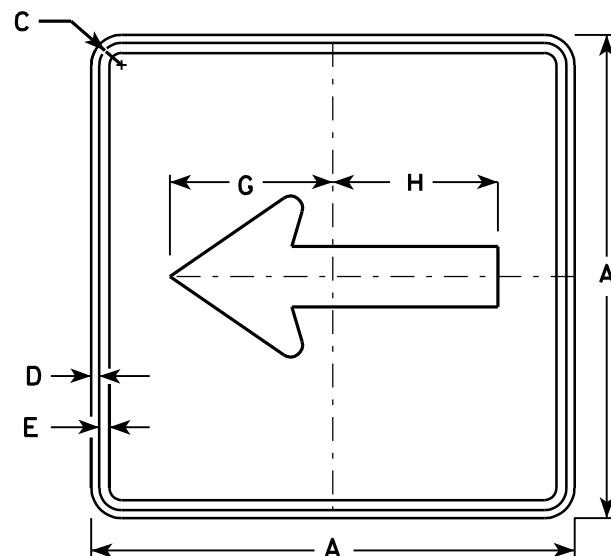
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 118	E
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STANDARD SIGN
M5-1 & M5-2

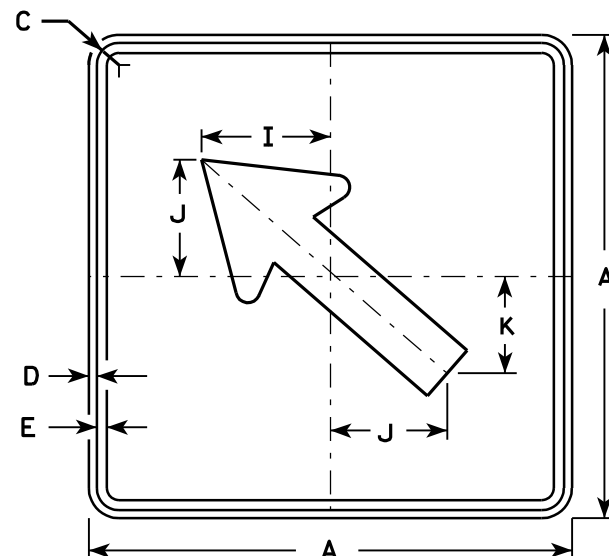
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

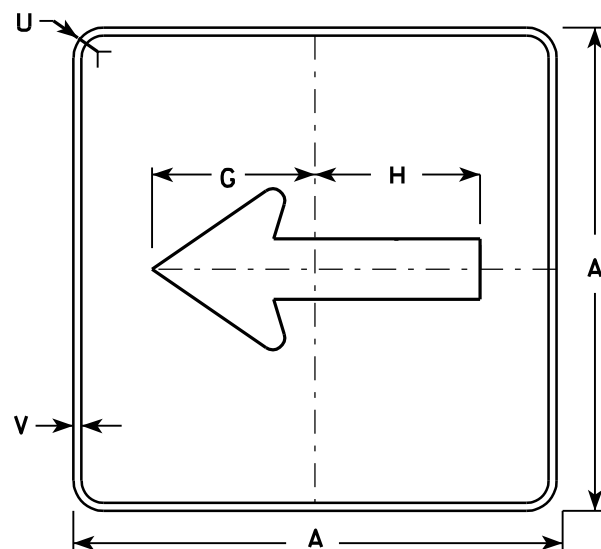
DATE 3/16/10 PLATE NO. M5-1.11



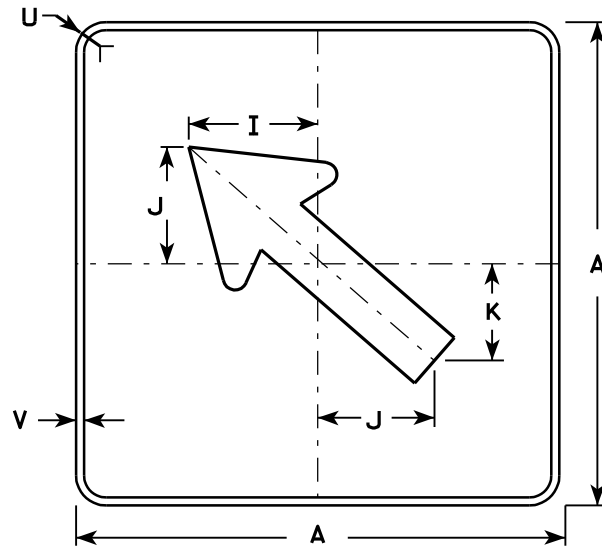
M6-1
MK6-1
MM6-1
MO6-1
MR6-1



M6-2
MK6-2
MM6-2
MO6-2
MR6-2



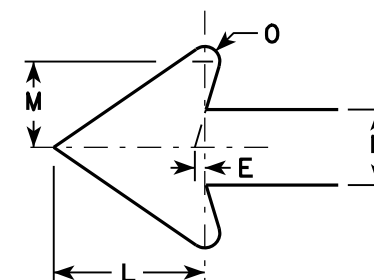
MB6-1
MG6-1
MN6-1



MB6-2
MG6-2
MN6-2

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG6-1 and MG6-2 Background - Green
Message - White - Type H Reflective
MK6-1 and MK6-2 Background - Green
Message - White - Type H Reflective
MM6-1 and MM6-2 Background - White - Type H Reflective
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White - Type H Reflective
MO6-1 and MO6-2 Background - Orange - Reflective
Message - Black
MR6-1 and MR6-2 Background - Brown
Message - Yellow - Type H Reflective

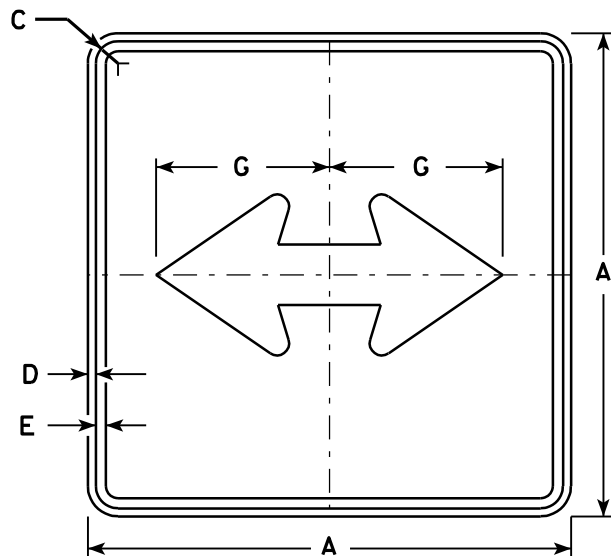


Metric equivalent
for this sign is:

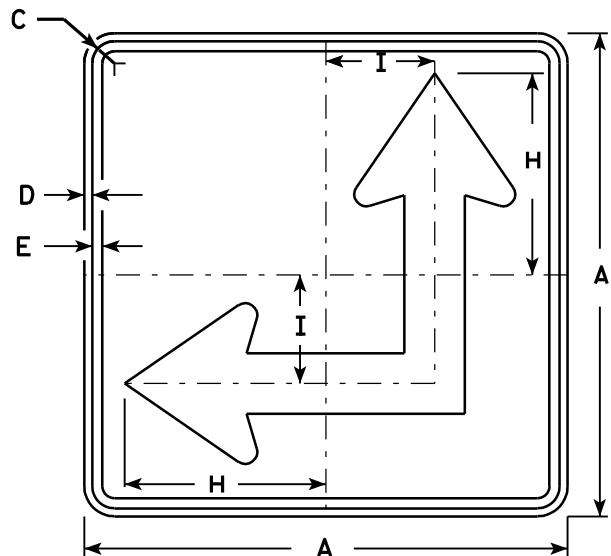
SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56

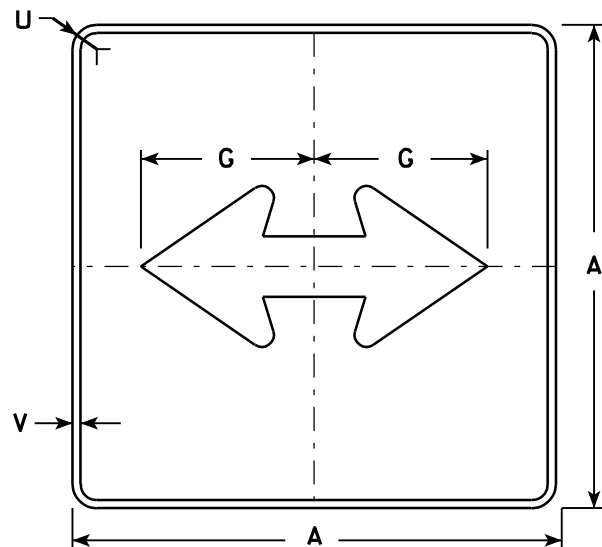
PROJECT NO: HWY: COUNTY: SHEET NO: 119 E



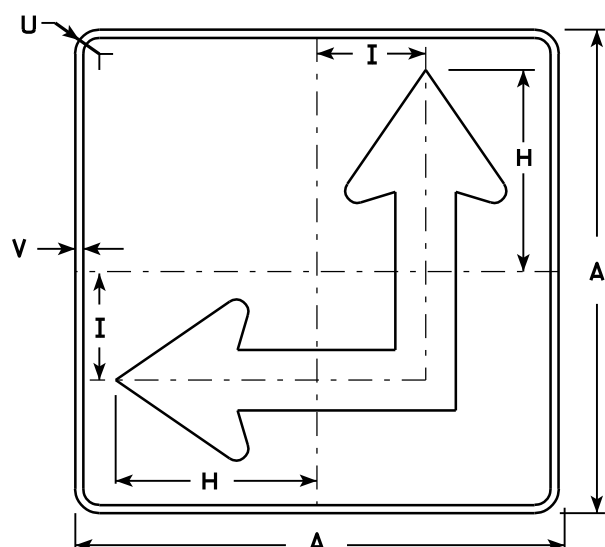
M6 - 4
MK6 - 4
MM6 - 4
MO6 - 4
MR6 - 4



M6 - 6
MK6 - 6
MM6 - 6
MO6 - 6
MR6 - 6



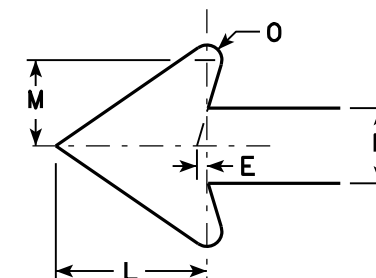
MB6 - 4
MG6 - 4
MN6 - 4



MB6 - 6
MG6 - 6
MN6 - 6

NOTES

- Signs are Type II - See Note 4 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - See Note 4
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-4 and M6-6 Background - White - Type H Reflective
(Detour or temporary Signs - Reflective)
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White - Type H Reflective
(Detour or temporary Signs - Reflective)
MG6-4 and MG6-6 Background - Green
Message - White - Type H Reflective
MK6-4 and MK6-6 Background - Green
Message - White - Type H Reflective
MM6-4 and MM6-6 Background - White - Type H Reflective
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White - Type H Reflective
MO6-4 and MO6-6 Background - Orange - Reflective
Message - Black
MR6-4 and MR6-6 Background - Brown
Message - Yellow - Type H Reflective
- M6-6R same as M6-6L except arrow points ahead and right.



Metric equivalent
for this sign is:

SIZE	
1	
2	525 mm X 525 mm
3	750 mm X 750 mm
4	750 mm X 750 mm
5	750 mm X 750 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06	0.28
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25	0.56

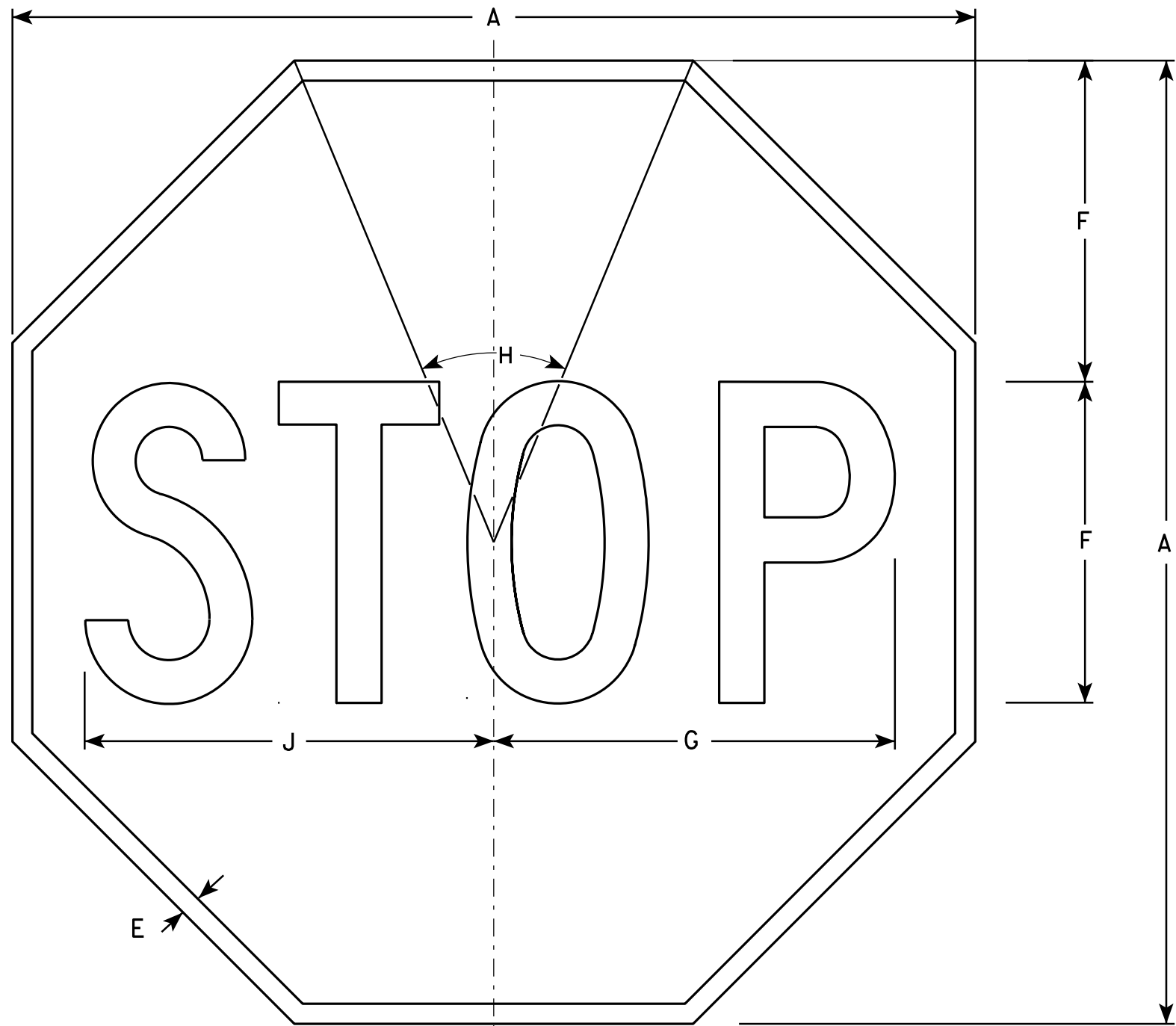
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 120	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/16/10 PLATE NO. M6-4.7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Red
 - Message - White
- 3. Message Series - C

R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24				3/8	8	10	45°		10 1/4																	3.31
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1.12

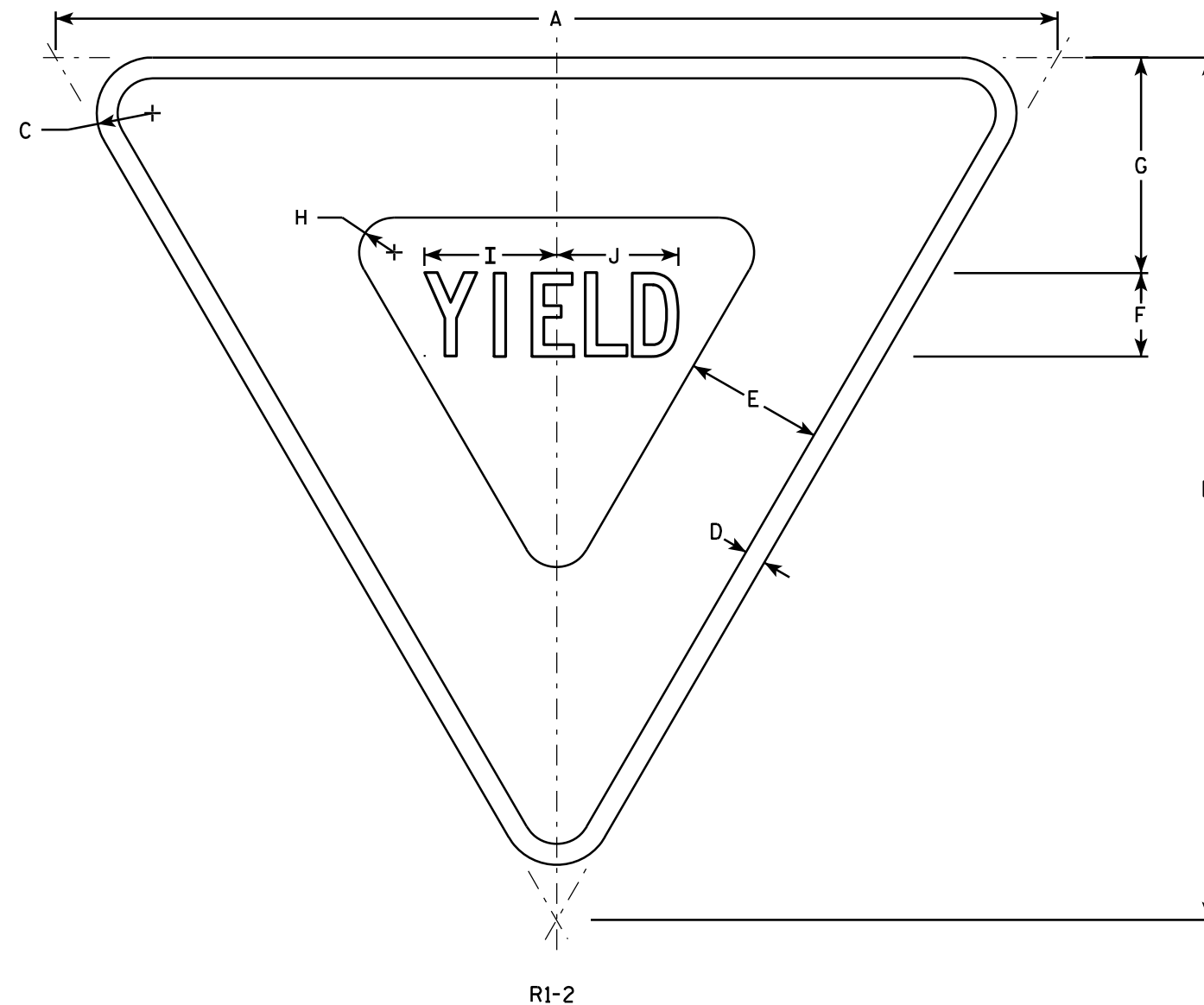
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 121

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6	24	21	1 1/2	3/8	3	2	4 3/4	7/8	3 1/4	3																	1.75
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

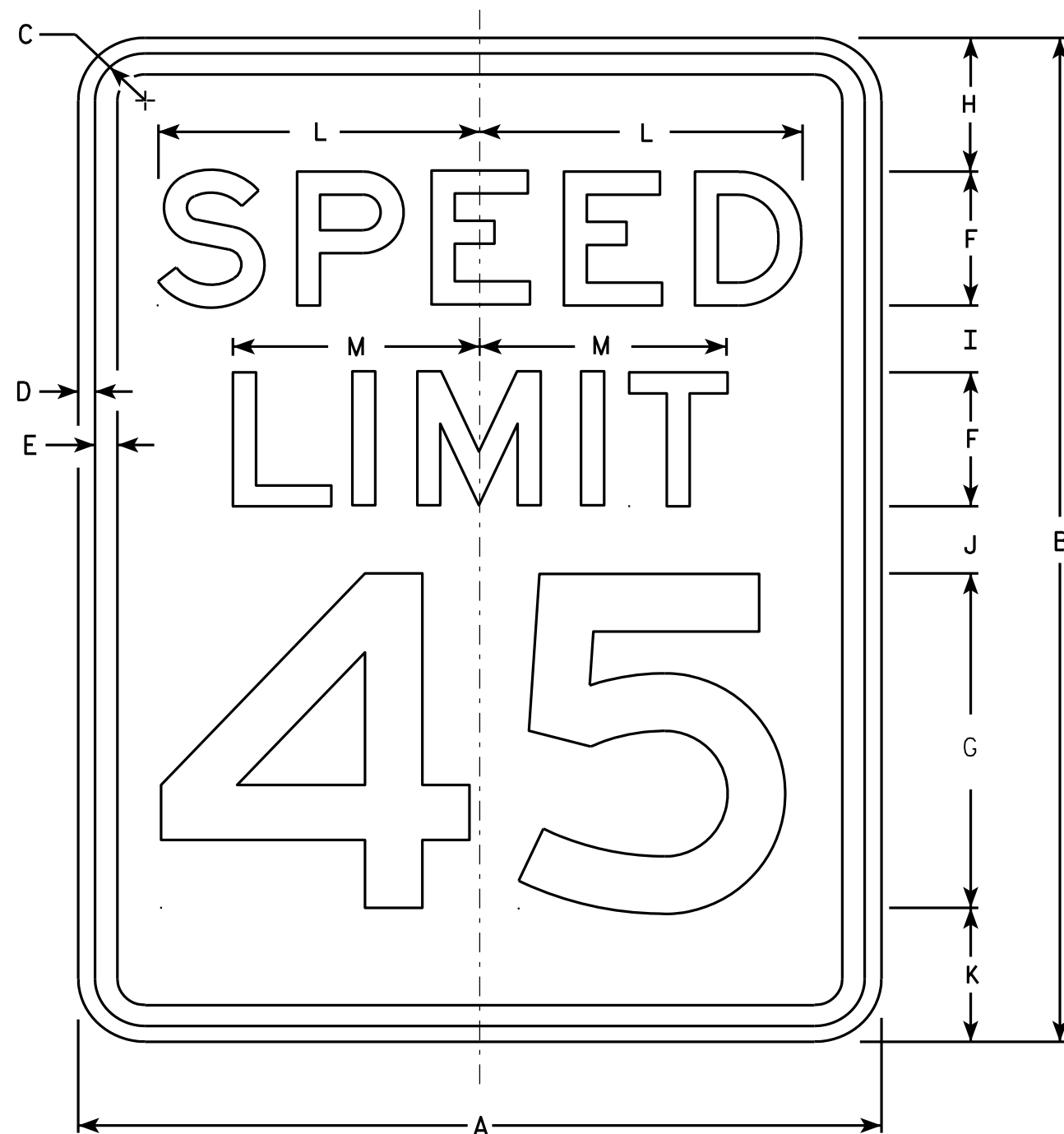
STANDARD SIGN
R1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/02/10 PLATE NO. R1-2.11

PROJECT NO: HWY: COUNTY: SHEET NO: 122 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

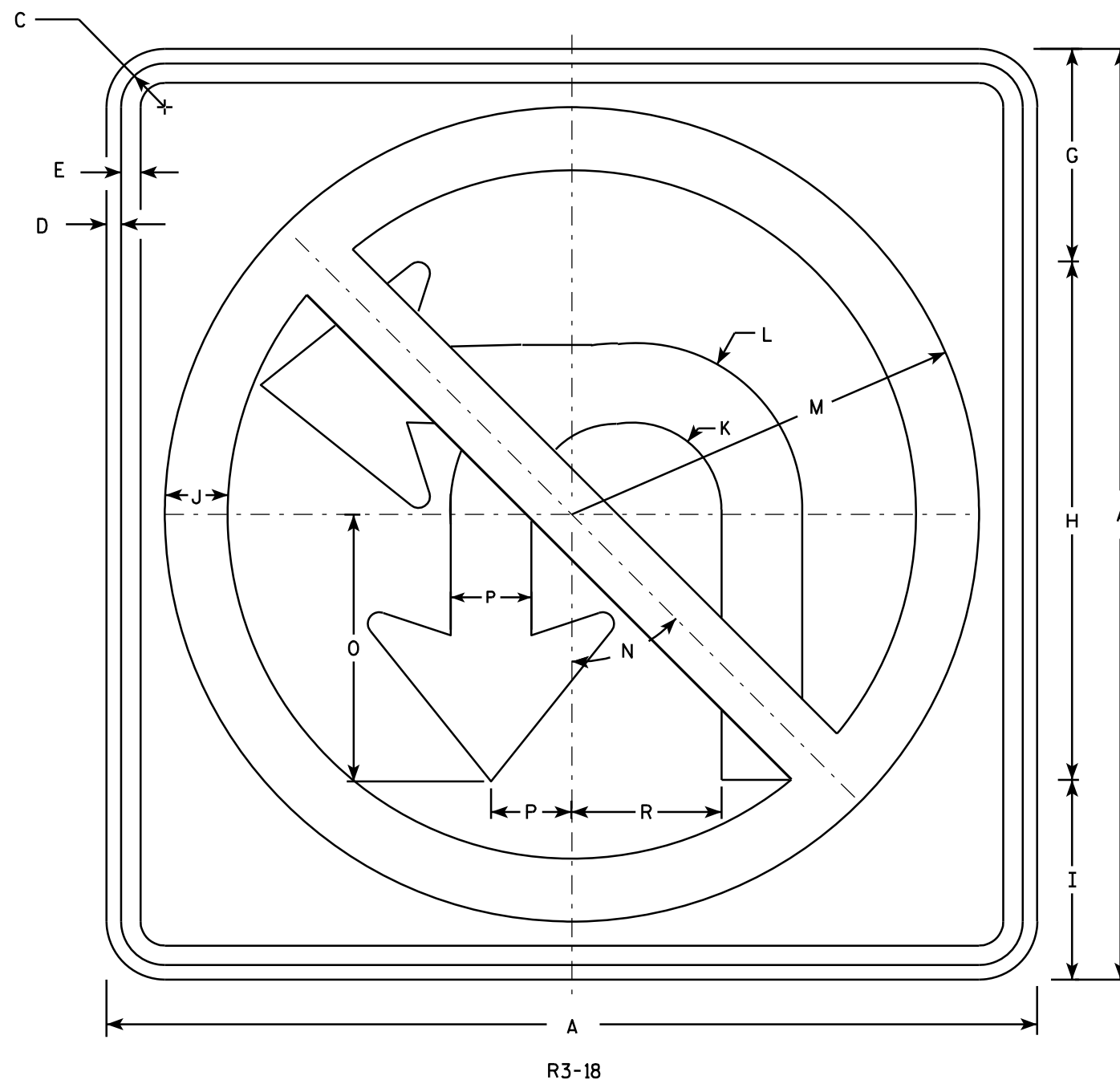
R2-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: 123 E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	3/8	1/2		5 1/2	13 3/8	5 1/8	1 5/8	2 1/4	4 1/4	10 1/2	45°	6 7/8	2 1/8		3 7/8									4.0
2M	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45°	10 3/8	3 1/8		5 3/4									9.0
3	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
4	36		1 5/8	5/8	3/4		8 1/4	20	7 3/4	2 1/2	3 3/8	6 1/2	15 3/4	45	10 3/8	3 1/8		5 3/4									9.0
5	48		2 1/4	3/4	1		11	26 3/4	10 1/4	3 1/4	4 5/8	8 5/8	21	45°	13 3/4	4 1/8		7 3/4									16.0

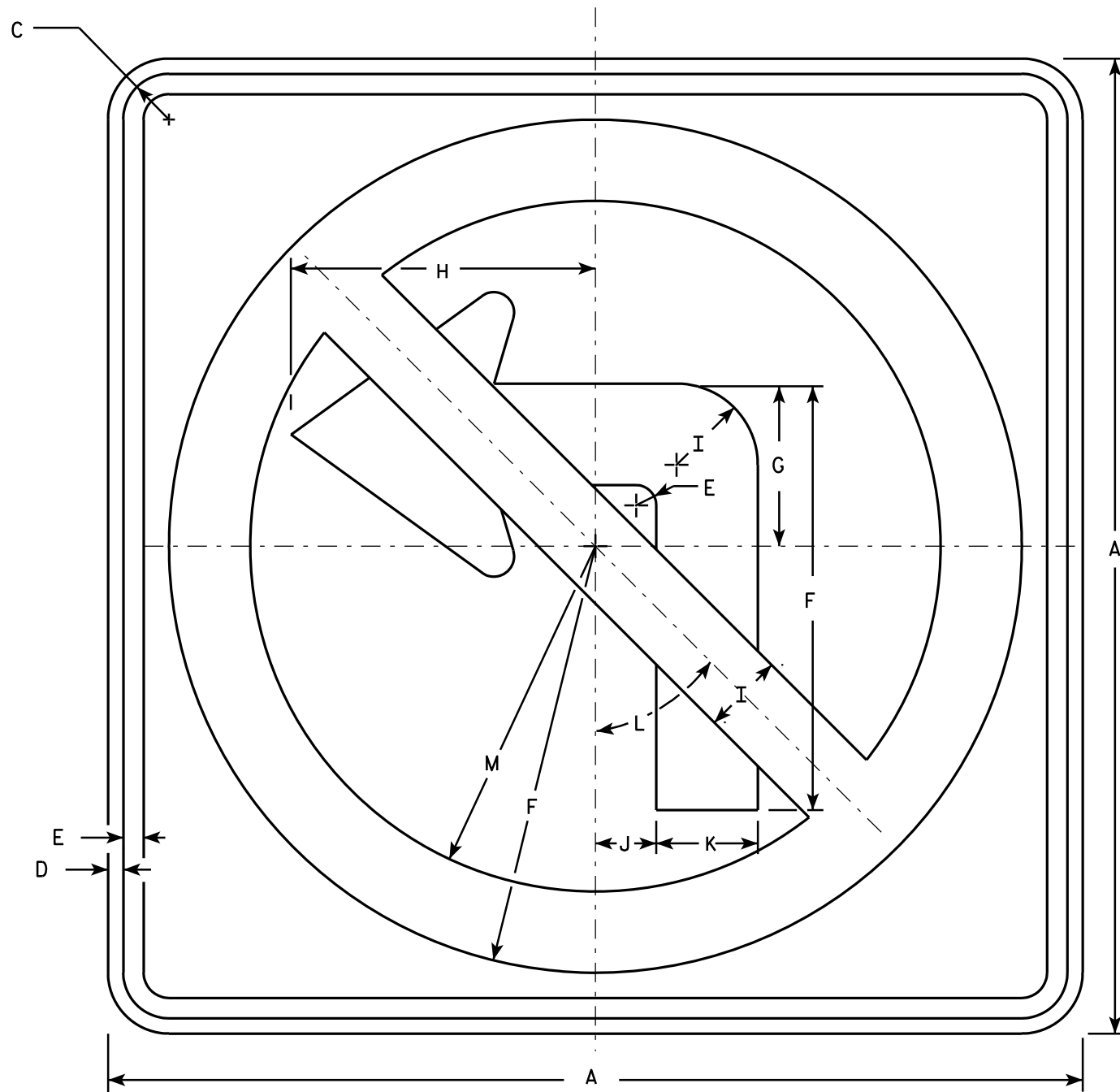
STANDARD SIGN R3-18

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/21/10 PLATE NO. R3-18.2

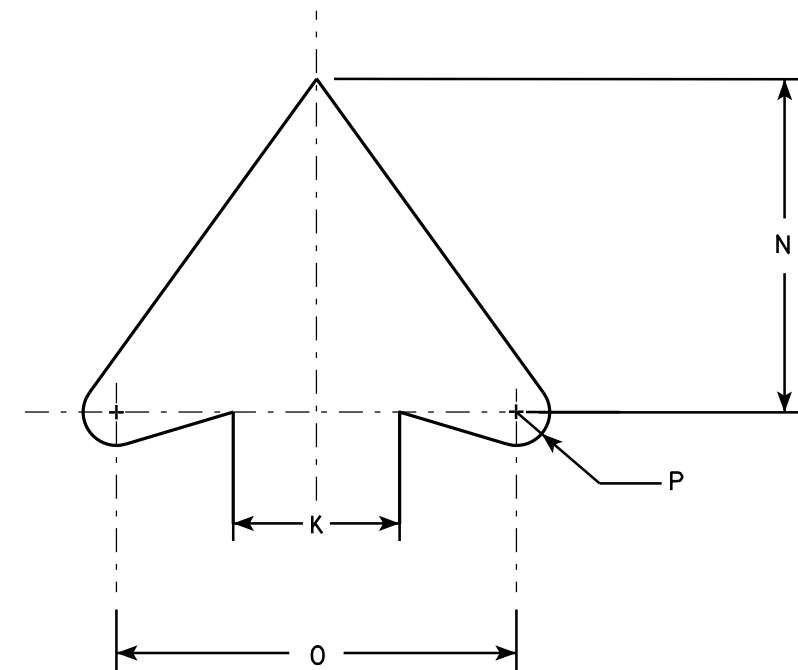
PROJECT NO: HWY: COUNTY: SHEET NO: 124 E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

STANDARD SIGN R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:

HWY:

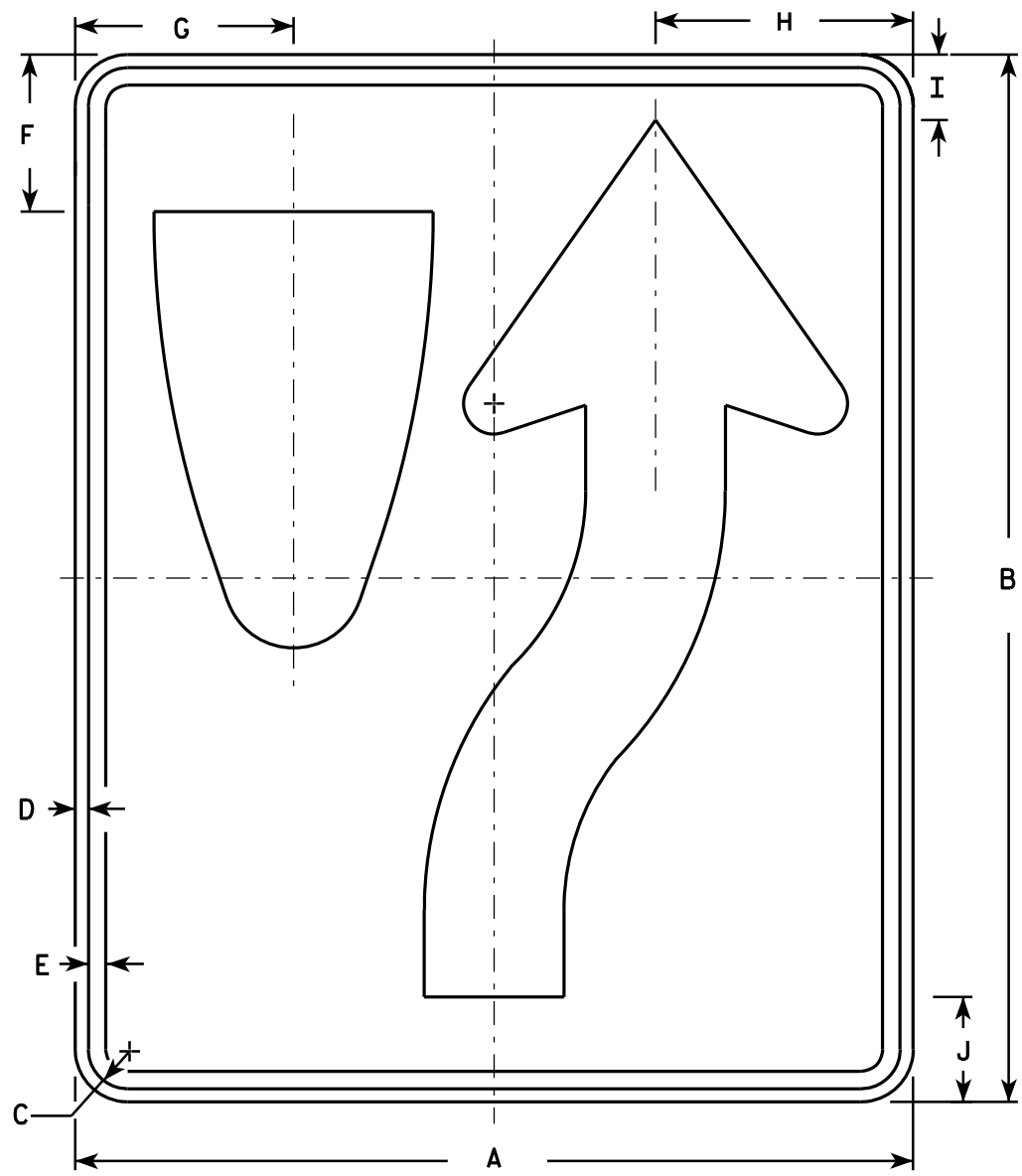
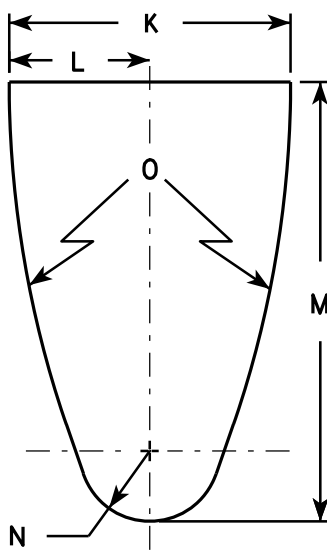
COUNTY:

SHEET NO: 125

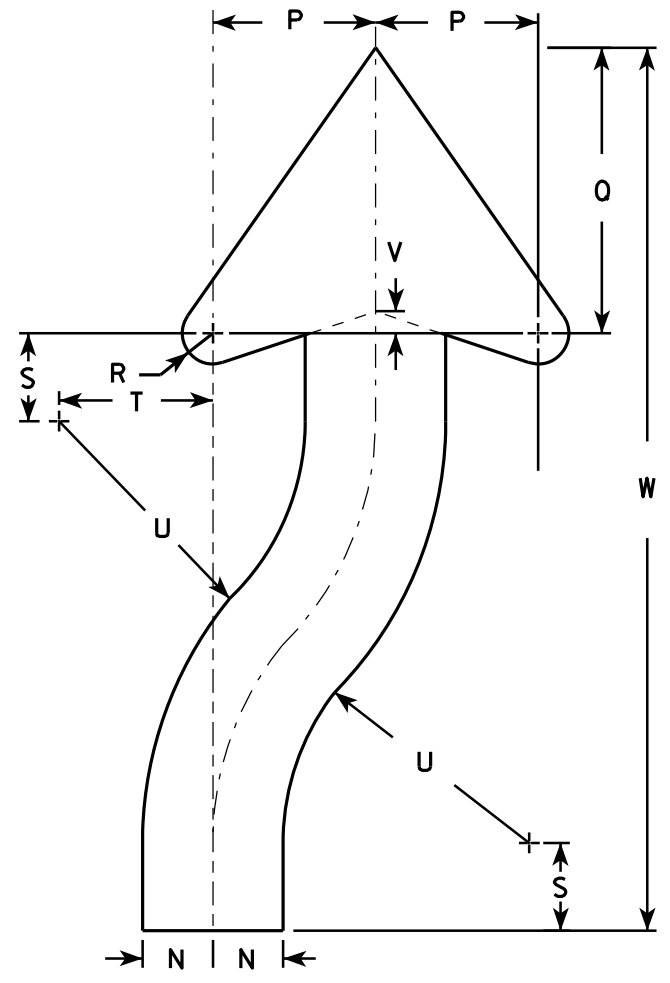
E

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
- 4. R4-8 is the same as R4-7 except Legend is reversed.



R4-7



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

HWY:

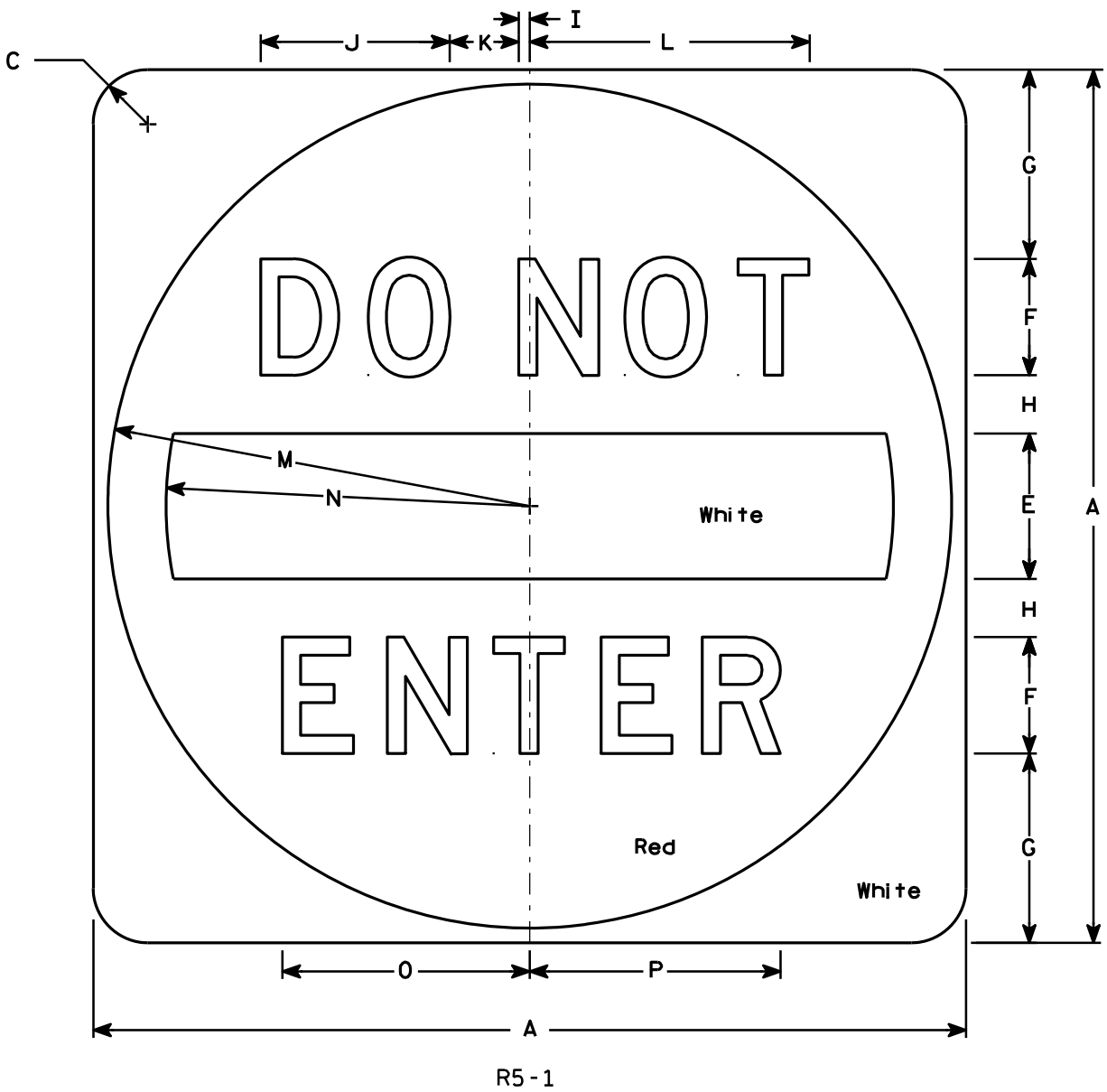
COUNTY:

SHEET NO: 126

E

NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but when base material is metal, the corners shall be rounded.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

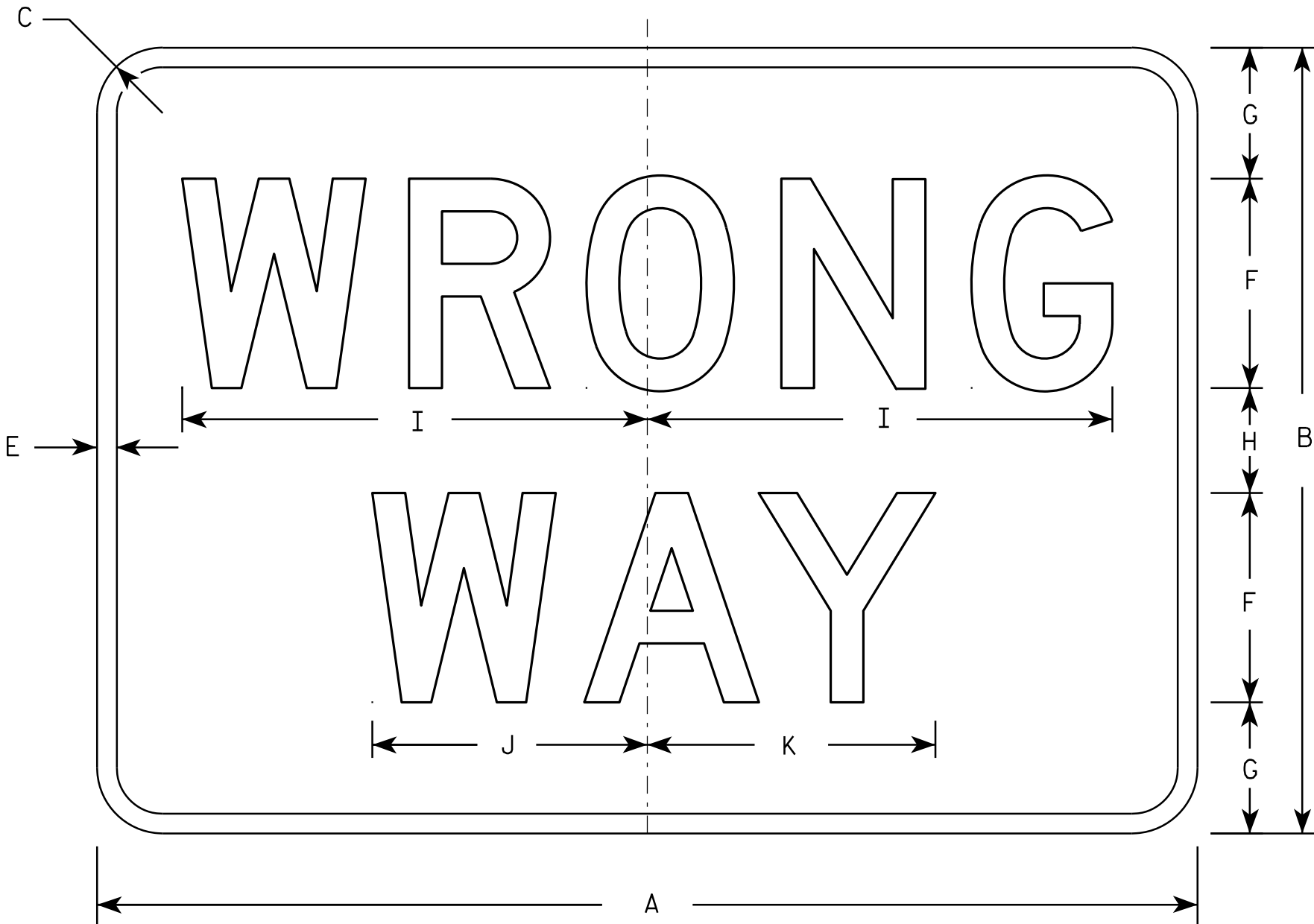
STANDARD SIGN

R5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

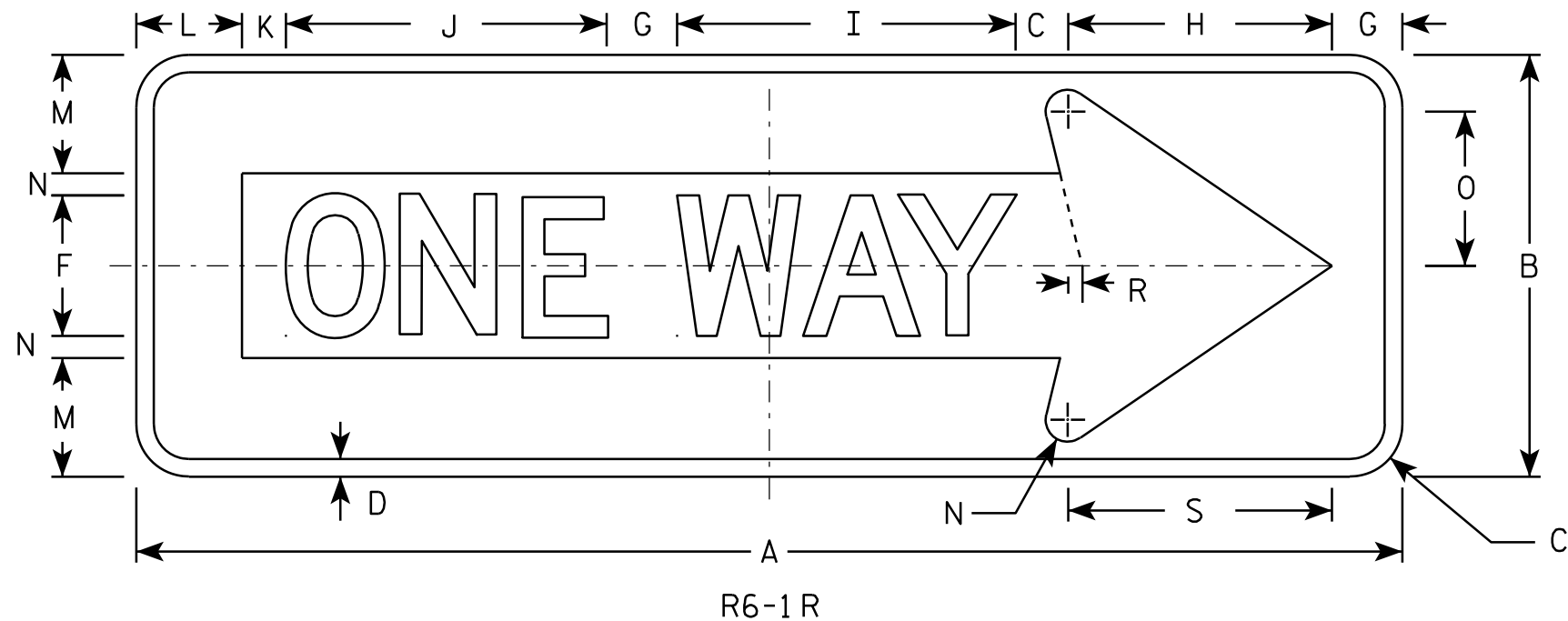
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

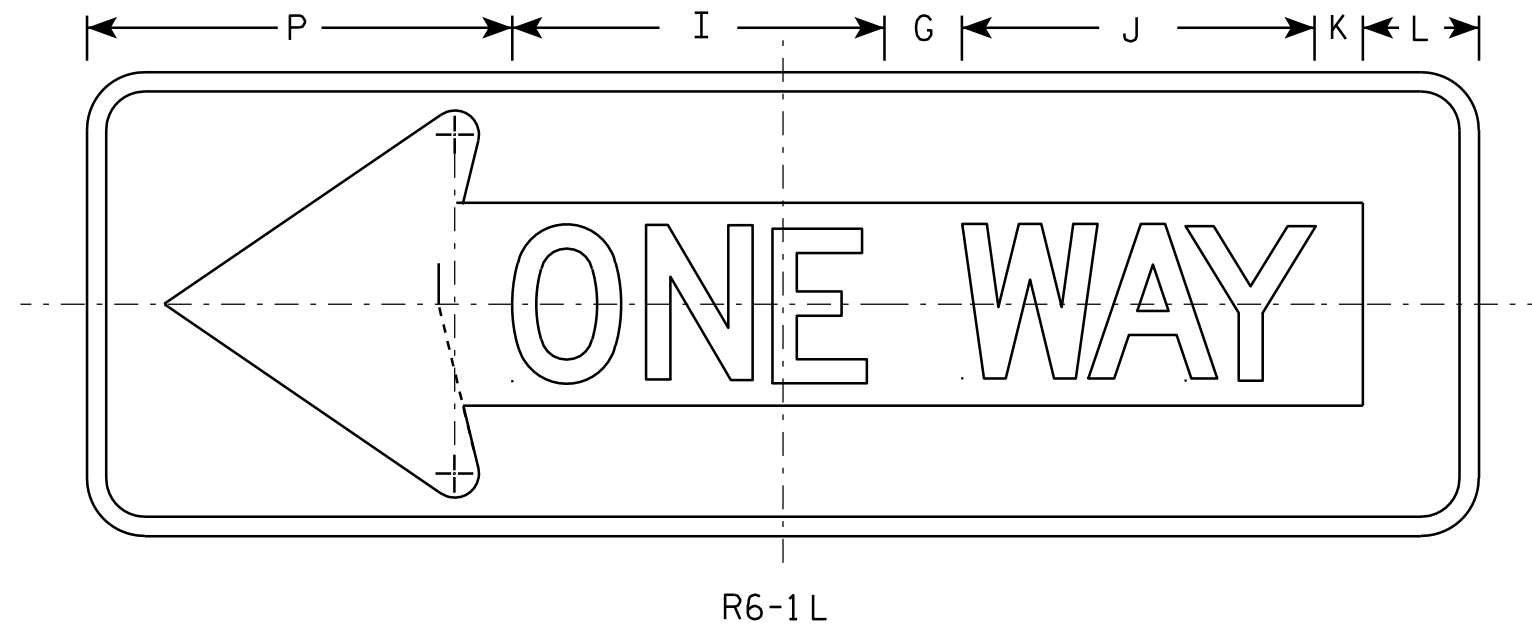
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - BLACK
Message - BLACK LEGEND & WHITE ARROW & BORDER
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R6-1 L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2								3.0
2M	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
3	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
4	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4								6.75
5																											

STANDARD SIGN R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

PROJECT NO:

SHEET NO: 129

E

STH 29 (CTH U INTERSECTION)

STATION	COMMON SF	FILL SF	COMMON CY	EXP FILL CY	MASS HAUL
480+00	20.8	0	0.0	0.0	0.0
480+50	19.4	0	37.2	0.0	-37.2
481+00	18.4	1.7	35.0	2.0	-70.3
481+50	18.6	3.9	34.3	6.5	-98.0
482+00	20.9	2.3	36.6	7.2	-127.4
482+50	20.9	3.5	38.7	6.7	-159.4
483+00	25.8	2.2	43.2	6.6	-196.1
483+50	30	2.3	51.7	5.2	-242.5
484+00	32.3	3.6	57.7	6.8	-293.4
484+50	33.5	3.6	60.9	8.3	-346.0
485+00	35.4	2	63.8	6.5	-403.3
485+50	36.4	1.7	66.5	4.3	-465.5
486+00	64.1	8.6	93.1	11.9	-546.6
486+50	105.2	0	156.8	10.0	-693.4
487+00	134.8	0	222.2	0.0	-915.6
487+50	134.7	0	249.5	0.0	-1165.2
488+00	127.3	0	242.6	0.0	-1407.8
488+50	76	1.6	188.2	1.9	-1594.2
489+00	39.5	3.8	106.9	6.3	-1694.9
489+50	37	7.3	70.8	12.8	-1752.8
490+00	31.8	27.1	63.7	39.8	-1776.7
490+50	32.6	7.5	59.6	40.0	-1796.3
491+00	31.9	4	59.7	13.3	-1842.7
491+50	30.4	1.7	57.7	6.6	-1893.8
492+00	29.1	0.1	55.1	2.1	-1946.8
492+50	30	0	54.7	0.1	-2001.4
493+00	32.2	0	57.6	0.0	-2059.0
493+50	32	0	59.4	0.0	-2118.5
494+00	31.3	0	58.6	0.0	-2177.1
494+50	32.1	0	58.7	0.0	-2235.8
494+91	32	0	49.0	0.0	-2284.8

STH 29 (CTH VV INTERSECTION)

STATION	COMMON SF	FILL SF	COMMON CY	EXP FILL CY	MASS HAUL
541+00	0	0	0.0	0.0	0.0
541+50	56	72.2	51.9	83.6	31.7
542+00	40.7	67.6	89.5	161.8	104.0
542+50	36.6	46.2	71.6	131.7	164.1
543+00	37.9	15.4	69.0	71.3	166.4
543+50	18	5.7	51.8	24.4	139.1
544+00	17.5	6.6	32.9	14.2	120.5
544+50	17.1	9.1	32.0	18.2	106.6
545+00	17	10.7	31.6	22.9	97.9
545+50	17.6	7.5	32.0	21.1	87.0
546+00	17.3	3.6	32.3	12.8	67.5
546+50	18.8	0.9	33.4	5.2	39.3
547+00	24.6	0	40.2	1.0	0.1
547+50	19.9	0	41.2	0.0	-41.1
548+00	18.2	0	35.3	0.0	-76.3
548+50	0	0	16.9	0.0	-93.2
549+00	0	0	0.0	0.0	-93.2
549+50	0	0	0.0	0.0	-93.2
550+00	0	0	0.0	0.0	-93.2
550+50	0	0	0.0	0.0	-93.2
551+00	0	0	0.0	0.0	-93.2
551+50	0	0	0.0	0.0	-93.2
552+00	0	0	0.0	0.0	-93.2
552+50	24.4	0	22.6	0.0	-115.8
553+00	22.9	0	43.8	0.0	-159.6
553+50	19.1	1.1	38.9	1.3	-197.2
554+00	17.5	6.7	33.9	9.0	-222.1
554+50	18.1	5.9	33.0	14.6	-240.4
555+00	20.2	6.8	35.5	14.7	-261.2
555+50	26.4	9	43.1	18.3	-286.1
556+00	33	10.5	55.0	22.6	-318.5
556+50	39.7	11	67.3	24.9	-360.9
557+00	27.7	17.3	62.4	32.8	-390.6
557+50	28.2	11.5	51.8	33.3	-409.0
558+00	27.2	9.4	51.3	24.2	-436.1
558+50	49.5	7	71.0	19.0	-488.1
559+00	104.1	0	142.2	8.1	-622.3
559+50	101.4	0	190.3	0.0	-812.5
560+00	88.9	0	176.2	0.0	-988.8
560+50	72.9	0	149.8	0.0	-1138.6
561+00	63.6	4.4	126.4	5.1	-1259.9
561+50	62.2	6.3	116.5	12.4	-1364.0
562+00	59.7	7.6	112.9	16.1	-1460.7
562+50	57	8.4	108.1	18.5	-1550.3

STH 29 (CTH VV INTERSECTION)

STATION	COMMON SF	FILL SF	COMMON CY	EXP FILL CY	MASS HAUL
563+00	55.7	6.4	104.4	17.1	-1637.5
563+50	50.4	1.6	98.2	9.3	-1726.5
564+00	49.7	1.8	92.7	3.9	-1815.2
564+50	46.2	2.6	88.8	5.1	-1898.9
565+00	43.4	1.5	83.0	4.7	-1977.2
565+50	46.9	0.9	83.6	2.8	-2058.0
566+00	48.3	0.2	88.1	1.3	-2144.9
566+50	33.5	0	75.7	0.2	-2220.4
567+00	33	0	61.6	0.0	-2281.9
567+50	34.3	0	62.3	0.0	-2344.3
568+00	35.8	0	64.9	0.0	-2409.2
568+50	35.9	0	66.4	0.0	-2475.6
569+00	27.7	0.2	58.9	0.2	-2534.2
569+50	31.9	0	55.2	0.2	-2589.2
570+00	32.6	0	59.7	0.0	-2648.9
570+50	29.9	0	57.9	0.0	-2706.8
571+00	29.6	0	55.1	0.0	-2761.9
571+50	29	0	54.3	0.0	-2816.1
572+00	27.8	0	52.6	0.0	-2868.7
572+50	27	0	50.7	0.0	-2919.4
573+00	24.3	0.2	47.5	0.2	-2966.7
573+50	22.5	2.3	43.3	2.9	-3007.2
574+00	21.7	3.5	40.9	6.7	-3041.4
574+50	20.9	8.8	39.4	14.2	-3066.6
575+00	20.6	10.4	38.4	22.2	-3082.8
575+50	26.1	14.1	43.2	28.4	-3097.7
576+00	34.9	12.8	56.5	31.1	-3123.0
576+50	17.8	13.8	48.8	30.8	-3141.0
577+00	36.7	24.5	50.5	44.3	-3147.2
577+50	36	69.4	67.3	108.7	-3105.8
578+00	40.3	116.5	70.6	215.2	-2961.3
578+50	46.4	148.8	80.3	307.1	-2734.5
579+00	23.5	21.5	64.7	197.1	-2602.1
579+50	0	0	21.8	24.9	-2599.0
580+00	0	0	0.0	0.0	-2599.0

STH 29 (STAGE 1A)

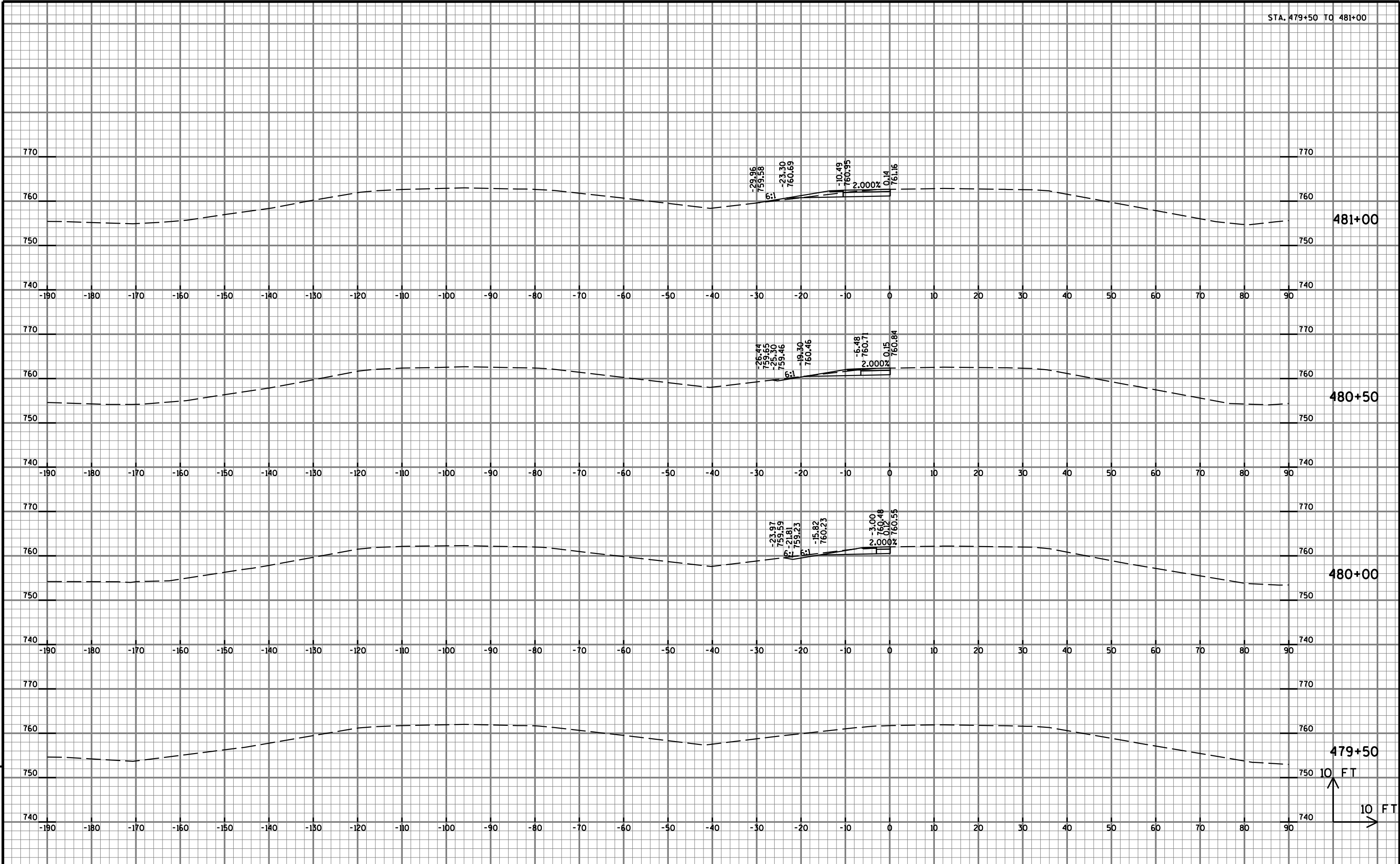
STATION	COMMON SF	FILL SF	COMMON CY	EXP FILL CY	MASS HAUL
540+50	0	0	0.0	0.0	0.0
541+00	0	0	0.0	0.0	0.0
541+50	18.5	57.9	17.1	67.0	49.9
542+00	18.9	85.1	34.6	165.5	180.8
542+50	20.5	69	36.5	178.4	322.6
543+00	17.4	27.5	35.1	111.7	399.2
543+50	0	0	16.1	31.8	415.0
576+50	0	0	0.0	0.0	415.0
577+00	19.7	3.1	18.2	3.6	400.3
577+50	19.6	54.6	36.4	66.8	430.7
578+00	18.6	127.6	35.4	210.9	606.2
578+50	18.4	165.3	34.3	339.0	910.9
579+00	0	0	17.0	191.3	1085.2
579+50	0	0	0.0	0.0	1085.2

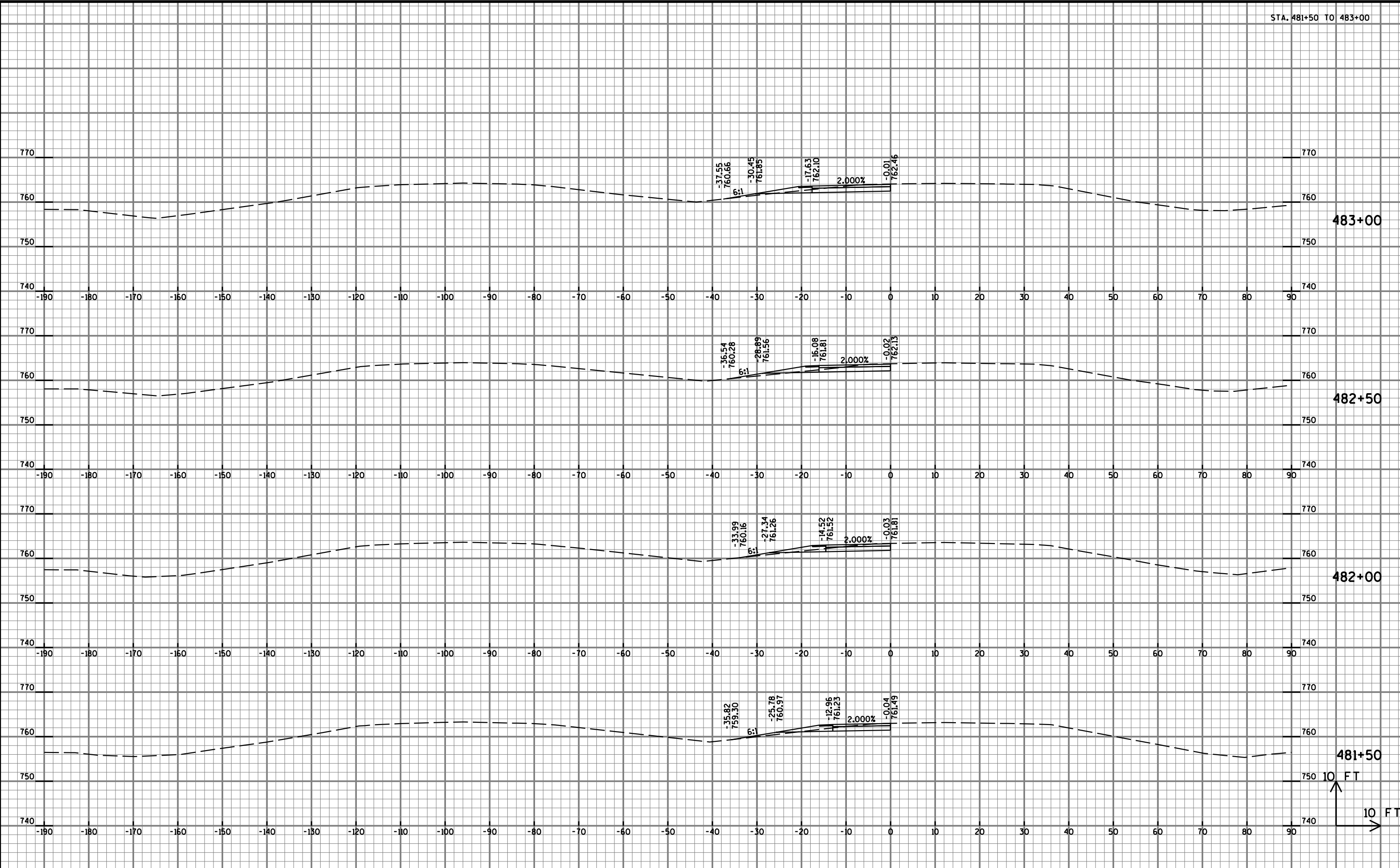
MARLEY/MILLTOWN CONNECTION

STATION	COMMON SF	FILL SF	COMMON CY	EXP FILL CY	MASS HAUL
101+00	0	0	0.0	0.0	0.0
101+50	163.1	9.9	151.0	11.5	-139.6
102+00	49.5	47.3	196.9	66.2	-270.2
102+50	153.5	4.9	188.0	60.4	-397.8
102+85	0	0	100.6	4.0	-494.4

TEMPORARY ROADWAY

STATION	COMMON SF	FILL SF	COMMON CY	EXP FILL CY	MASS HAUL
299+79	0	0	0	0	0
300+00	0	180	0.0	87.5	87.5
300+50	14.9	84	13.8	305.6	379.3
301+00	0	0	13.8	97.2	462.7





PROJECT NO: 9200-05-71

HWY: STH 29

COUNTY: BROWN

CROSS SECTIONS: STH 29 (CTH U INTERSECTION)

SHEET

133

E

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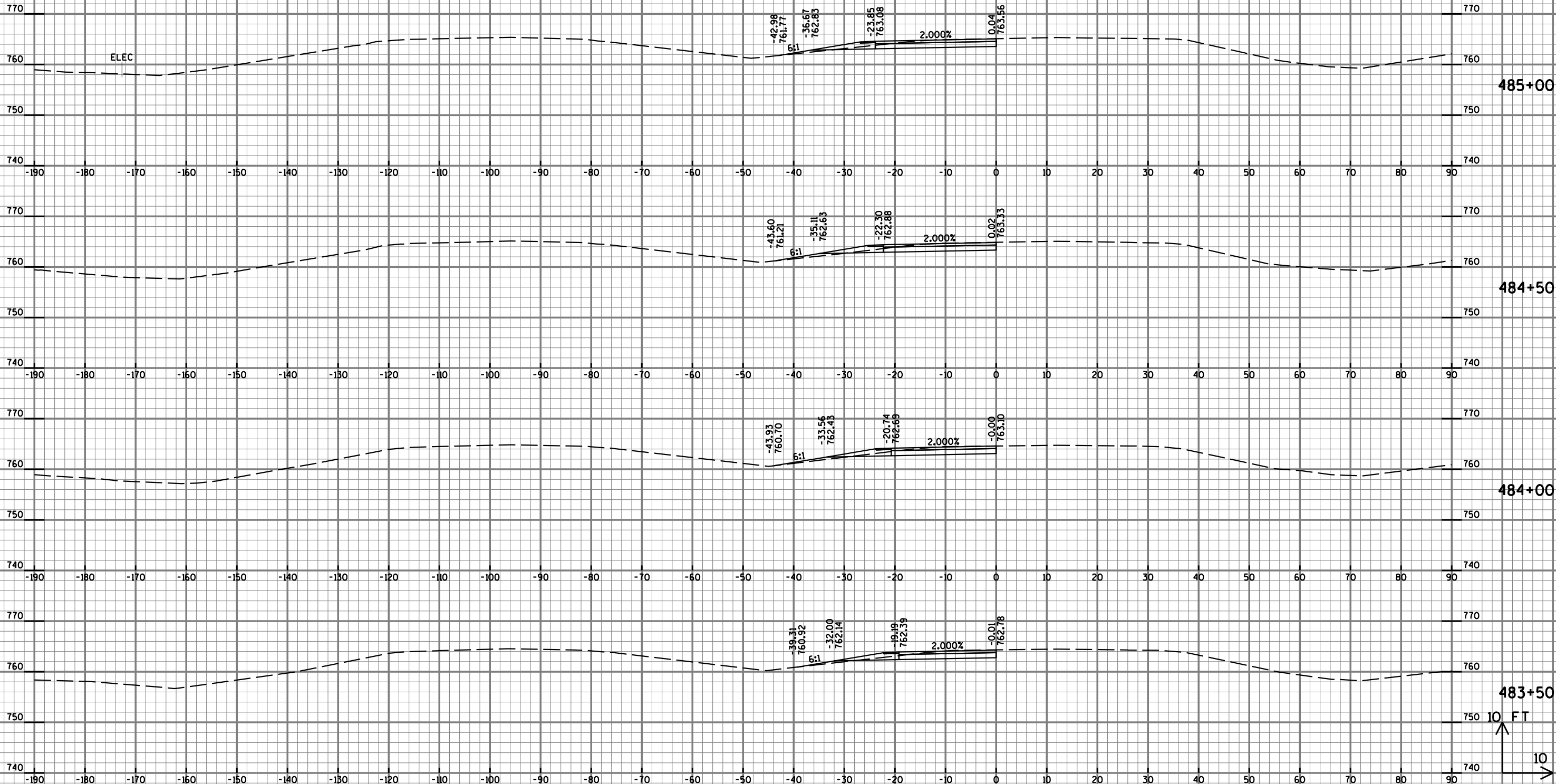
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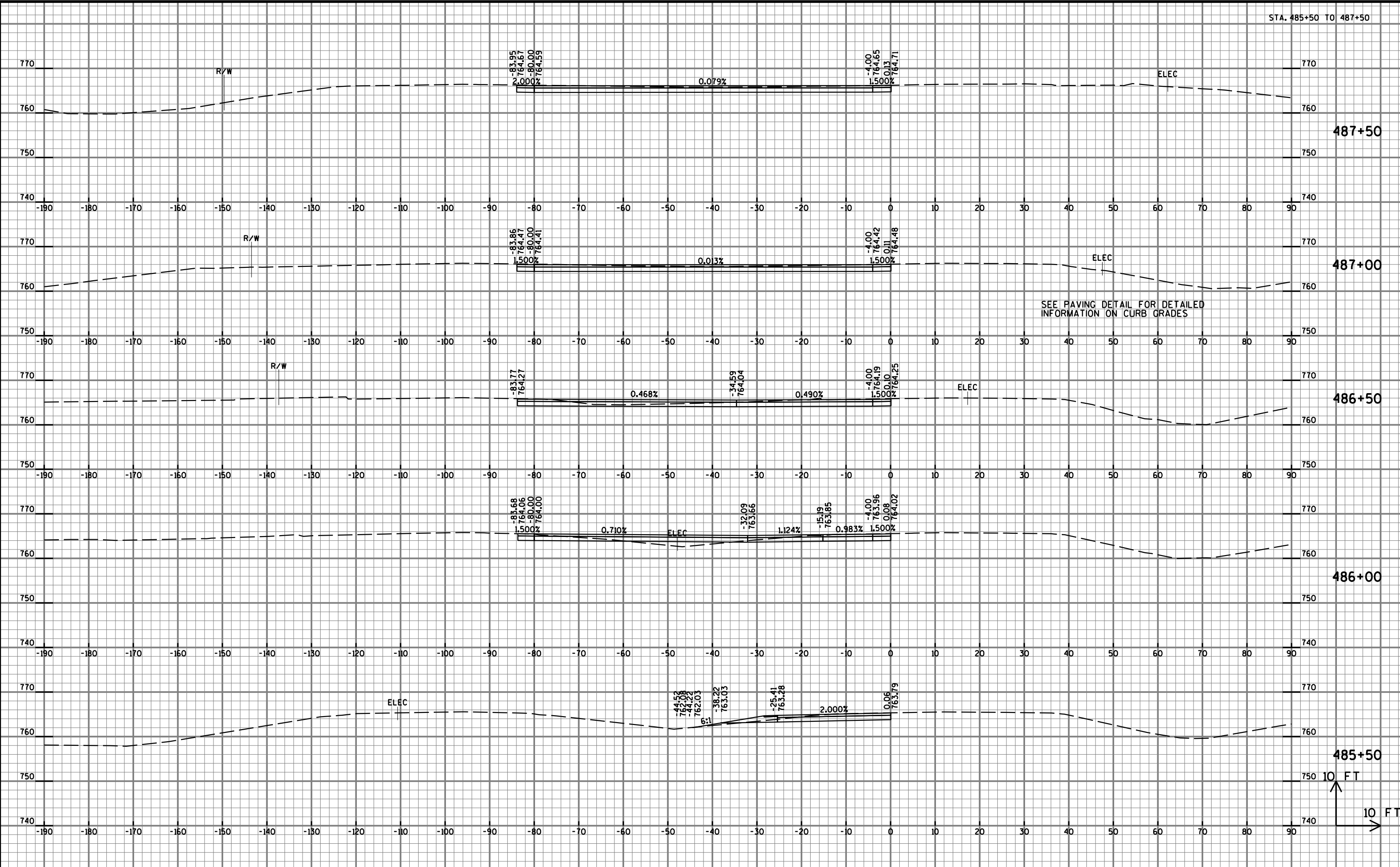
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PLOT NAME :

PLOT SCALE : 1:20

WISDOT/CADDs SHEET 21





PROJECT NO: 9200-05-71

HWY: STH 29

COUNTY: BROWN

CROSS SECTIONS: STH 29 (CTH U INTERSECTION)

SHEET

135

E

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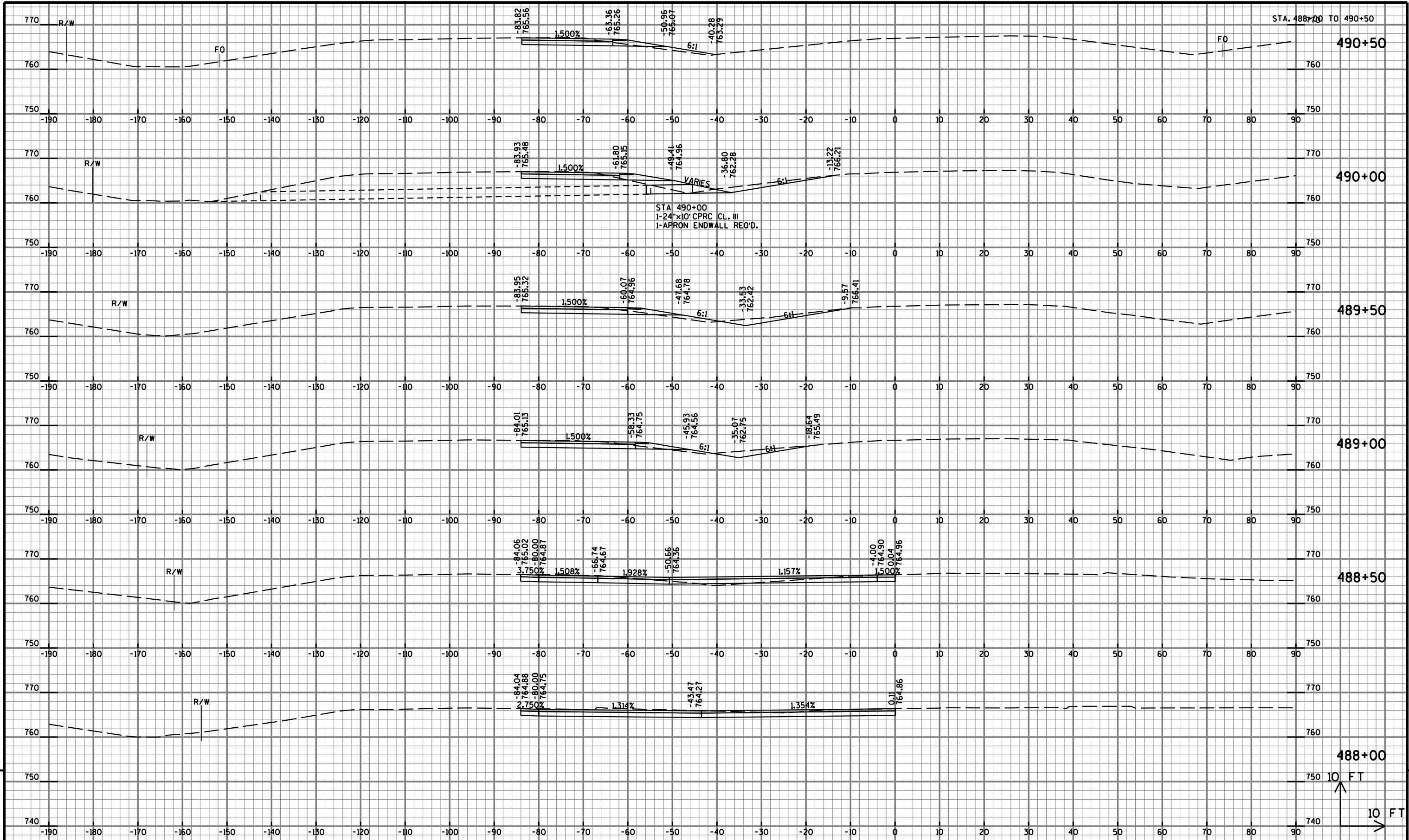
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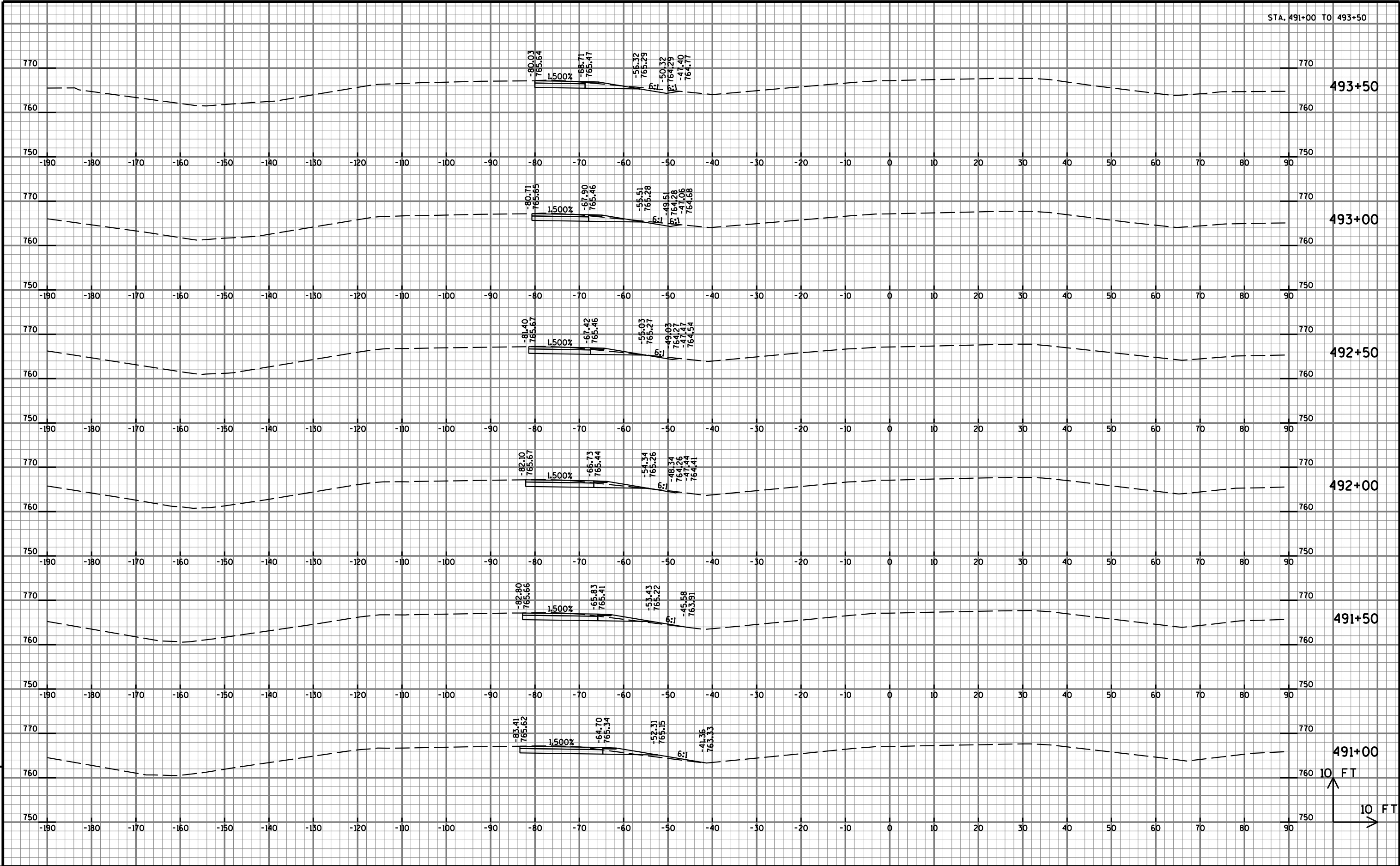
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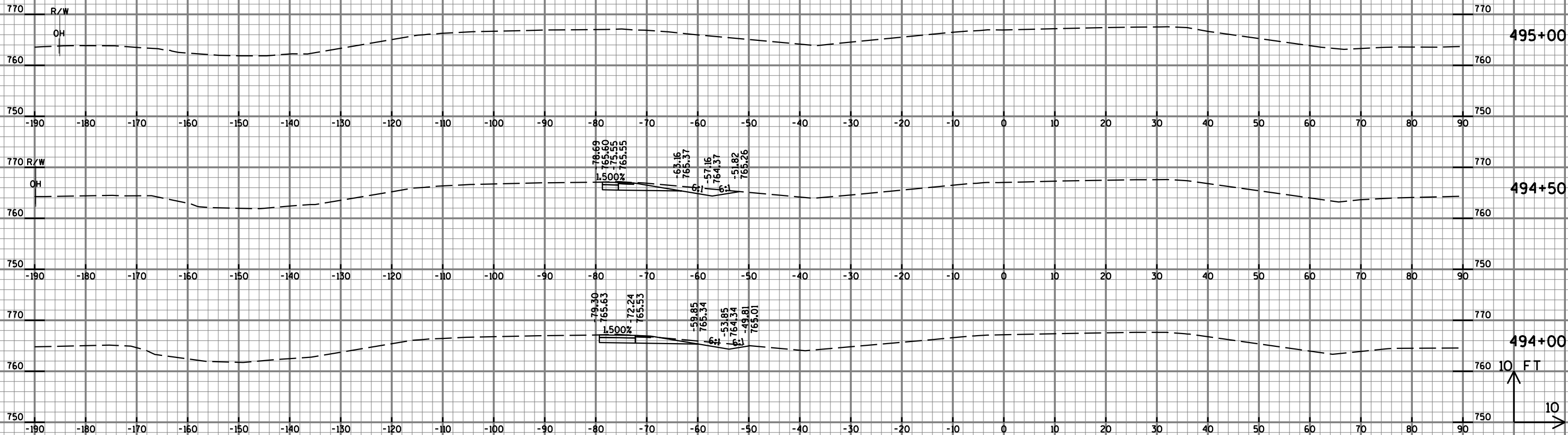
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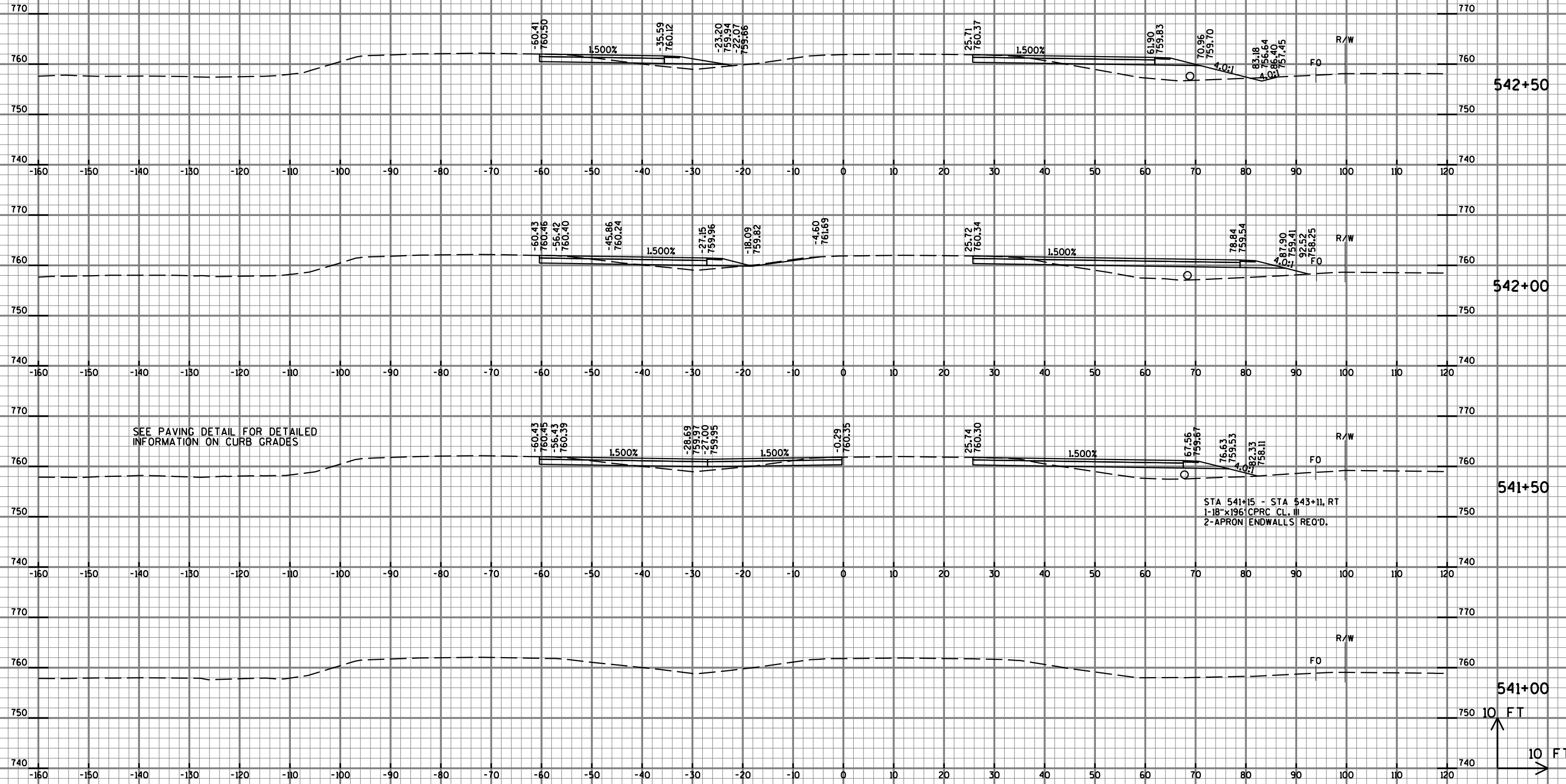
WISDOT/CADDs SHEET 21







STA. 541+00 TO 542+50



PROJECT NO: 9200-07-71

HWY: STH 29

COUNTY: BROWN

CROSS SECTIONS: STH 29 (CTH VV INTERSECTION)

SHEET

139

E

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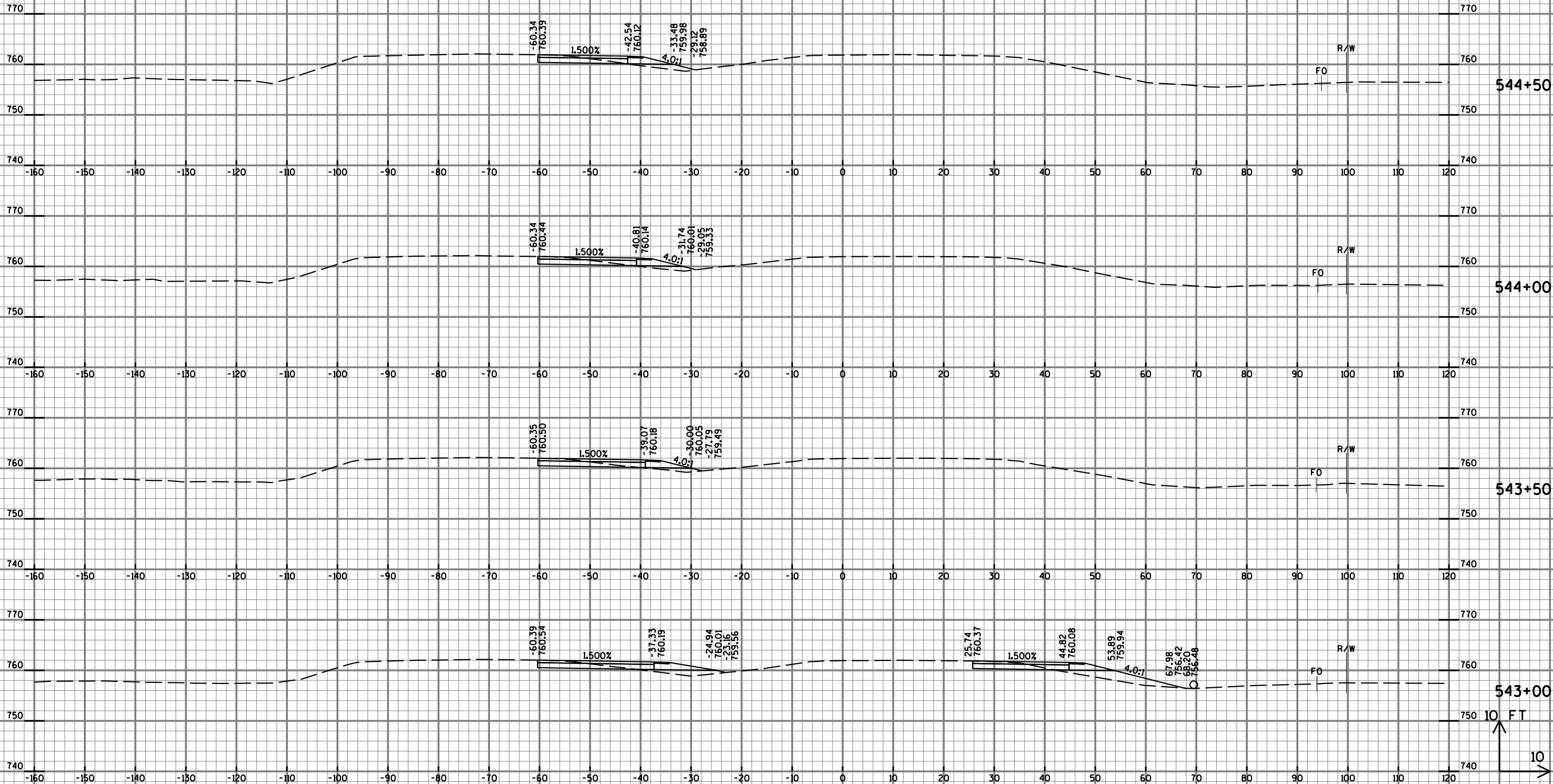
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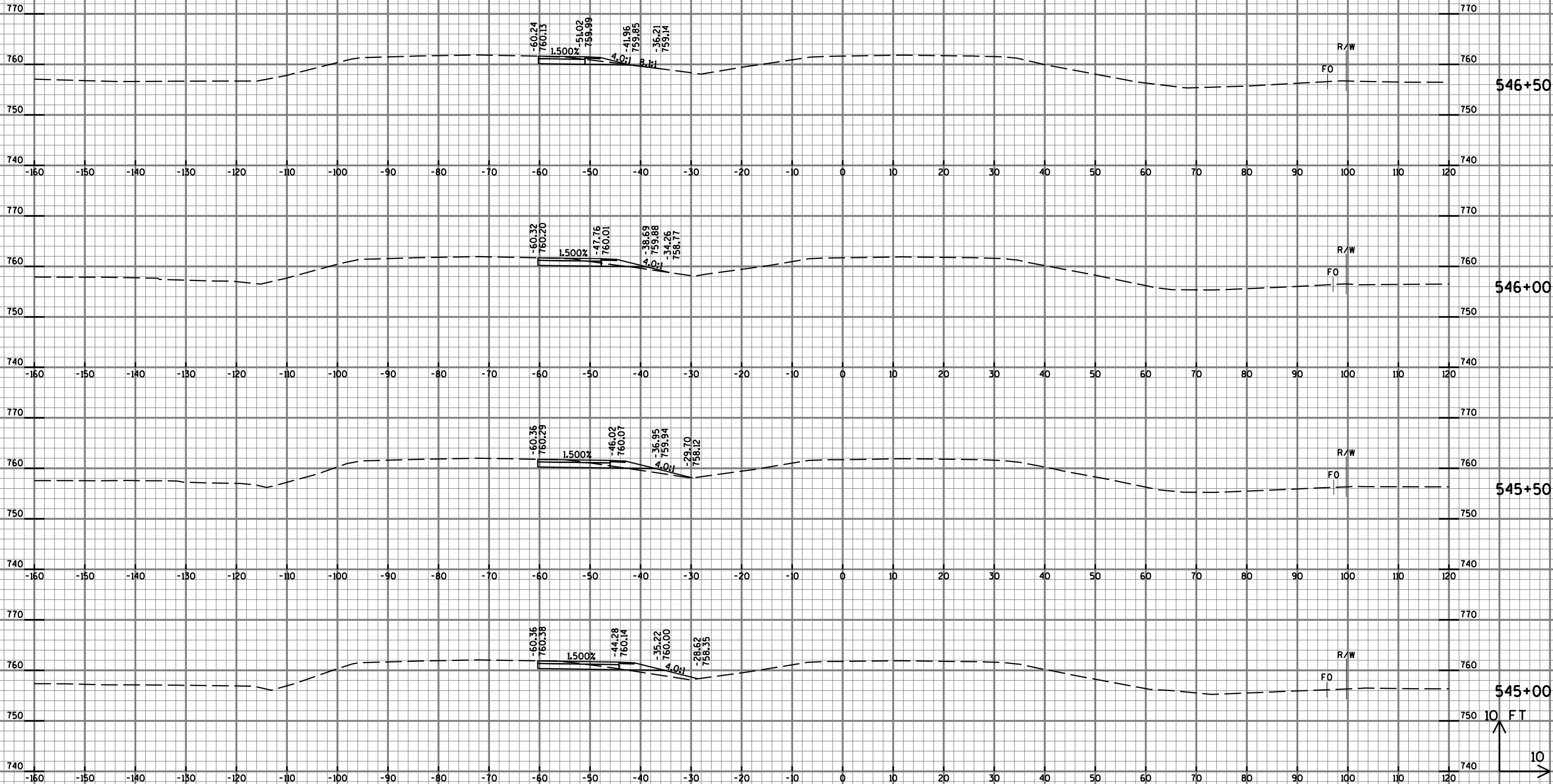
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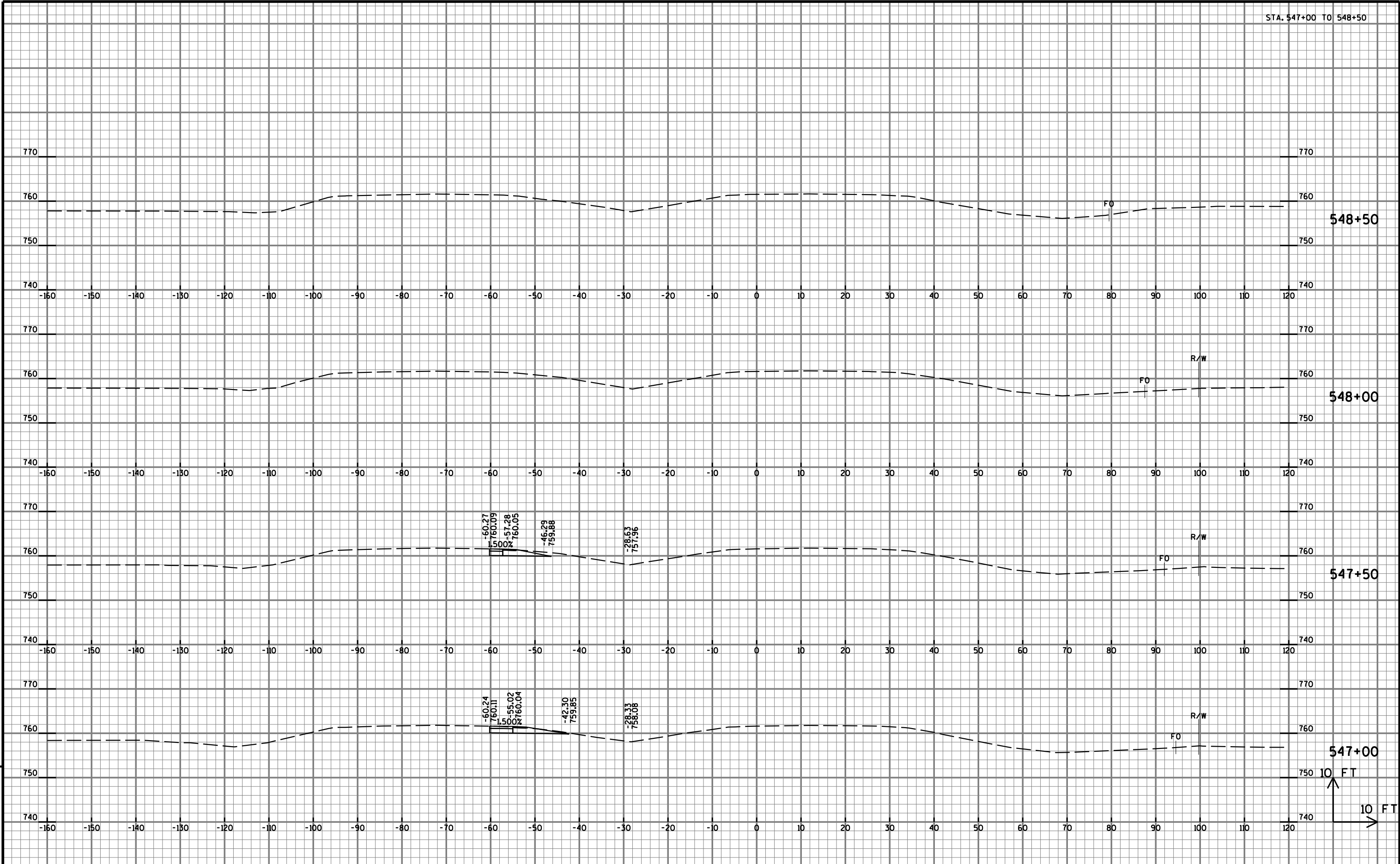
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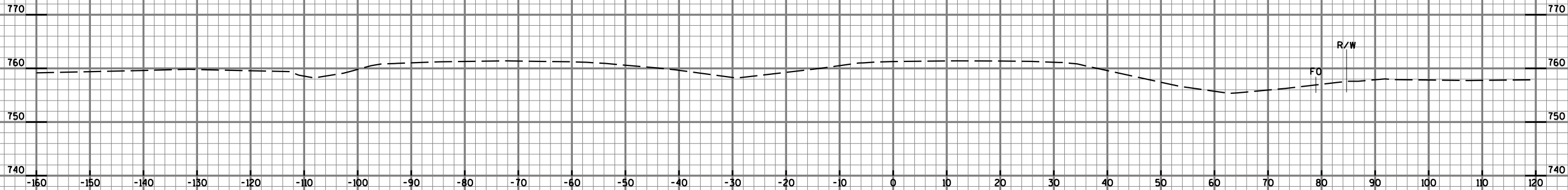
PLOT SCALE : 1:20

WISDOT/CADDs SHEET 21

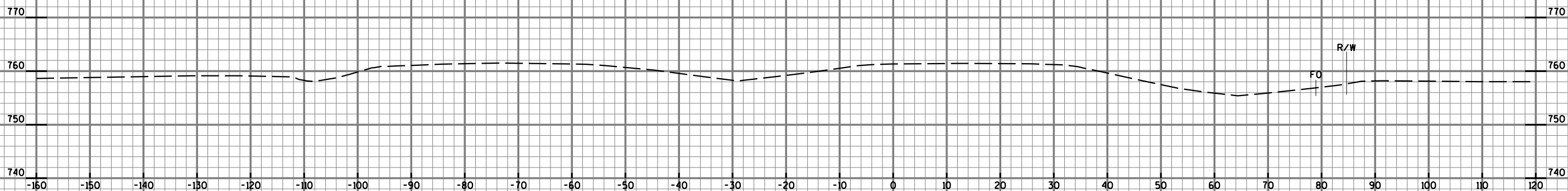




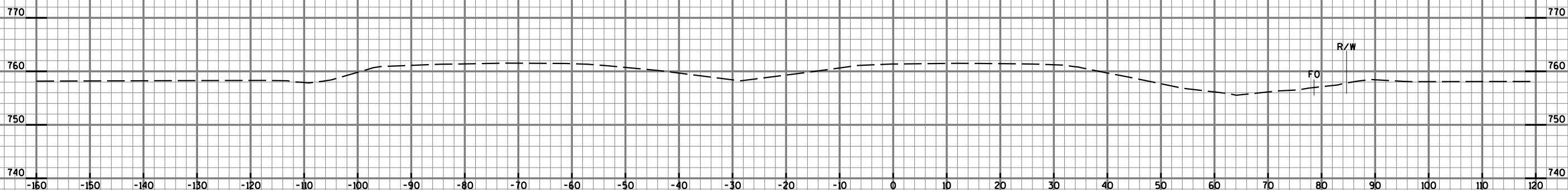




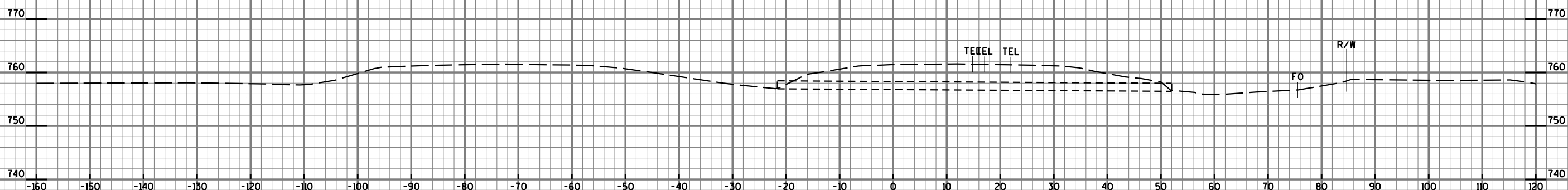
550+50



550+00



549+50

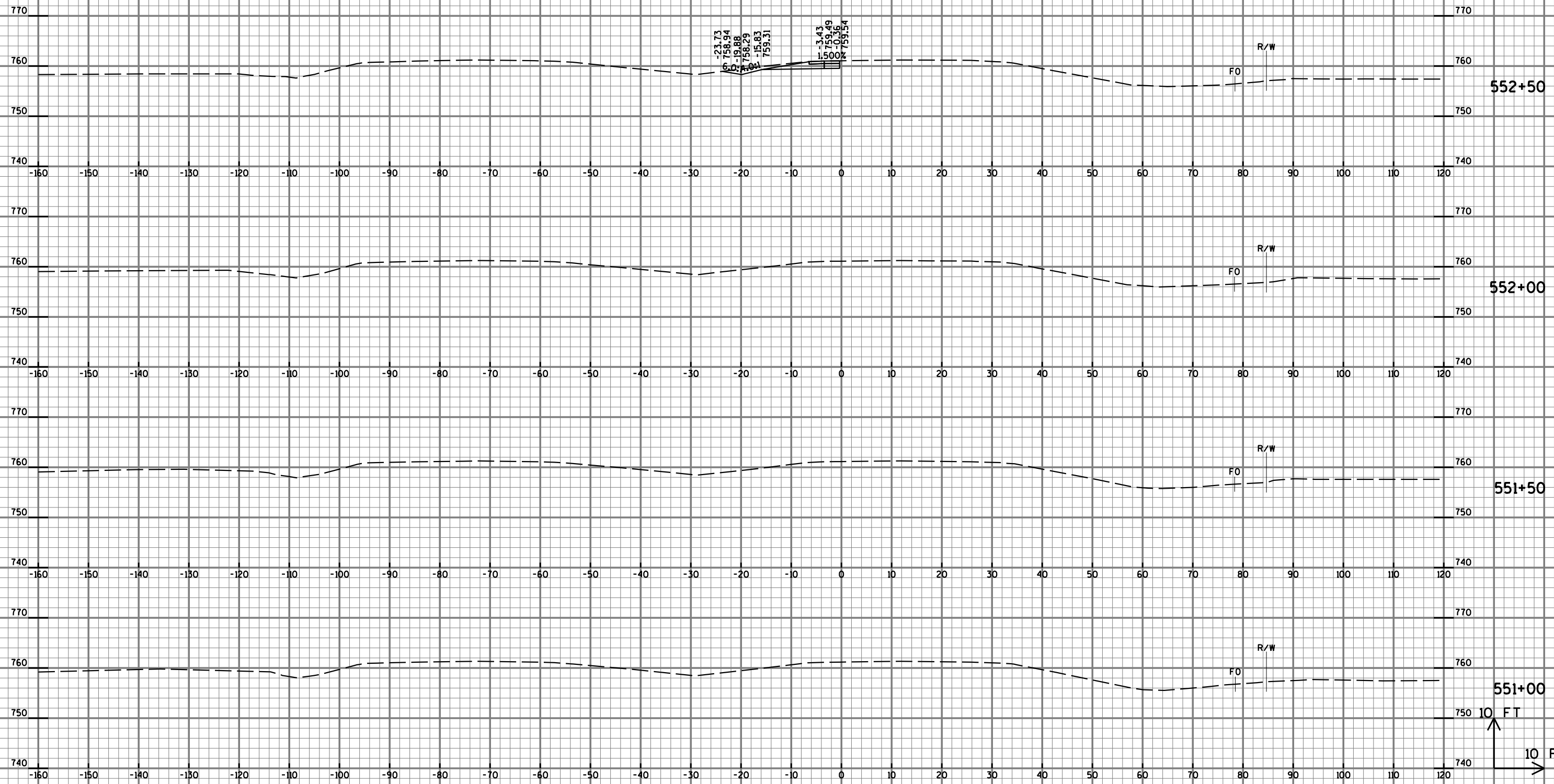


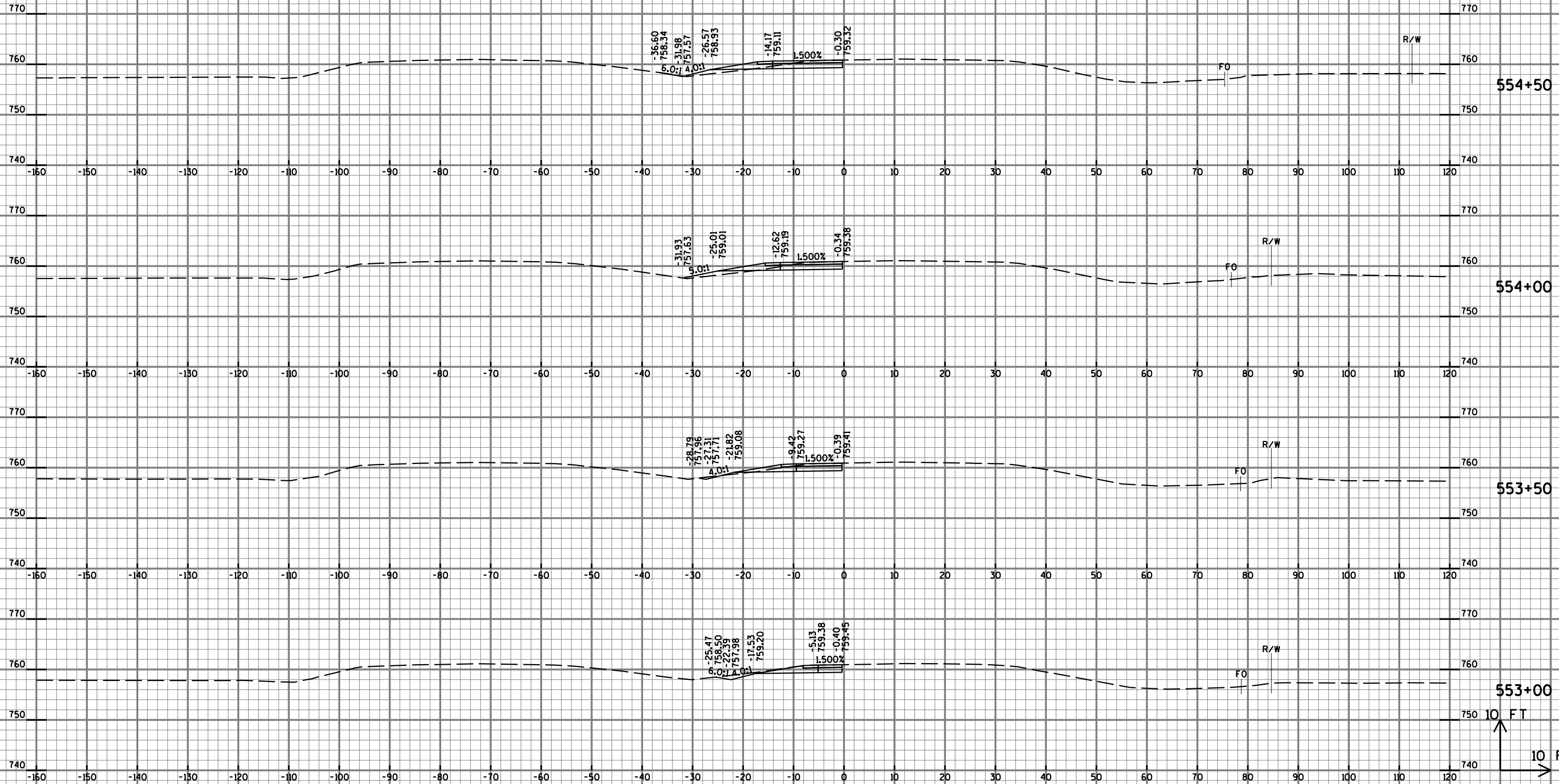
549+00

10 FT

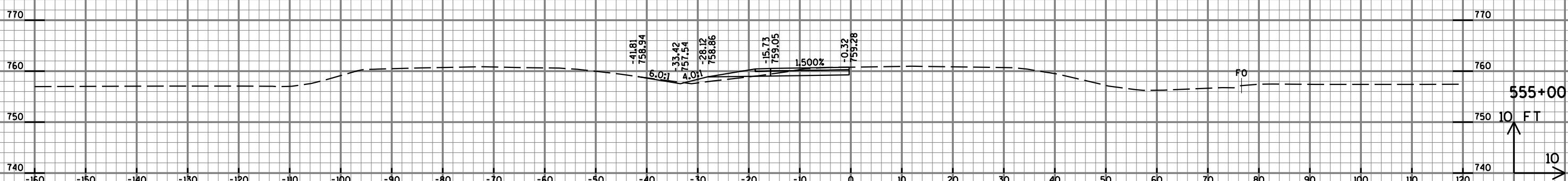
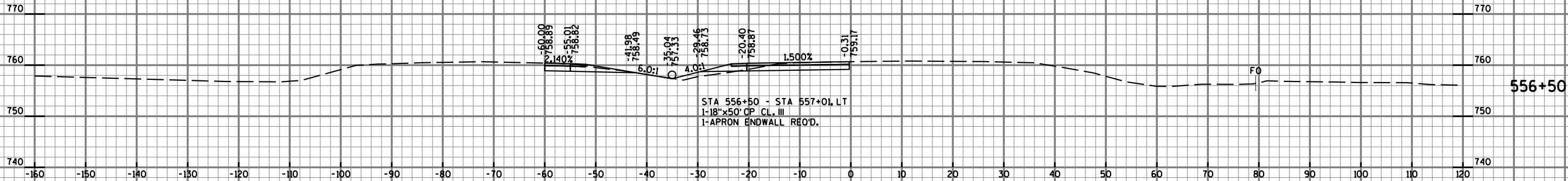
10 FT

STA. 551+00 TO 552+50





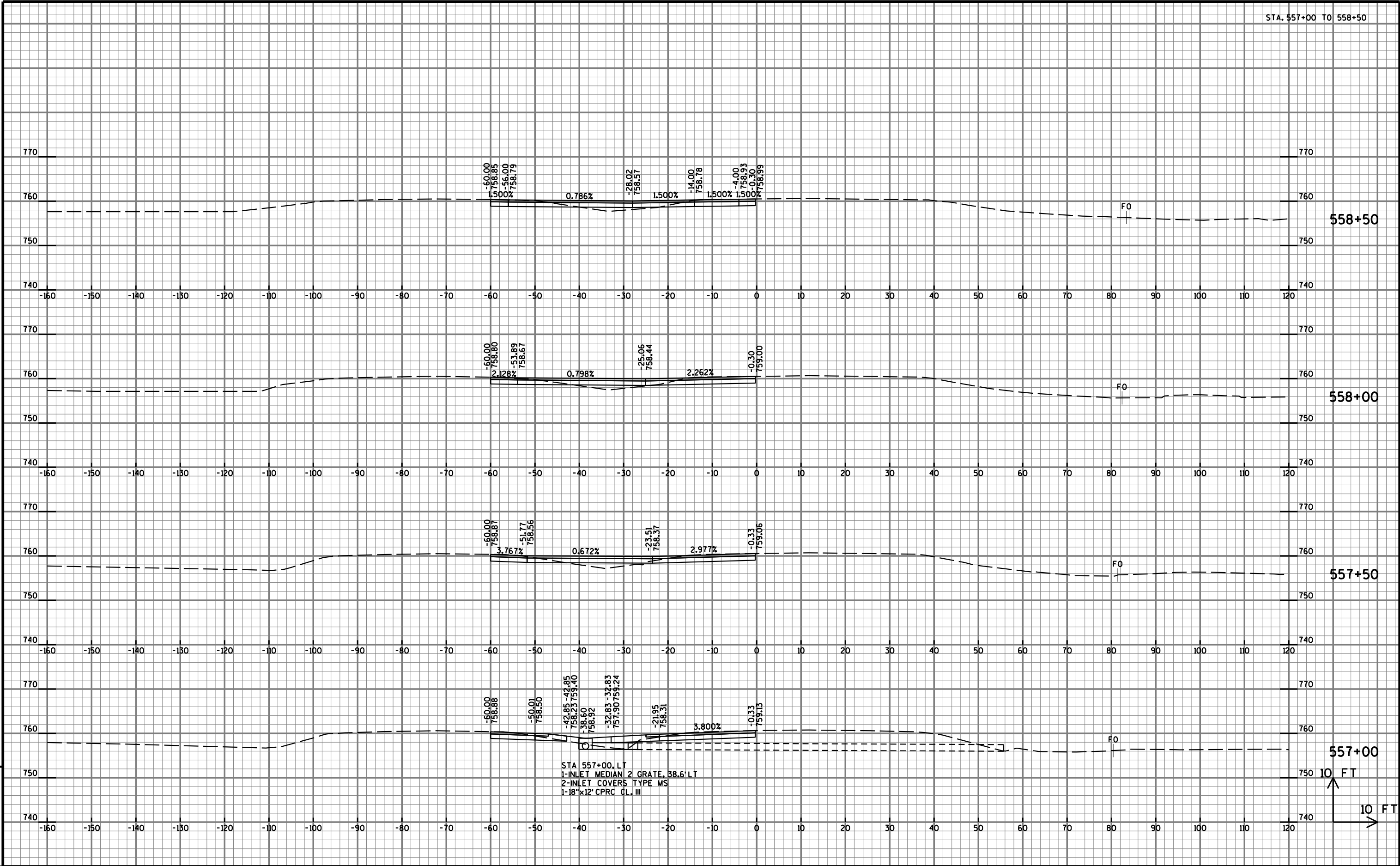
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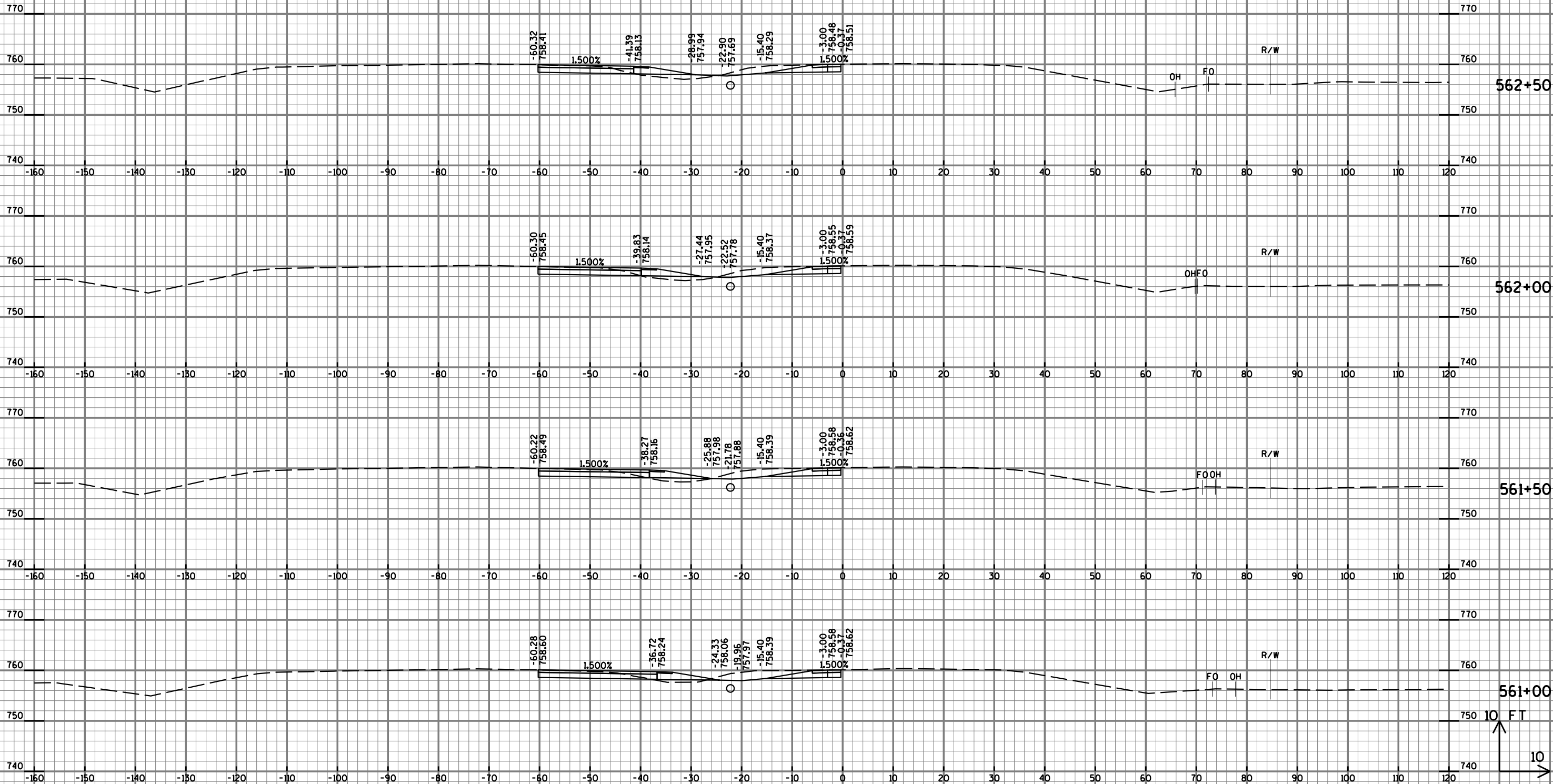


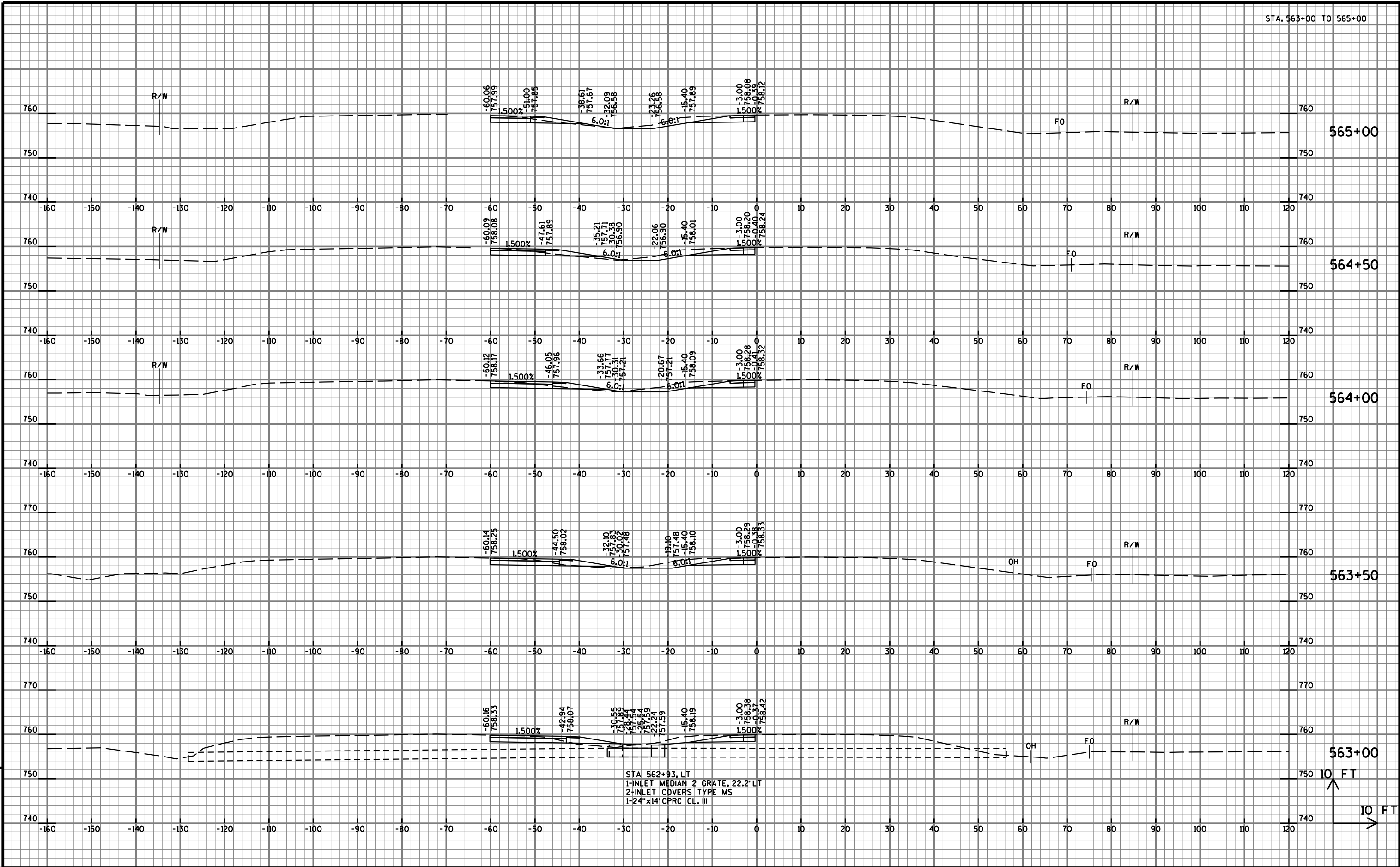
555+00

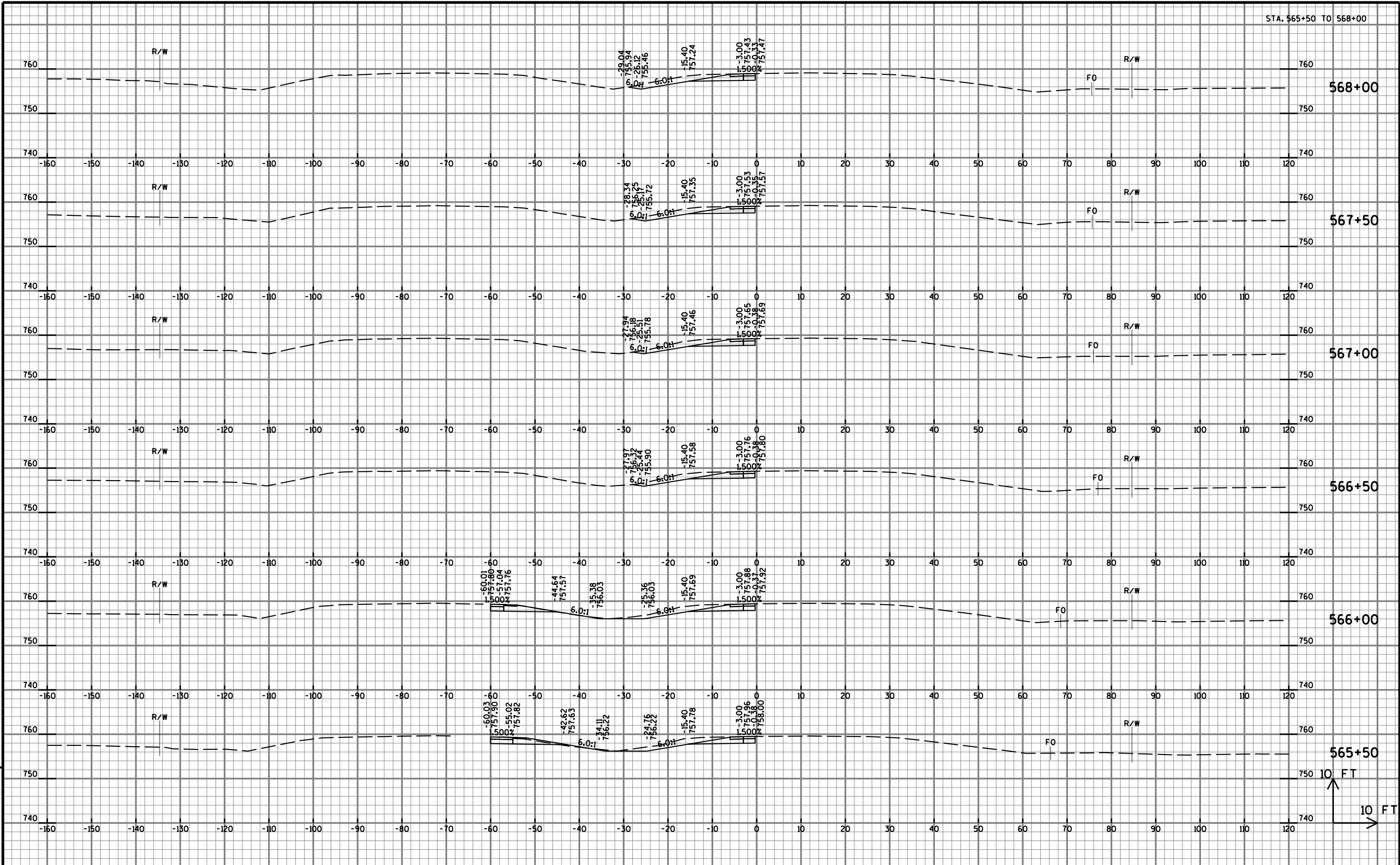
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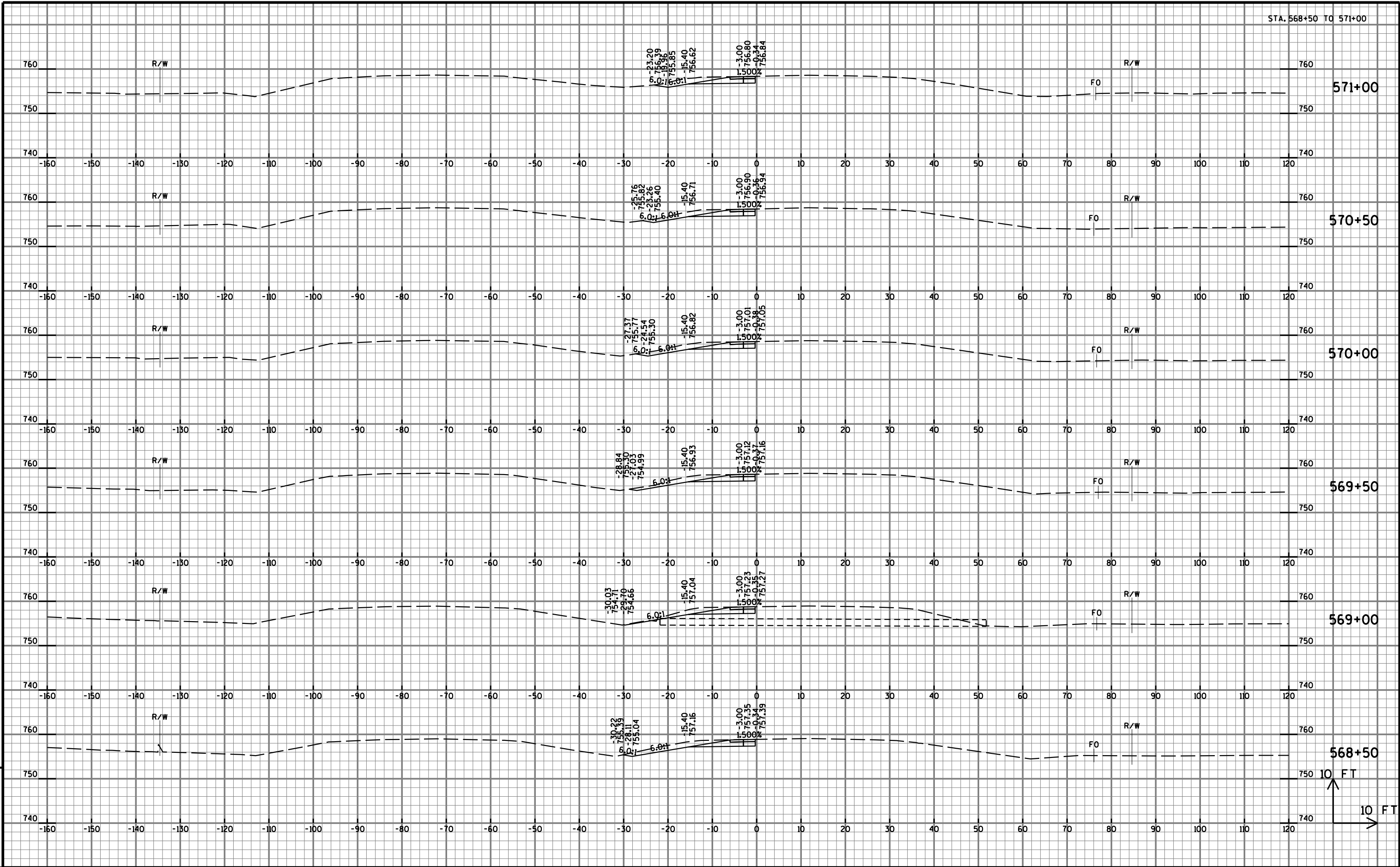
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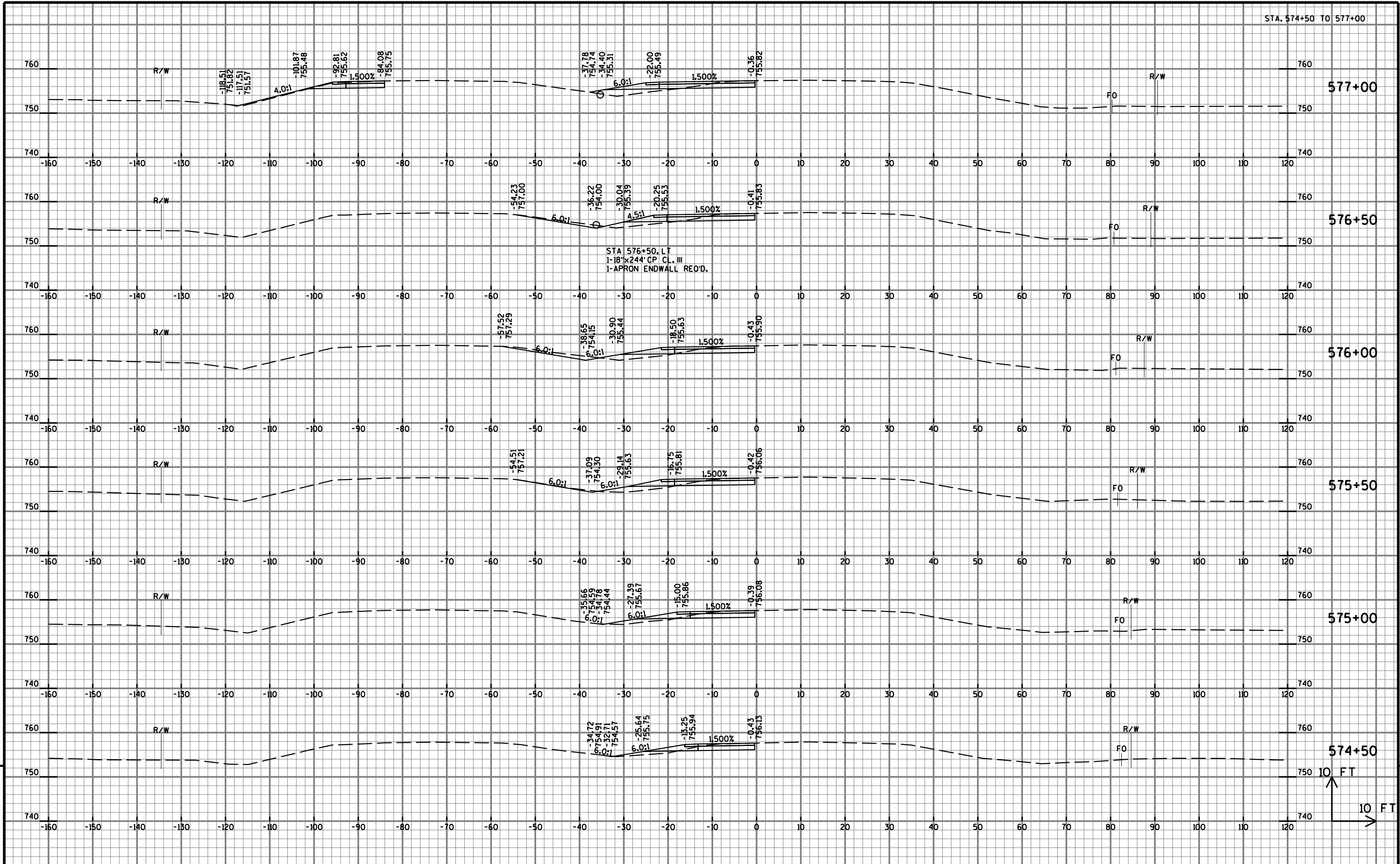


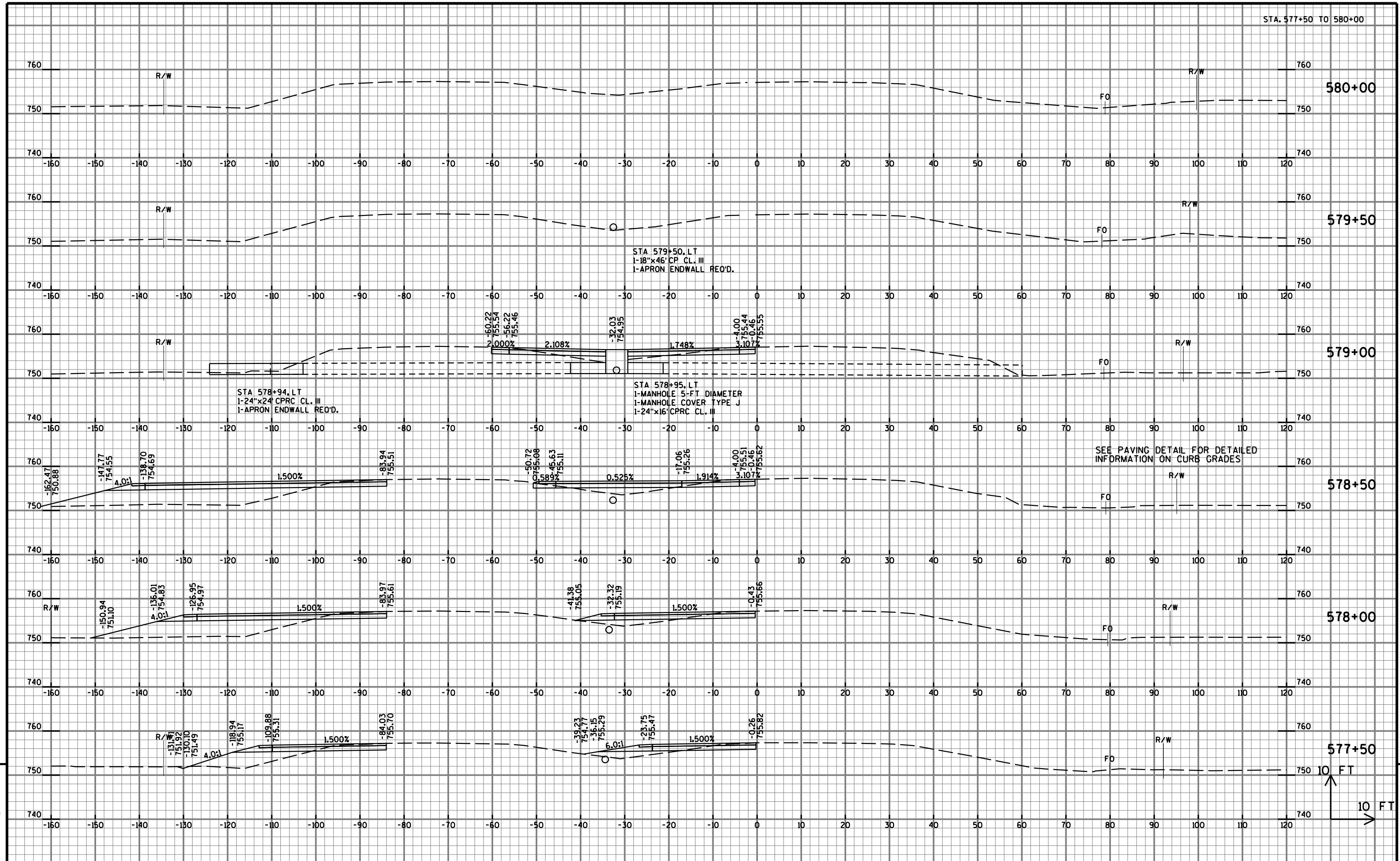


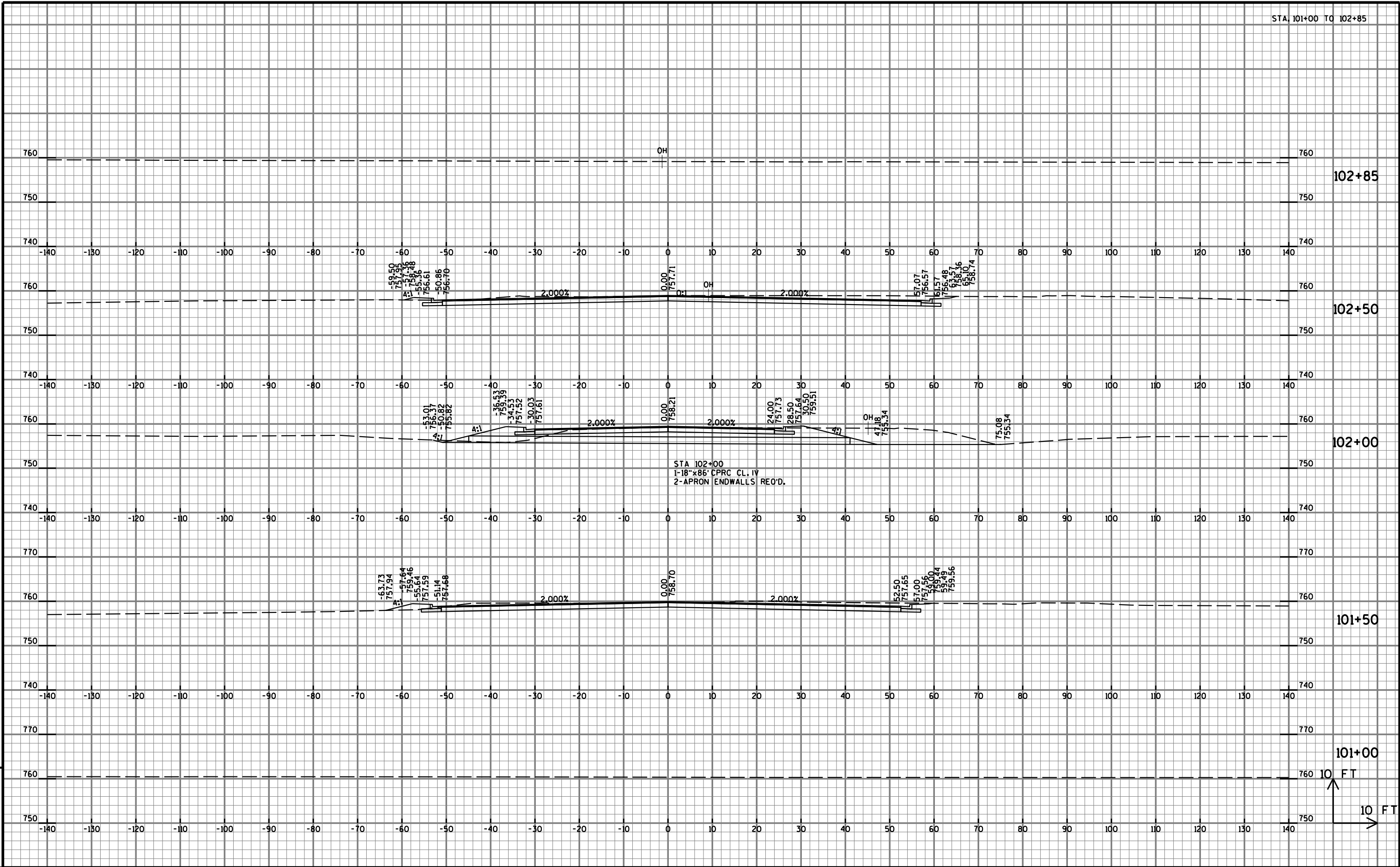




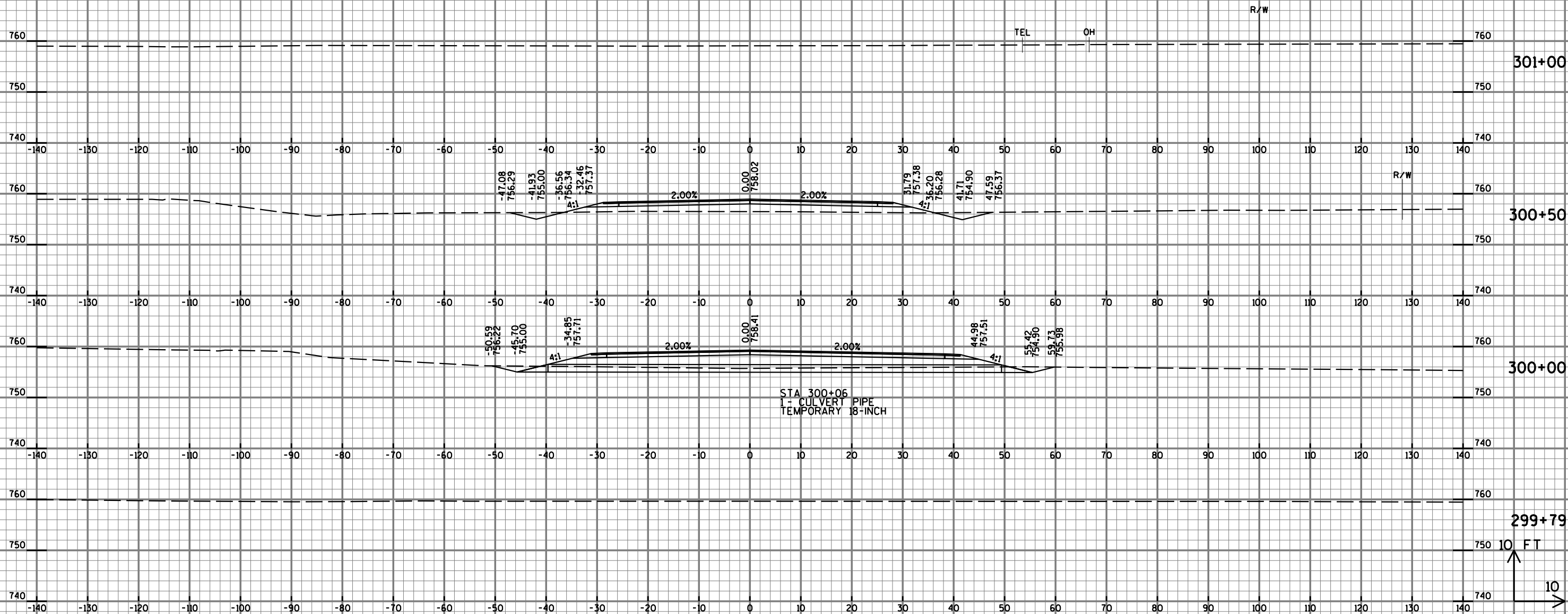








STA. 299+79 TO 301+00



PROJECT NO: 9200-07-71

HWY: STH 29

COUNTY: BROWN

CROSS SECTIONS: CTH VV TEMPORARY CONNECTION

SHEET

157

E

FILE NAME : T:\410621\DGN\cth vv x-section temp.dgn

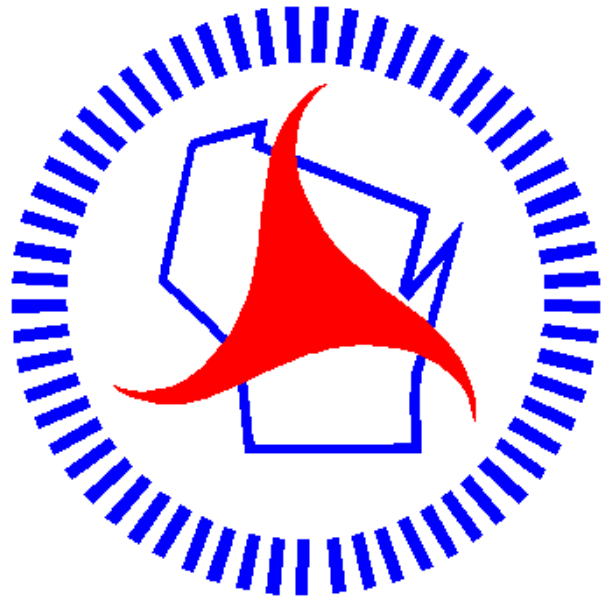
PLOT DATE : 8/29/2012

PLOT BY : AYRES-EC

PLOT NAME :

PLOT SCALE : 1:20

WISDOT/CADDs SHEET 21



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