



Wisconsin Department of Transportation

May 5, 2021

Division of Transportation Systems Development

Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

NOTICE TO ALL CONTRACTORS:

Proposal #31: 1014-00-77, WISC 2021353
Wisconsin Dells – Portage
Ishnala Rd to Schepps R, EB Only
IH 90/94
Sauk County

Letting of May 11, 2021

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
4.	Traffic

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
201.0205	Grubbing	STA	28	-4.5	23.5
614.0400	Adjusting Steel Plate Beam Guard	LF	7117	306	7423

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
204.0165	Removing Guardrail	LF	0	655	655
211.0100	Prepare Foundation Asphalt Paving (project) 01. 1014-00-77	LS	0	1	1
614.0230	Steel Thrie Beam	LF	0	105	105
614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	0	11	11
460.0105.S	HMA Pavement PWL Test Strip Volumetrics	EACH	0	1	1
460.0110.S	HMA Pavement PWL Test Strip Density	EACH	0	1	1

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
614.2500	MGS Thrie Beam Transition	LF	438	-438	0
614.2610	MGS Guardrail Terminal EAT	EACH	11	-11	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
48	Revised quantity for Grubbing
54	Revised quantities for several items in the Beam Guard Summary Table

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
72A – 72C	SDD – Steel Plate Beam Guard, Class “A” Installation & Elements
72D – 72K	SDD – Steel Thrie Beam Structure Approach
72L – 72N	SDD – Steel Plate Beam Guard Energy Absorbing Terminal

Deleted Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was deleted)
73-94	SDDs for MGS Guardrail, Thrie Beam and EAT

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 02

1014-00-77

May 5, 2021

Special Provisions

4. Traffic.

*Delete the last line of Table 108-1 under section titled **Wisconsin Lane Closure System Advance Notification** as it was a duplicate.*

Schedule of Items

Attached, dated May 5, 2021, are the revised Schedule of Items Pages 1 – 6.

Plan Sheets

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:

Revised: 48, 54

Added: 72A – 72N

END OF ADDENDUM

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	2010.0105 CLEARING STA	2010.0205 GRUBBING STA
426+50 EB	-	433+00	OUTSIDE	-	6.5
628+50 EB	-	641+00 EB	OUTSIDE	-	12.5
646+50 EB	-	651+00 EB	OUTSIDE	-	4.5
	-		UNDISTRIBUTED	5	-
TOTAL 0010				5	23.5

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ID 1014-00-77
Revised Sheet 48
May 5, 2021

BUTT JOINT SUMMARY

STATION	TO	STATION	LOCATION	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY
303+15 EB	-	304+00 EB	MAINLINE	253	-
303+15 EB	-	304+00 EB	SHOULDERS	-	117
354+47 EB	-	355+32 EB	MAINLINE	369	-
354+47 EB	-	355+32 EB	SHOULDERS	-	117
357+53 EB	-	358+38 EB	MAINLINE	360	-
357+53 EB	-	358+38 EB	SHOULDERS	-	117
740+61 EB	-	741+46 EB	MAINLINE	253	-
740+61 EB	-	741+46 EB	SHOULDERS	-	117
343+85 A	-	344+70 A	RAMP	160	-
343+85 A	-	344+70 A	SHOULDERS	-	97
349+80 B	-	350+68 B	RAMP	-	194
349+80 B	-	350+68 B	SHOULDERS	-	49
356+37 C	-	357+22 C	RAMP	-	165
356+37 C	-	357+22 C	SHOULDERS	-	49
337+67 EB	-	338+25 EB	CROSSOVER	-	37
385+66 EB	-	386+16 EB	CROSSOVER	-	32
466+00 EB	-	466+63 EB	CROSSOVER	-	41
522+36 EB	-	523+00 EB	CROSSOVER	-	42
616+65 EB	-	617+35 EB	CROSSOVER	-	46
671+05 EB	-	671+70 EB	CROSSOVER	-	42
TOTAL 0010				1,395	1,261

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ID 1014-00-77
Revised Sheet 56
May 5, 2021

CULVERT PIPE SUMMARY

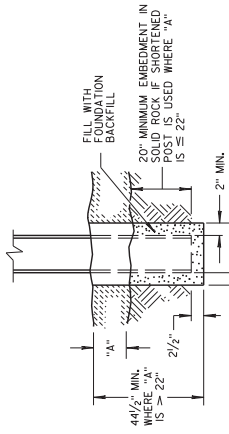
STATION	LOCATION	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	RIPRAP MEDIUM CY	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH LF	STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH LF	MARKERS CULVERT END EACH	608.0200	608.0324	608.0330	645.0120
431+20 EB	RIGHT	-	1	2	-	4	1				
637+75 EB	RIGHT	1	-	2	12	-	1				
647+50 EB	RIGHT	1	-	2	5	-	1				
TOTAL 0010		2	1	6	17	4	3				

BEAM GUARD SUMMARY

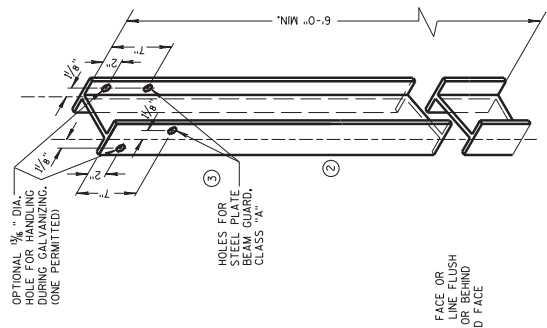
STATION	LOCATION	REMOVING GUARDRAIL LF	ADJUSTING STEEL PLATE BEAM GUARD LF	STEEL THREE BEAM LF	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	REMARKS
306+10 EB	RIGHT	-	295	-	-	
317+25 EB	RIGHT	50	678	-	1	
350+93 B	RIGHT	71	368	21	1	B RAMP TO BRIDGE OVER USH 12
355+32 EB	LEFT	50	218	-	1	
389+31 EB	RIGHT	50	1,741	-	1	
462+05 EB	RIGHT	71	152	21	1	CTH A OVERPASS
463+96 EB	LEFT	-	168	-	-	CTH A OVERPASS
517+44 EB	RIGHT	71	151	21	1	GILLEM RD OVERPASS
519+33 EB	LEFT	-	168	-	-	GILLEM RD OVERPASS
589+25 EB	RIGHT	50	740	-	1	
612+87 EB	RIGHT	71	161	21	1	CTH T OVERPASS
614+90 EB	LEFT	-	169	-	-	CTH T OVERPASS
667+09 EB	RIGHT	71	163	21	1	VAN HOOSSEN RD OVERPASS
669+34 EB	LEFT	-	168	-	-	VAN HOOSSEN RD OVERPASS
710+62 EB	RIGHT	50	1,383	-	1	
733+57 EB	RIGHT	741+46 EB	700	-	1	
TOTAL 0010		655	7,423	105	11	

GENERAL NOTES

- 1 W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS; USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
 - 2 USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS SHALL BE USED UNLESS OTHERWISE SPECIFIED. DRIVING AND REPAIR DAMAGED SPLITTER COATING ON GALVANIZED POSTS.
 - 3 INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
 - 4 USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
 - 5 IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
 - 6 IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. THE HOLE SHOULD BE 12 INCHES DEEP, 12 INCHES LONG AND PLACE IN THE HOLE BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATELY.
 - 7 WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS OVER THE FLANGE OF THE STEEL POST.
- INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS. ALL DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.

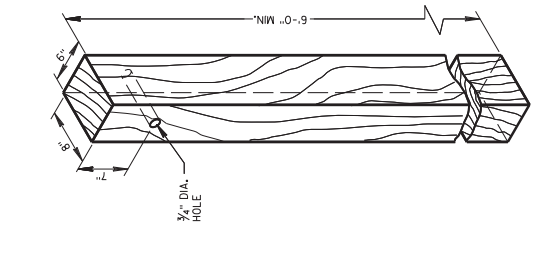


SETTING STEEL OR WOOD POST IN ROCK

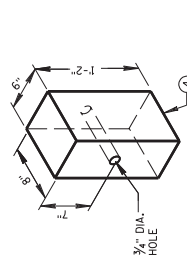


STEEL POST & HOLE PUNCHING DETAIL (W6 X 9)

ALL HOLES 3/4" DIAMETER EXCEPT AS NOTED



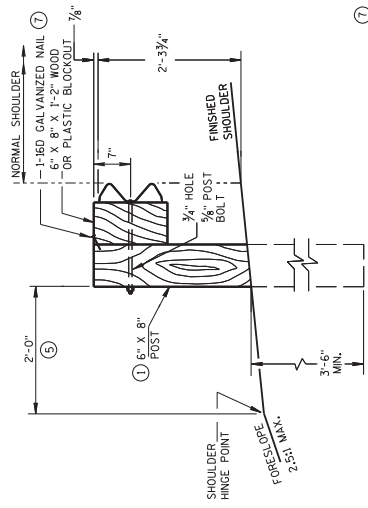
WOOD POST NOMINAL (6" X 8")



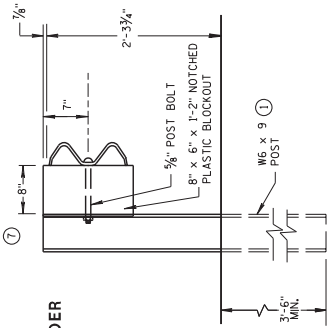
WOOD OR PLASTIC BLOCKOUT FOR WOOD POSTS

TYPICAL NOTCHED PLASTIC BLOCKOUT FOR STEEL POSTS

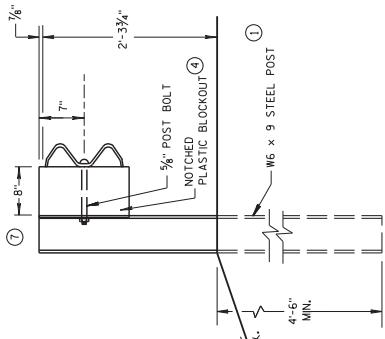
3/4" HOLE 5/8" POST BOLT THROUGH CENTER OF POST AND BLOCKOUT



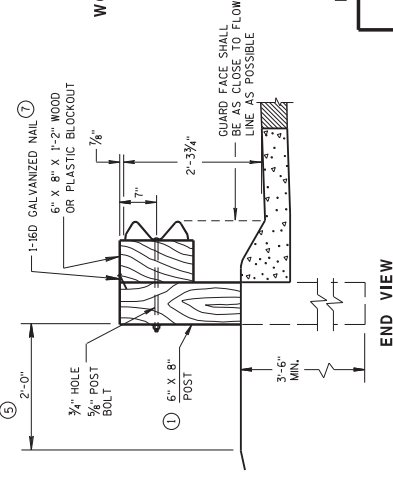
LOCATED ALONG A ROADWAY SHOULDER STANDARD INSTALLATION



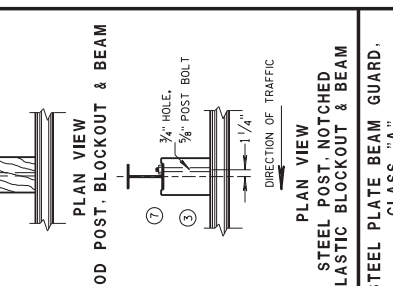
END VIEW NOTCHED PLASTIC BLOCKOUT ALTERNATIVE STANDARD INSTALLATION



END VIEW LONGER POST AT HALF POST SPACING W BEAM (LHW)



END VIEW LOCATED ALONG A MOUNTABLE CURBED ROADWAY



WOOD POST, BLOCKOUT & BEAM

STEEL POST, NOTCHED PLASTIC BLOCKOUT & BEAM

STEEL PLATE BEAM GUARD. CLASS "A"

INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Addendum No. 02
ID 1014-00-77
Added Sheet 72A
May 5, 2021

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

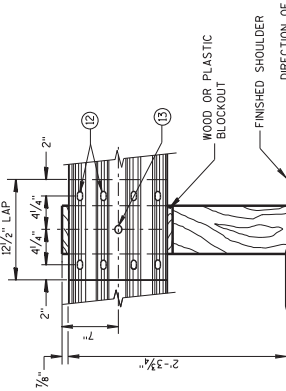
GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

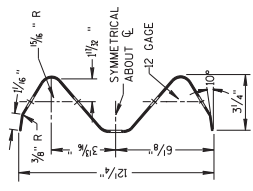
9 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.

12 8 - 5/8" x 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

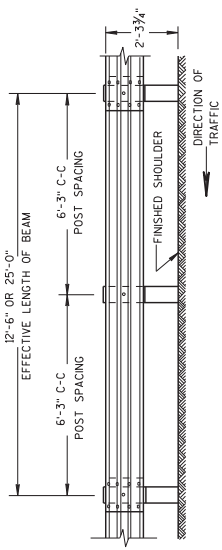
13 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



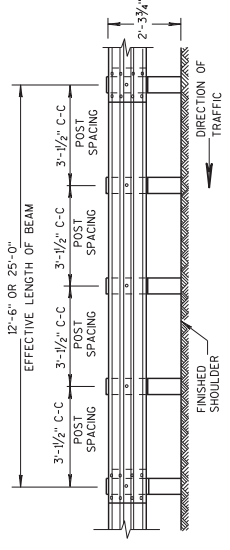
**FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL**



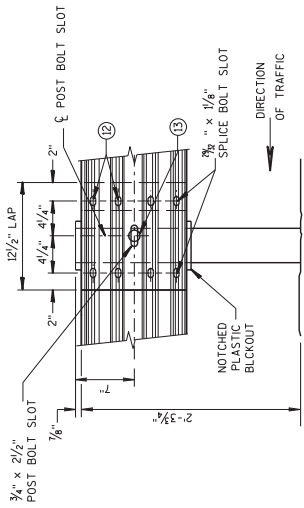
SECTION THRU W BEAM



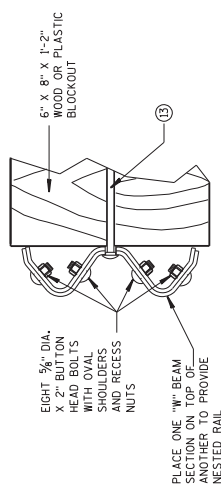
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



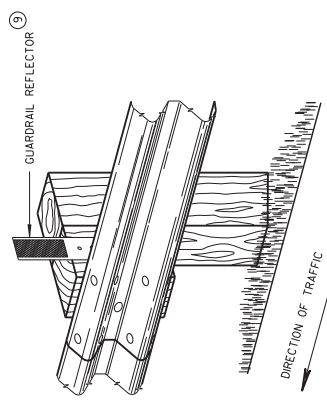
**FRONT VIEW
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)**



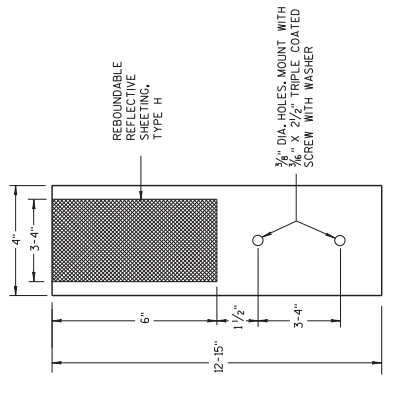
**FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPICING DETAILS
OF STEEL PLATE BEAM GUARD**



NESTED W BEAM (NW)
USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)



4\"/>

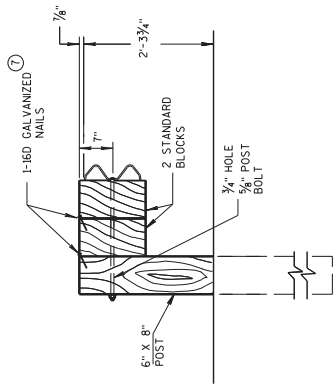


4\"/>

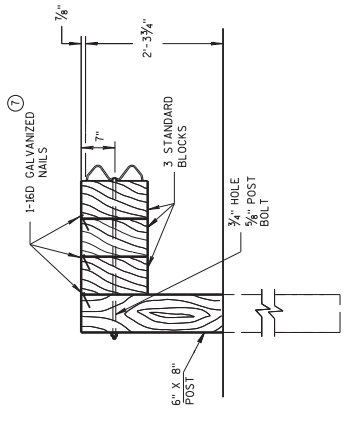
Addendum No. 02
ID 1014-00-77
Added Sheet 72B
May 5, 2021

**STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS**
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.

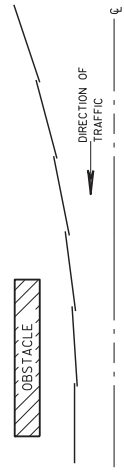


DETAIL FOR DOUBLE BLOCKS
 THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

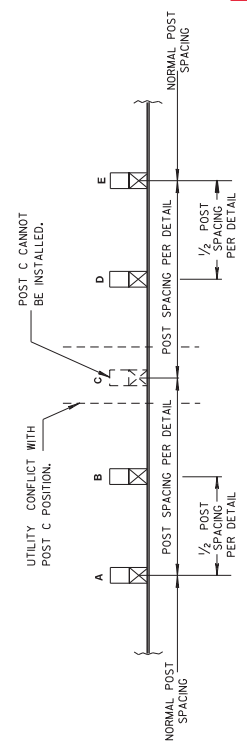


DETAIL FOR TRIPLE BLOCKS
 TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED. DO NOT USE EXTRA BLOCKOUTS. IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



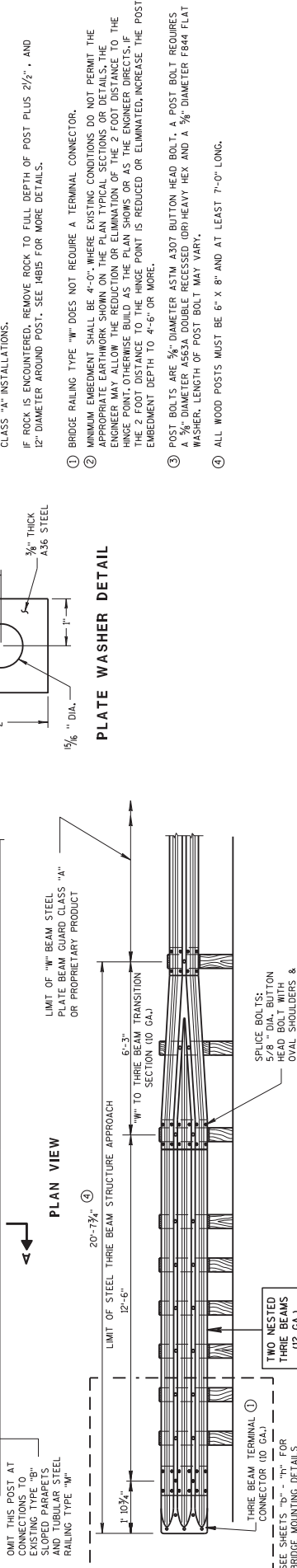
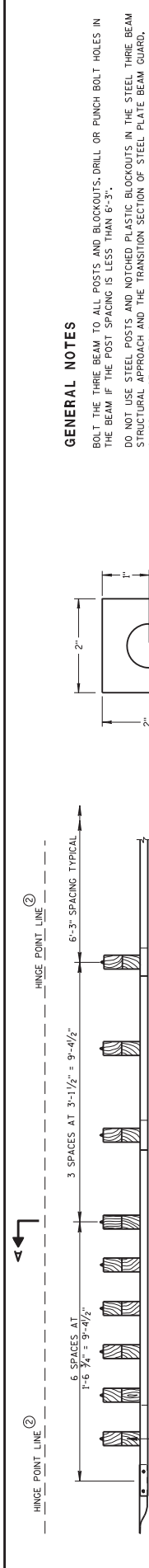
**PLAN VIEW
 BEAM LAPPING DETAIL**



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

Addendum No. 02
 ID 1014-00-77
 Added Sheet 72C
 May 5, 2021

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED June 2017 DATE /S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FWHA



GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS; DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE HB15 FOR MORE DETAILS.

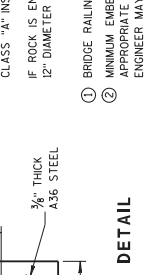


PLATE WASHER DETAIL

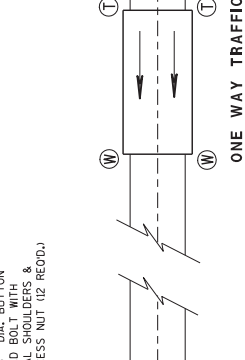
3/8" THICK A36 STEEL

1 5/8" DIA.

2"

2"

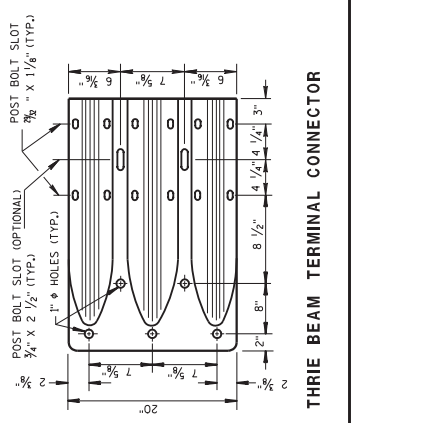
- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0" WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS; THE EMBEDMENT SHALL BE 6'-0" WHERE THE EMBEDMENT IS LESS THAN 6'-0".
- ③ POST BOLTS ARE 3/4" DIAMETER ASTM A307 BUTTON HEAD BOLT, A POST BOLT REQUIRES A 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 3/8" DIAMETER F844 FLAT WASHER, LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



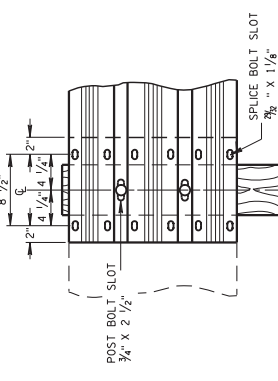
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

① THRIE BEAM CONNECTION

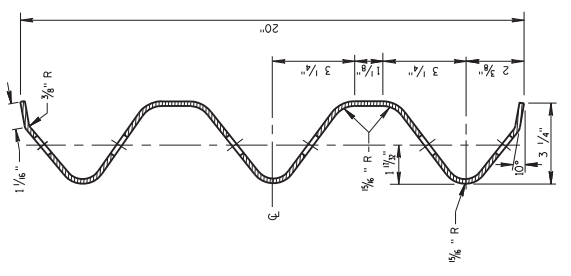
Ⓜ W-BEAM CONNECTION WHEN REQUIRED



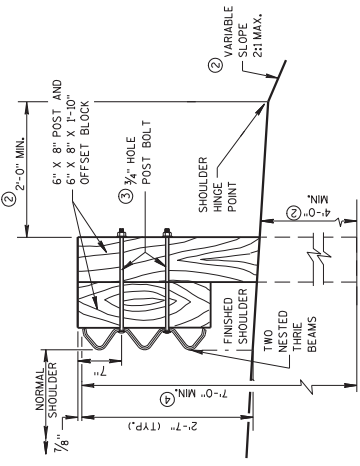
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU THRIE BEAM RAIL ELEMENT

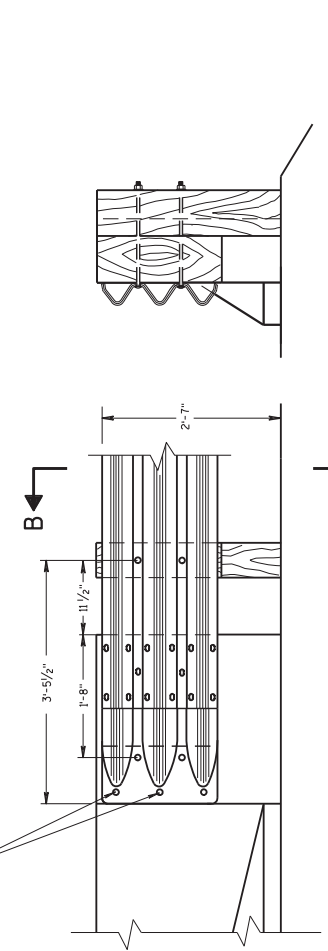


SECTION A-A

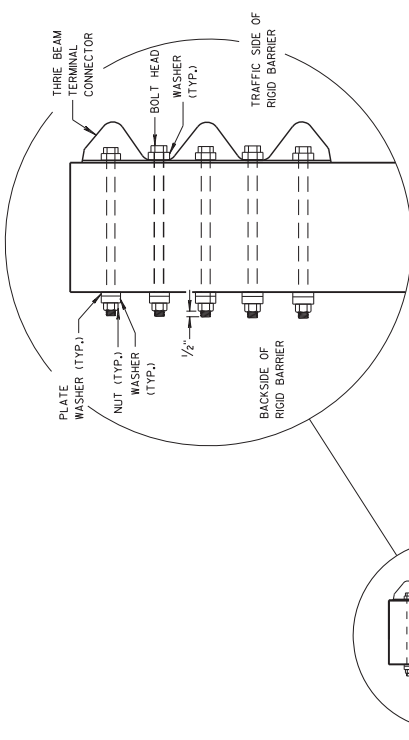
Addendum No. 02
ID 1014-00-77
Added Sheet 72D
May 5, 2021

STEEL THRIE BEAM STRUCTURE APPROACH	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/31/2012 DATE	/s/ Jeffry H. Zoogg ROADWAY STANDARDS DEVELOPMENT ENGINEER

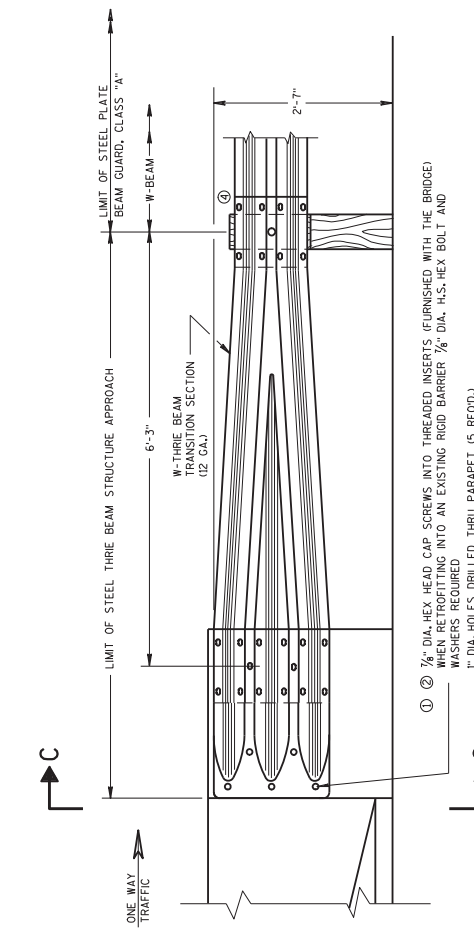
- ① ② 3/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
- 3/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
- 1" DIA. HOLES DRILLED THRU PARAPET (5 RECD.)



FRONT VIEW
THREE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS



SECTION C-C



- ① ② 3/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER 3/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
- 1" DIA. HOLES DRILLED THRU PARAPET (5 RECD.)

FRONT VIEW
W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THREE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THREE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDED ROUND STEEL WASHER THAT IS 2" O.D. X 3/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THREE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

Addendum No. 02
ID 1014-00-77
Added Sheet 72E
May 5, 2021

STEEL THREE BEAM STRUCTURE APPROACH CONNECTION TO SQUARE END PARAPETS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 8/31/2012	/s/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
DATE	PHWA

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 604.

① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A SECTION OF THE PARAPET TO BE REMOVED AND REPLACED. VERIFY BOLT LENGTH AND THREADING LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 3/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

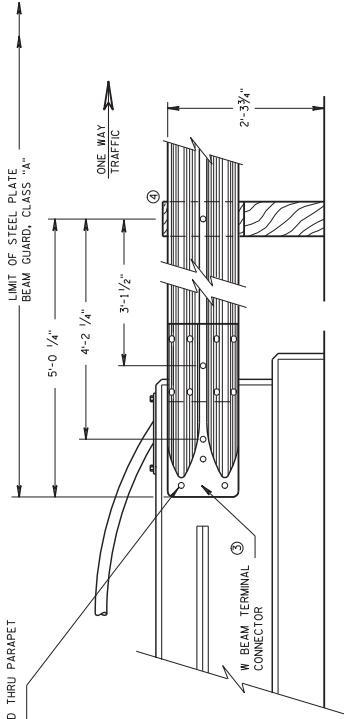
③ THE RECES FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE TO BE USED FOR ALL PLATE BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

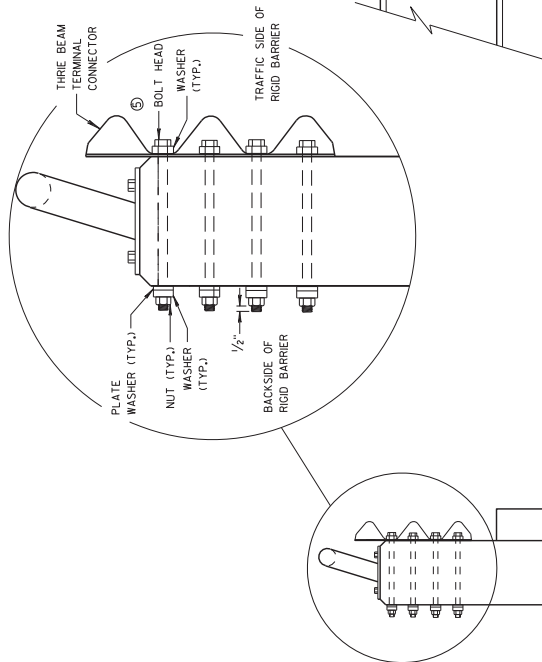
⑤ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PARAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THREE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

- ① 3/8" DIA. HEX HEAD CAP SCREWS INTO THE BRIDGE DECK WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
- 3/4" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
- 1" DIA. HOLES DRILLED THRU PARAPET (4 RECD.)

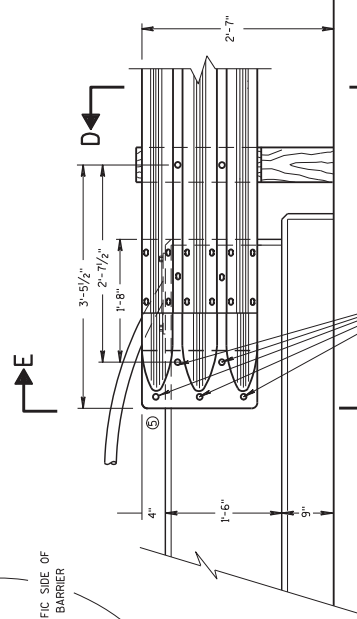


FRONT VIEW
W BEAM CONNECTION TO VERTICAL FACE PARAPET
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION E-E

- ① 3/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
- 3/4" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
- 1" DIA. HOLES DRILLED THRU PARAPET (4 RECD.)



FRONT VIEW

SECTION D-D

THREE BEAM CONNECTION TO VERTICAL FACED PARAPETS

Addendum No. 02
 ID 1014-00-77
 Added Sheet 72F
 May 5, 2021

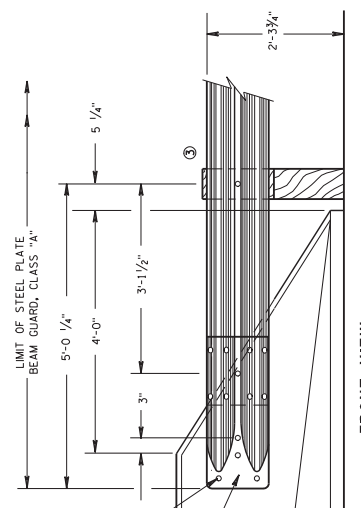
STEEL THREE BEAM STRUCTURE
 APPROACH, CONNECTION TO
 VERTICAL FACED PARAPETS

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

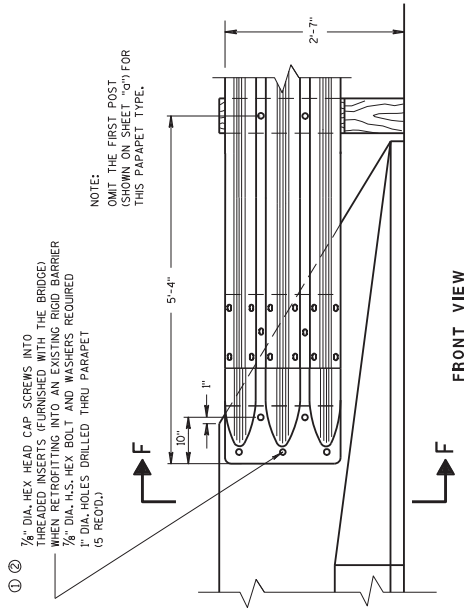
APPROVED
 8/31/2012 DATE
 /s/ Jerry H. Zoegg ENGINEER
 ROADWAY STANDARDS DEVELOPMENT
 FHWA

ONE WAY TRAFFIC

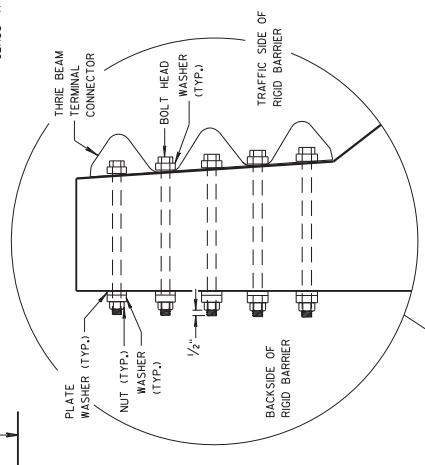
- ① 7/8" DIA. HEX HEAD CAP SCREWS INTO TAPERED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
- ② 7/8" DIA. HS.-HEX BOLT AND WASHERS REQUIRED (4 REQ'D.)
- ③ 1" DIA. HOLES DRILLED THRU PARAPET



FRONT VIEW
W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)



FRONT VIEW
THREE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS

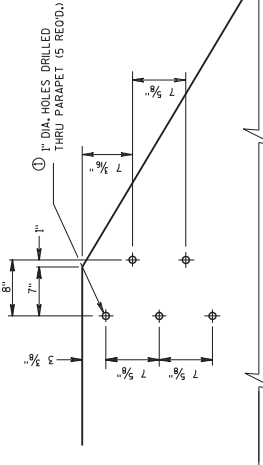


SECTION F-F

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

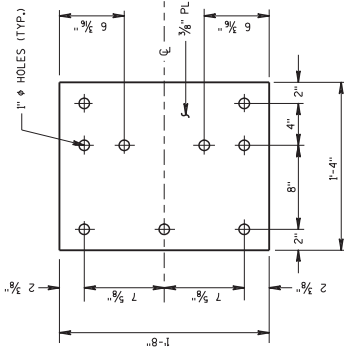
- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THREE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH, ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THREE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 3/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR WOOD BLOCKOUTS WITH WOOD PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THREE BEAM CONNECTION APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



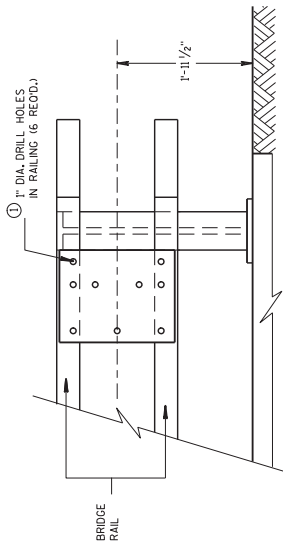
DRILL HOLE LOCATION AND PATTERN
FOR THREE BEAM CONNECTION

Addendum No. 02
 ID 1014-00-77
 Added Sheet 72G
 May 5, 2021

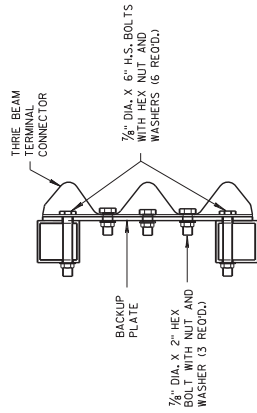
STEEL THREE BEAM STRUCTURE APPROACH CONNECTION TO SLOPED END PARAPETS	
APPROVED 8/31/2012 DATE	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
/S/ JEFFRY H. ZOOB ROADWAY STANDARDS DEVELOPMENT ENGINEER	PHWA



BACK-UP PLATE DETAIL



BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING



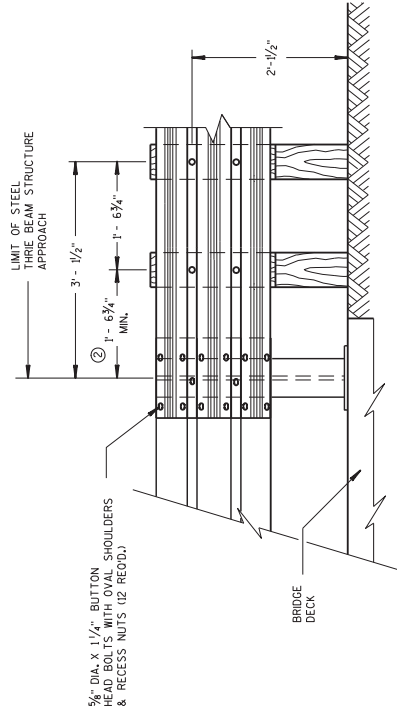
SECTION G-G

GENERAL NOTES

BOLTS, PLATES, NUTS AND WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A 325 AND BE GALVANIZED IN ACCORDANCE WITH ASTM A 153.

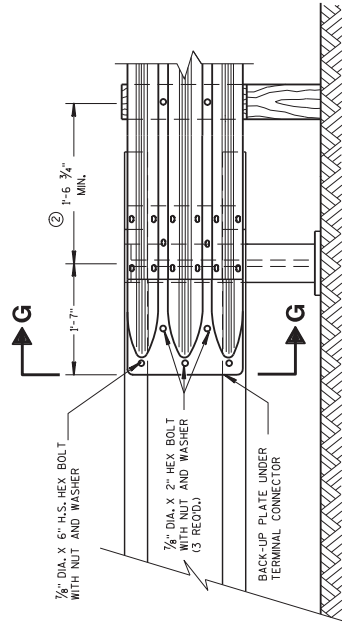
① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

② VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, MINOR WALL DETAILS, AND ANGLE OF SHEAR. THE FIRST WOOD POST OFF THE BRIDGE SHALL AS CLOSE AS FEASIBLE TO THE STEEL END POST.

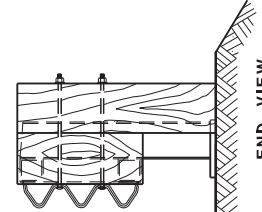


FRONT VIEW
THIRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"

Addendum No. 02
ID 1014-00-77
Added Sheet 72H
May 5, 2021



FRONT VIEW
THIRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"

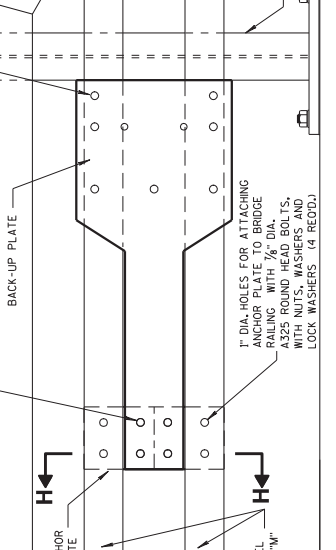


END VIEW

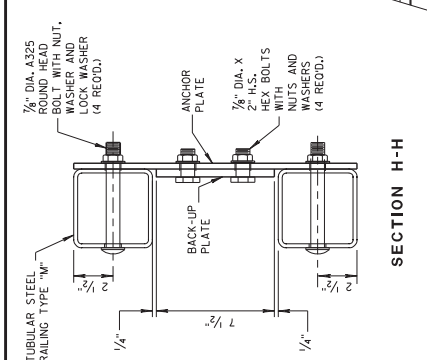
STEEL THIRIE BEAM STRUCTURE APPROACH, CONNECTION TO BRIDGE RAILING TYPES "F" AND "W"
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED 8/31/2012 DATE
/s/ JEFF Y. H. ZONG ROADWAY STANDARDS DEVELOPMENT ENGINEER FHWA

GENERAL NOTES

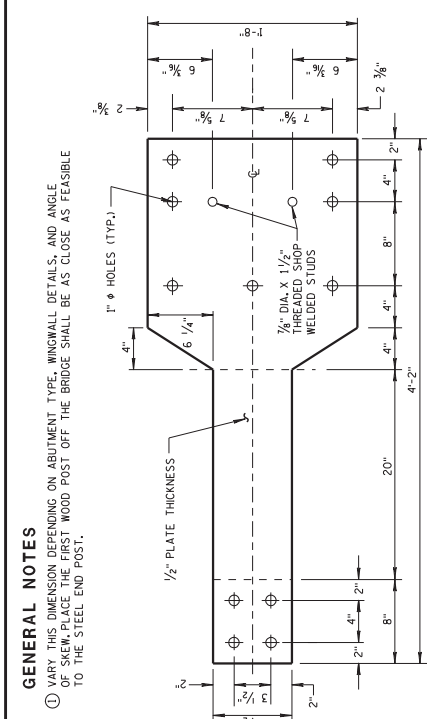
① VARY THIS DIMENSION DEPENDING ON ABUTMENT TYPE, WINGWALL DETAILS, AND ANGLE OF SKEW; PLACE THE FIRST WOOD POST OFF THE BRIDGE SHALL BE AS CLOSE AS FEASIBLE TO THE STEEL END POST.



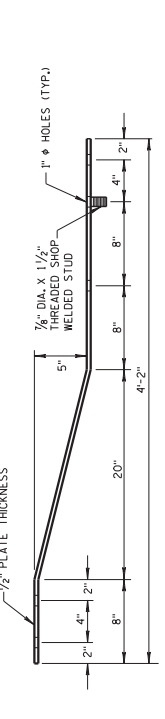
FRONT VIEW



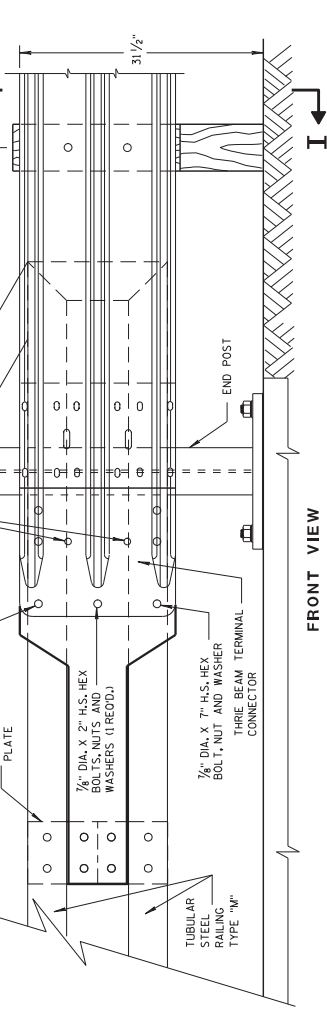
SECTION H-H



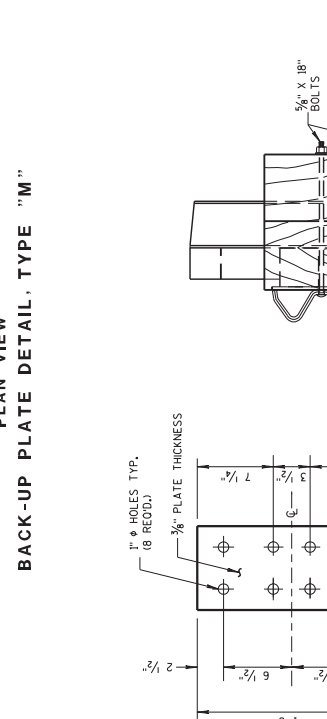
FRONT VIEW



PLAN VIEW

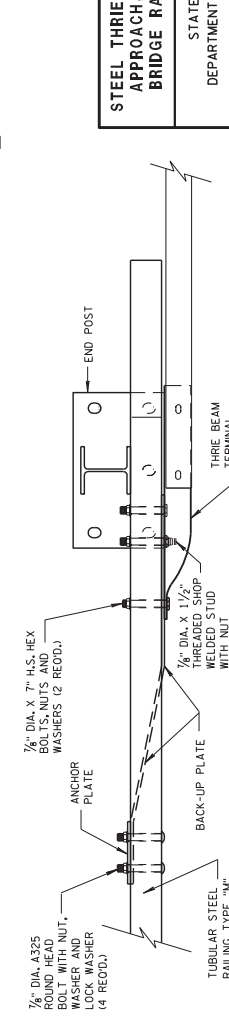


FRONT VIEW



FRONT VIEW

ANCHOR PLATE DETAIL, TYPE "M"

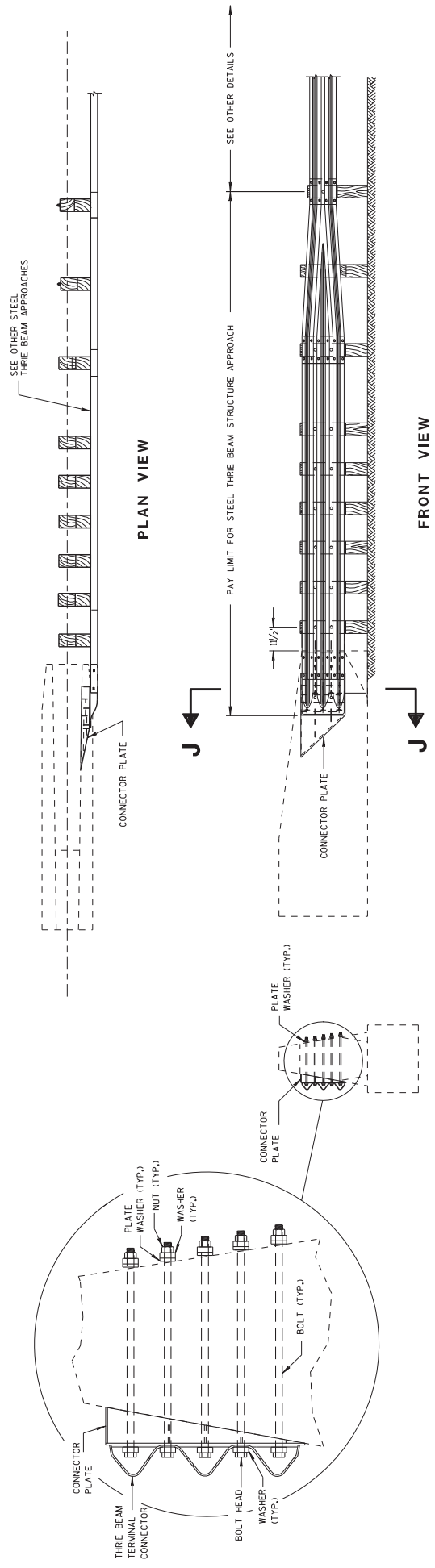


PLAN VIEW

SECTION I-I

Addendum No. 02
ID 1014-00-77
Added Sheet 721
May 5, 2021

STEEL THRIE BEAM STRUCTURE APPROACH CONNECTION TO BRIDGE RAILING TYPE "M"	
APPROVED	STATE OF WISCONSIN
DATE	DEPARTMENT OF TRANSPORTATION
8/31/2012	
PHWA	ROADWAY STANDARDS DEVELOPMENT ENGINEER
	/s/ Jerry H. Zogg



GENERAL NOTES

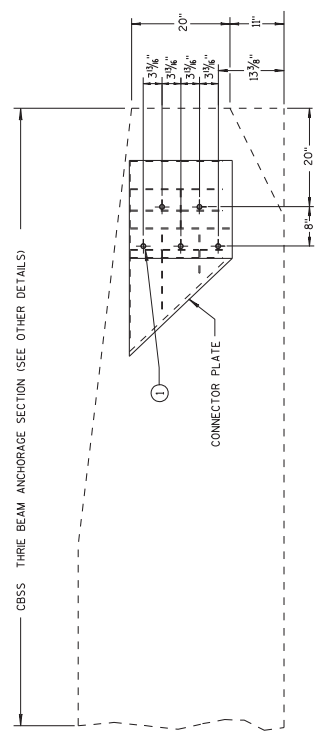
- CONSTRUCT PER STANDARD SPECIFICATION 614.
- CONNECTOR PLATE, DRILLING HOLES THROUGH PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 3/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

Addendum No. 02
 ID 1014-00-77
 Added Sheet 72K
 May 5, 2021

STEEL THRIE BEAM STRUCTURE APPROACH SINGLE SLOPE ATTACHMENT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	/S/ JERRY H. ZOGG ROADWAY STANDARDS DEVELOPMENT ENGINEER
DATE	8/31/2012
FHWA	

STEEL THRIE BEAM STRUCTURE APPROACH

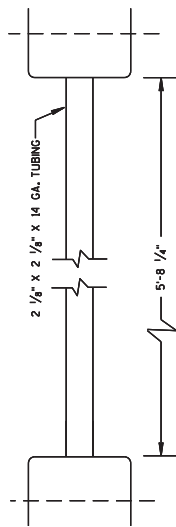
CONNECTOR PLATE LOCATION



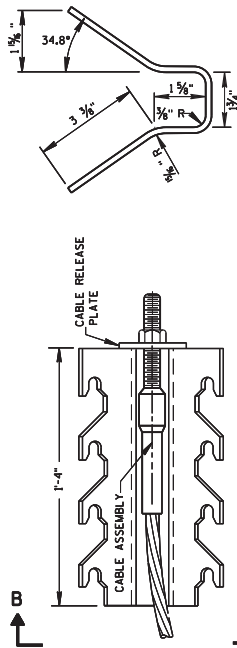
Addendum No. 02
ID 1014-00-77
Added Sheet 72M
May 5, 2021

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

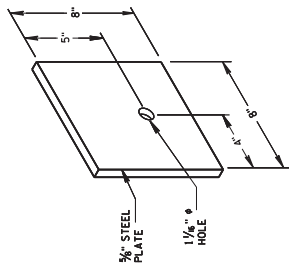
72M



⑩ STRUT DETAIL



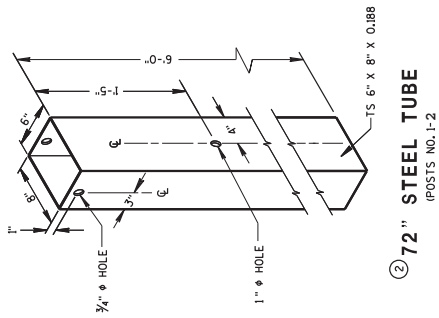
⑨ CABLE ANCHOR BOX



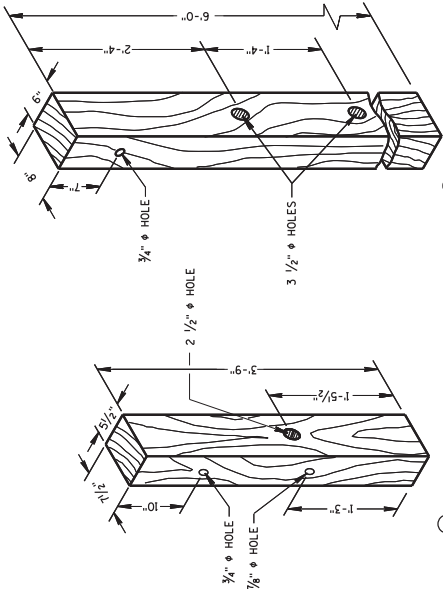
⑦ STEEL BEARING PLATE

GENERAL NOTES

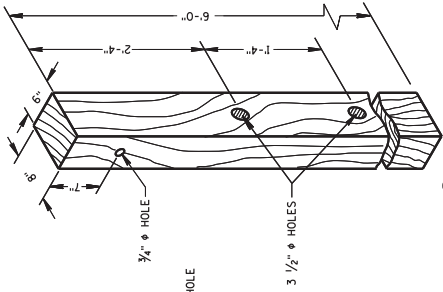
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 1/2 INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



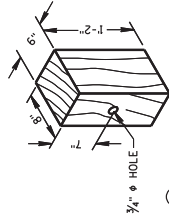
② 72" STEEL TUBE
(POSTS NO. 1-2)



① TERMINAL POST

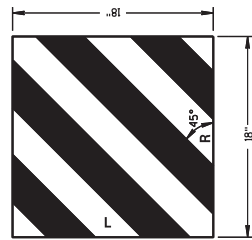


④ CRT POST
(POSTS NOS 5-8)

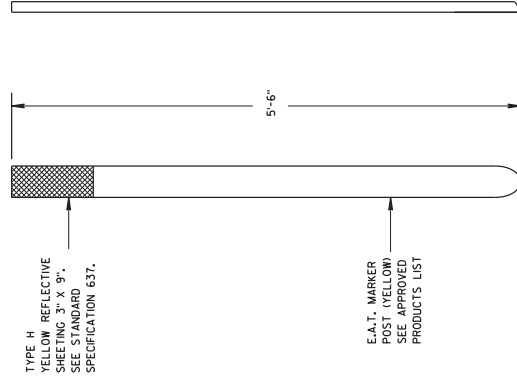


⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NOS 1 & 2

WOOD BREAKAWAY POSTS



⑬ REFLECTIVE SHEETING DETAILS



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST

Addendum No. 02
ID 1014-00-77
Added Sheet 72N
May 5, 2021

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED _____ /s/ Rodney Taylor
DATE June 2017 ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA



Proposal Schedule of Items

Proposal ID: 20210511031 Project(s): 1014-00-77

Federal ID(s): WISC 2021353

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0105 Clearing	5.000 STA	_____.	_____.
0004	201.0205 Grubbing	23.500 STA	_____.	_____.
0006	204.0105 Removing Pavement Butt Joints	1,395.000 SY	_____.	_____.
0008	204.0115 Removing Asphaltic Surface Butt Joints	1,261.000 SY	_____.	_____.
0010	204.0150 Removing Curb & Gutter	866.000 LF	_____.	_____.
0012	208.0100 Borrow	8,200.000 CY	_____.	_____.
0014	213.0100 Finishing Roadway (project) 01. 1014-00-77	1.000 EACH	_____.	_____.
0016	305.0110 Base Aggregate Dense 3/4-Inch	3,400.000 TON	_____.	_____.
0018	390.0403 Base Patching Concrete Shes	4,500.000 SY	_____.	_____.
0020	416.0610 Drilled Tie Bars	600.000 EACH	_____.	_____.
0022	416.0620 Drilled Dowel Bars	5,600.000 EACH	_____.	_____.
0024	455.0605 Tack Coat	22,000.000 GAL	_____.	_____.
0030	460.2005 Incentive Density PWL HMA Pavement	12,348.000 DOL	1.00000	12,348.00
0032	460.2007 Incentive Density HMA Pavement Longitudinal Joints	90,888.000 DOL	1.00000	90,888.00
0034	460.2010 Incentive Air Voids HMA Pavement	15,100.000 DOL	1.00000	15,100.00
0036	460.5224 HMA Pavement 4 LT 58-28 S	7,700.000 TON	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20210511031 Project(s): 1014-00-77

Federal ID(s): WISC 2021353

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0038	460.7224 HMA Pavement 4 HT 58-28 S	15,100.000 TON	_____	_____
0040	460.8624 HMA Pavement 4 SMA 58-28 V	15,100.000 TON	_____	_____
0042	465.0315 Asphaltic Flumes	12.000 SY	_____	_____
0044	465.0400 Asphaltic Shoulder Rumble Strips	87,220.000 LF	_____	_____
0046	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	2.000 EACH	_____	_____
0048	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	1.000 EACH	_____	_____
0050	606.0200 Riprap Medium	6.000 CY	_____	_____
0052	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	17.000 LF	_____	_____
0054	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	4.000 LF	_____	_____
0056	614.0400 Adjusting Steel Plate Beam Guard	7,423.000 LF	_____	_____
0062	619.1000 Mobilization	1.000 EACH	_____	_____
0064	624.0100 Water	100.000 MGAL	_____	_____
0066	625.0500 Salvaged Topsoil	15,900.000 SY	_____	_____
0068	628.1504 Silt Fence	2,700.000 LF	_____	_____
0070	628.1520 Silt Fence Maintenance	2,700.000 LF	_____	_____
0072	628.1905 Mobilizations Erosion Control	3.000 EACH	_____	_____



Proposal Schedule of Items

Proposal ID: 20210511031 Project(s): 1014-00-77

Federal ID(s): WISC 2021353

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0074	628.1910 Mobilizations Emergency Erosion Control	3.000 EACH	_____.	_____.
0076	628.2004 Erosion Mat Class I Type B	15,900.000 SY	_____.	_____.
0078	628.7504 Temporary Ditch Checks	80.000 LF	_____.	_____.
0080	629.0210 Fertilizer Type B	10.000 CWT	_____.	_____.
0082	630.0120 Seeding Mixture No. 20	453.000 LB	_____.	_____.
0084	630.0200 Seeding Temporary	100.000 LB	_____.	_____.
0086	630.0500 Seed Water	103.000 MGAL	_____.	_____.
0088	633.5200 Markers Culvert End	3.000 EACH	_____.	_____.
0090	642.5201 Field Office Type C	1.000 EACH	_____.	_____.
0092	643.0300 Traffic Control Drums	4,665.000 DAY	_____.	_____.
0094	643.0420 Traffic Control Barricades Type III	252.000 DAY	_____.	_____.
0096	643.0705 Traffic Control Warning Lights Type A	504.000 DAY	_____.	_____.
0098	643.0715 Traffic Control Warning Lights Type C	882.000 DAY	_____.	_____.
0100	643.0800 Traffic Control Arrow Boards	126.000 DAY	_____.	_____.
0102	643.0900 Traffic Control Signs	1,208.000 DAY	_____.	_____.
0104	643.1051 Traffic Control Signs PCMS with Cellular Communications	132.000 DAY	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20210511031 Project(s): 1014-00-77

Federal ID(s): WISC 2021353

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0106	643.1205.S Basic Traffic Queue Warning System	63.000 DAY	_____.	_____.
0108	643.4100.S Traffic Control Interim Lane Closure	63.000 EACH	_____.	_____.
0110	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0112	645.0120 Geotextile Type HR	12.000 SY	_____.	_____.
0114	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	100,742.000 LF	_____.	_____.
0116	646.3555 Marking Line Grooved Contrast Permanent Tape 8-Inch	1,688.000 LF	_____.	_____.
0118	646.9400 Marking Removal Plowable Raised Pavement Markers	410.000 EACH	_____.	_____.
0120	649.0105 Temporary Marking Line Paint 4-Inch	209,049.000 LF	_____.	_____.
0122	650.5500 Construction Staking Curb Gutter and Curb & Gutter	1,036.000 LF	_____.	_____.
0124	650.6000 Construction Staking Pipe Culverts	4.000 EACH	_____.	_____.
0126	650.8000 Construction Staking Resurfacing Reference	43,610.000 LF	_____.	_____.
0128	650.9910 Construction Staking Supplemental Control (project) 01. 1014-00-77	LS	LUMP SUM	_____.
0130	650.9920 Construction Staking Slope Stakes	2,350.000 LF	_____.	_____.
0132	690.0250 Sawing Concrete	13,066.000 LF	_____.	_____.
0134	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	2,100.000 HRS	5.00000	10,500.00



Proposal Schedule of Items

Proposal ID: 20210511031 Project(s): 1014-00-77

Federal ID(s): WISC 2021353

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0136	ASP.1T0G On-the-Job Training Graduate at \$5.00/HR	2,400.000 HRS	5.00000	12,000.00
0138	SPV.0060 Special 01. Verify Landmark Reference Monuments	4.000 EACH	_____	_____
0140	SPV.0090 Special 01. Concrete Curb and Gutter 30-Inch Type A, 9-Inch	866.000 LF	_____	_____
0142	SPV.0090 Special 02. Concrete Joint and Crack Cleaning	4,000.000 LF	_____	_____
0144	SPV.0105 Special 01. Material Transfer Vehicle	LS	LUMP SUM	_____
0146	460.0115.S HMA Pavement Test Strips Volumetrics	1.000 EACH	_____	_____
0148	460.0120.S HMA Pavement Test Strips Density	1.000 EACH	_____	_____
0150	460.2000 Incentive Density HMA Pavement	22,720.000 DOL	1.00000	22,720.00
0152	740.0440 Incentive IRI Ride	24,000.000 DOL	1.00000	24,000.00
0154	204.0165 Removing Guardrail	655.000 LF	_____	_____
0156	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 1014-00-77	LS	LUMP SUM	_____
0158	614.0230 Steel Thrie Beam	105.000 LF	_____	_____
0160	614.0370 Steel Plate Beam Guard Energy Absorbing Terminal	11.000 EACH	_____	_____
0162	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____	_____
0164	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	1.000 EACH	_____	_____



Proposal Schedule of Items

Proposal ID: 20210511031 Project(s): 1014-00-77

Federal ID(s): WISC 2021353

Section: 0001

Total: _____.

Total Bid: _____.

