November 1, 2017

ADDENDUM 1 – JOB 37

TO: All prospective bidders on projects NH-3-001(027)161 (PCN 21667), NH-6-002(122)295 (PCN 21341) and NH-6-002(123)295 (PCN 21346), Job No. 37 scheduled for the November 17, 2017 bid opening.

The following plan and request for proposal revisions shall be made:

Plan Revisions for SNH-002(122)295

Remove and replace sheets 6-2, 8-2, 10-1 and 100-1 with revised sheets dated 10/30/2017 and 10/31/2017.

Section 6 Sheet 2:

Added Note 704-511.

Section 8 Sheet 2:

Decrease bid item 704 1500 Obliteration of Pavement Marking from 21,759 SF to 4,963 SF.

Increase bid item 762 0430 Short Term 4 IN Line – Type NR from 280 to 25,468 LF. Removed bid item 762 1104 Pavement Marking Painted 4 IN Line 25,188 LF.

Section 10 Sheet 1:

Changed the pavement marking tables.

Section 100 Sheet 1:

Change the quantity of obliteration of pavement marking.

Plan Revisions for NH-6-002(123)295:

Remove and replace sheets 2-1, 6-1 and 8-1 with revised sheets dated 10/10/2017. Add Standard Drawing D-760-2 Rumble Strips Divided Highways.

Section 2 Sheet 1:

Added Standard Drawing D-760-2.

Section 6 Sheet 1:

Change note 570-P02.

Section 8 Sheet 1:

Increased bid item 760 0001 Rumble Strips – Concrete Shoulder from 9.500 to 9.638 Mile.

608 East Boulevard Avenue • Bismarck, North Dakota 58505-0700 Information: 1-855-NDROADS (1-855-637-6237) • FAX: (701) 328-0310 • TTY: 711 • dot.nd.gov Addendum 1 Job 37, November 17, 2017 Bid Opening Page **2** of **2**

Request for Proposal Revisions:

Remove and replace pages 8 and 9 of 11 with the enclosed pages revised 10/31/2017.

The following changes were made to the Bid Items:

Spec	Code	Description	Description of Change
No.	No.		
704	1500	OBLITERATION OF PAVEMENT MARKING	Decreased from 21,759 to 4,963 SF
760	0001	RUMBLE STRIPS – CONCRETE SHOULDER	Increased from 9.500 to 9.638 MILE
762	0430	SHORT TERM 4IN LINE-TYPE NR	Increased from 7,399 to 32,587 LF
762	1104	PVMT MK PAINTED 4IN LINE	Decreased from 37,509 to 12,321 LF

This addendum is to be incorporated into the bidder's proposal for this project. Project Bids files should be updated by downloading the addendum file from the Bid Express online bidding exchange at http://www.bidx.com/ and load it into the AASHTOWare Project Bids program.

PHILLIP MURDOFF - CONSTRUCTION SERVICES ENGINEER

80:jwj Enclosure North Dakota Department of Transportation

BID OPENING: November 17, 2017

Job 037

Page 8 of 11 Rev: 10/31/2017

BID ITEMS

Projects: NH-3-001(027)161 (PCN-21667), NH-6-002(122)295 (PCN-21341), and NH-6-002(123)295 (PCN-21346)

Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.

		total	. Do not carry unit prices further than three (3) de	ecimal	places.			_	
Item	em Spec Code				Approx.	Unit Price	!	Amount	
No.	No.	No.	Description	Unit	Quantity	\$\$\$\$\$	000	\$\$\$\$\$	00
049	704	1500	OBLITERATION OF PAVEMENT MARKING	SF	4,963.				
050	704	3510	PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	80.				
051	706	0400	FIELD OFFICE	EA	1.				
052	706	0500	AGGREGATE LABORATORY	EA	1.				
053	706	0550	BITUMINOUS LABORATORY	EA	1.				
054	706	0600	CONTRACTOR'S LABORATORY	EA	1.				
055	709	0151	GEOSYNTHETIC MATERIAL TYPE R1	SY	3,278.				
056	714	7036	PIPE PVC 18IN	LF	704.				
057	754	0112	FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	14.				
058	754	0206	STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	215.				
059	754	0592	RESET SIGN PANEL	EA	4.				
060	760	0001	RUMBLE STRIPS - CONCRETE SHOULDER	MILE	9.638				
061	760	0005	RUMBLE STRIPS - ASPHALT SHOULDER	MILE	1.880				
062	760	0007	RUMBLE STRIPS - ASPHALT CENTERLINE	MILE	.940				
063	760	0010	RUMBLE STRIPS - INTERSECTION	SET	1.				
064	762	0103	PVMT MK PAINTED-MESSAGE	SF	52.				

BID OPENING: November 17, 2017

Job 037

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BID ITEMS

Projects: NH-3-001(027)161 (PCN-21667), NH-6-002(122)295 (PCN-21341), and NH-6-002(123)295 (PCN-21346)

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total. Do not carry unit prices further than three (3) decimal places.

	Bidder must type or neatly print unit prices in numerals, make extensions for each item, and total. Do not carry unit prices further than three (3) decimal places.									
Item	Spec	Code			Approx.	Unit Price		Amount	Amount	
No.	No.	No.	Description	Unit	Quantity	\$\$\$\$\$	000	\$\$\$\$\$	00	
065	762	0110	EPOXY PVMT MK 4IN LINE-GROOVED	LF	13,213.					
066	762	0112	EPOXY PVMT MK MESSAGE	SF	96.					
067	762	0113	EPOXY PVMT MK 4IN LINE	LF	154,069.					
068	762	0115	EPOXY PVMT MK 8IN LINE	LF	2,270.					
069	762	0117	EPOXY PVMT MK 24IN LINE	LF	65.					
070	762	0200	RAISED PAVEMENT MARKERS	EA	21,309.					
071	762	0430	SHORT TERM 4IN LINE-TYPE NR	LF	32,587.					
072	762	1104	PVMT MK PAINTED 4IN LINE	LF	12,321.					
073	766	0100	MAILBOX-ALL TYPES	EA	3.					
074	772	2110	FLASHING BEACON-POST MOUNTED	EA	2.					
075	772	2935	REVISE FLASHING BEACON SYSTEM	EA	1.					
			TOTAL SUM BID							

	Revised 10/30/2017	STATE	PROJECT NO.	SECTION NO.	SHEET NO.
<u>NOTES</u>		ND	NH-6-002(122)295	6	2

- 550-P01 DOWEL BARS: Include the cost of cleaning, drilling, epoxy, and dowel bars where the new concrete pavement abuts the existing concrete in the price bid for "Concrete Placement Doweled".
- 550-P02 CONCRETE PAVEMENT: Place the concrete on a clean surface, free of loose or adhering foreign material. Air blast the milled surface no more than 30 minutes before placing concrete. Loaded trucks are allowed to run on the milled surface and back up to the concrete paving operation as long as loaded trucks aren't tracking foreign material onto the milled surface.
- 550-P03 CONCRETE PAVEMENT: The Department will waive the requirement to place the reinforcing steel, tie bars and dowel bar assemblies a minimum of 2,000 feet ahead of the paving operation as stated in Sections 550.04 E.1 and 550.04 G.2 and allow the use of the roadway as a haul road at the Contractors request, provided the following conditions are met:
 - Repair all damaged areas
 - Construct the finished surface to the specific surface tolerance prior to the placement of reinforcing steel, tie bars and dowel bar assemblies.
 - Place the reinforcing steel and tie bars on approved supports securely, properly and accurately in advance of the paving operation.
- 550-P04 LEAVE OUT: Leave out consists of paving half an intersection at a side street and allowing traffic to cross US 2 on the unpaved portion. The portion left out will not be paved until the concrete overlay has attained a flexural strength of 450 psi or a compressive strength of 3,000 psi.

Leave out location are:

- Sta. 15611+75 Airport Entrance
- Sta. 15892+18 42nd St NE
- Sta. 15981+30 Private Drive Access
- Sta. 16041+52 113th Ave NE
- Sta. 16081+90 Private Drive Access

Leave outs may be added or eliminated at the request of the contractor and at the discretion of the engineer. Include the cost for this work in the price bid for "Concrete Placement – Doweled".

- 550-P05 CONCRETE PAVEMENT: Included in the quantity for "CONCRETE OVERLAY" is an additional 5% for irregularities.
- 704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.
- 704-200 PRECAST CONCRETE MEDIAN BARRIERS STATE FURNISHED: Obtain 36 barriers from Devils Lake District. Return barriers to Devils Lake District. Obtain 44 barriers from Grand Forks District. Return barriers to Grand Forks District.

Some 4 inch x 4 inch boards are available at the return location. Provide any additional 4 inch x 4 inch boards necessary to stack barriers. The boards will become property of the Department. Include the cost for boards in the contract unit price for "Precast Concrete Median Barrier - State Furnished".

704-301 SEQUENCING ARROW PANEL – TYPE C – CROSSOVER: Provide solar powered arrow panels that meet the requirements of the MUTCD and ITE and that are capable of operating for 20 days without a solar charge.

Include all costs for materials, equipment, labor, and incidentals in the contract unit price for "Sequencing Arrow Panel – Type C – Crossover".

- 704-511 OBLITERATION OF PAVEMENT MARKINGS: Mask pavement markings designated for obliteration as specified in Section 704.04 N.1, "Masking".
- 704-P01 TRAFFIC CONTROL FOR BITUMINOUS PAVEMENT: Provide traffic control consisting of median crossings and road closure.

Maintain a minimum 12 feet wide lane for traffic at all times.

Complete necessary pavement marking and rumble strip installation operations prior to removing traffic control crossovers.

- Phase 1: Construct median cross overs. A total of 4 lane closures have been provided to allow work at two separate locations. Remove existing median approach.
- Phase 2: Perform work on mainline concrete overlay and cross road overlay.
- Phase 3: Removal of median cross overs. A total of 4 lane closures have been provided to allow work at two separate locations.

Traffic control device quantities are based on the phasing described above and the following list. Provide additional devices at no cost to the Department.

Standard D-704-15 layout A – For ND 1 intersection paving Standard D-704-22 layouts K and L – For trucks hauling

Standard D-704-22 layouts K and L – For trucks flauling Standard D-704-26 layouts CC, EE, and GG – For paving

Standard D-704-34 – For single lane closure

Standard D-704-38 – For east median crossover

Standard D-704-39 – For west median crossover

Place flaggers and traffic control devices as shown on Standard D-704-15, layout A at the intersection of US 2 and ND 1 when paving in the intersection. This document was originally issued and sealed by Sara A. Cahlin, Registration Number PE-8397, on 10/30/17 and the original document is stored at the North Dakota Department of Transportation.

ESTIMATE OF QUANTITIES

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-6-002(122)295	8	2

REVISED 10/31/2017

SPEC CODE ITEM DESCRIPTION	UNIT	MAINLINE		OTAL
704 1080 STACKABLE VERTICAL PANELS	EA	11		11
704 1087 SEQUENCING ARROW PANEL-TYPE C	EA	4		4
704 1088 SEQUENCING ARROW PANEL-TYPE C-CROSSOVER	EA	2		2
704 1500 OBLITERATION OF PAVEMENT MARKING	SF	4,963	4,	,963
704 3510 PRECAST CONCRETE MED BARRIER-STATE FURNISHED	EA	80		80
706 0400 FIELD OFFICE	EA	1		1
706 0500 AGGREGATE LABORATORY	EA	1		1
709 0151 GEOSYNTHETIC MATERIAL TYPE R1	SY	3,278	3,	,278
714 7036 PIPE PVC 18IN	LF	704		704
754 0112 FLAT SHEET FOR SIGNS-TYPE IV REFL SHEETING	SF	14		14
754 0206 STEEL GALV POSTS-TELESCOPING PERFORATED TUBE	LF	215		215
754 0592 RESET SIGN PANEL	EA	4		4
760 0001 RUMBLE STRIPS - CONCRETE SHOULDER	MILE	9.5		9.5
762 0103 PVMT MK PAINTED-MESSAGE	SF	52		52
762 0110 EPOXY PVMT MK 4IN LINE-GROOVED	LF	6,577	6,	,577
762 0113 EPOXY PVMT MK 4IN LINE	LF	100,983	100,	,983
762 0115 EPOXY PVMT MK 8IN LINE	LF	1,565	1,	,565
762 0117 EPOXY PVMT MK 24IN LINE	LF	65		65
762 0200 RAISED PAVEMENT MARKERS	EA	21,309	21,	,309
762 0430 SHORT TERM 4IN LINE-TYPE NR	LF	25,468	25,	,468
766 0100 MAILBOX-ALL TYPES	EA	3		3
772 2110 FLASHING BEACON-POST MOUNTED	EA	2		2
772 2935 REVISE FLASHING BEACON SYSTEM	EA	1		1

BASIS OF ESTIMATE

SECTION NO. SHEET NO. Revised 10/31/17 STATE PROJECT NO. NH-6-002(122)295 ND 10 1

		West Xover				25.83 Stations Lakota East 15597+20 to 15623+03		190.46		10.34 Stations gan West to 16094+99		East Xover	
		Xov	er er	Interse	ection	Tangent	& Curve	Tan	gent	Cı	ırve	Χον	/er
Material	Unit	Width (ft)	Quantity	Width (ft)	Quantity	Width (ft)	Quant/Sta	Width (ft)	Quant/Sta	Width (ft)	Quant/Sta	Width (ft)	Quantity
Aggregate Base CL 5 @ 1.5 Ton/CY +25%	Ton	21	494.1	, ,	_	, ,				, ,		21	679.0
Milling Pavement Surface	SY				1412.0	37.4	415.6	40.3	447.8	40.3	447.8		
Prime Coat @ 0.25 Gal/SY	Gal	21	292.0							8.1	22.5	21	350.2
Tack Coat @ 0.05 Gal/SY (1st lift)	Gal	21	58.4							8.1	4.5	21	70.0
Tack Coat @ 0.05 Gal/SY (2nd lift)	Gal	20.5	47.0							7.0	3.9	20.5	66.9
Relaying Milled Material @ 1.875 Ton/CY	Ton			varies	35.0	2 & 6	38.4	3 & 6	39.7	3 & 6	25.3		
7" PCC pavement	SY			varies	1695	27	300	27	300.0	27	300		
7" PCC Placement +5% for profile	CY			varies	346		61.3		61.3		61.3		
Superpave FAA 45 @ 2Ton/CY	Ton	20	200.7							6	13.0	20	297.1
PG 58-28 Asphalt Cement @ 6.0%	Ton		12.0								0.78		17.8
Imported Topsoil	CY			varies	13.9								

Permanent Paver	nent Marking (EB Roadway)				
Location - Type	Basis	Quantity			
Centerline – Epoxy Pvmt MK 4IN Line - Grooved	Centerline Skips 1,320 LF/mile	6,297 LF			
Edge Lines – Epoxy Pvmt MK 4IN Line	10,560 LF/mile	50,376 LF			
Channel Lines – Epoxy Pvmt Mk 8IN Line	Lakota Left & Right Turn Lanes	925 LF			
Stop Lines – Epoxy Pvmt Mk 24IN Line	ND 1 Intersection	65 LF			
Permanent Pavement Marking (WB)					
Edge Line – Epoxy Pvmt Mk 4IN Line	5,280 LF/mile	50,387 LF			
Hwy	1 Intersection				
Centerline – Epoxy Pvmt MK 4IN Line - Grooved	Dbl Barrier Stripe	280 LF			
Edge Lines – Epoxy Pvmt MK 4IN Line		220 LF			
Epoxy Pvmt MK 8IN Line	10 FT space Skewed at 45 degrees	640 LF			
Traffic Control (WB Roadway)					
Obliteration of Pavement Marking	Centerline Skips	4,199 SF			
Obliteration of Pavement Marking	Standards D-704-38 & 39 (WB & EB)	670 SF			

Short Term 4 IN Line-Type NR					
Location	Basis	Quantity			
Centerline – Milled Surface at Jct ND	Barrier Stripe	280 LF			
Edge Line – WB Roadway	5,280 LF/mile	25,188 LF			
Obliteration of Pavement Marking	Barrier Stripe	94 SF			

Rumble Strips

Concrete shoulder 9.5 miles

Mailboxes

<u>l ype</u>	<u>vvork</u>
Single	Replace
Single	Replace
Single	Replace
	Single Single

Existing Bituminous Cores

LXISTING	Bitalillious Cort
<u>RP</u>	Core Depth (in
295.62	14.25
295.80	14.75
301.00	16.25
301.25	8.75
301.50	11.50
301.75	9.25
302.00	14.50
302.14	16.00
302.25	10.50
302.50	14.75
302.75	15.50
303.00	12.00
303.25	15.50
303.50	11.50
303.75	14.25
304.00	10.50
304.25	11.25
304.50	14.00
304.75	17.50

Water 25 MGal/Mile for Dust Palliative 15 Gal/SY for Blended Base 20 Gal/Ton for Aggregates 10 Gal/CY for Embankment

This document was originally issued and sealed by Sarah BaeHurst, Registration Number PE-6239, on 10/31/17 and the original document is stored at the North Dakota Department of Transportation.

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
D3-36	36"x6"	STREET NAME SIGN (Sign and installation only)		6	
G20-1-60	60"x24"	ROAD WORK NEXT MILES		34	
G20-1b-60	60"x24"	WORK IN PROGRESS/ NO WORK IN PROGRESS (Sign and installation only)	_	26	4.
G20-2-48 G20-4-36	48"x24" 36"x18"	END ROAD WORK PILOT CAR FOLLOW ME (Mounted to back of pilot car)	8	19 18	15
G20-4-30 G20-10-108		CONTRACTOR SIGN	2	64	12
G20-50a-72	72"x36"	ROAD WORK NEXT MILES RT & LT ARROWS		37	
G20-52a-72	72"x24"	ROAD WORK NEXT MILES RT or LT ARROW		30	
G20-55-96	96"x48"	SPEED LIMIT ENFORCED - MINIMUM FEE \$80 WHEN WORKERS PRESENT	8	59	47
M1-1-36 M1-4-24	36"x36" 24"x24"	INTERSTATE ROUTE MARKER (Post and installation only) U.S. ROUTE MARKER (Post and installation only)		10 10	—
M1-4-24 M1-5-24	24 x24 24"x24"	STATE ROUTE MARKER (Post and installation only)		10	
M3-1-24	24"x12"	NORTH (Mounted on route marker post)		7	i
M3-2-24	24"x12"	EAST (Mounted on route marker post)		7	(
M3-3-24	24"x12"	SOUTH (Mounted on route marker post)		7	
M3-4-24	24"x12"	WEST (Mounted on route marker post)		7	—
M4-8-24	24"x12"	DETOUR (Mounted on route marker post)		7	<u> </u>
M4-9-30 M4-10-48	30"x24" 48"x18"	DETOUR ARROW RIGHT or LEFT/AHD AND RT or LT DETOUR ARROW RIGHT or LEFT	+	15 23	
M5-1-21	21"x15"	ARROW AND RT or LT(Mounted on route marker post)	_	7	
M5-2-21	21"x15"	ARROW AHD UP & RT or LT (Mounted on route marker post)		7	l
M6-1-21	21"x15"	ARROW RT or LT (Mounted on route marker post)		7	
M6-2-21	21"x15"	ARROW UP & RT or LT (Mounted on route marker post)		7	
M6-3-21	21"x15"	ARROW AHD (Mounted on route marker post)		7	
R1-1-48	48"x48"	STOP	13	32	4
R1-1a-18	18"x18"	STOP and SLOW PADDLE Back to Back	4 25	5	10:
R1-2-60 R2-1-48	60"x60" 48"x60"	YIELD SPEED LIMIT	35 28	29 39	10 ¹
R2-1-40 R2-1a-24	24"x18"	MINIMUM FEE \$80 (Mounted on Speed Limit post)	8	10	10:
R3-7-48	48"x48"	LEFT or RIGHT LANE MUST TURN LEFT or RIGHT		35	
R4-1-48	48"x60"	DO NOT PASS	24	39	9:
R4-7-48	48"x60"	KEEP RIGHT SYMBOL	2	39	7
R5-1-48	48"x48"	DO NOT ENTER		35	
R6-1-36	36"x12"	ONE WAY RIGHT or LEFT		13	—
R7-1-12	12"x18"	NO PARKING	_	11 16	
R10-6-24 R11-2-48	24"x36" 48"x30"	STOP HERE ON RED ROAD CLOSED	37	28	103
R11-2-46	48"x30"	STREET CLOSED	37	28	100
R11-3a-60	60"x30"	ROAD CLOSED MILES AHEAD LOCAL TRAFFIC ONLY		31	
R11-3c-60	60"x30"	STREET CLOSED MILES AHEAD LOCAL TRAFFIC ONLY		31	ĺ
R11-4a-60	60"x30"	STREET CLOSED TO THRU TRAFFIC		31	ĺ
W1-3-48	48"x48"	RIGHT or LEFT SHARP REVERSE CURVE ARROW		35	
W1-4-48	48"x48"	RIGHT or LEFT REVERSE CURVE ARROW	2	35	7
W1-4b-48 W1-6-48	48"x48" 48"x24"	DOUBLE RIGHT OF LEFT REVERSE CURVE ARROW LARGE ARROW	2	35 26	
W3-1-48	48"x48"	STOP AHEAD SYMBOL		35	
W3-3-48	48"x48"	SIGNAL AHEAD SYMBOL	+	35	
W3-4-48	48"x48"	BE PREPARED TO STOP	2	35	
W3-5-48	48"x48"	SPEED REDUCTION AHEAD	10	35	35
W4-2-48	48"x48"	RIGHT or LEFT LANE TRANSITION SYMBOL	8	35	28
W5-1-48	48"x48"	ROAD NARROWS		35	—
W5-8-48	+	THRU TRAFFIC RIGHT LANE	_	35	—
W5-9-48 W6-3-48	48"x48" 48"x48"	ROAD WORK TRAFFIC ONLY DOWN & LT or RT ARROW TWO WAY TRAFFIC SYMBOL	22	35	7
W8-1-48	48"x48"	BUMP	22	35 35	7
W8-3-48	48"x48"	PAVEMENT ENDS		35	
W8-7-48	48"x48"	LOOSE GRAVEL		35	
W8-9a-48	48"x48"	SHOULDER DROP-OFF		35	
W8-11-48	48"x48"	UNEVEN LANES		35	
W8-12-48	48"x48"	NO CENTER STRIPE		35	
W8-53-48 W8-54-48	48"x48" 48"x48"	TRUCKS ENTERING HIGHWAY TRUCKS ENTERING AHEAD or FT.	2	35 35	;
W8-55-48	48 x48	TRUCKS CROSSING AHEAD or FT.	2	35	
N8-56-48	48"x48"	TRUCKS EXITING HIGHWAY	1	35	
W9-3a-48	48"x48"	CENTER LANE CLOSED SYMBOL	<u> </u>	35	
W12-2-48	48"x48"	LOW CLEARANCE SYMBOL		35	
W13-1-24	24"x24"	MPH ADVISORY SPEED PLATE (Mounted on warning sign post)	2	11	
W13-4-48	48"x60"	RAMP ARROW		39	-
W14-3-48	48"x36"	NO PASSING ZONE	44	23	-
W20-1-48 W20-2-48	48"x48" 48"x48"	ROAD WORK AHEAD or _FT or _ MILE DETOUR AHEAD or _FT	14	35 35	4:
W20-2-46 W20-3-48	46 x46 48"x48"	ROAD or STREET CLOSED AHEAD or FT.	+	35	
W20-3-48	48"x48"	ONE LANE ROAD AHEAD OF FT.		35	
W20-5-48	48"x48"	RIGHT or LEFT LANE CLOSED AHEAD or FT.	16	35	5
W20-7a-48	48"x48"	FLAGGING SYMBOL	6	35	2
W20-7k-24	24"x18"	FEET (Mounted on warning sign post)		10	
W20-8-48	48"x48"	STREET CLOSED		35	
W20-51-48	48"x48"	EQUIPMENT WORKING		35	
W20-52-54 W21-1a-48	54"x12"	NEXTMILES (Mounted on warning sign post)	22	12	2
nr:12 10 10	48"x48"	WORKERS SYMBOL	1	35	i
W21-1a-46 W21-2-48	48"x48"	FRESH OIL		35	-

Revised 10/30/2017 Revised 10/30/2017

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
ND	NH-6-002(122)295	100	1

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	UNITS SUB TOTAL
W21-5-48	48"x48"	SHOULDER WORK		35	
W21-5a-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED		35	
W21-5b-48	48"x48"	RIGHT or LEFT SHOULDER CLOSED AHEAD or FT.		35	
W21-6a-48	48"x48"	SURVEY CREW AHEAD		35	
W21-50-48	48"x48"	BRIDGE PAINTING AHEAD or FT.		35	
W21-51-48	48"x48"	MATERIAL ON ROADWAY		35	
W22-8-48	48"x48"	FRESH OIL LOOSE ROCK		35	
	24"x24"	TAKE TURNS (6" D letters) (Mounted on stop sign post)		11	

SPECIAL SIG	NS		

SPEC & CODE 704-1000 TRAFFIC CONTROL SIGNS TOTAL UNITS 8773

If additional signs are required, units will be calculated using the formula from Section III-19.06 of the Design Manual.
http://www.dot.nd.gov/

SPEC & CODE	DESCRIPTION	UNIT	QUANTITY
704-0100	FLAGGING	MHR	800
704-1041	ATTENUATION DEVICE-TYPE B-55	EACH	2
704-1043	ATTENUATION DEVICE-TYPE B-65	EACH	
704-1044	ATTENUATION DEVICE-TYPE B-70	EACH	
704-1050	TYPE I BARRICADES	EACH	
704-1051	TYPE II BARRICADES	EACH	
704-1052	TYPE III BARRICADES	EACH	119
704-1060	DELINEATOR DRUMS	EACH	97
704-1065	TRAFFIC CONES	EACH	
704-1067	TUBULAR MARKERS	EACH	107
704-1070	DELINEATOR	EACH	
704-1072	FLEXIBLE DELINEATORS	EACH	619
704-1080	STACKABLE VERTICAL PANELS	EACH	11
704-1081	VERTICAL PANELS - BACK TO BACK	EACH	
704-1085	SEQUENCING ARROW PANEL - TYPE A	EACH	
704-1086	SEQUENCING ARROW PANEL - TYPE B	EACH	
704-1087	SEQUENCING ARROW PANEL - TYPE C	EACH	4
704-1088	SEQUENCING ARROW PANEL - TYPE C - CROSSOVER	EACH	2
704-1095	TYPE B FLASHERS	EACH	
704-1500	OBLITERATION OF PVMT MK	SF	4963
704-3501	PORTABLE PRECAST CONCRETE MED BARRIER	LF	
704-3510	PRECAST CONCRETE MED BARRIER - STATE FURNISHED	EACH	80
762-0200	RAISED PAVEMENT MARKERS	EACH	21309
762-0420	SHORT TERM 4IN LINE - TYPE R	LF	
762-0430	SHORT TERM 4IN LINE - TYPE NR	LF	
772-2110	FLASHING BEACON - POST MOUNTED	EACH	2

This document was originally issued and sealed by Sara A. Cahlin, Registration Number PE-8397, on 10/30/17 and the original document is stored at the North Dakota Department of Transportation.

Traffic Control Devices List

Milling and PCC Overlay

ND 1 E 0.5 Mi & 5.5 Mi E ND 1 to ND 35

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PLAN SECTIONS

LIST OF STANDARD DRAWINGS

Section	Page(s)	Description	Number	Description
1	1	Title Sheet	D-101-1, 2,3	NDDOT Abbreviations
2	1	Table of Contents	D-101-10	NDDOT Utility Company and Organization Abbreviations
4	1	Scope of Work	D-101-20, 21	Line Styles
6	1	Notes	D-101-30, 31,32	Symbols
8	1	Quantities	D-550-2	Longitudinal Joint Details
10	1	Basis of Estimate	D-550-3	Transverse Contraction Joint Details
11	1 - 12	Concrete Pavement Repair Tables	D-550-4	Transverse Expansion Joint Detail
20	1 - 8	General Details	D-704-10	Construction Sign Details - Regulatory Signs
30	1 - 2	Typical Sections	D-704-13	Barricade and Channelizing Device Details
100	1	Work Zone Traffic Control	D-704-14	Construction Sign Punching and Mounting Details
			D-704-50	Portable Sign Support Assembly
			D-704-63	One Road Closure Four-Lane Divided Highway - for Access to Two-Way Two-Lane Roadway
			D-760-2	Rumble Strips Divided Highways (Non-Interstate)
			D-762-1	Pavement Marking Message Details

Pavement Marking

D-762-4

10/10/2017 10:48:45 AM tfriezen

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- 105-P01 PAVEMENT SWEEPING: Sweep paved areas that were used by construction traffic before opening these areas to public traffic
- 411-P01 RELAYING MILLED MATERIAL: This work consists of placing, shaping, and compacting material on the roadway shoulders.

Use one of the following materials:

- Asphalt millings from tied projects;
- Class 4 aggregate meeting the requirements of Section 816;
- Class 5 aggregate meeting the requirements of Section 816;
- Salvaged Base Course meeting the requirements of Section 817.

Use the same type of material throughout the project.

If asphalt millings are used, the following additional requirements apply:

- Provide material with a maximum particle size of 1.5 inches;
- Perform final shaping and compaction of shoulder material after grinding operations have been

Such payment is full compensation for furnishing all materials, equipment, labor, and incidentals to complete the work as specified.

- 570-P01 CONCRETE PAVEMENT REPAIR: An additional 20% has been added to the quantities for "Doweled Contraction Joint Assembly." "8IN Conc Pvmt Repair - Full Depth - Doweled," "Spall Repair - Partial Depth," Random PCC Crack Cleaning & Sealing," and "Epoxy coated Deformed Bars" to be used as directed by the Engineer.
- 570-P02 CONCRETE PAVEMENT REPAIR & PCC PAVEMENT GRINDING: An ATR site is located at RP 296.65. Disconnect the loop and sensor splices in the pull box near the roadway. Ensure the sensor array is disconnected prior to grinding or CPR work in the area.
- 570-P03 Phase repairs adjacent to median crossings to maintain access at county roads and private drives.
- 570-P04 TRANSVERSE JOINT CLEANING AND SEALING: Provide joint material that meets NDDOT Standard Specification 826.02 B.
- 704-100 TRAFFIC CONTROL SUPERVISOR: Provide a Traffic Control Supervisor.
- 704-P01 TRAFFIC CONTROL FOR CONCRETE PAVEMENT REPAIR: Traffic control consisting of median crossings and a road closure is provided for under tied project NH-6-002(122)295. There are 7 median cross overs for county roads or private drives that will be signed according to D-704-63.
- 762-050 PAVEMENT MARKING: If the Engineer and Contractor agree, plan quantity will be used as the measurement for payment for pavement marking items.

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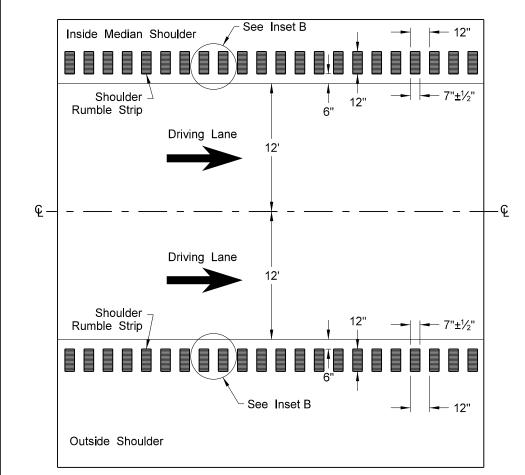
ESTIMATE OF QUANTITIES

STATE	PROJECT NO.	SECTION NO.	SHEET NO.
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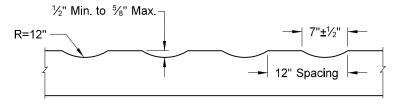
REVISED 10/10/2017

SPEC CODE ITEM DESCRIPTION	UNIT	MAINLINE	TOTAL
103 0100 CONTRACT BOND	L SUM	0.12	0.12
411 0132 RELAYING MILLED MATERIAL	TON	1,627	1,627
570 0210 PCC PAVEMENT GRINDING	SY	41,495	41,495
570 0240 DOWELED CONTRACTION JOINT ASSEMBLY	LF	342	342
570 0713 8IN CONCRETE PAVEMENT REPAIR-FULL DEPTH-DOWELED	SY	1,367	1,367
570 0963 TRANSVERSE PCC JOINT CLEANING & SEALING	LF	54,050	54,050
570 0965 LONGITUDINAL PCC JOINT CLEANING & SEALING	LF	26,611	26,611
570 0966 RANDOM PCC CRACK CLEANING & SEALING	LF	2,975	2,975
570 1512 SPALL REPAIR-PARTIAL DEPTH	SF	2,090	2,090
702 0100 MOBILIZATION	L SUM	0.12	0.12
704 0100 FLAGGING	MHR	240	240
704 1000 TRAFFIC CONTROL SIGNS	UNIT	1,310	1,310
704 1050 TYPE I BARRICADE	EA	30	30
704 1052 TYPE III BARRICADE	EA	50	50
760 0001 RUMBLE STRIPS - CONCRETE SHOULDER	MILE	0.138	0.138
762 0110 EPOXY PVMT MK 4IN LINE-GROOVED	LF	6,636	6,636
762 0112 EPOXY PVMT MK MESSAGE	SF	96	96
762 0113 EPOXY PVMT MK 4IN LINE	LF	53,086	53,086
762 0115 EPOXY PVMT MK 8IN LINE	LF	705	705

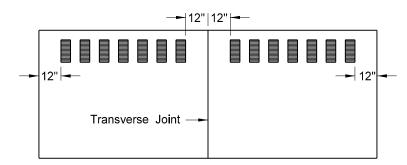
RUMBLE STRIPS DIVIDED HIGHWAYS (NON-INTERSTATE)



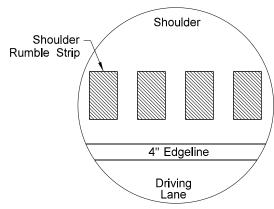
Divided Highways (Non-Interstate)



Profile of Rumble Strips - Bituminous and PCC Pavements



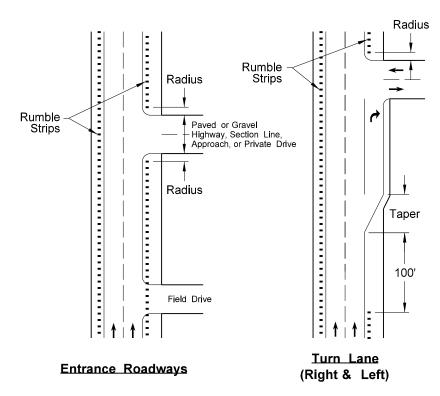
Discontinue rumble strip approx. 12" on both sides of PCC transverse joint

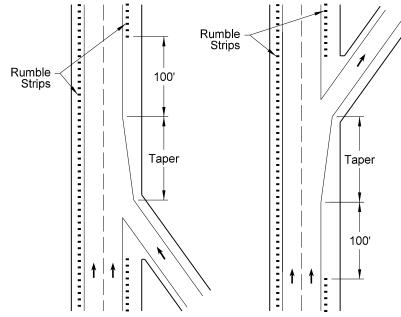


Inset B - Shoulder Rumble Strip

NOTES:

1) Discontinue rumble strips through the entire length of turn lanes & ramps, 100' before turn lane tapers, 100' before or after ramp tapers, and at the radius of a paved or gravel highway, section line, approach, or private drive as shown below.





Entrance Ramp

F	vit	Ra	mn

	NORTH DAKOTA
DEPARTM	ENT OF TRANSPORTATION
	12-29-09
	REVISIONS
DATE	CHANGE
2-25-10	Note 4 was added.
9-8-11	Revised Notes and D-760-2.

This document was originally issued and sealed by Roger Weigel, Registration Number PE- 2930, on 9/8/11 and the original document is stored at the North Dakota Department of Transportation