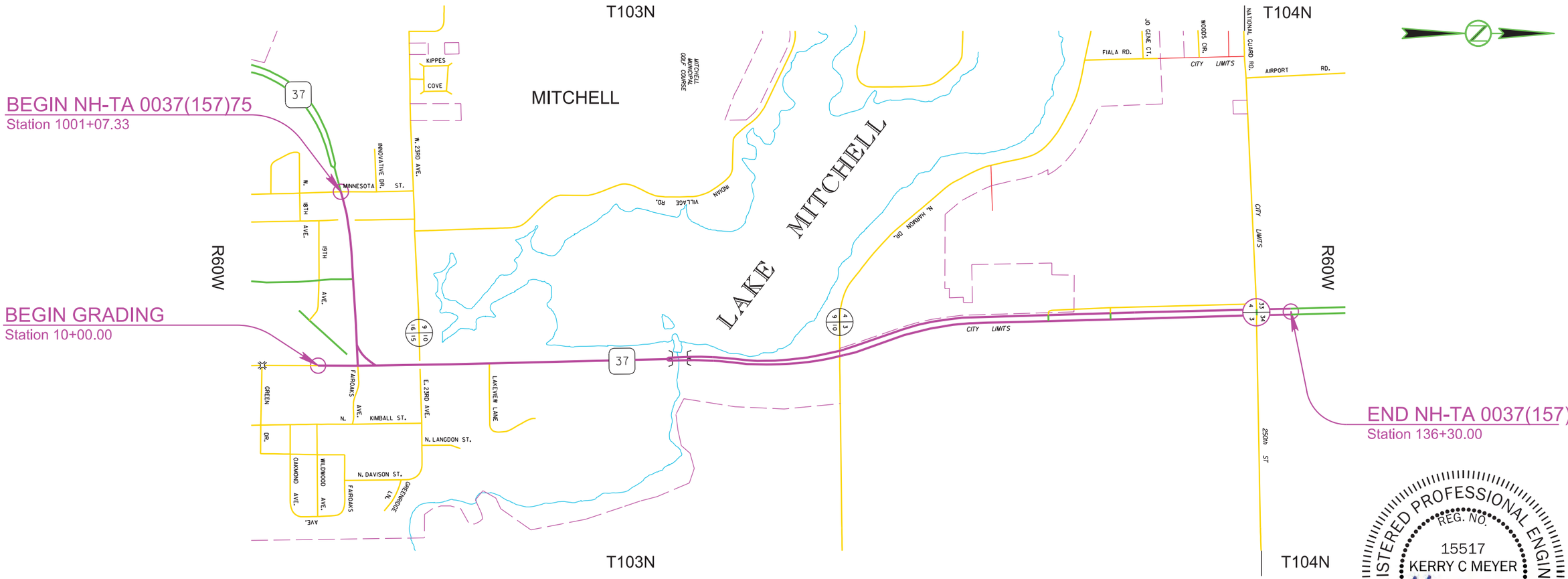
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SECTION B: GRADING PLANS

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SECTION B ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
004E0030	Maintenance of Traffic Diversion(s)	Lump Sum	LS
004E0050	Remove Traffic Diversion(s)	Lump Sum	LS
009E0010	Mobilization	Lump Sum	LS
009E3220	Reestablish Right-of-Way and Property Corner	129	Each
009E3225	Reestablish Public Land Survey System Corner	4	Each
009E3230	Grade Staking	15.158	Mile
009E3250	Miscellaneous Staking	5.213	Mile
009E3280	Slope Staking	5.213	Mile
009E3290	Structure Staking	3	Each
009E3301	Engineer Directed Surveying/Staking	40.0	Hour
009E4300	Construction Schedule, Category III	Lump Sum	LS
100E0020	Clear and Grub Tree	8	Each
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and/or Gutter	1,508	Ft
110E0400	Remove Drop Inlet	23	Each
110E0600	Remove Fence	6,732	Ft
110E0730	Remove Beam Guardrail	1,240.4	Ft
110E1010	Remove Asphalt Concrete Pavement	8,414.8	SqYd
110E1100	Remove Concrete Pavement	83,919.4	SqYd
110E1120	Remove Concrete Median Pavement	40.4	SqYd
110E1130	Remove Concrete Driveway Pavement	600.6	SqYd
110E1140	Remove Concrete Sidewalk	929.6	SqYd
110E7000	Remove Crossover Closure for Reset	208	Ft
110E7040	Remove Gate for Reset	4	Each
120E0010	Unclassified Excavation	143,008	CuYd
120E0500	Option Borrow Excavation	42,607	CuYd
120E0600	Contractor Furnished Borrow Excavation	4,854	CuYd
120E1000	Muck Excavation	2,310	CuYd
120E2000	Undercutting	55,786	CuYd
120E6100	Water for Embankment	495.0	MGal
240E0010	Obliterate Old Road	15	Sta
250E0020	Incidental Work, Grading	Lump Sum	LS
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	49,575.7	Ton
380E3520	6" PCC Approach Pavement	144.4	SqYd
380E3540	8" PCC Approach Pavement	409.6	SqYd
380E4060	8.5" PCC Fillet Section	84.4	SqYd
421E0100	Pipe Culvert Undercut	122	CuYd
450E0122	18" RCP Class 2, Furnish	5,188	Ft
450E0130	18" RCP, Install	5,188	Ft
450E0142	24" RCP Class 2, Furnish	322	Ft
450E0150	24" RCP, Install	322	Ft
450E0182	36" RCP Class 2, Furnish	264	Ft

SECTION B ESTIMATE OF QUANTITIES (CONTINUED)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E0190	36" RCP, Install	264	Ft
450E0212	54" RCP Class 2, Furnish	256	Ft
450E0220	54" RCP, Install	256	Ft
450E0700	RCP Tee, Furnish	2	Each
450E0701	RCP Tee, Install	2	Each
450E2040	54" RCP Flared End, Furnish	4	Each
450E2041	54" RCP Flared End, Install	4	Each
450E2200	24" RCP Sloped End, Furnish	5	Each
450E2201	24" RCP Sloped End, Install	5	Each
450E2304	18" RCP Safety End, Furnish	34	Each
450E2307	18" RCP Safety End, Install	34	Each
450E3002	18" RCP Arch Class 2, Furnish	36	Ft
450E3010	18" RCP Arch, Install	36	Ft
450E3012	24" RCP Arch Class 2, Furnish	56	Ft
450E3020	24" RCP Arch, Install	56	Ft
450E3022	30" RCP Arch Class 2, Furnish	248	Ft
450E3030	30" RCP Arch, Install	248	Ft
450E3032	36" RCP Arch Class 2, Furnish	78	Ft
450E3040	36" RCP Arch, Install	78	Ft
450E3042	42" RCP Arch Class 2, Furnish	598	Ft
450E3050	42" RCP Arch, Install	598	Ft
450E3052	48" RCP Arch Class 2, Furnish	80	Ft
450E3060	48" RCP Arch, Install	80	Ft
450E4512	36" RCP Arch Flared End, Furnish	2	Each
450E4513	36" RCP Arch Flared End, Install	2	Each
450E4516	42" RCP Arch Flared End, Furnish	4	Each
450E4517	42" RCP Arch Flared End, Install	4	Each
450E4520	48" RCP Arch Flared End, Furnish	2	Each
450E4521	48" RCP Arch Flared End, Install	2	Each
450E4600	24" RCP Arch Sloped End, Furnish	4	Each
450E4601	24" RCP Arch Sloped End, Install	4	Each
450E4604	30" RCP Arch Sloped End, Furnish	8	Each
450E4605	30" RCP Arch Sloped End, Install	8	Each
450E4650	18" RCP Arch Safety End, Furnish	1	Each
450E4653	18" RCP Arch Safety End, Install	1	Each
450E4758	18" CMP 14 Gauge, Furnish	56	Ft
450E4759	18" CMP 16 Gauge, Furnish	788	Ft
450E4760	18" CMP, Install	844	Ft
450E4768	24" CMP 14 Gauge, Furnish	26	Ft
450E4769	24" CMP 16 Gauge, Furnish	192	Ft
450E4770	24" CMP, Install	218	Ft
450E5010	18" CMP Elbow, Furnish	2	Each
450E5011	18" CMP Elbow, Install	2	Each

SECTION B ESTIMATE OF QUANTITIES (CONTINUED)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
450E5015	24" CMP Elbow, Furnish	2	Each
450E5016	24" CMP Elbow, Install	2	Each
450E5215	24" CMP Flared End, Furnish	2	Each
450E5216	24" CMP Flared End, Install	2	Each
450E5306	18" CMP Sloped End, Furnish	1	Each
450E5307	18" CMP Sloped End, Install	1	Each
450E5310	24" CMP Sloped End, Furnish	1	Each
450E5311	24" CMP Sloped End, Install	1	Each
450E5406	18" CMP Safety End, Furnish	20	Each
450E5407	18" CMP Safety End, Install	20	Each
450E5410	24" CMP Safety End, Furnish	4	Each
450E5411	24" CMP Safety End, Install	4	Each
450E5499	15" CMP Arch 16 Gauge, Furnish	22	Ft
450E5500	15" CMP Arch, Install	22	Ft
450E5569	54" CMP Arch 14 Gauge, Furnish	132	Ft
450E5570	54" CMP Arch, Install	132	Ft
450E5800	15" CMP Arch Flared End, Furnish	2	Each
450E5801	15" CMP Arch Flared End, Install	2	Each
450E6039	54" CMP Arch Safety End with Bars, Furnish	4	Each
450E6041	54" CMP Arch Safety End, Install	4	Each
450E8009	18" RCP to CMP Transition, Furnish	1	Each
450E8010	18" Pipe Transition, Install	1	Each
450E8014	24" RCP to CMP Transition, Furnish	1	Each
450E8015	24" Pipe Transition, Install	1	Each
462E0100	Class M6 Concrete	202.5	CuYd
464E0100	Controlled Density Fill	121.2	CuYd
480E0100	Reinforcing Steel	37,202	Lb
600E0200	Type II Field Laboratory	1	Each
620E0020	Type 2 Right-of-Way Fence	5,412	Ft
620E0030	Type 3 Right-of-Way Fence	702	Ft
620E0040	Type 4 Right-of-Way Fence	19	Ft
620E1020	2 Post Panel	21	Each
620E1030	3 Post Panel	9	Each
620E2100	Reset Gate	4	Each
621E0040	4' Chain Link Fence with Top Rail	283	Ft
621E0160	6' Chain Link Fence with Tension Wired Top	707	Ft
621E0410	Pedestrian Swing Gate	4	Each
629E9050	Reset Crossover Closure	208	Ft
630E0500	Type 1 MGS	787.5	Ft
630E1005	18'-9" Longspan MGS	3	Each
630E1500	Type 1 Guardrail Transition	2	Each
630E2018	MGS MASH Tangent End Terminal	3	Each
630E2065	MGS Trailing End Terminal	1	Each

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SECTION B ESTIMATE OF QUANTITIES (CONTINUED)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
650E0060	Type B66 Concrete Curb and Gutter	1,091	Ft
650E0085	Type B68.5 Concrete Curb and Gutter	8,241	Ft
650E1080	Type F68 Concrete Curb and Gutter	3,045	Ft
650E1085	Type F68.5 Concrete Curb and Gutter	1,866	Ft
650E1380	Type FL68 Concrete Curb and Gutter	9,554	Ft
650E4380	Type D48 Concrete Curb and Gutter	815	Ft
650E4385	Type D48.5 Concrete Curb and Gutter	176	Ft
650E4660	Type P6 Concrete Gutter	160	Ft
650E4680	Type P8 Concrete Gutter	132	Ft
650E4685	Type P8.5 Concrete Gutter	691	Ft
651E0040	4" Concrete Sidewalk	24,344	SqFt
651E0060	6" Concrete Sidewalk	120,489	SqFt
651E7000	Type 1 Detectable Warnings	548	SqFt
670E1200	Type B Frame and Grate	53	Each
670E2200	Type C Frame and Grate	6	Each
670E3300	Type E Frame and Grate	2	Each
670E4120	Type L Median Drain	1	Each
670E5300	3' x 4' Drop Inlet Cover	2	Each
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	26	Each
670E5342	4' x 6' Precast Concrete Type S Drop Inlet Lid	9	Each
670E5400	Precast Drop Inlet Collar	91	Each
671E1048	48" Manhole	1	Each
671E1072	72" Manhole	1	Each
671E7010	Adjust Manhole	2	Each
700E0210	Class B Riprap	54.9	Ton
720E1015	Bank and Channel Protection Gabion	9.0	CuYd
831E0110	Type B Drainage Fabric	1,671	SqYd
900E0010	Refurbish Single Mailbox	5	Each
900E2030	Miscellaneous Work	1	Site

TYPE II FIELD LABORATORY

The lab will be equipped with an internet connection such as DSL, cable modem, or other approved service. The internet connection will be provided with a multi-port wireless router. The internet connection will be a minimum speed of 5 Mbps unless limited by job location and approved by the DOT. Prior to installing the wireless router, the Contractor will submit the wireless router's technical data to the Area Office to check for compatibility with the state's computer equipment. The internet connection is intended for state personnel usage only. The Contractor's personnel are prohibited from using the internet connection unless pre-approved by the Project Engineer. These items will be incidental to the contract unit price per each for "Type II Field Laboratory".

UTILITIES

The Contractor will be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project, might be relocated or replaced by a new utility facility during the construction of this project, or might not require adjustment and may remain in its current location. The Contractor will contact each utility owner and confirm the status of all existing and new utility facilities. The utility contact information is provided elsewhere in the plans or bidding documents.

GRADING OPERATIONS

Water for Embankment is estimated at the rate of 10 gallons of water per cubic yard of Embankment minus Waste. The estimated cubic yards of excavation and/or embankment required to construct outlet ditches, ditch blocks, and approaches are included in the earthwork balance notes on the profile sheets.

The estimated excavation required for placing the Granular Bridge End Backfill and/or Bridge End Embankment are listed in the Table of Unclassified Excavation. Overburden Excavation for Bridge Berm Slope Protection is not included in the Unclassified Excavation quantity. Refer to Section E for information regarding the Overburden Excavation for Bridge Berm Slope Protection. The excavated material from the construction of the Bridge Berm(s) should be disposed of at a site provided by the Contractor and approved by the Engineer. This waste material is not included in the Waste shown in the Table of Excavation Quantities by Balances.

Special ditch grades and other sections of the roadway different than the typical sections will be constructed to the limits shown on the cross sections. If significant changes to the cross sections are necessary during construction, the Engineer will contact the Designer for the proposed change.

Generally, all shallow inlet and outlet ditches as noted on the plan sheets will be cut with a 10-foot wide bottom with 4:1 backslopes. However, the Engineer may direct the Contractor to adjust the ditch width for proper alignment with the drainage structure.

Temporary fence and/or permanent fence will be placed ahead of the grading operation unless otherwise directed by the Engineer.

TABLE OF CLEAR AND GRUB TREE (>6" DIAMETER)

Station	L/R	Quantity (Each)
32+20	L	1
95+00	L	1
95+50	L	1
403+00	L	1
403+50	L	1
404+00	L	1
404+50	L	1
405+00	L	1
	Total:	8

OBLITERATING OLD ROAD

The Contractor will obliterate the existing roadway at the locations listed in the Table of Obliterating Old Road.

The Contractor will obliterate the existing roadway in accordance with Section 240 of the Specifications when the existing roadway is not being removed in accordance with the template section.

The earthwork necessary for obliterating the existing road will be accomplished to such an extent that placing topsoil and seeding can be done in a satisfactory manner. Quantities of topsoil, fertilizing, mulching, and seeding for the obliterated sections of the old road are included in the Section D - Erosion and Sediment Control Plans Estimate of Quantities.

TABLE OF OBLITERATING OLD ROAD

Station	to	Station	L/R	Length (Sta)
116+00		131+00	L	15
			Total:	15

TRAFFIC DIVERSION

The traffic diversion is located at Sta. 9100+00. The traffic diversion will be constructed according to Section 4.5 A of the Specifications. Installation and removal of the traffic diversion will meet all requirements as set forth in the South Dakota Surface Water Quality Standards.

The traffic diversion(s) located at Stations 9100+00 will be constructed in accordance with the geometric layout shown in the plans with a temporary drainage structure size adequate to reduce the potential for upstream flooding. The Contractor will be responsible for sizing the temporary drainage structure for these crossings.

Costs to provide temporary drainage structures will be incidental to the contract lump sum price for "Maintenance of Traffic Diversion(s)".

The removed traffic diversion embankment will be used in the mainline embankment unless otherwise approved by the Engineer.

Traffic Diversion Excavation as shown on the plans profile sheets is the excavation required to construct the traffic diversion portion that is located inside the mainline cross section work limits. The Traffic Diversion Excavation quantity is included in the mainline excavation quantity in the Table of Excavation Quantities by Balances and in the Table of Unclassified Excavation.

Traffic Diversion Borrow, as shown on the plans profile sheets, is obtained from the mainline excavation from outside of the traffic diversion cross section work limits. The Traffic Diversion Borrow quantity is included in the mainline excavation quantity in the Table of Excavation Quantities by Balances and in the Table of Unclassified Excavation.

Added Traffic Diversion Excavation as shown on the plans profile sheets is the excavation required to construct the traffic diversion portion that is located outside the mainline cross section work limits. The Added Traffic Diversion Excavation quantity is added to the unclassified excavation quantity in the Table of Unclassified Excavation.

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SHRINKAGE FACTOR: Embankment

Station	to	Station	Shrinkage (%)
10+00		77+25	+20
77+25		136+30	+25

TABLE OF EXCAVATION QUANTITIES BY BALANCES

Station to	Station	Excavation (CuYd)	* Undercut (CuYd)	* Muck Exc. (CuYd)	* Option Borrow Exc. (CuYd)	* Contractor Furnished Borrow Exc. (CuYd)	** Waste (CuYd)	** Dead Haul (CuYdSta)	** Option Borrow Haul (CuYdSta)	** Haul (CuYdSta)
10+00	31+00	3579	11448	0	0	0	0	0	0	23153
31+00	55+86	1848	4757	2088	28880	0	2088	1545080	2621135	0
56+98	87+93	18867	16656	0	0	0	0	0	0	161810
87+93	136+30	17866	21116	222	10708	4854	222	572866	248055	52659
1001+07	1023+15	736	1809	0	412	0	0	22054	50427	3532
	Totals:	42896	55786	2310	40000	4854	2310	2140000	2919617	241154

* The quantities for these items are in the Estimate of Quantities under their respective contract items.
** The quantities for these items are for information only.



MUCK EXCAVATION

The areas of muck excavation are drawn on the cross sections with a normal depth of 3 feet. The estimated quantity of 2310 cubic yards of muck excavation will be paid for at the contract unit price per cubic yard for “Muck Excavation”.

Muck excavation consists of the removal of highly organic and/or highly saturated material from the designated areas shown on the cross sections. Highly organic muck material will not be used in the embankment but may be used as topsoil. Non-organic muck material may be used as embankment outside of the fill subgrade shoulder if it is properly handled and dried prior to placement in the embankment.

Field measurement of muck excavation will not be made unless the Engineer orders additional excavation, or when the Engineer determines, in accordance with Section 120.3 A.1 of the Specifications, that the classification of excavation be changed.

If the areas designated as muck excavation can be removed with similar equipment and procedures as used for unclassified excavation, the material will be measured and paid for as “Unclassified Excavation”.

TABLE OF MUCK EXCAVATION

Station	to	Station	L/R	Depth (Ft)	Quantity (CuYd)
47+50		51+00	R	3	2088
128+00		130+00	L	3	133
128+50		130+50	R	3	89
				Total:	2310

TABLE OF OPTION BORROW EXCAVATION

	(CuYd)
Option Borrow Excavation	40000
Topsoil in Option Borrow Pits	2607
Total:	42607

UNSTABLE MATERIAL EXCAVATION

The areas of unstable material excavation are drawn on the cross sections with a normal depth of 2 feet. The estimated quantity of 2027 cubic yards of unstable material excavation will be paid for at the contract unit price per cubic yard for “Unclassified Excavation”.

All areas designated as Unstable will be excavated. The unstable material excavated on this project will be placed outside the subgrade shoulder in fill sections or stockpiled and used as topsoil.

Field measurement of unstable material excavation will not be made. However, if there are additional areas of unstable material excavation other than what is shown in the plans, the Engineer will direct removal of these areas and the additional areas will be measured according to the Engineer.

TABLE OF UNSTABLE MATERIAL EXCAVATION

Station	to	Station	L/R	Depth (Ft)	Quantity (CuYd)
18+00		22+75	L	2	333
25+50		26+50	L	2	44
43+00		44+50	R	2	89
51+00		54+50	R	2	668
67+00		74+00	R	2	879
				Total:	2013

TABLE OF UNCLASSIFIED EXCAVATION

	(CuYd)
Excavation	42896
Undercut	55786
Topsoil	17015
Added Traffic Diversion Excavation	74
Exc. for Granular Bridge End Backfill and/or Bridge End Embankment	1006
Salvage Asphalt Mix and Granular Base Material (from cut sections)	26231
Total	143008

SALVAGE AND STOCKPILE ASPHALT MIX AND GRANULAR BASE MATERIAL

An estimated 49,575.7 tons (26,230.5 Cubic Yards) of asphalt mix and granular base material will be salvaged from the existing highway according to the in-place surfacing typical sections and stockpiled at a site furnished by the Contractor and satisfactory to the Engineer.

Salvaged material will be processed to meet the requirements of Section 884.2 D.7 prior to stockpiling. The Contractor will ensure that no vegetation, topsoil, subgrade, or other foreign material is incorporated into the salvaged asphalt mix and granular base material.

The salvaged material not used on the project will be stockpiled or disposed of as directed by the Engineer.

The quantity of salvaged asphalt mix and granular base material may vary from the plans. The quantity of salvageable material is estimated from the in-place surfacing typical sections.

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TABLE OF SALVAGE AND STOCKPILE ASPHALT MIX AND GRANULAR BASE MATERIAL

Location of Removal Areas	Salvage and Stockpile Asphalt Mix and Granular Base Material
	Tons
Sta. 10+00.00 to Sta. 55+56.76 Southbound plus median and center lanes and E-W SD37	8,722.2
Sta. 10+00.00 to Sta. 55+56.76 Northbound	6,084.5
Sta. 57+44.30 to Sta. 136+30.00 Southbound plus median and center lanes	17,735.7
Sta. 57+44.30 to Sta. 136+30.00 Northbound	17,033.3
Total	49,575.7

OPTION BORROW PIT

Eilts #1

Sediment Control:

Included in the estimate of quantities is 800’ of Low Flow Silt Fence for Sediment Control along the east edge of the borrow pit.

Existing Trees:

Trees will not be disturbed on the East side of the borrow pit.

Fence:

The fence on the northern boundary is approximately 25’ south of the property line. There will be a minor amount of fence work needed to allow removal of the borrow material from the northwest corner of the borrow pit. The contractor will remove a small portion of fence and place temporary fence of retain livestock in the pasture to the north of the borrow pit. Payment for any fence work will be incidental the contract unit price for Option Borrow.

Topsoil:

A minimum of 6 inches of topsoil will be removed and stockpiled from the borrow pit and any area of the borrow pit that will be disturbed by hauling. The topsoil pile will be placed in the area shown on the borrow sheet which is approximately 120’ south of the planned excavation to allow for additional borrow to be removed from the pit if necessary. At the completion of the borrow operations, the topsoil will be evenly spread to a depth of 6” on
the pit except for the pond area. The remaining topsoil stockpiled will be neatly shaped and left in the stockpile. Topsoil quantity was estimated by using the pond area plus a 20 border around the entire pit.

Permanent Seeding and Mulching

At the completion of borrow activities, the exposed topsoil except for the pond area will be seeded to Special Permanent Seed Mixture 1. Included in the Estimate of Quantities is 476 Lb of Special Permanent Seed Mixture 1 and 3.12 Tons of Mulching.

TABLE OF BORROW PITS

Site	Station	L/R	Dead Haul Distance (Sta)	Option Borrow Exc. (CuYd)	Dead Haul (CuYdSta)
1	189+80	R	53.5	40000	2140000
			Totals:	40000	2140000

Stations in the above table are not pit locations, but stations where the borrow is interjected into the earthwork balance for haul calculations.

The quantities listed in the above table for Dead Haul are for information only. The Dead Haul quantities are also included in the Table of Excavation Quantities by Balances.

The quantities listed in the above table for Option Borrow Excavation are also included in the Table of Excavation Quantities by Balances.

UNDERCUTTING

In all cut sections the earthen subgrade will be undercut 2 feet below the finished subgrade for the following alignments: Mainline, SD37, SD37 Free Right, XR15, XR23, XR32, XR77, and XR131. In all cut sections the earthen subgrade will be undercut 1-foot below the finished subgrade for the following alignments: XR61, Rowley, XR104, SD37 Sidewalk, and Shared Use Path (unless noted otherwise on the typical sections). The undercut material or other suitable material, as directed by the Engineer, will then be replaced and compacted to the density specified for the section being constructed. In the curb and gutter sections, the undercut will extend from behind the outside curb to behind the opposite outside curb. The distance behind the curb will be determined based on the paving operation.

Shallow embankment sections, fills less than 2 feet in height measured at the finished subgrade shoulders, will be undercut to ensure a minimum 2-foot height (or 1-foot depending on alignment) of earth embankment for the entire width of roadbed. The upper 4 inches of undercut material that consists of topsoil with a high humus content will be used as topsoil, placed in the fill slopes outside the shoulders of the earthen subgrade, or placed in the lower portion (below 4 foot depth) in fills which are greater than 4 feet in height. The remaining undercut soil and soil obtained from adjacent excavation (excluding the upper 4 inches) will then be replaced and compacted to the density specified for the section being constructed.

The plan shown quantity will be the basis of payment. However, if there are additional areas of undercut other than what is shown in the plans, the Engineer will direct removal of these areas and the additional areas will be measured according to the Engineer.

TABLE OF UNDERCUTTING

Station	to	Station	Quantity (CuYd)
10+00		31+00	11448
31+00		55+86	4757
56+98		87+93	16656
87+93		136+30	21116
1001+07		1023+43	1809
		Total:	55786

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HAUL

Included in the Table of Excavation Quantities by Balances are Dead Haul, Borrow Haul, Option Borrow Haul, Select Subgrade Topping Haul, Out-of-Balance Haul, and Haul. They are not pay items and are for informational purposes only. Haul was not estimated for moving Contractor Furnished Borrow Excavation. The mass haul diagram is available as part of the bid package for use in figuring this haul.

Dead Haul: Estimated quantity (CuYdSta) for moving borrow excavation material or option borrow excavation material from the borrow or option borrow site to the centerline mainline station listed in the Table of Borrow Pits.

Option Borrow Haul: Estimated quantity (CuYdSta) for moving option borrow excavation material from the centerline mainline station listed in the Table of Borrow Pits to the locations where it is needed throughout the earthwork balance.

Haul: Estimated quantity (CuYdSta) for moving unclassified excavation material to the locations where it is needed throughout the earthwork balance.

For Purpose of Extra Haul Computations:

Average Haul = (Haul + Out-of-Balance Haul)/Unclassified Excavation = 241154/143008 = 1.7 Sta.

Average Option Borrow Haul = (Option Borrow Haul + Dead Haul)/Total Option Borrow Excavation = 5059617/40000 = 126.5 Sta.

Compensation for “Extra Haul” will not be made for haul distances less than 5 stations. When payment for “Extra Haul” is authorized, the distance used for “Extra Haul” calculations will be that in excess of 5 stations.

CONTRACTOR FURNISHED BORROW EXCAVATION

The Contractor will provide a suitable site for Contractor furnished borrow excavation material. The Contractor is responsible for obtaining all required permits and clearances for the borrow site.

Restoration of the Contractor furnished borrow excavation site will be the responsibility of the Contractor.

The Contractor furnished borrow excavation material will be uniform in texture and free from organic material. The liquid limit will not exceed 45 and the plastic index will not exceed 25.

The Contractor will be responsible for the following minimum testing prior to use of each borrow site:

A minimum of one test for liquid limit and plastic index and a 4 point for each location and soil type, with samples obtained according to SD201.

The Department will be responsible for the following minimum testing:

A minimum of one test for liquid limit and plastic index and a 4 point for every major change in soil type. Independent Assurance testing will not be required.

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PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

When plan quantities are used for payment, the Unclassified Excavation quantity will be used for final payment and the plans quantity of Topsoil and salvaged surfacing items listed in the Table of Unclassified Excavation will not be adjusted according to field measurements.

The volume of in place Concrete Surfacing and Asphalt Surfacing removed will NOT be paid for as Unclassified Excavation.

The Excavation quantities from individual balances and the table above have been reduced by the volume of in place concrete pavement and asphalt pavement that will be removed.

TABLE OF ADDITIONAL ROADWAY EXCAVATION (FOR INFORMATIONAL PURPOSES)

Earthwork quantities for intersecting streets, the Shared Use Path, and the Traffic Diversion are included in the earthwork balance notes and shown in the Mainline quantities in the Table of Excavation Quantities. For informational purposes, the table below indicates the Earthwork quantities for these locations.

Location	Station	Excavation (CuYd)	Undercut (CuYd)	Option Borrow Exc. (CuYd)	Waste (CuYd)
SD37 Sidewalk	15+69	42	162	134	-
SD37 Shared Use Path	15+69	685	370	-	553
SD37 Free Right	15+69	901	888	-	45
XR15	15+69	192	288	-	127
XR23	23+51	981	235	-	663
XR32	32+37	27	108	61	-
XR49	49+50	378	258	5101	-
XR61	61+00	229	399	2489	-
FR66	66+63	71	251	1616	-
XR77	77+29	1651	853	-	1297
Rowley	82+50	1326	965	-	1058
XR104	104+41	3844	1766	-	3046
XR131	131+05	983	1171	137	-
Shared Use Path (Independent)	43+40	406	301	280	-
Shared Use Path (Independent)	63+55	3078	649	-	1840
Shared Use Path North	78+58	765	720	400	-
Shared Use Path National Guard	116+56	361	498	162	-
National Guard Traffic Diversion	9100+00	74	-	910	-

PIPE CULVERT UNDERCUT

The table includes undercut for 36 inch and larger pipe culverts. The depth of undercut is an estimate and the actual depth necessary will be determined during construction. Pipes listed may or may not require undercutting and pipes not listed may require undercutting. The Engineer will determine which pipe will be undercut in accordance with Section 421 of the Specifications.

Station	Undercut Depth (Ft)	Pipe Culvert Undercut (CuYd)
118+29	1	87
9103+55	1	35
	Total:	122

The table below describes the material types and groundwater elevations at the pipe locations based on subsurface investigations conducted in July 2022.

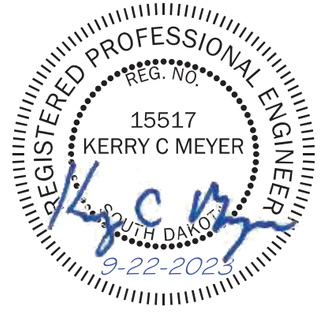
Station	Soils below Flowline	Groundwater Elevation	Flowline of Pipe	
			Inlet	Outlet
118+29	4' brown silt clay over coarse sand	1278.4	1280.6	1280.4
9103+55	Brown clay sand	1279.7	1281.9	1281.6

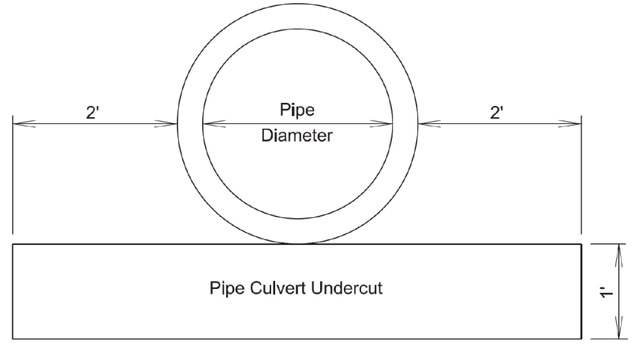
The large diameter pipe culverts will be undercut to a minimum depth of 12 inches. The depth of undercut is an estimate, and the actual depth necessary will be determined during construction. The Engineer will determine how much undercut will be done in accordance with Section 421 of the Specifications but will not reduce the undercut to less than the depth stated above.

The table below contains the rate for one-foot depth of pipe culvert undercut per foot of pipe length and should be used as an aid in determining the actual amount of undercut to be performed during construction. The table is derived from the drawing below and conforms to the Specifications. When calculating pipe culvert undercut, the length of pipe ends should be included in the overall pipe length.

Storm sewer and approach pipes do not require undercutting unless specified otherwise in these plans.

Pipe Diameter (In)	Round Pipe Undercut Rate for 1' Depth (CuYd/Ft)	Arch Pipe Undercut Rate for 1' Depth (CuYd/Ft)
24	0.2407	0.2577
30	0.2623	0.2847
36	0.2840	0.3110
42	0.3056	0.3337
48	0.3272	0.3596
54	0.3488	0.3827
60	0.3704	0.4105
66	0.3920	---
72	0.4136	0.4630
78	0.4352	---
84	0.4568	0.5123
90	0.4784	---





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GENERAL GEOLOGY

The project alignment traverses glacial terrain typical of eastern South Dakota. Included within this terrain may be areas of loess, shale, sand, gravel, glacial till and boulder till. As is the case with most glacial terrain, the materials throughout the project can vary greatly in a short distance.

CLASSIFICATION OF EXCAVATION

Large glacial boulders may be encountered sporadically within the project limits. Very large boulders could require more effort to excavate. Most of the material encountered should be able to be excavated using conventional methods associated with normal Unclassified Excavation. Muck Excavation will be required at the areas shown in the plans or as directed by the Engineer.

INCIDENTAL WORK, GRADING

Station	Remarks
12+13-64' L to 13+95-63' L	Take Out 36"-182' RCP
14+50-1' L to 14+50-30' R	Take Out 18"-31' RCP
14+50-1' L to 14+51-32' L	Take Out 18"-32' RCP
14+51-32' L to 14+51-50' L	Take Out 18"-18' RCP
19+51-2' L to 19+51-29' R	Take Out 18"-31' RCP
19+51-2' L to 19+51-33' L	Take Out 18"-31' RCP
19+51-33' L to 19+51-54' L	Take Out 18"-21' RCP
29+06-68' L	Take Out 18"-45' CMP & 2 Safety Ends
36+11-76' L	Take Out 18"-40' RCP
39+04-6' L to 39+04-35' R	Take Out 18"-41' RCP
39+04-6' L to 39+04-61' L	Take Out 18"-55' RCP
46+00-11' L to 46+00-62' L	Take Out 18"-52' RCP
50+75-58' R to 50+82-13' L	Take Out 24"-71' RCP
50+82-13' L to 50+82-64' L	Take Out 24"-51' RCP
54+69-67' L	Take Out 18"-37' RCP
55+20-68' L to 56+02-72' L	Take Out 4"-82' Steel Pipe
56+81-76' L to 57+46-76' L	Take Out 30"-66' CMP
57+26-65' L to 57+26-76' L	Take Out 12"-12' CMP
57+46-76' L to 58+74-79' L	Take Out 24"-129' CMP
57+46-76' L to 57+76-19' L	Take Out 24"-65' RCP
57+76-19' L to 58+10-35' R	Take Out 24"-64' RCP
58+06-10' R to 58+13-36' R	Take Out 4"-28' Steel Pipe
58+57-51' R	Take Out 18"-62' RCP
61+50-82' L	Take Out 18"-45' RCP
61+90-26' L to 61+91-74' L	Take Out 16"-48' RCP
61+90-19' L to 61+90-26' L	Take Out 16"-8' RCP
66+69-50' R	Take Out 24"-41' RCP
67+73-17' L	Take Out 16"-49' RCP
73+09-3' L to 73+08-44' R	Take Out 12"-46' RCP
77+32 to 84+32 R	Take Out 725' Barbwire Fence
77+91 R	Take Out 20"-67' RCP
83+12-86' L	Take Out 18"-64' CMP
90+96-92' L	Take Out 15"-64' RCP
90+98-5' L	Take Out 12"-61' CMP
91+35 R	Take Out 18"-63' RCP
92+52-90' L	Take Out 18"-57' RCP
92+61-86' R	Take Out 20"-41' RCP
94+38-82.5' L	Take Out 18"-39' RCP
96+07 R	Take Out 18"-63' RCP
97+23-82' L	Take Out 18"-57' RCP
103+00 L	Take Out 24"-70' RCP
103+00 R	Take Out 24"-67' RCP
109+17	Take Out 18"-35' RCP
110+87 L	Take Out 18"-59' RCP
112+26-88' R	Take Out 18"-41' RCP
112+28-82' L	Take Out 18"-56' RCP
118+34 L	Take Out Twin 36"-58' RCP
118+34 R	Take Out Twin 36"-63' RCP
129+35 L	Take Out 36"-49' RCP
130+39 L	Take Out Triple 24"-34' RCP
131+94-1' L to 132+02-72' R	Take Out 20"-73' RCP
1020+29-32' R to 1019+70-34' R	Take Out 18"-60' RCP
1020+30-32' L to 1019+70-34' L	Take Out 18"-60' RCP
1021+50-49' L to 1020+30-32' L	Take Out 18"-122' RCP
1021+60-22' L to 1021+50-49' L	Take Out 18"-29' RCP
1022+65	Take Out Twin 42"-278' RCP
7001+57	Take Out 24"-51' RCP
9100+79	Take Out Triple 24"-50' RCP
9103+55	Take Out 36"-46' RCP
9104+47	Take Out 18"-26' RCP

TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
12+42		12+88	R	138.1
15+37		16+00	R	325.9
22+94		23+80	R	450.1
23+33		23+70	L	75.9
24+14		55+59	L	4585.2
26+22		26+55	R	26.4
28+67		29+03	R	83.9
32+17		32+48	R	107.9
39+31		39+68	R	108.9
42+78		55+57	R	2147.5
57+22		136+30	R	10428.4
57+40		136+30	L	13692.4
116+00		131+00	L	2647.1
65+64		66+47	MED	96.8
67+64		76+81	MED	2247.8
75+70		76+83	MED	118.6
77+69		92+24	MED	1377.7
92+78		96+94	MED	385.9
97+48		104+15	MED	627.5
104+70		112+00	MED	704.5
112+54		130+74	MED	1726.6
131+28		131+47	MED	37.7
132+21		136+30	MED	1074.1
15+18-49.4' R		15+34-66.2' R	R	14.6
78+65-388.9' L		78+73-389.4' L	L	3.0
			Total:	8414.8

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REMOVAL OF EXISTING CONCRETE PAVEMENT STA. 10+00 to STA. 136+30

Existing asphalt concrete and/or existing asphalt concrete patch work that was placed above the existing concrete pavement is included in the quantity for "Remove Concrete Pavement". The Contractor will dispose of the concrete pavement and asphalt concrete at a site approved by the Engineer.

The existing concrete pavement on Mainline is mesh-reinforced 9-inch P.C.C. Pavement. The pavement is reinforced with welded wire fabric. The welded wire fabric weighs not less than 60 pounds per 100 square feet. The longitudinal wires are No. 1 gauge and are spaced 6 inches center to center and the transverse wires are No. 4 gauge and are spaced 12 inches center to center. The contraction joints have 1 ¼" x 18" dowel bars spaced approximately 12" center to center and the longitudinal joints have 5/8" x 30" deformed tie bars spaced approximately 48" center to center. The existing contraction joints are spaced at approximately 61.5 feet. The aggregate in the existing P.C.C. pavement is quartzite. This information is from the original construction plans and actual dimensions and pavement thickness may vary.

The existing concrete pavement on the SD Hwy 37 Bypass is 8.5-inch non-reinforced P.C.C. Pavement. The contraction joints have 1 ¼" dowel bars spaced approximately 12" center to center and the longitudinal joints have 5/8" x 30" deformed tie bars spaced approximately 48" center to center. The existing contraction joints are spaced at approximately 20 feet. The aggregate in the existing P.C.C. pavement is quartzite. This information is from the original construction plans and actual dimensions and pavement thickness may vary.

The following table summarizes the typical P.C.C. pavement widths along mainline.

Roadway	Station to Station	Concrete Width (ft)	C & G Width (ft) Left	Right
SD 37	10+00 to 24+14	60	2.7	2.7
SD 37	24+14 to 42+78	70	-	2.7
SD 37	42+78 to 58+83	60	-	-
SD 37 Northbound	58+83 to 77+00	24	2.7	-
SD 37 Southbound	58+83 to 77+00	24	-	2.7
SD 37 Northbound	77+00 to 136+30	24	-	-
SD 37 Southbound	77+00 to 136+30	24	-	-
SD 37 Bypass	1019+81 to 1023+43	60	2.7	2.7

TABLE OF CONCRETE PAVEMENT REMOVAL

Station	to	Station	Description	Quantity (SqYd)
10+00		42+78	Begin grading to bridge	33985.3
42+78		136+30	Bridge to end grading	46807.4
1019+81		1023+43	Begin grading to Mainline	3126.7
			Total:	83919.4

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TABLE OF CONCRETE MEDIAN PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
1022+80		1023+06	R	40.4
			Total:	40.4

TABLE OF CONCRETE CURB AND/OR GUTTER REMOVAL

Station	to	Station	L/R	Quantity (Ft)
12+40		12+41	R	23.5
12+90		12+91	R	23.3
15+20		15+35	R	32.3
15+36		15+48	R	74.9
15+89		16+01	R	75.1
22+87		23+30	R	120.0
23+30		23+30	L	17.6
23+71		23+82	R	94.2
32+34		32+81	L	111.2
32+89		32+81	L	40.1
46+48		46+53	R	62.6
46+76		46+80	R	60.0
75+71		76+79	R	109.6
9001+21		9002+28	R	103.2
9002+59		9003+87	R	128.3
9004+19		9008+73	R	454.9
9009+22		9009+67	L	44.9
1012+52		1012+52	L	4.5
			Total:	1580.2

TABLE OF CONCRETE DRIVEWAY PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
12+24		13+00	L	237.1
26+16		26+60	R	51.7
28+01		28+33	R	99.6
28+66		28+99	R	17.7
32+06		32+54	R	25.6
36+34		36+66	R	90.1
39+24		39+72	R	25.1
9002+28		9002+59	R	12.5
9003+87		9004+19	R	16.1
9008+73		9009+22	L	25.1
			Total:	600.6

TABLE OF SIDEWALK REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
10+00		12+40	R	133.7
12+91		15+43	R	175.9
13+61		15+10	L	112.1
15+96		23+23	R	478.6
1012+64		1012+84	R	29.3
			Total:	929.6

TABLE OF DROP INLET REMOVAL

All costs for removal of the frame and grate assembly will be incidental to the contract unit price per each for “Remove Drop Inlet”.

Station	L/R	Quantity (Each)
14+50	L	2
14+50	R	1
19+51	L	2
19+51	R	1
*25+44	L	1
*25+44	R	1
39+04	L	1
39+04	R	1
46+00	L	1
50+82	L	1
57+46	L	1
57+76	L	1
61+90	L	2
67+17	L	1
73+09	R	1
109+16	L	1
1020+29	R	1
1020+30	L	1
1021+50	L	1
1021+60	L	1
	Total:	23

* Remove Frame and Grate and remove the first 6 feet of the drop inlet structure

CORRUGATED METAL PIPE

Corrugated metal pipes will have 2 ⅔-inch x ½-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes will have 3-inch x 1-inch or 5-inch x 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

Areas within the project have soils that are highly corrosive to steel. Corrugated metal pipe in these areas will be polymer coated 14 gauge steel as specified in the Table of Pipe Quantities. Any required connection bands, elbows, tees, crosses, wyes, reducers, and transitions will also be polymer coated. The connection bands will be 24 inches wide. All polymer coated corrugated metal pipe and components will be in conformance with AASHTO M245. Riveted pipe will not be allowed.

All damage to the polymer coating will be repaired in accordance with the manufacturer’s recommendations prior to installation of the pipe.

All costs associated with the polymer coating including repair of polymer coating will be incidental to the corresponding CMP contract items.

Metal pipe end sections connected to polymer coated CMP will be aluminum-coated (Type 2) in accordance with AASHTO M36 as specified in the Table of Pipe Quantities. All costs associated for gauge, coating, and connections will be incidental to the corresponding CMP End Section contract items.

PIPE FOR APPROACHES AND INTERSECTING ROADS

Class 2 reinforced concrete pipe, high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe may be substituted for corrugated metal pipe at approaches and intersecting roads at no additional cost to the State.

If corrugated metal pipes are provided, the pipes will be as specified in the CORRUGATED METAL PIPE note.

If high density polyethylene pipe, polypropylene pipe (will be in conformance with AASHTO M330), or steel reinforced polyethylene pipe are provided, then the end sections will be metal, be compatible, and conform to the type of end section as shown in the plans.

PIPE FOR DOWNSPOUTS

The substitution of Class 2 reinforced concrete pipe, high density polyethylene pipe, polypropylene pipe, or steel reinforced polyethylene pipe for corrugated metal downspout pipes is not allowed.

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CONTROLLED DENSITY FILL FOR PIPE

Controlled density fill will be in conformance with Section 464 of the Specifications.

The controlled density fill will be placed between the pipes from the base of pipe elevation to the haunch of the pipes and extend to the end of the end section.

Controlled density fill between metal pipes will require the pipes to be anchored to resist floating. Anchoring methods will be determined by the Contractor and approved by the Engineer. Payment for anchoring the pipes will be incidental to the pipe installation contract item.

TABLE OF CONTROLLED DENSITY FILL FOR PIPE

Station	Quantity (CuYd)
118+29	53.25
9101+02	10.42
514+69	1.15
121+68 – 77' L	13.46
14+83.51 – 77.69' L to 17+96.44 – 84.01' L	42.88
Total:	121.2

CONCRETE PIPE CONNECTIONS

Pipe connections to existing pipes, manholes, junction boxes, and drop inlets will be done by breaking a hole into the existing structure and inserting the pipe. A concrete collar will then be poured around the pipe in the area of the connection.

When it is not possible to use a normal pipe joint (male-female ends), connections to existing pipe will be made by placing a 2' wide by 6" thick M6 concrete collar around the outside of the connection. The concrete collar will be reinforced with 6x6 W2.9 x W2.9 wire mesh.

All costs for constructing the concrete collars including materials and labor will be incidental to the contract unit price per foot for the corresponding pipe contract item.

PIPE COVER

The earthen subgrade cover for some pipe installations is less than one foot. The Contractor will take the necessary precautions to ensure the structural properties of the pipes are not damaged after installation and prior to the placement of final surfacing. Any additional costs for preventing damage to these pipes will be incidental to the contract unit price per foot for the corresponding pipe installation contract item.

STORM SEWER

Reinforced concrete pipe may be bell and spigot. The pipe sections will be adjoined such that the ends are fully entered and the inner surfaces are reasonably flush and even.

Lift holes in the reinforced concrete pipe will be plugged with grout.

Watertight joints are required for reinforced concrete pipe, drop inlets, manholes, and junction boxes where storm sewers run parallel to and within 10 feet horizontally from existing or proposed water mains.

Watertight joints are required where reinforced concrete pipes, drop inlets, manholes, or junction boxes cross water mains and are separated a distance of 18 inches or less, above or below, the water main.

If watertight joints are required then the watertight joints will extend for a distance of 10 feet beyond the water main. This measurement will be from the sealed concrete joint to the outer most surface of the water main.

Watertight joint seals will conform to the following requirements:

1. Reinforced Concrete Pipe (Circular): Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe will be sealed with a mastic joint seal conforming to the requirements of ASTM C990 and encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.

2. Reinforced Concrete Pipe (Arch): Gasketed pipe will conform to the requirements of ASTM C443 and the gasket will be in conformance with Section 990 of the Specifications. Non-gasketed concrete pipe joints will be sealed with a hydrophilic flexible water stop seal and wrapped with a 1-foot wide strip of fabric above the cradle. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.

3. Drop Inlets, Manholes, and Junction Boxes: Joints will be sealed with one of the following methods:

   A. A flexible strip seal placed in the joints conforming to the requirements of ASTM C990 and the perimeter encased with a minimum 2-foot wide by 6-inch thick M6 concrete collar reinforced with 6x6 W2.9 x W2.9 wire mesh.

   B. A hydrophilic flexible water stop seal placed in the joints and a 1-foot wide strip of fabric wrapped around the perimeter of the pipe. The fabric will conform to the requirements of Section 831 of the Specifications for Type A Drainage Fabric. The hydrophilic flexible water stop will be from the list below.

   C. A self-adhesive external joint seal wrap. The seal wrap will be from the list below.

Approved List of Self-adhesive Joint Wrap

Product	Manufacturer
Mar Mac Seal Wrap	Mar Mac Construction Products McBee, SC 843-335-5909 www.marmac.com
ConWrap CS-212	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 http://www.conseal.com

Approved List of Hydrophilic Flexible Water Stop Seal:

Product	Manufacturer
Waterstop RX	Cetco Hoffman Estates, IL 800-527-9948 www.cetco.com
Conseal CS-231	Concrete Sealants, Inc. Tipp City, OH 800-332-7325 http://www.conseal.com

Gaskets and seals (mastic, waterstop, and seal wraps) will be installed in accordance with the Manufacturer's recommendations.

The cost for furnishing and installing all gaskets, mastic joint seal, water stop seal, seal wrap, concrete collars, and for plugging the lift holes will be incidental to the contract unit price per foot for the corresponding pipe contract item.

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DROP INLETS

Where drop inlets are constructed within areas of curb and gutter, the Contractor will construct weep holes of at least 3 inches in diameter in the drop inlet walls. The weep holes will be constructed at the same elevation as the adjacent top of the earthen subgrade and will be maintained clean and open at all times until the permanent surfacing is placed. The drop inlets will be covered throughout construction operations as necessary with an Engineer approved cover to provide safe travel for motorists and to prevent materials from entering the storm sewer system. After the permanent surfacing has been placed, the Contractor will seal the weep holes with grout and remove all debris from the drop inlet. All costs involved with the coverings, weep holes, and removing debris from the drop inlets will be incidental to the contract unit prices for the components of the drop inlets.

The plan shown quantities of the drop inlet components such as Class M6 Concrete, Reinforcing Steel, Type B Frame and Grate Assembly, Type C Frame and Grate, and Precast Concrete Type S Drop Inlet Lid will be the basis of payment for these items.

If additions or reductions to the number of drop inlets are ordered by the Engineer, payment for the components required to construct the drop inlets will be made at the contract unit prices for the components of the drop inlets.

TABLE OF DROP INLETS AND QUANTITIES

Station	L / R	Drop Inlet Size	Drop Inlet Type	Class M6 Concrete (CuYd)	Reinf. Steel (Lb)	Precast Drop Inlet Collar (Each)	Frame and Grate/Lid Type
10+13.50	L	4’11’	S	4.10	689	1	S
10+13.50	R	4’11’	S	4.00	672	1	S
11+50.00	L	2’x3’	B	0.83	164	1	B
11+50.00	R	2’x3’	B	0.81	162	1	B
12+13.00	L	2’x3’	B	0.75	167	1	B
12+13.00	R	2’x3’	B	0.78	165	1	B
12+13.00	L	3’x4’	C	1.22	258		C
13+20.00	L	2’x3’	B	0.95	181	1	B
13+20.00	R	2’x3’	B	0.87	170	1	B
14+35.00	L	2’x3’	B	1.02	203	1	B
14+35.00	R	2’x3’	B	0.99	193	1	B
17+30.00	L	2’x3’	B	1.06	195	1	B
19+50.00	R	4’x6’	S	2.25	405	1	S
19+50.00	L	4’11’	S	3.74	649	1	S
22+67.00	L	4’11’	S	3.29	598	1	S
22+67.00	R	4’11’	S	3.28	590	1	S
25+25.00	L	4’11’	S	3.78	647	1	S
25+25.00	R	4’11’	S	3.67	635	1	S
25+60.00	L	4’11’	S	3.93	675	1	S
25+60.00	R	4’11’	S	3.62	647	1	S
*25+95.00	L	4’11’	S	3.78	647	1	S
25+95.00	R	4’11’	S	3.67	635	1	S
27+00.00	L	2’x3’	B	0.75	167	1	B
27+00.00	R	2’x3’	B	0.83	164	1	B
29+40.00	L	4’11’	S	4.27	709	1	S
29+40.00	R	2’x3’	B	1.08	205	1	B
*31+00.00	L	2’x3’	B	0.85	167	1	B
31+98.00	R	2’x3’	B	1.38	244	1	B
32+10.00	R	3’x4’	C	1.23	206		C
*34+00.00	L	2’x3’	B	1.00	194	1	B
34+00.00	R	2’x3’	B	0.96	182	1	B
35+70.00	L	2’x3’	B	1.13	210	1	B
35+80.00	R	2’x3’	B	0.86	175	1	B
37+00.00	L	2’x3’	B	1.13	211	1	B
37+00.00	R	2’x3’	B	0.96	181	1	B
38+00.00	L	2’x3’	B	1.54	265	1	B
38+00.00	R	4’11’	S	4.67	748	1	S
39+19.27	L	3’x4’	C	1.06	182		C
39+20.00	L	2’x3’	B	1.03	204	1	B
39+20.00	R	4’11’	S	3.44	609	1	S
41+50.00	L	2’x3’	B	0.95	187	1	B
41+50.00	R	4’11’	S	3.47	613	1	S
43+00.00	L	2’x3’	B	1.03	198	1	B
43+00.00	R	2’x3’	B	0.99	186	1	B
46+00.00	L	4’11’	S	3.70	644	1	S
46+00.00	R	4’11’	S	3.50	615	1	S
49+00.00	L	4’11’	S	4.52	731	1	S
49+00.00	R	2’x3’	B	1.37	242	1	B
50+35.00	L	4’11’	S	3.61	628	1	S
50+35.00	R	4’11’	S	5.27	816	1	S
50+70.00	L	4’11’	S	4.92	803	1	S
50+70.00	R	4’11’	S	5.44	862	1	S
51+05.00	L	4’11’	S	3.56	628	1	S
51+05.00	R	4’11’	S	5.22	816	1	S
52+00.00	L	2’x3’	B	0.94	180	1	B
52+00.00	R	2’x3’	B	1.56	261	1	B
53+40.00	L	2’x3’	B	1.06	201	1	B
53+40.00	R	3’x4’	B	1.61	246	1	E
55+05.00	L	2’x3’	B	1.09	206	1	B
55+05.00	R	2’x3’	B	0.88	171	1	B
57+60.00	L	3’x4’	C	2.77	420		C
57+61.00	L	4’11’	S	6.68	976	1	S
60+00.00	L	4’x6’	S	2.61	446	1	S
61+29.00	L	3’x4’	C	1.50	249		C
61+90.00	L	4’x6’	S	2.59	445	1	S
63+00.00	L	4’x6’	S	2.29	409	1	S
64+50.00	L	4’x6’	S	2.26	407	1	S
66+00.00	L	4’x6’	S	2.03	380	1	S
66+00.00	R	2’x3’	B	1.25	227	1	B
67+25.00	L	2’x3’	B	0.80	161	1	B
67+25.00	R	2’x3’	B	1.28	230	1	B
69+96.00	L	3’x4’	B	1.67	258	1	E
69+96.00	R	2’x3’	B	1.35	233	1	B
72+00.00	L	2’x3’	B	1.06	201	1	B
72+00.00	R	2’x3’	B	1.46	248	1	B
74+00.00	L	2’x3’	B	1.26	228	1	B
74+00.00	R	2’x3’	B	1.66	275	1	B
84+50.00	L	2’x3’	B	1.01	188	1	B
85+50.00	L	2’x3’	B	1.04	193	1	B
92+00.00	L	2’x3’	B	0.91	175	1	B
95+00.00	L	4’x6’	S	2.11	389	1	S
96+65.00	L	2’x3’	B	0.86	167	1	B
301+23.00	L	3’x4’	B	1.62	253	1	B
301+60.00	L	4’11’	S	3.25	599	1	S
302+00.00	L	3’x4’	B	1.52	235	1	B
1020+30.00	L	4’x4’	B	2.10	342	1	B
1020+30.00	R	4’x4’	B	2.13	346	1	B
1021+00.00	R	2’x3’	B	0.89	179	1	B
1021+80.00	L	4’x6’	S	2.19	399	1	S
1022+00.00	R	4’x6’	S	2.19	399	1	S
9002+15.00	L	2’x3’	B	0.81	162	1	B
9003+75.00	L	2’x3’	B	0.87	170	1	B
9005+65.00	L	2’x3’	B	0.95	181	1	B
9010+00.00	L	2’x3’	B	0.84	166	1	B
9012+50.00	L	2’x3’	B	0.72	151	1	B
Totals:				193.6	33761	91	

Total Type B Frame and Grate Assembly 53
Total Type C Frame and Grate 5
Total Type E Frame and Grate 2
Total 4’x6’ Precast Concrete Type S Drop Inlet Lid 9
Total 4’x11’ Precast Concrete Type S Drop Inlet Lid 26

* Drop inlet requires watertight joints in accordance with the STORM SEWER notes.

TABLE OF JUNCTION BOXES AND QUANTITIES

Station	L/R	Size L’xW’xH’	Frame and Grate (Type)	Class M6 Concrete (CuYd)	Reinforcing Steel (Lb)
14+83.51	L	13x’6’x4’-9”	C	8.9	3441
			Totals:	8.9	3441

Total Type C Frame and Grate 1

TABLE OF TYPE L MEDIAN DRAINS

(Quantities Shown for Information Only)

Station	L/R	Class M6 Concrete (CuYd)	Reinforcing Steel (Lb)	Type L Frame and Grate Assembly (Each)
133+80	R	0.89	140	1
	Totals:	.89	140	1

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FOR BIDDING PURPOSES ONLY

ADJUSTMENT OF MANHOLES

The Contractor will adjust manholes to the extent necessary on this project. Adjusting the manholes may consist of removing the upper course of brick or removing the concrete walls, replacing the removed materials with brick or Class M6 concrete, placing adjusting rings if necessary, and resetting the manhole frame and lid. The elevation of the lid will be set at the same elevation of the adjacent new pavement or surrounding ground. All manhole frames, lids, and rings that are cracked or broken due to carelessness of the Contractor will be replaced with new manhole frames, lids, and rings that conform with the Specifications at the Contractor's expense. Manholes will be adjusted to the satisfaction of the Engineer. All costs involved in adjusting the manholes will be incidental to the contract unit price per each for "Adjust Manhole".

The Engineer may direct adjustment of manholes that were not included in these plans. Payment for adjusting manholes that were not included in the plans will be at the contract unit price per each for "Adjust Manhole".

TABLE OF ADJUST MANHOLES

Station	L/R	Type of Adjustment
15+40	70' L	Lower 0.2' (Sanitary)
17+86	62' L	Raise 3.5' (Storm)

TABLE OF BANK AND CHANNEL PROTECTION GABIONS AND DRAINAGE FABRIC

Station	L/R	PVC Coated Bank and Channel Protection Gabion (CuYd)	Type B Drainage Fabric (SqYd)
49+00	R	4.5	15
50+70	R	4.5	15
	Totals:	9.0	30

8.5" PCC FILLET SECTIONS

Payment for "8.5" PCC Fillet Section" will be based on plans quantity. If additions or reductions to the area of PCC fillet sections are ordered by the Engineer, payment will be made in accordance with the contract unit price per square yard for "8.5" PCC Fillet Section".

TYPE 1 DETECTABLE WARNINGS

Detectable warnings will be in compliance with the Americans with Disabilities Act regulations.

The detectable warnings will be installed according to the manufacturer's installation instructions.

A concrete thickness equal to the adjacent concrete sidewalk thickness and 2 inches of granular cushion material will be placed below the Type 1 Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness will be transitioned at the rate of 1" per foot to match the adjacent concrete sidewalk thickness.

The detectable warnings will be a brick red color for application in concrete curb ramps. Cast iron plates may be a natural patina (weathered steel).

Type 1 Detectable Warning Panels will be one of the following products:

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate(No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com
Iron Dome Cast Iron Detectable Warning Tile	ADA Solutions, Inc. 323 Andover Street Suite 3 Wilmington, MA 01887 800-372-0519 https://adatile.com
TufTile (wet-set) Cast Iron Replaceable Tile	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/
Advantage Tactile Detectable Warning Cast Iron Plate	Advantage Tactile Systems, Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 800-679-4022 https://advantagetactile.com/
ADA Arcis Tactile Detectable Warning Tile Concrete Panel Reinforced with Stainless Steel Prestress Strands	Arcis Corporation 10680 NW 289th Place PO Box 1250 North Plains, Oregon 97133 503-647-5042 http://www.arcis-corp.com/#/tactile/
CASTinTACT Concrete Panel Reinforced with Stainless Steel Prestress Strands	MASCO Mason Supply 6018 234th St SE Woodinville, Washington 98072 425-487-6161 http://www.castintact.com
CASTinTACT 3 Concrete Panel Enhanced with Microsilica and Fiber Reinforced	MASCO Mason Supply 6018 234th St SE Woodinville, Washington 98072 425-487-6161 http://www.castintact.com
TufTile (wet-set) Polymer Replaceable Tile	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/
Alertcast Composite Replaceable Cast in Place	Cape Fear Systems, III, LLC 215 South Water Street, Suite 103 Wilmington, NC 28401 877-232-6287 http://www.alerttile.com/
Detectable Warning Tile Composite Replaceable Wet-Set	ADA Solutions, Inc. North Billerica, MA 01862 800-372-0519 http://www.adatile.com
Access Tile Composite Replaceable Cast in Place	Access Products Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 888-679-4022 http://www.accesstile.com/
Armorcast Detectable Warning Tile Composite Replaceable Wet-Set	Armorcast Products Company 13230 Saticoy Street North Hollywood, CA 91605 818-982-3600 http://www.armorcastprod.com/
TufTile (10 Gauge) Galvanized – Powder Coated Steel Replaceable Tile	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/

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TYPE 1 DETECTABLE WARNINGS (CONTINUED)

Type 1 Detectable Warnings will be installed along a radius at the locations as shown in the plans. The radius necessary will be as shown in the plans. Payment for the radius detectable warnings will be at the contract unit price per square foot for "Type 1 Detectable Warnings".

Type 1 Detectable Warning Panels with a radius will be one of the following products:

Type 1 Detectable Warnings (Radius)

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate 9'-5", 15', 20', 25', 35' Radius	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate (No Coating) 10', 15', 17.5', 20', 25', 30', 35' Radius	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com
Iron Dome Cast Iron Detectable Warning Tile 15', 20', 25', 30' Radius	ADA Solutions, Inc. 323 Andover Street Suite 3 Wilmington, MA 01887 800-372-0519 https://adatile.com
TufTile (wet-set) Cast Iron Replaceable Tile 15' and 30' Radius	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/
Advantage Tactile Detectable Warning Cast Iron Plate 10', 15', 17.5', 20', 25', 30', 35' Radius	Advantage Tactile Systems, Inc. 241 Main Street, Suite 100 Buffalo, NY 14203 800-679-4022 https://advantagetactile.com/
TufTile (wet-set) Polymer Replaceable Tile 15', 20', 25', 30' Radius	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/
TufTile (10 Gauge) Galvanized – Powder Coated Steel Replaceable Tile 15', 20', 25', 30' Radius	TufTile 1200 Flex Court Lake Zurich, IL 60047 888-960-8897 http://www.tuftile.com/

TABLE OF TYPE 1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
14+97.83	40.15' L	10
15+13.93	52.08' L	10
15+19.26	33.17' R	10
15+39.33	45.66' R	10
15+95.91	45.72' R	10
15+99.00	44.52' L	10
16+17.95	33.17' L	10
16+18.04	34.37' R	10
22+85.27	24.14' L	10
22+85.27	34.03' R	10
23+11.75	45.67' R	15
23+13.69	48.17' L	29
23+86.43	48.17' L	28
23+89.08	45.67' R	15
24+17.56	33.46' L	10
24+17.56	33.70' R	10
31+88.56	33.17' L	10
31+88.56	33.17' R	10
32+15.81	40.67' R	10
32+58.64	40.67' R	10
32+85.37	33.17' L	10
32+85.37	33.17' R	10
35+53.25	33.17' L	10
35+53.25	33.17' R	10
78+68.68	394.16' L	20
116+56.00	120.76' L	20
SD 37 Bypass		
1011+72.29	33.31' L	10
1011+82.90	34.65' R	10
1011+95.50	46.90' R	10
1012+06.88	48.00' L	20
1012+53.37	48.14' L	21
1012+66.01	46.90' R	10
1012+75.99	33.31' L	10
1012+77.95	34.96' R	10
SD 37 Free Right		
302+87.89	2.67' L	10
302+88.11	20.67' R	10
Shared Use Path (Independent Align)		
85+21.77	0'	20
Rowley St.		
8002+27.65	10.50' L	20
8002+27.65	10.50' R	20
XR 104		
9000+87.93	25.52' L	20
XR 131 (National Guard Road)		
9100+20.00	13.77' R	20
	Total:	548

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MAILBOXES

The Contractor will reset the existing mailboxes on new posts with the necessary support hardware for single mailbox assemblies. The local Postmaster will determine the recommended mounting height of the mailboxes throughout the project. The Contractor will coordinate with the Engineer on the proper postal representative to contact.

If large mailboxes are located at double mailbox installations, a single post may need to be used for the large mailbox.

All costs for removing existing mailboxes, providing temporary mailboxes, and resetting mailboxes with new posts and necessary support hardware will be incidental to the contract unit price per each for "Refurbish Single Mailbox".

TABLE OF REFURBISH MAILBOX

Station	L/R	Single (Each)
28+54	R	1
28+55	R	1
28+56	R	1
35+75	L	1
39+88	R	1
	Totals:	5

BRACE PANELS FOR ROW FENCE

The E-Z Brace or an approved equal may be utilized as an alternate horizontal brace in the brace panels if approved by the Engineer. The E-Z Brace will be attached to each wood post utilizing two 5/16" x 3" lag screws. Holes of appropriate diameter, based on wood post condition, will be drilled before placement of lag screws. The following is the contact regarding the E-Z Brace:

Charlie Mack
Macksteel E-Z Braces
415 20th Ave. SE.
Watertown, SD 57201
605-882-2177

TABLE OF RIPRAP AND DRAINAGE FABRIC

Station	L/R	Class B Riprap (Ton)	Type B Drainage Fabric (SqYd)
67+00 to 73+25 (Shared Use Path)	L	45.5	1360
73+25 to 79+50 (Shared Use Path)	L	9.4	281
	Totals:	54.9	1641

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TABLE OF GUARDRAIL

Location	Remove Beam Guardrail (Ft)	Type 1 MGS (Ft)	18'-9" Longspan MGS (Each)	Type 1 Guardrail Transition (Each)	MGS MASH Tangent End Terminal (Each)	MGS Trailing End Terminal (Each)
Structure No. 18-150-075						
Begin Bridge Lt.	80.9					
Begin Bridge Rt.	130.3	137.5		1	1	
End Bridge Lt.	130.8	87.5	1	1	1	
End Bridge Rt.	79.9					
Sta. 57+48 to Sta. 58+25 Lt.	100.8					
Sta. 57+49 to Sta. 58+11 Lt.	75.5					
Sta. 58+91 to Sta. 60+03 Lt.	113.7					
Sta. 67+08 to Sta. 70+55 Lt.	528.5	562.5	2		1	1
Totals:	1240.4	787.5	3	2	3	1

TABLE OF SUPERELEVATION

Station	to	Station		
10+00		62+87.52	-	Normal Crown Section
62+87.52		66+21.52	-	Superelevation Transition
66+21.52		75+65.04	-	2710' Radius Curve Left 0.046'/' Superelevation Rate Point of Rotation at Centerline
75+65.04		78+99.04	-	Superelevation Transition
78+99.04		82+97.86	-	Normal Crown Section
82+97.86		85+80.86	-	Superelevation Transition
85+80.86		95+67.38	-	3940' Radius Curve Right 0.036'/' Superelevation Rate Point of Rotation at Centerline
95+67.38		98+50.38	-	Superelevation Transition
98+50.38		136+30.00	-	Normal Crown Section
XR 104				
9000+42.00		9000+75.00	-	Superelevation Transition
9000+75.00		9001+50.00	-	40' Radius Curve Right 0.01'/' Superelevation Rate Point of Rotation at Centerline
9001+50.00		9002+10.00	-	Superelevation Transition
9002+10.00		9013+13.52	-	Normal Crown Section

PUBLIC LANDS SURVEY SYSTEM, RIGHT OF WAY, AND PROPERTY CORNERS

The Contractor will have a Land Surveyor, licensed in the State of South Dakota, to set, reestablish or verify public land survey system (PLSS) corners, right of way (ROW) corners, and property corners as directed by the appropriate SDDOT Region Land Surveyor. It is estimated that 4 PLSS corners and 129 ROW and property corners will be set, reestablished, or verified for this project. The Contractor's Land Surveyor, under the direction of the Region Land Surveyor, will set, reestablish, or verify all corner monuments after surfacing and fencing operations are completed in accordance with the PUBLIC LANDS SURVEY SYSTEM CORNERS section and the RIGHT OF WAY AND PROPERTY CORNERS section in Chapter 8 of the SDDOT Survey Manual.

< https://dot.sd.gov/doing-business/engineering/design-services/surveyors >

All costs associated with furnishing and installing PLSS caps, rebar, and all other materials associated with setting, reestablishing, or verifying PLSS, ROW corners, and property corners in accordance with the SDDOT Survey Manual will be incidental to the contract unit price per each for "Reestablish Public Land Survey System Corner" and/or "Reestablish Right-of-Way and Property Corner".

REMOVE AND RESET LANDSCAPE ROCK

In order to install the Shared Use Path and construct the backslope along the SD Hwy 37 Bypass the in place landscape rock located from 1002+38 to 1002+48 L will need to be removed, the area reshaped and the landscape rock reset to the satisfaction of the Engineer.

All costs for removing the landscape rock, shaping the backslope and resetting the landscape rock shall be incidental to the contract unit price per square foot for "6" Sidewalk".

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MISCELLANEOUS WORK

Miscellaneous Work consists of temporary Shared Use Path construction as detailed in the plans. The temporary Shared Use Path south of the spillway will connect a pathway from the permanent Shared Use Path to the new Hwy 37 shoulder at Sta. 55+50. Pedestrian traffic will be allowed to use the southbound Hwy 37 right lane and shoulder to cross the spillway using the new roadway bridge in case the pedestrian bridge needs to remain closed for spillway construction by others. Pedestrians will be shielded from traffic using Traffic Control Barriers. See Section C for Traffic Control Barrier specifications. The temporary Shared Use Path north of the spillway will connect a pathway from the new Hwy 37 shoulder at Sta. 59+50 to the Pumphouse Driveway. See Miscellaneous Work layout sheets. All costs for construction and removal of the temporary Shared Use Paths will be incidental to the contract unit price per site for "Miscellaneous Work". Estimated quantities for Miscellaneous Work are listed here:

ESTIMATE OF QUANTITIES FOR MISCELLANEOUS WORK (FOR INFORMATION ONLY)

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
120E0600	Contractor Furnished Borrow Excavation	1130	CuYd
120E6200	Water for Granular Material	1.4	MGal
260E2010	Gravel Cushion	113.9	Tons
320E6000	Temporary Asphalt	120.1	Tons
634E0700	Traffic Control Movable Concrete Barrier	42	Each
651E7000	Type 1 Detectable Warnings	60	SqFt

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TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS

Concrete barriers will be provided by the State and are available for pickup from the SDDOT Kimball Maintenance Yard located in the SW1/4 of Section 3 – Township 103N – Range 68W of the 5th PM. On SD Hwy 45, travel approximately 1.4 miles north of Interstate Hwy 90 Exit 284 at Kimball, SD. The barriers will be hauled back to the SDDOT Kimball Maintenance Yard when they are no longer needed on the project.

Barriers to be adjusted or moved will be disconnected from adjacent barriers to minimize damage to connecting pins. Pins damaged by the Contractor will be replaced at no cost to the Department.

Concrete barrier sections will be placed as depicted in the plans to comply with clear zone requirements and as required by the Engineer. The barriers will be pinned and bolted together as directed by the Engineer.

TRAFFIC CONTROL MOVABLE CONCRETE BARRIERS (CONTINUED)

All costs associated with picking the barriers up from the SDDOT Maintenance Yard, transporting, setting, connecting, and hauling them back to the SDDOT Maintenance Yard will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier.

After the initial placement, the concrete barriers may need to be adjusted. Adjustment of the barriers, where they do not need to be loaded on a truck for transport, will be incidental to the contract unit price per each for Traffic Control Movable Concrete Barrier. All costs associated with removing, loading, unloading, and resetting of the barriers at a new site, will be incidental to the contract unit price per each for Remove and Reset Traffic Control Movable Concrete Barrier. No additional payment will be made for barriers that are not immediately reset at a new location on the project and stored on-site until they are either reset on the project or returned to the SDDOT as indicated in these plans.

TABLE OF CONSTRUCTION STAKING FOR PROJECT NH-TA 0037(157)75

(See Special Provision for Contractor Staking)

					Grade Staking						
Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Length (Mile)	Lane Factor	*Sets of Stakes	**Grade Staking Quantity (Mile)	Miscellaneous Staking Quantity (Mile)	Slope Staking Quantity (Mile)	Structure Staking Quantity (Each)
SD Hwy 37 (5 Lanes PCCP)	10+00	55+85	5	4,585	0.868	2.5	2	4.340	0.868	0.868	
SD Hwy 37 (Gravity Large Concrete Block Retaining Wall)	52+00 R	55+84 R									1
SD Hwy 37 (Roadway Bridge)	55+85	57+00									1
SD Hwy 37 (5 Lanes PCCP)	57+00	136+30	5	7,930	1.502	2.5	2	7.510	1.502	1.502	
SD Hwy 37 East/West (5 Lanes PCCP)	1019+81	1023+13	5	332	0.063	2.5	2	0.315	0.063	0.063	
SD Hwy 37 Free Right (1 Lane PCCP)	300+00	305+94	1	594	0.113	0.5	2	0.113	0.113	0.113	
Fairoaks Avenue (3 Lanes PCCP)	9200+30	9201+08	3	78	0.015	1.5	2	0.045	0.015	0.015	
23rd Avenue West (3 Lanes PCCP)	2000+05	2000+77	3	72	0.014	1.5	2	0.042	0.014	0.014	
23rd Avenue East (3 Lanes PCCP)	2001+38	2002+35	3	97	0.018	1.5	2	0.054	0.018	0.018	
Lakeview Lane (2 Lanes PCCP)	3000+31	3000+85	2	54	0.010	1	2	0.020	0.010	0.010	
Pumphouse Driveway (2 Lanes AC Pavement)	5000+37	5004+32	2	395	0.075	1	1	0.075	0.075	0.075	
Harmon Drive West (2 Lanes PCCP)	7000+51	7001+90	2	139	0.026	1	2	0.052	0.026	0.026	
Harmon Drive East (2 Lanes PCCP)	7002+78	7003+80	2	102	0.019	1	2	0.038	0.019	0.019	
Rowley Street (2 Lanes AC Pavement)	8000+82	8009+12	2	830	0.157	1	1	0.157	0.157	0.157	
Frontage Road (2 Lanes AC Pavement)	9000+42	9018+14	2	1772	0.336	1	1	0.336	0.336	0.336	
National Guard Road West (2 Lanes PCCP)	9100+50	9102+11	2	161	0.030	1	2	0.060	0.030	0.030	
National Guard Road East (2 Lanes PCCP)	9103+19	9105+00	2	181	0.034	1	2	0.068	0.034	0.034	
Shared Use Path SD37 (1 Lane PCCP)	1+71	22+00	1	2029	0.384	0.5	2	0.384	0.384	0.384	
Shared Use Path Independent Alignment (1 Lane PCCP)	43+40	61+94	1	1854	0.351	0.5	2	0.351	0.351	0.351	
Shared Use Path (Pedestrian Bridge)											1
Shared Use Path Independent Alignment (1 Lane PCCP)	63+56	85+26	1	2170	0.411	0.5	2	0.411	0.411	0.411	
Shared Use Path North (1 Lane PCCP)	400+09	426+70	1	2661	0.504	0.5	2	0.504	0.504	0.504	
Shared Use Path National Guard (1 Lane PCCP)	500+00	514+94	1	1494	0.283	0.5	2	0.283	0.283	0.283	
							Totals:	15.158	5.213	5.213	3

* 1 = Blue Top Stakes Only (Asphalt Concrete Pavement)
2 = Blue Top and Paving Hub Stakes (PCC Pavement)

** Grade Staking Quantity = (Length) x (Lane Factor) x (Sets of Stakes)

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
9-22-2023

Plot Scale - 1:200
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\NotesSectionB.dgn

PIPE QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B15	B245

Plotting Date: 8/18/2023

		Reinforced Concrete																									Corrugated Metal																Pipe Transition	
		Circular				Arch						Circular Flared End		Arch Flared End			Circular Sloped End		Arch Sloped End		Circular Safety End		Arch Safety End		Tee		Circular				Arch		Arch Flared End		Circular Flared End		Circular Safety End		Arch Safety End		Circular Sloped End		Circular Elbow		Round RCP to CMP Transition	
Station	Offset (L/R)	18" Cl. 2 Ft	24" Cl. 2 Ft	36" Cl. 2 Ft	54" Cl. 2 Ft	18" Cl. 2 Ft	24" Cl. 2 Ft	30" Cl. 2 Ft	36" Cl. 2 Ft	42" Cl. 2 Ft	48" Cl. 2 Ft	54" Each		36" Each	42" Each	48" Each	24" Each		24" Each	30" Each	18" Each		18" Each		18" x 18" Each	54" x 18" Each	18" 14 Ga Ft	18" 16 Ga Ft	24" 14 Ga Ft	24" 16 Ga Ft	15" 16 Ga Ft	54" 14 Ga 3x1 Ft	15" Each		24" Each		18" Each	24" Each	54" with Bars Each		18" Each	24" Each	18" 12.5° Each	24" 17.5° Each	18" Outlet Each	24" Outlet Each
10+13.50-34.13' R to 10+13+50-34.13' L		66																																										
10+13.50-34.13' L to 10+13+50-59.95' L		26																																										
11+50.00-31.67' L to 12+13.00-31.67' L		60																																										
11+50.00-31.67' R to 12+13.00-31.67' R		60																																										
12+13.00-63.37' L to 14+35.00-62.63' L				218																																									
12+13.00-31.67' R to 12+13.00-31.67' L		62																																										
12+13.00-31.67' L to 12+13.00-63.37' L		30																																										
13+20.00-31.67' L to 14+35.00-31.67' L		112																																										
13+20.00-31.67' R to 14+35.00-31.67' R		112																																										
14+35.00-31.67' R to 14+35.00-31.67' L		62																																										
14+35.00-31.67' L to 14+35.00-62.63' L		28																																										
14+35.00-62.63' L to 14+83.51-77.69" L				46																																									
14+83.51-77.69" L to 17+96.44-84.01' L										302				2																															
14+83.51-77.69" L to 17+96.44-84.01' L										296				2												1																			
17+29.10-76.89' L to 17+30.00-32.17' L		42																																											
19+50.00-34.62' R to 19+50.00-36.00' L		68																																										
19+50.00-36.00' L to 19+50.00-76.50' L		32																			1																								
22+67.00-34.62' R to 22+67.00-34.62' L		66																																										
22+67.00-34.62' L to 22+67.00-71.00' L		28																			1																								
25+25.00-34.62' L to 25+60.00-34.62' L		24																																										
25+25.00-34.62' R to 25+60.00-34.62' R		24																																										
25+60.00-34.62' R to 25+60.00-34.62' L		66																																										
25+60.00-34.62' L to 25+60.00-75.13' L	*	32																			1																								
25+60.00-34.62' L to 25+95.00-34.62' L		24																																										
25+60.00-34.62' R to 25+95.00-34.62' R		24																																										
27+00.00-32.17' R to 27+00.00-32.17' L		64																																										
27+00.00-32.17' L to 27+00.00-69.67' L	*	30																			1																								
29+09-73' L																											64										2							
27+00.00-32.17' L to 29+40.00-34.62' L		240																																										
29+40.00-32.17' R to 29+40.00-34.62' L		64																																										
29+40.00-32.17' R to 31+98.00-32.17' R		256																																										
31+00.00-32.17' L to 31+00.00-69.67' L	*	30																			1																								
31+98.00-32.17' R to 32+10.00-64.00' R		32																																										
34+00.00-32.17' R to 34+00.00-32.17' L		64																																										
34+00.00-32.17' L to 34+00.00-73.67' L	*	34																			1																								
35+60.87-78.80' L to 35+70.00-32.17' L	*	40																			1																								
35+70.00-32.17' L to 35+80.00-32.17' R		64																																										
35+80.00-56.00 R to 35+80.00-32.17' R		16																			1																								
36+06-82' L																											84										2							
37+00.00-32.17' R to 37+00.00-32.17' L		64																																										
37+00.00-32.17' L to 37+00.00-75.67' L	*	36																			1																								
38+00.00-34.63' R to 38+00.00-32.17' L		64																																										
38+00.00-32.17' L to 39+20.00-32.17' L		118																																										
Subtotal:		2264	0	264	0	0	0	0	0	598	0	0		0	4	0	0		0	0	9		0		0	1	0	148	0	0	0	0	0		0		4	0	0		0	0	0	0	0	0

Pipes denoted with an asterisk(*) indicate that the entire length or a portion of the pipe requires watertight joints in accordance with the STORM SEWER plan note.

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:200

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\TablePipe.dgn

PIPE QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B16	B245

Plotting Date: 8/18/2023

Station	Offset (L/R)	Reinforced Concrete																										Corrugated Metal														Pipe Transition	
		Circular				Arch						Circular Flared End		Arch Flared End			Circular Sloped End		Arch Sloped End		Circular Safety End		Arch Safety End		Tee		Circular				Arch		Arch Flared End		Circular Flared End		Circular Safety End		Arch Safety End		Circular Sloped End		Circular Elbow		Round RCP to CMP Transition	
		18" Cl. 2	24" Cl. 2	36" Cl. 2	54" Cl. 2	18" Cl. 2	24" Cl. 2	30" Cl. 2	36" Cl. 2	42" Cl. 2	48" Cl. 2	54"		36"	42"	48"	24"		24"	30"	18"		18"		18" x 18"	54" x 18"	18" 14 Ga	18" 16 Ga	24" 14 Ga	24" 16 Ga	15" 16 Ga	54" 14 Ga 3x1	15"		24"		18"	24"	54" with Bars		18"	24"	18" 12.5°	24" 17.5°	18" Outlet	24" Outlet
		Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Ft	Each		Each	Each	Each	Each		Each	Each	Each		Each		Each	Each	Ft	Ft	Ft	Ft	Ft	Ft	Each		Each		Each	Each	Each		Each	Each	Each	Each	Each	Each
38+08-76' L			66														2																											
39+20.00-34.62' R to 39+20.00-32.17' L		64																																										
39+18.88-65.65' L to 39+20.00-32.17' L *		26																			1																							
39+18.71-70.83' L to 39+19.27-82.04' L		10																																										
41+50.00-34.63' R to 41+50.00-32.17' L		64																																										
41+50.00-32.17' L to 41+50.00-61.67' L *		22																			1																							
43+00.00-32.17' R to 43+00.00-32.17' L		64																																										
43+00.00-32.17' L to 43+00.00-63.67' L *		24																			1																							
46+00.00-34.62' R to 46+00.00-34.62' L		66																																										
46+00.00-34.62' L to 46+00.00-63.12' L		20																			1																							
49+00.00-34.62' L to 49+00.00-32.17' R		64																																										
49+00.00-32.17' R to 49+00.00-110.00' R *		10																									56														1		2		1	
50+35.00-34.62' L to 50+70.00-34.62' L		24																																										
50+35.00-34.62' R to 50+70.00-34.62' R		24																																										
50+70.00-34.62' L to 50+70.00-34.62' R			66																																									
50+70.00-61.00' L to 50+70.00-34.62' L			18														1																											
50+70.00-34.62' R to 50+70.00-135.00' R *			58																									26														1		2		1	
50+70.00-34.62' L to 51+05.00-34.62' L		24																																										
50+70.00-34.62' R to 51+05.00-34.62' R		24																																										
51+05.00-34.62' R to 52+00.00-32.17' R		90																																										
51+05.00-34.62' L to 52+00.00-32.17' L		90																																										
53+40.00-32.17' R to 53+40.00-32.17' L		62																																										
53+40.00-32.17' L to 53+40.00-63.67' L		24																			1																							
55+05.00-32.17' R to 55+05.00-32.17' L		64																																										
55+05.00-32.17' L to 55+05.00-63.67' L		24																			1																							
56+81.97-64.50' L to 57+60.00-64.50' L		78																			1																							
57+60.00-64.50' L to 57+61.00-34.62' L		28																																										
58+53.17-64.46' L to 61+29.00-78.00' L		274																			1				1																			
58+63-69' R																												106														2					
59+99.20-70.46' L to 60+00.00-36.04' L		32																																										
61+29.00-44.00' L to 61+29.00-78.00' L		32																																										
61+29.00-44.00' L to 61+90.00-37.37' L		58																																										
61+43-67' R																												92														2					
63+00.00-38.12' L to 63+00.00-60.00' R		90																			1																							
64+50.00-38.12' L to 64+50.00-66.37' R		96																			1																							
66+00.00-38.12' L to 66+00.00-8.33' R		44																																										
66+00.00-8.33' R to 66+00.00-69.83' R *		54																			1																							
67+25.00-35.67' L to 67+25.00-8.33' R		42																																										
67+25.00-8.33' R to 67+25.00-71.83' R *		56																			1																							
69+96.00-8.33' R to 69+96.00-35.67' L		42																																										
69+96.00-35.67' L to 69+96.00-65.17' L		22																			1																							
70+44-67' R																												80														2					
72+00.00-8.33' R to 72+00.00-35.67' L		42																																										
72+00.00-35.67' L to 72+00.00-67.17' R		24																			1																							
Subtotal:		1898	208	0	0	0	0	0	0	0	0	0		0	0	0	3		0	0	14		0		1	0	56	278	26	0	0	0	0		0		6	0	0		1	1	2	2	1	1

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:200
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section BT\TablePipe.dgn

PIPE QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B17	B245

Plotting Date: 8/18/2023

	Reinforced Concrete																										Corrugated Metal														Pipe Transition	
	Circular				Arch						Circular Flared End		Arch Flared End			Circular Sloped End		Arch Sloped End		Circular Safety End		Arch Safety End		Tee		Circular				Arch		Arch Flared End		Circular Flared End		Circular Safety End		Arch Safety End		Circular Sloped End		Circular Elbow		Round RCP to CMP Transition	
Station Offset (L/R)	18" Cl. 2 Ft	24" Cl. 2 Ft	36" Cl. 2 Ft	54" Cl. 2 Ft	18" Cl. 2 Ft	24" Cl. 2 Ft	30" Cl. 2 Ft	36" Cl. 2 Ft	42" Cl. 2 Ft	48" Cl. 2 Ft	54" Each		36" Each	42" Each	48" Each	24" Each		24" Each	30" Each	18" Each		18" Each		18" x 18" Each	54" x 18" Each	18" 14 Ga Ft	18" 16 Ga Ft	24" 14 Ga Ft	24" 16 Ga Ft	15" 16 Ga Ft	54" 14 Ga 3x1 Ft	15" Each		24" Each		18" Each	24" Each	54" with Bars Each		18" Each	24" Each	18" 12.5° Each	24" 17.5° Each	18" Outlet Each	24" Outlet Each
74+00.00-8.33' R to 74+00.00-35.67' L	42																																									
74+00.00-35.67' L to 74+00.00-69.17' L	26																			1																							
83+14-71' L																													88							2						
84+50.00-8.33' L to 84+50.00-69.00' L	54																			1																							
85+50.00-8.33' L to 85+50.00-73.00' L	58																			1																							
92+00.00-8.33' L to 92+00.00-71.00' L	66																			1																							
92+58-79' L																												76							2							
94+41-78' L																												82							2							
95+00.00-3.98' L to 95+00.00-70.00' L *	58																			1																							
96+65.00-8.33' L to 96+65.00-67.00' L *	52																			1																							
97+22-72' L																													70							2							
103+00		114														2																												
112+26-77' R																												66							2							
112+30-74' L																												92							2							
118+29				256							4																																
121+68-77' L																															132						4						
133+80.00-2.25' R to 133+80.00-74.75' R	64																			1																							
SD Highway 37 & Free Right																																											
1020+30.00-32.65' L to 1019+70.43-34.45' L	58																																									
1020+30.00-31.67' R to 1019+69.57-34.38' R	60																																									
1021+00.00-31.67' R to 1020+30.00-31.67' R	68																																									
1021+15.51-42.46' L to 1020+30.00-32.65' L	84																																									
1021+80.00-34.12' L to 1021+50.21-54.16' L	30																																									
1022+00.00-34.12' R to 1021+00.00-31.67' R	96																																									
301+60.00-4.12' L to 301+23.00-1.67' L	30																																									
302+00.00-1.67' L to 301+60.00-4.12' L	34																																									
Shared Use Path (National Guard Road)																																											
514+69						56												4																										
Shared Use Path (North)																																											
419+05																													34				2										
422+76																														22		2											
XR 77 (Harmon Drive)																																											
7001+64							78					2																																
XR 104 (Frontage Road)																																											
9002+15.00-12.67' L to 9002+15.00-30.83' R	36																			1																							
9003+75.00-12.67' L to 9003+75.00-30.83' R	36																			1																							
9005+65.00-12.67' L to 9005+65.00-32.83' R	38																			1																							
9010+00.00-12.67' L to 9010+00.00-30.83' R *	36																			1																							
9012+50.00-12.67' L to 9012+50.00-30.83' R *					36																	1																				
XR 131 (National Guard Road & 54th Street)																																											
9101+02							248											8																										
9103+55									80					2																													
9104+47-39' R																												46							2							
Subtotal:	1026	114	0	256	36	56	248	78	0	80	4		2	0	2	2		4	8	11		1		0	0	0	362	0	192	22	132	2		2		10	4	4		0	0	0	0	0	0
Total:	5188	322	264	256	36	56	248	78	598	80	4		2	4	2	5		4	8	34		1		1	1	56	788	26	192	22	132	2		2		20	4	4		1	1	2	2	1	1

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:200

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\TablePipe.dgn

FENCE QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B18	B245

Plotting Date: 8/18/2023

Station to Station		Side (L/R)	Right-of-Way Fence					Post Panels		Gates			Remove Fence	Remove Gate for Reset
			Type 2 (Ft)	Type 3 (Ft)	Type 4 (Ft)	4' Chain Link Fence with Top Rail (Ft)	6' Chain Link Fence w/Tension Wire Top (Ft)	2 Post Panel (Each)	3 Post Panel (Each)	Barbed Wire Gate 24' (Each)	Barbed Wire Gate 40' (Each)	Pedestrian Swing Gate (Each)	(Ft)	(Each)
51+25	54+43	R		297				3					297	1
55+84	55+87	R					64						48	
56+97	57+05	R					61						47	
61+95 (SUP)	55+88	L					200					2	117	
63+55 (SUP)	56+97	L					209					2	137	
61+91 (SUP)	61+95 (SUP)	L					86							
63+48 (SUP)	63+55 (SUP)	L					87							
70+42	73+38	L				283							330	
77+32	130+71	R	5412					12	9	2	1		5353	2
100+29	104+05	L		405				4					393	1
104+21	104+40	L			19			2					10	
TOTALS:			5412	702	19	283	707	21	9	2	1	4	6732	4

Post Type and Sequence:

Right-of-way fence will be constructed using alternate wood and steel posts except as noted.

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:200
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File - ...\Section B\Table\Fence.dgn

PAVEMENT, CURB AND GUTTER, AND SIDEWALK QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B19	B245

Plotting Date: 8/18/2023

Station to Station		Concrete Curb and Gutter								Concrete Gutter			PCC Fillet Section			Type A PCC Approach Pavement			Concrete Sidewalk			Detectable Warning Type 1			
		Type B		Type F		Type FL		Type D		Type P															
		66	68.5	68	68.5	68		48	48.5	P6	P8	P8.5		8.5"		6"	8"		4"	6" SUP					
		Ft		Ft		Ft		Ft	Ft	Ft	Ft	Ft		SqYd		Sqyd	SqYd		SqFt	SqFt			SqFt		
Mainline: To Fairoaks																									
10+00 29.56' R	12+85 30.00' R		245.0									40.0					28.9		1427						
12+85 30.00' R	15+51 107.75' R		326.6																1750.4				20		
15+18 49.44' R	15+34 66.19' R		22.8																						
10+00 29.90' L	13+00 30.00' L		224.0									76.0					48.8								
13+00 30.00' L	15+32 129.81' L		305.0																1483.1				20		
Fairoaks to 23rd Ave																									
15+86 107.71' R	23+33 127.49' R		881.7																4639.8				45		
15+97 37.77' L	17+39 39.50' L		135.2									22.8							672.8				30		
18+28 37.96' L	23+33 102.04' L		552.6																	4943			39		
23rd Ave to Bridge																									
23+69 127.55' R	26+58 30.50' R		323.4									40.0					28.9		1831.6				25		
26+58 30.50' R	28+33 30.50' R		143.2									32.0					24.5		876.1						
28+33 30.50' R	29+07 30.50' R		33.3									40.0					28.9		366.2						
29+07 30.50' R	32+27 55.50' R		334.5											14.9					1631.2				20		
32+48 55.50' R	36+85 30.49' R		412.0									40.0		14.9		28.9			2148.9				30		
36+85 30.49' R	39+67 30.50' R		249.9									32.0					24.5		1509.4						
39+67 30.50' R	46+54 108.71' R		577.2		168.6														30						
46+79 106.34' R	49+70 30.50' R				316.1							40.0					28.9								
49+70 30.50' R	55+86 30.50' R				340.0				175.7			100.0													
23+70 102.92' L	29+15 30.50' L		572.1									24.0				40.0				5402			38		
29+15 30.50' L	32+59 30.50' L		319.1									24.0					40.0			3490			10		
32+59 30.50' L	36+26 30.50' L		331.5									36.0					53.3			3815			20		
36+26 30.50' L	39+89 30.50' L		322.6									40.0					28.9			1126					
39+89 30.50' L	55+86 30.50' L		556.7		1040.8																				
Bridge to Harmon Dr																									
56+98 30.50' L	59+35 30.76' L							137.9				100.0													
59+35 30.76' L	61+16 31.91' L			149.7							32.0						24.4								
61+16 31.91' L	75+77 34.00' L			672.5				677.1			100.0														
63+06 10.00' R	70+04 10.00' R			566.4		133.1																			
70+82 10.00' R	76+68 2.00' L			588.3																					
63+06 10.00' L	70+04 10.00' L					696.4																			
70+82 2.00' R	76+68 10.00' L					585.5																			
Harmon Dr to National Guard Rd																									
77+89 10.00' R	82+59 2.00' L					470.0																			
83+69 10.00' R	87+34 2.00' L					366.1																			
88+34 10.00' R	92+12 2.00' L					378.3																			
92+96 10.00' R	103+79 2.00' L					1082.1																			
104+85 10.00' R	111+70 2.00' L					685.3																			
112+78 10.00' R	121+20 3.32' L					842.6																			
122+25 13.04' R	130+03 14.00' L					778.6																			
77+89 2.00' R	82+59 10.00' L					470.0																			
83+69 10.00' L	87+34 10.00' L			285.2		80.8																			
Subtotal:		0	6868	2262	1865.5	6568.8	0	815	175.7	0	132	686.8	0	29.8	0	68.9	360	0	18366.5	18777	0	0	297	0	0

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
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8-18-2023

Plot Scale - 1:200

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PAVEMENT, CURB AND GUTTER, AND SIDEWALK QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B20	B245

Plotting Date: 8/18/2023

Station to Station		Concrete Curb and Gutter								Concrete Gutter			PCC Fillet Section	Type A PCC Approach Pavement		Concrete Sidewalk		Detectable Warning Type 1
		Type B		Type F		Type FL	Type D			Type P								
		66	68.5	68	68.5	68	48	48.5		P6	P8	P8.5	8.5"	6"	8"	4"	6" SUP	
		Ft		Ft		Ft	Ft	Ft		Ft	Ft	Ft	SqYd	Sqyd	SqYd	SqFt	SqFt	SqFt
88+34 10.00' L	92+12 10.00' L			379.2														
92+96 2.00' R	103+79 10.00' L			403.4		679.8												
104+85 2.00' R	111+70 10.00' L					685.3												
112+78 2.00' R	121+20 11.64' L					842.6												
122+25 13.04' L	130+03 22.00' L					777.3												
SD 37 Bypass																		
1001+43 39.50' R	1012+01 55.40' R		39.8										15.7			5385.1		20
1012+61 54.65' R	1012+86 29.74' R		39.3										14.9			250.5		20
1019+81 30.15' R	1022+12 30.00' R		230.9													342.2		
1001+65 32.00' L	1012+13 55.55' L		59.8										11.4				10623	30
1012+49 59.99' L	1012+85 30.76' L		53.9										12.6				451	31
1012+85 30.76' L	1019+93 30.02' L		12.7														7108	
1021+73 38.99' L	1023+07 30.00' L		141.4									4.1						
SD 37 Free Right																		
300+00 0.00'	304+44 0.00'		444.2														4253	10
301+75 18.00' R	303+60 18.00' R		198.1															
XR 104 (Frontage Rd)																		
9000+92 27.23' L	9001+10 26.26' L	13.0								20.00					20.7			
9001+10 26.26' L	9002+58 11.00' L	133.0								30.00				23.3				
9002+58 11.00' L	9004+17 11.00' L	129.0								30.00				23.3				
9004+17 11.00' L	9009+08 11.00' L	450.8								40.00					28.9			
9009+08 11.00' L	9013+02 11.00' L	354.4								40.00				28.9				
9013+02 11.00' L	9013+14 11.00' L	11.0																
Driveway at 32+47L																		
0+85 12.00 L	1+62 18.54' L		109.2															
0+85 12.00 R	1+62 27.73' R		43.3															
Shared Use Path (Independent Align)																		
43+40	49+00																5600	
49+00	55+00																5023	
55+00	61+00																4814	
61+00	61+94																968	
63+56	67+00																3481	
67+00	73+25																6250	
73+25	79+50																6250	
79+50	85+32																5814	20
Subtotal:		1091	1373	782.6	0	2985	0	0	0	160	0	4.1	0	54.6	0	75.5	49.6	0	5977.8	60633.4	0	0	131	0	0	0

PAVEMENT, CURB AND GUTTER, AND SIDEWALK QUANTITIES

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B21	B245

Plotting Date: 8/18/2023

Station to Station		Concrete Curb and Gutter								Concrete Gutter			PCC Fillet Section			Type A PCC Approach Pavement			Concrete Sidewalk			Detectable Warning Type 1			
		Type B		Type F		Type FL		Type D		Type P															
		66	68.5	68	68.5	68		48	48.5	P6	P8	P8.5		8.5"		6"	8"		4"	6" SUP					
		Ft		Ft		Ft		Ft	Ft	Ft	Ft	Ft		SqYd		Sqyd	SqYd		SqFt	SqFt			SqFt		
Shared Use Path North																									
400+07	405+64																			5544			20		
405+89	406+43																			530			20		
406+63	426+70																			20067			40		
Shared Use Path National Guard Rd																									
500+00	514+94																			14938			40		
Subtotal:		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41078.9	0	0	120	0	0
Total:		1091	8241	3045	1865.5	9553.8	0	815	175.7	160	132	690.9	0	84.4	0	144.4	409.6	0	24344.3	120489	0	0	548	0	0

REGISTERED PROFESSIONAL ENGINEER
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8-18-2023

Plot Scale - 1:200

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PIT INFORMATION SHEET
BORROW

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B22	B245

Plotting Date: 04/21/2023

PIT NO. Elits Pit

PROJECT NO. NH 0037(157)75 PCN 05UY COUNTY Davison

LOCATION W 1/2 SEC. 34 TOWNSHIP 104N RANGE 60W

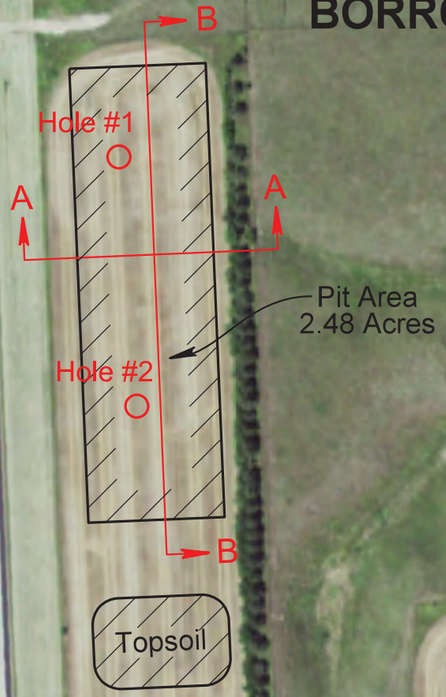
PIT OWNER Melvin C. Elits and Brenda J. Elits ADDRESS Mitchell, SD

AVERAGE DEPTH OF MATERIAL 10' AVERAGE DEPTH OF TOPSOIL 6"

MATERIAL AVAILABLE 40,000 CU.YDS.

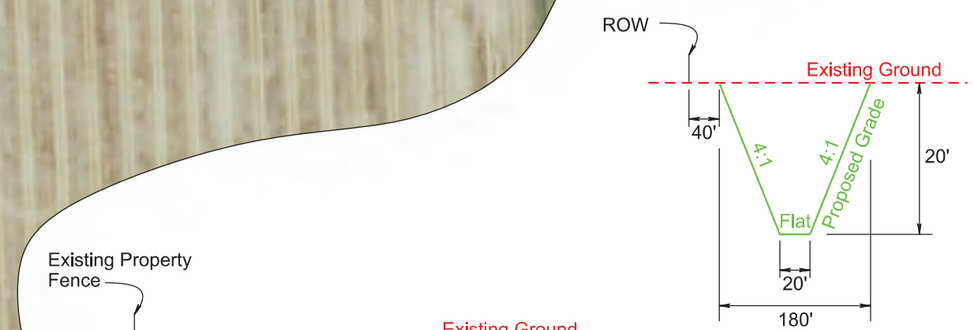
ESTIMATED CU. YDS. OF TOPSOIL 2,607

5350' DEADHAUL TO STATION 136+30

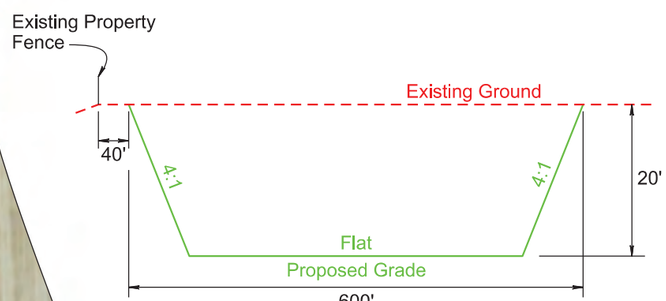


PIT DATA

LAB. SAMPLE #	22-1019	22-1020
PIT NUMBER/NAME	North Eilts	South Eilts
HOLE#	1	2
FIELD SAMPLE #	1	2
DEPTH	1'-22'	1'-22'
FIELD MOISTURE	#N/A	#N/A
DRY LOOSE WT.	72.5	75.1
% passing 3/8	99.3	98.4
% passing # 4	99.1	98.1
% passing # 10	98.4	97.3
% coarse sand	6.5	7.2
% fine sand	27.9	26.4
% silt	34.7	32.8
% clay	29.3	30.9
% passing # 40	92.0	90.1
% passing # 200	64.1	63.7
% coarse & fine sand	34.4	33.5
liquid limit	34	33
liquid plastic limit	16	16
P. I.	18	17
TEX. CLASSIFICATION	CLAY SILT	SNDY CLAY
AASHTO CLASS.	A-6	A-6
GP Index	9	9
Field Color	Brown	Brown
DEPTH TO GROUNDWATER	Dry Hole	Dry Hole
Drilling Date	04/04/2022	04/04/2022
DEPTH OF TOPSOIL	6"	6"



Sec A-A



Sec B-B

SCALE:
1" = 200 ft

STANDARD PIT INFORMATION SHEET
SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

PLOT SCALE - 1=200

PLOT NAME - 1

FILE - ...\PITS\DAVS05UY\BP05UY.DGN

PLOTTED FROM - TRM1INT16

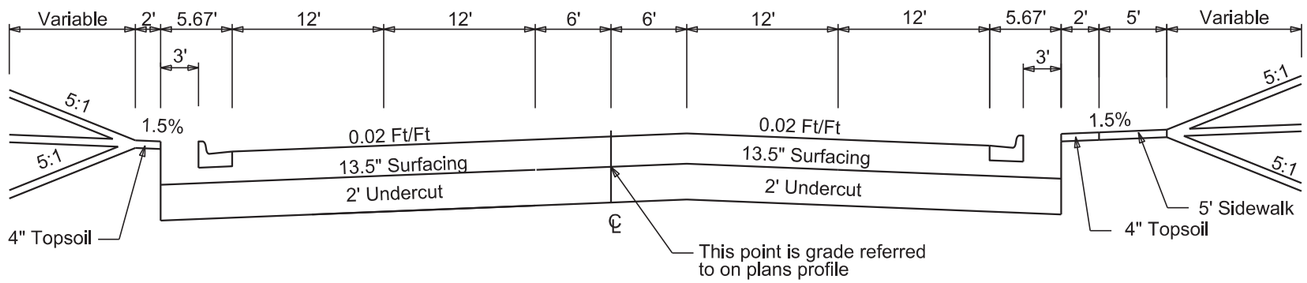
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

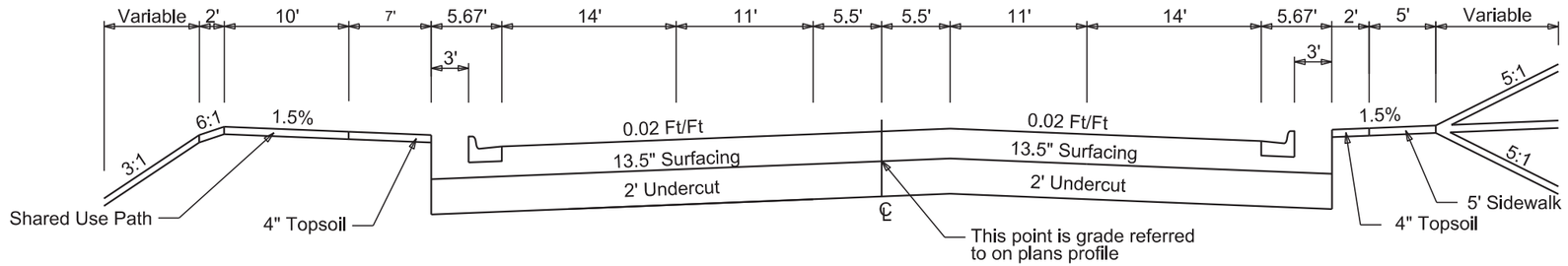
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B23	B245

Plotting Date: 8/18/2023

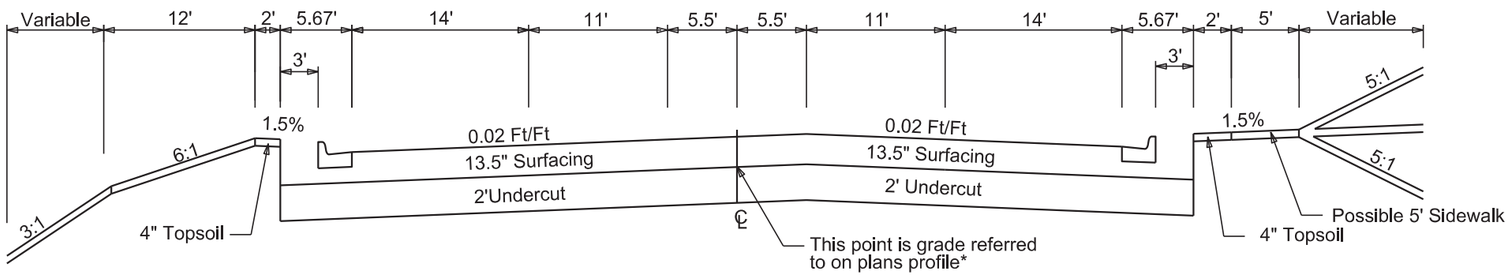
From South Limits to Fairoaks Avenue
10+00.00 to 15+68.00



From Fairoaks Avenue to North of Lake Mitchell Campground
15+68.00 to 37+38.70



From North of Lake Mitchell Campground to Bridge
37+38.70 to 55+86.00



* Profile grade across the bridge is at Finished Grade

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
8-18-2023

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File - ...\Sheet Files\Section B1Typ.dgn

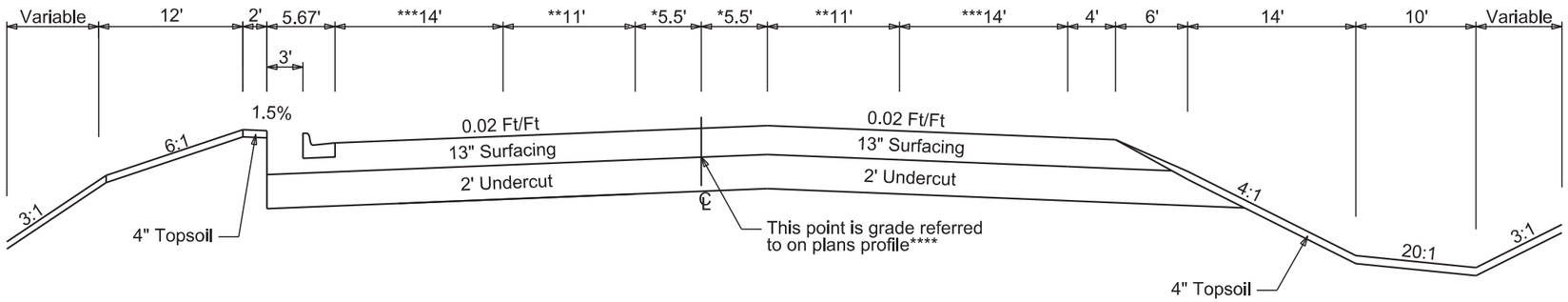
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B24	B245

Plotting Date: 8/18/2023

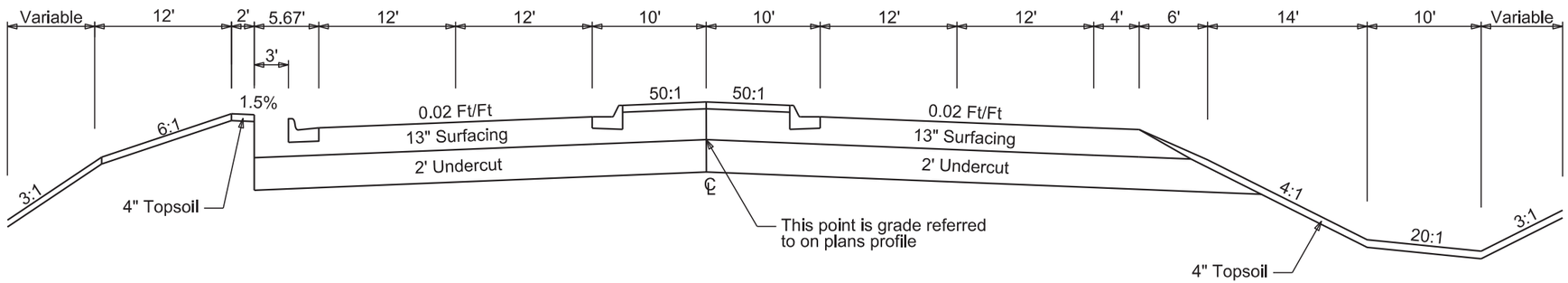
From Bridge to Raised Median Transition
56+98.00 to 62+98.02



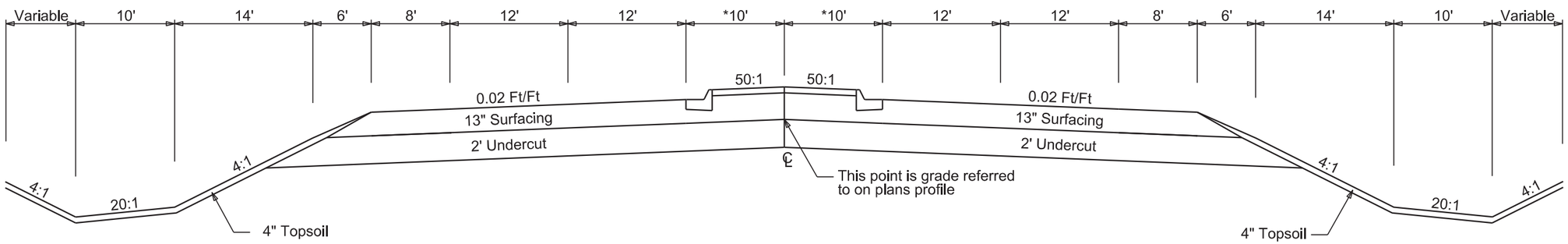
* 57+98.02 to 62+98.02
5.5' to 10'
** 57+98.02 to 62+98.02
11' to 12'
*** 57+98.02 to 62+98.02
14' to 12'

****Profile grade across the bridge is at Finished Grade

From Median Transition to Harmon Drive
62+98.02 to 77+28.91



From Harmon Drive to National Guard Road
77+28.91 to 131+99.00



* 119+95.07 to 129+05.07
10' to 22'

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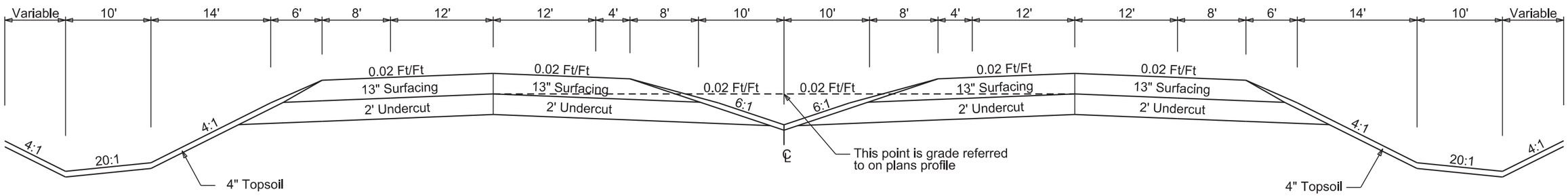
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

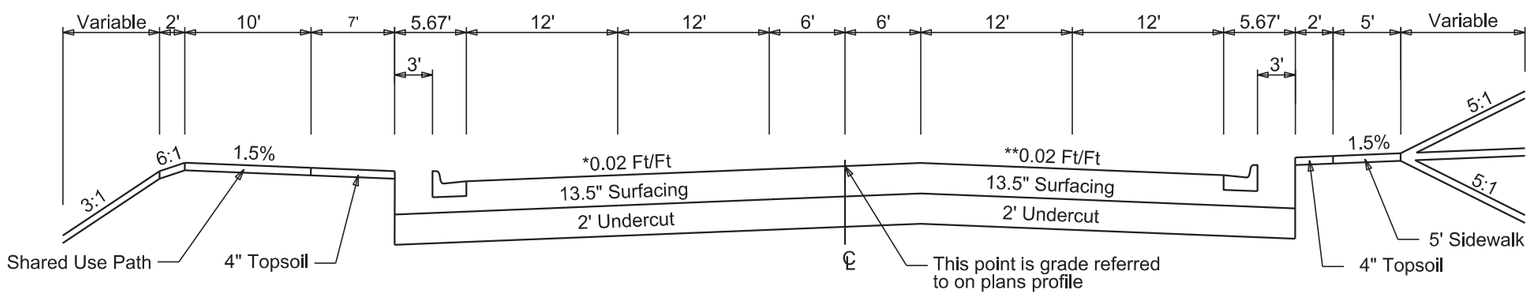
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B25	B245

Plotting Date: 9/21/2023 Rev 09/15/2023 RJB

National Guard Road to North Limits
131+99.00 to 136+30.00

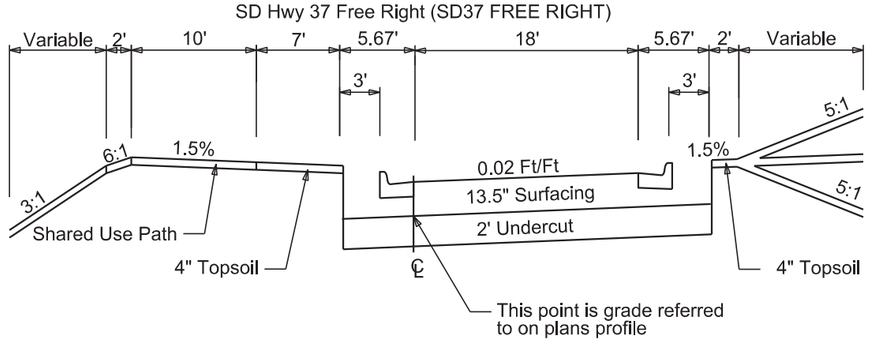


SD Hwy 37 (SD37)
1019+80.77 to 1023+43.22



SD Hwy 37
*1022+15.00 to 1023+00.00 : 0.020 Ft/Ft to 0.003 Ft/Ft
**1022+15.00 to 1023+00.00 : -0.020 Ft/Ft to 0.003 Ft/Ft
*1023+00.00 to 1023+15.00 : 0.003 Ft/Ft
**1023+00.00 to 1023+15.00 : 0.003 Ft/Ft

SD Hwy 37 Free Right (SD37 FREE RIGHT)



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9-22-2023

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File - ...\Sheet Files\Section B\Typ.dgn

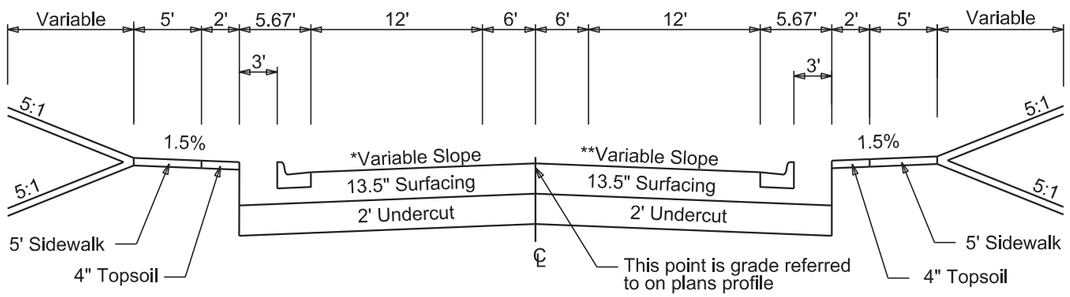
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B26	B245

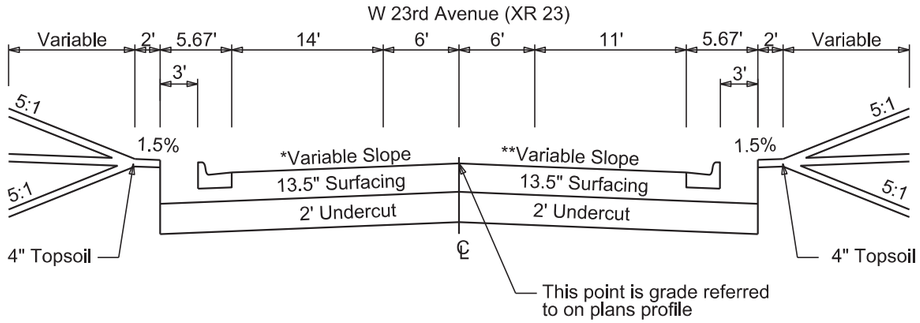
Plotting Date: 8/18/2023

Fairoaks Avenue (XR 15)



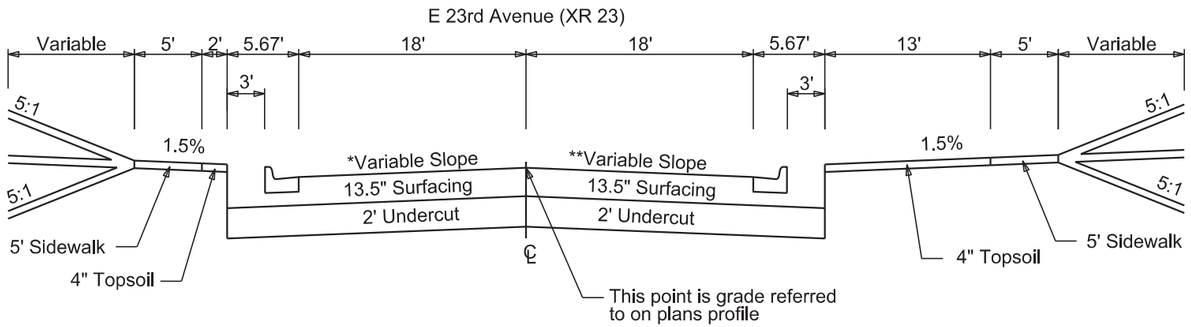
Fairoaks Avenue
*9200+29.88 to 9201+07.73 : 0.003 Ft/Ft to 0.028 Ft/Ft
**9200+29.88 to 9201+07.73 : 0.003 Ft/Ft to -0.020 Ft/Ft

W 23rd Avenue (XR 23)



W 23rd Avenue
*2000+05.00 to 2000+76.87 : 0.012 Ft/Ft to 0.019 Ft/Ft
**2000+05.00 to 2000+76.87 : 0.005 Ft/Ft to 0.019 Ft/Ft

E 23rd Avenue (XR 23)



E 23rd Avenue
*2001+38.18 to 2002+35.00 : 0.019 Ft/Ft to 0.065 Ft/Ft
**2001+38.18 to 2002+35.00 : 0.019 Ft/Ft to 0.000 Ft/Ft

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8-18-2023

Plot Scale - 1:200
Plotted From - Ryan.Brown1@jacobs.com
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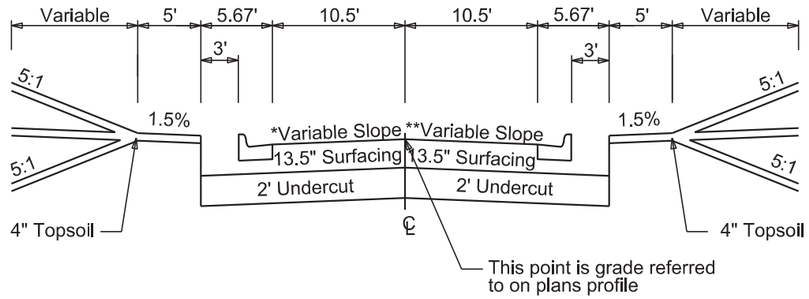
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B27	B245

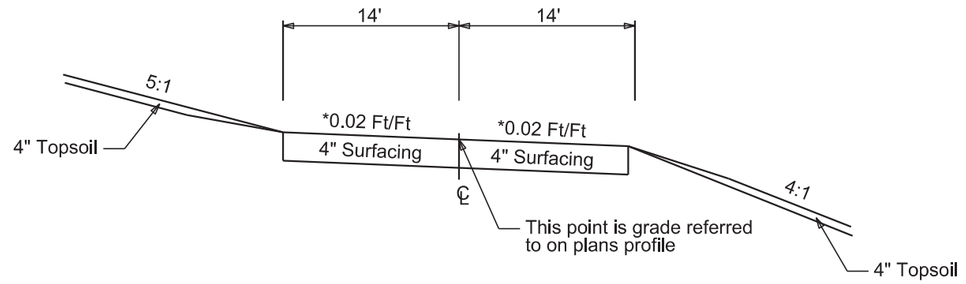
Plotting Date: 8/18/2023

Lakeview Lane (XR 32)



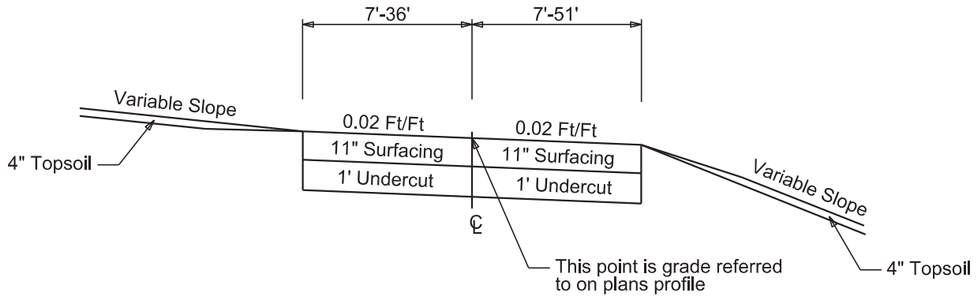
Lakeview Lane
*3000+30.51 to 3000+85.34 : -0.002 Ft/Ft to 0.048 Ft/Ft
**3000+30.51 to 3000+85.34 : -0.003 Ft/Ft to -0.005 Ft/Ft

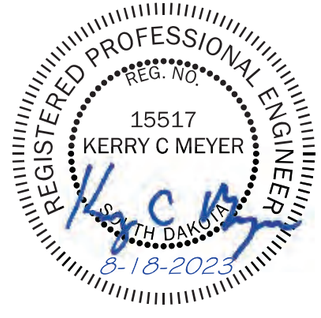
Fishing Access (XR 49)



Fishing Access
*4000+33.17 to 4000+50.00 : 0.013 Ft/Ft to 0.010 Ft/Ft
*4000+50.00 to 4001+10.00 : 0.010 Ft/Ft
*4001+10.00 to 4002+00.00 : 0.010 Ft/Ft to -0.020 Ft/Ft

Pumphouse Driveway (XR 61)





Plot Scale - 1:200
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Sheet Files\Section B\Typ.dgn

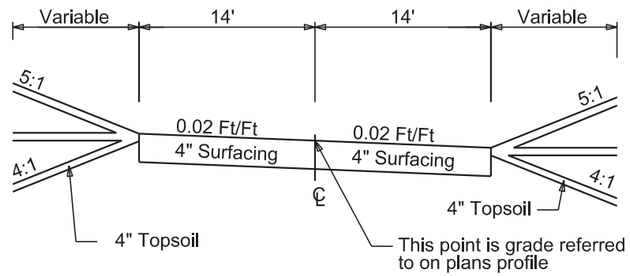
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

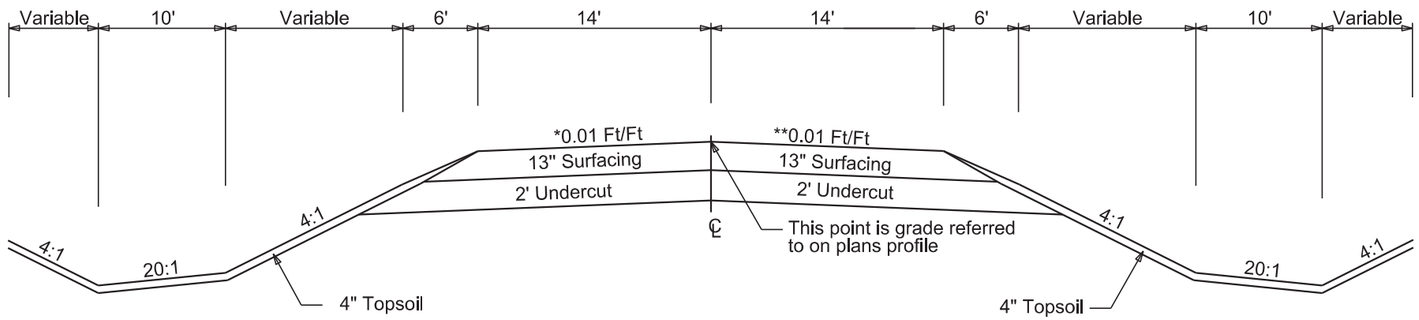
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B28	B245

Plotting Date: 8/18/2023

Fosness Access (FR 66)

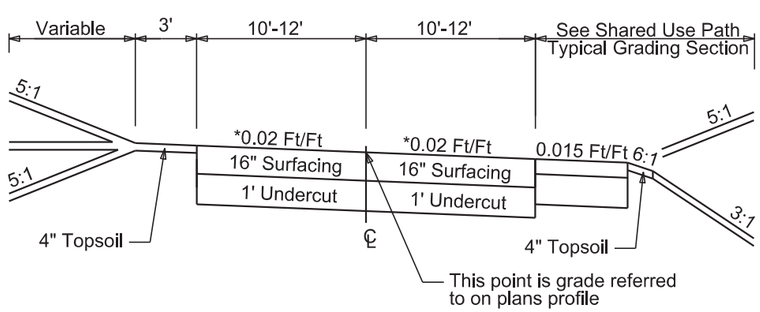


Harmon Drive (XR 77)



Harmon Drive
*7001+00.00 to 7001+25.00 : -0.010 Ft/Ft to -0.013 Ft/Ft
**7001+00.00 to 7001+25.00 : -0.010 Ft/Ft to -0.013 Ft/Ft
*7001+25.00 to 7001+90.22 : -0.013 Ft/Ft
**7001+25.00 to 7001+90.22 : -0.013 Ft/Ft
*7002+78.17 to 7003+30.00 : -0.013 Ft/Ft
**7002+78.17 to 7003+30.00 : -0.013 Ft/Ft
*7003+30.00 to 7003+80.00 : -0.013 Ft/Ft to 0.025 Ft/Ft
**7003+30.00 to 7003+80.00 : -0.013 Ft/Ft to -0.040 Ft/Ft

Rowley Street (ROWLEY)
8000+81.57 to 8009+12.33



Rowley
*8000+81.57 to 8001+20.00 : -0.005 Ft/Ft to -0.020 Ft/Ft

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:200

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File - ...\Sheet Files\Section BiTyp.dgn

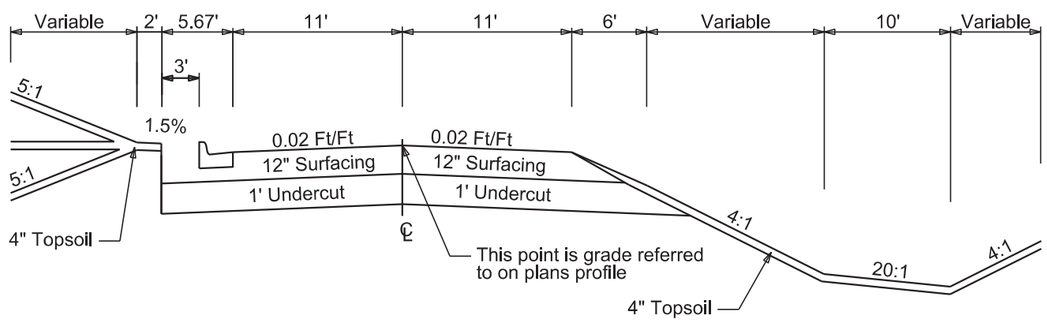
TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

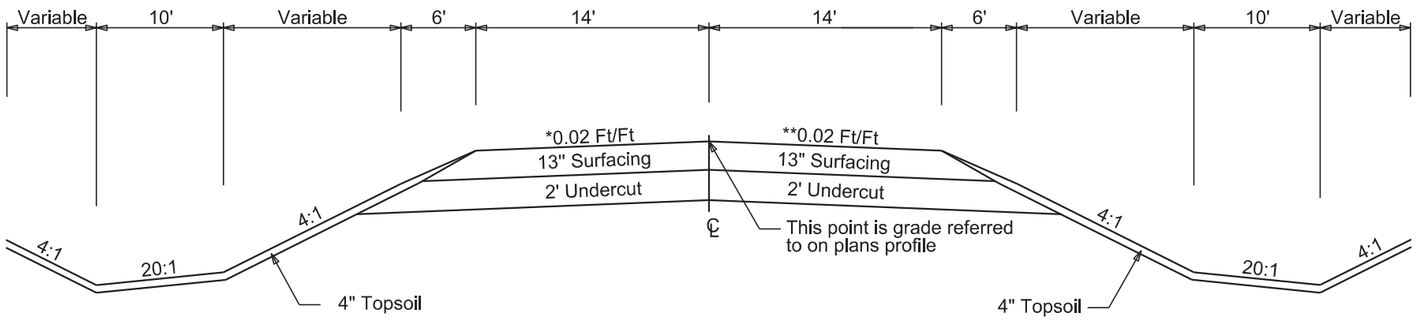
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B29	B245

Plotting Date: 9/21/2023 Rev 09/15/2023 RJB

Frontage Road (XR 104)

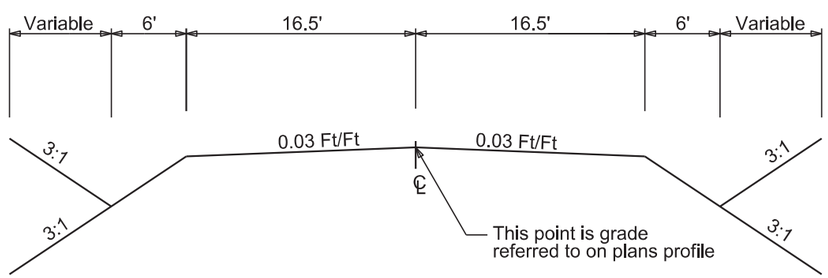


National Guard Road (XR 131)



National Guard Road
*9101+00.00 to 9102+11.31 : 0.020 Ft/Ft to 0.003 Ft/Ft
**9101+00.00 to 9102+11.31 : -0.020 Ft/Ft to 0.001 Ft/Ft
*9103+19.31 to 9104+25.00 : 0.003 Ft/Ft to 0.020 Ft/Ft
**9103+19.31 to 9104+25.00 : 0.001 Ft/Ft to -0.020 Ft/Ft

National Guard Road Traffic Diversion



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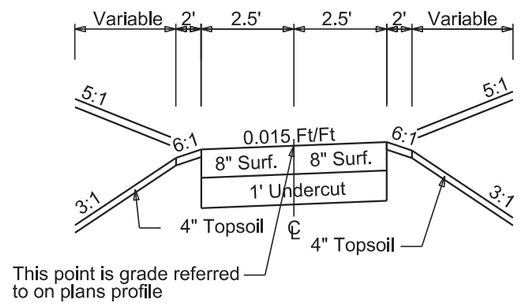
Plot Scale - 1:200
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Sheet Files\Section B\Typ.dgn

TYPICAL GRADING SECTION

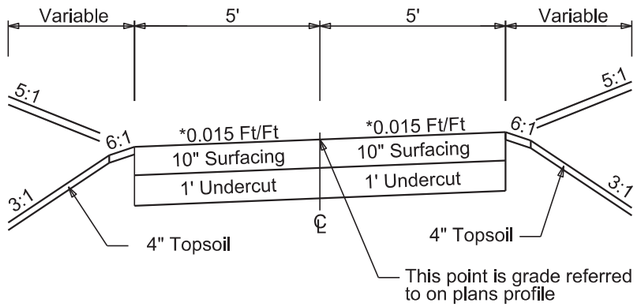
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B30	B245

SD Hwy 37 Sidewalk (SD37 SIDEWALK)



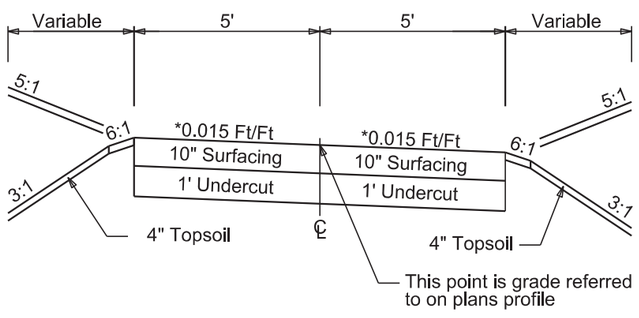
SD Hwy 37 Shared Use Path (SHARED USE PATH) &
Shared Use Path National Guard



SD Hwy 37 Shared Use Path
*13+03.39 to 13+53.39 : -0.015 Ft/Ft to 0.015 Ft/Ft
*21+50.00 to 22+00.00 : 0.015 Ft/Ft to -0.015 Ft/Ft

Shared Use Path National Guard
*500+50.00 to 501+50.00 : 0.015 Ft/Ft to -0.015 Ft/Ft
*501+50.00 to 504+42.70 : -0.015 Ft/Ft to -0.015 Ft/Ft
*504+42.70 to 504+92.70 : -0.015 Ft/Ft to 0.012 Ft/Ft
*504+92.70 to 505+32.70 : 0.012 Ft/Ft
*505+32.70 to 505+82.70 : 0.012 Ft/Ft to -0.015 Ft/Ft
*505+82.70 to 514+93.82 : -0.015 Ft/Ft to -0.015 Ft/Ft

Shared Use Path North



Shared Use Path North
*400+00.00 to 400+50.00 : -0.015 Ft/Ft to 0.015 Ft/Ft
*400+50.00 to 405+00.00 : 0.015 Ft/Ft
*405+00.00 to 405+50.00 : 0.015 Ft/Ft to 0.003 Ft/Ft
*405+50.00 to 407+00.00 : 0.003 Ft/Ft
*407+00.00 to 407+50.00 : 0.003 Ft/Ft to -0.015 Ft/Ft
*416+17.14 to 416+67.14 : -0.015 Ft/Ft to 0.003 Ft/Ft
*416+67.14 to 417+17.14 : 0.003 Ft/Ft
*417+17.14 to 417+66.97 : 0.003 Ft/Ft to -0.015 Ft/Ft
*419+26.97 to 419+51.97 : -0.015 Ft/Ft to 0.003 Ft/Ft
*419+51.97 to 420+01.97 : 0.003 Ft/Ft
*420+01.97 to 420+26.97 : 0.003 Ft/Ft to -0.015 Ft/Ft

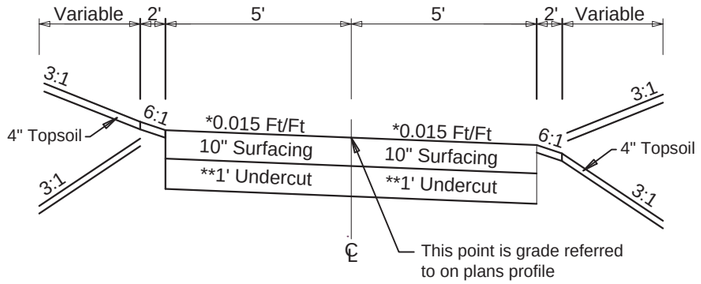
REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

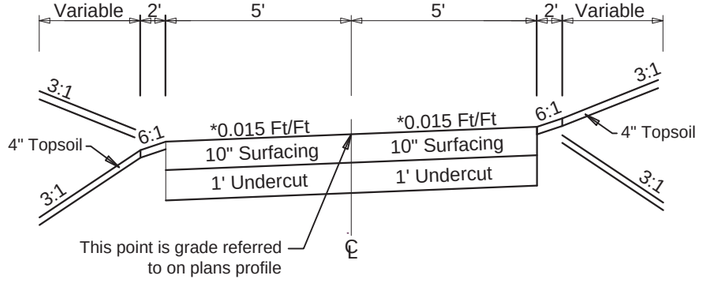
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B31	B245

SD Hwy 37 Shared Use Path (Independent Alignment)
43+40.04 to 49+89.94

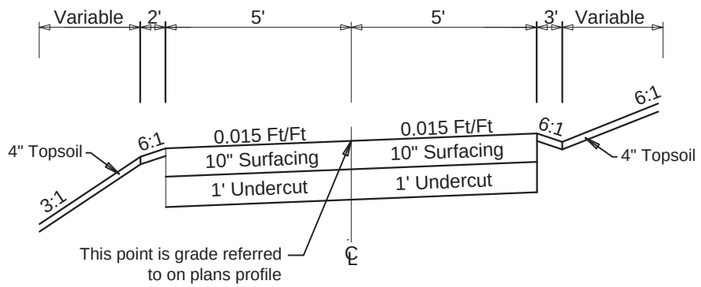


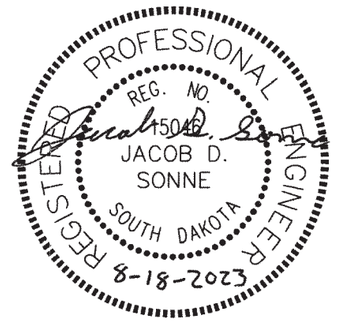
** No Undercut, Scarify 6" of subgrade and recompact from 64+67.78 to 68+00.00

SD Hwy 37 Shared Use Path (Independent Alignment)
63+96.60 to 67+50.00
74+50.00 to 79+25.00
82+00.00 to 85+23.00



SD Hwy 37 Shared Use Path (Independent Alignment)
79+25.00 to 82+00.00



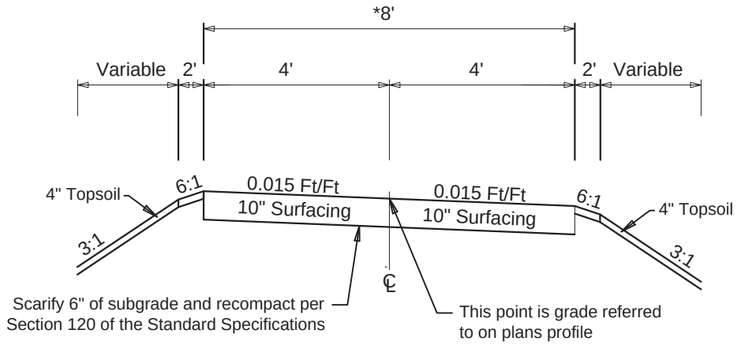


TYPICAL GRADING SECTION

FOR BIDDING PURPOSES ONLY

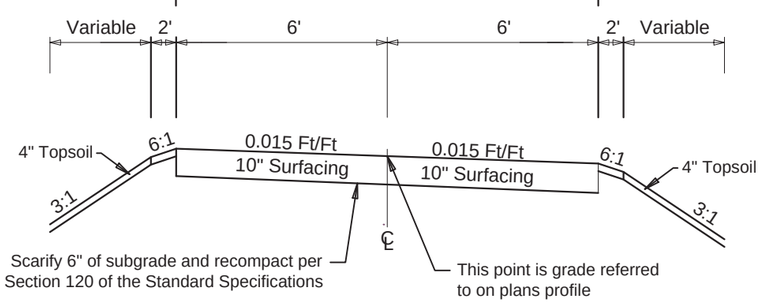
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B32	B245

SD Hwy 37 Shared Use Path (Independent Alignment)
50+32.57 to 60+67.14



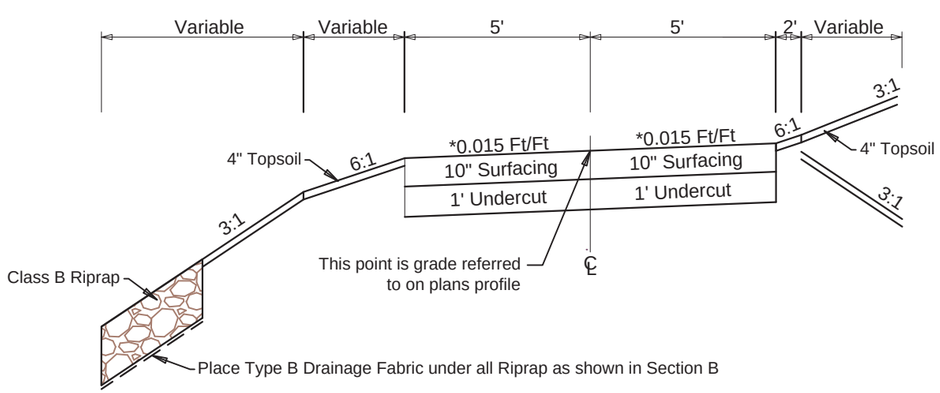
* 49+89.94 to 50+32.57 - 10' to 8'
* 60+67.14 to 61+37.85 - 8' to 10'

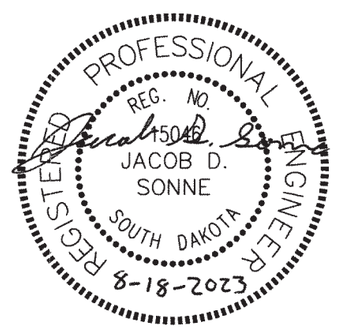
SD Hwy 37 Shared Use Path (Independent Alignment)
61+90.46 to 61+94.00
63+56.00 to 63+62.83



* 61+51.21 to 61+90.46 - 10' to 12'
* 63+62.83 to 63+96.60 - 12' to 10'

SD Hwy 37 Shared Use Path (Independent Alignment)
67+50.00 to 74+50.00





HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B33	B245

Plotting Date: 8/18/2023

MAINLINE

Type	Station			Northing	Easting
POB	9+13.88			516546.599	2578387.952
		TL = 1428.08	N 2°00'03" W		
PI	23+41.96			517973.805	2578338.094
		TL = 1958.04	N 1°58'53" W		
PC	43+00.00			519930.679	2578270.396
PI	44+18.75	R = 14100.00	Delta = 0°57'54" R	520049.355	2578266.290
PRC	45+37.49			520168.084	2578264.184
PI	46+56.24	R = 14100.00	Delta = 0°57'54" L	520286.813	2578262.077
PT	47+74.98			520405.490	2578257.972
		TL = 740.59	N 1°58'53" W		
PC	55+15.57			521145.637	2578232.366
PI	59+49.47	R = 7870.00	Delta = 6°18'41" R	521579.280	2578217.364
PT	63+82.50			522011.944	2578250.125
		TL = 172.02	N 4°19'48" E		
PC	65+54.52			522183.478	2578263.113
PI	71+00.49	R = 2710.00	Delta = 22°46'53" L	522727.891	2578304.336
PT	76+32.04			523245.796	2578131.538
		TL = 891.82	N 18°27'04" W		
PC	85+23.86			524091.772	2577849.279
PI	90+77.73	R = 3940.00	Delta = 16°00'14" R	524617.165	2577673.982
PT	96+24.38			525170.525	2577650.331
		TL = 4209.96	N 2°26'51" W		
POE	138+34.34			529376.646	2577470.559

SD37 (SD Hwy 37)

Type	Station			Northing	Easting
POB	1000+00.00			516909.065	2576045.193
		TL = 48.04	N 73°13'01" E		
PC	1000+48.04			516922.937	2576091.191
PI	1004+61.04	R = 3934.00	Delta = 11°59'10" R	517042.189	2576486.597
PT	1008+71.02			517076.726	2576898.148
		TL = 1079.92	N 85°12'11" E		
PI	1019+50.94			517167.032	2577974.285
		TL = 392.27	N 85°02'48" E		
POE	1023+43.22			517200.903	2578365.094

XR 15 (Fairoaks Ave)

Type	Station			Northing	Easting
POB	9200+00.00			517200.903	2578365.094
		TL = 218.76	N 87°55'59" E		
POE	9202+18.76			517208.793	2578583.707

XR 23 (23rd Ave)

Type	Station			Northing	Easting
POB	2000+00.00			517977.737	2578230.444
		TL = 76.97	N 86°39'06" E		
PI	2000+76.97			517982.232	2578307.284
		TL = 61.01	N 88°53'33" E		
PI	2001+37.98			517983.411	2578368.280
		TL = 105.95	N 88°06'22" E		
POE	2002+43.93			517986.913	2578474.170

XR 32 (Lakeview Lane)

Type	Station			Northing	Easting
POB	3000+00.00			518866.006	2578307.228
		TL = 98.45	N 86°18'58" E		
POE	3000+98.45			518872.332	2578405.474

XR 49 (Fishing Access)

Type	Station			Northing	Easting
POB	4000+00.00			520580.406	2578251.921
		TL = 59.73	N 88°01'07" E		
PC	4000+59.73			520582.471	2578311.618
PI	4000+84.73	R = 25.00	Delta = 90°00'00" L	520583.336	2578336.603
PT	4000+99.00			520608.321	2578335.738
		TL = 558.77	N 1°58'53" W		
POE	4006+57.77			521166.758	2578316.419

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/11); Geoid 12A; SF = 0.9998512126

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
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Plot Scale - 1:200

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\DataHoriz.dgn

HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B34	B245

Plotting Date: 8/18/2023

XR 61 (Pumphouse Driveway)

Type	Station			Northing	Easting
POB	5000+00.00			521368.011	2578044.648
		TL = 65.41	N 26°55'37" E		
PC	5000+65.41			521426.328	2578074.269
PI	5000+93.20	R = 175.00	Delta = 18°03'02" L	521451.110	2578086.856
PT	5001+20.54			521478.574	2578091.146
		TL = 29.93	N 8°52'36" E		
PC	5001+50.47			521508.146	2578095.764
PI	5002+55.05	R = 3000.00	Delta = 3°59'35" R	521611.475	2578111.902
PCC	5003+59.55			521713.430	2578135.195
		R = 25.00	Delta = 79°24'14" R		
PT	5003+94.20			521732.842	2578160.559
		TL = 73.35	S 87°43'36" E		
POE	5004+67.55			521729.932	2578233.856

FR 66 (Fosness Access)

Type	Station			Northing	Easting
POB/PC	6000+00.00			522287.869	2578376.192
PI	6003+10.89	R = 3936.00	Delta = 9°01'57" L	522598.760	2578376.229
PT	6006+20.50			522905.803	2578327.457

XR 77 (Harmon Drive)

Type	Station			Northing	Easting
POB	7000+00.00			523331.031	2577866.878
		TL = 234.09	N 88°22'11" E		
PI	7002+34.09			523337.690	2578100.877
		TL = 197.13	N 89°12'18" E		
POE	7004+31.23			523340.425	2578297.991

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SOUTH DAKOTA
8-18-2023

ROWLEY (Rowley Street)

Type	Station			Northing	Easting
POB	7995+80.00			523327.860	2577712.075
		TL = 69.88	N 10°59'32" W		
PC	7996+49.88			523396.461	2577698.750
PI	7996+86.40	R = 500.00	Delta = 8°21'15" R	523432.308	2577691.787
PT	7997+22.79			523468.786	2577690.107
		TL = 358.79	N 2°38'16" W		
PC	8000+81.57			523827.184	2577673.594
PI	8001+36.80	R = 250.00	Delta = 24°54'59" L	523882.358	2577671.052
PRC	8001+90.28			523931.326	2577645.503
PI	8002+45.87	R = 250.00	Delta = 25°04'15" R	523980.606	2577619.789
PT	8002+99.68			524036.140	2577617.381
		TL = 502.46	N 2°29'01" W		
PC	8008+02.14			524538.129	2577595.608
PI	8008+68.08	R = 65.00	Delta = 90°49'24" L	524604.008	2577592.750
PT	8009+05.17			524600.204	2577526.919
		TL = 39.83	S 86°41'35" W		
POE	8009+45.00			524597.906	2577487.159

XR 104 (Frontage Road)

Type	Station			Northing	Easting
POB	9000+00.00			525985.959	2577615.479
		TL = 81.68	S 87°33'09" W		
PC	9000+81.68			525982.471	2577533.870
PI	9001+21.92	R = 40.00	Delta = 90°20'16" R	525980.753	2577493.671
PT	9001+44.75			526020.963	2577492.190
		TL = 1174.69	N 2°06'34" W		
POE	9013+19.45			527194.861	2577448.949

XR 131 (National Guard Road)

Type	Station			Northing	Easting
POB	9100+00.00			528634.763	2577236.719
		TL = 573.28	N 87°14'05" E		
POE	9105+73.28			528662.420	2577809.330

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Plot Scale - 1:200
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HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B35	B245

Plotting Date: 8/18/2023

SD37 SIDEWALK (south side sidewalk)

Type	Station			Northing	Easting
POB/PC	200+00.00			516899.920	2576161.989
PI	201+76.41	R = 3892.00	Delta = 5°11'25" R	516948.198	2576331.662
PCC	203+52.57			516980.928	2576505.007
PI	203+67.25	R = 50.00	Delta = 32°43'29" R	516983.652	2576519.432
PT	203+81.13			516978.145	2576533.040
		TL = 9.47	S 67°58'04" E		
PC	203+90.60			516974.593	2576541.817
PI	204+04.85	R = 50.00	Delta = 31°49'06" L	516969.247	2576555.027
PRC	204+18.37			516971.669	2576569.072
PI	205+87.04	R = 3871.50	Delta = 4°59'22" R	517000.339	2576735.291
PT	207+55.50			517014.445	2576903.374
		TL = 234.16	N 85°12'11" E		
PC	209+89.66			517034.026	2577136.714
PI	210+04.20	R = 50.00	Delta = 32°26'02" L	517035.242	2577151.206
PRC	210+17.97			517044.041	2577162.785
PI	210+32.51	R = 50.00	Delta = 32°26'02" R	517052.839	2577174.363
PT	210+46.27			517054.055	2577188.855
		TL = 135.72	N 85°12'11" E		
POE	211+81.99			517065.405	2577324.104

SD37 FREE RIGHT (SB North Main Street Free Right)

Type	Station			Northing	Easting
POB/PC	300+00.00			517200.614	2578014.040
PI	300+59.95	R = 700.00	Delta = 9°47'25" L	517205.791	2578073.767
PCC	301+19.61			517221.048	2578131.744
PI	303+09.35	R = 250.00	Delta = 74°23'41" L	517269.336	2578315.239
PT	304+44.22			517459.057	2578318.092
		TL = 149.41	N 0°51'42" E		
POE	305+93.62			517608.446	2578320.339

SHARED USE PATH NORTH

Type	Station			Northing	Easting
POB	400+00.00			523335.181	2577686.823
		TL = 38.61	N 21°32'27" W		
PC	400+38.61			523371.091	2577672.648
PI	400+47.01	R = 50.00	Delta = 19°05'05" R	523378.909	2577669.562
PT	400+55.26			523387.307	2577669.202

SHARED USE PATH NORTH (CONTINUED)

Type	Station			Northing	Easting
		TL = 362.33	N 2°27'22" W		
PC	404+17.59			523749.303	2577653.675
PI	404+45.95	R = 150.00	Delta = 21°24'52" L	523777.640	2577652.459
PT	404+73.65			523803.576	2577640.982
		TL = 34.13	N 23°52'14" W		
PC	405+07.79			523834.788	2577627.170
PI	405+23.70	R = 100.00	Delta = 18°05'17" R	523849.344	2577620.728
PT	405+39.36			523865.180	2577619.125
		TL = 85.74	N 5°46'57" W		
PC	406+25.10			523950.485	2577610.486
PI	406+33.02	R = 10.00	Delta = 76°47'30" R	523958.369	2577609.688
PT	406+38.50			523960.948	2577617.181
		TL = 28.63	N 71°00'33" E		
PC	406+67.13			523970.265	2577644.253
PI	406+77.33	R = 10.00	Delta = 91°09'22" L	523973.585	2577653.901
PT	406+83.04			523983.165	2577650.387
		TL = 36.14	N 20°08'49" W		
PC	407+19.18			524017.091	2577637.940
PI	407+34.71	R = 100.00	Delta = 17°39'48" R	524031.678	2577632.588
	407+50.00			524047.201	2577631.915
		TL = 45.21	N 2°29'01" W		
	407+95.21			524092.368	2577629.956
		TL = 100.02	N 1°20'16" W		
	408+95.23			524192.361	2577627.621
		TL = 393.80	N 2°29'01" W		
PC	412+89.03			524585.790	2577610.557
PI	413+26.18	R = 200.00	Delta = 21°02'37" L	524622.902	2577608.947
PT	413+62.49			524656.960	2577594.119
		TL = 6.03	N 23°31'37" W		
PC	413+68.52			524662.487	2577591.712
PI	414+05.67	R = 200.00	Delta = 21°02'40" R	524696.547	2577576.884
PT	414+41.98			524733.660	2577575.274
		TL = 277.65	N 2°28'57" W		
PC	417+19.62			525011.046	2577563.248
PI	417+29.63	R = 400.00	Delta = 2°51'55" L	525021.040	2577562.815
PRC	417+39.63			525031.000	2577561.882
PI	417+49.63	R = 400.00	Delta = 2°51'55" R	525040.960	2577560.950
PT	417+59.63			525050.954	2577560.517
		TL = 909.80	N 2°28'57" W		
POE	426+69.43			525959.903	2577521.108

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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Plot Scale - 1:200

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HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B36	B245

Plotting Date: 8/18/2023

SHARED USE PATH NATIONAL GUARD

Type	Station			Northing	Easting
POB	500+00.00			527194.640	2577442.953
		TL = 100.18	N 2°26'08" W		
PC	501+00.18			527294.726	2577438.696
PI	501+16.96	R = 250.00	Delta = 7°41'00" R	527311.498	2577437.982
PRC	501+33.70			527328.215	2577439.518
PI	501+50.49	R = 250.00	Delta = 7°41'00" L	527344.932	2577441.053
PT	501+67.23			527361.705	2577440.340
		TL = 1126.37	N 2°26'08" W		
PC	512+93.59			528487.052	2577392.473
PI	513+16.09	R = 45.00	Delta = 53°08'00" L	528509.533	2577391.517
PT	513+35.32			528522.256	2577372.957
		TL = 124.02	N 55°34'08" W		
PC	514+59.34			528592.377	2577270.667
PI	514+74.23	R = 30.00	Delta = 52°48'14" R	528600.798	2577258.383
PT	514+86.99			528615.674	2577257.664
		TL = 20.08	N 2°45'55" W		
POE	515+07.06			528635.728	2577256.695

XR 32DRIVE (Stifel Nicolaus Driveway)

Type	Station			Northing	Easting
POB	0+00.00			518877.883	2578306.817
		TL = 110.46	S 88°01'07" W		
PC	1+10.46			518874.064	2578196.419
PI	1+40.46	R = 30.00	Delta = 90°00'00" R	518873.027	2578166.437
PT	1+57.59			518903.009	2578165.400
		TL = 49.02	N 1°58'53" W		
POE	2+06.61			518952.004	2578163.705

XR 46DRIVE (Mitchell Water Plant Driveway)

Type	Station			Northing	Easting
POB	0+00.00			520286.880	2578261.576
		TL = 161.63	N 83°03'50" E		
POE	1+61.63			520306.400	2578422.027

XR 4002DRIVE (Malters Farm Access)

Type	Station			Northing	Easting
POB	0+00.00			520774.634	2578329.985
		TL = 19.20	N 88°01'07" E		
PC	0+19.20			520775.297	2578349.172
PI	0+44.40	R = 100.00	Delta = 28°17'39" R	520776.169	2578374.363
PT	0+68.58			520764.996	2578396.957
		TL = 142.18	S 63°41'14" E		
POE	2+10.76			520701.972	2578524.404

XR 87DRIVE (Rowley Access)

Type	Station			Northing	Easting
POB	0+00.00			524341.144	2577775.131
		TL = 174.76	S 75°19'58" W		
POE	1+74.76			524296.895	2577606.071

NATIONAL GUARD ROAD TRAFFIC DIVERSION

Type	Station			Northing	Easting
POB	0+00.00			528628.759	2577138.794
		TL = 5.98	N 87°00'35" E		
PC	0+05.98			528629.071	2577144.764
PI	0+73.69	R = 200.00	Delta = 37°24'23" R	528632.603	2577212.380
PT	1+36.55			528594.335	2577268.237
		TL = 170.25	S 55°35'02" E		
PC	3+06.80			528498.108	2577408.688
PI	3+73.46	R = 200.00	Delta = 36°51'48" L	528460.435	2577463.675
PT	4+35.48			528463.282	2577530.268
		TL = 46.51	N 87°33'09" E		
POE	4+81.99			528465.268	2577576.732

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REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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HORIZONTAL ALIGNMENT DATA

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B37	B245

Plotting Date: 8/18/2023

SHARED USE PATH

Type	Station			Northing	Easting
POB/PC	0+50.00			516957.513	2576077.696
PI	1+19.58	R = 3971.00	Delta = 2°00'27" R	516977.652	2576144.294
PRC	1+89.14			516995.446	2576211.556
PI	2+06.21	R = 500.00	Delta = 3°54'43" L	516999.813	2576228.065
PRC	2+23.28			517005.296	2576244.236
PI	2+45.27	R = 500.00	Delta = 5°02'14" R	517012.358	2576265.065
PCC	2+67.24			517017.564	2576286.434
PI	3+22.55	R = 3974.00	Delta = 1°35'42" R	517030.659	2576340.180
PCC	3+77.87			517042.252	2576394.270
PI	3+90.56	R = 500.00	Delta = 2°54'29" R	517044.912	2576406.679
PRC	4+03.24			517046.939	2576419.207
PI	4+13.10	R = 500.00	Delta = 2°15'29" L	517048.512	2576428.935
PRC	4+22.95			517050.468	2576438.593
PI	4+87.60	R = 3973.00	Delta = 1°51'53" R	517063.300	2576501.963
PRC	5+52.25			517074.064	2576565.716
PI	5+61.77	R = 200.00	Delta = 5°27'03" L	517075.649	2576575.104
PRC	5+71.27			517078.119	2576584.299
PI	5+81.80	R = 200.00	Delta = 6°01'39" R	517080.850	2576594.468
PCC	5+92.31			517082.498	2576604.868
PI	6+47.79	R = 3975.00	Delta = 1°35'57" R	517091.183	2576659.662
PRC	7+03.26			517098.335	2576714.677
PI	7+16.75	R = 200.00	Delta = 7°42'46" L	517100.073	2576728.046
PRC	7+30.19			517103.589	2576741.061
PI	7+45.10	R = 200.00	Delta = 8°31'36" R	517107.478	2576755.455
PCC	7+59.95			517109.190	2576770.266
PI	8+22.33	R = 3979.00	Delta = 1°47'46" R	517116.352	2576832.228
PT	8+84.69			517121.568	2576894.385
		TL = 38.29	N 85°12'11" E		
PC	9+22.98			517124.770	2576932.542
PI	9+37.16	R = 200.00	Delta = 8°06'35" R	517125.956	2576946.670
PRC	9+51.29			517125.136	2576960.824
PI	9+65.47	R = 200.00	Delta = 8°06'35" L	517124.317	2576974.978
PT	9+79.60			517125.503	2576989.106
		TL = 167.29	N 85°12'11" E		
PC	11+46.89			517139.492	2577155.809
PI	11+56.41	R = 50.00	Delta = 21°33'55" L	517140.288	2577165.298
PRC	11+65.71			517144.517	2577173.830
PI	11+75.23	R = 50.00	Delta = 21°33'55" R	517148.745	2577182.362
PT	11+84.52			517149.541	2577191.851
		TL = 82.93	N 85°12'11" E		

SHARED USE PATH

Type	Station			Northing	Easting
PI	12+67.45			517156.476	2577274.489
		TL = 9.67	N 67°42'59" E		
PC	12+77.12			517160.141	2577283.433
PI	12+86.30	R = 12.33	Delta = 73°19'56" L	517151.645	2577286.915
PT	12+92.91			517152.544	2577296.053
		TL = 10.49	N 84°23'03" E		
PC	13+03.39			517153.570	2577306.489
PI	13+14.71	R = 500.00	Delta = 2°35'37" R	517154.678	2577317.753
PRC	13+26.02			517155.275	2577329.055
PI	13+33.77	R = 500.00	Delta = 1°46'28" L	517155.683	2577336.788
PT	13+41.51			517156.556	2577323.270
		TL = 561.65	N 85°12'11" E		
PC	19+03.16			517203.298	2577904.189
PI	19+20.09	R = 200.00	Delta = 9°40'35" L	517204.713	2577921.059
PRC	19+36.94			517208.944	2577937.451
PI	19+53.59	R = 200.00	Delta = 9°31'12" R	517213.107	2577953.576
PT	19+70.17			517214.545	2577970.168
		TL = 29.83	N 85°02'48" E		
PI	20+00.00			517217.120	2577999.885

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15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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HORIZONTAL ALIGNMENT DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B38	B245

SHARED USE PATH

Type	Station			Northing	Easting
POB	20+00.00			517217.1203	2577999.8853
		TL=12.68	N 85°02'48" E		
PC	20+12.68			517218.2148	2578012.5142
PI	20+71.11	R=682.33	Delta=09°47'25" L	517223.2607	2578070.7340
PCC	21+29.27			517238.1329	2578127.2480
PI	22+07.45	R=232.33	Delta=37°11'50" L	517258.0300	2578202.8566
PCC	22+80.10			517319.5893	2578251.0542
PI	23+58.29	R=232.33	Delta=37°11'50" L	517381.1486	2578299.2518
PT	24+30.94			517459.3226	2578300.4275
		TL=148.96	N 00°51'42" E		
PI	25+79.90			517608.2700	2578302.6676
		TL=364.08	N 02°00'03" W		
PI	29+43.98			517972.1232	2578289.9567
		TL=1396.76	N 01°58'53" W		
PC	43+40.74			519368.0485	2578241.6644
PI	43+75.27	R=100.00	Delta=38°05'56" L	519402.5572	2578240.4706
PT	44+07.23			519428.9771	2578218.2386
		TL=40.65	N 40°04'49" W		
PC	44+47.88			519460.0785	2578192.0671
PI	44+70.25	R=100.00	Delta=25°13'04" R	519477.1939	2578177.6646
PT	44+91.89			519498.8145	2578171.9270
		TL=119.25	N 14°51'45" W		
PC	46+11.14			519614.0705	2578141.3406
PI	46+29.82	R=500.00	Delta=04°16'48" R	519632.1292	2578136.5483
PT	46+48.49			519650.4951	2578133.1170
		TL=145.88	N 10°34'57" W		
PC	47+94.37			519793.8962	2578106.3257
PI	48+36.32	R=300.00	Delta=15°55'07' R	519835.1275	2578098.6226
PT	48+77.72			519876.8904	2578102.5233
		TL=119.21	N 05°20'10 E		
PC	49+96.93			519995.5875	2578113.6099
PI	50+11.32	R=200.00	Delta=08°13'34 L	520009.9073	2578114.9474
PT	50+25.65			520024.0859	2578114.2579
		TL=522.25	N 02°53'24" W		
PI	55+47.89			520545.8518	2578087.8902
		TL=522.24	N 02°40'51" W		
PC	60+70.13			521067.5194	2578063.4645
PI	61+02.70	R=200.00	Delta=18°29'48" L	521100.0500	2578061.9414
PT	61+34.70			521130.4168	2578050.1766
		TL=19.57	N 21°10'39" W		
PC	61+54.27			521148.6685	2578043.1055
PI	61+71.08	R=100.00	Delta=19°04'40" R	521164.3375	2578037.0349
PT	61+87.57			521181.1303	2578036.4192
		TL=209.03	N 02°05'59" W		
PC	63+96.60			521390.0211	2578028.7607
PI	64+25.45	R=150.00	Delta=21°46'34" R	521418.8547	2578027.7036
PCC	64+53.61			521457.6496	2578040.6471
PI	64+67.11	R=42.00	Delta=35°37'50" R	521458.7320	2578041.9633
PCC	64+79.73			521466.4143	2578053.0608
PI	65+09.71	R=70.00	Delta=46°22'36" L	521483.4812	2578077.7151
PCC	65+36.39			521513.1030	2578082.3698
PI	66+46.21	R=3014.00	Delta=04°10'25" R	521621.5936	2578099.4179
PCC	67+55.93			521728.5557	2578124.3164
PI	67+80.53	R=100.00	Delta=27°38'03" R	521752.5093	2578129.8923
PCC	68+04.17			521771.1441	2578145.9423

SHARED USE PATH

Type	Station			Northing	Easting
PI	68+69.94	R=200.00	Delta=36°24'29" L	521820.9797	2578188.8653
PT	69+31.25			521886.5639	2578193.8312
		TL=301.30	N 04°19'48" E		
PC	72+32.55			522187.0011	2578216.5800
PI	73+23.30	R=2663.33	Delta=03°54'10" L	522277.4875	2578223.4315
PCC	74+13.97			522368.2305	2578224.1081
PI	74+53.59	R=200	Delta=22°24'26" L	522407.8437	2578224.4035
PT	74+92.19			522444.5786	2578209.5765
		TL=157.76	N 21°58'48" W		
PC	76+49.95			522590.8714	2578150.5296
PI	76+69.99	R=500.00	Delta=04°35'29" R	522609.4586	2578143.0274
PT	76+90.01			522628.5868	2578137.0372
		TL=56.29	N 17°23'19" W		
PC	77+46.30			522682.3019	2578120.2155
PI	78+03.38	R=500.00	Delta=13°01'34" L	522736.7764	2578103.1560
PT	78+59.98			522786.0040	2578074.2572
		TL=157.04	N 30°24'53" W		
PC	80+17.01			522921.4293	2577994.7564
PI	80+37.04	R=100.00	Delta=22°39'10" L	522938.7027	2577984.6162
PT	80+56.55			522950.7381	2577968.6054
		TL=189.88	N 53°04'04" W		
PC	82+46.43			523064.8313	2577816.8260
PI	82+72.89	R=150.00	Delta=20°00'23" R	523080.7291	2577795.6771
PT	82+98.80			523102.9031	2577781.2434
		TL=73.35	N 33°07'46" W		
PC	83+72.15			523164.3268	2577741.1570
PI	83+99.61	R=100.00	Delta=30°42'31" R	523187.3219	2577726.1500
PT	84+25.75			523214.7562	2577724.9902
		TL=35.85	N 02°25'15" W		
PC	84+61.60			523250.5791	2577723.4758
PI	84+90.88	R=100.00	Delta=32°37'55" L	523279.8253	2577722.2394
PT	85+18.56			523303.7883	2577705.4275
		TL=12.70	N 35°03'10" W		
POE	85+31.26			523314.1887	2577698.1308

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REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15048
JACOB D. SONNE
SOUTH DAKOTA
8-18-2023

CONTROL DATA

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B39	B245

Plotting Date: 8/18/2023

HORIZONTAL AND VERTICAL CONTROL POINTS

POINT	STATION	OFFSET	DESCRIPTION	NORTHING	EASTING	ELEVATION
CP 1	12+31.19	64.03' R	Mag nail in top of curb in Shopko entrance approx. 65' East of CL of North Main St.	516865.952	2578440.861	1304.763
CP 2	15+43.23	54.00' R	Brass disk in concrete post stamped "37 76.25"	517177.454	2578419.948	1303.605
CP 3	18+84.98	30.39' R	Mag nail in top of East curb - approx. 325' North of Main & Fairoaks Ave. intersection	517518.169	2578384.419	1302.249
CP 4	23+71.09	148.42' R	Mag nail in drop inlet - North side of 23rd Ave - 150' East of CL of North Main St.	518008.055	2578485.418	1290.188
CP 5	61+30.13	59.18' R	Brass disk in concrete post stamped "37 77.12"	521757.463	2578294.235	1276.497
CP 6	81+10.30	95.18' L	Mag nail in asphalt parking lot of church	523669.341	2577889.883	1291.121
CP 7	107+96.29	99.77' R	NGS point AC5284 - 1' West of East right-of-way fence	526345.629	2577699.963	1284.642
CP 8	128+35.66	131.95' L	3/4" Rebar just South of power pole along service road	528373.240	2577381.378	1283.650
CP 9	-	-	3/4" Rebar .5' East of airport fence	530076.003	2577315.404	1298.179
CP 10	-	-	NGS BM AC5283 - Brass disk in concrete post stamped "37 78.94"	531274.133	2577514.006	1300.969

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/11); Geoid 12A; SF = 0.9998512126

Plot Scale - 1:200
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LEGEND

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B40	B245

Plotting Date: 8/18/2023

Plot Scale - 1:200

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Commercial Sign Double Face
- Commercial Sign One Post
- Commercial Sign Overhead
- Commercial Sign Two Post
- Concrete Symbol
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Elec. Trans./Power Jct. Box
- Environmental Sensitive Site — ESS —
- Fence Barbwire
- Fence Chainlink
- Fence Electric
- Fence Misc.
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Guide Sign One Post
- Guide Sign Two Post
- Gutter
- Guy Pole
- Haystack
- Hedge
- Highway R.O.W. Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Misc
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Misc. Line
- Misc. Property Corner
- Misc. Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad R.O.W. Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Regulatory Sign One Post
- Regulatory Sign Two Post
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank
- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer — S —
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Warning Sign One Post
- Warning Sign Two Post
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner

- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- R. O. W. Line
- New R. O. W. Line
- Cut and Fill Limits
- Control of Access
- New Control of Access
- Proposed ROW (After Property Disposal)

- Drainage Arrow

- Remove Concrete Pavement
- Remove Concrete Driveway Pavement
- Remove Asphalt Concrete Pavement
- Remove Concrete Sidewalk
- Remove Concrete Approach Pavement
- Remove Concrete Median Pavement
- Remove Concrete Curb
- Remove Concrete Curb and Gutter
- Remove Concrete Gutter

- Detectable Warning
- Pedestrian Push Button Pole and 30" x 48" Clear Space with 1.5% slope

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B41	B245

Plotting Date: 8/22/2023 Rev 06/27/2023 RJB

FOR BIDDING PURPOSES ONLY

10+13.50-34.13' R to
10+13.50-34.13' L
Install 18"-66' RCP
(Between Drop Inlets)

10+13.50-34.13' L to
10+13.50-59.95' L
Install 18"-26' RCP
(Between Drop Inlet & Manhole)

11+50.00-31.67' L to
12+13.00-31.67' L
Install 18"-60' RCP
(Between Drop Inlets)

12+13-64' L to 13+95-63' L
Take Out 36"-182' RCP
(Incidental Work, Grading)

11+50.00-31.67' R to
12+13.00-31.67' R
Install 18"-60' RCP
(Between Drop Inlets)

12+13.00-63.37' L to 14+35.00-62.63' L
Install 36"-218' RCP
(Between Drop Inlet and Manhole)

12+13.00-31.67' L to 12+13.00-63.37' L
Install 18"-30' RCP
(Between Drop Inlets)

12+13.00-31.67' R to
12+13.00-31.67' L
Install 18"-62' RCP
(Between Drop Inlets)

14+35.00-62.63' L to
14+83.51-77.69" L
Install 36"-46' RCP
(Between Manhole and Junction Box)

13+20.00-31.67' L to
14+35.00-31.67' L
Install 18"-112' RCP
(Between Drop Inlets)

13+20.00-31.67' R to
14+35.00-31.67' R
Install 18"-112' RCP
(Between Drop Inlets)

14+35.00-31.67' R to
14+35.00-31.67' L
Install 18"-62' RCP
(Between Drop Inlets)

14+35.00-31.67' L to
14+35.00-62.63' L
Install 18"-28' RCP
(Between Drop Inlet
and Manhole)

14+50-1' L to 14+50-30.0' R
Take Out 18"-31' RCP
(Incidental Work, Grading)

14+50-1' L to 14+51-32' L
Take Out 18"-32' RCP
(Incidental Work, Grading)

14+51-32' L to 14+51-50' L
Take Out 18"-18' RCP
(Incidental Work, Grading)

Remove Drop Inlets
with Frame and Grate
at the following locations:
14+50-32' L
14+50-1' L
14+50-30' R

BEGIN GRADING
Station 10+00.00

MITCHELL
Sec 15 - T103N - R60W

Mitchell Storage, LLC
(INFORMATION ONLY)

Muth Properties, LLC
(INFORMATION ONLY)

Wiebelhaus Properties I, LLC
(INFORMATION ONLY)

LOT SC-4

LOT SC-4-3

LOT SC-4-1

LOT H3A

Control of Access & R.O.W. LINE

Present SD Hwy 37

1023+00

SD37

131'

131'

North Main Street

1023+43.22 (SD37)=
9200+00.00 (xr15)=
15+68.58 (Mainline)

1023+43
9200+00

xr15

N 87°55'59" E 920

66' Fairoaks Avenue

10+00 to 11+90 R
Do Not Disturb Parking Lot Curb & Gutter

LOT G-2

LOT G-3-B

10+42.46 - 51.13'

11+59 - 51' & 58'

LOT G-3-A

12+35 - 58' & 69'

12+95 - 51' & 69'

13+06.05 - 50.66'

LOT G-3

LOT G-3E

Mark Coborn & Chris
Coborn Real Property
Family Partnership
(INFORMATION ONLY)

Krohmer Properties LLC
Parcel A2

Dakota Land and Property Management, LLC
Parcel 1

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
11+50.00-31.67' L
11+50.00-31.67' R
12+13.00-31.67' L
12+13.00-31.67' R
13+20.00-31.67' L
13+20.00-31.67' R
14+35.00-31.67' L
14+35.00-31.67' R

12+13.00-63.37' L
Install 3'x4' Type C Drop Inlet
and Type C Frame and Grate

Install 4'x11' Type S Drop Inlet Base
and Precast Concrete
Type S Drop Inlet Lid
at the following locations:
10+13.50-34.13' L
10+13.50-34.13' R

14+35.00-62.63' L
Install 72" Manhole and
Type A Frame and Lid

14+83.51-77.69' L
Install 13'x6' Junction Box and
Type C Frame and Grate

14+83.51-77.69" L to
17+96.44-84.01' L
Install 42"-302' RCP Arch
& 42"-296' RCP Arch (240' & 56')
& 1-18" on 42" (Arch) x 6' RCP Tee
at 17+29-79' L
(Between Junction Box and Outlet)
(Spaced 7.3' C to C
with Controlled Density Fill)
& 4 Flared End Sections

Parcel A2
10+42.46 to 13+06.05 R
Temporary Easement containing
2436 sq ft, more or less

Parcel 1
15+17.62 to 15+35.89 R
Temporary Easement containing
929 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B42	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Plot Scale - 1:40

10+00
Begin Work

L 100.00ft
G1 -1.2964%
G2 -0.3000%
K 100

-1.2964%

-0.3000%

18"RCP 0.5000%

18"RCP 0.5000%

18"RCP 1.0000%

18"RCP 1.0000%

36"RCP 0.6000%

36"RCP 0.0052%

42" RCP Arch 0.0022%

FLR 1300.50
FLL (Drop Inlet) 1300.00
FLL (Outlet) 1299.12

FLR 1300.34
FLL 1300.03

FLR 1300.04
FLL 1299.73

FLR 1300.04
FLL (Drop Inlet) 1299.73
FLL (Median Drop Inlet) 1299.30

FLL 1298.05

FLR 1299.53
FLL 1298.92

FLR 1298.41
FLL 1297.80
FLL (Manhole) 1296.74

FLR 1298.41
FLL (Drop Inlet) 1297.80
FLL (Manhole) 1297.53

FLL 1296.74

FL 1296.50

PVI 11+25
Elev 1303.42

12+62 L
76' Drive

12+65 R
40' Drive

15+69 L
60' Int Hwy
(SD 37)

15+69 R
36' Int St
(Fairoaks Ave)

CP 1
12+31.19-64.03' R
Mag nail in top of curb in Shopko entrance
approx. 65' East of CL of North Main St.
1304.763

CP 2
15+43.20-53.49' R
Brass disk in concrete
post stamped "37 76.25"
1302.605

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

1350 1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260

1305.04 1304.78 1304.52 1304.26 1304.00 1303.78 1303.59 1303.44 1303.33 1303.25 1303.19 1303.13 1303.07 1303.01 1302.95 1302.89 1302.83 1302.77 1302.71 1302.65 1302.59 1302.53 1302.47 1302.41 1302.35 1302.29 1302.23 1302.17 1302.11 1302.05 1301.99

10+00 11+00 12+00 13+00 14+00 15+00 16+00

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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B43	B245

Plotting Date: 8/22/2023

Remove Drop Inlets with Frame and Grate at the following locations:
19+51-33' L
19+51-2' L
19+51-29' R

17+30.00-32.17' L
Install 2'x3' Type B Drop Inlet with 6" Concrete Collar and Type B Frame and Grate

Install Type S Drop Inlet Base and Precast Concrete Type S Drop Inlet Lid at the following locations:
19+50.00-34.62' R (4'x6')
19+50.00-36.00' L (4'x11')

17+29.10-76.89' L
17+30.00-32.17' L
Install 18"-42' RCP
(Between Drop Inlet and Tee)

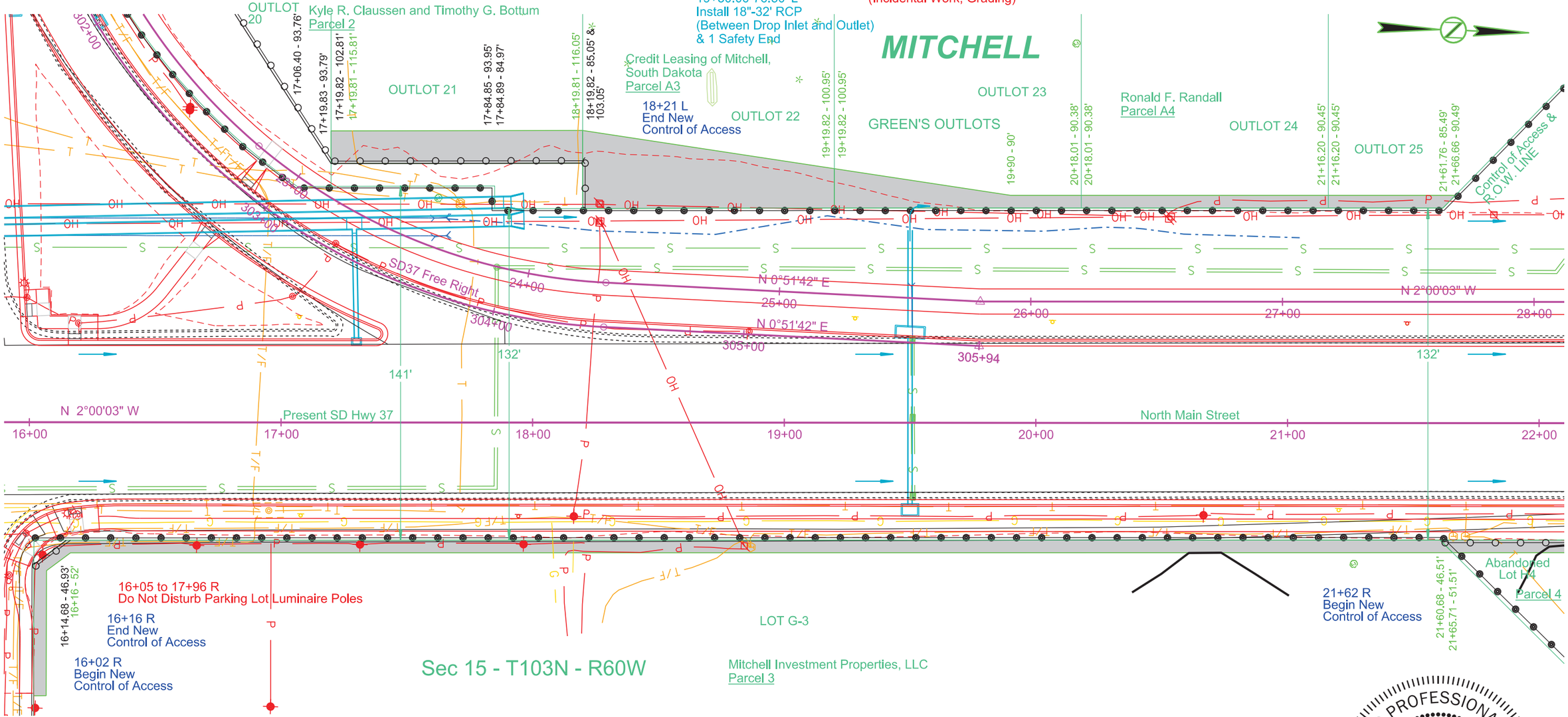
19+50.00-34.62' R to
19+50.00-36.00' L
Install 18"-68' RCP
(Between Drop Inlets)

19+50.00-36.00' L to
19+50.00-76.50' L
Install 18"-32' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

19+51-2' L to 19+51-29' R
Take Out 18"-31' RCP
(Incidental Work, Grading)

19+51-2' L to 19+51-33' L
Take Out 18"-31' RCP
(Incidental Work, Grading)

19+51-33' L to 19+51-54' L
Take Out 18"-21' RCP
(Incidental Work, Grading)



Sec 15 - T103N - R60W

Mitchell Investment Properties, LLC
Parcel 3



Parcel 2
17+19.81 L to 18+19.81 L
Temporary Easement containing
1300 sq ft, more or less

Parcel A3
18+19.81 L to 19+19.82 L
Temporary Easement containing
2333 sq ft, more or less

Parcel A4
19+19.82 L to 21+66.66 L
Temporary Easement containing
1596 sq ft, more or less

Parcel 3
16+01.84 to 21+65.71 R
Temporary Easement containing
3063 sq ft, more or less

Parcel 4
21+60.68 to 23+10.71 R
Temporary Easement containing
1122 sq ft, more or less

Plot Scale - 1:40
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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B44	B245

Plotting Date: 8/22/2023

Mainline
10+00 to 31+00

Excavation	3,579	Embankment	1,074	
Undercut	11,448	+20%	215	1,289
Muck	0	Undercut	11,448	
Option Borrow	0	+20%	2,290	13,738
	15,027	Waste		0
				15,027

Haul	=	23,153	CuYdSta
Option Borrow Haul	=	0	CuYdSta
Dead Haul	=	0	CuYdSta

Waste is Muck Excavation to be disposed of at a site approved by the Engineer

-0.3000%

42" RCP Arch 0.0022%

FLL 1297.21
FLL (Tee) 1295.95

FL 1295.80

PVI 19+00
Elev 1301.09

FLR 1296.27
FLL (Drop Inlet) 1295.60
FLL (Outlet) 1294.83

-1.9000%

LDG -1.4384%

L 300.00ft
G1 -0.3000%
G2 -1.9000%
K 188

LDGPI 19+75
Elev 1294.60

CP 3
18+84.98-30.39' R
Mag nail in top of East curb - approx. 325' North of Main & Fairoaks Ave. intersection
1302.249

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255

1301.99 1301.93 1301.87 1301.81 1301.75 1301.69 1301.63 1301.57 1301.51 1301.43 1301.33 1301.20 1301.06 1300.89 1300.70 1300.49 1300.26 1300.01 1299.74 1299.44 1299.13 1298.79 1298.43 1298.05 1297.67 1297.29 1296.91 1296.53 1296.15 1295.77 1295.39

16+00 17+00 18+00 19+00 20+00 21+00 22+00

Plot Scale - 1:40

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B45	B245

Plotting Date: 8/22/2023 Rev 08/11/2023 RJB

FOR BIDDING PURPOSES ONLY

Plot Scale - 1:40

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
27+00.00-32.17' L
27+00.00-32.17' R

22+67.00-34.62' R to 22+67.00-34.62' L
Install 18"-66' RCP
(Between Drop Inlets)

22+67.00-34.62' L to 22+67.00-71.00' L
Install 18"-28' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

Install 4'x11' Type S Drop Inlet Base
and Precast Concrete Type S
Drop Inlet Lid
at the following locations:
22+67.00-34.62' L
22+67.00-34.62' R
25+25.00-34.62' L
25+25.00-34.62' R
25+60.00-34.62' L
25+60.00-34.62' R
25+95.00-34.62' L
25+95.00-34.62' R

25+25.00-34.62' L to 25+60.00-34.62' L
Install 18"-24' RCP
(Between Drop Inlets)

25+25.00-34.62' R to 25+60.00-34.62' R
Install 18"-24' RCP
(Between Drop Inlets)

25+60.00-34.62' R to 25+60.00-34.62' L
Install 18"-66' RCP
(Between Drop Inlets)

25+60.00-34.62' L to 25+60.00-75.13' L
Install 18"-32' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

25+60.00-34.62' L to 25+95.00-34.62' L
Install 18"-24' RCP
(Between Drop Inlets)

25+60.00-34.62' R to 25+95.00-34.62' R
Install 18"-24' RCP
(Between Drop Inlets)

REGISTERED PROFESSIONAL ENGINEER
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KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Control of Access & R.O.W. LINE

PI 23+41.96
N 517973.80
E 2578338.09
Del 0°01'10" R

23+42.11

2000+00

West 23rd Avenue

40'

23+81.70 - 108.22'
23+86.70 - 86.04' & 108'

xr23
PI 2000+76.97
N 517982.23
E 2578307.28
Del 2°14'28" R

MITCHELL

Sec 10 - T103N - R60W

25+65.00 - 86.48' & 91'

Boyle Family Trust
Parcel A5

LOT 11

26+30.00 - 86.64' & 92'

Dean M. Sadler &
Betty J. Sadler
(INFORMATION ONLY)

SCOVILLE'S ADDITION

LOT 1

28+00 29+00 30+00 31+00 32+00 33+00 34+00

2001+07.48 (xr23)=
23+50.98 (Mainline)

2001+00

132'

Present SD Hwy 37

North Main Street

22+00 23+00 24+00 25+00 26+00 27+00 28+00

Abandoned
Lot H4

22+69.51' - 46.43'
22+73.60' - 46.43'

Mitchell
Investment
Properties, LLC
Parcel 4

23+10.90 - 86.92'
23+06 - 92'

23+11 R
End New
Control of Access

23+06 - 129'
23+11.14 - 128.79'

Section Line

2002+00

East 23rd Avenue

xr23

Lot H2 of LOT 5
(Abandoned)
Estate of Gwynethe Lindley
Shirley Sampson and
Betty Johnson)
Parcel 5

23+82 - 113'
23+77.09 - 114.36'

23+82 - 129'
23+77.18 - 128.72'

LOT A

24+30.18 - 45.78'
24+30 - 51'

24+69.36' - 50.65'
24+73.18 - 45.64'

24+92.12 - 50.60'
24+92.12 - 55.60'

RESURVEY
LOT 5

Mitchell Investment
Properties, LLC
Parcel A7

Mitchell Investment Properties, LLC
Parcel 6

25+82.09 - 45.32' & 47.21'
25+87.09 - 45.31' & 47.20'

26+08 - 55' & 73'

RESURVEY LOT 4

26+68 - 55' & 73'

24+65 to 27+60 R
Do Not Disturb Parking
Lot Luminaire Poles

27+60.60 - 54.76'
27+60.60 - 54.76'

27+72 to 27+75 R
Do Not Disturb Sign

27+91 - 55' & 78'

Rocky Niewenhuis &
Melinda Niewenhuis
Parcel A8

LOT 1
ROCKY TODD
ADDITION

Sec 15 - T103N - R60W

xr23
PI 2001+37.98
N 517983.41
E 2578368.28
Del 0°45'46" L

Remove Frame and Grate
& Remove 6' of the Drop
Inlet Structure at the
following locations:
25+44-3' L
25+44-38' R

Install 3'x4' Drop Inlet Cover
at the following locations:
25+44-3' L
25+44-38' R

25+44-94' R to 25+44-38' R
Retain 24"-57' RCP

25+44-38' R to 25+44-3' L
Retain 24"-42' RCP

25+44-3' L to 25+46-74' L
Retain 24"-71' RCP

27+00.00-32.17' R to 27+00.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

27+00.00-32.17' L to 27+00.00-69.67' L
Install 18"-30' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

27+00.00-32.17' L to 29+40.00-34.62' L
Install 18"-240' RCP
(Between Drop Inlets)

Parcel A5
23+81.70 to 23+86.70 L
Temporary Easement containing
111 sq ft, more or less

Parcel A5
25+65.00 to 26+30.00 L
Temporary Easement containing
325 sq ft, more or less

Parcel 5
23+77.18 to 24+73.18 R
Temporary Easement containing
529 sq ft, more or less

Parcel A7
24+69.36 to 24+92.12 R
Temporary Easement containing
104 sq ft, more or less

Parcel 6
24+92.12 to 27+60.60 R
Temporary Easement containing
3755 sq ft, more or less

Parcel A8
27+60.60 to 28+23.16 R
Temporary Easement containing
1358 sq ft, more or less

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B46	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Plot Scale - 1:40

1340
1335
1330
1325
1320
1315
1310
1305
1300
1295
1290
1285
1280
1275
1270
1265
1260
1255
1250

23+51 L
36' Int St
(W 23rd Ave)

23+51 R
36' Int St
(E 23rd Ave)

L 350.00ft
G1 -1.9000%
G2 1.7000%
K 97

26+38 R
40' Drive

-1.9000%
LDG -1.4384%
LDG 6.3636%
FLR 1290.95
FLL (Drop Inlet) 1290.62
FLL (Outlet) 1290.45

18"RCP 1.0000%
18"RCP 2.0000%
18"RCP 2.0000%
18"RCP 1.0000%
FLL 1286.13
FLR 1286.54
FLR 1286.30
FLL 1285.65
FLR (Drop Inlet) 1286.30
FLL (Drop Inlet) 1285.65
FLL (Outlet) 1284.88
FLL 1286.13
FLR 1286.54
FLR 1286.30
FLL 1285.65

1.7000%
18"RCP 1.0000%
LDG 2.1250%
LDG 1.0000%
FLL 1287.88
FLR 1288.19
FLL (Drop Inlet) 1287.88
FLL (Outlet) 1287.70

LDGPI 22+67
Elev 1290.40

LDGPI 23+00
Elev 1292.50

PVI 25+50
Elev 1288.74

LDGPI 27+00
Elev 1287.70

LDGPI 26+90
Elev 1287.60

CP 4
23+71.09-148.42' R
Mag nail in drop inlet - North side of 23rd Ave - 150' East of CL of North Main St.
1290.188

1295.39 1295.01 1294.63 1294.25 1293.87 1293.49 1293.11 1292.73 1292.35 1291.98 1291.63 1291.32 1291.05 1290.83 1290.64 1290.50 1290.40 1290.34 1290.32 1290.34 1290.40 1290.50 1290.65 1290.83 1291.06 1291.33 1291.64 1291.97 1292.31 1292.65 1292.99

22+00 23+00 24+00 25+00 26+00 27+00 28+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B47	B245

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29+06-68' L
Take Out 18"-50' RCP
(Incidental Work, Grading)

29+09-73' L (1 ac)
Install 18"-64' CMP
& 2 Safety Ends

32+20-95' L
Take Out Trees (>6" Diameter)

29+40.00-32.17' R to 29+40.00-34.62' L
Install 18"-64' RCP
(Between Drop Inlets)

29+40.00-32.17' R to 31+98.00-32.17' R
Install 18"-256' RCP
(Between Drop Inlets)

29+40.00-34.62' L
Install 4'x11' Type S Drop Inlet Base
and Precast Concrete Type S Drop Inlet Lid

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
29+40.00-32.17' R
31+00.00-32.17' L
31+98.00-32.17' R
34+00.00-32.17' L
34+00.00-32.17' R

31+00.00-32.17' L to 31+00.00-69.67' L
Install 18"-30' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

32+10.00-64.00' R
Install 3'x4' Type C Drop Inlet
and Type C Frame and Grate

31+98.00-32.17' R to 32+10.00-64.00' R
Install 18"-32' RCP
(Between Drop Inlets)

MITCHELL

32+27-157' L
Do Not Disturb Tree

xr32 drive
PI 1+40.46
N 518873.03
E 2578166.44
Del 90°00'00" R
Dc 190°59'09"
T 30.00'
L 47.12'
R 30.00'

34+00.00-32.17' R to 34+00.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

34+00.00-32.17' L to 34+00.00-73.67' L
Install 18"-34' RCP
(Between Drop Inlet and Outlet) &
1 Safety End

32+97-96' L
Do Not Disturb Sign and
Landscaping within the
Temporary Easement

Dean M. Sadler & Betty J. Sadler
Parcel A6

SCOVILLE'S ADDITION

LOT 1 | LOT 2 | LOT 3 | LOT 4

KLAS, LLC
Parcel A10

Present SD Hwy 37

North Main Street

xr32drive

3000+00.00 (xr32)= 32+37.23 (Mainline)

0+00.00 (xr32drive)= 32+46.57 (Mainline)

29+11-52' R
Do Not Disturb Sign

28+52-69' R
Do Not Disturb Sign

30+90-58' R
Do Not Disturb Post

Ronald and Mary Schaefer Irrevocable
Family Legacy Trust
Parcel 7

Tom Moody &
Diane Moody
Parcel 8

Rocky
Niewenhuis &
Melinda
Niewenhuis
Parcel A8

Marvin E. Thome &
Michael C. Thome
Parcel A9

LOT 1

LOT 12A-3

LOT 12A-2

33' Access Easement

Property Line

Refurbish single mailbox
at the following locations:
28+54 R
28+55 R
28+56 R

ROCKY TODD
ADDITION

Sec 10 - T103N - R60W

Koch Premier Properties LLC
Parcel 9

LOT 14

LAKE PARK
ADDITION

50' Lakeview Lane

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Parcel A6
28+88.46 to 29+36.96 L
Temporary Easement containing
1234 sq ft, more or less

Parcel A6
32+04.41 to 32+29.04 L
Temporary Easement containing
2232 sq ft, more or less

Parcel A10
32+29.04 to 33+65.00 L
Temporary Easement containing
5915 sq ft, more or less

Parcel A9
28+23.16 to 28+85.62 R
Temporary Easement containing
2061 sq ft, more or less

Parcel 7
28+85.62 to 30+90.66 R
Temporary Easement containing
2398 sq ft, more or less

Parcel 8
30+90.66 to 32+15.76 R
Temporary Easement containing
2416 sq ft, more or less

Parcel 9
32+65.70 to 35+10.60 R
Temporary Easement containing
7857 sq ft, more or less

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B48	B245

Plotting Date: 8/22/2023

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31+00

xr32drive

PVI 0+83
Elev 1299.43
PVI 0+53
Elev 1299.88
PVI 0+43
Elev 1299.73
PVI 1+62
Elev 1297.22
L 30.00ft
G1 -4.7179%
G2 0.8888%
K 5
4.2209%
-1.5000%
8.3325%
1.5000%
-4.7179%
0.8888%
PVI 0+33
Elev 1299.31
PVI 0+32
Elev 1299.24
L 30.00ft
G1 -1.5000%
G2 -4.7179%
K 9
PVI 1+35
Elev 1296.98
1299.60
1299.78
1299.40
1298.64
1297.69
1297.12
1297.21
0+00
1+00
2+00

32+47 L
24' Drive

32+35 R
21' Int St
(Lakeview Lane)

28+17 R
32' Drive

28+87 R
40' Drive

28+97 L
24' Drive

1.7000%
LDG 2.1250%
18"RCP 1.0000%
FLL 1290.21
LDG 1.3333%
FLR 1290.85
FLL 1290.21
FLR 1290.85
LDG 0.5063%
18"RCP 0.7500%
FLL (Drop Inlet) 1294.38
FLL (Outlet) 1294.11
18"RCP 0.6000%
FLR 1292.76
FLR 1292.95
LDG -0.9816%
FLR 1294.63
FLL (Drop Inlet) 1294.01
FLL (Outlet) 1293.20

LDGPI 34+00
Elev 1293.20
L 900.00ft
G1 1.7000%
G2 -4.0000%
K 158
LDGPI 32+37
Elev 1294.80
LDGPI 29+40
Elev 1292.80
LDGPI 30+00
Elev 1293.60

1292.99
1293.33
1293.67
1294.01
1294.35
1294.69
1295.03
1295.37
1295.71
1296.05
1296.39
1296.73
1297.05
1297.34
1297.60
1297.84
1298.05
1298.24
1298.40
1298.54
1298.65
1298.74
1298.80
1298.84
1298.85
1298.83
1298.79
1298.73
1298.64
1298.52
1298.38

28+00
29+00
30+00
31+00
32+00
33+00
34+00

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REG. NO.
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KERRY C MEYER
SOUTH DAKOTA
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B49	B245

Plotting Date: 8/22/2023 Rev 06/12/2023 RJB

Plot Scale - 1:40

36+11-76' L
Take Out 18"-40' RCP
(Incidental Work, Grading)

Remove Drop Inlets
with Frame and Grate
at the following locations:
39+04-6' L
39+04-35' R

36+06-82' L (2 ac)
Install 18"-84' CMP
& 2 Safety Ends

35+80.00-56.00' R to 35+80.00-32.17' R
Install 18"-16' RCP
(Between Inlet and Drop Inlet)
& 1 Safety End

35+70.00-32.17' L to 35+80.00-32.17' R
Install 18"-64' RCP
(Between Drop Inlets)

35+60.87-78.80' L to 35+70.00-32.17' L
Install 18"-40' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

SCOVILLE'S ADDITION

Refurbish single mailbox
at the following location:
35+75 L

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
35+70.00-32.17' L
35+80.00-32.17' R
37+00.00-32.17' L
37+00.00-32.17' R
38+00.00-32.17' L
39+20.00-32.17' L

36+24-132' L
Do Not Disturb Trees

MITCHELL

39+04-6' L to 39+04-35' R
Take Out 48"-41' RCP
(Incidental Work, Grading)

39+04-6' L to 39+04-61' L
Take Out 18"-55' RCP
(Incidental Work, Grading)

39+20.00-34.62' R to 39+20.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

39+18.88-65.65' L to 39+20.00-32.17' L
Install 18"-26' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

LOT 4
KLAS, LLC
Parcel A10
City of Mitchell
Parcel A11
LOT 5
LOT 10A
LOT E
LOT 12A-1
Determan Family LLC
Parcel 11
Present SD Hwy 37
North Main Street
N 14°51'45" W
N 1°58'53" W
132'
157'
34+00
35+00
36+00
37+00
38+00
39+00
40+00
40+00
41+00
42+00
43+00
44+00
45+00
46+00
35+89.51 - 150.00'
35+89.51 - 150.00'
35+18 - 150'
36+40 - 96'
36+61.99 - 89.15'
37+17.24 - 89.28'
34+87.00 - 88.70' & 94'
35+73 - 94'
39+21.22 - 56.24'
39+21.20 - 46.97'
39+21.28 - 81.80'
39+77.33 - 66.65' & 82'
30' Access Easement
LOT 1
Cully Evers
Parcel A12
BRIG ADDITION
39+72 to 39+85 R
Do Not Disturb Retaining Walls
Refurbish single mailbox
at the following locations:
39+88 R
Koch Premier Properties LLC
Parcel 9
LOT 14
LAKE PARK ADDITION
35+10.49 - 48.05'
35+10.60 - 80.22'
35+70.00 - 47.91' & 66.00'
35+90.00 - 47.86' & 66.00'
LOT 1
PETERS ADDITION
36+32 - 80' & 89'
36+65.31 - 47.67'
36+65.02 - 93.72'
36+74 - 69'
37+60 - 57' & 69'
36+38 R & 36+62 R
Do Not Disturb Pillars
Determan Family LLC
Parcel 10, 10A
Sec 10 - T103N - R60W

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37+00.00-32.17' R to 37+00.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

37+00.00-32.17' L to 37+00.00-75.67' L
Install 18"-36' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

38+00.00-34.63' R to 38+00.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

38+00.00-32.17' L to 39+20.00-32.17' L
Install 18"-118' RCP
(Between Drop Inlets)

38+08-76' L (3 ac)
Install 24"-66' RCP
& 2 Sloped Ends

39+18.71-70.83' L to 39+19.27-82.04' L
Install 18"-10' RCP
(Between Drop Inlets)

39+19.27-82.04' L
Install 3'x4' Type C Drop Inlet
and Type C Frame and Grate

Install 4'x11' Type S Drop Inlet Base
and Precast Concrete Type S
Drop Inlet Lid
at the following locations:
38+00.00-34.63' R
39+20.00-34.62' R

Parcel A11
34+87.00 to 50+28.39 L
Temporary Easement containing
43863 sq ft, more or less

Parcel 10
35+10.60 to 36+65.02 R
Temporary Easement containing
5003 sq ft, more or less

Parcel 11
36+65.02 to 39+21.22 R
Temporary Easement containing
3614 sq ft, more or less

Parcel A12
39+21.28 to 39+77.33 R
Temporary Easement containing
846 sq ft, more or less

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B50	B245

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Plotting Date: 8/22/2023

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PVI 34+60
Elev 1304.21

36+08 L
36' Drive

36+55 R
40' Drive

39+51 R
32' Drive

39+69 L
40' Drive

18"RCP 1.527%
18"RCP 2.000%

RDG -0.3382%
LDG -1.6667%

RDG 0.5455%
FLR 1292.47
FLL 1291.21
FLL 1290.50
FLL 1291.21
FLR (Inlet) 1294.40
FLR (Drop Inlet) 1292.47

LDG -2.5556%

FLR (Drop Inlet) 1289.50
FLL (Drop Inlet) 1288.25
FLL (Outlet) 1287.40

LDG -3.2420%
FLR 1284.70
FLL 1283.42
FL 1285.20
FL 1282.70

18"RCP 2.400%
18"RCP 2.000%
FLL 1281.08

-4.0000%

LDG 0.3226%
FLR 1282.36
FLL (Drop Inlet) 1281.08
FLL (Outlet) 1280.30

LDG -4.2500%
FLL 1277.64
FLL (Outlet) 1277.44

RDGPI 34+10
Elev 1295.00

LDGPI 34+00
Elev 1293.20

RDGPI 35+80
Elev 1294.40

RDGPI 36+35
Elev 1294.70

L 900.00ft
G1 1.7000%
G2 -4.0000%
K 158

LDGPI 36+10
Elev 1289.70

LDGPI 37+00
Elev 1287.40

LDGPI 39+50
Elev 1280.40

LDGPI 39+19
Elev 1280.30

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

1298.38 1298.21 1298.02 1297.80 1297.56 1297.29 1297.00 1296.68 1296.34 1295.97 1295.57 1295.15 1294.71 1294.24 1293.74 1293.22 1292.67 1292.10 1291.50 1290.88 1290.23 1289.56 1288.86 1288.14 1287.39 1286.61 1285.81 1285.01 1284.21 1283.41 1282.61

34+00 35+00 36+00 37+00 38+00 39+00 40+00

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REG NO.
15517
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SOUTH DAKOTA
8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B51	B245

Plotting Date: 8/22/2023 Rev 06/12/2023 RJB

Install 4'x11' Type S Drop Inlet Base and Precast Concrete Type S Drop Inlet Lid at the following locations:
41+50.00-34.62' R
46+00.00-34.62' L
46+00.00-34.62' R

Install 2'x3' Type B Drop Inlet with 6" Concrete Collar and Type B Frame and Gate at the following locations:
41+50.00-32.17' L
43+00.00-32.17' L
43+00.00-32.17' R

41+50.00-34.63' R to 41+50.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

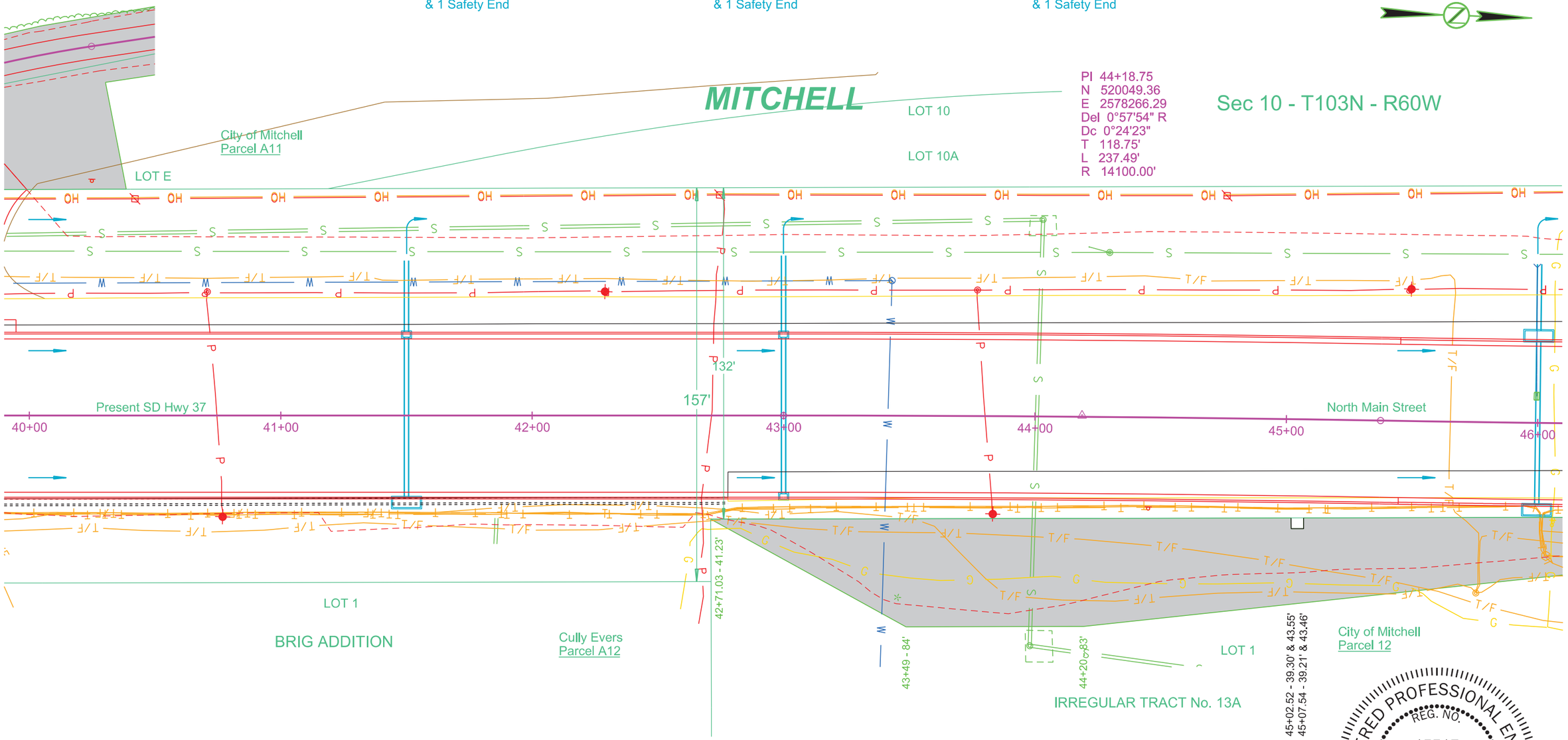
41+50.00-32.17' L to 41+50.00-61.67' L
Install 18"-22' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

43+00.00-32.17' R to 43+00.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

43+00.00-32.17' L to 43+00.00-63.67' L
Install 18"-24' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

46+00.00-34.62' R to 46+00.00-34.62' L
Install 18"-66' RCP
(Between Drop Inlets)

46+00.00-34.62' L to 46+00.00-63.12' L
Install 18"-20' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End



Parcel 12
42+71.03 to 46+47.24 R and
Temporary Easement containing
12845 sq ft, more or less

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B52	B245

Plotting Date: 8/22/2023

Mainline
31+00 to 55+86

Excavation	1,848		Embankment	18,493	
Undercut	4,757		+20%	3,699	22,192
Muck	2,088		Undercut	11,078	
Option Borrow	28,880		+20%	2,215	13,293
	37,573		Waste		2,088
					37,573

Haul	=	0	CuYdSta
Option Borrow Haul	=	2,621,135	CuYdSta
Dead Haul	=	1,545,080	CuYdSta

Waste is Muck Excavation to be disposed of at a site approved by the Engineer

LDG -4.2500%

-4.0000%

LDG -4.2667%

LDG -3.8667%

FLR 1273.11
FLL (Drop Inlet) 1272.47
FLL (Outlet) 1271.90

FLR 1266.73
FLL (Drop Inlet) 1266.11
FLL (Outlet) 1265.50

FLR 1255.08
FLL (Drop Inlet) 1254.43
FLL (Outlet) 1253.90

LDGPI 41+50
Elev 1271.90

LDGPI 43+00
Elev 1265.50

LDGPI 46+00
Elev 1253.90

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8-22-2023

1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235 1230 1225 1220 1215

1282.61 1281.81 1281.01 1280.21 1279.41 1278.61 1277.81 1277.01 1276.21 1275.41 1274.61 1273.81 1273.01 1272.21 1271.41 1270.61 1269.81 1269.01 1268.21 1267.41 1266.61 1265.81 1265.01 1264.21 1263.41 1262.61 1261.81 1261.01 1260.21 1259.41 1258.61

40+00 41+00 42+00 43+00 44+00 45+00 46+00

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B53	B245

Plotting Date: 8/22/2023

46+00-11' L to 46+00-62' L
Take Out 18"-52' RCP
(Incidental Work, Grading)

Remove Drop Inlet
with Frame and Grate
at the following locations:
46+00-11' L
50+82-13' L

Install 4'x11' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet Lid
at the following locations:
49+00.00-34.62' L
50+35.00-34.62' L
50+35.00-34.62' R
50+70.00-34.62' L
50+70.00-34.62' R
51+05.00-34.62' L
51+05.00-34.62' R

LOT 10A

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
49+00.00-32.17' R
52+00.00-32.17' L
52+00.00-32.17' R

49+00.00-34.62' L to 49+00.00-32.17' R
Install 18"-64' RCP
(Between Drop Inlets)

49+00 R
Install Bank and
Channel Protection
Gabions (4.5 CuYd)
and Type B Drainage
Fabric (15 SqYd)

SW1/4

PI 46+56.24
N 520286.81
E 2578262.08
Del 0°57'54" L
Dc 0°24'23"
T 118.75'
L 237.49'
R 14100.00'

49+00.00-32.17' R to 49+00.00-110.00' R
Install 18"-10' RCP
Install 18"-56' CMP (32',24')
and 2-12.5° Elbows
& 1-18" RCP to CMP Outlet Transition
& 1 Sloped End
(Between Drop Inlet and Outlet)

50+75-58' R to 50+82-13' L
Take Out 24"-71' RCP
(Incidental Work, Grading)

50+82-13' L to 50+82-64' L
Take Out 24"-51' RCP
(Incidental Work, Grading)

City of
Mitchell
(INFORMATION ONLY)

50+35.00-34.62' L to 50+70.00-34.62' L
Install 18"-24' RCP
(Between Drop Inlets)

50+35.00-34.62' R to 50+70.00-34.62' R
Install 18"-24' RCP
(Between Drop Inlets)

50+70.00-34.62' L to 50+70.00-34.62' R
Install 24"-66' RCP
(Between Drop Inlets)

50+70.00-61.00' L to 50+70.00-34.62' L
Install 24"-18' RCP
(Between Drop Inlet and Inlet)
& 1 Sloped End

MITCHELL
Sec 10 - T103N - R60W

50+70.00-34.62' R to 50+70.00-135.00' R
Install 24"-66' RCP
Install 24"-26' CMP (14',12')
and 2-17.5° Elbows
& 1-24" RCP to CMP Outlet Transition
& 1 Sloped End
(Between Drop Inlet and Outlet)

50+70.00-34.62' L to 51+05.00-34.62' L
Install 18"-24' RCP
(Between Drop Inlets)

50+70.00-34.62' R to 51+05.00-34.62' R
Install 18"-24' RCP
(Between Drop Inlets)

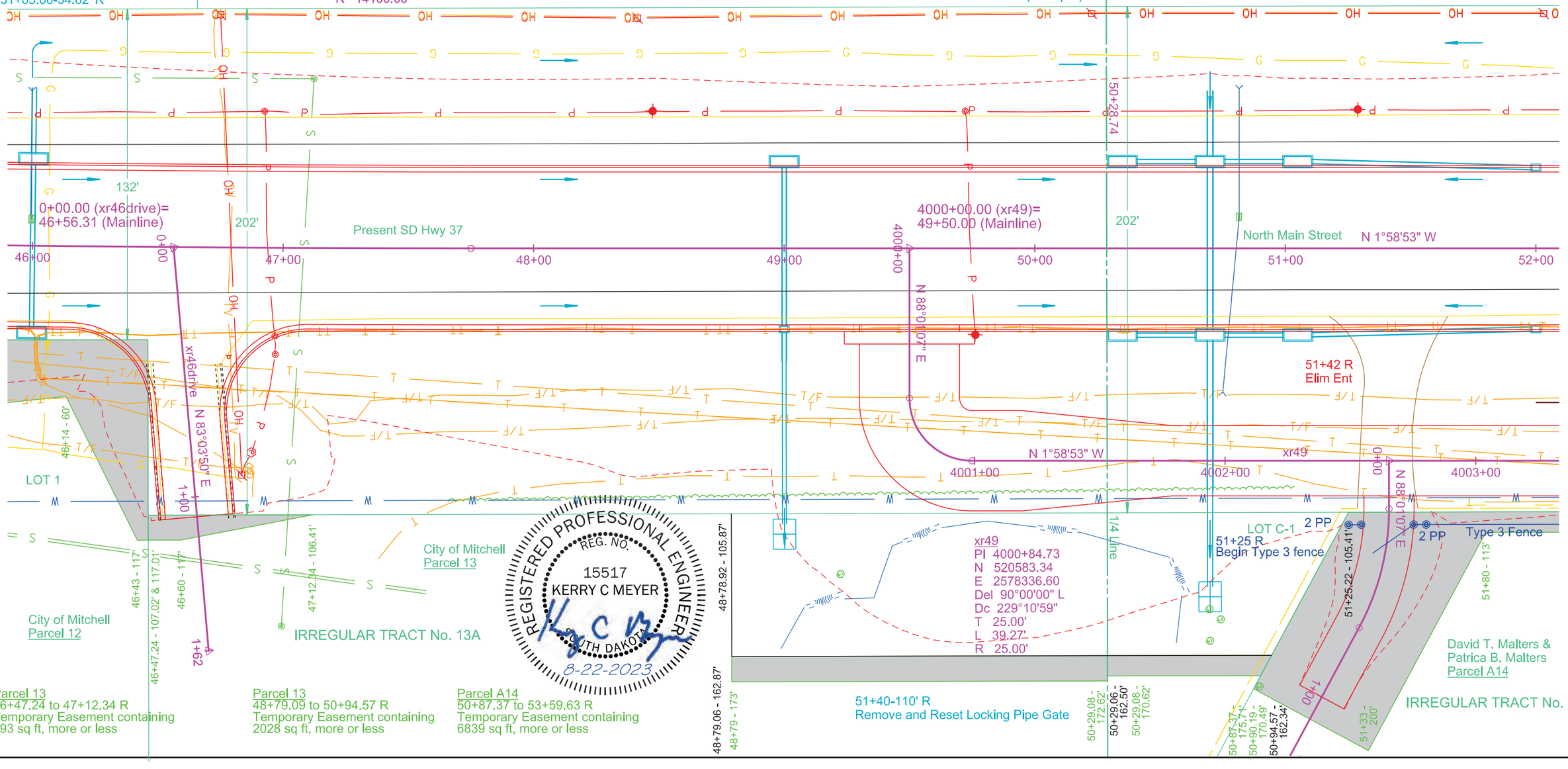
50+70 R
Install Bank and Channel
Protection Gabions (4.5 CuYd)
and Type B Drainage Fabric
(15 SqYd)

City of
Mitchell
Parcel A13

IRREGULAR TRACT No. 6

51+05.00-34.62' R to 52+00.00-32.17' R
Install 18"-90' RCP
(Between Drop Inlets)

51+05.00-34.62' L to 52+00.00-32.17' L
Install 18"-90' RCP
(Between Drop Inlets)



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Parcel 13
46+47.24 to 47+12.34 R
Temporary Easement containing
393 sq ft, more or less

Parcel 13
48+79.09 to 50+94.57 R
Temporary Easement containing
2028 sq ft, more or less

Parcel A14
50+87.37 to 53+59.63 R
Temporary Easement containing
6839 sq ft, more or less

51+40-110' R
Remove and Reset Locking Pipe Gate

Plot Scale - 1:40

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B54	B245

Plotting Date: 8/22/2023

Plot Scale - 1:40

1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235 1230 1225 1220 1215 1210 1205

46+56 R
25' Drive

49+50 R
40' Drive
(Fishing Access)

L 750.00ft
G1 -4.0000%
G2 3.6000%
K 99

-4.0000%

LDG -2.7600%

LDG -1.5455%

LDG 0.9643%

LDGPI 46+00
Elev 1253.90

LDGPI 48+50
Elev 1247.00

LDGPI 50+70
Elev 1243.60

PVI 50+50
Elev 1240.61

FLL 1243.69
FLR (Drop Inlet) 1243.37
FLR (Outlet) 1234.90

FLL 1243.60
18"RCP 1.000%
FLR 1241.00

FLL 1243.84
FLR 1241.24
18"RCP 1.000%

FLL 1243.84
FLR 1241.24
18"RCP 1.000%

FLL 1244.72
FLR 1242.12
18"RCP 1.000%

FLL (Inlet) 1243.60
FLL (Drop Inlet) 1243.34
FLL (Drop Inlet) 1241.15
FLR (Drop Inlet) 1240.50
FLR (Outlet) 1234.60

PVI 0+31
Elev 1256.98

PVI 0+65
Elev 1256.29

xr46drive

PVI 1+08
Elev 1251.74

-2.0000%

-10.5919%

L 40.00ft
G1 -2.0000%
G2 -10.5919%
K 5

1256.79 1256.15 1254.68 1252.59

0+00 1+00 1+60

1258.61 1257.81 1257.01 1256.21 1255.42 1254.65 1253.92 1253.23 1252.58 1251.97 1251.41 1250.88 1250.39 1249.95 1249.54 1249.18 1248.86 1248.57 1248.33 1248.13 1247.97 1247.85 1247.77 1247.73 1247.73 1247.77 1247.85 1247.97 1248.13 1248.34 1248.58

46+00 47+00 48+00 49+00 50+00 51+00 52+00

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SOUTH DAKOTA
8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B55	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

53+40.00-32.17' R to 53+40.00-32.17' L
Install 18"-62' RCP
(Between Drop Inlets)

53+40.00-32.17' L to 53+40.00-63.67' L
Install 18"-24' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

57+61.00-34.62' L
Install 4'x11' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet Lid

57+60.00-64.50' L
Install 3'x4' Type C Drop Inlet
and Type C Frame and Grate

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
53+40.00-32.17' L
55+05.00-32.17' L
55+05.00-32.17' R

53+40.00-32.17' R
Install 3'x4' Type B Drop Inlet
with 6" Concrete Collar and
Type E Frame and Grate

54+69-67' L
Take Out 18"-37' RCP
(Incidental Work, Grading)

55+05.00-32.17' R to
55+05.00-32.17' L
Install 18"-64' RCP
(Between Drop Inlets)

55+05.00-32.17' L to
55+05.00-63.67' L
Install 18"-24' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

56+81.97-64.50' L to
57+60.00-64.50' L
Install 18"-78' RCP
(Between Drop Inlet & Outlet)
& 1 Safety End

55+20-68' L to 56+02-72' L
Take Out 4"-82' Steel Pipe
(Incidental Work, Grading)

55+79 to 57+22
Take Out 146'-0" Prestressed
Concrete Beam Bridge
(Incidental Work, Structure)
(See Section E)

56+81-76' L to 57+46-76' L
Take Out 30"-66' CMP
(Incidental Work, Grading)

57+26-65' L to 57+26-76' L
Take Out 12"-12' CMP
(Incidental Work, Grading)

57+46-76' L to 58+74-79' L
Take Out 24"-129' CMP
(Incidental Work, Grading)

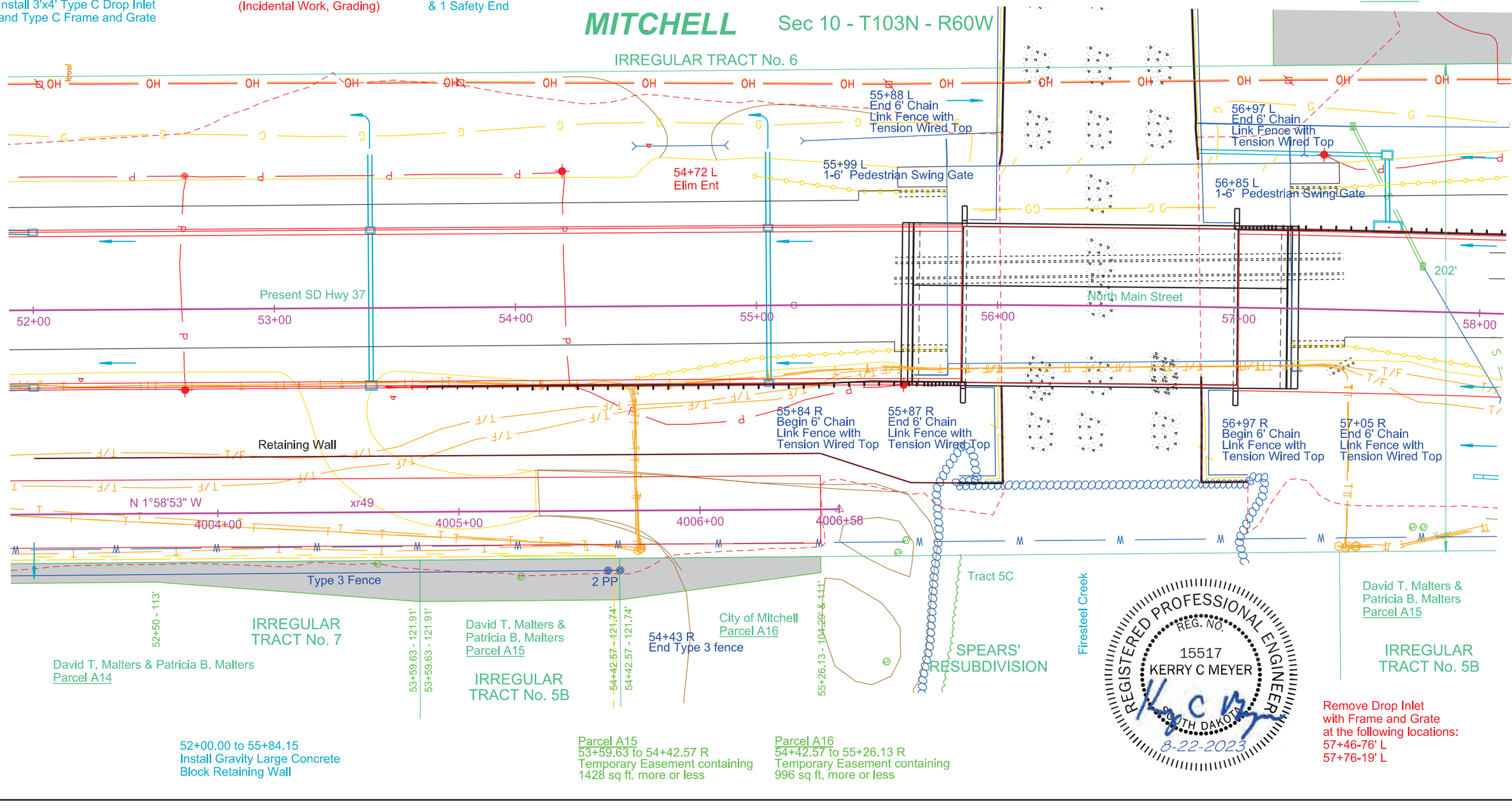
57+60.00-64.50' L to
57+61.00-34.62' L
Install 18"-28' RCP
(Between Drop Inlets)

57+46-76' L to 57+76-19' L
Take Out 24"-65' RCP
(Incidental Work, Grading)

57+76-19' L to 58+10-35' R
Take Out 24"-64' RCP
(Incidental Work, Grading)

Remove Steel Guardrail
at the following locations:
55+00-50' L to 55+79-43' L
54+51-34' R to 55+79-22' R
57+21-45' L to 58+49-60' L
57+23-20' R to 58+02-28' R

55+84.75 to 57+00.25
Install 115'-6" Prestr. Girder Bridge and
Bridge Berm Slope Protection
(See Section E)



52+00.00 to 55+84.15
Install Gravity Large Concrete
Block Retaining Wall

Parcel A15
53+59.63 to 54+42.57 R
Temporary Easement containing
1428 sq ft, more or less

Parcel A16
54+42.57 to 55+26.13 R
Temporary Easement containing
996 sq ft, more or less

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SOUTH DAKOTA
8-22-2023

Remove Drop Inlet
with Frame and Grate
at the following locations:
57+46-76' L
57+76-19' L

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B56	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Plot Scale - 1:40

55+86 Bridge

56+98 Bridge

PVI 56+98
Elev 1265.07 (Finished)

PVI 56+98
Elev 1263.94

PVI 55+86
Elev 1261.04 (Finished)

PVI 55+86
Elev 1259.91

PVI 57+18
Elev 1264.70

PVI 57+18
Elev 1264.66

57+40 L
Ditch Block
Elev 1263.8

Finished Grade Across Structure

Subgrade

Subgrade

L 750.00ft
G1 -4.0000%
G2 3.6000%
K 99

3.6000%

3.6000%

3.6000%

LDG 2.7000%

LDG 10.7843%

RDG 3.4815%

LDG 4.4186%

LDG 3.4000%

LDG 0.9643%

18"RCP 4.000%

L 700.00ft
G1 3.6000%
G2 0.5500%
K 230

FL 1254.42

FL 1251.35

FLR 1248.05
FLL (Drop Inlet) 1246.81
FLL (Outlet) 1246.20

FLR 1253.48
FLL (Drop Inlet) 1252.23
FLL (Outlet) 1251.62

FLL (Type S Inlet) 1256.95
FLL (Type C Inlet) 1256.42

RDGPI 57+30
Elev 1258.90

LDGPI 57+50
Elev 1262.70

LDGPI 56+99
Elev 1257.20

LDGPI 55+86
Elev 1255.20

LDGPI 55+00
Elev 1251.40

LDGPI 53+50
Elev 1246.30

1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235 1230 1225 1220 1215 1210 1205

1248.58 1248.86 1249.19 1249.55 1249.96 1250.41 1250.89 1251.42 1251.99 1252.60 1253.25 1253.94 1254.65 1255.37 1256.09 1256.81 1257.53 1258.25 1258.97 1259.69 1261.54 1262.26 1262.98 1263.70 1264.42 1264.01 1264.78 1265.50 1266.21 1266.92 1267.60

52+00 53+00 54+00 55+00 56+00 57+00 58+00

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8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B57	B245

Plotting Date: 9/21/2023 Rev 09/18/2023 RJB

58+06-10' R to 58+13-36' R
Take Out 4"-28' Steel Pipe
(Incidental Work, Grading)

Install 4'x6' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet and Lid
at following locations:
60+00.00-36.04 L
63+00.00-38.12 L
61+90.00-37.37' L

58+57-51' R
Take Out 18"-62' RCP
(Incidental Work, Grading)

58+63-69' R (4 ac)
Install 18"-106' CMP
& 2 Safety Ends

59+99.20-70.46' L to 60+00.00-36.04' L
Install 18"-32' RCP
(Between Drop Inlet and Tee)

61+50-82' L
Take Out 18"-45' RCP
(Incidental Work, Grading)

61+29.00-44.00' L to 61+29.00-78.00' L
Install 18"-32' RCP
(Between Manhole and Drop Inlet)

61+90-26' L to 61+91-74' L
Take Out 16"-48' RCP
(Incidental Work, Grading)

61+29.00-44.00' L
Install 48" Manhole and
Type A Frame and Lid

61+29.00-78.00' L
Install 3'x4' Type C Drop Inlet
and Type C Frame and Grate

61+90-19' L to 61+90-26' L
Take Out 16"-9' RCP
(Incidental Work, Grading)

61+43-67' R (3 ac)
Install 18"-92' CMP
& 2 Safety Ends

61+29.00-44.00' L to
61+90.00-37.37' L
Install 18"-58' RCP
(Between Drop Inlet
and Manhole)

Remove Drop Inlet
with Frame and Grate
at the following locations:
61+90-26' L
61+90-19' L

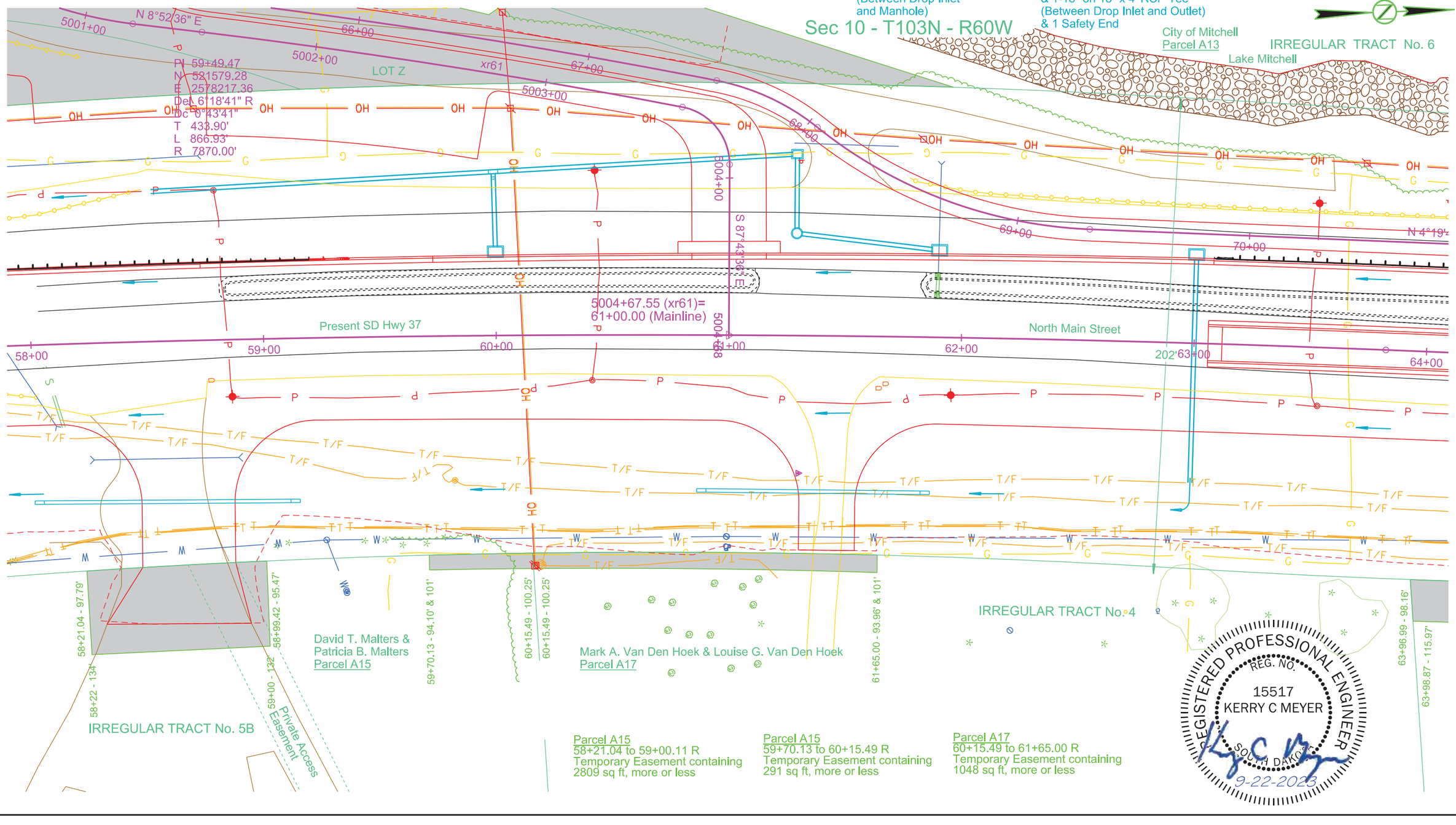
Remove Steel Guardrail
61+78-61' L to 67+07-57' L

58+53.17-64.46' L to 61+29.00-78.00' L
Install 18"-274' RCP (128' & 146')
& 1-18" on 18" x 4' RCP Tee
(Between Drop Inlet and Outlet)
& 1 Safety End

63+00.00-38.12' L to
63+00.00-60.00' R
Install 18"-90' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

MITCHELL

Sec 10 - T103N - R60W



Parcel A15
58+21.04 to 59+00.11 R
Temporary Easement containing
2809 sq ft, more or less

Parcel A15
59+70.13 to 60+15.49 R
Temporary Easement containing
291 sq ft, more or less

Parcel A17
60+15.49 to 61+65.00 R
Temporary Easement containing
1048 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
9-22-2023

Plot Scale - 1:40

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B58	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Plot Scale - 1:40

61+00 L
32' Drive
(Pumphouse Dwy)

PVI 61+00
Elev 1278.46

58+67 R
24' Ent

61+43 R
24' Ent

18"RCP 2.000%

FLL 1271.03

LDG 2.2667%

FLL 1271.64

FLL 1272.77

RDG 2.1800%

FLL (Manhole) 1271.64
FLL (Drop Inlet) 1271.03

18"RCP 2.000%

RDG 0.7571%

FLL 1275.09
FLR (Outlet) 1274.13

LDG 16.8000%

LDG 2.7000%

RDG 3.4815%

FLL 1265.50

FLL (Drop Inlet) 1268.77
FLL (Tee) 1268.45

RDGPI 62+50
Elev 1273.75

L 700.00ft
G1 3.6000%
G2 0.5500%
K 230

RDGPI 60+00
Elev 1268.30

LDGPI 62+00
Elev 1273.50

LDGPI 61+25
Elev 1271.80

LDGPI 58+75
Elev 1269.60

LDGPI 58+50
Elev 1265.40

CP 5
61+30.13-59.18' R
Brass disk in concrete
post stamped "37 77.12"
1276.497

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235 1230 1225

1267.60 1268.27 1268.92 1269.55 1270.17 1270.77 1271.35 1271.91 1272.46 1272.98 1273.50 1273.99 1274.46 1274.92 1275.36 1275.79 1276.19 1276.58 1276.95 1277.31 1277.65 1277.96 1278.27 1278.55 1278.82 1279.07 1279.30 1279.51 1279.71 1279.89 1280.05

58+00 59+00 60+00 61+00 62+00 63+00 64+00

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B59	B245

Plotting Date: 9/21/2023 Rev 09/18/2023 RJB

Install 4'x6' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet
at the following locations:
64+50.00-38.12' L
66+00.00-38.12' L

64+50.00-38.12' L to 64+50.00-66.37' R
Install 18"-96' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

66+69-50' R
Take Out 24"-41' RCP
(Incidental Work, Grading)

66+00.00-8.33' R to 66+00.00-69.83' R
Install 18"-54' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

66+00.00-38.12' L to 66+00.00-8.33' R
Install 18"-44' RCP
(Between Drop Inlets)

67+17' L
Remove Drop Inlet with
Frame and Grate

67+73-17' L to 67+75-32' R
Take Out 16"-49' RCP
(Incidental Work, Grading)

69+96.00-35.67' L
Install 3'x4' Type B Drop Inlet
with 6" Concrete Collar and
Type E Frame and Grate

67+25.00-35.67' L to 67+25.00-8.33' R
Install 18"-42' RCP
(Between Drop Inlets)

67+25.00-8.33' R to 67+25.00-71.83' R
Install 18"-56' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

69+96.00-35.67' L to 69+96.00-65.17' L
Install 18"-22' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

69+96.00-8.33' R to 69+96.00-35.67' L
Install 18"-42' RCP
(Between Drop Inlets)

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grade
at the following locations:
67+25.00-35.67' L
67+25.00-8.33' R
69+96.00-8.33' R
66+00.00-8.33' R

MITCHELL

Sec 10 - T103N - R60W

City of Mitchell
Parcel A13

IRREGULAR TRACT No. 6

Lake Mitchell

LOT X

N 4°19'48" E

N 21°58'48" W

Present SD Hwy 37

North Main Street

202'

66+71 R
Elim Ent

IRREGULAR TRACT No. 3

Chris R. Fosness & Laura K. Fosness
Parcel A18

Parcel A18
63+96.99 to 72+70.71 R
Temporary Easement containing
35655 sq ft, more or less

66+49 - 108' & 132'

68+34.81 - 130.74'
68+34.81 - 130.74'

IRREGULAR TRACT No. 2

69+43 - 140'

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
9-22-2023

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Plot Scale - 1:40

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B60	B245

Plotting Date: 8/22/2023

Plot Scale - 1:40

1330
1325
1320
1315
1310
1305
1300
1295
1290
1285
1280
1275
1270
1265
1260
1255
1250
1245
1240

0.5500%

RDG 0.7571%

RDG 0.4800%

RDG 1.6000%

FLL 1276.28
FLR (Outlet) 1275.26

FLL 1276.92
FLR (Drop Inlet) 1276.70
FLR (Outlet) 1276.40

FLL 1277.52
FLR (Drop Inlet) 1277.31
FLR (Outlet) 1277.00

FLR 1278.77
FLL (Drop Inlet) 1278.36
FLL (Outlet) 1278.08

L 700.00ft
G1 3.6000%
G2 0.5500%
K 230

RDGPI 66+00
Elev 1276.40

RDGPI 67+25
Elev 1277.00

RDGPI 70+00
Elev 1281.40

1280.05 1280.20 1280.32 1280.44 1280.55 1280.66 1280.77 1280.88 1280.99 1281.10 1281.21 1281.32 1281.43 1281.54 1281.65 1281.76 1281.87 1281.98 1282.09 1282.20 1282.31 1282.42 1282.53 1282.64 1282.75 1282.86 1282.97 1283.08 1283.19 1283.30 1283.41

64+00 65+00 66+00 67+00 68+00 69+00 70+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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Install 2'x3' Type B Drop Inlet with 6" Concrete Collar and Type B Frame and Grate at the following locations:
72+00.00-35.67' L
72+00.00-8.33' R
74+00.00-35.67' L
74+00.00-8.33' R

70+44-67' R (1 ac)
Install 18"-80' CMP
& 2 Safety Ends

72+00.00-8.33' R to 72+00.00-35.67' L
Install 18"-42' RCP
(Between Drop Inlets)

72+00.00-35.67' L to 72+00.00-67.17' R
Install 18"-24' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

73+09-3' L to 73+08-44' R
Take Out 12"-46' RCP
(Incidental Work, Grading)

73+09-3' R
Remove Drop Inlet
with Frame and Grate

74+00.00-8.33' R to 74+00.00-35.67' L
Install 18"-42' RCP
(Between Drop Inlets)

74+00.00-35.67' L to 74+00.00-69.17' L
Install 18"-26' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B61	B245

Plotting Date: 8/22/2023

Plot Scale - 1:40

MITCHELL
Sec 10 - T103N - R60W

LOT X

City of Mitchell
Parcel A13

LOT K-1

73+38 L
End 4' Chain
Link Fence with
Top Rail

70+42 L
Begin 4' Chain
Link Fence with
Top Rail

N 17°23'19" W

77+00
78+00
70+00
71+00
72+00
73+00
74+00
75+00
76+00

OH
HO

Present SD Hwy 37

North Main Street

PI 71+00.49
N 522727.89
E 2578304.34
Del 22°46'53" L
Dc 2°06'51"
T 545.97'
L 1077.52'
R 2710.00'

xr66

6004+00
6005+00
6006+00
6006+20

72+70.71 - 90.21'

70+43 - 143'
71+15 - 141'
72+56.72 - 130.40'
72+56.72 - 130.40'
72+70 - 130'

IRREGULAR TRACT No. 2

Chris R. Fosness & Laura K. Fosness
Parcel A18

IRREGULAR TRACT No. 1

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B62	B245

Plotting Date: 8/22/2023

Mainline
56+98 to 87+93

Excavation	18,867	Embankment	12,247		
Undercut	16,656	+20%/25%	2,749	14,996	
Muck	0	Undercut	16,829		
Option Borrow	0	+20%/25%	3,698	20,527	
	35,523	Waste		0	
				35,523	

Haul	=	161,810	CuYdSta
Option Borrow Haul	=	0	CuYdSta
Dead Haul	=	0	CuYdSta

Waste is Muck Excavation to be disposed of at a site approved by the Engineer

70+44 R
36' Ent

0.5500%

RDG 0.3095%

LDG -0.8333%

LDG 0.6154%

LDG 1.8000%

LDG 1.4000%

FLR 1279.31
FLL (Drop Inlet) 1278.89
FLL (Outlet) 1278.58

FLR 1279.49
FLL (Drop Inlet) 1279.07
FLL (Outlet) 1278.80

RDGPI 70+00
Elev 1281.40

LDGPI 71+50
Elev 1279.00

LDGPI 72+70
Elev 1278.00

LDGPI 74+00
Elev 1278.80

LDGPI 75+50
Elev 1281.50

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

70+00 71+00 72+00 73+00 74+00 75+00 76+00

1283.41 1283.52 1283.63 1283.74 1283.85 1283.96 1284.07 1284.18 1284.29 1284.40 1284.51 1284.62 1284.73 1284.84 1284.95 1285.06 1285.17 1285.28 1285.39 1285.50 1285.61 1285.72 1285.83 1285.94 1286.05 1286.16 1286.27 1286.38 1286.49 1286.60 1286.71

Plot Scale - 1:40

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B63	B245

Plotting Date: 8/22/2023

FOR BIDDING PURPOSES ONLY

77+91 R
Take Out 20"-67' RCP
(Incidental Work, Grading)

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
84+50.00-8.33' L
85+50.00-8.33' L

84+50.00-8.33' L to 84+50.00-69.00' L
Install 18"-54' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

85+50.00-8.33' L to 85+50.00-73.00' L
Install 18"-58' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

83+12-86' L
Take Out 18"-64' CMP
(Incidental Work, Grading)

83+14-71' L (2 ac)
Install 24"-88' CMP
& 2 Safety Ends

MITCHELL

Sec 10 - T103N - R60W

Sec 4 - T103N - R60W

Resurrection Lutheran Church of Mitchell, Inc. (INFORMATION ONLY)

D.M. ELLWEIN'S FIRST ADDITION

LOT X

LOT 1

LOT 2

LOT K-1

City of Mitchell
Parcel A13

Resurrection Lutheran Church of Mitchell, Inc.
Parcel A23

Horseman's Sports, Inc.
Parcel A20

IRREGULAR TRACT No. 1

Chris R. Fosness &
Laura K. Fosness
Parcel A18

Mitchell Sandventure, L.L.C.
Parcel A24

North Harmon Drive

Section Line

Rowley Street

SharedUsePathNorth

CITY LIMITS

R.O.W. LINE

North Main Street

Present SD Hwy 37

251st Street

Type 2 Fence

2 PP

2 PP
2-3 PP

80+07-95' L
Do Not Disturb Sign

81+51 to 82+11-94' L
Do Not Disturb Signs

86+00 to 87+55-250' L
Do Not Disturb Buildings

77+32 R
Begin Type 2 fence

PI 90+77.73
N 524617.17
E 2577673.98
Del 16°00'14" R
Dc 1°27'15"
T 553.86'
L 1100.52'
R 3940.00'

SW1/4

Sec 3 - T103N - R60W

Parcel A13
76+85.85 to 77+57.70 L
Temporary Easement containing
2816 sq ft, more or less

Parcel A18
76+26.66 to 76+61.83 R
Temporary Easement containing
1081 sq ft, more or less

Parcel A23
77+90.23 to 78+43.90 L
Temporary Easement containing
2311 sq ft, more or less

Parcel A23
82+82.83 to 83+43.26 L
Temporary Easement containing
598 sq ft, more or less

Parcel A24
77+18.23 to 84+31.92 R and
Temporary Easement containing
15060 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B64	B245

Plotting Date: 8/22/2023

Plot Scale - 1:100

87+93

xr87drive
PVI 0+42
Elev 1295.10
L 30.00ft
G1 -6.5000%
PVI 0+75
Elev 1294.31
G2 1.9876%
K 4
PVI 1+52
Elev 1290.75
-2.4000%
-6.5000%
1.9876%

77+29 L
28' Int St
(N Harmon Dr)

77+29 R
28' Int St
(E 38th St/251st St)

83+14 L
40' Ent

87+84 L
40' Ent

PVI 1+35
Elev 1290.41
L 30.00ft
G1 -2.4000%
G2 -6.5000%
K 7

PVI 87+00
Elev 1292.76

1294.91
1292.68
1290.71

RDG 0.3095%
LDG 1.4000%
LDG 0.3857%
0.5500%
LDG 0.4777%
-0.3000%
LDG -0.2591%

FLR 1287.89
FLL (Outlet) 1286.40
FLR 1288.47
FLL (Outlet) 1286.88

L 150.00ft
G1 0.5500%
G2 -0.3000%
K 176

RDGPI 77+14
Elev 1283.61

LDGPI 76+50
Elev 1282.90

LDGPI 80+00
Elev 1284.25

CP 6
81+10.30-95.18' L
Mag nail in asphalt
parking lot of church
1291.121

LDGPI 87+85
Elev 1288.00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

1286.71 1286.98 1287.26 1287.53 1287.81 1288.08 1288.36 1288.63 1288.91 1289.18 1289.46 1289.73 1290.01 1290.28 1290.56 1290.83 1291.11 1291.38 1291.66 1291.93 1292.21 1292.46 1292.60 1292.59 1292.46 1292.31 1292.16 1292.01 1291.86 1291.71 1291.56

76+00 81+00 86+00 91+00

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B65	B245

Plotting Date: 8/22/2023 Rev 06/29/2023 RJB

FOR BIDDING PURPOSES ONLY

90+98-5' L
Take Out 12"-61' CMP
(Incidental Work, Grading)

90+96-92' L
Take Out 15"-64' RCP
(Incidental Work, Grading)

91+35 R
Take Out 18"-63' RCP
(Incidental Work, Grading)

92+52-90' L
Take Out 18"-57' RCP
(Incidental Work, Grading)

92+61-86' R
Take Out 20"-41' RCP
(Incidental Work, Grading)

92+00.00-8.33' L to 92+00.00-71.00' L
Install 18"-66' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

94+38-82.5' L
Take Out 18"-39' RCP
(Incidental Work, Grading)

92+58-79' L (1 ac)
Install 18"-76' CMP
& 2 Safety Ends

97+22-71' L (5 ac)
Install 24"-70' CMP
& 2 Safety Ends

96+07 R
Take Out 18"-63' RCP
(Incidental Work, Grading)

94+41-78' L (2 ac)
Install 18"-82' CMP
& 2 Safety Ends

95+00.00-3.98' L to 95+00.00-70.00' L
Install 18"-58' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

96+65.00-8.33' L to 96+65.00-67.00' L
Install 18"-52' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

97+23-82' L
Take Out 18"-57' RCP
(Incidental Work, Grading)

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
92+00.00-8.33' L
96+65.00-8.33' L

95+00.00-3.98' L
Install 4'x6' Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet

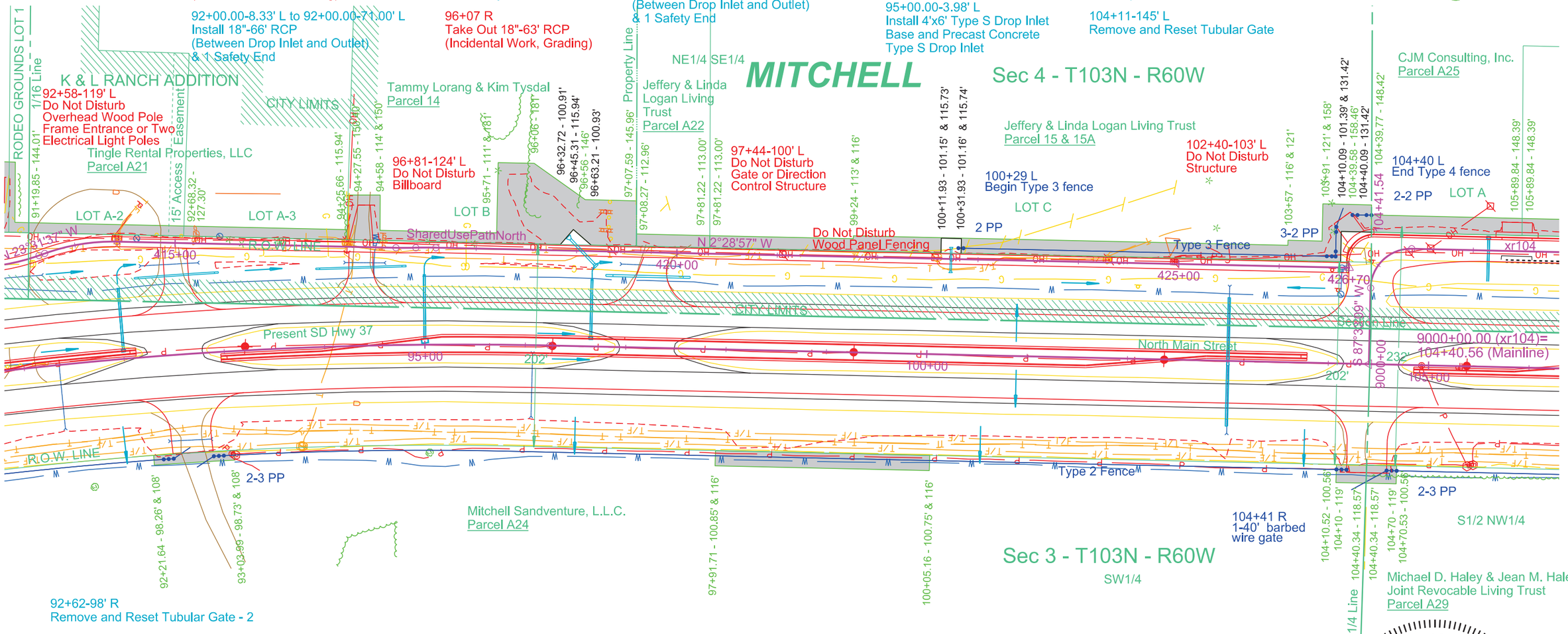
103+00 L
Take Out 24"-70' RCP
(Incidental Work, Grading)

103+00 R
Take Out 24"-67' RCP
(Incidental Work, Grading)

103+00 (7 ac)
Install 24"-114' RCP
& 2 Sloped Ends

104+11-145' L
Remove and Reset Tubular Gate

Take Out Trees (>6" Diameter)
at the following locations:
95+00-103' L
95+50-98' L



Parcel A21
91+19.85 to 94+25.66 L
Temporary Easement containing
3169 sq ft, more or less

Parcel 14
94+27.55 to 97+07.59 L
Temporary Easement containing
10809 sq ft, more or less

Parcel A22
97+08.27 to 97+81.22 L
Temporary Easement containing
876 sq ft, more or less

Parcel 15
97+81.22 to 104+39.58 L
Temporary Easement containing
10482 sq ft, more or less

Parcel A25
104+39.77 to 110+95.31 L
Temporary Easement containing
12674 sq ft, more or less

Parcel A24
92+21.64 to 93+03.99 R
Temporary Easement containing
774 sq ft, more or less

Parcel A24
97+91.71 to 100+05.16 R
Temporary Easement containing
3226 sq ft, more or less

Parcel A24
104+10.52 to 104+40.34 R
Temporary Easement containing
541 sq ft, more or less

Parcel A29
104+40.34 to 104+70.53 R
Temporary Easement containing
541 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
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SOUTH DAKOTA
8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B66	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Plot Scale - 1:100

92+58 L
24' Ent

92+61 R
40' Ent

94+39 L
24' Ent

96+96 L
24' Ent

104+41 L
42' Ent
(Frontage Rd)

104+41 R
40' Ent

PVI 106+00
Elev 1290.06

L 150.00ft
G1 -0.3000%
G2 0.3000%
K 250

-0.3000%

0.3000%

LDG -0.2591%

LDG -0.2545%

LDG 0.4286%

LDG -0.3021%

RDG -0.8000%

RDG 1.4000%

FLR 1287.75

FLL (Outlet) 1286.15

FLR 1287.16

FLL (Outlet) 1285.72

PVI 101+00
Elev 1288.56

FL 1284.10
FL 1283.60

L 150.00ft
G1 0.3000%
G2 -0.3000%
K 250

RDGPI 102+00
Elev 1284.40

RDGPI 103+00
Elev 1283.60

RDGPI 104+00
Elev 1285.00

LDGPI 97+50
Elev 1285.50

LDGPI 103+00
Elev 1284.10

LDGPI 104+40
Elev 1284.70

REGISTERED PROFESSIONAL ENGINEER
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15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

1291.56 1291.41 1291.26 1291.11 1290.96 1290.81 1290.66 1290.51 1290.36 1290.21 1290.06 1289.91 1289.76 1289.61 1289.46 1289.31 1289.16 1289.01 1288.86 1288.72 1288.67 1288.72 1288.86 1289.01 1289.16 1289.31 1289.46 1289.61 1289.76 1289.89 1289.94

91+00 96+00 101+00 106+00

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B67	B245

Plotting Date: 8/22/2023

FOR BIDDING PURPOSES ONLY

109+17 L
Take Out 18"-35' RCP
(Incidental Work, Grading)

109+16-111' L
Remove Drop Inlet with
Frame and Grate

110+87 L
Take Out 18"-59' RCP
(Incidental Work, Grading)

112+28-82' L
Take Out 18"-56' RCP
(Incidental Work, Grading)

112+26-88' R
Take Out 18"-41' RCP
(Incidental Work, Grading)

112+30-74' L (2 ac)
Install 18"-92' CMP
& 2 Safety Ends

112+26-77' R (1 ac)
Install 18"-66' CMP
& 2 Safety Ends

118+34 L
Take Out Twin 36"-58' RCP
(Incidental Work, Grading)

118+34 R
Take Out Twin 36"-63' RCP
(Incidental Work, Grading)

118+29 (669 ac)
Install Twin 54"-128' RCP
& 4 Flared Ends
(Spaced 8.4' C to C
Controlled Density Fill)

375 feet

150 feet

Sec 4 - T103N - R60W

BEAUREGARD'S ADDITION

CJM Consulting, Inc.
Parcel A25

Georgia A. Livesay
Revocable Living
Trust Agreement
Parcel A26

Georgia A. Livesay
Parcel A27

CJM Consulting, Inc.
Parcel A28

CJM Consulting, Inc.
Parcel 16

113+94-145' L
Do Not Disturb
Sign

116+00-119' L to 131+00-111' L
Obliterate Service Road (15 Sta)

Government Lot 1

LOT 1 | LOT 2 | LOT 3 | LOT 4 | LOT 5 | LOT 6 | LOT 7 | LOT 8 | LOT B | S1/2 NE1/4

CITY LIMITS

Property Line

107+22 - 148' & 159'

107+73 - 151' & 159'

110+95.31 - 151.28'

110+95.37 - 147.28'

112+00 - 147' & 152'

112+19.64 - 152.26'

113+69 - 152' & 163'

114+44.31 - 163.21'

114+44.30 - 152.21'

116+57 - 145' & 152'

117+55.27 - 145.15'

117+56.89

117+55.27 - 145.15'

Section Line

Present SD Hwy 37

110+00

115+00

120+00

232'

Type 2 Fence

2-3 PP

112+25 R
1-24' barbed
wire gate

Government Lot 4

Michael D. Haley & Jean M. Haley
Joint Revocable Living Trust
Parcel 17

1/16 Line

S1/2 NW1/4

Sec 3 - T103N - R60W

Michael D. Haley & Jean M. Haley
Joint Revocable Living Trust
Parcel A29

Parcel A26
110+95.37 to 112+19.64 L
Temporary Easement containing
2087 sq ft, more or less

Parcel A27
112+19.64 to 114+44.31 L
Temporary Easement containing
5548 sq ft, more or less

Parcel A28
114+44.30 to 117+55.27 L
Temporary Easement containing
5846 sq ft, more or less

Parcel 16
117+55.27 to 130+54.76 L
Temporary Easement containing
17164 sq ft, more or less

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SOUTH DAKOTA
8-22-2023

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FOR BIDDING PURPOSES ONLY

Mainline
87+93 to 136+30

Excavation	17,866		Embankment	16,980	
Undercut	21,116		+20%/25%	4,007	20,987
Muck	222		Undercut	26,845	
Option Borrow	10,708		+20%/25%	6,712	33,557
Contractor Furnished Borrow	4,854		Waste		222
	54,766				54,766

Haul	=	52,659 CuYdSta
Option Borrow Haul	=	248,055 CuYdSta
Dead Haul	=	572,866 CuYdSta

Waste is Muck Excavation to be disposed of at a site approved by the Engineer

112+30 L
40' Ent

112+26 R
24' Ent

PVI 106+00
Elev 1290.06

L 150.00ft
G1 0.3000%
G2 -0.3000%
K 250

-0.3000%

LDG -0.4896%

RDG -0.9000%

RDG -0.2171%

LDG -0.2797%

L 150.00ft
G1 -0.3000%
G2 -0.0353%
K 567

-0.0353%

PVI 116+50
Elev 1286.91

FL 1280.60
FL 1280.40

LDG 0.1101%
RDG 0.0784%

RDGPI 108+00
Elev 1284.00

RDGPI 110+00
Elev 1282.20

LDGPI 114+00
Elev 1281.80

RDGPI 118+29
Elev 1280.40

LDGPI 118+29
Elev 1280.60

Q_{100}=279 cfs
EI 1286.73

CP 7
107+96.29-99.77' R
NGS point AC5284 - 1' West
of East right-of-way fence
1284.642

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
8-22-2023

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

1289.94 1289.89 1289.76 1289.61 1289.46 1289.31 1289.16 1289.01 1288.86 1288.71 1288.56 1288.41 1288.26 1288.11 1287.96 1287.81 1287.66 1287.51 1287.36 1287.21 1287.06 1286.96 1286.89 1286.87 1286.85 1286.84 1286.82 1286.80 1286.78 1286.77 1286.75

106+00 111+00 116+00 121+00

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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B69	B245

Plotting Date: 8/22/2023

121+68-77' L (551 ac)
Install Twin 54"-66' CMP Arch
& 4 Safety Ends
(Spaced 7.2 ft C to C
Controlled Density Fill)

129+35 L
Take Out 36"-49' RCP
(Incidental Work, Grading)

130+39 L
Take Out Triple 24"-34' RCP
(Incidental Work, Grading)

133+80.00-2.25' R to 133+80.00-74.75' R
Install 18"-64' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

131+94.41' L to 132+02.72' R
Take Out 20"-73' RCP
(Incidental Work, Grading)

133+80.00-2.25' R
Install Type L Median Drain
and Frame and Grate

116+00-119' L to 131+00-111' L
Obliterate Service Road (15 Sta)

Sec 4 - T103N - R60W

Government Lot 1

CJM Consulting, Inc.
Parcel 16

125+00 - 141' & 145'

129+55 - 141'
129+64.17 - 130.90'

130+54.37 - 273.84'
130+54.76 - 251.71'

National Guard Road

515+00
515+07

Sec 33 - T104N - R60W

SE1/4

City of Mitchell
Parcel A30

N 26°08" W

N 33°34'08" W

505+00

510+00

Shared Use Path NC

131+08.33
N 87°14'05" E

250'

Section Line

Present SD Hwy 37

125+00

232

130+00

135+00

9102+65.31 (xr131)=
131+04.59 (Mainline)

127+02.95 - 113.80'

127+12.27 - 101.02' & 111'

Type 2 Fence

2 PP

3 PP

4-2 PP

5-2 PP

130+18 - 111'

xr131

Section Line

250th Street

130+43 R
1-24' barbed
wire gate

130+71 R
End Type 2 fence

LOT 12

Dakota Land and Property
Management LLC
Parcel A31

Melvin C. Eilts Jr. & Brenda J. Eilts
(INFORMATION ONLY)

TRACT 1
BSD ADDITION

Michael D. Haley & Jean M. Haley
Joint Revocable Living Trust
Parcel 17

Government Lot 4

Sec 3 - T103N - R60W

Sec 34 - T104N - R60W

MAUI FARMS FIRST ADDITION

Parcel 17
127+12.27 to 130+74.31 R
Temporary Easement containing
6942 sq ft, more or less

Parcel A30
131+38.08 to 131+81.99 L
Temporary Easement containing
4579 sq ft, more or less

Parcel A31
131+40.12 to 131+72.78 R
Temporary Easement containing
4138 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:100

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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B70	B245

Plotting Date: 8/22/2023

Plot Scale - 1:100

121+68 L
40' Ent

132+05 L
28' Int Rd
(National Guard Rd)

132+05 R
28' Int St
(E 54th/250th St)

PVI 131+00
Elev 1288.41

L 150.00ft
G1 -0.0353%
G2 0.3000%
K 447

L 300.00ft
G1 -0.5000%
G2 1.4333%
K 155

-0.0353%

0.3000%

-0.5000%

1.4333%

LDG 0.1101%

RDG 0.0784%

PVI 125+00
Elev 1286.61

LDG 0.2500%

RDG 0.2178%

RDG 0.8889%

FLL 1282.73

FLR (Outlet) 1282.52

PVI 134+20
Elev 1286.81

L 150.00ft
G1 0.3000%
G2 -0.5000%
K 188

RDGPI 134+00
Elev 1282.70

RDGPI 133+55
Elev 1282.30

RDGPI 128+50
Elev 1281.20

LDGPI 131+00
Elev 1282.00

LDGPI 133+80
Elev 1282.70

CP 8
128+35.66-131.95' L
3/4" Rebar just South of
power pole along service road
1283.650

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
8-22-2023

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

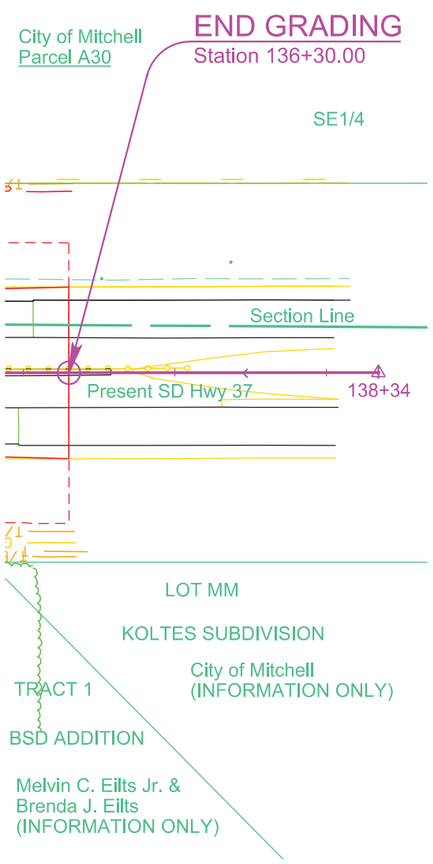
1286.75 1286.73 1286.71 1286.69 1286.68 1286.66 1286.64 1286.63 1286.67 1286.76 1286.91 1287.06 1287.21 1287.36 1287.51 1287.66 1287.81 1287.96 1288.11 1288.24 1288.26 1288.14 1287.91 1287.66 1287.44 1287.36 1287.45 1287.70 1288.11 1288.68 1289.39

121+00 126+00 131+00 136+00

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Plot Scale - 1:100
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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B72	B245

Plotting Date: 8/22/2023

136+30
End Work

PVI 136+30
Elev 1289.82

1.4333%

1289.39

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

136+00 141+00 146+00 151+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:100

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SD Hwy 37

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B73	B245

Plotting Date: 8/22/2023 Rev 06/29/2023 RJB

Plot Scale - 1:40

1002+38 to 1002+48 L
Remove and Reset Landscaping Rock as necessary
(See Section B)

Shared Use Path
PI 1+19.58
N 516977.65
E 2576144.29
Del 2°00'27" R
Dc 1°26'34"
T 69.58'
L 139.14'
R 3971.00'

Shared Use Path
PI 2+06.21
N 516999.81
E 2576228.07
Del 3°54'43" L
Dc 11°27'33"
T 17.08'
L 34.14'
R 500.00'

Shared Use Path
PI 2+45.27
N 517012.36
E 2576265.07
Del 5°02'14" R
Dc 11°27'33"
T 21.99'
L 43.96'
R 500.00'

Dental Designs Properties, LLC
Parcel A32

FULLERTON PROPERTIES' FIRST ADDITION

Shared Use Path
PI 2+22.55
N 517030.66
E 2576340.18
Del 1°35'42" R
Dc 1°26'30"
T 55.32'
L 110.63'
R 3974.00'

BLOCK 1

1002+43-50' L
Do Not Disturb Sign

LOT 1

Shared Use Path
PI 3+90.56
N 517044.91
E 2576406.68
Del 2°54'29" R
Dc 11°27'33"
T 12.69'
L 25.38'
R 500.00'

MITCHELL
Sec 16 - T103N - R60W

Shared Use Path
PI 4+13.10
N 517048.51
E 2576428.94
Del 2°15'29" L
Dc 11°27'33"
T 9.85'
L 19.71'
R 500.00'

SD37
PI 1004+61.04
N 517042.19
E 2576486.60
Del 11°59'10" R
Dc 1°27'23"
T 413.00'
L 822.98'
R 3934.00'

North Wisconsin Street

Shared Use Path
PI 4+87.60
N 517063.30
E 2576501.96
Del 1°51'53" R
Dc 1°26'32"
T 64.66'
L 129.30'
R 3973.00'

1005+78 to 1006+93 L
Do Not Disturb Trees

Shared Use Path
PI 5+61.77
N 517075.65
E 2576575.10
Del 5°27'03" L
Dc 28°38'52"
T 9.52'
L 19.03'
R 200.00'

Shared Use Path
PI 5+81.80
N 517080.85
E 2576594.47
Del 6°01'39" R
Dc 28°38'52"
T 10.53'
L 21.04'
R 200.00'

Mitchell Retirement, L.L.C.
Parcel 18
Parcel 18A (Omitted)

Shared Use Path
PI 6+47.79
N 517091.18
E 2576659.66
Del 1°35'57" R
Dc 1°26'29"
T 55.48'
L 110.95'
R 3975.00'

LOT F

North Minnesota Street

1001+00.10 - 48.20'
1001+61.92 - 56.24'

1003+80.83 - 49.66'
1003+82.19 - 67.67'

1005+20.60 - 50.10'
1005+21.95 - 60.10'

1006+20 - 56' & 60'

99'

100'

Present SD Hwy 37

1001+00
1002+00
1003+00
1004+00
1005+00
1006+00
1007+00

1+00
2+00
3+00
4+00
5+00
6+00
7+00

200+00
201+00
202+00
203+00
204+00
205+00
206+

OH

S 67°58'04" E

1001+34.91 - 59.91'
1001+37.54 - 48.92'

LOT 6

Abbott House, Inc.
Parcel A33

1002+82.49 - 60.38'
1002+82.49 - 60.38'

The Mitchell Area Safehouse, Inc.
Parcel A34

SD37 Sidewalk
PI 201+76.41
N 516948.20
E 2576331.66
Del 5°11'25" R
Dc 1°28'20"
T 176.41'
L 352.57'
R 3892.00'

LOT 1

BLOCK 9

1003+60.99 - 60.70'
1003+62.96 - 49.71'

North Wisconsin Street

BEGIN PROJECT
Station 1001+07.33

FULLERTON PROPERTIES' FIRST ADDITION

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

SD37 Sidewalk
PI 203+67.25
N 516983.65
E 2576519.43
Del 32°43'29" R
Dc 114°35'30"
T 14.68'
L 28.56'
R 50.00'

1005+02.69 - 78.78'
1005+04.40 - 66.93'

SD37 Sidewalk
PI 204+04.85
N 516969.25
E 2576555.03
Del 31°49'06" L
Dc 114°35'30"
T 14.25'
L 27.77'
R 50.00'

LOT A

City of Mitchell
Parcel 19

LOT C-1

SD37 Sidewalk
PI 205+87.04
N 517000.34
E 2576735.29
Del 4°59'22" R
Dc 1°28'48"
T 168.67'
L 337.13'
R 3871.50'

Parcel A32
1001+60.10 to 1003+82.19 L
Temporary Easement containing
1788 sq ft, more or less

Parcel 18
1005+20.60 to 1011+84.09 L
Temporary Easement containing
5650 sq ft, more or less

Parcel A33
1001+34.91 to 1002+82.49 R
Temporary Easement containing
1372 sq ft, more or less

Parcel A34
1002+82.49 to 1003+62.96 R
Temporary Easement containing
789 sq ft, more or less

Parcel 19
1005+02.69 to 1011+78.35 R
Temporary Easement containing
7966 sq ft, more or less

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B74	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

SD Hwy 37 (Sidewalk)

200+33
Begin Work

PVI 200+33
Elev 1307.14

-1.2500%

1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255

1307.05 1306.80 1306.55 1306.30 1306.05 1305.80 1305.55 1305.30 1305.05 1304.80 1304.55 1304.30 1304.05 1303.80 1303.55 1303.30 1303.05 1302.80 1302.55 1302.30 1302.05 1301.80 1301.55 1301.30 1301.05 1300.80 1300.55 1300.30 1300.05

200+00 201+00 202+00 203+00 204+00 205+00 206+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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File - ...\Section B\SD37v.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B75	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

SD Hwy 37 (Shared Use Path)

1+69
Begin Work

PVI 1+71
Elev 1306.03

-0.9796%

PVI 3+50
Elev 1304.28

L 100.00ft
G1 -2.0000%
G2 -0.5000%
K 67

PVI 5+50
Elev 1301.78

-1.1000%

L 100.00ft
G1 -0.9796%
G2 -2.0000%
K 98

PVI 4+50
Elev 1302.28

L 100.00ft
G1 -0.5000%
G2 -1.1000%
K 167

1350 1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260

1305.94 1305.75 1305.55 1305.36 1305.16 1304.96 1304.77 1304.55 1304.29 1304.00 1303.66 1303.28 1302.91 1302.60 1302.35 1302.16 1302.03 1301.92 1301.78 1301.62 1301.44 1301.23 1301.01 1300.79 1300.57 1300.35 1300.13

1+00 2+00 3+00 4+00 5+00 6+00 7+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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SD Hwy 37

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B76	B245

Plotting Date: 9/21/2023 Rev 09/14/2023 RJB

Plot Scale - 1:40

Shared Use Path
PI 7+16.75
N 517100.07
E 2576728.05
Del 7°42'46" L
Dc 28°38'52"
T 13.48'
L 26.92'
R 200.00'

Shared Use Path
PI 7+45.10
N 517107.48
E 2576755.46
Del 8°31'36" R
Dc 28°38'52"
T 14.91'
L 29.76'
R 200.00'

Shared Use Path
PI 8+22.33
N 517116.35
E 2576832.29
Del 1°47'46" R
Dc 1°26'24"
T 62.37'
L 124.74'
R 3979.00'

Shared Use Path
PI 9+37.16
N 517125.96
E 2576946.67
Del 8°06'35" R
Dc 28°38'52"
T 14.18'
L 28.31'
R 200.00'

Shared Use Path
PI 9+65.47
N 517124.32
E 2576974.98
Del 8°06'35" L
Dc 28°38'52"
T 14.18'
L 28.31'
R 200.00'

Shared Use Path
PI 11+56.41
N 517140.29
E 2577165.30
Del 21°33'55" L
Dc 114°35'30"
T 9.52'
L 18.82'
R 50.00'

Shared Use Path
PI 11+75.23
N 517148.75
E 2577182.36
Del 21°33'55" R
Dc 114°35'30"
T 9.52'
L 18.82'
R 50.00'

1006+93 to 1007+26 L
Do Not Disturb Trees

1007+79 to 1008+89 L
Do Not Disturb Road

1009+85 to 1011+08 L
Do Not Disturb Trees

1012+49 to 1012+55 L
Do Not Disturb
Curb & Gutter

MITCHELL
Sec 16 - T103N - R60W

LOT F

Mitchell Retirement, L.L.C.
Parcel 18
Parcel 18A (Omitted)

Firesteel Engineering Group, LLP
Parcel A35

LOT B

1009+04 - 56' & 60'
1009+64 - 59' & 60'
1011+40 - 59' & 70'
1011+50.38 - 50.30' & 54.30'
1011+83.21 - 50.31'
1011+83.38 - 54.31'
1011+84.09 - 70.31'
1012+49.47 - 62.24'
1012+50.90 - 70.65'
1012+90.57 - 50.00' & 60.29'

N 85°12'11" E
N 67°12'59" E
N 84°23'03" E

8+00 9+00 10+00 11+00 12+00 13+00

100' Present SD Hwy 37 100' 100'

1007+00 1008+00 1009+00 1010+00 1011+00 1012+00 1013+00

206+00 207+00 208+00 209+00 210+00 211+00 211+82

SD37 Sidewalk
PI 205+87.04
N 517000.34
E 2576735.29
Del 4°59'22" R
Dc 1°28'48"
T 168.67'
L 337.13'
R 3871.50'

LOT A

City of Mitchell
Parcel 19

SD37 Sidewalk
PI 210+04.20
N 517035.24
E 2577151.21
Del 32°26'02" L
Dc 114°35'30"
T 14.54'
L 28.30'
R 50.00'

SD37 Sidewalk
PI 210+32.51
N 517052.84
E 2577174.36
Del 32°26'02" R
Dc 114°35'30"
T 14.54'
L 28.30'
R 50.00'

1011+77.76 - 78.61'
1011+78.35 - 66.69'

North Sanborn Boulevard

1012+80.59 - 69.84'
1012+80.68 - 49.84'
1012+98.29 - 49.84'

LOT A

Bankwest, Inc.
Parcel A37

Parcel A35
1012+49.47 to 1017+34.03 L
Temporary Easement containing
2548 sq ft, more or less

Parcel A37
1012+80.59 to 1012+98.29 R
Temporary Easement containing
176 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
9-22-2023

Plotted From - Ryan.Brown1@jacobs.com

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B77	B245

FOR BIDDING PURPOSES ONLY

SD Hwy 37 (Sidewalk)

SD37 Sidewalk

Excavation	42	Embankment	120		
Undercut	162	+20%	24	144	
Option Borrow	134	Undercut	162		
	338	+20%	32	194	
				338	

(Earthwork For Information Only)
Data Included in SD37 Quantities

210+68
End Work

L 100.00ft
G1 -1.2500%
G2 1.2544%
K 40

PVI 210+68
Elev 1301.36

-1.2500%

1.2544%

PVI 207+82
Elev 1297.78

1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255

1300.05 1299.80 1299.55 1299.30 1299.05 1298.80 1298.55 1298.31 1298.15 1298.09 1298.13 1298.27 1298.50 1298.75 1299.01 1299.26 1299.51 1299.76 1300.01 1300.26 1300.51 1300.76 1301.01 1301.26

206+00 207+00 208+00 209+00 210+00 211+00 212+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B78	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

SD Hwy 37 (Shared Use Path)

Shared Use Path

Excavation	685	Embankment		49	
Undercut	370		+20%	10	58
	1,055	Undercut		370	
			+20%	74	444
		Waste			553
					1,055

(Earthwork For Information Only)
Data Included in SD37 Quantities

L 100.00ft
G1 -1.1000%
G2 0.3000%
K 71

L 50.00ft
G1 0.3000%
G2 1.1461%
K 59

PVI 11+85
Elev 1300.86

-1.1000%

0.3000%

1.1461%

PVI 8+00
Elev 1299.03

PVI 11+05
Elev 1299.94

1350 1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260

1300.13 1299.91 1299.69 1299.48 1299.31 1299.20 1299.15 1299.16 1299.21 1299.27 1299.33 1299.39 1299.45 1299.51 1299.57 1299.63 1299.69 1299.75 1299.81 1299.87 1299.96 1300.12 1300.34 1300.57 1300.80

7+00 8+00 9+00 10+00 11+00 12+00 13+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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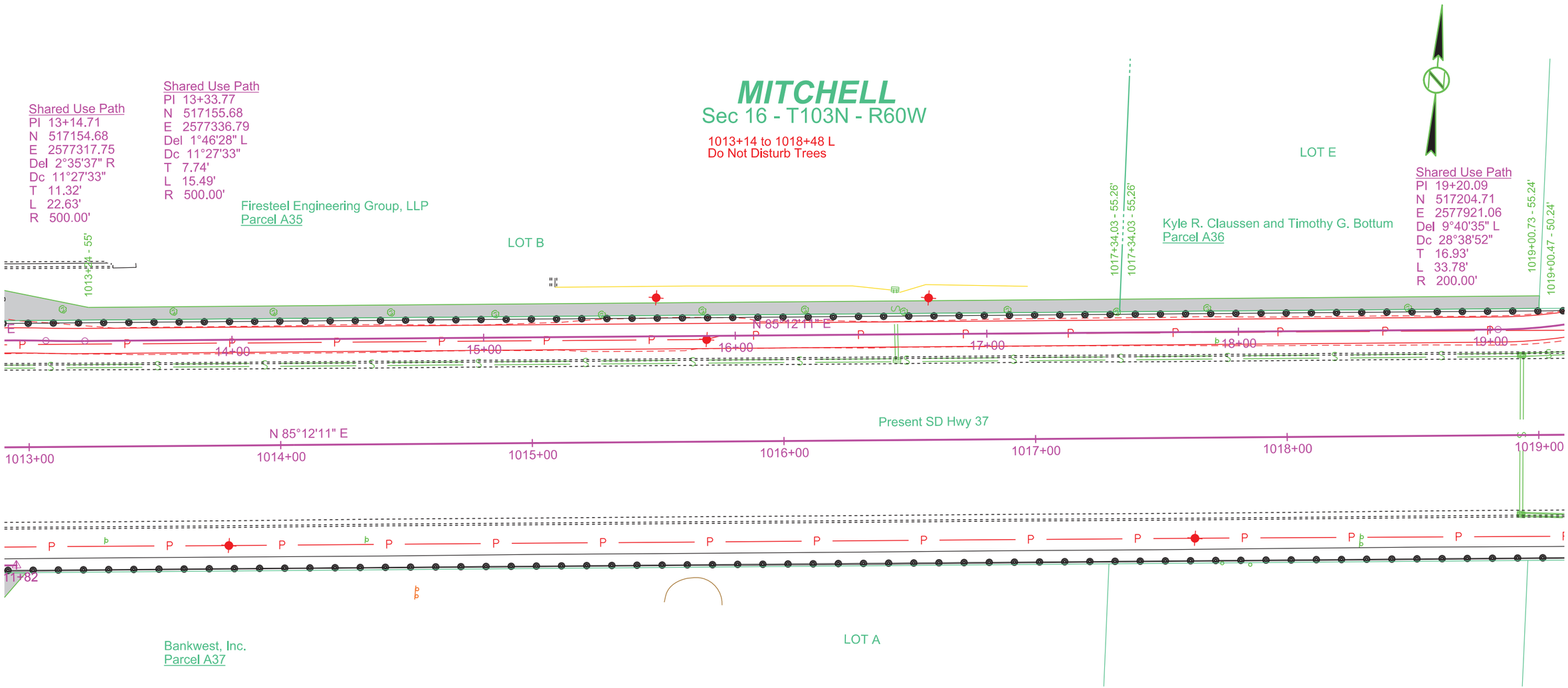
SD Hwy 37

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B79	B245

Plotting Date: 8/22/2023 Rev 03/13/2023 RJB

Plot Scale - 1:40



Parcel A36
1017+34.03 to 1019+00.73 L
Temporary Easement containing
833 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\SD37_3.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B80	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

SD Hwy 37 (Shared Use Path)

PVI 13+03
Elev 1301.56

PVI 15+20
Elev 1302.46

PVI 17+50
Elev 1301.31

0.4157%

-0.5000%

-0.8000%

L 100.00ft
G1 0.4157%
G2 -0.5000%
K 109

L 100.00ft
G1 -0.5000%
G2 -0.8000%
K 333

1301.62 1301.71 1301.79 1301.87 1301.96 1302.04 1302.12 1302.21 1302.29 1302.33 1302.34 1302.31 1302.25 1302.16 1302.06 1301.96 1301.86 1301.76 1301.66 1301.56 1301.45 1301.33 1301.20 1301.06 1300.91 1300.75 1300.59 1300.43 1300.27 1300.11

13+00 14+00 15+00 16+00 17+00 18+00 19+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\SD37\v3_SUP.dgn

SD Hwy 37

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B81	B245

Plotting Date: 8/22/2023 Rev 05/30/2023 RJB

1020+30.00-32.65' L to
1019+70.43-34.45' L
Install 18"-58' RCP
(Between Drop Inlets)

1021+00.00-31.67' R to
1020+30.00-31.67' R
Install 18"-68' RCP
(Between Drop Inlets)

1022+00.00-34.12' R to
1021+00.00-31.67' R
Install 18"-96' RCP
(Between Drop Inlets)

Install Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
1020+30.00-32.65' L (4'x4')
1020+30.00-31.67' R (4'x4')
1021+00.00-31.67' R (2'x3')

Install Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet
at the following locations:
1021+80.00-34.12' L (4'x6')
1022+00.00-34.12' R (4'x6')

1020+30.00-31.67' R to
1019+69.57-34.38' R
Install 18"-60' RCP
(Between Drop Inlets)

1021+80.00-34.12' L to
1021+50.21-54.16' L
Install 18"-30' RCP
(Between Drop Inlets)

1021+15.51-42.46' L to
1020+30.00-32.65' L
Install 18"-84' RCP
(Between Drop Inlets)

Shared Use Path
PI 19+20.09
N 517204.71
E 2577921.06
Del 9°40'35" L
Dc 28°38'52"
T 16.93'
L 33.78'
R 200.00'

Shared Use Path
PI 19+53.59
N 517213.11
E 2577953.58
Del 9°31'12" R
Dc 28°38'52"
T 16.65'
L 33.23'
R 200.00'

MITCHELL
Sec 15 - T103N - R60W

GREEN'S OUTLOTS

Kyle R. Claussen and Timothy G. Bottum
Parcel 2

Kyle R. Claussen
and
Timothy G. Bottum
Parcel A36

OUTLOT 20

1020+86 L
Begin New
Control of Access

Mitchell Investment Properties, LLC
Parcel 3

16+16 R
End New
Control of Access

LOT G-3

16+02 R
Begin New
Control of Access

N 85°02'48" E

Present SD Hwy 37

1019+00 1020+00 1021+00 1022+00 1023+00 1023+43 9200+00 9201+00

1023+43.22 (SD37)=
9200+00.00 (xr15)=
15+68.58 (Mainline)

N 2°00'03" W

16+00

xr15 N 87°55'59" E 66'

Fairoaks Avenue

North Main Street

15+00

LOT G-3E

Dakota Land and Property Management, LLC
Parcel 1

33' 33' Section Line

OUTLOT 18

LOT H2

14+98 - 203'
15+07.74 - 203.06'

14+99.68 - 163.05'
15+00.57 - 162.57'

14+80 - 147'
14+83 - 143'

14+04.95 - 87.49'

City of Mitchell
Parcel A1

LOT H3A

1019+80 to 1022+55 R
Do Not Disturb Sidewalk

1020+30-32' L to
1019+70-34' L
Take Out 18"-60' RCP
(Incidental Work, Grading)

1020+29-32' R to
1019+70-34' R
Take Out 18"-60' RCP
(Incidental Work, Grading)

1021+50-49' L to
1020+30-32 L
Take Out 18"-122' RCP
(Incidental Work, Grading)

1021+60-22' L to
1021+50-49' L
Take Out 18"-29' RCP
(Incidental Work, Grading)

Remove Drop Inlets
with Frame and Grate
at the following locations:
1020+29-32' R
1020+30-32' L
1021+50-49' L
1021+60-22' L

1022+65
Take Out Twin 42"-278' RCP
(Incidental Work, Grading)

Parcel A1
14+04.95 L to 15+07.74 L
Temporary Easement containing
1185 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\SD37_4.dgn

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B82	B245

Plotting Date: 8/22/2023

SD Hwy 37

1019+81 Begin Work — SD37 — 1023+15 End Work

Excavation	736	Embankment		655	
Undercut	1,809		+20%	131	787
Option Borrow	412	Undercut		1,809	
	2,957		+20%	362	2,171
					2,957

Haul	=	3,532	CuYdSta
Option Borrow Haul	=	50,427	CuYdSta
Dead Haul	=	22,054	CuYdSta

Waste is Muck Excavation to be disposed of at a site approved by the Engineer

PVI 1019+81
Elev 1300.79

PVI 1023+13
Elev 1302.62

PVI 1023+43
Elev 1303.21

L 90.00ft
G1 0.3000%
G2 2.0278%
K 52

0.3000% 2.0278% 1.9818%

18"RCP 1.0000% (Right)
18"RCP 0.5000% (Right)
18"RCP 1.0000% (Left)
18"RCP 1.0000% (Right)
18"RCP 1.0000% (Left)
18"RCP 0.5000% (Left)

FLR 1295.16
FLL 1295.01
FLR 1295.74
FLL 1295.59
FLR 1296.41
FLL 1296.00
FLL 1296.29
FLL 1296.59
FLR 1296.89

PVI 1022+65
Elev 1301.64

1300.85 1300.91 1300.97 1301.03 1301.09 1301.15 1301.21 1301.27 1301.33 1301.39 1301.45 1301.51 1301.61 1301.78 1302.03 1302.36 1302.75 1303.15

1019+00 1020+00 1021+00 1022+00 1023+00 1024+00 1025+00

1350 1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260

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REG. NO.
15517
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SOUTH DAKOTA
8-22-2023

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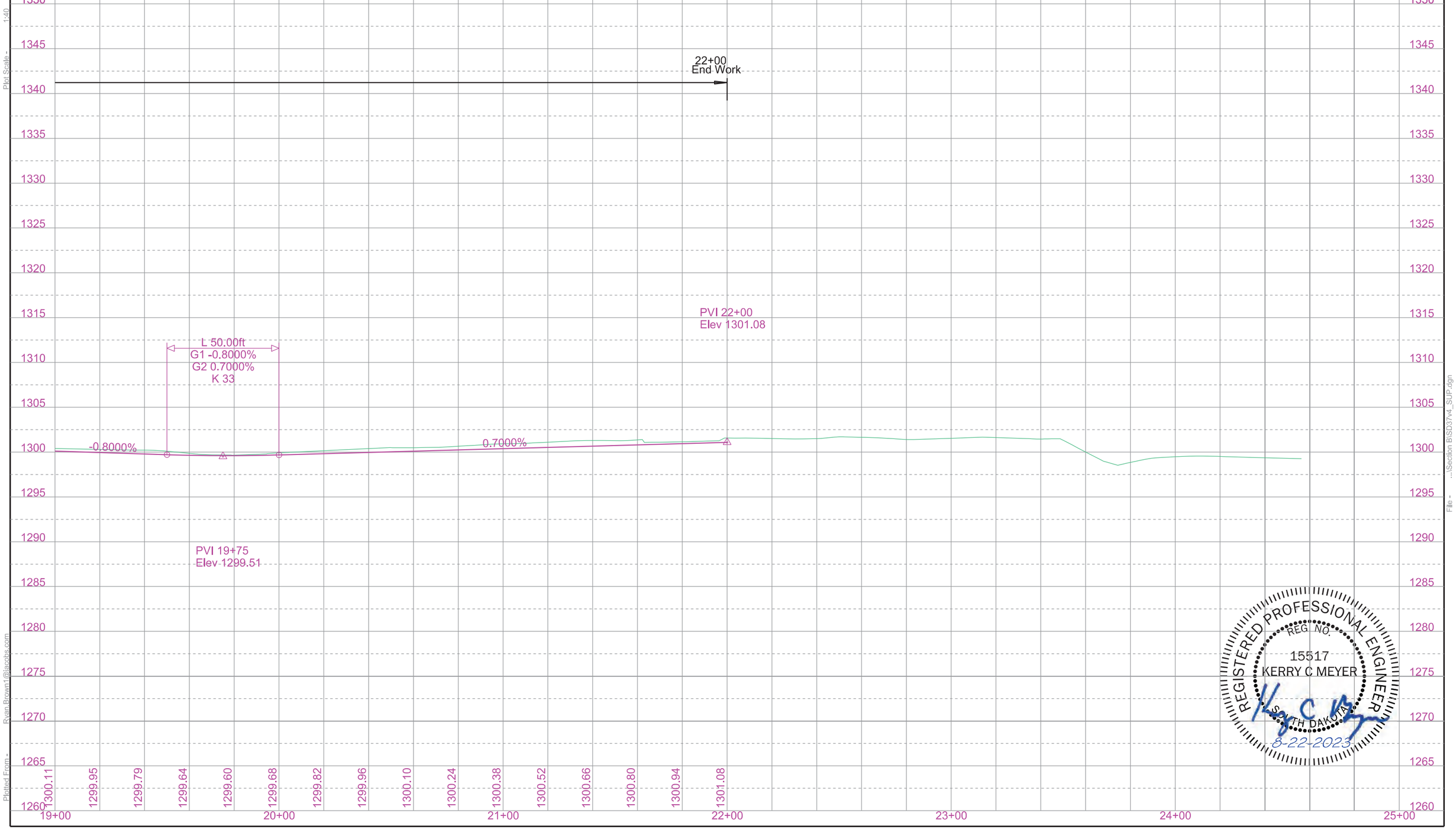
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B83	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

SD Hwy 37 (Shared Use Path)



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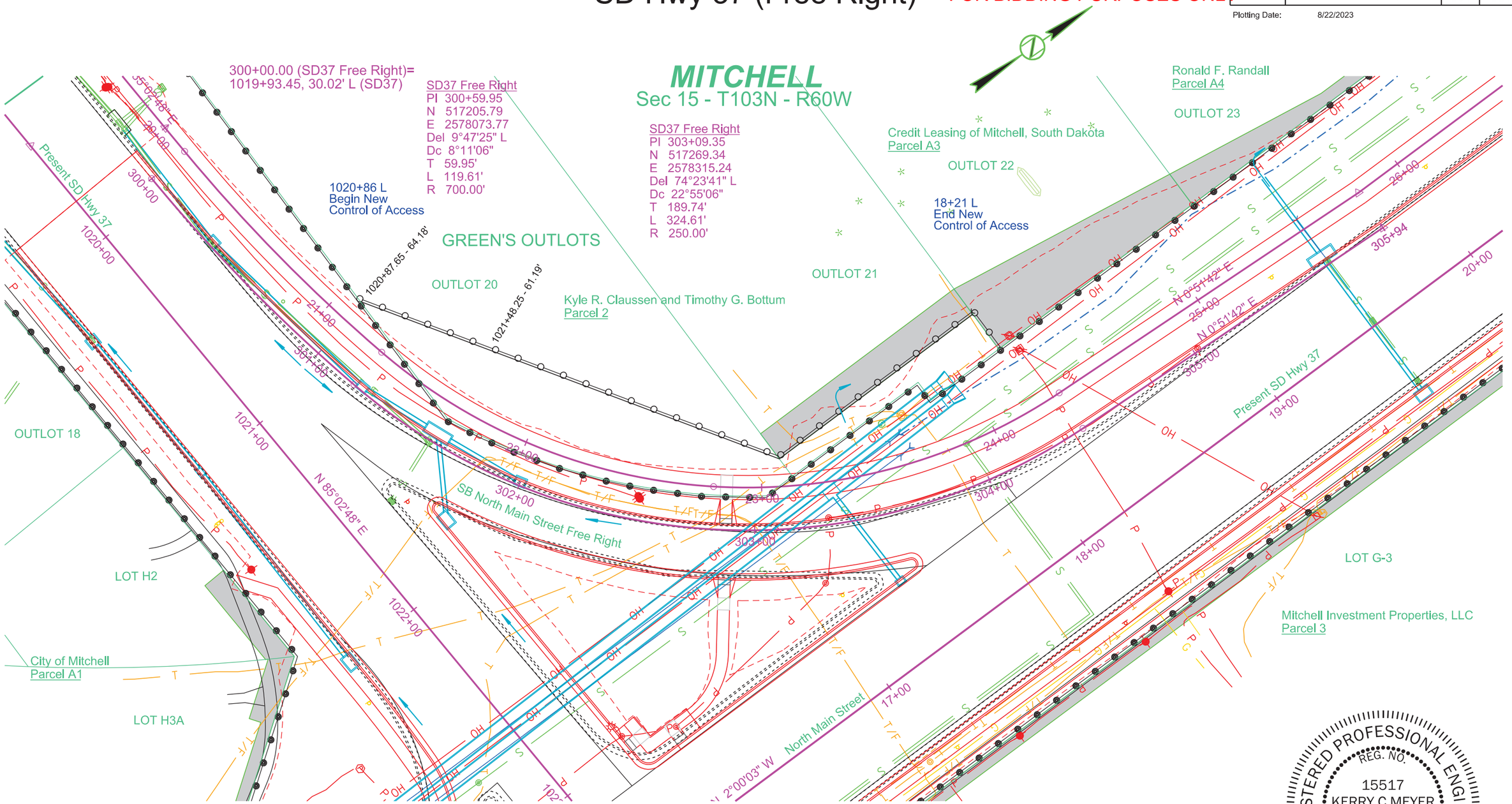
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SD Hwy 37 (Free Right)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B84	B245

Plotting Date: 8/22/2023



Install Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
301+23.00-1.67' L (3'x4')
302+00.00-1.67' L (3'x4')

Install Type S Drop Inlet
Base and Precast Concrete
Type S Drop Inlet
at the following locations:
301+60.00-4.12' L (4'x11')

301+60.00-4.12' L to
301+23.00-1.67' L
Install 18"-30' RCP
(Between Drop Inlets)

302+00.00-1.67' L to
301+60.00-4.12' L
Install 18"-34' RCP
(Between Drop Inlets)

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8-22-2023

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B85	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

SD Hwy 37 (Free Right)

Excavation	901		Embankment	565	
Undercut	888		+20%	113	678
	1,789		Undercut	888	
			+20%	178	1,065
			Waste		45
					1,789

(Earthwork For Information Only)
Data Included in SD37 Quantities

300+00
Begin Work

SD37 Free Right

305+94
End Work

PVI 300+00
Elev 1299.10

PVI 300+92
Elev 1299.38

L 50.00ft
G1 -0.3000%
G2 0.6692%
K 52

PVI 303+85
Elev 1300.60

PVI 305+07
Elev 1300.13

PVI 305+94
Elev 1298.87

0.3000%

-0.3000%

0.6692%

LDG -4.7727%

-0.3861%

LDG -0.6486%

-1.4523%

18"RCP 1.0000%

18"RCP 0.9000%

FLL 1296.00

FLL 1296.29

FLL 1296.58

L 100.00ft
G1 0.3000%
G2 -0.3000%
K 167

PVI 301+69
Elev 1299.15

L 50.00ft
G1 0.6692%
G2 -0.3861%
K 47

L 170.00ft
G1 -0.3861%
G2 -1.4523%
K 159

LDGPI 303+20
Elev 1300.00

LDGPI 304+08
Elev 1295.80

LDGPI 305+93
Elev 1294.60

1299.10 1299.16 1299.22 1299.27 1299.30 1299.30 1299.28 1299.24 1299.20 1299.24 1299.36 1299.49 1299.63 1299.76 1299.90 1300.03 1300.16 1300.30 1300.43 1300.52 1300.53 1300.47 1300.38 1300.27 1300.13 1299.97 1299.78 1299.57 1299.33 1299.07

300+00 301+00 302+00 303+00 304+00 305+00 306+00

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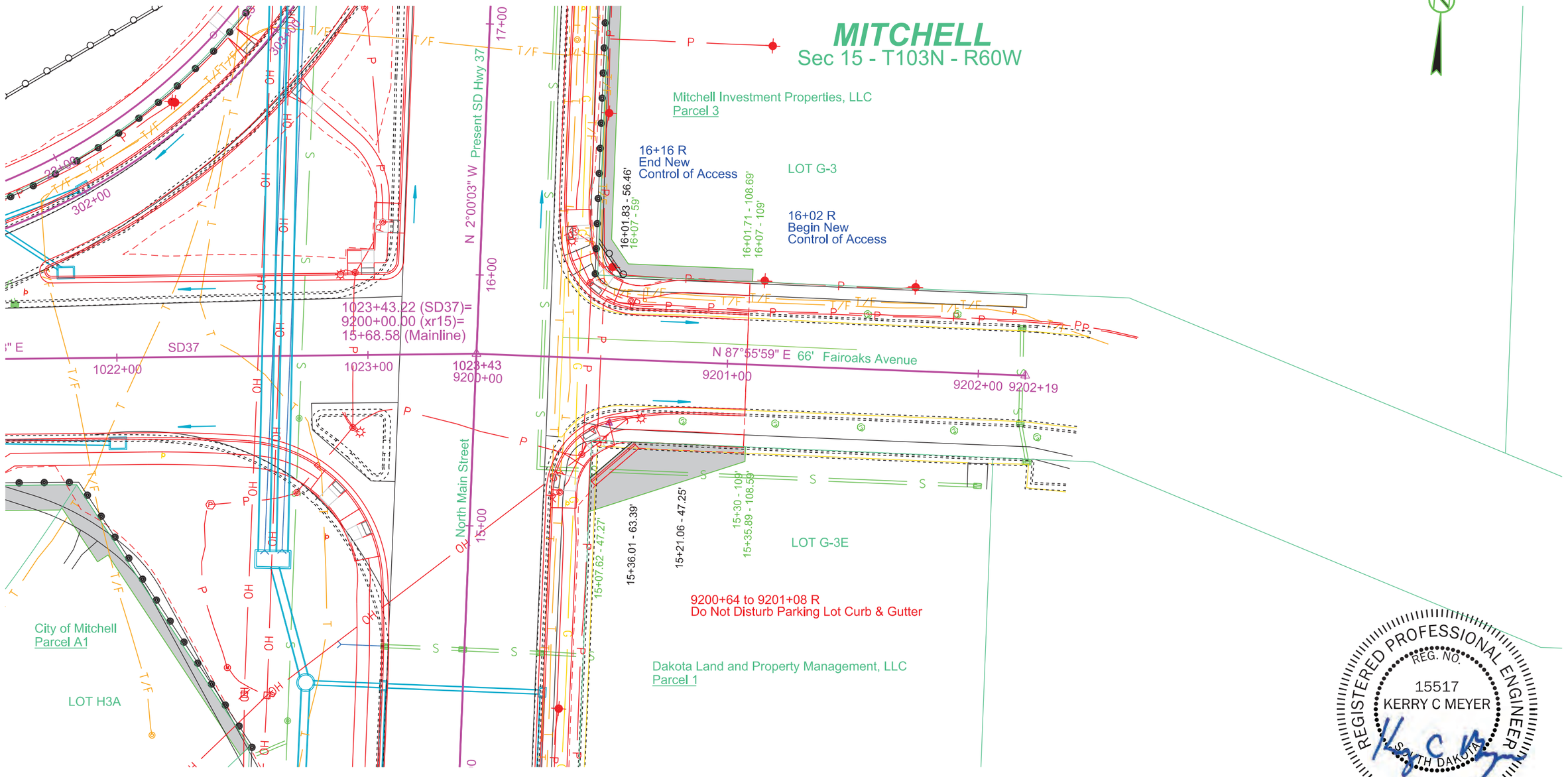
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XR 15 (Fairoaks Ave)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B86	B245

Plotting Date: 8/22/2023 Rev 05/30/2023 RJB



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XR 15 (Fairoaks Ave)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B87	B245

Plotting Date: 8/22/2023

XR15

Excavation	192	Embankment	6	
Undercut	288	+20%	1	7
	480	Undercut	288	
		+20%	58	346
		Waste		127
				480

9200+30 Begin Work

9201+08 End Work

(Earthwork For Information Only)
Data Included in Mainline Quantities

PVI 9200+00
Elev 1303.21

PVI 9200+06
Elev 1303.33

PVI 9200+30
Elev 1302.84

PVI 9201+08
Elev 1301.78

1.9997%

-1.9796%

+1.3644%

1303.04 1302.71 1302.43 1302.16 1301.89

1350 1345 1340 1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260

9200+00 9201+00 9202+00 9203+00

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B88	B245

Plotting Date: 8/22/2023

XR 23 (23rd Avenue)

XR23

Excavation	981	
Undercut	235	
	1,216	
Embankment	226	
+20%	45	272
Undercut	235	
+20%	47	282
Waste		663
		1,216

2000+05 Begin Work

(Earthwork For Information Only)
Data Included in Mainline Quantities

2002+35 End Work

PVI 2000+05
Elev 1293.71

PVI 2000+77
Elev 1293.03

L 50.00ft
G1 -2.0831%
G2 0.5000%
K 19

PVI 2001+13
Elev 1293.76

PVI 2001+38
Elev 1293.27

PVI 2001+90
Elev 1293.01

PVI 2002+35
Elev 1291.77

-2.0831%

RDG 1.2682%

0.5000%

2.0287%

-1.9708%

-0.5000%

-2.7462%

PVI 2000+45
Elev 1292.87

RDGPI 2000+21
Elev 1292.30

RDGPI 2000+05
Elev 1292.10

L 50.00ft
G1 -0.5000%
G2 -2.7462%
K 22

1293.39 1293.08 1292.97 1293.09 1293.50 1293.62 1293.26 1293.16 1293.01 1292.69 1292.19

2000+00 2001+00 2002+00 2003+00

XR 32 (Lakeview Lane)

XR32

Excavation	27	
Undercut	108	
Option Borrow	61	
	196	
Embankment	55	
+20%	11	67
Undercut	108	
+20%	22	130
		196

(Earthwork For Information Only)
Data Included in Mainline Quantities

3000+31 Begin Work

3000+85 End Work

PVI 3000+31
Elev 1299.52

PVI 3000+85
Elev 1298.09

PVI 3000+50
Elev 1299.23

-1.5000%

-3.2242%

L 20.00ft
G1 -1.5000%
G2 -3.2242%
K 12

1299.38 1298.91 1298.26

3000+00 3001+00

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XR 49 (Fishing Access)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B89	B245

Plotting Date: 8/22/2023

Plot Scale - 1:40

MITCHELL
Sec 10 - T103N - R60W

4000+00.00 (xr49)=
49+50.00 (Mainline)

Present SD Hwy 37

N 1°58'53" W

North Main Street

4000+00 50+00 51+00 52+00 53+00 54+00 55+00

N 88°01'07" E

50+28.71

Retaining Wall

4002+65.42 (xr49)=
0+00.00 (xr4002)

N 1°58'53" W

Fishing Access

4001+00 4002+00 4003+00 4004+00 4005+00 4006+00 4006+58

0+00

N 88°01'07" E

xr49
PI 4000+84.73
N 520583.34
E 2578336.60
Del 90°00'00" L
Dc 229°10'59"
T 25.00'
L 39.27'
R 25.00'

1/4 Line

xr4002

1+00

xr4002
PI 0+44.40
N 520776.17
E 2578374.36
Del 28°17'39" R
Dc 57°17'45"
T 25.21'
L 49.38'
R 100.00'

S 63°41'14" E

2+00 2+11

David T. Malters & Patrica B. Malters
Parcel A14

IRREGULAR TRACT No. 7

David T. Malters &
Patricia B. Malters
Parcel A15

IRREGULAR
TRACT No. 5B

City of Mitchell
Parcel A16

Tract 5C

City of Mitchell
Parcel 13

IRREGULAR TRACT No. 13A

LOT C-1

SPEARS' RESUBDIVISION

REGISTERED PROFESSIONAL ENGINEER
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SOUTH DAKOTA
8-22-2023

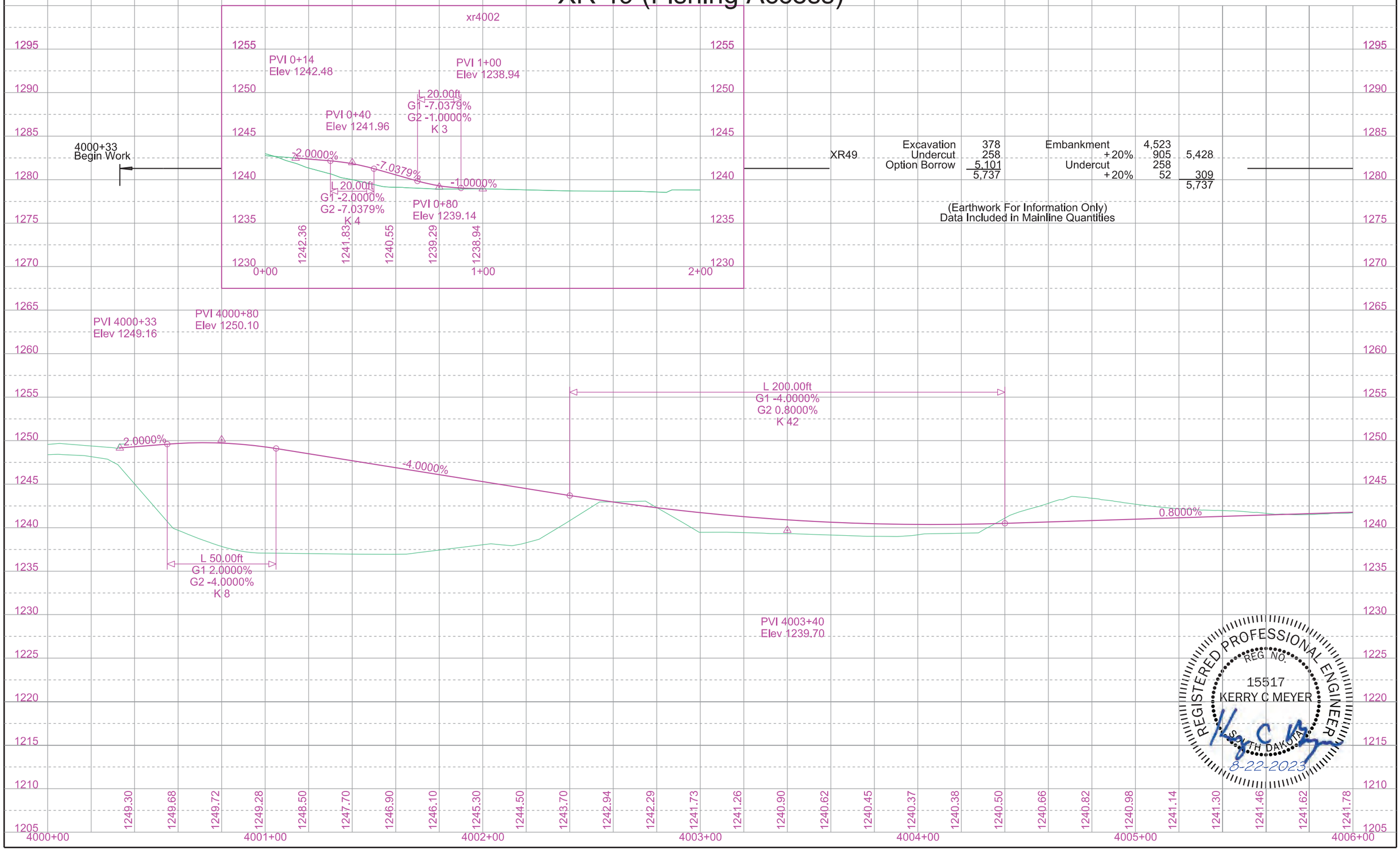
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B90	B245

FOR BIDDING PURPOSES ONLY

XR 49 (Fishing Access)



Excavation	378	Embankment	4,523	
Undercut	258	+20%	905	5,428
Option Borrow	5,101	Undercut	258	
	5,737	+20%	52	309
				5,737

(Earthwork For Information Only)
Data Included in Mainline Quantities

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SOUTH DAKOTA
8-22-2023

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B91	B245

FOR BIDDING PURPOSES ONLY

XR 49 (Fishing Access)



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8-22-2023

XR 61 (Pumphouse Driveway)

FOR BIDDING PURPOSES ONLY

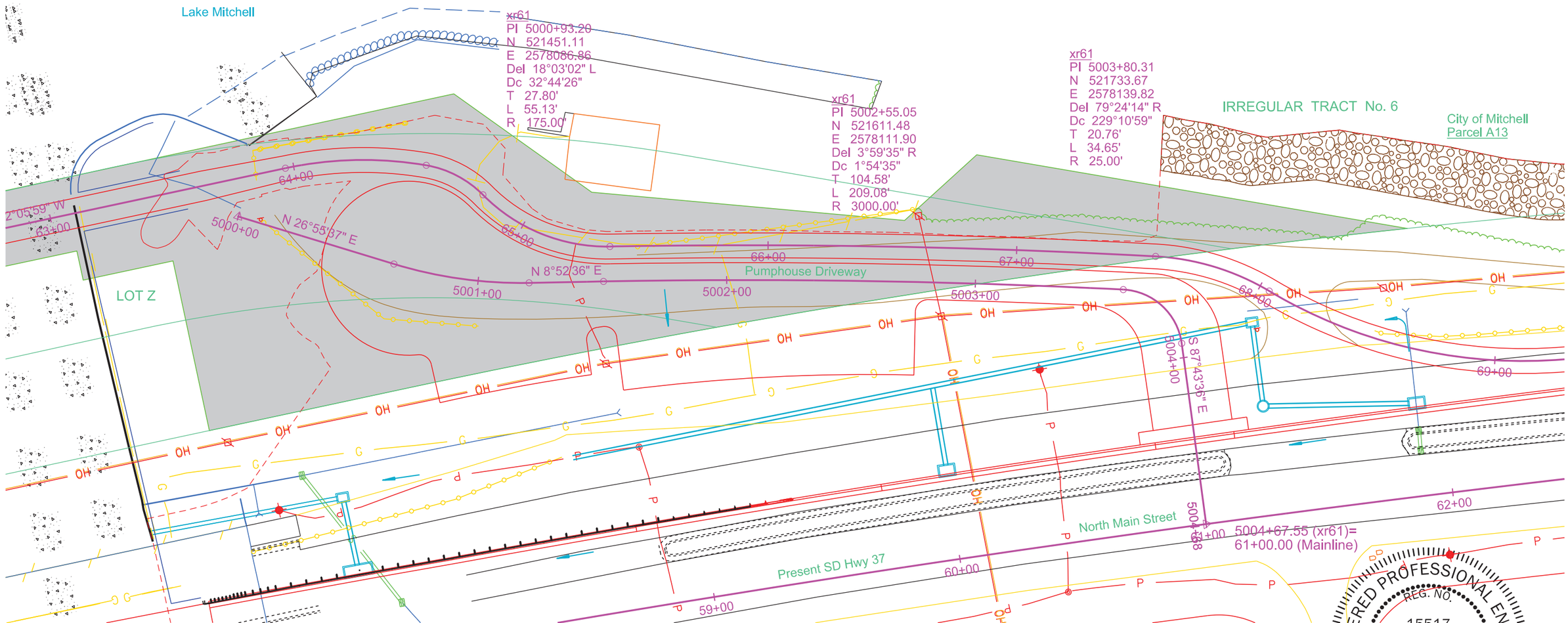
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B92	B245

Plotting Date: 9/21/2023 Rev 09/18/2023 RJB

Remove Steel Guardrail
5000+03-16' L to 5000+54-56' L
5000+10-1' L to 5001+02-18' R
5001+64-14' L to 5002+75-29' L

MITCHELL

Sec 10 - T103N - R60W



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B93	B245

FOR BIDDING PURPOSES ONLY

XR 61 (Pumphouse Driveway)

5000+37
Begin Work

XR61

Excavation	229		Embankment	2,199	
Undercut	399		+20%	440	2,639
Option Borrow	2,489		Undercut	399	
	3,117		+20%	80	478
					3,117

5004+32
End Work

(Earthwork For Information Only)
Data Included in Mainline Quantities

PVI 5000+37
Elev 1274.55

PVI 5002+00
Elev 1276.51

PVI 5003+90
Elev 1277.08

PVI 5004+32
Elev 1276.24

1.2000%

0.3000%

-2.0000%

L 150.00ft
G1 1.2000%
G2 0.3000%
K 167

L 50.00ft
G1 0.3000%
G2 -2.0000%
K 22

1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235 1230

1272.60 1273.13 1273.66 1274.19 1274.72 1275.20 1275.59 1275.90 1276.13 1276.27 1276.33 1276.30 1276.21 1276.11 1276.01 1275.91 1275.81 1275.74 1275.82 1276.05

5000+00 5001+00 5002+00 5003+00 5004+00 5005+00 5006+00

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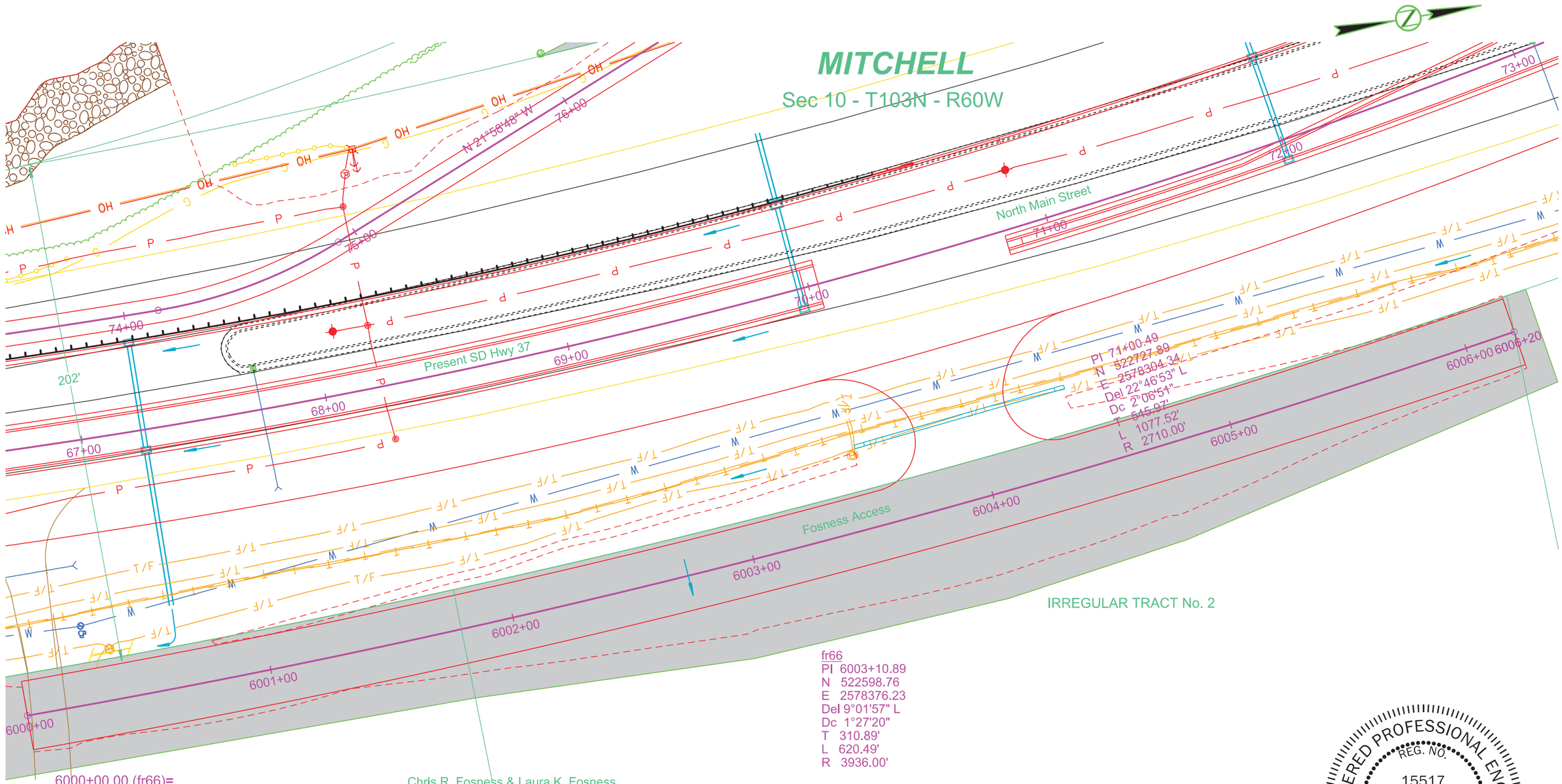
FR 66 (Fosness Access)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B94	B245

Plotting Date: 9/21/2023 Rev 09/18/2023 RJB

Plot Scale - 1:40





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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B95	B245

FOR BIDDING PURPOSES ONLY

FR 66 (Fosness Access)

6000+00
Begin Work

FR66

Excavation	71		Embankment	1,364	
UndercutA	251		+20%	273	1,637
Option Borrow	1,616		UndercutA	251	
	1,938		+20%	50	301
					1,938

(Earthwork For Information Only)
Data Included in Mainline Quantities

6006+20
End Work

PVI 6000+00
Elev 1281.80

L 100.00ft
G1 -3.0000%
G2 1.9250%
K 20

-3.0000%

PVI 6000+80
Elev 1279.40

1.9250%

PVI 6004+00
Elev 1285.56

L 100.00ft
G1 1.9250%
G2 -2.0000%
K 25

-2.0000%

PVI 6005+60
Elev 1282.36

L 100.00ft
G1 -2.0000%
G2 1.1856%
K 31

1.1856%

PVI 6006+20
Elev 1283.08

1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235

1281.80 1281.20 1280.63 1280.23 1280.02 1280.01 1280.20 1280.56 1280.94 1281.33 1281.71 1282.10 1282.48 1282.87 1283.25 1283.64 1284.02 1284.41 1284.77 1285.00 1285.07 1284.99 1284.74 1284.36 1283.96 1283.56 1283.18 1282.91 1282.76 1282.74 1282.85 1283.08

6000+00 6001+00 6002+00 6003+00 6004+00 6005+00 6006+00

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8-22-2023

XR 77 (Harmon Drive)

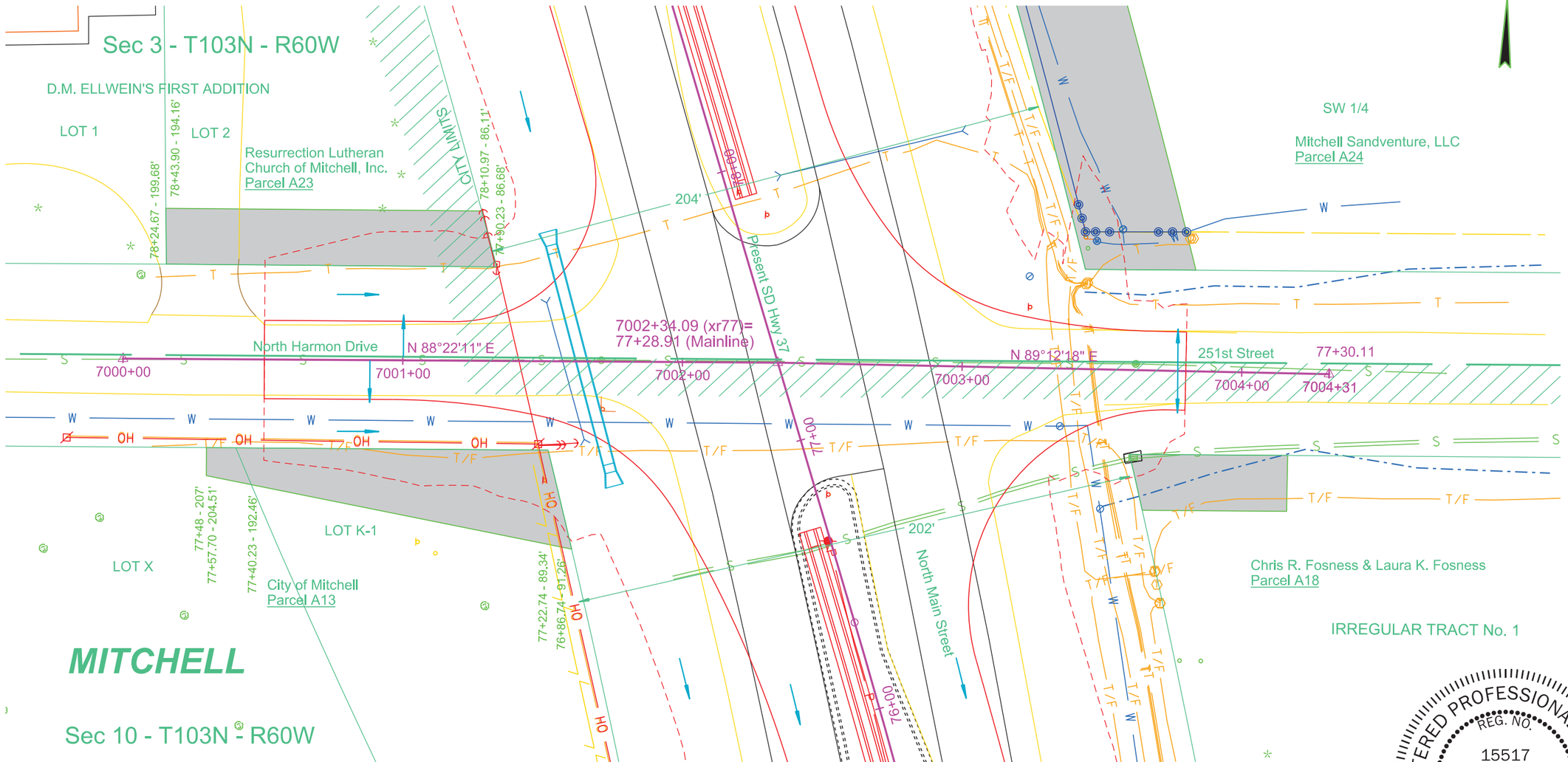
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B96	B245

Plotting Date: 8/22/2023

7001+57
Take Out 24"-51' RCP
(Incidental Work, Grading)

7001+64 (6 ac)
Install 36"-78' RCP Arch
Skewed 15° RHF
& 2 Flared Ends



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B97	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

XR 77 (Harmon Drive)

XR77

Excavation		1,651
Undercut		853
		2,505

Embankment		153	
	+20%	31	184
Undercut		853	
	+20%	171	1,024
Waste			1,297
			2,505

(Earthwork For Information Only)
Data Included in Mainline Quantities

7000+51
Begin Work

7003+80
End Work

PVI 7000+51
Elev 1289.35

L 100.00ft
G1 -3.3663%
G2 1.7553%
K 20

PVI 7001+90
Elev 1287.73

PVI 7002+34
Elev 1288.50

PVI 7002+78
Elev 1289.11

PVI 7003+15
Elev 1289.69

PVI 7003+80
Elev 1284.74

-3.3663%
LDG -4.8934%
RDG -3.5514%
1.7553%
1.7553%
1.3799%
1.5829%
-7.6219%

FL 1283.4
FL 1283.1

Q_{100}=30 cfs
El 1285.86

RDGPI 7000+51
Elev 1287.35

RDGPI 7000+97
Elev 1285.70

PVI 7001+30
Elev 1286.67

L 70.00ft
G1 1.5829%
G2 -7.6219%
K 8

LDGPI 7000+51
Elev 1287.75

LDGPI 7001+19
Elev 1284.40

1289.03 1288.36 1287.78 1287.42 1287.26 1287.30 1287.55 1287.90 1288.25 1288.58 1288.86 1289.14 1289.19 1288.72 1287.72 1286.26 1284.74

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

7000+00 7001+00 7002+00 7003+00 7004+00 7005+00 7006+00

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Rowley (Rowley Street)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B98	B245

Plotting Date: 8/22/2023

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8-22-2023

MITCHELL
Sec 4 - T103N - R60W

Rowley
PI 8002+45.87
N 523980.61
E 2577619.79
Del 25°04'15" R
Dc 22°55'06"
T 55.59'
L 109.39'
R 250.00'

SE1/4 SE1/4

Horseman's Sports, Inc.
Parcel A20

8000+00 to 8006+00 L
Do Not Disturb Fence

83+23.31 - 306.59'
83+68 - 307'
84+78.70 - 274.66'
84+80 - 281'
N 5°46'57" W
406+00
N 23°52'14" W
405+00
404+00
8002+00
8003+00
N 2°29'01" W
8004+00
N 1°20'16" W
408+00
409+00
Rowley Street
N 2°29'01" W
8005+00
8006+00
410+00
Δ = 17°00'33"
℄ R
N 20°08'49" W
407+00
66'
Section Line
8000+00
8001+00
33'
WELCOMES YOU
D.M. ELLWEIN'S FIRST ADDITION
LOT 2
Rowley
PI 8001+36.80
N 523882.36
E 2577671.05
Del 24°54'59" L
Dc 22°55'06"
T 55.23'
L 108.72'
R 250.00'
Resurrection Lutheran Church of Mitchell, Inc.
Parcel A23
CITY LIMITS
Sec 3 - T103N - R60W
Present SD Hwy 37

Parcel A20
82+03.19 to 82+34.45 L
Temporary Easement containing
88 sq ft, more or less

Parcel A20
83+23.31 to 84+80.16 L
Temporary Easement containing
905 sq ft, more or less

Plot Scale - 1:40
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\Rowley.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B99	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Rowley (Rowley Street)

Plot Scale - 1:40

8000+82
Begin Work

Rowley

Excavation	1,326		Embankment	21	
Undercut	965		+25%	5	27
	2,291		Undercut	965	
			+25%	241	1,206
			Waste		1,058
					2,291

(Earthwork For Information Only)
Data Included in Mainline Quantities

8001+60 L
36' Ent

PVI 8000+82
Elev 1292.76

-0.3000%

L 150.00ft
G1 -0.3000%
G2 -1.3000%
K 150

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

1292.70 1292.64 1292.58 1292.52 1292.46 1292.40 1292.34 1292.28 1292.22 1292.16 1292.10 1292.04 1291.98 1291.92 1291.86 1291.80 1291.74 1291.68 1291.62 1291.56 1291.50 1291.44 1291.38 1291.32 1291.26 1291.19

8000+00 8001+00 8002+00 8003+00 8004+00 8005+00 8006+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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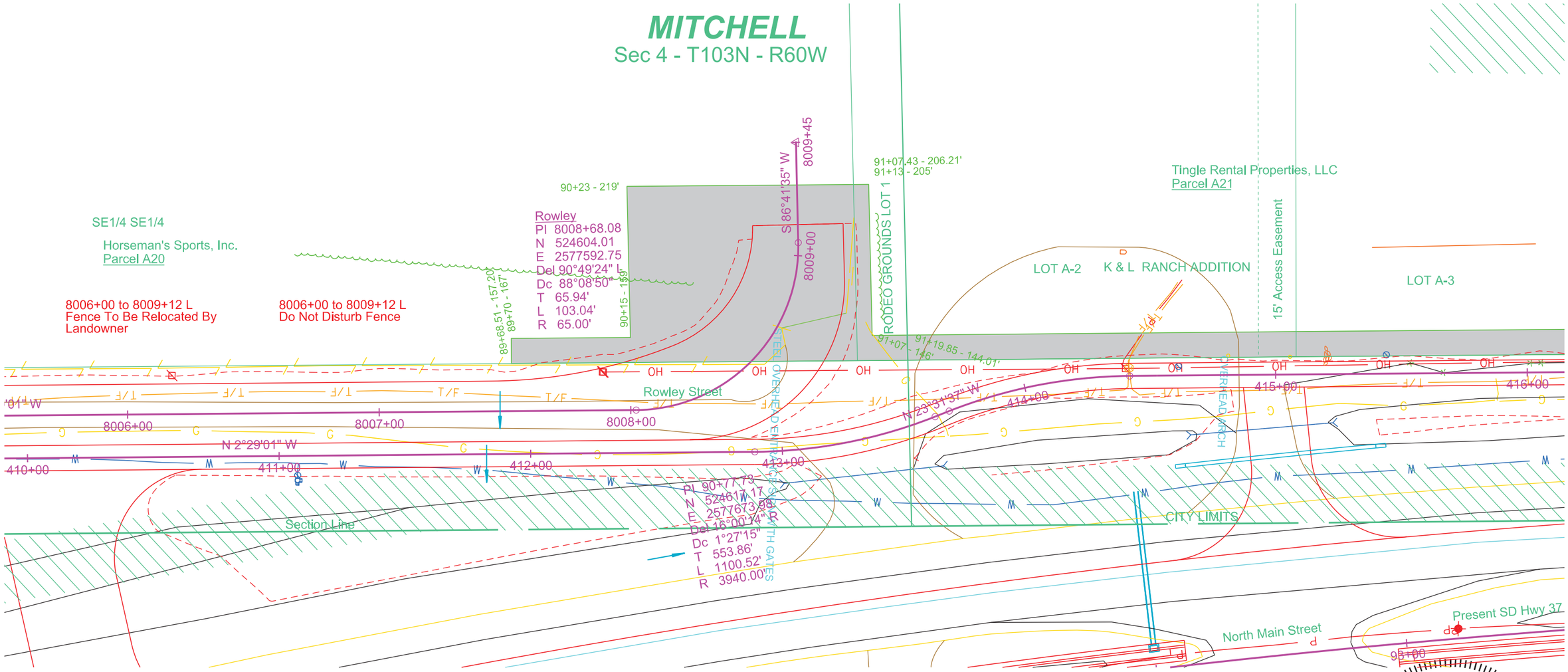
Rowley (Rowley Street)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B100	B245

Plotting Date: 8/22/2023

Plot Scale - 1:40



Parcel A20
89+68.51 to 91+19.85 L
Temporary Easement containing
7336 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
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KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B101	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Rowley (Rowley Street)

8009+12
End Work

PVI 8006+58
Elev 1291.03

L 100.00ft
G1 -1.3000%
G2 2.5887%
K 26

PVI 8009+12
Elev 1291.43

-1.3000%

2.5887%

L 150.00ft
G1 -0.3000%
G2 -1.3000%
K 150

PVI 8008+17
Elev 1288.96

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

1291.19 1291.10 1290.98 1290.83 1290.65 1290.45 1290.22 1289.96 1289.70 1289.48 1289.40 1289.47 1289.70 1290.09 1290.59 1291.11

8006+00 8007+00 8008+00 8009+00 8010+00 8011+00 8012+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\Rowley_v2.dgn

XR 104 (Frontage Road)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B102	B245

Plotting Date: 8/22/2023 Rev 06/29/2023 RJB

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate
at the following locations:
9002+15.00-12.67' L
9003+75.00-12.67' L
9005+65.00-12.67' L

9002+15.00-12.67' L to 9002+15.00-30.83' R
Install 18"-36' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

9003+75.00-12.67' L to 9003+75.00-30.83' R
Install 18"-36' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

9005+65.00-12.67' L to 9005+65.00-32.83' R
Install 18"-38' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End

MITCHELL
Sec 4 - T103N - R60W

BEAUREGARD'S ADDITION

Jeffery & Linda Logan Living Trust
Parcel 15 & 15A

CJM Consulting, Inc.
Parcel A25

104+41.54

1/4 Line

xr104
PI 9001+15.75
N 525981.02
E 2577499.83
Del 90°00'42" R
Dc 143°14'22"
T 40.01'
L 62.84'
R 40.00'

CITY LIMITS

LOT C
LOT A
LOT 1
LOT 2
LOT 3
LOT 4

NE1/4 SE1/4

OH
9001+00
9002+00
9003+00
9004+00
9005+00
426+00
426+69
S 87°33'09" W
Section Line
CITY LIMITS
9000+00.00 (xr104)=
104+40.56 (Mainline)
Present SD Hwy 37
9000+00
104+00
105+00
106+00
107+00
108+00
109+00

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\xr104.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B103	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

XR 104 (Frontage Road)

9000+42
Begin Work

9001+04 L
20' Drive

9002+43 L
30' Drive

9004+02 L
30' Drive

PVI 9000+42
Elev 1289.82

L 50.00ft
G1 -1.0000%
G2 -0.1000%
K 56

-1.0000%

-0.1000%

FLL 1284.72
FLL (Outlet) 1284.30

FLL 1284.28
FLL (Outlet) 1283.86

FLL 1283.73
FLL (Outlet) 1283.29

PVI 9001+44
Elev 1288.80

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

1289.64 1289.44 1289.24 1289.04 1288.88 1288.79 1288.76 1288.74 1288.72 1288.70 1288.68 1288.66 1288.64 1288.62 1288.60 1288.58 1288.56 1288.54 1288.52 1288.50 1288.48 1288.46 1288.44 1288.42 1288.40 1288.38 1288.36 1288.34

9000+00 9001+00 9002+00 9003+00 9004+00 9005+00 9006+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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XR 104 (Frontage Road)

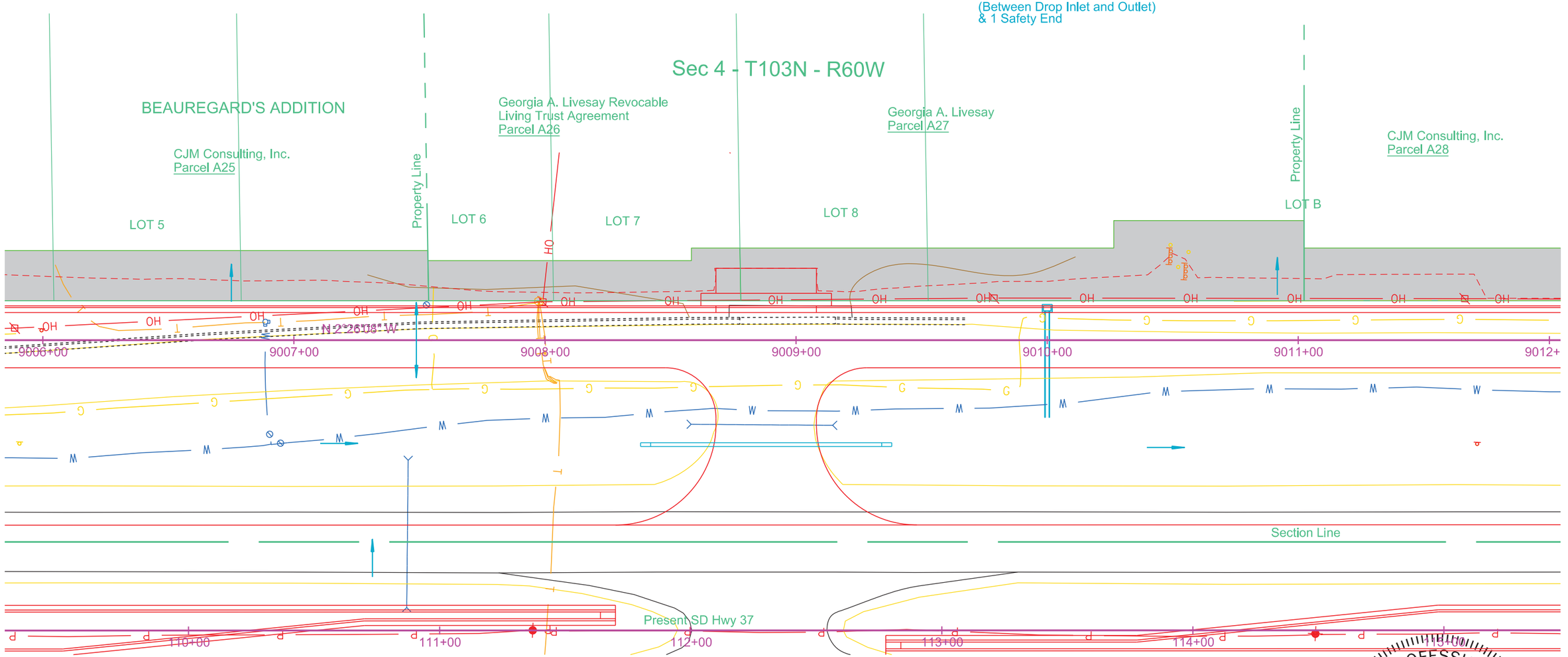
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B104	B245

Plotting Date: 8/22/2023

9010+00.00-12.67' L
Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate

9010+00.00-12.67' L to 9010+00.00-30.83' R
Install 18"-36' RCP
(Between Drop Inlet and Outlet)
& 1 Safety End



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section Bxr104_2.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B105	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

XR 104 (Frontage Road)

Plot Scale - 1:40

XR104

Excavation	3,844	Embankment		285	
Undercut	1,766		+25%	71	356
	5,609	Undercut		1,766	
			+25%	441	2,207
		Waste			3,046
					5,609

(Earthwork For Information Only)
Data Included in Mainline Quantities

9008+88 L
40' Drive

PVI 9006+50
Elev 1288.29

-0.1000%

L 50.00ft
G1 -0.1000%
G2 -0.5000%
K 125

-0.5000%

FLL 1282.40
FLL (Outlet) 1281.98

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

1288.34 1288.32 1288.29 1288.23 1288.14 1288.04 1287.94 1287.84 1287.74 1287.64 1287.54 1287.44 1287.34 1287.24 1287.14 1287.04 1286.94 1286.84 1286.74 1286.64 1286.54 1286.44 1286.34 1286.24 1286.14 1286.04 1285.94 1285.84 1285.74 1285.64 1285.54

9006+00 9007+00 9008+00 9009+00 9010+00 9011+00 9012+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plotted From - Ryan.Brown1@jacobs.com

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XR 104 (Frontage Road)

FOR BIDDING PURPOSES ONLY

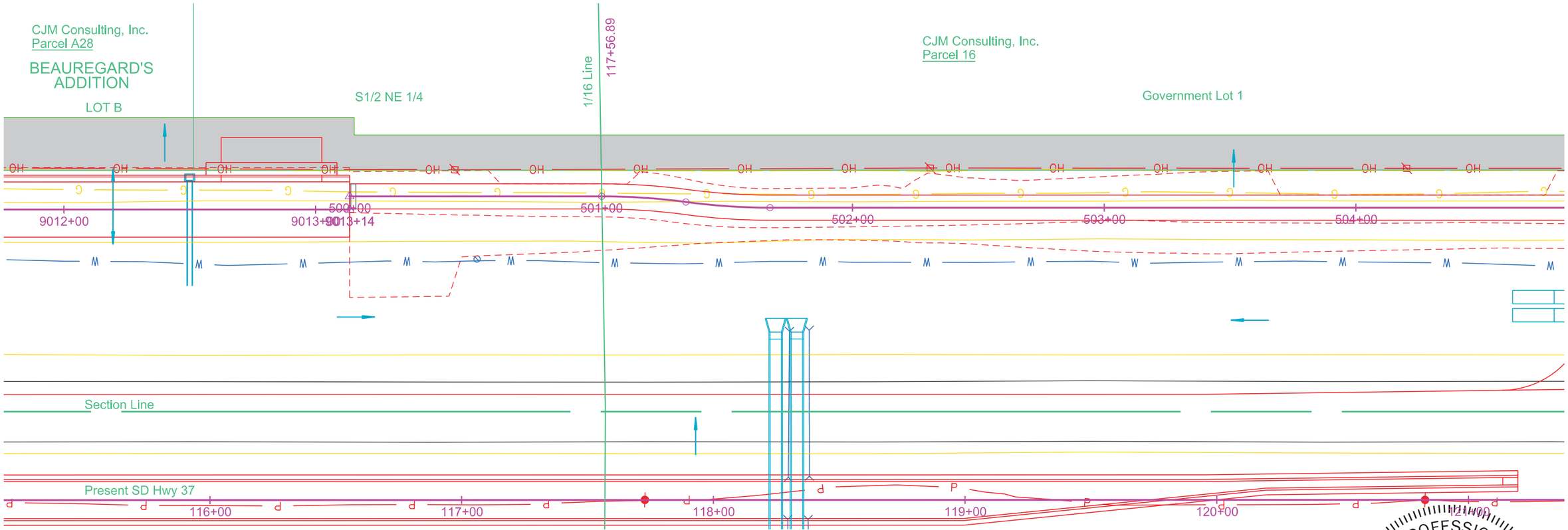
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B106	B245

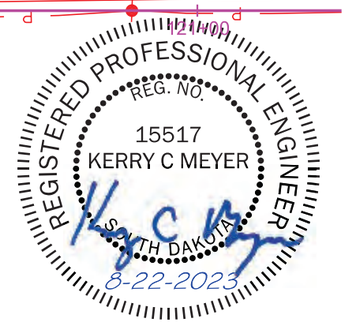
Plotting Date: 8/22/2023

9012+50.00-12.67' L
Install 2'x3' Type B Drop Inlet
with 6" Concrete Collar and
Type B Frame and Grate

9012+50.00-12.67' L to 9012+50.00-30.83' R
Install 18"-36' RCP Arch
(Between Drop Inlet and Outlet)
& 1 Safety End

Sec 4 - T103N - R60W





Plotted From - Ryan.Brown1@jacobs.com
Plot Scale - 1:40
File - ...\Section B\xr104_3.dgn

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B107	B245

Plotting Date: 8/22/2023

XR 104 (Frontage Road)

1330
1325
1320
1315
1310
1305
1300
1295
1290
1285
1280
1275
1270
1265
1260
1255
1250
1245
1240

9013+14
End Work

9012+82 L
40' Drive

PVI 9013+14
Elev 1284.97

-0.5000%

FLL 1281.68
FLL (Outlet) 1281.26

1285.54
1285.44
1285.34
1285.24
1285.14
1285.04

9012+00
9013+00
9014+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\xr104v3.dgn

XR 131 (National Guard Road & 54th Street)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B108	B245

Plotting Date: 8/22/2023

9100+79
Take Out Triple 24"-50' RCP
(Incidental Work, Grading)

9101+02 (525 ac)
Install Quadruple 30"-62' RCP Arch
Skewed 35° RHF
& 8 Sloped Ends
(Spaced 4.6 ft C to C
Controlled Density Fill)

9103+55
Take Out 36"-46' RCP
(Incidental Work, Grading)

9104+47
Take Out 18"-26' RCP
(Incidental Work, Grading)

9103+55 (40 ac)
Install 48"-80' RCP Arch
& 2 Flared Ends

9104+47-39' R (1 ac)
Install 18"-46' CMP
& 2 Safety Ends

Sec 33 - T104N - R60W

Sec 34 - T104N - R60W

City of Mitchell
Parcel A30

SE1/4

131+80 - 234'

131+38.08 - 233.86'

131+81.99 - 124.87'

131+39.99 - 124.86'

National Guard Traffic Diversion
PI 0+73.69
N 528632.60
E 2577212.38
Del 37°24'23" R
Dc 28°38'52"
T 67.71'
L 130.57'
R 200.00'

Dakota Land and Property Management LLC
Parcel A31

LOT 12

MAUI FARMS
FIRST ADDITION

131+72.78 - 125.11'

131+40.78 - 125.11'

131+72 - 254'

131+40.12 - 254.50'

33'

N 87°00'35" E

National Guard Road

Section Line

0+00

9100+00

9101+00

9102+00

9103+00

9104+00

9105+00

131+08.38

9102+65.31 (xr131)=
131+04.59 (Mainline)

132+00

131+00

515+07

515+00

50'

1+00

N 87°14'05" E

250th Street

33'

N 24°45'55" W

N 55°35'02" W

2+00

514+00

S 55°35'02" E

CJM Consulting, Inc.
Parcel 16

Government Lot 1

Sec 4 - T103N - R60W

513+00

3+00

4+00

National Guard Traffic Diversion
PI 3+73.46
N 528460.44
E 2577463.68
Del 36°51'48" L
Dc 28°38'52"
T 66.65'
L 128.68'
R 200.00'

Section Line

Present SD Hwy 37

130+00

129+00

N 87°33'09" E

4+82

Government Lot 4

130+51.68 - 146.08'

130+51.31 - 217.08'

130+74.31 - 217.09'

130+37.91 - 101.08'

130+43 - 255'

130+74.12 - 254.86'

Michael D. Haley & Jean M. Haley
Joint Revocable Living Trust
Parcel 17

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Sec 3 - T103N - R60W

Plot Scale - 1:40

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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B109	B245

Plotting Date: 8/22/2023

XR 131 (National Guard Road & 54th Street)

XR131

Excavation 983
Undercut 1,171
Option Borrow 137
2,291

Embankment 662
+25% 165 827
Undercut 1,171
+25% 293 1,464
2,291

9100+50
Begin Work

9105+00
End Work

(Earthwork For Information Only)
Data Included in Mainline Quantities

(Earthwork For Information Only)
Data Included in Mainline Quantities
Excavation 74 Embankment 787
Option Borrow 910 +25% 197 984
984 984

National Guard Traffic Diversion

PVI 0+00
Elev 1286.86
-0.5278%

PVI 0+77
Elev 1286.46
-0.4486%

L 100.00ft
G1 -0.4486%
G2 1.8279%
K 44

PVI 2+39
Elev 1285.73
1.8279%

PVI 3+59
Elev 1287.91
1.8214%

PVI 3+93
Elev 1288.52
-4.3644%

PVI 4+37
Elev 1286.57

1286.76 1286.65 1286.54 1286.44 1286.35 1286.26 1286.17 1286.08 1285.99 1285.92 1285.92 1286.01 1286.20 1286.48 1286.83 1287.20 1287.56 1287.93 1288.29 1288.19 1287.32

0+00 1+00 2+00 3+00 4+00 5+00

PVI 9100+50
Elev 1286.72

L 100.00ft
G1 -0.4156%
G2 2.0000%
K 41

0.4156%
2.0000%

PVI 9101+11
Elev 1288.25
1.9993%

PVI 9102+54
Elev 1289.11
-0.6673%

PVI 9102+87
Elev 1288.89
-2.0006%

PVI 9103+19
Elev 1288.25
2.0000%

L 100.00ft
G1 -2.0000%
G2 2.6188%
K 22

2.6188%

9104+47 R
24' Ent

PVI 9105+00
Elev 1290.41

LDG -2.0986%
RDG -1.3147%
LDG 0.1828%
RDG -0.0111%

FL 1282.1
FL 1282.0

Q_{36} =239 cfs
El 1286.60

PVI 9101+20
Elev 1286.43

FL 1281.9
FL 1281.6

PVI 9103+75
Elev 1287.14

Q_{100}=51 cfs
El 1285.80

LDG 3.8677%
RDG 2.9710%

RDGPI 9100+50
Elev 1283.00

LDGPI 9100+50
Elev 1282.42

LDGPI 9100+70
Elev 1282.00

RDGPI 9101+34
Elev 1281.89

RDGPI 9101+79
Elev 1281.89

LDGPI 9101+79
Elev 1282.20

RDGPI 9103+54
Elev 1281.66

LDGPI 9103+54
Elev 1281.85

RDGPI 9105+00
Elev 1286.00

LDGPI 9105+00
Elev 1287.50

1286.68 1286.61 1286.62 1286.73 1286.94 1287.24 1287.63 1288.03 1288.43 1288.83 1289.08 1288.94 1288.64 1288.24 1287.89 1287.72 1287.74 1287.94 1288.32 1288.84 1289.37 1289.89 1290.41

9100+00 9101+00 9102+00 9103+00 9104+00 9105+00 9106+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section Bxr131v.dgn

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B110	B245

REV 09/22/2023 JDS

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
9-22-23
#15611

LAKE MITCHELL

LOT 10A

LOT 10

City of Mitchell
Parcel A11

LOT E

Shared Use Path
PI 43+75.27
N 519402.5572
E 2578240.4706
Del 38°05'56"
T 34.53
L 66.50
R 100.00

Shared Use Path
PI 44+70.25
N 519477.1939
E 2578177.6646
Del 25°13'04"
T 22.37
L 44.01
R 100.00

Shared Use Path
PI 46+29.82
N 519632.1292
E 2578136.5483
Del 4°16'48"
T 18.68
L 37.35
R 500.00

Shared Use Path
PI 48+36.32
N 519835.1275
E 2578098.6226
Del 15°55'07"
T 41.94
L 83.35
R 300.00

37+17 - 89'
40+04 - 155'
40+30 - 133'
40+38.56 - 90.06'
42+10 - 190'
42+11 - 160'

N40° 04' 49"W
N14° 51' 45"W
N10° 34' 57"W
N05° 20' 10"E

37+00
38+00
39+00
40+00
41+00
42+00
43+00
44+00
45+00
46+00
47+00
48+00
49+00

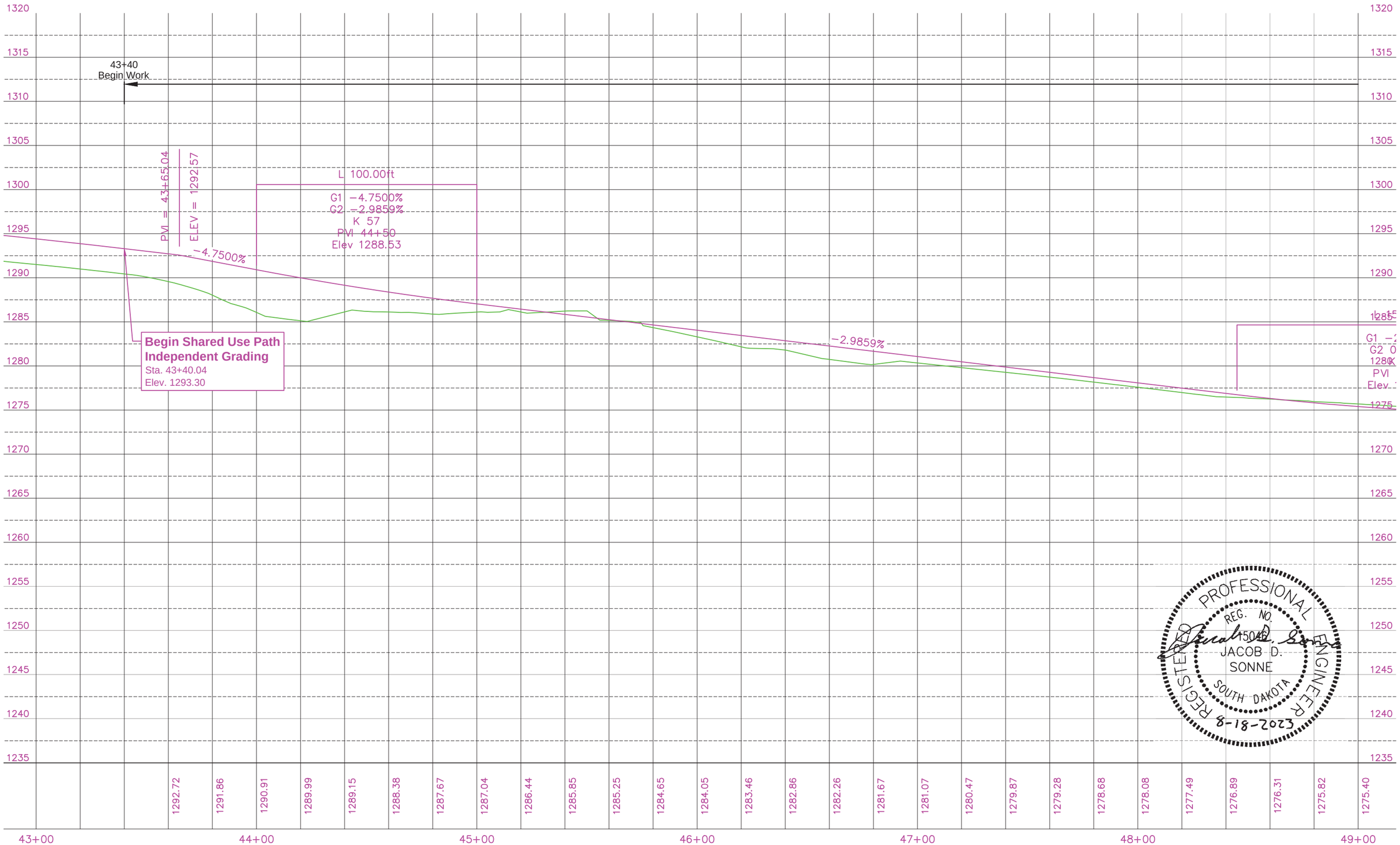
132'
157'
+69
40' Drive
+51
32' Drive

Present SD Hwy 37
North Main Street

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B111	B245

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY



PROFESSIONAL ENGINEER
REGISTERED
REG. NO. 15048
JACOB D. SONNE
SOUTH DAKOTA
8-18-2023

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B112	B245

REV 09/22/2023 JDS

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
9-22-23
#15611

LAKE MITCHELL

LOT 10

LOT 10A

City of Mitchell
Parcel A11

SW 1/4

City of Mitchell
(INFORMATION ONLY)

LOT W

LOT E

Shared Use Path
PI 50+11.32
N 520009.9073
E 2578114.9474
Del 8°13'34"
T 14.38
L 28.71
R 200.00

43+88 - 167'

N05° 20' 10"E

49+00

50+00

51+00

52+00

N02° 53' 24"W

53+00

54+00

55+00

43+79 - 138'

LOT 10A

SW 1/4

OH

S

G

T/F

P

W

132'

157'

Present SD Hwy 37

North Main Street

43+00

44+00

45+00

46+00

47+00

202'

48+00

IRREGULAR TRACT No. 13A

City of Mitchell
Parcel 11

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B113	B245

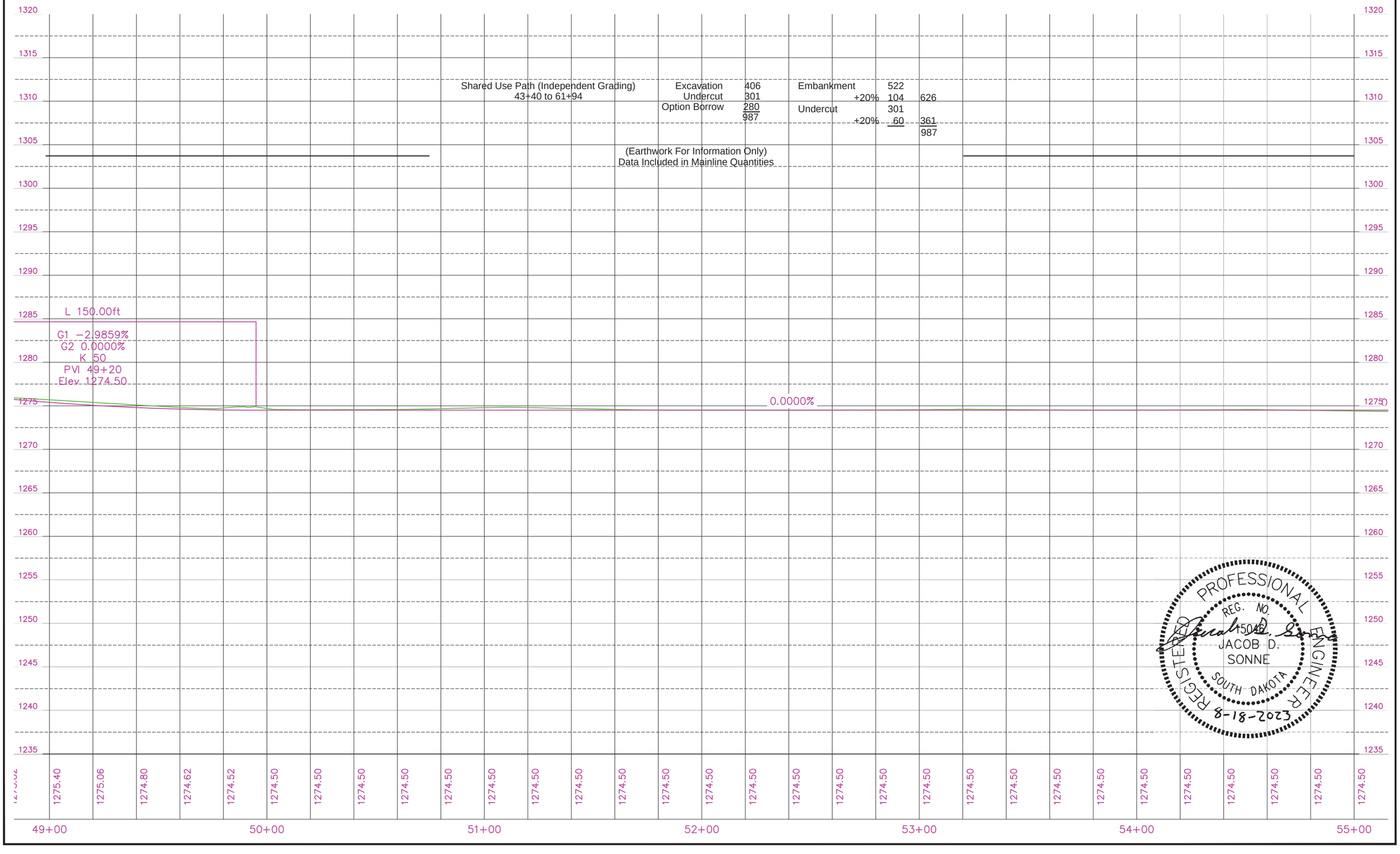
Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

Shared Use Path (Independent Grading)
43+40 to 61+94

Excavation		406	
Undercut		301	
Option Borrow		280	
		987	
Embankment		522	
	+20%	104	626
Undercut		301	
	+20%	60	361
			987

(Earthwork For Information Only)
Data Included in Mainline Quantities



Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B114	B245

REV 09/22/2023 JDS

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
9-22-23
#15611

Parcel A13
50+28.39 to 61+94.76 L
Temporary Easement containing
51018 sq ft, more or less

LAKE MITCHELL

50+28.74 1/4 Line

50+28.39 - 180.13'

50+28.39 - 180.13'

IRREGULAR TRACT No. 6

SW 1/4

City of Mitchell
(INFORMATION ONLY)

City of Mitchell
Parcel A13

LOT W

LOT Z

54+72 - 186'

55+00

56+00

N02° 40' 51"W

57+00

58+00

59+00

60+00

61+00

Shared Use Path
PI 61+02.70
N 521100.0500
E 2578061.9414
Del 18°29'48"
T 32.57
L 64.57
R 200.00

54+80 - 157'

50+28.45 - 151.13'

50+28.45 - 151.13'

IRREGULAR TRACT No. 6

SW 1/4

OH

G

P

T/F

Present SD Hwy 37

North Main Street

202'

202'

49+00

50+00

51+00

52+00

53+00

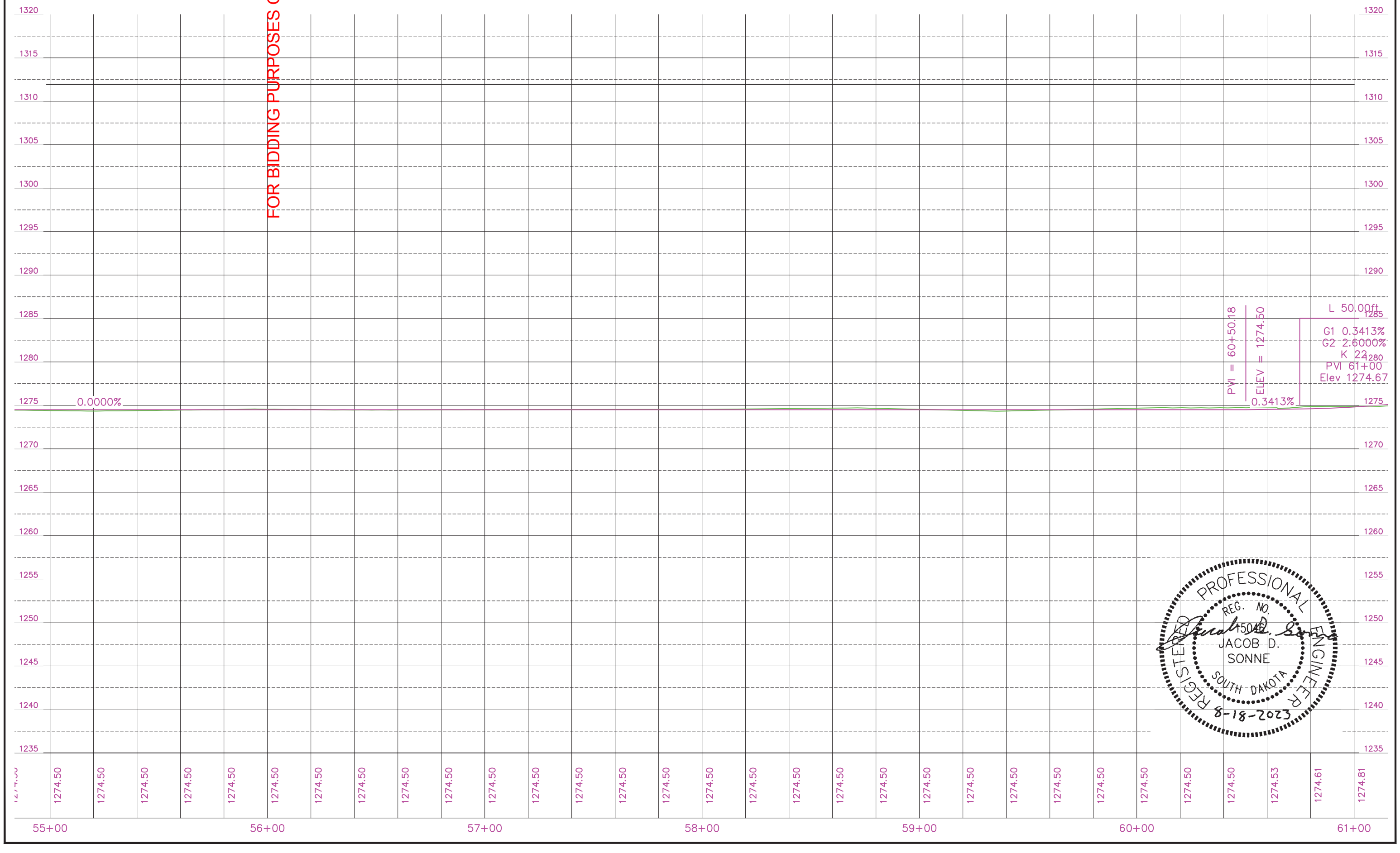
54+00

40' Drive
1350

Shared Use Path (SD Hwy 37)

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B115	B245

FOR BIDDING PURPOSES ONLY


1320
1315
1310
1305
1300
1295
1290
1285
1280
1275
1270
1265
1260
1255
1250
1245
1240
1235
0.0000%
PVI = 60+50.18
ELEV = 1274.50
0.3413%
L 50.00ft
G1 0.3413%
G2 2.6000%
K 22
PVI 61+00
Elev 1274.67
1274.50
1274.50
1274.50

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B116	B245

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

REV 09/22/2023 JDS

61+94.00 to 63+56.00
Install 162'-0" Pedestrian Steel Truss Bridge
and Bridge Berm Slope Protection
(See Section E)

61+91 L
Begin 6' Chain
Link Fence with
Tension Wired Top

61+95 L
End 6' Chain
Link Fence with
Tension Wired Top

Shared Use Path
PI 61+71.08
N 521164.3375
E 2578037.0349
Del 19°04'40"
T 16.80
L 33.30
R 100.00

IRREGULAR TRACT No. 6

63+48 L
Begin 6' Chain
Link Fence with
Tension Wired Top

63+55 L
End 6' Chain
Link Fence with
Tension Wired Top

LAKE MITCHELL

Shared Use Path
PI 64+25.45
N 521418.8547
E 2578027.7036
Del 21°46'34"
T 28.85
L 57.01
R 150.00

City of Mitchell
Parcel A13

Shared Use Path
PI 65+09.71
N 521483.4812
E 2578077.7151
Del 46°22'36"
T 29.99
L 56.66
R 70.00

Shared Use Path
PI 66+46.21
N 521621.5936
E 2578099.4179
Del 4°10'25"
T 109.82
L 219.55
R 3014.00

Shared Use Path
PI 64+67.11
N 521458.7320
E 2578041.9633
Del 35°37'50"
T 13.50
L 26.12
R 42.00

Shared Use Path
PI 61+02.70
N 521100.0500
E 2578061.9414
Del 18°29'48"
T 32.57
L 64.57
R 200.00

61+95 R
Begin 6' Chain
Link Fence with
Tension Wired Top

62+31 R
1-6' Pedestrian Swing Gate

63+55 R
Begin 6' Chain
Link Fence with
Tension Wired Top

63+12 R
1-6' Pedestrian Swing Gate

LOT Z

IRREGULAR TRACT No. 6

Present SD Hwy 37

North Main Street

N02° 05' 59"W

N21° 10' 39"W

54+72 - 186'
55+37 - 209'
54+80 - 157'
55+43 - 165'
56+05 - 165'
56+05 - 180'
56+74 - 182'
56+75 - 170'
57+11 - 170'
57+12.58 - 100.63'
58+31 - 217'
58+78 - 169'
59+98 - 138'
60+30 - 160'
202'

55+00
56+00
57+00
58+00
59+00
60+00
61+00
62+00
63+00
64+00
65+00
66+00
67+00

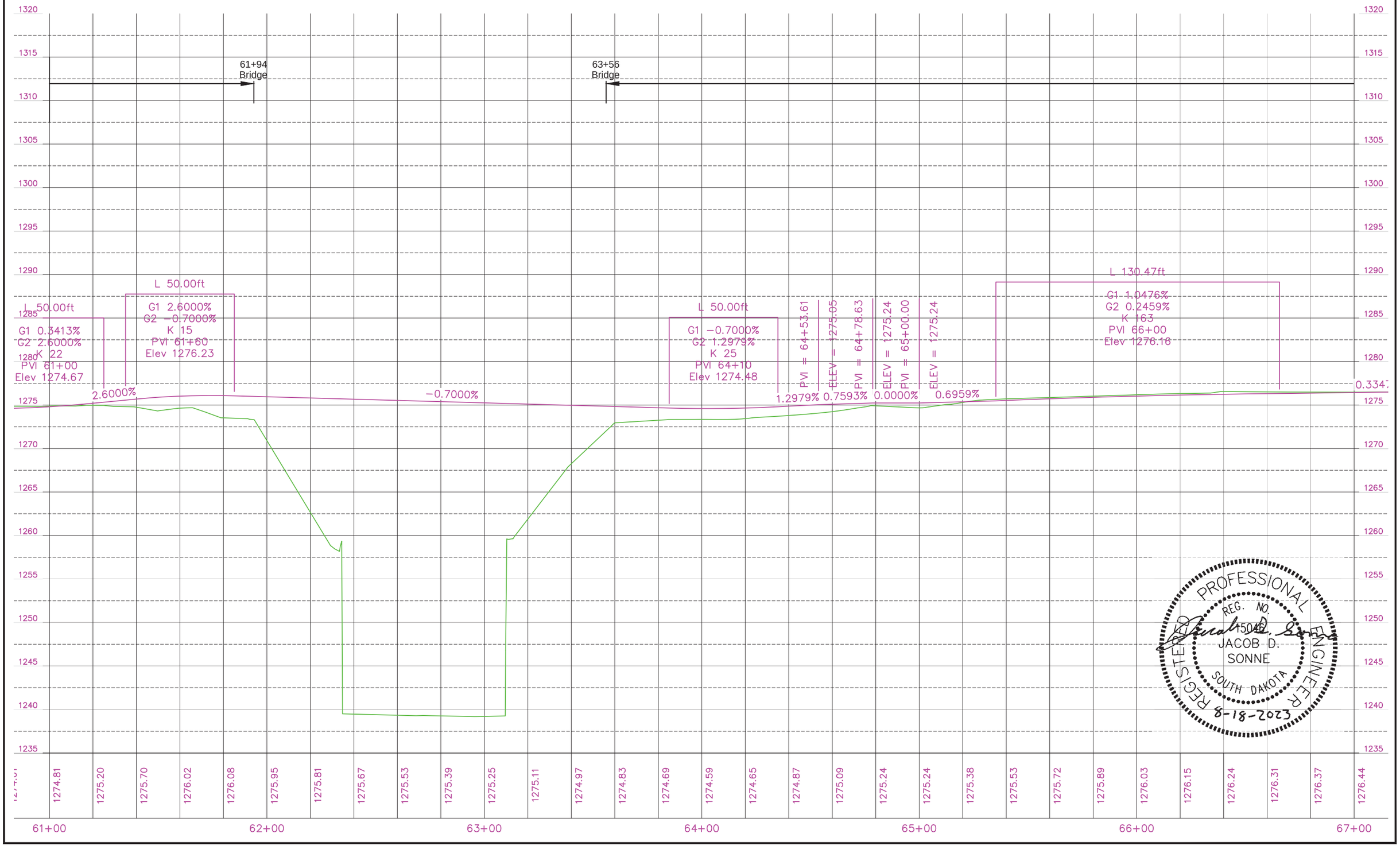
OH
G
P
T/F

PROFESSIONAL ENGINEER
REGISTERED
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
9-22-23
#15611

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B117	B245



Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B118	B245

67+56.00 to 74+50.00
Install Class B Riprap and Place Type B
Drainage Fabric under all Riprap
(See Section B)

PROFESSIONAL ENGINEER
REGISTERED
REG. NO. 15046
JACOB D. SONNE
SOUTH DAKOTA
6-18-2023

City of Mitchell
Parcel A13

LAKE MITCHELL

IRREGULAR TRACT No. 6

Shared Use Path
PI 67+80.53
N 521752.5093
E 2578129.8923
Del 27°38'03"
T 24.59
L 48.23
R 100.00

Shared Use Path
PI 68+69.94
N 521820.9797
E 2578188.8653
Del 36°24'29"
T 65.77
L 127.09
R 200.00

Shared Use Path
PI 73+23.30
N 522277.4875
E 2578223.4315
Del 3°54'10"
T 90.75
L 181.42
R 2663.33

N04° 19' 48"E

32' Drive

Present SD Hwy 37

North Main Street

OH
T/F
W
P
G

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B119	B245

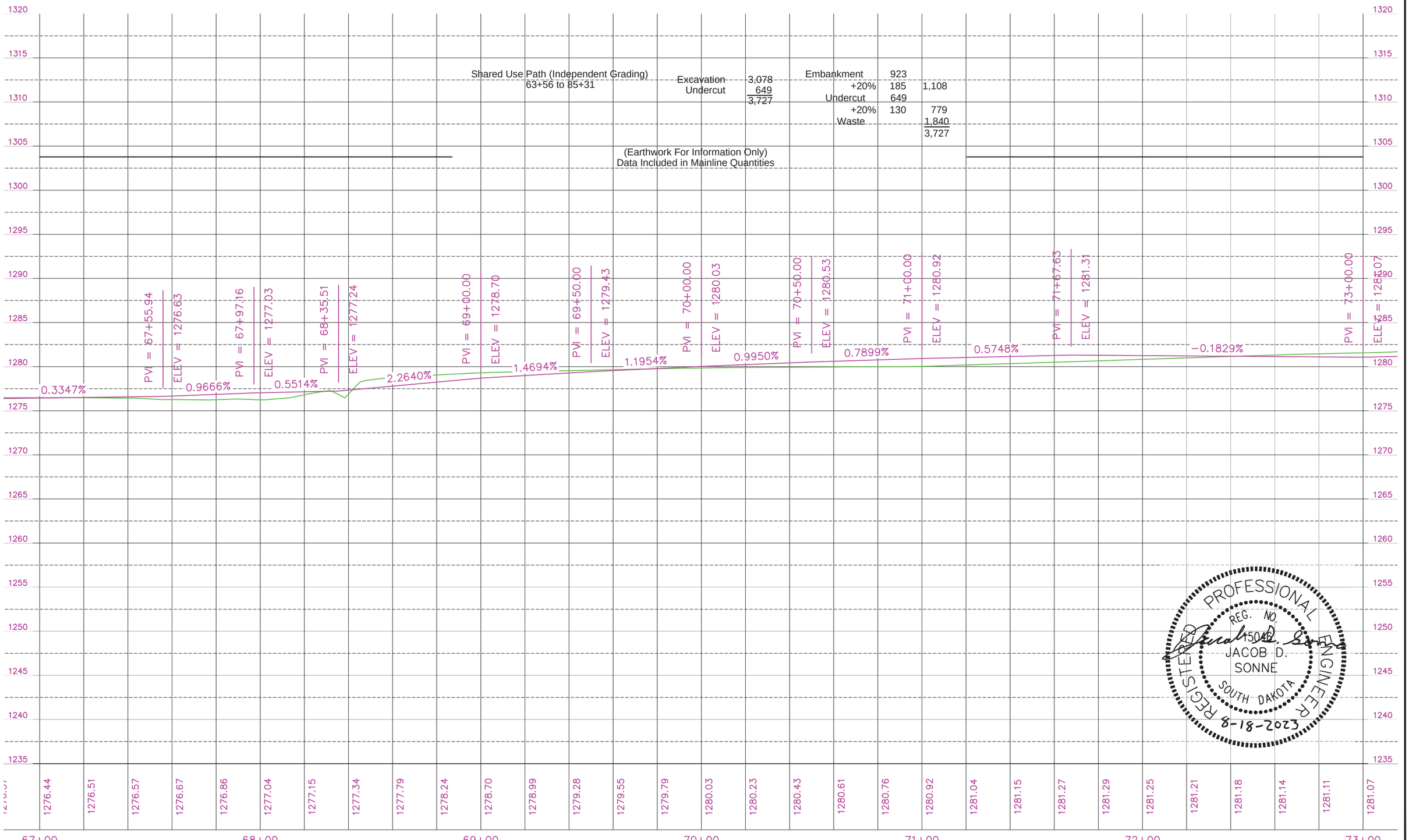
Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

Shared Use Path (Independent Grading)
63+56 to 85+31

Excavation	3,078		
Undercut	649		
	3,727		
Embankment	923		
+20%	185	1,108	
Undercut	649		
+20%	130	779	
Waste		1,840	
		3,727	

(Earthwork For Information Only)
Data Included in Mainline Quantities



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15042
JACOB D. SONNE
SOUTH DAKOTA
8-18-2023

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B120	B245

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15048
JACOB D. SONNE
SOUTH DAKOTA
8-18-2023

Parcel A13
69+15.37 to 78+14.29 L
Temporary Easement containing
43852 sq ft, more or less

City of Mitchell
Parcel A13

LOT X

IRREGULAR TRACT No. 6

LAKE MITCHELL

Shared Use Path
PI 78+03.38
N 522736.7764
E 2578103.1560
Del 13°01'34"
T 57.08
L 113.67
R 500.00

N30° 24' 53"W

71+24 - 158'

72+17 - 161'

72+17 - 135'

69+15.37 - 116.65'

Shared Use Path
PI 76+69.99
N 522609.4586
E 2578143.0274
Del 4°35'29"
T 20.04
L 40.07
R 500.00

N17° 23' 19"W

Shared Use Path
PI 74+53.59
N 522407.8437
E 2578224.4035
Del 22°24'26"
T 39.61
L 78.22
R 200.00

N21° 58' 48"W

ared Use Path
73+23.30
522277.4875
2578223.4315
3°54'10"
90.75
181.42
2663.33

North Main Street

Present SD Hwy 37

202'

79+00
78+00
77+00
76+00
75+00
74+00
72+00
71+00
70+00
69+00
68+00
67+00

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B121	B245

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

PVI = 73+00.00
ELEV = 1281.07

L 100.00ft
G1 0.5840%
G2 −4.0080%
K 22
PVI 75+13
Elev 1282.31

L 100.00ft
G1 −4.0080%
G2 0.5903%
K 22
PVI 76+27
Elev 1277.75

0.5840%
−4.0080%
0.5903%

1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240 1235

1281.07 1281.19 1281.30 1281.42 1281.54 1281.65 1281.77 1281.89 1282.00 1282.06 1281.93 1281.61 1281.12 1280.44 1279.64 1278.96 1278.46 1278.14 1278.01 1278.06 1278.18 1278.30 1278.42 1278.53 1278.65 1278.77 1278.89 1279.01 1279.12 1279.24 1279.36

73+00 74+00 75+00 76+00 77+00 78+00 79+00

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15048
JACOB D. SONNE
SOUTH DAKOTA
8-18-2023

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B122	B245

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 15048
JACOB D. SONNE
SOUTH DAKOTA
8-18-2023

Shared Use Path
PI 80+37.04
N 522938.7027
E 2577984.6162
Del 22°39'10"
T 20.03
L 39.54
R 100.00

Shared Use Path
PI 82+72.89
N 523080.7291
E 2577795.6771
Del 20°00'23"
T 26.46
L 52.38
R 150.00

Shared Use Path
PI 83+99.61
N 523187.3219
E 2577726.1500
Del 30°42'31"
T 27.46
L 53.60
R 100.00

Shared Use Path
PI 84+90.88
N 523279.8253
E 2577722.2394
Del 32°37'55"
T 29.27
L 56.95
R 100.00

N30° 24' 53"W
N53° 04' 04"W
N33° 07' 46"W
N62° 25' 15"W
N35° 03' 10"W

80+00
81+00
82+00
83+00
84+00
85+00
85+38

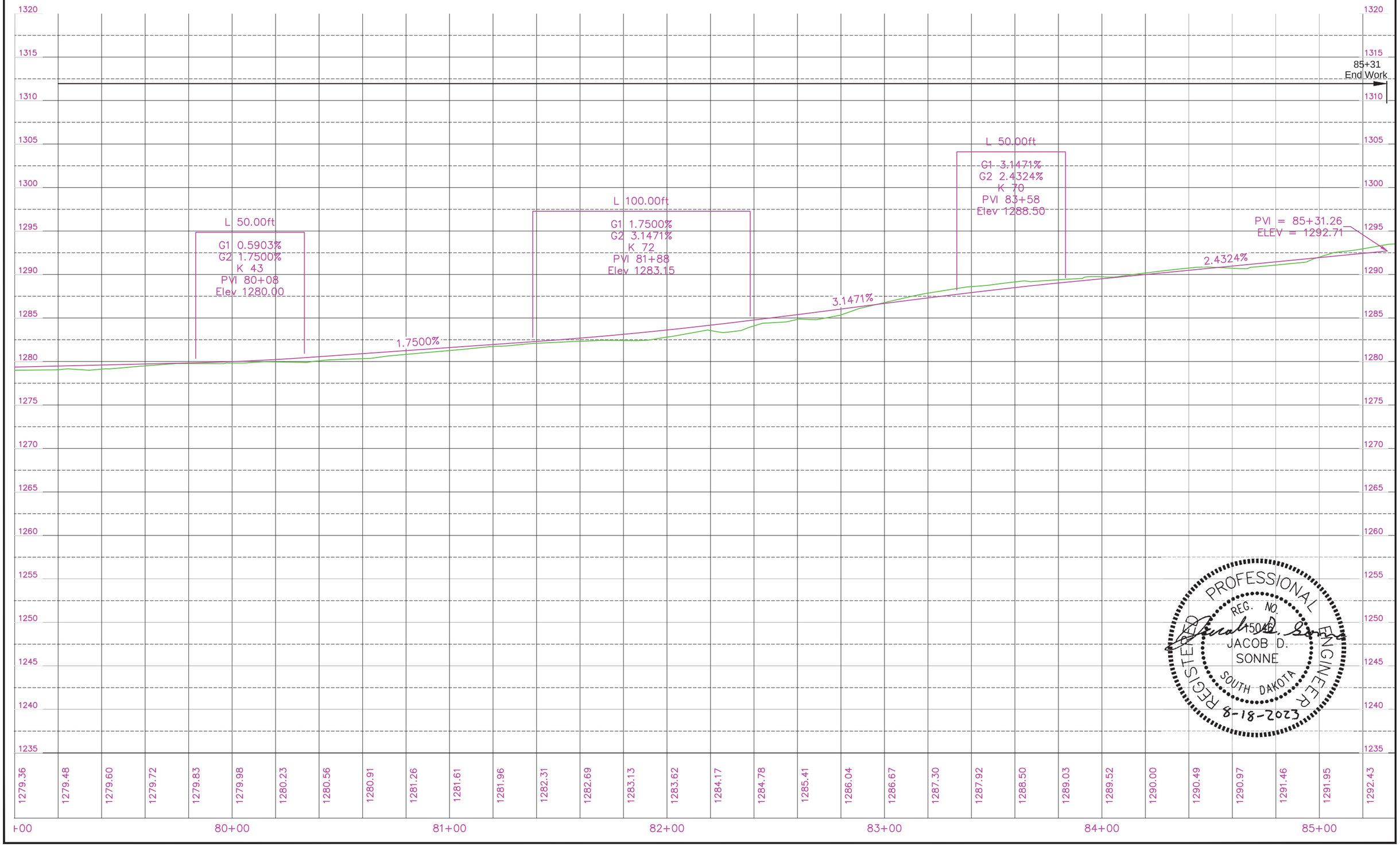
73+57 - 288'
73+73 - 211'
73+38.80 - 130.90'
73+37.89 - 109.45'
75+19 - 316'
75+66 - 384'
76+03 - 423'
76+64 - 436'
76+79 - 341'
77+06 - 419'
77+94 - 393'
78+14.29 - 397.19'
77+89.08 - 307.88'
77+30.11

IRREGULAR TRACT No. 6
LOT X
LOT A
LOT 1
LOT K-1
LOT 2
City of Mitchell
Parcel A13
Section Line
Present SD Hwy 37
North Harmon Drive
Resurrection Lutheran Church of Mitchell, Inc. (INFORMATION ONLY)
D.M. ELLWEIN'S FIRST ADDITION
OH
33'

Shared Use Path (SD Hwy 37)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B123	B245



Shared Use Path (North)

FOR BIDDING PURPOSES ONLY

Take Out Trees (36" Diameter) at the following locations:
403+00-5' L
403+50-5' L
404+00-5' L
404+50-5' L
405+00-5' L

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B124	B245

Plotting Date: 9/21/2023 Rev 09/14/2023 RJB

Plot Scale - 1:40

MITCHELL
Sec 4 - T103N - R60W

L & R Anderson Ranch, LLC.
Parcel A19

16' Alley

BAYSIDE OVERLOOK SUBDIVISION
BLOCK 1
LOT 1
LOT 2

Horseman's Sports, Inc.
Parcel A20

SE1/4 SE1/4

400+00.00 (Shared Use Path North)=
78+57.58, 393.56' L (Mainline)

Shared Use Path North
PI 400+47.01
N 523378.91
E 2577669.56
Del 19°05'05" R
Dc 114°35'30"
T 8.41'
L 16.65'
R 50.00'

Shared Use Path North
PI 404+46.14
N 523777.64
E 2577652.46
Del 21°24'52" L
Dc 38°11'50"
T 28.36'
L 56.06'
R 150.00'

Shared Use Path North
PI 405+23.89
N 523849.34
E 2577620.73
Del 18°05'17" R
Dc 57°17'45"
T 15.92'
L 31.57'
R 100.00'

77+30.11

78+94.01 - 408.67'
78+96.29 - 413.22'

80+40.85 - 366.81'
80+43.13 - 371.36'

80+56.50 - 362.35'
80+59.24 - 367.80'

82+03.19 - 320.01'
82+05.92 - 325.47'

82+34.45 - 317.23'

N 2°27'22" W

N 21°32'27" W

N 23°52'14" W

N 5°46'57" W

401+00 402+00 403+00 404+00 405+00 406+00

33'

Rowley Street

Section Line N 2°38'16" W

N 10°59'32" W

7995+80 7996+00 7997+00 7998+00 7999+00 8000+00 8001+00

7995+80.00 (Rowley)=
78+42.64, 371.93' L (Mainline)

Section Line

North Harmon Drive

Rowley
PI 7996+86.40
N 523432.31
E 2577691.79
Del 8°21'15" R
Dc 11°27'33"
T 36.52'
L 72.90'
R 500.00'

Resurrection Lutheran Church of Mitchell, Inc.
(INFORMATION ONLY)

LOT 1

D.M. ELLWEIN'S FIRST ADDITION

LOT 2

Resurrection Lutheran Church of Mitchell, Inc.
Parcel A23

Sec 3 - T103N - R60W

Parcel A19
78+94.01 to 80+43.13 L
Temporary Easement containing
763 sq ft, more or less

Parcel A19
80+56.50 to 82+05.92 L
Temporary Easement containing
916 sq ft, more or less

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
9-22-2023

Plotted From - Ryan.Brown1@jacobs.com

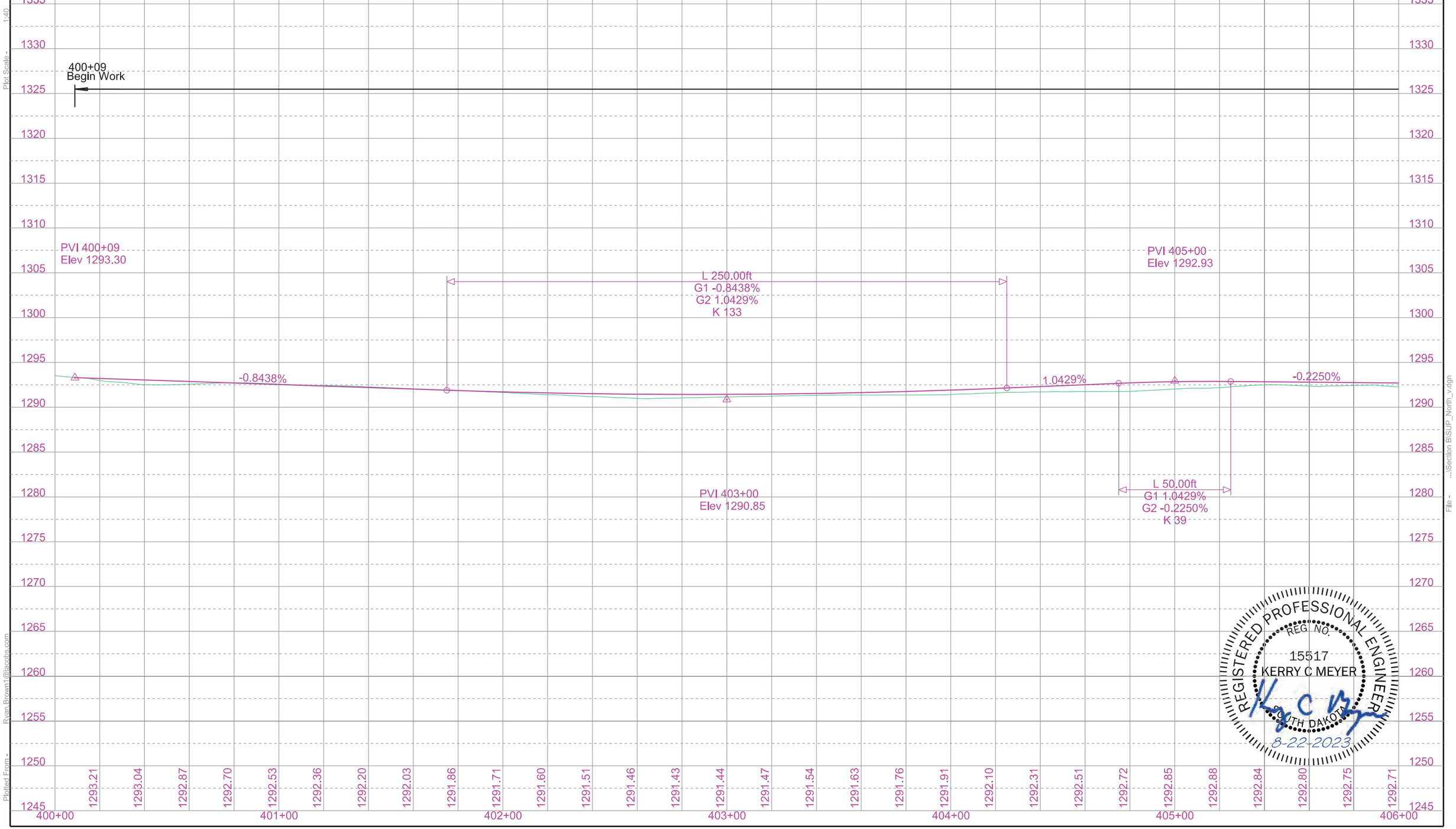
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B125	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Shared Use Path (North)



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

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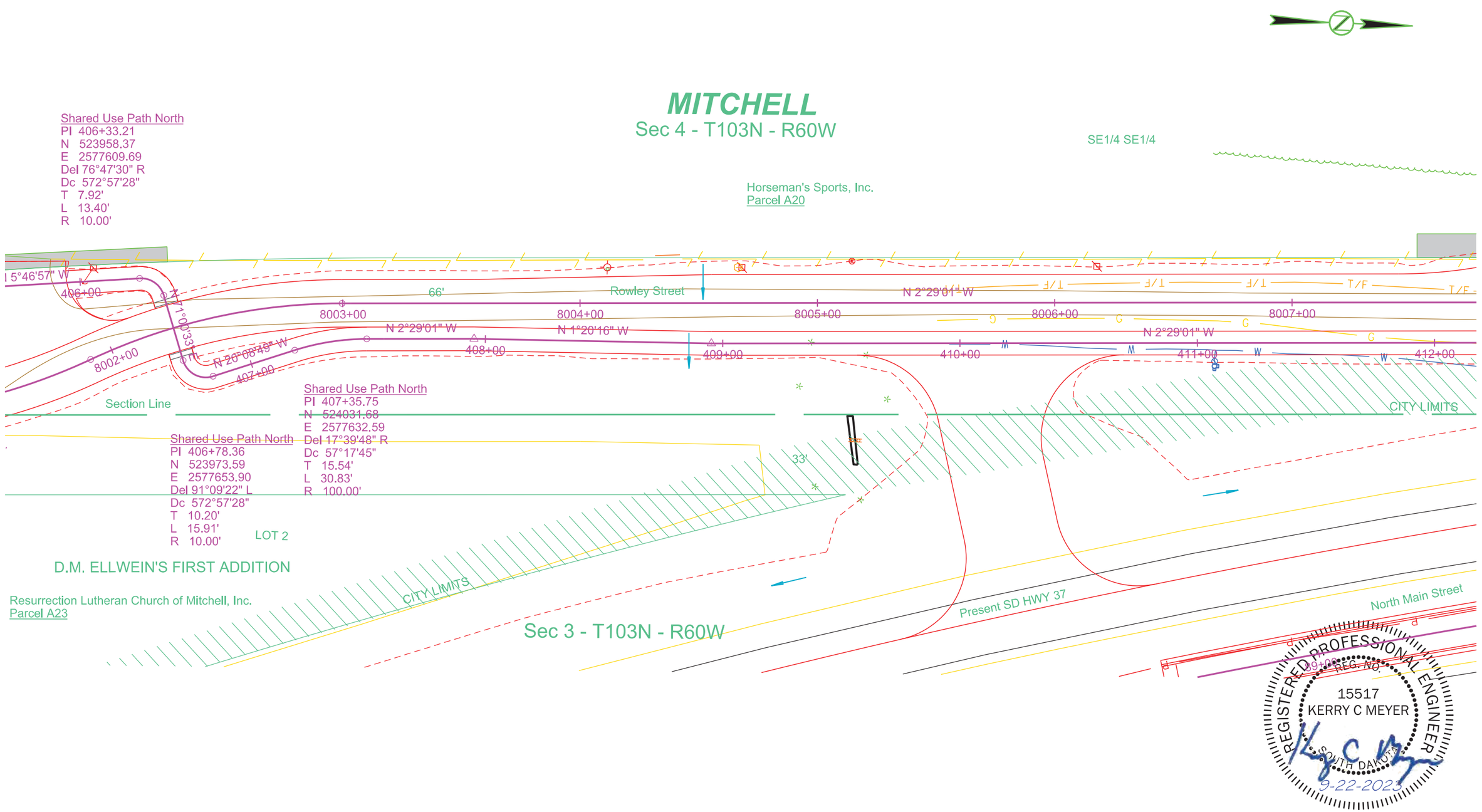
Shared Use Path (North)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B126	B245

Plotting Date: 9/21/2023 Rev 09/14/2023 RJB

Plot Scale - 1:40



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B127	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Shared Use Path (North)

PVI 406+38
Elev 1292.62

PVI 406+66
Elev 1292.06

PVI 411+05
Elev 1290.68

-0.2250%

-2.0000%

-0.3150%

-1.3396%

L 165.00ft
G1 -0.3150%
G2 -1.3396%
K 161

1292.71 1292.66 1292.58 1292.18 1292.02 1291.95 1291.89 1291.83 1291.77 1291.70 1291.64 1291.58 1291.51 1291.45 1291.39 1291.32 1291.26 1291.20 1291.14 1291.07 1291.01 1290.95 1290.87 1290.78 1290.66 1290.51 1290.34 1290.14 1289.92 1289.67 1289.41

406+00 407+00 408+00 409+00 410+00 411+00 412+00

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

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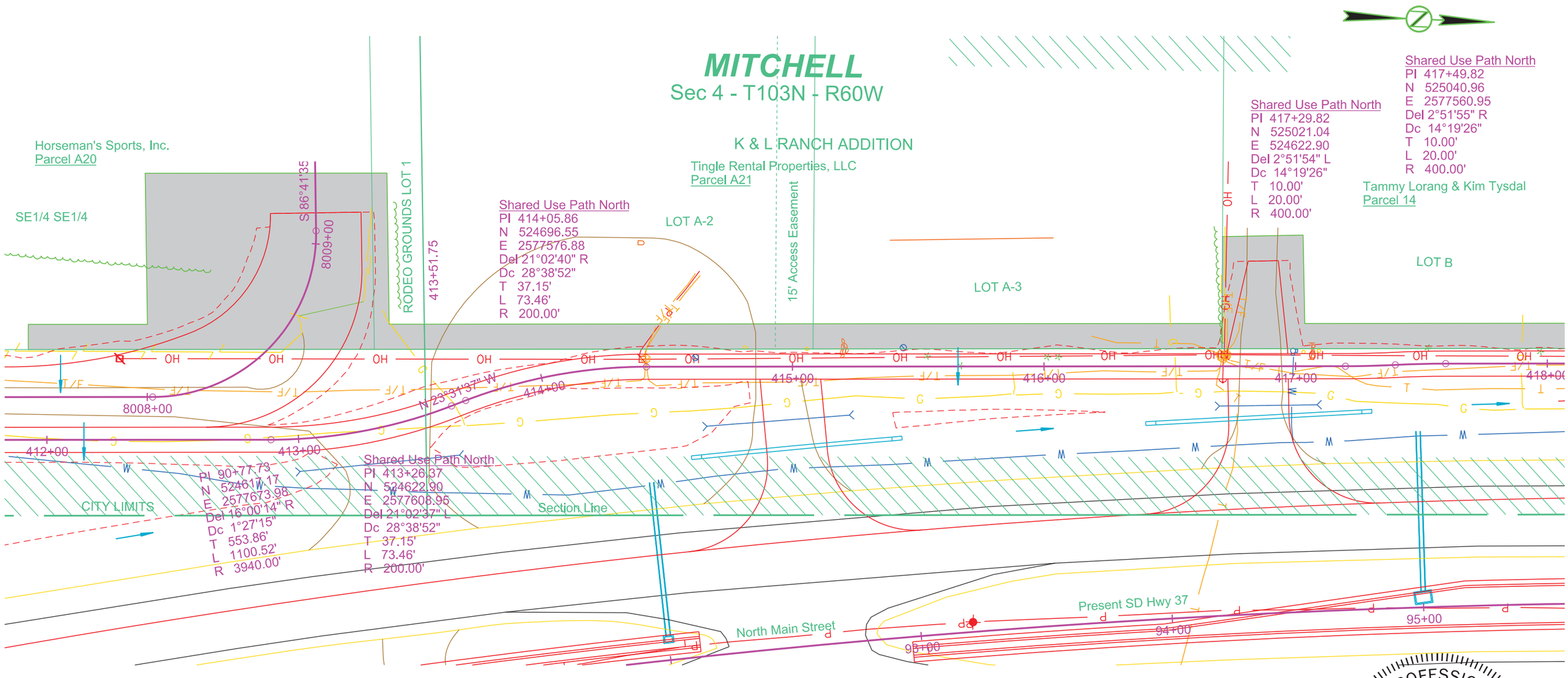
Shared Use Path (North)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B128	B245

Plotting Date: 8/22/2023

Plot Scale - 1:40



Sec 3 - T103N - R60W

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plotted From - Ryan.Brown1@jacobs.com

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FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B129	B245

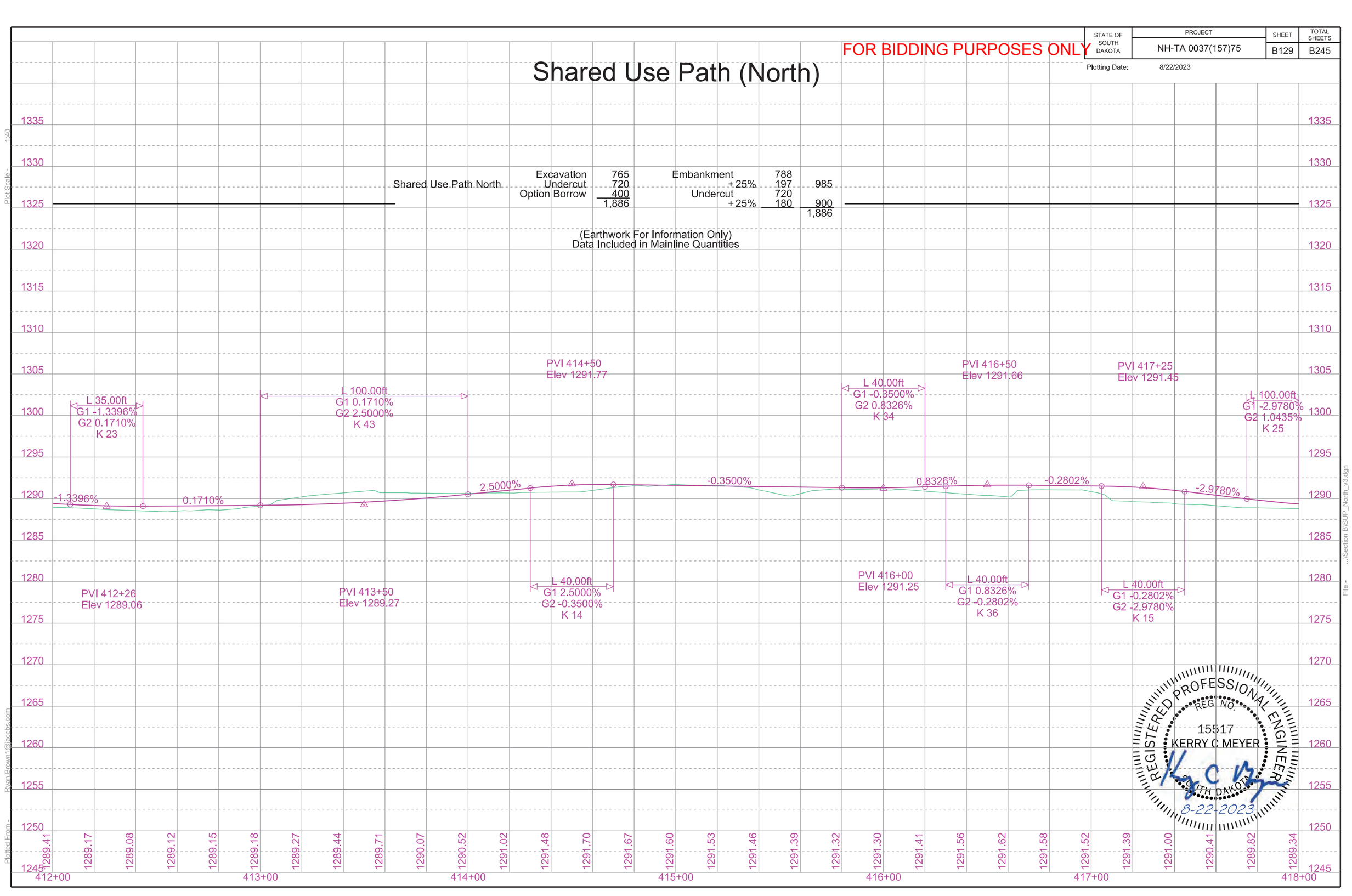
Plotting Date: 8/22/2023

Shared Use Path (North)

Plot Scale - 1:40

Shared Use Path North	Excavation	765	Embankment	788		
	Undercut	720	+25%	197	985	
	Option Borrow	400	Undercut	720		
		1,886	+25%	180	900	
					1,886	

(Earthwork For Information Only)
Data Included in Mainline Quantities



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

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Shared Use Path (North)

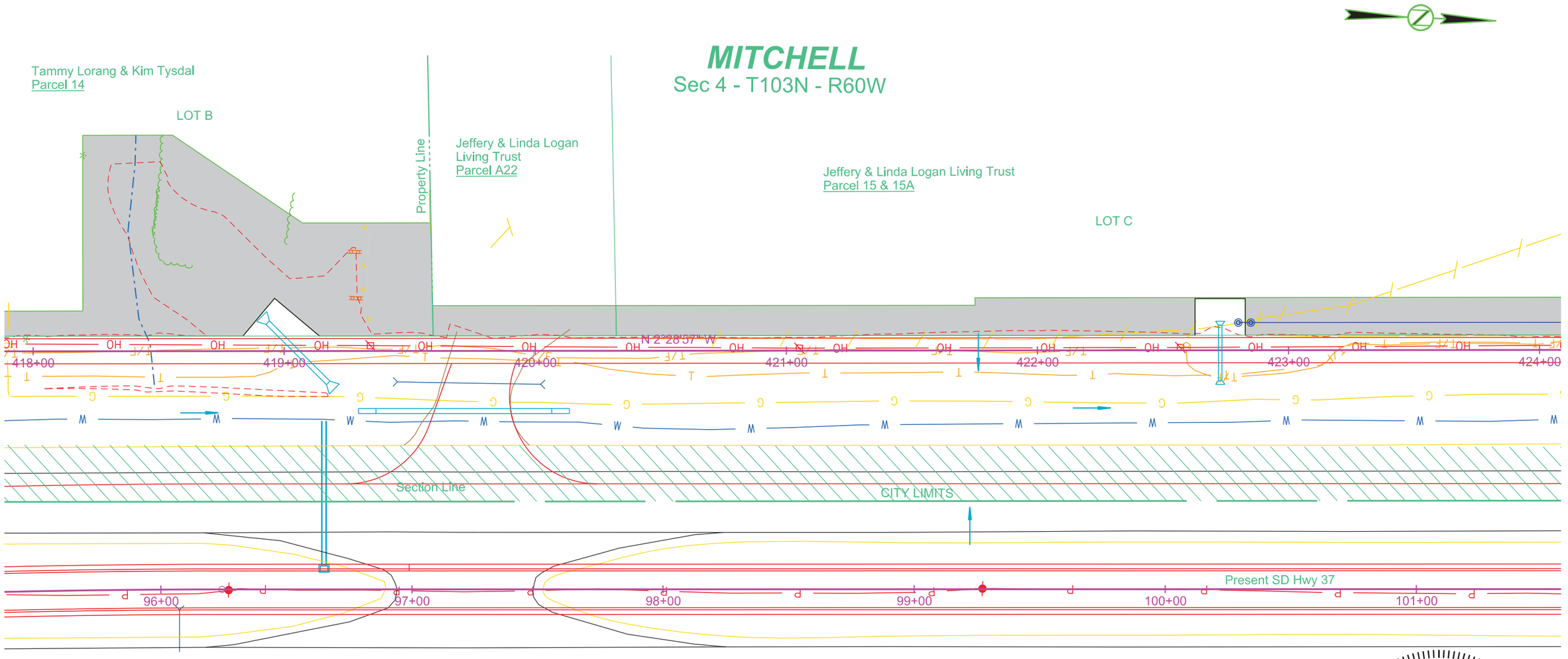
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B130	B245

Plotting Date: 8/22/2023 Rev 06/29/2023 RJB

419+05 (2 ac)
Install 24" - 34' CMP
Skewed 45° RHF
& 2 Flared Ends

422+73 (2 ac)
Install 15" - 21' CMP Arch
& 2 Flared Ends



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B131	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Shared Use Path (North)

Plot Scale - 1:40

PVI 418+25
Elev 1288.47

L 100.00ft
G1 -2.9780%
G2 1.0435%
K 25

1.0435%

L 40.00ft
G1 1.0435%
G2 -0.3617%
K 28

PVI 419+50
Elev 1289.78

-0.3617%

L 50.00ft
G1 -0.3617%
G2 -0.5000%
K 362

PVI 420+50
Elev 1289.42

-0.5000%

L 200.00ft
G1 -0.5000%
G2 0.7072%
K 166

PVI 424+00
Elev 1287.67

1289.34 1289.03 1288.88 1288.88 1289.05 1289.26 1289.46 1289.66 1289.72 1289.67 1289.60 1289.52 1289.45 1289.36 1289.27 1289.17 1289.07 1288.97 1288.87 1288.77 1288.67 1288.57 1288.47 1288.37 1288.27 1288.17 1288.08 1288.01 1287.97 1287.96 1287.97

418+00 419+00 420+00 421+00 422+00 423+00 424+00

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

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SOUTH DAKOTA
8-22-2023

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File - ...\Section B\SUP_North_v4.dgn

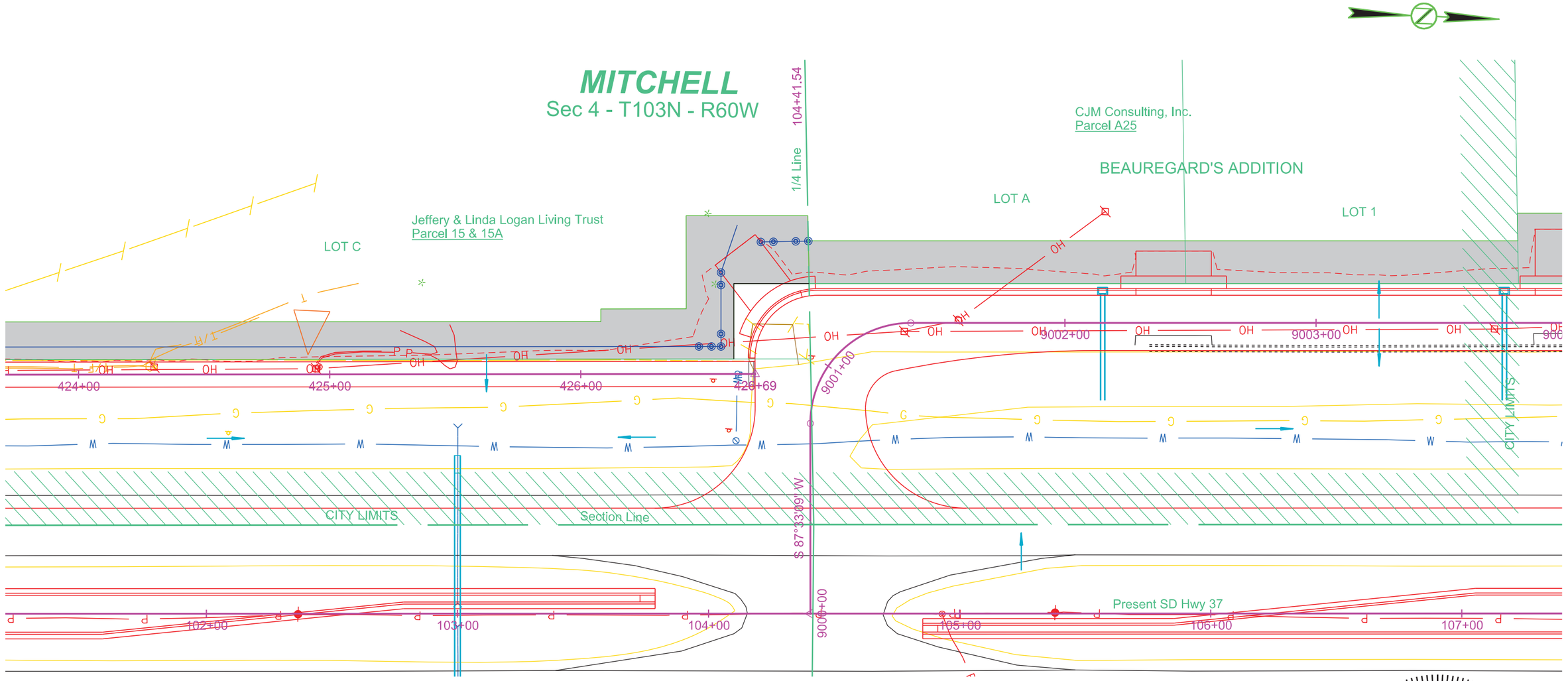
Shared Use Path (North)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B132	B245

Plotting Date: 8/22/2023 Rev 06/29/2023 RJB

Plot Scale - 1:40



Sec 3 - T103N - R60W

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SOUTH DAKOTA
8-22-2023

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section BISUP_North5.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B133	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Shared Use Path (North)

426+70
End Work

PVI 426+70
Elev 1289.57

L 200.00ft
G1 -0.5000%
G2 0.7072%
K 166

0.7072%

PVI 424+00
Elev 1287.67

1287.97 1288.00 1288.06 1288.14 1288.24 1288.37 1288.51 1288.66 1288.80 1288.94 1289.08 1289.22 1289.36 1289.50

424+00 425+00 426+00 427+00 428+00 429+00 430+00

1335 1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245

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REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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File - ...\Section B\SUP_North_v5.dgn

Shared Use Path (National Guard Road)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B134	B245

Plotting Date: 8/22/2023

Sec 4 - T103N - R60W

CJM Consulting, Inc.
Parcel A28

S1/2 NE1/4

117+56.89

1/16 Line

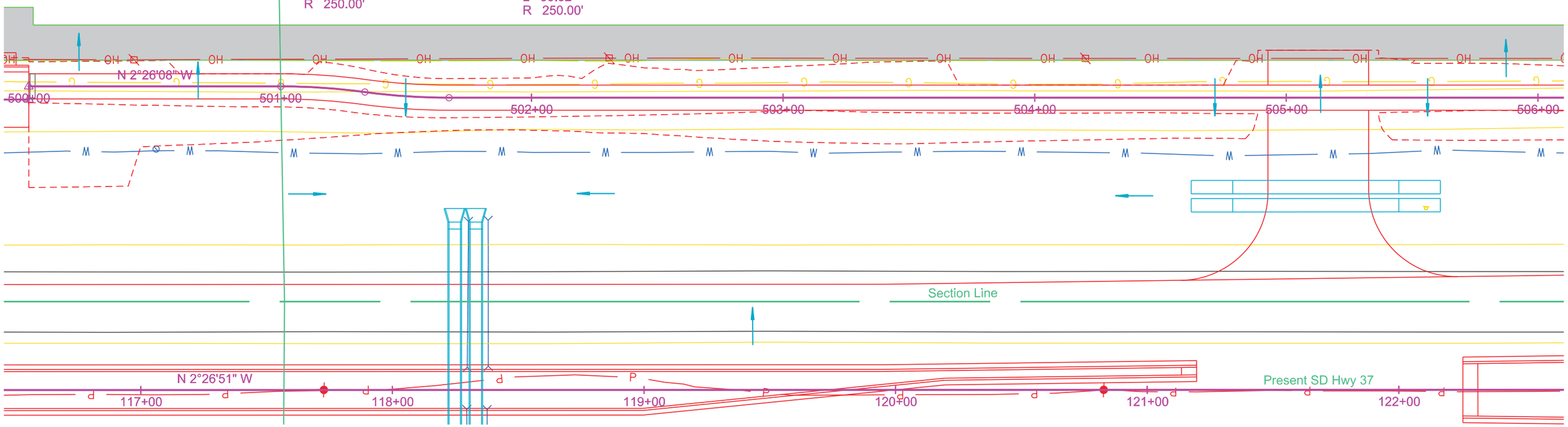
Shared Use Path National Guard
PI 501+16.96
N 527311.50
E 2577437.98
Del 7°41'00" R
Dc 22°55'06"
T 16.79'
L 33.52'
R 250.00'

Shared Use Path National Guard
PI 501+50.49
N 527344.93
E 2577441.05
Del 7°41'00" L
Dc 22°55'06"
T 16.79'
L 33.52'
R 250.00'

CJM Consulting, Inc.
Parcel 16

Government Lot 1

500+00.00 (Shared Use Path National Guard)=
116+55.50, 120.76' L (Mainline)



Sec 3 - T103N - R60W

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15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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File - ...\Section BISUP_NG.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B135	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Shared Use Path (National Guard Road)

500+00
Begin Work

PVI 500+00
Elev 1284.87

L 100.00ft
G1 -0.3000%
G2 0.3451%
K 155

PVI 501+00
Elev 1284.57

PVI 504+25
Elev 1285.69

L 100.00ft
G1 0.3451%
G2 -0.2443%
K 170

-0.3000%

0.3451%

-0.2443%

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

1284.87 1284.81 1284.75 1284.69 1284.66 1284.65 1284.67 1284.71 1284.78 1284.85 1284.92 1284.98 1285.05 1285.12 1285.19 1285.26 1285.33 1285.40 1285.47 1285.54 1285.59 1285.61 1285.62 1285.60 1285.56 1285.51 1285.46 1285.41 1285.36 1285.31 1285.26

500+00 501+00 502+00 503+00 504+00 505+00 506+00

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SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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File - ...\Section B\SUP_NG_v.dgn

Shared Use Path (National Guard Road)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B136	B245

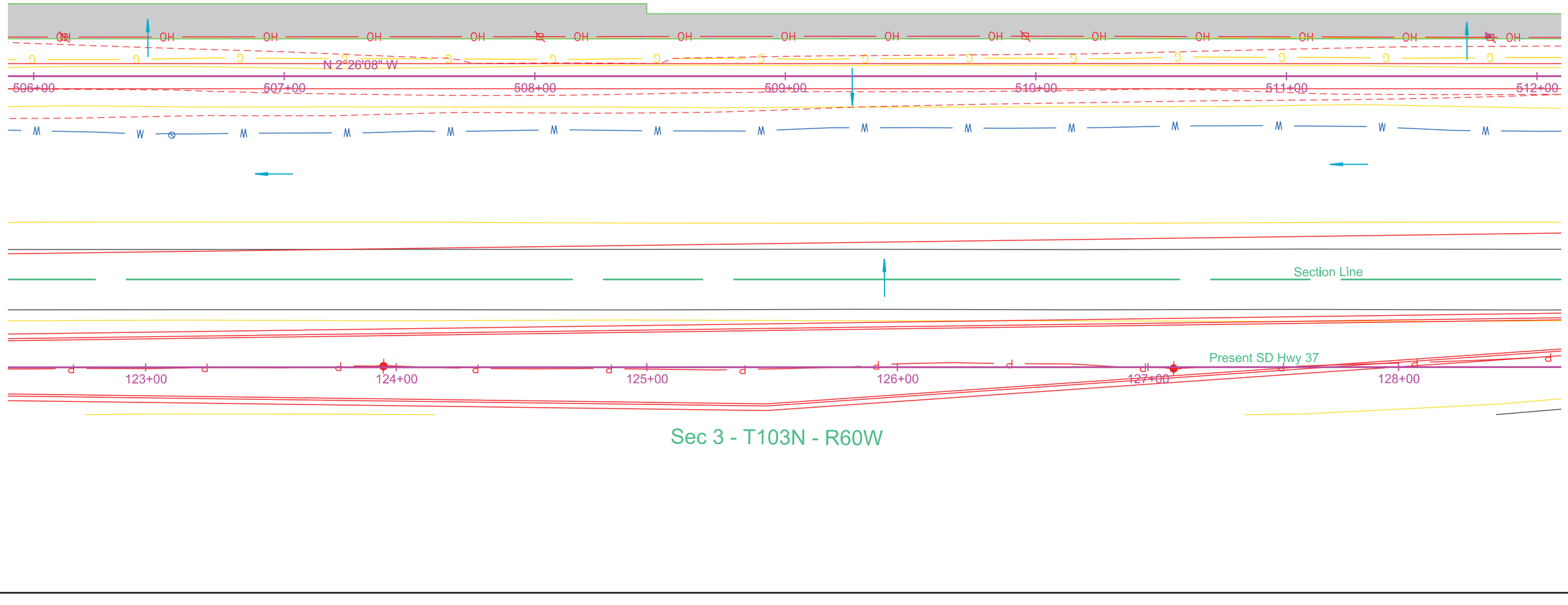
Plotting Date: 8/22/2023

Sec 4 - T103N - R60W

Government Lot 1

CJM Consulting, Inc.
Parcel 16

REGISTERED PROFESSIONAL ENGINEER
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15517
KERRY C MEYER
SOUTH DAKOTA
8-22-2023



Sec 3 - T103N - R60W

Plot Scale - 1:40

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File - ...\Section B\SUP_NG2.dgn

FOR BIDDING PURPOSES ONLY

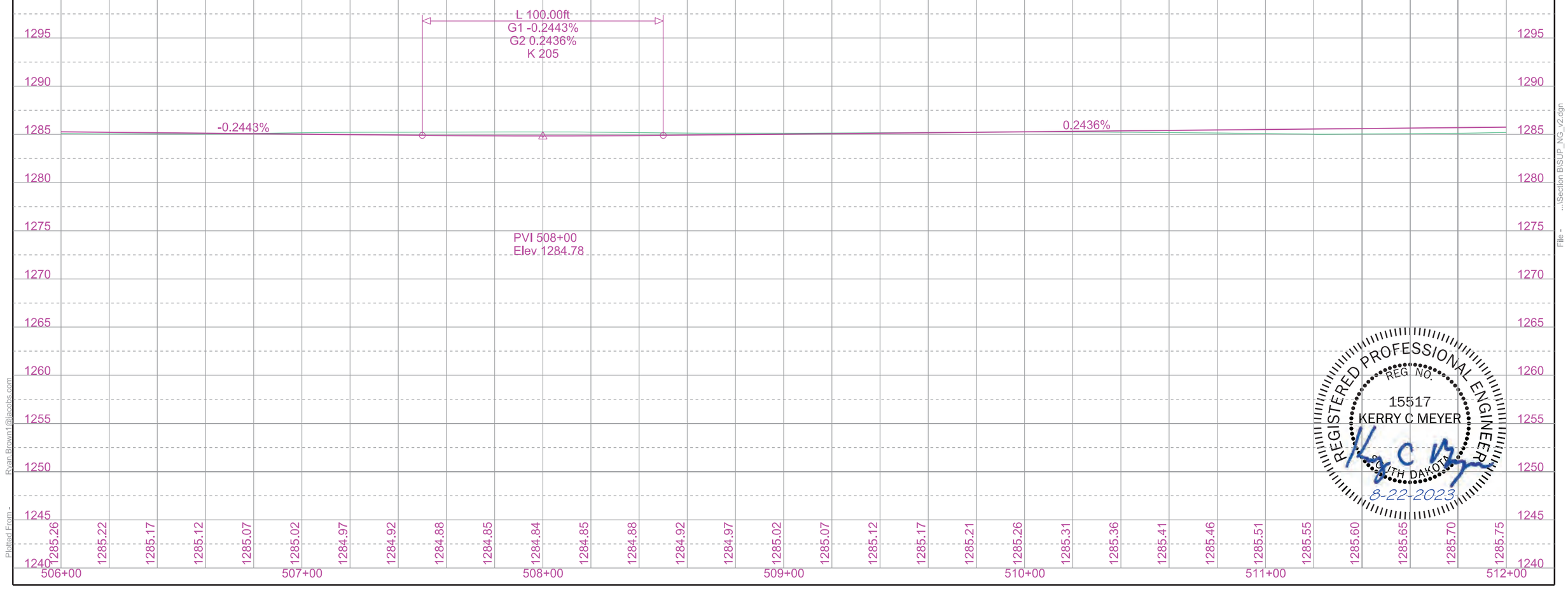
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B137	B245

Plotting Date: 8/22/2023

Shared Use Path (National Guard Road)

Shared Use Path National Guard	Excavation	361	Embankment		319		
	Undercut	498		+25%	80	398	
	Option Borrow	162	Undercut		498		
		1,021		+25%	125	623	
						1,021	

(Earthwork For Information Only)
Data Included in Mainline Quantities



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SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40
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File - ...\Section B\SUP_NG_v2.dgn

Shared Use Path (National Guard Road)

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B138	B245

Plotting Date: 8/22/2023

514+69 (23 ac)
Install Twin 24" - 28' RCP Arch
& 4 Sloped Ends
(Spaced 3.9' C to C
Controlled Density Fill)

Sec 4 - T103N - R60W

Sec 33 - T104N - R60W

Shared Use Path National Guard
PI 514+74.23
N 528600.80
E 2577258.38
Del 52°48'14" R
Dc 190°59'09"
T 14.89'
L 27.65'
R 30.00'

CJM Consulting, Inc.
Parcel 16

Government Lot 1

Shared Use Path National Guard
PI 513+16.09
N 528509.53
E 2577391.52
Del 53°08'00" L
Dc 127°19'26"
T 22.50'
L 41.73'
R 45.00'

National Guard Road
50'
33'
Section Line
N 2°45'55" W
N 55°54'08" W
9100+00
9101+00
9102+00
512+00
513+00
514+00
515+00
515+07

City of Mitchell
Parcel A30

SE1/4

Present SD HWY 37

Present SD HWY 37

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SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

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File - ...\Section BISUP_NG3.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B139	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/22/2023

Shared Use Path (National Guard Road)

514+94
End Work

PVI 514+94
Elev 1286.47

0.2436%

1285.75 1285.80 1285.85 1285.90 1285.94 1285.99 1286.04 1286.09 1286.14 1286.19 1286.24 1286.29 1286.33 1286.38 1286.43

1330 1325 1320 1315 1310 1305 1300 1295 1290 1285 1280 1275 1270 1265 1260 1255 1250 1245 1240

512+00 513+00 514+00 515+00 516+00 517+00 518+00

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REG. NO.
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KERRY C MEYER
SOUTH DAKOTA
8-22-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

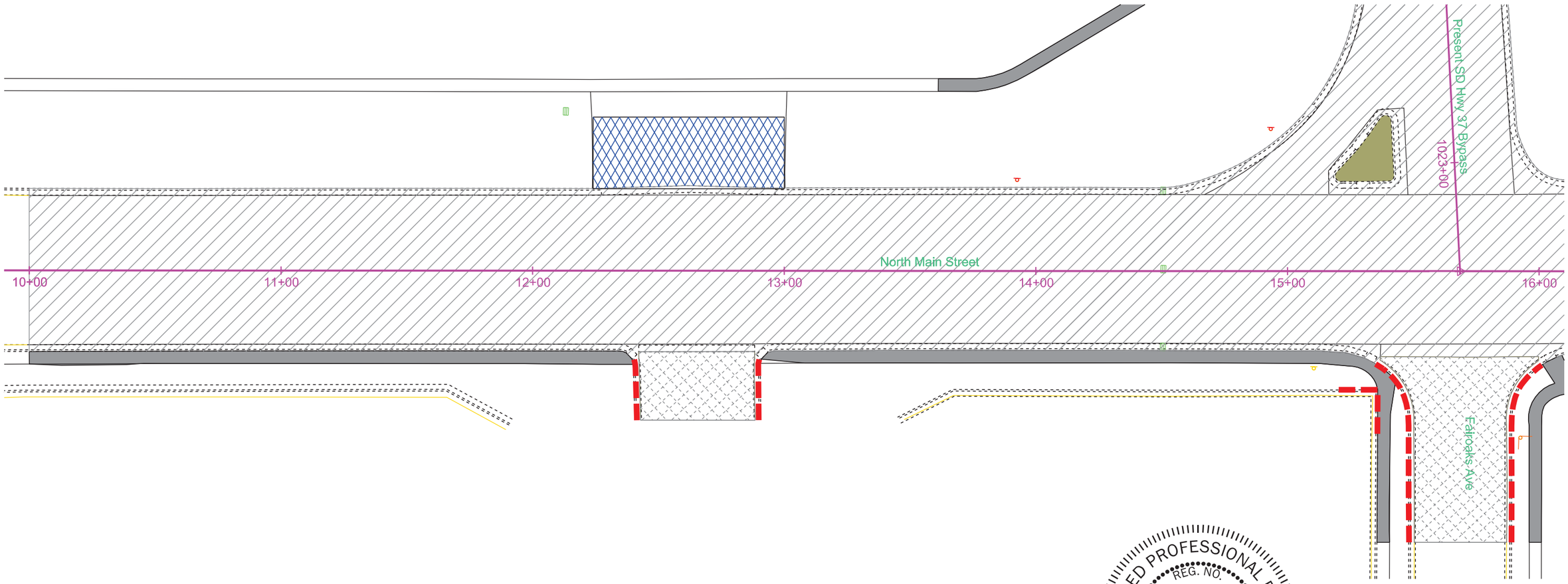
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B140	B245

Plotting Date: 8/18/2023



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8-18-2023

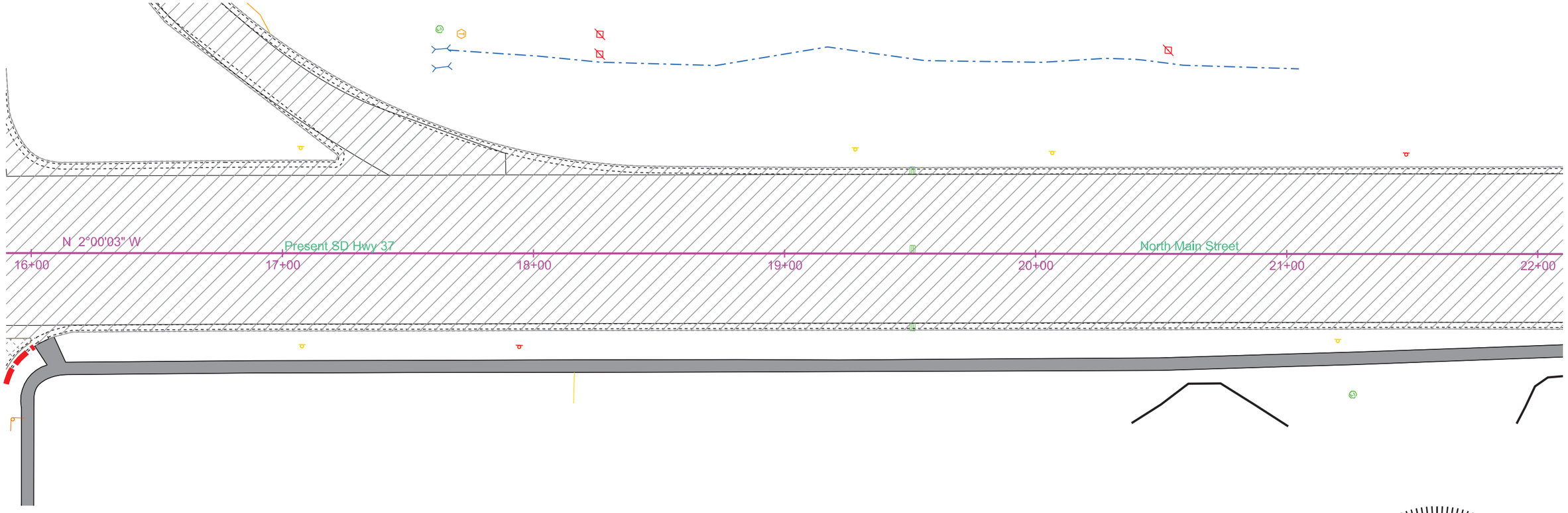
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B141	B245

Plotting Date: 8/18/2023



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8-18-2023

Plot Scale - 1:40

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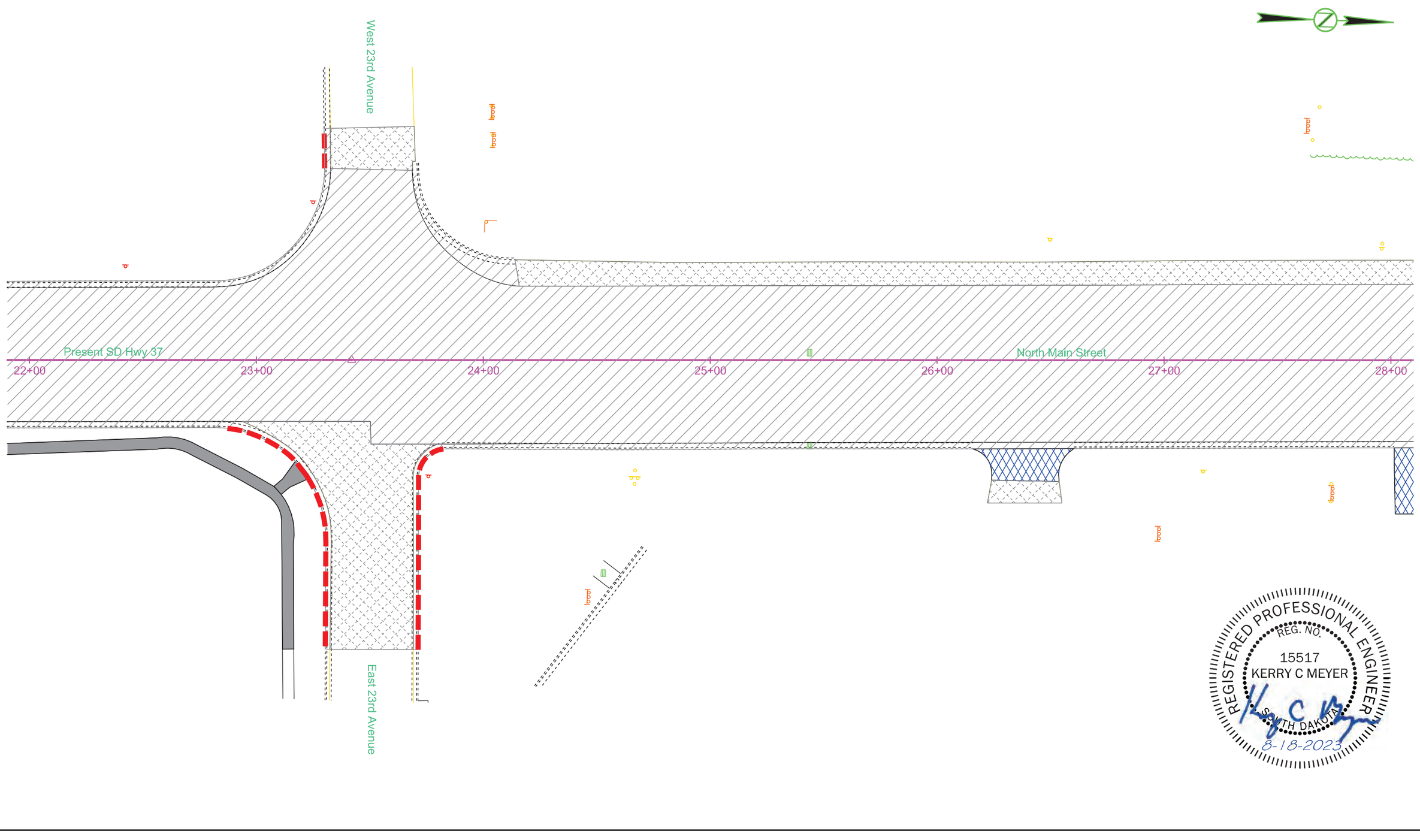
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B142	B245

Plotting Date: 8/18/2023



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15517
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8-18-2023

Plot Scale - 1:40

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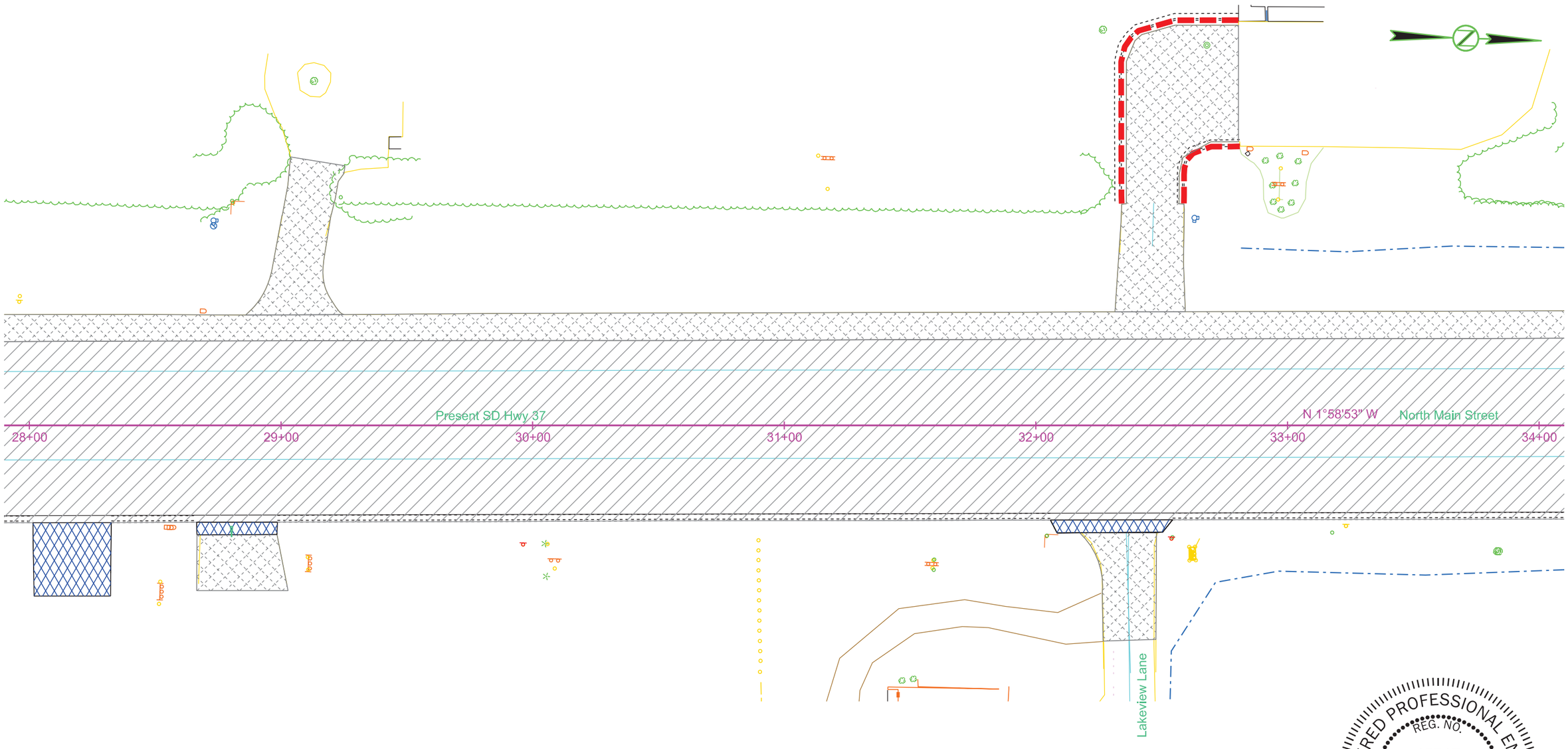
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B143	B245

Plotting Date: 8/18/2023



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15517
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8-18-2023

Plot Scale - 1:40

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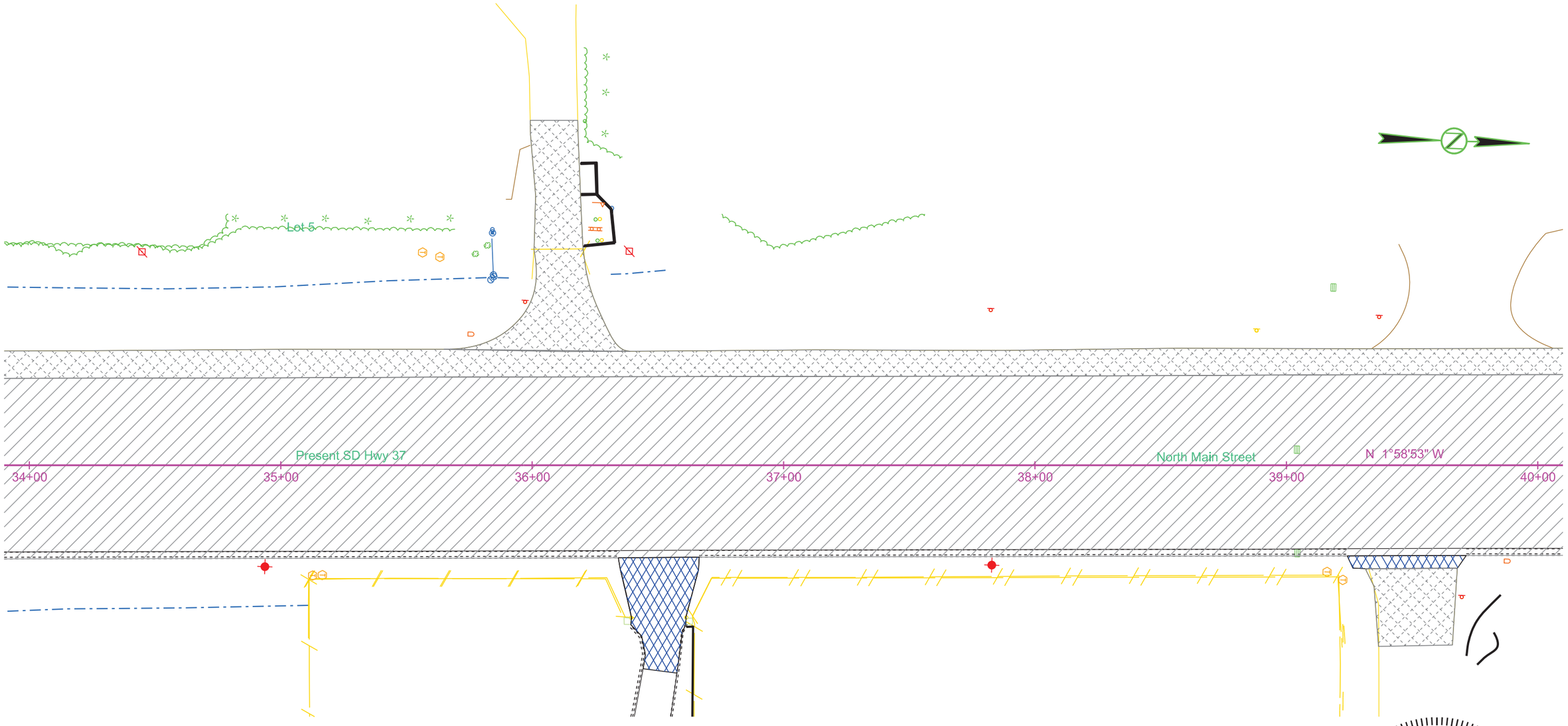
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B144	B245

Plotting Date: 8/18/2023



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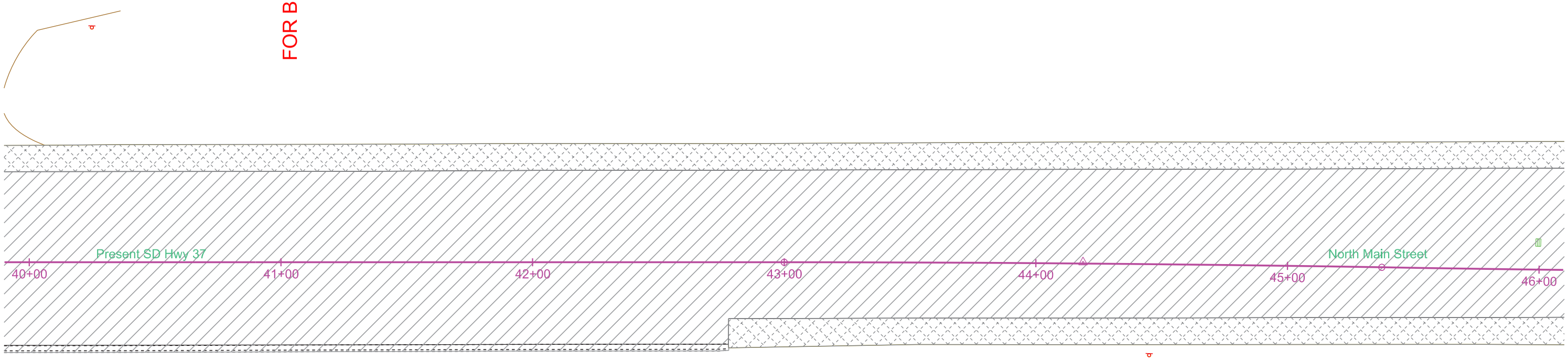
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PAVEMENT REMOVAL LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B145	B245

Plotting Date: 8/18/2023

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8-18-2023

Plot Scale - 1:40

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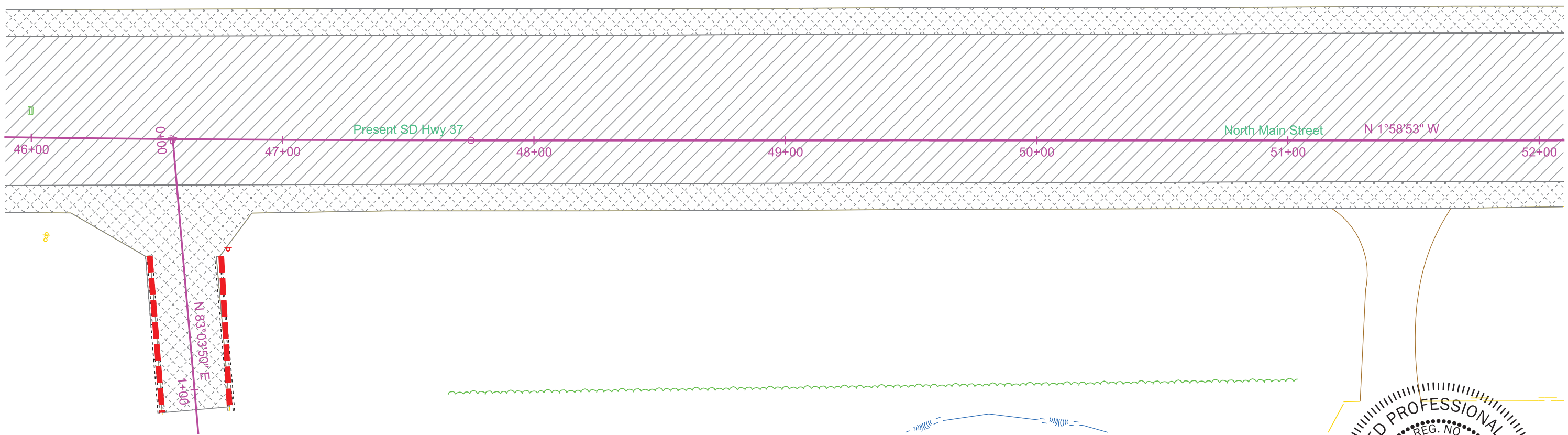
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PAVEMENT REMOVAL LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B146	B245

Plotting Date: 8/18/2023

FOR BIDDING PURPOSES ONLY



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SOUTH DAKOTA
8-18-2023

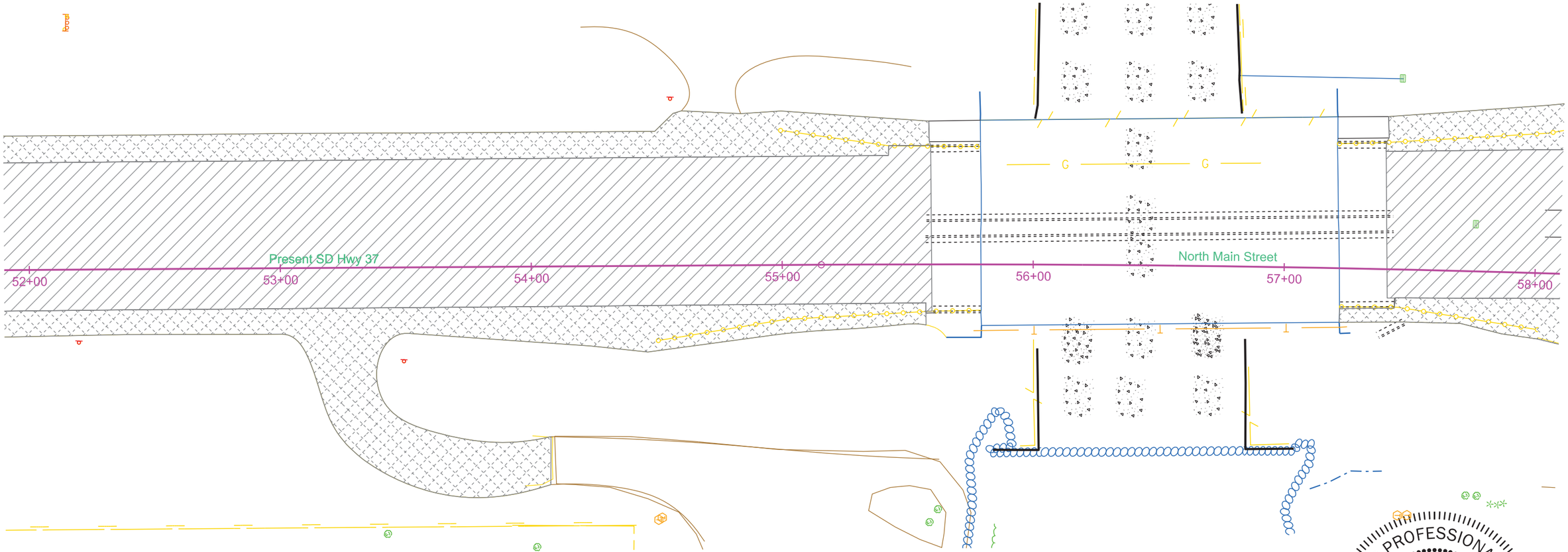
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B147	B245

Plotting Date: 8/18/2023



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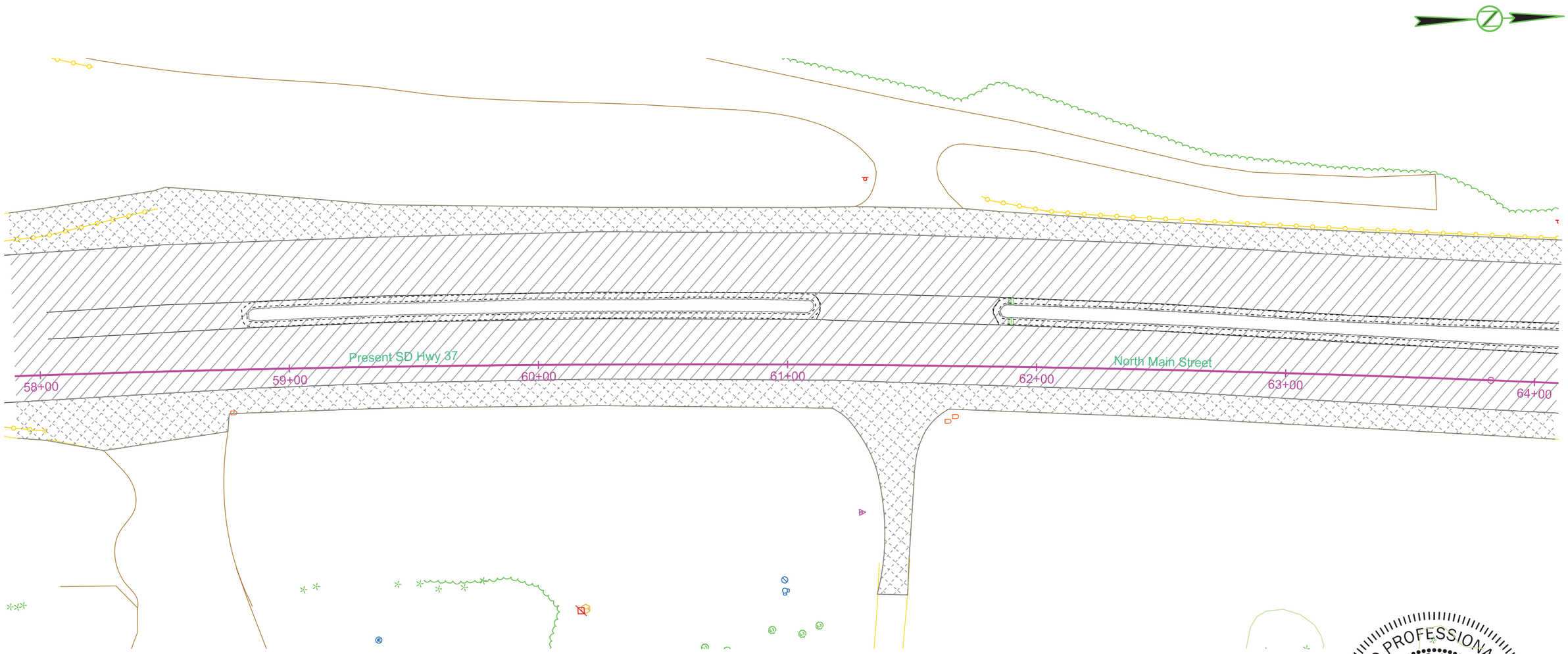
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Plotted From - Ryan.Brown1@jacobs.com
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B148	B245

Plotting Date: 8/18/2023



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8-18-2023

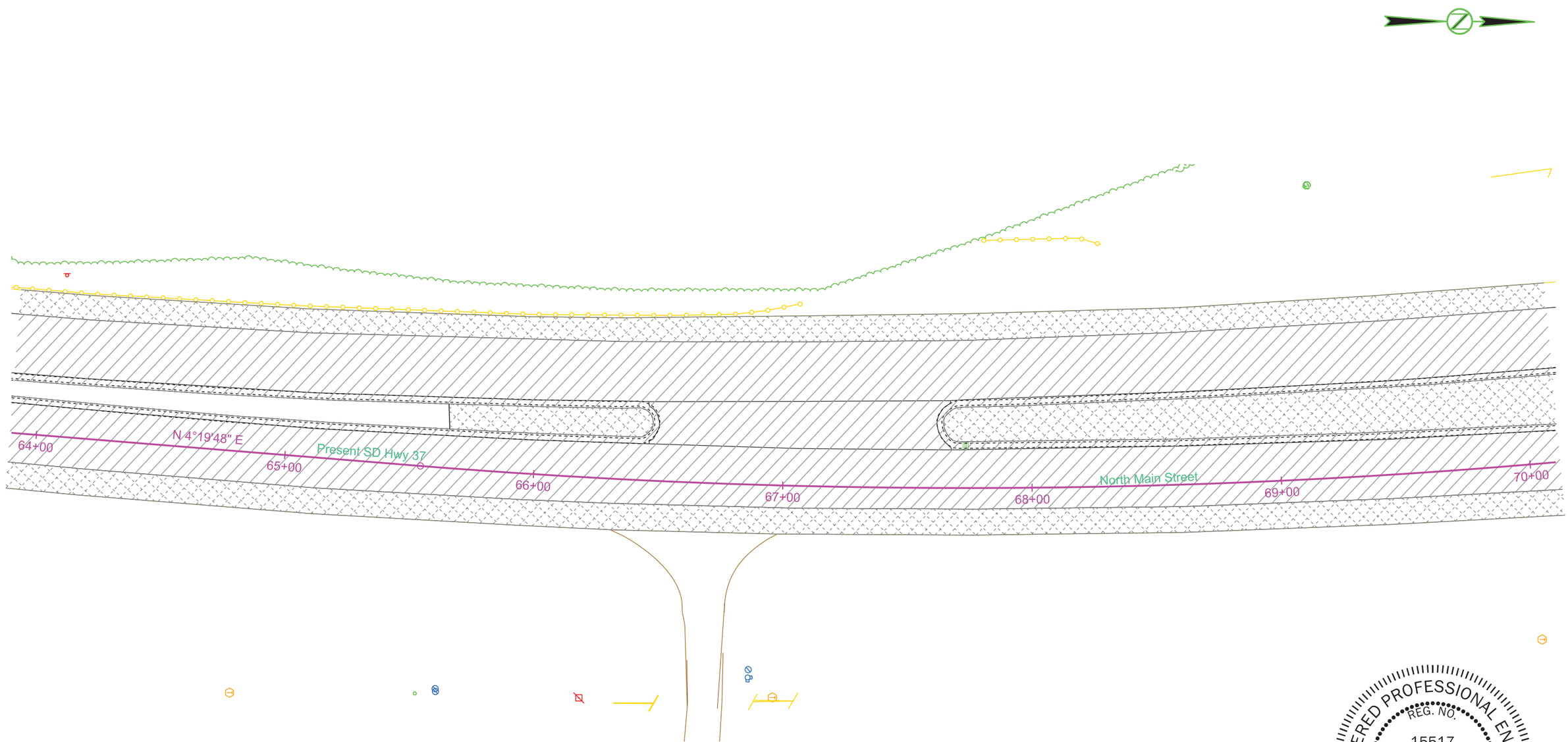
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Plotted From - Ryan.Brown1@jacobs.com
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B149	B245

Plotting Date: 8/18/2023



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

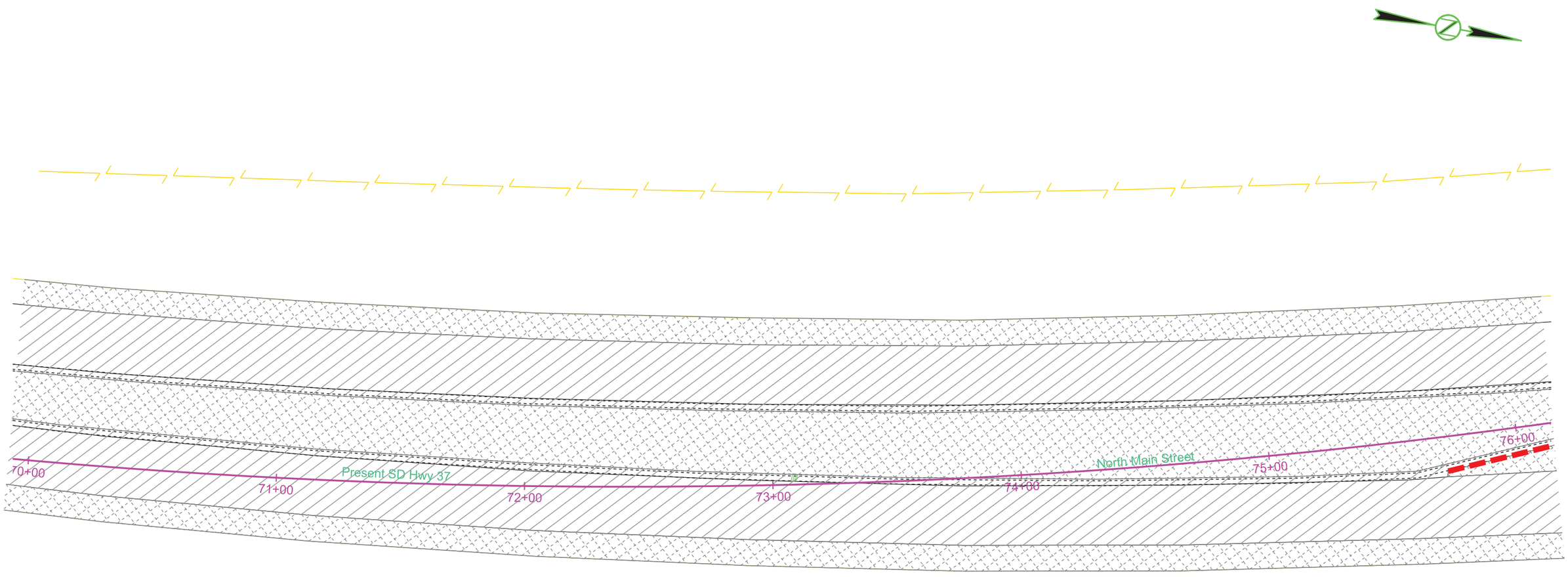
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B150	B245

Plotting Date: 8/18/2023



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REG. NO.
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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

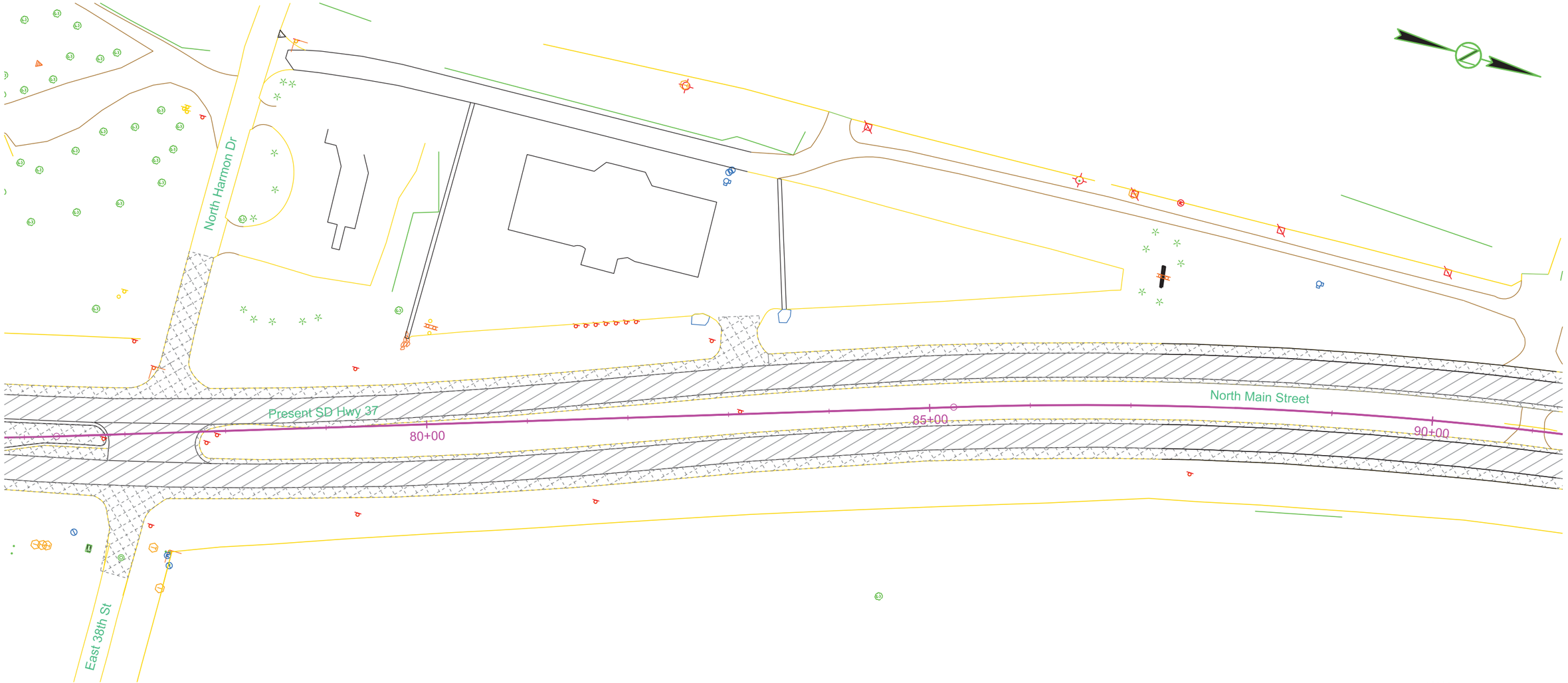
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B151	B245

Plotting Date: 8/18/2023



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REG. NO.
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8-18-2023

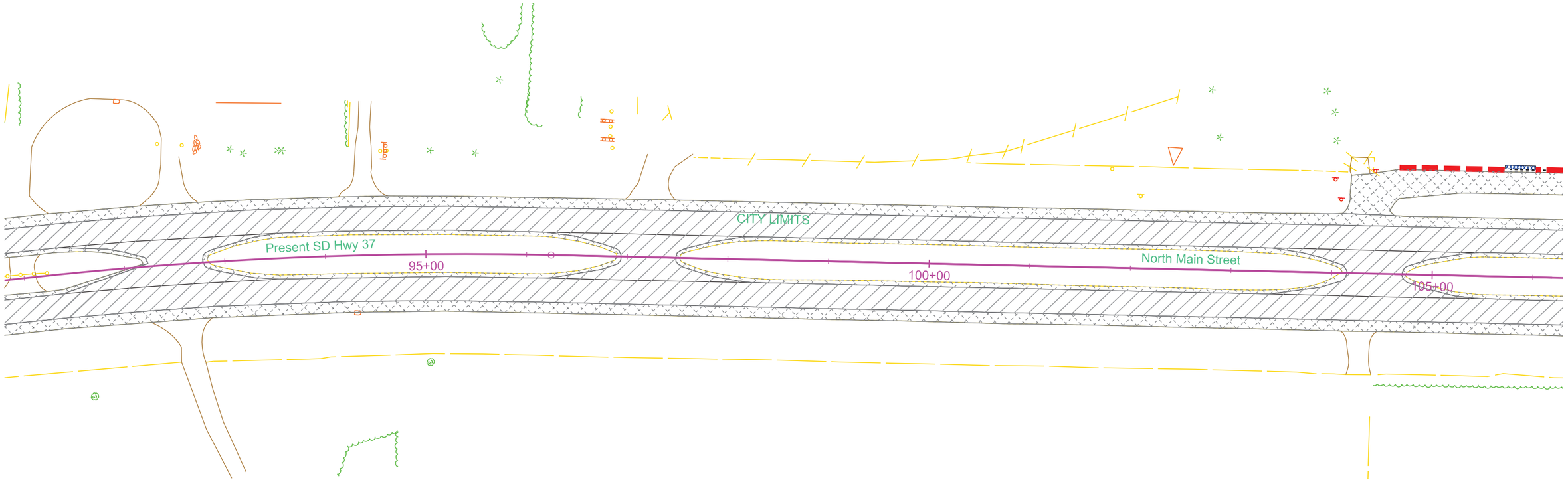
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Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\076pr.dgn

PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B152	B245

Plotting Date: 8/18/2023



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REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:100

Plotted From - Ryan.Brown1@jacobs.com

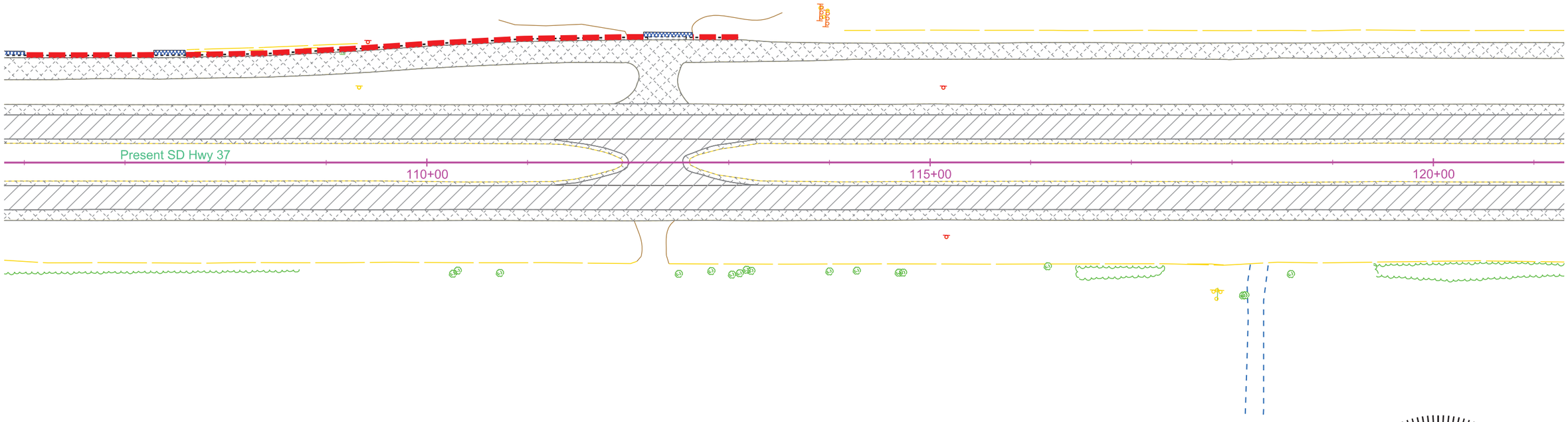
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B153	B245

Plotting Date: 8/18/2023



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
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SOUTH DAKOTA
8-18-2023

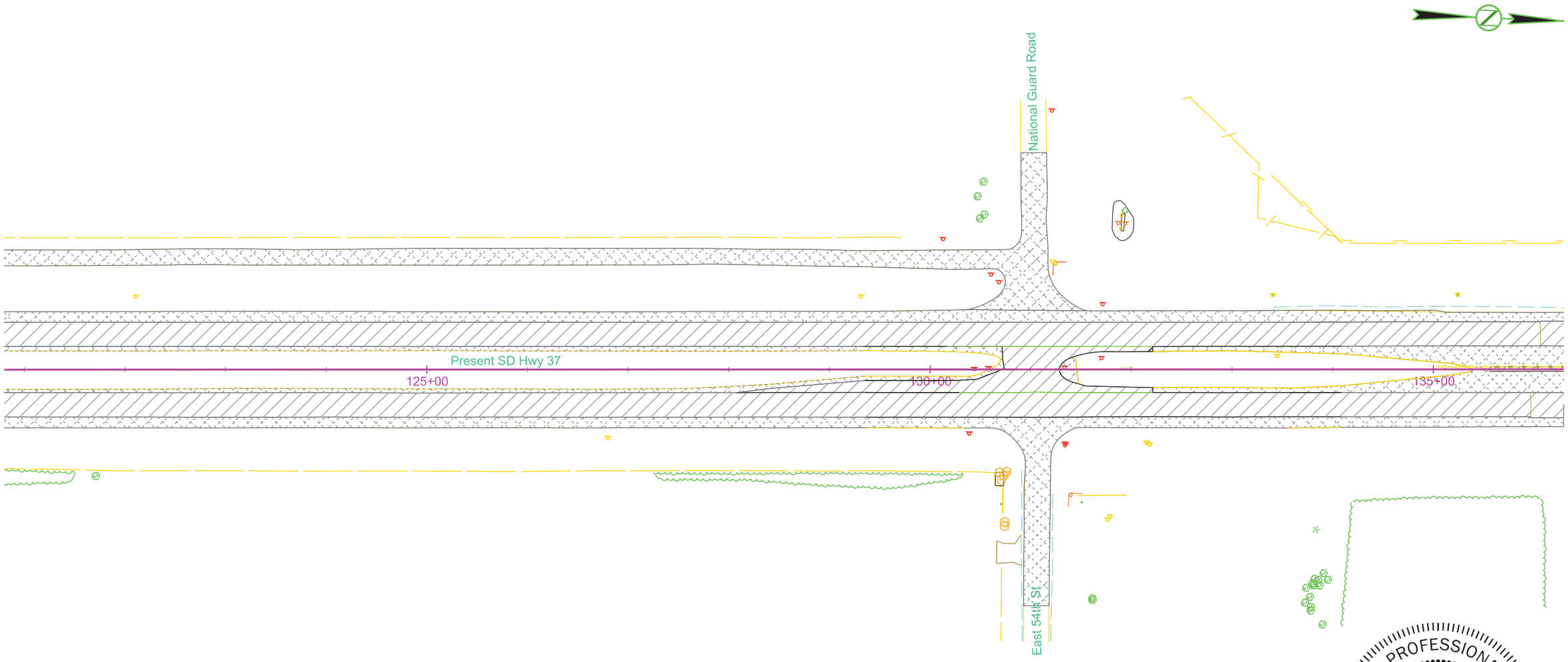
Plot Scale - 1:100
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\106pr.dgn

PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B154	B245

Plotting Date: 8/18/2023



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:100

Plotted From - Ryan.Brown1@jacobs.com

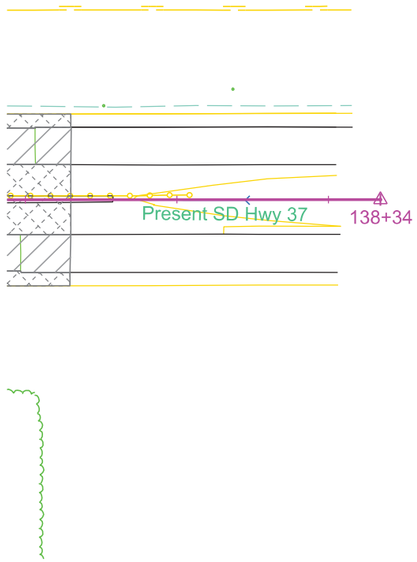
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B155	B245

Plotting Date: 8/18/2023



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SOUTH DAKOTA
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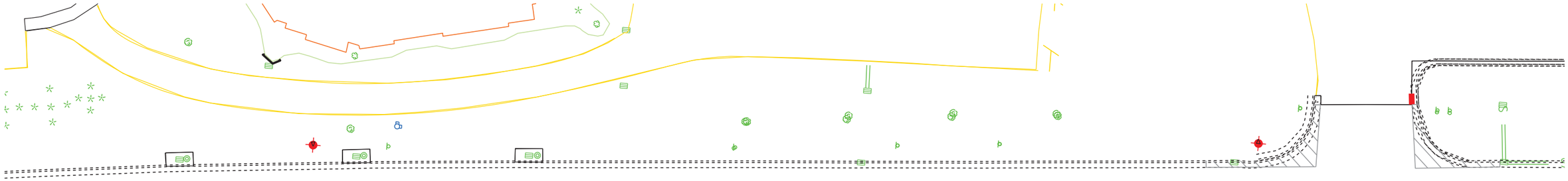
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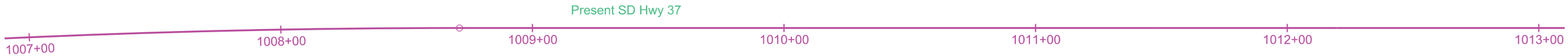
PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B156	B245

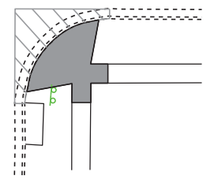
Plotting Date: 8/18/2023







North Sanborn Bvld.



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SOUTH DAKOTA
8-18-2023

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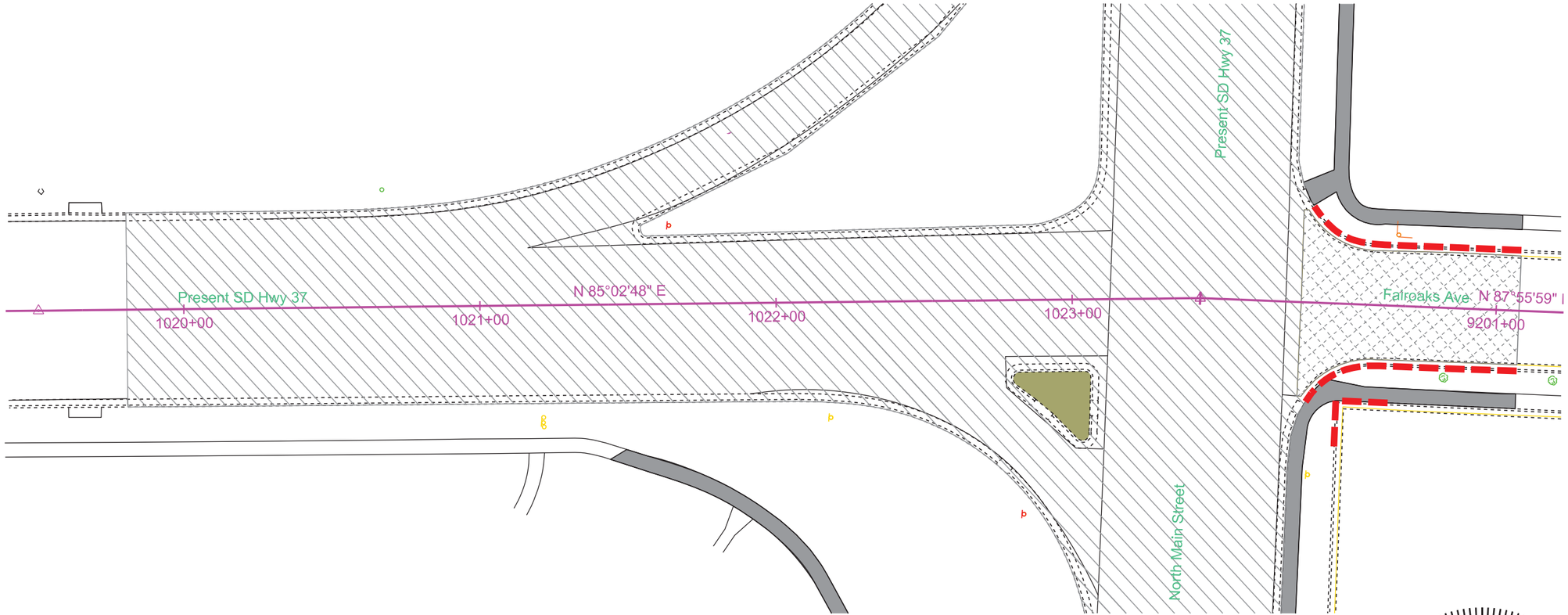
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PAVEMENT REMOVAL LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B157	B245

Plotting Date: 8/18/2023



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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B158	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 10+00.00-29.90' L
Begin Str C & G
TC Elev 1306.00 +/-
(Match Existing)

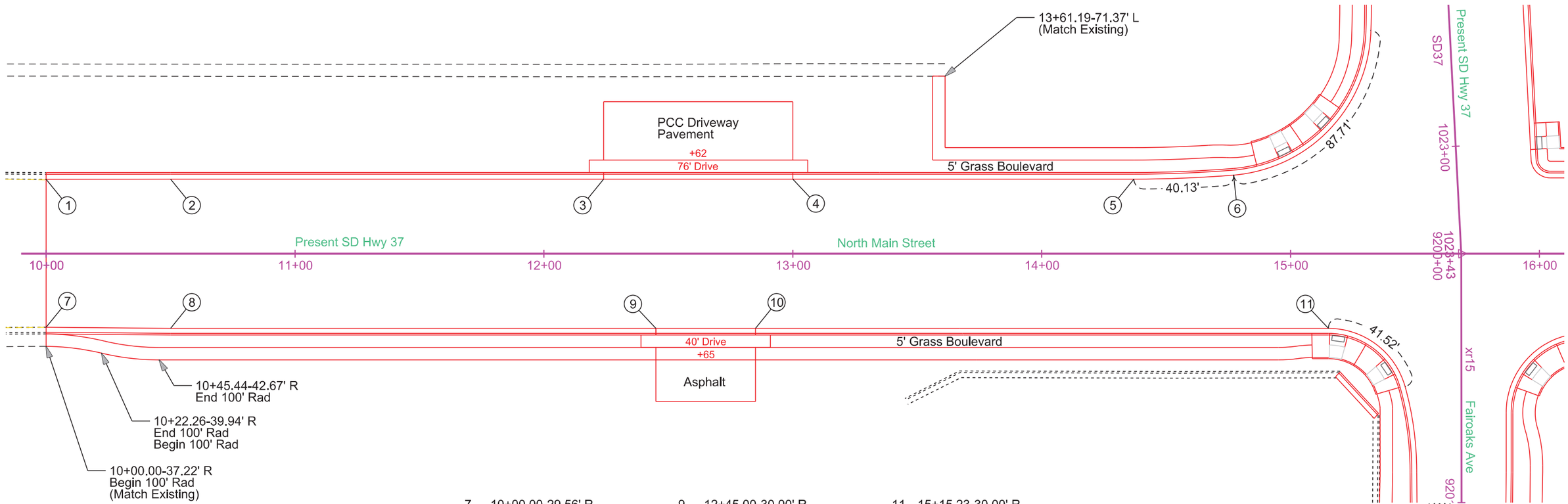
2 10+50.00-30.00' L
End Str C & G
Begin Str C & G
TC Elev 1305.32

3 12+24.00-30.00' L
End Str C & G
Begin Type P Gutter
TC Elev 1304.05 (Theor)

4 13+00.00 - 30.00' L
End Type P Gutter
Begin Str C & G
TC Elev 1303.82 (Theor)

5 14+37.05-30.00' L
End Str C & G
Begin 500' Rad C & G
TC Elev 1303.41

6 14+77.14 - 31.61' L
End 500' Rad C & G
Begin 60' Rad C & G
TC Elev 1303.20



7 10+00.00-29.56' R
Begin Str C & G
TC Elev 1306.12 +/-
(Match Existing)

8 10+50.00-30.00' R
End Str C & G
Begin Str C & G
TC Elev 1305.56

9 12+45.00-30.00' R
End Str C & G
Begin Type P Gutter
TC Elev 1304.23 (Theor)

10 12+85.00 - 30.00' R
End Type P Gutter
Begin Str C & G
TC Elev 1304.11 (Theor)

11 15+15.23-30.00' R
End Str C & G
Begin 32' Rad C & G
TC Elev 1303.41 (Theor)

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REG. NO.
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KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40
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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B159	B245

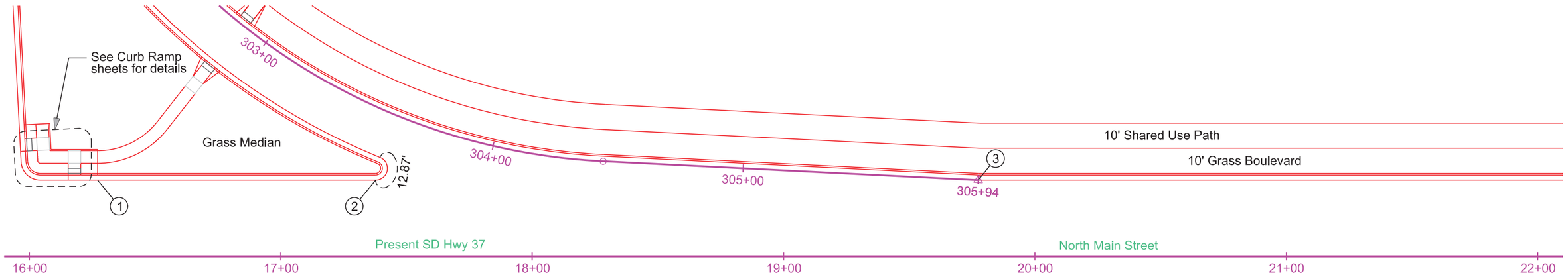
Plotting Date: 8/18/2023

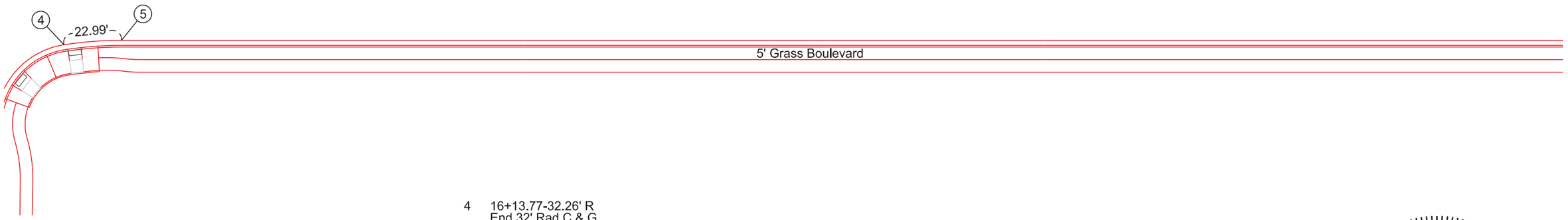
Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 16+27.17-30.50' L
Begin Str C & G
TC Elev 1302.83

2 17+37.75-30.50' L
End Str C & G
Begin 4.67' Rad C & G
TC Elev 1302.51

3 19+77.44-30.50' L
End Str C & G
Begin Str C & G
TC Elev 1300.40





4 16+13.77-32.26' R
End 32' Rad C & G
Begin 150' Rad C & G
TC Elev 1303.06 (Theor)

5 16+36.67-30.50' R
End 150' Rad C & G
Begin Str C & G
TC Elev 1303.02

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REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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File - ...\Section B\016cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B160	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 22+77.73-30.50' L
End Str C & G
Begin 55' Rad C & G
TC Elev 1294.83

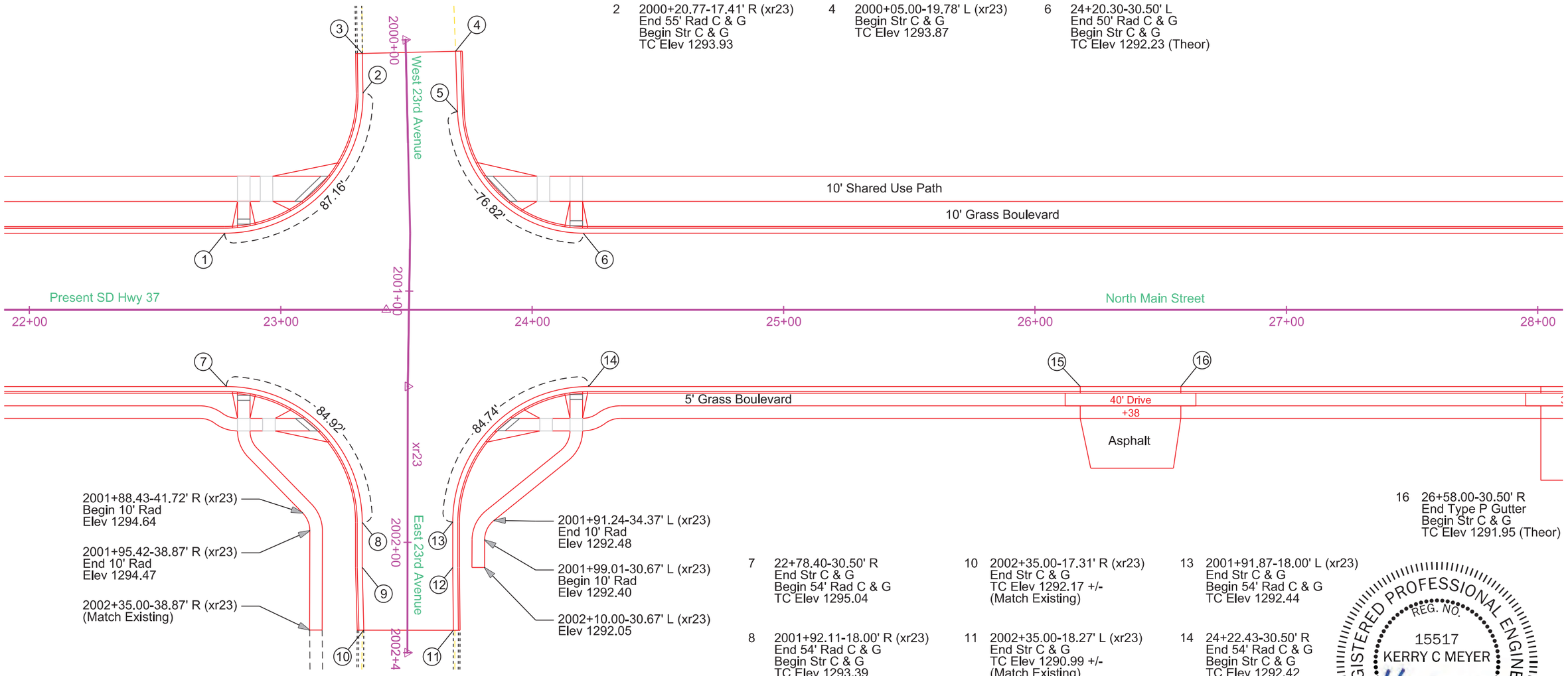
2 2000+20.77-17.41' R (xr23)
End 55' Rad C & G
Begin Str C & G
TC Elev 1293.93

3 2000+05.00-17.26' R (xr23)
End Str C & G
TC Elev 1294.19 +/-
(Match Existing)

4 2000+05.00-19.78' L (xr23)
Begin Str C & G
TC Elev 1293.87

5 2000+29.15-20.03' L (xr23)
End Str C & G
Begin 50' Rad C & G
TC Elev 1293.33

6 24+20.30-30.50' L
End 50' Rad C & G
Begin Str C & G
TC Elev 1292.23 (Theor)



7 22+78.40-30.50' R
End Str C & G
Begin 54' Rad C & G
TC Elev 1295.04

8 2001+92.11-18.00' R (xr23)
End 54' Rad C & G
Begin Str C & G
TC Elev 1293.39

9 2002+10.00-18.00' R (xr23)
End Str C & G
Begin Str C & G
TC Elev 1292.95

10 2002+35.00-17.31' R (xr23)
End Str C & G
TC Elev 1292.17 +/-
(Match Existing)

11 2002+35.00-18.27' L (xr23)
End Str C & G
TC Elev 1290.99 +/-
(Match Existing)

12 2002+10.00-18.00' L (xr23)
End Str C & G
Begin Str C & G
TC Elev 1291.90

13 2001+91.87-18.00' L (xr23)
End Str C & G
Begin 54' Rad C & G
TC Elev 1292.44

14 24+22.43-30.50' R
End 54' Rad C & G
Begin Str C & G
TC Elev 1292.42

15 26+18.00-30.50' R
End Str C & G
Begin Type P Gutter
TC Elev 1291.63 (Theor)

16 26+58.00-30.50' R
End Type P Gutter
Begin Str C & G
TC Elev 1291.95 (Theor)

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B161	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 28+91.46-30.50' L
End Str C & G
Begin Type P Gutter
TC Elev 1295.46 (Theor)

2 29+15.46-30.50' L
End Type P Gutter
Begin Str C & G
TC Elev 1295.87 (Theor)

3 32+34.57-30.50' L
End Str C & G
Begin Type P Gutter
TC Elev 1299.70 (Theor)

4 0+85.00-12.00' L (xr32drive)
Begin Str C & G
TC Elev 1299.71

5 1+25.79-18.15' L (xr32drive)
End Str C & G
Begin 25' Rad C & G
TC Elev 1298.03

6 1+47.48-21.43' L (xr32drive)
End 25' Rad C & G
Begin Str C & G
TC Elev 1297.77

7 1+61.56-18.54' L (xr32drive)
End Str C & G
TC Elev 1297.89

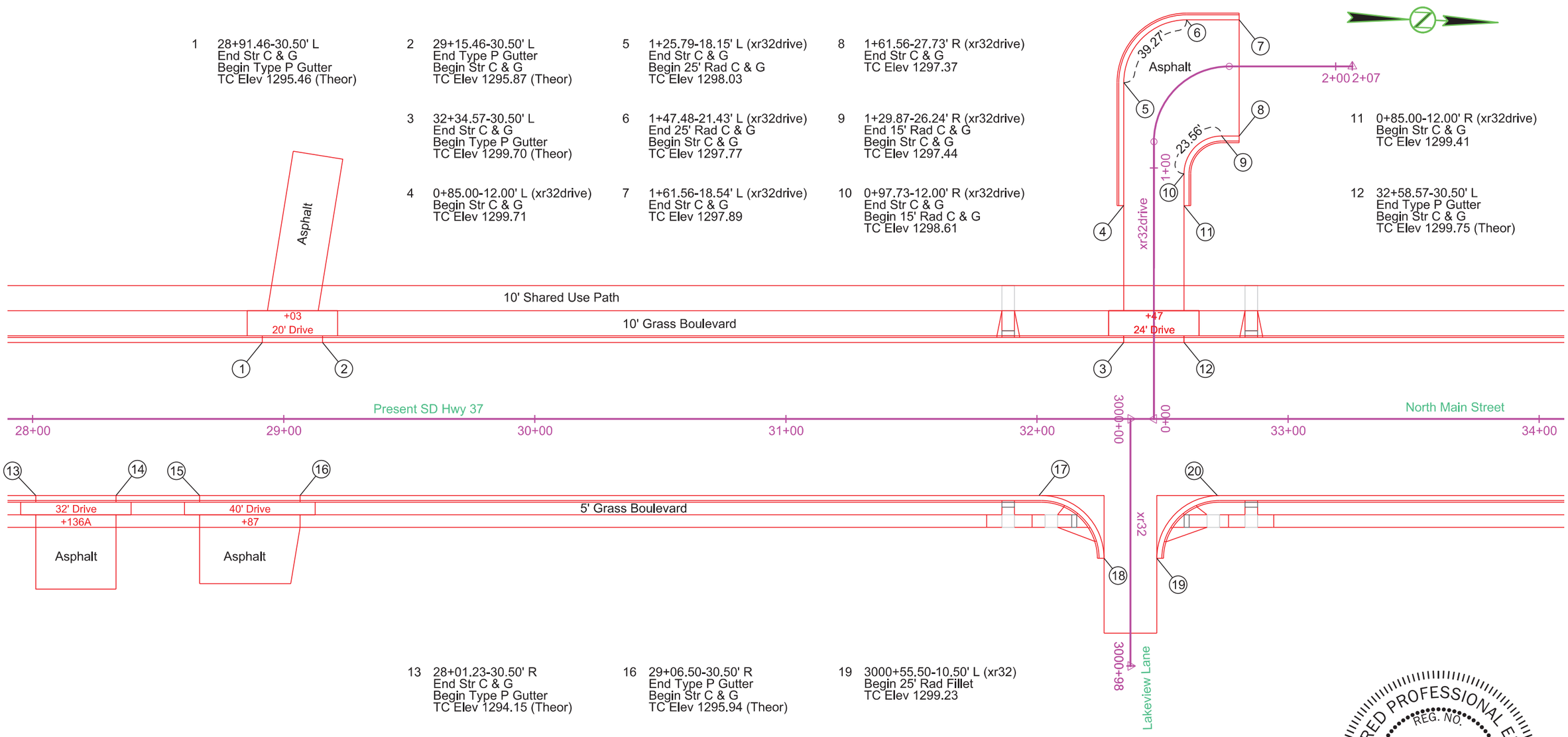
8 1+61.56-27.73' R (xr32drive)
End Str C & G
TC Elev 1297.37

9 1+29.87-26.24' R (xr32drive)
End 15' Rad C & G
Begin Str C & G
TC Elev 1297.44

10 0+97.73-12.00' R (xr32drive)
End Str C & G
Begin 15' Rad C & G
TC Elev 1298.61

11 0+85.00-12.00' R (xr32drive)
Begin Str C & G
TC Elev 1299.41

12 32+58.57-30.50' L
End Type P Gutter
Begin Str C & G
TC Elev 1299.75 (Theor)



13 28+01.23-30.50' R
End Str C & G
Begin Type P Gutter
TC Elev 1294.15 (Theor)

14 28+33.23-30.50' R
End Type P Gutter
Begin Str C & G
TC Elev 1294.69 (Theor)

15 28+66.50-30.50' R
End Str C & G
Begin Type P Gutter
TC Elev 1295.26 (Theor)

16 29+06.50-30.50' R
End Type P Gutter
Begin Str C & G
TC Elev 1295.94 (Theor)

17 32+01.73-30.50' R
End Str C & G
Begin 25' Rad Fillet
TC Elev 1299.79

18 3000+55.50-10.50' R (xr32)
End 25' Rad Fillet
TC Elev 1299.40

19 3000+55.50-10.50' L (xr32)
Begin 25' Rad Fillet
TC Elev 1299.23

20 32+72.73-30.50' R
End 25' Rad Fillet
Begin Str C & G
TC Elev 1299.98

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SOUTH DAKOTA
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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B162	B245

Plotting Date: 8/18/2023

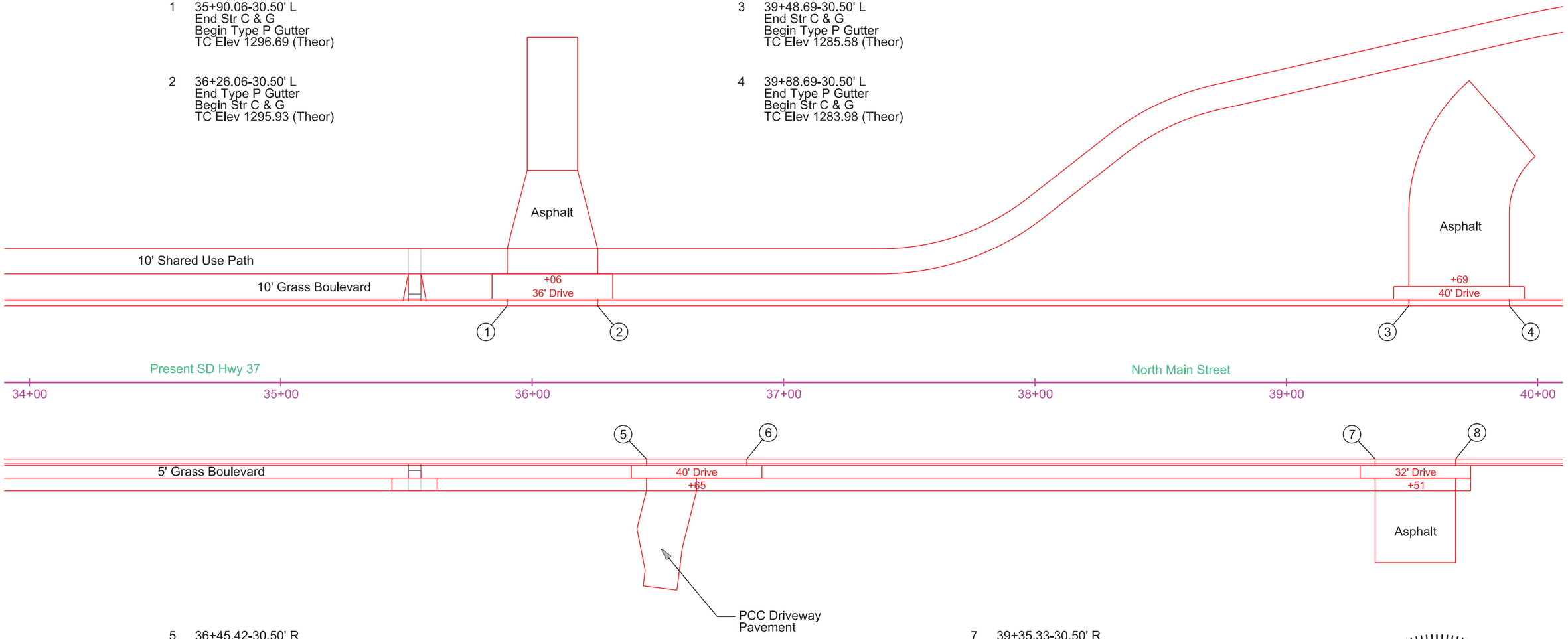
Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 35+90.06-30.50' L
End Str C & G
Begin Type P Gutter
TC Elev 1296.69 (Theor)

2 36+26.06-30.50' L
End Type P Gutter
Begin Str C & G
TC Elev 1295.93 (Theor)

3 39+48.69-30.50' L
End Str C & G
Begin Type P Gutter
TC Elev 1285.58 (Theor)

4 39+88.69-30.50' L
End Type P Gutter
Begin Str C & G
TC Elev 1283.98 (Theor)



5 36+45.42-30.50' R
End Str C & G
Begin Type P Gutter
TC Elev 1295.72 (Theor)

6 36+85.42-30.50' R
End Type P Gutter
Begin Str C & G
TC Elev 1294.74 (Theor)

7 39+35.33-30.50' R
End Str C & G
Begin Type P Gutter
TC Elev 1286.34 (Theor)

8 39+67.33-30.50' R
End Type P Gutter
Begin Str C & G
TC Elev 1285.06 (Theor)

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KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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File - ...\Section B\034cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B163	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All station and offset callouts are from Mainline except as noted.

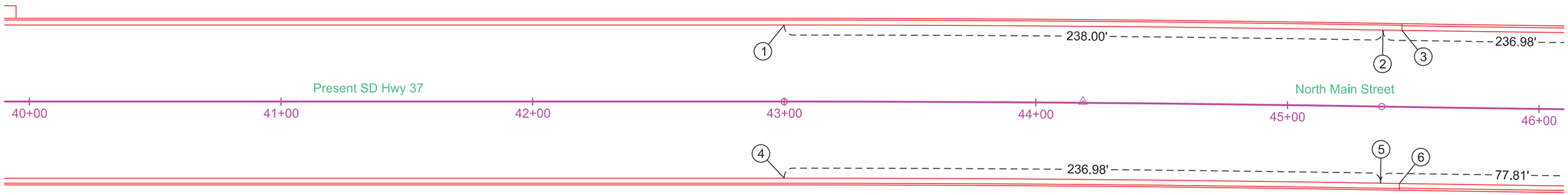
Plot Scale - 1:40

Asphalt

1 43+00.00-30.50' L
End Str C & G
Begin 14130.5' Rad C & G
TC Elev 1271.53

2 45+37.49-30.50' L
End 14130.5' Rad C & G
Begin 14069.5' Rad C & G
TC Elev 1262.03

3 45+45.00-30.50' L
End Type B68.5 C & G
Begin Type F68.5 C & G
TC Elev 1261.74



4 43+00.00-30.50' R
End Str C & G
Begin 14069.5' Rad C & G
TC Elev 1271.75

5 45+37.49-30.50' R
End 14069.5' Rad C & G
Begin 14130.5' Rad C & G
TC Elev 1262.25

6 45+45.00-30.50' R
End Type B68.5 C & G
Begin Type F68.5 C & G
TC Elev 1261.96

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SOUTH DAKOTA
8-18-2023

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File - ...\Section B\040cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

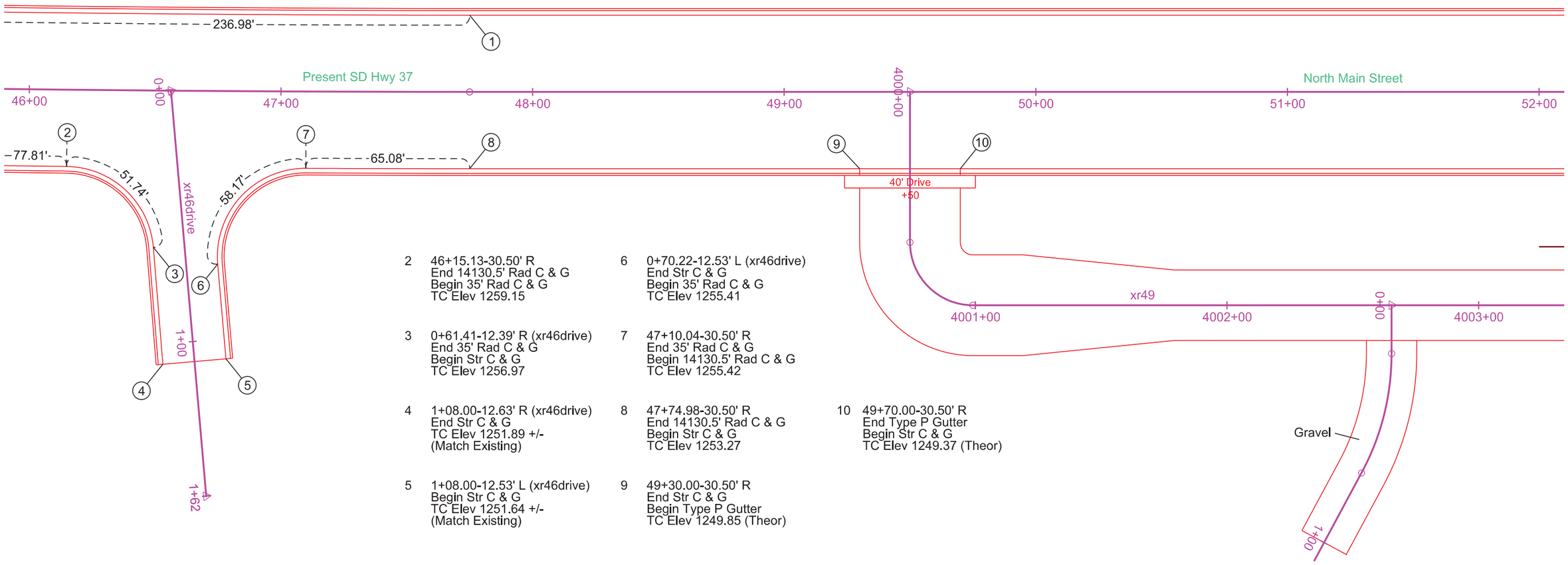
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B164	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type F68.5 except as noted.
All station and offset callouts are from Mainline except as noted.

1 47+74.98-30.50' L
End 14069.5' Rad C & G
Begin Str C & G
TC Elev 1253.05

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2 46+15.13-30.50' R
End 14130.5' Rad C & G
Begin 35' Rad C & G
TC Elev 1259.15

3 0+61.41-12.39' R (xr46drive)
End 35' Rad C & G
Begin Str C & G
TC Elev 1256.97

4 1+08.00-12.63' R (xr46drive)
End Str C & G
TC Elev 1251.89 +/-
(Match Existing)

5 1+08.00-12.53' L (xr46drive)
Begin Str C & G
TC Elev 1251.64 +/-
(Match Existing)

6 0+70.22-12.53' L (xr46drive)
End Str C & G
Begin 35' Rad C & G
TC Elev 1255.41

7 47+10.04-30.50' R
End 35' Rad C & G
Begin 14130.5' Rad C & G
TC Elev 1255.42

8 47+74.98-30.50' R
End 14130.5' Rad C & G
Begin Str C & G
TC Elev 1253.27

9 49+30.00-30.50' R
End Str C & G
Begin Type P Gutter
TC Elev 1249.85 (Theor)

10 49+70.00-30.50' R
End Type P Gutter
Begin Str C & G
TC Elev 1249.37 (Theor)

Plot Scale - 1:40
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\046cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B165	B245

Plotting Date: 8/18/2023

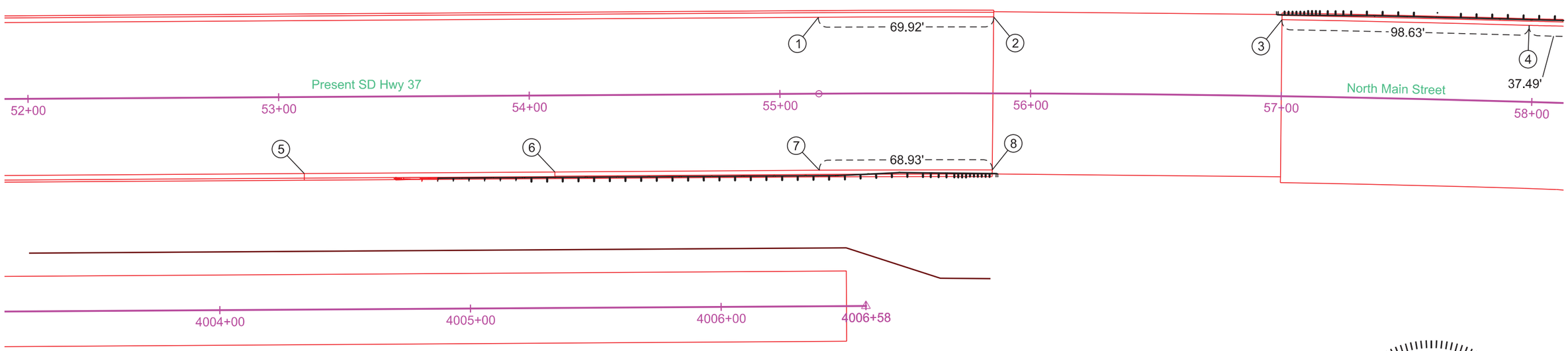
Note: All curb and gutter shown on this sheet is Type F68.5 except as noted.
All station and offset callouts are from Mainline except as noted.

1 55+15.57-30.50' L
End Str C & G
Begin 7900.5' Rad C & G
TC Elev 1258.30

2 55+85.22-30.50' L
End 7900.5' Rad C & G
TC Elev 1260.81

3 56+99.77-30.50' L
Begin 7900.5' Rad Type D48 C & G
TC Elev 1264.79

4 57+98.02-30.50' L
End 7900.5' Rad Type D48 C & G
Begin 7902' Rad Type D48 C& G
TC Elev 1268.31



5 53+10.03-30.50' R
End Type F68.5 C & G
Begin Type P Gutter
TC Elev 1251.79 (Theor)

6 54+10.03-30.50' R
End Type P Gutter
Begin Type D48.5 C & G
TC Elev 1254.58

7 55+15.57-30.50' R
End Str Type D48.5 C & G
Begin 7839.5' Rad Type D48.5 C & G
TC Elev 1258.37

8 55+84.77-30.50' R
End 7839.5' Rad Type D48.5 C & G
TC Elev 1260.86

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40
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File - ...\Section B\b52cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B166	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type F68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 57+98.02-30.50' L
End 7900.5' Rad Type D48 C & G
Begin 7902' Rad Type D48 C & G
TC Elev 1268.31

2 58+73.52-31.03' L
End 7902' Rad Type D48 C & G
Begin Type P Gutter
TC Elev 1270.88 (Theor)

3 59+73.14-31.73' L
End 7902' Rad Type P Gutter
Begin 7902' Rad C & G
TC Elev 1273.70

4 60+84.07-32.50' L
End 7902' Rad C & G
Begin 7902' Rad Type P Gutter
TC Elev 1276.34 (Theor)

5 61+15.93-32.76' L
End 7902' Rad Type P Gutter
Begin 7902' Rad C & G
TC Elev 1276.99 (Theor)

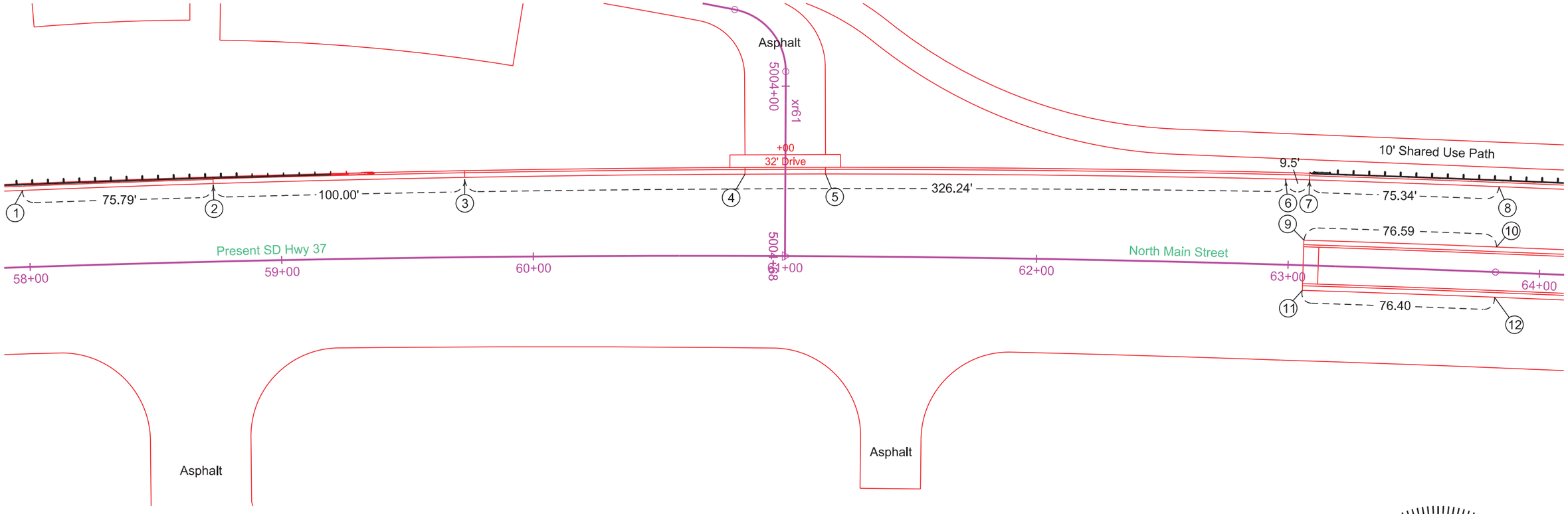
6 62+98.02-34.00' L
End 7902' Rad C & G
Begin 7904' Rad C & G
TC Elev 1279.90

7 63+07.49-34.00' L
End 7904' Rad C & G
Begin 7904' Rad Type D48 C & G
TC Elev 1279.82

8 63+82.50-34.00' L
End 7904' Rad Type D48 C & G
Begin Str Type D48 C & G
TC Elev 1280.57

9 63+06.00-10.00' L
Begin 7880' Rad Type FL68 C & G
TC Elev 1280.52 (Theor)

10 63+82.50-10.00' L
End 7880' Rad Type FL68 C & G
Begin Str Type FL68 C & G
TC Elev 1281.29



11 63+06.00-10.00' R
Begin 7860 ' Rad Type FL68 C & G
TC Elev 1280.56 (Theor)

12 63+82.50-10.00' R
End 7860' Rad Type FL68 C & G
Begin Str Type FL68 C & G
TC Elev 1281.48

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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File - ...\Section B\058cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B167	B245

Plotting Date: 8/18/2023

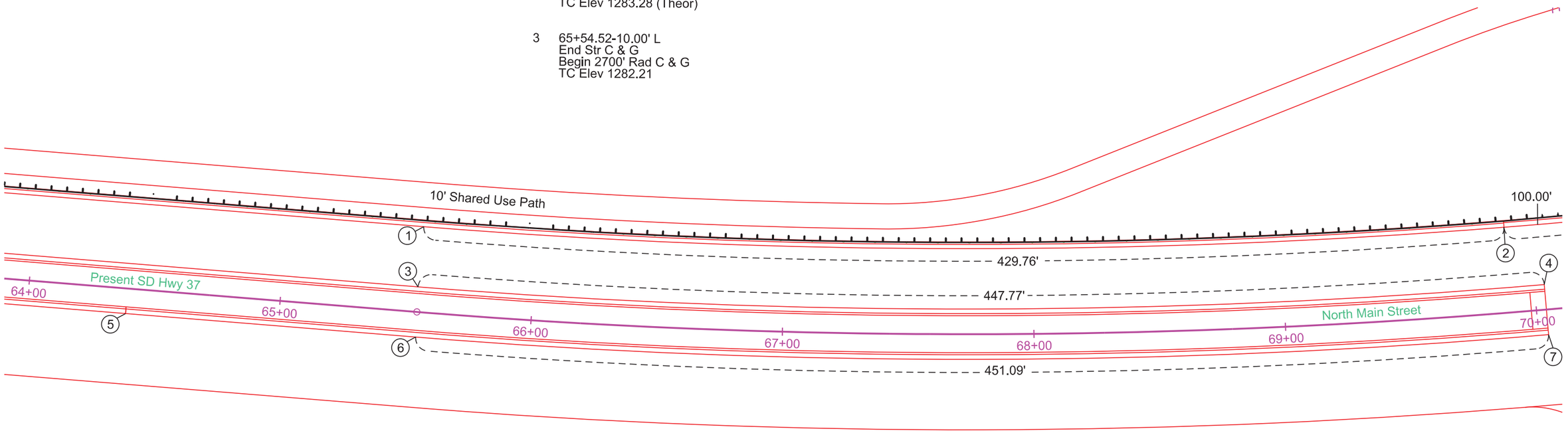
Note: All curb and gutter shown on this sheet is Type FL68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 65+54.52-34.00' L
End Str Type D48 C & G
Begin 2676' Rad Type D48 C & G
TC Elev 1281.18

2 69+89.75-34.00' L
End 2676' Rad Type D48 C & G
Begin 2676' Rad Type P Gutter
TC Elev 1283.28 (Theor)

3 65+54.52-10.00' L
End Str C & G
Begin 2700' Rad C & G
TC Elev 1282.21

4 70+03.95-10.00' L
End 2700' Rad C & G
TC Elev 1284.55 (Theor)



5 64+39.17-10.00' R
End Str Type FL68 C & G
Begin Str Type F68 C & G
TC Elev 1281.91

6 65+54.52-10.00' R
End Str Type F68 C & G
Begin 2720' Rad Type F68 C & G
TC Elev 1282.78

7 70+03.95-10.00' R
End 2720' Rad Type F68 C & G
TC Elev 1285.38 (Theor)

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40
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File - ...\Section B\064cg.dgn

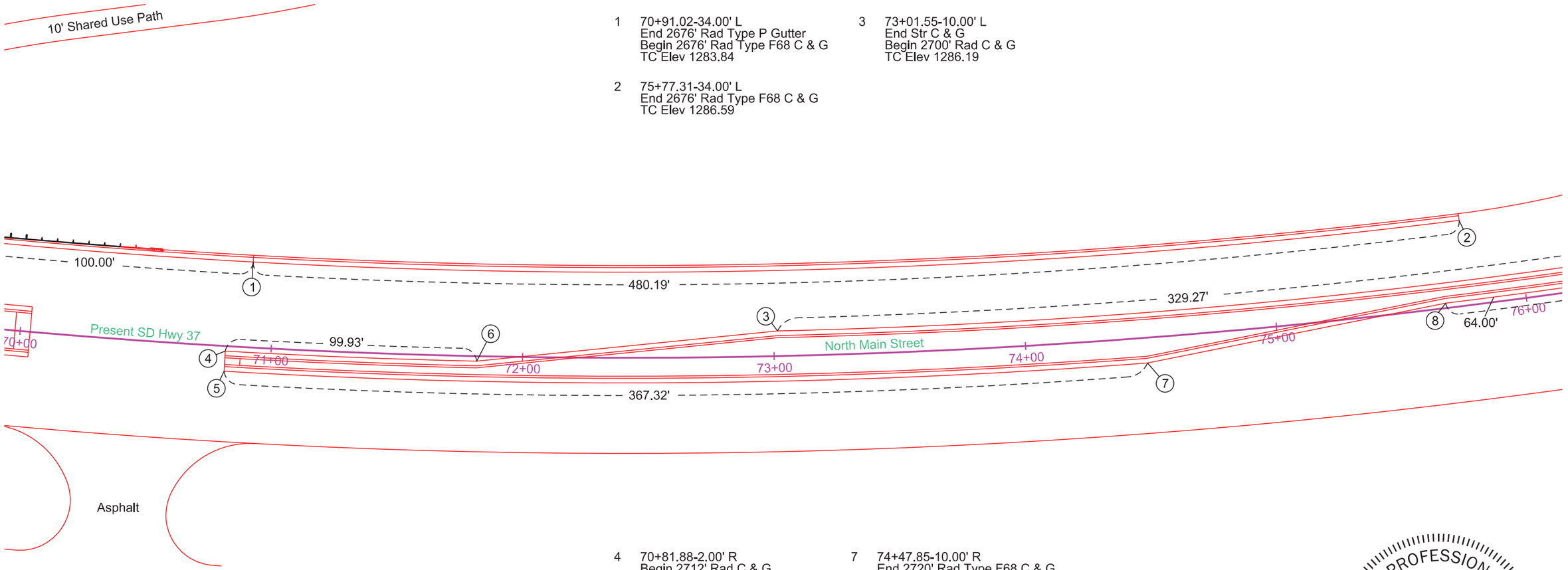
CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B168	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type FL68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.



1 70+91.02-34.00' L
End 2676' Rad Type P Gutter
Begin 2676' Rad Type F68 C & G
TC Elev 1283.84

2 75+77.31-34.00' L
End 2676' Rad Type F68 C & G
TC Elev 1286.59

3 73+01.55-10.00' L
End Str C & G
Begin 2700' Rad C & G
TC Elev 1286.19

4 70+81.88-2.00' R
Begin 2712' Rad C & G
TC Elev 1285.53 (Theor)

5 70+81.88-10.00' R
Begin 2720' Rad Type F68 C & G
TC Elev 1285.81 (Theor)

6 71+81.73-2.00' R
End 2712' Rad C & G
Begin Str C & G
TC Elev 1286.08

7 74+47.85-10.00' R
End 2720' Rad Type F68 C & G
Begin Str Type F68 C & G
TC Elev 1287.82

8 75+67.99-2.00' R
End Str Type F68 C & G
Begin 2708' Rad Type F68 C & G
TC Elev 1287.93

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40
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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B169	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type FL68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 76+32.04-10.00' L
End 2700' Rad C & G
Begin Str C & G
TC Elev 1288.14

2 76+68.14-10.00' L
End Str C & G
TC Elev 1288.41 (Theor)

3 76+32.04-2.00' L
End 2708' Rad Type F68 C & G
Begin Str Type F68 C & G
TC Elev 1288.31

4 76+68.14-2.00' L
End Str Type F68 C & G
TC Elev 1288.52 (Theor)

5 80+09.28-10.00' L
End Str C & G
Begin Str C & G
TC Elev 1290.34

6 82+58.54-10.00' L
End Str C & G
TC Elev 1290.71 (Theor)

7 81+58.41-2.00' L
End Str C & G
Begin Str C & G
TC Elev 1291.40

8 82+58.54-2.00' L
End Str C & G
TC Elev 1291.95 (Theor)

9 83+68.54-10.00' L
Begin Str C & G
TC Elev 1292.46 (Theor)

10 84+49.36-10.00' L
End Str C & G
Begin Str Type F68 C & G
TC Elev 1292.97

11 85+23.86-10.00' L
End Str Type F68 C & G
Begin 3950' Rad Type F68 C & G
TC Elev 1293.53

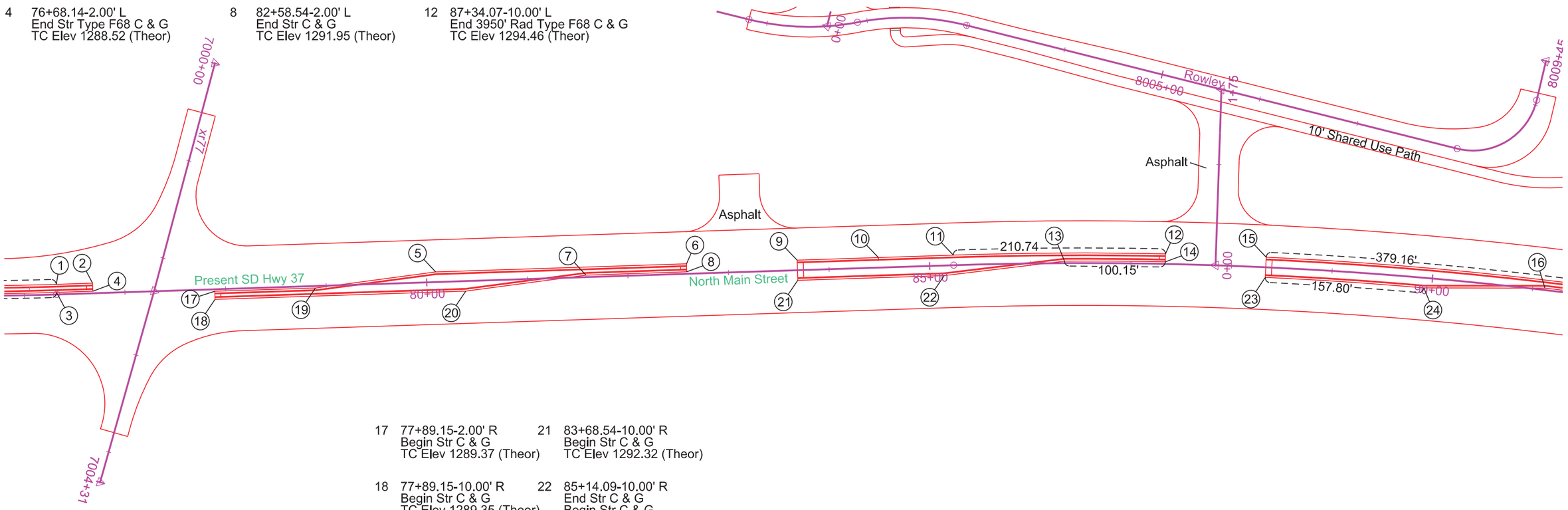
12 87+34.07-10.00' L
End 3950' Rad Type F68 C & G
TC Elev 1294.46 (Theor)

13 86+33.97-2.00' L
End Str C & G
Begin 3942' Rad C & G
TC Elev 1294.05

14 87+34.07-2.00' L
End 3942' Rad C & G
TC Elev 1294.26 (Theor)

15 88+34.07-10.00' L
Begin 3950' Rad Type F68 C & G
TC Elev 1294.21 (Theor)

16 91+12.17-2.00' L
End Str C & G
Begin 3942' Rad C & G
TC Elev 1293.18



17 77+89.15-2.00' R
Begin Str C & G
TC Elev 1289.37 (Theor)

18 77+89.15-10.00' R
Begin Str C & G
TC Elev 1289.35 (Theor)

19 78+89.28-2.00' R
End Str C & G
Begin Str C & G
TC Elev 1289.92

20 80+38.41-10.00' R
End Str C & G
Begin Str C & G
TC Elev 1290.50

21 83+68.54-10.00' R
Begin Str C & G
TC Elev 1292.32 (Theor)

22 85+14.09-10.00' R
End Str C & G
Begin Str C & G
TC Elev 1293.09

23 88+34.07-10.00' R
Begin 3930' Rad C & G
TC Elev 1293.58 (Theor)

24 89+92.27-10.00' R
End 3930' Rad C & G
Begin Str C & G
TC Elev 1293.10

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:100

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\076cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B170	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type FL68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 92+12.28-10.00' L
End 3950' Rad Type F68 C & G
TC Elev 1293.07 (Theor)

2 92+12.28-2.00' L
End 3942' Rad C & G
TC Elev 1292.88 (Theor)

3 95+16.67-10.00' L
End Str Type F68 C & G
Begin 3950' Rad Type F68 C & G
TC Elev 1292.16

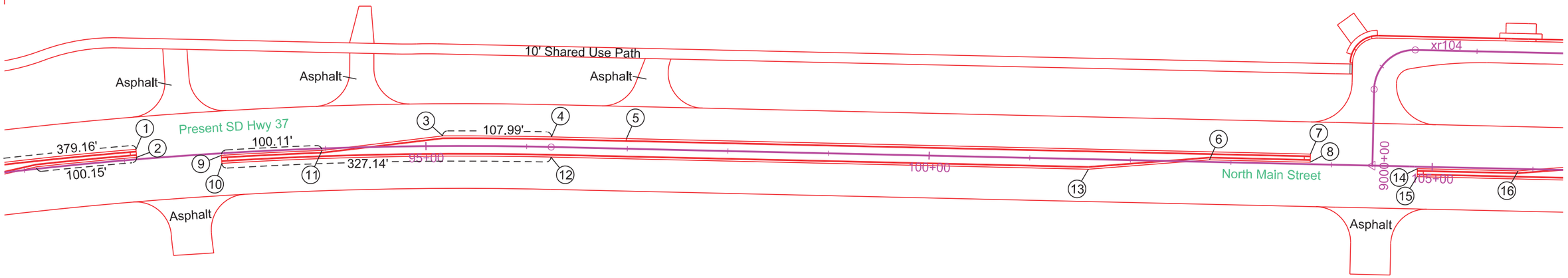
4 96+24.38-10.00' L
End 3950' Rad Type F68 C & G
Begin Str Type F68 C & G
TC Elev 1291.72

5 96+98.88-10.00' L
End Str Type F68 C & G
Begin Str C & G
TC Elev 1291.35

6 102+78.57-2.00' L
End Str C & G
Begin Str C & G
TC Elev 1290.71

7 103+78.71-10.00' L
End Str C & G
TC Elev 1290.78 (Theor)

8 103+78.71-2.00' L
End Str C & G
TC Elev 1291.02 (Theor)



9 92+96.41-2.00' R
Begin 3938' Rad Type F68 C & G
TC Elev 1292.39 (Theor)

10 92+96.41-10.00' R
Begin 3930' Rad C & G
TC Elev 1292.19 (Theor)

11 93+96.57-2.00' R
End 3938' Rad Type F68 C & G
Begin Str Type F68 C & G
TC Elev 1292.09

12 96+24.38-10.00' R
End 3930' Rad C & G
Begin Str C & G
TC Elev 1291.32

13 101+58.57-10.00' R
End Str C & G
Begin Str C & G
TC Elev 1290.12

14 104+85.29-2.00' R
Begin Str C & G
TC Elev 1291.34 (Theor)

15 104+85.29-10.00' R
Begin Str C & G
TC Elev 1291.10 (Theor)

16 105+85.42-2.00' R
End Str C & G
Begin Str C & G
TC Elev 1291.56

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:100

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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B171	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type FL68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 107+05.42-10.00' L
End Str C & G
Begin Str C & G
TC Elev 1291.12

2 110+70.04-2.00' L
End Str C & G
Begin Str C & G
TC Elev 1290.21

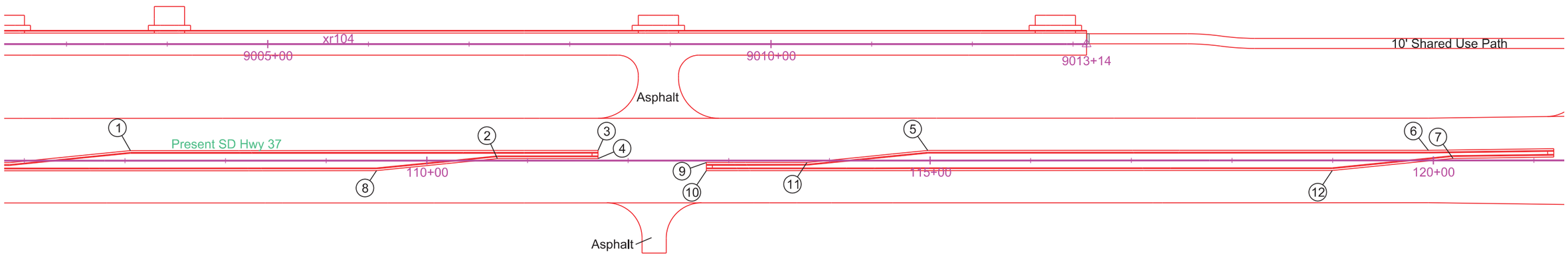
3 111+70.04-10.00' L
End Str C & G
TC Elev 1287.49 (Theor)

4 111+70.04-2.00' L
End Str C & G
TC Elev 1287.09 (Theor)

5 114+97.68-10.00' L
End Str C & G
Begin Str C & G
TC Elev 1288.75

6 119+95.04-10.00' L
End Str C & G
Begin Str C & G
TC Elev 1288.17

7 120+19.61-2.00' L
End Str C & G
Begin Str C & G
TC Elev 1288.21



8 109+50.04-10.00' R
End Str C & G
Begin Str C & G
TC Elev 1290.39

9 112+77.68-2.00' R
Begin Str C & G
TC Elev 1289.65 (Theor)

10 112+77.68-10.00' R
Begin Str C & G
TC Elev 1289.41 (Theor)

11 113+77.68-2.00' R
End Str C & G
Begin Str C & G
TC Elev 1289.35

12 118+99.61-10.00' R
End Str C & G
Begin Str C & G
TC Elev 1288.20

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:100
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File - ...\Section B\106cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B172	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type FL68 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from Mainline except as noted.

1 121+19.64-11.64' L
End Str C & G
TC Elev 1288.09 (Theor)

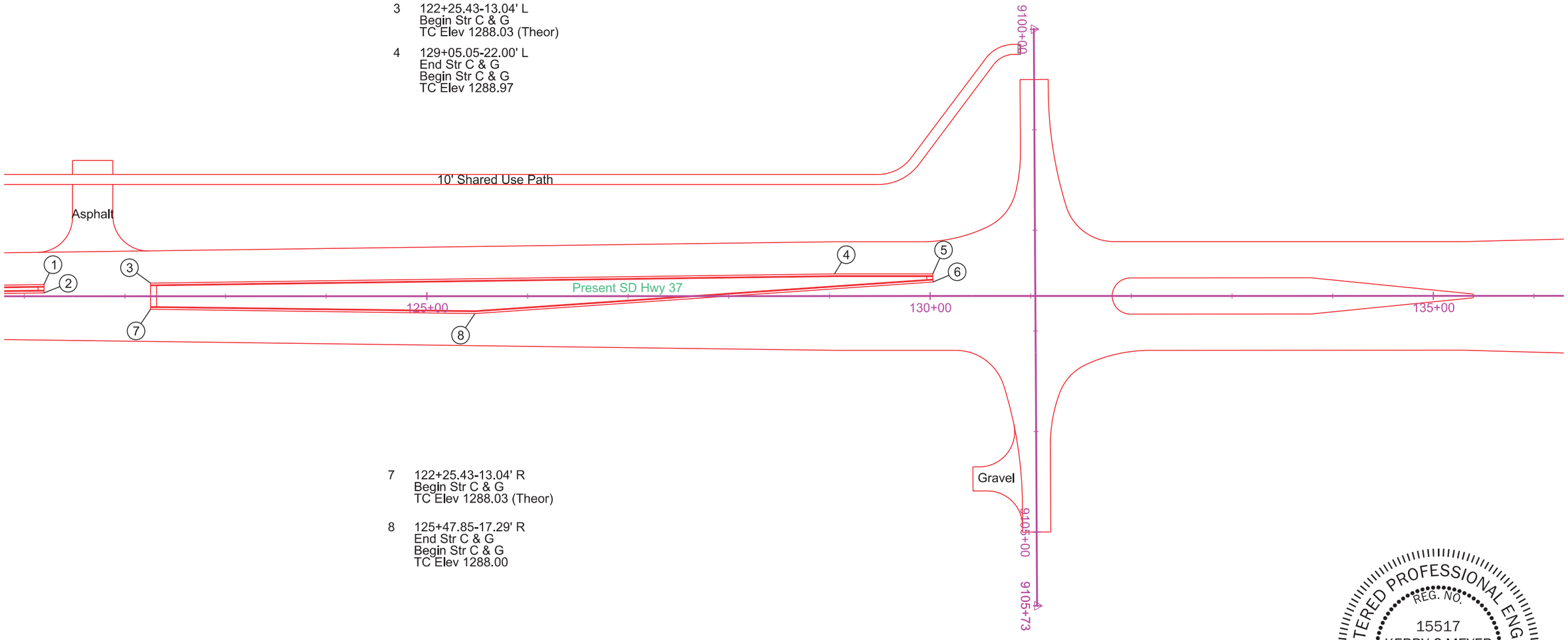
2 121+19.64-3.32' L
End Str C & G
TC Elev 1288.39 (Theor)

3 122+25.43-13.04' L
Begin Str C & G
TC Elev 1288.03 (Theor)

4 129+05.05-22.00' L
End Str C & G
Begin Str C & G
TC Elev 1288.97

5 130+02.66-22.00' L
End Str C & G
TC Elev 1289.26 (Theor)

6 130+02.93-14.00' L
End Str C & G
TC Elev 1289.50 (Theor)



7 122+25.43-13.04' R
Begin Str C & G
TC Elev 1288.03 (Theor)

8 125+47.85-17.29' R
End Str C & G
Begin Str C & G
TC Elev 1288.00

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

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CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B173	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from SD37 except as noted.

1 1011+67.80-30.61' L
Begin Str C & G
TC Elev 1300.67 +/-
(Match Existing)

2 1011+89.21-30.74' L
End Str C & G
Begin 24' Rad Fillet
TC Elev 1300.84

3 1012+13.01-53.01' L
End 24' Rad Fillet
Begin Str C & G
TC Elev 1301.13 (Theor)

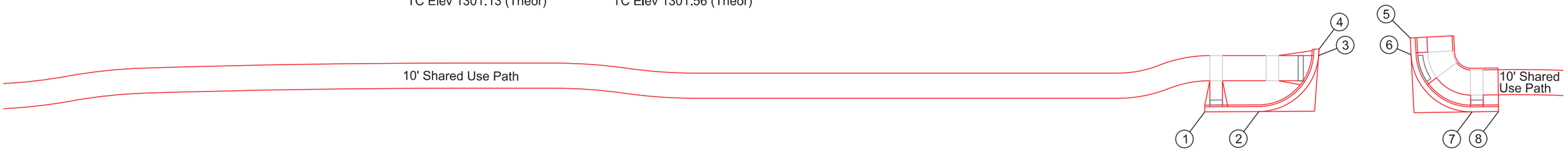
4 1012+13.19-55.55' L
End Str C & G
TC Elev 1301.15 +/-
(Match Existing)

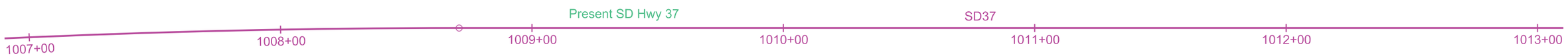
5 1012+49.39-59.99' L
Begin Str C & G
TC Elev 1301.58 +/-
(Match Existing)

6 1012+49.73-53.36' L
End Str C & G
Begin 24' Rad Fillet
TC Elev 1301.56 (Theor)

7 1012+74.04-30.61' L
End 24' Rad Fillet
Begin Str C & G
TC Elev 1301.47 (Theor)

8 1012+84.53-30.76' L
End Str C & G
TC Elev 1301.44 +/-
(Match Existing)







9 1011+75.81-29.79' R
Begin 25' Rad Fillet
TC Elev 1300.90 +/-
(Match Existing)

10 1012+00.72-55.40' R
End 25' Rad Fillet
TC Elev 1300.97 +/-
(Match Existing)

11 1012+60.80-54.65' R
Begin 25' Rad Fillet
TC Elev 1301.29 +/-
(Match Existing)

12 1012+85.88-29.74' R
End 25' Rad Fillet
TC Elev 1301.84 +/-
(Match Existing)

North Sanborn Blvd.

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\SD37_2cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B174	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from SD37 except as noted.

1 1019+80.77-30.02' L
Begin Str C & G
TC Elev 1300.72 +/-
(Match Existing)

2 1019+93.45-30.02' L
End Str C & G
Begin 700' Rad C & G
TC Elev 1300.63

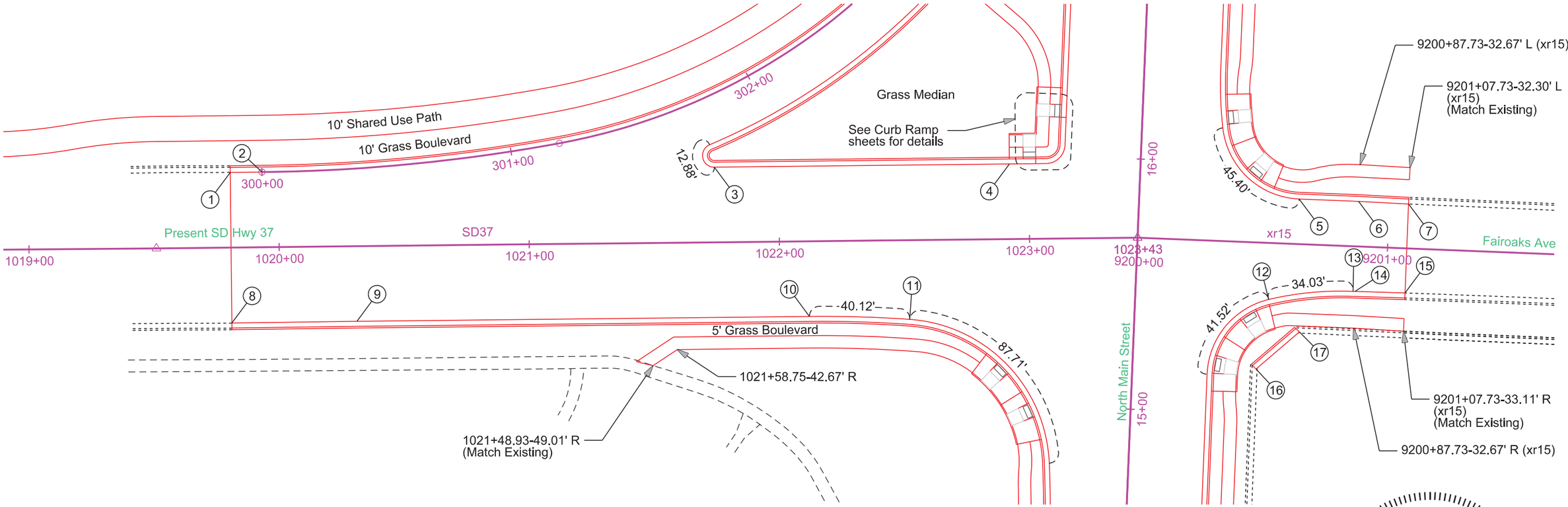
3 1021+74.33-30.00' L
End 4.67' Rad C & G
Begin Str C & G
TC Elev 1301.17

4 1022+92.29-30.00' L
End Str C & G
TC Elev 1302.48

5 9200+63.94-18.00' L (xr15)
End 32' Rad C & G
Begin Str C & G
TC Elev 1302.64

6 9200+87.73-18.00' L (xr15)
End Str C & G
Begin Str C & G
TC Elev 1302.07

7 9201+07.73-17.75' L (xr15)
End Str C & G
TC Elev 1301.69 +/-
(Match Existing)



8 1019+80.77-30.15' R
Begin Str C & G
TC Elev 1300.94 +/-
(Match Existing)

9 1020+30.77-30.00' R
End Str C & G
Begin Str C & G
TC Elev 1300.98

10 1022+11.69-30.00' R
End Str C & G
Begin 500' Rad C & G
TC Elev 1301.52

11 1022+51.78-31.61' R
End 500' Rad C & G
Begin 60' Rad C & G
TC Elev 1301.83

12 9200+53.33-22.60' R (xr15)
End 32' Rad C & G
Begin 125' Rad C & G
TC Elev 1302.80

13 9200+86.95-18.00' R (xr15)
End 125' Rad C & G
Begin Str C & G
TC Elev 1302.11

14 9200+87.73-18.00' R (xr15)
End Str C & G
Begin Str C & G
TC Elev 1302.09

15 9201+07.73-17.80' R (xr15)
End Str C & G
TC Elev 1301.83 +/-
(Match Existing)

16 9200+49.38-50.54' R (xr15)
Begin Type B Str C & G
TC Elev 1303.41 +/-
(Match Existing)

17 9200+66.15-35.05' R (xr15)
End Type B Str C & G
TC Elev 1302.97 +/-
(Match Existing)

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40
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File - ...\Section B\SD37_4cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

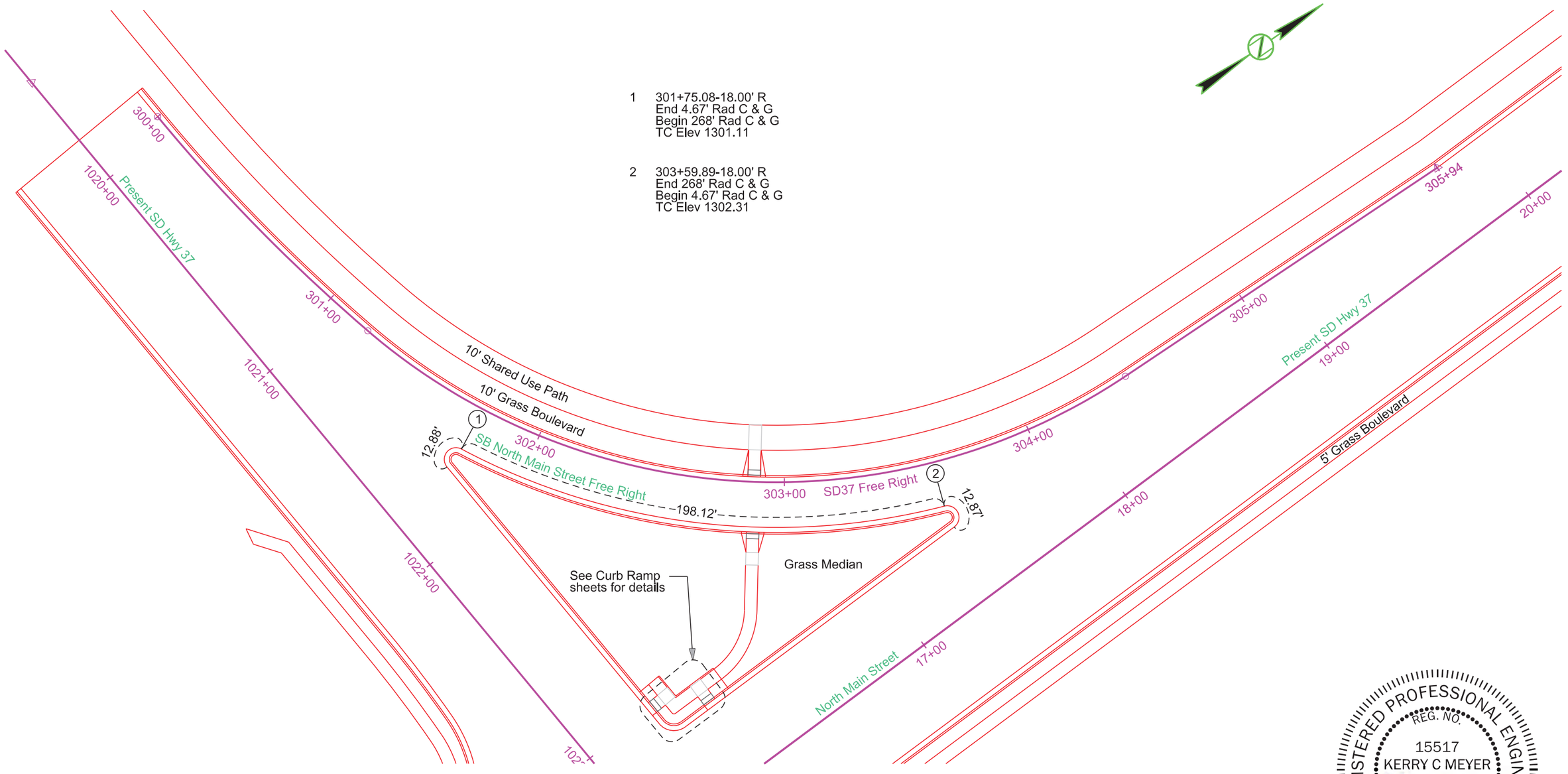
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B175	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B68.5 except as noted.
All sidewalk is 5' wide except as noted.
All station and offset callouts are from SD37 Free Right except as noted.

1 301+75.08-18.00' R
End 4.67' Rad C & G
Begin 268' Rad C & G
TC Elev 1301.11

2 303+59.89-18.00' R
End 268' Rad C & G
Begin 4.67' Rad C & G
TC Elev 1302.31



REGISTERED PROFESSIONAL ENGINEER
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15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B176	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B66 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from xr104 except as noted.

1 9000+91.63-27.23' L
Begin 25' Rad C & G
TC Elev 1290.90

2 9000+98.92-30.16' L
End 25' Rad C & G
Begin 25' Rad Type P Gutter
TC Elev 1289.95 (Theor)

3 9001+10.15-26.26' L
End 25' Rad Type P Gutter
Begin 25' Rad C & G
TC Elev 1289.80 (Theor)

4 9001+13.47-23.01' L
End 25' Rad C & G
Begin Str C & G
TC Elev 1289.74

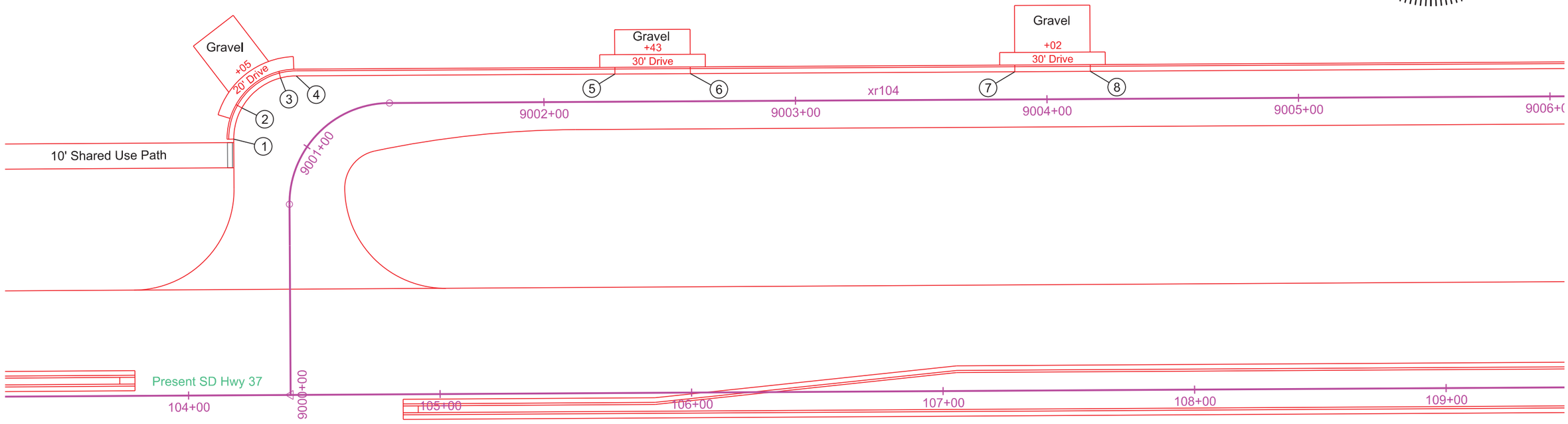
5 9002+28.25-11.00' L
End Str C & G
Begin Type P Gutter
TC Elev 1288.89 (Theor)

6 9002+58.25-11.00' L
End Type P Gutter
Begin Str C & G
TC Elev 1288.86 (Theor)

7 9003+87.27-11.00' L
End Str C & G
Begin Type P Gutter
TC Elev 1288.73 (Theor)

8 9004+17.27-11.00' L
End Type P Gutter
Begin Str C & G
TC Elev 1288.70 (Theor)

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8-18-2023



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File - ...\Section B\xr104cg.dgn

CURB AND GUTTER LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B177	B245

Plotting Date: 8/18/2023

Note: All curb and gutter shown on this sheet is Type B66 except as noted.
All sidewalk is 10' wide except as noted.
All station and offset callouts are from xr104 except as noted.

1 9008+68.08-11.00' L
End Str C & G
Begin Type P Gutter
TC Elev 1287.38 (Theor)

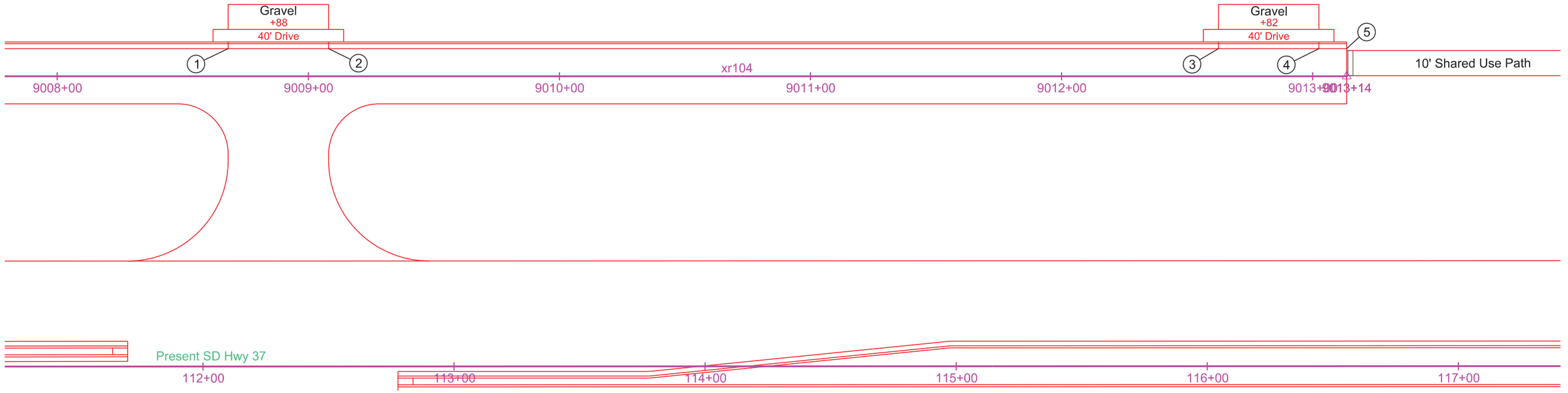
2 9009+08.08-11.00' L
End Type P Gutter
Begin Str C & G
TC Elev 1287.18 (Theor)

3 9012+62.49-11.00' L
End Str C & G
Begin Type P Gutter
TC Elev 1285.41 (Theor)

4 9013+02.49-11.00' L
End Type P Gutter
Begin Str C & G
TC Elev 1285.21 (Theor)

5 9013+13.52-11.00' L
End Str C & G
TC Elev 1285.15

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File - ...\Section B\xr104_2cg.dgn

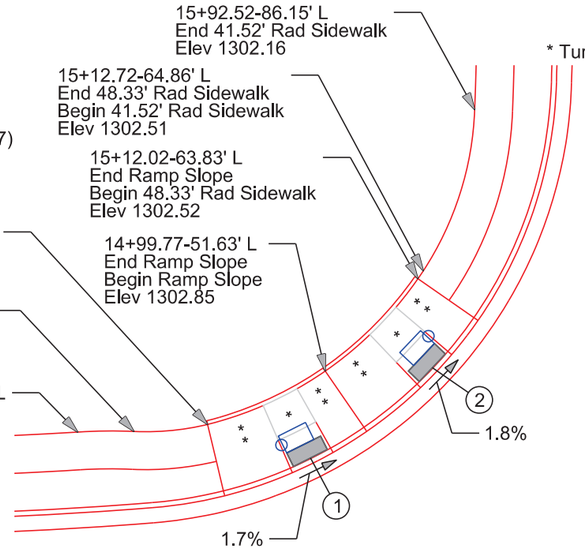
CURB RAMP LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B178	B245

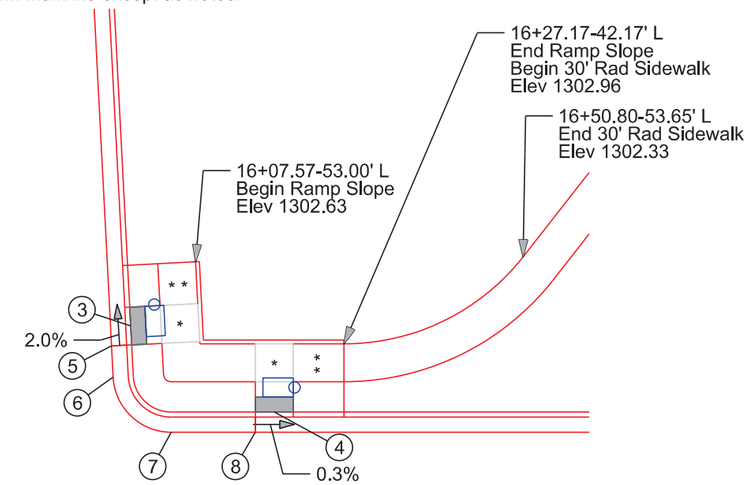
Plotting Date: 8/18/2023

* Turning Space with 1.5% cross slope, longitudinal slope matches roadway grade
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All station and offset callouts are from Mainline except as noted.



1 14+97.83-40.15' L
Center Type 3
Curb Ramp

2 1022+88.40-51.90' R (SD37)
Center Type 3
Curb Ramp



3 1023+00.33-32.67' L (SD37)
Center Type 3
Curb Ramp

4 16+17.95-33.17' L
Center Type 3
Curb Ramp

5 1023+02.83-30.00' L (SD37)
Begin Str Type P Gutter
TC Elev 1302.69 (Theor)

6 1023+06.94-30.00' L (SD37)
End Str Type P Gutter
Begin 7.66' Rad Type P Gutter
TC Elev 1302.77 (Theor)

7 16+04.33-30.50' L
End 7.66' Rad Type P Gutter
Begin Str Type P Gutter
TC Elev 1302.90 (Theor)

8 16+15.45-30.50' L
End Str Type P Gutter
TC Elev 1302.86 (Theor)

Present SD Hwy 37
1023+00
SD37

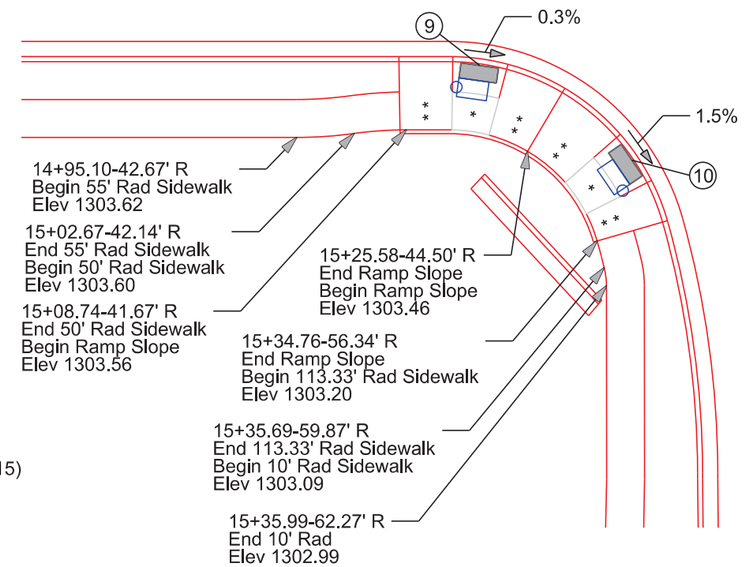
North Main Street
15+00

1023+43
9200+00

Present SD Hwy 37
16+00

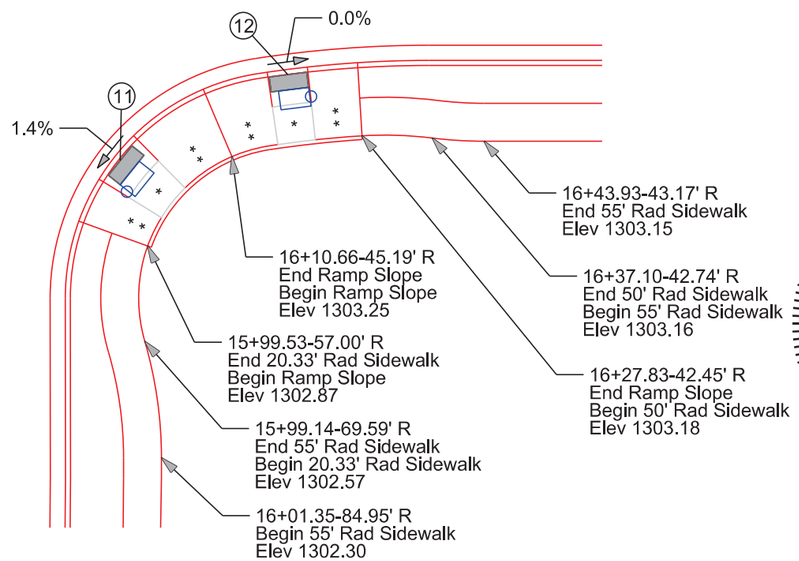
xr15

Fairoaks Ave



9 15+19.26-33.17' R
Center Type 3
Curb Ramp

10 9200+45.63-29.31' R (xr15)
Center Type 3
Curb Ramp



11 9200+45.75-27.27' L (xr15)
Center Type 3
Curb Ramp

12 16+18.04-34.37' R
Center Type 3
Curb Ramp

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SOUTH DAKOTA
8-18-2023

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CURB RAMP LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B179	B245

Plotting Date: 8/18/2023

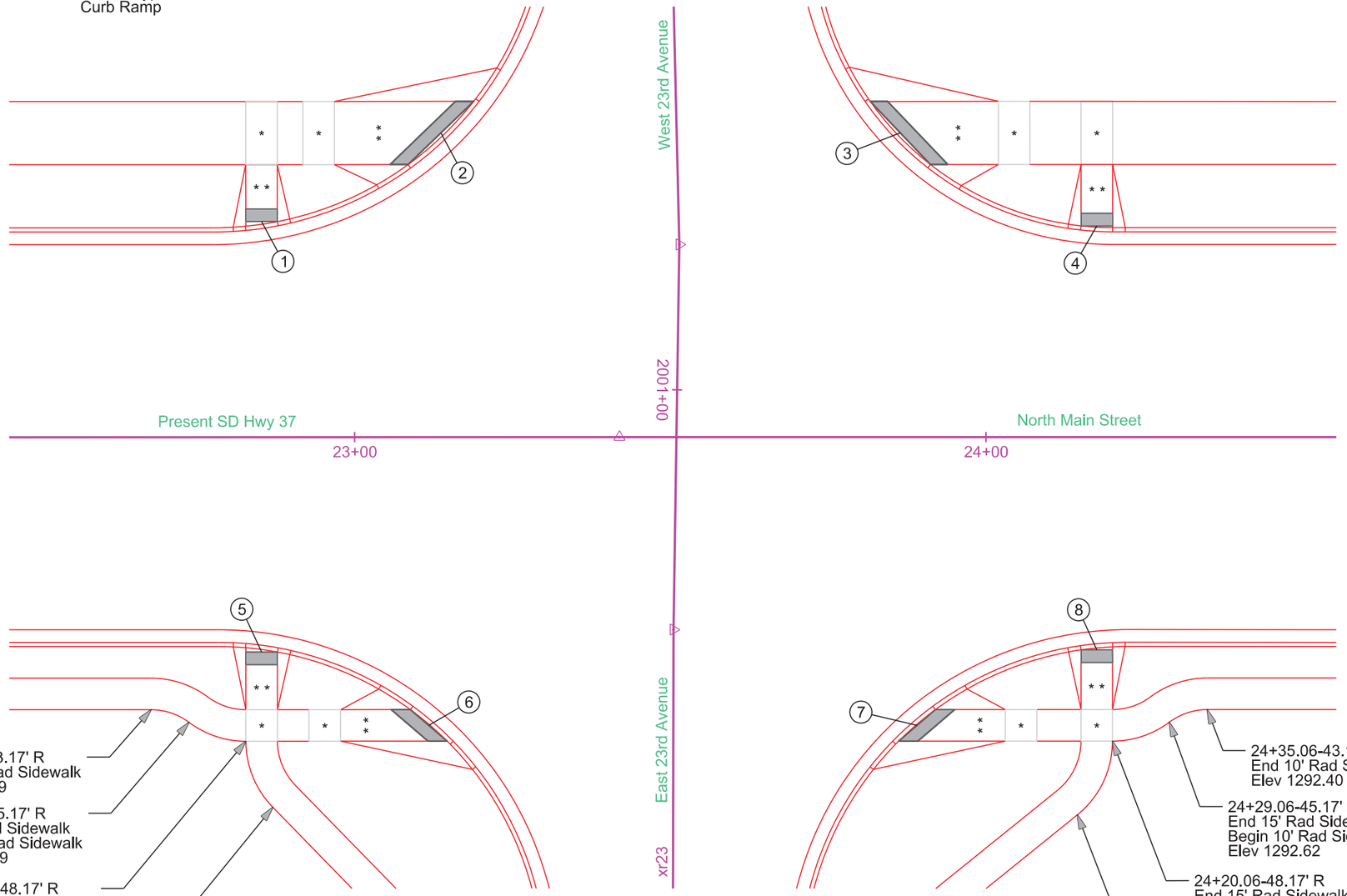
* Turning Space with 1.5% slope
** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All station and offset callouts are from Mainline except as noted.

1 22+85.27-34.14' L
Center Type 2
Curb Ramp

2 2000+58.42-37.34' R (xr23)
Center Type 2
Curb Ramp

3 2000+60.14-35.40' L (xr23)
Center Type 2
Curb Ramp

4 24+17.56-33.46' L
Center Type 2
Curb Ramp



5 22+85.27-34.03' R
Center Type 2
Curb Ramp

6 2001+53.21-38.72' R (xr23)
Center Type 2
Curb Ramp

7 2001+53.09-38.59' L (xr23)
Center Type 2
Curb Ramp

8 24+17.56-33.70' R
Center Type 2
Curb Ramp

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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:20

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CURB RAMP LAYOUT

FOR BIDDING PURPOSES ONLY

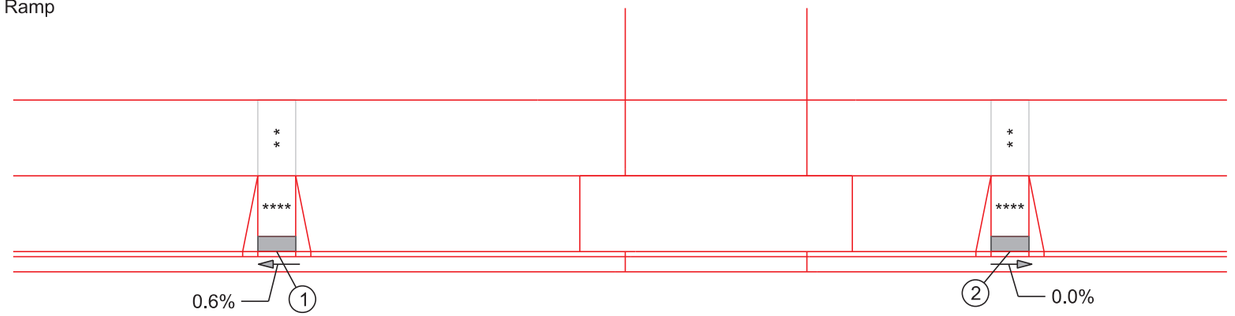
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B180	B245

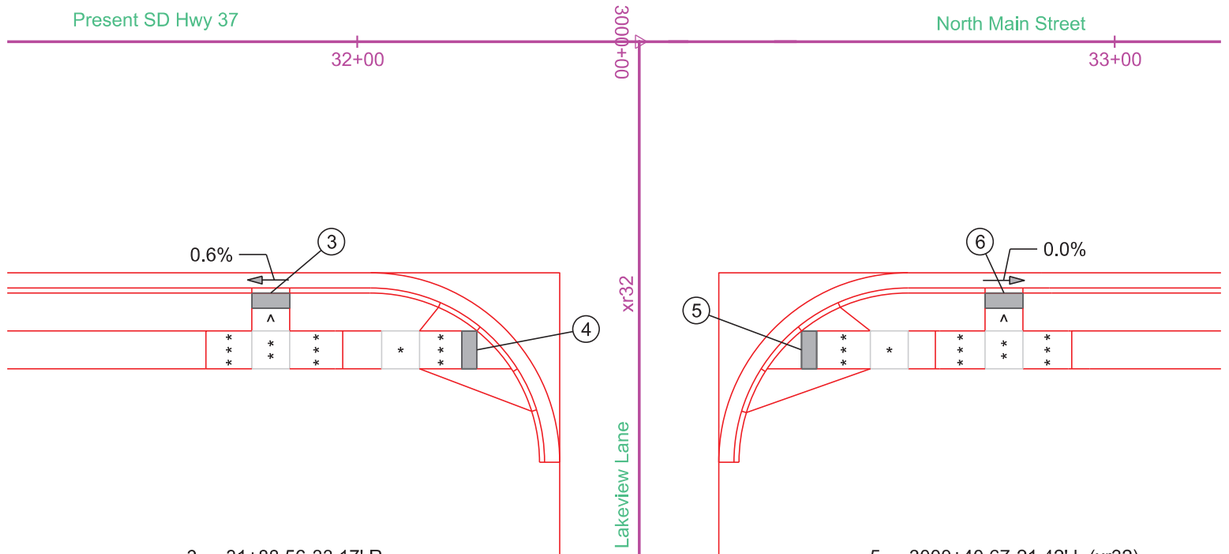
Plotting Date: 8/18/2023

* Turning Space with 1.5% slope
** Turning Space with 1.5% cross slope, longitudinal slope matches roadway grade
*** Curb Ramp with 7.5% slope and 1.5% cross slope
**** Curb Ramp with 6.1% slope, cross slope matches roadway grade
^ Curb Ramp with 1.5% slope, cross slope matches roadway grade
Note: All station and offset callouts are from Mainline except as noted.

1 31+88.56-33.17' L
Center Type 1
Curb Ramp

2 32+85.37-33.17' L
Center Type 1
Curb Ramp





3 31+88.56-33.17' R
Center Type 3
Curb Ramp

4 3000+40.67-21.42' R (xr32)
Center Type 2
Curb Ramp

5 3000+40.67-21.42' L (xr32)
Center Type 2
Curb Ramp

6 32+85.37-33.17' R
Center Type 3
Curb Ramp

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REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:20

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\032cr.dgn

CURB RAMP LAYOUT

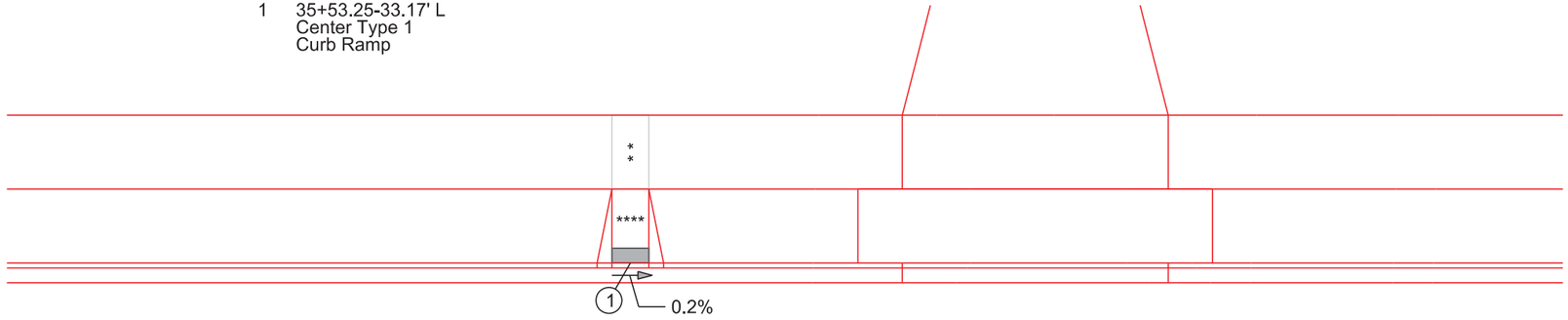
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B181	B245

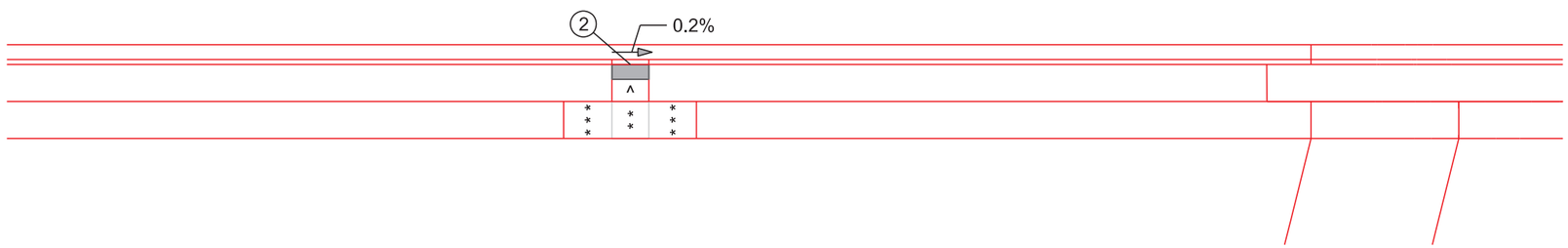
Plotting Date: 8/18/2023

* Turning Space with 1.5% slope
** Turning Space with 1.5% cross slope, longitudinal slope matches roadway grade
*** Curb Ramp with 7.5% slope and 1.5% cross slope
**** Curb Ramp with 6.1% slope, cross slope matches roadway grade
^ Curb Ramp with 1.5% slope, cross slope matches roadway grade
Note: All station and offset callouts are from Mainline except as noted.

1 35+53.25-33.17' L
Center Type 1
Curb Ramp







2 35+53.25-33.17' R
Center Type 3
Curb Ramp

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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:20
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File - ...\Section B\b35cr.dgn

CURB RAMP LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B182	B245

Plotting Date: 8/18/2023

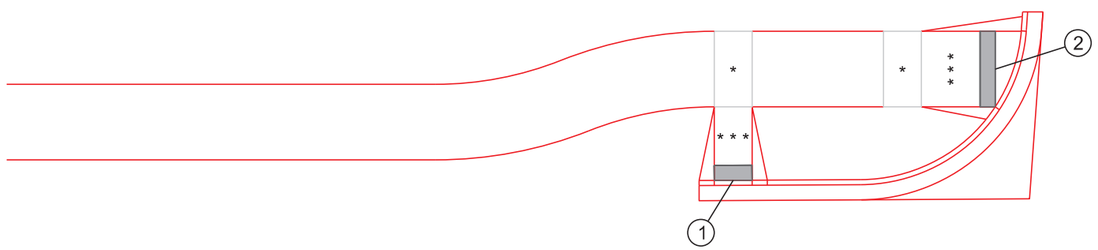
* Turning Space with 1.5% slope
** Turning Space with 1.5% cross slope, longitudinal slope matches roadway grade
*** Curb Ramp with 7.5% slope and 1.5% cross slope
Note: All station and offset callouts are from SD37 except as noted.

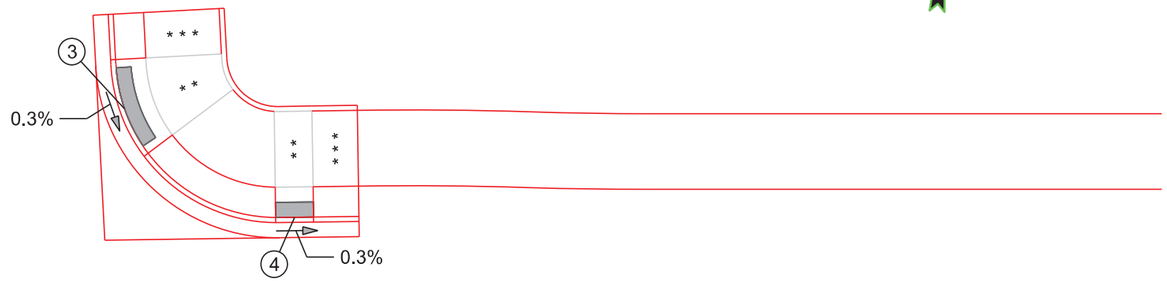
1 1011+72.29-33.31' L
Center Type 1
Curb Ramp

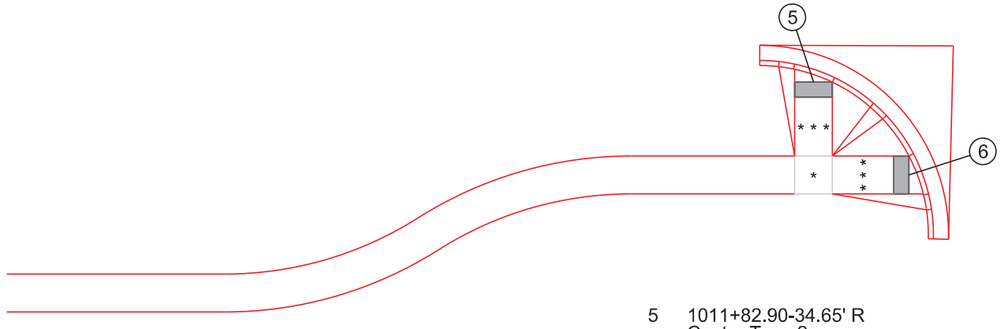
2 1012+06.88-48.00' L
Center Type 2
Curb Ramp

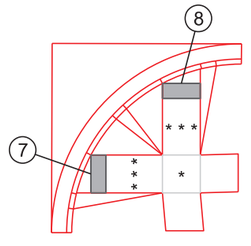
3 1012+53.55-47.62' L
Center Type 3
Curb Ramp

4 1012+75.99-33.31' L
Center Type 3
Curb Ramp









North Sanborn Blvd.

5 1011+82.90-34.65' R
Center Type 2
Curb Ramp

6 1011+95.50-46.90' R
Center Type 2
Curb Ramp

7 1012+66.01-46.90' R
Center Type 2
Curb Ramp

8 1012+77.95-34.96' R
Center Type 2
Curb Ramp

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:20
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CURB RAMP LAYOUT

FOR BIDDING PURPOSES ONLY

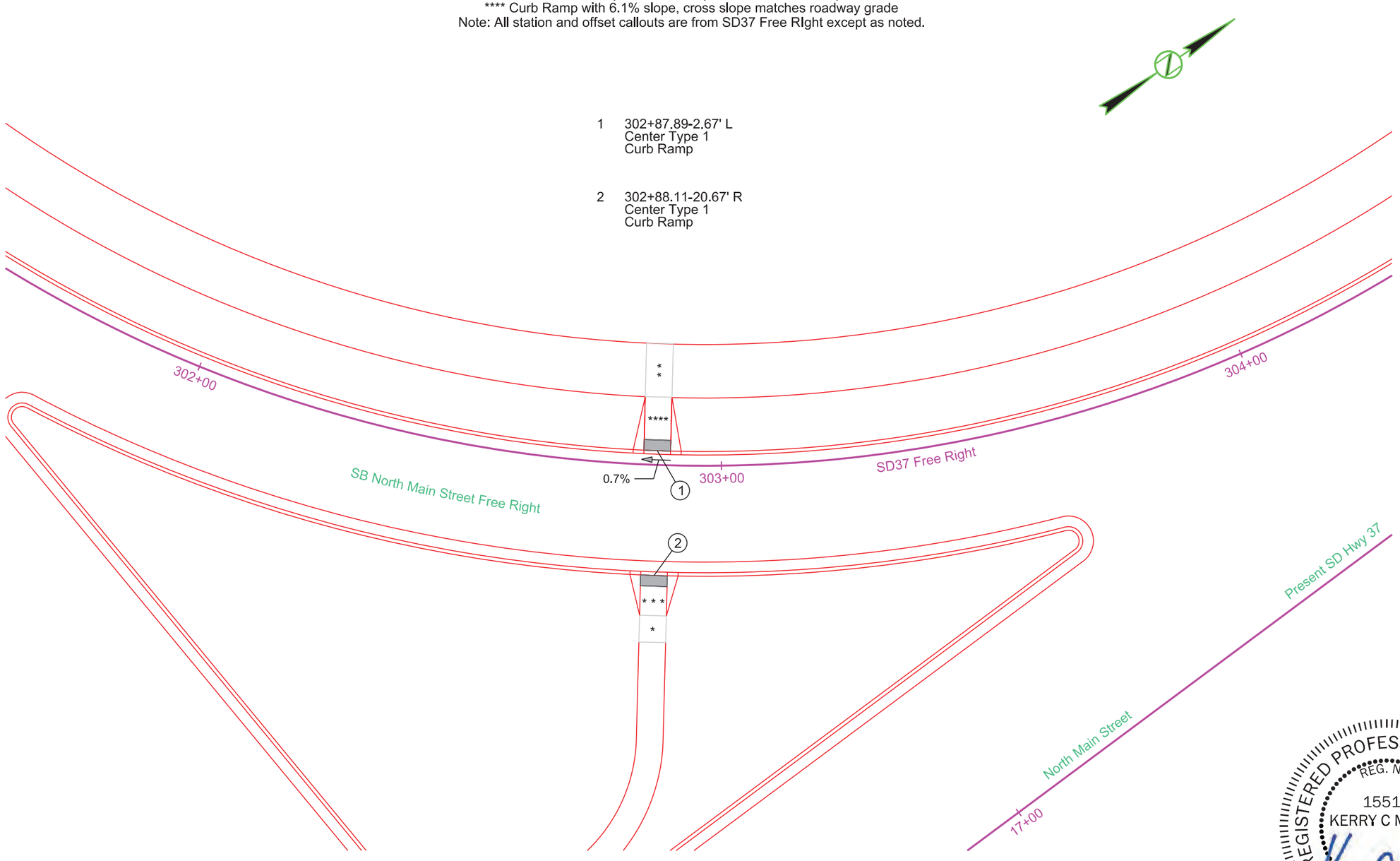
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B183	B245

Plotting Date: 8/18/2023

* Turning Space with 1.5% slope
** Turning Space with 1.5% cross slope, longitudinal slope matches roadway grade
*** Curb Ramp with 7.5% slope and 1.5% cross slope
**** Curb Ramp with 6.1% slope, cross slope matches roadway grade
Note: All station and offset callouts are from SD37 Free RIght except as noted.

1 302+87.89-2.67' L
Center Type 1
Curb Ramp

2 302+88.11-20.67' R
Center Type 1
Curb Ramp



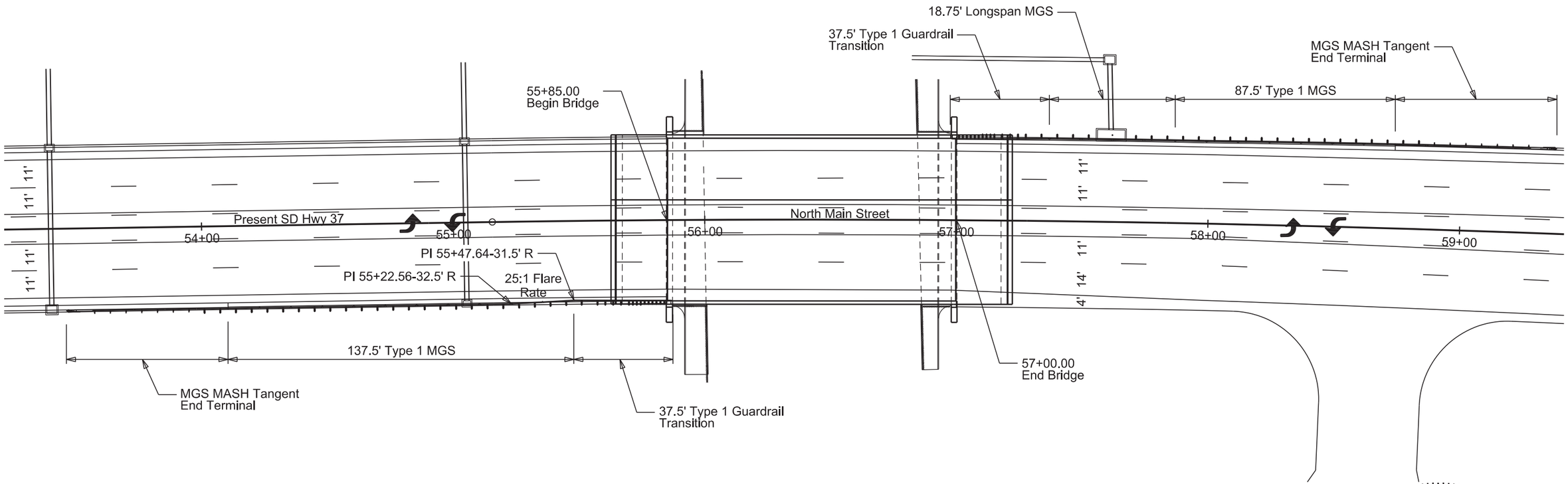
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SOUTH DAKOTA
8-18-2023

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Plotted From - Ryan.Brown1@jacobs.com
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GUARDRAIL LAYOUT FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B184	B245

Plotting Date: 8/18/2023



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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

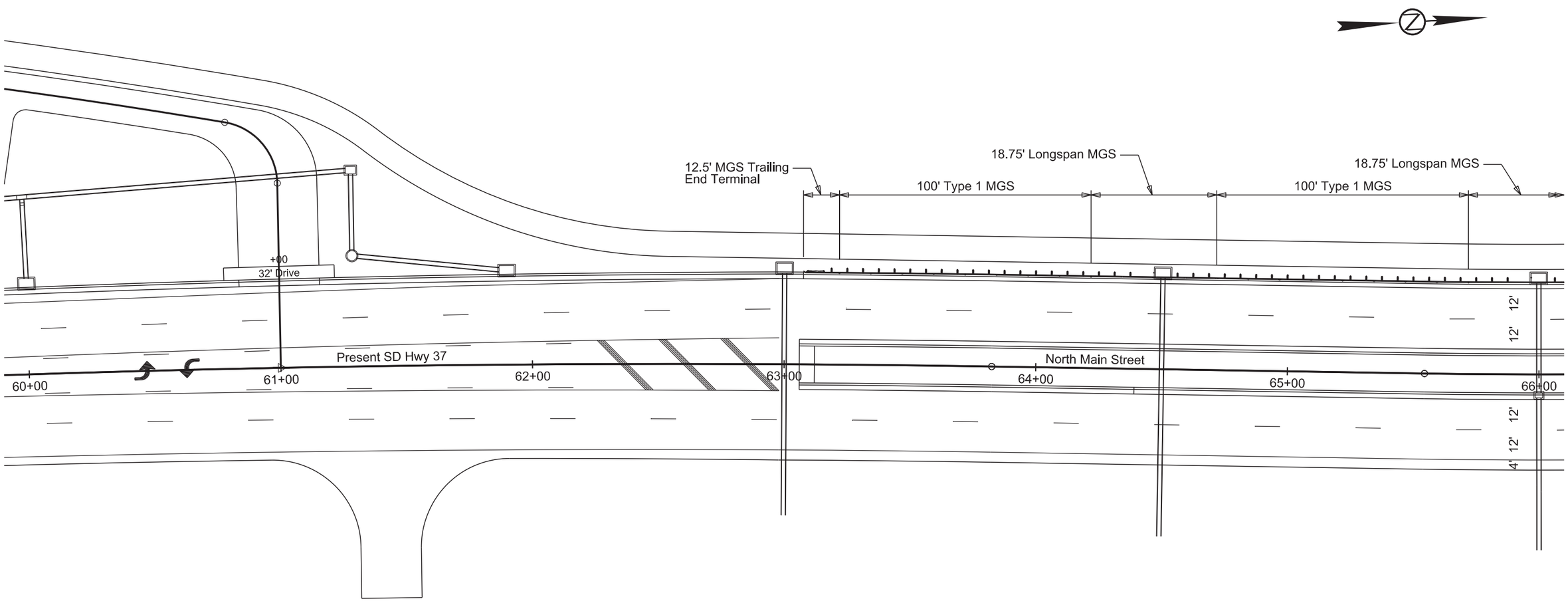
Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\053gr.dgn

GUARDRAIL LAYOUT FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B185	B245

Plotting Date: 8/18/2023



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REG. NO.
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SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

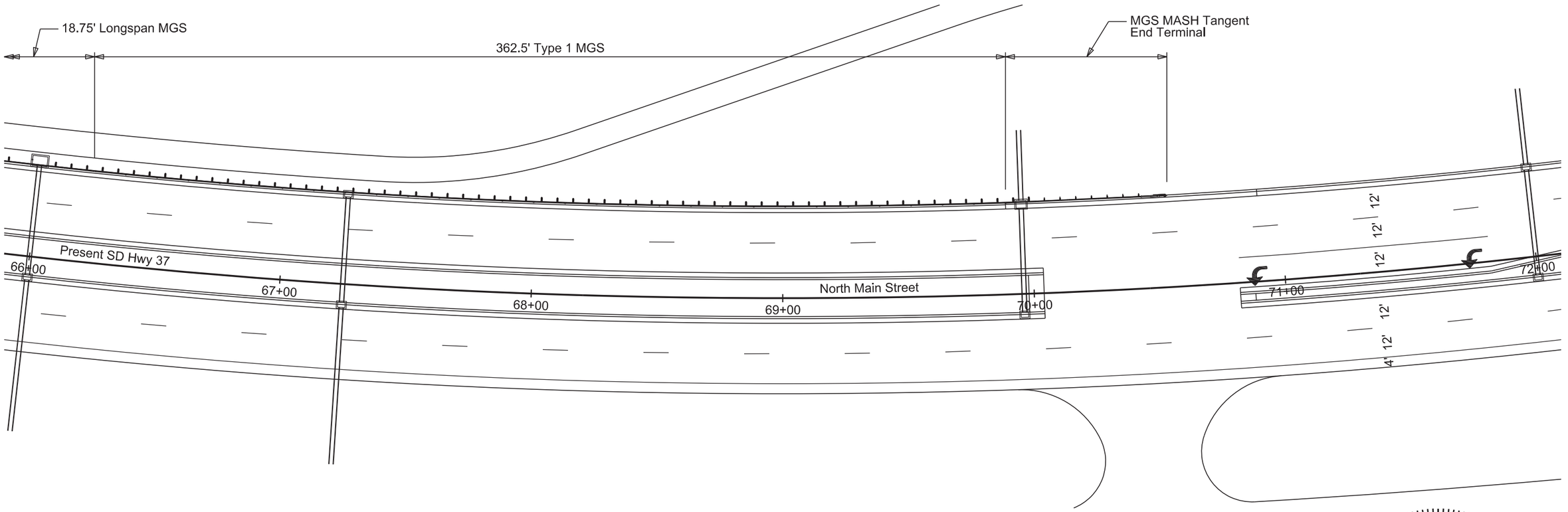
Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\060gr.dgn

GUARDRAIL LAYOUT FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B186	B245

Plotting Date: 8/18/2023



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KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

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File - ...\Section B\066gr.dgn

INTERSECTION LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B187	B245

Plotting Date: 8/18/2023

1 10+32.51-104.05' L
500' Rad Point

2 1022+11.69-30.00' R (SD37)
PC
Elev 1301.12

3 1022+51.78-31.61' R (SD37)
PCC
Elev 1301.43

4 14+72.33-91.42' L
60' Rad Point

5 14+77.14-31.61' L
PCC
Elev 1302.80

6 1018+07.43-104.45' R (SD37)
500' Rad Point

7 14+37.05-30.00' L
PT
Elev 1303.01

8 9200+61.94-53.43' R (xr15)
32' Rad Point

9 15+15.23-30.00' R
PC
Elev 1303.01

10 9200+53.33-22.60' R (xr15)
PCC
Elev 1302.66

11 14+25.68-87.11' R
125' Rad Point

12 9200+86.95-18.00' R (xr15)
PT
Elev 1301.71

13 9200+63.94-50.00' L (xr15)
32' Rad Point

14 9200+63.94-18.00' L (xr15)
PC
Elev 1302.13

15 16+13.77-32.26' R
PCC
Elev 1302.66

16 9201+80.58-67.88' L (xr15)
150' Rad Point

17 16+36.67-30.50' R
PT
Elev 1302.62

18 1023+06.94-37.67' L (SD37)
7.66' Rad Point

19 16+04.33-30.50' L
PC
Elev 1302.50

20 1023+06.94-30.00' L (SD37)
PT
Elev 1302.37

A 15+37.00-30.00' L
Begin joint line transition
Elev 1302.68

B 15+37.00-18.00' L
Begin joint line transition
Elev 1302.95

C 15+37.00-6.00' L
Begin joint line transition
Elev 1303.19

D 15+37.00-6.00' R
Begin joint line transition
Elev 1303.43

E 15+37.00-18.00' R
Begin joint line transition
Elev 1303.19

F 15+37.00-30.00' R
Begin joint line transition
Elev 1302.95

G 15+97.20-30.50' L
End joint line transition
Elev 1302.52

H 15+97.20-16.50' L
End joint line transition
Elev 1302.80

I 15+97.20-5.50' L
End joint line transition
Elev 1303.02

J 15+97.20-5.50' R
End joint line transition
Elev 1303.24

K 15+97.20-16.50' R
End joint line transition
Elev 1303.02

L 15+97.20-30.50' R
End joint line transition
Elev 1302.74

M 1023+13.71-18.00' L (SD37)
Begin joint line transition
Elev 1302.56

N 1023+13.19-6.00' L (SD37)
Begin joint line transition
Elev 1302.60

O 1023+12.67-6.00' R (SD37)
Begin joint line transition
Elev 1302.63

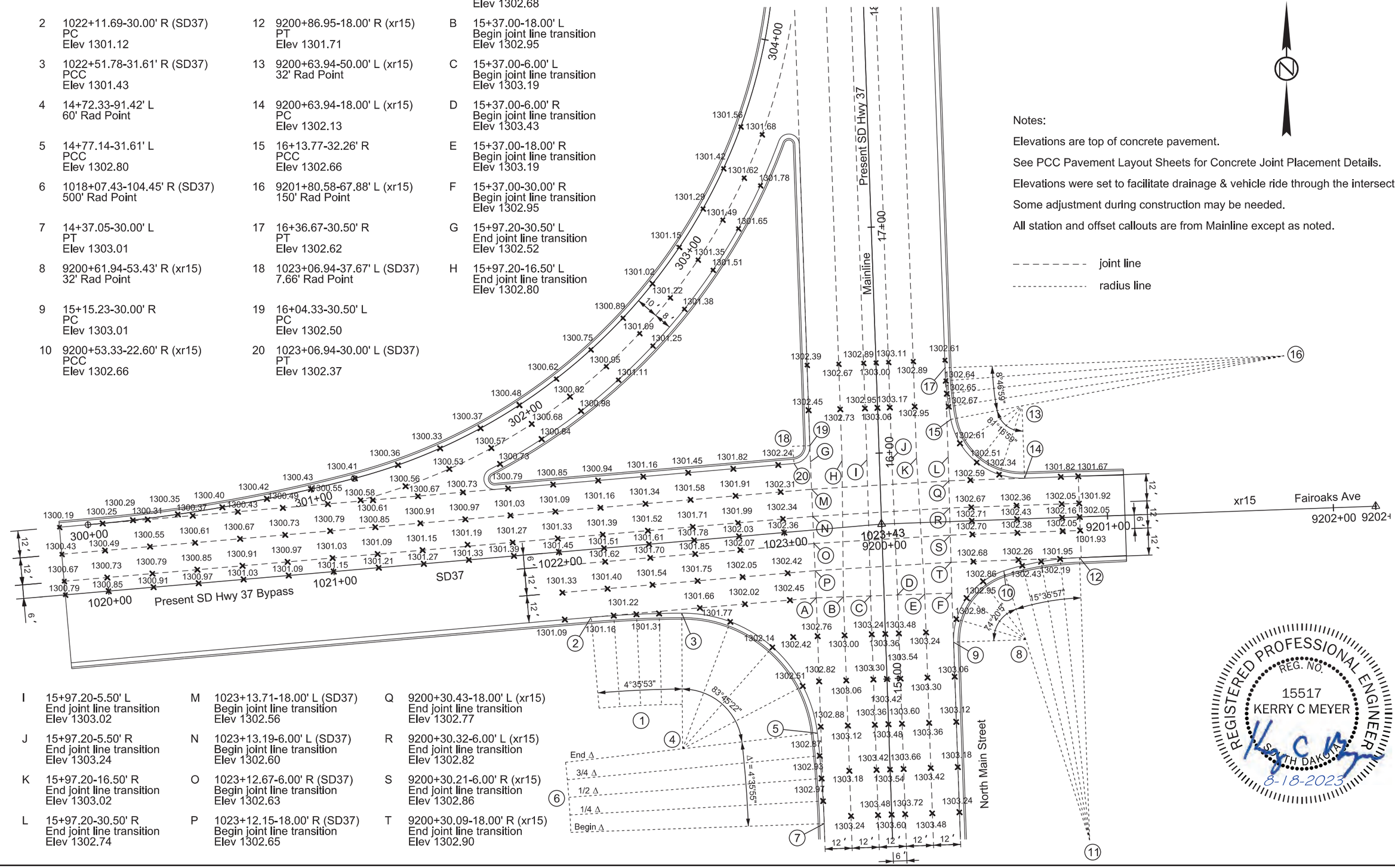
P 1023+12.15-18.00' R (SD37)
Begin joint line transition
Elev 1302.65

Q 9200+30.43-18.00' L (xr15)
End joint line transition
Elev 1302.77

R 9200+30.32-6.00' L (xr15)
End joint line transition
Elev 1302.82

S 9200+30.21-6.00' R (xr15)
End joint line transition
Elev 1302.86

T 9200+30.09-18.00' R (xr15)
End joint line transition
Elev 1302.90



Notes:

Elevations are top of concrete pavement.

See PCC Pavement Layout Sheets for Concrete Joint Placement Details.

Elevations were set to facilitate drainage & vehicle ride through the intersection.

Some adjustment during construction may be needed.

All station and offset callouts are from Mainline except as noted.

joint line

radius line

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@iacobs.com

File - ...\Section B\0114int.dgn

INTERSECTION LAYOUT

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B188	B245

Plotting Date: 8/18/2023

Plot Scale - 1:40

Present SD Hwy 37 Bypass

SD37

Present SD Hwy 37

North Main Street

Mainline

Mainline

1021+00

1022+00

1023+00

1023+43

920D+00

920

301+00

302+00

303+00

304+00

305+00

305+94

15+00

16+00

17+00

18+00

19+00

20+00

21+00

8'

10'

14'

11'

5.5'

1301.15' 1301.29' 1301.42' 1301.56' 1301.65' 1301.66' 1301.59' 1301.50' 1301.39' 1301.25' 1301.09' 1300.90' 1300.69' 1300.45' 1300.19' 1299.95' 1299.64' 1299.31' 1298.95'

1301.35' 1301.51' 1301.49' 1301.62' 1301.68' 1301.77' 1301.86'

1301.65' 1301.78'

1302.27' 1302.21' 1302.15' 1302.09' 1302.03' 1301.95' 1301.84' 1301.72' 1301.57' 1301.41' 1301.22' 1301.01' 1300.78' 1300.53' 1300.25'

1302.55' 1302.49' 1302.43' 1302.37' 1302.31' 1302.23' 1302.12' 1302.00' 1301.85' 1301.69' 1301.50' 1301.29' 1301.06' 1300.81' 1300.53' 1300.24' 1299.92' 1299.59' 1299.23'

1302.77' 1302.71' 1302.65' 1302.59' 1302.53' 1302.45' 1302.34' 1302.22' 1302.07' 1301.91' 1301.72' 1301.51' 1301.28' 1301.03' 1300.75' 1300.46' 1300.14' 1299.81' 1299.45'

1302.88' 1302.82' 1302.76' 1302.70' 1302.64' 1302.56' 1302.45' 1302.33' 1302.18' 1302.02' 1301.83' 1301.62' 1301.39' 1301.14' 1300.86' 1300.57' 1300.25' 1299.92' 1299.56'

Notes:

Elevations are top of concrete pavement.

See PCC Pavement Layout Sheets for Concrete Joint Placement Details.

Elevations were set to facilitate drainage & vehicle ride through the intersection.

Some adjustment during construction may be needed.

All station and offset callouts are from Mainline except as noted.

joint line

radius line

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plotted From - Ryan.Brown1@iacobs.com

File - ...\Section B\0114\nt_1.dgn

MISCELLANEOUS WORK

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B189	B245

Plotting Date: 8/18/2023

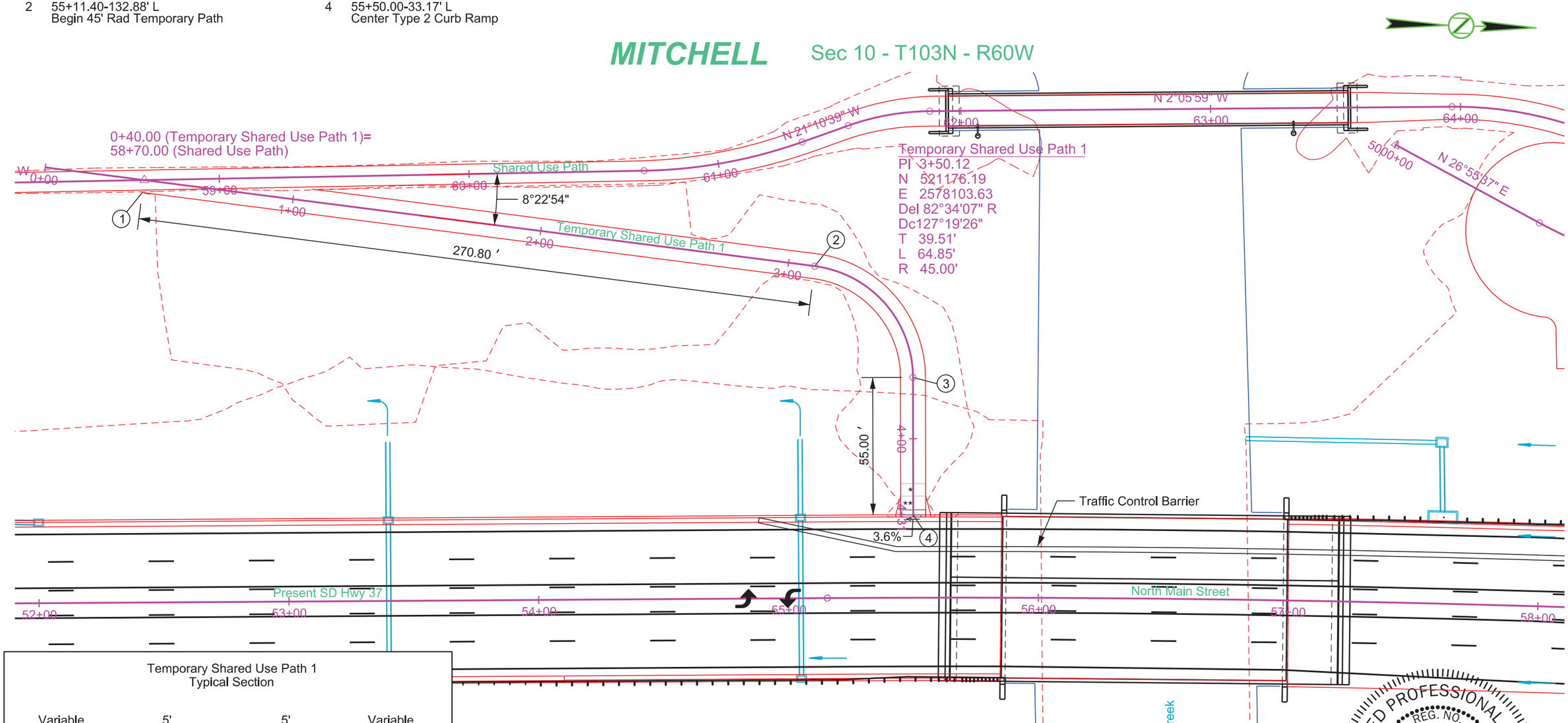
1 58+69.09-4.92' R (Shared Use Path)
Begin Temporary Path

2 55+11.40-132.88' L
Begin 45' Rad Temporary Path

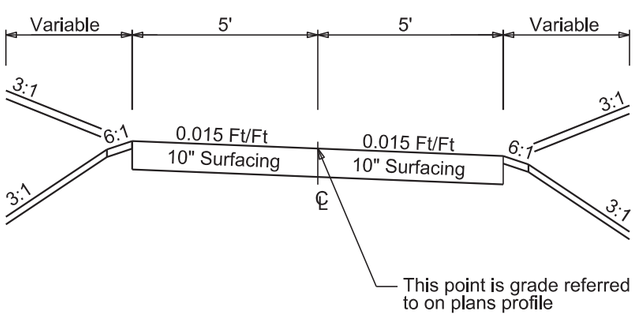
3 55+50.00-88.17' L
End 45' Rad Temporary Path

4 55+50.00-33.17' L
Center Type 2 Curb Ramp

* Turning Space with 1.5% slope, cross slope matches roadway grade
** Curb Ramp with 7.5% slope, cross slope matches roadway grade
Note: All station and offset callouts are from Mainline except as noted.



Temporary Shared Use Path 1
Typical Section



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8-18-2023

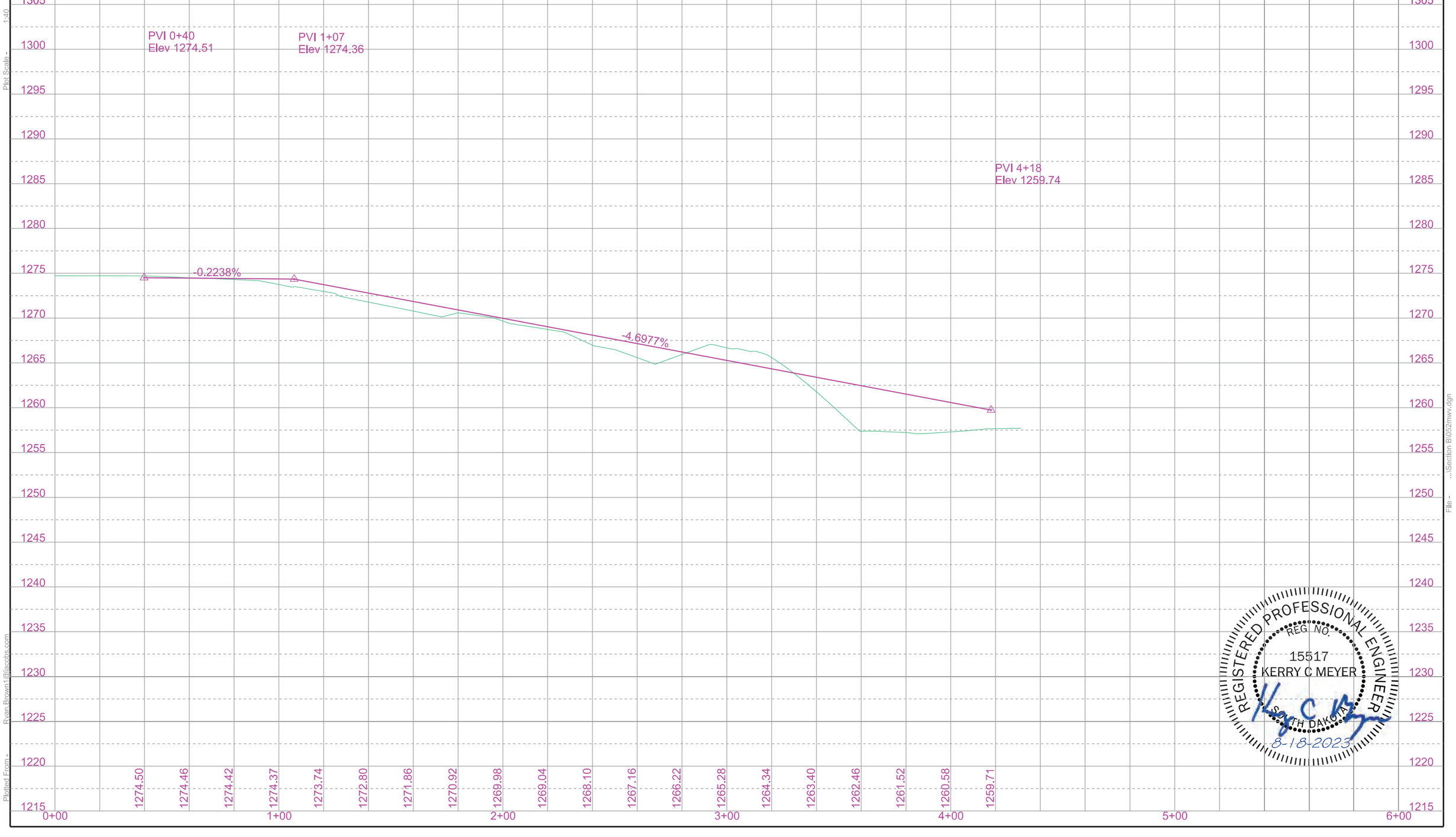
Plot Scale - 1:40
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\052mw.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B190	B245

FOR BIDDING PURPOSES ONLY

Plotting Date: 8/18/2023

MISCELLANEOUS WORK



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REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40

Plotted From - Ryan.Brown1@jacobs.com

File - ...\Section B\052mww.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B191	B245

Plotting Date: 8/18/2023

MISCELLANEOUS WORK

FOR BIDDING PURPOSES ONLY

1 59+50.00-34.23' L
Center Type 2 Curb Ramp

2 59+50.00-44.23' L
Begin 15' Rad Temporary Path

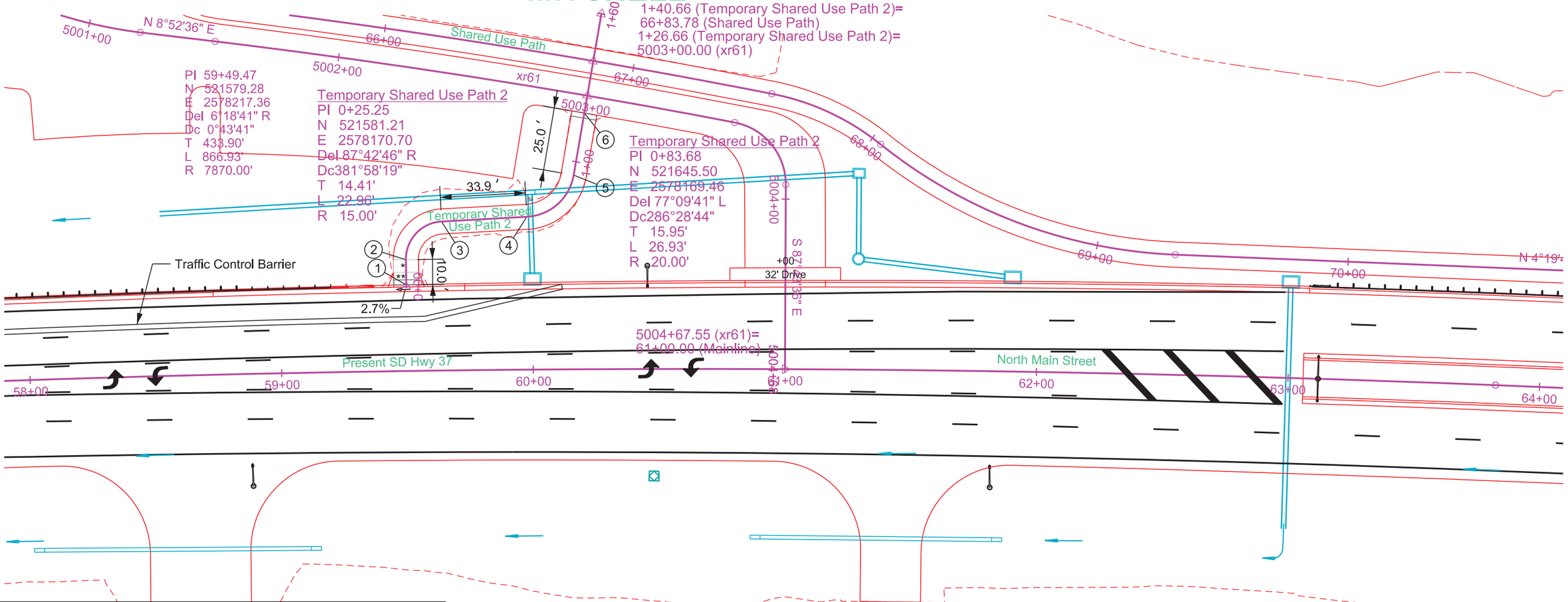
3 59+64.29-59.23' L
Begin 15' Rad Temporary Path

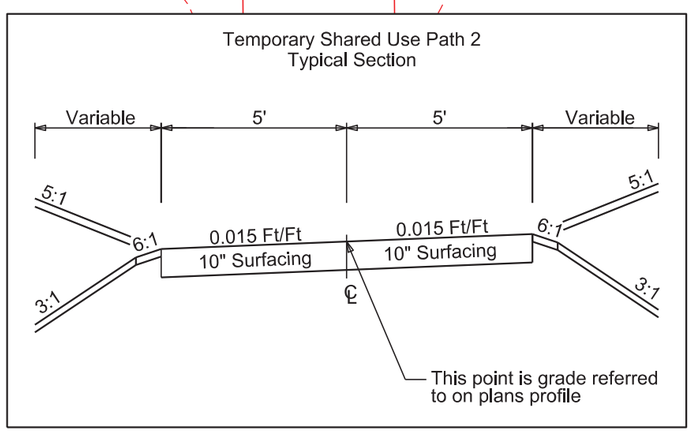
4 59+97.94-60.72' L
Begin 20' Rad Temporary Path

5 5003+00-32.00' R (xr61)
End 20' Rad Temporary Path

6 5003+00-7.00' R (xr61)
End Temporary Path

* Turning Space with 1.5% slope, cross slope matches roadway grade
** Curb Ramp with 7.5% slope, cross slope matches roadway grade
Note: All station and offset callouts are from Mainline except as noted.





REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

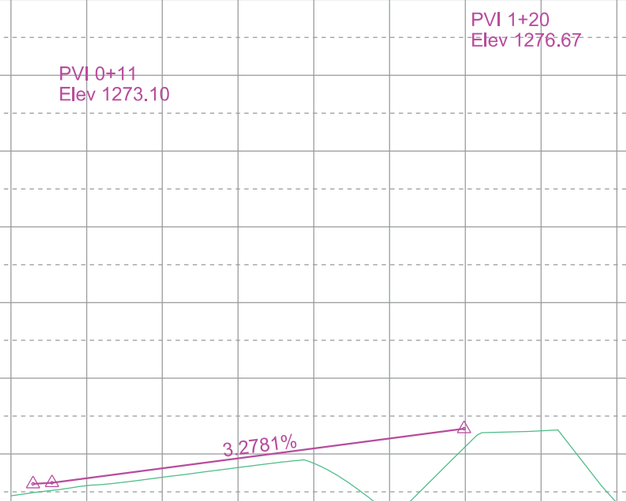
Plot Scale - 1:40
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B058mw.dgn

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B192	B245

Plotting Date: 8/18/2023

FOR BIDDING PURPOSES ONLY

MISCELLANEOUS WORK



REGISTERED PROFESSIONAL ENGINEER
REG. NO.
15517
KERRY C MEYER
SOUTH DAKOTA
8-18-2023

Plot Scale - 1:40
Plotted From - Ryan.Brown1@jacobs.com
File - ...\Section B\058mwv.dgn

The elevations shown in these plans are based on the National Geodetic Survey (NGS) North American Vertical Datum of 1988 (NAVD88).

STATE OF S.D.	PROJECT	SHEET NO.	TOTAL SHEETS
	NH-TA 0037(157)75	B193	B245

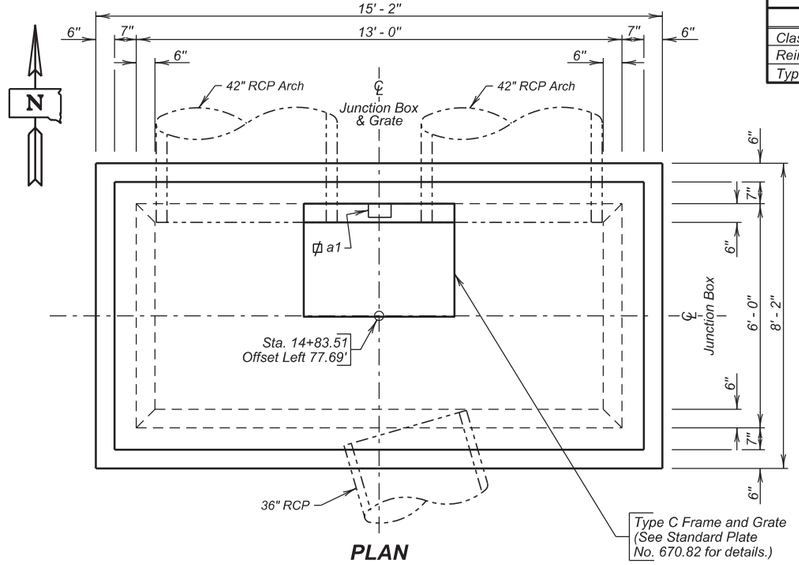
FOR BIDDING PURPOSES ONLY

ESTIMATED QUANTITIES

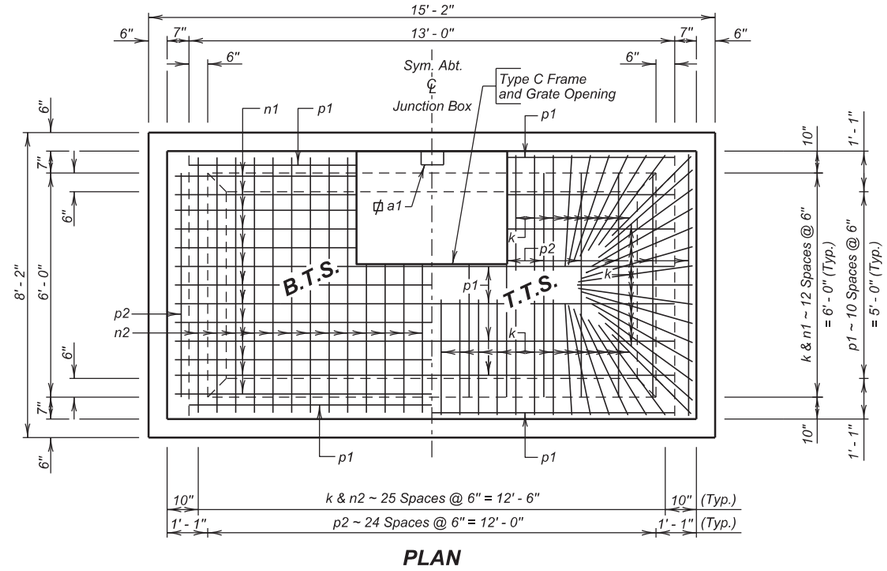
ITEM	UNIT	QUANTITY
Class M6 Concrete	Cu. Yd.	8.9
Reinforcing Steel	Lb.	3,441
Type C Frame and Grate	Each	1

LEGEND FOR PLACING RE-STEEL

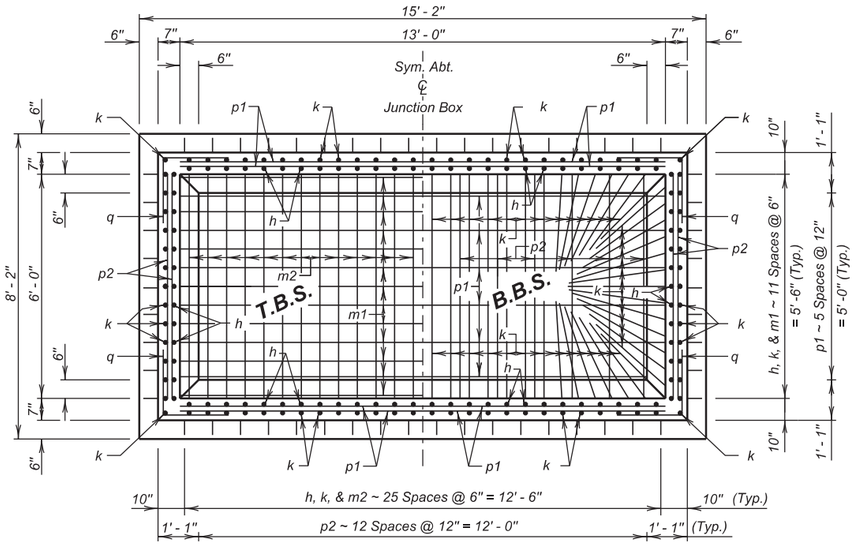
T.T.S. - Top of Top Slab
B.T.S. - Bottom of Top Slab
T.B.S. - Top of Bottom Slab
B.B.S. - Bottom of Bottom Slab
O.F.W. - Outside Face of Wall
I.F.W. - Inside Face of Wall



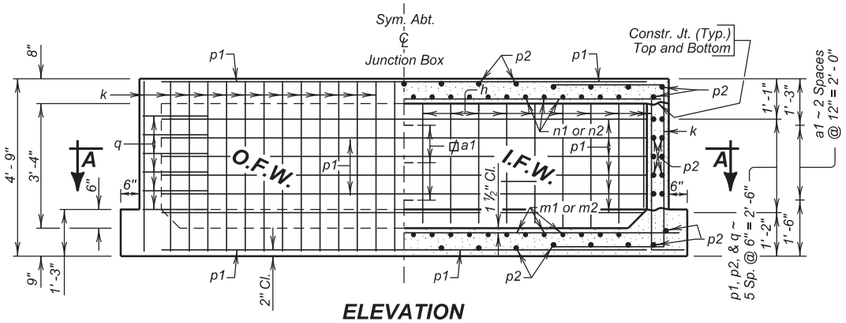
PLAN



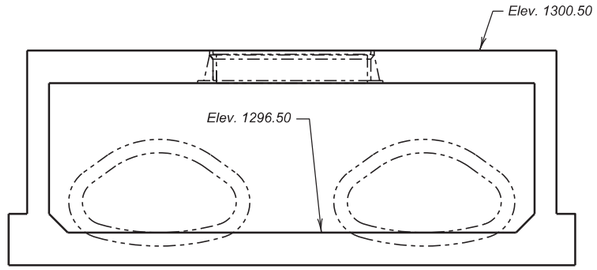
PLAN



SECTION A - A



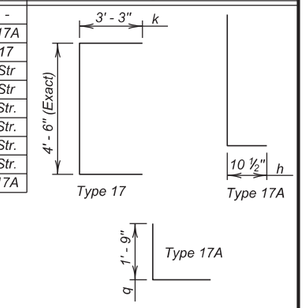
ELEVATION



DETAIL OF CONNECTION BETWEEN PRECAST PIPE SECTION, TYPE C FRAME AND GRATE, AND JUNCTION BOX

REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a1	3	-	-----	-	
h	80	6	5' - 1"	17A	
k	80	6	11' - 0"	17	
m1	12	6	14' - 9"	Str	
m2	26	6	7' - 9"	Str	
n1	13	6	13' - 9"	Str.	
n2	26	6	6' - 9"	Str.	
p1	45	6	13' - 0"	Str.	
p2	64	6	6' - 0"	Str.	
q	24	6	3' - 6"	17A	



NOTES:
All dimensions are out to out of bars.
Cast Iron Manhole Steps (R-1980-C) from Neenah Foundry or equivalent.

SPECIFICATIONS

1. Design Specifications: AASHTO LRFD Bridge Design Specifications, 2020 Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, 2015 Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES

1. Design Live Load: HL-93. No construction loading in excess of legal load was considered.
2. The design of the Junction Box is based on zero fill and zero distribution of live loads through fill.
3. Reinforcing steel will conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipes and Type C Frame Grate thru junction box walls and top slab.
4. Junction Box may be precast. If precast junction box details differ from the details as shown on this sheet, submit a checked design (done by a South Dakota registered P.E.) and shop plans to the Office of Bridge Design for approval.
5. Use 1 inch clear cover on all reinforcing steel unless otherwise noted.
6. All exposed edges will be chamfered ¾ inch.
7. The cost of furnishing and installing the manhole steps will be incidental to the contract unit price per Lb. for "Reinforcing Steel".
8. See Section B plans for pipe flowline elevation, locations and sizes,

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 9380
RODNEY D. RILEY
SOUTH DAKOTA
08-18-2023

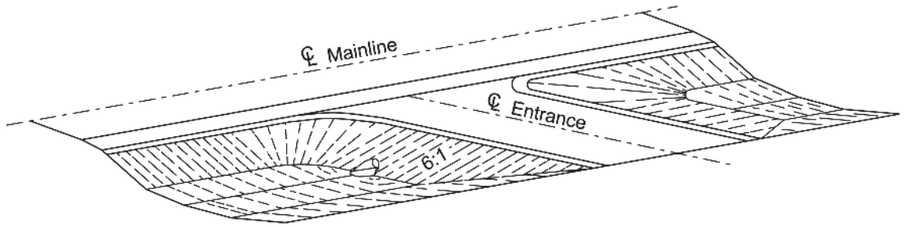
DETAILS
FOR
"SPECIAL" 13' X 6' JUNCTION BOX
STA. 14 + 83.51, 77.69' Left Offset NH-TA 0037(157)75
PCN 05UY

DAVISON COUNTY
S. D. DEPT. OF TRANSPORTATION
AUGUST 2023

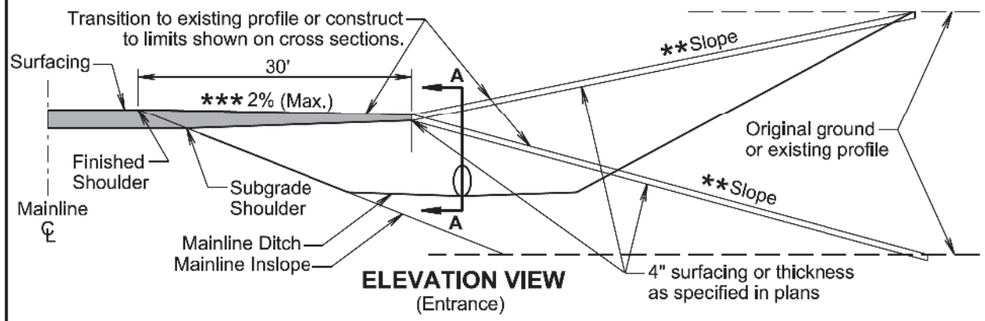
1 OF 1

PLANS BY : Jacobs

DESIGNED BY	CK. DES. BY	DRAFTED BY	
MJM	RR	MM	BRIDGE ENGINEER



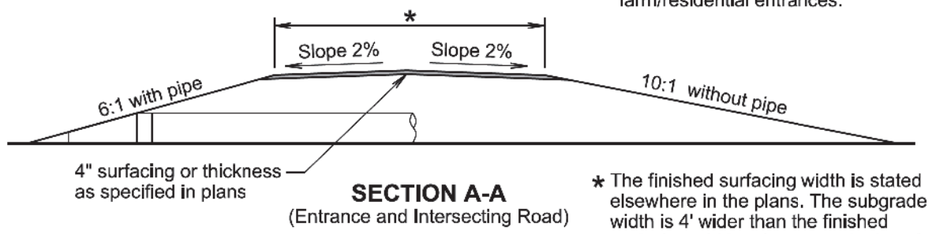
PERSPECTIVE OF ENTRANCE



ELEVATION VIEW
(Entrance)

*** 2% When on the inside of superelevation and 0% or flat when on outside of superelevation.

** Entrance maximum slope is typically 10:1 for field entrances and 15:1 for farm/residential entrances.



SECTION A-A
(Entrance and Intersecting Road)

* The finished surfacing width is stated elsewhere in the plans. The subgrade width is 4' wider than the finished surfacing width unless stated otherwise in the plans.

GENERAL NOTES:

The ditch section shown above in the perspective view is only for illustrative purpose.

The elevation view above is typical for either a ditch cut or fill section. Entrances that vary from above should be specified in the plans.

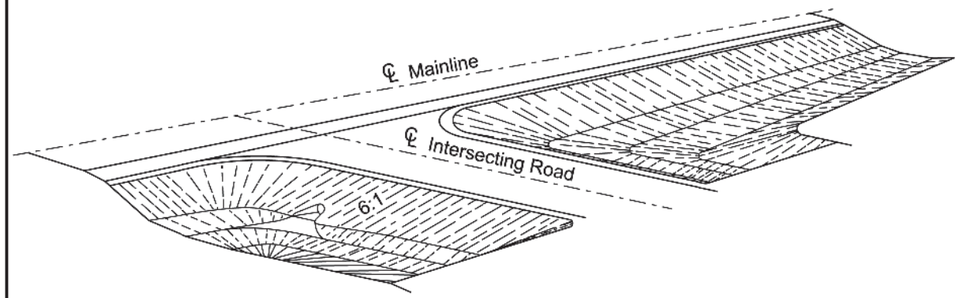
Pipe length will be adjusted if necessary during construction to obtain the 6:1 slope. For grading projects, the pipe length is estimated typically using a 4" thickness of surfacing directly over the subgrade above the pipe.

The transition area between the mainline inslope and the entrance or intersecting road inslope will be rounded to eliminate an abrupt transition.

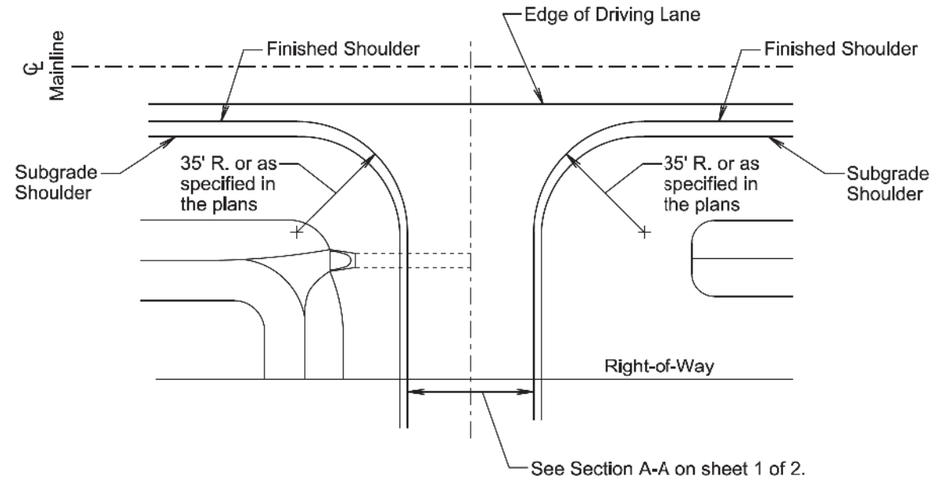
The turning radii will be 35' for intersecting roads and entrances unless stated otherwise in the plans.

November 19, 2021

Published Date: 2024	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 1 of 2



PERSPECTIVE OF INTERSECTING ROAD



PLAN VIEW

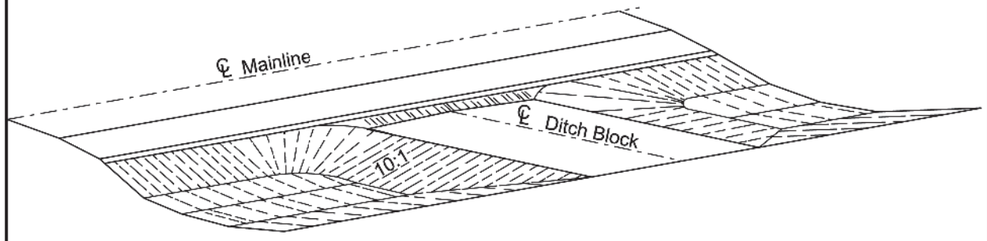
GENERAL NOTES:

The 6:1 or 10:1 intersecting road inslope will transition to the existing intersecting road inslope near the right-of-way or at a location as determined by the Engineer.

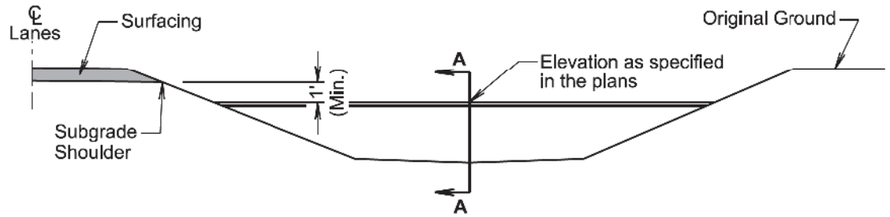
November 19, 2021

Published Date: 2024	SDDOT	INTERSECTING ROADS AND ENTRANCES	PLATE NUMBER 120.01
			Sheet 2 of 2

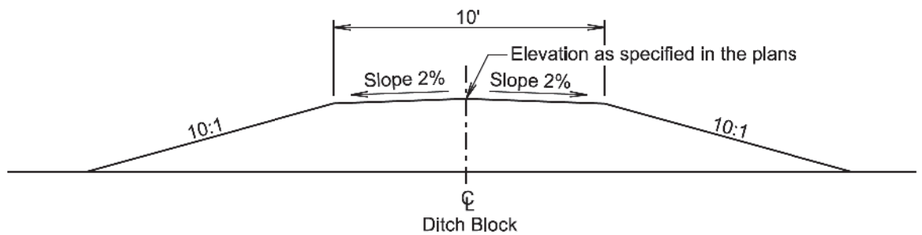
Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BI\StdPlateSectionB.dgn



PERSPECTIVE OF DITCH BLOCK



ELEVATION VIEW



SECTION A-A

GENERAL NOTES:

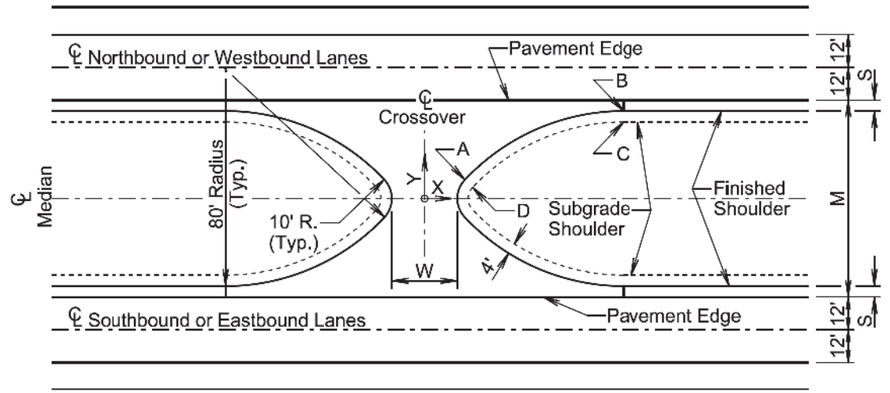
The ditch section shown above in the perspective and elevation view is only for illustrative purpose.

The inslopes of the ditch block will be 10:1 or as specified in the plans.

The transition area between the mainline inslope and the ditch block inslope will be rounded to eliminate an abrupt transition.

September 14, 2018

Published Date: 2024	SDDOT	DITCH BLOCK	PLATE NUMBER 120.02
			Sheet 1 of 1



PLAN VIEW

S = Finished Shoulder Width
M = Median Width
W = Finished Median Crossover Width

PUBLIC ACCESS MEDIAN CROSSOVER LAYOUT INFORMATION

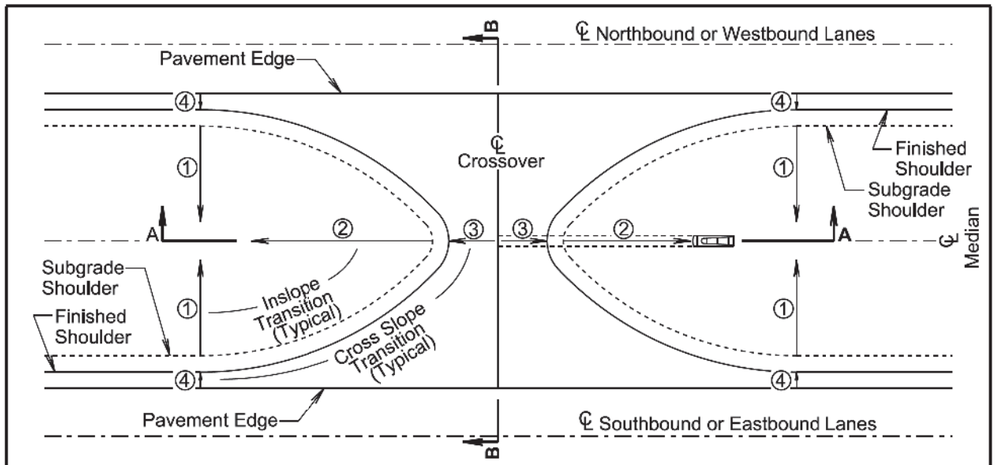
M	S	W	Point A		Point B		Point C		Point D	
(Ft)	(Ft)	(Ft)	X (Ft)	Y (Ft)	X (Ft)	Y (Ft)	X (Ft)	Y (Ft)	X (Ft)	Y (Ft)
60	4	24	15.7	7.7	66.5	26.0	66.5	22.0	18.2	4.7
60	4	40	23.7	7.7	74.5	26.0	74.5	22.0	26.2	4.7
60	6	24	16.0	8.0	64.0	24.0	64.0	20.0	18.4	4.8
60	6	40	24.0	8.0	72.0	24.0	72.0	20.0	26.4	4.8
66	4	24	15.2	7.3	70.0	29.0	70.0	25.0	17.9	4.4
66	4	40	23.2	7.3	78.0	29.0	78.0	25.0	25.9	4.4
66	6	24	15.5	7.6	67.7	27.0	67.7	23.0	18.1	4.6
66	6	40	23.5	7.6	75.7	27.0	75.7	23.0	26.1	4.6
72	4	24	14.8	6.9	73.0	32.0	73.0	28.0	17.6	4.1
72	4	40	22.8	6.9	81.0	32.0	81.0	28.0	25.6	4.1
72	6	24	15.0	7.1	71.0	30.0	71.0	26.0	17.8	4.3
72	6	40	23.0	7.1	79.0	30.0	79.0	26.0	25.8	4.3
80	4	24	14.2	6.3	76.4	36.0	76.4	32.0	17.3	3.8
80	4	40	22.2	6.3	84.4	36.0	84.4	32.0	25.3	3.8
80	6	24	14.5	6.6	74.8	34.0	74.8	30.0	17.5	4.0
80	6	40	22.5	6.6	82.8	34.0	82.8	30.0	25.5	4.0

The dimensions provided for "X" and "Y" begin from the intersection of the median centerline and the crossover centerline.

September 14, 2018

Published Date: 2024	SDDOT	PUBLIC ACCESS MEDIAN CROSSOVER	PLATE NUMBER 120.03
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



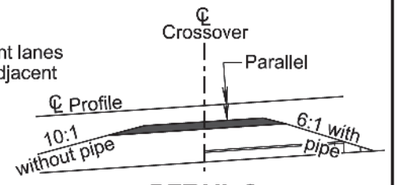
PLAN VIEW

① Inslope as specified on the typical sections or cross sections

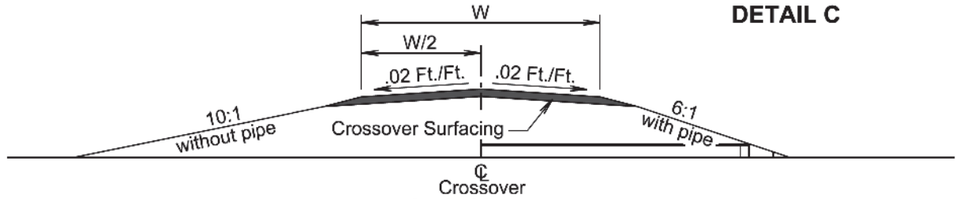
② 10:1 Inslope without pipe, 6:1 with pipe

③ Cross slope will be .02 Ft./Ft. when centerline profiles of adjacent lanes are at less than 2% grade. When the centerline profiles of the adjacent lanes are 2% and greater the cross slope will be parallel to the profile or as approved by the Engineer. (See Detail C)

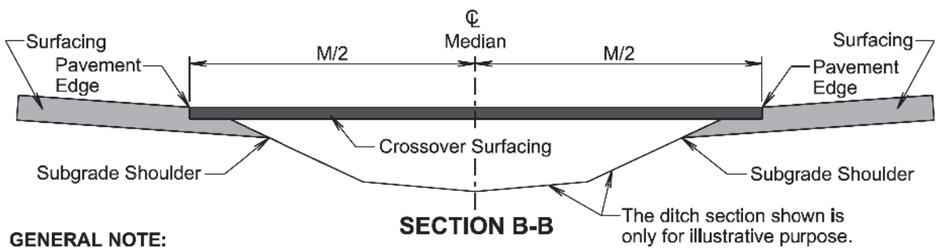
④ Cross slope as specified on the typical sections



DETAIL C



SECTION A-A



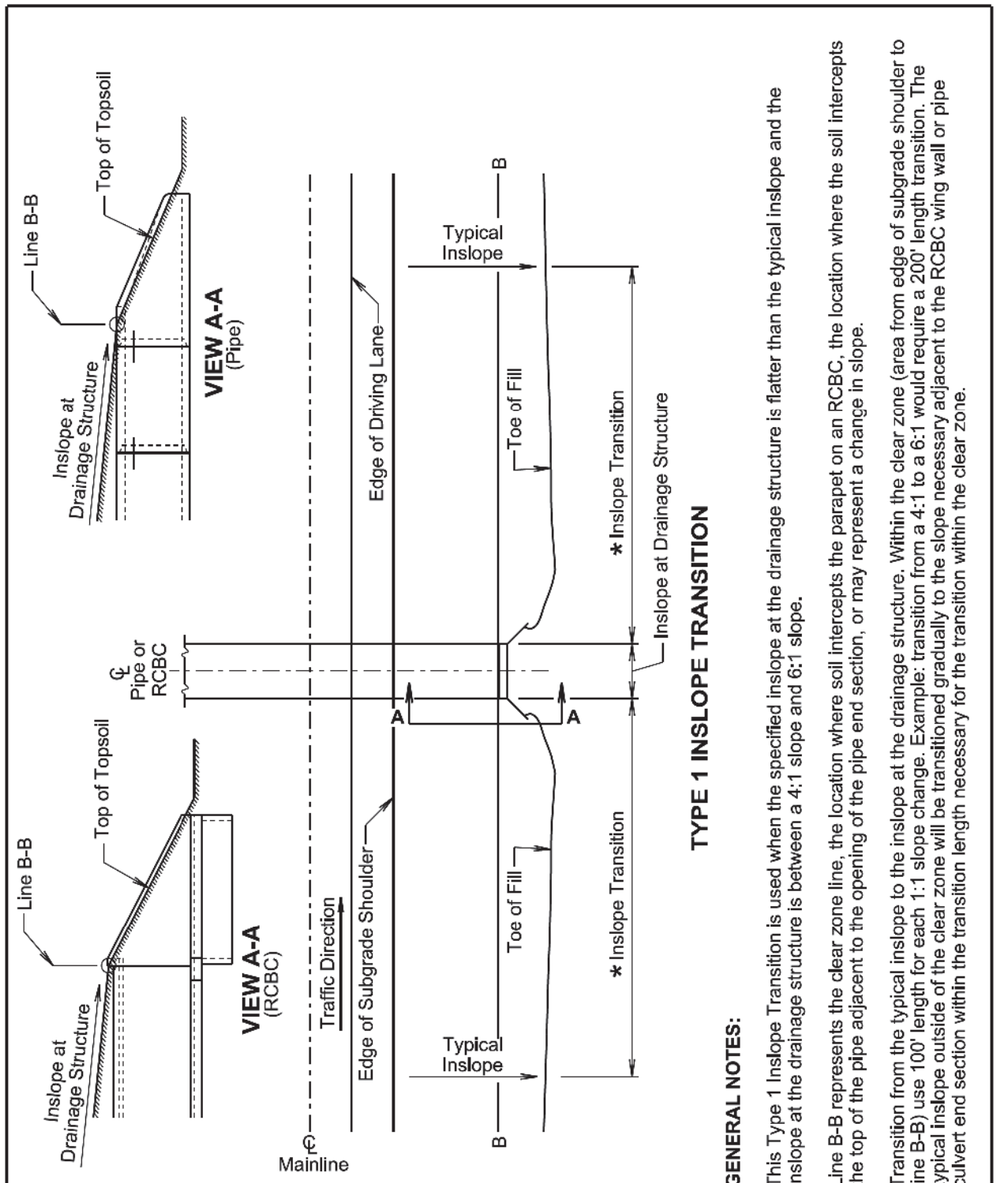
SECTION B-B

GENERAL NOTE:

The quantities of materials necessary for construction of the public access median crossover are as provided in the plans and will be paid for at their respective contract unit prices for the various materials used.

September 14, 2018

Published Date: 2024	SDDOT	PUBLIC ACCESS MEDIAN CROSSOVER	PLATE NUMBER 120.03
			Sheet 2 of 2



TYPE 1 INSLOPE TRANSITION

GENERAL NOTES:

This Type 1 Inslope Transition is used when the specified inslope at the drainage structure is flatter than the typical inslope and the inslope at the drainage structure is between a 4:1 slope and 6:1 slope.

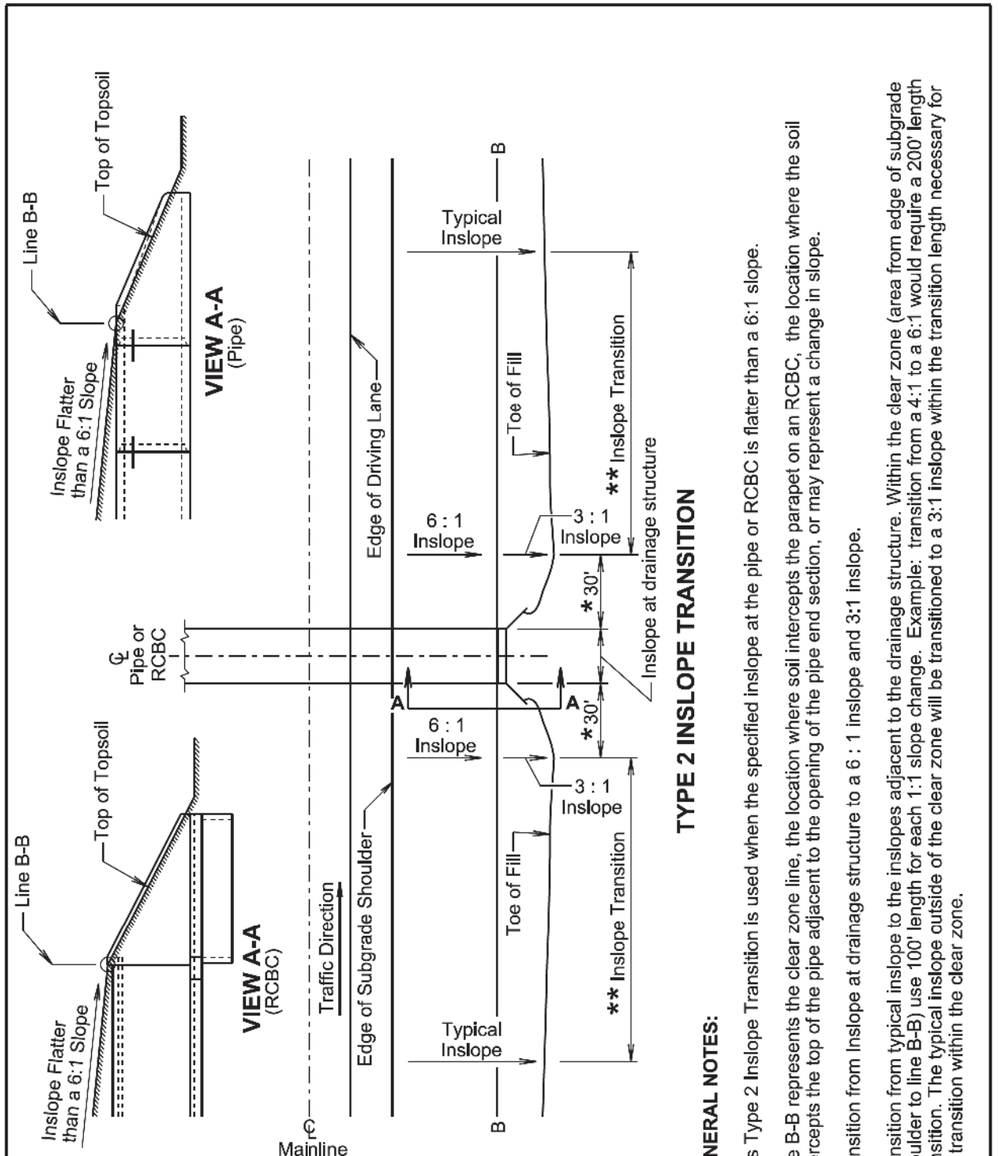
Line B-B represents the clear zone line, the location where soil intercepts the parapet on an RCBC, the location where the soil intercepts the top of the pipe adjacent to the opening of the pipe end section, or may represent a change in slope.

* Transition from the typical inslope to the inslope at the drainage structure. Within the clear zone (area from edge of subgrade shoulder to line B-B) use 100' length for each 1:1 slope change. Example: transition from a 4:1 to a 6:1 would require a 200' length transition. The typical inslope outside of the clear zone will be transitioned gradually to the slope necessary adjacent to the RCBC wing wall or pipe culvert end section within the transition length necessary for the transition within the clear zone.

September 14, 2018

Published Date: 2024	SDDOT	INSLOPE TRANSITIONS AT PIPE CULVERTS OR REINFORCED CONCRETE BOX CULVERTS	PLATE NUMBER 120.05
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



TYPE 2 INSLOPE TRANSITION

GENERAL NOTES:

This Type 2 Inslope Transition is used when the specified inslope at the pipe or RCBC is flatter than a 6:1 slope.

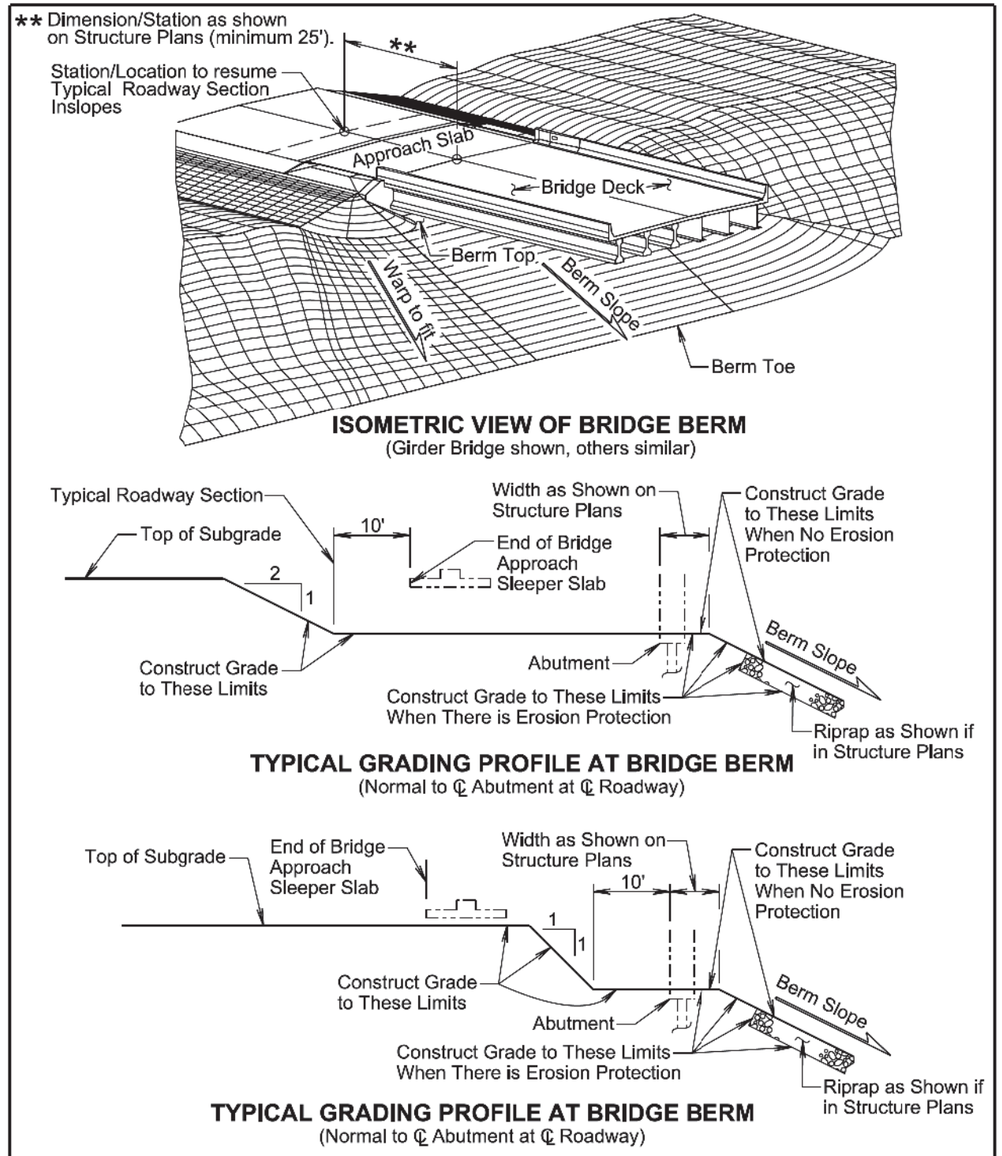
Line B-B represents the clear zone line, the location where soil intercepts the parapet on an RCBC, the location where the soil intercepts the top of the pipe adjacent to the opening of the pipe end section, or may represent a change in slope.

* Transition from Inslope at drainage structure to a 6 : 1 inslope and 3:1 inslope.

** Transition from typical inslope to the inslopes adjacent to the drainage structure. Within the clear zone (area from edge of subgrade shoulder to line B-B) use 100' length for each 1:1 slope change. Example: transition from a 4:1 to a 6:1 would require a 200' length transition. The typical inslope outside of the clear zone will be transitioned to a 3:1 inslope within the transition length necessary for the transition within the clear zone.

September 14, 2018

Published Date: 2024	SDDOT	INSLOPE TRANSITIONS AT PIPE CULVERTS OR REINFORCED CONCRETE BOX CULVERTS	PLATE NUMBER 120.05
			Sheet 2 of 2



ISOMETRIC VIEW OF BRIDGE BERM

(Girder Bridge shown, others similar)

TYPICAL GRADING PROFILE AT BRIDGE BERM

(Normal to ℄ Abutment at ℄ Roadway)

TYPICAL GRADING PROFILE AT BRIDGE BERM

(Normal to ℄ Abutment at ℄ Roadway)

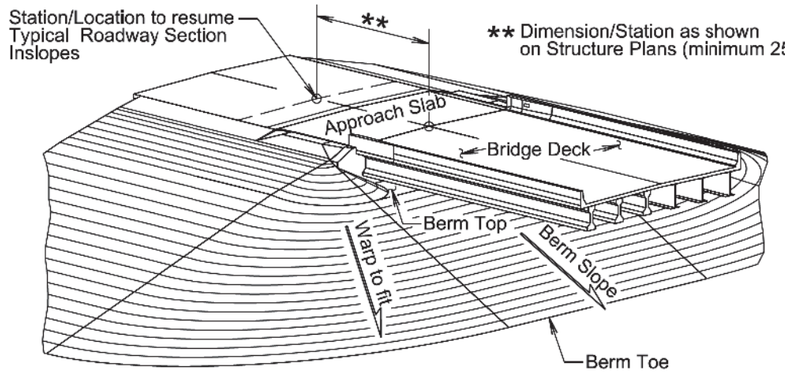
GENERAL NOTES:

The bridge berm elevation and slope will be as shown in the Structure Plans.
See Structure Plans to determine which grading profile to use.

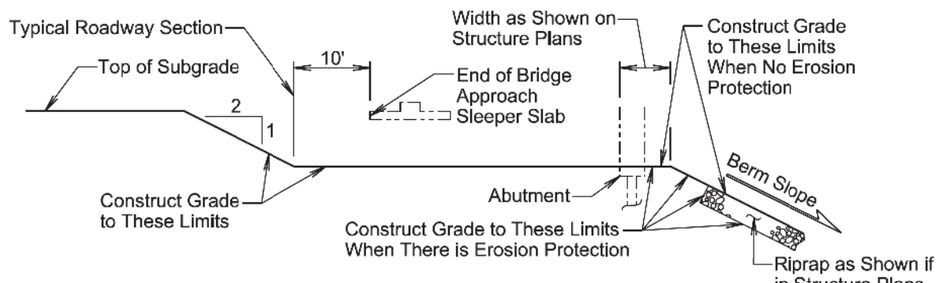
January 22, 2021

Published Date: 2024	SDDOT	BRIDGE BERM (NONPROJECTING EMBANKMENT)	PLATE NUMBER 120.10
			Sheet 1 of 1

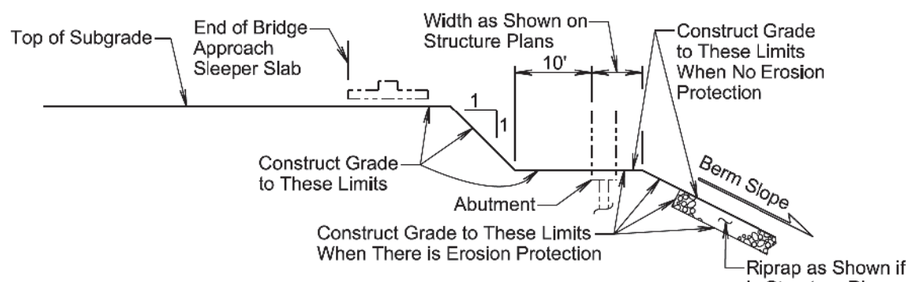
Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



ISOMETRIC VIEW OF BRIDGE BERM
(Girder Bridge shown, others similar)



TYPICAL GRADING PROFILE AT BRIDGE BERM
(Normal to ℄ Abutment at ℄ Roadway)



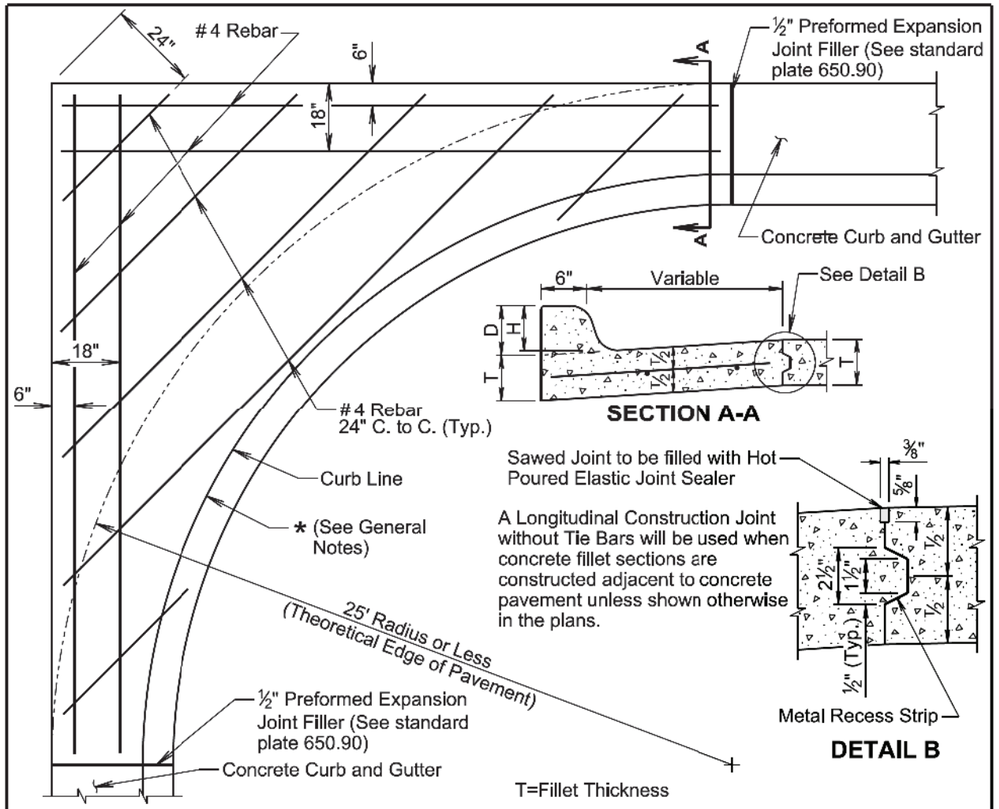
TYPICAL GRADING PROFILE AT BRIDGE BERM
(Normal to ℄ Abutment at ℄ Roadway)

GENERAL NOTES:

The bridge berm elevation and slope will be as shown in the Structure Plans. See Structure Plans to determine which grading profile to use.

January 22, 2021

Published Date: 2024	SDDOT	BRIDGE BERM (PROJECTING EMBANKMENT)	PLATE NUMBER 120.11
			Sheet 1 of 1



GENERAL NOTES:

* If a curb ramp is constructed adjacent to a PCC fillet section, the curb will need to be modified. Refer to the corresponding curb ramp standard plate or other special details in the plans for modification of the PCC fillet section.

Dimensions D, H, and T will conform to those shown on the appropriate curb and gutter standard plate.

All rebar will be in conformance with Sections 480 and 1010 of the Specifications. All rebar will have a minimum of 3 inches of clear cover.

Class M6 Concrete will be used in construction of the fillets.

The concrete curb will be monolithic with the concrete fillet. No separate payment for this curb will be made as the curb is considered a part of the fillet.

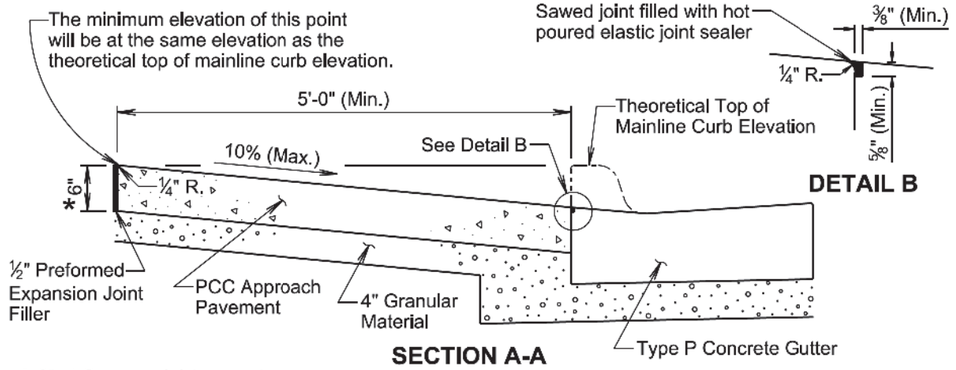
Joints will be constructed at 10-foot intervals except when fillets are constructed adjacent to PCC Pavement. If there is adjacent PCC Pavement the joints will be extended from edge of pavement through the fillet section as directed by the Engineer.

The cost for all materials, labor, and incidentals necessary to construct the PCC fillet section with curb and gutter will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item.

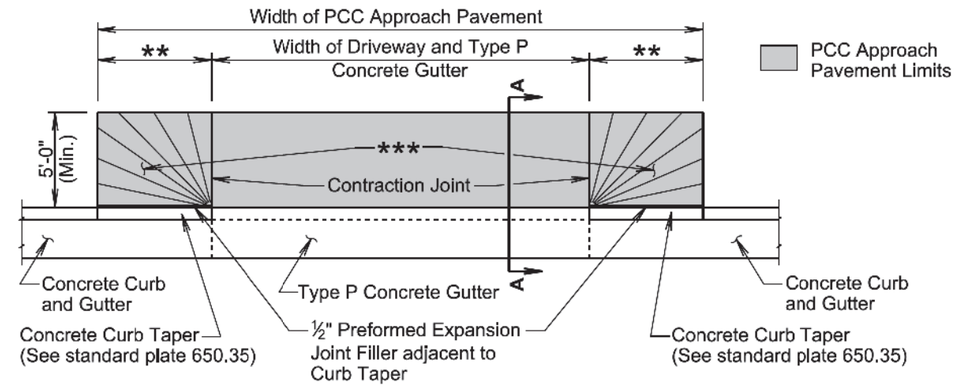
November 19, 2022

Published Date: 2024	SDDOT	PCC FILLET SECTION WITH TYPE B CURB AND GUTTER	PLATE NUMBER 380.30
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



* 8" at Commercial Approaches
** Width for 6" high curb is 6' (See standard plate 650.35)
*** Within these areas, the surface of the type A PCC approach pavement will be sloped transitionally as approved by the Engineer.



PLAN VIEW

GENERAL NOTES:

The concrete for the type A PCC approach pavement and adjacent driveway will comply with the requirements of the Specifications for class M6 concrete unless otherwise stated in the plans.

Contraction joints in the type A PCC approach pavement will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View will be spaced as follows:

One joint at the center of the approach for driveways 16 feet to 24 feet wide.
Two joints spaced at equal intervals for driveways greater than 24 feet to 40 feet wide.

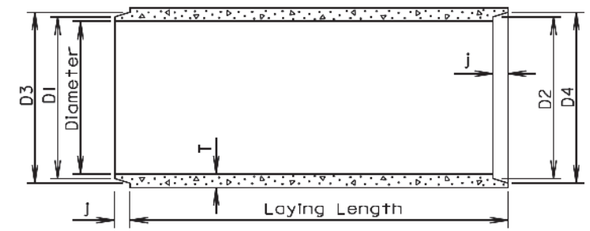
All costs for furnishing and placing the type A PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, excavation, and materials including the earthen backfill and granular material, will be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement contract item.

June 26, 2019

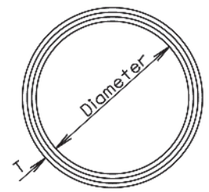
Published Date: 2024	SDDOT	*TYPE A PCC APPROACH PAVEMENT*	*PLATE NUMBER 380.40*
			Sheet 1 of 1

TOLERANCES IN DIMENSIONS

Diameter: ±1.5% for 24" Dia. or less and ±1% or 3/8" whichever is more for 27" Dia. or greater.
Diameters at joints: ± 3/16" for 30" Dia. or less and ± 1/4" for 36" or greater.
Length of joint (J): ± 1/4".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than 1/2".



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

Construction of R.C.P. shall conform to the requirements of Section 990 of the Specifications.

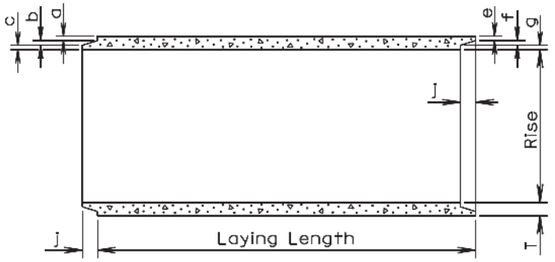
Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1¾	13¼	13⅝	13⅛	14¼
15	127	2¼	2	16½	16⅞	17¼	17⅝
18	168	2½	2¼	19⅝	20	20⅜	20¾
21	214	2¾	2½	22⅞	23¼	23¾	24⅛
24	265	3	2¾	26	26⅜	27	27⅜
27	322	3¼	3	29¼	29⅝	30¼	30⅝
30	384	3½	3¼	32⅜	32¾	33½	33⅞
36	524	4	3¾	38¾	39¼	40	40½
42	685	4½	4	45⅛	45⅝	46½	47
48	867	5	4½	51½	52	53	53½
54	1070	5½	4½	57⅞	58⅜	59⅜	59⅞
60	1296	6	5	64¼	64¾	66	66½
66	1542	6½	5½	70⅝	71⅛	72½	73
72	1810	7	6	77	77½	79	79½
78	2098	7½	6½	83⅜	83⅞	85⅝	86⅛
84	2410	8	7	89¾	90¼	92⅛	92⅝
90	2740	8½	7	95¾	96¼	98⅛	98⅝
96	2950	9	7	102⅛	102⅝	104½	105
102	3075	9½	7½	109	109½	111½	112
108	3870	10	7½	115½	116	118	118½

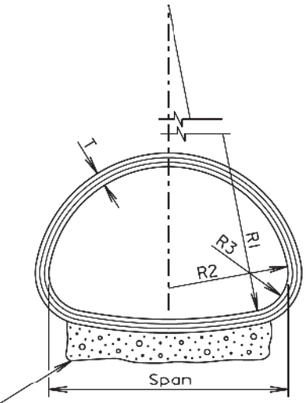
June 26, 2015

Published Date: 2024	SDDOT	*REINFORCED CONCRETE PIPE*	*PLATE NUMBER 450.01*
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



LONGITUDINAL SECTION



END VIEW

TOLERANCES IN DIMENSIONS

Radial dimensions at joints: ± 1/8" for 65" span or less and ± 1/4" for longer spans.
Rise and Span: ±2% of tabular values.
Length of Joint (J): ± 1/4".
Wall thickness (T): not less than design T by more than 5% or 3/16", whichever is greater.
Laying length: shall not underrun by more than 1/2".

Gravel Bedding Material shall be supplied for 102" to 169" spans. It shall be placed to a thickness of 6" (Min.) x 85% of the Span x Length of culvert and shall conform to the gradation requirements for gravel surfacing except material may be screened or may be plan provided material.

* Size (in.)	Approx. Wt./Ft. (lb.)	Rise (in.)	Span (in.)	T (in.)	a (in.)	b (in.)	c (in.)	j (in.)	e (in.)	f (in.)	g (in.)	R1 (in.)	R2 (in.)	R3 (in.)
18	170	13 1/2	22	2 1/2	1 3/8	3/8	3/4	2	1 1/8	3/8	1	27 1/2	13 3/4	5 1/4
24	320	18	28 1/2	3 1/2	1 5/8	1/2	1 3/8	3	1 3/8	1/2	1 5/8	40 11/16	14 3/4	4 5/8
30	450	22 1/2	36 1/4	4	1 13/16	5/8	1 9/16	3 1/2	1 9/16	5/8	1 13/16	51	18 3/4	6 1/8
36	600	26 5/8	43 3/4	4 1/2	2	3/4	1 3/4	4	1 3/4	3/4	2	62	22 1/2	6 1/2
42	740	31 5/16	51 1/8	4 1/2	2	3/4	1 3/4	4	1 3/4	3/4	2	73	26 1/4	7 3/4
48	890	36	58 1/2	5	2 1/4	3/4	2	5	2	3/4	2 1/4	84	30	8 7/8
54	1100	40	65	5 1/2	2 1/2	3/4	2 1/4	5	2 1/4	3/4	2 1/2	92 1/2	33 3/8	10
60	1400	45	73 1/2	6	3 5/16	3/4	1 15/16	5	2 3/4	3/4	2 1/2	105	37 1/2	11
72	1900	54	88	7	3 13/16	1	2 3/16	6	3 1/4	1	2 3/4	126	45	13 5/16
84	2500	62	102	8	4 1/8	1	2 7/8	6	3 1/2	1	3 1/2	162 1/2	52	14 1/2
96	3300	78	122 3/8	9	4 1/2	1	3 1/2	7	4	1	4	218	62	20
108	4200	88	138 1/2	10	5	1	4	7	4 1/2	1	4 1/2	269	70	22
120	5100	96 7/8	154	11	5 1/2	1	4 1/2	7	5	1	5	301 3/8	78	24
132	5100	106 1/2	168 3/4	10		1	4	7	4 1/2	1	4 1/2	329	85 5/8	26 7/8

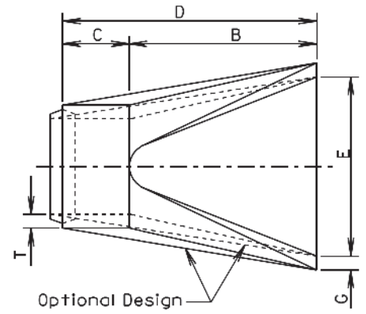
* Equivalent Diameter of Circular R. C. P.

GENERAL NOTES:

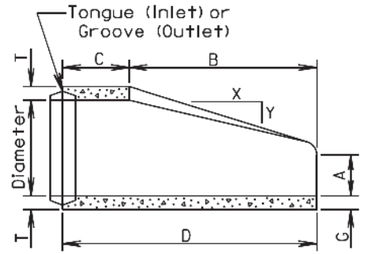
Construction of R.C.P. Arch shall conform to the requirements of Section 990 of the Specifications. Not more than 2 four-foot sections shall be permitted near the ends of any culvert. Four-foot lengths shall be used only to secure the required length of culvert.

June 26, 2015

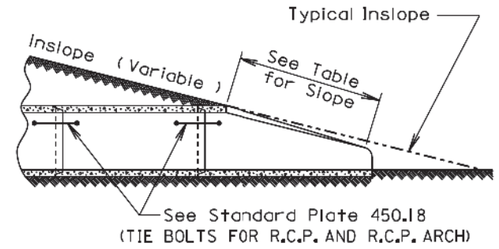
Published Date: 2024	SDDOT	REINFORCED CONCRETE PIPE ARCH	PLATE NUMBER 450.02
			Sheet 1 of 1



TOP VIEW



LONGITUDINAL SECTION

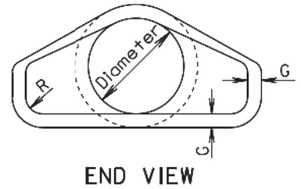


SLOPE DETAIL

GENERAL NOTES:

Lengths of concrete pipe shown on plan sheets are between flared ends only.

Construction of R.C.P. Flared End shall conform to the requirements of Section 990 of the Specifications.



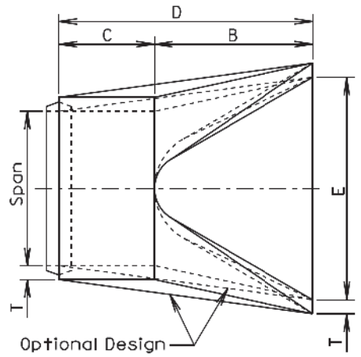
END VIEW

Dia. (in.)	Approx. Wt. of Section (lbs.)	Approx. Slope (X to Y)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	G (in.)	R (in.)
12	530	2.4:1	2	4	24	48 7/8	72 7/8	24	2	1 1/2
15	740	2.4:1	2 1/4	6	27	46	73	30	2 1/4	1 1/2
18	990	2.3:1	2 1/2	9	27	46	73	36	2 1/2	1 1/2
21	1280	2.4:1	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	1 1/2
24	1520	2.5:1	3	9 1/2	43 1/2	30	73 1/2	48	3	1 1/2
27	1930	2.5:1	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	1 1/2
30	2190	2.5:1	3 1/2	12	54	19 3/4	73 3/4	60	3 1/2	1 1/2
36	4100	2.5:1	4	15	63	34 3/4	97 3/4	72	4	1 1/2
42	5380	2.5:1	4 1/2	21	63	35	98	78	4 1/2	1 1/2
48	6550	2.5:1	5	24	72	26	98	84	5	1 1/2
54	8240	2:1	5 1/2	27	65	33 1/4	98 1/4	90	5 1/2	1 1/2
60	8730	1.9:1	6	35	60	39	99	96	5	1 1/2
66	10710	1.7:1	6 1/2	30	72	27	99	102	5 1/2	1 1/2
72	12520	1.8:1	7	36	78	21	99	108	6	1 1/2
78	14770	1.8:1	7 1/2	36	90	21	111	114	6 1/2	1 1/2
84	18160	1.6:1	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2
90	20900	1.5:1	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	6

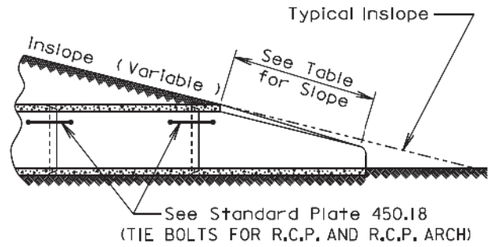
June 26, 2015

Published Date: 2024	SDDOT	R. C. P. FLARED ENDS	PLATE NUMBER 450.10
			Sheet 1 of 1

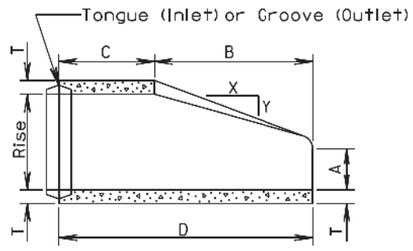
Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



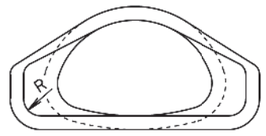
TOP VIEW



SLOPE DETAIL



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

Lengths of concrete pipe shown on plan sheets are between flared ends only.

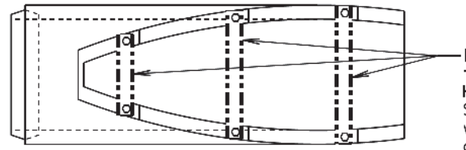
Construction of R.C.P. Arch Flared End shall conform to the requirements of Section 990 of the Specifications.

* Size (in.)	Approximate Weight of Section (lbs.)	Rise (in.)	Span (in.)	Slope (X:Y)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	R (in.)
18	1100	13 1/2	22	3:1	2 1/2	7	27	45	72	36	2
24	1750	18	28 1/2	3:1	3 1/2	8 1/2	39	33	72	48	3
30	3300	22 1/2	36 1/4	3:1	4	9 1/2	50	46	96	60	3
36	4350	26 5/8	43 3/4	3:1	4 1/2	1 1 1/8	60	36	96	72	6
42	5250	31 5/16	51 1/8	3:1	4 1/2	15 13/16	60	36	96	78	6
48	6400	36	58 1/2	3:1	5	21	60	36	96	84	6
54	7850	40	65	3:1	5 1/2	25 1/2	60	36	96	90	6
60	9500	45	73 1/2	3:1	6	31	60	36	96	96	6
72	13550	54	88	2:1	7	31	60	39	99	120	6
84	17950	62	102	2:1	8	28 1/2	83	19	102	144	6

*Equivalent Diameter of Circular R.C.P.

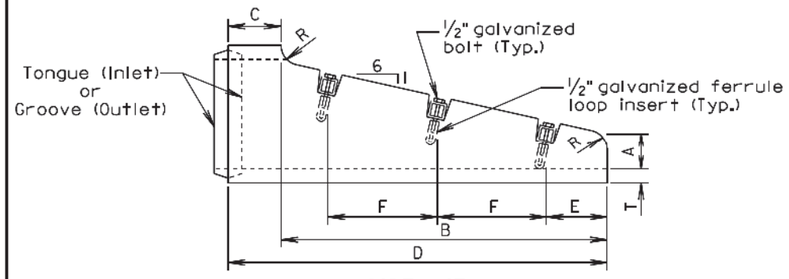
June 26, 2015

Published Date: 2024	SDDOT	R.C.P. ARCH FLARED ENDS	PLATE NUMBER 450.11
			Sheet 1 of 1

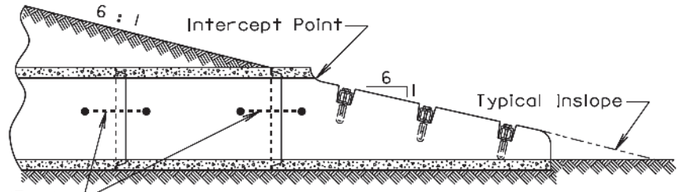


TOP VIEW

If bars are specified in the plans then provide HSS 2.5X2.5X.1875 Structural Steel Tubing in conformance with ASTM A500, Grade B or 3" Diameter Schedule 40 Pipe in conformance with ASTM A53, Grade B.



SIDE VIEW



ELEVATION VIEW

Dia. (in.)	T (in.)	R (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F (in.)	No. Sections	No. Bars
FOR CIRCULAR PIPE										
15	2 1/4	3	6	48	9	57	6	18	1	3
18	2 1/2	3	6	69	9	78	9	24	1	3
*24	3	3	6	111	9	120	6	24	1 or 2	5
FOR ARCH PIPE										
**18	2 1/2	1	6	39	33	72	6	24	1	2

*The use of 2 sections must be an approved design.
**Equivalent Diameter of Circular R.C.P.

GENERAL NOTES:

The length of concrete pipe shown on the plans is between safety ends.

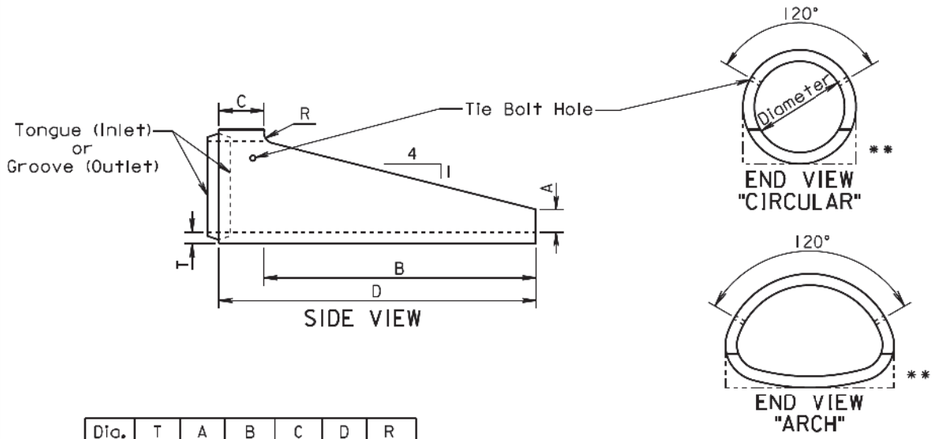
Safety ends without bars are acceptable with or without the bar notches.

Bars shall be galvanized after fabrication in accordance with ASTM A123.

August 31, 2013

Published Date: 2024	SDDOT	R.C.P. SAFETY ENDS WITH OR WITHOUT BARS	PLATE NUMBER 450.12
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BS\dPlateSection8.dgn



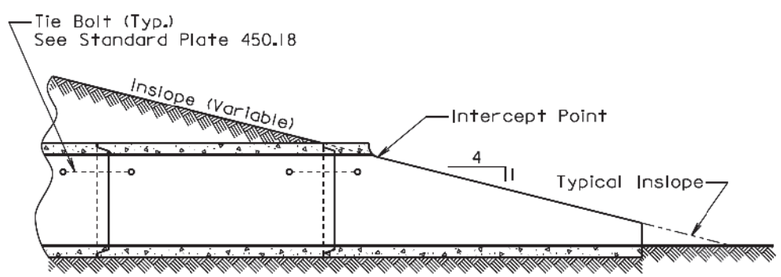
Dia. (in.)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	R (in.)
FOR CIRCULAR PIPE						
24	3	6	72	12	84	3
30	3½	7½	90	12	102	3½
FOR ARCH PIPE						
* 24	3	6	48	12	60	3
* 30	3½	7½	60	12	72	3½
* 36	4½	8⅝	66	30	96	0
* 42	4½	10	77¼	18¾	96	0

ALTERNATE

Dia. (in.)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	R (in.)
FOR CIRCULAR PIPE						
24	3	9	72	12	84	0
30	3½	11	90	12	102	0
FOR ARCH PIPE						
* 24	3	9	48	12	60	0
* 30	3½	11	60	12	72	0

* Equivalent Diameter of Circular R.C.P.

** Acceptable Flat Bottom Alternate.



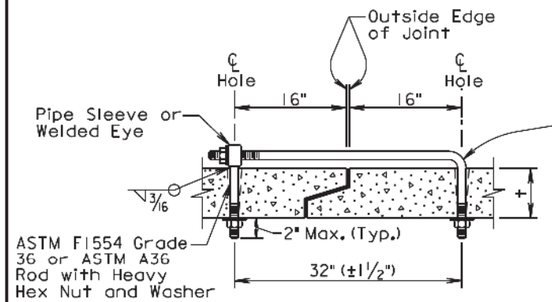
GENERAL NOTE:

The length of concrete pipe shown in the construction plans is between sloped ends.

September 22, 2006

Published Date: 2024	SDDOT	R. C. P. SLOPED ENDS	PLATE NUMBER 450.13
			Sheet 1 of 1

Wall "t" (in.)	Rod Dia. (in.)	Pipe Sleeve Dia. (nominal)
≤ 3¼	⅝	¾
3½-6½	¾	1
≥ 7	1	1¼



ADJUSTABLE EYE BOLT TIE

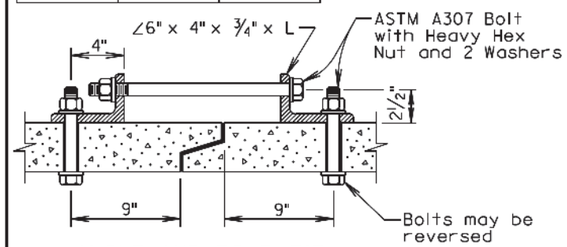
GENERAL NOTES:

Tie bolts shall conform to ASTM F1554 Grade 36 or ASTM A36. Nuts shall be heavy hex conforming to ASTM A563. Washers shall conform to ASTM F436.

Pipe Sleeve shall conform to ASTM A500 or A53, Grade B.

Galvanize adjustible eye bolt tie assembly in accordance with ASTM A153.

Pipe Dia. (in.)	"L" (in.)	Bolt Dia. (in.)
≤ 48	4	¾
> 48	6	1



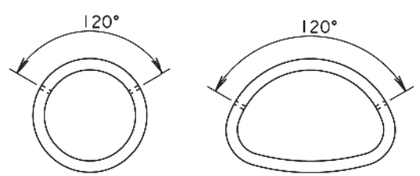
ANGLE AND BOLT TIE

GENERAL NOTES:

Angles shall conform to ASTM A36.

Bolts shall conform to ASTM A307. Nuts shall be heavy hex conforming to ASTM A563. Washers shall conform to ASTM F436.

Galvanize angles, bolts, nuts, and washers in accordance with ASTM A153.



GENERAL NOTES:

In lieu of the tie bolts detailed above other types of tie bolt connections may be installed as approved by the Office of Bridge Design.

All pipe sections of R.C.P. and R.C.P. Arch shall be tied with tie bolts except for pipe located between drop inlets, manholes, and junction boxes. All pipe sections of pipes that only enter or exit drop inlets, manhole, and junction boxes shall be tied with tie bolts.

There will be no separate measurement or payment for the tie bolts. The cost for furnishing and installing the tie bolts shall be incidental to the contract unit price per foot for the corresponding bid item for R.C.P. or R.C.P. Arch.

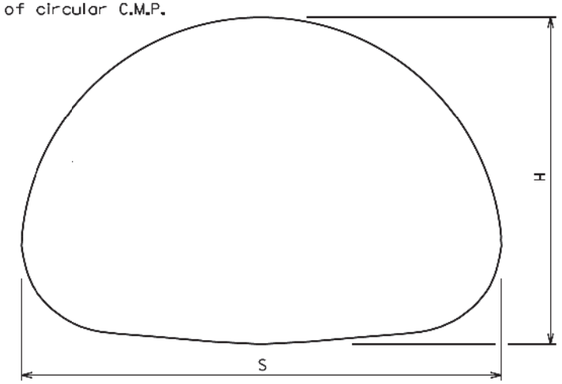
February 28, 2013

Published Date: 2024	SDDOT	TIE BOLTS FOR R.C.P. AND R.C.P. ARCH	PLATE NUMBER 450.18
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BI\Std\PlateSectionB.dgn

	2⅔" x ½" CORRUGATIONS			3" X 1" CORRUGATIONS		
* Dia. (in.)	S Span (in.)	H Rise (in.)	Area (Sq. Ft.)	S Span (in.)	H Rise (in.)	Area (Sq. Ft.)
15	17	13	1.1			
18	21	15	1.6			
21	24	18	2.2			
24	28	20	2.8			
30	35	24	4.4			
36	42	29	6.4	40	31	7.0
42	49	33	8.7	46	36	9.4
48	57	38	11.4	53	41	12.3
54	64	43	14.3	60	46	15.6
60	71	47	17.6	66	51	19.3
66	77	52	21.3	73	55	23.2
72	83	57	25.3	81	59	27.4
78				87	63	32.1
84				95	67	37.0
90				103	71	42.4
96				112	75	48.0
102				117	79	54.2
108				128	83	60.8
114				137	87	67.4
120				142	91	74.5

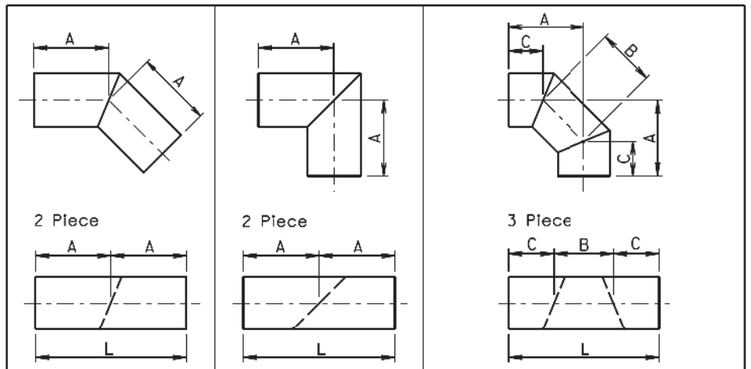
* Equivalent diameter of circular C.M.P.



GENERAL NOTE:
All dimensions measured from inside crest.

March 31, 2000

Published Date: 2024	SDDOT	CORRUGATED METAL PIPE ARCH CULVERT	PLATE NUMBER 450.30
			Sheet 1 of 1



Diameter	A	L	Diameter	A	L	Diameter	A	B	C	L
Inches	Feet	Feet	Inches	Feet	Feet	Inches	Inches			Feet
12	1	2	12	2	4	12	25½	11	18½	4
15	1	2	15	2	4	15	26½	12	18	4
18	1	2	18	2	4	18	27	14	17	4
21	2	4	21	2	4	21	27	15	16½	4
24	2	4	24	2	4	24	27½	16	16	4
27	2	4	27	2	4	27	27½	17	15½	4
30	2	4	30	3	6	30	40	19	26½	6
33	2	4	33	3	6	33	40	20	26	6
36	2	4	36	3	6	36	40½	21	25½	6
42	2	4	42	3	6	42	41	23	24½	6
48	2	4	48	4	8	48	53½	26	35	8
54	3	6	54	4	8	54	54	28	34	8
60	3	6	60	4	8	60	54½	31	32½	8
66	3	6	66	4	8	66	54	33	31½	8
72	3	6	72	5	10	72	67½	36	42	10
78	3	6	78	5	10	78	68	39	40½	10
84	3	6	84	5	10	84	68½	41	39½	10
90	3	6	90	6	12	90	70	46	37	10
96	3	6	96	6	12	96	82	46	49	12

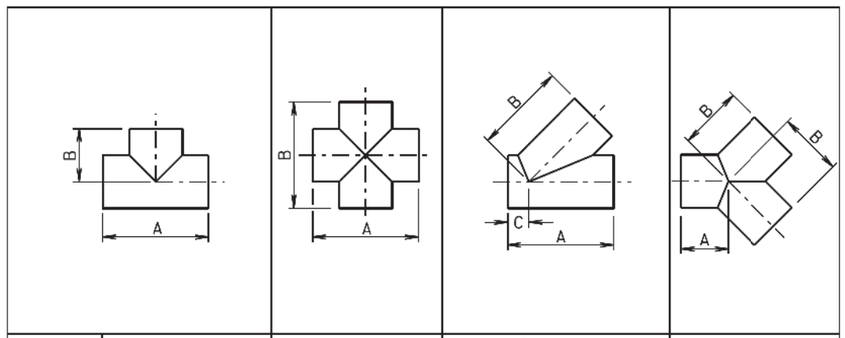
FABRICATED ELBOW LENGTHS FOR ALL CORRUGATIONS

GENERAL NOTES:
All dimensions shown are nominal.
L = Linear Feet of C.M.P. required to fabricate fitting.

June 26, 2001

Published Date: 2024	SDDOT	C.M.P. FABRICATED LENGTHS FOR ELBOWS	PLATE NUMBER 450.32
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BStdPlateSectionB.dgn



	Tee			Cross			45° Lateral				45° Wye		
Diameter	A	B	L	A	B	L	A	B	C	L	A	B	L
Inches	Feet			Feet			Feet		Inches	Feet	Feet		
12	4	2	6	4	4	8	4	2	17	6	2	2	6
15	4	2	6	4	4	8	4	4	18	8	2	2	6
18	4	2	6	4	4	8	4	4	13	8	2	2	6
21	4	2	6	4	4	8	6	4	22	10	2	2	6
24	4	2	6	4	4	8	6	4	23	10	2	2	6
27	4	2	6	4	4	8	6	4	20	10	2	2	6
30	4	2	6	4	4	8	6	4	21	10	2	2	6
33	6	4	10	6	6	12	6	6	19	12	2	3	8
36	6	4	10	6	6	12	8	6	19	14	2	3	8
42	6	4	10	6	6	12	8	6	21	14	2	3	8
48	6	4	10	6	6	12	10	8	28	18	2	3	8
54	6	4	10	6	6	12	10	8	23	18	4	4	12
60	8	4	12	8	8	16	12	10	30	22	4	4	12
66	8	4	12	8	8	16	12	10	32	22	4	4	12
72	8	4	12	8	8	16	14	10	45	24	4	5	14
78	10	6	16	10	10	20	14	10	46	24	4	5	14
84	10	6	16	10	10	20	16	12	47	28	4	5	14
90	10	6	16	10	10	20	16	12	49	28	4	5	14
96	10	6	16	10	10	20	16	12	50	28	4	6	16

FABRICATED LENGTHS FOR TEES, CROSSES, AND WYES FOR ALL CORRUGATIONS

GENERAL NOTES:

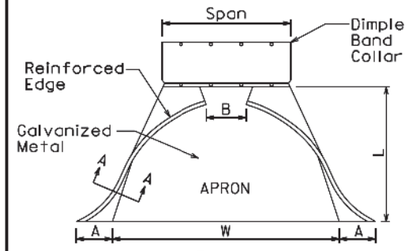
All dimensions shown are nominal.

L = Linear Feet of C.M.P. required to fabricate fitting.

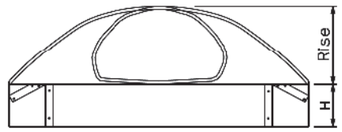
June 26, 2001

Published Date: 2024	SDDOT	***C.M.P. FABRICATED LENGTHS FOR TEES, CROSSES, AND WYES***	*PLATE NUMBER* 450.33 *Sheet 1 of 1*

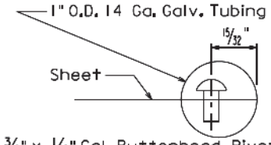
Alternate Type Connector Sections may be used with approval of the Engineer.



PLAN

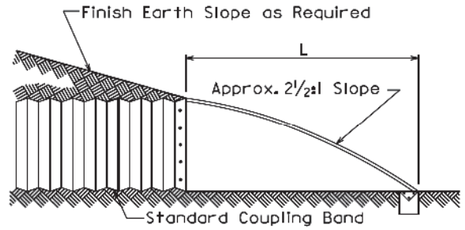


ELEVATION



3/8" x 1/2" Gal. Buttonhead Rivets spaced 6" C. to C. Overall length of rivets=0.78"

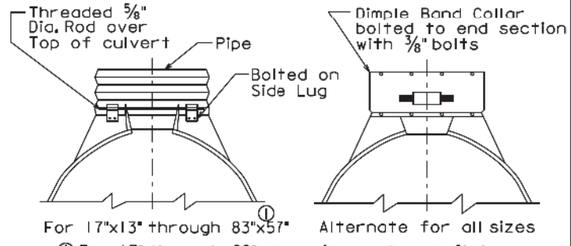
TUBING ATTACHMENT DETAILS
SECTION A-A



TYPICAL CROSS-SECTION

Span x Rise (in.)x(in.)	Equiv. Dia. (in.)	Ga.	APPROX. DIMENSIONS (in.) A	B	H	L	W	Approx. Slope	Body
17x13	15	16	7	9	6	19	30	2 1/2:1	1 Pc.
21x15	18	16	7	10	6	23	36	2 1/2:1	1 Pc.
24x18	21	16	8	12	6	28	42	2 1/2:1	1 Pc.
28x20	24	16	9	14	6	32	48	2 1/2:1	1 Pc.
35x24	30	14	10	16	6	39	60	2 1/2:1	1 Pc.
42x29	36	14	12	18	8	46	75	2 1/2:1	1 Pc.
49x33	42	12	13	21	9	53	85	2 1/2:1	2 Pc.
57x38	48	12	16	26	12	63	90	2 1/2:1	2 Pc.
64x43	54	12	18	30	12	70	102	2 1/4:1	2 Pc.
71x47	60	12	18	33	12	77	114	2 1/4:1	3 Pc.
77x52	66	12	18	36	12	77	126	2:1	3 Pc.
83x57	72	12	18	39	12	77	133	2:1	3 Pc.

STANDARD CONNECTIONS

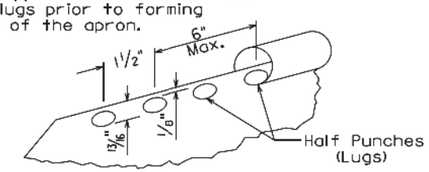


For 17"x13" through 83"x57" ①

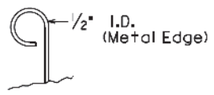
Alternate for all sizes

① For 17" through 28" span pipe-arches a flat strap connector may be used in place of the rod connection. Strap connector shall be 1" wide, 12 ga. strap with standard 6" long x 1/2" dia. bond bolt and nut.

NOTE:
Tubing is slipped over the sheet and rivets or lugs prior to forming operations of the apron.



SECTION A-A (alternate)



SECTION A-A (alternate)

GENERAL NOTES:

All 3 pc. bodies shall have 12 Ga. sides and 10 Ga. center panels. Width of center panels shall be greater than 20% of the pipe periphery. Multiple panel bodies shall have lap seams tightly joined by 3/8" Dia. galvanized rivets or bolts.

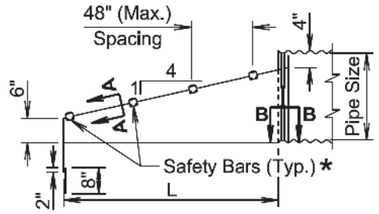
For 77" x 52" and 83" x 57" sizes, reinforced edges shall be supplemented with galvanized stiffener angles. The angles will be 2" x 2" x 1/4" for both the 77" x 52" size and the 83" x 57" size. The angles shall be attached by 3/8" Dia. galvanized nuts and bolts.

Rivets and Bolts shall be 3/8" Dia. Min. for 10 Ga. and 12 Ga. sheet, and 5/16" Dia. Min. for 14 Ga. and 16 Ga. sheets. Tighten nuts with torque wrench to 25 lbs. torque.

March 31, 2000

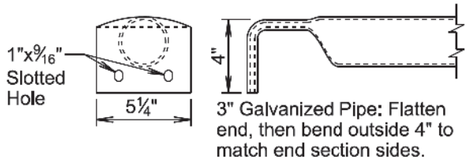
Published Date: 2024	SDDOT	***C.M.P. ARCH FLARED ENDS***	*PLATE NUMBER* 450.36 *Sheet 1 of 1*

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BIStdPlateSectionB.dgn

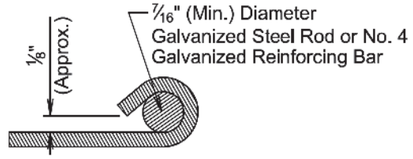


*Number of bars required will vary depending on the length of the end section.

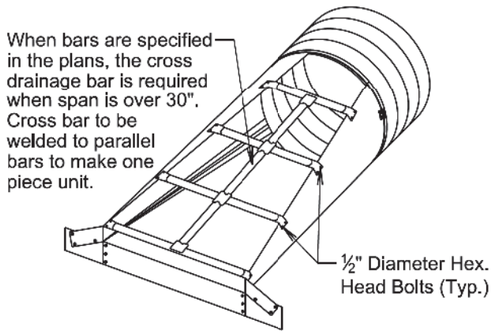
ELEVATION VIEW



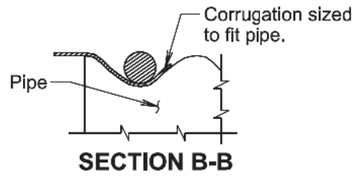
DETAIL OF SAFETY BARS



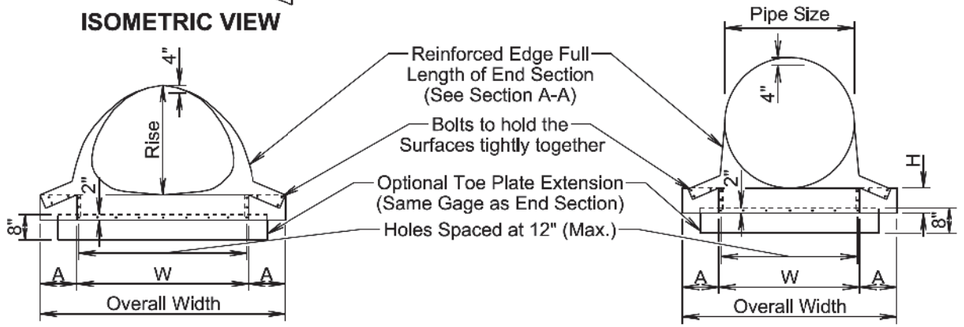
SECTION A-A



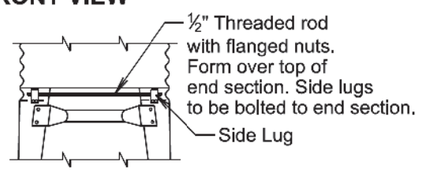
ISOMETRIC VIEW



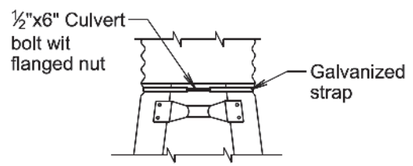
SECTION B-B



FRONT VIEW **FRONT VIEW**



TYPE #2 CONNECTOR DETAIL
(For 30" and Larger)
(For 21"x15" and Larger)



TYPE #1 CONNECTOR DETAIL
(For 15" Through 24")

August 31, 2022

Published Date: 2024	SDDOT	C.M.P. SLOPED ENDS	PLATE NUMBER 450.37
			Sheet 1 of 2

ARCH C.M.P. SLOPED ENDS

Equiv. Dia. (Inch)	(Inches) Span	Rise	(Min.) Thick. Inch	Gage	Dimensions (Inches) A	H	W	L Dimensions Overall Width	Slope	Length (Inch)
18	21	15	.064	16	8	6	27	43	4:1	20
21	24	18	.064	16	8	6	30	46	4:1	32
24	28	20	.064	16	8	6	34	50	4:1	40
30	35	24	.079	14	12	9	41	65	4:1	56
36	42	29	.109	12	12	9	48	72	4:1	76
42	49	33	.109	12	16	12	55	87	4:1	92
48	57	38	.109	12	16	12	63	95	4:1	112
54	64	43	.109	12	16	12	70	102	4:1	132
60	71	47	.109	12	16	12	77	109	4:1	148
72	83	57	.109	12	16	12	89	121	4:1	188

CIRCULAR C.M.P. SLOPED ENDS

Pipe Dia. (Inch)	(Min.) Thick. Inch	Gage	Dimensions (Inches) A	H	W	L Dimensions Overall Width	Slope	Length (Inch)
15	.064	16	8	6	21	37	4:1	20
18	.064	16	8	6	24	40	4:1	32
21	.064	16	8	6	27	43	4:1	44
24	.064	16	8	6	30	46	4:1	56
30	.109	12	12	9	36	60	4:1	80
36	.109	12	12	9	42	66	4:1	104
42	.109	12	16	12	48	80	4:1	128
48	.109	12	16	12	54	86	4:1	152
54	.109	12	16	12	60	92	4:1	176
60	.109	12	16	12	66	98	4:1	200

GENERAL NOTES:

Safety bars will be provided when specified in the plans.

Sloped ends will be fabricated from galvanized steel and will conform to the requirements of the Specifications.

Safety bars will be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5x.216 in conformance with ASTM A500, grade B.

Slotted holes for safety bar attachment will be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter will be made with Type #1 straps. All other sizes will be attached with Type #2 rods and lugs.

When stated in the plans, optional toe plate extension will be punched and bolted to end section apron lip with ⅜" diameter galvanized bolts. Steel for toe plate extension will be same gauge as end section. Dimensions will be overall width less 6" by 8" high.

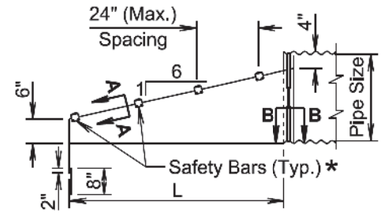
Installation will be performed in accordance with the Specifications.

Cost of all work and materials required for fabrication and installation of sloped ends will be incidental to the bid items for the various sizes of sloped ends.

August 31, 2022

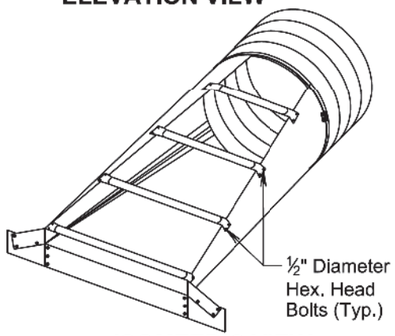
Published Date: 2024	SDDOT	C.M.P. SLOPED ENDS	PLATE NUMBER 450.37
			Sheet 2 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BS\StdPlateSectionB.dgn

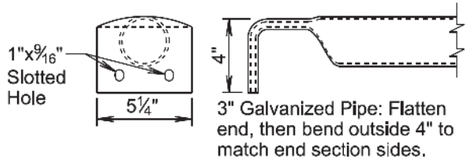


* Number of bars required will vary depending on the length of the end section.

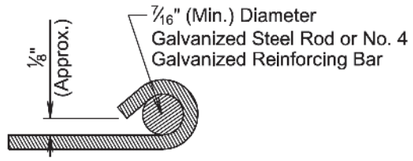
ELEVATION VIEW



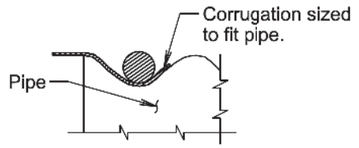
ISOMETRIC VIEW



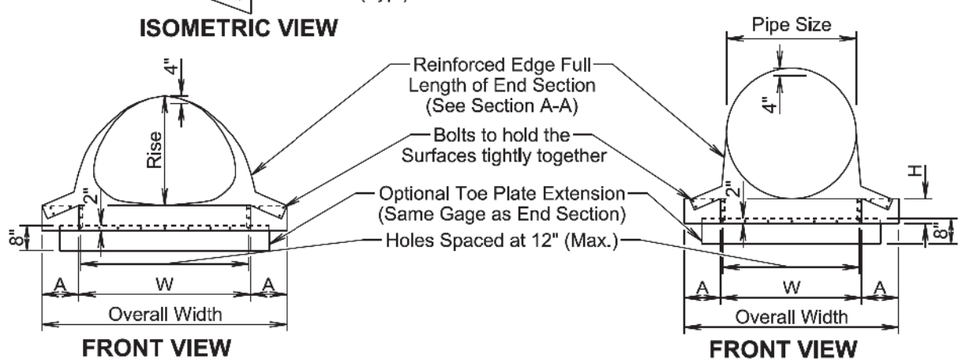
DETAIL OF SAFETY BARS



SECTION A-A

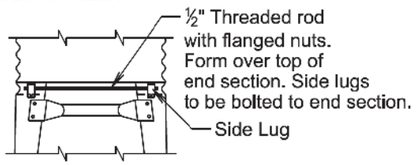


SECTION B-B



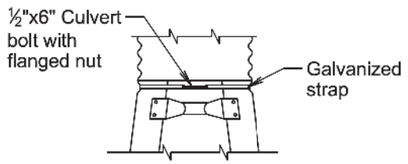
FRONT VIEW

FRONT VIEW



TYPE #2 CONNECTOR DETAIL

(For 30" and Larger)
(For 21"x15" and Larger)



TYPE #1 CONNECTOR DETAIL

(For 15" Through 24")

August 31, 2022

Published Date: 2024	SDDOT	C.M.P. SAFETY ENDS	PLATE NUMBER 450.38
			Sheet 1 of 2

ARCH C.M.P. SAFETY ENDS

Equlv. Dia. (Inch)	(Inches) Span	Rise	(Min.) Thick. Inch	Gage	Dimensions (Inches) A	H	W	L Dimensions Overall Width	Slope	Length (Inch)
18	21	15	.064	16	8	6	27	43	6:1	30
21	24	18	.064	16	8	6	30	46	6:1	48
24	28	20	.064	16	8	6	34	50	6:1	60
30	35	24	.079	14	12	9	41	65	6:1	84
36	42	29	.109	12	12	9	48	72	6:1	114
42	49	33	.109	12	16	12	55	87	6:1	138
48	57	38	.109	12	16	12	63	95	6:1	168
54	64	43	.109	12	16	12	70	102	6:1	198
60	71	47	.109	12	16	12	77	109	6:1	222
72	83	57	.109	12	16	12	89	121	6:1	282

CIRCULAR C.M.P. SAFETY ENDS

Pipe Dia. (Inch)	(Min.) Thick. Inch	Gage	Dimensions (Inches) A	H	W	Overall Width	L Dimensions Slope	Length (Inch)
15	.064	16	8	6	21	37	6:1	30
18	.064	16	8	6	24	40	6:1	48
21	.064	16	8	6	27	43	6:1	66
24	.064	16	8	6	30	46	6:1	84
30	.109	12	12	9	36	60	6:1	120
36	.109	12	12	9	42	66	6:1	156
42	.109	12	16	12	48	80	6:1	192
48	.109	12	16	12	54	86	6:1	228
54	.109	12	16	12	60	92	6:1	264
60	.109	12	16	12	66	98	6:1	300

GENERAL NOTES:

Safety bars will be provided when specified in the plans.

Safety ends will be fabricated from galvanized steel conforming to the requirements of the Specifications.

Safety bars will be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5x.216 in conformance with ASTM A500, grade B.

Slotted holes for safety bar attachment will be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter will be made with Type #1 straps. All other sizes will be attached with Type #2 rods and lugs.

When stated in the plans, optional toe plate extension will be punched and bolted to end section apron lip with ⅜" diameter galvanized bolts. Steel for toe plate extension will be same gauge as end section. Dimensions will be overall width less 6" by 8" high.

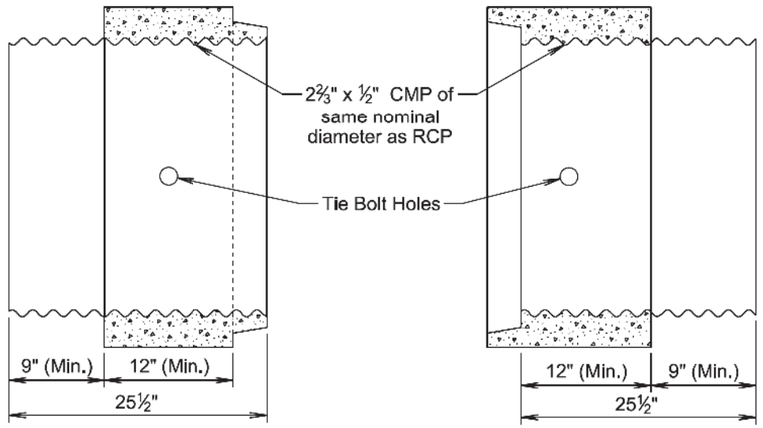
Installation will be performed in accordance with the Specifications.

Cost of all work and materials required for fabrication and installation of safety ends will be incidental to the bid items for the various sizes of safety ends.

August 31, 2022

Published Date: 2024	SDDOT	C.M.P. SAFETY ENDS	PLATE NUMBER 450.38
			Sheet 2 of 2

Plot Scale - 1:200
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File - ...\Section B\StdPlateSectionB.dgn



INLET
(CMP to RCP Transition)

OUTLET
(RCP to CMP Transition)

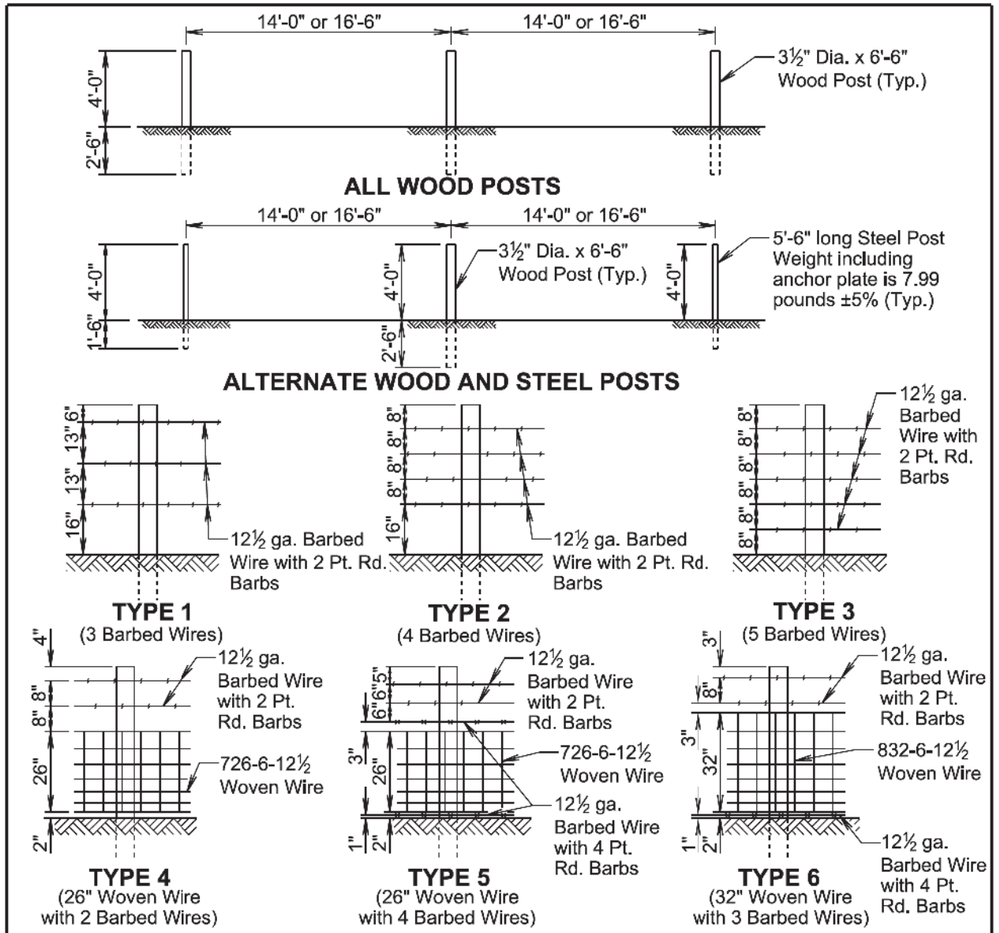
GENERAL NOTE:

Arch pipe transitions will be fabricated similar to the round transition shown above.

All pipe transitions will be precast as shown. Alternate designs other than shown will need to be approved by the Engineer.

November 19, 2022

Published Date: 2024	SDDOT	*C.M.P. TO R.C.P. TRANSITION AND R.C.P. TO C.M.P. TRANSITION*	*PLATE NUMBER 450.50*
			Sheet 1 of 1



TYPE OF FENCE		LINE POST SPACING	BARBED WIRE		WOVEN WIRE
TYPE	DESCRIPTION		WIRE GAGE	NUMBER AND SHAPE OF BARBS	STYLE OR DESIGN NO.
1	3 Barbed Wires	16'-6"	12½	2 Point Round	—
2	4 Barbed Wires	16'-6"	12½	2 Point Round	—
3	5 Barbed Wires	16'-6"	12½	2 Point Round	—
4	26" Woven Wire with 2 Barbed Wires	14'-0"	12½	2 Point Round	726-6-12½
5	26" Woven Wire with 4 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 2 wires with 4 Pt. Rd.	726-6-12½
6	32" Woven Wire with 3 Barbed Wires	14'-0"	12½	2 wires with 2 Pt. Rd. 1 wire with 4 Pt. Rd.	832-6-12½

GENERAL NOTES:

Fence types designated on the plans that are followed by the letter S will have smooth (barbless) wires.

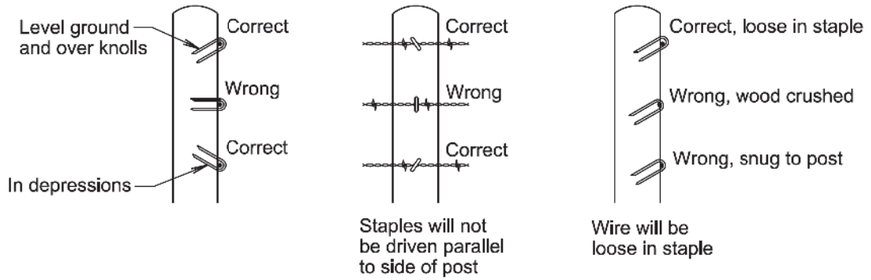
When type 5S or 6S is designated the bottom wire may be barbed, smooth, or left off.

All degrees of curvature stated for fence are at centerline of roadway.

June 26, 2019

Published Date: 2024	SDDOT	*RIGHT-OF-WAY FENCE*	*PLATE NUMBER 620.01*
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std Plate Section B.dgn



STAPLE INSTALLATION

GENERAL NOTES:

The Right-of-Way fence will consist of barbed wire or a combination of woven wire and barbed wire. The barbed wire and/or woven wire will be fastened to all wood posts or fastened to alternating wood and steel posts. Only wood posts will be used for brace panels. Gates will be of the type designated in the plans or as otherwise directed by the Engineer. Fence will be constructed conforming to the details on the standard plates and in the plans unless otherwise directed by the Engineer.

Right-of-Way fence on Interstate Projects will be constructed one foot within the Interstate Right-of-Way lines except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

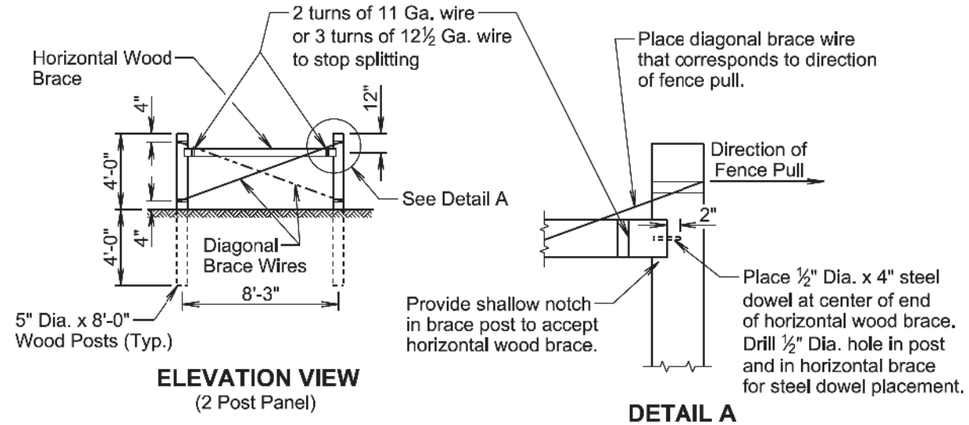
Right-of-Way fence other than on Interstate Projects will be constructed within one foot of the Right-of-Way on the Landowner's side except at bridge openings, cattle passes, and as otherwise directed by the Engineer.

Barbs will be fabricated from zinc coated 14 ga. wire. Two point barbs will be wrapped twice around one main strand at four-inch spacings and the four point barbs will be interlocked and wrapped around both main strands at five-inch spacings.

The gages of wire and wood post lengths and sizes are the minimum acceptable unless otherwise specified in the plans. The tolerances for steel posts will be as stated in AASHTO M281. Woven wire will conform to design and specifications of ASTM A116 and barbed wire will conform to ASTM A121.

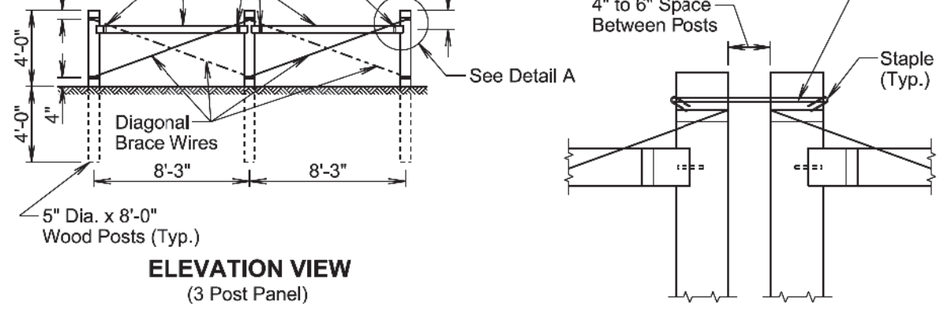
June 26, 2019

Published Date: 2024	SDDOT	STAPLE INSTALLATION AND GENERAL RIGHT-OF-WAY FENCE NOTES	PLATE NUMBER 620.02
			Sheet 1 of 1



ELEVATION VIEW
(2 Post Panel)

DETAIL A



ELEVATION VIEW
(3 Post Panel)

DETAIL B

GENERAL NOTES:

Two Post Panels will be installed at least every 1320' between corners.

Two Post Panels will be installed at any sharp vertical angle crest points and as directed by the Engineer.

Horizontal wood braces will consist of 4" dia. x 8' wood posts or rough 4" x 4" x 8' timbers.

Diagonal brace wires will be fabricated with 4 strands of 9 Ga. galvanized wire twisted tight. The diagonal brace wires will be installed in accordance with the direction of the fence pull. Two diagonal brace wires are required if fence pull is in both directions.

January 22, 2023

Published Date: 2024	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 1 of 3

Plot Scale - 1:200
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File - ...\Section B\Std\PlateSectionB.dgn

SPACING OF 2 POST PANELS WITHIN CURVES	
RADIUS OF CURVE	SPACING OF 2 POST PANEL
Greater than 1800 Ft.	** 1320'
Less than 1800 Ft.	**At P.C., P.T., and at every 1320' between P.C. and P.T.

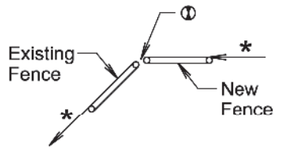
** Fence lengths greater than 1320' and less than 2640' place 2 Post Panel approximately at midpoint.

① See Detail B on Sheet 1 of 3.

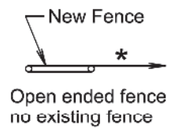
GENERAL NOTE:

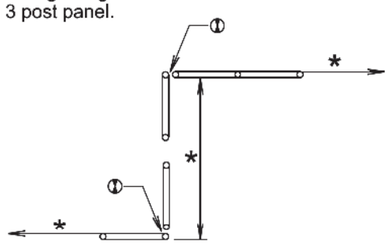
All degrees of curvature stated for fence are at centerline of roadway.

If fence length is less than 600' to next corner use a 2 post panel.
* If fence length is greater than 600' to next corner use a 3 post panel.

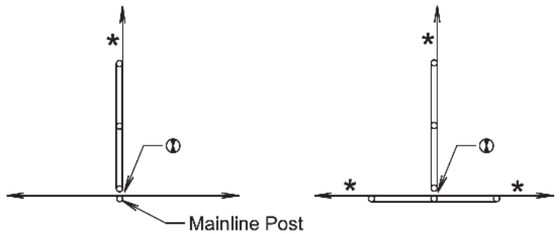


BEGIN OR END FENCE
(Where new fence ties into existing fence)

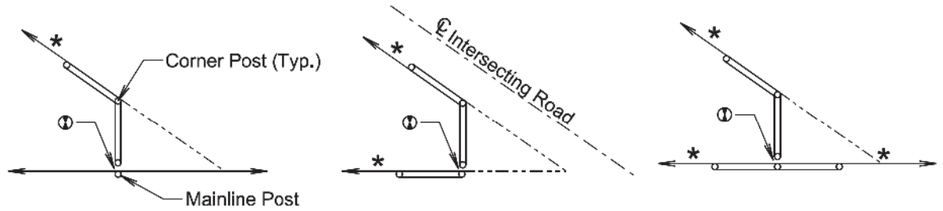




SHORT JOGS IN FENCE



CROSS FENCE



SHARP ANGLES IN CROSS FENCE



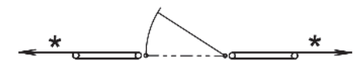
Additional fence panel is NOT required when an angle in the mainline fence is 10° and less.

Additional fence panel is required when an angle in the mainline fence is greater than 10°.

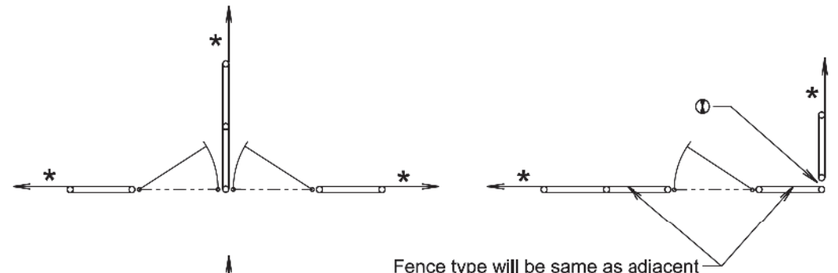
ANGLES IN MAINLINE FENCE

January 22, 2023

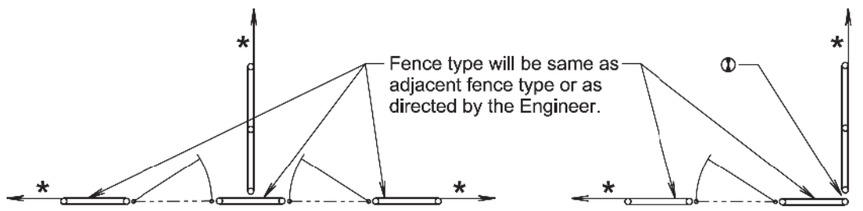
Published Date: 2024	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 2 of 3



ENTRANCE
(Not on corner)



Fence type will be same as adjacent fence type or as directed by the Engineer.



DOUBLE ENTRANCES

ENTRANCES AT CORNERS

GATES

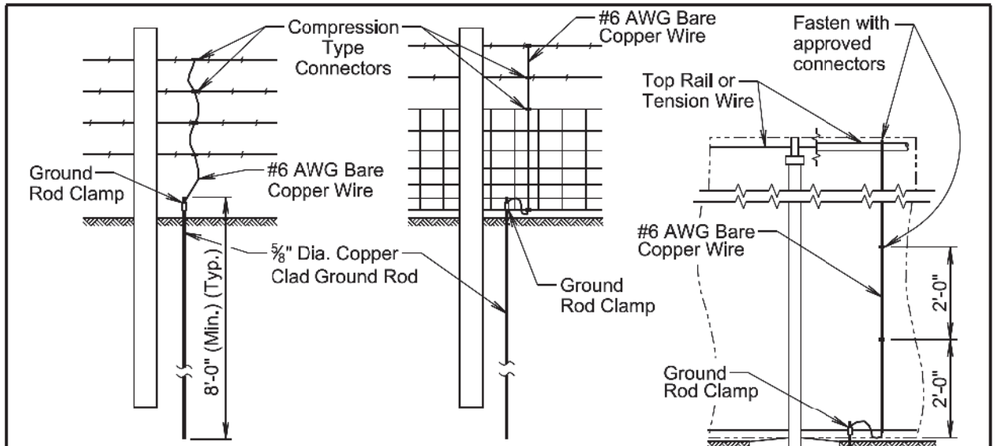
* If fence length is less than 600' to next corner use a 2 post panel.
If fence length is greater than 600' to next corner use a 3 post panel.

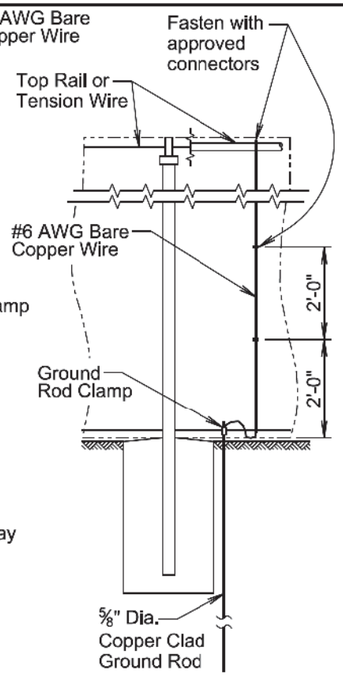
① See Detail B on Sheet 1 of 3.

January 22, 2023

Published Date: 2024	SDDOT	BRACE PANELS AND APPLICATIONS OF BRACE PANELS	PLATE NUMBER 620.03
			Sheet 3 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn





GENERAL NOTES:

Details shown on this standard plate will apply to all types of Right-of-Way fence constructed with all wood posts or chain link fence.

Continuous fence in urban areas will be grounded at maximum intervals of 500 feet. Continuous fence in rural areas will be grounded at maximum intervals of 1000 feet. There will be a ground at a maximum of 100 feet from a gate in each adjacent section of fence.

Fence placed under a power line will be grounded with three grounds. One ground will be placed directly below the crossing and the other two will be placed 25 feet to 50 feet away, one on each side.

One ground will be placed directly below each telephone or cable crossing.

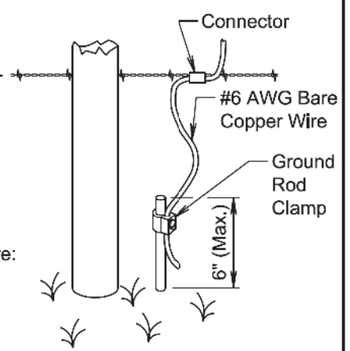
Ground rods will be located on the post side of the fence and will be as close as possible to the post and fence.

The cost of furnishing and placing all materials for grounding will be incidental to the contract unit price per foot for the respective Right-of-Way fence or chain link fence contract item.

The approximate quantites of materials per each installation of a ground are:

1 ground rod clamp.
1 ⅝" diameter x 8' long copper clad ground rod
1 #6 AWG bare copper wire; 7' long for Right-of-Way fence or 10' long for chain link fence.

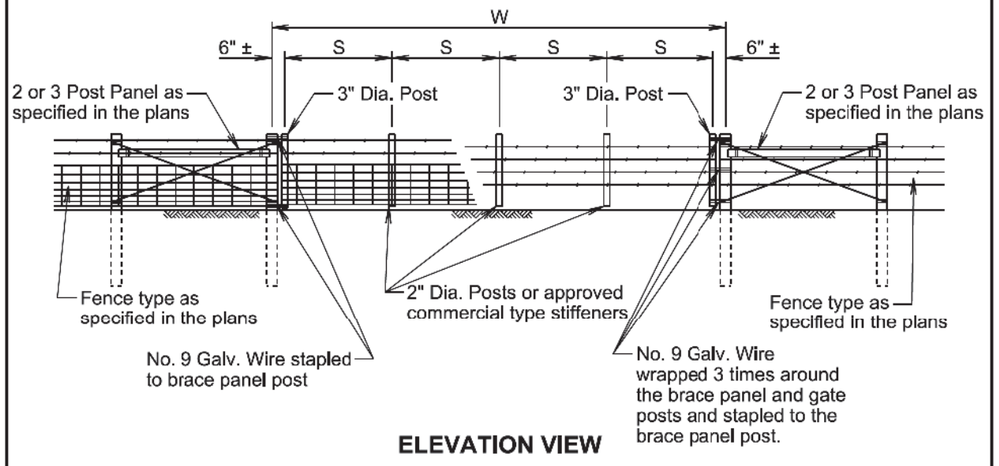
Compression type or other type of connectors:
26" woven wire will have a total of two connectors, one secured to the top and one secured to the bottom.
32" woven wire will have a total of three connectors, one secured to the top, one secured to the middle, and one secured to the bottom.
One connector will be used for each strand of barbed wire.
A minimum of 3 connectors will be installed on chain link fence, the connectors will be placed vertically at every 2-foot increment and connectors will be placed on the top and bottom tension wires or top rail.



GROUND ROD DETAIL

June 26, 2019

Published Date: 2024	SDDOT	FENCE GROUNDING	PLATE NUMBER 620.11
			Sheet 1 of 1



ELEVATION VIEW

W Gate Width (Ft.)	S Post Spacing
16	3 @ 5'-0" ±
20	4 @ 4'-9" ±
24	4 @ 5'-9" ±
30	5 @ 5'-10" ±
40	6 @ 6'-6" ±

GENERAL NOTES:

Creosote treatment of the gate posts will not be accepted.

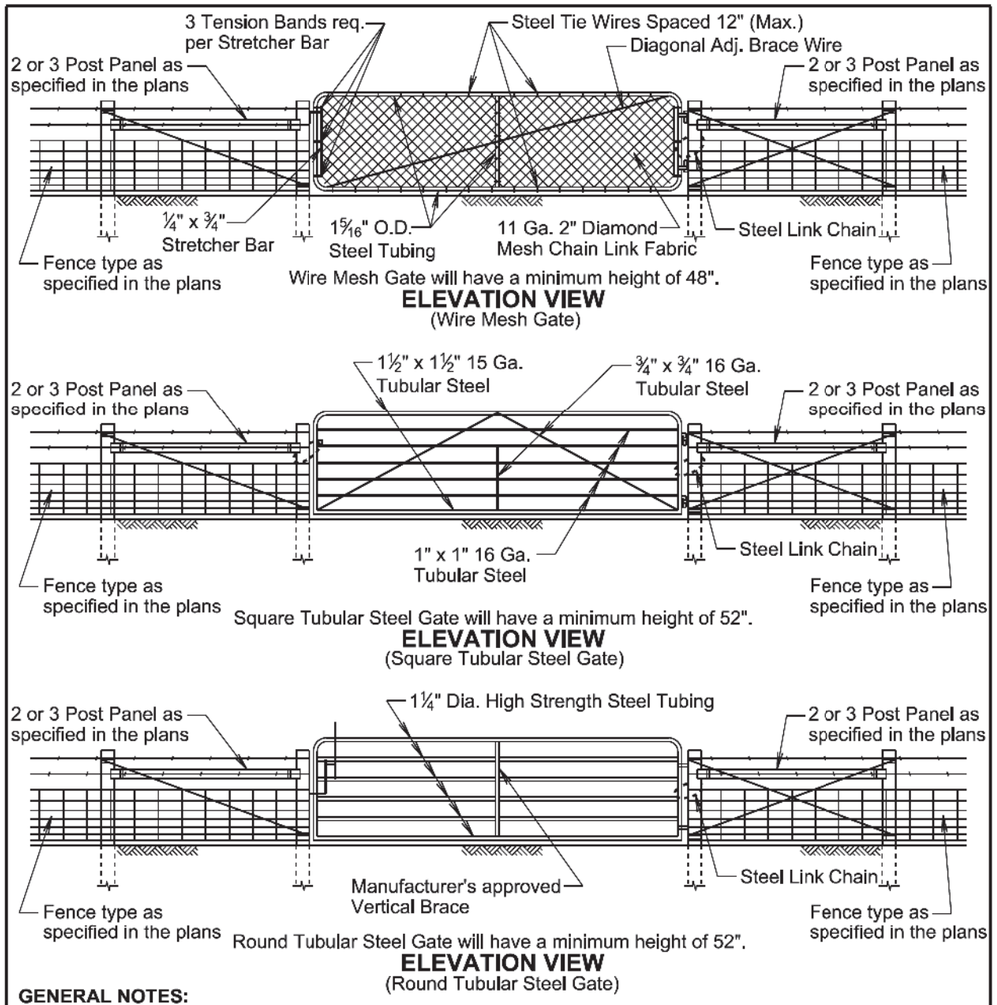
The type of fencing in the gate will be of the same type as specified for the adjacent Right-of-Way fence.

All costs for furnishing and constructing the wire gate(s) will be incidental to the contract unit price per foot for the respective Right-of-Way fence contract item.

June 26, 2019

Published Date: 2024	SDDOT	WIRE GATES	PLATE NUMBER 620.20
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std Plate\Section B.dgn



GENERAL NOTES:

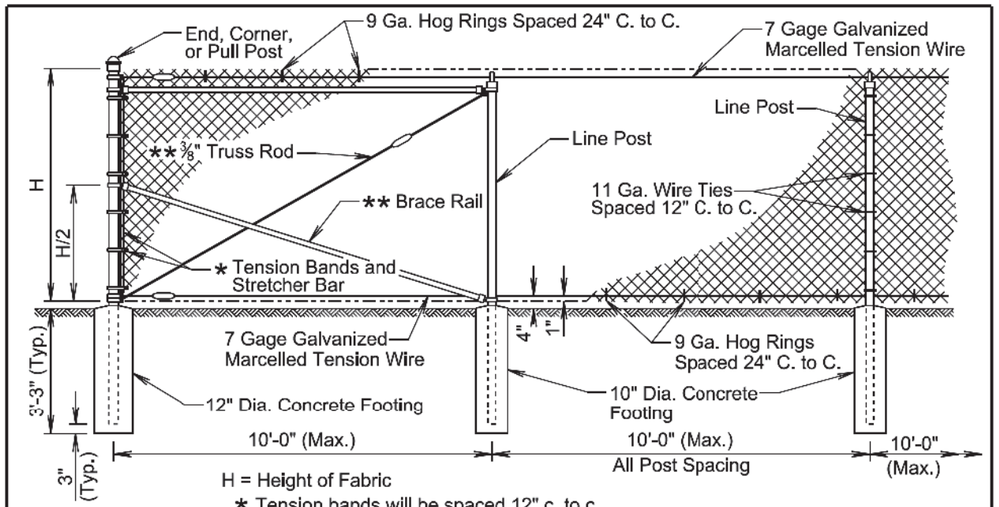
Only single tubular frame gates are shown on this standard plate. If double tubular frame gates are specified, the gates will be of the same type and materials as shown above. Double tubular gates will swing toward the middle of the opening and will be secured by a chain, latch, or other suitable hardware.

Gate hardware will conform to the specific type of gate installed. The gate and gate hardware will either be painted or galvanized. The paint on the gates and hardware will be subject to approval by the Engineer.

The Steel Link Chain will be a minimum of ¼", 4' long, rust resistant, and have electrically welded links. The chain will be wrapped around the gate hinge post and gate frame and the ends of the chain will be welded together with enough slack in the chain to provide free operation of the gate.

June 26, 2019

Published Date: 2024	SDDOT	TUBULAR FRAME GATES	PLATE NUMBER 620.21
			Sheet 1 of 1



H = Height of Fabric

* Tension bands will be spaced 12" c. to c.

** Are not required for 3' through 5' height fences.

⬭ Tightening device such as shown on standard plate 621.03

COMPONENT	END, CORNER, and PULL POST		LINE POST			BRACE RAIL	
Type of Fabrication	Round Pipe Nominal	Roll Formed Steel	Round Pipe Nominal	"C" Section	H Beam Steel	Round Pipe Nominal	Roll Formed Steel
Size	3.00" O. D.	3.5"x3.5"	2.50" O. D.	1.875"x1.625"	2.25"x1.70"	1.625" O. D.	1.625"x1.25"
Weight (lb. / Ft.)	5.79 or 4.64	5.14	3.65 or 3.12	2.34	3.43	2.27 or 1.84	1.35

GENERAL NOTES:

Specific details of the component parts of the fence will be approved by the Engineer. Commercially available items produced specifically for the use intended will be used wherever possible in the construction of the fence.

Height of the fabric will be as shown in the plans. Fabric is available at the following heights: 36", 42", 48", 60", 72", 84", 96", 108", 120", and 144". Fabric heights 60 inches and less will be knuckled at both selvages. Fabric heights 72 inches and higher will be knuckled at one selvage and twisted at the other selvage.

Chain link fabric will be 2-inch mesh, No. 9 gage galvanized wire securely fastened to tension wire, line post, rails, braces, and stretcher bars.

Fence may be constructed with either round pipe, "C" section, "H" beam, or roll formed steel components as shown in the table above. Line posts may be round pipe, "C" section, or "H" beam. The corner post and rails will be either round pipe or roll formed steel. The type of components used must be approved by the Engineer prior to installation.

All posts will have a means to securely hold the top tension wire in position and allow for the removal and replacement of a post without damaging the top tension wire.

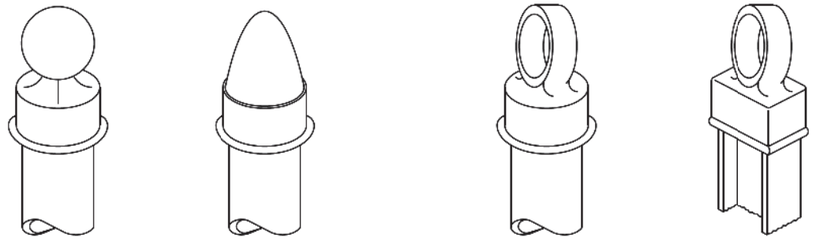
Where fence must cross small bodies of water such as drainage areas or ponds that could freeze during the winter, use 11 gage hog rings. Provide only two ties per tension wire between line posts.

Fence grounding will be as shown on standard plate 620.11.

November 19, 2022

Published Date: 2024	SDDOT	CHAIN LINK FENCE WITH TENSION WIRED TOP	PLATE NUMBER 621.02
			Sheet 1 of 1

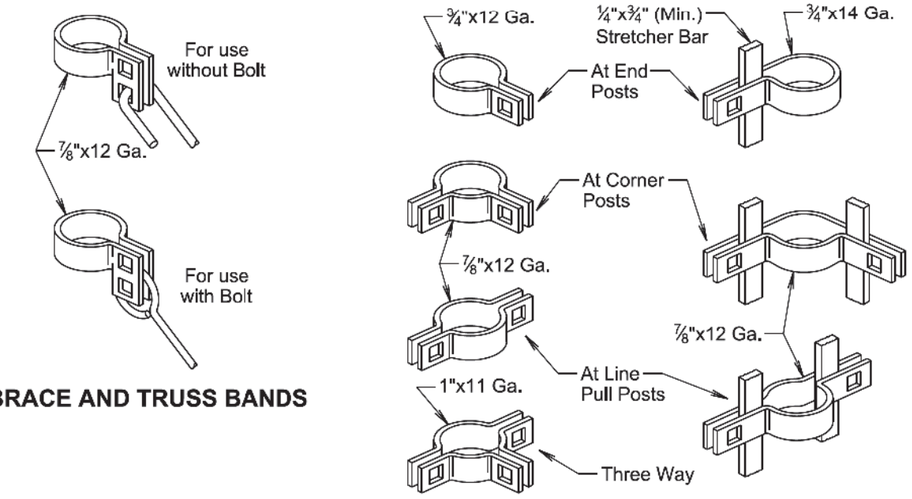
Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



For End, Corner, and Pull Posts

For Line Posts

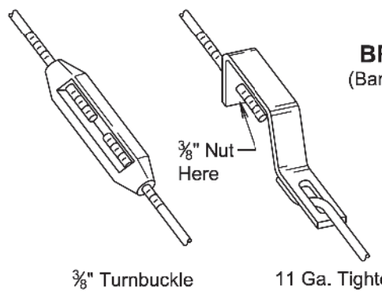
TYPICAL POST TOPS
(Shown for example only)



BRACE AND TRUSS BANDS

BRACE BANDS

TENSION BANDS
(Bands will be rectangular for "C" Section and "H" Beam Posts.)



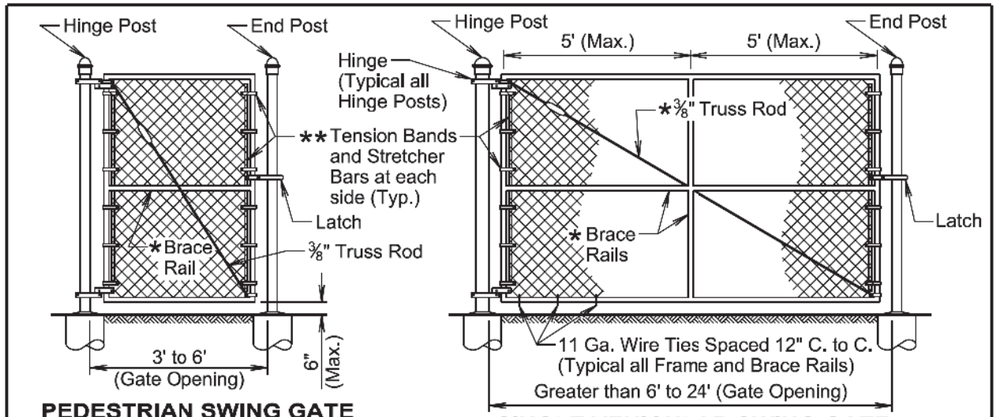
TIGHTENING DEVICES



RAIL ENDS

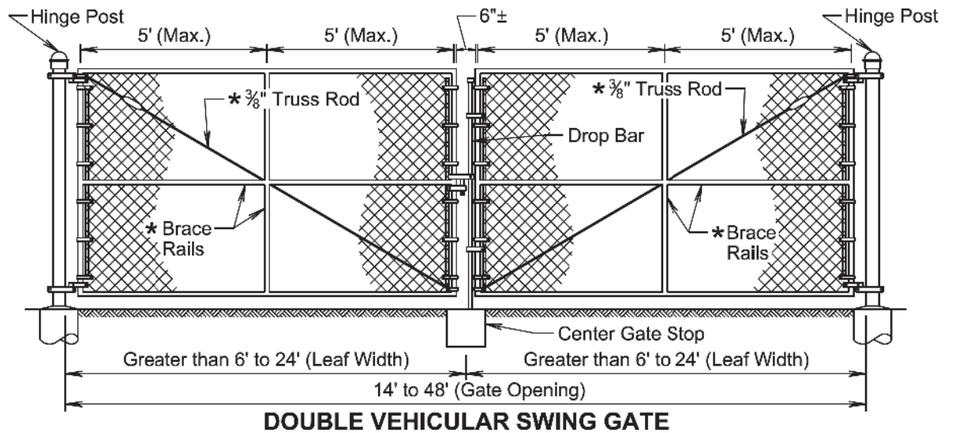
June 26, 2019

Published Date: 2024	SDDOT	HARDWARE FOR CHAIN LINK FENCE	PLATE NUMBER 621.03
			Sheet 1 of 1



PEDESTRIAN SWING GATE

SINGLE VEHICULAR SWING GATE



DOUBLE VEHICULAR SWING GATE

[1] Gate Opening Width	Hinge Post		Concrete Footing	
	Round Pipe Nominal	Roll Formed Steel	Depth	Diameter
3' to 6'	3.00"	3.50"x3.50"	36"	12"
> 6' to 13'	4.00"	—	42"	12"
> 13' to 18'	6.625"	—	48"	18"
> 18' to 23'	8.625"	—	48"	24"

Gate Opening		Frame Pipe Nominal	Brace Rail Pipe Nominal
[1] Width	[2] Height		
3' to 8'	3' to 6'	1.50"	1.50"
>8' to 23'	6'	1.90"	1.50"
>8' to 23'	>6' to 12'	1.90"	1.90"

* Are not required for gates 3' to 5' height or 5' or less in width.

** Tension Bands willl be spaced 12" center to center.

⬭ Tightening Device such as shown on standard plate 621.03

1 Leaf width for Double Vehicular Swing Gate

2 Will coincide with fence height

GENERAL NOTES:

Gate frames may be constructed of bent or welded steel tubing, must be approved by the Engineer prior to installation, and installed in accordance with the Manufacturer's installation instructions.

Center gate stops must be approved by the Engineer prior to installation and will be installed in accordance with the Manufacturer's installation instructions.

June 26, 2019

Published Date: 2024	SDDOT	SWING GATES FOR CHAIN LINK FENCE	PLATE NUMBER 621.10
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BS\tdPlateSectionB.dgn

TYPE AND DETAILS OF MGS						
Type of MGS	W Beam Rail Single or Double (Nested)	Blockout Size	Blockout Material	Post Size	Post Material	Post Spacing
1	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"
1C	Single	6"x12"x14"	Wood	6"x8"x7'-6"	Wood	6'-3"
2	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	3'-1½"
3	Single	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	1'-6¾"
4	Double	6"x12"x14"	Wood	6"x8"x6'-0"	Wood	6'-3"

STANDARD PLATE REFERENCE	
Type of MGS	See Standard Plate(s)
1	630.20, 630.22
1C	630.20, 630.25
2	630.20
3	630.20
4	630.20

GENERAL NOTES:

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite".

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

Topsoil is not shown in the transverse section drawing on sheet 2 of 6.

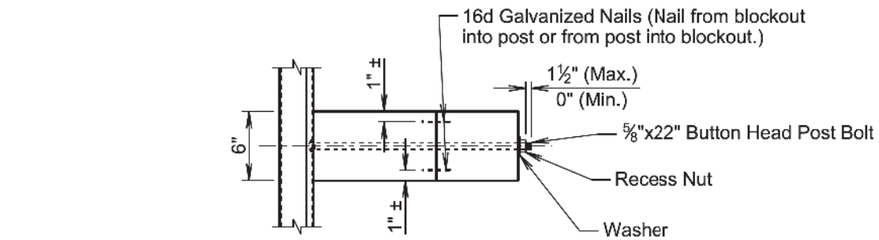
All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

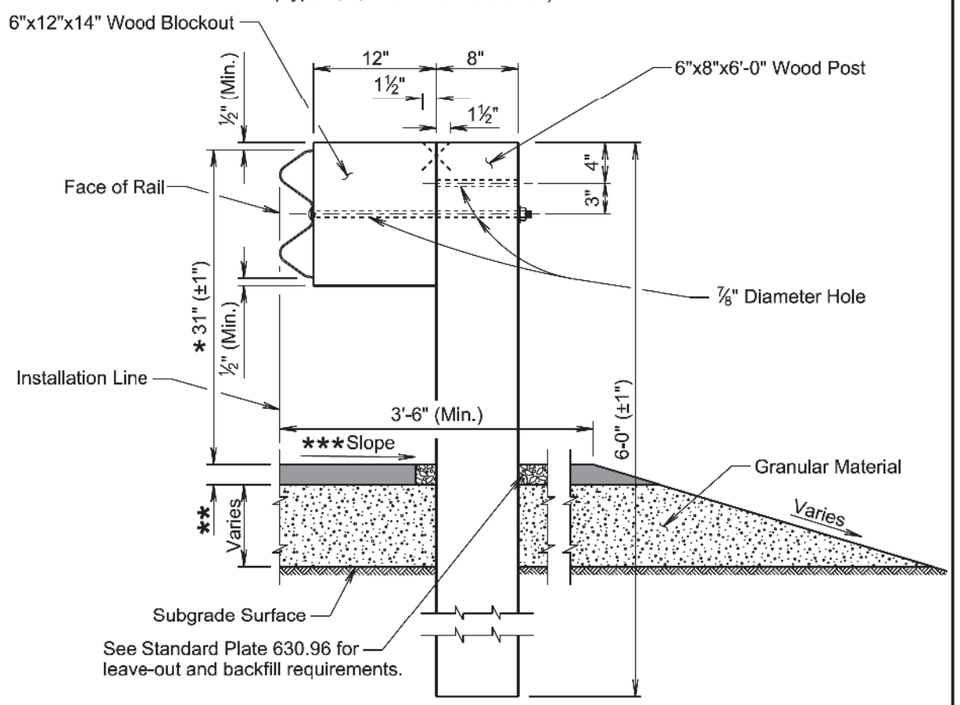
Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for constructing the MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per foot for the respective MGS contract item.

September 14, 2019



TOP VIEW
(Type 1, 2, or 3 MGS Installation)



TRANSVERSE SECTION
(Type 1, 2, or 3 MGS Installation)

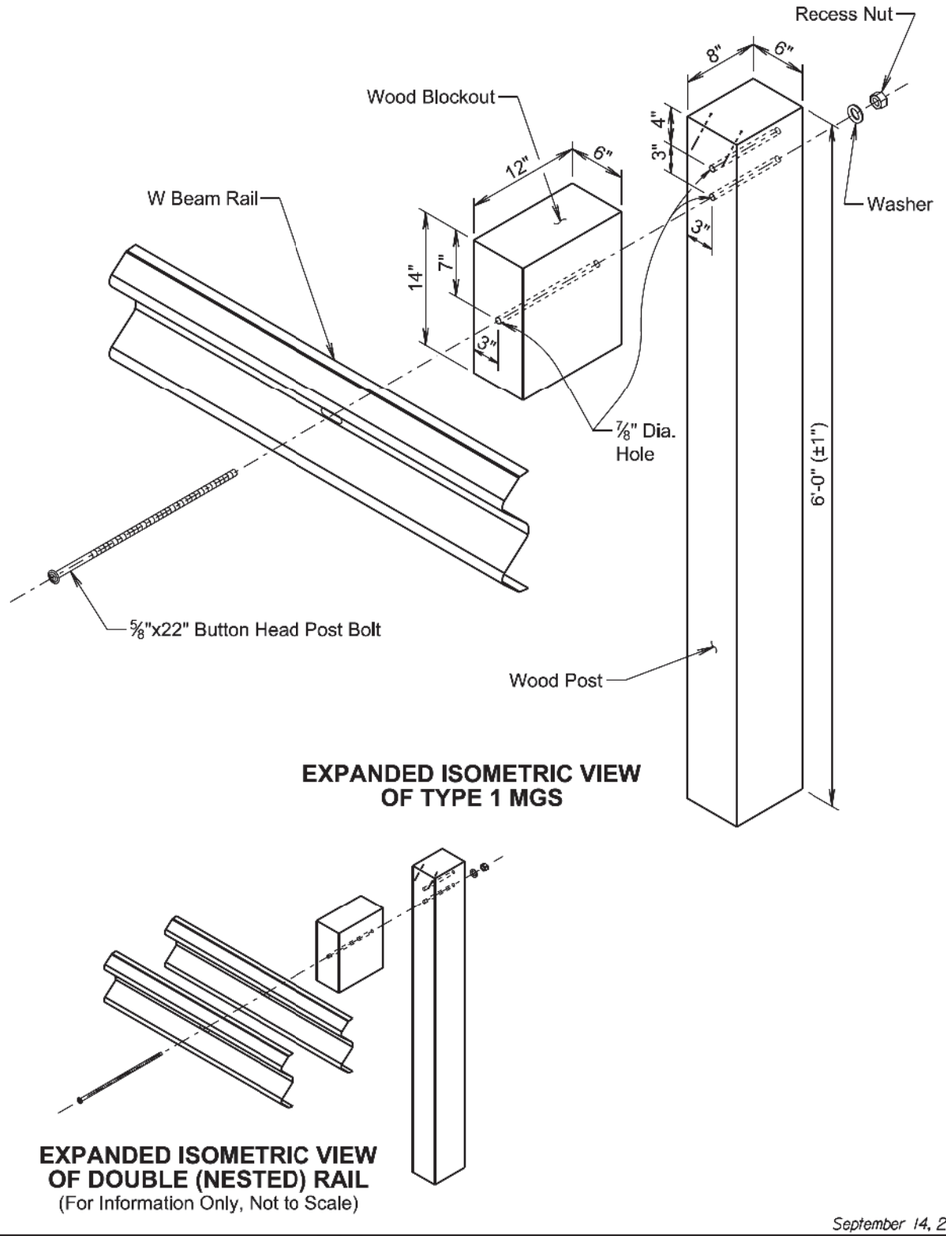
* See Standard Plate 630.99

** 2" asphalt concrete or as specified in the plans.

*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

September 14, 2019

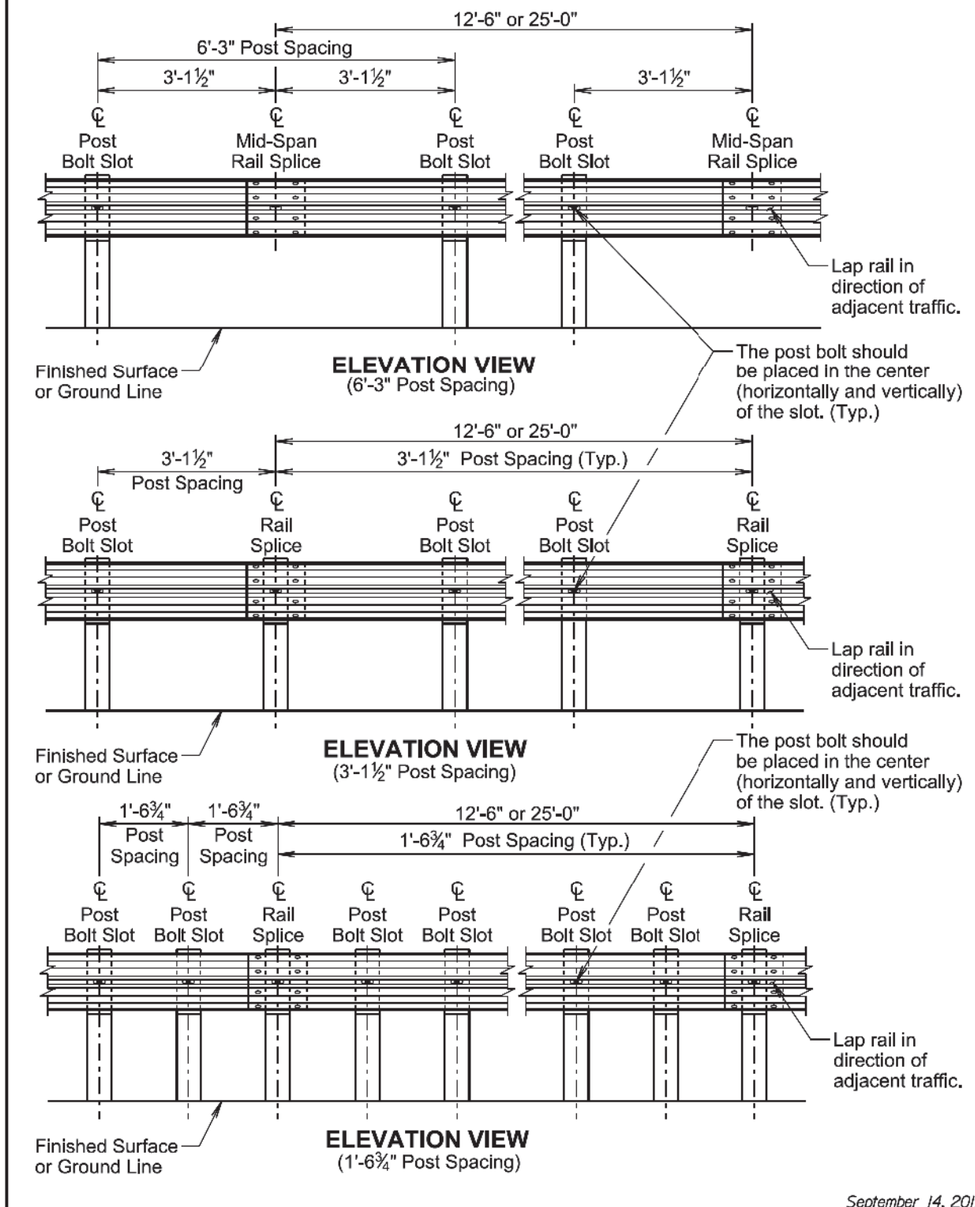
Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



EXPANDED ISOMETRIC VIEW OF TYPE 1 MGS

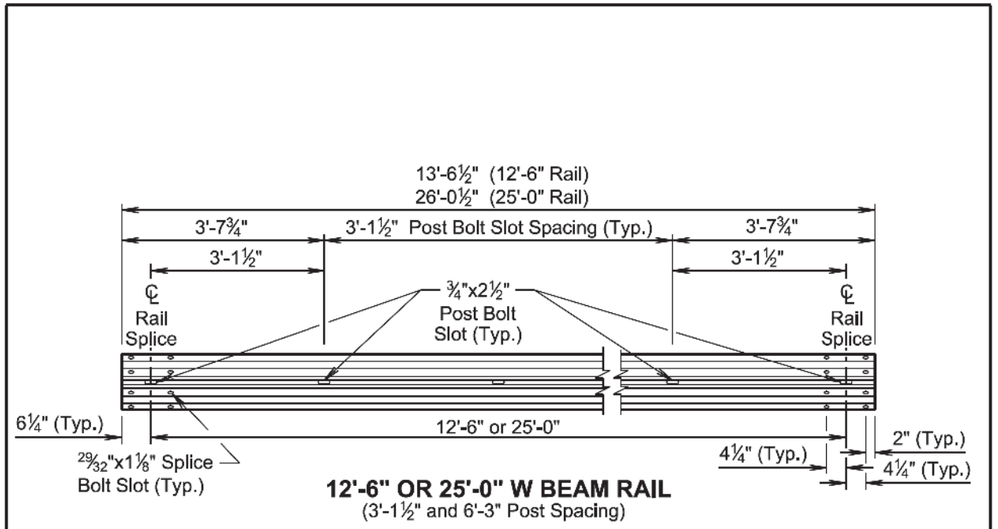
EXPANDED ISOMETRIC VIEW OF DOUBLE (NESTED) RAIL
(For Information Only, Not to Scale)

September 14, 2019

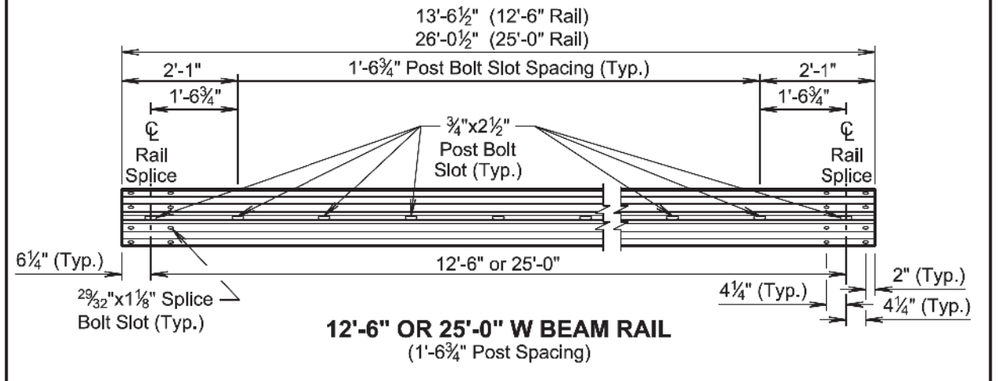


September 14, 2019

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



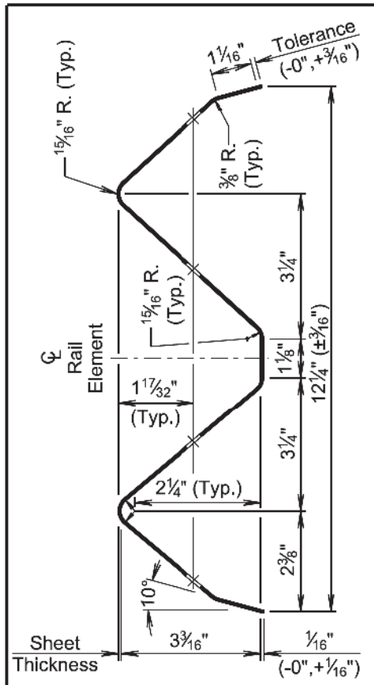
12'-6" OR 25'-0" W BEAM RAIL
(3'-1½" and 6'-3" Post Spacing)



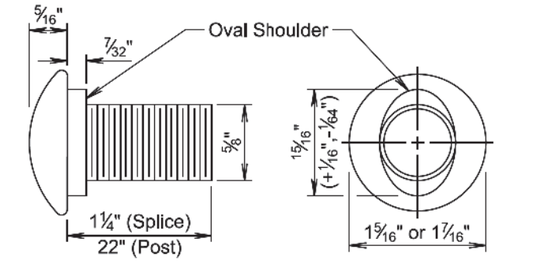
12'-6" OR 25'-0" W BEAM RAIL
(1'-6¾" Post Spacing)

September 14, 2019

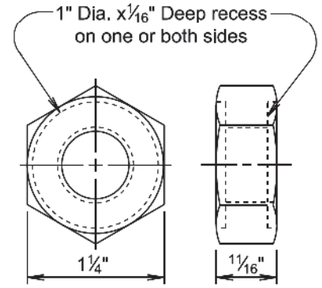
Published Date: 2024	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 5 of 6



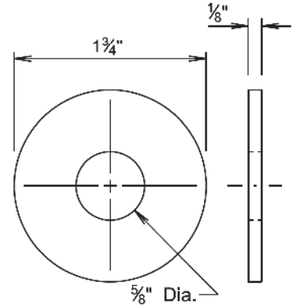
SECTION THROUGH W BEAM RAIL



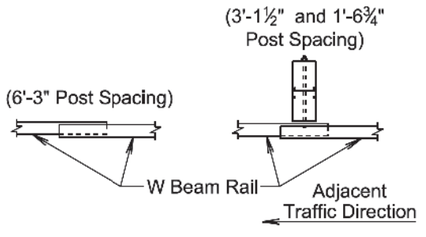
SPLICE BOLT AND POST BOLT
(⅝" Button Head Bolt)



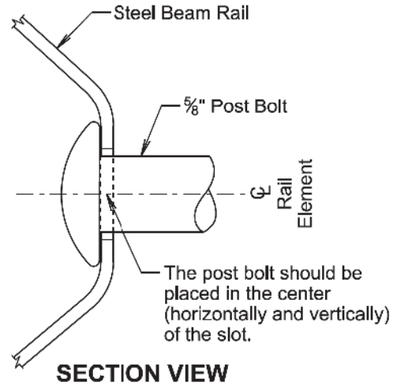
RECESS NUT
(At lap splices, the recess will be placed against the steel rail.)



WASHER
(The washer will be placed between the back side of wood post and the recess nut, see sheet 2 and 3.)



PLAN VIEW
(Lap Splice)
(Lap rail in direction of adjacent traffic.)
(8 splice bolts and 8 recess nuts per splice, NO washers)



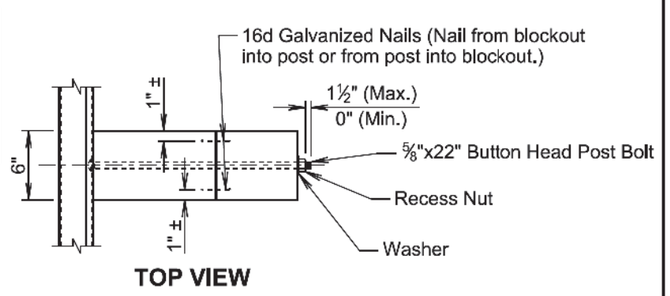
SECTION VIEW
(At Post Bolt)

September 14, 2019

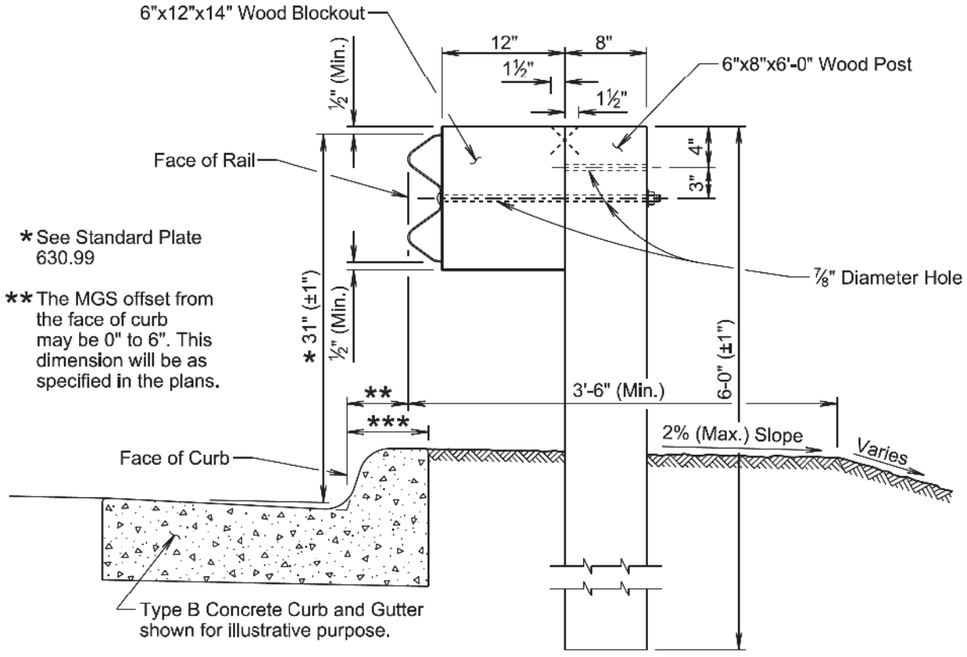
Published Date: 2024	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.20
			Sheet 6 of 6

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\SlotPlateSectionB.dgn

CONCRETE CURB AND GUTTER TYPE	DIMENSION *** (in.)
B and BL	8
D	12
F and FL	10
R	11



TOP VIEW



* See Standard Plate 630.99

** The MGS offset from the face of curb may be 0" to 6". This dimension will be as specified in the plans.

TRANSVERSE SECTION

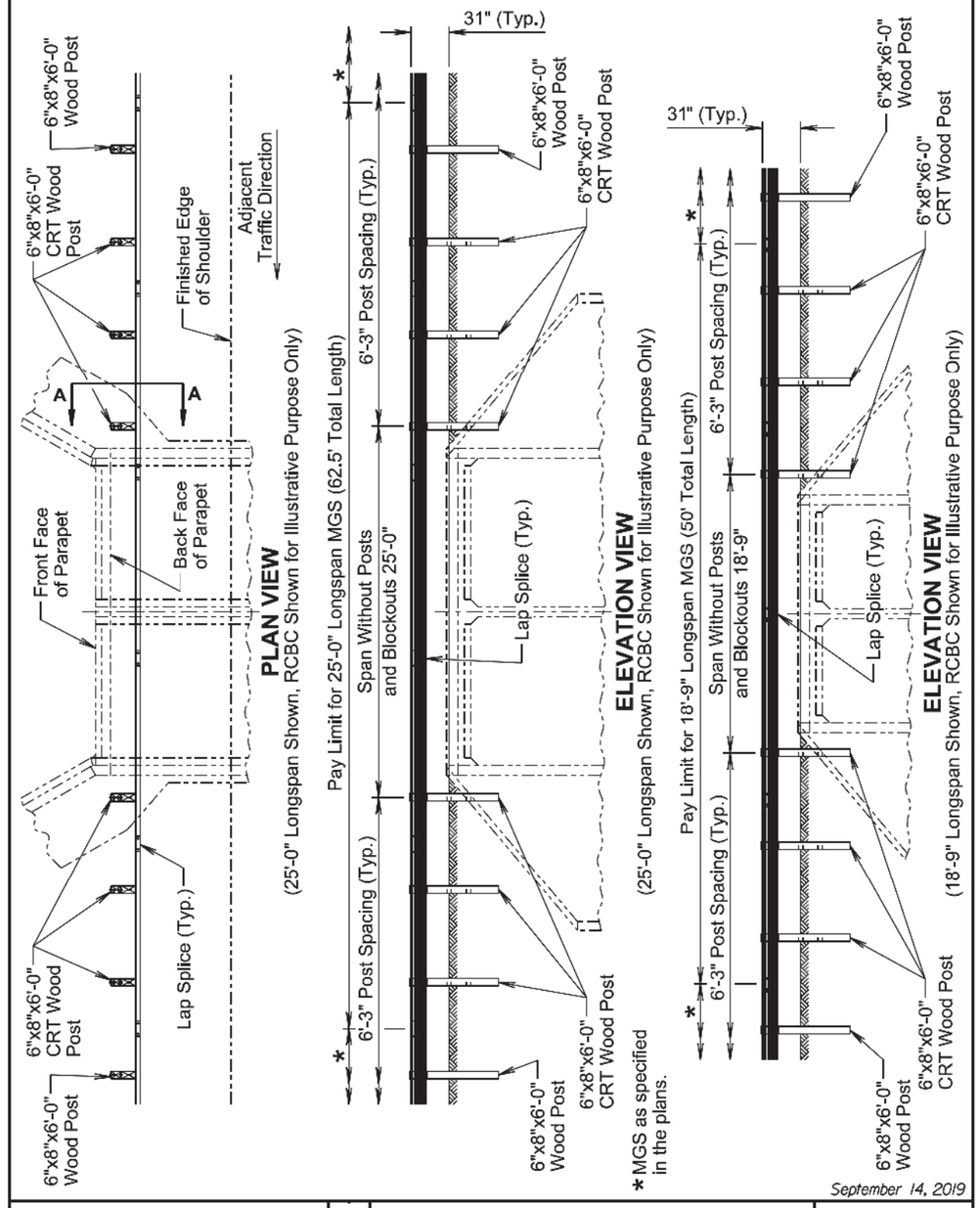
GENERAL NOTES:

The guardrail on this standard plate is Type 1 MGS. See standard plate 630.20 for specifications regarding Type 1 MGS.

When PCC pavement or asphalt concrete pavement is adjacent to the post, see standard plate 630.96 for leave-out and backfill requirements.

September 14, 2019

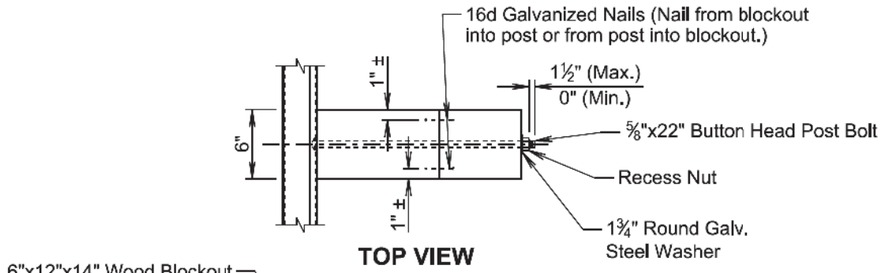
Published Date: 2024	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) AT CURB AND GUTTER	PLATE NUMBER 630.22
			Sheet 1 of 1



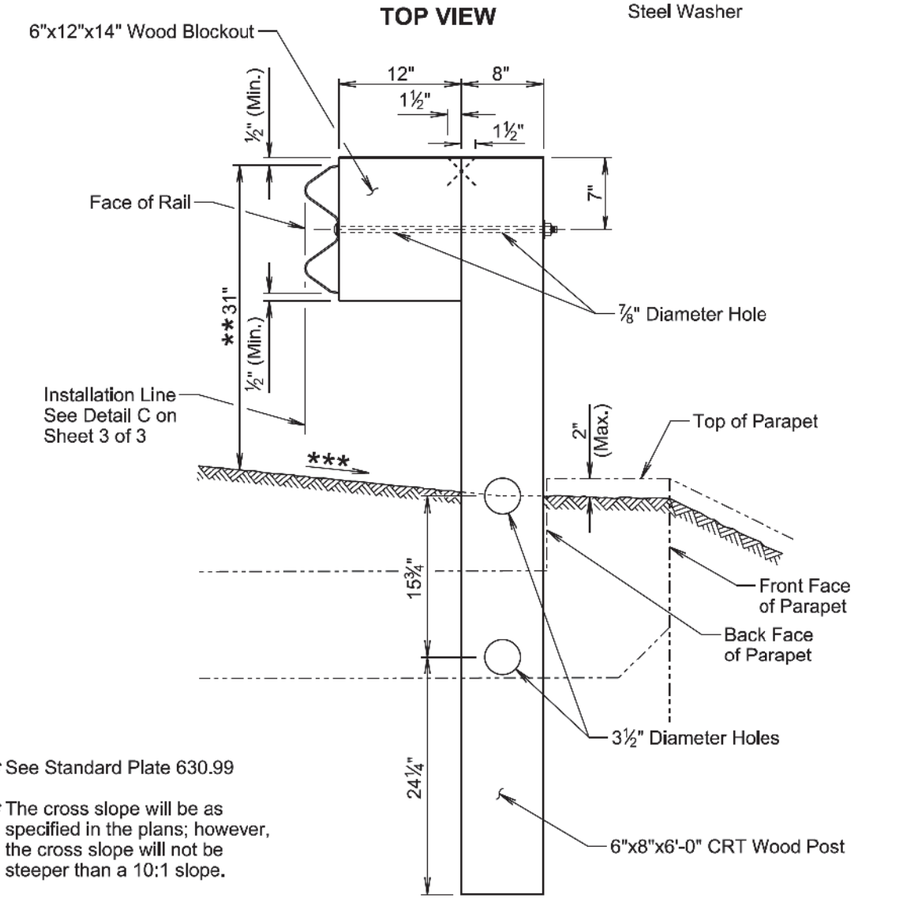
September 14, 2019

Published Date: 2024	SDDOT	LONGSPAN MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.27
			Sheet 1 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



TOP VIEW



** See Standard Plate 630.99

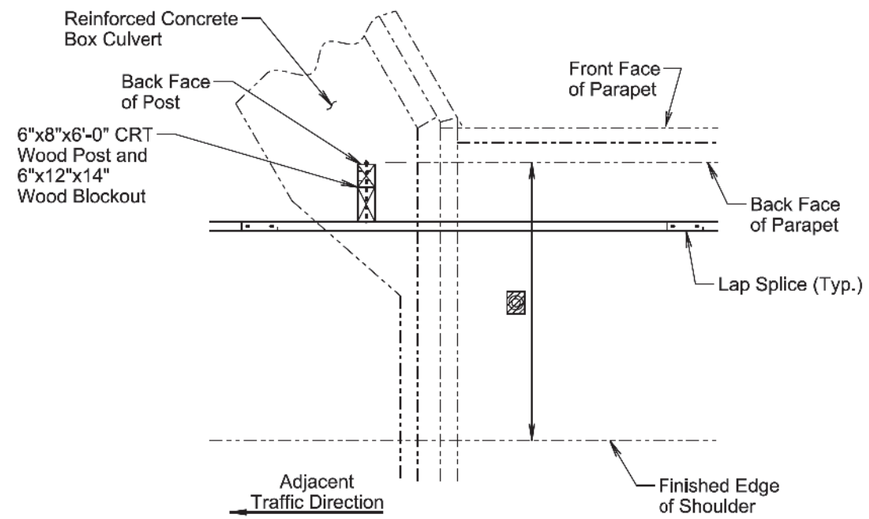
*** The cross slope will be as specified in the plans; however, the cross slope will not be steeper than a 10:1 slope.

VIEW A-A

(Longspan alignment is shown with the back of post aligned with the back face of parapet.)

September 14, 2019

Published Date: 2024	SDDOT	LONGSPAN MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.27
			Sheet 2 of 3



DETAIL C

(Longspan alignment is shown with the back of post aligned with the back face of parapet)

The MGS Longspan alignment will be as specified in the plans; however, the allowable limits of lateral alignment will be such that the back of post will not encroach beyond the back face of the parapet and the front face of the guardrail will not encroach onto the finished shoulder. For other types of culverts that do not have a parapet, the back of post lateral alignment will be a minimum of 1 foot from the opening.

GENERAL NOTES:

See standard plate 630.20 for hardware details and specifications.

The span without posts will be 25' or 18'-9" only, as shown on sheet 1 of 3.

All W beam rail will be Type 1 and Class A (12 Ga.) unless specified otherwise in the plans.

W beam rail section lengths may be 12'-6" and/or 25'-0". The combination of section lengths used will be compatible with the total length of rail per site as shown in the plans.

When PCC pavement or asphalt concrete pavement is adjacent to the post, see standard plate 630.96 for leave-out and backfill requirements.

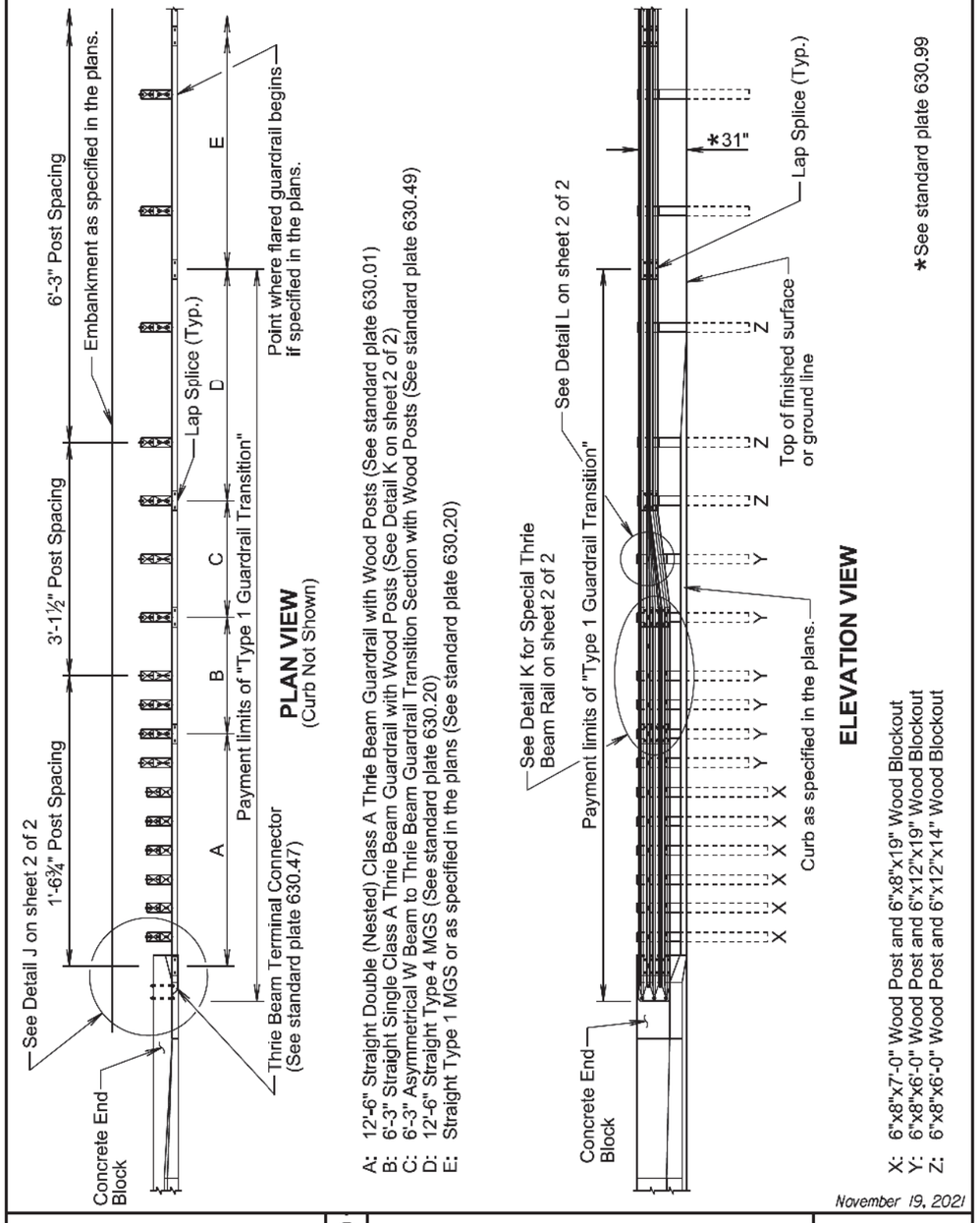
Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for constructing the Longspan MGS including labor, equipment, and materials including all posts, blockouts, steel beam rail, and hardware will be incidental to the contract unit price per each for the corresponding Longspan MGS contract item.

September 14, 2019

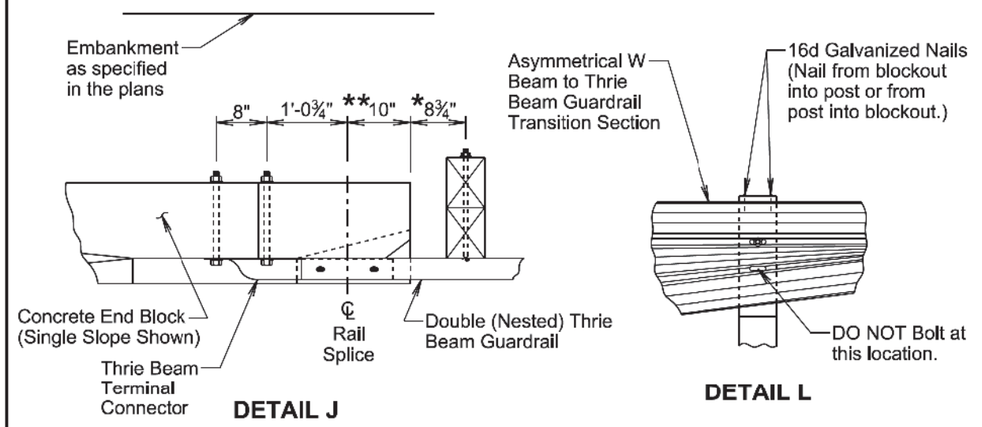
Published Date: 2024	SDDOT	LONGSPAN MIDWEST GUARDRAIL SYSTEM (MGS)	PLATE NUMBER 630.27
			Sheet 3 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BiStdPlateSectionB.dgn

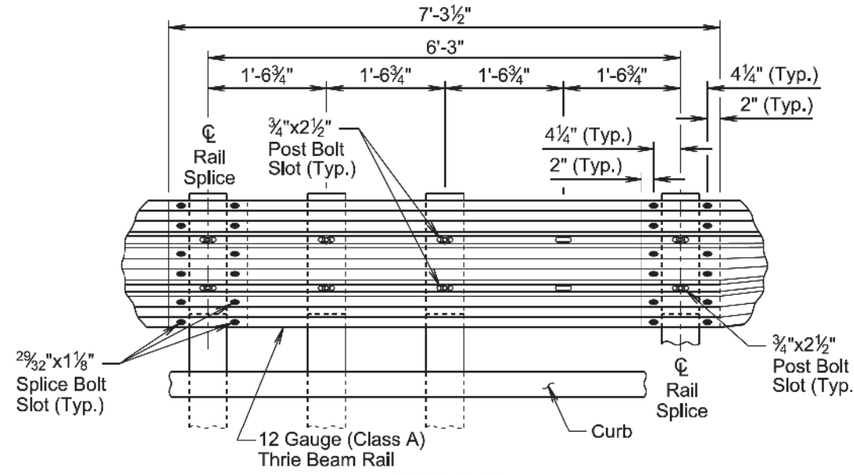


November 19, 2021

Published Date: 2024	SDDOT	TYPE 1 GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.50
			Sheet 1 of 2



Jersey Barrier Dimensions are **7¼" and *11½"



DETAIL K
(Special Thrie Beam Rail)

GENERAL NOTES:

Throughout the type 1 guardrail transition, slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for furnishing and installing the type 1 guardrail transition including labor, equipment, and materials which includes all rail sections, posts and blockouts, hardware, and incidentals will be included in the contract unit price per each for "Type 1 Guardrail Transition".

November 19, 2021

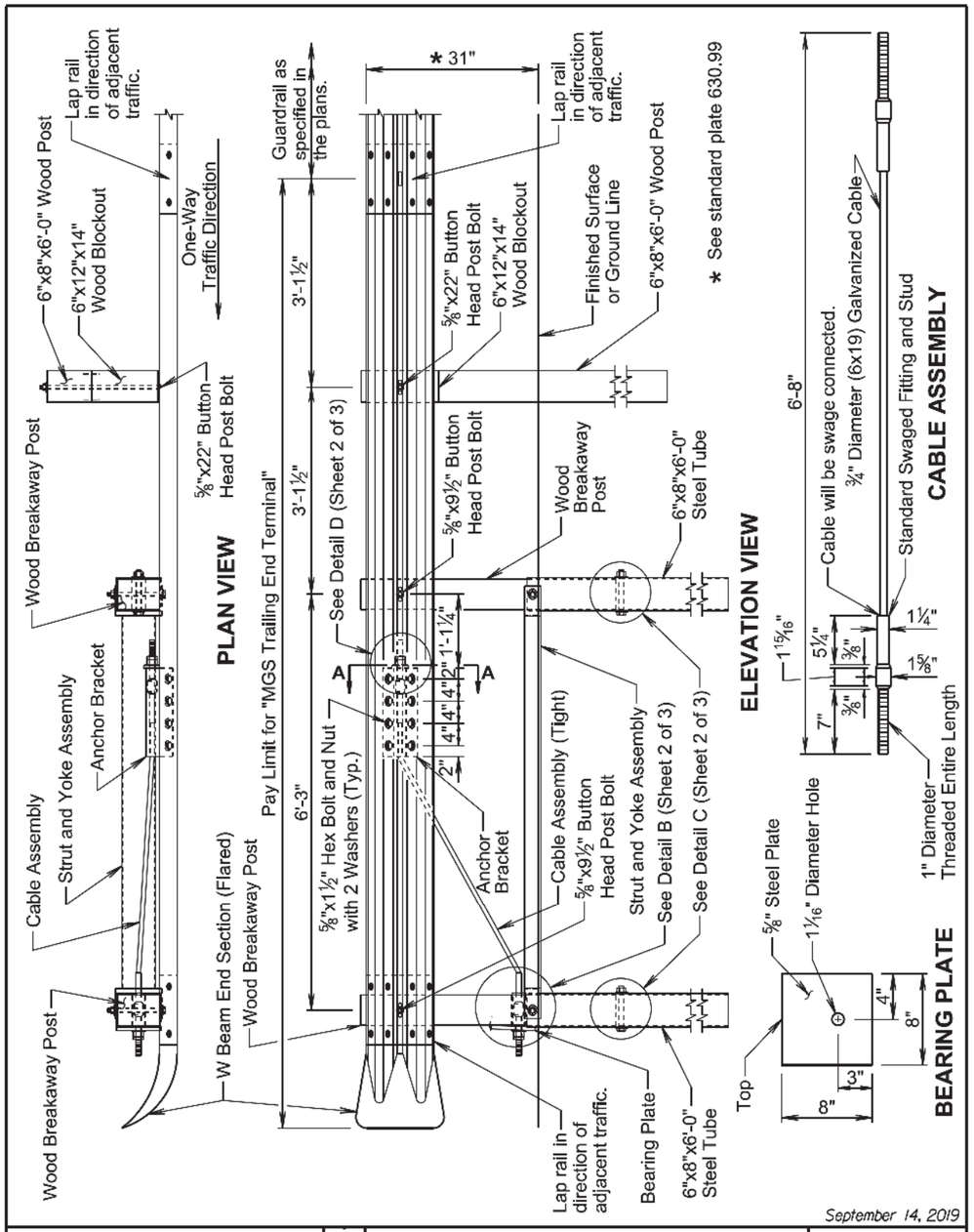
Published Date: 2024	SDDOT	TYPE 1 GUARDRAIL TRANSITION (CONCRETE END BLOCK TO MIDWEST GUARDRAIL SYSTEM (MGS))	PLATE NUMBER 630.50
			Sheet 2 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn

FOR BIDDING PURPOSES ONLY

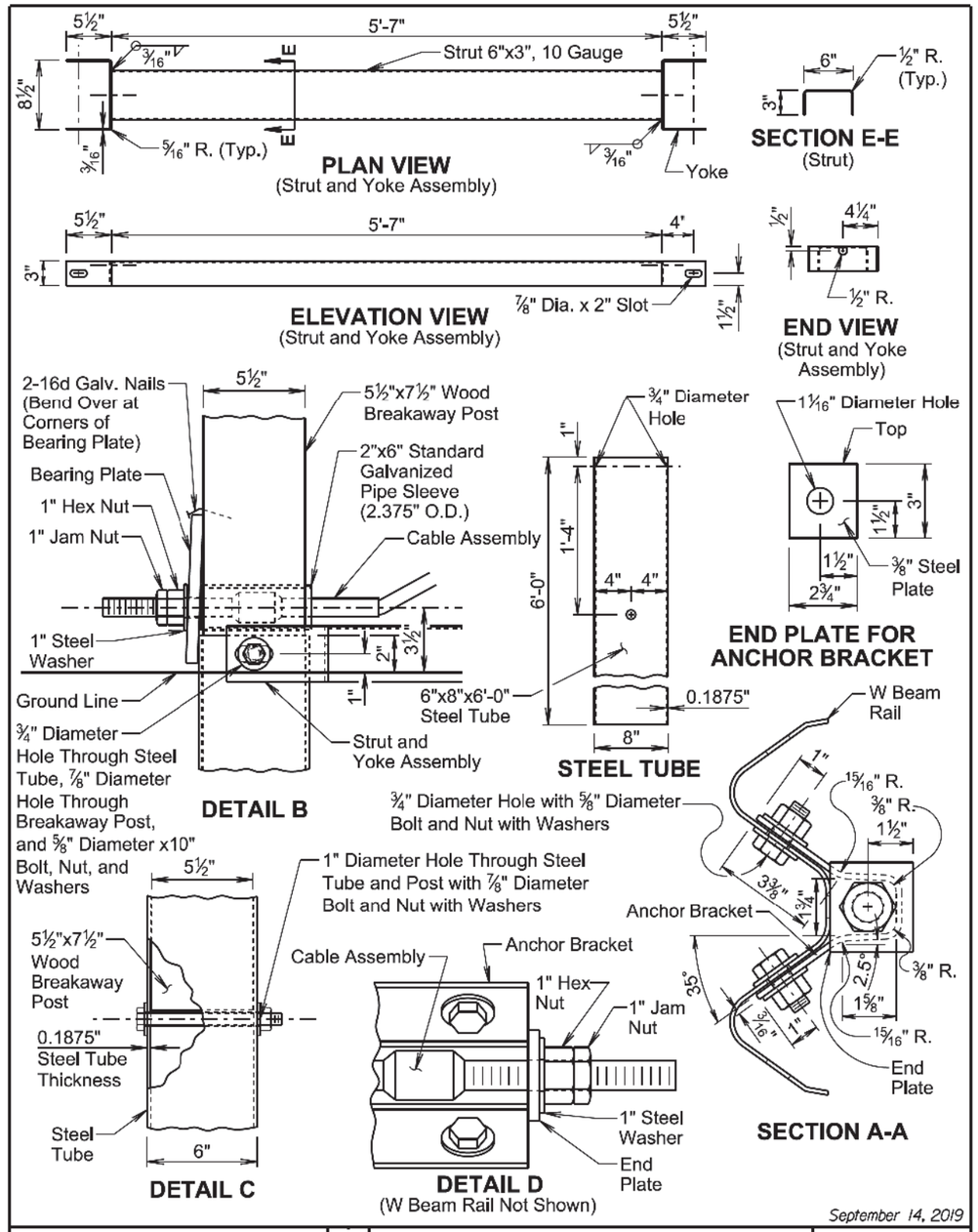
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B219	B245

Plotting Date: 9/20/2023



September 14, 2019

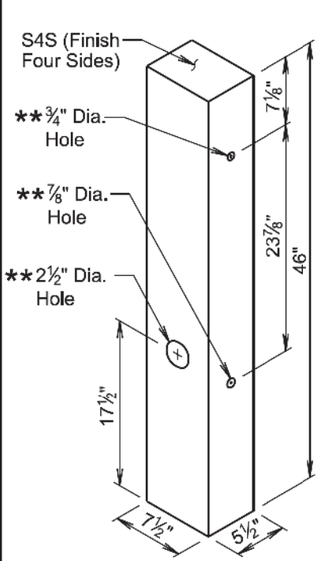
Published Date: 2024	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) TRAILING END TERMINAL	PLATE NUMBER 630.82
			Sheet 1 of 3



September 14, 2019

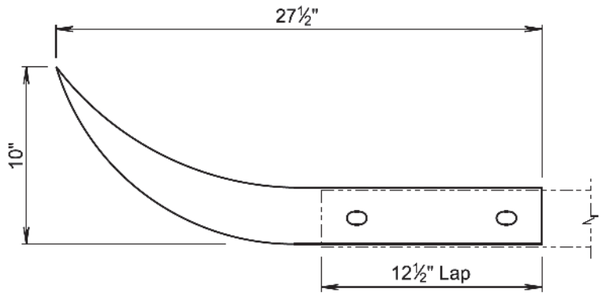
Published Date: 2024	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) TRAILING END TERMINAL	PLATE NUMBER 630.82
			Sheet 2 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BS\tdPlateSectionB.dgn

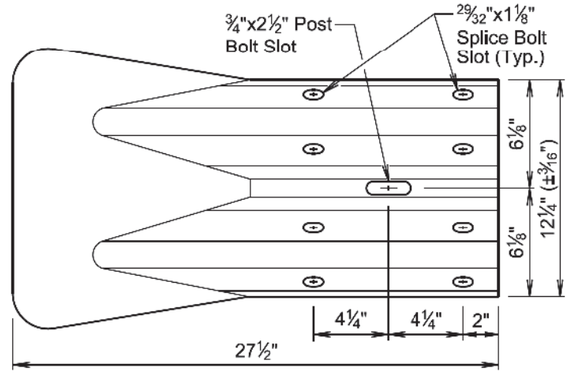


** All holes will be centered on respective sides.

WOOD BREAKAWAY POST



PLAN VIEW
(W Beam End Section (Flared))



ELEVATION VIEW
(W Beam End Section (Flared))

GENERAL NOTES:

The MGS trailing end terminal will only be used in a one-way traffic situation on the downstream traffic flow end.

W beam end section (flared) will be 12 gauge.

The cable will be ¾", Type II, with Class A coating in conformance with AASHTO M30.

The steel tube will meet the requirements of ASTM A500, Grade B, and will be galvanized after fabrication in accordance with the requirements of AASHTO M111.

All hardware will be galvanized in accordance with ASTM A153.

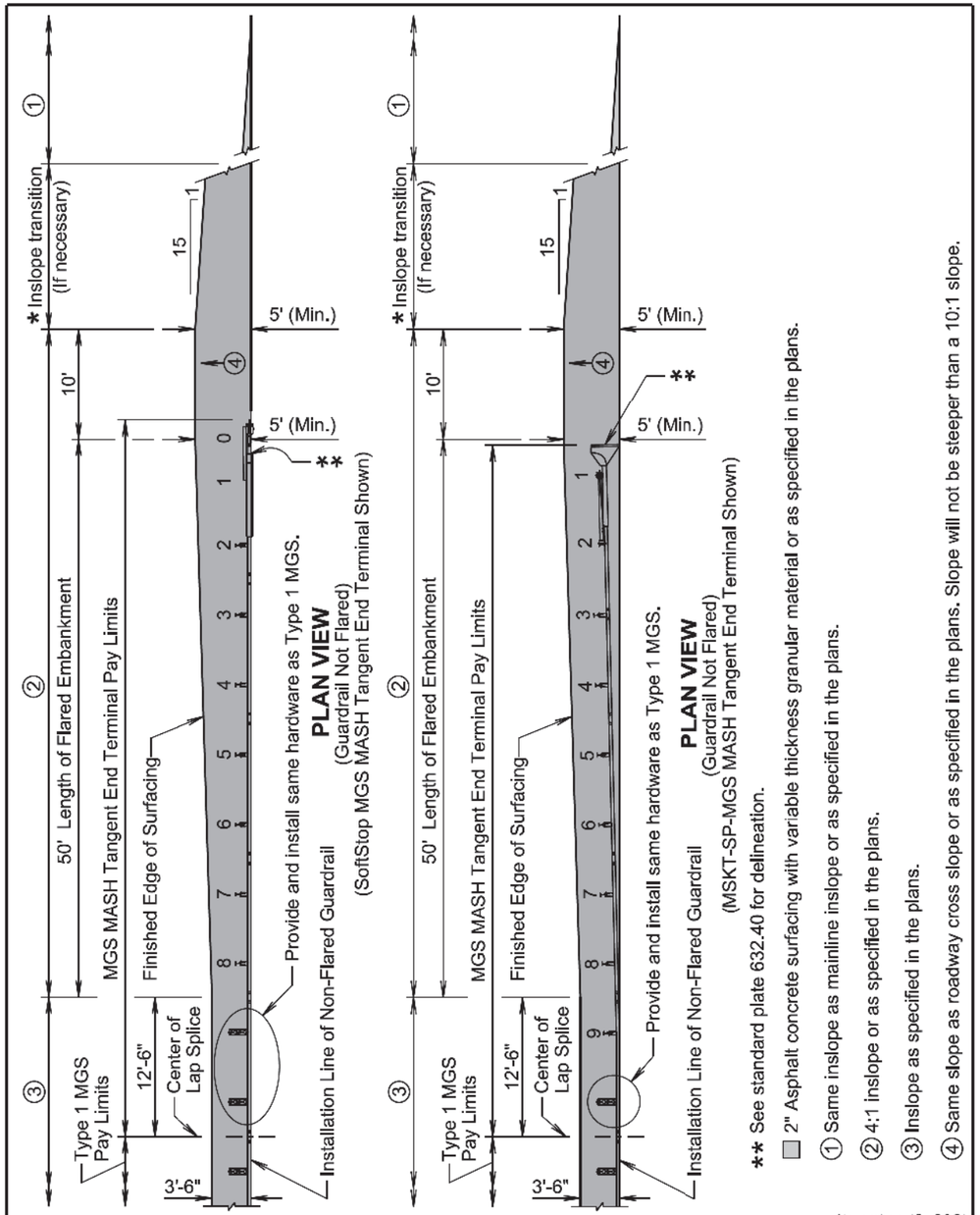
The anchor bracket, strut and yoke assembly, and bearing plate will be fabricated from steel that meets ASTM A36 Specifications. They will be galvanized after fabrication in accordance with ASTM A123.

Slots in the rails will be provided as specified in the plans and by the manufacturer. A drilled hole through the rail is not allowed as a replacement for a slot. If the Contractor must create a slot, a cutting torch or plasma cutter is not allowed. The slot edges will be smooth and free of burrs or notches.

All costs for furnishing and constructing the MGS trailing end terminal including labor, equipment, materials which includes W beam rail section, two wood breakaway posts, steel tubes, strut and yoke assembly, cable assembly, bearing plate, anchor bracket, W beam end section (flared), one MGS wood post and blockout, hardware, and incidentals will be included in the contract unit price per each for "MGS Trailing End Terminal".

September 14, 2019

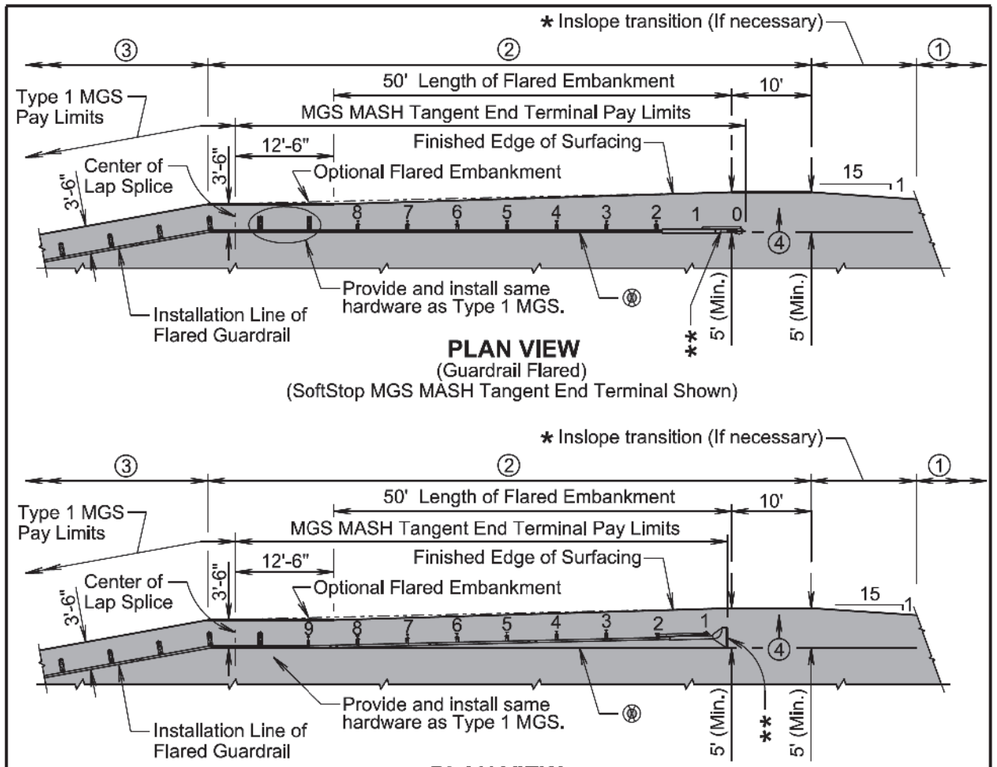
Published Date: 2024	SDDOT	MIDWEST GUARDRAIL SYSTEM (MGS) TRAILING END TERMINAL	PLATE NUMBER 630.82
			Sheet 3 of 3



November 19, 2021

Published Date: 2024	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std Plate\Section B.dgn



PLAN VIEW
(Guardrail Flared)
(SoftStop MGS MASH Tangent End Terminal Shown)

PLAN VIEW
(Guardrail Flared)
(MSKT-SP-MGS MASH Tangent End Terminal Shown)

GENERAL NOTES:

The MGS MASH tangent end terminals above are for illustrative purpose only. Pay limit length of the MGS MASH tangent end terminal is 62'-6".

* The length of inslope transition varies with the amount of change between inslopes. The length of the transition will change 100' for every whole number change in the inslope. For Example: If the inslope changes from a 5:1 to a 4:1 the length of the inslope transition would be 100'. If the inslope changes from a 6:1 to a 4:1 the length of the inslope transition would be 200'.

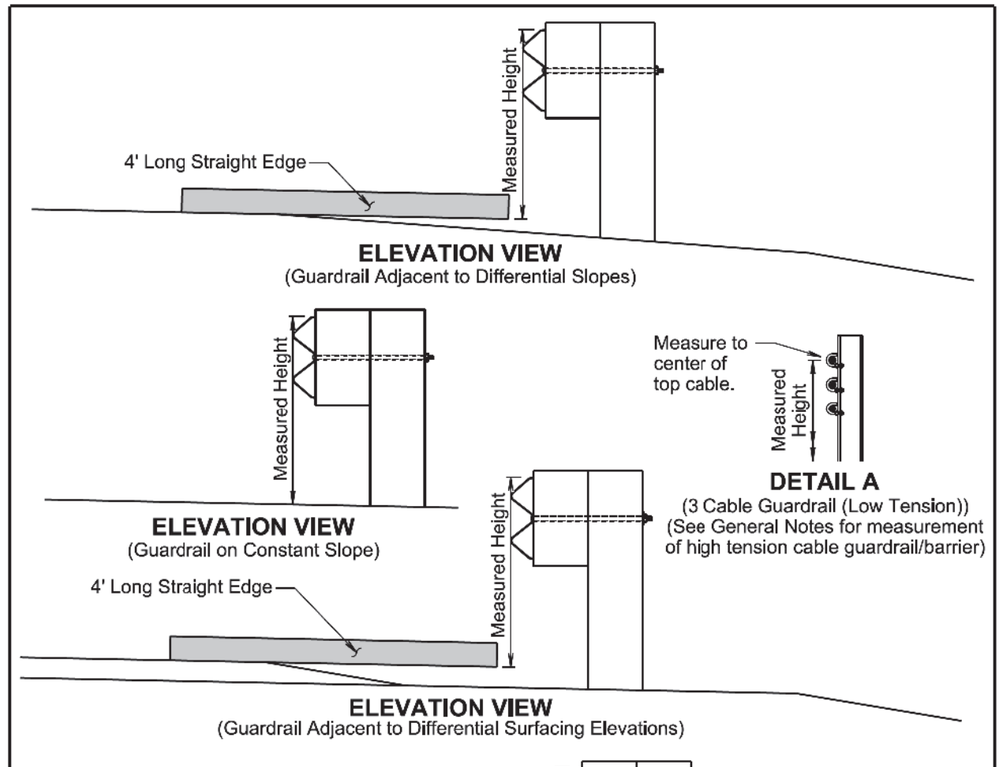
Ⓜ The installation reference line for MGS MASH tangent end terminals will always be parallel to the roadway.

Asphalt concrete will be the same type used elsewhere on the project or will be as specified in the plans. If asphalt concrete is not specified in the plans, the asphalt concrete will conform to the Specifications for "Asphalt Concrete Composite."

Granular material will be the same type used elsewhere on the project or will be as specified in the plans. If granular material type is not specified in the plans, the material will conform to the Specifications for "Base Course". The granular material will be placed the same thickness as the mainline surfacing or as specified in the plans.

November 19, 2021

Published Date: 2024	SDDOT	EMBANKMENT, SURFACING, AND PAYMENT LIMITS FOR MGS MASH TANGENT END TERMINAL	PLATE NUMBER 630.89
			Sheet 2 of 2

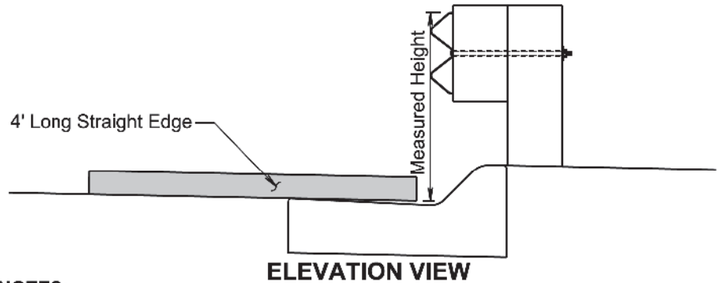


ELEVATION VIEW
(Guardrail Adjacent to Differential Slopes)

ELEVATION VIEW
(Guardrail on Constant Slope)

DETAIL A
(3 Cable Guardrail (Low Tension))
(See General Notes for measurement of high tension cable guardrail/barrier)

ELEVATION VIEW
(Guardrail Adjacent to Differential Surfacing Elevations)



ELEVATION VIEW
(Guardrail at Curb and Gutter)

GENERAL NOTES:

The W Beam guardrail shown is for illustrative purpose. The guardrail height for all types of guardrail systems except for high tension cable guardrail/barrier will be measured in accordance with this standard plate.

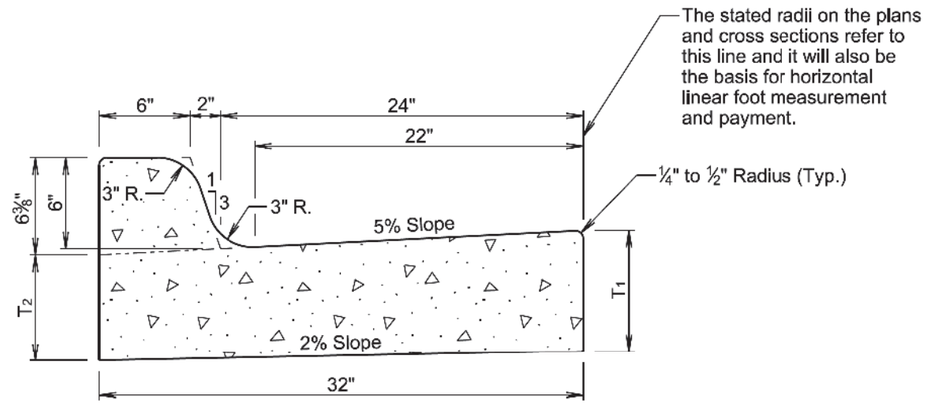
When measuring height of 3 cable guardrail (low tension) the height will be measured to the center of the top cable. See Detail A.

The height of high tension cable guardrail/barrier will be measured in accordance with the Manufacturer's installation instructions.

September 14, 2019

Published Date: 2024	SDDOT	MEASURING GUARDRAIL HEIGHT	PLATE NUMBER 630.99
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



TYPE B CONCRETE CURB AND GUTTER				
Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	5 1/16	0.057	17.7
B67	7	6 1/16	0.065	15.4
B68	8	7 1/16	0.073	13.7
B68.5	8.5	7 9/16	0.077	13.0
B69	9	8 1/16	0.081	12.3
B69.5	9.5	8 9/16	0.085	11.7
B610	10	9 1/16	0.090	11.2
B610.5	10.5	9 9/16	0.094	10.7
B611	11	10 1/16	0.098	10.2
B611.5	11.5	10 9/16	0.102	9.8
B612	12	11 1/16	0.106	9.4

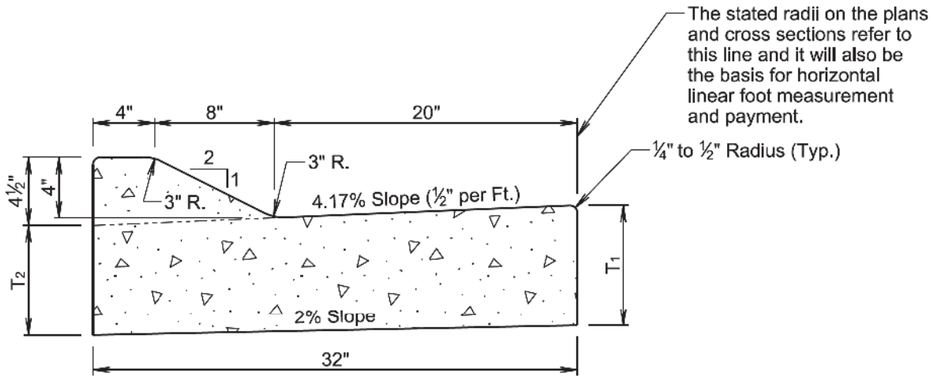
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023

Published Date: 2024	SDDOT	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1



TYPE D CONCRETE CURB AND GUTTER				
Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
D46	6	5 5/16	0.056	18.0
D47	7	6 5/16	0.064	15.7
D48	8	7 5/16	0.072	13.9
D48.5	8.5	7 13/16	0.076	13.1
D49	9	8 5/16	0.080	12.5
D49.5	9.5	8 13/16	0.084	11.9
D410	10	9 5/16	0.088	11.3
D410.5	10.5	9 13/16	0.093	10.8
D411	11	10 5/16	0.097	10.3
D411.5	11.5	10 13/16	0.101	9.9
D412	12	11 5/16	0.105	9.5

GENERAL NOTES:

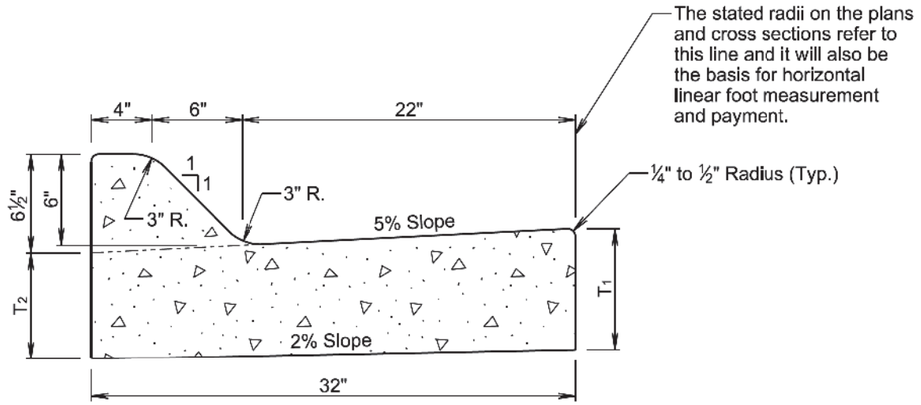
When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023

Published Date: 2024	SDDOT	TYPE D CONCRETE CURB AND GUTTER	PLATE NUMBER 650.15
			Sheet 1 of 1

Plot Scale - 1:200
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File - ...\Section B\Std\PlateSectionB.dgn



TYPE F CONCRETE CURB AND GUTTER

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
F66	6	5 1/16	0.057	17.6
F67	7	6 1/16	0.065	15.4
F68	8	7 1/16	0.073	13.6
F68.5	8.5	7 9/16	0.077	12.9
F69	9	8 1/16	0.082	12.3
F69.5	9.5	8 9/16	0.086	11.7
F610	10	9 1/16	0.090	11.1
F610.5	10.5	9 9/16	0.094	10.7
F611	11	10 1/16	0.098	10.2
F611.5	11.5	10 9/16	0.102	9.8
F612	12	11 1/16	0.106	9.4

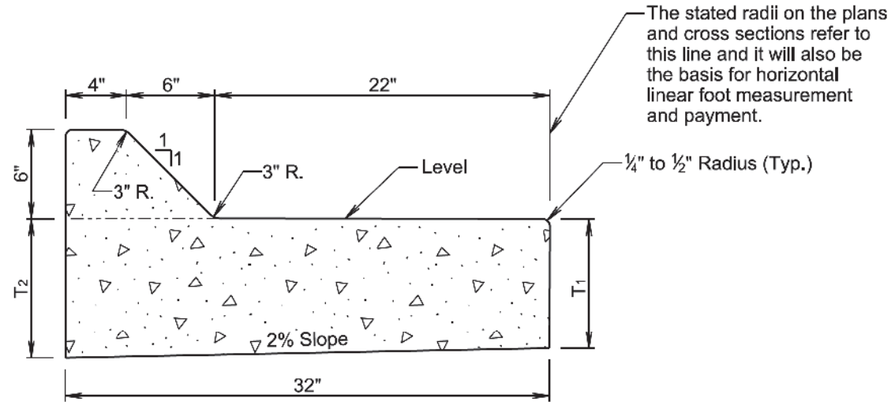
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023

Published Date: 2024	SDDOT	***TYPE F CONCRETE CURB AND GUTTER***	*PLATE NUMBER* 650.20 *Sheet 1 of 1*



TYPE FL CONCRETE CURB AND GUTTER

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
FL66	6	6 5/8	0.062	16.1
FL67	7	7 5/8	0.071	14.1
FL68	8	8 5/8	0.079	12.7
FL68.5	8.5	9 1/8	0.084	11.9
FL69	9	9 5/8	0.087	11.5
FL69.5	9.5	10 1/8	0.091	11.0
FL610	10	10 5/8	0.095	10.9
FL610.5	10.5	11 1/8	0.100	10.0
FL611	11	11 5/8	0.104	9.6
FL611.5	11.5	12 1/8	0.108	9.3
FL612	12	12 5/8	0.112	8.9

GENERAL NOTES:

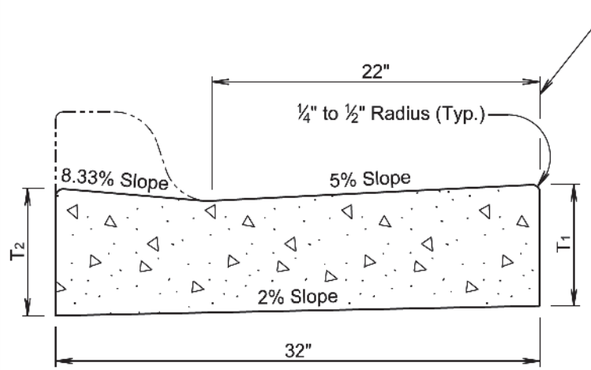
When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

See standard plate 650.90 for expansion and contraction joints in the curb and gutter.

January 22, 2023

Published Date: 2024	SDDOT	***TYPE FL CONCRETE CURB AND GUTTER***	*PLATE NUMBER* 650.25 *Sheet 1 of 1*

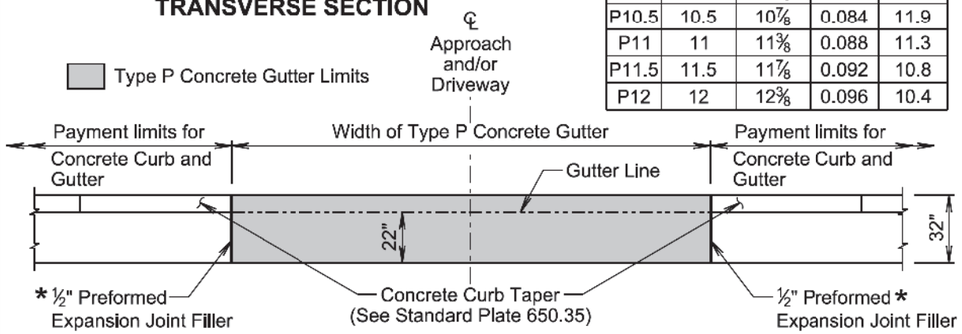
Plot Scale - 1:200
Plotted From - Jennifer.Rogatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



TRANSVERSE SECTION

The stated radii on the plans and cross sections refer to this line and it will also be the basis for horizontal linear foot measurement and payment.

TYPE P CONCRETE GUTTER				
Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
P6	6	6⅜	0.047	21.2
P7	7	7⅜	0.055	18.1
P8	8	8⅜	0.064	15.7
P8.5	8.5	8⅞	0.068	14.8
P9	9	9⅜	0.072	13.9
P9.5	9.5	9⅞	0.076	13.2
P10	10	10⅜	0.080	12.5
P10.5	10.5	10⅞	0.084	11.9
P11	11	11⅜	0.088	11.3
P11.5	11.5	11⅞	0.092	10.8
P12	12	12⅜	0.096	10.4



PLAN VIEW

* Joint will not be needed if concrete curb and gutter and type P concrete gutter is placed at the same time. If the ½" preformed expansion joint filler is provided, then the joint will be sealed in accordance with standard plate 650.90.

GENERAL NOTES:

The concrete for the type P concrete gutter will comply with the requirements of the specifications for class M6 concrete.

When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment will be by one of the methods shown on standard plate 380.21.

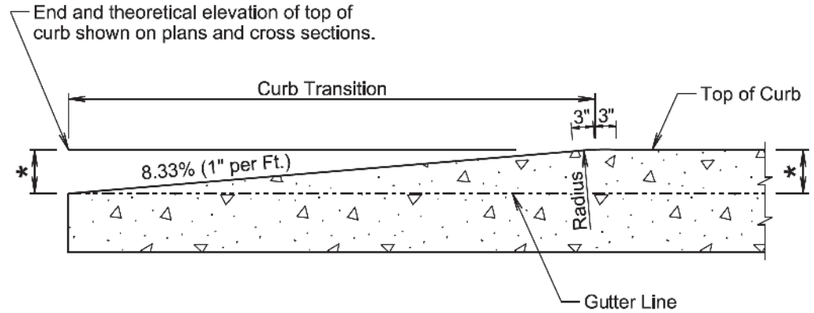
Transverse contraction joints will be constructed at 10-foot intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete gutter at each mainline PCC pavement transverse contraction joint location.

When concrete gutter is placed monolithically with mainline PCC pavement, the transverse contraction joints in the concrete gutter will be sawed and sealed the same as the transverse contraction joints in the mainline PCC pavement.

When concrete gutter is not placed monolithically with the mainline PCC pavement and when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete gutter will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete.

January 22, 2023

Published Date: 2024	SDDOT	TYPE P CONCRETE GUTTER	PLATE NUMBER 650.30
			Sheet 1 of 1



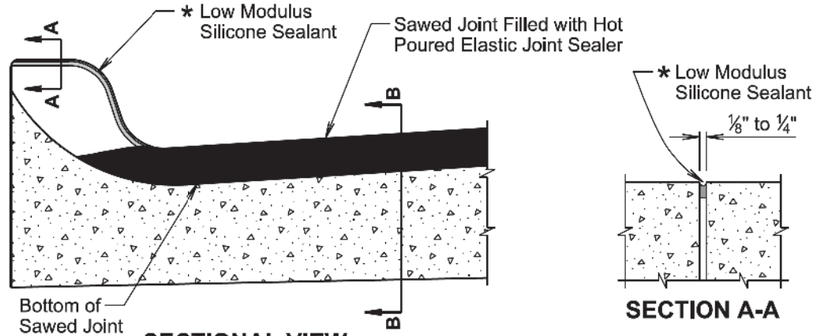
* Height of Curb

LONGITUDINAL SECTION
(Concrete Curb Taper)

December 23, 2019

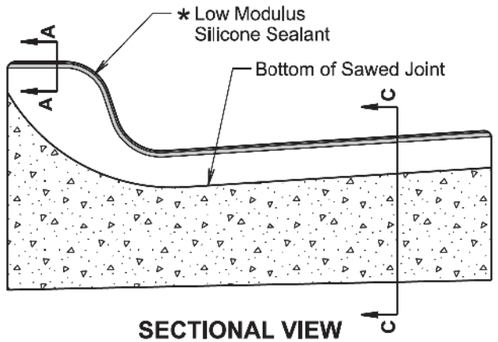
Published Date: 2024	SDDOT	CONCRETE CURB TAPER	PLATE NUMBER 650.35
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn

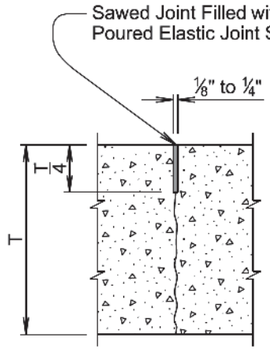


SECTIONAL VIEW
(Curb and Gutter Placed Monolithic with Adjacent Mainline PCC Pavement)

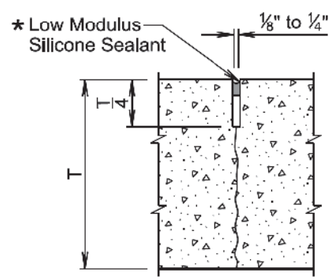
SECTION A-A



SECTIONAL VIEW
(Curb and Gutter not Placed Monolithic with Adjacent Mainline PCC Pavement or Mainline Surfacing is not PCC Pavement)



SECTION B-B

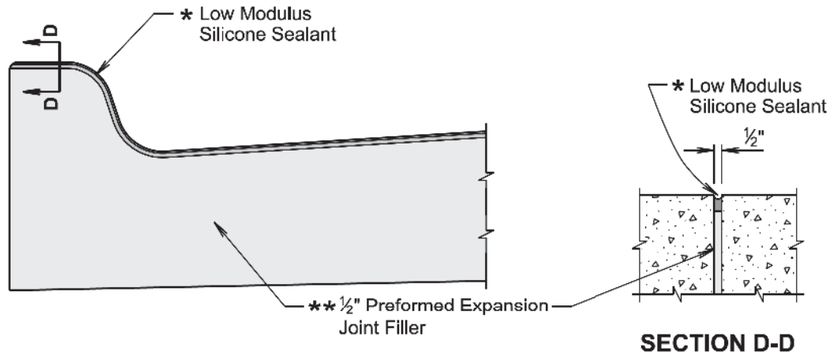


SECTION C-C

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

December 23, 2019

Published Date: 2024	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 2



SECTIONAL VIEW
(Curb and Gutter at ½" Preformed Expansion Joint Filler Location)

SECTION D-D

* The silicone sealant will be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

GENERAL NOTES:

For illustrative reason, only the type B curb and gutter is shown.

** A ½-inch preformed expansion joint filler will be placed transversely in the curb and gutter at the following locations:

At each junction between the radius return of curb and gutter, and curb and gutter which is parallel to the project centerline.

At each junction between new curb and gutter and existing curb and gutter.

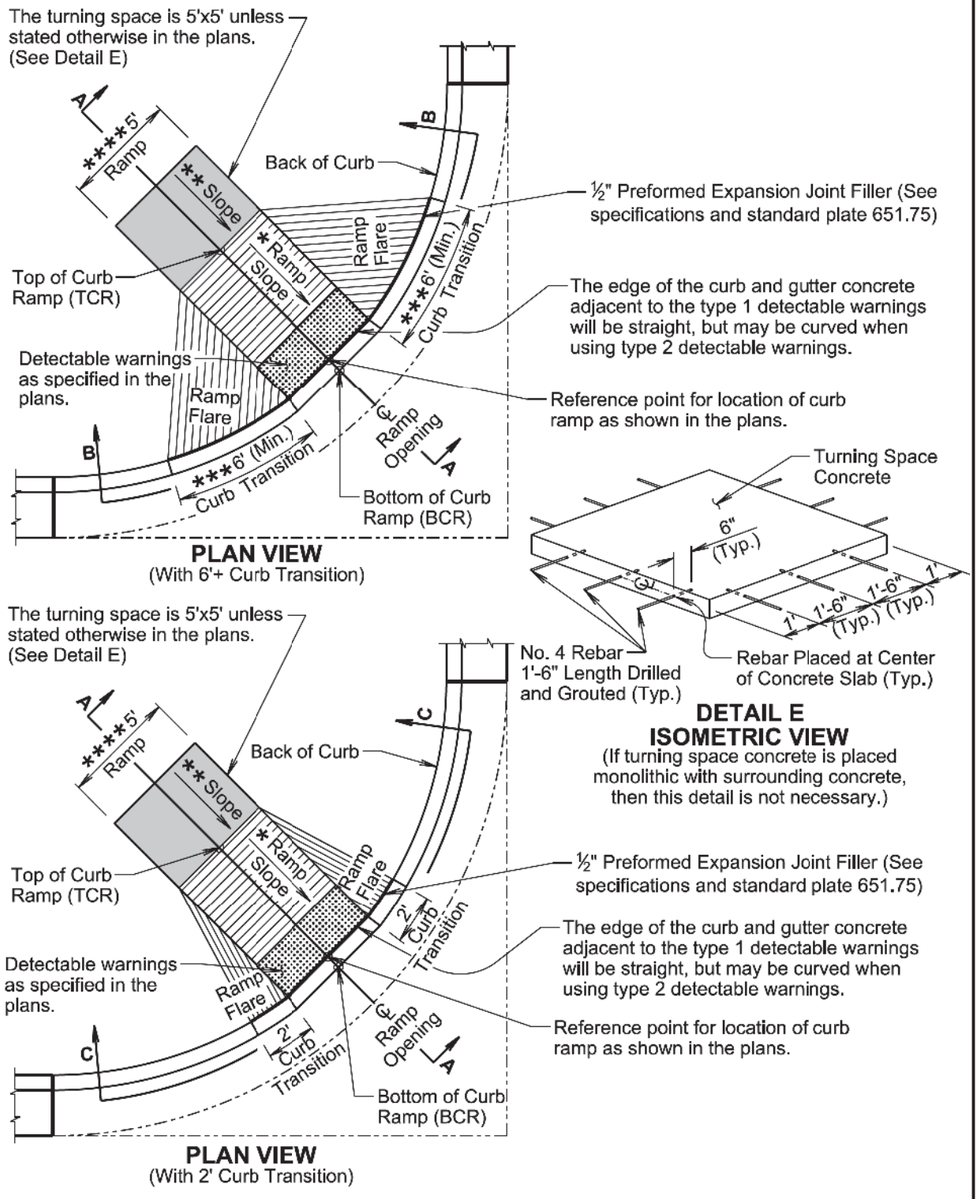
Transverse contraction joints will be constructed at 10 foot intervals in the concrete curb and gutter except when the concrete curb and gutter is constructed adjacent to mainline PCC pavement. When concrete curb and gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint will be constructed in the concrete curb and gutter at each mainline PCC pavement transverse contraction joint location.

When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter will be 1½ inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint will be at least ¼ the thickness of the concrete and the joint will be sealed in accordance with the details shown above.

December 23, 2019

Published Date: 2024	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 2 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



February 14, 2020

Published Date: 2024	SDDOT	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 1 of 3

* Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% and will not exceed 15' in length unless stated otherwise in the plans.

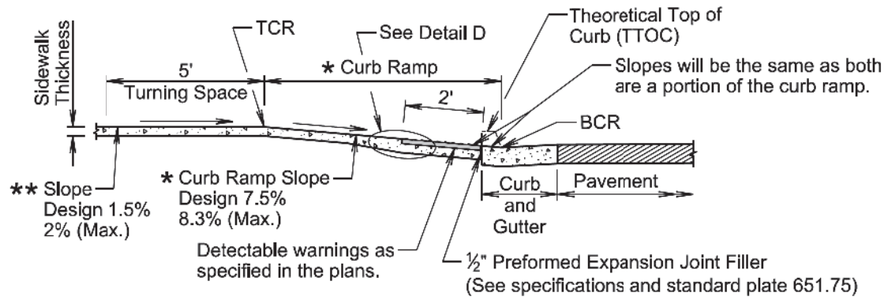
The curb ramp length may be computed based on the intersection of a continuous 1.5% theoretical slope from theoretical top of curb (TTOC) with the curb ramp using a continuous 7.5% curb ramp slope. The elevation of point TCR will always be higher than the elevation of point TTOC unless specified otherwise in the plans. The curb ramp length dimension as shown in the plans will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

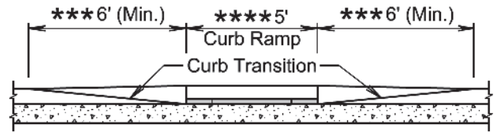
** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

*** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The curb transition length will be adjusted as necessary to meet slope and length requirements based on field geometrics.

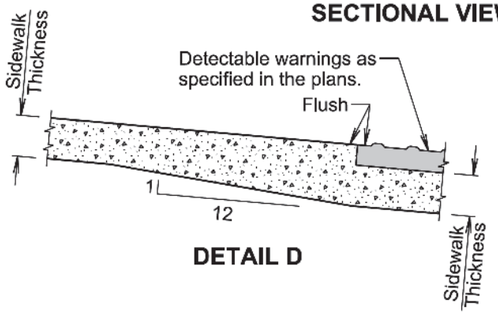
**** The ramp width is 5' unless stated otherwise in the plans.



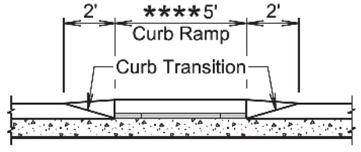
SECTION A-A



SECTIONAL VIEW B-B



DETAIL D



SECTIONAL VIEW C-C

February 14, 2020

Published Date: 2024	SDDOT	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 2 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

For illustrative purpose only, PCC fillet sections are shown in the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section or curb and gutter.

For illustrative purpose only, the curb ramp location is shown at the center of a PCC fillet section. The curb ramp will be placed at the location stated in the plans.

Sidewalk will not be placed adjacent to the curb ramp flares when a 2-foot curb transition is used unless shown otherwise in the plans.

* Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

If rebar is placed in the turning space as depicted in detail E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

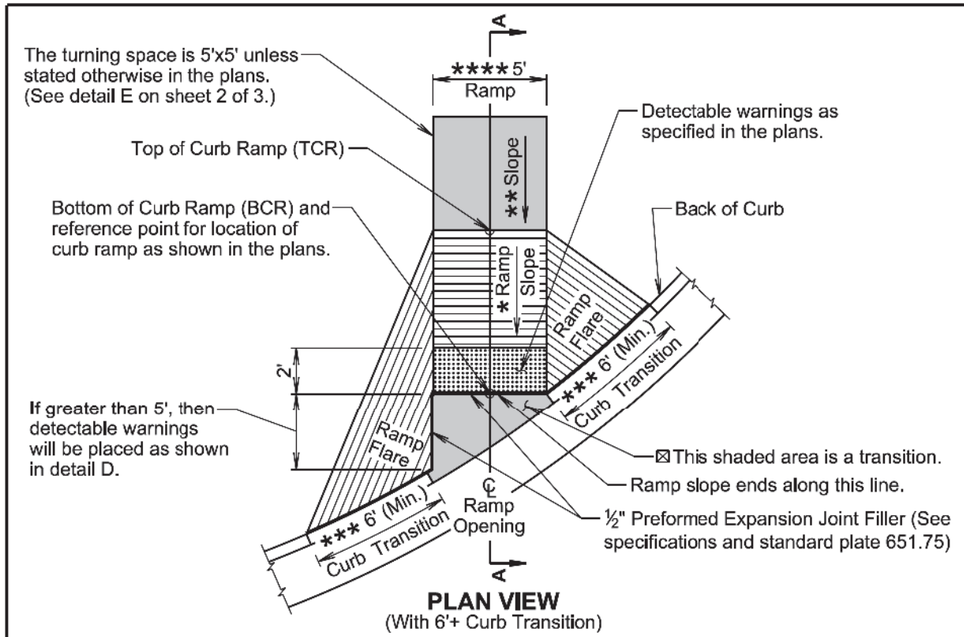
The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

February 14, 2020

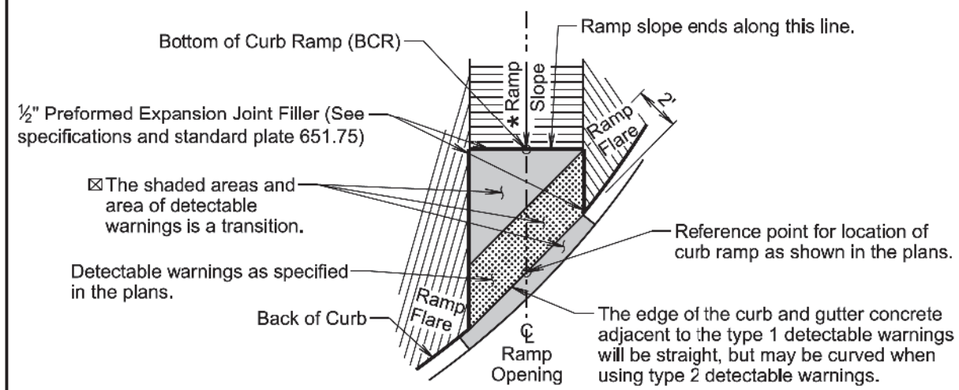
Published Date: 2024	SDDOT	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 3 of 3



PLAN VIEW
(With 6'+ Curb Transition)

⊠ The slope within the transition area will not be steeper than 5%. The concrete within the transition will be placed monolithic with the curb and gutter or fillet section concrete. The concrete thickness within the transition will be the same as the curb and gutter or fillet section concrete thickness.

*** The curb transition will be a minimum of 6' long, a maximum of 10' long, and the curb transition slope will not be steeper than 10% unless stated otherwise in the plans. The curb transition length will be adjusted as necessary to meet slope and length requirements based on field geometrics.

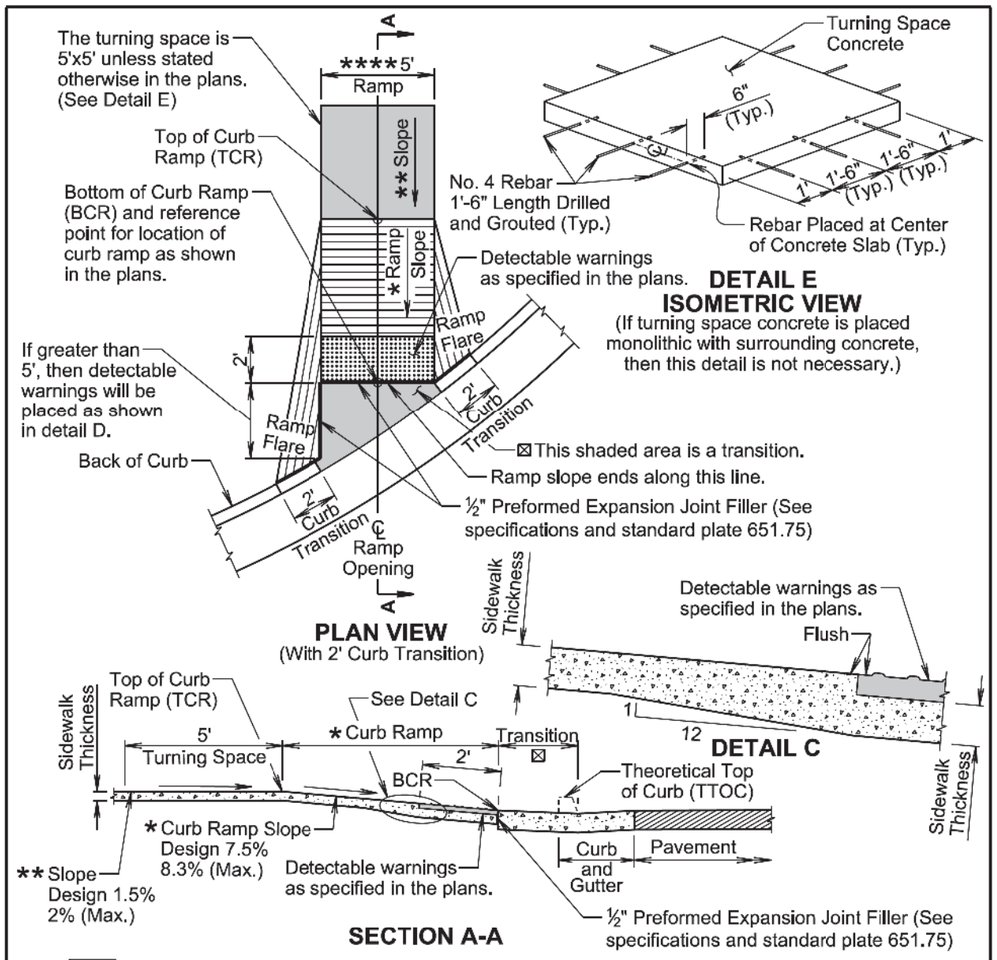


DETAIL D

February 14, 2020

Published Date: 2024	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 1 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% and will not exceed 15' in length unless stated otherwise in the plans.

* The elevation of point TCR will always be higher than the elevation of point TTOC unless specified otherwise in the plans. The curb ramp length dimension as shown in the plans will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

The cross slope of the ramp will not be steeper than 2%. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

**** The ramp width is 5' unless stated otherwise in the plans.

February 14, 2020

Published Date: 2024	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

The curb ramp depicted on this standard plate may be used with a PCC fillet section or curb and gutter. The curb ramp will be placed at the location stated in the plans.

Sidewalk will not be placed adjacent to the curb ramp flares when a 2-foot curb transition is used unless shown otherwise in the plans.

* Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking.

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings will be included in the measured and paid for quantity of sidewalk.

If rebar is placed in the Turning Space as depicted in DETAIL E, the cost of the materials, labor, and equipment to furnish and install the rebar will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

All costs for furnishing and installing the transition area at the base of the curb ramp will be incidental to the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used and will be incidental to the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

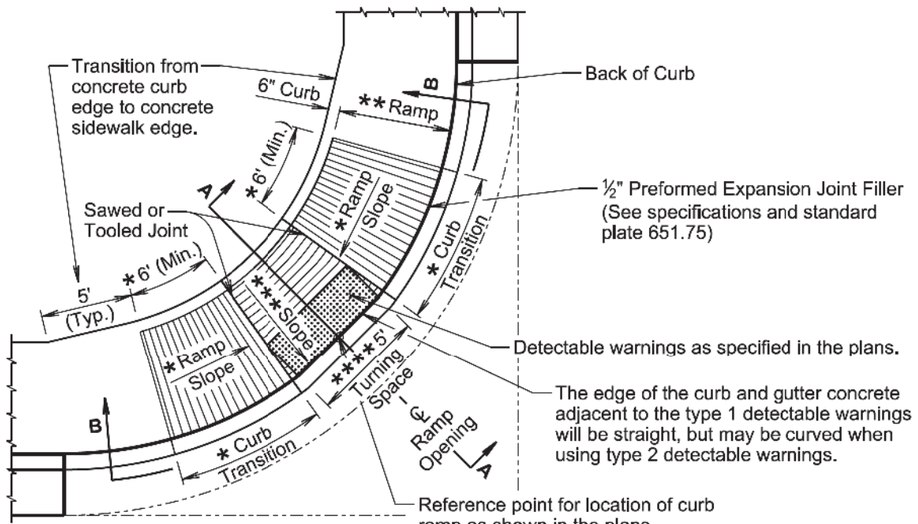
The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

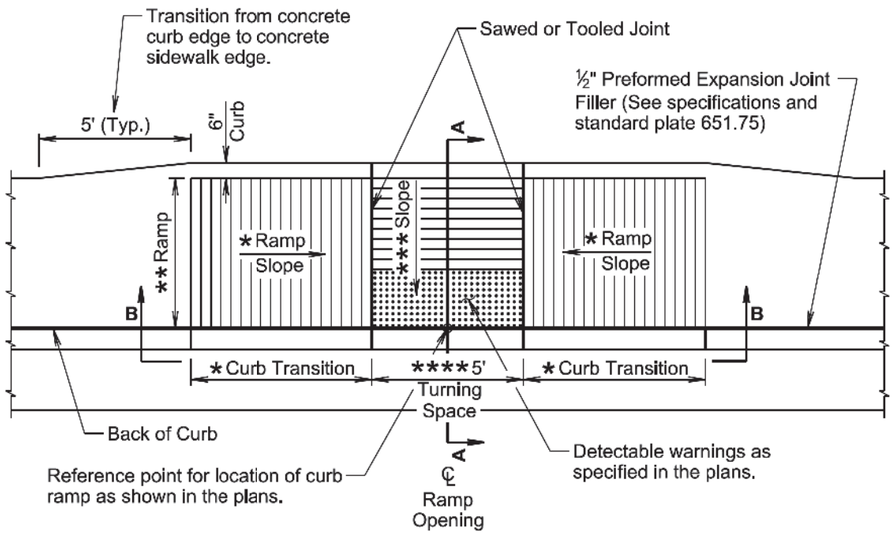
February 14, 2020

Published Date: 2024	SDDOT	TYPE 2 CURB RAMP (DIRECTIONAL CURB RAMP)	PLATE NUMBER 651.02
			Sheet 3 of 3

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn



PLAN VIEW
(With Curved Curb and Gutter)



PLAN VIEW
(With Straight Curb and Gutter)

April 18, 2021

Published Date: 2024	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 1 of 3

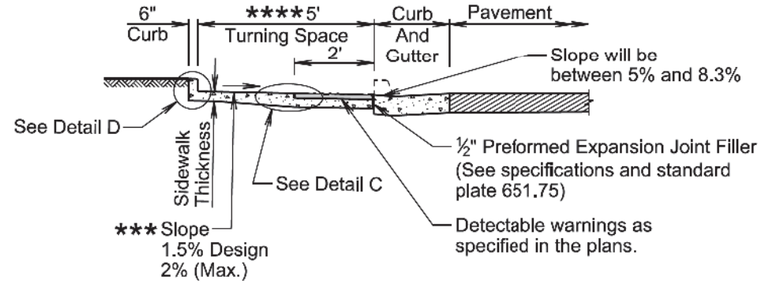
* The curb transition slope will match the curb ramp slope. Curb ramp slopes are designed at 7.5% unless stated otherwise in the plans. The curb ramp may have a maximum slope of 8.3% at any location of the curb ramp and will not exceed 15' in length unless stated otherwise in the plans. The curb transitions and curb ramp lengths will be adjusted as necessary to meet all slope and length requirements based on field geometrics.

** The cross slope of the ramp will not be steeper than 2% and the ramp width is 5' unless stated otherwise in the plans. Plans are designed using a 1.5% cross slope for the ramp unless stated otherwise in the plans.

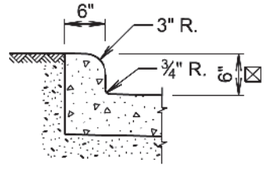
*** The slope in the turning space will not be steeper than 2% in any direction of pedestrian travel. Plans are designed using a 1.5% slope unless stated otherwise in the plans.

**** The turning space is 5'x5' unless stated otherwise in the plans.

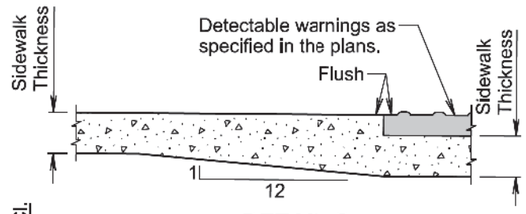
☒ The curb height will be 6" unless stated otherwise in the plans.



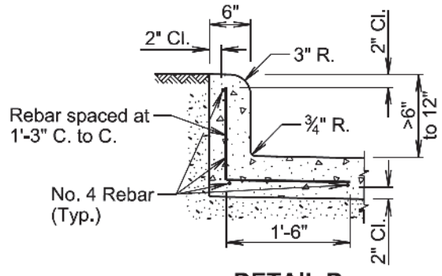
SECTION A-A



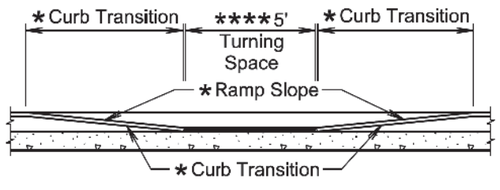
DETAIL D



DETAIL C



DETAIL D
(Use this detail when the curb height is greater than 6" and less than 12")



SECTIONAL VIEW B-B

April 18, 2021

Published Date: 2024	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 2 of 3

Plotted From - ...Jennifer.Roggatz@jacobs.com
Plot Scale - 1:200
File - ...\Section B\StdPlateSectionB.dgn

GENERAL NOTES:

For illustrative purpose only, type 1 detectable warnings are shown in the drawings.

For illustrative purpose only, a PCC fillet section is shown in one of the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section or with curb and gutter.

The curb ramp will be placed at the location stated in the plans.

Sidewalk adjacent to the curb ramp will be as shown in the plans.

Care will be taken to ensure a uniform grade on the curb ramp, free of sags and short grade changes.

Surface texture of the curb ramp will be obtained by coarse brooming transverse to the slope of the curb ramp.

The normal gutter line profile will be maintained through the area of the ramp opening.

Joints will be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking (see plan view for joint location).

Care will be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings will be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings will be incidental to the corresponding detectable warning contract item.

When curb height is greater than 6" and less than 12", reinforcing steel is required in accordance with the detail on sheet 2 of 3. The reinforcing steel will conform to ASTM A615, Grade 60. Cost for furnishing and installing the reinforcing steel will be incidental to the contract unit price per square foot for the corresponding concrete sidewalk contract item.

There will be no separate payment for curb ramps. The curb ramp will be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk contract item. The square foot area of the detectable warnings and the curb along the short radius will be included in the measured and paid for quantity of sidewalk.

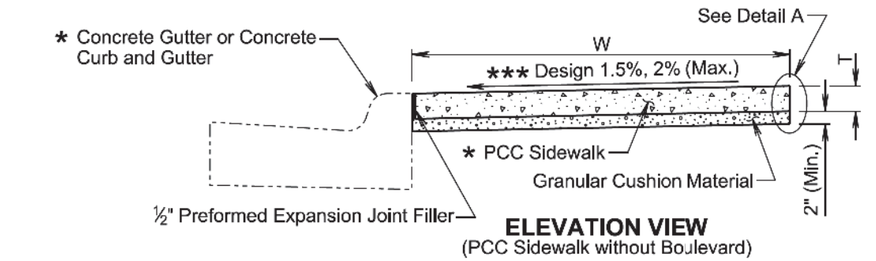
The curb transitions and ramp opening will be measured and paid for at the contract unit price per foot for the corresponding curb and gutter contract item when curb and gutter is used. The curb transitions and ramp opening will be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section contract item when a PCC fillet section is used.

The type 1 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals will be paid for at the contract unit price per square foot for "Type 1 Detectable Warnings".

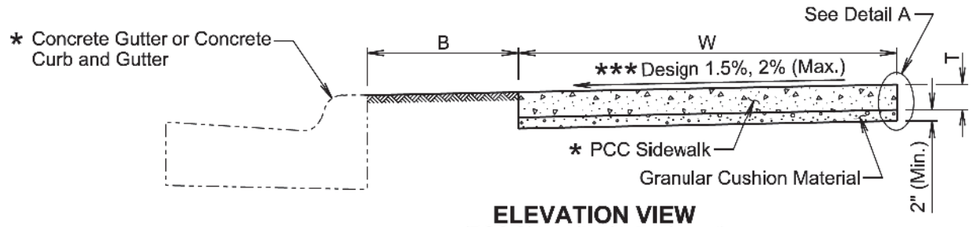
The type 2 detectable warnings will be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding will be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

April 18, 2021

Published Date: 2024	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 3 of 3



ELEVATION VIEW
(PCC Sidewalk without Boulevard)



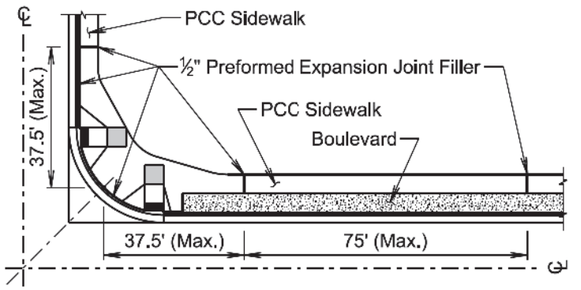
ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.

T Thickness of PCC sidewalk as specified in the plans.

W Width of PCC sidewalk as specified in the plans.

* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk will be constructed in accordance with Section 651 of the Specifications.

*** The cross slope of the sidewalk is designed at 1.5% and the maximum slope allowed is 2% unless specified otherwise in the plans.

The maximum length between expansion joints in the PCC sidewalk is 75 feet.

PCC sidewalk placed adjacent to intersection of roadways will have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See Plan View.

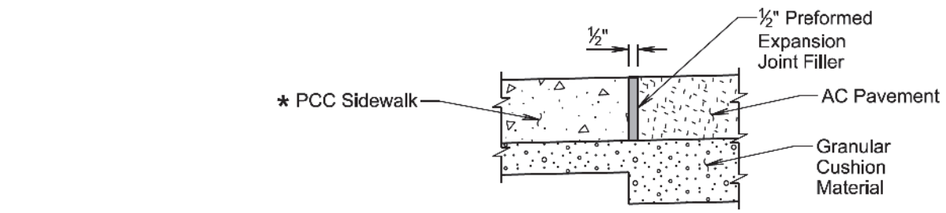
An expansion joint in the PCC sidewalk will consist of a ½ -inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

** Large areas of PCC pavement adjacent to the PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor will construct the joint treatment in accordance with the plans.

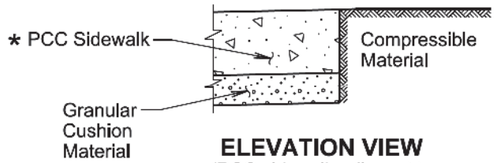
February 14, 2020

Published Date: 2024	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2

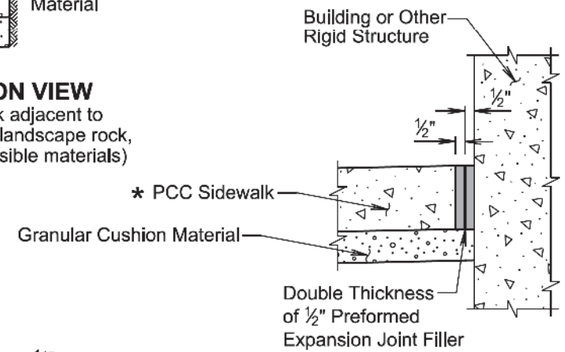
Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



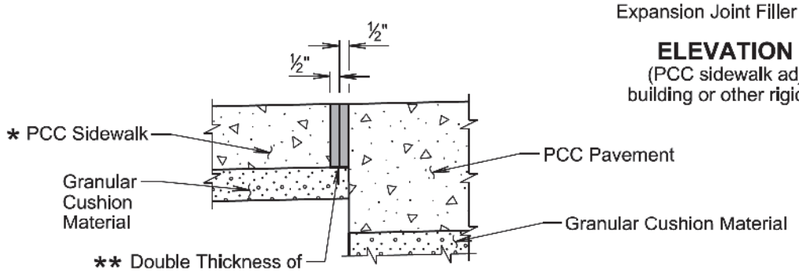
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)

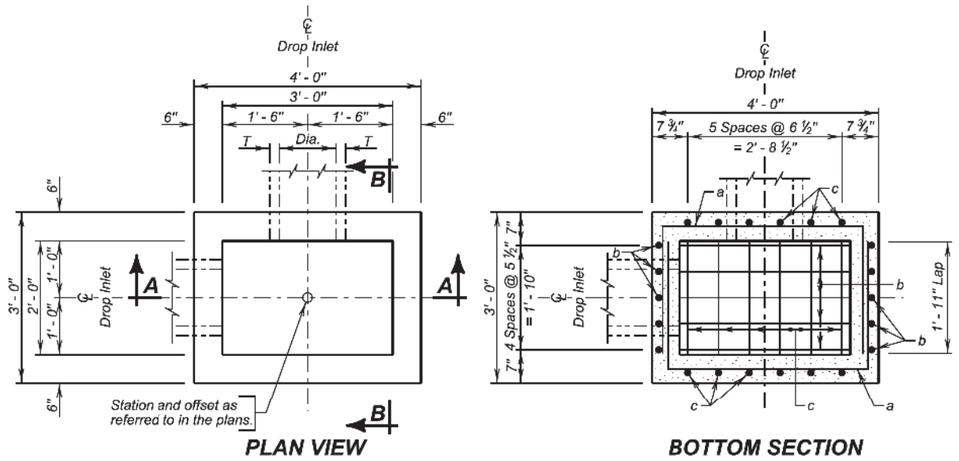


ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

DETAIL A
(Use Appropriate Detail(s))

February 14, 2020

Published Date: 2024	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2



ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
* Class M6 Concrete	Cu. Yd.	0.26	0.22H
Reinforcing Steel	Lb.	83.03	28.97H
Frame and Grate Assembly	Each	1	———

DROP INLETS FOR 12" TO 24" DIAMETER PIPE

SPECIFICATIONS

Design Specifications: AASHTO LRFD Bridge Design Specifications, 2012 Edition.

Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

Design Live Load: HL-93. No construction loading in excess of legal load was considered.

Reinforcing steel shall conform to ASTM A615 grade 60. The d bars shall be lapped 12 inches with the b and c bars. Cut and bend reinforcing steel as required to place pipe(s) through the drop inlet wall.

Drop inlet may be precast. If precast drop inlet details differ from this standard plate, submit a checked design done by a SD registered P.E. and shop plans to the Office of Bridge Design for approval.

* Reduce total quantities of concrete by the amount of concrete displaced by the pipe(s). The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.

Drop inlet shown may be modified by the addition or omission of connecting pipes as noted elsewhere in the plans. All pipes entering drop inlet must fit between the inside face of walls and shall not enter through the corners.

Maximum R.C.P. diameter shall not exceed 18 inches on the 2-foot wide side and shall not exceed 24 inches (24 inches for R.C. arch) on the 3-foot wide side of the drop inlet.

The dimension of H is in feet. Maximum H is 10 feet.

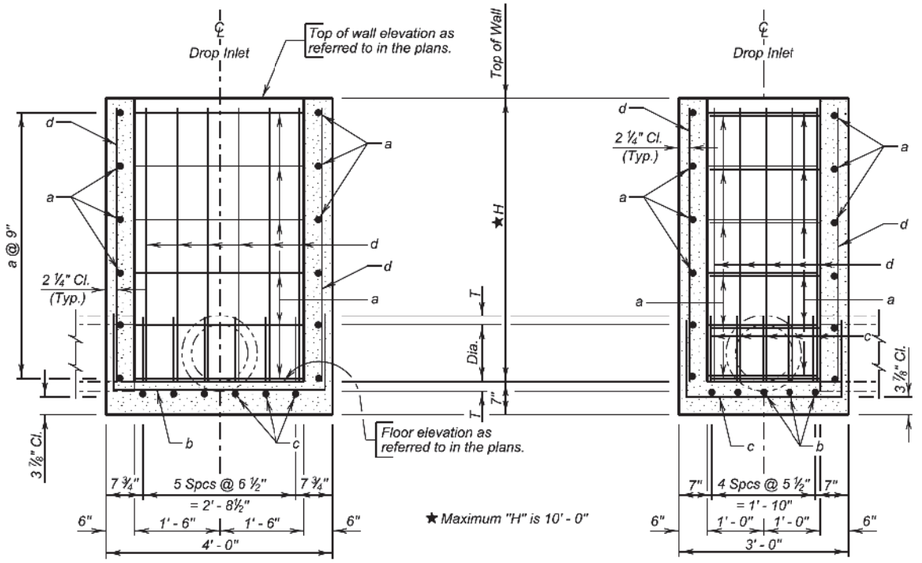
PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09

December 16, 2015

Published Date: 2024	SDDOT	2' X 3' TYPE B REINFORCED CONCRETE DROP INLET	PLATE NUMBER 670.01
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn

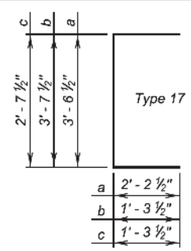


SEC. A - A **SEC. B - B**

REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a	2.67H	4	8' - 0"	17	
b	5	5	6' - 3"	17	
c	6	4	5' - 3"	17	
d	22	4	H - 2"	Str.	

NOTE:
All dimensions are out to out of bars.



December 16, 2015

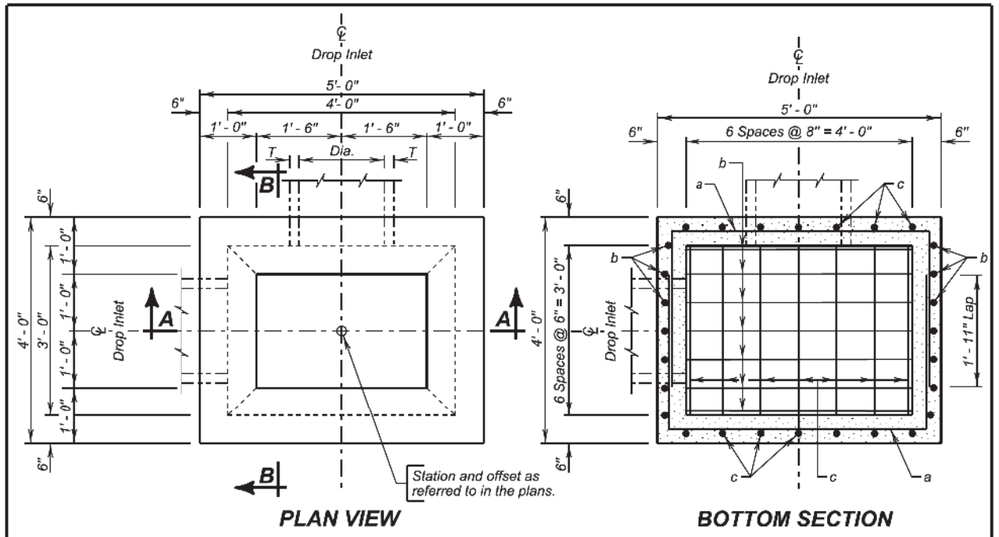
Published Date: 2024

SDDOT

2'X 3' TYPE B
REINFORCED CONCRETE DROP INLET

PLATE NUMBER
670.01

Sheet 2 of 2



ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
⚹ Class M6 Concrete	Cu. Yd.	0.72	0.30H
Reinforcing Steel	Lb.	130.93	36.54H
Frame and Grate Assembly	Each	1	———

DROP INLETS FOR 12" TO 36" DIAMETER PIPE

SPECIFICATIONS

Design Specifications: AASHTO LRFD Bridge Design Specifications, 2012 Edition.

Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

Design Live Load: HL-93. No construction loading in excess of legal load was considered.

Reinforcing steel shall conform to ASTM A615 grade 60. The d bars shall be lapped 12 inches with the b and c bars. Cut and bend reinforcing steel as required to place pipe(s) through the drop inlet wall.

Drop inlet may be precast. If precast drop inlet details differ from this standard plate, submit a checked design done by a SD registered P.E. and shop plans to the Office of Bridge Design for approval.

⚹ Reduce total quantities of concrete by the amount of concrete displaced by the pipe(s). The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.

Drop inlet shown may be modified by the addition or omission of connecting pipes as noted elsewhere in the plans. All pipes entering drop inlet must fit between the inside face of walls and shall not enter through the corners.

Maximum R.C.P. diameter shall not exceed 24 inches (24 inches for R. C. arch) on the 3-foot wide side and shall not exceed 36 inches (30 inches for R.C. arch) on the 4-foot wide side of the drop inlet.

The dimension of H is in feet. Maximum H is 10 feet.

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
	30	3 ½	0.14
	36	4	0.20
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09
	30	4	0.14

December 16, 2015

Published Date: 2024

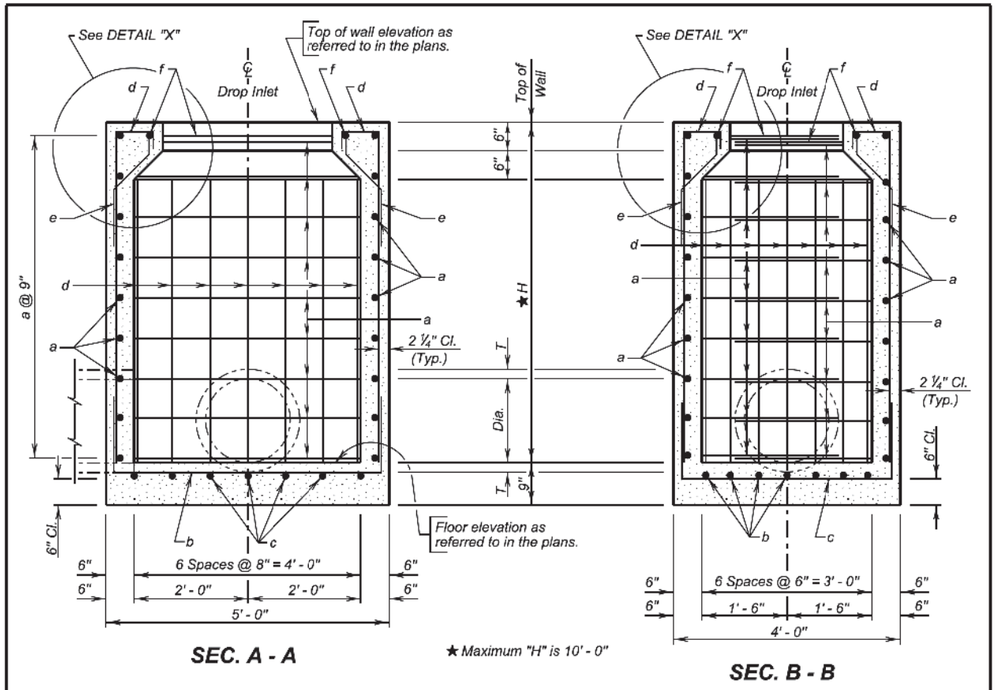
SDDOT

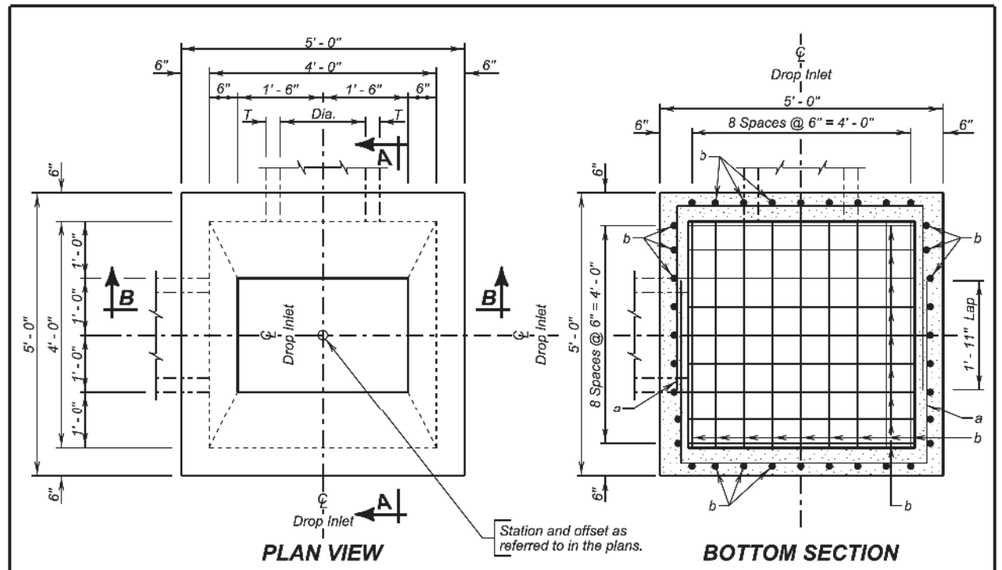
3'X 4' TYPE B
REINFORCED CONCRETE DROP INLET

PLATE NUMBER
670.02

Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn





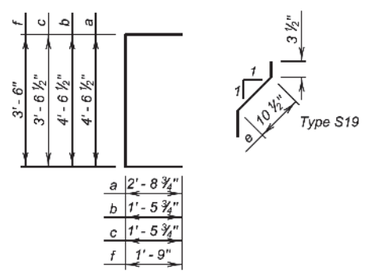
ESTIMATED QUANTITIES

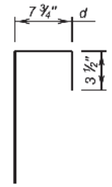
ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
✳Class M6 Concrete	Cu. Yd.	0.98	0.33H
Reinforcing Steel	Lb.	180.69	43.67H
Frame and Grate Assembly	Each	1	—

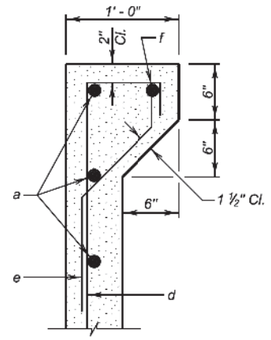
REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a	2.67H	4	10' - 0"	17	
b	7	4	7' - 6"	17	
c	7	4	6' - 6"	17	
d	28	4	H + 9"	S17	
e	28	4	2' - 3"	S19	
f	2	4	7' - 0"	17	

NOTE:
All dimensions are out to out of bars.







DETAIL "X"

December 16, 2015

Published Date: 2024

SDDOT

3' X 4' TYPE B
REINFORCED CONCRETE DROP INLET

PLATE NUMBER
670.02

Sheet 2 of 2

DROP INLETS FOR 12" TO 36" DIAMETER PIPE

SPECIFICATIONS

Design Specifications: AASHTO LRFD Bridge Design Specifications, 2012 Edition.

Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

Design Live Load: HL-93. No construction loading in excess of legal load was considered.

Reinforcing steel shall conform to ASTM A615 grade 60. The d bars shall be lapped 12 inches with the b and c bars. Cut and bend reinforcing steel as required to place pipe(s) through the drop inlet wall.

Drop inlet may be precast. If precast drop inlet details differ from this standard plate, submit a checked design done by a SD registered P.E. and shop plans to the Office of Bridge Design for approval.

✳ Reduce total quantities of concrete by the amount of concrete displaced by the pipe(s). The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.

Drop inlet shown may be modified by the addition or omission of connecting pipes as noted elsewhere in the plans. All pipes entering drop inlet must fit between the inside face of walls and shall not enter through the corners.

Maximum R.C.P. diameter shall not exceed 36 inches (30 inches for R. C. arch) on the 4-foot wide side of the drop inlet.

The dimension of H is in feet. Maximum H is 10 feet.

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
	30	3 ½	0.14
	36	4	0.20
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09
	30	4	0.14

December 16, 2015

Published Date: 2024

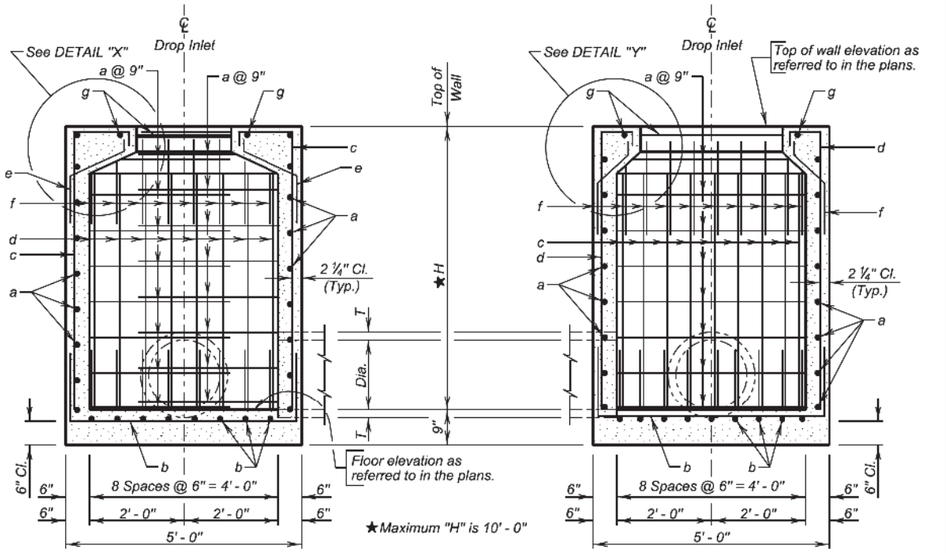
SDDOT

4' X 4' TYPE B
REINFORCED CONCRETE DROP INLET

PLATE NUMBER
670.04

Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn

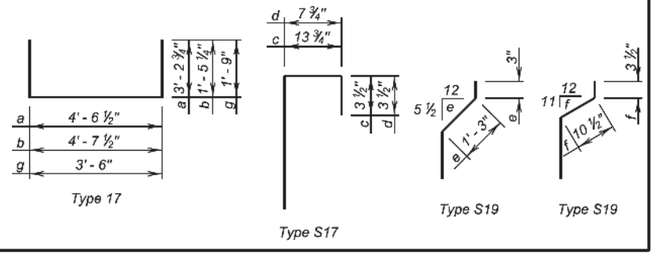


REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type
a	2.67H	4	11' - 0"	17
b	18	4	7' - 6"	17
c	18	4	H + 15"	S17
d	18	4	H + 9"	S17
e	18	4	2' - 6"	S19
f	18	4	2' - 3"	S19
g	2	4	7' - 0"	17

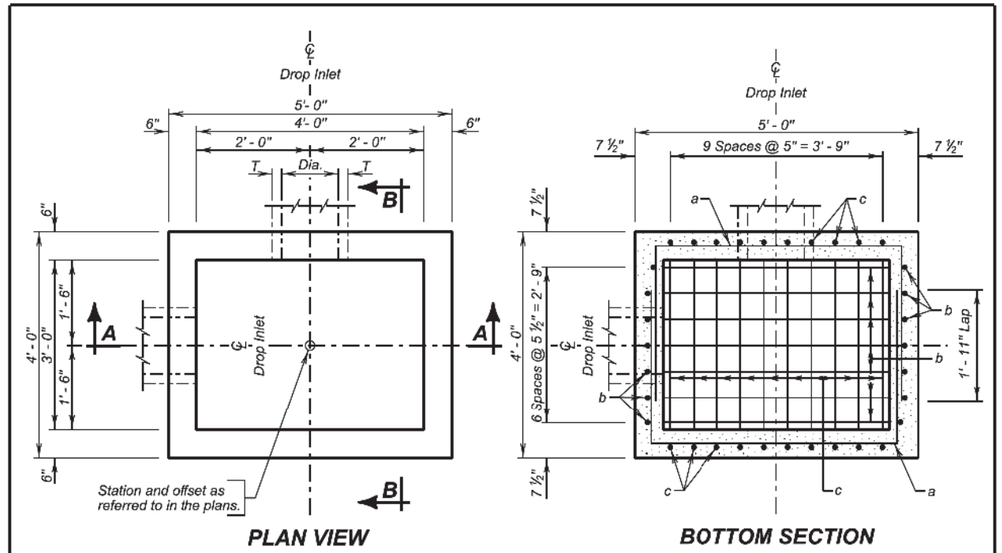
NOTE:
All dimensions are out to out of bars.

Bending Details



December 16, 2015

Published Date: 2024	SDDOT	4' X 4' TYPE B REINFORCED CONCRETE DROP INLET	PLATE NUMBER 670.04
			Sheet 2 of 2



ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
⚹ Class M6 Concrete	Cu. Yd.	0.43	0.30H
Reinforcing Steel	Lb.	90.90	40.53H
Frame and Grate Assembly	Each	1	———

DROP INLETS FOR 12" TO 36" DIAMETER PIPE

SPECIFICATIONS

Design Specifications: AASHTO LRFD Bridge Design Specifications, 2012 Edition.

Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

Design Live Load: HL-93. No construction loading in excess of legal load was considered.

Reinforcing steel shall conform to ASTM A615 grade 60. The d bars shall be lapped 12 inches with the b and c bars. Cut and bend reinforcing steel as required to place pipe(s) through the drop inlet wall.

Drop inlet may be precast. If precast drop inlet details differ from this standard plate, submit a checked design done by a SD registered P.E. and shop plans to the Office of Bridge Design for approval.

⚹ Reduce total quantities of concrete by the amount of concrete displaced by the pipe(s). The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.

Drop inlet shown may be modified by the addition or omission of connecting pipes as noted elsewhere in the plans. All pipes entering drop inlet must fit between the inside face of walls and shall not enter through the corners.

Maximum R.C.P. diameter shall not exceed 24 inches (24 inches for R. C. arch) on the 3-foot wide side and shall not exceed 36 inches (30 inches for R. C. arch) on the 4-foot wide side of the drop inlet.

The dimension of H is in feet. Maximum H is 10 feet.

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
	30	3 ½	0.14
	36	4	0.20
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09
	30	4	0.14

December 16, 2015

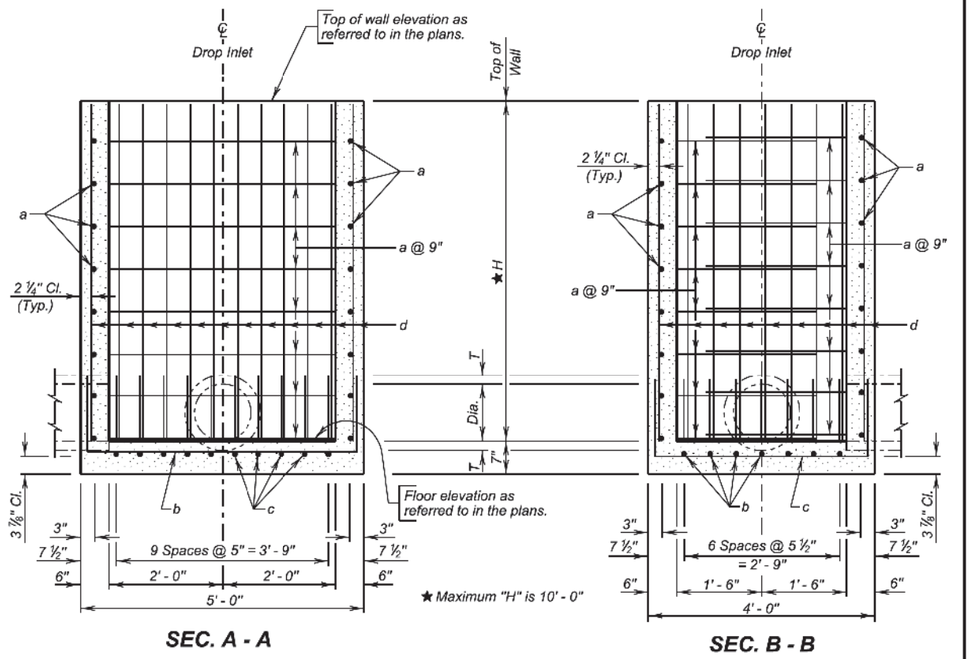
Published Date: 2024	SDDOT	3' X 4' TYPE C REINFORCED CONCRETE DROP INLET	PLATE NUMBER 670.10
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B235	B245

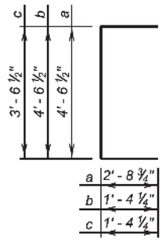
Plotting Date: 9/20/2023



REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a	2.67H	4	10' - 0"	17	
b	7	5	7' - 3"	17	
c	10	4	6' - 3"	17	
d	34	4	H - 2"	Str.	

NOTE:
All dimensions are out to out of bars.



a	2' - 8 ¾"
b	1' - 4 ¼"
c	1' - 4 ¼"

Type 17

December 16, 2015

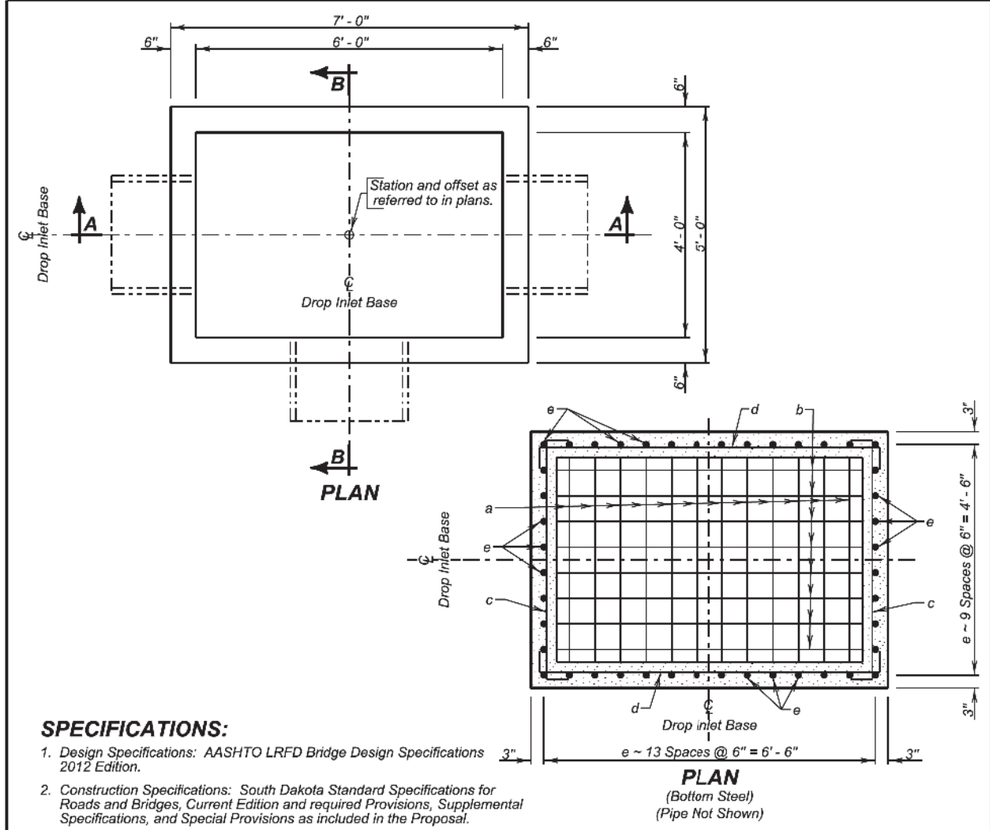
Published Date: 2024

SDDOT

3' X 4' TYPE C REINFORCED CONCRETE DROP INLET

PLATE NUMBER 670.10

Sheet 2 of 2



SPECIFICATIONS:

1. Design Specifications: AASHTO LRFD Bridge Design Specifications 2012 Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

1. Design Live Load: HL-93 loading. No construction loading in excess of legal load was considered.
2. Base is intended for use with a Precast Concrete Type S Drop Inlet Lid, Standard Plate 670.38. Base may be precast. If precast base used, and details differ from that shown, the precast base must be on the current approved list. The current approved list is available through proper channels from the SDDOT Office of Bridge Design.
3. To qualify for addition to the approved list, submit a checked design, by South Dakota Registered Professional Engineers and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
4. ✳ Reduce total quantities of concrete by the amount of concrete displaced by the pipe. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.
5. Inlets shown may be modified by the addition or omission of connecting pipes as shown on the layouts. Connecting pipes shall not enter the inlet through the corners.
6. Maximum R.C.P. diameter shall not exceed 36 inches (30 inches for R.C. Arch) on the 4-foot wide side and shall not exceed 54 inches (48 inches for R.C. Arch) on the 6-foot wide side of the Drop Inlet.
7. Reinforcing steel shall conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipe(s) through the inlet wall.
8. Use 1 inch clear cover on all reinforcing steel unless otherwise noted.
9. The dimension of H is in feet. Maximum H is 8 feet.

June 26, 2015

Published Date: 2024

SDDOT

4' X 6' TYPE S DROP INLET BASE

PLATE NUMBER 670.30

Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section BIS\dPlateSectionB.dgn

FOR BIDDING PURPOSES ONLY

Plotting Date: 9/20/2023

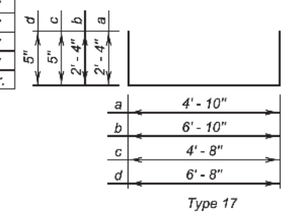
PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
	30	3 ½	0.14
	36	4	0.20
	42	4 ½	0.26
	48	5	0.34
	54	5 ½	0.43
R.C. ARCH	18	2 ½	0.05
	24	3 ½	0.09
	30	4	0.14
	36	4 ½	0.19
	42	4 ½	0.24
	48	5	0.32

REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type
a	14	5	9' - 6"	17
b	10	5	11' - 6"	17
c	2H	4	5' - 6"	17
d	2H	4	7' - 6"	17
e	44	4	H - 2"	Str.

Bending Details

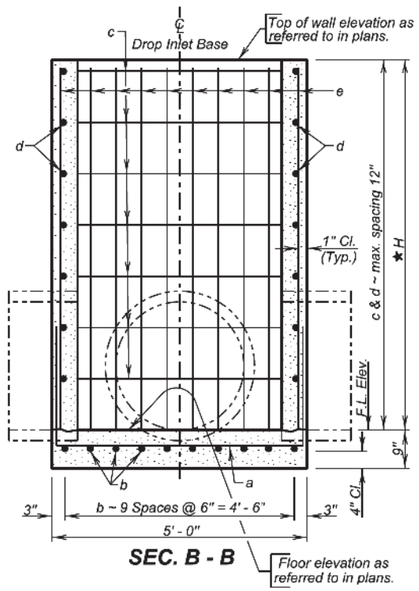


Type 17

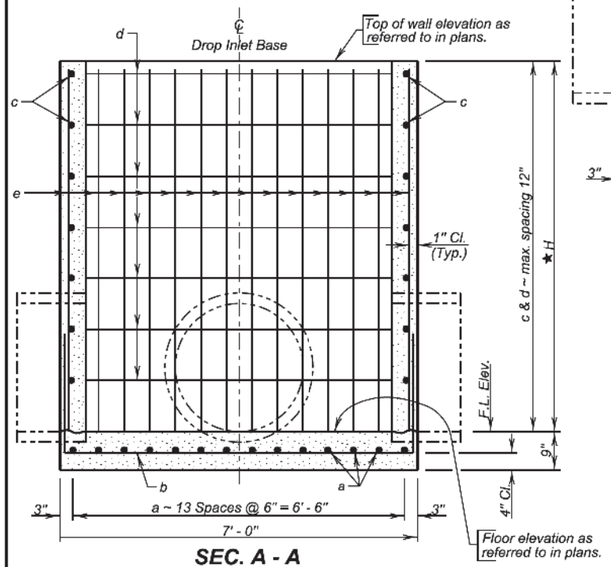
NOTE:
All dimensions are out to out of bars

ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
✳ Class M6 Concrete	Cu.Yd.	0.97	0.41H
Reinforcing Steel	Lb.	253.77	46.76H



SEC. B - B

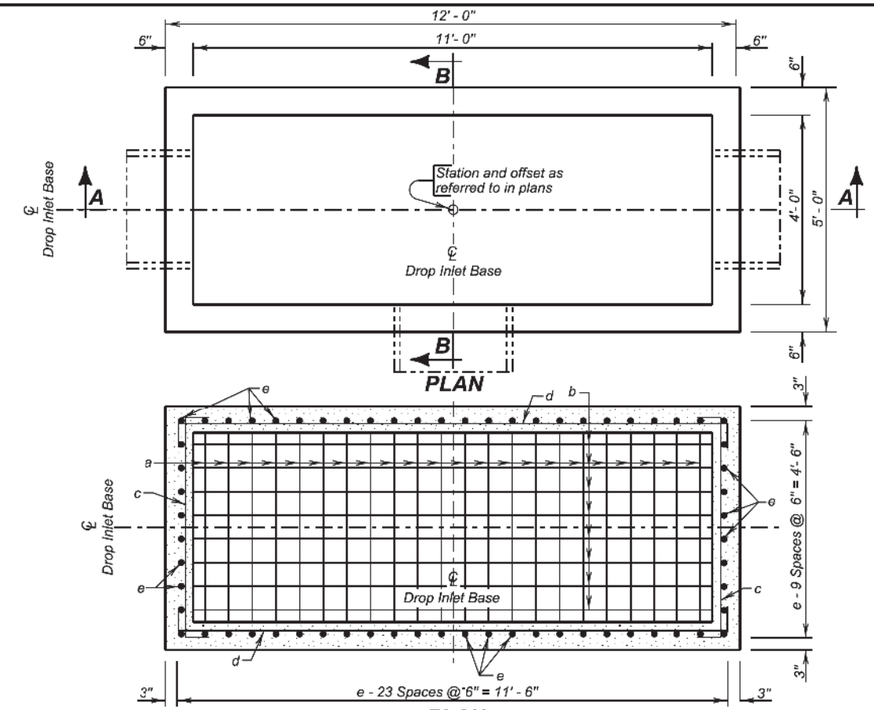


SEC. A - A

★ Maximum H is 8' - 0"

June 26, 2015

Published Date: 2024	SDDOT	4'X 6'TYPE S DROP INLET BASE	PLATE NUMBER 670.30
			Sheet 2 of 2



PLAN
(Bottom Steel)
(Pipe Not Shown)

SPECIFICATIONS:

1. Design Specifications: AASHTO LRFD Bridge Design Specifications 2012 Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

1. Design Live Load: HL-93 loading. No construction loading in excess of legal load was considered.
2. Base is intended for use with a Precast Concrete Type S Drop Inlet Lid, Standard Plate 670.40. Base may be precast. If precast base used, and details differ from that shown, the precast base must be on the current approved list. The current approved list is available through proper channels from the SDDOT Office of Bridge Design.
3. To qualify for addition to the approved list, submit a checked design, by South Dakota Registered Professional Engineers and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.

✳ 4. Reduce total quantities of concrete by the amount of concrete displaced by the pipe. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.

5. Inlets shown may be modified by the addition or omission of connecting pipes as shown on the layouts. Connecting pipes shall not enter the inlet through the corners.
6. Maximum R.C.P. diameter shall not exceed 36 inches (30 inches for R.C. Arch) on the 4-foot wide side of the Drop Inlet.
7. Reinforcing steel shall conform to ASTM A615 Grade 60. Cut and bend reinforcing steel as required to place pipe(s) through the inlet wall.
8. Use 1 inch clear cover on all reinforcing steel unless otherwise noted.
9. The dimension of H is in feet. Maximum H is 8 feet.

June 26, 2015

Published Date: 2024	SDDOT	4'X 11'TYPE S DROP INLET BASE	PLATE NUMBER 670.32
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn

FOR BIDDING PURPOSES ONLY

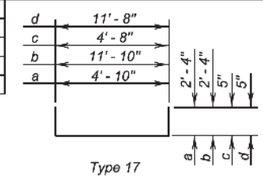
Plotting Date: 9/20/2023

PIPE DISPLACEMENT REDUCTIONS

	Diameter (Inches)	Wall T (Inches)	Class M6 Concrete (Cu. Yd.)
R.C.P.	12	2	0.03
	15	2 1/4	0.04
	18	2 1/2	0.05
	24	3	0.09
	30	3 1/2	0.14
	36	4	0.20
	42	4 1/2	0.26
	48	5	0.34
	54	5 1/2	0.43
	60	6	0.52
R.C. ARCH	18	2 1/2	0.05
	24	3 1/2	0.09
	30	4	0.14
	36	4 1/2	0.19
	42	4 1/2	0.24
	48	5	0.32
	54	5 1/2	0.39
	60	6	0.49
	72	7	0.70
	84	8	0.93

REINFORCING SCHEDULE

Mk.	No.	Size	Length	Type	Bending Details
a	24	5	9' - 6"	17	
b	10	5	16' - 6"	17	
c	2H	4	5' - 6"	17	
d	2H	4	12' - 6"	17	
e	64	4	H - 2"	Str.	

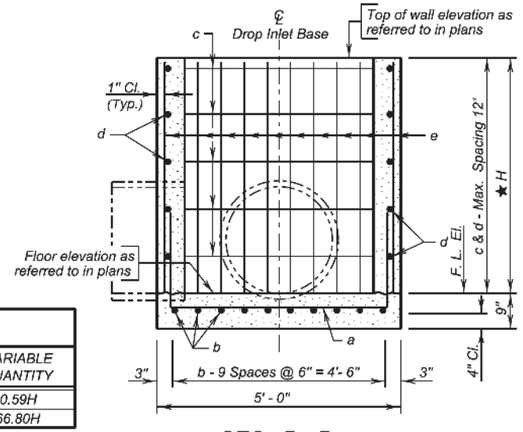


Type 17

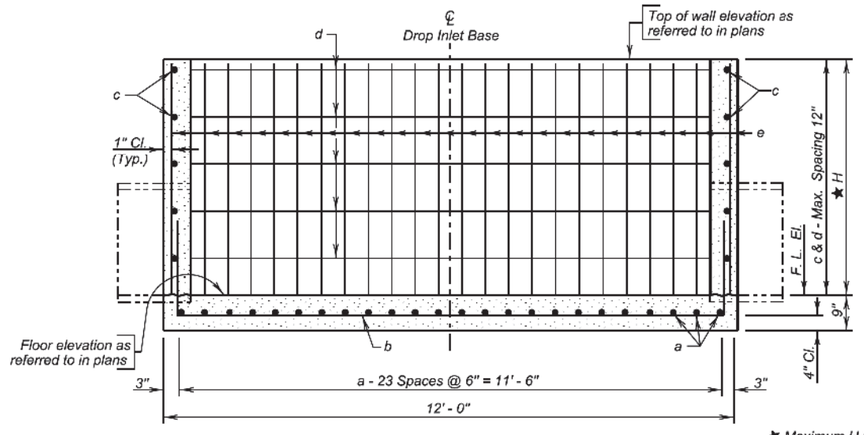
NOTE:
All dimensions are out to out of bars.

ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
✳ Class M6 Concrete	Cu. Yd.	1.67	0.59H
Reinforcing Steel	Lb.	402.77	66.80H



SEC. B - B

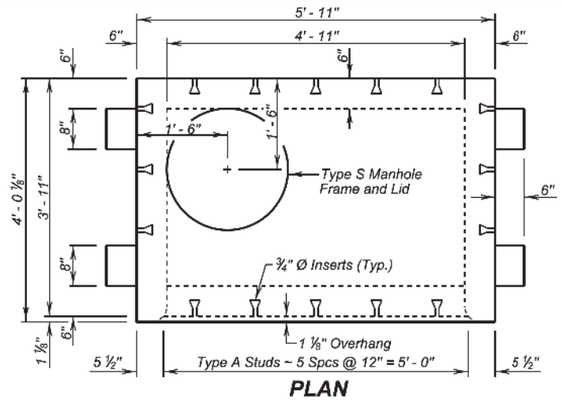


SEC. A - A

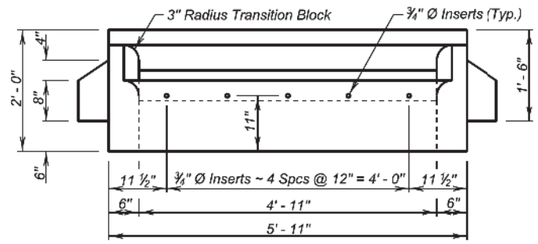
★ Maximum H is 8' - 0"

June 26, 2015

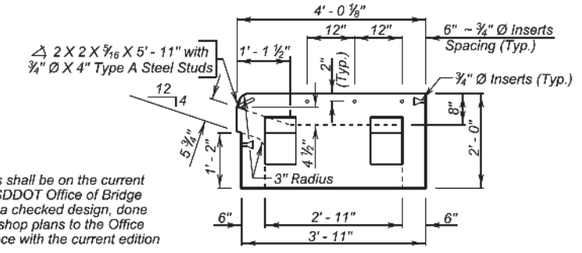
Published Date: 2024	SDDOT	4' X 11' TYPE S DROP INLET BASE	PLATE NUMBER 670.32
			Sheet 2 of 2



PLAN



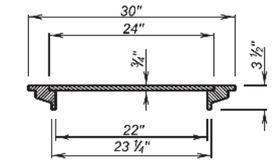
ELEVATION



SIDE VIEW
(With Sidewalk Inserts)

GENERAL NOTES:

1. The Precast Concrete Type S Drop Inlet Lid and the shims shall be on the current approved list available through proper channels from the SDDOT Office of Bridge Design. To qualify for addition to the approved list, submit a checked design, done by South Dakota Registered Professional Engineers, and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
2. Design Live Load shall be HL - 93.
3. Concrete mix shall be as per fabricators design, however, minimum compressive strength shall not be less than 4500 psi. Type II Cement is required.
4. The Type S Manhole Frame and Lid shall conform to AASHTO M105, Class 30.
5. Structural Steel shall conform to ASTM A36. The ¾ inch diameter Headed Type A Steel Studs shall comform to Section 7 of the current edition of AWS DI. I Structural Steel Welding Code.
6. The ¾ inch diameter Concrete Inserts shall be galvanized or made of a corrosion resistant material. Provide ¾ inch diameter x 1' - 6" long dowels conforming to ASTM A615, Gr. 60 threaded to fit Inserts with each lid.
7. All costs associated with furnishing and installing the Precast Concrete Type S Drop Inlet Lid including the type S manhole frame and lid, shims, inserts, and dowels shall be included in the contract unit price per each for " 4' x 6' Precast Concrete Type S Drop Inlet Lid ".



TYPICAL SECTION THROUGH TYPE S MANHOLE FRAME AND LID
(Weight 140 Lbs.)

November 19, 2022

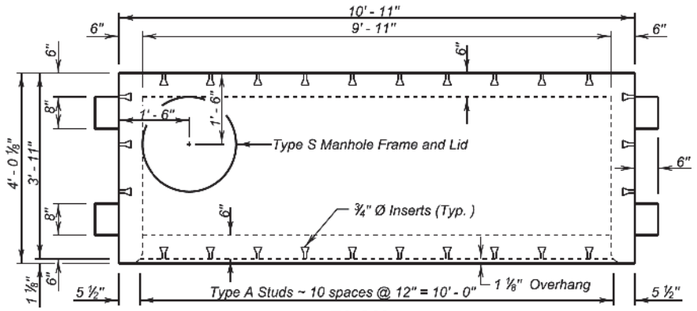
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			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
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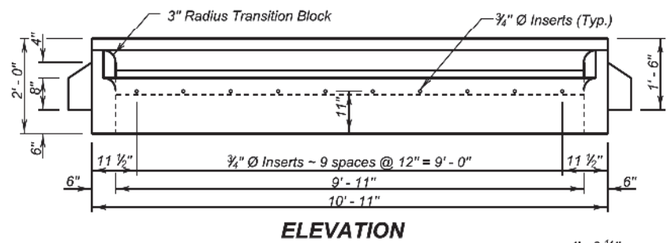
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B238	B245

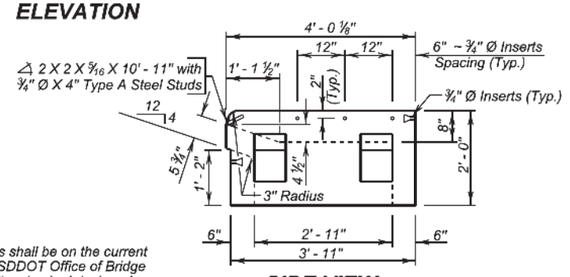
Plotting Date: 9/20/2023



PLAN



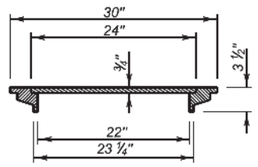
ELEVATION



SIDE VIEW
(With Sidewalk Inserts)

GENERAL NOTES:

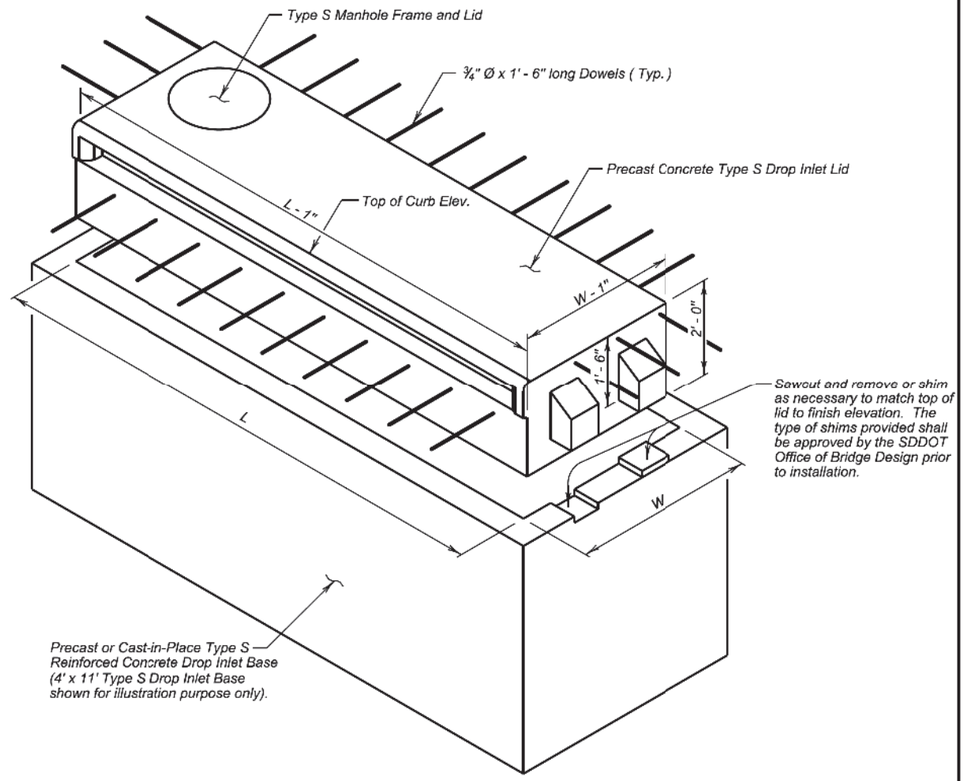
1. The Precast Concrete Type S Drop Inlet Lid and the shims shall be on the current approved list available through proper channels from the SDDOT Office of Bridge Design. To qualify for addition to the approved list, submit a checked design, done by South Dakota Registered Professional Engineers, and shop plans to the Office of Bridge Design for approval. Design shall be in accordance with the current edition of the AASHTO LRFD Bridge Design Specifications.
2. Design Live Load shall be HL - 93.
3. Concrete mix shall be as per fabricators design, however, minimum compressive strength shall not be less than 4500 psi. Type II Cement is required.
4. The Type S Manhole Frame and Lid shall conform to AASHTO M105, Class 30.
5. Structural Steel shall conform to ASTM A36. The ¾ inch diameter Headed Type A Steel Studs shall conform to Section 7 of the current edition of AWS D1. 1 Structural Steel Welding Code.
6. The ¾ inch diameter Concrete Inserts shall be galvanized or made of a corrosion resistant material. Provide ¾ inch diameter x 1' - 6" long dowels conforming to ASTM A615, Gr. 60 threaded to fit inserts with each lid.
7. All costs associated with furnishing and installing the Precast Concrete Type S Drop Inlet Lid including the type S manhole frame and lid, shims, inserts, and dowels shall be included in the contract unit price per each for " 4' x 11' Precast Concrete Type S Drop Inlet Lid ".



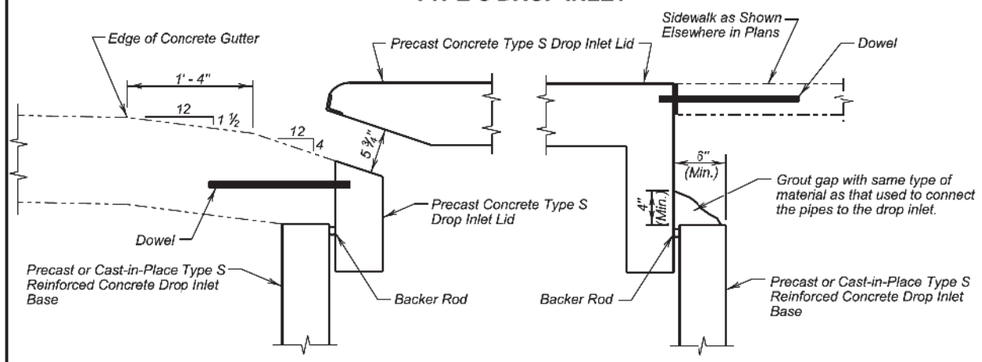
TYPICAL SECTION THROUGH TYPE S MANHOLE FRAME AND LID
(Weight 140 Lbs.)

December 23, 2012

Published Date: 2024	SDDOT	4' X 11' PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.40
			Sheet 1 of 1



TYPE S DROP INLET



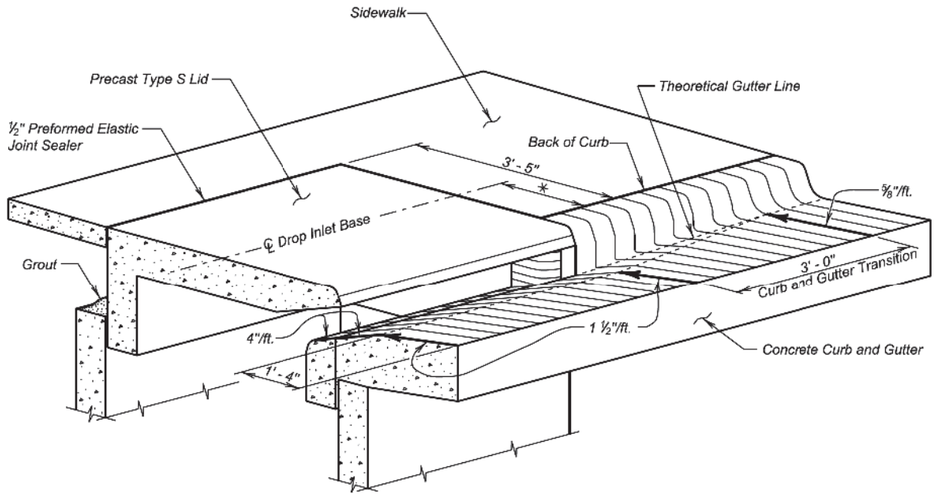
CONCRETE GUTTER DETAIL

GROUTING DETAIL
(Sides and Back, Adjacent to Sidewalk)

December 23, 2012

Published Date: 2024	SDDOT	INSTALLATION DETAILS FOR PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.45
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn



CURB AND GUTTER TRANSITION DETAILS

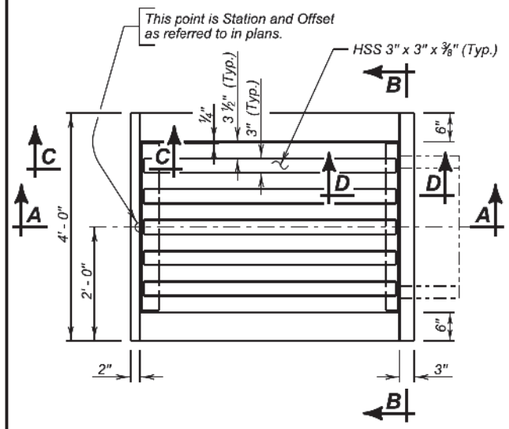
Drop Inlet Base Unit Size	✳ Distance
4' x 6'	1' - 5 ½"
4' x 11'	1' - 5 ½"
7' x 11'	2' - 11 ½"

GENERAL NOTES:

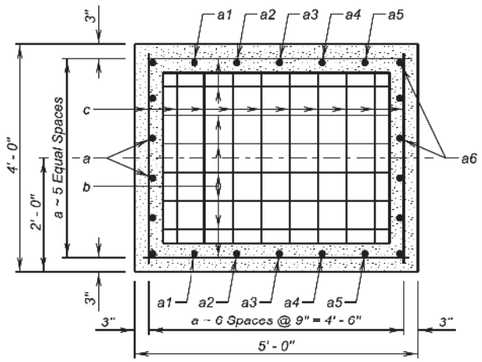
1. Dowels shall be used to anchor the precast concrete Type S drop inlet lid to the concrete gutter. See Standard Plate 670.38 or 670.40 as applicable. If there is sidewalk adjacent dowels shall be used to anchor the precast concrete Type S drop inlet lid to the sidewalk. If there is sidewalk adjacent to the drop inlet, the precast lid shall match the finish elevations and cross slopes of the sidewalk.
2. The sidewalk shall be steel reinforced when the sidewalk adjoins the precast lid. Refer to Standard Plate 651.70 for reinforced concrete sidewalk details.

December 23, 2012

Published Date: 2024	SDDOT	INSTALLATION DETAILS FOR PRECAST CONCRETE TYPE S DROP INLET LID	PLATE NUMBER 670.45 Sheet 2 of 2



PLAN VIEW - TYPE L FRAME AND GRATE ASSEMBLY



BOTTOM SECTION

ESTIMATED QUANTITIES

ITEM	UNIT	CONSTANT QUANTITY	VARIABLE QUANTITY
✳ Class M6 Concrete	Cu.Yd.	0.48	0.30 H
Reinforcing Steel	Lb.	116.84	14.70 H
Type L Frame and Grate Assembly	Each	1	———

PIPE DISPLACEMENT REDUCTIONS

	DIAMETER (Inches)	Wall T (Inches)	CLASS M6 CONCRETE (Cu. Yd.)
R.C.P.	15	2 ¼	0.04
	18	2 ½	0.05
	24	3	0.09
R.C. ARCH	18	2 ½	0.05
	24	3	0.09

SPECIFICATIONS:

1. Design Specifications: AASHTO LRFD Bridge Design Specifications, 2012 Edition.
2. Construction Specifications: South Dakota Standard Specifications for Roads and Bridges, Current Edition and required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

GENERAL NOTES:

1. The dimension H is in feet.
2. Design Live Load: HL-93.
3. ✳ Reduce total quantities of concrete by the amount of concrete displaced by the pipe. The total quantity of concrete shall be computed to the nearest hundredth of a cubic yard. The total quantity of reinforcing steel shall be computed to the nearest pound.
4. Cut and bend reinforcing steel during construction as necessary to accomodate pipe outlet. All reinforcing steel shall conform to ASTM A615 Grade 60.
5. All Concrete shall be Class M6.
6. All angles shall conform to ASTM A36. Tubes shall conform to ASTM A500 Grade B.
7. All exposed edges shall be chamfered ¾ inch.
8. Use 1 ½ inch clear cover on all reinforcing steel except as shown.
9. After welding is complete, galvanize the frame and grate assembly in accordance with AASHTO M111 (ASTM A123). For information only, the estimated weight of the frame and grate assembly is 338 pounds.
10. Type L Median Drain shall be paid for at the contract unit price per each or by the individual bid items as shown in the plans, which shall be full compensation for furnishing all materials and labor including necessary excavation and backfill required to construct one complete drain.
11. The location and size of pipe outlet from the drain shall be as noted on cross section sheets.

June 26, 2015

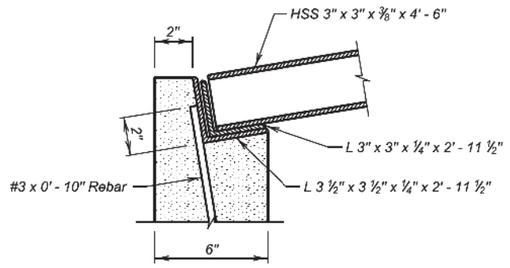
Published Date: 2024	SDDOT	TYPE L MEDIAN DRAIN For 6:1 INSLOPE	PLATE NUMBER 670.60 Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std Plate Section B.dgn

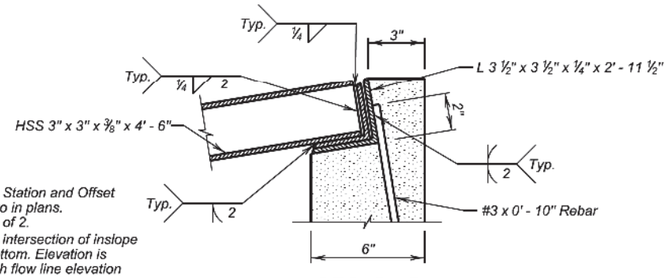
REINFORCING SCHEDULE
(For 1 Drain)

Mk.	No.	Size	Length	Type
a	6	4	H + 3"	Str.
a1	2	4	H + 4"	Str.
a2	2	4	H + 6"	Str.
a3	2	4	H + 7"	Str.
a4	2	4	H + 9"	Str.
a5	2	4	H + 10"	Str.
a6	6	4	H + 1.0'	Str.
b	18	4	4' - 9"	Str.
c	19	4	3' - 9"	Str.
d	2	4	2' - 4"	Str.

NOTE:
All dimensions are out to out of bars.



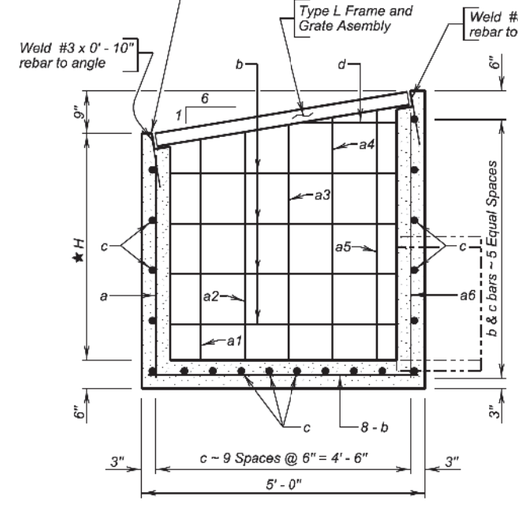
SEC. C - C



SEC. D - D

This point is Station and Offset as referred to in plans. See sheet 1 of 2.

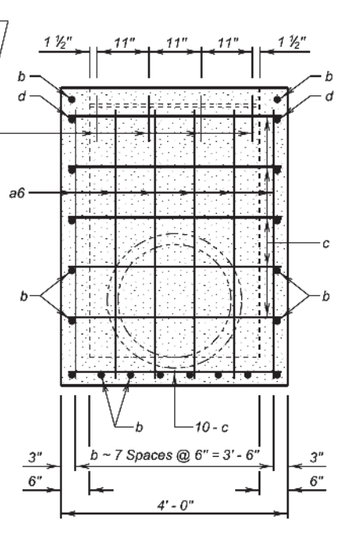
This point is intersection of inslope and ditch bottom. Elevation is equal to ditch flow line elevation at location noted on plans.



★Maximum H is 4' - 0"

SEC. A - A

(L3" x 3" x ¼" x 2' - 11 ½" not shown for illustration purpose)



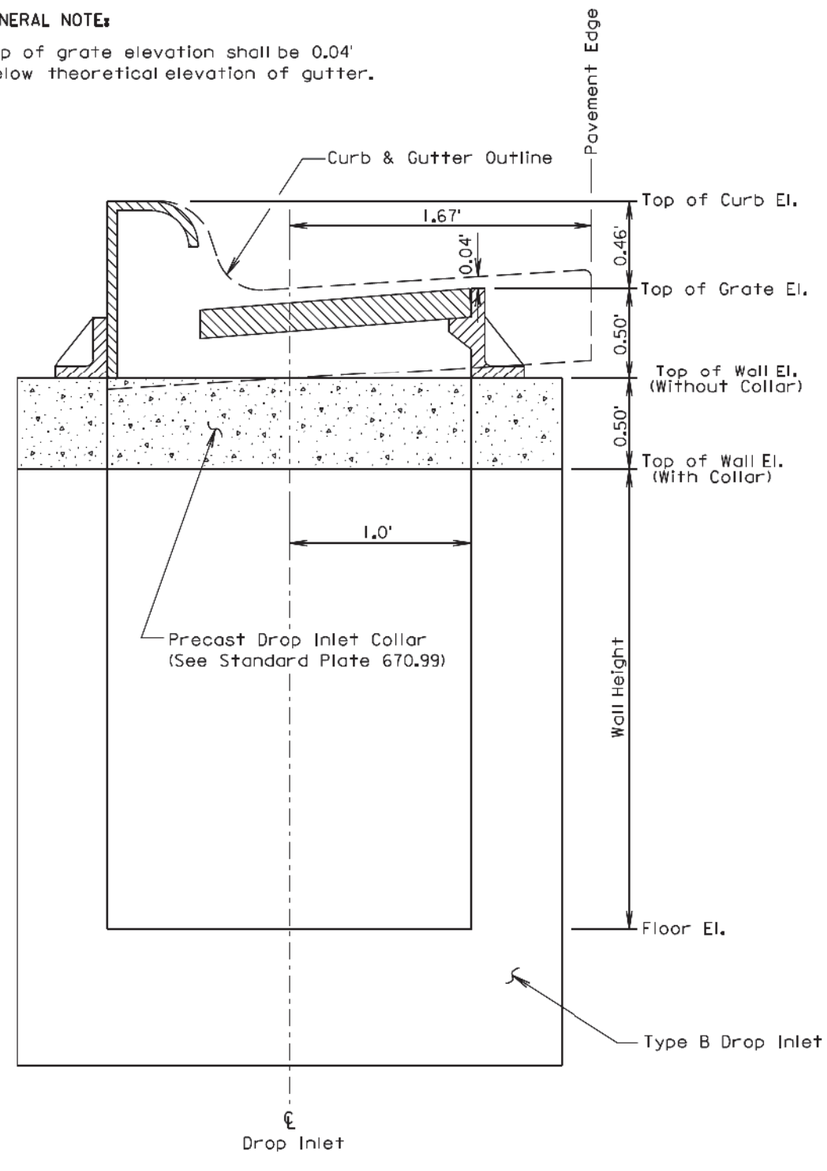
SEC. B - B

June 26, 2015

Published Date: 2024	SDDOT	TYPE L MEDIAN DRAIN For 6:1 INSLOPE	PLATE NUMBER 670.60 Sheet 2 of 2

GENERAL NOTE:

Top of grate elevation shall be 0.04' below theoretical elevation of gutter.



June 26, 2011

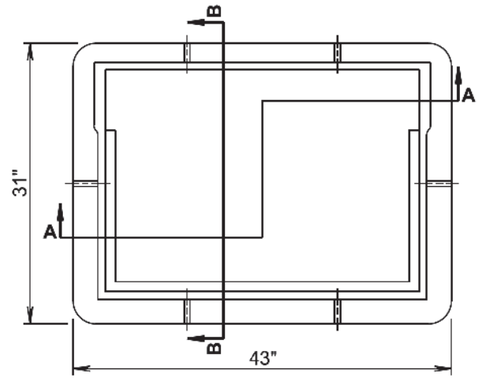
Published Date: 2024	SDDOT	INSTALLATION OF TYPE B DROP INLET	PLATE NUMBER 670.75 Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn

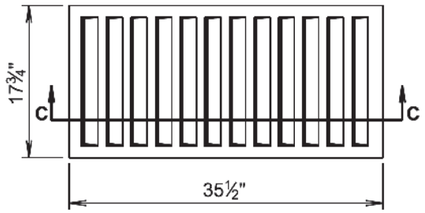
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B241	B245

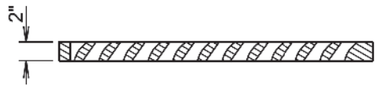
Plotting Date: 9/20/2023



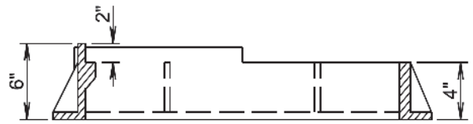
PLAN VIEW
(Frame)



PLAN VIEW
(Grate)



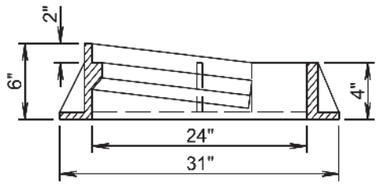
SECTION C-C



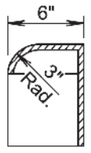
SECTION A-A



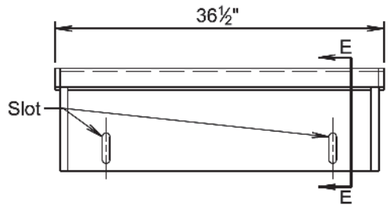
TOP VIEW
(Curb Box)



SECTION B-B



SECTION E-E



ELEVATION VIEW
(Curb Box)

GENERAL NOTES:

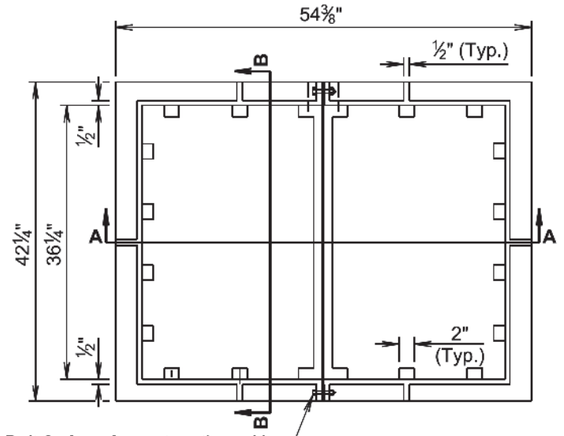
The product dimensions may vary from those shown on the standard plate depending on the manufacturer. Grate size and configuration will be similar to the standard plate for hydraulic capacity and bicycle safety. Any variation in dimensions will be approved by the Engineer and the type B frame and grate assembly will be from a manufacturer on the approved products lists.

Design load for the grate will meet the requirements of AASHTO HL-93.

The curb box will be adjustable 6" to 9".

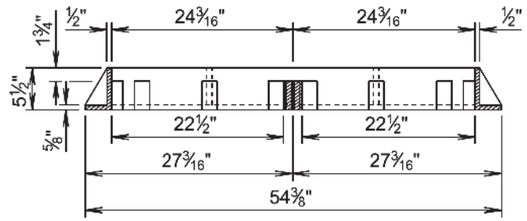
June 1, 2022

Published Date: 2024	SDDOT	*TYPE B FRAME AND GRATE*	*PLATE NUMBER* 670.80
			Sheet 1 of 1

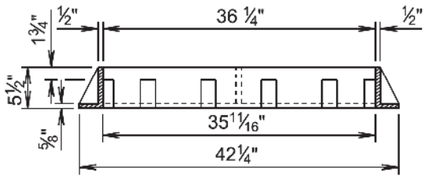


Bolt 2 piece frame together with ½" x 2" stainless steel hex bolt, washers, and hex nuts (2 places)

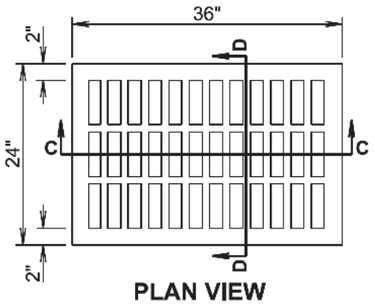
PLAN VIEW
(Frame)



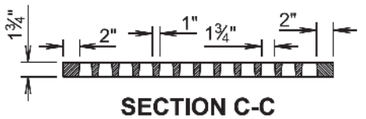
SECTION A-A



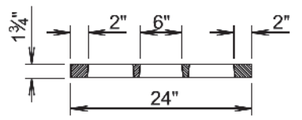
SECTION B-B



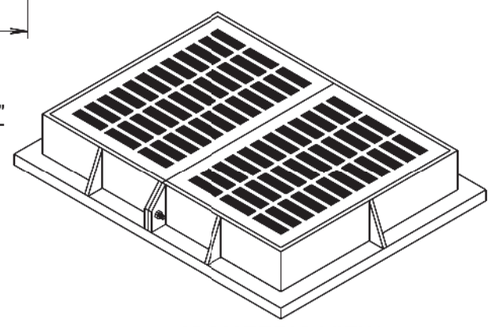
PLAN VIEW
(Grate)



SECTION C-C



SECTION D-D



ISOMETRIC VIEW

GENERAL NOTES:

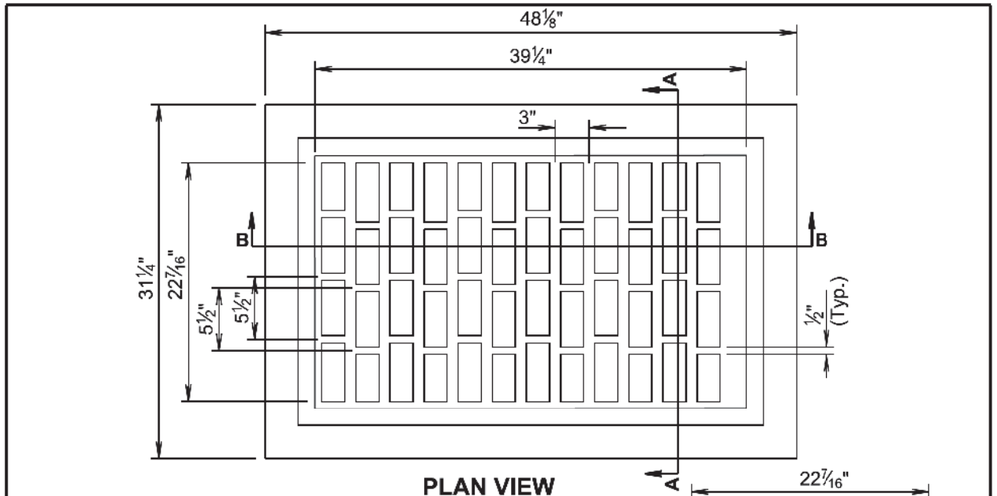
The product dimensions may vary from those shown on the standard plate depending on the manufacturer. Grate size and configuration will be similar to the standard plate for hydraulic capacity. Any variation in dimensions will be approved by the Engineer and the type C frame and grate will be from a manufacturer on the approved products list.

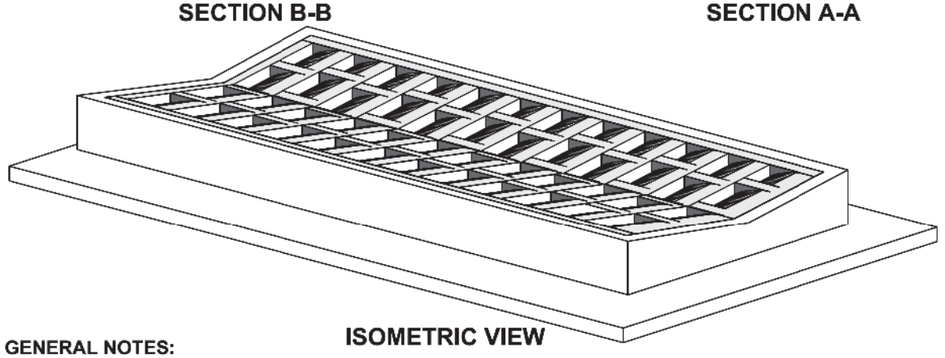
Design load for the grate will meet the requirements of AASHTO HL-93.

June 1, 2022

Published Date: 2024	SDDOT	*TYPE C FRAME AND GRATE*	*PLATE NUMBER* 670.82
			Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\StdPlateSectionB.dgn





GENERAL NOTES:

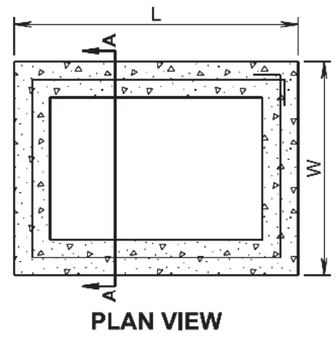
The product dimensions may vary from those shown on the standard plate depending on the manufacturer. Grate size and configuration will be similar to the standard plate for hydraulic capacity and bicycle safety. Any variation in dimensions will be approved by the Engineer and the type E frame and grate will be from a manufacturer on the approved products list.

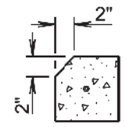
Design load for the grate will meet the requirements of AASHTO HL-93.

The type E frame and grate is used typically with valley gutter and type P gutter.

June 1, 2022

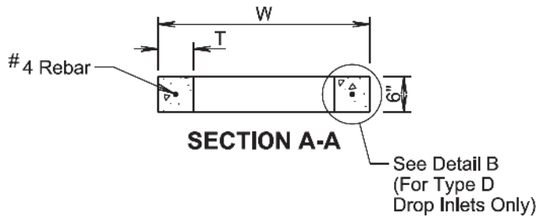
Published Date: 2024	SDDOT	***TYPE E FRAME AND GRATE***	*PLATE NUMBER* 670.86 *Sheet 1 of 1*





For Type D Drop Inlets only:
Use Precast Drop Inlet Collar with
2" chamfer on L sides only.

DETAIL B



INFORMATIONAL QUANTITIES					
FRAME AND GRATE TYPE	L (Ft-in)	W (Ft-in)	T (in)	CLASS M6 CONCRETE (CuYd)	REINFORCING STEEL (Lb)
TYPE A, B, and E	4'-0"	3'-0"	6	0.11	9
TYPE C	5'-0"	4'-0"	6	0.15	11
TYPE D	4'-0"	2'-6"	6	0.10	8

GENERAL NOTES:

All reinforcing steel will conform to ASTM A615, Grade 60.

The ½" diameter bar will lap 6"± and will be centered in the concrete.

The cost of furnishing and installing Precast Drop Inlet Collars, including labor, materials, and incidentals will be incidental to the contract unit price per Each for "Precast Drop Inlet Collar".

June 1, 2022

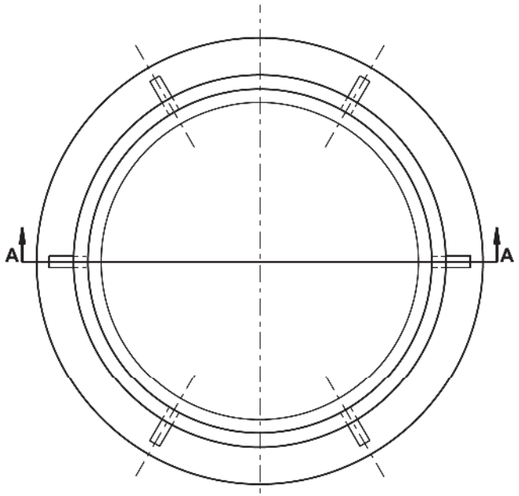
Published Date: 2024	SDDOT	***PRECAST DROP INLET COLLAR***	*PLATE NUMBER* 670.99 *Sheet 1 of 1*

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn

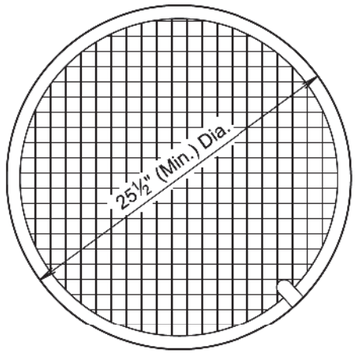
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	NH-TA 0037(157)75	B243	B245

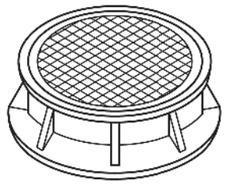
Plotting Date: 9/20/2023



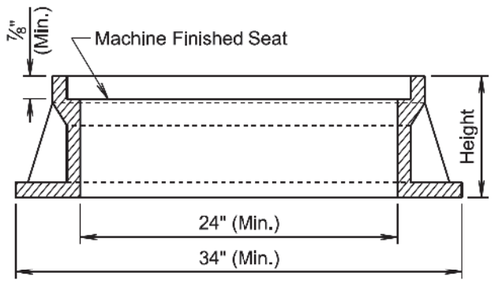
PLAN VIEW
(Frame)



PLAN VIEW
(Lid)



ISOMETRIC VIEW



SECTION A-A

TYPE	HEIGHT (Inches)
A7	7
A8	8
A9	9
A10	10

GENERAL NOTES:

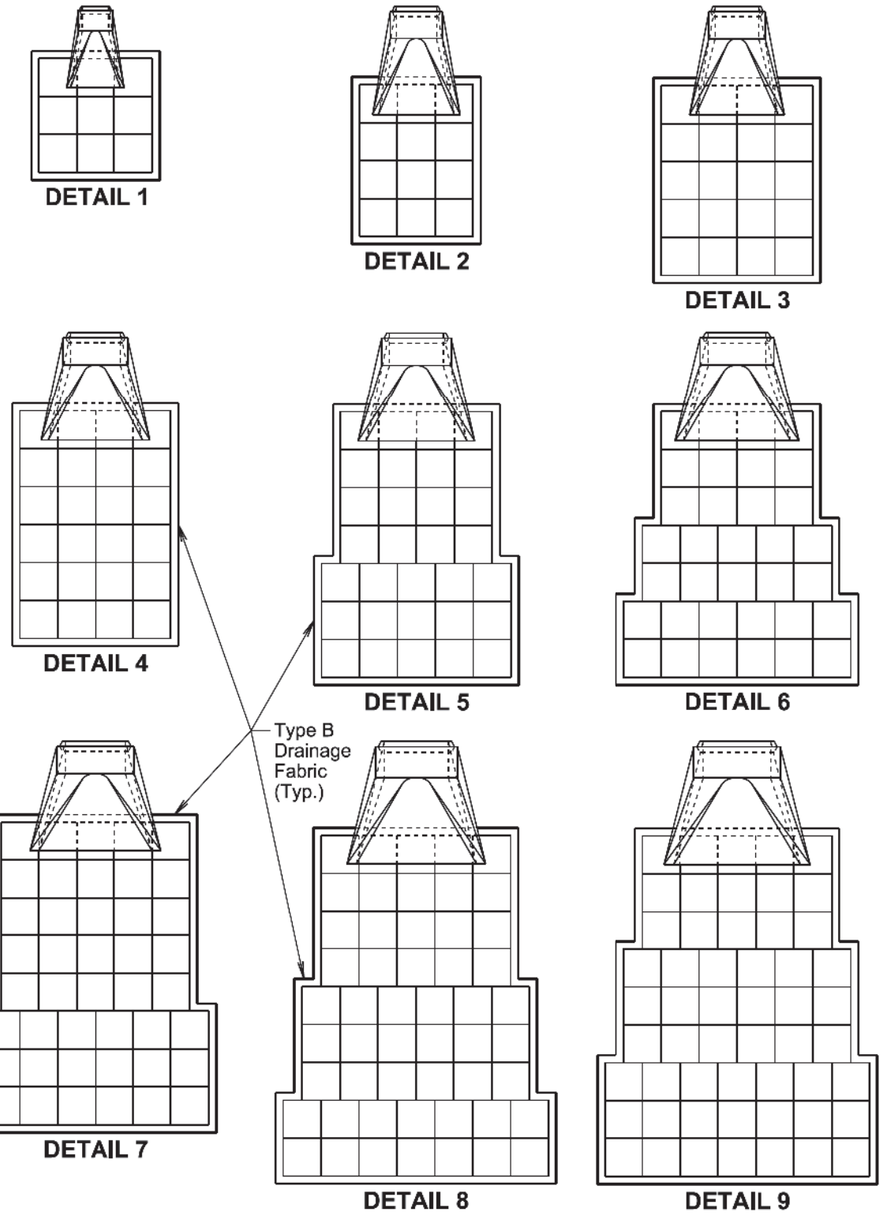
The product dimensions may vary from those shown on the standard plate depending on the manufacturer. Any variation in dimensions will be approved by the Engineer and the type A manhole frame and lid will be from a manufacturer on the approved products lists.

Design load for the grate will meet the requirements of AASHTO HL-93.

Geometric pattern on top of lid other than that shown will be approved by the Engineer.

June 1, 2022

Published Date: 2024	SDDOT	TYPE A MANHOLE FRAME AND LID	PLATE NUMBER 671.10
			Sheet 1 of 1



February 14, 2020

Published Date: 2024	SDDOT	BANK AND CHANNEL PROTECTION GABION PLACEMENT UNDER PIPE END SECTIONS	PLATE NUMBER 720.03
			Sheet 1 of 2

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
File - ...\Section B\Std\PlateSectionB.dgn

	* ESTIMATED QUANTITIES			
	Detail	Pipe Diameter (Inches)	Gabion (Cu. Yd.)	Type B Drainage Fabric (Sq. Yd.)
RCP, RCP Arch, CMP, and CMP Arch	1	12, 18, and 24	4.5	15
	2	30 and 36	6.0	19
	3	42	10.0	29
	4	48 and 54	12.0	34
	5	60	15.5	43
	6	66	17.0	47
	7	72	21.5	57
	8	78	26.0	68
	9	84	27.0	70

GENERAL NOTES:

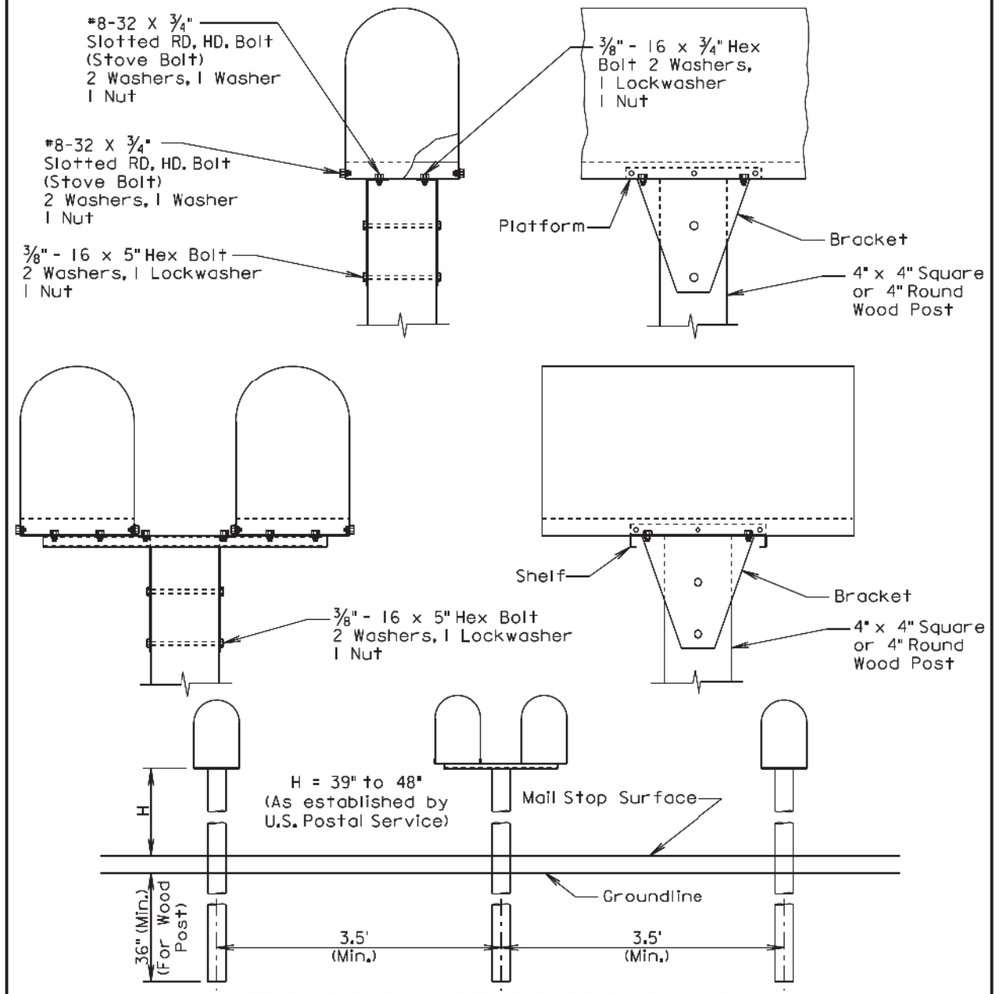
Gabions at outlets of CMP and RCP will be placed under the end section a distance of 2 feet from the outlet end. For CMP end section installations, the upper fabric of the gabions will be modified to accommodate the metal end section as approved by the Engineer.

* Gabion and type B drainage fabric quantities on this standard plate are based on standard gabion sizes D, E, and F as depicted on standard plate 720.01.

Type B drainage fabric will be placed under the gabions and around the exterior sides (perimeter) of the gabions as approved by the Engineer. The type B drainage fabric will be in conformance with Section 831 of the Specifications. Measurement and payment of the type B drainage fabric will be in conformance with Section 720 of the Specifications.

February 14, 2020

Published Date: 2024	SDDOT	**BANK AND CHANNEL PROTECTION GABION PLACEMENT UNDER PIPE END SECTIONS**	PLATE NUMBER 720.03 Sheet 2 of 2



SPACING FOR MULTIPLE POST INSTALLATION

GENERAL NOTES:

The post support assemblies provided should be consistant throughout the project.

Single and double mailboxes may be in any sequence.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

September 6, 2013

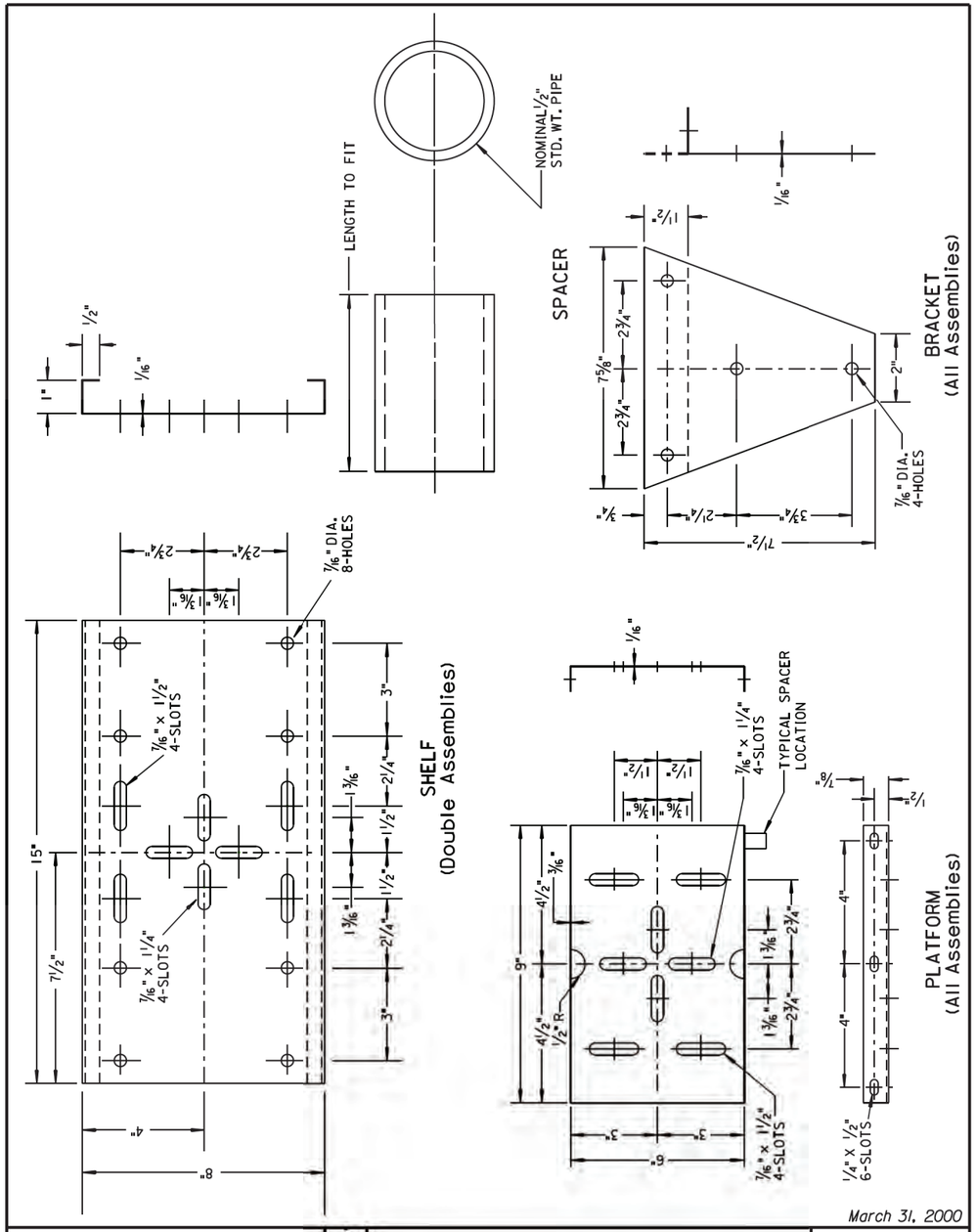
Published Date: 2024	SDDOT	**SINGLE AND DOUBLE MAILBOX ASSEMBLIES**	PLATE NUMBER 900.02 Sheet 1 of 1

Plot Scale - 1:200
Plotted From - Jennifer.Roggatz@jacobs.com
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Plot Scale - 1:200

Plotted From - Jennifer.Roggatz@jacobs.com

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March 31, 2000

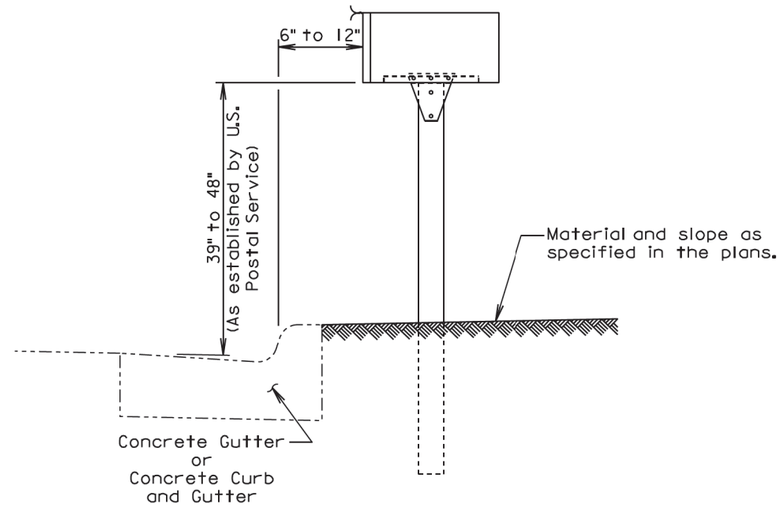
Published Date: 2024

SDDOT

MAILBOX SUPPORT HARDWARE

PLATE NUMBER 900.03

Sheet 1 of 1



ELEVATION VIEW

GENERAL NOTES:

The post support assemblies provided should be consistant throughout the project.

Post support assemblies shall be one from the approved products list, a 4"x4" or 4" round wood post, or an alternate post support assembly that meets the test level 3 crash testing requirements of NCHRP 350 or MASH.

Alternate mailbox support assemblies shall be approved by the Engineer prior to installation. The Contractor shall provide the Engineer written certification that the mailbox support assembly has met the crash testing requirements and will be installed in accordance with the manufacturer's installation instructions.

February 10, 2014

Published Date: 2024

SDDOT

MAILBOX ADJACENT TO CONCRETE GUTTER OR CONCRETE CURB AND GUTTER

PLATE NUMBER 900.05

Sheet 1 of 1