STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	1	40

Plotting Date: 02-JUL-2007

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

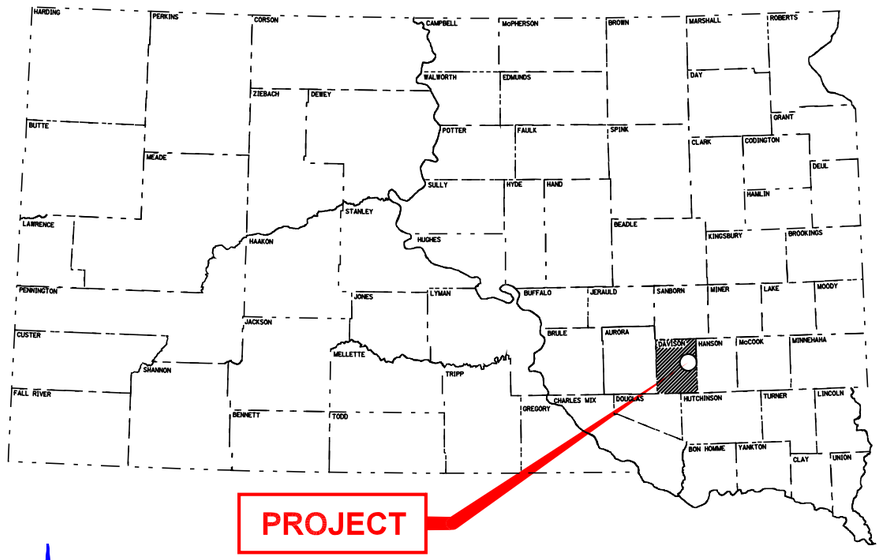
PLANS FOR PROPOSED

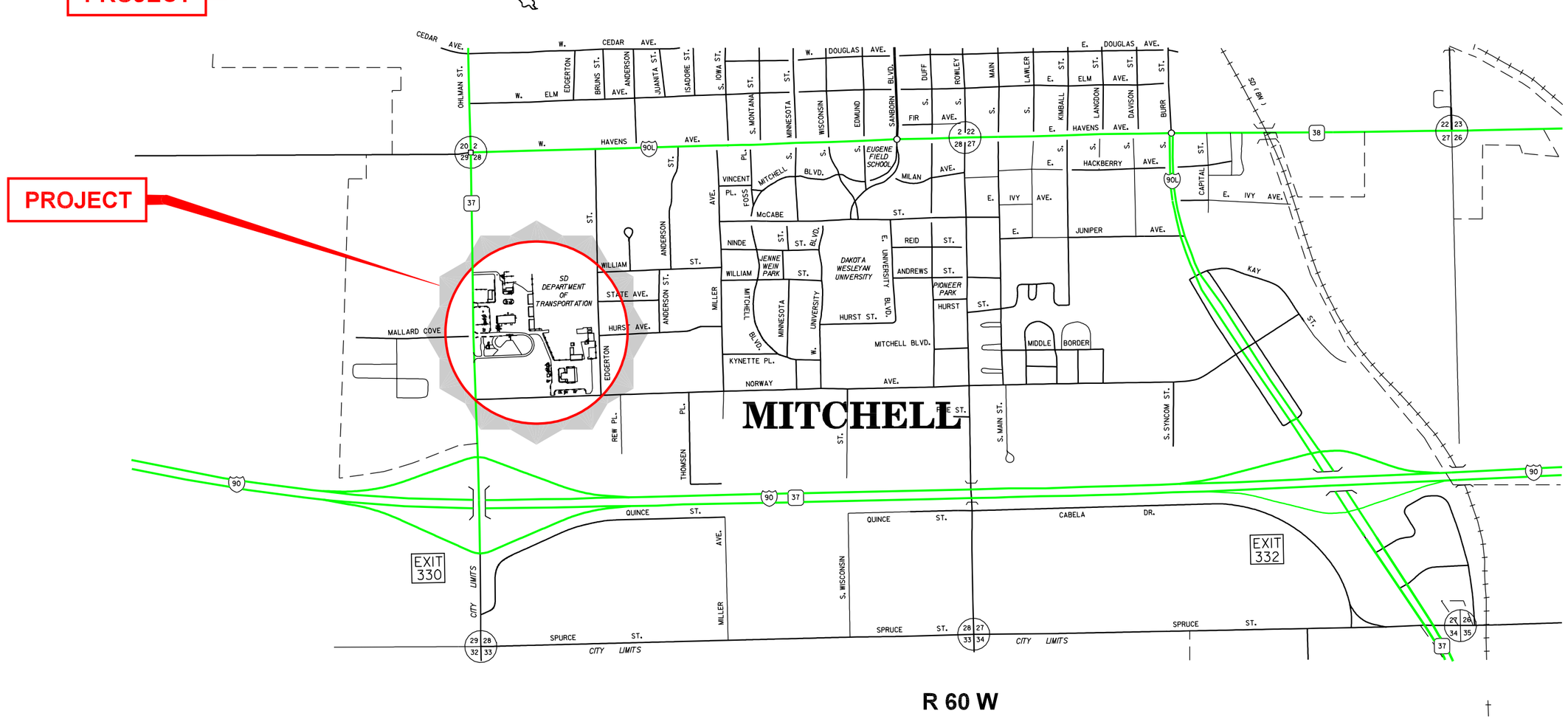
PROJECT 410B223
MITCHELL REGION COMPLEX
DAVISON COUNTY

COLD MILLING ASPHALT CONCRETE,
ASPHALT CONCRETE RESURFACING,
MISCELLANEOUS PCC PAVEMENT,
CURB & GUTTER, SIDEWALK, PCC APPROACH PAVEMENT AND
INSTALLATION OF NEW FLAG POLE WITH LIGHTS

PCN I0QN

INDEX OF SHEETS





STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	2	40

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	410B223 - Region QUANTITY	410B223 - Area QUANTITY	410B223 - Yard QUANTITY	TOTAL QUANTITY	UNIT
009E0010	Mobilization	<---------- Lump Sum ----------			Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	42	48	-	90	Ft
110E1100	Remove Concrete Pavement	144	-	-	144	SqYd
110E1110	Remove Concrete Approach Pavement	-	26.7	-	26.7	SqYd
110E1140	Remove Concrete Sidewalk	15	-	-	15	SqYd
120E0010	Unclassified Excavation	451	14	-	465	CuYd
120E0100	Unclassified Excavation, Digouts	330	220	-	550	CuYd
260E1030	Base Course, Salvaged	710	440	-	1,150	Ton
260E2010	Gravel Cushion	370	25	-	395	Ton
320E0007	PG 64-28 Asphalt Binder	141.5	83	75.6	300.1	Ton
320E1050	Class E Asphalt Concrete	2,481	1,456	1,328	5,265	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	4.5	2.6	2.5	9.6	Ton
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	4	2.6	1.3	7.9	Ton
330E2000	Sand for Flush Seal	77	48	24	149	Ton
332E0010	Cold Milling Asphalt Concrete	10,710	8,590	-	19,300	SqYd
380E1030	8" Miscellaneous PCC Pavement	986	-	-	986	SqYd
380E3540	8" PCC Approach Pavement	-	26.7	-	26.7	SqYd
462E0100	Class M6 Concrete	0.3	-	-	0.3	CuYd
480E0100	Reinforcing Steel	2,345	-	-	2,345	Lb
635E5025	2.5' Diameter Footing	6.5	-	-	6.5	Ft
635E9302	2/C #14 AWG IMSA Copper Cable, K1	78	-	-	78	Ft
650E0080	Type B68 Concrete Curb and Gutter	95	10	-	105	Ft
650E4680	Type P8 Concrete Gutter	30	38	-	68	Ft
651E0040	4" Concrete Sidewalk	285	-	-	285	SqFt
671E7010	Adjust Manhole	1	-	-	1	Each
730E0206	Type D Permanent Seed Mixture	156	-	-	156	Lb
731E0200	Fertilizing	0.04	-	-	0.04	Ton
900E5120	Flag Pole	1	-	-	1	Each

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and/or Special Provisions as included in the Proposal.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	3	40

TABLE OF MATERIAL QUANTITIES

	UNCL. EXC.	UNCL. EXC. DIG-OUTS	BASE COURSE SALVAGED	GRAVEL CUSHION	COLD MILLING ASPHALT CONCRETE	CLASS E ASPHALT CONCRETE	PG 64-28 ASPHALT BINDER	SS-1h/ CSS-1h ASPH. FOR TACK	SS-1h/ CSS-1h ASPH. FOR FLUSH SEAL	SAND FOR FLUSH SEAL
	CuYd	CuYd	Ton	Ton	SqYd	Ton	Ton	Ton	Ton	Ton
410B223 - Region TOTALS:	451	330	710	370	10710	2481	141.5	4.5	4.0	77
410B223 - Area TOTALS:	14	220	440	25	8590	1456	83.0	2.6	2.6	48
410B223 - Yard TOTALS:	-	-	-	-	-	1328	75.6	2.5	1.3	24
Totals:	465	550	1150	395	19300	5265	300.1	9.6	7.9	149

BREAKDOWN OF QUANTITIES

LOCATION	DESCRIPTION	UNCL. EXC.	UNCL. EXC. DIG-OUTS	BASE COURSE SALVAGED	GRAVEL CUSHION	COLD MILLING ASPHALT CONCRETE	CLASS E ASPHALT CONCRETE 1ST LIFT	PG 64-28 ASPHALT BINDER	CLASS E ASPHALT CONCRETE 2ND LIFT	PG 64-28 ASPHALT BINDER	SS-1h/ CSS-1h ASPH. FOR TACK	SS-1h/ CSS-1h ASPH. FOR FLUSH SEAL	SAND FOR FLUSH SEAL
							<-------- 1ST LIFT ------>		<-------- 2ND LIFT ------>				
		CuYd	CuYd	Ton	Ton	SqYd	Ton	Ton	Ton	Ton	Ton	Ton	Ton
Region	Region Lot - (2" Lift)	-	330	660	-	-	1994	113.7	-	-	3.5	3.5	66
Region	Adjacent to Island in Mitchell Complex (2" to 3" Lift)	-	-	-	-	-	127	7.2	-	-	0.2	0.2	4
Region	Concrete Pad for Cold Storage Buildings	174	-	-	129	-	100	5.7	100	5.7	0.4	0.2	4
Region	New Curb & Gutter and expansion of parking lot between Region Office and Materials Lab	68	-	50	32	-	15	0.9	15	0.9	0.1	-	1
Region	New PCC Pavement Around Fuel Pumps	199	-	-	199	-	-	-	-	-	-	-	-
Region	New Sidewalk Ramp at Region Office	10	-	-	10	-	-	-	-	-	-	-	-
Region	West Yard Entrance	-	-	-	-	-	65	3.7	65	3.7	0.3	0.1	2
Area	Mitchell Area Lot (2" Lift)	-	220	440	-	-	1456	83.0	-	-	2.6	2.6	48
Area	Replacing Approach at Mitchell Area	14	-	-	25	-	-	-	-	-	-	-	-
Yard	Mitchell Area Loading Yard	-	-	-	-	-	664	37.8	664	37.8	2.5	1.3	24
Region Lot		-	-	-	-	10710	-	-	-	-	-	-	-
Area Lot		-	-	-	-	8590	-	-	-	-	-	-	-
	TOTALS:	**465**	**550**	**1150**	**395**	**19300**	**4421**	**252.0**	**844**	**48.1**	**9.6**	**7.9**	**149**

NOTES: The tonnage shown above for Base Course, Salvaged is based on a compacted depth of 6 inches for the expansion of parking lot between Region Office and Materials Lab.

The tonnage shown above for Gravel Cushion is based on a compacted depth of 6 inches.

The tonnage shown above for Class E Asphalt Concrete - 1st Lift is based on a compacted depth of 2 inches for all areas except for the area adjacent to the Region Island, which is based on a compacted depth from 2 inches to 3 inches.
The tonnage shown above for Class E Asphalt Concrete - 2nd Lift is based on a compacted depth of 2 inches.

The above quantities are included in the Estimate of Quantities.

UTILITIES

The Contractor shall contact the involved utility companies through South Dakota One Call (1-800-781-7474) prior to starting work. It shall be the responsibility of the Contractor to coordinate work with the utility owners to avoid damage to existing facilities.

COMPLETION DATES AND SUSPENDED WORK PERIOD

All work shall be completed on or before October 26, 2007.

Concrete work adjacent to areas where asphalt concrete is to be placed as specified in these plans shall be done before the asphalt concrete is placed. The Contractor shall complete all concrete work within the Region Lot on or before September 12, 2007.

The Contractor shall suspend all work in the Region Lot and have all machinery moved out of the lot between the dates of September 13, 2007 to September 20, 2007 for the South Dakota Department of Transportation Fall Surplus Sale.

The Contractor may leave milled surfaces open during this time but should have temporary ramps (in accordance with the Cold Milling Asphalt Concrete note) placed at vertical edges as determined by the Engineer.

The Contractor will be allowed to work in the Area Lot and Yard while work is suspended in the Region Lot.

COORDINATION BETWEEN CONTRACTORS

A separate contract for underground electrical work between the Region buildings and Area buildings will be awarded to another Contractor.

The Contractor shall schedule his work so as not to interfere with or hinder the progress of the work performed by the Contractor on the underground electrical project. The Contractor shall be aware of where underground electrical cable will be buried by the other contract and schedule resurfacing in those areas after that work is completed.

SURFACING THICKNESS DIMENSIONS

Plans tonnage will be applied even though the thickness may vary from that shown on the plans.

At those locations where material must be placed to achieve a required elevation, plans tonnage may be varied to achieve the required elevation.

WASTE DISPOSAL SITE

The Contractor will be required to furnish a site(s) for the disposal of construction/demolition debris generated by this project.

Construction/demolition debris may not be disposed of within the State (Right-of-Way) ROW.

All construction/demolition debris generated by this project shall be cleaned up and disposed of by the Contractor.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Engineer.

WASTE DISPOSAL SITE (CONTINUED)

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction/demolition debris consisting of concrete, asphalt concrete or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction/demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. Seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates and placement of a sign or signs at the entrance to the site stating No Dumping Allowed.
2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

Failure to comply with the requirements stated above may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

Cost for furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates and signs) and reclamation of the waste disposal site(s) shall be incidental to the contract unit prices for the various items.

COLD MILLING ASPHALT CONCRETE

Cold Milling Asphalt Concrete operations ahead of asphalt concrete laydown will be limited by particular job conditions and subject to approval of the Engineer.

The requirement for a traveling stringline shall be waived.

If resurfacing cannot be placed immediately after cold milling at complex entrances and building entrances, etc, then temporary (asphalt mix, milled material or granular material) ramps shall be placed as directed by the Engineer. Cost for placing and removing the temporary ramps shall be incidental to the contract unit prices for the various items.

Milled material not reused on the project shall be placed in the Complex Yard at a location specified by the Engineer. Cost for this shall be incidental to the contract unit price per square yard for Cold Milling Asphalt Concrete.

EXCAVATION OF UNSTABLE MATERIAL

Included in the Estimate of Quantities are 550 cubic yards of Unclassified Excavation, Digouts (330 cubic yards for Region Lot and 220 cubic yards for Area Lot) for the necessary removal of unstable material.

Backfill shall be paid for at the contract unit price per ton for Base Course, Salvaged in areas where the asphalt surface has been entirely removed.

Backfill shall be paid for at the contract unit prices per ton for Base Course, Salvaged and Asphalt Concrete Composite in areas where the existing adjacent asphalt surface has not been entirely removed.

BASE COURSE, SALVAGED

Base Course, Salvaged shall be obtained from milled material on the project and may be used without further testing.

If necessary, water shall be added to the Base Course, Salvaged to bring the material to ±2% of optimum moisture at the time of compaction.

Base Course, Salvaged shall be compacted according to Section 260.3.B of the Standard Specifications.

Included in the Estimate of Quantities are 1100 tons of Base Course, Salvaged (660 tons for Region Lot and 440 tons for Area Lot) for backfill of the Unclassified Excavation, Digouts.

WATER FOR COMPACTION

Cost of water for compaction of the Base Course, Salvaged and Gravel Cushion shall be incidental to the contract unit prices for the various contract items. The moisture required at the time of compaction will be 6%± unless otherwise directed by the Engineer.

CLASS E ASPHALT CONCRETE

Mineral Aggregate for Class E Asphalt Concrete shall conform to the requirements for Class E Type 1.

Mineral aggregate for the Class E may be obtained from a hot plant producing asphalt concrete for the SDDOT in accordance with Class Q medium traffic volume, Class Q high traffic volume, or Class Q2, Class Q3 or Class Q4 hot mixed asphalt concrete specifications. Mineral Aggregate for Asphalt Concrete with Class Q medium traffic volume, Class Q high traffic volume shall conform to the requirements of the Special Provision for Quality Control / Quality Assurance Specifications for Asphalt Concrete Pavement. Mineral Aggregate for Class Q2, Class Q3 or Class Q4 Hot Mixed Asphalt Concrete shall conform to the requirements of the Special Provision for Gyratory Controlled Quality Control/Quality Assurance Hot Mixed Asphalt Concrete Pavement. Testing requirements for the mineral aggregate shall be in accordance with Class E specifications.

If the asphalt mixture used on the project is a Class Q-MVT, Class Q-HVT, Class Q2, Class Q3, or Class Q4 Asphalt concrete from another project the job-mix formula for the mix shall apply, but the testing shall be in accordance with the SDDOT requirements for a Class E Specification.

All other requirements for Class E shall apply.

FLUSH SEAL

The Contractor shall apply a Flush Seal to the final lift of Asphalt Concrete. The rate of SS-1h or CSS-1h Asphalt for Flush Seal shall be applied at 0.05 gallons per square yard. The rate of Sand for Flush seal shall be applied at 8 pounds per square yard.

Cost for this work is included in the contract unit price per ton for Asphalt Concrete Composite.

ADDITIONAL QUANTITIES

Included in the Estimate of Quantities are 275 tons of Class E Asphalt Concrete (165 tons for Region Lot and 110 tons for Area Lot) and 15.7 tons of PG 64-28 Asphalt Binder (9.4 tons for Region Lot and 6.3 tons for Area Lot) for backfill of the Unclassified Excavation, Digouts.

MITCHELL AREA LOADING AREA IN YARD

Quantities for two 2" Class E Asphalt Concrete Lifts are included in the Estimate of Quantities for this area. Department of Transportation Maintenance forces will have this area shaped and prepared prior to the resurfacing.

8" MISCELLANEOUS PCC PAVEMENT

The fine aggregate may require screening as determined by the Engineer.

Fine aggregate shall conform to Section 800.2.D Alkali Silica Reactivity (ASR) Requirements of the Standard Specifications.

The concrete mix shall be Class A40 when slipform or formed construction is used. Class F Modified Fly Ash shall be substituted for 20 percent of the cement in accordance with Section 605 of the Standard Specifications.

In lieu of an automatic subgrader operating from a preset line, a motor grader or other suitable equipment may be used to bring the gravel cushion to final grade prior to placement of concrete.

There will be no direct payment for trimming of the gravel cushion for PCC pavement. The trimming will be considered incidental to the related items required for PCC Pavement. Trimming shall be performed as required by Section 380.3 C. of the Standard Specifications.

A construction joint will be sawed whenever new concrete pavement is placed adjacent to existing concrete pavement.

TABLE OF PRECAST CONCRETE DETECTABLE WARNING PANELS

(For Information Only)

Location	Quantity (1'x2' Panel)	Quantity (3'x2' Panel)
Sidewalk Ramp at Region Office	2	1
Totals:	2	1

ADJUSTMENT OF MANHOLES

The Contractor shall adjust the manhole south of the Region Materials Lab as shown on Sheet 1 of 3 for Resurfacing Adjacent to Mitchell Complex Island to the extent necessary.

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 shall 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 shall be replaced with new manhole frames, lids, and rings that conform with the Standard Specifications at the Contractor's expense. Manholes shall be adjusted to the satisfaction of the Engineer. All costs involved in adjusting the manholes shall 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.

NEW FLAG POLE

The Contractor shall install a new 25' flag pole and lighting for the pole at the Region Office. Details are shown on sheets titled New Flag Pole and Lighting at Region Office.

Cost for work is outlined in the plan sheets.

REMOVE FLAG POLE

The Contractor shall remove the existing flag pole located in the Region Island as noted on the layout for Resurfacing Adjacent to Mitchell Complex Island.

Cost to remove and dispose of the existing flag pole shall be incidental to the contract unit price per each for Flag Pole.

PERMANENT SEEDING AND FERTILIZING

The areas to be seeded and fertilized include all disturbed areas resulting from the work required by this contract.

All permanent seed shall be planted in the topsoil at a depth of ¼" to ½".

All seed broadcast must be raked or dragged in (incorporated) within the top ¼" to ½" of topsoil when possible. This requirement may be waived by the Engineer during construction when raking or dragging is deemed not feasible by conventional methods.

Type D Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Alene	1.5
Perennial Ryegrass	Turf Type	1.5
Creeping Red Fescue		1.5
Alkali Grass	Fults, Salty	1.5
	Total:	6

A commercial fertilizer with a minimum guaranteed analysis of 13-13-13 or an approved alternate fertilizer shall be applied to all areas designated for permanent seeding. The application rate of fertilizer shall be 3 pounds per 1000 SqFt.
The areas to be seeded and fertilized are estimated to be 0.6 acre.

MAINTENANCE OF TRAFFIC

The Department of Transportation shall supply traffic control for the project.

COLD MILLING ASPHALT CONCRETE LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	6	40

Plotting Date: 29-JUN-2007

MITCHELL REGION COMPLEX

Ohlman Street

90L & SD37

MITCHELL REGION OFFICE

MATERIALS LAB

Drain Field Cleanouts
In Place
Do Not Disturb

Adjust Manhole

ISLAND

17'

28'

16'

See Layout for Cold Milling Drainage Channel at Region Maintenance Shop

47'

45'

20'

MITCHELL REGION MAINTENANCE SHOP

48'

35'

FUEL ISLANDS

31'

46'

30'

30'

COLD STORAGE BUILDING NO. 3

COLD STORAGE BUILDING NO. 2

30'

COLD STORAGE BUILDING NO. 1

WEST YARD ENTRANCE

See Layouts for Resufacing West Yard Entrance for milling details.

Cold Milling Asphalt Concrete
10710 SqYds

Cold Milling Asphalt Concrete Depth 2"

Daylight Cold Milling Asphalt Concrete

Cold Milling Asphalt Concrete Depth 2" to 5"

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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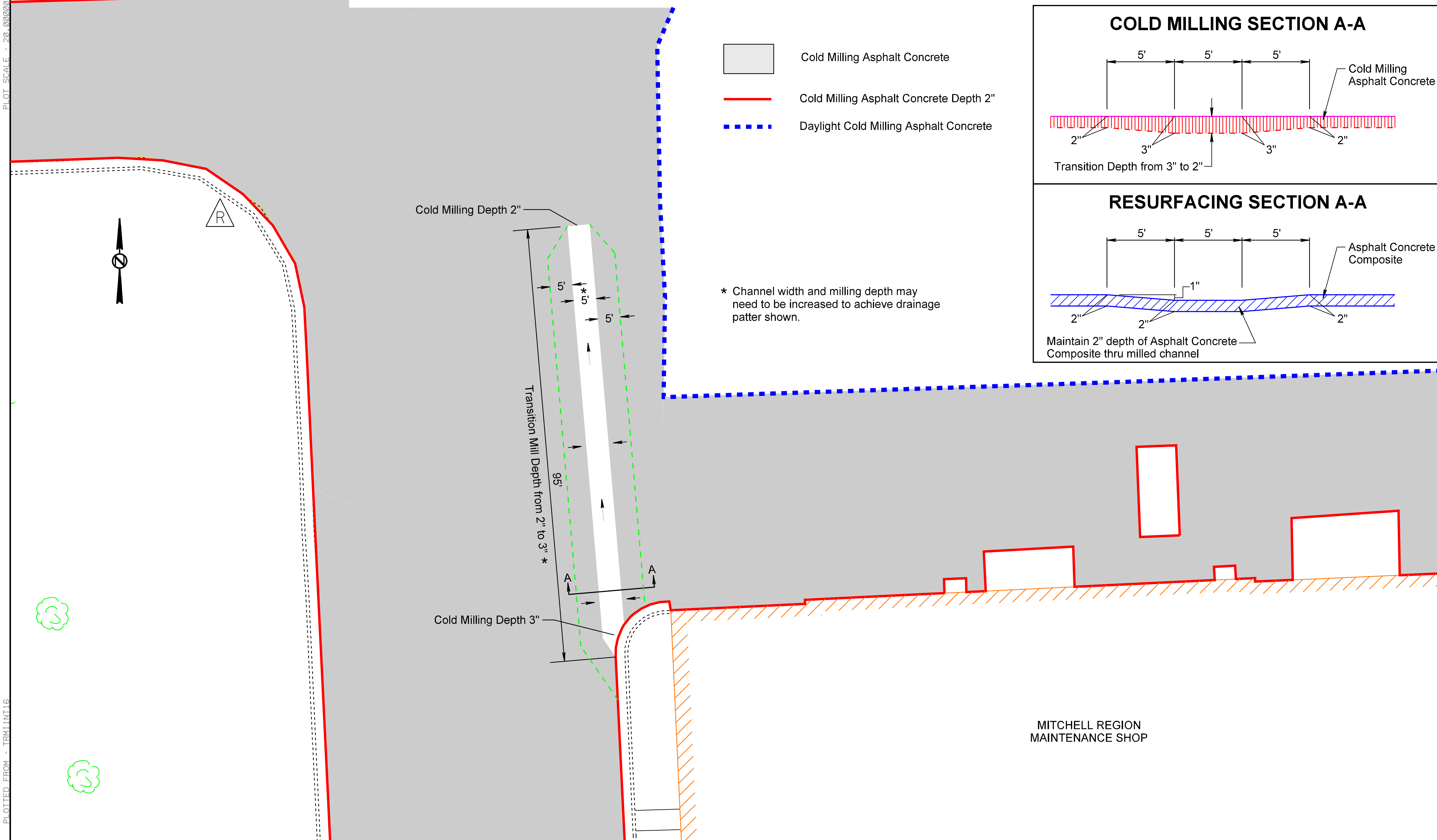
Plotting Date: 29-JUN-2007

LAYOUT FOR COLD MILLING DRAINAGE CHANNEL

NORTHWEST OF REGION MAINTENANCE SHOP

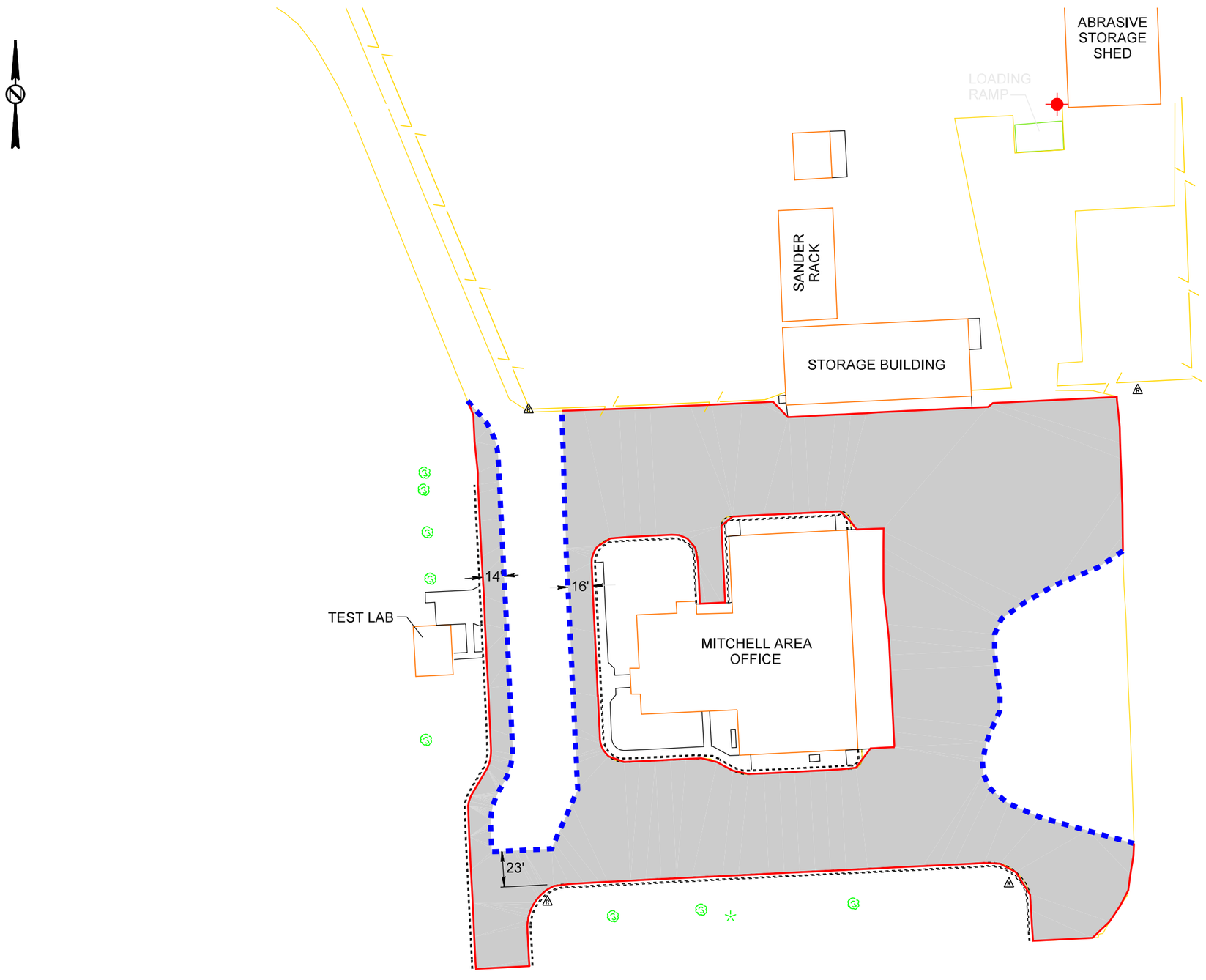


COLD MILLING ASPHALT CONCRETE LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	8	40

Plotting Date: 29-JUN-2007

MITCHELL AREA



Cold Milling Asphalt Concrete
8595 SqYds

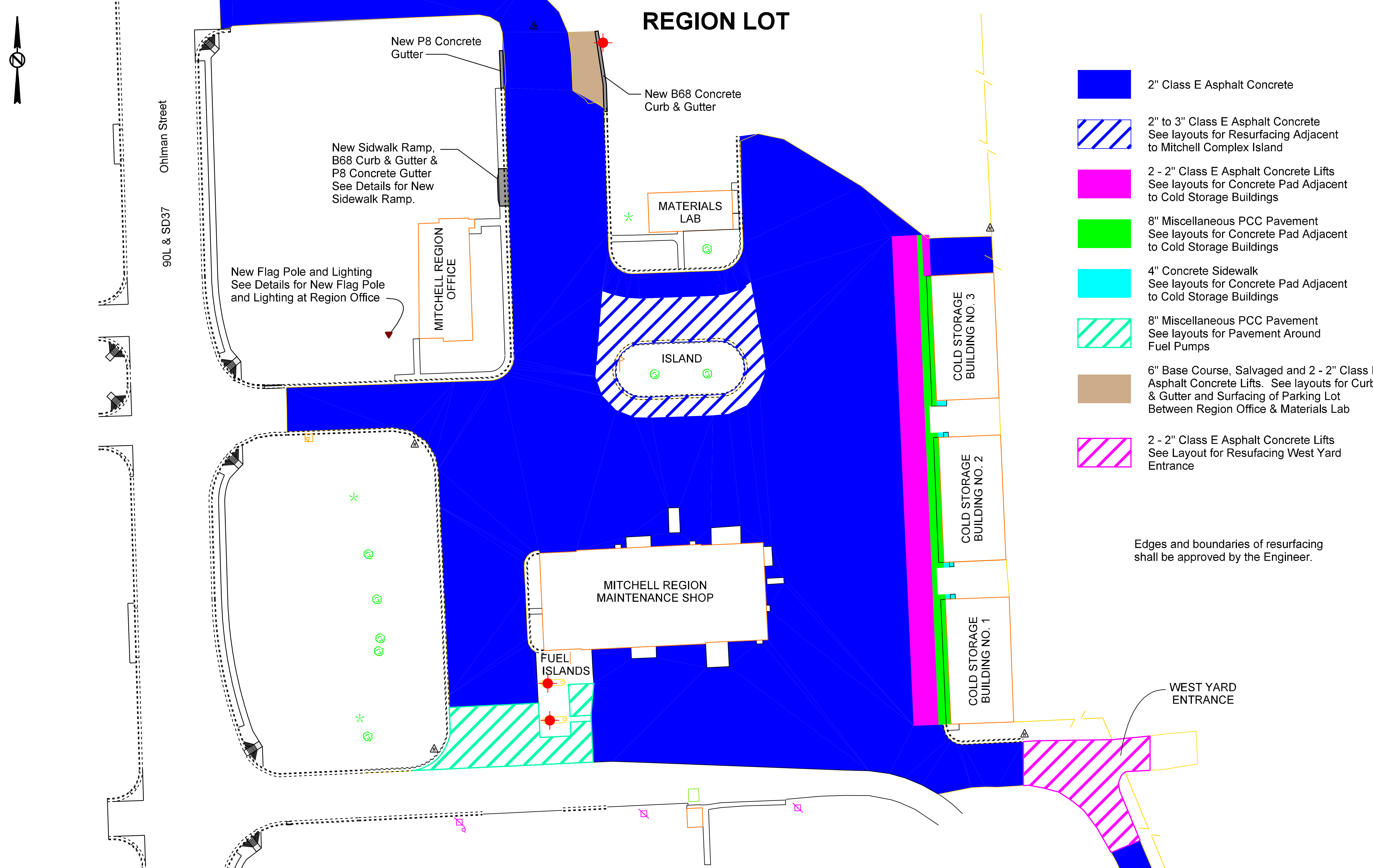
Cold Milling Asphalt Concrete Depth 2"

Daylight Cold Milling Asphalt Concrete

RESURFACING LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	9	40

Plotting Date: 29-JUN-2007


REGION LOT
New P8 Concrete Gutter
New B68 Concrete Curb & Gutter
New Sidewalk Ramp, B68 Curb & Gutter & P8 Concrete Gutter See Details for New Sidewalk Ramp.
New Flag Pole and Lighting See Details for New Flag Pole and Lighting at Region Office
Ohlman Street
90L & SD37
MITCHELL REGION OFFICE
MATERIALS LAB
ISLAND
COLD STORAGE BUILDING NO. 3
COLD STORAGE BUILDING NO. 2
COLD STORAGE BUILDING NO. 1
MITCHELL REGION MAINTENANCE SHOP
FUEL ISLANDS
WEST YARD ENTRANCE
2" Class E Asphalt Concrete
2" to 3" Class E Asphalt Concrete See layouts for Resurfacing Adjacent to Mitchell Complex Island
2 - 2" Class E Asphalt Concrete Lifts See layouts for Concrete Pad Adjacent to Cold Storage Buildings
8" Miscellaneous PCC Pavement See layouts for Concrete Pad Adjacent to Cold Storage Buildings
4" Concrete Sidewalk See layouts for Concrete Pad Adjacent to Cold Storage Buildings
8" Miscellaneous PCC Pavement See layouts for Pavement Around Fuel Pumps
6" Base Course, Salvaged and 2 - 2" Class E Asphalt Concrete Lifts. See layouts for Curb & Gutter and Surfacing of Parking Lot Between Region Office & Materials Lab
2 - 2" Class E Asphalt Concrete Lifts See Layout for Resufacing West Yard Entrance
Edges and boundaries of resurfacing shall be approved by the Engineer.

PLOT SCALE - 72.000000:1.000000
PLOTTED FROM - TRMIINT16

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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Plotting Date: 29-JUN-2007

RESURFACING LAYOUT

MITCHELL AREA
LOT AND LOADING AREA

This area is included in the quantities for the Mitchell Region Complex

2" Class E Asphalt Concrete

Mitchell Area Loading Area (Yard)
2 - 2" Class E Asphalt Concrete Lifts
The base will be shaped and prepared by SDDOT Maintenance forces.

Replace Approach Pavement and Gutter.
See Layout for Replacing Approach Pavement at Mitchell Area

Edges and boundaries of resurfacing shall be approved by the Engineer.

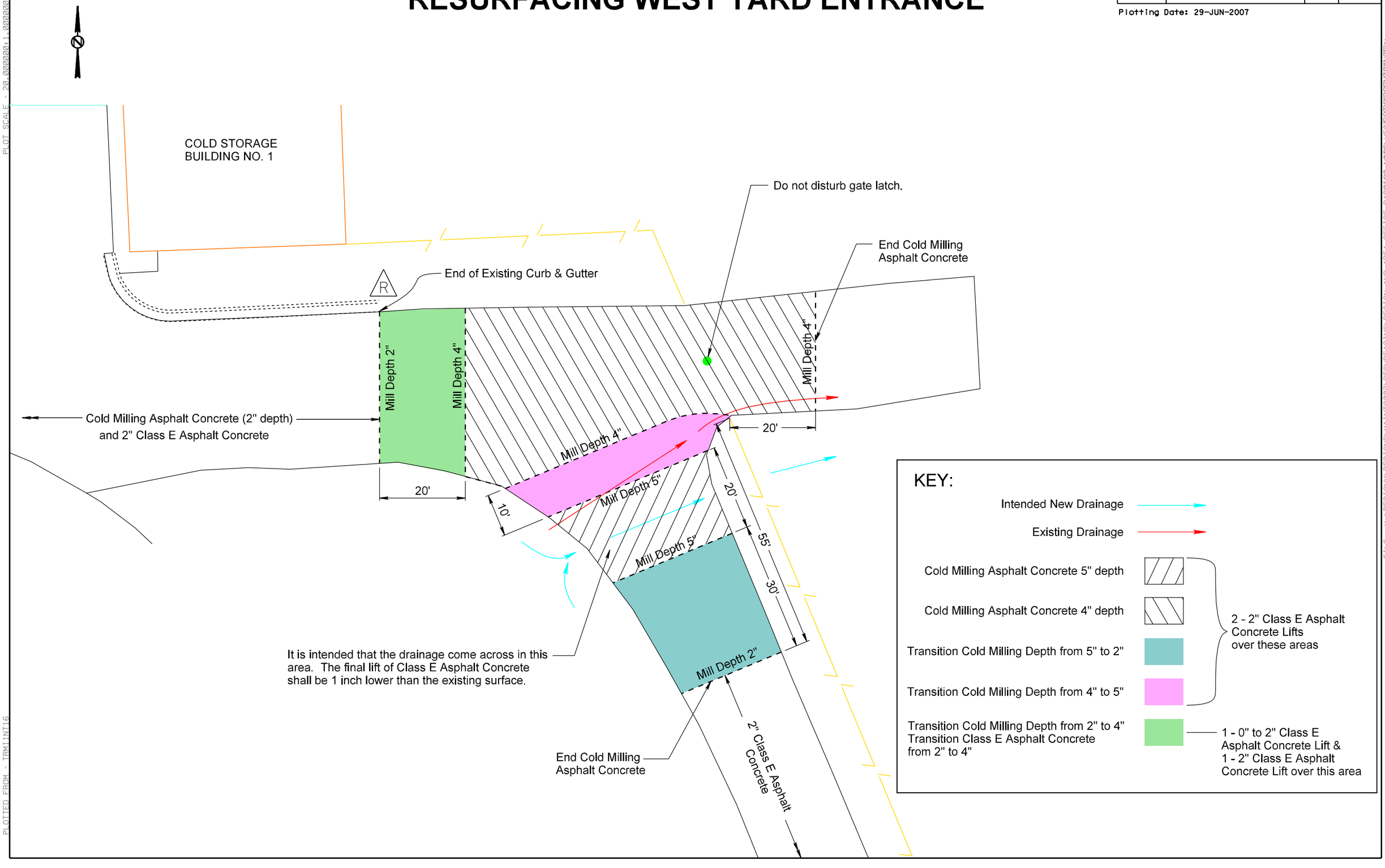
SALT BIN
SALT BIN
ABRASIVE STORAGE SHED
LOADING RAMP
Loading Area (Yard)
SANDER RACK
STORAGE BUILDING
TEST LAB
MITCHELL AREA OFFICE
Norway Avenue

FILE - U:\REGIONM\DESIGNR\MAINT2007\RESURFACING\REGION AND AREA OFFICE PARKING LOTS\MITCHELL.DGN

RESURFACING WEST YARD ENTRANCE

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	11	40

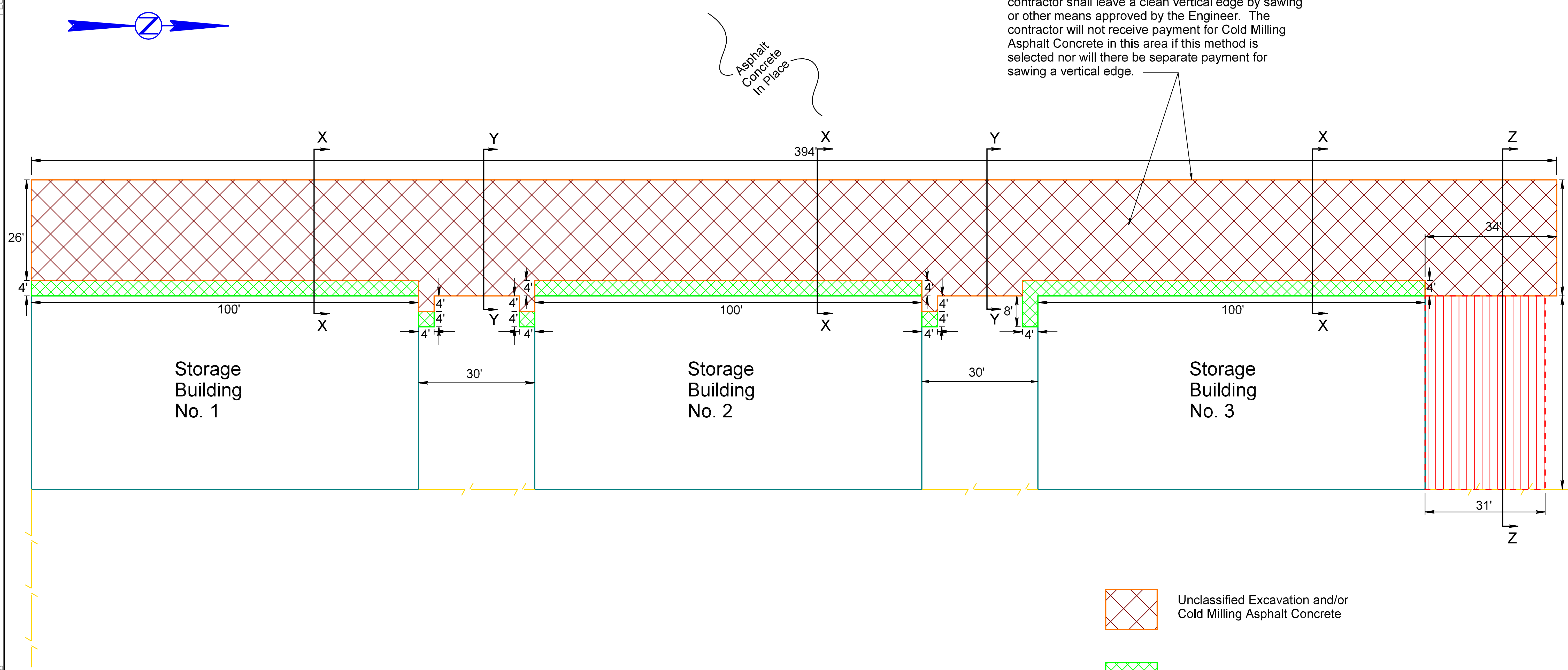
Plotting Date: 29-JUN-2007



CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

REMOVAL OF EXISTING CONCRETE PADS

The Contractor may elect to remove the top 2" of surfacing with equipment other than a cold milling machine such as a wheel loader. In this case the contractor shall leave a clean vertical edge by sawing or other means approved by the Engineer. The contractor will not receive payment for Cold Milling Asphalt Concrete in this area if this method is selected nor will there be separate payment for sawing a vertical edge.



Unclassified Excavation and/or Cold Milling Asphalt Concrete

Remove Concrete Pavement (144 SqYds)

Cold Milling Asphalt Concrete 2" Depth

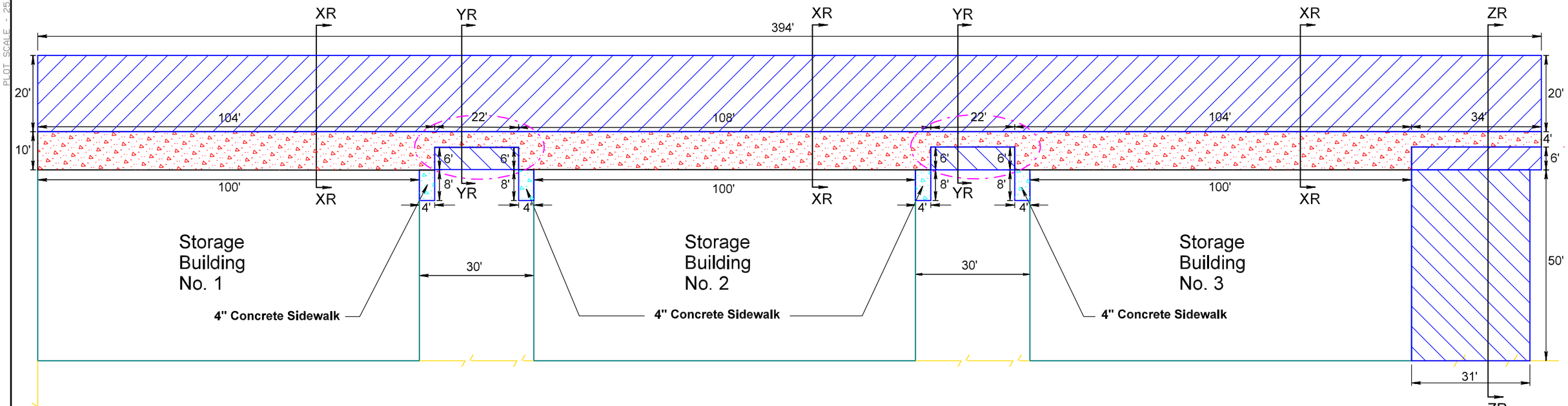
See Sheet 6 of 8 for Excavation and Cold Milling Section X-X, See Sheet 7 of 8 for Excavation and Cold Milling Section Y-Y and See Sheet 8 of 8 for Excavation and Cold Milling Section Z-Z of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	13	40

Plotting Date: 29-JUN-2007

NEW CONCRETE COLD STORAGE PAD



2 - 2" Class E Asphalt Concrete Lifts

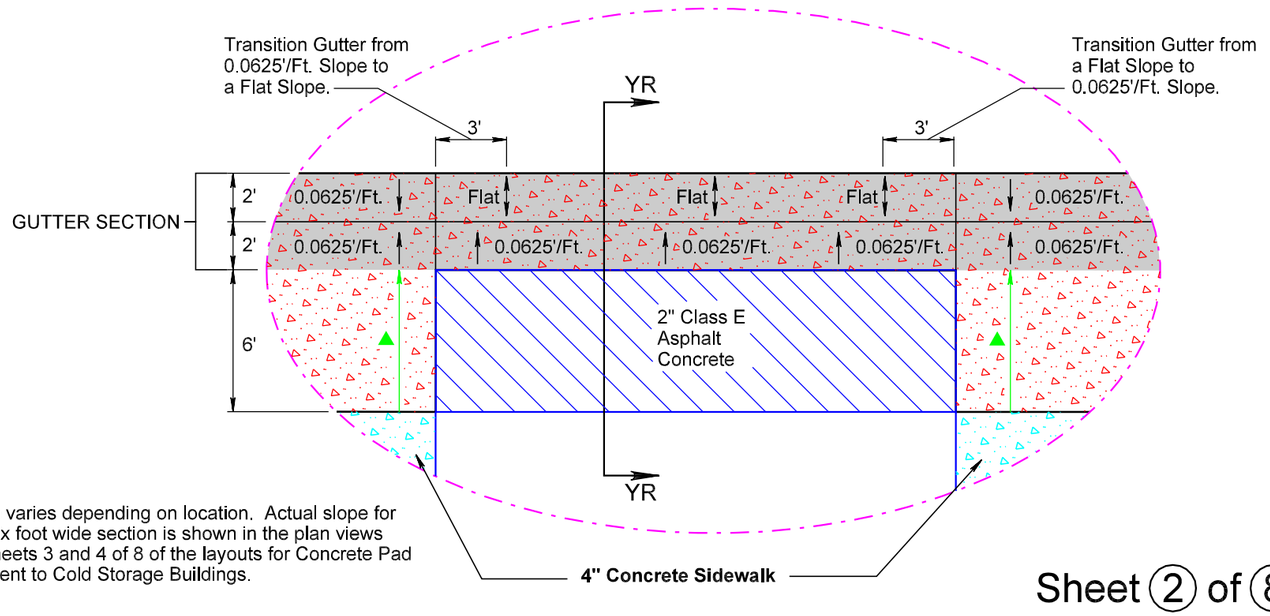
2" Class E Asphalt Concrete

8" Miscellaneous PCC Pavement (386 SqYds)

4" Concrete Sidewalk (14.2 SqYds)

See Sheet 6 of 8 for Resurfacing Section XR-XR,
See Sheet 7 of 8 for Resurfacing Section YR-YR and
See Sheet 8 of 8 for Resurfacing Section ZR-ZR of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

DETAIL FOR GUTTER SECTION BETWEEN BUILDINGS



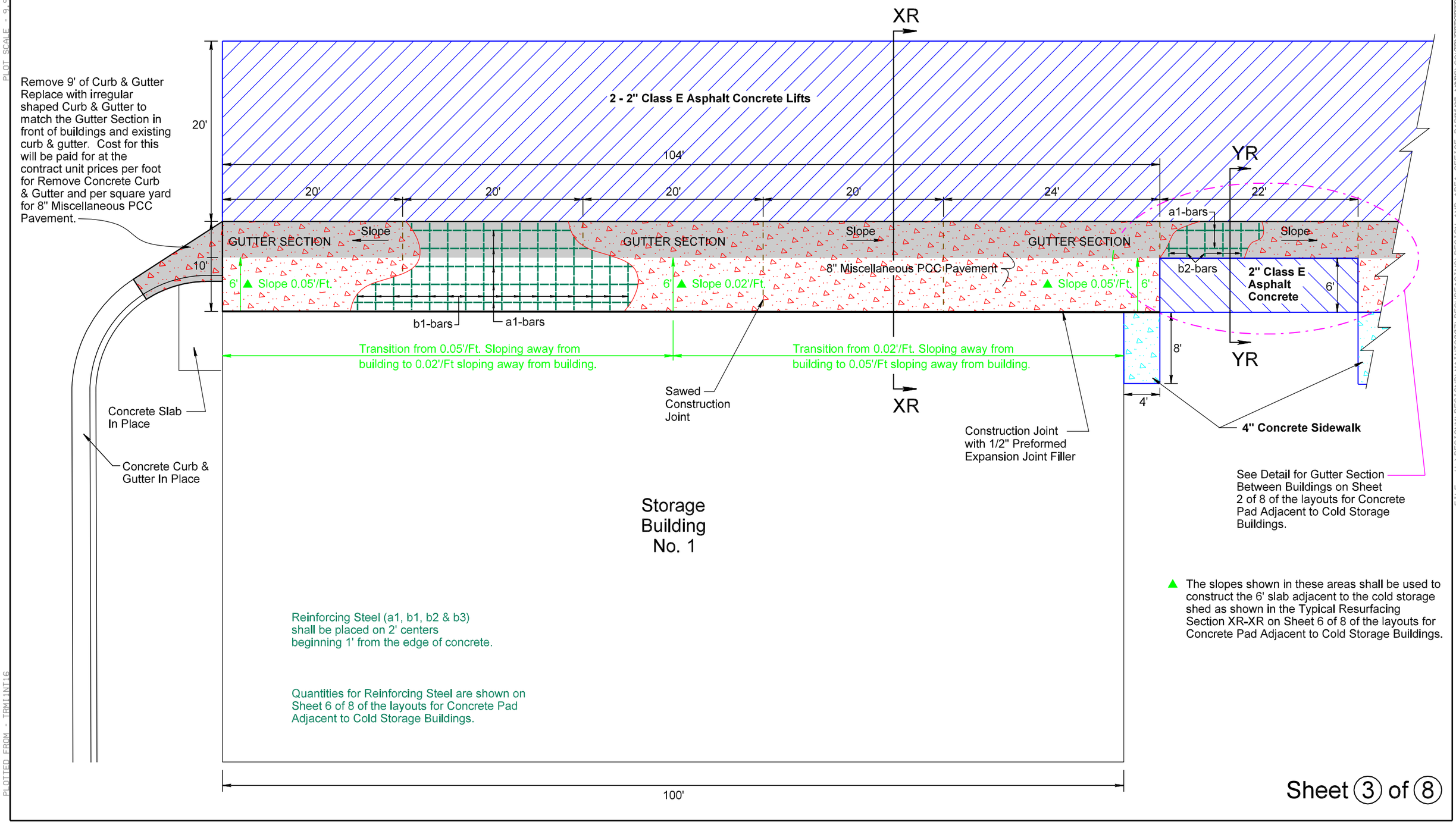
▲ Slope varies depending on location. Actual slope for this six foot wide section is shown in the plan views on Sheets 3 and 4 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	14	40

Plotting Date: 29-JUN-2007

CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

NEW CONCRETE COLD STORAGE PAD AT COLD STORAGE BUILDING NO. 1



Remove 9' of Curb & Gutter Replace with irregular shaped Curb & Gutter to match the Gutter Section in front of buildings and existing curb & gutter. Cost for this will be paid for at the contract unit prices per foot for Remove Concrete Curb & Gutter and per square yard for 8" Miscellaneous PCC Pavement.

See Detail for Gutter Section Between Buildings on Sheet 2 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

Reinforcing Steel (a1, b1, b2 & b3) shall be placed on 2' centers beginning 1' from the edge of concrete.

Quantities for Reinforcing Steel are shown on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

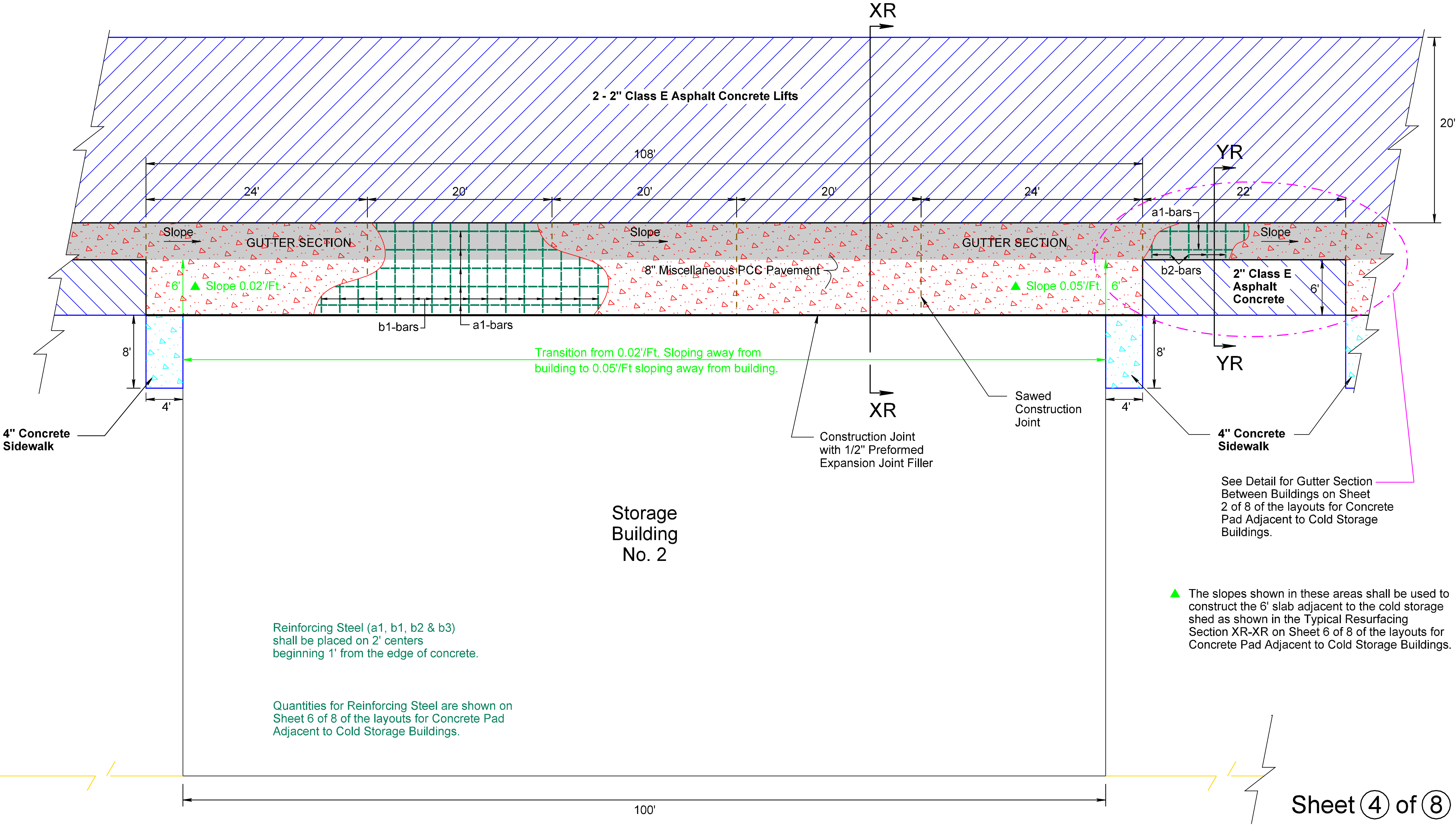
▲ The slopes shown in these areas shall be used to construct the 6' slab adjacent to the cold storage shed as shown in the Typical Resurfacing Section XR-XR on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	15	40

Plotting Date: 29-JUN-2007

CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

NEW CONCRETE COLD STORAGE PAD AT COLD STORAGE BUILDING NO. 2



See Detail for Gutter Section Between Buildings on Sheet 2 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

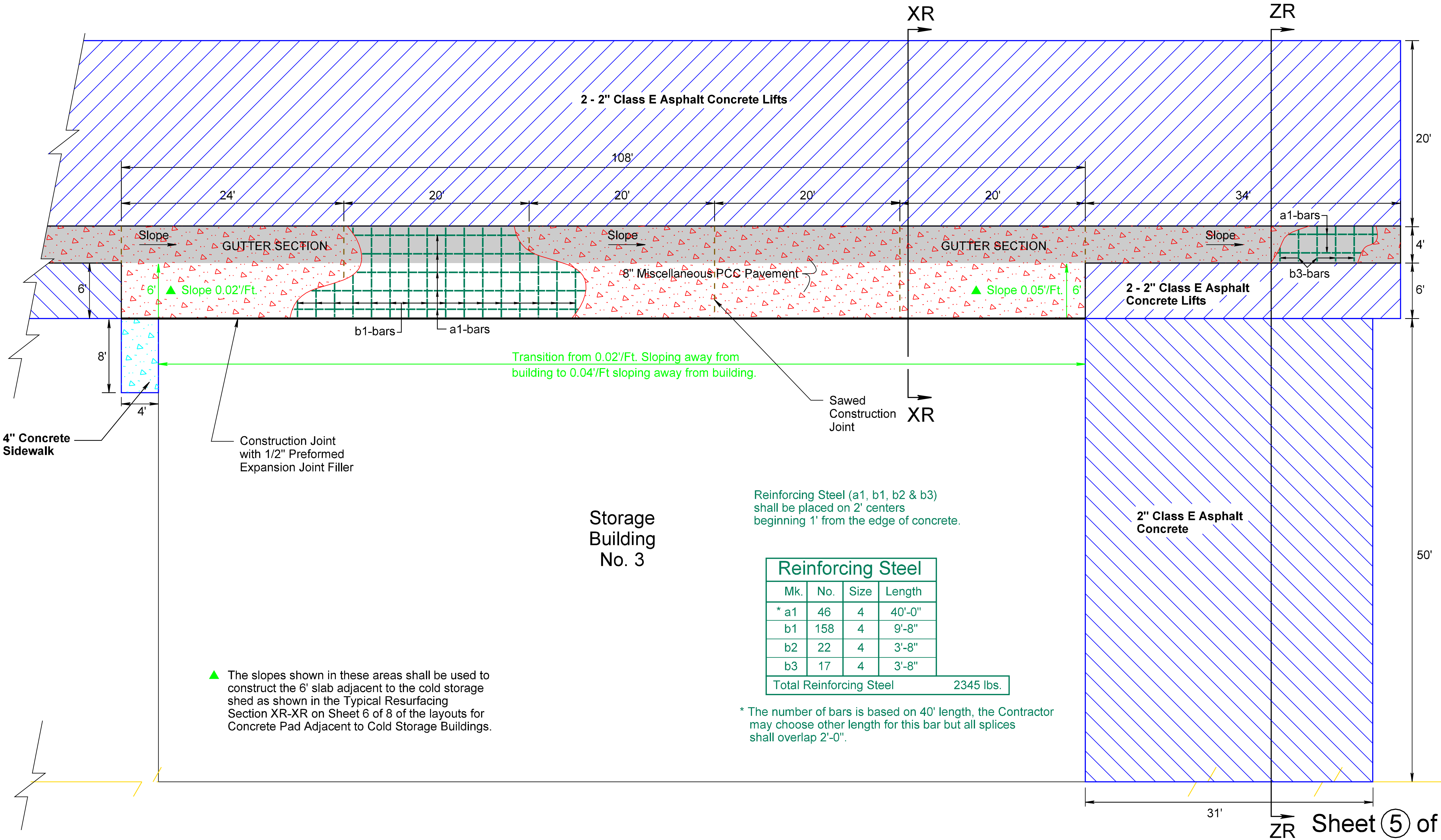
▲ The slopes shown in these areas shall be used to construct the 6' slab adjacent to the cold storage shed as shown in the Typical Resurfacing Section XR-XR on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

Reinforcing Steel (a1, b1, b2 & b3) shall be placed on 2' centers beginning 1' from the edge of concrete.

Quantities for Reinforcing Steel are shown on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

NEW CONCRETE COLD STORAGE PAD AT COLD STORAGE BUILDING NO. 3



Reinforcing Steel (a1, b1, b2 & b3) shall be placed on 2' centers beginning 1' from the edge of concrete.

Reinforcing Steel

Mk.	No.	Size	Length
* a1	46	4	40'-0"
b1	158	4	9'-8"
b2	22	4	3'-8"
b3	17	4	3'-8"
Total Reinforcing Steel			2345 lbs.

* The number of bars is based on 40' length, the Contractor may choose other length for this bar but all splices shall overlap 2'-0".

▲ The slopes shown in these areas shall be used to construct the 6' slab adjacent to the cold storage shed as shown in the Typical Resurfacing Section XR-XR on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

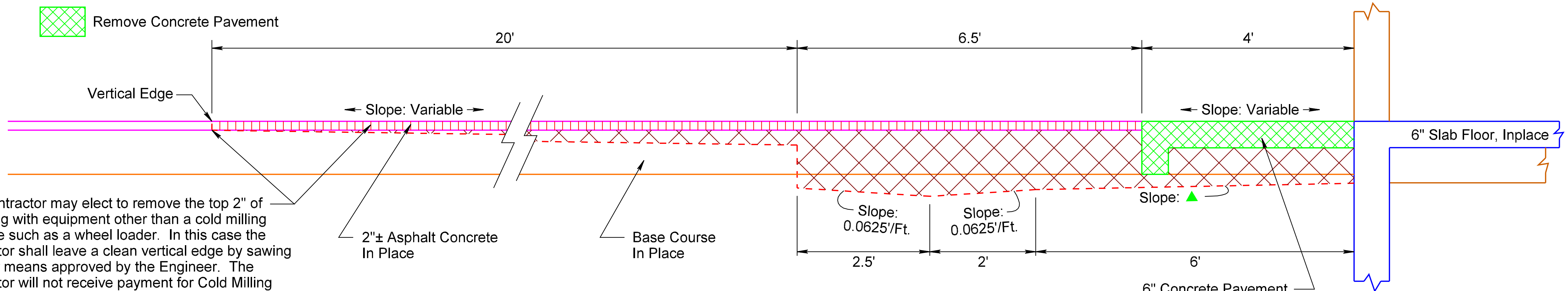
Cold Milling Asphalt Concrete

Unclassified Excavation

Remove Concrete Pavement

TYPICAL EXCAVATION AND COLD MILLING SECTION

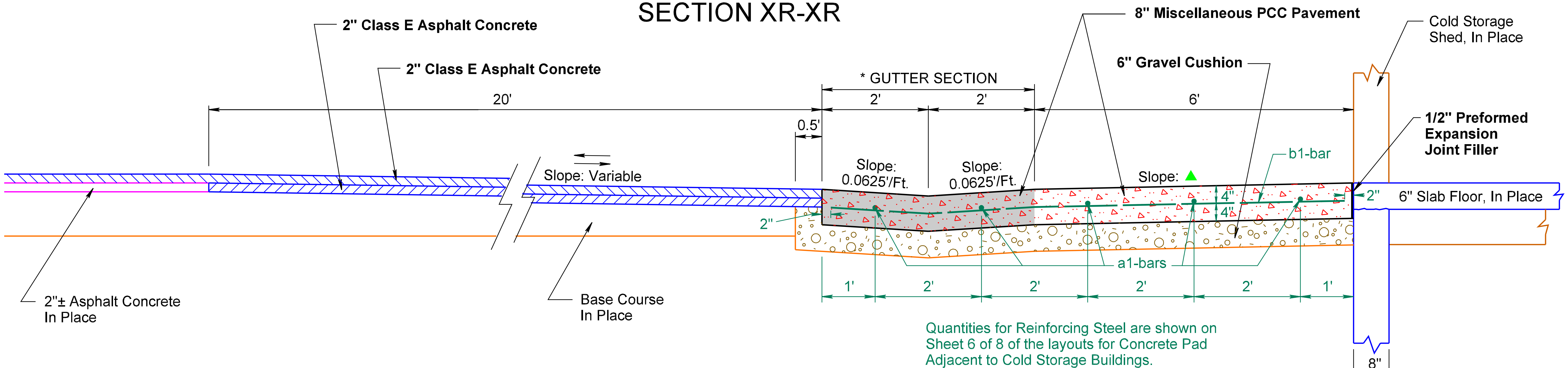
SECTION X-X



The Contractor may elect to remove the top 2" of surfacing with equipment other than a cold milling machine such as a wheel loader. In this case the contractor shall leave a clean vertical edge by sawing or other means approved by the Engineer. The contractor will not receive payment for Cold Milling Asphalt Concrete in this area if this method is selected nor will there be separate payment for sawing a vertical edge.

TYPICAL RESURFACING SECTION

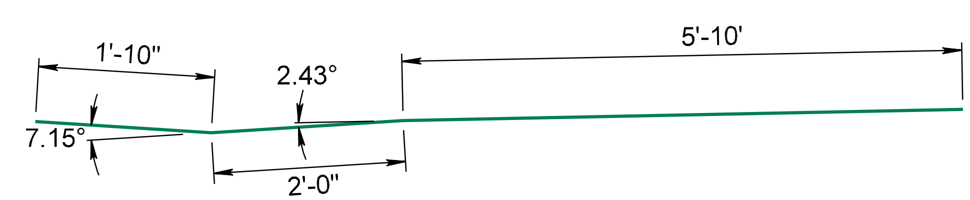
SECTION XR-XR



Quantities for Reinforcing Steel are shown on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.

▲ Slope varies depending on location. Actual slope for this six foot wide section is shown in the plan views along with the transitions between slopes.

* The gutter section shall be monolithic with the slab next to the cold storage building. The gutter section shall maintain the slopes shown throughout length of the new pad.



b1-bar detail

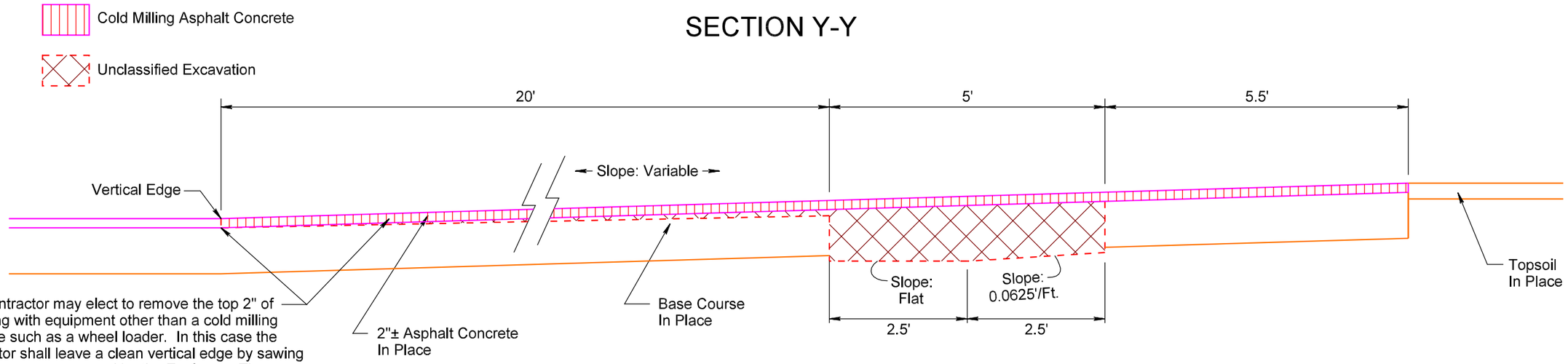
CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	18	40

Plotting Date: 29-JUN-2007

TYPICAL EXCAVATION AND COLD MILLING SECTION

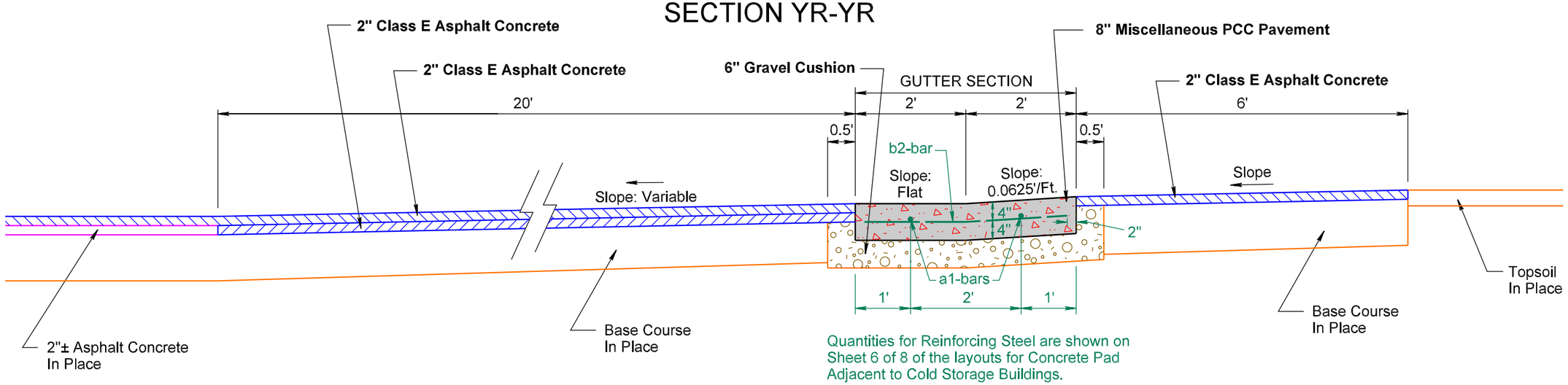
SECTION Y-Y



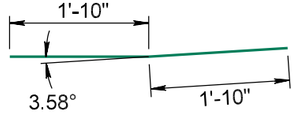
The Contractor may elect to remove the top 2" of surfacing with equipment other than a cold milling machine such as a wheel loader. In this case the contractor shall leave a clean vertical edge by sawing or other means approved by the Engineer. The contractor will not receive payment for Cold Milling Asphalt Concrete in this area if this method is selected nor will there be separate payment for sawing a vertical edge.

TYPICAL RESURFACING SECTION

SECTION YR-YR



Quantities for Reinforcing Steel are shown on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.



b2-bar detail

PLOT SCALE = 1.000000'/1.000000
PLOTTED FROM - TRM11NT16
FILE - U:\REGION\DESIGNR\MAINT2007\RESURFACING\REGION AND AREA OFFICE PARKING LOTS.DGN

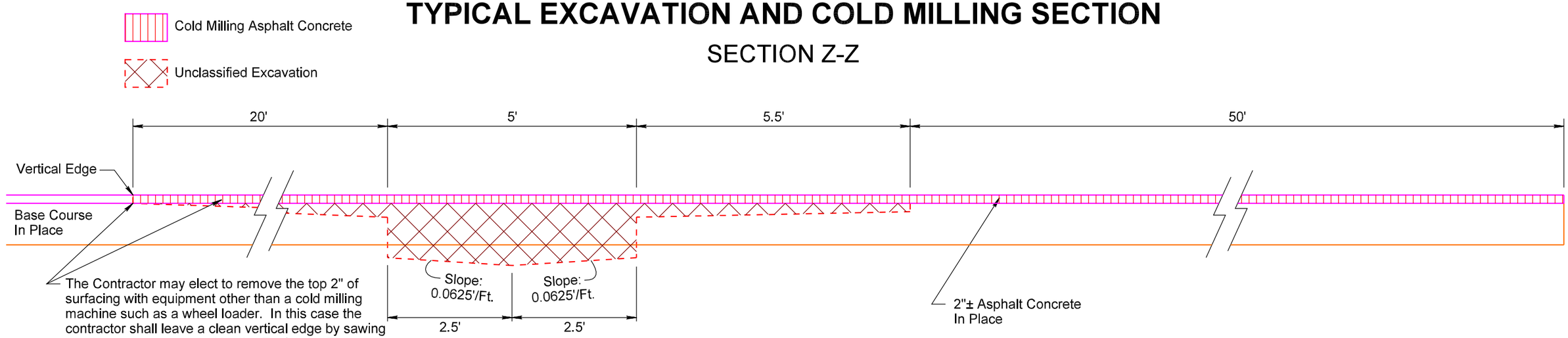
CONCRETE PAD ADJACENT TO COLD STORAGE BUILDINGS

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	19	40

Plotting Date: 29-JUN-2007

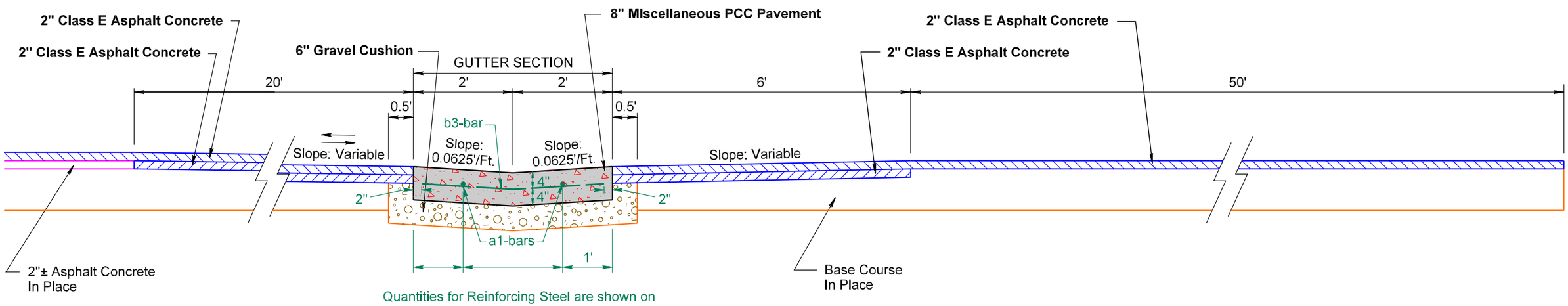
TYPICAL EXCAVATION AND COLD MILLING SECTION

SECTION Z-Z

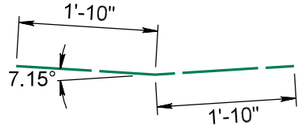


TYPICAL RESURFACING SECTION

SECTION ZR-ZR



Quantities for Reinforcing Steel are shown on Sheet 6 of 8 of the layouts for Concrete Pad Adjacent to Cold Storage Buildings.



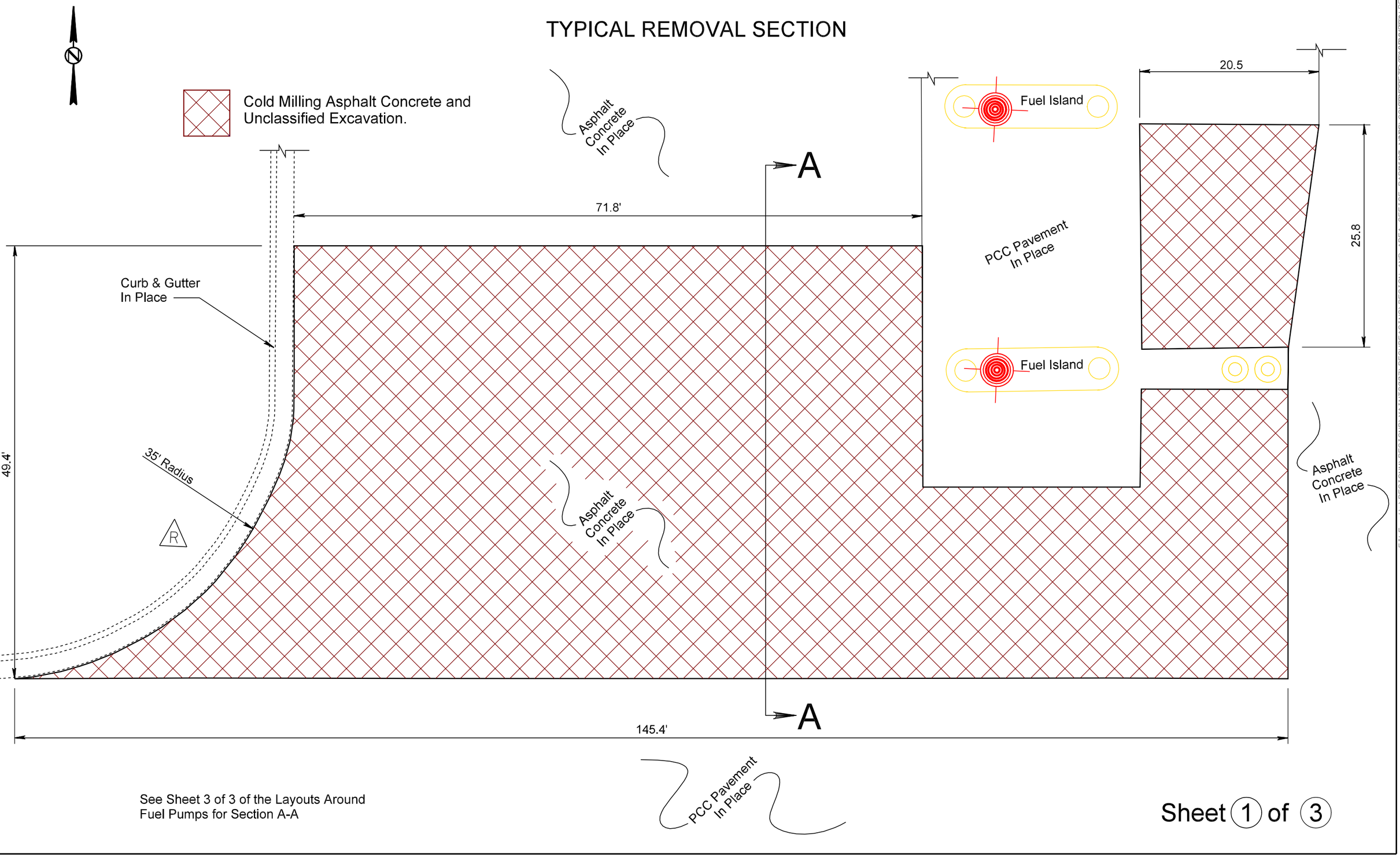
b3-bar detail

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	20	40

Plotting Date: 29-JUN-2007

PAVEMENT AROUND FUEL PUMPS

TYPICAL REMOVAL SECTION



See Sheet 3 of 3 of the Layouts Around Fuel Pumps for Section A-A

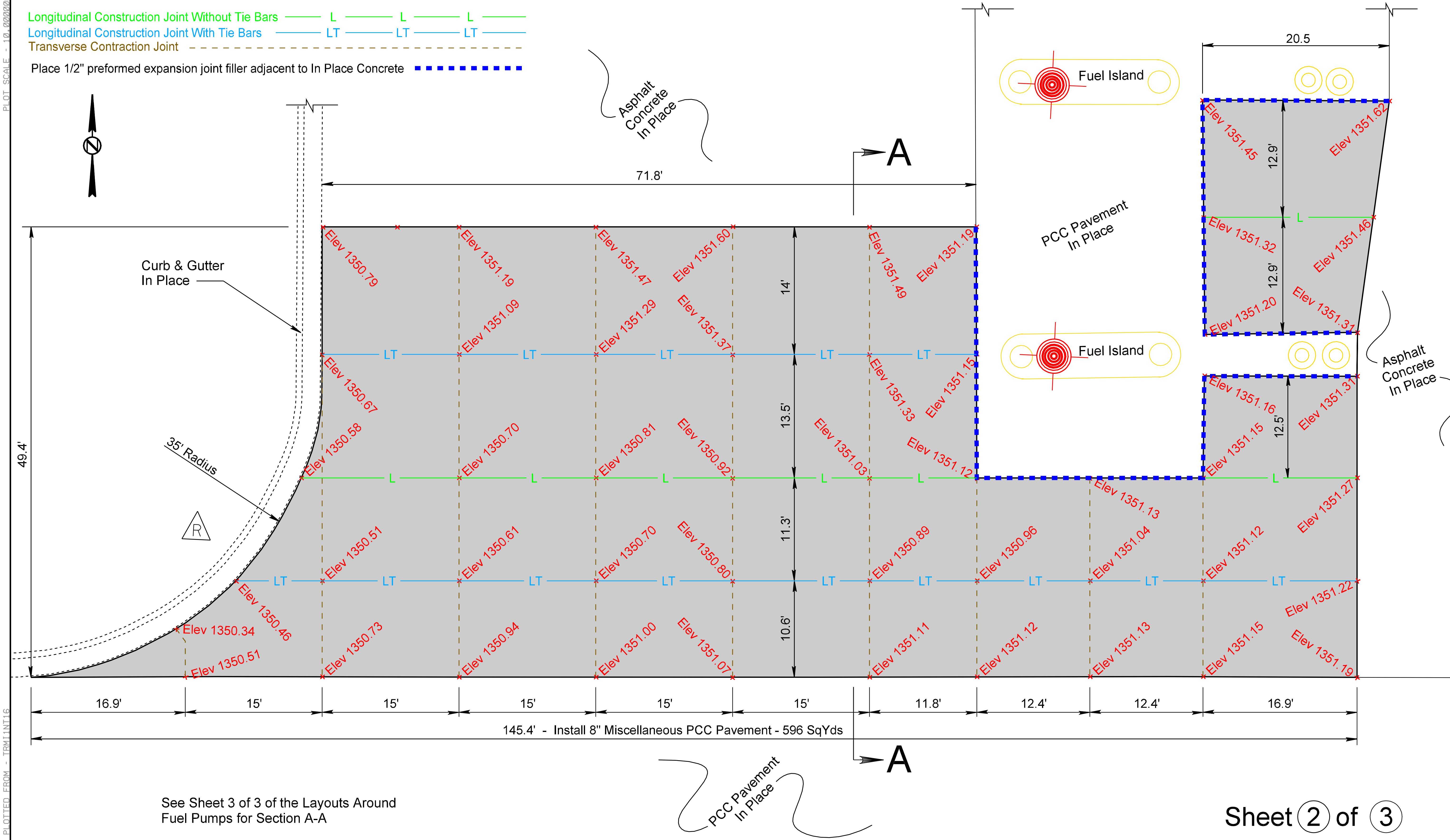
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	21	40

Plotting Date: 29-JUN-2007

PAVEMENT AROUND FUEL PUMPS

8" MISCELLANEOUS PCC PAVEMENT

Longitudinal Construction Joint Without Tie Bars — L — L — L —
Longitudinal Construction Joint With Tie Bars — LT — LT — LT —
Transverse Contraction Joint - - - - - - - -
Place 1/2" preformed expansion joint filler adjacent to In Place Concrete ■ ■ ■ ■ ■ ■



See Sheet 3 of 3 of the Layouts Around Fuel Pumps for Section A-A

Sheet 2 of 3

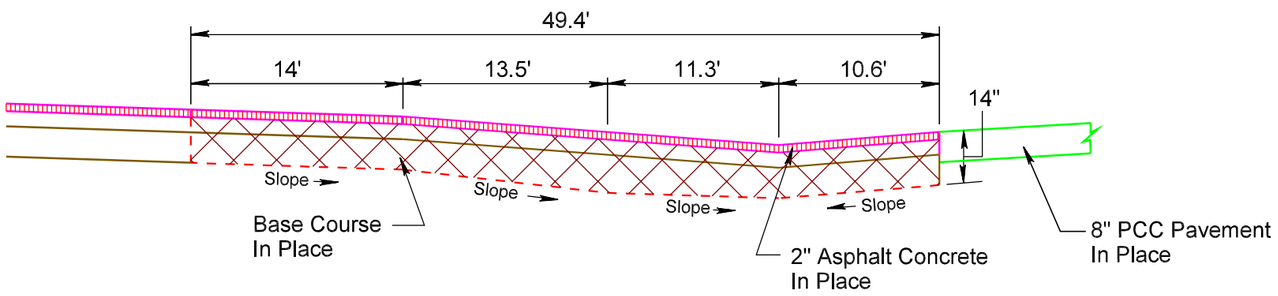
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	22	40

Plotting Date: 29-JUN-2007

PAVEMENT AROUND FUEL PUMPS

SECTION A-A

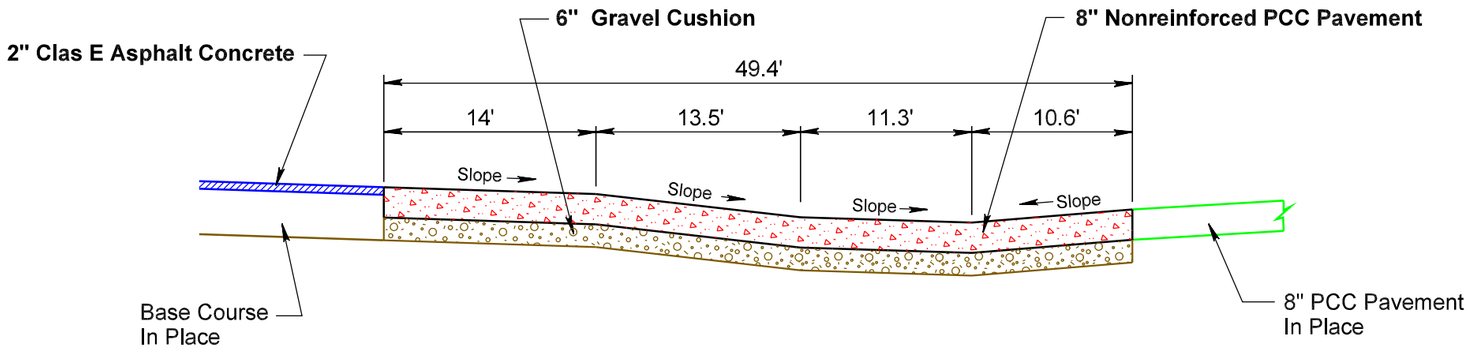
TYPICAL REMOVAL SECTION



Cold Milling Asphalt Concrete

Unclassified Excavation

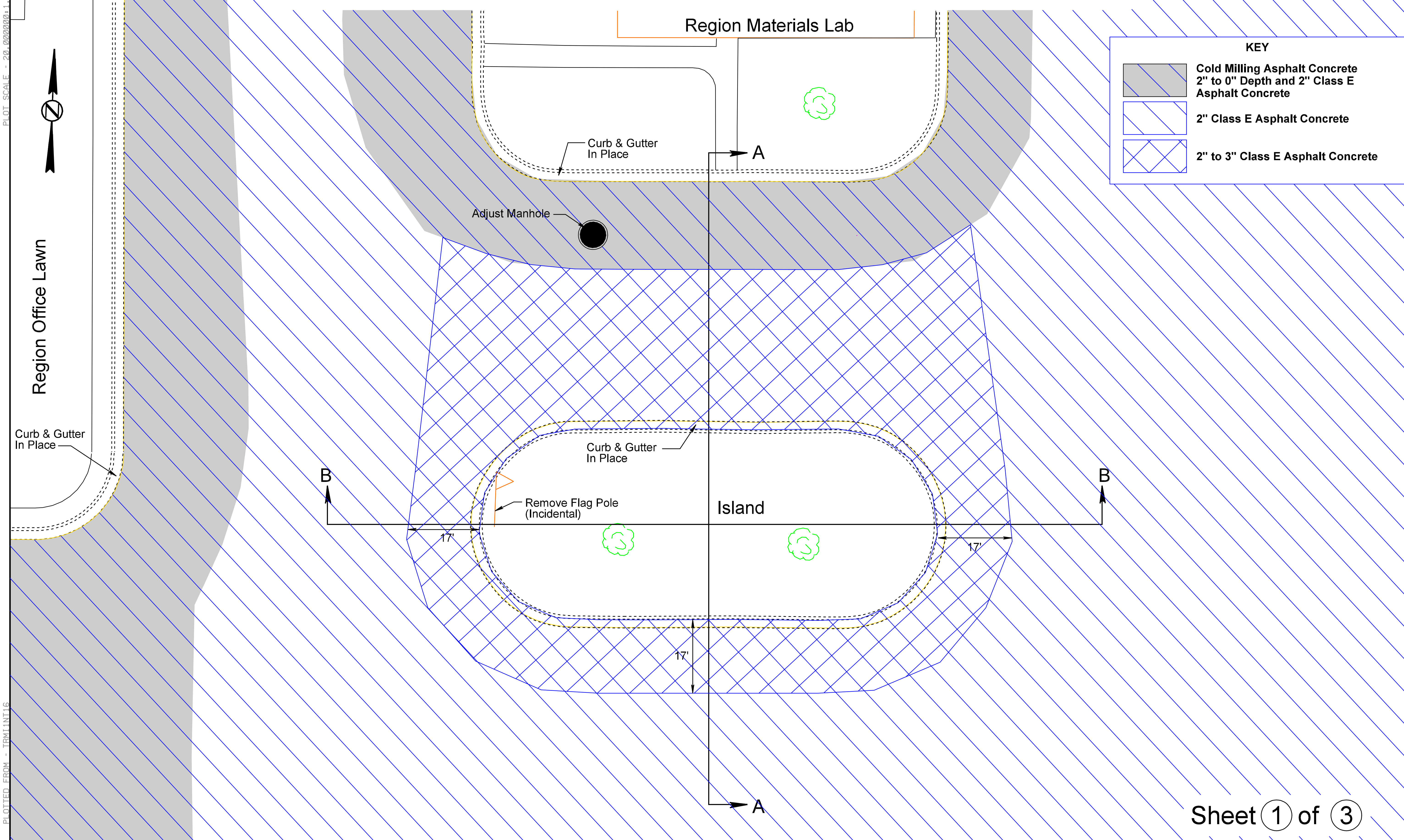
TYPICAL RESURFACING SECTION



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	23	40

Plotting Date: 29-JUN-2007

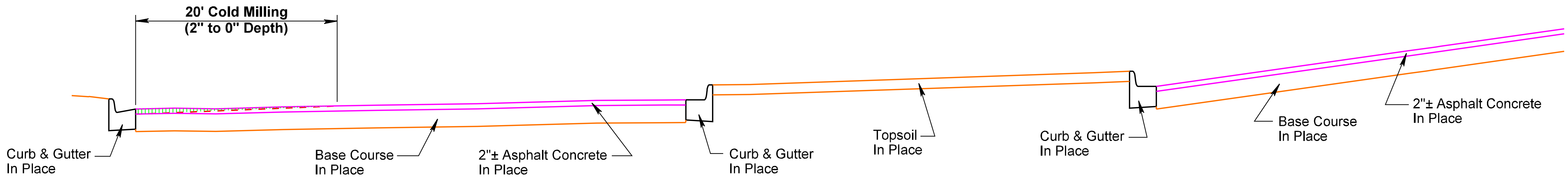
RESURFACING ADJACENT TO MITCHELL COMPLEX ISLAND



RESURFACING ADJACENT TO MITCHELL COMPLEX ISLAND

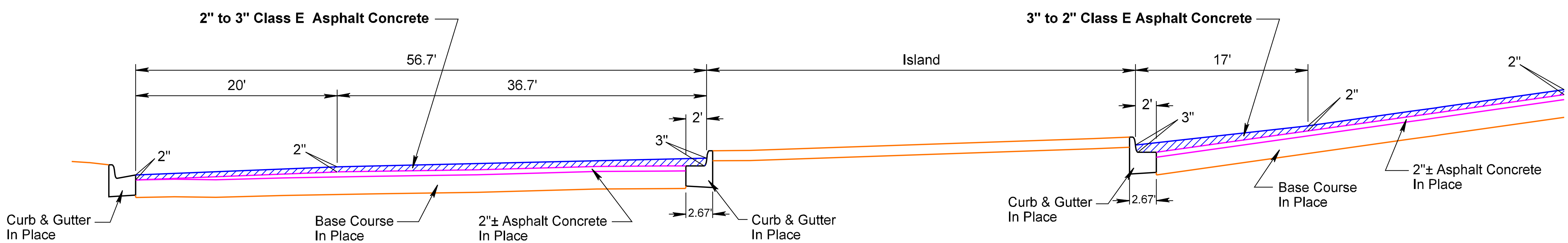
TYPICAL COLD MILLING SECTION

SECTION A-A



TYPICAL RESURFACING SECTION

SECTION A-A



Sheet 2 of 3

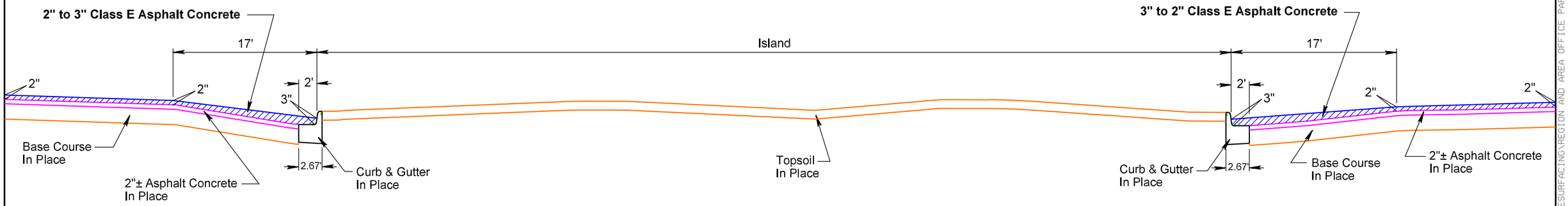
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	25	40

Plotting Date: 29-JUN-2007

RESURFACING ADJACENT TO MITCHELL COMPLEX ISLAND

TYPICAL RESURFACING SECTION

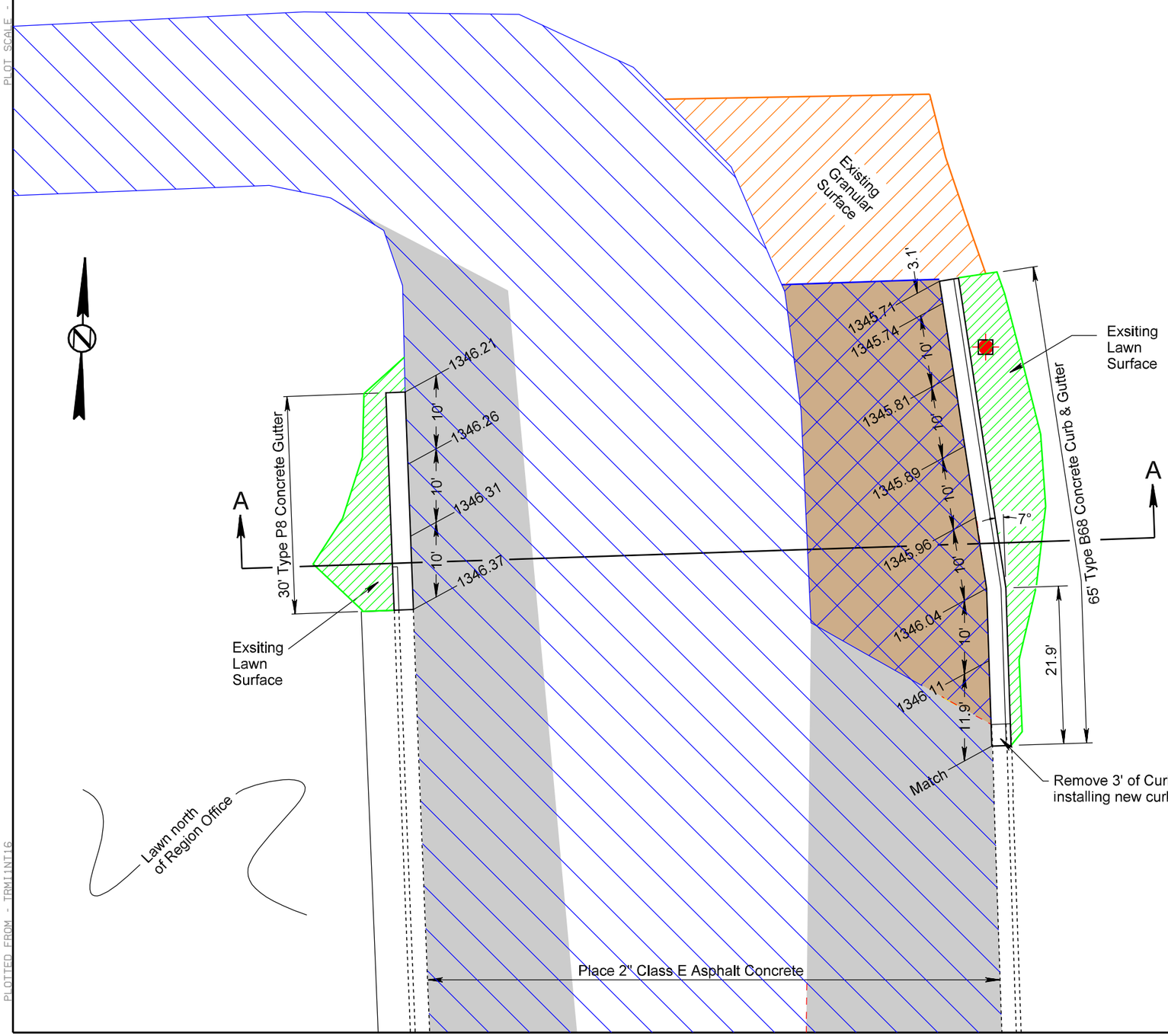
SECTION B-B



LAYOUT FOR CURB & GUTTER AND SURFACING OF PARKING LOT BETWEEN REGION OFFICE & MATERIALS LAB

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	26	40

Plotting Date: 29-JUN-2007



Unlcassifed Excavation - (Topsoil shall be salvaged and replaced. Salvaging topsoil shall be incidental to Unclassified Excavation.)

Unclassified Exacavation (shape to match new gutter and asphalt concrete surface)

Unclassified Excavation; Place 6" Base Course, 2 - 2" Class E Asphalt Concrete Lifts

Cold Milling Asphalt Concrete - 0" to 2" depth and 2" Class E Asphalt Concrete

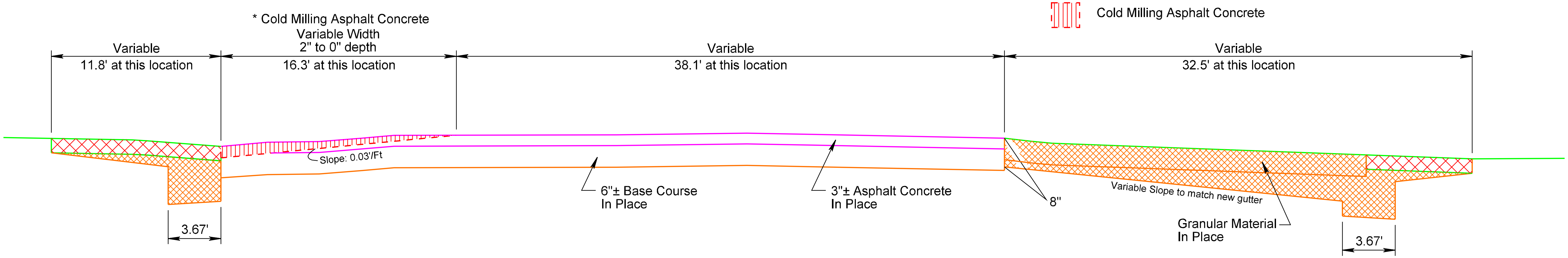
2" Class E Asphalt Concrete

LAYOUT FOR CURB & GUTTER AND SURFACING OF PARKING LOT BETWEEN REGION OFFICE & MATERIALS LAB

TYPICAL EXCAVATION SECTION

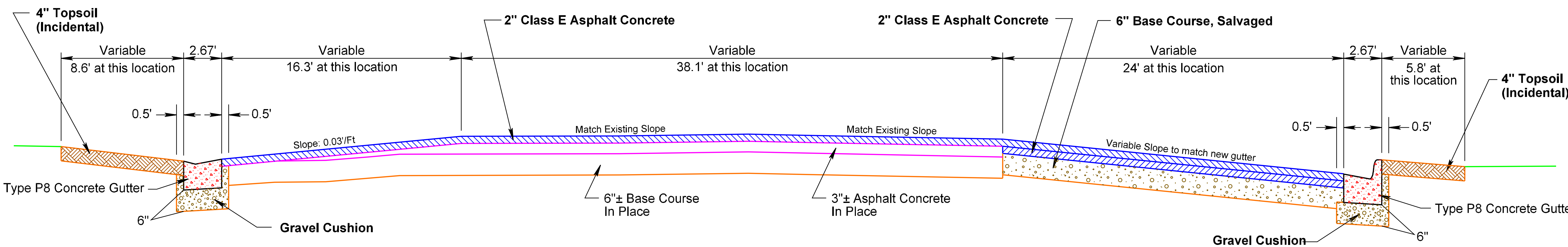
SECTION A-A
REGION OFFICE PARKING LOT

- Salvage 4" of Topsoil (Incidental to various items)
- Unclassified Excavation
- Cold Milling Asphalt Concrete



TYPICAL RESURFACING SECTION

SECTION A-A
REGION OFFICE PARKING LOT



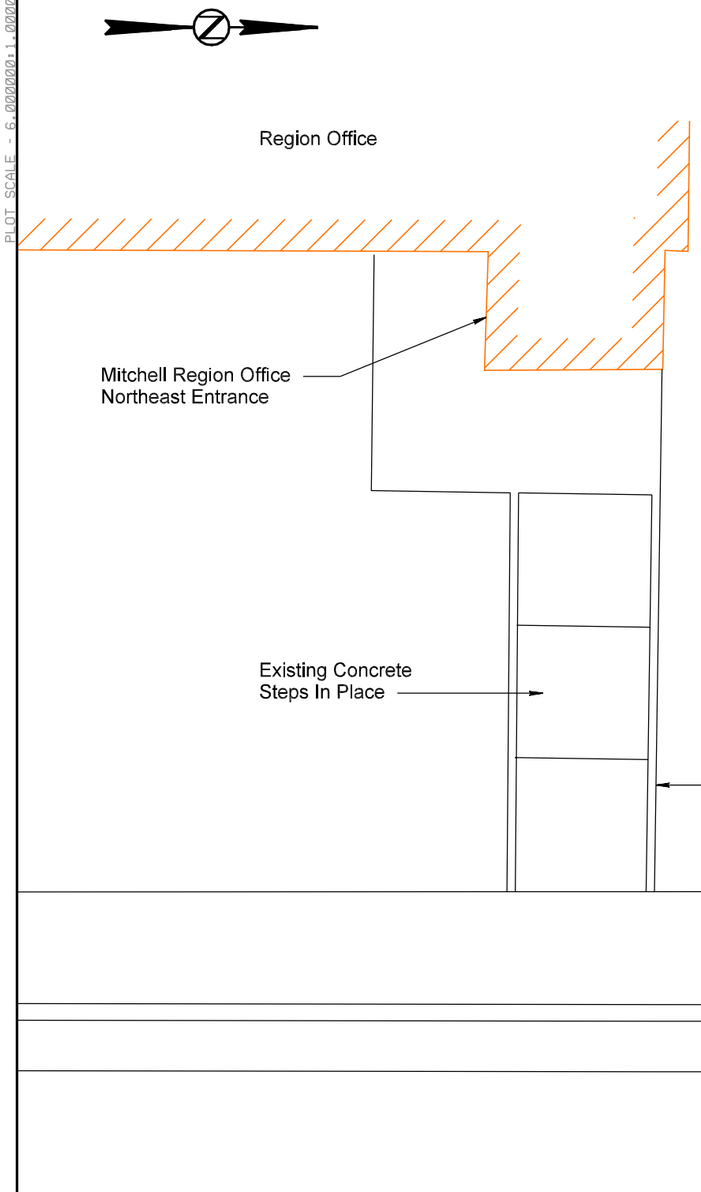
Sheet 2 of 2

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	28	40

Plotting Date: 29-JUN-2007

LAYOUT FOR NEW SIDEWALK RAMP

REMOVAL OF SIDEWALK AT REGION OFFICE



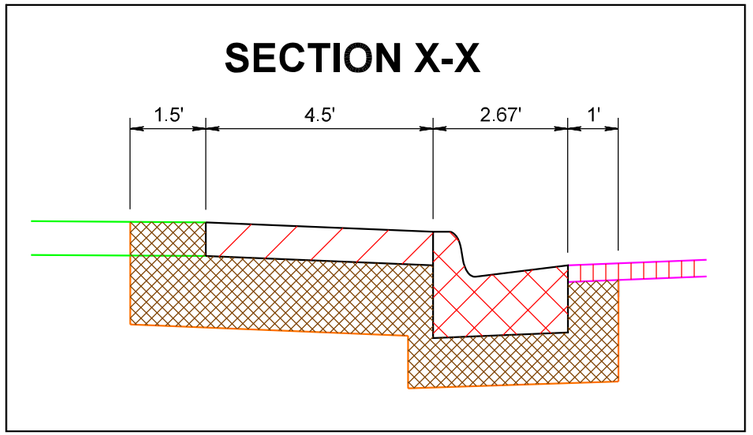
Remove Concrete Sidewalk

Remove Concrete Curb & Gutter

Cold Milling Asphalt Concrete

Unclassified Excavation

SECTION X-X



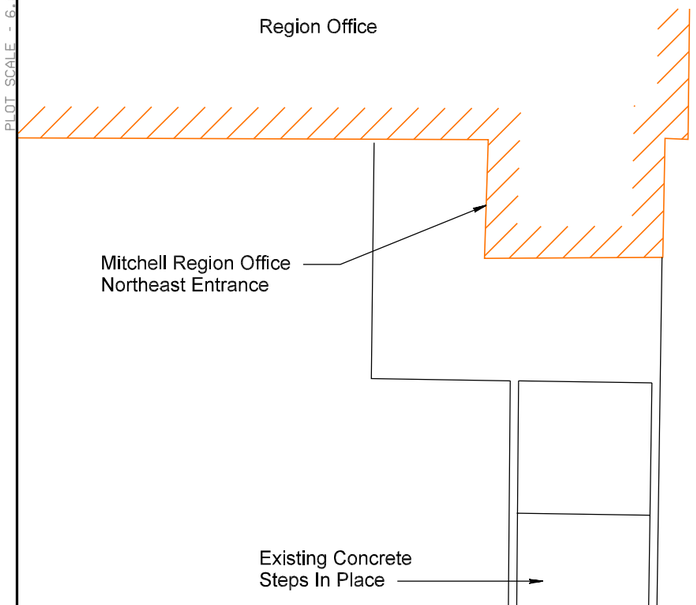
PLOT SCALE - 6.000000:1.000000
PLOTTED FROM - TRM1INT16

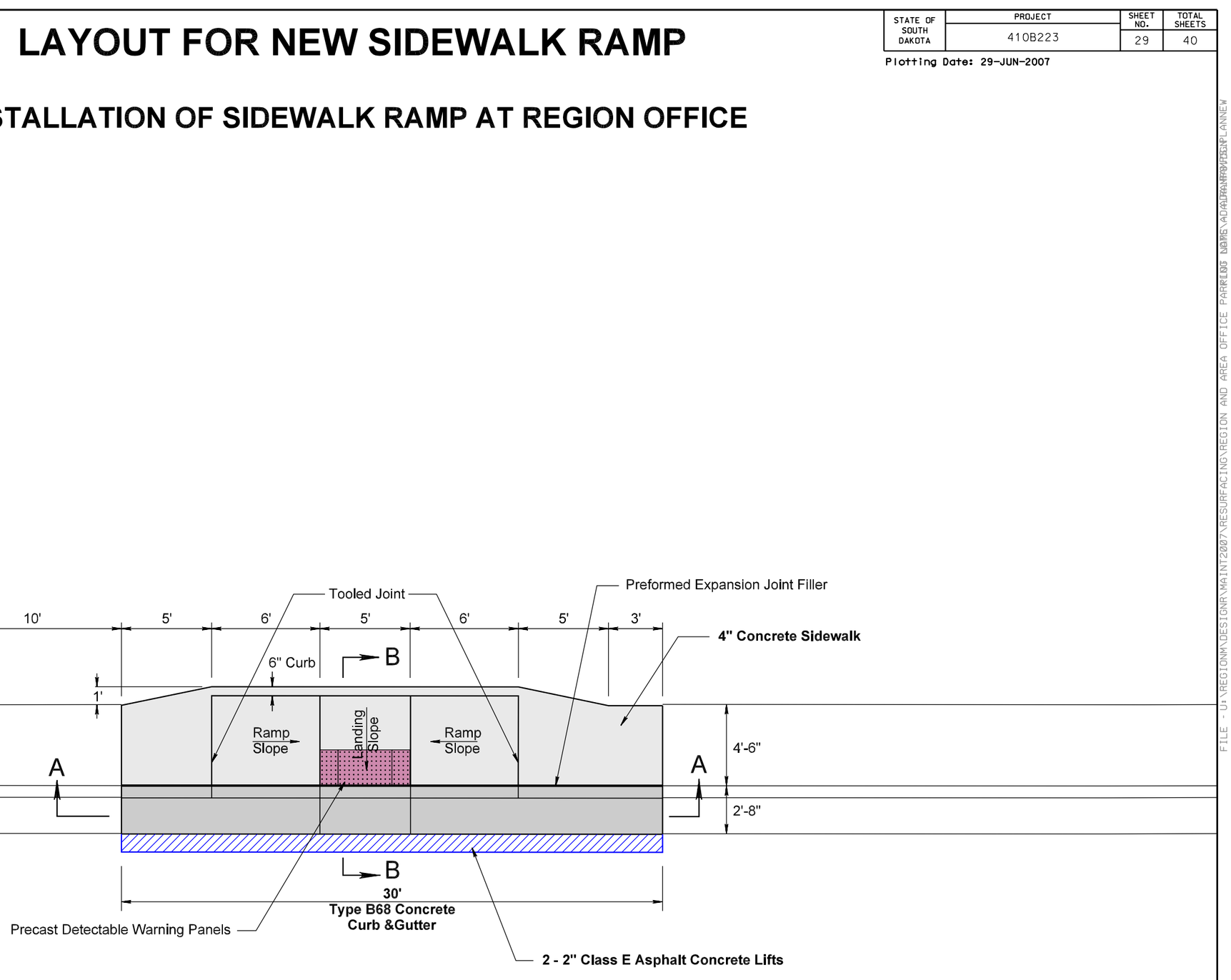
LAYOUT FOR NEW SIDEWALK RAMP

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	29	40

Plotting Date: 29-JUN-2007

INSTALLATION OF SIDEWALK RAMP AT REGION OFFICE





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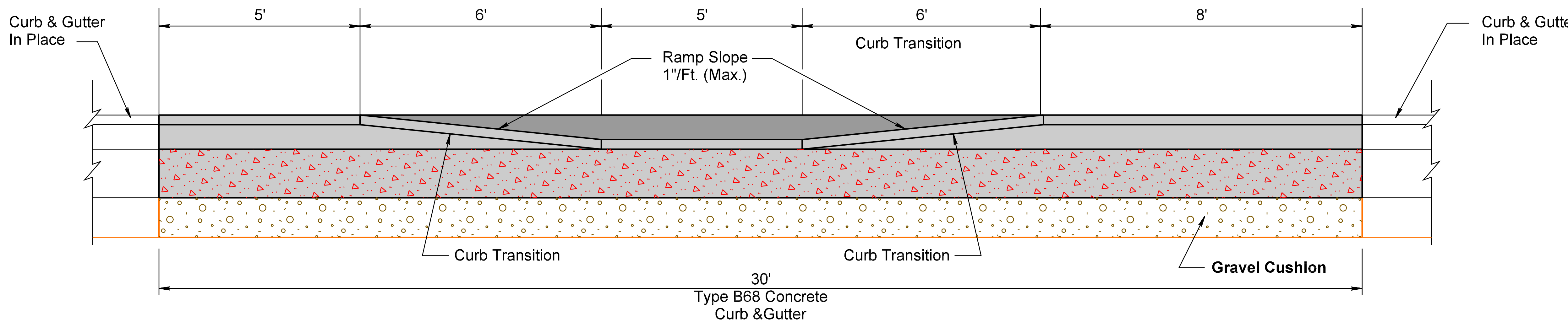
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	30	40

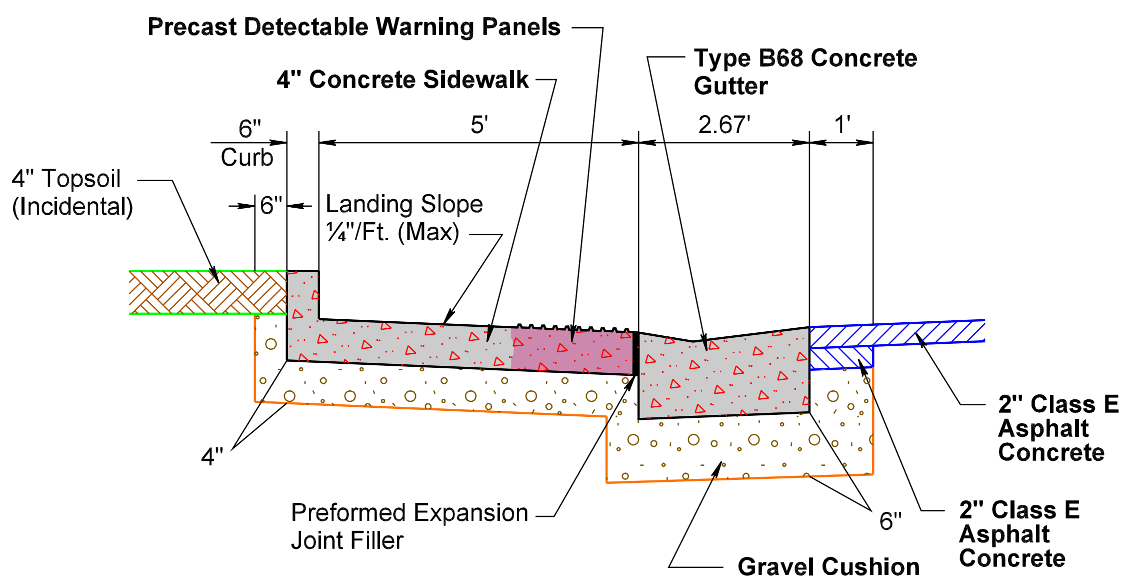
Plotting Date: 29-JUN-2007

LAYOUT FOR NEW SIDEWALK RAMP

SECTION A-A



SECTION B-B



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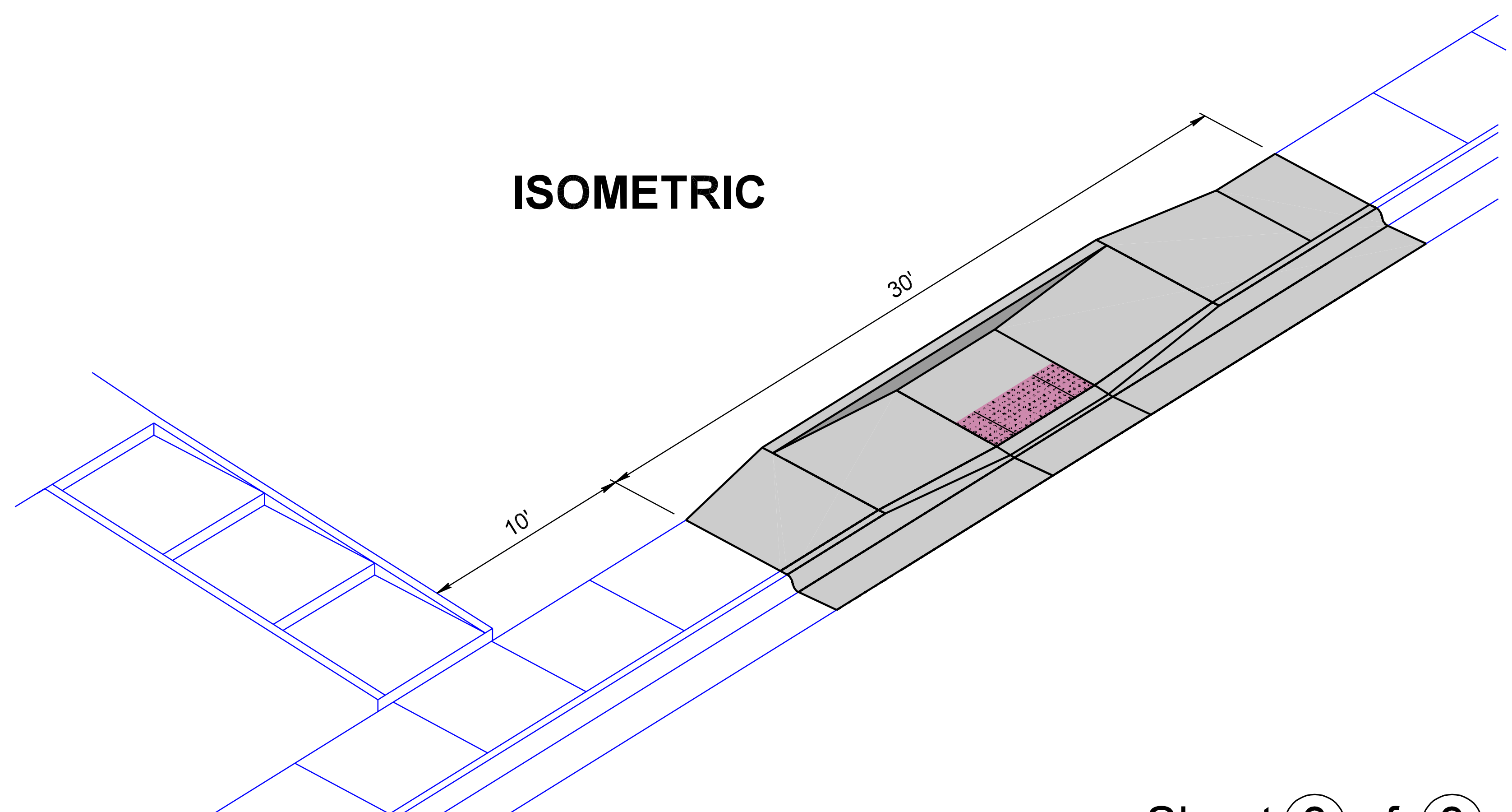


PLOT SCALE - 3.000000:1.000000

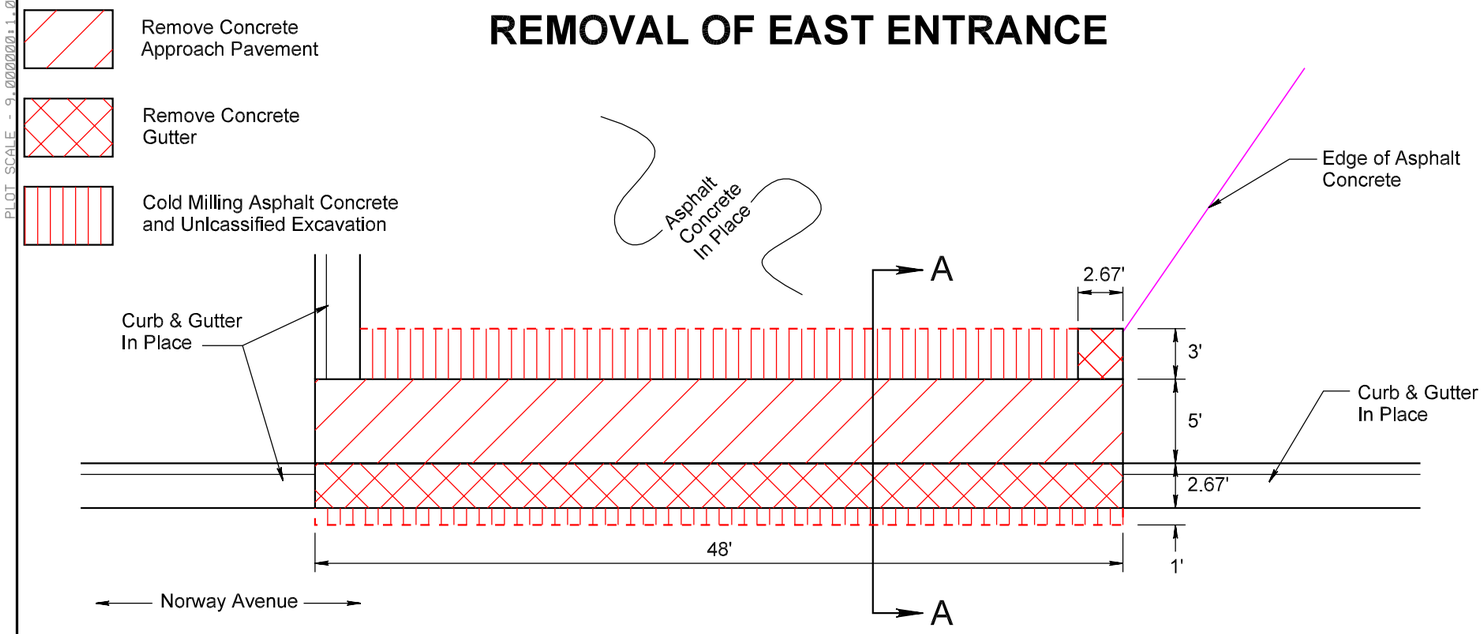
PLOTTED FROM - TRMIINT16

LAYOUT FOR REPLACING APPROACH PAVEMENT AT MITCHELL AREA

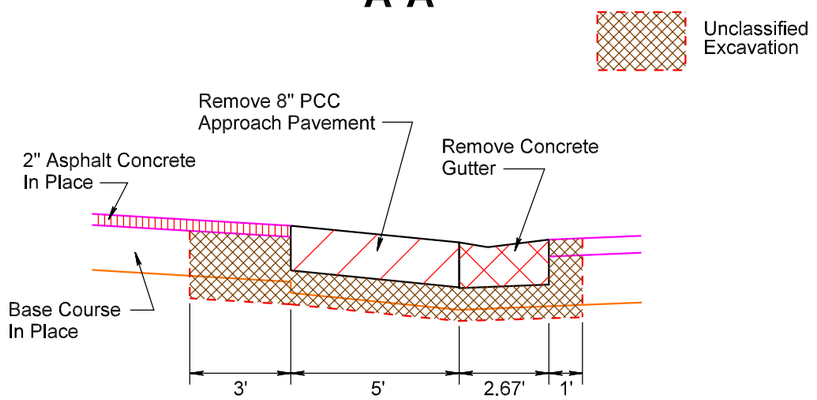
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	31	40

Plotting Date: 29-JUN-2007

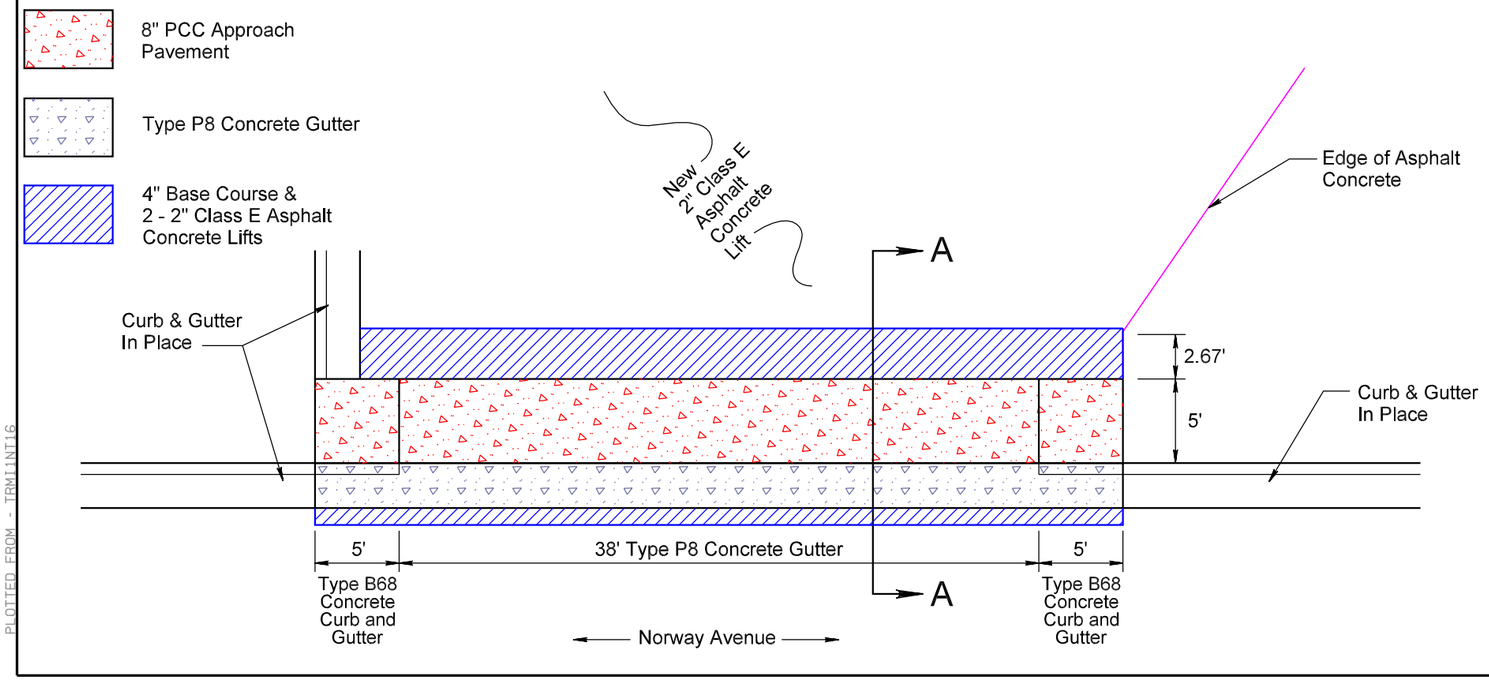
REMOVAL OF EAST ENTRANCE



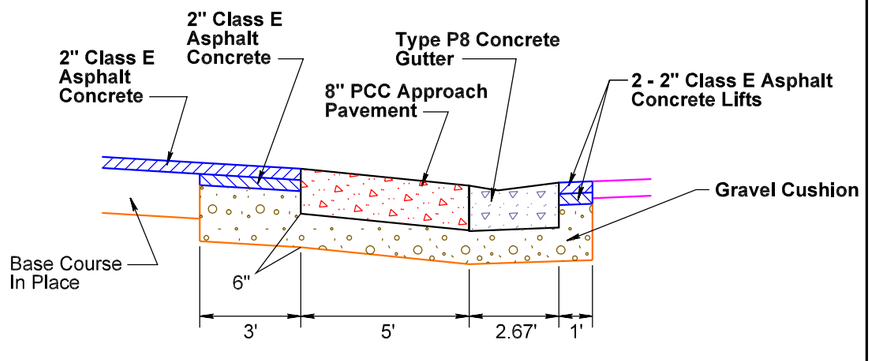
REMOVAL SECTION A-A



NEW APPROACH PAVEMENT AT EAST ENTRANCE



RESURFACING SECTION A-A

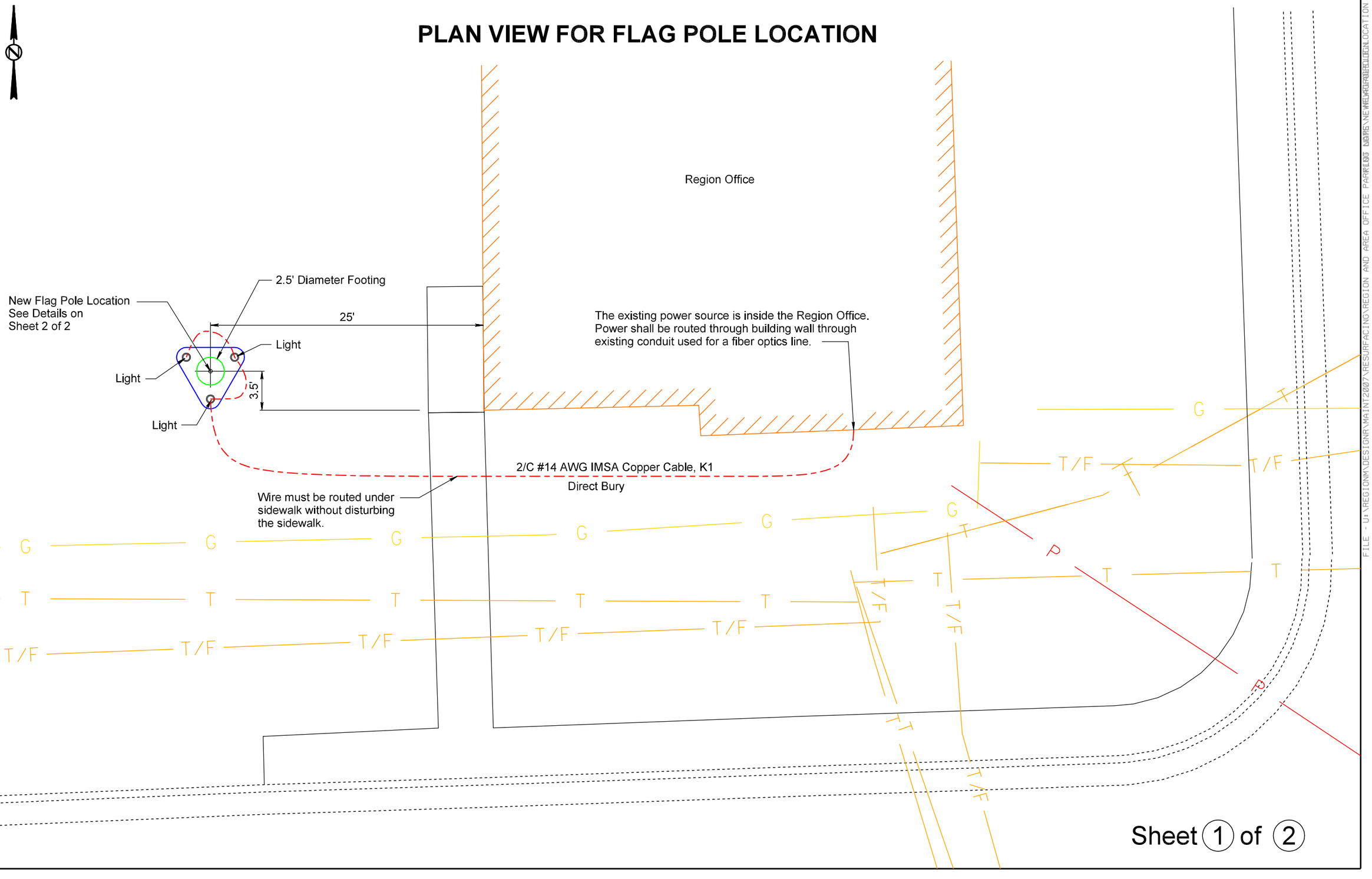


NEW FLAG POLE AND LIGHTING AT REGION OFFICE

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	32	40

Plotting Date: 29-JUN-2007

PLAN VIEW FOR FLAG POLE LOCATION

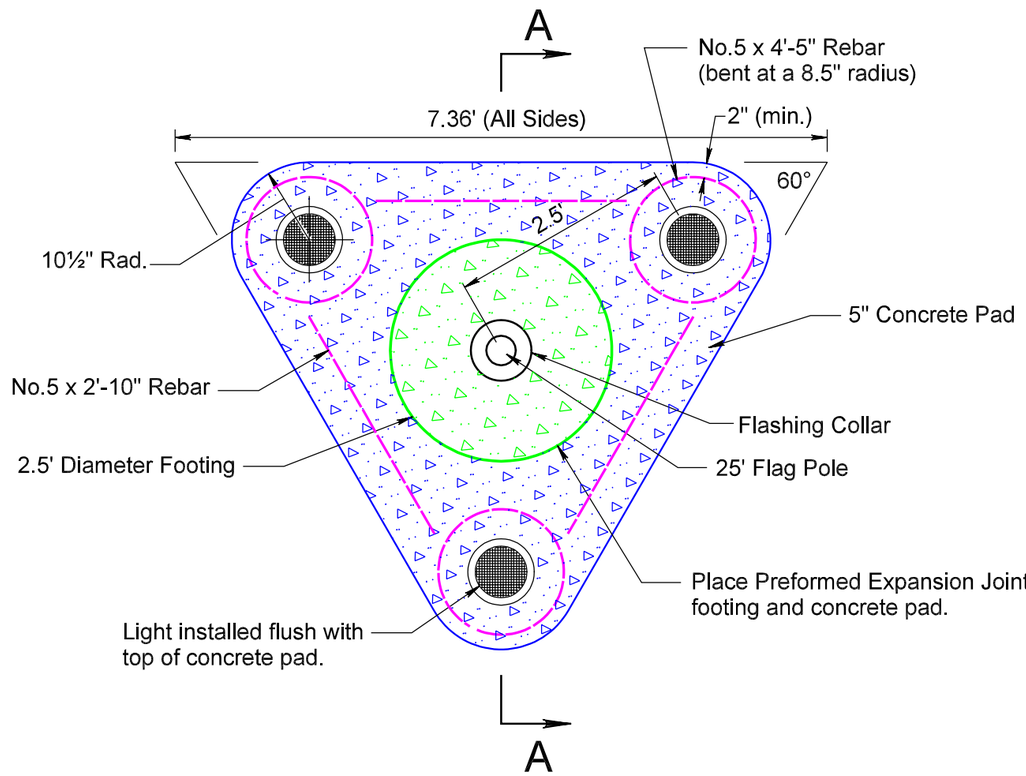


NEW FLAG POLE AND LIGHTING AT REGION OFFICE

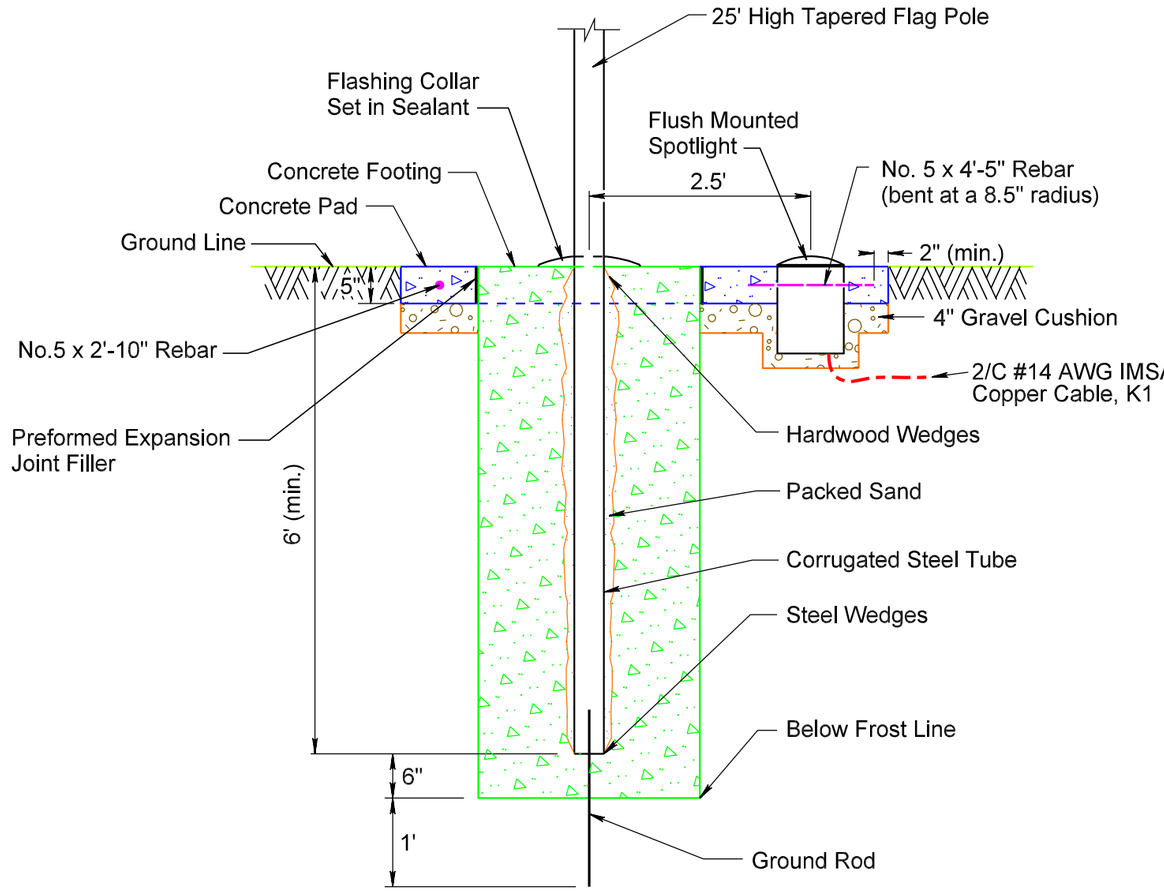
DETAILS FOR FLAG POLE FOOTING, PAD AND LIGHTING

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410B223	33	40

Plotting Date: 29-JUN-2007



TOP VIEW



SECTION A-A

NOTES:

Cost for the Concrete Pad is included in the contract unit price per cubic yard for Class M6 Concrete. Cost for rebar use in the concrete pad shall be incidentall to the contract unit price per cubic yard for Class M6 Concrete.

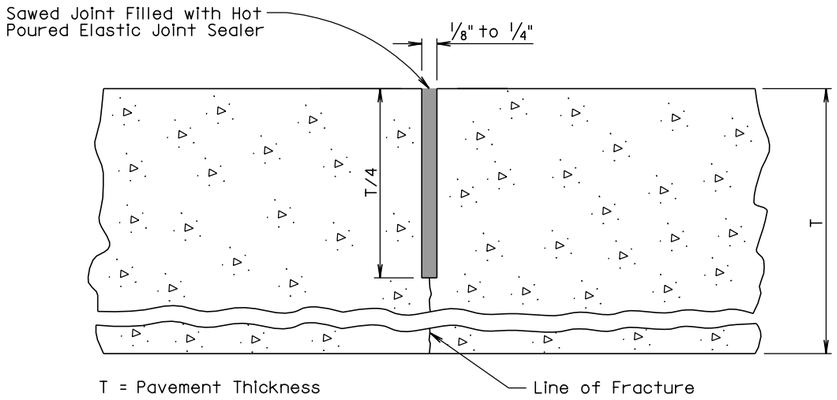
Cost for the Concrete Footing is included in the contract unit price per foot for 2.5' Diameter Footing.

Cost for furnishing and laying the #14 AWG Copper Cable is included in the contract unit price per foot for 2/C #14 AWG IMSA Copper Cable, K1.

Cost for furnishing and installing the 25' Flag Pole is included in the contract unit price per each for Flag Pole.

The Contractor shall furnish and install 3 spotlights in the concrete pad. The spotlights shall be commercial grade and suitable for lighting a flag at a height of 25 feet. The spotlights shall be approved by the Engineer before installation.

Cost for furnishing and installing 3 spotlights shall be incidental to the various items pertaining to the erection of the flag pole.



GENERAL NOTES:

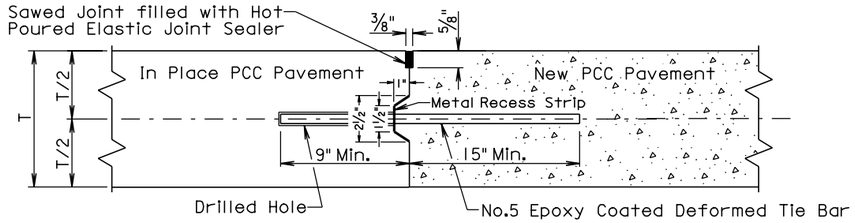
The saw cut to control cracking shall be a minimum of 1/4 the thickness of the pavement.

September 6, 2006

Published Date: 2nd Qtr. 2007	SDDOT	PCC PAVEMENT TRANSVERSE CONTRACTION JOINT WITH OR WITHOUT DOWEL BAR ASSEMBLY	PLATE NUMBER 380.03 Sheet 1 of 1

LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS

(DRILLED IN BARS)



T = Pavement Thickness

GENERAL NOTES:

The tie bars shall be embedded a minimum depth of 9 inches into the in place PCC pavement and anchored with an epoxy resin adhesive.

No.5 epoxy coated deformed tie bars shall be spaced 48" center to center for a female keyway or 30" center to center for a vertical face and male keyway. The keyway shown above is a female keyway.

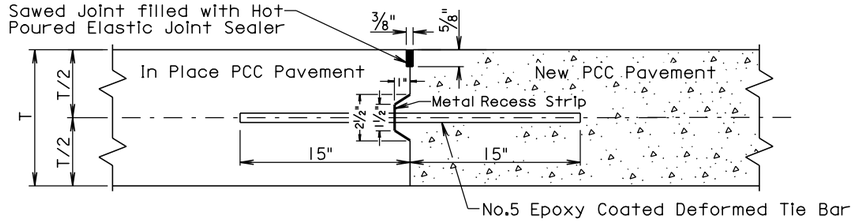
The tie bars shall be placed a minimum of 15 inches from existing transverse contraction joints.

The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip shall be used. When concrete pavement is slip formed, a metal recess strip is not required.

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project or current project.

LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS

(INSERTED OR FORMED IN BARS)



T = Pavement Thickness

GENERAL NOTES:

No.5 epoxy coated deformed tie bars shall be spaced 48" center to center for a female keyway or 30" center to center for a vertical face and male keyway. The keyway shown above is a female keyway.

The tie bars shall be placed a minimum of 15 inches from existing transverse contraction joints.

The keyway is optional and is not required. When concrete pavement is formed and a keyway is provided, a metal recess strip shall be used. When concrete pavement is slip formed, a metal recess strip is not required.

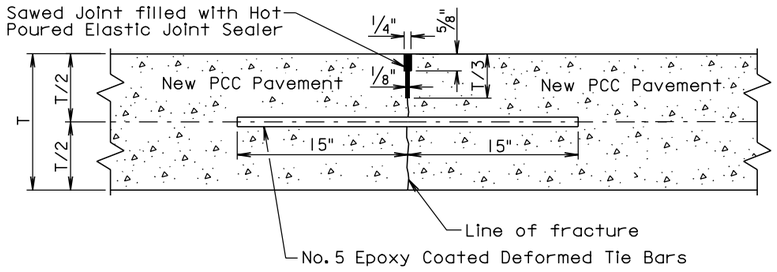
The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on the current project.

September 14, 2001

Published Date: 2nd Qtr. 2007	SDDOT	PCC PAVEMENT LONGITUDINAL JOINTS WITH TIE BARS	PLATE NUMBER 380.10 Sheet 1 of 2

SAWED LONGITUDINAL JOINT WITH TIE BARS

(POURED MONOLITHICALLY)



T = Pavement Thickness

GENERAL NOTES:

No. 5 epoxy coated deformed tie bars shall be spaced 48 inches center to center.

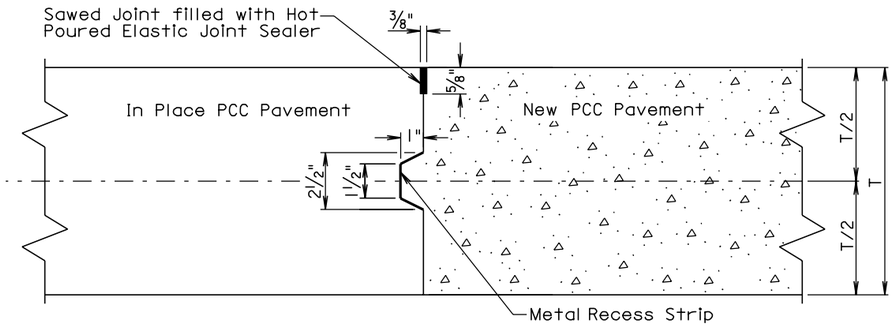
The tie bars shall be placed a minimum of 15 inches from the existing transverse contraction joints.

The first saw cut to control cracking shall be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer will be necessary.

September 14, 2001

Published Date: 2nd Qtr. 2007	SDDOT	PCC PAVEMENT LONGITUDINAL JOINTS WITH TIE BARS	PLATE NUMBER 380.10 Sheet 2 of 2

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS



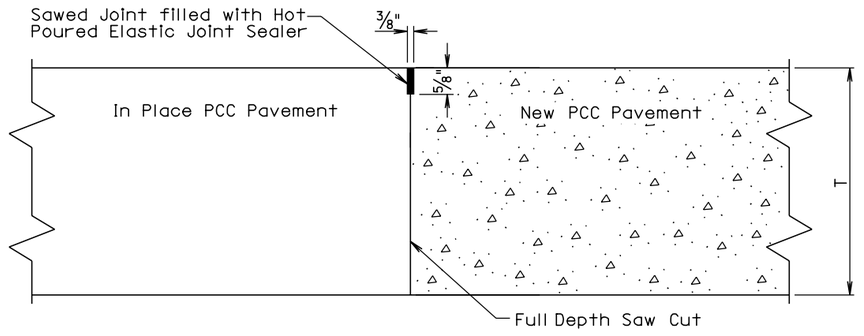
T = Pavement Thickness

GENERAL NOTES:

When concrete pavement is formed and a keyway is provided, a metal recess strip shall be used. When concrete pavement is slip formed, a metal recess strip is not required.

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on the current project.

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS



T = Pavement Thickness

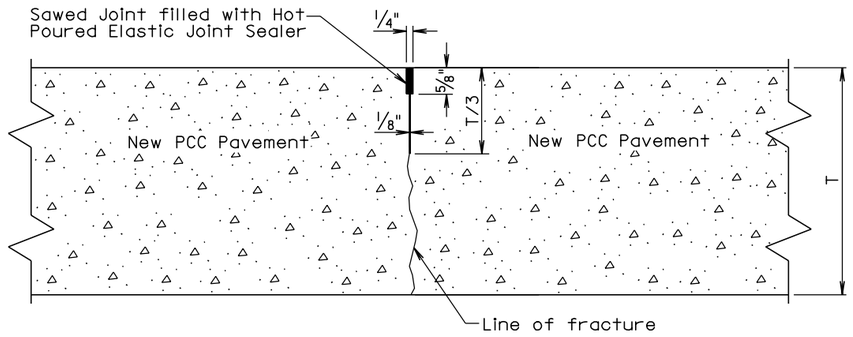
GENERAL NOTE:

The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

September 14, 2001

Published Date: 2nd Qtr. 2007	SDDOT	PCC PAVEMENT LONGITUDINAL JOINTS WITHOUT TIE BARS	PLATE NUMBER 380.12 Sheet 1 of 2

SAWED LONGITUDINAL JOINT WITHOUT TIE BARS



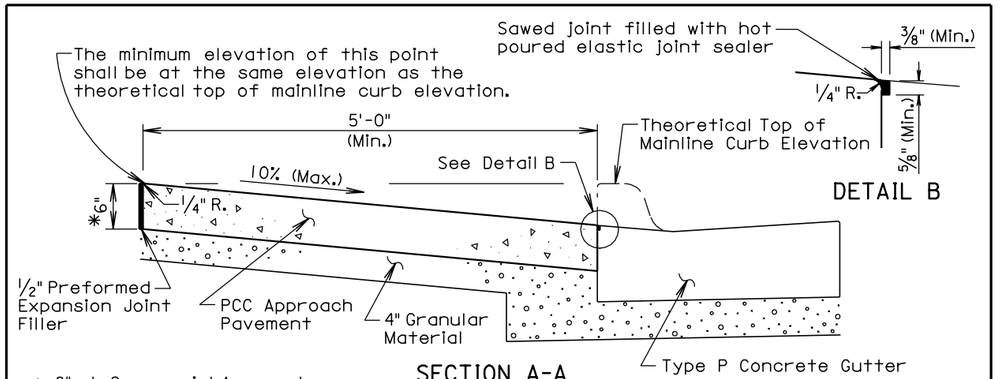
T = Pavement Thickness

GENERAL NOTE:

The first saw cut to control cracking shall be a minimum of 1/3 the thickness of the pavement. Additional sawing for widening the saw cut to provide the width for the installation of the hot poured elastic joint sealer will be necessary.

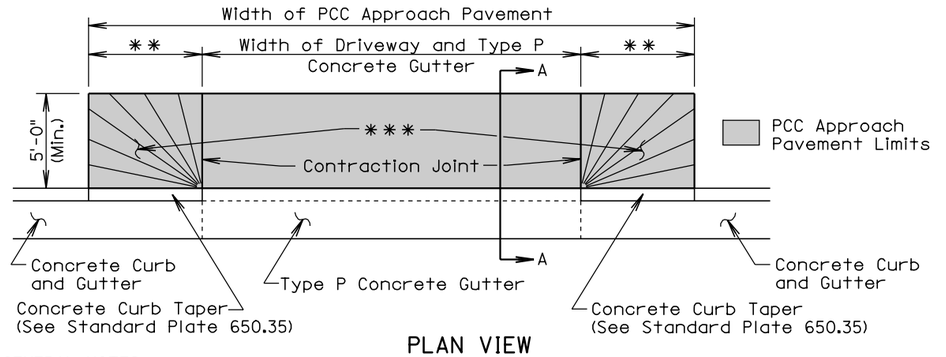
September 14, 2001

Published Date: 2nd Qtr. 2007	SDDOT	PCC PAVEMENT LONGITUDINAL JOINTS WITHOUT TIE BARS	PLATE NUMBER 380.12 Sheet 2 of 2



SECTION A-A

* 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 shall be sloped transitionally as approved by the Engineer.



PLAN VIEW

GENERAL NOTES:

The concrete for the type A PCC approach pavement and adjacent driveway shall comply with the requirements of the Standard Specifications for class M6 concrete unless otherwise stated in the plans.

Contraction joints in the type A PCC approach pavement shall 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 shall be at least ¼ the thickness of the approach pavement. Additional contraction joints not shown in the Plan View shall be spaced as follows:

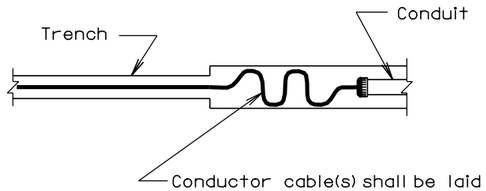
One joint at the center of the approach for driveways 16' to 24' wide.
Two joints spaced at equal intervals for driveways greater than 24' to 40' wide.

All costs for furnishing and placing the type A PCC approach pavement and constructing the expansion and contraction joints including labor, equipment, and materials including the earthen backfill shall be incidental to the contract unit price per square yard for the corresponding PCC Approach Pavement bid item.

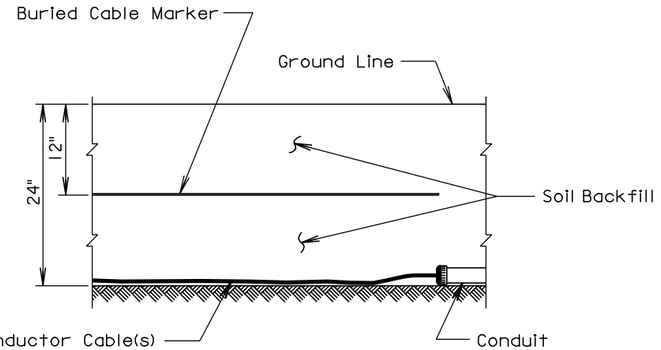
All costs for excavation required for placing the type A PCC approach pavement and granular material shall be incidental to the contract unit price per cubic yard for "Unclassified Excavation". All costs for furnishing and placing the granular material shall be incidental to the contract unit price per ton for the corresponding granular material bid item.

September 14, 2005

Published Date: 2nd Qtr. 2007	SDDOT	TYPE A PCC APPROACH PAVEMENT	PLATE NUMBER 380.40 Sheet 1 of 1



PLAN VIEW



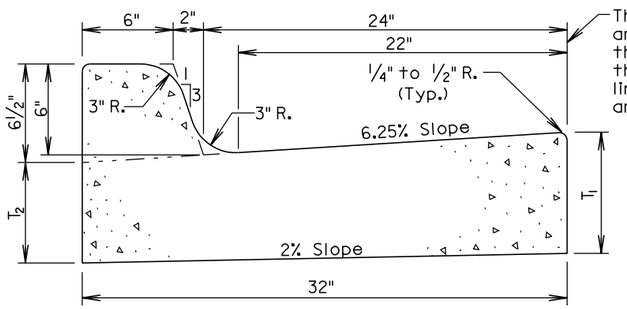
SECTION VIEW

GENERAL NOTE:

The Buried Cable Marker shall be plastic, approximately 6" wide, and shall be capable of sustaining a minimum of a 350% tolerance of elongation without tearing. The Buried Cable Marker shall have a life expectancy approximately equal to that of the conductor(s) beneath it. A phrase indicating the presence of a buried electric circuit below shall be printed in a contrasting color on the cable marker. The Buried Cable Marker shall be subject to approval by the Engineer. All costs associated with furnishing and installing the Buried Cable Marker shall be incidental to the contract unit price per Foot for the bid item used for the electrical conductor.

March 31, 2000

Published Date: 2nd Qtr. 2007	SDDOT	DIRECT BURIAL INSTALLATION OF CONDUCTOR CABLE(S)	PLATE NUMBER 635.75
			Sheet 1 of 1



The stated radii on the plans and cross sections refer to this line and it shall also be the basis for horizontal linear foot measurement and payment.

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	4 5/8	0.055	18.2
B67	7	5 5/8	0.063	15.9
B68	8	6 5/8	0.071	14.1
B68.5	8.5	7 1/8	0.075	13.3
B69	9	7 5/8	0.079	12.7
B69.5	9.5	8 1/8	0.084	11.9
B610	10	8 5/8	0.088	11.4
B610.5	10.5	9 1/8	0.092	10.9
B611	11	9 5/8	0.096	10.4
B611.5	11.5	10 1/8	0.100	10.0
B612	12	10 5/8	0.104	9.6

GENERAL NOTES:

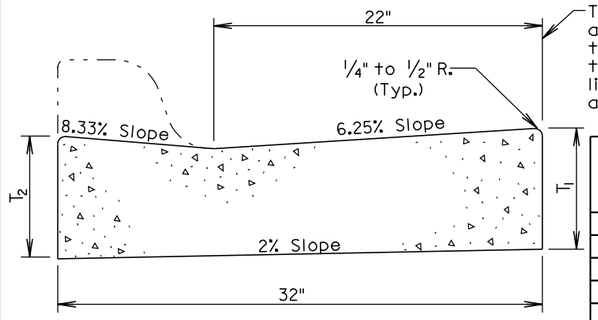
When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

See Standard Plate 650.90 for expansion and contraction joints in the curb and gutter.

September 6, 2006

Published Date: 2nd Qtr. 2007	SDDOT	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1

Username - TRMINT16

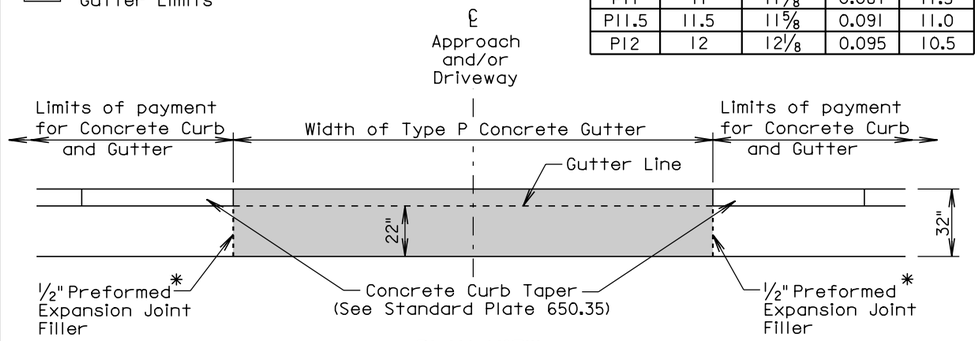


TRANSVERSE SECTION

The stated radii on the plans and cross sections refer to this line and it shall also be the basis for horizontal linear foot measurement and payment.

Type	T_1 (Inches)	T_2 (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
P6	6	6 1/8	0.046	21.7
P7	7	7 1/8	0.055	18.2
P8	8	8 1/8	0.063	15.9
P8.5	8.5	8 5/8	0.067	14.9
P9	9	9 1/8	0.071	14.1
P9.5	9.5	9 5/8	0.075	13.3
P10	10	10 1/8	0.079	12.7
P10.5	10.5	10 5/8	0.083	12.0
P11	11	11 1/8	0.087	11.5
P11.5	11.5	11 5/8	0.091	11.0
P12	12	12 1/8	0.095	10.5

Type P Concrete Gutter Limits



PLAN VIEW

* Joint will not be needed if concrete curb & gutter and type P concrete gutter is placed at the same time.

GENERAL NOTES:

The concrete for the Type P Concrete Gutter shall comply with the requirements of the Standard Specifications for Class M6 Concrete.

When concrete gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

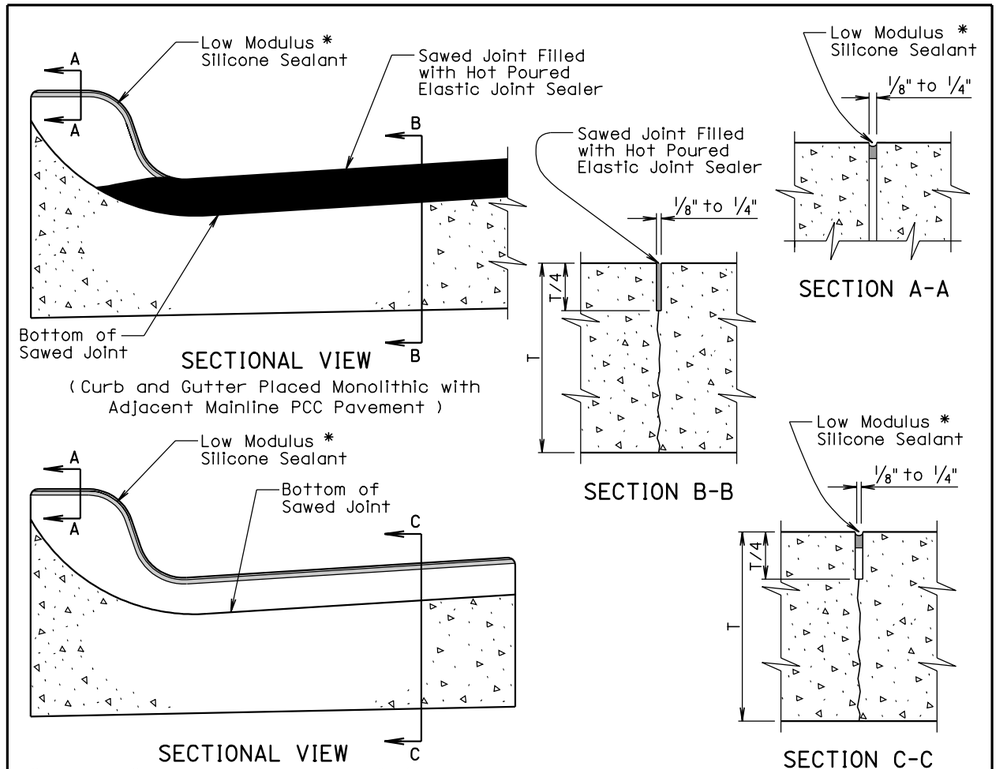
Transverse contraction joints shall be constructed at 10' intervals in the concrete gutter except when concrete gutter is constructed adjacent to mainline PCC pavement. When concrete gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint shall be constructed in the concrete 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 shall 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 shall be 1 1/2 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 shall be at least 1/4 the thickness of the concrete.

September 14, 2005

Published Date: 2nd Qtr. 2007	SDDOT	TYPE P CONCRETE GUTTER	PLATE NUMBER 650.30
			Sheet 1 of 1



* The silicone sealant shall 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 1/2" preformed expansion joint filler shall be placed transversely in the curb and gutter at the following locations:

1. At each junction between the radius return of curb and gutter and curb and gutter which is parallel to the project centerline.
2. At each junction between new curb and gutter and existing curb and gutter.

Transverse contraction joints shall be constructed at 10' 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 shall be constructed in the concrete curb and gutter at each mainline PCC pavement transverse contraction joint location.

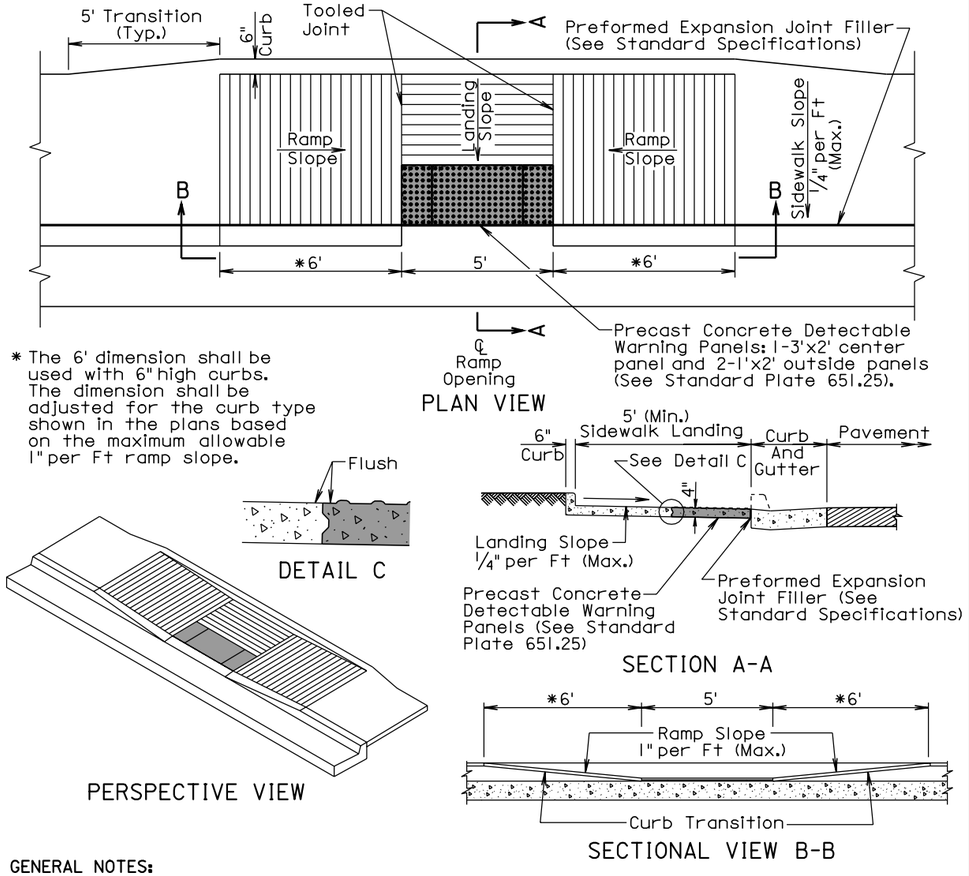
When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter shall be 1 1/2 inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be at least 1/4 the thickness of the concrete and the joint shall be sealed in accordance with the details shown above.

September 6, 2006

Published Date: 2nd Qtr. 2007	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 1

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	410B223	39	40

Plotting Date: 29-JUN-2007



* The 6' dimension shall be used with 6" high curbs. The dimension shall be adjusted for the curb type shown in the plans based on the maximum allowable 1" per Ft ramp slope.

DETAIL C

PERSPECTIVE VIEW

SECTION A-A

SECTIONAL VIEW B-B

GENERAL NOTES:

Sidewalk shall not be placed adjacent to the backside of the 6" wide curb. The sidewalk adjacent to the curb ramp shall be as shown in the plans.

Care shall be taken to ensure a uniform grade on the ramp, free of sags and short grade changes.

The normal gutter line profile shall be maintained through the area of the ramp.

Care shall be taken to ensure that the surface of the precast concrete panel is clean and maintains a uniform brick red color after placement of the ramp concrete.

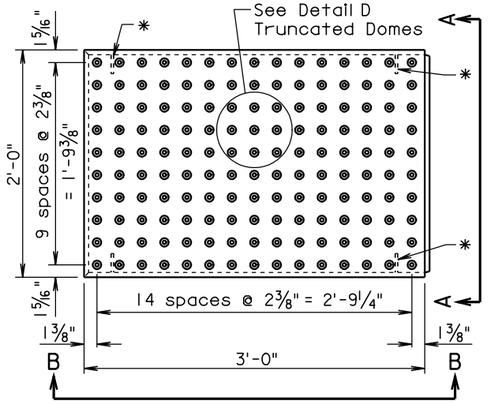
Surface texture of the ramp shall be obtained by coarse brooming transverse to the slope of the ramp.

Joints shall be tooled into the concrete adjacent to the precast detectable warning panels to alleviate possible corner cracking (see plan view for tooled joint location).

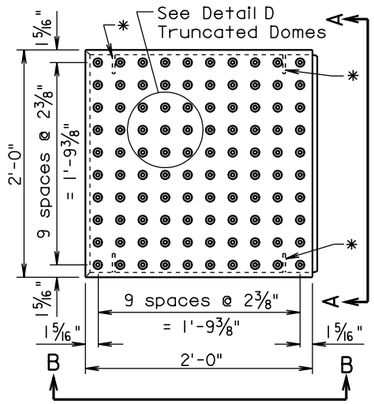
There will be no separate payment for curb ramps. The curb ramp shall be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk bid item. The curb transitions and ramp opening shall be measured and paid for at the contract unit price per foot for the corresponding curb and gutter bid item.

May 14, 2003

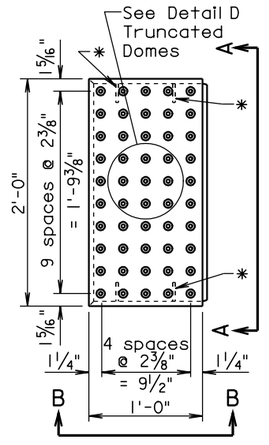
Published Date: 2nd Qtr. 2007	SDDOT	TYPE 4 CURB RAMP	PLATE NUMBER 651.04
			Sheet 1 of 1



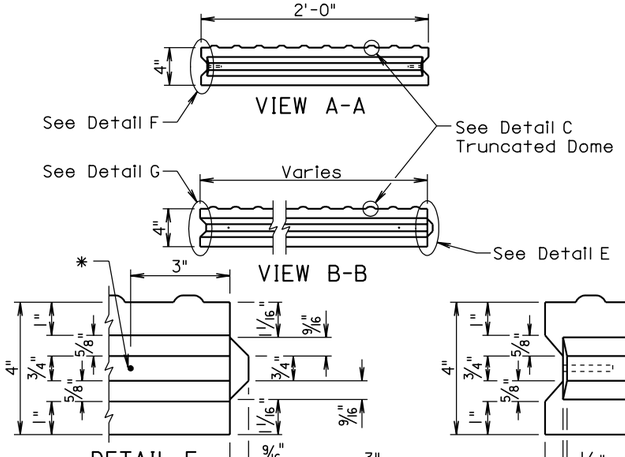
PLAN VIEW DETECTABLE WARNING PANEL 3' x 2'

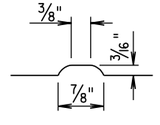


PLAN VIEW DETECTABLE WARNING PANEL 2' x 2'

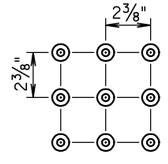


PLAN VIEW DETECTABLE WARNING PANEL 1' x 2'

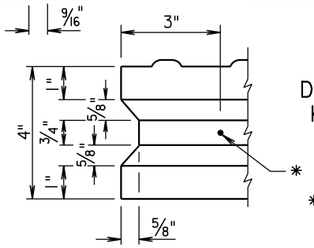




DETAIL C TRUNCATED DOME



DETAIL D TRUNCATED DOMES



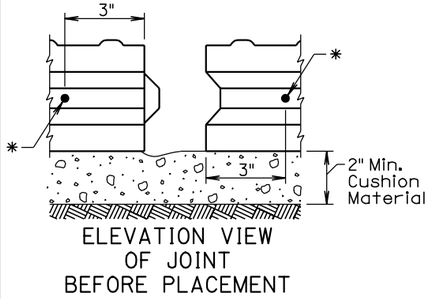
DETAIL G KEYWAY

* Drilled-In or Cast-In-Place 1/4" Galvanized Anchor

May 14, 2003

Published Date: 2nd Qtr. 2007	SDDOT	PRECAST CONCRETE DETECTABLE WARNING PANELS	PLATE NUMBER 651.25
			Sheet 1 of 2

Username - TRMINT16

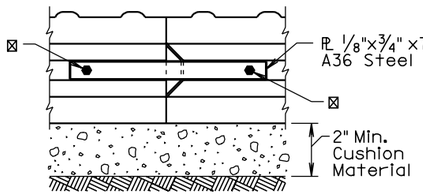


ELEVATION VIEW
OF JOINT
BEFORE PLACEMENT

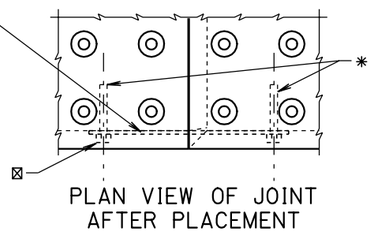
APPLICATIONS OF DETECTABLE WARNING PANELS

Sidewalk or Ramp Width	Detectable Warning Panel 1' x 2'		Detectable Warning Panel 2' x 2'		Detectable Warning Panel 3' x 2'	
	No.	Location(s)	No.	Location(s)	No.	Location(s)
3'	—	—	—	—	1	C
4'	—	—	2	L and R	—	—
5'	2	L and R	—	—	1	C
6'	—	—	3	L,C, and R	—	—
7'	—	—	2	L and R	1	C
8'	—	—	4	L and R	—	—
9'	—	—	—	—	3	L,C, and R
10'	—	—	5	L,C, and R	—	—

The locations stated in the table refer to L = Left, R = Right, and C = Center of the sidewalk or ramp.



ELEVATION VIEW
OF JOINT
AFTER PLACEMENT



PLAN VIEW OF JOINT
AFTER PLACEMENT

* Drilled-In or Cast-In-Place 1/4" Galvanized Anchor

⊠ Bolt or Nut with Washer

GENERAL NOTES:

The concrete shall be Class M6 in conformance with Section 462 of the Standard Specifications. The concrete shall consist of a "brick red" color. The coloring compound shall be mixed into the concrete mix according to the manufacturer's recommendations. A color placed only on the surface of the concrete is not allowed, the color has to be throughout the concrete mix. Curing compounds that would discolor the precast panel shall not be used; however, other approved viable methods of curing shall be used.

The precast concrete detectable warning panels shall not have any cracks, chips, or color deformations. The truncated domes shall be the same size, shape, and placed at the same pattern as specified on sheet 1 of this standard plate.

The precast concrete detectable warning panels shall be placed prior to adjacent sidewalk or ramp PCC pavement.

Care shall be taken when sliding adjoining panels together so that the cushion material is not slid or pinched into the joint. The joint shall be free from cushion material. Placement of solid nonbiodegradeable material to slide panels on or digging very small trough at the joint will be acceptable for placement of the panels.

There will be no separate payment for precast concrete detectable warning panels. All costs for materials, labor, and equipment necessary for constructing, hauling, and placing the detectable warning panels shall be incidental to the contract unit price per square foot for the corresponding sidewalk bid item.

May 14, 2003

Published Date: 2nd Qtr. 2007	SDDOT	**PRECAST CONCRETE DETECTABLE WARNING PANELS**	PLATE NUMBER 651.25
			Sheet 2 of 2