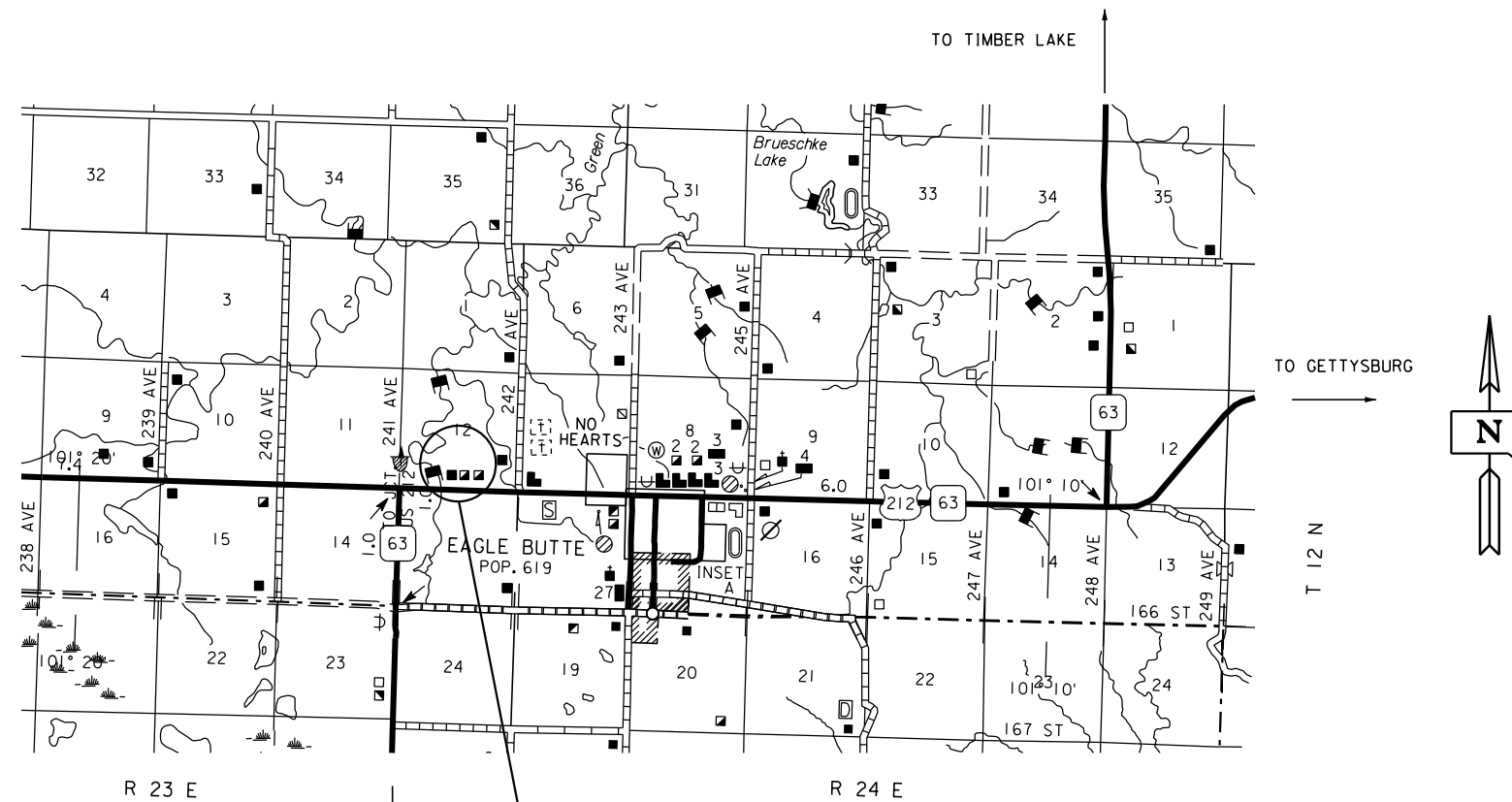
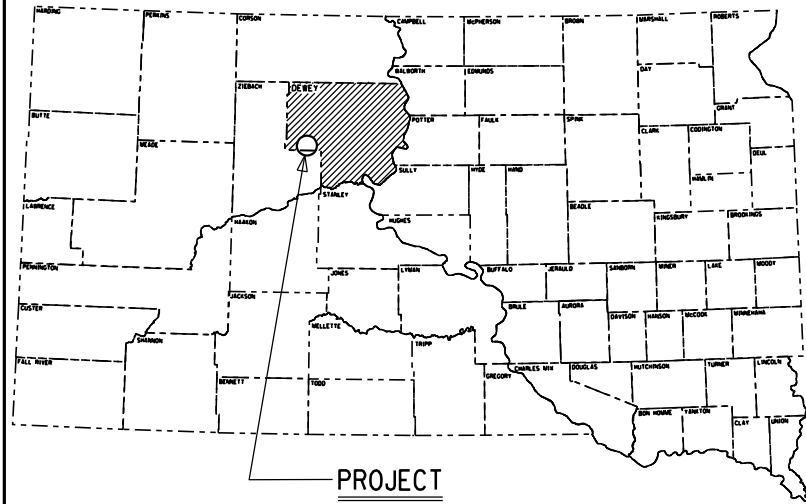


STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
s.d.	410C269	1	9

STATE OF SOUTH DAKOTA  
 DEPARTMENT OF TRANSPORTATION  
 PLANS FOR PROPOSED

**PROJECT 410C269**  
**PCN I33Q**  
**EAGLE BUTTE MAINTENANCE SHOP #3209**  
**DEWEY COUNTY**  
**RESURFACE YARD**



**PROJECT SITE**  
 Eagle Butte Shop Site  
 Site 3209  
 SW 1/4 SE 1/4 SEC 12 T12N R23E

**INDEX OF SHEETS**

Sheet No. 1	Title Sheet
Sheet No. 2	Notes
Sheet No. 3	Notes
Sheet No. 4	Pavement Removal Layout
Sheet No. 5	Asphalt Concrete Composite Layout
Sheet No. 6	Approach Slab Details and Joint Layout
Sheet No. 7	Details Joint Details
Sheet No. 8	Details Concrete Typical
Sheet No. 9	Details Cold Milling along Buildings and Slabs

**LEGEND**

STATE AND NATIONAL LINE	— — — — —
COUNTY LINE	— — — — —
SECTION LINE	— — — — —
QUARTER LINE	— — — — —
SIXTEENTH LINE	— — — — —
PROPERTY LINE	— — — — —
CONSTRUCTION LINE	— — — — —
R. O. W. LINE	— — — — —
WORK LIMITS	- - - - -

DRAWN BY: \_\_\_\_\_ CHECKED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**PROJECT # 410C269 PCN I33Q**

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
110E1010	Remove Asphalt Concrete Pavement	338.0	SqYd
120E0010	Unclassified Excavation	111	CuYd
120E0100	Unclassified Excavation, Digouts	50	CuYd
320E1200	Asphalt Concrete Composite	1,370.0	Ton
332E0010	Cold Milling Asphalt Concrete	600	SqYd
380E1030	8" Miscellaneous PCC Pavement	338.0	SqYd
380E6110	Insert Steel Bar in PCC Pavement	40	Each

**SPECIFICATIONS**

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

**SCOPE OF WORK**

Work on this project in the Eagle Butte Maintenance Yard located west of Eagle Butte includes but is not limited to:

- 1) Removal of asphalt surfacing for new PCC approach pavement
- 2) Cold milling along building and slabs for Asphalt overlay
- 3) Preparation of grade for new PCC approach pavement
- 4) Installation of Steel Bars into PCC
- 5) Installation of new PCC approach pavement
- 6) Asphalt overlay of portions of the Eagle Butte Yard

**SEQUENCE OF OPERATIONS**

The Contractor shall coordinate their activities with the SDDOT Eagle Butte Maintenance personnel to minimize the disruption of the Owner's use of the yard and shop.

The Contractor shall contact the Eagle Butte Maintenance Forces on site (605-964-4361) a minimum of 48 hours prior to beginning excavation so that access to the building and yard can be arranged.

**WASTE DISPOSAL**

All waste and excess material generated from the various construction activities shall be removed from the property as determined by the Engineer.

**MAINTENANCE OF TRAFFIC**

The Contractor shall furnish and install 48" x 48" TRUCK CROSSING signs (W8-6) that are to be placed on State or County highways, or other well traveled roadways. The signs shall be located a minimum of 550' in advance of intersections and approaches to the highway where the haul route crosses, or turns onto or from the highway. The TRUCK CROSSING signs shall be installed for both directions of traffic travel. The exact number and location of the signs will be determined based on the pit location and haul road approved for use.

**MAINTENANCE OF TRAFFIC (continued)**

The TRUCK CROSSING signs shall be displayed at all times when the haul vehicles are hauling material from the pit to the stockpile site. During non-working hours, the signs shall be covered or removed from view. Hinged signs may be used. There will be no direct payment for the TRUCK CROSSING signs. All costs for furnishing, installing, maintaining, and removing the signs shall be incidental to the various contract items.

**UTILITIES**

The Contractor shall 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 shall 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.

Utilities are not planned to be affected on this project.

**EXISTING APPROACH SLAB**

For informational purposes, the existing concrete approach slab of the building is 6 inches thick with #4 reinforcing steel on 2' centers at the mid-point of the slab.

**PROOF ROLLING PRIOR TO PAVING**

The entirety of the yard to be paved shall be proof rolled with a loaded vehicle of substantial weight (approximating the weight of a loaded tandem axle dump truck) by the Contractor prior to paving to verify the stability of the material. This work shall be incidental to the contract unit bid price for Asphalt Concrete Composite.

**EXCAVATION OF UNSTABLE MATERIAL**

Included in the Estimate of Quantities are 50 cubic yards of UNCLASSIFIED EXCAVATION, DIGOUTS for the removal of unstable material, if necessary.

Granular material for digouts shall be obtained from the Eagle Butte DOT Maintenance stockpile and may be used without further testing. For excise tax purposes, the cost per ton of the BASE COURSE, SALVAGED ASPHALT MIX, STATE FURNISHED, is \$3.00 per ton.

Compaction of the Granular material for any digouts shall be to the satisfaction of the Engineer.

**COLD MILLING ASPHALT**

Milling along the buildings shall be as shown in the Pavement Removal Layout sheet and the Details Cold Milling Along Buildings and Slabs.

**SAWING OF EXISTING ASPHALT CONCRETE**

Where asphalt concrete is to be removed, the existing asphalt at the removal limits shall be sawed full depth to a true line with a vertical face. There will not be a separate payment made for sawing. All costs associated with sawing existing asphalt concrete shall be incidental to the various contract items.

**SURFACING THICKNESS DIMENSIONS**

Plans quantity 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 quantity may be varied to achieve the required elevation.

**ASPHALT CONCRETE COMPOSITE**

The Contractor is required to notify the Area Engineer at least two weeks prior to beginning paving.

The Contractor shall produce an estimated 1370 tons of Asphalt Concrete Composite. The Asphalt Concrete Composite shall be placed by the Contractor at the Eagle Butte Maintenance Yard as shown in the Plans. The Asphalt Concrete Composite shall be placed in 2 – 1.5" lifts. For informational purposes only it is estimated that 1.7 ton of SS-1h or CSS-1h will be required for tack between lifts.

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements of the Standard Specifications for Class E, Type 1; Class G, Type 1; Asphalt Concrete Class Q low traffic volume, Asphalt Concrete Class Q medium traffic volume, Asphalt Concrete Class Q high traffic volume or Asphalt Concrete Superpave 12.5 mm specifications.

All other requirements in the Standard Specifications for Asphalt Concrete Composite shall apply.

The asphalt binder used in the mixture shall be PG 58-28, PG 64-22, PG 64-28 or PG 64-34 Asphalt Binder.

The asphalt binder content may be adjusted by the Engineer.

All costs involved in producing the asphalt concrete, hauling, placing and tacking will be incidental to the contract unit bid price for Asphalt Concrete Composite and shall include mineral aggregate, asphalt binder, hydrated lime if required, equipment, labor, and incidentals necessary to complete the work.

The requirement for a paver feeder from section 320.3F will be waived.

**REMOVE ASPHALT CONCRETE PAVEMENT**

Asphalt Concrete Pavement shall be removed from the area to be surfaced with PCC Approach Pavement as shown in the Pavement Removal Layout Sheet.

The removed material shall be used and/or wasted as directed by the Engineer. Plans quantity shall be the basis of payment for this item.

It is estimated that 0 to 3 inches of asphalt concrete pavement exists throughout the removal area.

All labor, equipment, materials, tools, and all other incidentals needed to remove and dispose of the asphalt concrete pavement shall be paid for at the contract unit price per square yard for "Remove Asphalt Concrete Pavement".

**UNCLASSIFIED EXCAVATION**

Limits of the removals shall be excavated to the proper elevation as needed to allow for the placement of Granular Material and new PCC Approach Pavement.

It is anticipated that sufficient granular material will remain in place following minimum gravel or asphalt pavement removal. Granular Material left in place shall be scarified and compacted to the satisfaction of the Engineer.

Any compaction of the grade prior to installation of new Granular Material shall be to the satisfaction of the Engineer. Any unstable material shall be removed.

Unstable material shall be removed from the project and disposed of by the Contractor.

Additional excavation beyond the limits of the new PCC Approach Pavement may be necessary to assure positive drainage. These areas shall be excavated to allow for the placement of 6 inches of Granular Material and two 1 1/2" lifts of Asphalt Concrete Composite.

Excavated Granular Material that is deemed usable by the Engineer may be substituted for Granular Material under the PCC Approach Pavement as directed by the Engineer.

Any salvaged granular material may be used with no further testing.

All costs to provide a stable gravel base to receive the new PCC Approach Pavement and maintain positive drainage as directed by the Engineer shall be incidental to the contract lump sum price for UNCLASSIFIED EXCAVATION.

It is not anticipated that water for compaction will be required; however, if in the opinion of the Engineer the excavated subgrade is extremely dry, water may be ordered and placed to the satisfaction of the Engineer. All costs for any added water shall be incidental to the contract lump sum price for UNCLASSIFIED EXCAVATION.

**GRANULAR MATERIAL**

If additional granular material is required for fill on the project, granular material shall be obtained from the Eagle Butte DOT Maintenance stockpile and may be used without further testing. For excise tax purposes, the cost per ton of the BASE COURSE, SALVAGED ASPHALT MIX, STATE FURNISHED, is \$3.00 per ton.

Placement of Granular Material shall be in accordance with SDDOT Specification Section 260.3 B.

Cost of water for compaction of the granular material shall be incidental to the contract unit price for the various granular items. Six percent, plus or minus, moisture will be required at the time of compaction unless otherwise directed by the Engineer.

**STEEL BAR INSTALLATION**

The Contractor shall install the steel bars (#5 plain round dowel bars) into drilled holes in the existing concrete pavement. Damage to the concrete slab during drilling due to negligence by the Contractor shall be repaired at no cost to the state. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole.

The steel bars shall be cut to the specified length by sawing and shall be free from burring or deformations. Shearing will not be permitted. Epoxy resin adhesive shall be of the type intended for horizontal applications and shall conform to the requirements of ASTM C 881, Type IV, Grade 3 (equivalent to AASHTO M235, Type IV, Grade 3).

The diameter of the drilled holes in the existing concrete pavement for the steel bars shall not be less than 1/8 inch nor more than 3/8 inch greater than the overall diameter of the steel bar. Holes drilled into the existing concrete pavement shall be located at mid-depth of the slab and true and normal. The drilled holes shall be blown out with compressed air using a device that will reach to the back of the hole to ensure that all debris or loose material has been removed prior to epoxy injection.

Mix the epoxy resin as recommended by the manufacturer and apply by an injection method approved by the Engineer. If an epoxy pump is utilized, it shall be capable of metering the components at the manufacturers designated rate and be equipped with an automatic shut-off. The pump shall shut off when any of the components are not being metered at the designated rate. Fill the drilled holes from the back to the front 1/3 to 1/2 full of epoxy or as recommended by the manufacturer, prior to insertion of the steel bar. Care shall be taken to prevent epoxy from running out of the horizontal hole prior to steel bar insertion. Rotate the steel bar during installation to eliminate voids and ensure complete bonding of the bar. Insertion of the bars by the dipping method will not be allowed. Steel bars shall not be placed closer than 6 inches to any longitudinal joint, not closer than 18 inches to any transverse joint, and not closer than 15 inches to any construction joint.

Adjacent concrete may be placed when the epoxy for anchoring the steel bars has hardened sufficiently to permit no movement of the steel bars as recommended by the manufacturer and the exposed end of the bar has been greased.

All costs for the installation of steel bars shall be incidental to the contract unit price per each for INSERT STEEL BAR IN PCC PAVEMENT.

**8" MISCELLANEOUS PCC PAVEMENT**

Concrete used for PCC approach pavement shall be Class M6 meeting the requirements of section 462 of the standard specifications and with the coarse aggregate being Crushed Ledge Rock.

All costs incurred for furnishing all materials, labor, equipment, and incidentals necessary to complete the work, except for installation of steel bars in drilled holes, shall be incidental to the contract unit price per square yard for 8" MISCELLANEOUS PCC PAVEMENT.

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

The surface of the paving shall be given a carpet drag or heavy broom finish.

Joints shall be constructed in accordance with the details shown in the plans, to match existing joints and as approved by the Engineer during construction.

All costs incurred for the construction of joints shall be incidental to the contract unit price per square yard for 8" MISCELLANEOUS PCC PAVEMENT

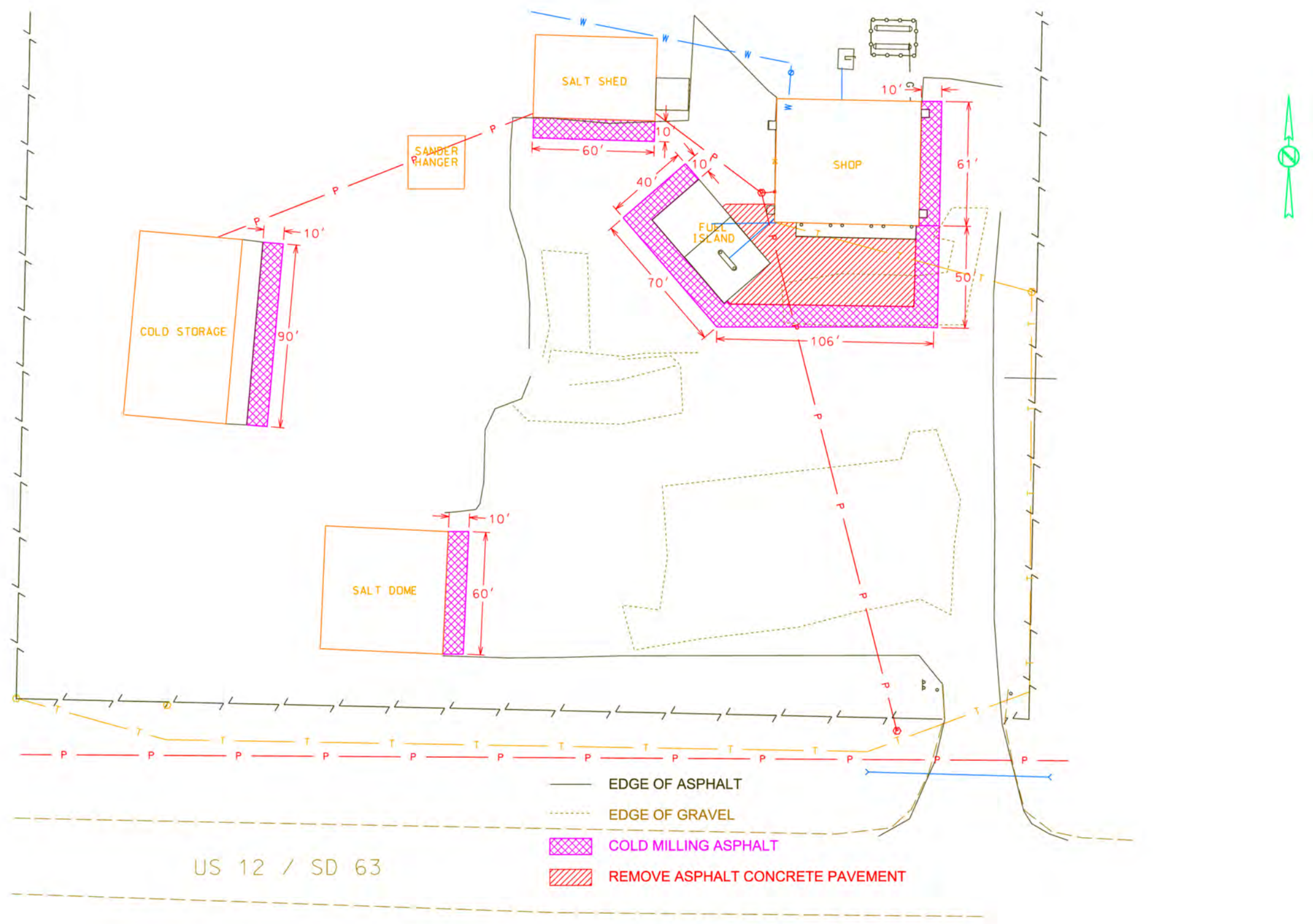
**LOCATION OF CONCRETE PAVEMENT JOINTS**

The Contractor shall install a construction joint or sawed joint at the locations shown on sheet "APPROACH SLAB DETAILS AND JOINT LAYOUT". New joint locations shall match the existing joint locations on the adjacent existing slab. Construction of the sawed joint shall conform to "Typical Control Joint" as shown on Joint Detail Sheet.

The location of joints as shown in the Plans are approximate for use as a guide in the final location of joints and to afford bidders a basis for estimating the construction costs of the joints. The final location of the joints should align with the joints in the existing slab and as designated by the Engineer during construction.

PAVEMENT REMOVAL LAYOUT

STATE OF SOUTH DAKOTA	PROJECT 410C269	SHEET 4	TOTAL 9
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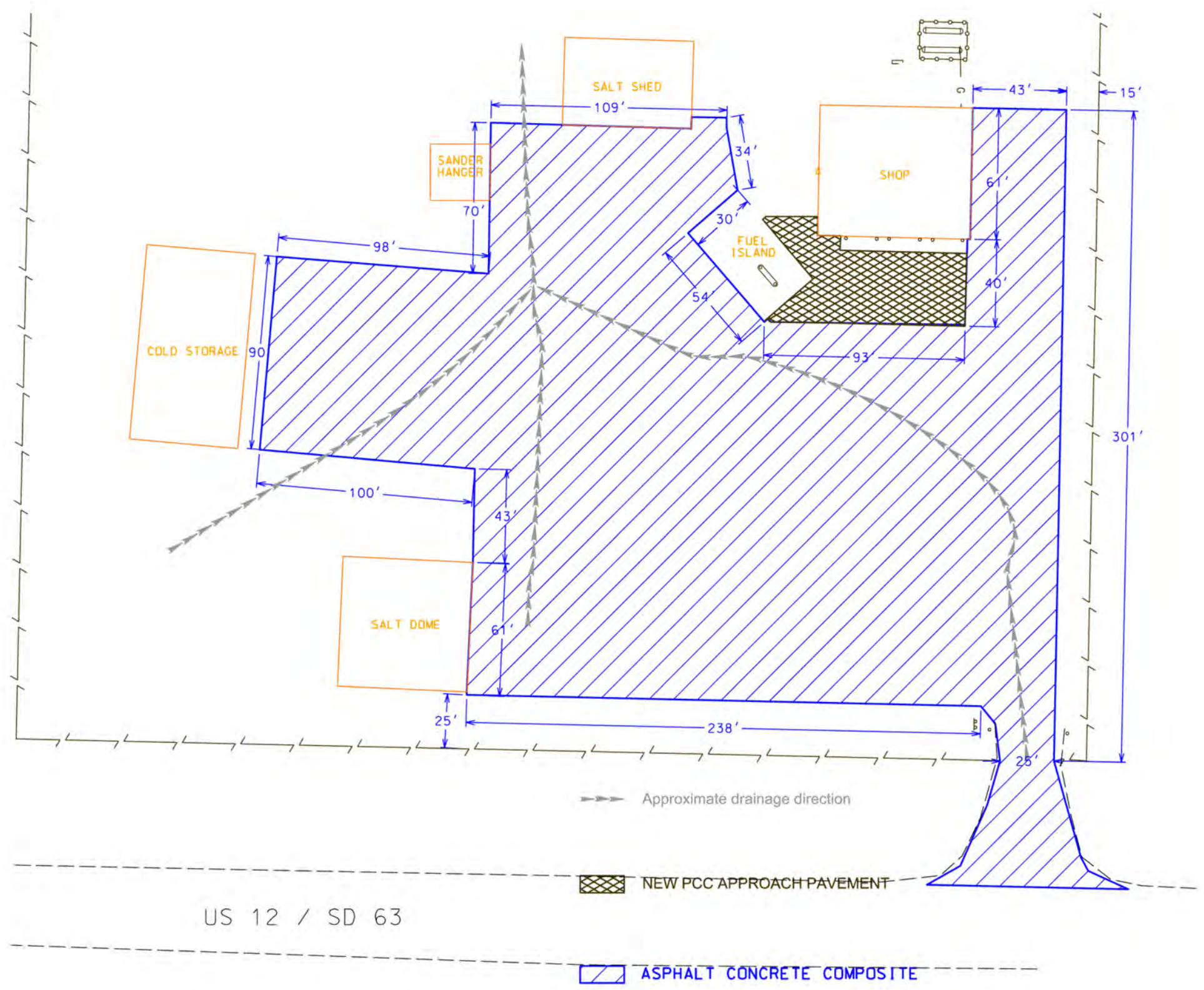


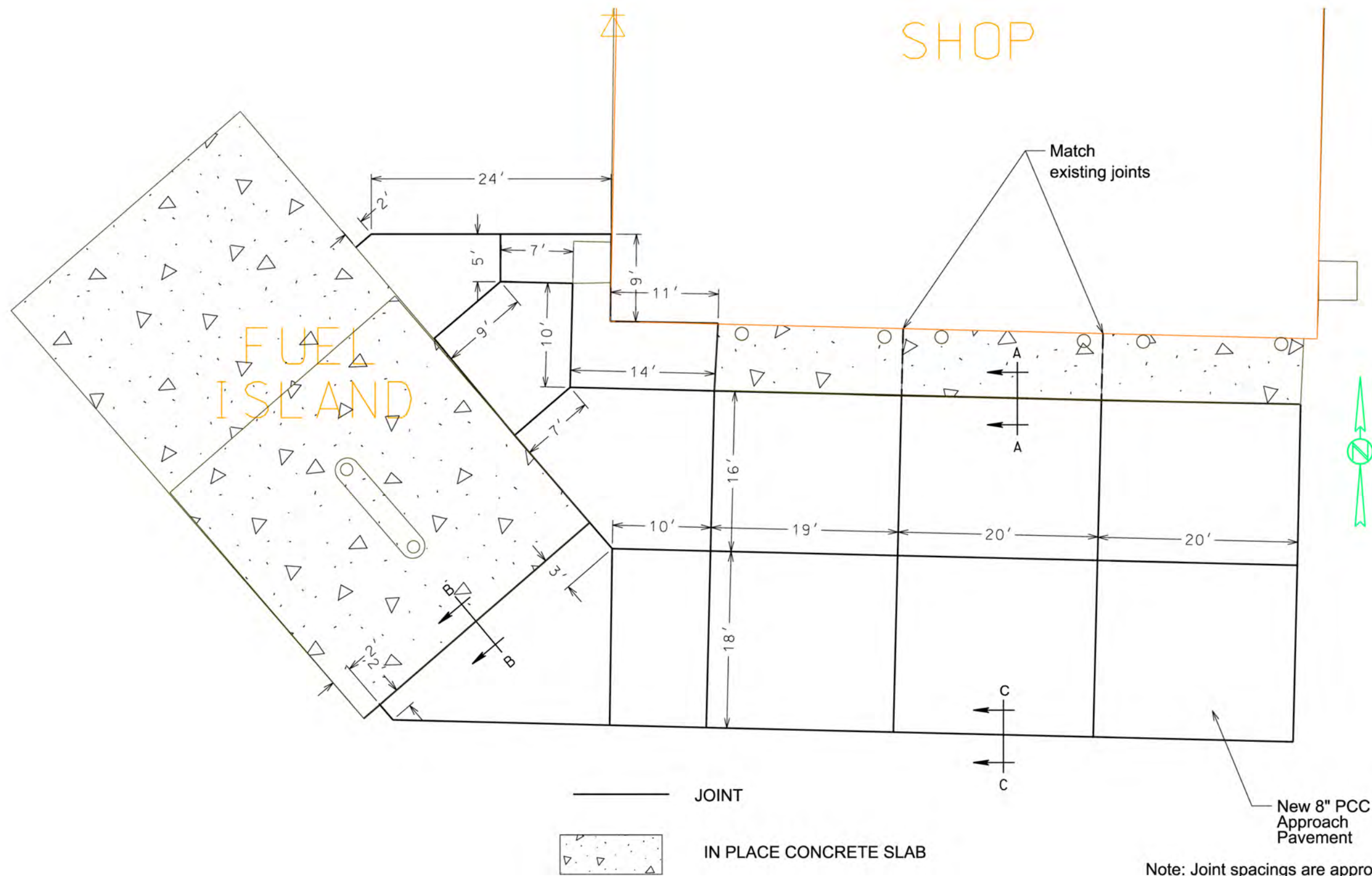
- EDGE OF ASPHALT
- - - EDGE OF GRAVEL
- ▨ COLD MILLING ASPHALT
- ▨ REMOVE ASPHALT CONCRETE PAVEMENT

US 12 / SD 63

ASPHALT CONCRETE COMPOSITE LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL
	410C269	5	9





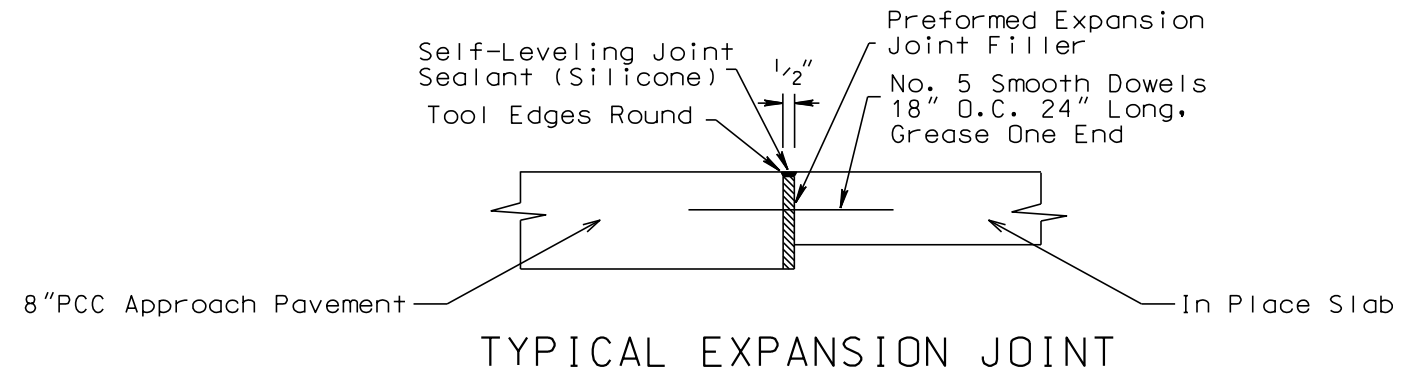
New 8" PCC Approach Pavement

Note: Joint spacings are approximate

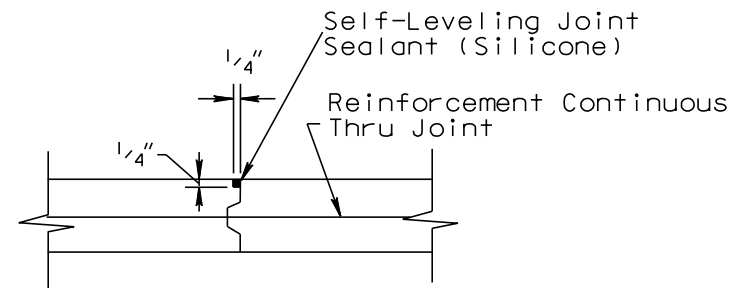
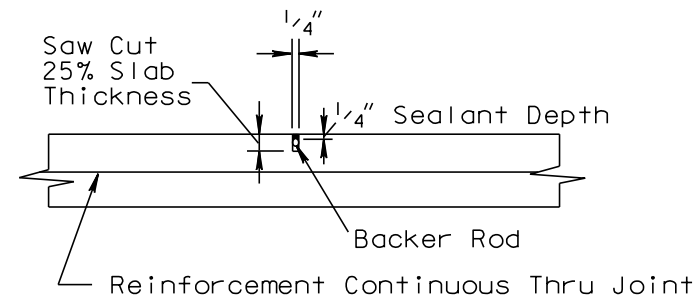
STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
s.d.	410C269	7	9

# DETAILS

## Joint Details



Saw Cut - Fill with Self-Leveling  
Joint Sealant (Silicone)



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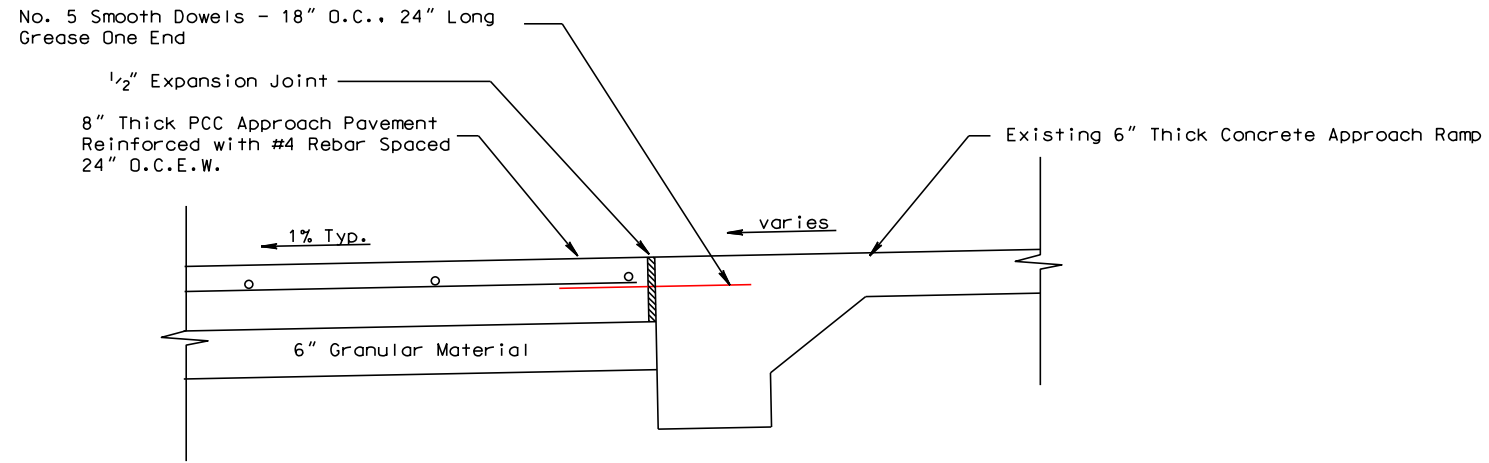
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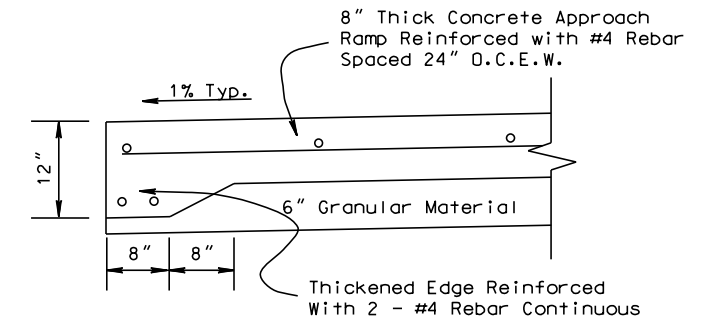
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s.D.	410C269	8	9

# DETAILS

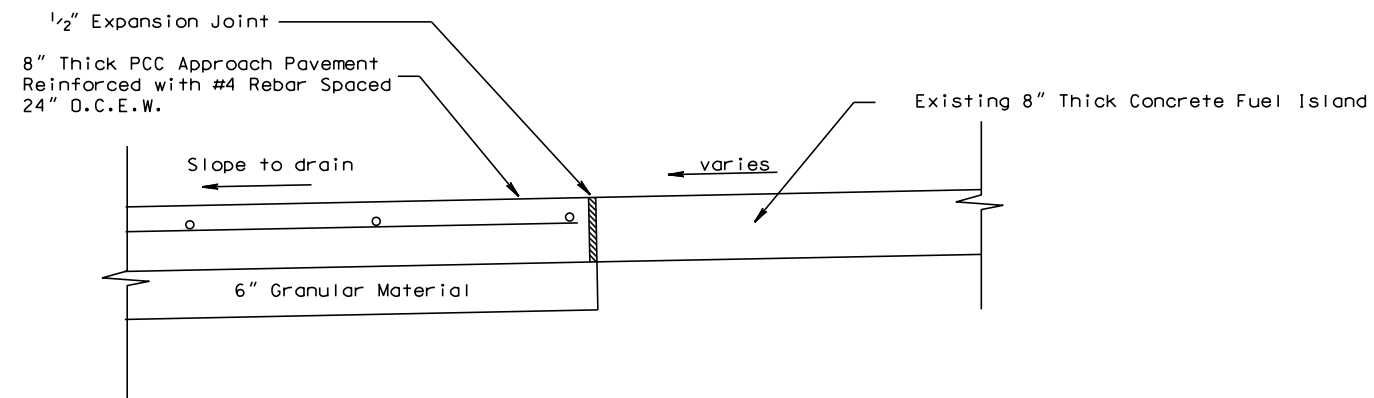
## Concrete Typical



SECTION A - A



SECTION C-C



SECTION B - B

DATE:

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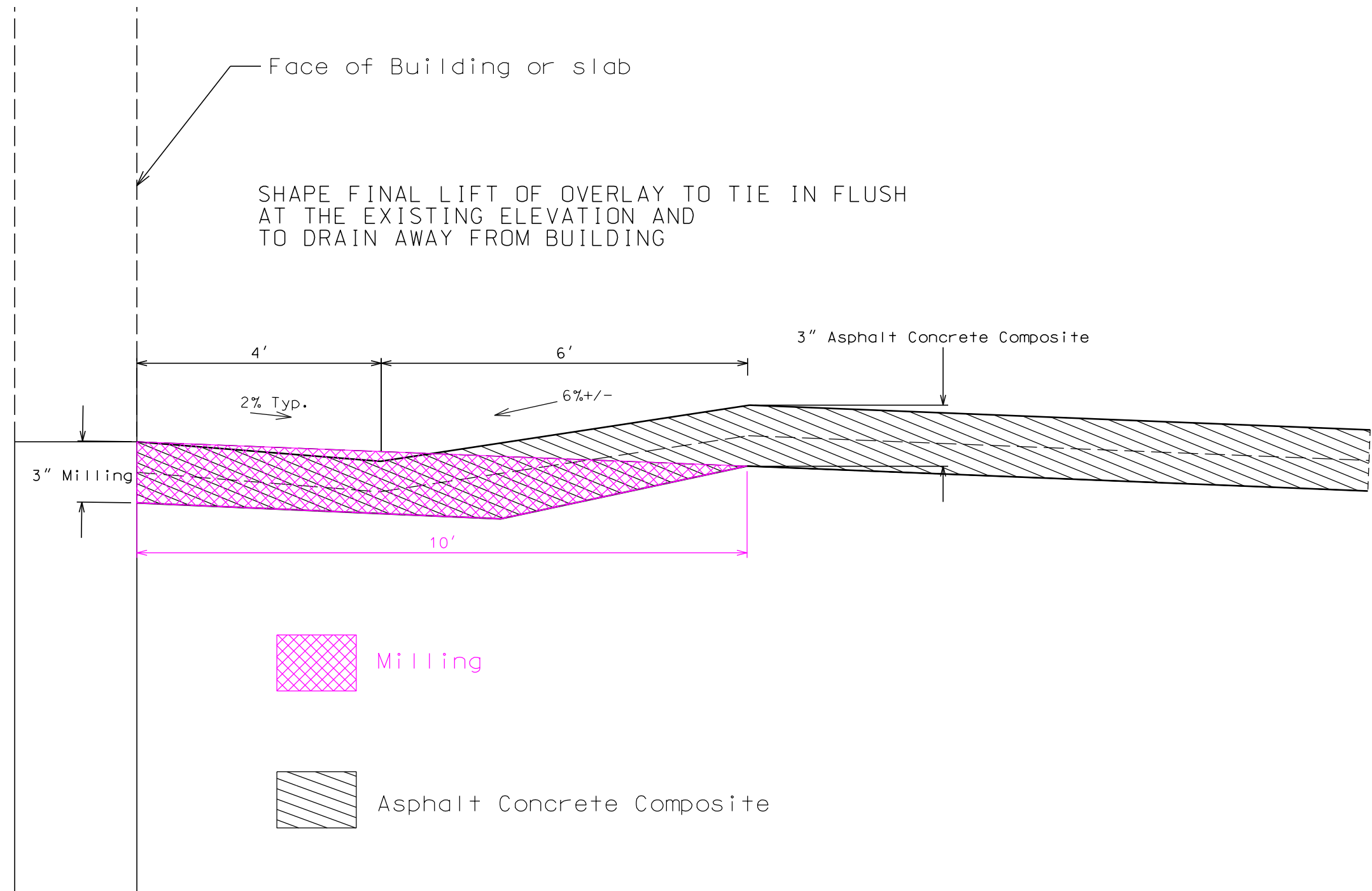
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STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
S.D.	410C269	9	9

# DETAILS

## COLD MILLING ALONG BUILDINGS AND SLABS



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CHECKED BY:

DATE:

DRAWN BY: