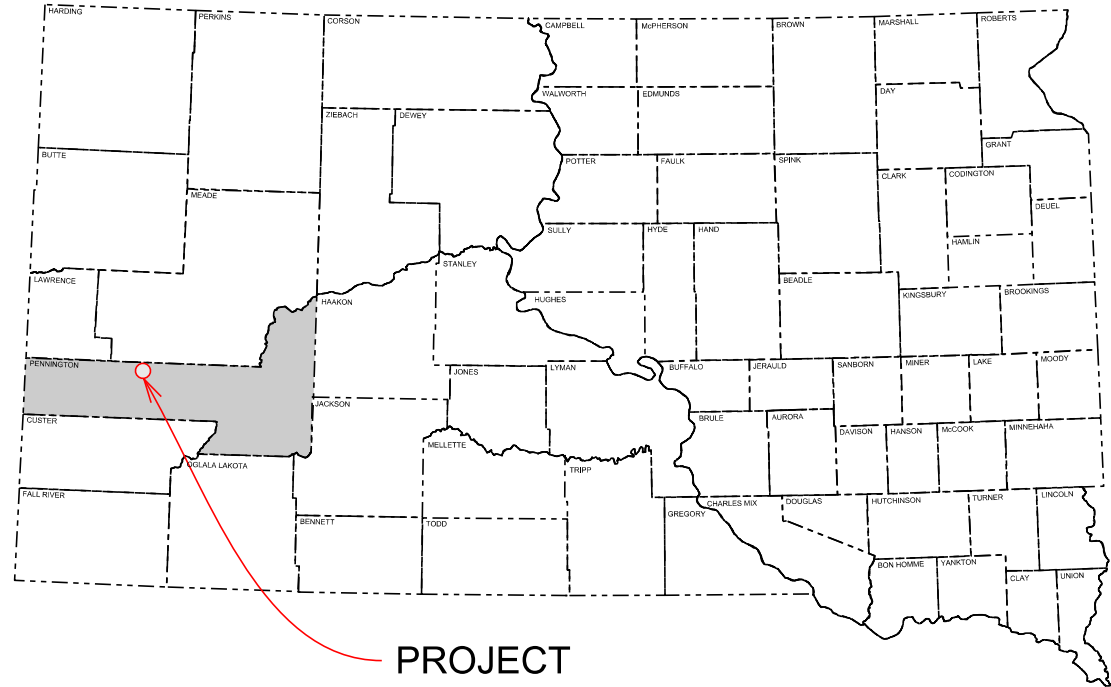


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Plotted From - TRRC14610



PROJECT

STATE OF SOUTH DAKOTA  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR PROPOSED

PROJECT M-0009-452  
PENNINGTON COUNTY

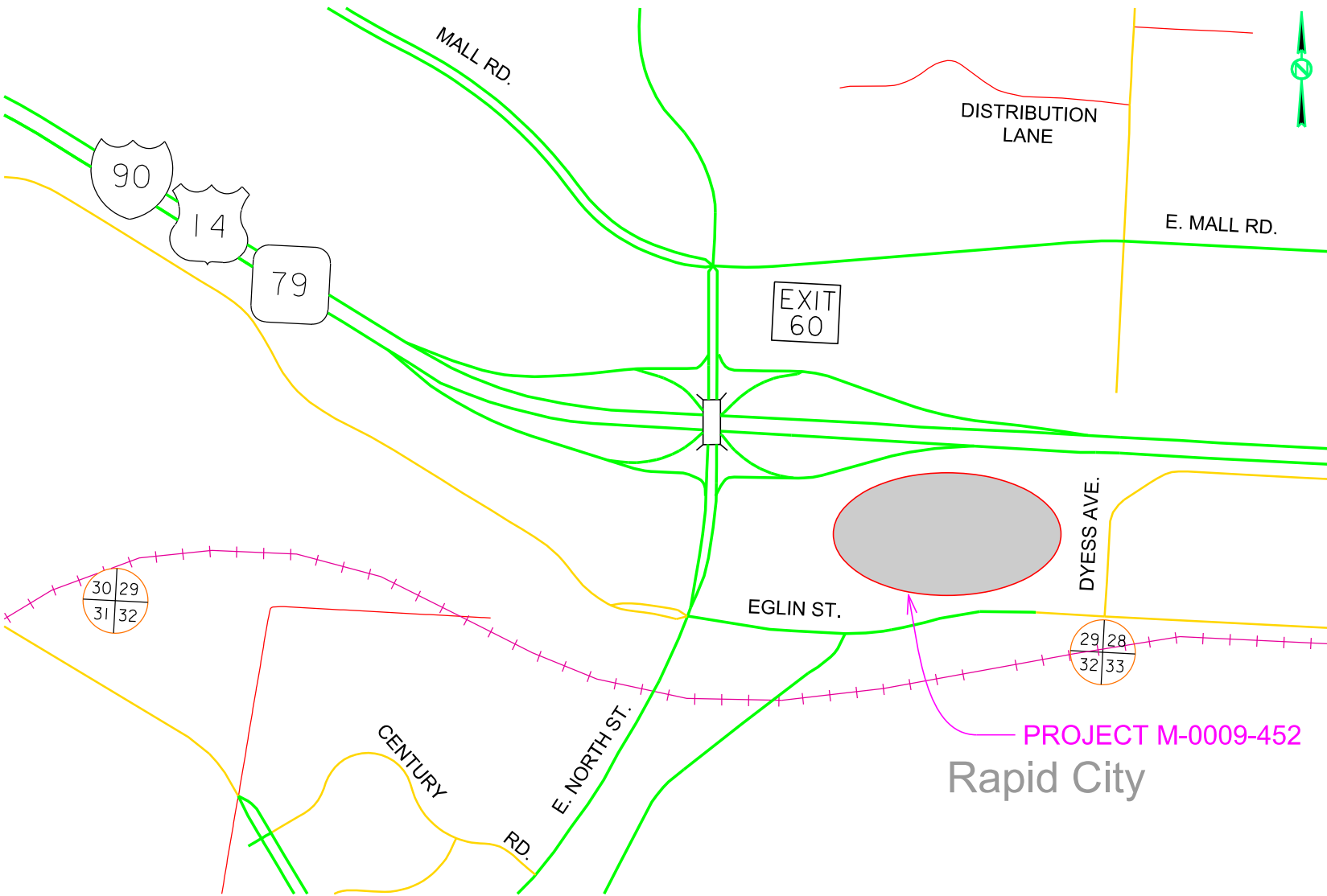
BOLLARDS  
PCN i5hw

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	1	17

Plotting Date: 03/19/2019

INDEX OF SHEETS

- 1 General Layout W/Index
- 2-4 Estimate With General Notes & Tables
- 5 Topography Symbolology & Legend
- 6 Site Layout
- 7-9 PCC Pavement Removal Sheets
- 10-14 Bollard Layout Sheets
- 15 Bollard Detail
- 16-17 Standard Plates



STORM WATER PERMIT  
None Required

Plot Name - 1

File - ...IRC Yard Bollards\title.dgn

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
110E1000	Remove Asphalt Concrete Pavement	Lump Sum	LS
250E0010	Incidental Work	Lump Sum	LS
380E5030	Nonreinforced PCC Pavement Repair	44.6	SqYd
380E6110	Insert Steel Bar in PCC Pavement	140	Each
900E5145	Bollard	44	Each

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications, and Special Provisions as included in the Proposal.

ENVIRONMENTAL COMMITMENTS

The SDDOT is committed to protecting the environment and uses Section A Environmental Commitments as a communication tool for the Engineer and Contractor to ensure that attention is given to avoid, minimize, and/or mitigate an environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency with permitting authority can delay a project if identified environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor’s primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office.

Additional guidance on SDDOT’s Environmental Commitments can be accessed through the Environmental Procedures Manual found at: <http://www.sddot.com/resources/Manuals/EnvironProcManual.pdf>

For questions regarding change orders in the field that may have an effect on an Environmental Commitment, the Project Engineer will contact the Environmental Office at 605-773-3098 or 605-773-4336 to determine whether an environmental analysis and/or resource agency coordination is necessary.

COMMITMENT E: STORM WATER

Construction activities constitute less than 1 acre of disturbance.

Action Taken/Required:

At a minimum and regardless of project size, appropriate erosion and sediment control measures must be installed to control the discharge of pollutants from the construction site.

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project.

Action Taken/Required:

Construction and/or demolition debris may not be disposed of within the Public ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for 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 Project Engineer.

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 and/or 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 and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the Public ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the Public 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.

All costs associated with 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 various contract items.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	2	17

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

State Historical Preservation Office (SHPO or THPO) concurrence has not been obtained for this project.

Action Taken/Required:

All earth disturbing activities require a cultural resource review prior to scheduling the pre-construction meeting. This work includes, but is not limited to: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

The Contractor will arrange and pay for a record search and when necessary, a cultural resource survey. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review if the site was previously surveyed; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor will provide ARC with the following: a topographical map or aerial view of which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor will submit the cultural resources survey report to SDDOT Environmental Office, 700 East Broadway Avenue, Pierre, SD 57501-2586. SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

In the event of an inadvertent discovery of human remains, funerary objects, or if evidence of cultural resources is identified during project construction activities, then such activities will immediately cease and the Project Engineer will be immediately notified. The Project Engineer will contact the SDDOT Environmental Office to determine an appropriate course of action.

The Contractor is responsible for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas that affect wetlands, threatened and endangered species, or waterways. The Contractor will not utilize a site known or suspected of having contaminated soil or water. The Contractor will provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

**COMMITMENT K: RAPID CITY AREA AIR QUALITY CONTROL ZONE**

Administrative Rule of South Dakota (ARSD) 74:36:18:03 states that "no state facility or state contractor may engage in any construction activity or continuous operation activity within the Rapid City air quality control zone which may cause fugitive emissions of particulate to be released into the ambient air without first obtaining a permit issued by the board or the secretary."

Construction activity is defined as any temporary activity which involves the removal or alteration of the natural or pre-existing cover of one acre or more of land. One acre of surface area is based on a cumulative area of disturbance to be completed for the entire project. Construction activity will include, but not be limited to, stripping of topsoil, drilling, blasting, excavation, dredging, ditching, grading, street maintenance and repair, or earth moving. It also includes stockpiles, access roads, and disposal areas. An off-site disposal area of excess material will require an additional permit.

**Action Taken/Required:**

To be considered eligible for authorization to conduct a construction activity under the terms and conditions of this permit, the owner operator must submit a Notice of Intent (NOI) form. The form must be submitted to the address below at least seven business days prior to the anticipated date of beginning the construction activity.

South Dakota Department of Environment and Natural Resources Air Quality Program, 523 East Capitol, Joe Foss Building, Pierre, SD 57501-3181, Phone: 605-773-3151.

The permit requires the Contractor to use reasonably available technology to control fugitive dust emissions. The Contractor is required to use control measures for track out, paved areas, unpaved roads, unpaved parking lots, disturbed areas, and for material handling and storage. The control measures that the Contractor is required to use are listed in the permit.

The Rapid City Air Quality Permit will need to be renewed annually by the Contractor until construction activities are completed.

The online form can be found at: <http://denr.sd.gov/des/aq/airpermits.aspx>

**COORDINATION**

The Contractor shall coordinate with Rapid City Area Maintenance Supervisor (Bob Smith 605 394-1646) and Equipment Shop Forman (Barry Bruce 605 394-1643) to ensure equipment is relocated, if necessary, and to coordinate work activities.

**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.

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD One Call Process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor shall contact the Project Engineer to determine modifications that will be necessary to avoid utility impacts.

**INCIDENTAL WORK**

Incidental work includes, but not limited to, the restoration of all disturbed areas to the satisfaction of the Engineer.

**BOLLARDS**

Bollards shall be spaced not more than 4 feet between posts, on center.

Bollards shall be located not less than 3 feet from the protected object, except at Building F the bollards shall be placed at the back of the curb & gutter.

The top of the bollard footing located in the asphalt removal area at the Abrasive Shed shall be level with the existing asphalt.

**EXISTING PCC PAVEMENT**

The existing is 8" Nonreinforced PCC Pavement with limestone aggregate. Longitudinal joints are reinforced with No. 5x30" deformed tie bars spaced 48" center to center. The joints are spaced at 10' to 15' apart. Transverse joints are reinforced with 1 ¼" plain round dowel bars and with No. 9 deformed tie bars spaced 12" center to center.

**RESTORATION OF GRAVEL CUSHION**

An inspection of the gravel cushion subgrade shall be made after removing concrete from each pavement replacement area. Areas of excess moisture shall be dried to the satisfaction of the Engineer. Loose and excess material shall be removed. Each replacement area shall be leveled and compacted to the satisfaction of the Engineer.

All costs associated with this work shall be incidental to the contract unit price per square yard for "Nonreinforced PCC Pavement Repair".

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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**NONREINFORCED PCC PAVEMENT REPAIR**

Testing requirements shall be in accordance with Section 462 of the Specification.

New pavement thickness shall equal existing pavement thickness.

Locations and size (length or width) of concrete repair areas are subject to change in the field, at the discretion of the Engineer. There will be no increase in the contract unit price bid for these changes. Payment will be based on the actual area replaced.

Existing concrete pavement shall be sawed full depth at the beginning and end of the PCCP repair areas. When either the beginning or end of a PCCP repair area falls close to an existing joint or crack, the PCCP repair area shall be extended to eliminate the existing joint or crack. Where possible, new working joints shall be adjacent to existing working joints.

Existing concrete pavement in the replacement areas shall be removed by the lift out method or by means that minimize damage to the base and sides of remaining in place concrete. All removed material shall be removed from within the right-of-way by the end of the workday. Damage to adjacent concrete caused by the Contractor's operations shall be removed and replaced at the Contractor's expense.

If the pavement replacement area is entirely on either side of the existing contraction joint, the location of one of the working joints will be at the original location.

Upon removal of the concrete, the Engineer will inspect for existing tie bars along longitudinal joint to determine if tie bar installation will be required.

At repair locations where the new working joint is not opposite the existing working joint, the Contractor shall place a ¼ inch preformed asphalt expansion joint material along the longitudinal joint from the existing working joint to the new working joint. The expansion joint material shall meet the requirements of AASHTO M33. Cost for this material shall be incidental to the contract unit price per square yard for "Nonreinforced PCC Pavement Repair". All joints (longitudinal and transverse) through and around the repair areas shall be sawed and sealed with Hot Poured Elastic Joint Sealer.

Saw cuts that extend beyond the repair area shall be minimized and filled with Hot Pour Elastic Joint Sealant at the Contractor's expense.

NONREINFORCED PCC PAVEMENT REPAIR (CONTINUED)

The slump requirement will be limited to 3" maximum after water reducer is added and the concrete shall contain 4.5% to 7.0% entrained air. Coarse aggregate shall be crushed ledge rock, Size No. 1, unless an alternative gradation is approved by the concrete engineer as part of the mix design submittal. The concrete mixture shall contain a minimum of 50% coarse aggregate by weight. The concrete mix shall contain at least 600 lbs. of type I, II or III cement per cubic yard. The minimum 28 day compressive strength shall be 4,000 psi. The Contractor is responsible for the mix design used. The Contractor may need to modify the mix design to meet contract time requirements on the project. The Contractor shall submit a mix design and supporting documentation for approval at least 2 weeks prior to use.

Concrete shall be cured with white pigmented curing compound (AASHTO M148, Type 2) applied as soon as practical at a rate of 125 square feet per gallon. Concrete shall be cured for a minimum of 48 hours before opening to traffic. The 48 hours is based upon a concrete surface temperature of 60 degrees Fahrenheit or higher throughout the cure period. If the concrete temperature falls below 60 degrees Fahrenheit, the cure time shall be extended or other measures shall be taken, at no additional cost to the State. In addition to the curing requirements, strength of 3,500 psi must be obtained prior to opening to traffic.

The initial contraction joint sawing shall be performed as soon practical to avoid random cracking.

All costs for performing this work including sawing and removing concrete, furnishing and placing concrete, sawing and sealing joints, labor, tools and equipment shall be incidental to the contract unit price per square yard for "Nonreinforced PCC Pavement Repair".

STEEL BAR INSERTION

Locations and quantities of concrete repair are subject to change in the field at the discretion of the Engineer. The Contractor will be responsible for ordering the actual quantity of steel bars necessary to complete the work.

The Contractor shall insert the steel bars (1¼" x 18" epoxy coated plain round into drilled holes in the existing concrete pavement. An epoxy resin adhesive must be used to anchor the steel bar in the drilled hole as per Section 380.3 C.1.

Steel bars shall be inserted in the joint on 18" centers. The first steel bar in the joint shall be placed 9" from the edge of the slab. It will be necessary to laterally adjust the location of some of the inserted steel bars when the dimensions above interfere with existing steel bar locations.

A rigid frame or mechanical device will be required to guide the drill to ensure proper horizontal and vertical alignment of the steel bars in the drilled holes.

TABLE OF NONREINFORCED PCC PAVEMENT REPAIR

Location	Length	Width	8" Nonreinforced PCC Pavement Repair	1 1/4" Bar	Insert Steel Bar in PCC Pavement	Remove Asphalt Concrete
	Ft	Ft	SqYd	Each	Each	SqFt
Main gate	6	4	2.7	12	12	
Building B - fuel pumps	22	4 - 5	11.2	36	36	
Building B - parts room	65	4 - 5	29	85	85	
Abrasive Shed		4	1.7	7	7	2
		TOTALS:	44.6	140	140	2



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LEGEND

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	5	17

Plotting Date: 03/19/2019

Anchor		Highway ROW Marker		Shrub Tree		State and National Line	
Antenna		Interstate Close Gate		Sidewalk		County Line	
Approach		Iron Pin		Sign Face		Section Line	
Assumed Corner		Irrigation Ditch		Sign Post		Quarter Line	
Azimuth Marker		Lake Edge		Slough Or Marsh		Sixteenth Line	
BBQ Grill/ Fireplace		Lawn Sprinkler		Spring		Property Line	
Bearing Tree		Mailbox		Stream Gauge		Construction Line	
Bench Mark		Manhole Electric		Street Marker		ROW Line	
Box Culvert		Manhole Gas		Subsurface Utility Exploration Test Hole		New ROW Line	
Bridge		Manhole Miscellaneous		Telephone Fiber Optics		Cut and Fill Limits	
Brush		Manhole Sanitary Sewer		Telephone Junction Box		Control of Access	
Buildings		Manhole Storm Sewer		Telephone Pole		New Control of Access	
Bulk Tank		Manhole Telephone		Television Cable Jct Box		Proposed ROW	
Cattle Guard		Manhole Water		Television Tower		(After Property Disposal)	
Cemetery		Merry-Go-Round		Test Wells/Bore Holes			
Centerline		Microwave Radio Tower		Traffic Signal			
Cistern		Miscellaneous Line		Trash Barrel		Drainage Arrow	
Clothes Line		Miscellaneous Property Corner		Tree Belt			
Commercial Sign Double Face		Miscellaneous Post		Tree Coniferous			
Commercial Sign One Post		Overhang Or Encroachment		Tree Deciduous		Remove Concrete Pavement	
Commercial Sign Overhead		Overhead Utility Line		Tree Stumps		Remove Concrete Driveway Pavement	
Commercial Sign Two Post		Parking Meter		Triangulation Station		Remove Asphalt Concrete Pavement	
Concrete Symbol		Pedestrian Push Button Pole		Underground Electric Line		Remove Concrete Sidewalk	
Creek Edge		Pipe With End Section		Underground Gas Line		Remove Concrete Median Pavement	
Curb/Gutter		Pipe With Headwall		Underground High Pressure Gas Line		Remove Concrete Curb and/or Gutter	
Curb		Pipe Without End Section		Underground Sanitary Sewer			
Dam Grade/Dike/Levee		Playground Slide		Underground Storm Sewer			
Deck Edge		Playground Swing		Underground Tank			
Ditch Block		Power And Light Pole		Underground Telephone Line			
Doorway Threshold		Power And Telephone Pole		Underground Television Cable			
Drainage Profile		Power Meter		Underground Water Line			
Drop Inlet		Power Pole		Warning Sign One Post			
Edge Of Asphalt		Power Pole And Transformer		Warning Sign Two Post			
Edge Of Concrete		Power Tower Structure		Water Fountain			
Edge Of Gravel		Propane Tank		Water Hydrant			
Edge Of Other		Property Pipe		Water Meter			
Edge Of Shoulder		Property Pipe With Cap		Water Tower			
Electric Transformer/Power Junction Box		Property Stone		Water Valve			
Fence Barbwire		Public Telephone		Water Well			
Fence Chainlink		Railroad Crossing Signal		Weir Rock			
Fence Electric		Railroad Milepost Marker		Windmill			
Fence Miscellaneous		Railroad Profile		Wingwall			
Fence Rock		Railroad ROW Marker		Witness Corner			
Fence Snow		Railroad Signs					
Fence Wood		Railroad Switch					
Fence Woven		Railroad Track					
Fire Hydrant		Railroad Trestle					
Flag Pole		Rebar					
Flower Bed		Rebar With Cap					
Gas Valve Or Meter		Reference Mark					
Gas Pump Island		Regulatory Sign One Post					
Grain Bin		Regulatory Sign Two Post					
Guardrail		Retaining Wall					
Guide Sign One Post		Riprap					
Guide Sign Two Post		River Edge					
Gutter		Rock And Wire Baskets					
Guy Pole		Rockpiles					
Haystack		Satellite Dish					
Hedge		Septic Tank					

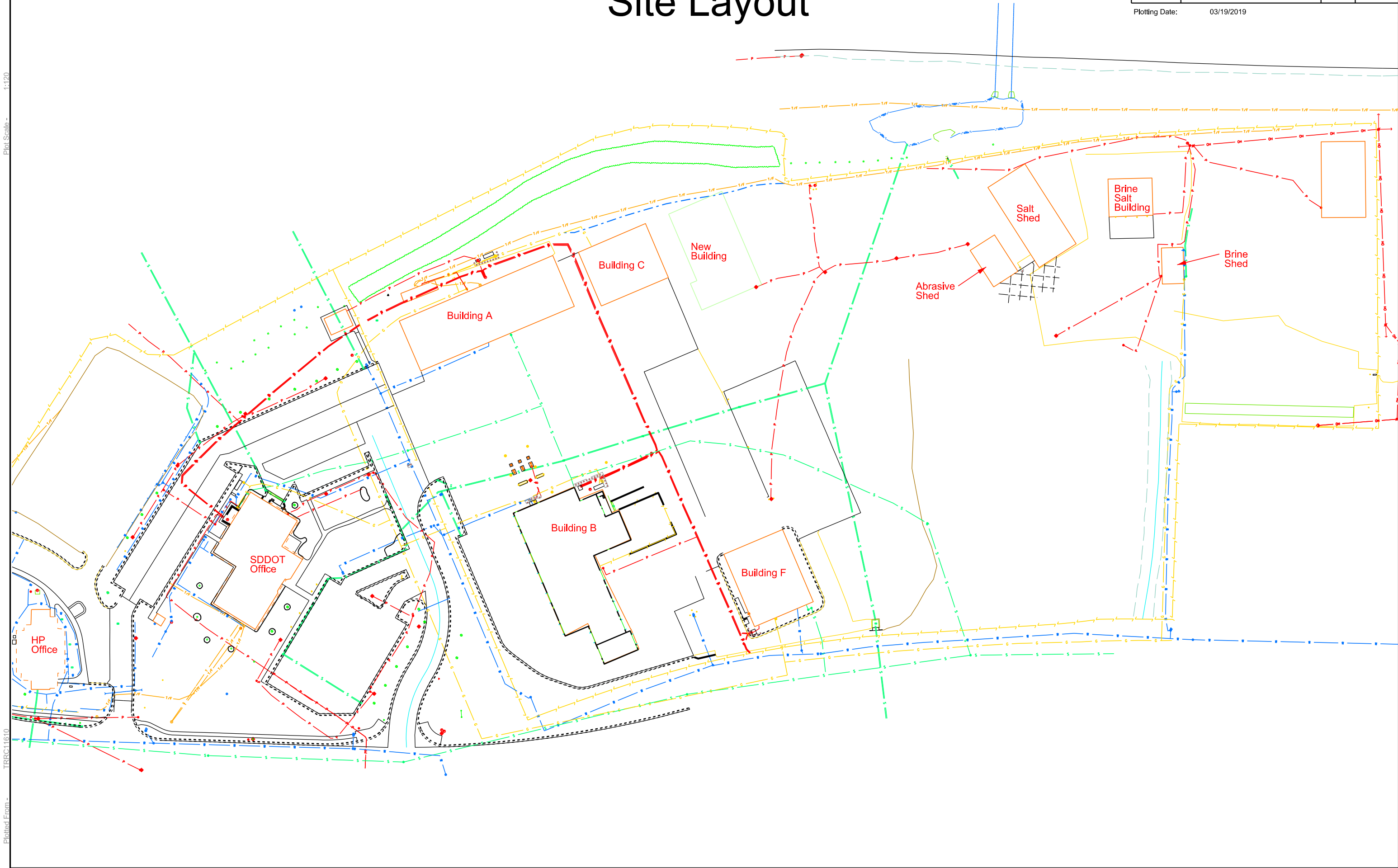
# Site Layout

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	6	17

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Plot Scale - 1:120

Plotted From - TRRC14610



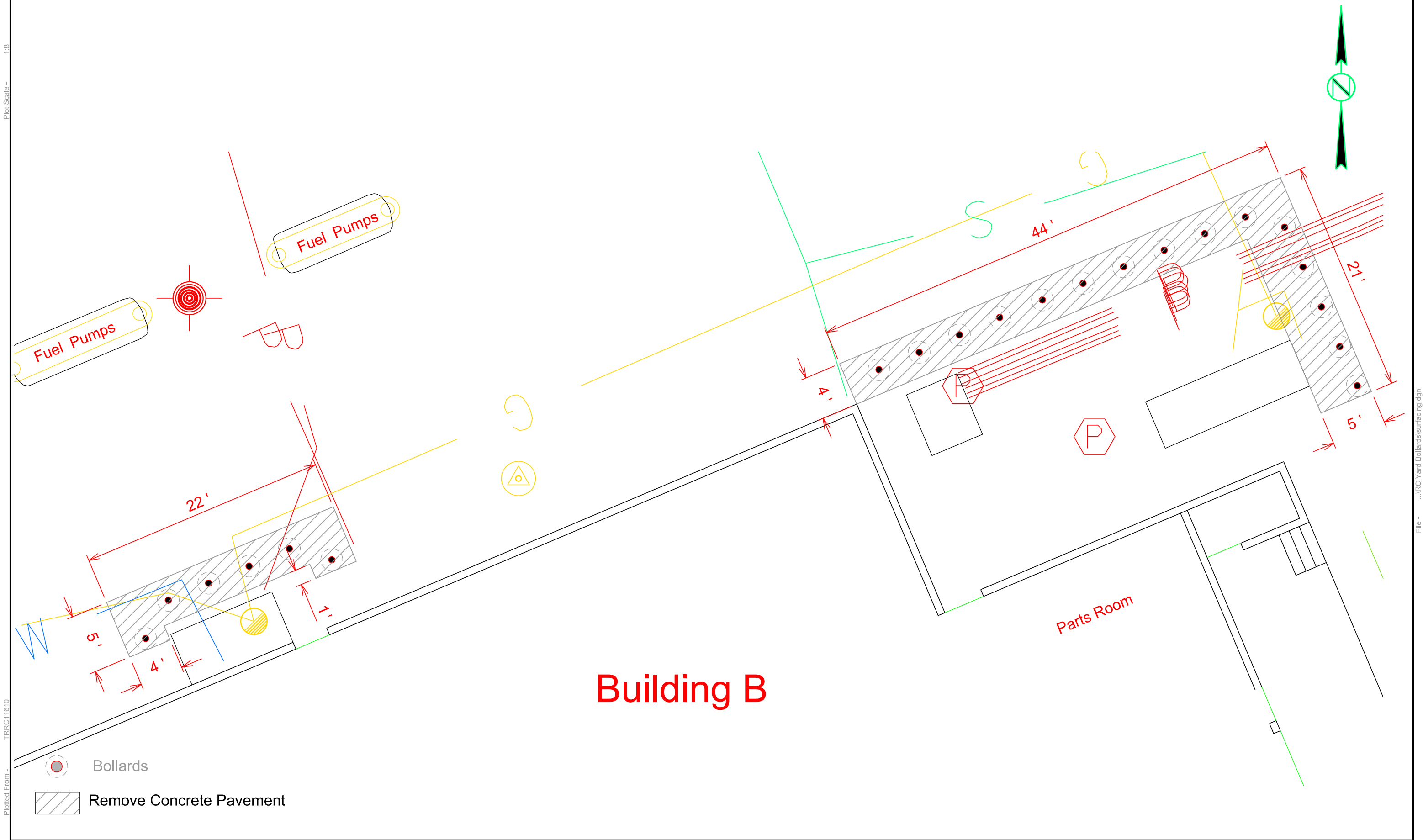
# PAVEMENT REMOVAL LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	7	17

Plotting Date: 03/19/2019

Plot Scale - 1:8

Plotted From - TRRC14610



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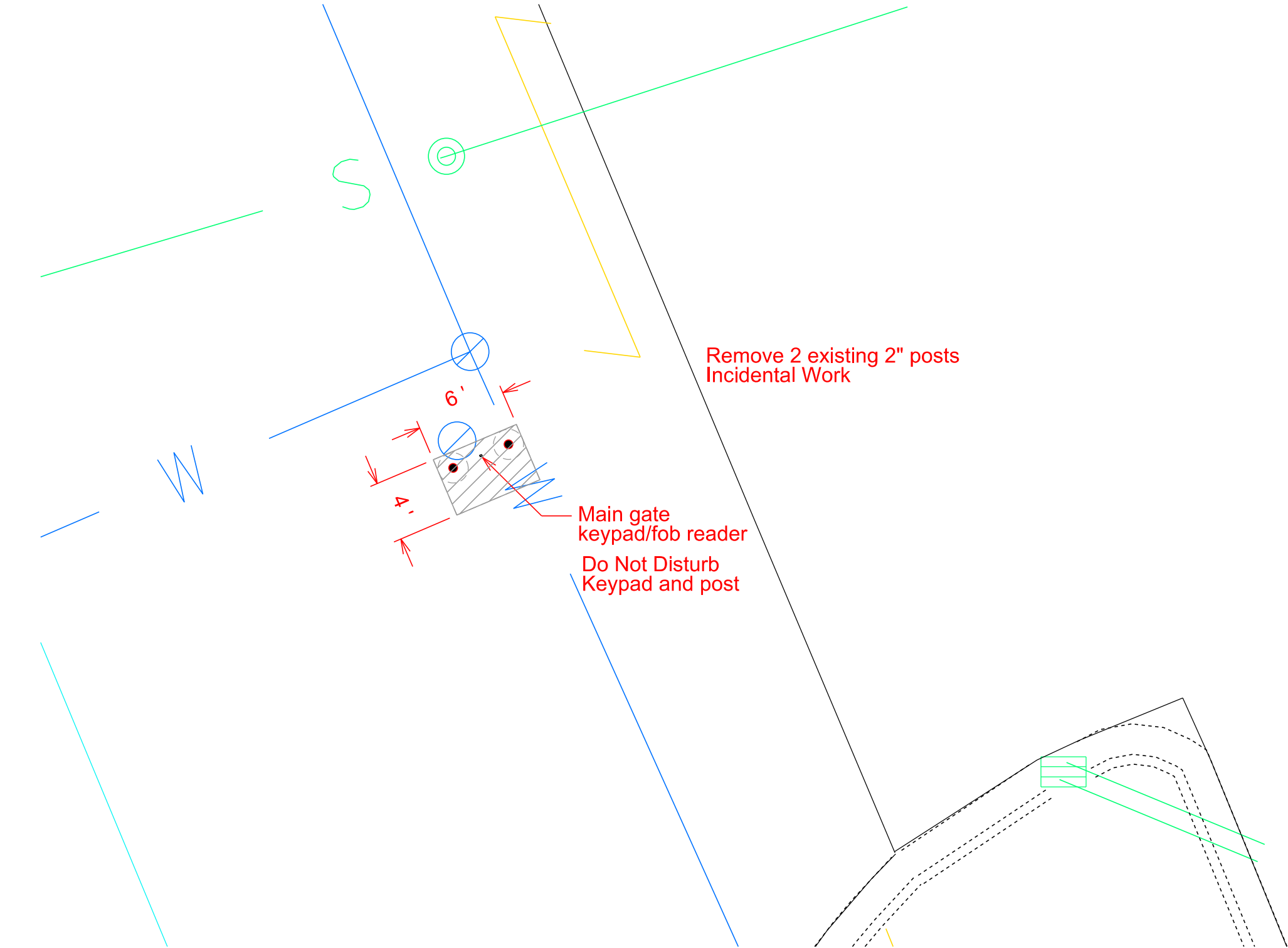
Plot Scale - 1:8



Plotted From - TRRC14610

# PAVEMENT REMOVAL LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	8	17

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-  Bollards
-  Remove Concrete Pavement



# PAVEMENT REMOVAL LAYOUT

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	9	17

Plotting Date: 03/19/2019



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Plotted From - TRRC14610

Abrasive Shed

Salt Shed



-  Remove Concrete Pavement
-  Remove Asphalt Concrete Pavement

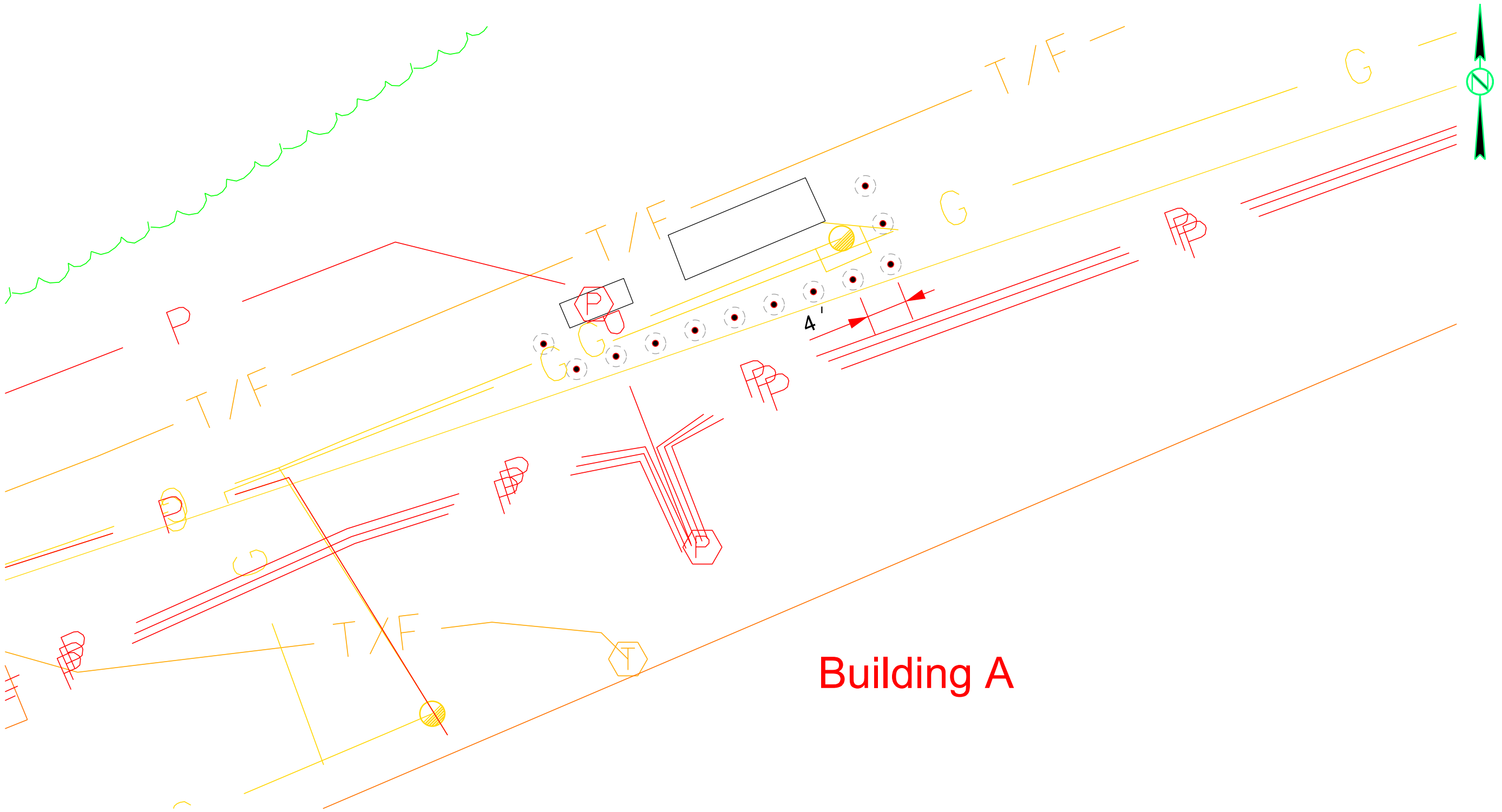
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	10	17

Plotting Date: 03/19/2019

North of Building A  
Install 12 Bollards

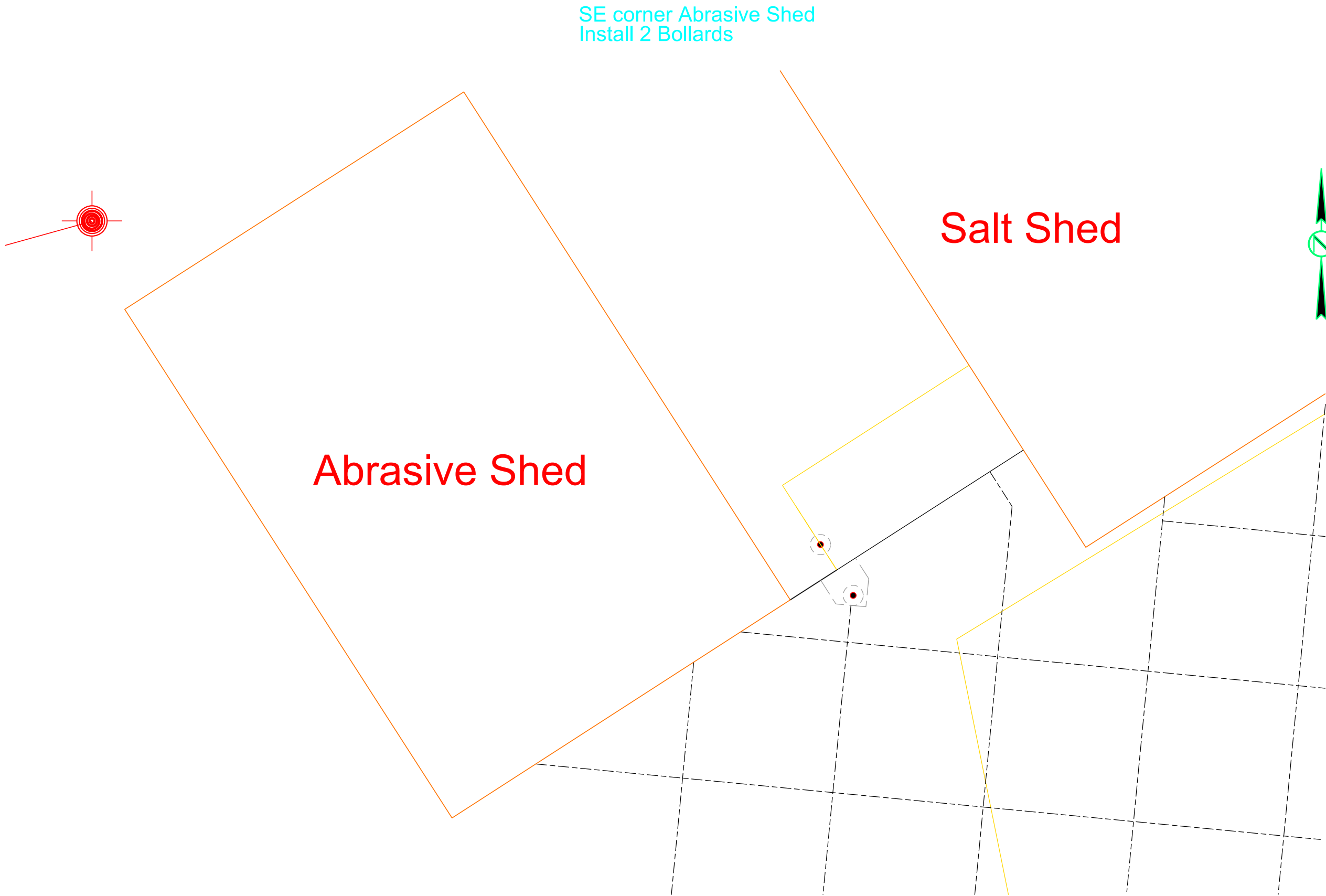
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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	11	17

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Plot Scale - 1:10

Plotted From - TRR014610

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	12	17

Plotting Date: 03/19/2019

SW corner Building F  
Install 6 Bollards

Building F

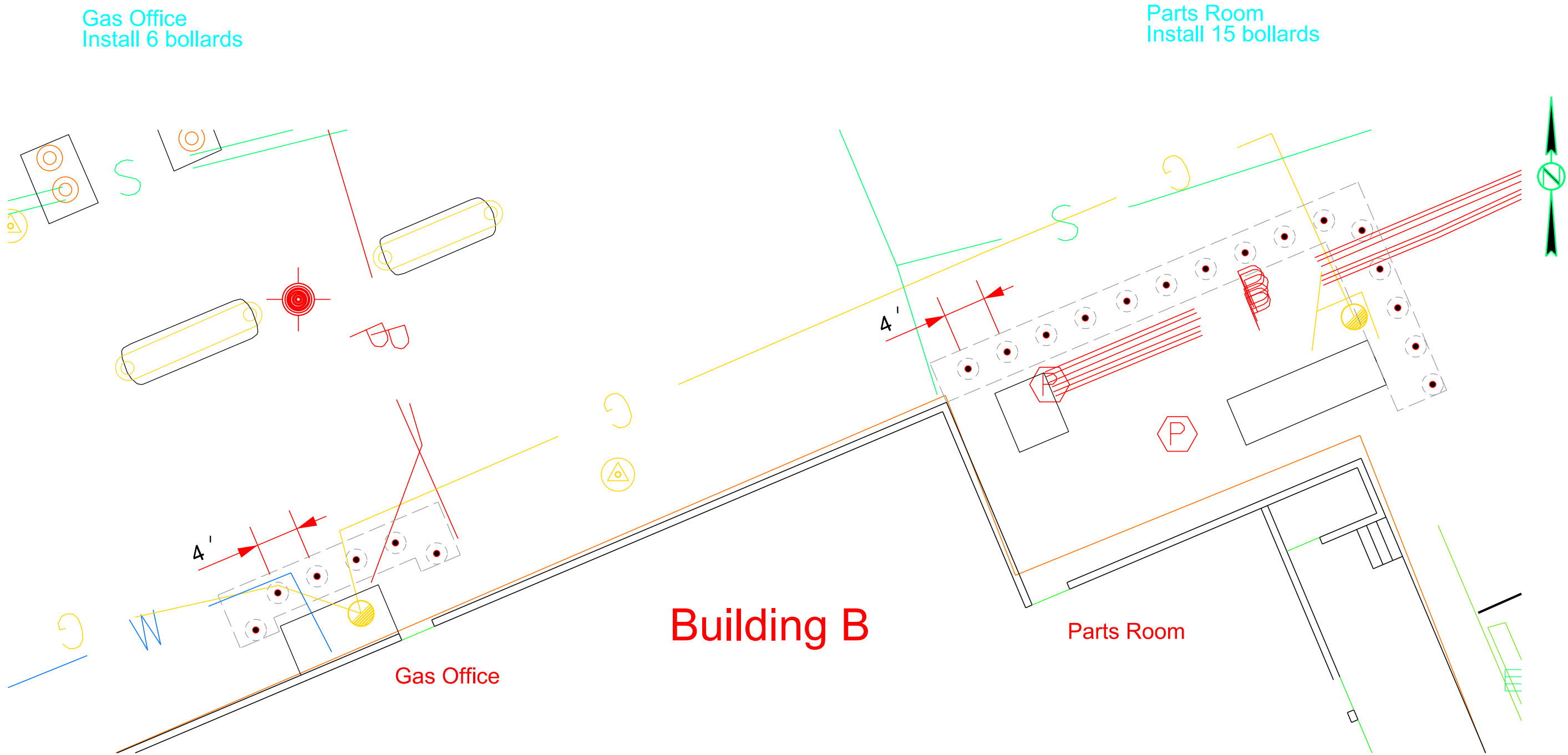


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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	13	17

Plotting Date: 03/19/2019





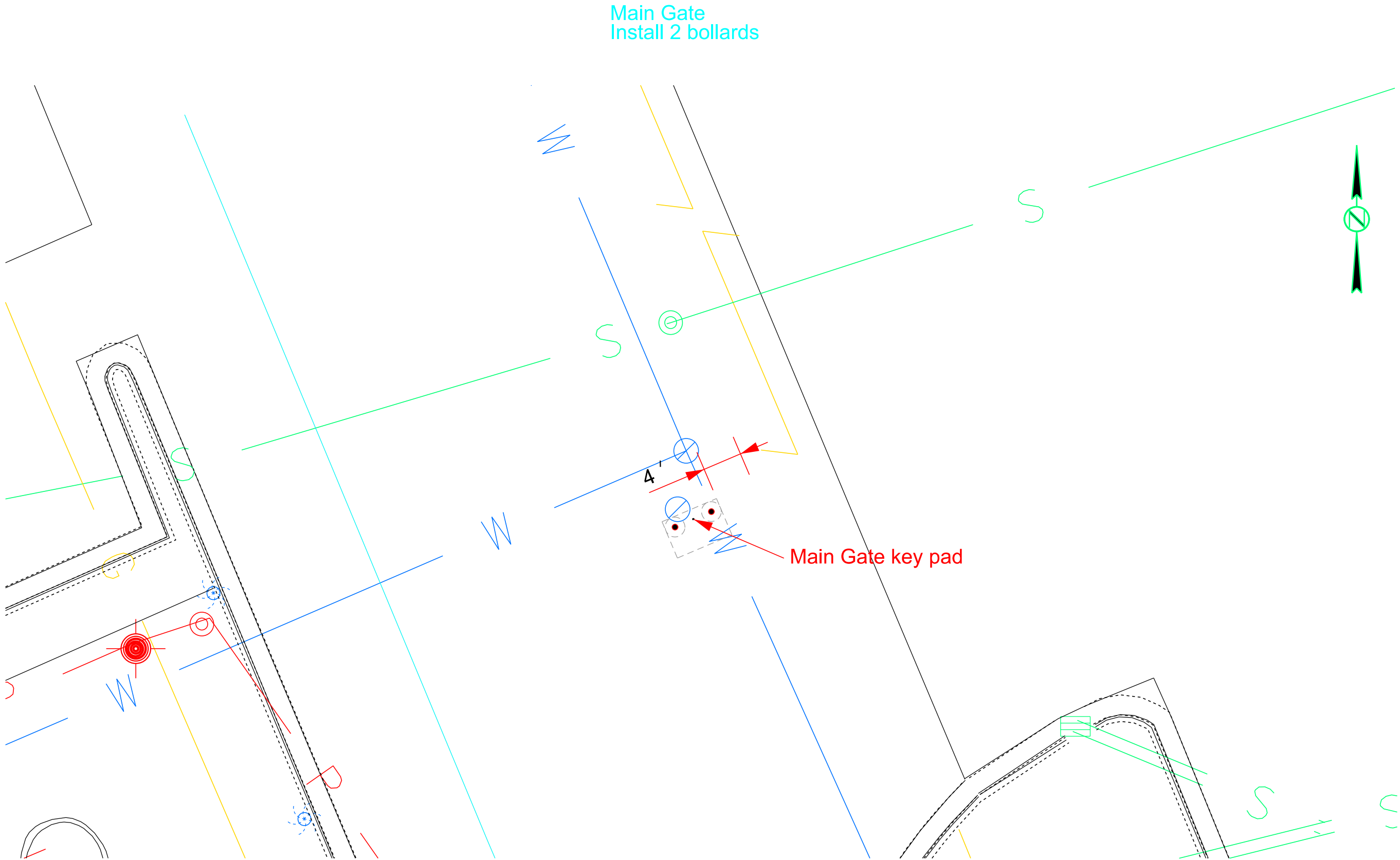
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	14	17

Plotting Date: 03/19/2019

Plot Scale - 1:10

Plotted From - TRRC14610

File - ...bollard layout.dgn



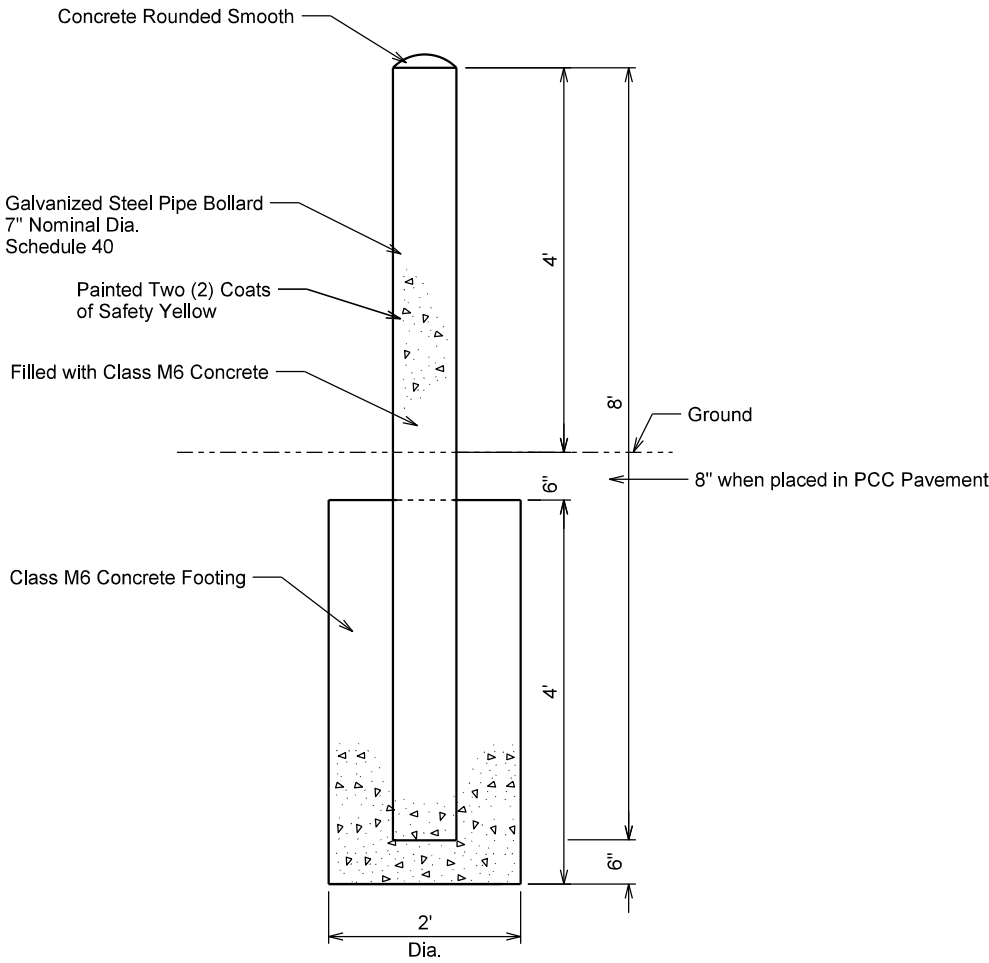
# DETAILS FOR CONCRETE BOLLARDS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	15	17

Plotting Date: 03/19/2019

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Plotted From -  
TRRC14610



SECTIONAL VIEW  
( Section Through Center of Bollard)

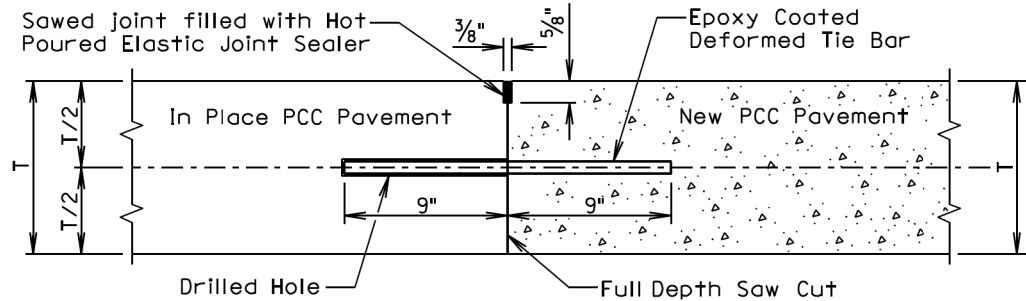
## GENERAL NOTES:

The concrete for the bollard footing shall be class M6 concrete.

The galvanized steel pipe bollard shall be 7" nominal diameter, 8' long, schedule 40, and shall be in conformance with ASTM A53, Grade B. The steel pipe bollard shall be galvanized in accordance with ASTM A123.

All costs for furnishing and installing the bollard including labor, equipment, excavation, and materials including the steel pipe, concrete footing, and paint shall be incidental to the contract unit price per each for "Bollard".

DETAIL A  
TRANSVERSE CONSTRUCTION JOINT WITH TIE BARS



T = In Place PCC Pavement and New PCC Pavement Thickness

GENERAL NOTES:

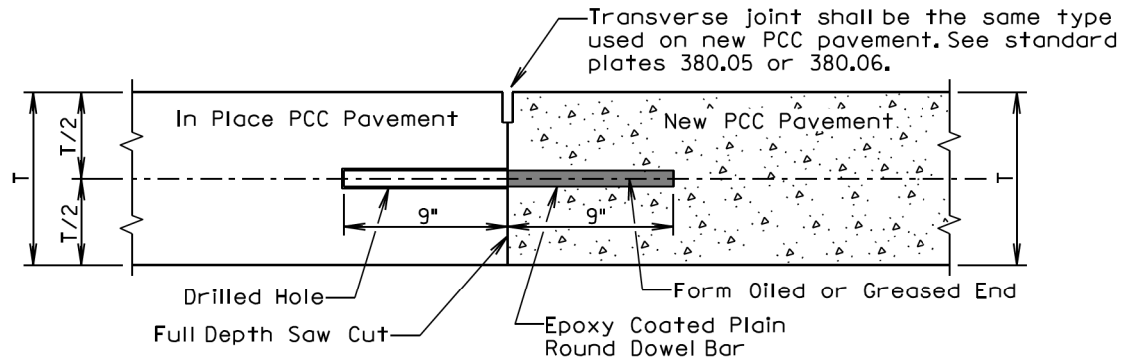
The term "In Place PCC Pavement" in the above drawing indicates that the in place PCC pavement was placed on a previous project.

See sheet 2 of 2 of this standard plate to determine if Detail A shall be used.

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.9 epoxy coated deformed tie bars shall be used in 10 inch thickness and less PCC Pavement and No.11 epoxy coated deformed tie bars shall be used in 10.5 inch thickness and greater PCC Pavement. The tie bar spacing shall be 18 inches center to center and shall be a minimum of 3 inches and a maximum of 9 inches from the pavement edges.

DETAIL B  
TRANSVERSE CONSTRUCTION JOINT WITH DOWEL BARS



T = In Place PCC Pavement and New PCC Pavement Thickness

GENERAL NOTES:

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.

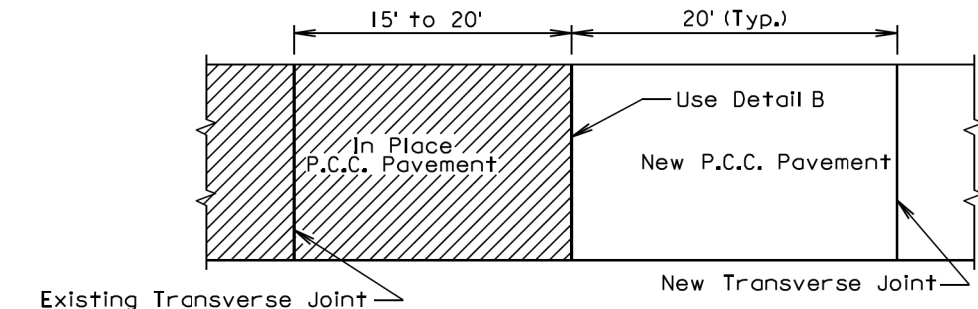
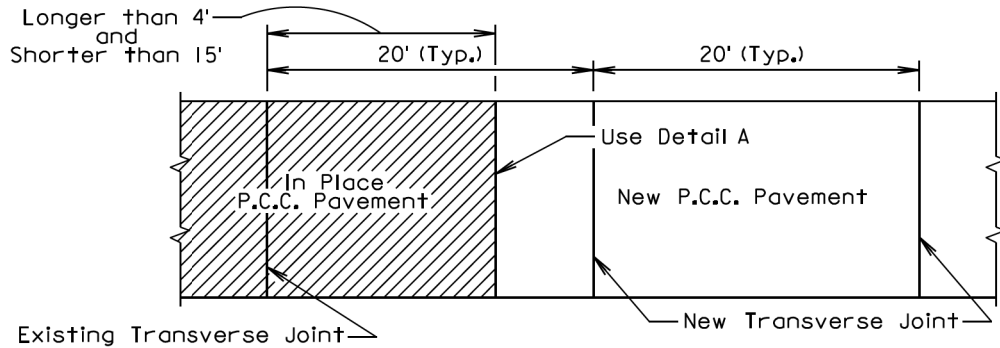
See sheet 2 of 2 of this standard plate to determine if Detail B shall be used.

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

The epoxy coated plain round dowel bar size, number, and spacing shall be the same as detailed on the corresponding dowel bar assembly standard plate (380.01, 380.02, 380.03, or 380.04). The epoxy coated plain round dowel bars shall be a minimum of 3 inches and a maximum of 6 inches from the pavement edges.

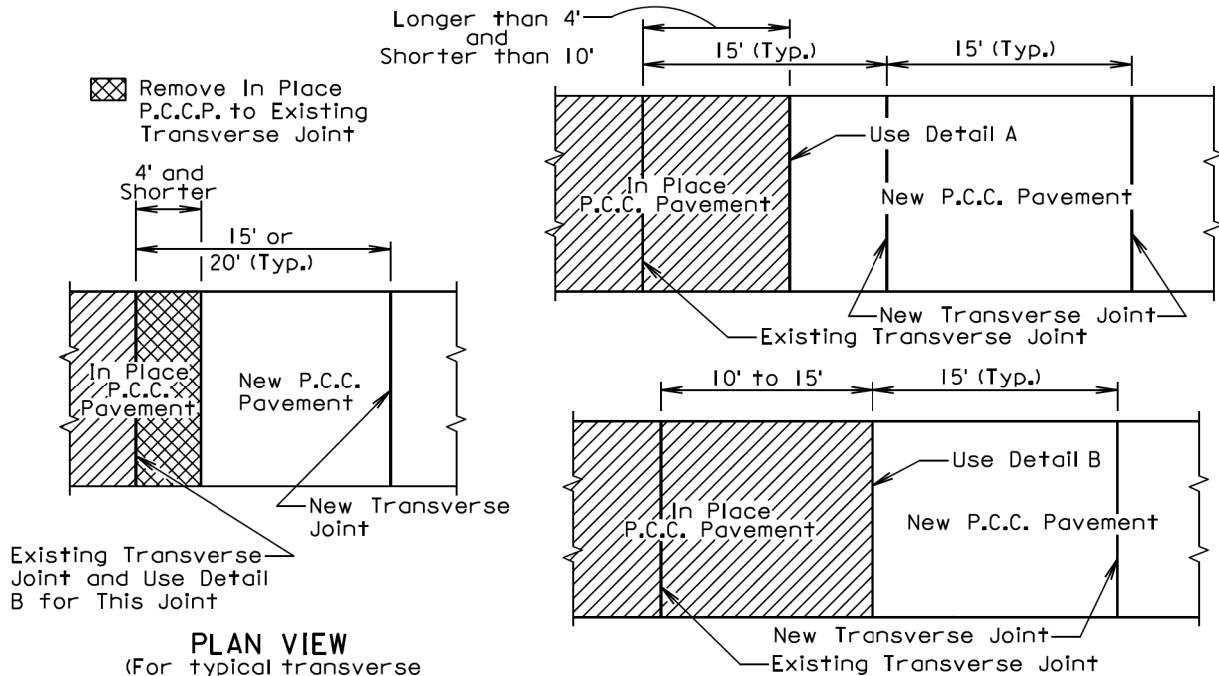
September 6, 2013

Published Date: 1st Qtr. 2019	S D D O T	PCC PAVEMENT TRANSVERSE CONSTRUCTION JOINTS WITH TIE BARS OR DOWEL BARS	PLATE NUMBER 380.08
			Sheet 1 of 2



PLAN VIEW

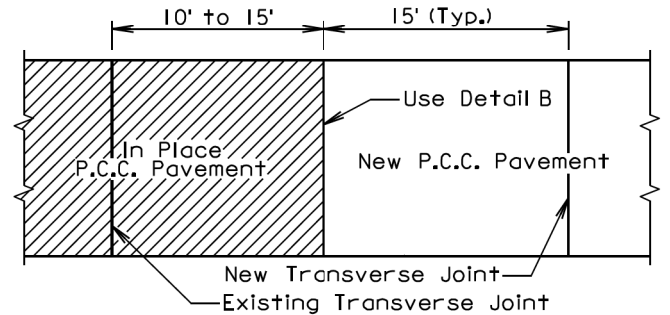
(For typical transverse joint spacing of 20' on the current project)



Existing Transverse Joint and Use Detail B for This Joint

PLAN VIEW

(For typical transverse joint spacing of 15' or 20' on the current project)



PLAN VIEW

(For typical transverse joint spacing of 15' on the current project)

September 6, 2013

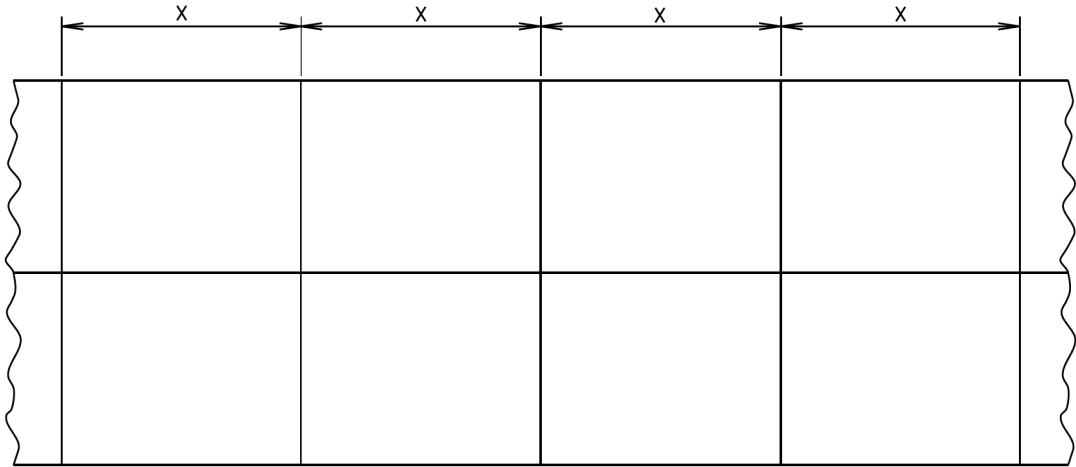
Published Date: 1st Qtr. 2019	S D D O T	PCC PAVEMENT TRANSVERSE CONSTRUCTION JOINTS WITH TIE BARS OR DOWEL BARS	PLATE NUMBER 380.08
			Sheet 2 of 2

Plot Scale - 1:200

Plotted From - TRRC11610

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	M-0009-452	17	17

Plotting Date: 03/19/2019



PCCP Thickness	Transverse Contraction Joint Spacing (X)
8" to 9.5"	15'
10" and Thicker	20'

August 31, 2013

<i>Published Date: 1st Qtr. 2019</i>	<b>S D D O T</b>	<b>PCC PAVEMENT TYPICAL CONTRACTION JOINT SPACING</b>	PLATE NUMBER 380.09
			Sheet 1 of 1