

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED
WIP 410A363
DEUEL COUNTY

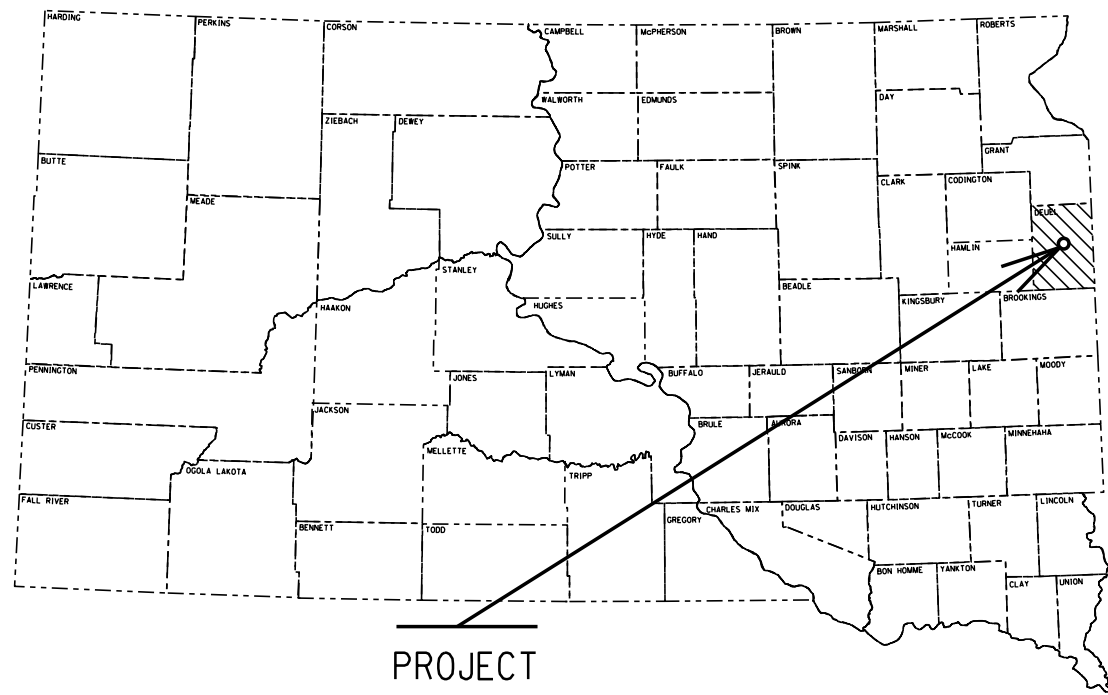
60' X 80' STORAGE BUILDING

OSE# T2216--03X/DEL

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A363	1	6
Plotting Date: 08/06/2015			

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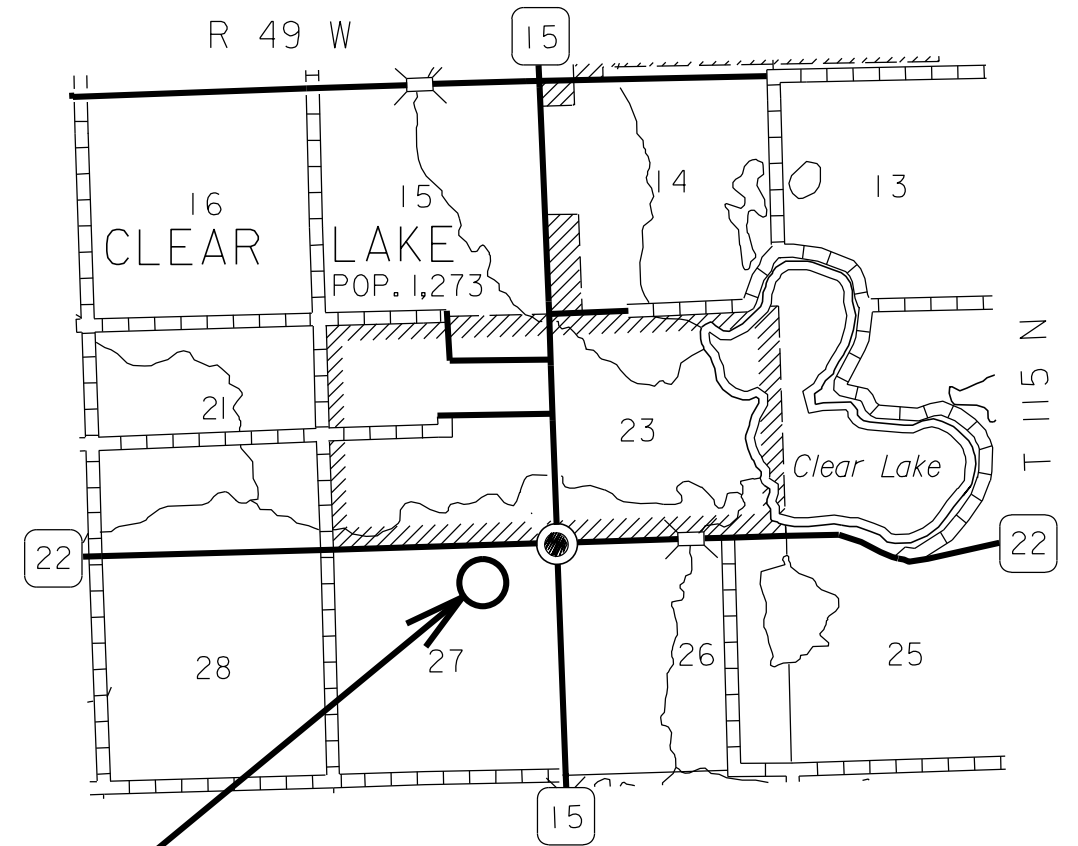
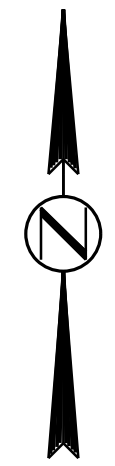


PROJECT



SD Hwy 22

Project Location



PLOT SCALE - 1" = 400'

PLOTTED FROM - TRAB17882

PLOT NAME - 1

FILE - ... \PRJ\410A363\TITLE SHEET.DGN

SPECIFICATIONS

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

PERMITS AND LICENSES

The Contractor shall obtain all necessary State and/or County and/or City Permits and/or Licenses in accordance with Section 7.2 of the Standard Specifications.

SCOPE OF WORK

This project consists of building a **60' wide by 80' long** wood framed metal covered building atop a concrete wall foundation. The buildings intended use is to store deicing salt. The concrete wall foundation shall support the wood columns. The building shall be designed to have one open end.

GENERAL CONSTRUCTION NOTES

Storage areas for materials will be provided within close proximity to the building. Exact location will be discussed in greater detail at the Preconstruction meeting. The Contractor must keep the storage area in a neat and tidy condition. No material may be stored in front of buildings or otherwise interfere with normal operations of the SDDOT.

The Contractor shall protect the parking lot from damage during construction activities. The Contractor shall be responsible for any repairs required, at no cost to the State.

Once work starts on this project, work shall proceed in a continuous manner until the project is complete.

Work hours and access to the site will be discussed at the Preconstruction meeting.

The Contractor shall be responsible for backfilling any excavation required to construct the building foundation and walls. The SDDOT shall be responsible for placing any asphalt concrete surfacing inside the building.

Concrete sidewall of the building shall be constructed with a 3" steel conduit opening to allow future electrical service line to enter building. Location of conduit shall be in the northeast corner of building as directed by the Engineer. Steel conduit shall be located 18" below grade and the ends of the conduit shall extend 1' on each side of the concrete sidewall. The ends of the conduit shall be capped with a threaded cap.

The open end of the building (**East** side) shall have a minimum of **16** feet of unrestricted vertical clearance. The width of the opening at the open end shall be a minimum of **56** feet. This **56** feet minimum opening width allows for a concrete wall adjacent to the side walls to help support the open end of the building.

The Contractor shall notify Matt Brey, Watertown Area Engineer, 605-882-5166 at least two weeks prior to starting work to allow for site work to be completed.

BUILDING DESIGN

- A. The wood frame building structural design shall conform to the requirements of International Building Code (IBC), 2012 Edition. Structural Design shall be provided by the Building Manufacturer and submitted plans shall be signed and sealed by an Engineer Licensed in the state of South Dakota.
1. DEAD LOAD of all building structural components furnished by Building Manufacturer.
 2. Ground Snow Load (pg) = 50 lbs
 3. WIND

Wind Speed (3 second gust)	= 105 mph
Wind Exposure Classification	= C
 4. Collateral/Mechanical Dead Load = 0.0
on the frames & purlins. This load is to be added to the bid Dead Load.
 5. Frost Depth = 40 inches
- B Building design shall comply with the following design requirements.
1. Design of wood members shall be in accordance with formulas published in the latest Edition of the "National Design Specification for Wood Construction".
 2. Trusses shall conform to Truss Plate Institute's 2007 Edition of the "National Design Standard for Metal Plate Connected Wood Truss Construction".

MATERIALS AND FABRICATION

The roof framing shall be designed with the uses of wood trusses. All lumber used in the design of the trusses must be kiln dried and graded in accordance with the current grading rules. Design stresses allowed are those listed in the current additions of respective lumber association's grading rules. The design of wood members must be in accordance with the formulas published in the latest Edition of the "National Design Specification for Wood Construction". Light metal toothed connector plates and joint design must conform to the specifications as set out in the 2007 edition of Truss Plate Institute's "National Design Standard for Metal Plate Connected Wood Truss Construction". Connector plates shall be fabricated from ASTM 446, Grade A, No. 18 and No. 20 gauge steel sheets galvanized with G90 coating.

MINIMUM REQUIREMENTS

Reinforcing Steel for Concrete:

ASTM A615 Grade 60.
#4 Epoxy Coated Reinforcing Bar.
One row spaced @ 2' center to center, both horizontally and vertically in the foundation walls.
Three rows spaced 9" center to center and tied at 4' spacing in the footings.

Steel for Sides, Roof, & Trim:

Colored.
29 gauge thickness.
All steel to be screwed.
Minimum 80,000 psi tensile strength.
40 year paint warranty.
Color coated thickness 0.015 mils.
Base steel 0.0145 mils.
0.0015 mils thickness.
Grade E steel.
Paint thickness 0.0015 mils.
9 ounces galv. per sq. ft.

Concrete

4,000 psi Concrete.
Coarse aggregate shall be crushed ledge rock.

Lumber

Structural building columns shall be pressure preservative treated. Outer plies of the columns shall be continuous and not have any splices.
Pressure preservative treated skirt (splash) boards- minimum #2 grade lumber.
Dry dimensional (no Green) framing lumber- minimum Standard or #2 Graded (no utility or #3).
Lumber to be treated in accordance with the latest Edition American Wood Protection Association (AWPA), Standard UC2 or higher.

Trusses

Engineered pre-fabricated roof trusses (double trusses for interior clear-spans) or rafters.
Truss plates shall be galvanized.

Connectors

All specialty nails, bolts and hangers.
Powder coated color matched screws to attach steel roofing and siding.

Miscellaneous

80' x 36" Soft White Polycarbonate eave lights, both sidewalls.

FOOTINGS

The concrete footings shall be undercut 1' in depth and 1' wider than the width of the concrete footings. The undercut area shall be backfilled with Base Course. Compaction of the Base Course shall be to the satisfaction of the Engineer.

The Base Course material may be obtained from the SDDOT Clear Lake Yard project site and may be used without further testing.

The furnish cost of the state material is \$8.00 per ton.

WARRANTIES

The building vendor shall agree to repair, or at its discretion, to replace free of charge the building framework, roofing, or side panels if directly damaged by snow loads for a period of fifteen (15) years. For a period of five (5) years the building vendor shall repair, or at its discretion replace, free of charge, the building framework, roofing, or side panels if directly damaged by wind loads, unless damage is caused by flying or falling objects. The building vendor shall repair, free of charge, any roof leaks due to defects in material or workmanship for a period of five (5) years. Any other building parts that are defective in materials or workmanship shall be repaired, or replaced at the vendor's discretion, for a period of one (1) year. The paint system on the roofing, walls and trim shall be warrantied for 40 years against fading and chalking. The polycarbonate eave lights shall be warrantied for a period of 10 years against yellowing and damage due to hail.

EXPLANATION OF BID

The submission of a bid is conclusive evidence that the Contractor has investigated and is satisfied as to the conditions to be encountered; the character, quality and scope of the proposed work; the quality and quantity of the materials to be furnished. The Technical Specification of the bid documents are intended as a minimum standard for certain portions or the work. If no technical Specification is referenced, then the Contractor shall provide, as a minimum, those items required by codes, standards and regulations of the industry associated with the work being performed. Unless all bids are rejected, the State will accept the lowest responsive and responsible bid.

The Bid for this project shall include:

1. Providing to the Owner three (3) complete sets of design documents for the project including:
 - A. Footing/Foundation Plan including details for required reinforcing steel based on the loading/reaction requirements of the building.
 - B. Building Plans based on the Owners suggested floor plan and including details for all wall, roof, eaves, trim and moldings, flashings, fasteners, etc. The building shall be of wood frame type. In addition to plans, furnish design calculations and letter of design certification signed by a registered professional engineer licensed in the State of South Dakota.

- C. Standard Specifications for the proposed building which augments the specifications found in the bid documents. The specifications found in the bid documents shall be a minimum standard. The building shall have a minimum dimension of 60'W x 80'L, measured from outside of framing to outside of framing. Minimum building height shall be 16' door opening with 18' minimum height sidewalls.
 - D. Building Plans shall include the method of attachment of the building columns to the concrete foundation sidewalls.
 - E. Provide Owner with choice of manufacturers standard building colors from which the Owner will determine final building color choice.
2. Successful bidder shall allow for a ten (10) working day review and comment period by the South Dakota Department of Transportation to review items called for under Item #1 above.
 3. The contract price shall include all labor, material and equipment necessary to construct the Storage Shed as described herein. Include all concrete work associated with perimeter building footings/foundations.

COMPLETION DATE

This building project has an overall completion date of [November 20, 2015](#). There shall be an interim completion date of [October 9, 2015](#) for the completion of all concrete work required for the building.

Failure to complete all the concrete work by the interim completion date of [October 9, 2015](#) shall result in liquidated damages of \$250 per calendar day.

Failure to complete the building project by the overall completion date of [November 20, 2015](#) shall result in liquidated damages as per Section 8.7 of the Standard Specifications.

PLOT SCALE - 1:7.35

PLOTTED FROM - TRAB17882

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A363	4	6
Plotting Date: 08/05/2015			

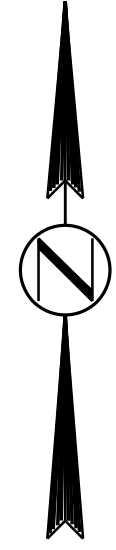
80.0' minimum

Concrete Foundation
8" Minimum Thickness

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4' minimum
6' maximum

60.0' minimum



80' x 60'

Plan View

56' minimum width clear opening

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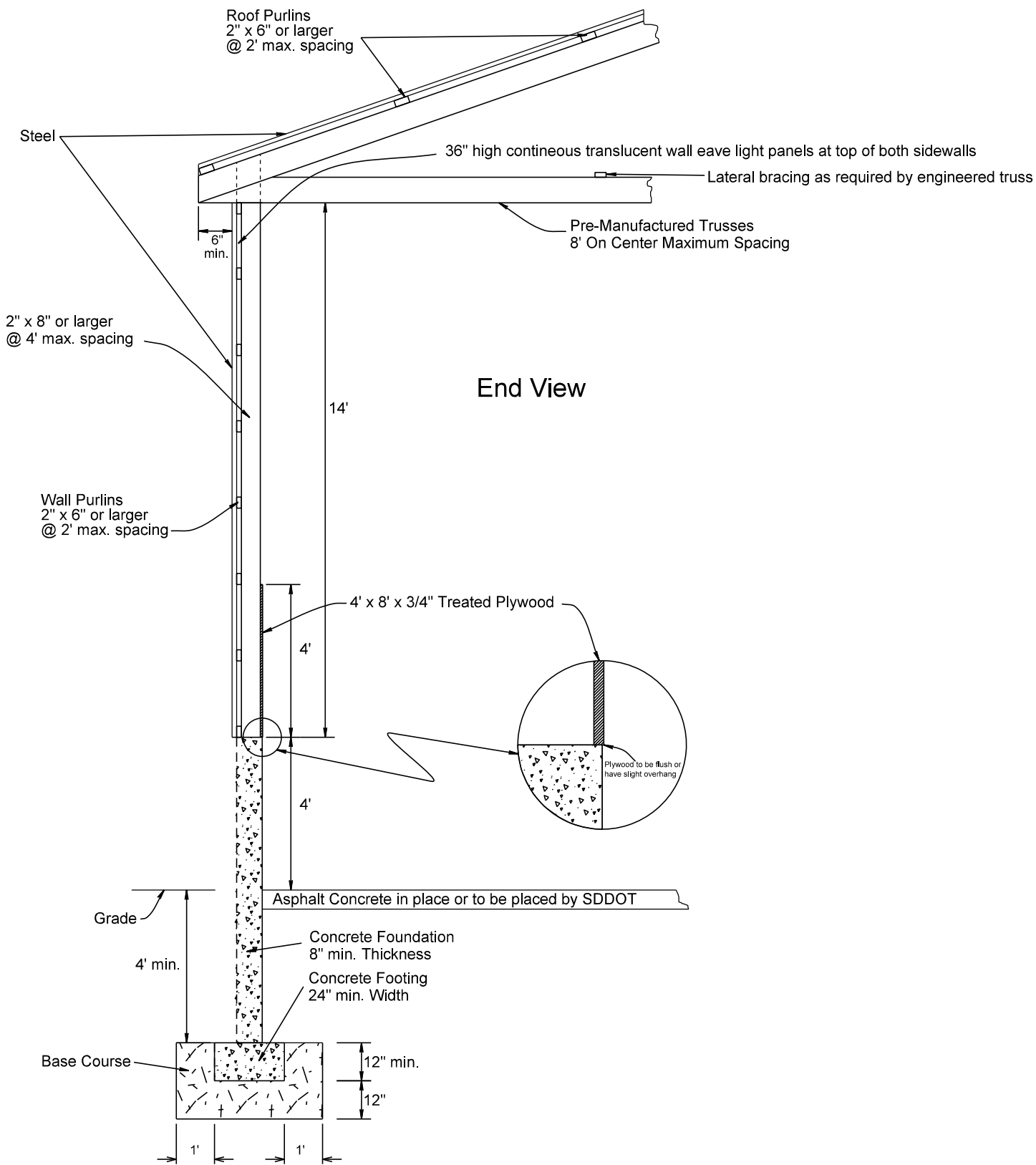
Grade Elevation and building location to be provided by the SDDOT. The Contractor shall be responsible for staking the building so that the building is square.

PLOT NAME - 2

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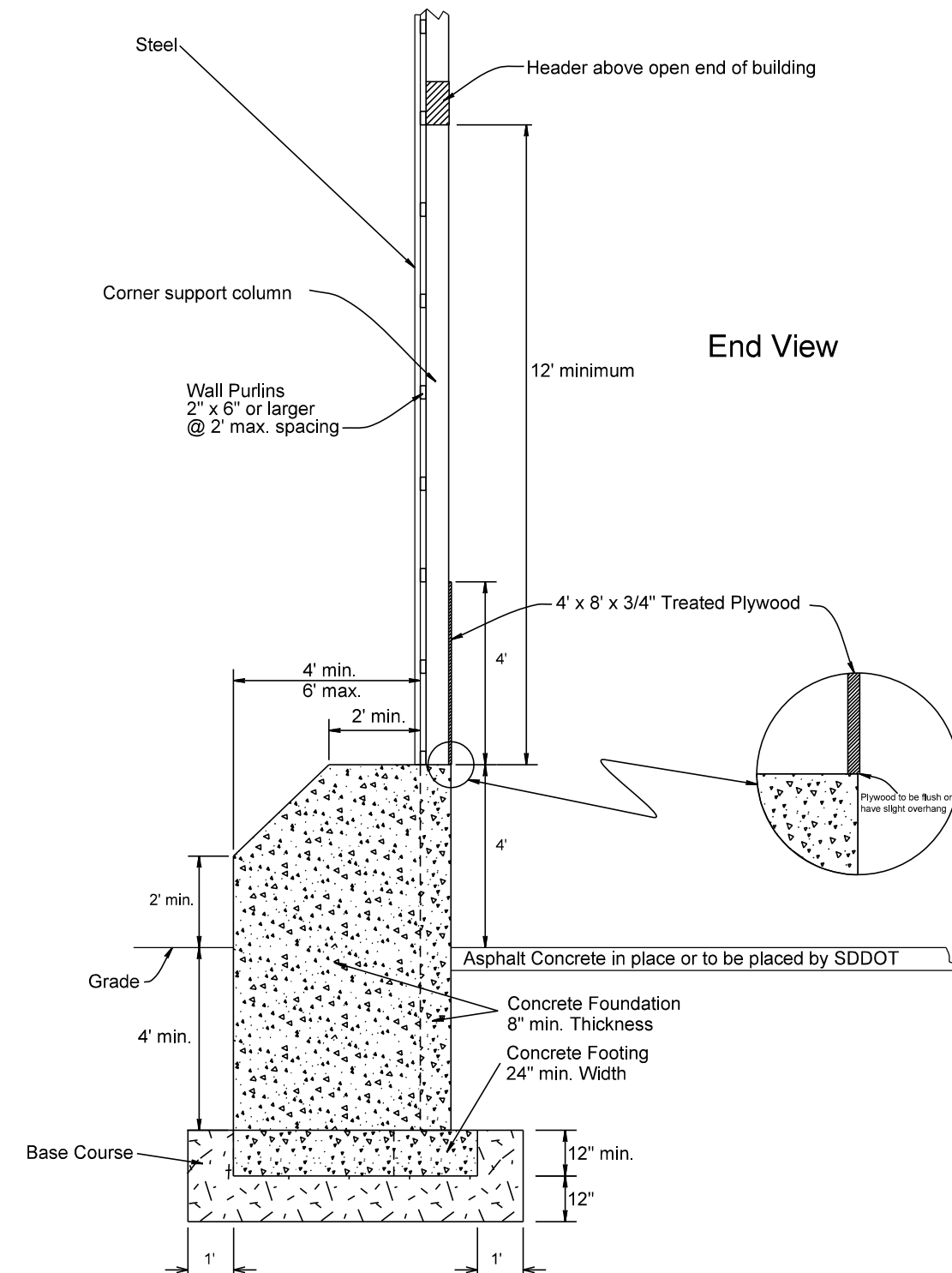
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
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PLOT SCALE - 1:3.6



End View

SIDE WALL SECTION



End View

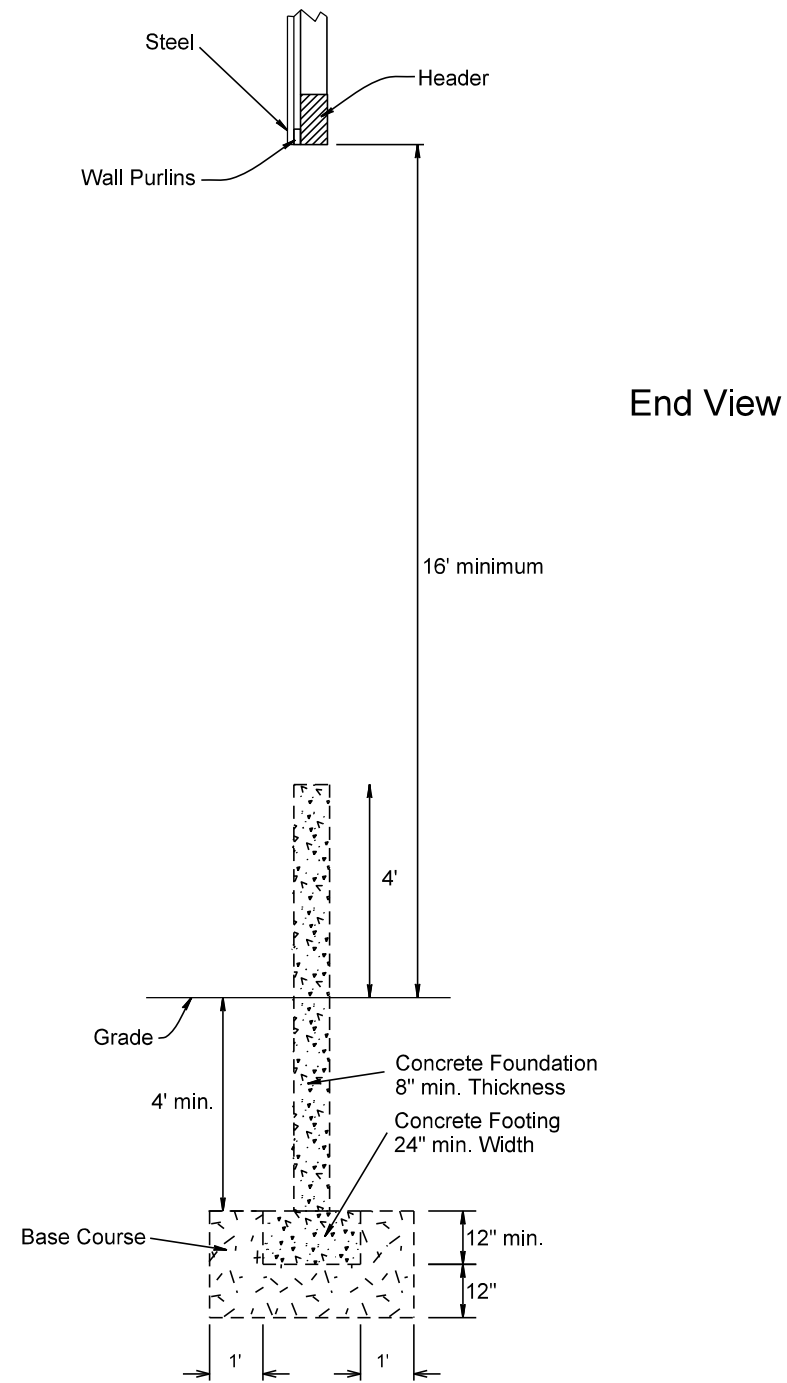
SIDE WALL SECTION AT OPEN BUILDING END

PLOTTED FROM - TRAB17882

PLOT NAME - 3

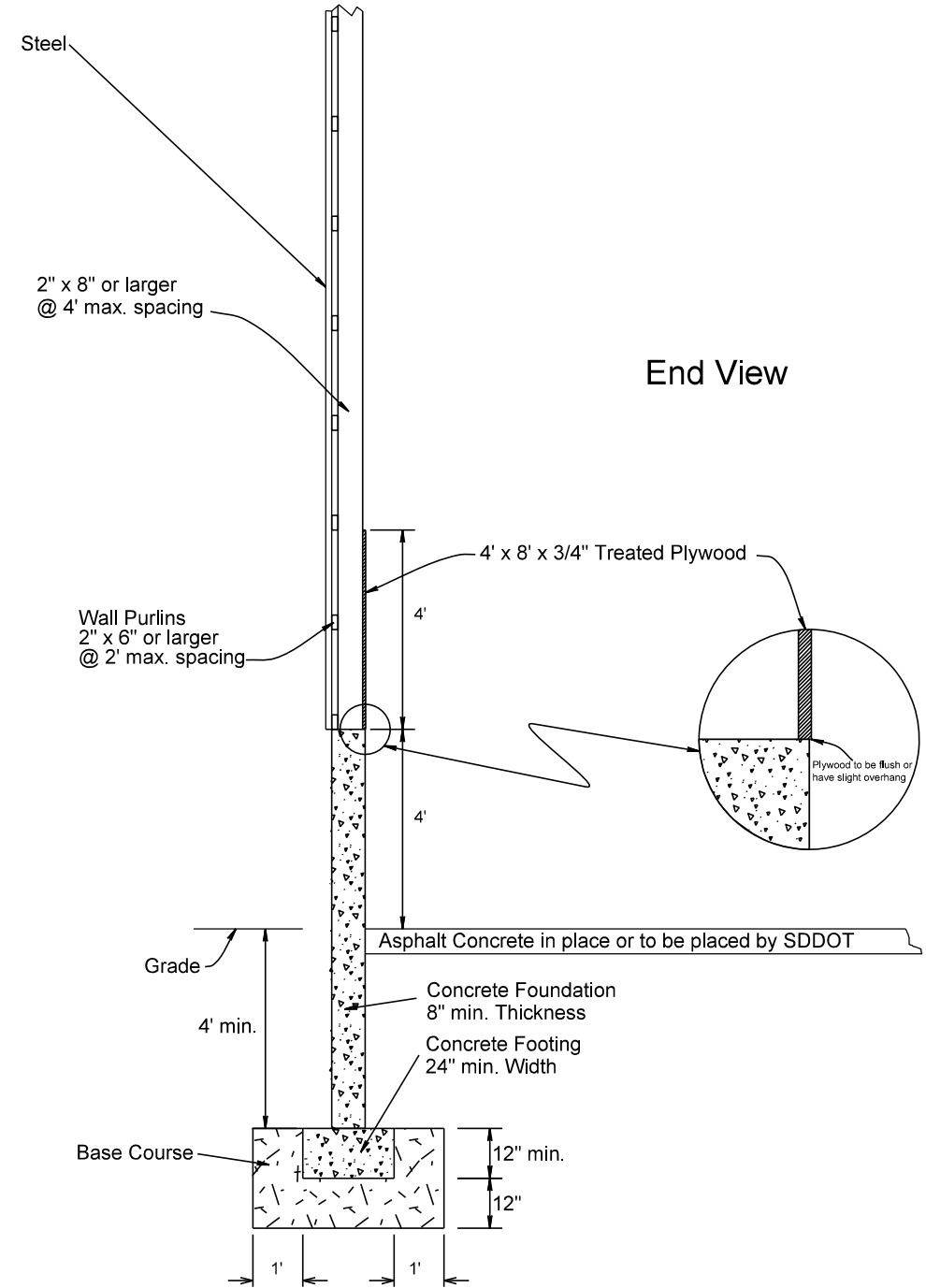
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End View

OPEN END END SECTION



End View

CLOSED END END SECTION