GENERAL NOTES:

1. ALL DIMENSIONS AND CONDITIONS MUST BE VERIFIED IN THE FIELD. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH THE AFFECTED PART OF THE WORK.
2. THE WALL(S) ARE DESIGNED TO BE SELF SUPPORTING AND STABLE AFTER COMPLETED. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURES AND SEQUENCE TO ENSURE SAFETY OF THE STRUCTURES AND ITS COMPONENTS DURING ERECTION. THIS INCLUDES THE ADDITION OF NECESSARY SHORING, SHEETING, TEMPORARY BRACING (AND ACCOMPANYING FOOTINGS), GUYS OR TIEDOWNS.
3. THE DESIGN OF THIS RETAINING WALL SHOWN IN THESE CONSTRUCTION DOCUMENTS IS FOR THE ONE TIME USE AT 900 MAIN ST DEADWOOD, SOUTH DAKOTA 57732.

DESIGN CODES:

- 2021 INTERNATIONAL RESIDENTIAL CODE.

DESIGN LOADS:

1. THE STRUCTURAL SYSTEMS FOR THE RETAINING WALLS HAVE BEEN DESIGNED BASED UPON THE FOLLOWING SOIL PARAMETERS.

   EXISTING SITE SOIL :
   - Ø = 24°
   - γ = 120 lb/ft^3
   - c = 0 lb/ft^2

   DRAINAGE FILL :
   - Ø = 38°
   - γ = 135 lb/ft^3
   - c = 0 lb/ft^2

2. WALLS HAVE BEEN DESIGNED USING LATERAL EARTH PRESSURES BASED FROM SOIL PROPERTIES DESCRIBED ABOVE. CONTRACTOR SHALL PROVIDE DRAINAGE FILL MEETING THESE SOIL PARAMETERS.

FOUNDATIONS:

1. FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 1,800 PSF ON EXISTING SOILS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PREPARE LEVELING PAD SUBGRADE FOR THIS ALLOWABLE BEARING PRESSURE.

DRAIN TILE:

1. DRAIN TILE SHALL BE 4" PERFORATED PVC CONFORMING TO ASTM D 1784 AND ASTM D 2729.
2. ALL FITTINGS SHALL BE PVC OR STYRENE.

GEOTEXTILE FABRIC:

1. FABRIC SHALL BE NON WOVEN US 205NW FABRIC AND SATISFY REQUIREMENTS PER AASHTO M-288, SURVIVABILITY CLASS 1.
2. FABRIC SHALL BE INSTALLED AT TOP HORIZONTAL AND BACK VERTICAL INTERFACE BETWEEN IMPORTED GRAVEL FILL AND ADJACENT SOIL.
3. CARE SHALL BE TAKEN BY CONTRACTOR AS TO NOT PUNCTURE FABRIC DURING INSTALLATION.

CLEAN ROCK IMPORTED FILL GRADATION:

1. WHERE CLEAN ROCK IS INDICATED IN PLANS, MATERIAL SHALL BE A CRUSHED LIMESTONE ROCK HAVING A MINIMUM OF TWO FRACTURED FACES AND MEET THE FOLLOWING GRADATION REQUIREMENTS BY DRY WEIGHT:

PASSING 1½" SIEVE :	100%
PASSING #200 SIEVE:	5% MAX

2. PLACE MATERIAL IN MAXIMUM 8" LIFTS AND COMPACT WITH HAND HELD EQUIPMENT.

MODULAR BLOCK RETAINING WALL:

1. MODULAR BLOCK RETAINING WALL UNITS SHALL BE REDI-ROCK AS PRODUCE BY PETE LIEN & SONS.
2. REDI-ROCK BLOCK TEXTURE (LIMESTONE OR LEDGESTONE) SHALL BE PER OWNER'S CHOICE. BLOCK TEXTURE HAS NO AFFECT ON THE ENGINEERING OF THE SYSTEM.
3. LEVELING PAD SHALL BE A 12" THICK COMPACTED GRANULAR FILL AS INDICATED IN THE STRUCTURAL DRAWINGS. EXISTING IN-SITU FOUNDATION SOILS SHALL BE INSPECTED AND APPROVED PER THE GEOTECHNICAL RECOMMENDATIONS PRIOR TO LEVELING PAD PLACEMENT.
4. FREE DRAINING BACKFILL MATERIAL SHALL BE A CLEAN ROCK AS INDICATED. ORGANIC SOILS OR FROST SUSCEPTIBLE SOILS SHALL NOT BE USED WITHIN A 12" AREA TAKEN FROM THE BACK FACE OF THE WALL.
5. WALL UNIT INSTALLATION SHALL BE AS PER THE MANUFACTURER'S INSTALLATION RECOMMENDATIONS. ONLY HAND-OPERATED PLATE COMPACTING EQUIPMENT SHALL BE USED WITHIN 3 FEET OF THE WALL TO ACHIEVE CONSOLIDATION. COMPACT BACKFILL AS PER THE SDDOT STANDARDS.

STRUCTURAL SHEET INDEX

SHEET NUMBER	SHEET NAME
S001	STRUCTURAL NOTES AND IBC INSPECTION TABLES
S200	NEW RETAINING WALL DETAIL

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
12764
JARED D.
SCHIPPERS
SOUTH DAKOTA
08/05/25

Albertson Engineering Inc.
605.343.9606
www.albertsonengineering.com
Offices in Rapid City,
Sioux Falls, & Winner

CONSULTANT

PROJECT IDEN:

900 MAIN STREET
RETAINING WALL

AEI PROJECT NO 2025-243
DEADWOOD, SOUTH DAKOTA

ISSUE BLOCK:

NO	ISSUE TYPE	ISSUE DATE

MANAGEMENT:

PROJECT NO: 25-243
DRAWN BY: BAD
CHECKED BY: JDS

SHEET TITLE:

STRUCTURAL NOTES

SHEET IDENTIFICATION:

S001

01 OF 02

RETAINING WALL NOTES:

1. SEE SHEET S001 FOR GENERAL STRUCTURAL NOTES.
2. DIMENSIONS AND ELEVATIONS ARE APPROXIMATE MAY VARY. CONTRACTOR SHALL VERIFY DIMENSIONS BEFORE CONSTRUCTION COMMENCES.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL OVERHEAD & UNDERGROUND UTILITIES AND TAKING ALL NECESSARY PRECAUTIONS TO PREVENT DAMAGING ALL UTILITIES. ANY DAMAGE SHALL BE RESTORED TO MATCH EXISTING AT THE COST OF THE CONTRACTOR.
4. BLOCK SIZES SHOWN IN SCHEDULE ARE MINIMUM SIZES. AT CONTRACTOR'S CHOICE, LARGER BLOCKS CAN BE SUBSTITUTED AT ANY LOCATION

REDI- ROCK WALL SCHEDULE (REAR WALL)

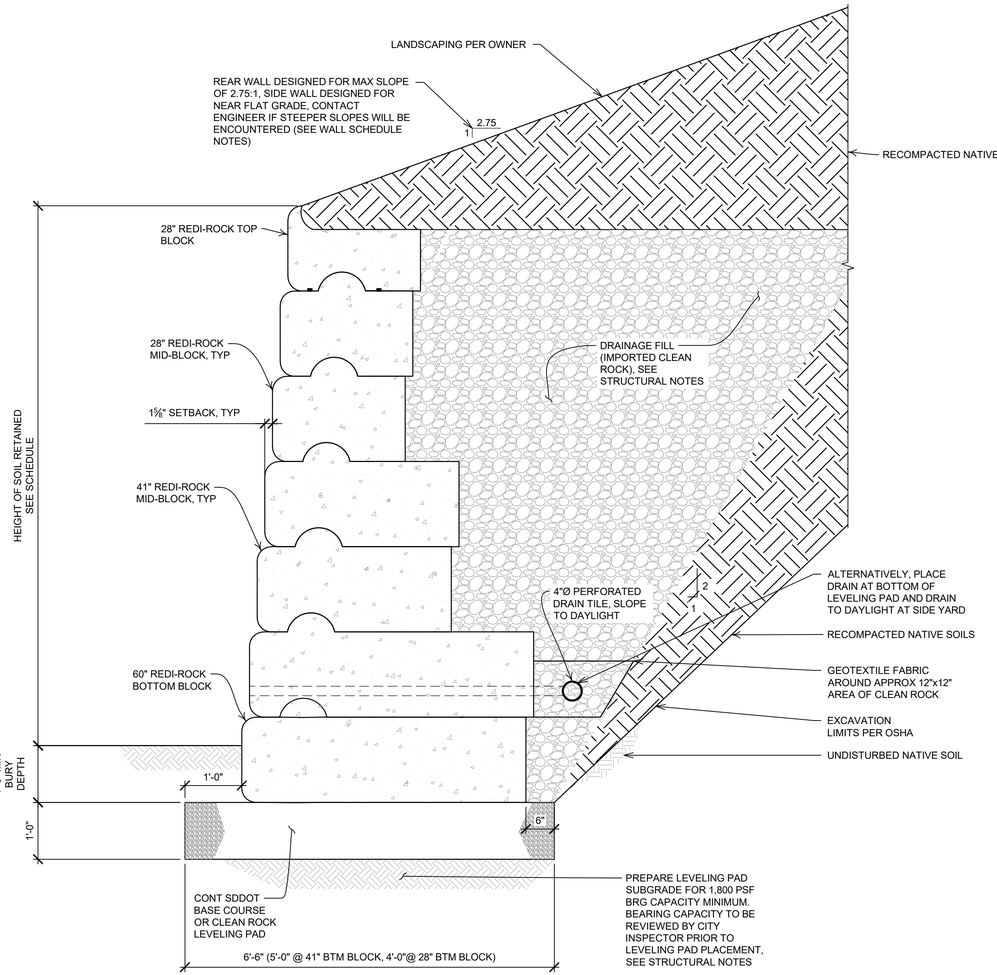
HEIGHT OF SOIL RETAINED	MINIMUM BURY DEPTH	NO. OF 60" BLOCKS	NO. OF 41" BLOCKS	NO. OF 28" BLOCKS	ACTUAL BEARING PRESSURE
9' - 6" TO 8' - 0"	1' - 0"	2	2	3	1800 PSF

NOTE: BACK-SLOPE AT REAR WALL IS DESIGNED FOR NO STEEPER THAN 2.75H:1V SLOPE MEASURED PERPENDICULAR TO THE WALL. NOTIFY ENGINEER IF STEEPER SLOPES WILL BE ENCOUNTERED AS THE WALL WILL REQUIRE REDESIGN.

REDI- ROCK WALL SCHEDULE (SIDE WALL)

HEIGHT OF SOIL RETAINED	MINIMUM BURY DEPTH	NO. OF 60" BLOCKS	NO. OF 41" BLOCKS	NO. OF 28" BLOCKS	ACTUAL BEARING PRESSURE
8' - 0" TO 6' - 6"	1' - 0"	0	2	4	1600 PSF
6' - 6" TO 5' - 0"	1' - 0"	0	1	4	1100 PSF
5' - 0" TO 3' - 6"	1' - 0"	0	0	4	850 PSF
< 3' - 6"	1' - 0"	0	0	AS REQ'D	-

NOTE: BACK-SLOPE AT SIDE WALL IS DESIGNED FOR NEAR FLAT SLOPE MEASURED PERPENDICULAR TO THE WALL (5H:1V SLOPE OR FLATTER). NOTIFY ENGINEER IF STEEPER SLOPES WILL BE ENCOUNTERED AS THE WALL WILL REQUIRE REDESIGN.



TYP RETAINING WALL DETAIL

SCALE: 3/4" = 1'-0"

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
12764
JARED D. SCHIPPERS
SOUTH DAKOTA
08/05/25

Albertson Engineering Inc.
605.343.9606
www.albertsonengineering.com
Offices in Rapid City,
Sioux Falls, & Winner

CONSULTANT

PROJECT IDEN:

900 MAIN STREET
RETAINING WALL

AEI PROJECT NO 2025-243
DEADWOOD, SOUTH DAKOTA

ISSUE BLOCK:

NO	ISSUE TYPE	ISSUE DATE

MANAGEMENT:

PROJECT NO: 25-243
DRAWN BY: BAD
CHECKED BY: JDS

SHEET TITLE:

NEW RETAINING WALL DETAIL

SHEET IDENTIFICATION:

S200

01 OF 02