

BUILDING BACKFILL

PART 1 - GENERAL

1.01 SUMMARY

A. Section includes:

1. Building perimeter and site structure backfilling to subgrade elevations.
2. Fill under slabs on grade.
3. Consolidation and compaction.
4. Fill for over-excavation.

1.02 REFERENCES

- A. ANSI/ASTM C136 - Method for Sieve Analysis of Fine and Coarse Aggregates
- B. ANSI/ASTM D1557 - Test Methods for Moisture-Density Relations of Soils and Soil-Aggregate Mixtures

1.03 SUBMITTALS

- A. Testing laboratory reports indicating that material for backfill under structure meets requirements of this Section.
- B. Field density test reports of backfill in place.

PART 2 - PRODUCTS

2.01 FILL MATERIALS

- A. Structural Fill (Crushed Gravel, ADT Spec. 704.05A, Fine): Free of shale, clay, friable material, sand, debris; graded in accordance with ANSI/ASTM C136 within the following limits:

Sieve Size	Percent Passing
2"	100
1 1/2"	90 - 100
No. 4	30 - 60
No. 100	0 - 12
No. 200	0 - 6

- B. Compacted Fill/Granular Backfill: Free of shale, clay, friable material, debris, and organic matter, graded in accordance with ANSI/ASTM C136 within the following limits:

Sieve Size	Percent Passing
3"	100
3/4"	75 - 100
No. 4	20 - 100
No. 100	0 - 20
No. 200	0 - 6

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify fill materials to be reused are acceptable.
- B. Verify underground tanks are anchored to their own foundation to avoid flotation after backfilling.

3.02 PREPARATION

- A. Generally, compact subgrade to density requirements for subsequent backfill materials.
- B. Cut out soft areas of subgrade not capable of insitu compaction. Backfill with crushed gravel fill and compact to density equal to or greater than requirements for subsequent backfill material.
- C. Prior to placement of aggregate base course material, compact subsoil to 95 percent of its maximum dry density in accordance with ANSI/ASTM D1557.

3.03 BACKFILLING

- A. Backfill areas to contours and elevations with unfrozen materials.
- B. Systematically backfill to allow maximum time for natural settlement. Do not backfill over porous, wet, frozen or spongy subgrade surfaces.
- C. Place geotextile fabric as shown in the plans.
- D. Granular Backfill: Place and compact materials in continuous layers not exceeding 8 inches compacted depth.
- E. Employ a placement method that does not disturb or damage foundation perimeter drainage and utilities in trenches.
- F. Maintain optimum moisture content of backfill materials to attain required compaction density.
- G. Backfill against supported foundation walls: Do not backfill against unsupported foundation walls. No backfill material shall be placed against a newly completed structure until the concrete has been cured for 7 days.
- H. Backfill simultaneously on each side of unsupported foundation walls until supports are in place.
- I. Slope grade away from building a minimum of 1/4 inch per foot, or as shown in plans, unless noted otherwise.
- J. Make grade changes gradual. Blend slope into level areas.

3.04 TOLERANCES

- A. Surface of fill under building slabs shall be graded smooth and even, free of voids, compacted as specified, and to the required elevation. Fill shall be final graded to within a tolerance of 1/2" when tested with a 10' straight edge.

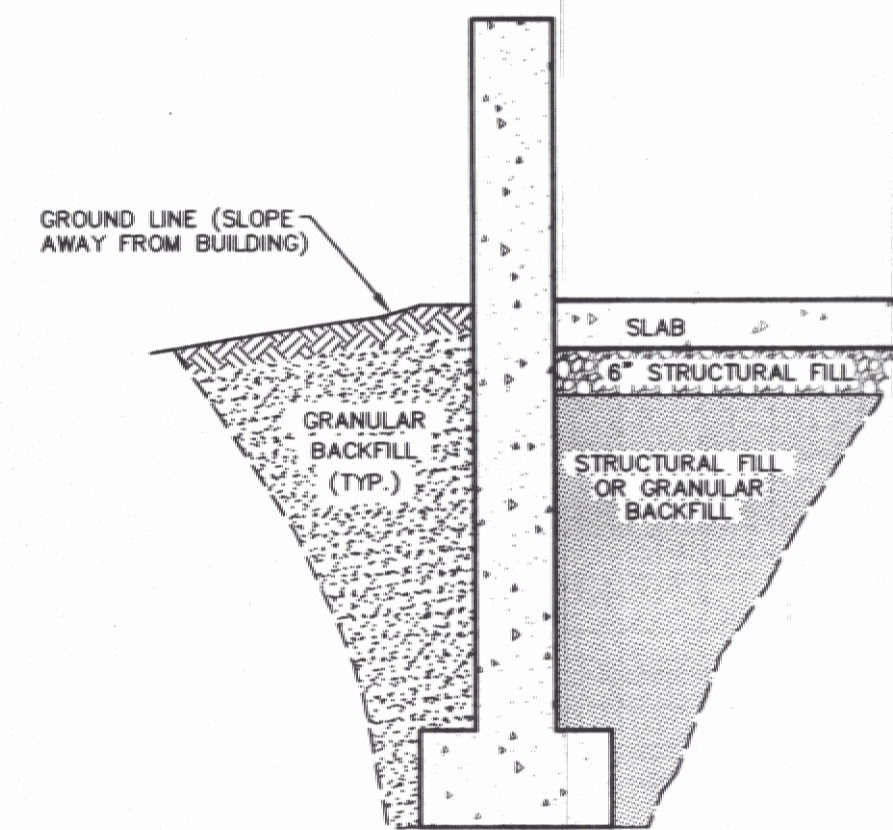
3.05 FIELD QUALITY CONTROL

- A. Compaction Requirements: Modified Proctor/ASTM D1557.
- B. If tests indicate Work does not meet specified requirements, remove Work, replace and retest at no cost to Owner.

3.06 SCHEDULE

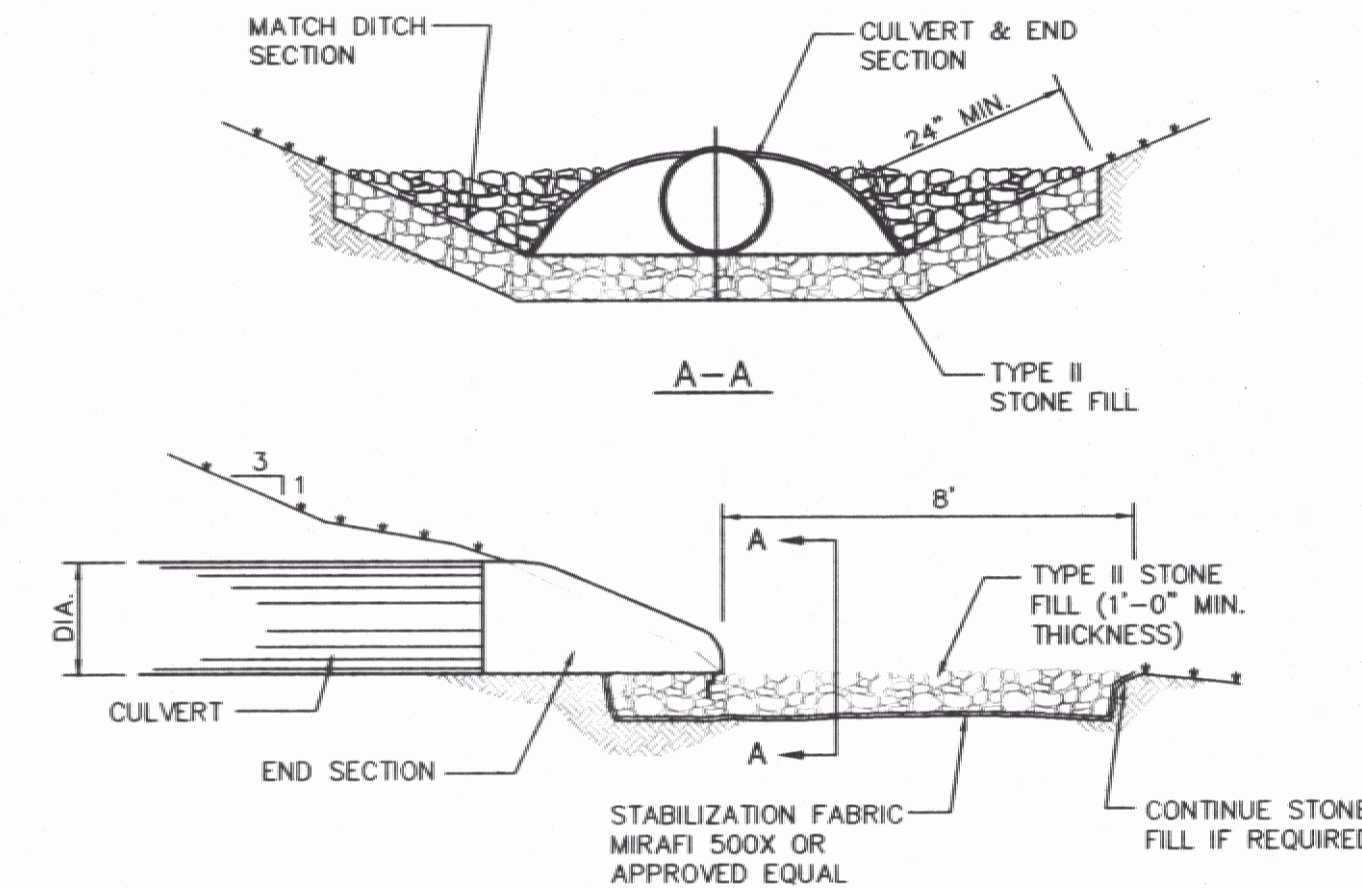
All backfills to be placed in 8" (Maximum) lifts, compacted as specified below:

LOCATION	MATERIAL	% COMPACTION MODIFIED PROCTOR ASTM D-1557
Under Footings	Undisturbed Native Material; or Structural Fill	98%
Interior Slab-on-Grade	Structural Fill	95%
Interior, Adjacent to Foundation Walls	Structural Fill; or Granular Backfill	95%
Exterior, Adjacent to Foundation Walls	Structural Fill; or Granular Backfill	90%



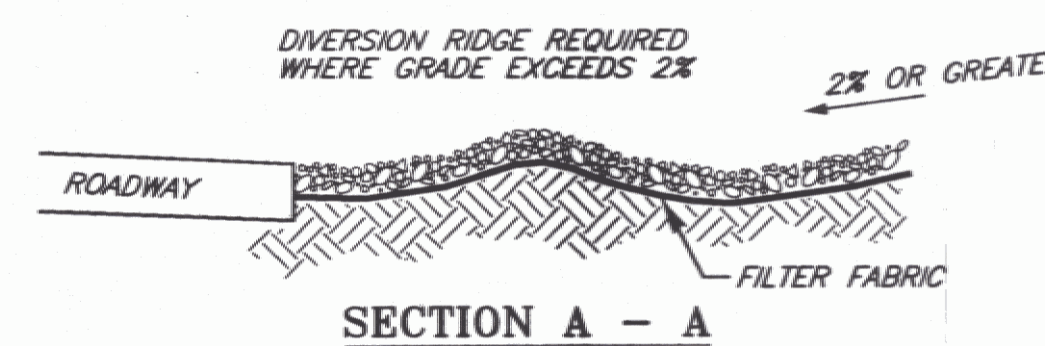
TYPICAL FOUNDATION BACKFILL SECTION

N.T.S.

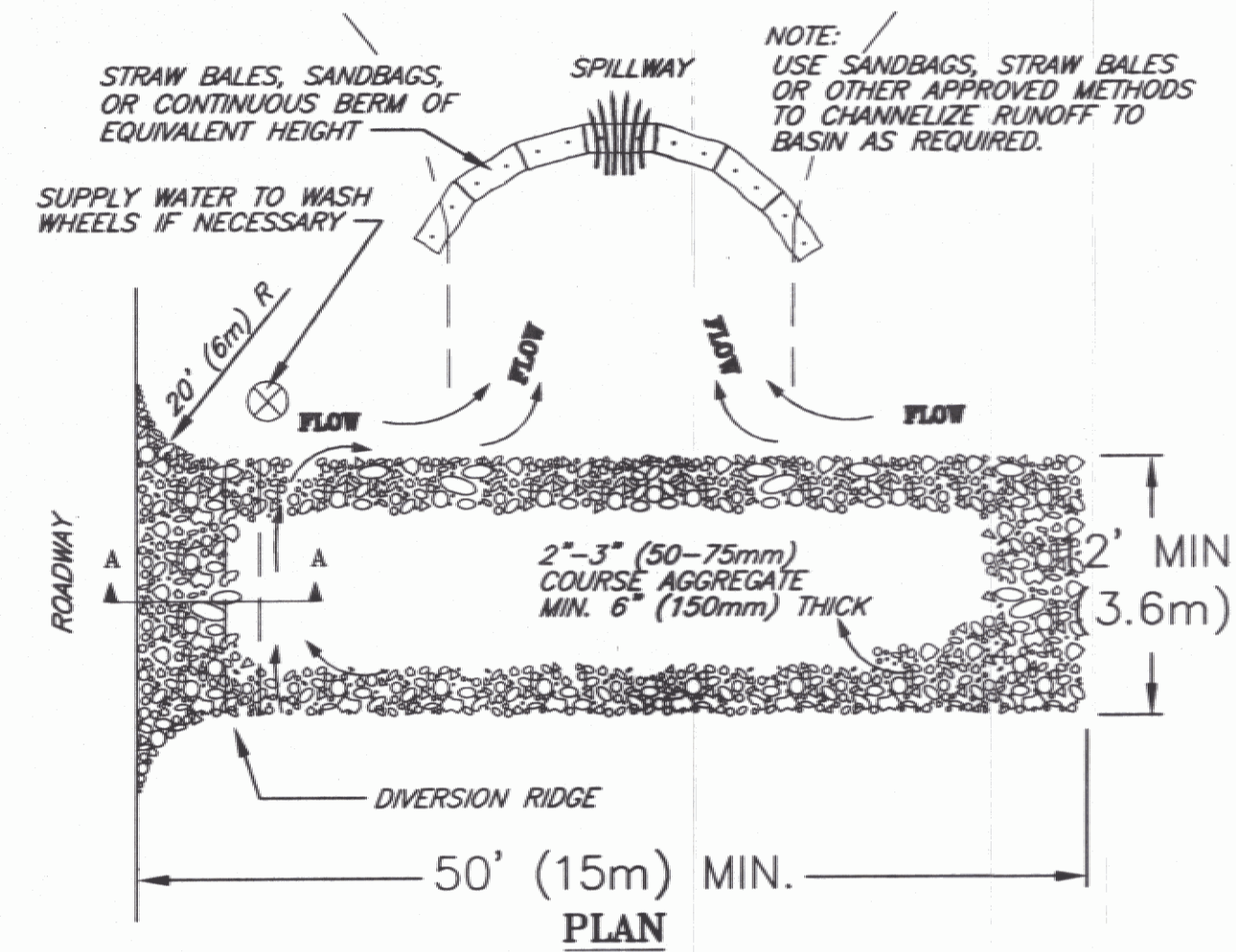


END SECTION DETAIL

N.T.S.



SECTION A - A



PLAN

NOTES:

1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.

STABILIZED CONSTRUCTION ENTRANCE

N.T.S.

SITE ENGINEER:



CIVIL ENGINEERING ASSOCIATES, INC.
P.O. BOX 485 SHELburne, VT 05482
802-985-2323 FAX: 802-985-2271 web: www.ceavt.com

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DRAWN

CJG

CHECKED

BCE

APPROVED

BCE

OWNER:



STATE OF VERMONT

VERMONT AGENCY OF TRANSPORTATION

MONTPELIER, VERMONT

PROJECT:

SNOW REMOVAL EQUIPMENT BUILDING

ROUTE 7B
CLARENDON, VERMONT

DATE	CHECKED	REVISION

BUILDING BACKFILL and SITE NOTES and DETAILS

DATE
12/28/2005
SCALE
AS SHOWN
PROJ. NO.
05102.03

DRAWING NUMBER
C2.1