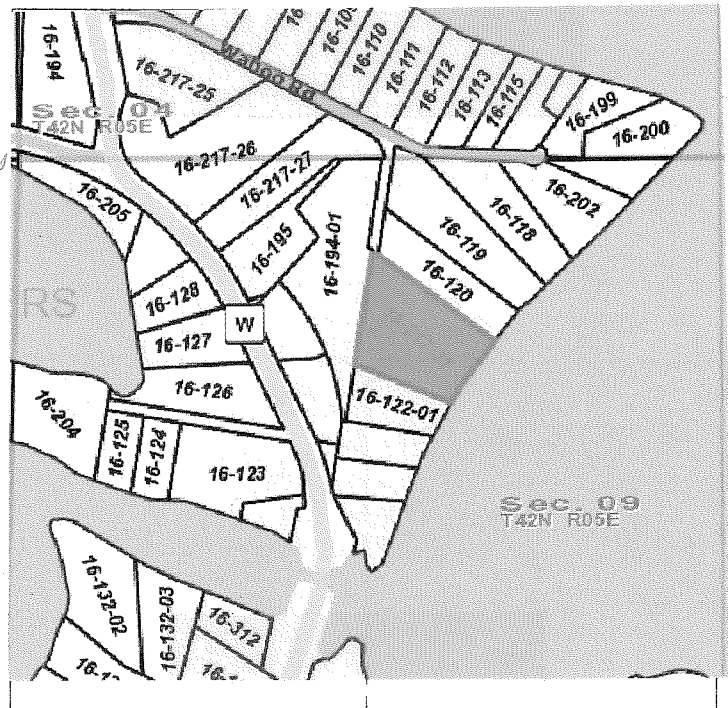


CONSTRUCTION PLAN

PRACTICE ATP 50.8 Streambank + Shoreline Protection
LANDOWNER Manitowish Waters LLC - Bill Rudy
ADDRESS 150 City Highway W,
LANDOWNER PHONE NO. 608-828-5006 COUNTY Vilas
TOWNSHIP Manitowish Waters T 42 N, R 05 E, Sec. 09
FIELD OFFICE Vilas Land & Water TELEPHONE NO. 715-479-3747

Sheet	Contents
1	<u>Cover page</u>
2	<u>Construction Notes</u>
3	<u>Estimated Quantities</u>
4	<u>Plan View</u>
5	<u>Typical Cross-section</u>
6	<u>Specific Cross-sections</u>
7	<u>Specs + Standards</u>
8	
9	
10	
11	
12	



LOCATION MAP

DIGGERS HOTLINE
Call 3 Work Days Before You Dig!
Toll Free 1-800-242-8511
Milw. Area 1-414-259-1181
TDD 1-800-542-2289



Not to Scale

NOTICE TO LANDOWNERS AND CONTRACTORS REGARDING UTILITIES

No representation is made by the USDA Natural Resources Conservation Service or the County Land Conservation Department as to the existence or nonexistence of underground hazards. Prior to the start of construction the owners of utilities must be notified of the pending construction. You will be liable for damages resulting from construction activities. (Call Diggers Hotline)

CONSTRUCTION DRAWINGS AND SPECIFICATIONS ACCEPTANCE

I/we have reviewed and do accept the attached plans. I/we agree to have this project constructed in accordance with these plans and specifications and to notify all affected utility companies.

Signed: W. H. Rudy Date: 2-12-12
Designed by: Quita Sheehon Date: 1-23-12
Checked by: Stacy D. Dehne Date: 1-23-12
Approved by: Stacy D. Dehne Date: 1-31-12
Construct Approved by: Stacy D. Dehne Date: 3-14-12
Job Approval Class II

Sheet 1 of 5

Project installed according to and meet NRC standards and specifications. SDD

General Construction Notes
Shoreland Protection

1. The owner is responsible for obtaining any necessary permits from town, county, state, US Army Corps of Engineers and/or tribe. All permits shall be acquired before construction begins. (DNR permit applied for by landowner).
2. Before the start of any construction, the owner(s) of any involved utilities must be notified and these utilities must be located.
3. Schedule preconstruction meeting with DATCP and County personnel, the contractor, and the landowner prior to the construction start-up. The contractor and/or landowner shall notify the Vilas County Land and Water Conservation Department at least 5 days prior to start-up of construction. Seek written authorization for any changes to the plan design with County personnel before installation. The Cost Share program will not cover unauthorized changes.
4. Provide erosion control measures as required in accordance with permit requirements and Wisconsin Construction Specifications 1 and 5.
5. Initial survey layout will be performed by DATCP or County personnel. It is the contractor's responsibility to provide additional grade stakes during construction, as is necessary for completion.
6. All heavy equipment used within the construction site shall be well maintained. All equipment lines and fittings shall be checked on a daily basis to ensure that they are in good working order. The contractor is responsible for all aspects of cleanup from accidental spills. Refer to WI Construction Spec. 5 (attached) for details on Construction Site Pollution Control.
7. If rock is used, allow the DATCP or County technician to inspect the rock source prior to delivering to the project site.
8. The Cost Share program will not cover unauthorized changes in species planted. Immediate and routine watering is crucial to the success of the plantings. Additional information on the plantings and seeding are found in the plan or the Operation and Maintenance Agreement in the contract.
9. Prevent deer browse of the plantings. Damage to Cost Share funded plantings caused by intentional neglect of deer resistance measures (fencing or spray) must be restored at landowners expense.
10. Wheel ruts caused by construction equipment shall be graded and seeded. Restore all areas disturbed during construction and seed according to the plan.
11. If a significant archeological or historical site is found, cease construction immediately and relocate, redesign or delete the cost share practice, as needed, to prevent damage to the archeological or historical site.

Site Specific Construction Notes

1. No equipment will be driven on the slope; work will be completed on foot and with shovels to protect fragile soils. Limit walking on the bank as much as possible, Make as few trips on the slope to install sediment logs and vegetation. Retain all litter and large woody debris in place on slope as much as possible. If the large woody debris is in the way of the riprap installation, move it and replace after riprap is complete. Retain all existing vegetation on slope, especially at the top of the installed riprap.
2. Excavate about 16 yd³ of lake bed for the toe of the rip rap as indicated in plans – see sheet 3 of 6. Refer to WI Construction Spec. 2 (attached) for details on removal of excavated materials. Try to retain as much live plant material as possible. Trim shrubs as needed to facilitate work. Part of existing stair access to the lake may need to be temporarily removed while riprap installation takes place. Replace stair case when the project is finished.
3. Construct 196 feet of riprap along toe of slope to protect it from erosion. (See sheet 4 of 6).
4. Place 205 yd² of Class I, non-woven geo-textile fabric t toe of slope prior to rock riprap. As rock is placed, fold the ends inward as shown on the plan Typical Cross Section drawing (sheet 5 of 6). See Table 2 in Wisconsin Construction Specification 13 (attached) for a listing of all geo-textile property requirements.
5. Place 50 yd³ of riprap with a D⁵⁰ rock size of 6 to 9 inches. See sheet 5 of 6 (typical cross section) for rock gradation requirements. Refer to WI Construction Spec. 9 for requirements on placing rock riprap.
6. In locations where there natural slope has been washed out below the OHWM; supplement with additional geotextile fabric and rock. (Quantities already accounted for in calculations).

Manitowish Waters Lodgin LLC/ Rudy
VILAS COUNTY LWCD, WI
Designed: QS Checked: SDD

Date: 1/2012

ESTIMATED QUANTITIES

ITEM	UNIT	QUANTITY	SHEET NUMBER	WI. CONSTRUCTION SPEC. OR JOB SHEET NUMBER
Mobilization	Job	1		WCS 5, 7
Excavation (into lakebed)	Yd ³	~16	Pg 3	WCS 2
Geo-textile, Class I, non-woven	Yd ²	205	Pg 5,6	WCS 13
Rock Riprap (6-9" D ⁵⁰)	Yd ³	50	Pg 5,6	WCS 9

**Notes:

All quantities are measured to neat lines and grade.

It is the contractor's responsibility to supply the materials needed for the job and bid accordingly.

Refer to the Wisconsin Construction Specifications listed to determine all materials required for project implementation.

COOPERATOR MWL/Rudy/Phase 1

COUNTY Vilas

ESTIMATED QUANTITIES

U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

Designed _____ Date _____

Drawing No. WI-005 Date 5/01

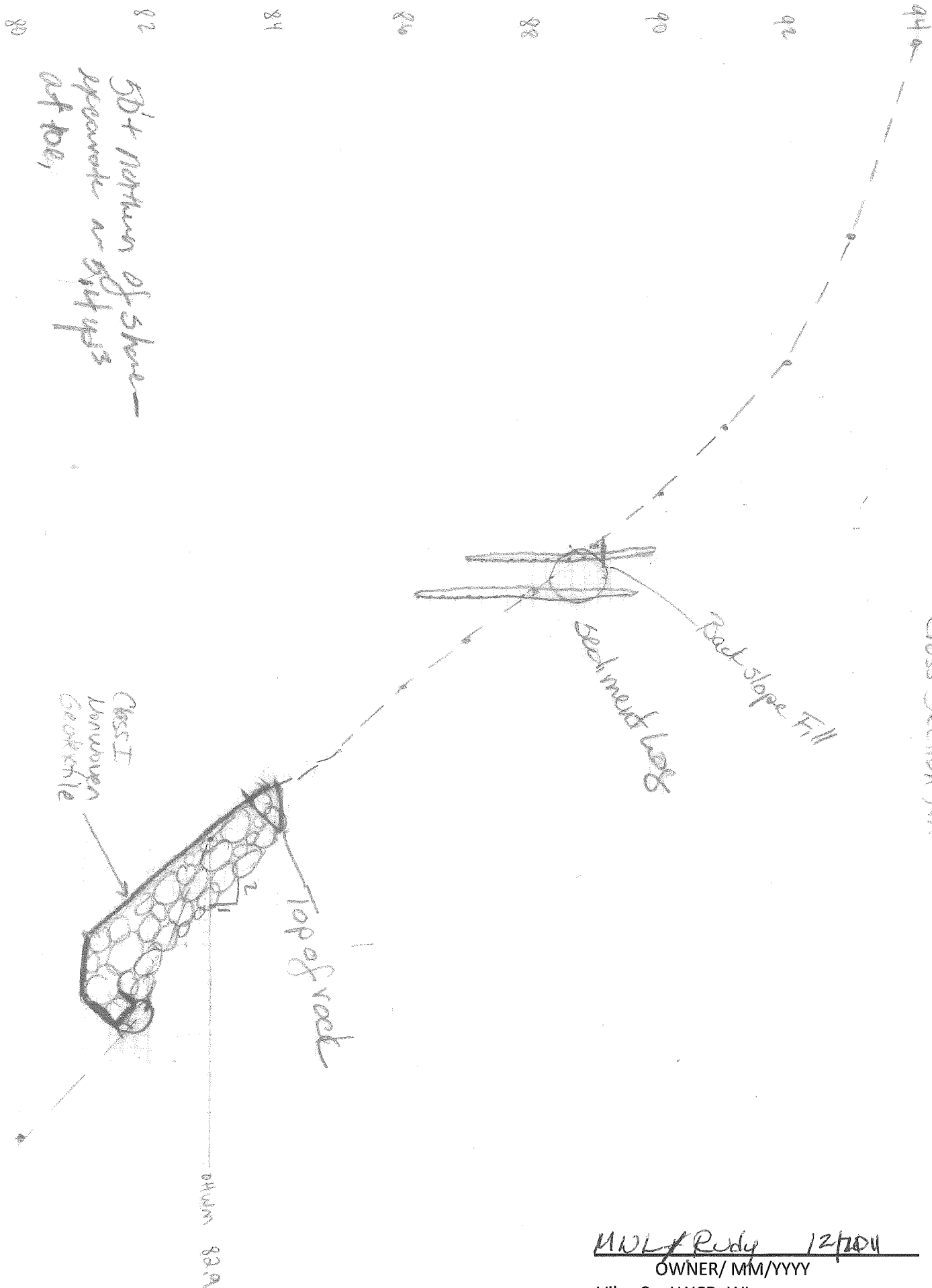
QS _____ 1/2012

Checked _____ Date _____

SDD _____ 1/2012

Sheet 3 of 6

Cross Section AA'



MWL/Rudy 12/10/11

OWNER/ MM/YYYY

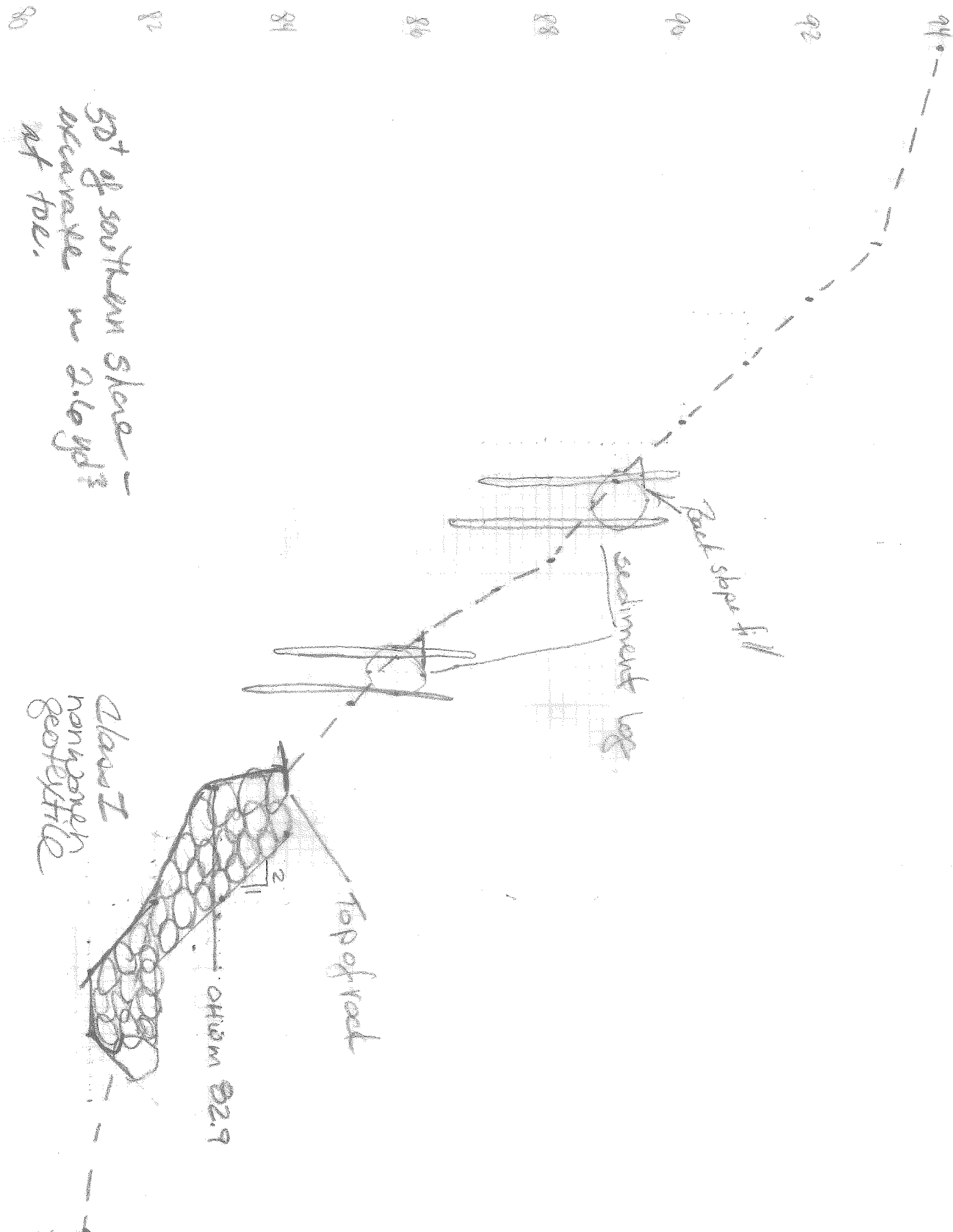
Vilas Co. LWCD, WI.

Designed: RS

Checked: SDD

SHEET 6 of 6

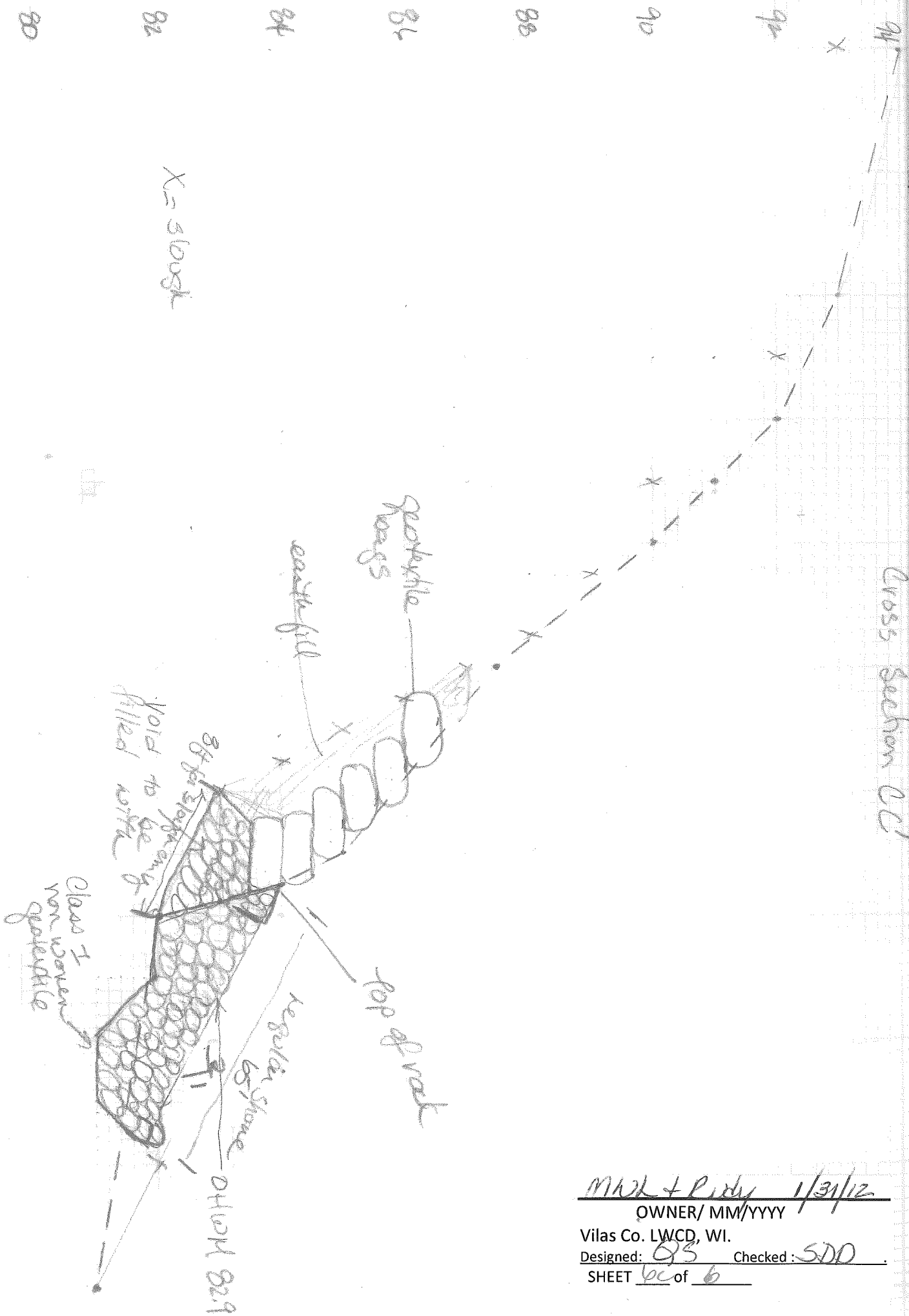
Cross Section BB'



50' of southern slope -
accurate in 2.0 yds
at toe.

Manibhishk Kumar Lodan
OWNER/ MM/YYYY
Vilas Co. LWCD, WI.
Designed: *KS* Checked: *SD*
SHEET *66 of 6*

Cross Section CC'



MAK + Rudy 1/31/12
 OWNER/ MM/YYYY
 Vilas Co. LWCD, WI.
 Designed: GS Checked: SDD
 SHEET 6C of 6

94

Cross Section D-D

92

90

88

86

84

82

80

0+00

0+02

0+04

0+06

0+08

0+10

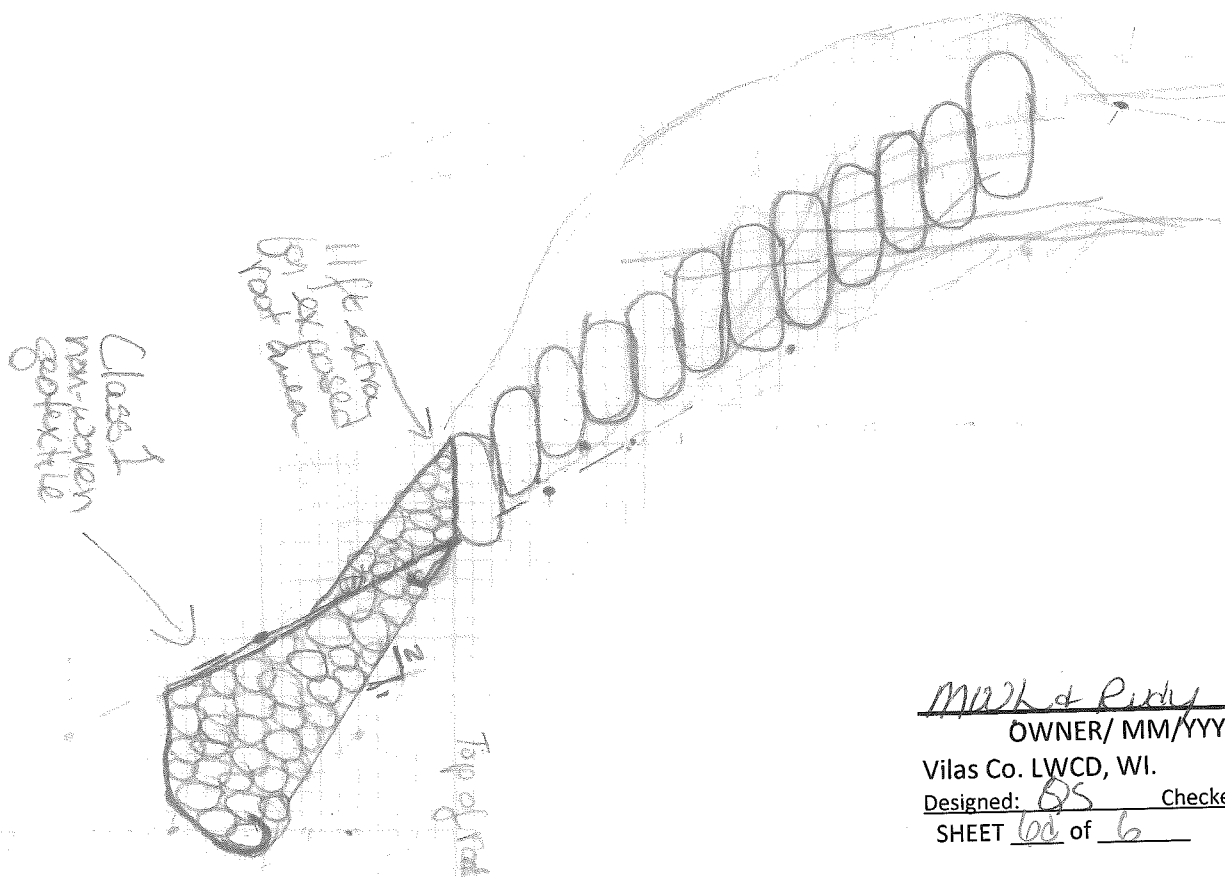
0+12

0+14

0+16

0+18

0+20



Mark & Purdy 1/31/12
 OWNER/ MM/YYYY
 Vilas Co. LWCD, WI.
 Designed: BS Checked: SDD
 SHEET 60 of 6