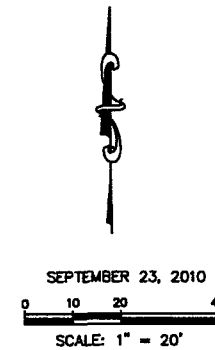
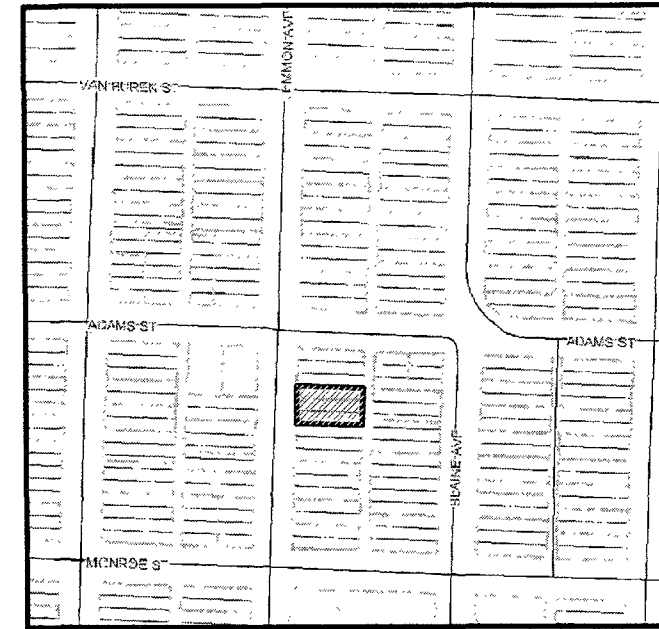


APPROXIMATE LOCATION OF FLOOD BOUNDARY AS SCALED FROM COMMUNITY PANEL NUMBER 465420 F DATED FEBRUARY 16, 1996

APPROXIMATE LOCATION OF FLOOD BOUNDARY AS SCALED FROM COMMUNITY PANEL NUMBER 465420 F DATED FEBRUARY 16, 1996



NOTE: TOPOGRAPHY IS SCALED FROM USGS TOPOGRAPHY

SEPTEMBER 23, 2010

SCALE: 1" = 20'

NOTE: COORDINATE RELOCATION OR RETIREMENT OF EXISTING PRIVATE UTILITY SERVICE TO FACILITATE NEW CONSTRUCTION.

NOTE: EXISTING POWER & TELECOM LINES ARE OVERHEAD

INDEX OF SHEETS

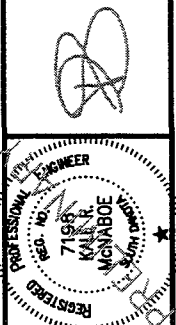
- 1 TOPOGRAPHIC MAP/DEMO PLAN
- 2 SITE PLAN
- 3 EROSION CONTROL PLAN
- 4 DETAILS

RECEIVED

SEP 27 2010

Rapid City Growth Management Department

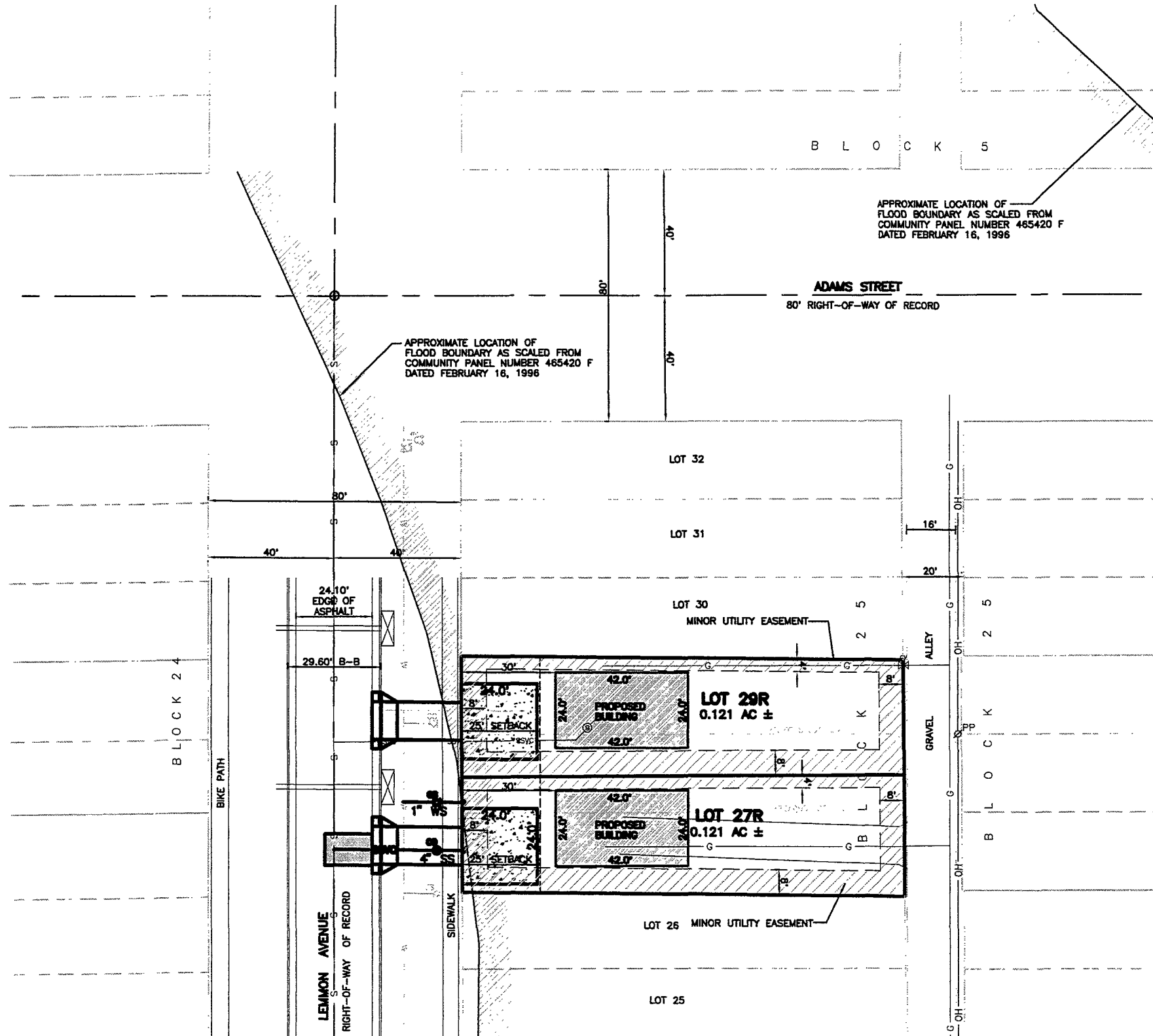
SPERLICH Consulting, Inc.
 621 Colville St. Suite 101 Rapid City, SD 57701
 TEL: (605) 771-4100 FAX: (605) 771-4105
 E-MAIL: sarah@sperryinc.com
 Engineering "Sustaining" Planning



REVISIONS	DATE	REVISION

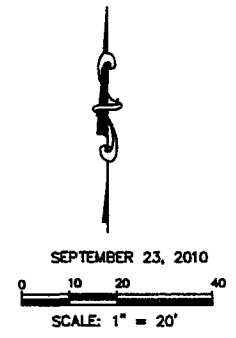
LEGAL DESCRIPTION
 LOTS 27R AND 29R OF BLOCK 26
 NORTH-RAPID-ADDITION
 SURVEYED BY: SCI
 DRAWN BY: CAS/ZMH

TOPOGRAPHIC MAP/DEMO PLAN
 LOTS 27R AND 29R OF BLOCK 26
 NORTH-RAPID-ADDITION



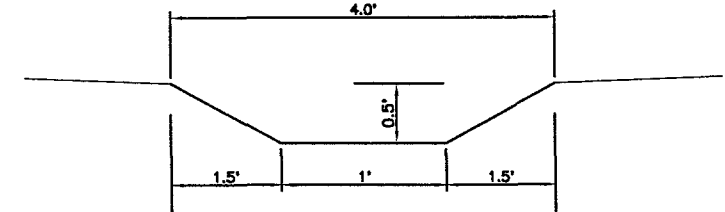
PROPOSED IMPROVEMENTS:

- FURNISH & INSTALL A TOTAL OF 24 L.F. OF TYPE "P" GUTTER.
- FURNISH & INSTALL A TOTAL OF 180 Sq.Ft. OF 12" WIDE STANDARD DRIVEWAY PAVEMENT.
- FURNISH & INSTALL A TOTAL OF 75 Sq.Ft. OF 12" WIDE STANDARD APPROACH PAVEMENT.
- FURNISH & INSTALL A TOTAL OF 1,182 Sq.Ft. OF 24"x24" PARKING PAD.
- SAWCUT REMOVE & REPLACE 150.5 Sq.Ft. OF ASPHALT PAVEMENT TO ACCOMMODATE SEWER SERVICE CONNECTION.
- FURNISH & INSTALL 20.0± L.F. OF 1" WATER SERVICE W/ CURB STOP.
- FURNISH & INSTALL 40.0± L.F. OF 4" SEWER SERVICE W/ CLEANOUT.

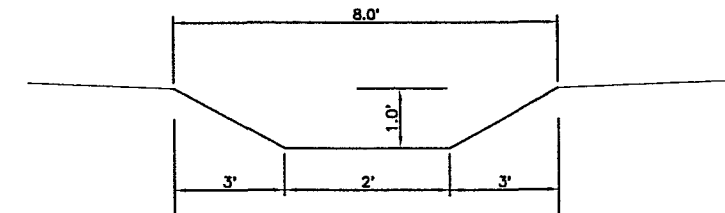


CONSTRUCT SIDE YARD PROPERTY LINE SWALE

•CONSTRUCT TYPICAL SECTION DEPENDANT UPON EASEMENT WIDTH
•MINIMUM SLOPE IS 1.0%



DEPTH = 0.36' @ 100 YEAR EVENT MAX.



DEPTH = 0.30' @ 100 YEAR EVENT MAX.

$Q=CiA$
 $C_p = .40$
 $C_{10} = .50$
 $C_{100} = .60$

$A=0.238$ Acres
 $i_2 = 4.20$ in/hr
 $i_{10} = 6.37$ in/hr
 $i_{100} = 9.98$ in/hr

$Q_2 = (.40)(4.20)(.238) = 0.40$ cfs
 $Q_{10} = (.50)(6.37)(.238) = 0.80$ cfs
 $Q_{100} = (.60)(9.98)(.238) = 1.40$ cfs

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SEP 27 2010

Rapid City Growth
Management Department

SPERLICH
consulting, Inc.
423 Columbia St., Suite 118 Rapid City, SD 57701
605.343.7140 FAX 605.343.4049
E-Mail: asperlich@sperrlich.com
http://www.sperrlich.com

SEPTEMBER 23, 2010
SCALE: 1" = 20'

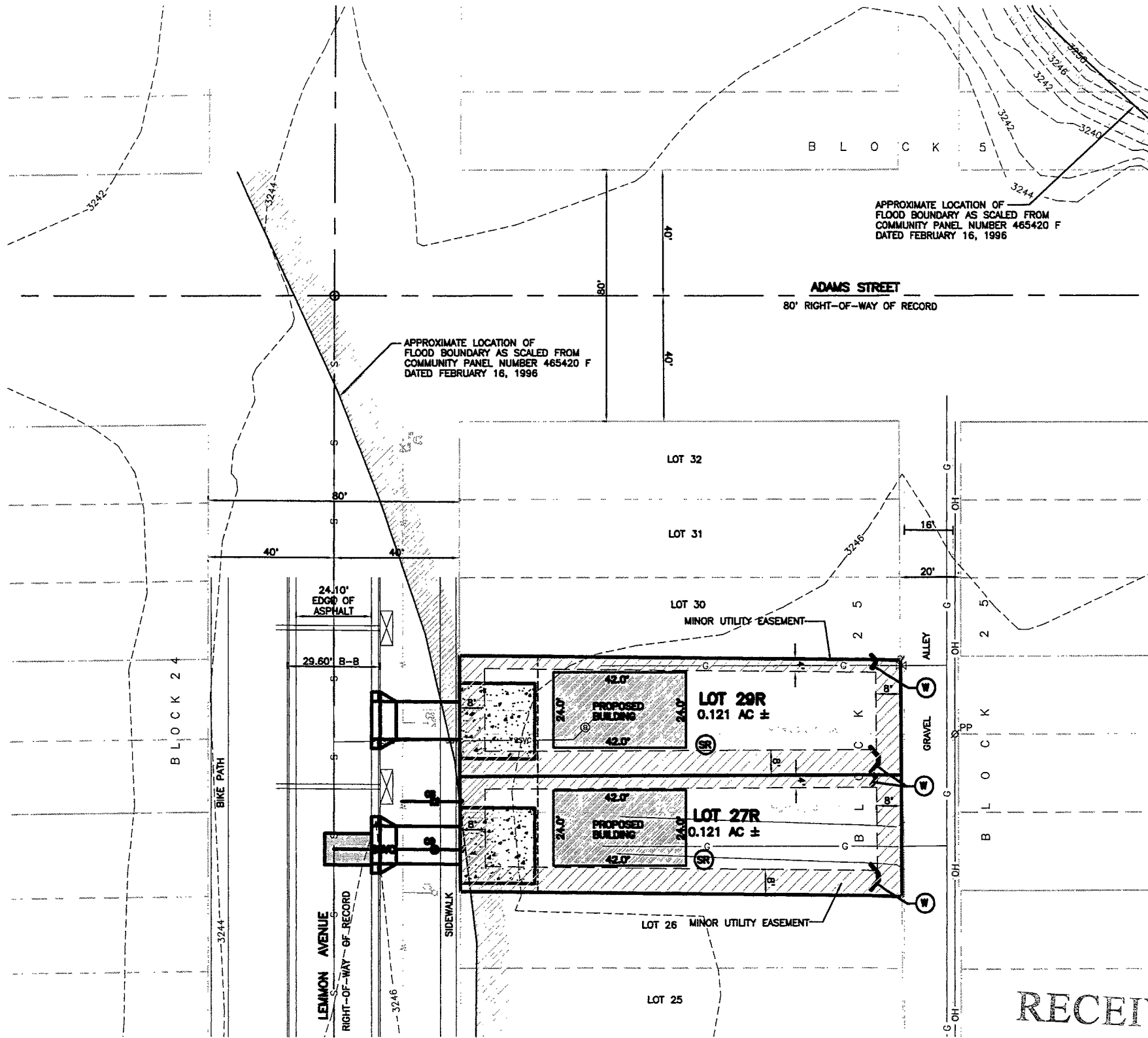


REVISIONS	DATE	DESCRIPTION

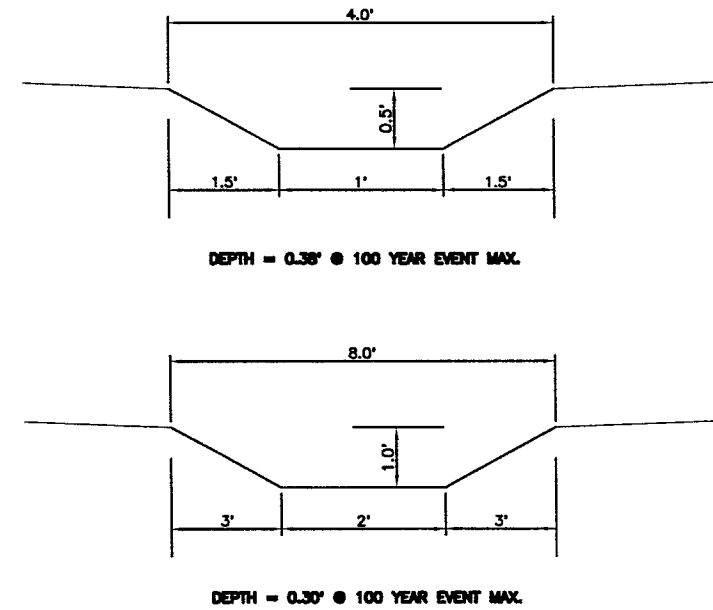
LEGAL DESCRIPTION:
LOT 27R AND 29R OF BLOCK 25 OF THE NORTH-RAPID-ADDITION
LOCATED IN THE CITY OF RAPID CITY
SOUTH DAKOTA, COUNTY OF RAPID CITY,
STATE OF SOUTH DAKOTA.

SITE PLAN
LOTS 27R AND 29R OF BLOCK 25
NORTH-RAPID-ADDITION

C:\Projects\3203\3203SITE.dwg, EROSION, 9/23/2010 9:24:40 AM



CONSTRUCT SIDE YARD PROPERTY LINE SWALE
 *CONSTRUCT TYPICAL SECTION DEPENDANT UPON EASEMENT WIDTH
 *MINIMUM SLOPE IS 1.0%



LEGEND

- (W) WATTLE
- (SR) SURFACE ROUGHENING

FURNISH AND INSTALL NOTES
 F&I: 30 L.F. 3" WATTLES

$Q=CiA$
 $C_p = .40$
 $C_{10} = .50$
 $C_{100} = .60$
 $A = 0.238$ Acres
 $i_2 = 4.20$ in/hr
 $i_{10} = 6.37$ in/hr
 $i_{100} = 9.98$ in/hr

$Q_2 = (.40)(4.20)(.238) = 0.40$ cfs
 $Q_{10} = (.50)(6.37)(.238) = 0.80$ cfs
 $Q_{100} = (.60)(9.98)(.238) = 1.40$ cfs

GENERAL NOTE

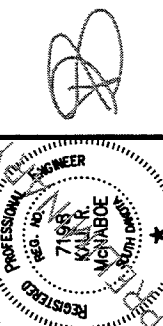
- ① EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL PERMANENT REVEGETATION IS ESTABLISHED.
- ② DISTURBED AREAS TO BE RE-SEEDDED IMMEDIATELY UPON COMPLETION OF THE GRADING WITH NON IRRIGATED LAWN MIX PER THE 2007 EDITION OF THE CITY OF RAPID CITY STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION.

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SEP 27 2010

Rapid City Growth Management Department

SPERLICH consulting, Inc.
 221 Columbia St., Suite 113, Rapid City, SD 57701
 P: 605.327.2710 FAX: 605.327.4043
 E: info@sperrlich-engineering.com
 Engineering - Surveying - Planning



REVISIONS	DATE	DESCRIPTION

EROSION CONTROL
 LOTS 27R AND 29R OF BLOCK 25
 NORTH-RAPID-ADDITION

PROJECT NUMBER 3203
 SHEET 3 / 4

EROSION CONTROL REPORT

1) PROJECT DESCRIPTION

This project consists of building two houses.

2) EXISTING SITE CONDITION

The site is currently occupied by two single family structures.

3) WETLANDS:

- Are wetlands an issue? NO
- Do any other jurisdictional authorities (SHPO or GFP) need to review these plans? NO

4) ADJACENT AREAS

North is Residential Lot
West is Lemmon Ave.
South is Residential Lot
East is Alley

5) SOILS

Predominant soils are:
Moody silty clay loam, 3 to 5 percent slopes.
Trent silty clay loam, 0 to 3 percent slopes.

6) AREA AND VOLUME

N.A.

7) EROSION AND SEDIMENT CONTROL MEASURES

The Erosion Control Plan shows the type and location of the erosion and sediment control measures for the grading of this site.

8) AREA FOR STOCKPILES AND STORAGE

A topsoil stockpile location is shown on the Erosion Control Plan. Erosion control measures shall be implemented around the stockpile.

9) CONSTRUCTION SCHEDULE

Grading: Fall 2010
Temporary Cover Seeding: Fall 2010

10) SOIL SURFACE STABILIZATION PRACTICES

After construction begins, soil surface stabilization shall be applied within 14 days to all disturbed areas that may not be at final grade but will remain dormant (undisturbed) for periods longer than an additional 21 calendar days. Within 14 days after final grade is reached on any portion of the site, permanent or temporary soil surface stabilization shall be applied to disturbed areas and soil stockpiles.

11) PERMANENT STABILIZATION PRACTICES

It is anticipated that home building will be continuous on the improved lots and most will be sodded or seeded during the building season. The stockpiles and the graded lots will be maintained during the development process. Erosion control shall be maintained until final stabilization is achieved.

12) STORM WATER MANAGEMENT CONSIDERATIONS

Stormwater will either flow towards the street and then to the constructed storm sewer or else it will flow towards the back of the lot then down the lot line to the street and then to the constructed storm sewer. Stormwater will ultimately flow to the same downstream location after construction as it did before construction.

13) MAINTENANCE

Inspection of erosion and sediment control measures should be scheduled weekly and following any storm event of 1/2 inch or greater. All measures shall be maintained in good working order. Inspection and maintenance procedures shall continue until the disturbed areas achieve final stabilization.

14) SPILL CONTROL PRACTICES

Chemical and Petroleum Product spills of toxic or hazardous material shall be reported to the appropriate state or local government agency. All spills shall be cleaned up immediately after discovery.

15) SPILL PREVENTION

Petroleum Products: Onsite construction equipment shall be monitored for leaks & receive regular preventive maintenance.

- a) Regularly pickup and dispose of garbage and waste material.
- b) Make sure all equipment and related processes are working properly and preventative maintenance is kept up with on both.
- c) Routinely inspect equipment and processes for leaks or conditions that could lead to discharges of chemicals or contact of storm water with raw materials, intermediate materials, waste materials, or products used on site.
- d) Assure all spill clean up procedures are understood by employees. Training of employees on proper clean up procedures shall be implemented.
- e) Designate separate areas of the site for auto parking, vehicle refueling, and routine maintenance.
- f) Clean up leaks, drips, and other spills immediately.
- g) Cover and maintain dumpsters and waste receptacles.
- h) Store containers, drums, and bags away from direct traffic routes to prevent accidental spills.
- i) Stack containers according to manufacturer's instructions to avoid damaging the containers from improper weight distribution.
- j) Store containers on pallets or similar devices to prevent corrosion of containers that results from containers coming in contact with moisture on the ground.
- k) Store toxic or hazardous liquids within curbed areas or secondary containers.
- l) Assign responsibility of hazardous material inventory to a limited number of people who are trained to handle such materials. In the event of spills of any dangerous or hazardous material, notify City of Rapid City and Department of Environment and Natural Resources.

The following preventative strategies are recommended where fluids are commonly present:

- a) Identify all equipment that may be exposed to storm water, pollutants that may be generated and possible sources of leaks or discharges.
- b) Perform regular maintenance of each piece of equipment to check for: proper operation, leaks, malfunctions, and evidence of leaks or discharge (stains). Develop a procedure for spill reporting, clean up, and repair.
- c) Drain or replace motor oil or other automotive fluids in an area away from streams or storm or sanitary sewer inlets. Collect spent fluids and recycle or dispose of properly.
- d) In fueling areas, clean up spills with dry clean up methods (absorbents).
- e) Make sure employees are trained in spill prevention practices and adhere to them.

16) SITE PLAN

The Erosion Control Plan shows the erosion control devices to be installed. These items shall be installed as per City of Rapid City Standard Details and Specifications, 2007 Edition

17) NOTICE OF INTENT

A Notice of Intent (NOI) has not been filed with the Surface Water Discharge Program of the South Dakota Department of Environment and Natural Resources (DENR). The Primary Responsible Party is required to notify the EC Inspector when the site has reached final stabilization, and to file a Notice of Termination with DENR.

18) DEWATERING

If water from temporary dewatering shall be discharged to water of the state during construction, Contractor must first get coverage under DENR's General Permit for Temporary Dewatering. For more information, contact Al Spangler at (605) 773-3351. In addition, City of Rapid City may require a temporary BMP. Prior approval of which is required by City Engineering.(394-4154)

19) SITE INSPECTION

Contact Development Service Center at 394-4157 after initial erosion control is installed prior to any grading work. The devices to be installed shall be outlined in the construction sequence. Disturb only as necessary to install these devices. This shall include all perimeter erosion control and other items specified in this narrative or shown directly on the plan.

20) PROJECT INSPECTION PRIORITY: High

21) COMPLETION OF WORK

Upon completion of work contact Development Service Center for Inspection 394-4157

OWNER'S CERTIFICATION

The Erosion Control Plan appears to fulfill the technical criteria for erosion and sediment control requirements of the City of Rapid City. We understand that additional erosion control measures may be needed if unforeseen erosion problems occur or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of Daene Boomsma until such time as the plan is properly completed, modified or voided.

Date _____ Signed _____ Printed: Daene Boomsma

ENGINEER'S CERTIFICATION

I hereby certify that these plans were prepared under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

Date _____ Signed _____ Printed: Kale R. McNaboe, PE Reg. No. 7198

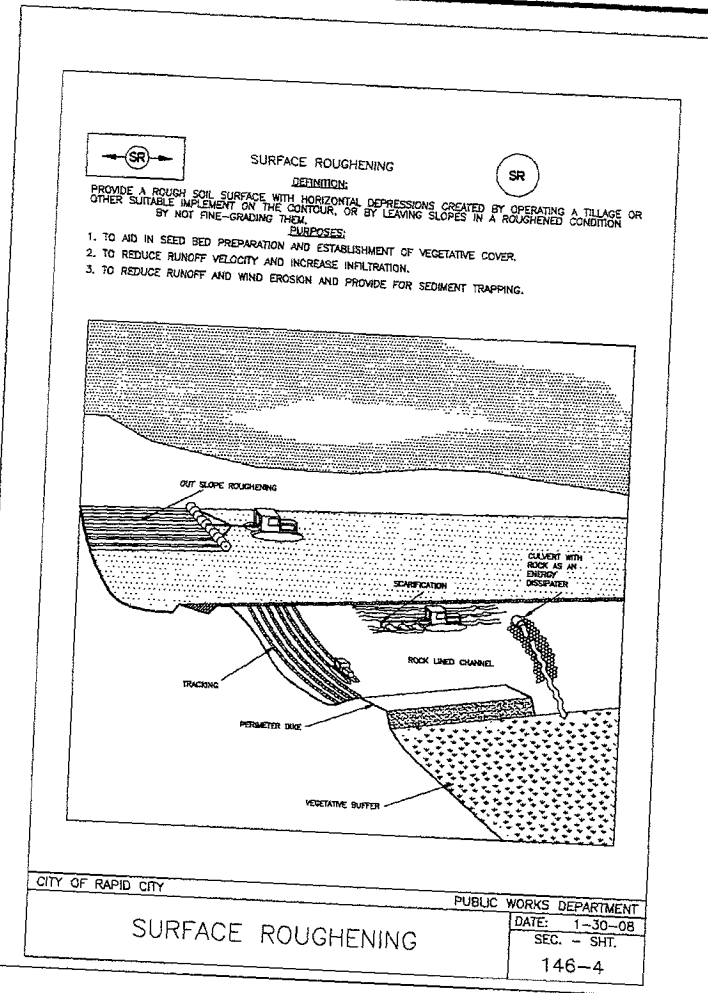
Table 12.1
Maximum Time Limits of Land Exposures
for Selection of Erosion Controls

Erosion Control Method	Exposure ⁽¹⁾
Surface Roughening	1 mo.
Mulching	12 mo.
Temporary Revegetation	12-24 mo.
Permanent Revegetation	24 mo. or more
Soil Stockpile Revegetation	2 mo.
Early Application of Road Base	1 mo.

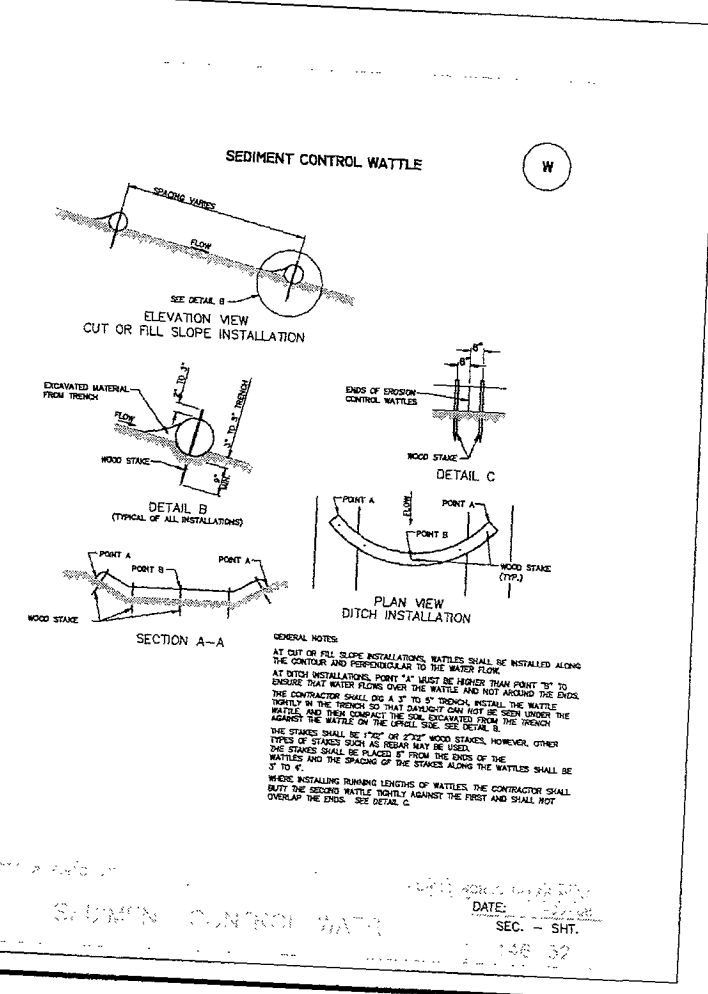
(1) Exposure is the Maximum Allowable Period of Exposure in Months

Owner:
Daene Boomsma
5340 Pine Tree Dr.
Rapid City, SD 57702
(605) 381-5707

Engineer:
SPERLICH CONSULTING, INC.
821 Columbus St., Suite 1
Rapid City, SD 57701
(605) 721-4040
email: dougsperrlich@rushmore.com



CITY OF RAPID CITY PUBLIC WORKS DEPARTMENT
DATE: 1-30-08
SEC. - SHT. 146-4



DATE: 1-30-08
SEC. - SHT. 146-32

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Rapid City Growth
Management Department

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SPERLICH CONSULTING, INC.
422 Columbus St., Suite 1, Rapid City, SD 57701
TEL: (605) 721-4040 FAX: (605) 721-4040
F. McNaboe, Registered Professional Engineer
"Engineering is a Service"

REGISTERED PROFESSIONAL ENGINEER
KALE R. MCNABOE
7198
SOUTH DAKOTA
EXPIRES 12/31/2010

REVISIONS
DATE REVISION

LEGAL DESCRIPTION
LOT 27R AND 29R OF BLOCK 25
NORTH-RAPID-ADDITION
SURVEYED BY SET
DRAIN BY CAS

DETAILS
LOTS 27R AND 29R OF BLOCK 25
NORTH-RAPID-ADDITION

PROJECT NUMBER **3203**
SHEET **4 / 4**