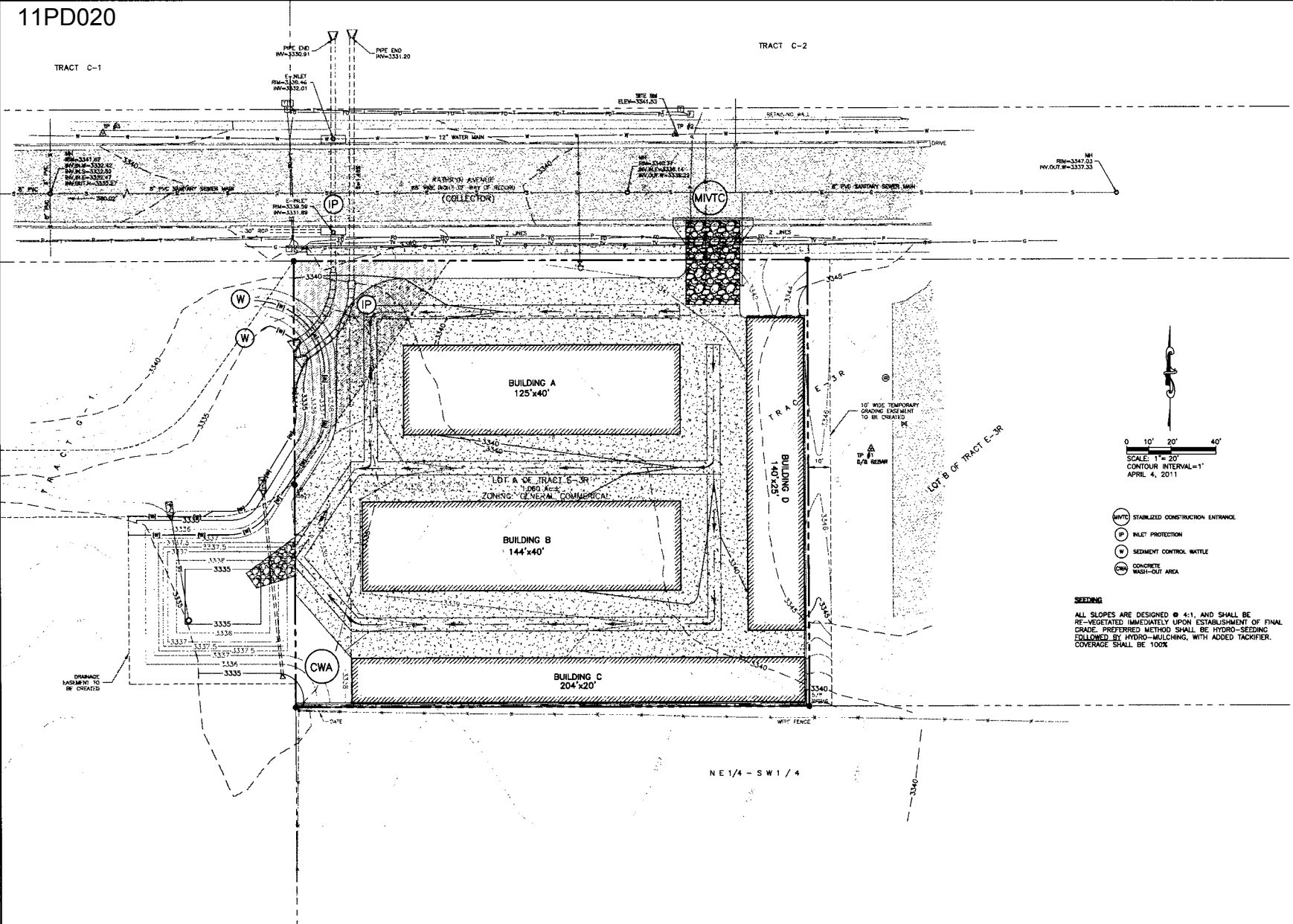
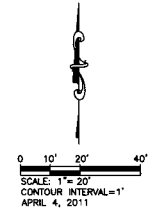


TRACT C-1

TRACT C-2



RM=3347.53  
HY.OUT.W=3337.33



- MIVTC STABILIZED CONSTRUCTION ENTRANCE
- P PILET PROTECTION
- W SEDIMENT CONTROL MATTE
- CWA CONCRETE WASH-OUT AREA

**SEEDING**  
ALL SLOPES ARE DESIGNED @ 4:1, AND SHALL BE RE-VEGETATED IMMEDIATELY UPON ESTABLISHMENT OF FINAL GRADE. PREFERRED METHOD SHALL BE HYDRO-SEEDING FOLLOWED BY HYDRO-MULCHING, WITH ADDED TACKIFIER. COVERAGE SHALL BE 100%

NE 1/4 - SW 1/4

Prepared By: **RENNER & ASSOCIATES, LLC.**  
 118 1/2 1st St., Rapid City, SD 57701  
 605.342.1111  
 Fax: 605.342.1112  
 www.rennerandassociates.com

Scale:	1" = 20'
Designed By:	Drawn By:
MRP	ADP
Check Date:	Print Date:
4/1/2011	4/7/2011
Reviewed By:	Survey Date:
RL JS	3/28/2011
Revisions:	

**LOT A OF TRACT E-3R OF  
MCMAHON SUBDIVISION**  
 LOCATED IN THE NE 1/4 OF THE SW 1/4 OF  
 SECTION 24, T2N, R7E, B1W  
 RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

Location:  
 Prepared For:  
 MAP DEVELOPMENTS  
 1304 OREGON STREET  
 RAPID CITY, SD 57701  
 PH:348-2338

Internal Job No:  
**#2504.01**

Sheet Title:  
**EROSION &  
 SEDIMENT CONTROL  
 PLAN**

Sheet:  
**3 of 7**

**EROSION AND SEDIMENT CONTROL PLAN NARRATIVE**

<b>SITE NAME</b> DOWNTOWN AVENUE STORAGE UNITS	<b>OWNER/DEVELOPER</b> MAP DEVELOPMENTS 1544 WASHINGTON STREET RAPID CITY, SD 57701 605-348-2335	<b>ENGINEER</b> RENNER & ASSOCIATES, LLC 81 FIFTH SOUTH STREET RAPID CITY, SD 57701 605-721-7310	<b>GENERAL CONTRACTOR</b>
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**PROJECT DESCRIPTION:**  
THIS PROJECT CONSISTS OF THE GRADING OF A TOTAL OF 1.31 ACRES. OF THAT, APPROXIMATELY 0.85 ACRES WILL BE MAINTAINED AS EXISTING DRIVEWAYS AND CONCRETIZED PARKING. THE REMAINING AREA WILL BE SEEDING, FERTILIZED, AND MULCHED, WITH HEDGEROW TREES AND LARGER TREES.

**EXISTING SITE CONDITIONS:**  
THE EXISTING PARCEL IS UNDEVELOPED AND GRASSED. THE MAJORITY OF THE AREA TO BE DEVELOPED HAS BEEN FILLED FROM PREVIOUS HEAVY WORK. THIS FILL WILL BE EXCAVATED AND RE-COMPACTED AS PART OF THE WORK.

**DESIGNED STORMWATER IMPROVEMENTS:**  
TWO STORMWATER TREATMENT AND ATTENUATION PONDS IS INCLUDED IN THE DESIGN TO TREAT AND ATTENUATE THE STORMWATER RUNOFF FROM THE ENTIRE DEVELOPED SITE. THE SITE LIES NORTH OF ANY MAJOR DRAINAGE BASIN DESIGN, SO ATTENUATION IS PROVIDED BY THE POND AS WELL.

**ADJACENT AREAS:**  
NORTH: THE AREA TO THE NORTH IS PARTIALLY DEVELOPED COMMERCIAL.  
EAST: THE AREA TO THE EAST IS UNDEVELOPED. A DRAINAGE EASEMENT EXISTS ALONG THE EAST BOUNDARY.  
SOUTH: UNDEVELOPED GRASS.  
WEST: THE AREA TO THE WEST IS DEVELOPED COMMERCIAL.

**SOIL:**  
APPROXIMATELY 2' OF FILL OVER NATIVE CLAYEY MATERIAL. CURRENTLY GRASSED.

**AREA AND VOLUME DISTURBED:**  
TOTAL AREA DISTURBED BY THE PROPOSED WORK IS 1.31 ACRES. VOLUME OF MATERIAL BEING MOVED IS APPROXIMATELY 1,800 CY.

**EROSION AND SEDIMENT CONTROL MEASURES:**  
THE EROSION AND SEDIMENT CONTROL PLAN SHOWS THE MINIMUM TYPE AND LOCATION OF THE EROSION AND SEDIMENT CONTROL MEASURES FOR THE GRADING OF THIS PROJECT. THE OWNER SHALL USE EROSION CONTROL METHODS/BMPs AS NEEDED TO PREVENT MATERIAL FROM LEAVING THE SITE.

**AREA FOR STABILIZATION AND RESTORATION:**  
SPECIFIC LOCATIONS SHALL BE DETERMINED DURING CONSTRUCTION AND SHALL BE APPROPRIATELY STABILIZED WITH A COMBINATION OF WATTLES AND SURFACE ROUGHENING SUFFICIENT TO PREVENT SEDIMENT FROM LEAVING THE SITE.

**EROSION AND SEDIMENT CONTROL CONSTRUCTION SEQUENCE:**  
INSTALL VEHICLE TRACKING CONTROL.  
INSTALL INLET PROTECTION.  
INSTALL TEMPORARY EROSION CONTROL WATTLES ALONG THE EAST EMBANKMENT OF THE EXISTING DRAINAGE.

CONSTRUCT THE NEW DETENTION AND TREATMENT BASIN. THIS POND WILL ACT AS THE PRIMARY DRAINAGE DURING CONSTRUCTION AND SHALL BE RESTORED TO DESIGN GRASSES, VOLUME, AND CONFIGURATION AFTER SITE DEVELOPMENT IS COMPLETED AND THE PROJECT IS FINALIZED.

INSTALL SEDIMENT CONTROL COMPOST SOCKS AND EMPLOY SURFACE ROUGHENING, SEEDING, FERTILIZING, AND MULCHING IMMEDIATELY FOLLOWING EMBANKMENT CONSTRUCTION.

INSTALL INLET AND OUTLET PROTECTION UPON CONSTRUCTION OF STORM PIPES. THIS MAY REQUIRE MULTIPLE INSTALLATIONS AT THE SAME LOCATION DUE TO CONSTRUCTION ACTIVITIES. REMOVE INLET PROTECTION AFTER SURFACES ARE PERMANENTLY STABILIZED.

UPON COMPLETION OF GRADING, APPLY SEED, FERTILIZER AND MULCH TO ALL AREAS NOT COVERED WITH GRAVEL SURFACING, SAND SURFACING, OR SEALING.

UPON COMPLETION OF PLANNED DEVELOPMENT AND FINAL STABILIZATION, REMOVE COMPOST SOCKS AND OTHER TEMPORARY BMPs THAT MAY HAVE BEEN EMPLOYED AND FILE NOTICE OF TERMINATION WITH STATE.

**PERMANENT STABILIZATION MEASURES:**  
PERMANENT STABILIZATION MEASURES INCLUDE OUTLET PROTECTION ON ALL PIPES. PERMANENT LANDSCAPING INCLUDING SEEDING, FERTILIZING, MULCHING, AND TREES. THE REMAINING AREA FILLED WITH SAND SURFACING IS CONSIDERED STABILIZED WHEN THE SURFACING HAS BEEN INSTALLED.

**STORM WATER MANAGEMENT CONSIDERATIONS:**  
THE NEW DETENTION BASIN IS BEING CONSTRUCTED TO ACHIEVE SOIL RECHARGE OF TSS FROM THE FIRST 1/2 INCH OF RAIN ON THE SITE. THIS POND ALSO REDUCES THE PEAK STORM FLOW FROM THE ENTIRE SITE TO HISTORIC LEVELS. SEE THE DRAINAGE REPORT COMPLETED BY RENNER & ASSOCIATES FOR ADDITIONAL STORM WATER MANAGEMENT INFORMATION.

**MAINTENANCE:**  
INSPECTION OF EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE SCHEDULED WEEKLY AND FOLLOWING ANY SIGNIFICANT EVENT OF 0.5 INCH OR GREATER. ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. INSPECTION AND MAINTENANCE PROCEDURES WILL CONTINUE UNTIL ALL DISTURBED AREAS HAVE REACHED FINAL STABILIZATION.

**SPILL PREVENTION:**  
PETROLEUM PRODUCTS: ON-SITE CONSTRUCTION EQUIPMENT WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE.  
CHEMICALS AND FERTILIZERS: THE USE OF FERTILIZERS IS ANTICIPATED DURING FINAL SEEDING.  
CONCRETE TRUCKS: CONCRETE TRUCKS WILL NOT BE ALLOWED TO DISCHARGE SURPLUS CONCRETE ON THE SITE UNLESS A WASHOUT AREA HAS BEEN DESIGNED.

**HAZARDOUS MATERIAL SPILLS:**  
CHEMICAL AND PETROLEUM PRODUCT SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE FEDERAL, STATE OR LOCAL GOVERNMENT AGENCY. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.

**SOIL RECHARGE RESTORATION PRACTICES:**  
AFTER CONSTRUCTION BEGINS, SOIL SURFACE STABILIZATION SHALL BE APPLIED WITHIN 14 DAYS TO ALL DISTURBED AREAS THAT HAVE NOT BE AT FINAL GRADE BUT WILL REMAIN DISTURBED (UNDEVELOPED) FOR PERIODS LONGER THAN 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.

MAXIMUM TIME LIMITS OF LAND EXPOSURES FOR SELECTION OF EROSION CONTROLS	
EROSION CONTROL METHOD	MAXIMUM ALLOWABLE PERIOD OF EXPOSURE (MONTHS)
SURFACE ROUGHENING	1
MULCHING	1
TEMPORARY VEGETATION	12-24
PERMANENT VEGETATION	24 OR MORE
SOIL STOCKPILE RESTORATION	3
EARLY APPLICATION OF ROAD BASE	3

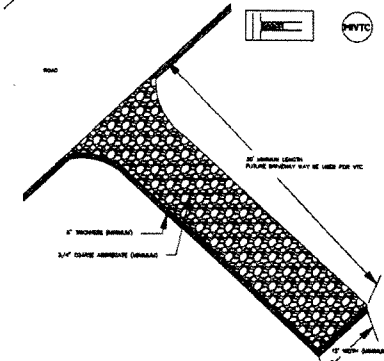
**SOIL PLAN:**  
EXISTING CONTROLS ARE SHOWN AT ONE-FOOT INTERVALS. THE PROPOSED ARE AT ONE-FOOT INTERVALS. THE GRADING DISTURBANCE LIMITS, COMPOST SOCKS, VEHICLE TRACKING CONTROL AND OUTLET PROTECTION ARE SHOWN ON THE PLAN.

**NOTICE OF INTENT:**  
A NOTICE OF INTENT (NOI) HAS NOT BEEN FILED WITH SD-DEM. THE RESPONSIBLE PARTY IS RESPONSIBLE FOR FILING NOTICE OF INTENT AND NOTICE OF TERMINATION WITH SD-DEM.

**SETBACKS:**  
NO SETBACKS WILL BE IMPACTED WITH THIS PROJECT.

**CONTRACTING:**  
CONTRACTING OPERATIONS ARE NOT EXPECTED. IF NEEDED, A GENERAL DEMOLITION PERMIT WILL BE OBTAINED FROM SD-DEM.

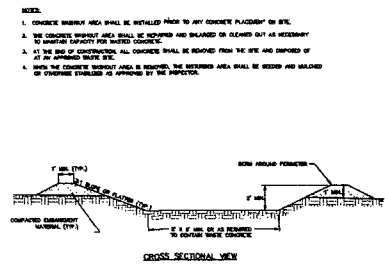
**MINOR IMPACT CONSTRUCTION SITE, VEHICLE TRACKING CONTROL**



- MINIMUM REQUIREMENTS:**
- APPROXIMATE SIZE 3/4" OR LARGER
  - NO SOILS
  - MINIMUM 12" WIDE
  - LENGTH 5' MINIMUM
- IMP SHALL BE IN PLACE AND OPERATIONAL PRIOR TO ANY VEHICLES LEAVING A SITE THAT HAVE BEEN OPERATED IN AN AREA OF PREPARED SOILS.
- THE IMPERIAL PLATE CAN ONLY BE USED AS A STRUCTURAL BMP FOR A SINGLE IMPACT CONSTRUCTION SITE. IMP SHALL BE REMOVED IMMEDIATELY UPON COMPLETION OF THE PROJECT AND REPLACED WITH A GRASS SEEDING CONSTRUCTION SITE.

**STABILIZED CONSTRUCTION ENTRANCE NTS**

**CONCRETE WASHOUT AREA**



**CONCRETE WASHOUT AREA NTS**

**EROSION AND SEDIMENT CONTROL PLAN CERTIFICATION**

THIS EROSION AND SEDIMENT CONTROL NARRATIVE AND ATTACHED EROSION AND SEDIMENT PLAN, APPEARS TO FULFILL THE TECHNICAL CRITERIA AND THE CRITERIA FOR EROSION CONTROL AND THE REQUIREMENTS OF THE CITY OF RAPID CITY. I UNDERSTAND THAT ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE NEEDED IF UNFORSEEN EROSION PROBLEMS OCCUR OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS ANTICIPATED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE RESPONSIBLE PARTY UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

OWNER/DEVELOPER \_\_\_\_\_ DATE \_\_\_\_\_

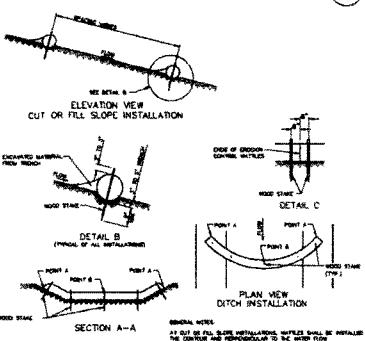
GENERAL CONTRACTOR (OPTIONAL) \_\_\_\_\_ DATE \_\_\_\_\_

**ENGINEER'S CERTIFICATION**

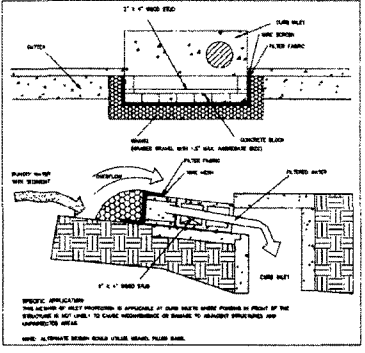
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF SOUTH DAKOTA.

RENNER & ASSOCIATES, P.C. \_\_\_\_\_ DATE \_\_\_\_\_

**SEDIMENT CONTROL WATTLE**



**SEDIMENT CONTROL WATTLE NTS**



**INLET PROTECTION NTS**

**RENNER & ASSOCIATES, LLC.**  
1544 WASHINGTON STREET  
RAPID CITY, SD 57701  
605-348-2335  
REGISTRATION NUMBER: 0000077700019

**Scale:** NONE  
Checked By: NONE  
Designed By: ADP  
Drawn Date: 4/20/2011  
Print Date: 4/27/2011  
Surveyed By: Survey Date: 2/28/2011  
Revision:

**LOT A OF TRACT E-3R OF MCGAHON SUBDIVISION**  
LOCATED IN THE NE 1/4 OF THE SW 1/4 OF SECTION 24, T2N, R7E, BHM  
RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

Prepared For:  
MAP DEVELOPMENTS  
ATTN: MIKE MACIEL  
1544 WASHINGTON STREET  
RAPID CITY, SD 57701  
605-348-2335

Internal Job No.: #2504.01

Sheet Title:  
EROSION AND SEDIMENT CONTROL NARRATIVE & DETAILS

Sheet: 4 of 7