10PD071

RECEIVED
DEC 21 2010
Rapid City Growth
Management Department

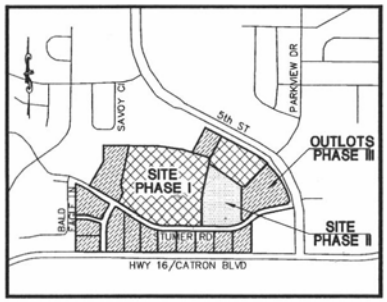
PROPOSED DEVELOPMENT PLANS
BLACK HILLS CENTER
Walmart
STORE# 3872-03
RAPID CITY,
PENNINGTON COUNTY, S.D.

HWY 16 / CATRON BOULEVARD INTERSECTION FIFTH STREET

UTILITY RESPONSIBILITY MATRIX FOR THIS PROJECT

	UTILITY/ GOVERNING AGENCIES CONTACTS	CONTRACTOR RESPONSIBILITY-	OTHERS RESPONSIBILITY-
GAS	GAS SERVICE MONTANA-DAKOTA UTILITIES CO. PO.BOX 1061 RAPID CITY, SD 57709 CONTACT: MR. MARC JACOBS PHONE: (605) 355-4015 FAX (605) 355-4538 Email: Marc.Jacobs@mdu.com EMERGENCY PHONE: 800-638-3278	-COORDINATE CONSTRUCTION ACTIVITIES WITH GAS COMPANY TO ENSURE INSTALLATION OF GAS LINES ARE COMPLETED PRIOR TO ASPHALT OR CURB PLACEMENT -INSTALL BOLLARD PROTECTION AS SHOWN ON THE PLANS AND PER THE GAS COMPANY REQUIREMENTS	-SERVICE FROM THE POINT OF CONNECTION AT THE EXISTING LINE UP TO AND INCLUDING SETTING OF METER WILL BE BY THE GAS COMPANY MONTANA-DAKOTA UTILITIES CO. (MDU). -ANY RELOCATION OF EXISTING WILL BE DONE BY MDU
TELEPHONE	AT&T, MO , SPRINT MIDCONTINENT COMMUNICATIONS www.midcontinent.com Phone: 1-800-888-1300 QWEST/ www.qwest.com KNOLOGY www.knology.com	-COORDINATE CONSTRUCTION ACTIVITIES WITH TELEPHONE COMPANY TO ENSURE INSTALLATION OF UNDERGROUND LINES ARE COMPLETED PRIOR TO ASPHALT OR CURB PLACEMENT -PROVIDE AND INSTALL 3-4" SCHEDULE 40 PVC CONDUITS WITH PULL ROPES, INCLUDING ALL TRENCHING AND BACKFILLING, FROM THE RISER POLE UP TO THE BUILDING -PROVIDE AND INSTALL PULL BOXES AS PER TELEPHONE COMPANY REQUIREMENTS	-TELEPHONE COMPANY WILL PROVIDE AND INSTALL ALL TELEPHONE CABLES FROM THE POINT OF CONNECTION UP TO THE BUILDING (PRESENT RESPONSIBLE PARTIES) -ANY RELOCATION OF EXISTING WILL BE DONE BY THE PHONE COMPANY (PRESENT RESPONSIBLE PARTIES)
ELECTRIC	ELECTRIC SERVICE BLACK HILLS POWER PO.BOX 1400 RAPID CITY, SD 57709 CONTACT: MR. DON MARTINEZ PHONE: (605) 721-2999 FAX (605) 719-9917 Email: Don.martinez@blackhillscorp.com EMERGENCY PHONE: 605-721-2999 SOUTH DAKOTA ONE CALL: 1-800-781-7474	-COORDINATE CONSTRUCTION ACTIVITIES WITH ELECTRIC COMPANY TO ENSURE INSTALLATION OF UNDERGROUND LINES ARE COMPLETED PRIOR TO ASPHALT OR CURB PLACEMENT -PROVIDE AND INSTALL 3-4" SCHEDULE 40 PVC CONDUITS WITH PULL ROPES, INCLUDING TRENCHING AND BACKFILLING, FROM THE RISER POLE UP TO THE TRANSFORMER. SCHEDULE 80 PVC CONDUITS SHALL BE USED ON THE RISER POLE AND RIGID METAL LONG RADIUS, ELBOWS SHALL BE USED WHERE THE UNDERGROUND PORTION MEETS THE RISER POLE AND TRANSFORMER -CONSTRUCT TRANSFORMER PAD AS PER THE ELECTRIC COMPANY'S SPECIFICATIONS -PROVIDE AND INSTALL ALL SECONDARY SERVICE AND MATERIALS	-ELECTRIC COMPANY: BLACK HILLS POWER, WILL PROVIDE AND INSTALL ALL MATERIALS NEEDED TO ESTABLISH PRIMARY OVERHEAD SERVICE FROM POINT OF CONNECTION AT THE EXISTING LINE UP TO THE TRANSFORMER (PRESENT RESPONSIBLE PARTIES) -ELECTRIC COMPANY WILL PROVIDE AND INSTALL PRIMARY CABLE FOR ALL UNDERGROUND LINES UP TO THE TRANSFORMER (PRESENT RESPONSIBLE PARTIES) -ANY RELOCATION OF EXISTING LINES OR POLES WILL BE DONE BY RAPID CITY ELECTRIC SYSTEM OR CONTRACTOR. (PRESENT RESPONSIBLE PARTIES)
SANITARY SEWER	CITY OF RAPID CITY / SEWER PUBLIC WORKS DEPARTMENT 300 SIXTH STREET, RAPID CITY, SD 57701 CONTACT: MR. STACY STOLS PHONE: (605) 394-4165 FAX (605) 355-3083	-PROVIDE AND INSTALL SANITARY SEWER LINES AND ASSOCIATED APPURTENANCES PER THE PLANS AND SPECIFICATION -ALL PUBLIC AND PRIVATE SANITARY SEWER LINES SHALL BE PVC SDR 35 AND SLASED SDR 35 -COORDINATE REQUIRED INSPECTION SERVICES WITH ENGINEER OF RECORD AND CITY OF RAPID CITY DEPARTMENT OF PUBLIC WORKS, SEE UTILITY PLAN FOR REQUIREMENTS	
WATER	CITY OF RAPID CITY / WATER PUBLIC WORKS DEPARTMENT 300 SIXTH STREET, RAPID CITY, SD 57701 CONTACT: MR. STACY STOLS PHONE: (605) 394-4165 FAX (605) 355-3083	-PROVIDE AND INSTALL ALL WATER MAINS AND ASSOCIATED APPURTENANCES PER THE PLANS AND SPECIFICATION -ALL PUBLIC AND PRIVATE WATER MAINS SHALL BE C-900 PVC DR14 CLASS 200 -ALL PORTIONS OF THE FIRE PROTECTION WATER SYSTEM SHALL BE INSTALLED BY A LICENSED FIRE SPRINKLER CONTRACTOR -ALL PORTIONS OF OTHER NON FIRE PROTECTION RELATED LINES MAY BE INSTALLED BY THE PLUMBING CONTRACTOR -COORDINATE REQUIRED INSPECTION SERVICES WITH ENGINEER OF RECORD AND CITY OF RAPID CITY DEPARTMENT OF PUBLIC WORKS, SEE UTILITY PLAN FOR REQUIREMENTS	-DOMESTIC TAP FROM THE POINT OF CONNECTION AT THE EXISTING LINE UP TO AND INCLUDING SETTING OF METER AT THE PROPERTY LINE WILL BE BY THE CONTRACTOR. -(PRESENT RESPONSIBLE PARTIES) -ANY RELOCATION OF EXISTING WILL BE DONE BY THE CONTRACTOR (PRESENT RESPONSIBLE PARTIES)
STORM SEWER	CITY OF RAPID CITY RAPID CITY, SOUTH DAKOTA 57701-2724 PUBLICWORKS DEPARTMENT 300 SIXTH STREET CONTACT: TELEPHONE: (605) 394-4165 FAX: (605) 394-5636 WEB: www.rapiccity.org	-PROVIDE AND INSTALL ALL STORM SEWER LINES AND ASSOCIATED APPURTENANCES PER THE PLANS AND SPECIFICATION -REFER TO GRADING PLAN FOR INFORMATION ON ALLOWABLE STORM SEWER MATERIALS	
FIRE	FIRE DEPARTMENT RAPID CITY DEPARTMENT OF FIRE & EMERGENCY SERVICES PREVENTION DIVISION / PERMITS 1930 PRAIRIE ROAD, RAPID CITY, SD 57701 CONTACT: CHIEF TIM BEHLINGER 605-394-5133 FAX 394-5235		

THIS MATRIX HAS BEEN PROVIDED FOR INFORMATIONAL PURPOSES. THE CONTRACTOR SHALL PROVIDE ANY AND ALL APPURTENANCES, TRENCHING AND BACKFILL, AND OTHER INCIDENTALS TO MEET OR EXCEED THE SPECIFICATIONS OF THE ITEMS LISTED.



LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4. SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

NOTES:

1. THE SITEWORK FOR THE WALMART PORTION OF THIS PROJECT SHALL MEET OR EXCEED THE "WALMART STANDARD SITEWORK SPECIFICATIONS".
2. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODES AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO ANNOUNCED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICES.

WALMART SUPERCENTER # 3872-03
BLACK HILLS CENTER, RAPID CITY, SD
SHEET INDEX

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3	2 of 2 PROPERTY MAP	2/26/2010		BY: RENNER & ASSOCIATES
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5	C-1A SITE PLAN (60 SCALE)	12/09/2010		
6	C-1B SITE PLAN (60 SCALE)	12/09/2010		
7	C-2 OVERALL GRADING PLAN (100 SCALE)	12/09/2010		
8	C-2A GRADING PLAN (60 SCALE)	12/09/2010		
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10	C-3 OVERALL UTILITY PLAN (100 SCALE)	12/09/2010		
11	C-3A UTILITY PLAN (60 SCALE)	12/09/2010		
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13	ES-1 PHASE I - EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (100 SCALE)	12/09/2010		
14	ES-1A PHASE I - EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN (60 SCALE)	12/09/2010		
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19	ES-4 EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN NOTES	12/09/2010		
20	IA-1 INLET AREA DRAINAGE MAP (100 SCALE)	12/09/2010		
21	ST-1 STORM SEWER PROFILES (60 SCALE)	12/09/2010		
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24	C-7 STRUCTURE & PIPE TABLES	12/09/2010		
25	D-1A SITE PLAN DETAILS	12/09/2010		
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27	D-1C SITE PLAN DETAILS	12/09/2010		
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35	TR-1 OPERATIONAL SITE PLAN	12/09/2010		
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38	L-2 PRELIMINARY PLANTING PLAN (30 SCALE)	03/19/2010	12/06/2010	BY: LANDSCAPE ECONOLOGY
39	L-3 PRELIMINARY PLANTING PLAN (30 SCALE)	03/19/2010	12/06/2010	BY: LANDSCAPE ECONOLOGY
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NOTE: PLANS SUBMITTED UNDER A SEPARATE COVER INCLUDE:
-FIFTH STREET AND EAST STUMER ROAD INTERSECTION IMPROVEMENT PLANS.
-TRAFFIC SIGNAL INSTALLATION PLAN, US 16B / CATRON BOULEVARD AND BLACKHILLS BOULEVARD.

ENGINEER-
Wolverton & Associates
Consulting Engineers + Land Surveyors
6745 Sugarloaf Parkway • Suite 100 • Duluth, Georgia 30097
Phone: (770) 447-8999 • Fax: (770) 447-9070
www.wolverton-assoc.com
CONTACT: MR. KELLY J. WAGONER

811 Know what's below. Call before you dig. (800)781-7474 Outside SD

OWNER / DEVELOPER-
THF STONERIDGE DEVELOPMENT, LLC
2127 INNERBELT BUSINESS CENTER DR.
SUITE 200 / ST. LOUIS, MO. 63114
PHONE: (314) 429-0900
FAX: (314) 429-0999

Wolverton & Associates
Consulting Engineers + Land Surveyors
6745 Sugarloaf Parkway • Suite 100 • Duluth, Georgia 30097
Phone: (770) 447-8999 • Fax: (770) 447-9070
www.wolverton-assoc.com

Registered Professional Engineer

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

PROPOSED BLACK HILLS CENTER
Walmart # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

Project Developer
THF STONERIDGE DEVELOPMENT, LLC
2127 INNERBELT BUSINESS CENTER DR.
SUITE 200 / ST. LOUIS, MO. 63114

SHEET NUMBER
C-0
OF SHEETS

LEGEND

MAILBOX	PROPERTY LINE
BARRIER	WIRE FENCE
FIRE HYDRANT	CHAIN LINK FENCE
WATER VALVE	WOOD FENCE
POWER POLE	CURB & GUTTER
LIGHT POLE	FIBER OPTIC LINE
TREE	WATER LINE
PINE	POWER LINE
SIGN	OVER HEAD POWER
TELEPHONE BOX	TELEPHONE LINE
CABLE BOX	SANITARY SEWER LINE
ELECTRIC BOX	STORM SEWER LINE
FIBER BOX	GAS LINE
	CABLE LINE
ASPHALT SURFACE	MINOR CONTOUR (1')
CONCRETE SURFACE	MAJOR CONTOUR (5')
GRAVEL	DENOTES FOUND SURVEY MONUMENT MARKED LS 7917, UNLESS OTHERWISE NOTED
EASEMENTS NOT SHOWN ON THIS SURVEY	DENOTES SET 1/2" REBAR MARKED "ROBERTS-ASSOC. 7917"

(M) MEASURED THIS SURVEY
(r) REFERENCED IN A PREVIOUS PLAT OR DESCRIPTION

NOTES

1. **BASIS OF BEARINGS:** GEODETIC NORTH AS DETERMINED BY LOCAL POSITIONING SYSTEM (GPS)
2. **BENCHMARK:** ELEVATIONS ARE BASED ON RAPID CITY BM #R06517 WITH A PUBLISHED ELEVATION OF 3617.18 FT (NAVD88) & #2108 WITH A PUBLISHED ELEVATION OF 3287.28 (NAVD88)
3. ALL WATER AND SANITARY SEWER LINES ARE SIZED AS SHOWN AND CONSTRUCTED OF A POLYVINYL CHLORIDE PIPE (PVC)
4. ALL DRAINAGE EASEMENTS SHOWN HEREON SHALL BE KEPT FREE OF ALL OBSTRUCTIONS INCLUDING BUT NOT LIMITED TO BUILDINGS, WALLS, FENCES, HEDGES, TREES AND SHRUBS. THESE EASEMENTS GRANT TO ALL PUBLIC AUTHORITIES THE RIGHT TO CONSTRUCT, OPERATE, MAINTAIN, INSPECT AND REPAIR SUCH IMPROVEMENTS AND STRUCTURES AS IT DEEMS EXPEDIENT TO FACILITATE DRAINAGE FROM ANY COURSE, AS NOTED ON THE PLAT RECORDED IN BOOK 34 OF PLATS ON PAGE 76 IN THE OFFICE OF THE REGISTER OF DEEDS, PENNINGTON COUNTY, SOUTH DAKOTA
5. ALL BUILDERS SHALL MAINTAIN EXISTING DRAINAGE FACILITIES TO ACCOMPANY THE APPROVED CONSTRUCTION PLANS AS NOTED ON THE PLAT RECORDED IN BOOK 34 OF PLATS ON PAGE 76 AND IN BOOK 33 OF PLATS ON PAGE 146 IN THE OFFICE OF THE REGISTER OF DEEDS, PENNINGTON COUNTY, SOUTH DAKOTA. RAPID CITY ENGINEERING DIVISION REQUESTED NOTICE
6. ALL PAVEMENT IN GOOD CONDITION. ALL CURB & GUTTER IS STANDARD CONCRETE
7. LATITUDE & LONGITUDE ESTABLISHED FROM NGS MONUMENT AC5884

LEGAL DESCRIPTION

THE SOUTH HALF OF THE NORTHEAST QUARTER (S1/2NE1/4) LYING SOUTHWESTERLY OF 44TH STREET, EXCEPTING THEREFROM LOT R-10 AS SHOWN ON THE PLAT RECORDED IN BOOK 8 OF MINOR PLATS ON PAGE 13, AND EXCEPTING THEREFROM BLACK HILLS CENTER, AND EXCEPTING THEREFROM 44TH STREET OFFICE PLAZA, AND EXCEPTING THEREFROM BLACK HILLS BOULEVARD, AND TUNDER ROAD

ALL LOCATED IN SECTION TWENTY-FOUR (24) IN TOWNSHIP ONE NORTH (T1N), RANGE SEVEN EAST OF THE BLACK HILLS MERIDIAN SITE BASE, CITY OF RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

LOTS ONE (1), THREE (3) AND FOUR (4) IN BLOCK ONE (1) OF BLACK HILLS CENTER, CITY OF RAPID CITY, AS SHOWN ON THE PLAT RECORDED IN BOOK 33 OF PLATS ON PAGE 146 IN THE OFFICE OF THE REGISTER OF DEEDS, PENNINGTON COUNTY, SOUTH DAKOTA

LOT ONE (1) IN BLOCK TWO (2) OF FIFTH STREET OFFICE PLAZA, CITY OF RAPID CITY, AS SHOWN BY THE PLAT RECORDED IN BOOK 34 OF PLATS ON PAGE 76 IN THE OFFICE OF THE REGISTER OF DEEDS, PENNINGTON COUNTY, SOUTH DAKOTA

UTILITIES

SOUTH DAKOTA ONE CALL NOTIFICATION CENTER
115 EVERGREEN HEIGHTS DRIVE
HOT SPRINGS, SD 57747
1-800-781-7474

THE LOCATION OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNERS OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES

CONTACTS

Electricity
Black Hills Power & Light Co.
P.O. Box 1400
Rapid City, SD 57709
(605) 394-2142
Contact: Ken Van Buchner
Min. Line Depth: 24" Cover

Natural Gas
Montana Dakota Utilities
P.O. Box 1943
Rapid City, SD 57709
(605)350-4042
Contact: Mark Jacobs, Engineer
Min. Line Depth: 12" Service
30" Main

City of Rapid City
Grant Montgomery
300 Sixth Street
Rapid City, SD 57701
(605) 394-4150
Contact: Marvin Davis, Planning Director

Public Works
300 Sixth Street
Rapid City, SD 57701
(605) 394-4185
Contact: Robert Ellis, Director

Telecommunications
Nextlink
500 Disciplined Avenue
Rapid City, SD 57703
(605)721-1722
Contact: Tim Dickson, Construction/Engineering Manager
Min. Line Depth: 36" Cover

Telephone/Communication
1824 Concourse Court
Rapid City, SD 57703
(605)721-1121
Contact: Terry Hoter, Construction Supervisor
Min. Line Depth: 36" service
36" Main

Qwest
612 Mount Rushmore Road
Rapid City, SD 57703
(605) 394-4715
Contact: Keith Nelson, Construction Supervisor
Min. Line Depth: 24" Cover

Sewer & Water
City of Rapid City Maintenance
500 Skate Avenue
Rapid City, SD 57701
(605) 394-4163
Contact: Chip Peck
Tibby Pasofka
Min. Sewer Depth: 42" Cover
Min. Water Depth: 72" Cover

SPEED LIMITS OF STREETS

LIMIT	ROAD NAME
NO SIGN	BALD EAGLE DRIVE
20 MPH	BLACK HILLS BOULEVARD

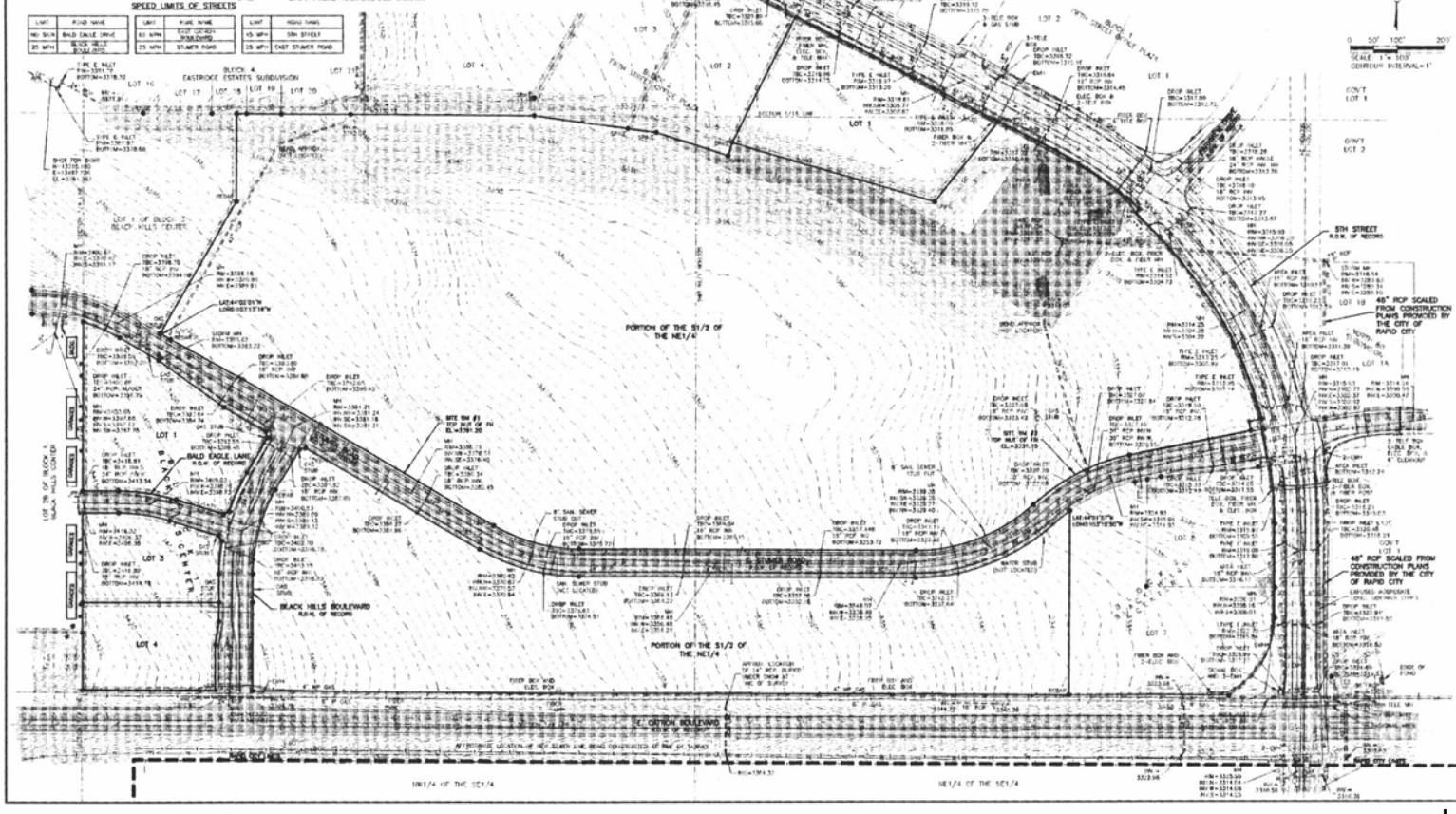
LIMIT	ROAD NAME
30 MPH	EAST CATHEDRAL DRIVE
25 MPH	STAMER ROAD

LIMIT	ROAD NAME
45 MPH	5TH STREET
25 MPH	EAST STAMER ROAD

CERTIFICATE OF SURVEYOR

I, ERIC D. HOWARD, REGISTERED LAND SURVEYOR NO. 7713 OF THE STATE OF SOUTH DAKOTA, DO HEREBY CERTIFY THAT BEING SO AUTHORIZED, I DID CAUSE THE WITHIN SHOWN SURVEY AND MAP TO BE MADE UNDER MY DIRECTION AND THAT THE SAID MAP CORRECTLY SHOWS THE EXISTING SITE CONDITIONS AND PERMANENT MARKERS AND THEIR LOCATIONS

DATE ERIC D. HOWARD REGISTERED LAND SURVEYOR



RENNER & ASSOCIATES, L.L.C.
CIVIL ENGINEERS • LAND SURVEYORS
6116 SMITH RD. • RAPID CITY, SD 57701
PHONE: 605/341-7860 FAX: 605/341-7313
E-MAIL: RENNER@RENNERASSOC.COM
CITY FIELD 1999

Scale: 1"=100'
Designed By: ADP
Design Date: 7/18/10
Drawn By: RENNER
Drawn Date: 1/2010
Revisions: 2/16/10-ADDL TOPO EAST OF 44th ST

DETAILED TOPOGRAPHIC MAP

Prepared For: CHE REALTY, INC. 1011 SOUTH KNOLLWOOD CENTER DRIVE, STE. 230 SIOUX FALLS, SD 57108 ATTN: ROBERT GREEN PHONE: (513) 424-1400

Project No: #2464

Sheet Title: DETAILED TOPOGRAPHIC MAP

Sheet: 1 of 2

10PD071

RECORD LINE DIMENSIONS

LINE	LENGTH	BEARING
L1	50.00'	S00°01'00"W
L2	50.00'	S00°01'00"W
L3	50.00'	S00°01'00"W
L4	50.00'	S00°01'00"W
L5	50.00'	S00°01'00"W
L6	50.00'	S00°01'00"W
L7	50.00'	S00°01'00"W
L8	50.00'	S00°01'00"W
L9	50.00'	S00°01'00"W
L10	50.00'	S00°01'00"W
L11	50.00'	S00°01'00"W
L12	50.00'	S00°01'00"W

LINE	LENGTH	BEARING
L13	14.14'	S15°27'49"E
L14	14.14'	S15°27'49"E
L15	14.14'	S15°27'49"E
L16	14.14'	S15°27'49"E
L17	46.18'	S00°00'00"E
L18	31.84'	S00°00'00"E
L19	50.00'	N79°44'50"E
L20	50.00'	N79°44'50"E
L21	50.00'	N79°44'50"E
L22	50.00'	N79°44'50"E
L23	14.14'	S15°27'49"E
L24	14.14'	S15°27'49"E

LINE	LENGTH	BEARING
L25	50.00'	S00°01'00"W
L26	50.00'	S00°01'00"W
L27	50.00'	S00°01'00"W
L28	50.00'	S00°01'00"W
L29	50.00'	S00°01'00"W
L30	50.00'	S00°01'00"W
L31	50.00'	S00°01'00"W
L32	50.00'	S00°01'00"W
L33	50.00'	S00°01'00"W
L34	50.00'	S00°01'00"W
L35	50.00'	S00°01'00"W
L36	50.00'	S00°01'00"W

MEASURED LINE DIMENSIONS

LINE	LENGTH	BEARING
L37	14.14'	S14°29'53"E
L38	50.74'	N14°29'53"W
L39	45.58'	S00°01'00"W
L40	14.14'	S15°27'49"E
L41	14.14'	S15°27'49"E
L42	14.14'	S15°27'49"E
L43	14.14'	S15°27'49"E
L44	14.14'	S15°27'49"E
L45	14.14'	S15°27'49"E
L46	14.14'	S15°27'49"E
L47	14.14'	S15°27'49"E
L48	14.14'	S15°27'49"E

LINE	LENGTH	BEARING
L49	50.00'	S00°01'00"W
L50	50.00'	S00°01'00"W
L51	50.00'	S00°01'00"W
L52	50.00'	S00°01'00"W
L53	50.00'	S00°01'00"W
L54	50.00'	S00°01'00"W
L55	50.00'	S00°01'00"W
L56	50.00'	S00°01'00"W
L57	50.00'	S00°01'00"W
L58	50.00'	S00°01'00"W
L59	50.00'	S00°01'00"W
L60	50.00'	S00°01'00"W

RECORD CURVE DIMENSIONS

CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C1	131.52'	142.00'		S38°19'44"W	126.98'
C2	131.52'	142.00'		S38°19'44"W	126.98'
C3	81.06'	436.00'		S34°12'13"W	80.94'
C4	81.16'	364.00'		S33°12'06"W	80.98'
C5	31.42'	20.00'	90°00'00"	N44°01'00"E	28.28'
C6	31.42'	20.00'	90°00'00"	N44°01'00"E	28.28'
C7	147.13'	364.00'		N34°12'13"E	146.13'
C8	224.84'	436.00'	29°32'02"	S47°27'45"E	222.33'
C9	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C10	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C11	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C12	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C13	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C14	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C15	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C16	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C17	225.48'	908.00'	14°13'45"	S82°02'07"E	224.99'
C18	40.30'	25.00'	92°33'11"	S43°15'13"E	36.03'

MEASURED CURVE DIMENSIONS

CURVE	LENGTH	RADIUS	DELTA	CHORD BEARING	CHORD DISTANCE
C1	131.52'	142.00'		S38°19'44"W	126.98'
C2	131.52'	142.00'		S38°19'44"W	126.98'
C3	81.06'	436.00'		S34°12'13"W	80.94'
C4	81.16'	364.00'		S33°12'06"W	80.98'
C5	31.42'	20.00'	90°00'00"	N44°01'00"E	28.28'
C6	31.42'	20.00'	90°00'00"	N44°01'00"E	28.28'
C7	147.13'	364.00'		N34°12'13"E	146.13'
C8	224.84'	436.00'	29°32'02"	S47°27'45"E	222.33'
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C11	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C12	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C13	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C14	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C15	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C16	31.42'	20.00'	90°00'00"	S44°01'00"W	28.28'
C17	225.48'	908.00'	14°13'45"	S82°02'07"E	224.99'
C18	40.30'	25.00'	92°33'11"	S43°15'13"E	36.03'

LEGEND

- ● DENOTES FOUND SURVEY MONUMENT MARKED AS NOTED UNLESS OTHERWISE NOTED
- ◉ DENOTES SET 5/8" REBAR MARKED "RENNER-KEUDE 9211"
- (M) MEASURED THIS SURVEY
- (R) RECORDED IN A PREVIOUS PLAT OR DESCRIPTION

BASIS OF BEARINGS: GEODETIC NORTH AS DETERMINED BY GLOBAL POSITIONING SYSTEM (GPS)

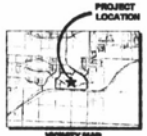
LEGAL DESCRIPTION

THE SOUTH HALF OF THE NORTHEAST QUARTER (S1/2NE1/4) LYING SOUTHWESTERLY OF FIFTH STREET, EXCEPTING THEREFROM LOT NH1 AS SHOWN ON THE PLAT RECORDED IN BOOK 15 OF MINI PLATS ON PAGE 13, AND EXCEPTING THEREFROM BLACK HILLS CENTER AND EXCEPTING THEREFROM FIFTH STREET OFFICE PLAZA, AND EXCEPTING THEREFROM BLACK HILLS BOULEVARD AND STUMER ROAD

ALL LOCATED IN SECTION TWENTY-FOUR (24) IN TOWNSHIP ONE NORTH (T1N), RANGE SEVEN EAST OF THE BLACK HILLS MERIDIAN (BHM), CITY OF RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

LOTS ONE (1), THREE (3) AND FOUR (4) IN BLOCK ONE (1) OF BLACK HILLS CENTER, CITY OF RAPID CITY, AS SHOWN BY THE PLAT RECORDED IN BOOK 33 OF PLATS ON PAGE 146 IN THE OFFICE OF THE REGISTER OF DEEDS, PENNINGTON COUNTY, SOUTH DAKOTA

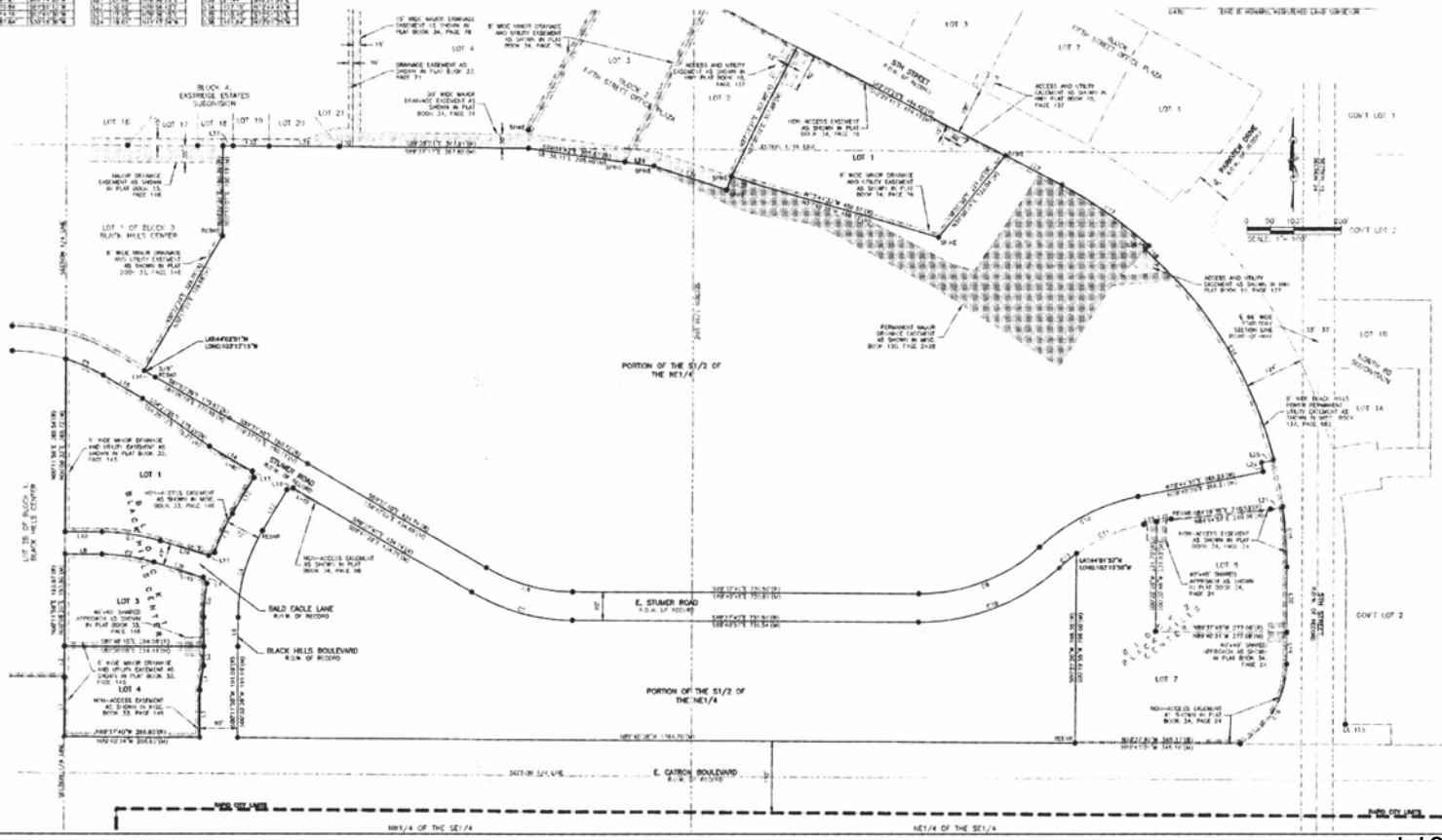
LOT ONE (1) IN BLOCK TWO (2) OF FIFTH STREET OFFICE PLAZA, CITY OF RAPID CITY, AS SHOWN BY THE PLAT RECORDED IN BOOK 34 OF PLATS ON PAGE 76 IN THE OFFICE OF THE REGISTER OF DEEDS, PENNINGTON COUNTY, SOUTH DAKOTA



CERTIFICATE OF SURVEYOR

I, ERIC D. HOWARD, REGISTERED LAND SURVEYOR NO. 9211 OF THE STATE OF SOUTH DAKOTA, DO HEREBY CERTIFY THAT BEING TO AUTHORITY, I DID CAUSE THE WITHIN SHOWN SURVEY AND MAP TO BE MADE UNDER MY DIRECTION AND THAT THE SAID MAP CORRECTLY SHOWS THE EXISTING SITE CONDITIONS AND PERMANENT MARKERS AND THEIR LOCATIONS.

DATE: _____ ERIC D. HOWARD, REGISTERED LAND SURVEYOR



RENNER & ASSOCIATES, LLC.
618 SOUTH 80th ST. • RAPID CITY, SD 57703
PHONE: 605/721-7313 FAX: 605/721-7315
PROFESSIONAL CIVIL ENGINEERS • PLANNERS
CITY HALL 1968

Scale: 1"=100'
Designed by: ACP
Drawn by: ACP
Design Date: 2/26/10
Drawn Date: 2/26/10
Surveyed by: RENNER
Survey Date: 1/2010
Revisions:

DETAILED PROPERTY MAP

Prepared for:
TAP REALTY, INC.
C/O LIZ HAMBRIGHT BUSINESS CENTER EAST, S.E. 001
ST. LOUIS, MO. 63114
ATTN: ROBERT GRIDER
PHONE (314) 421-7000

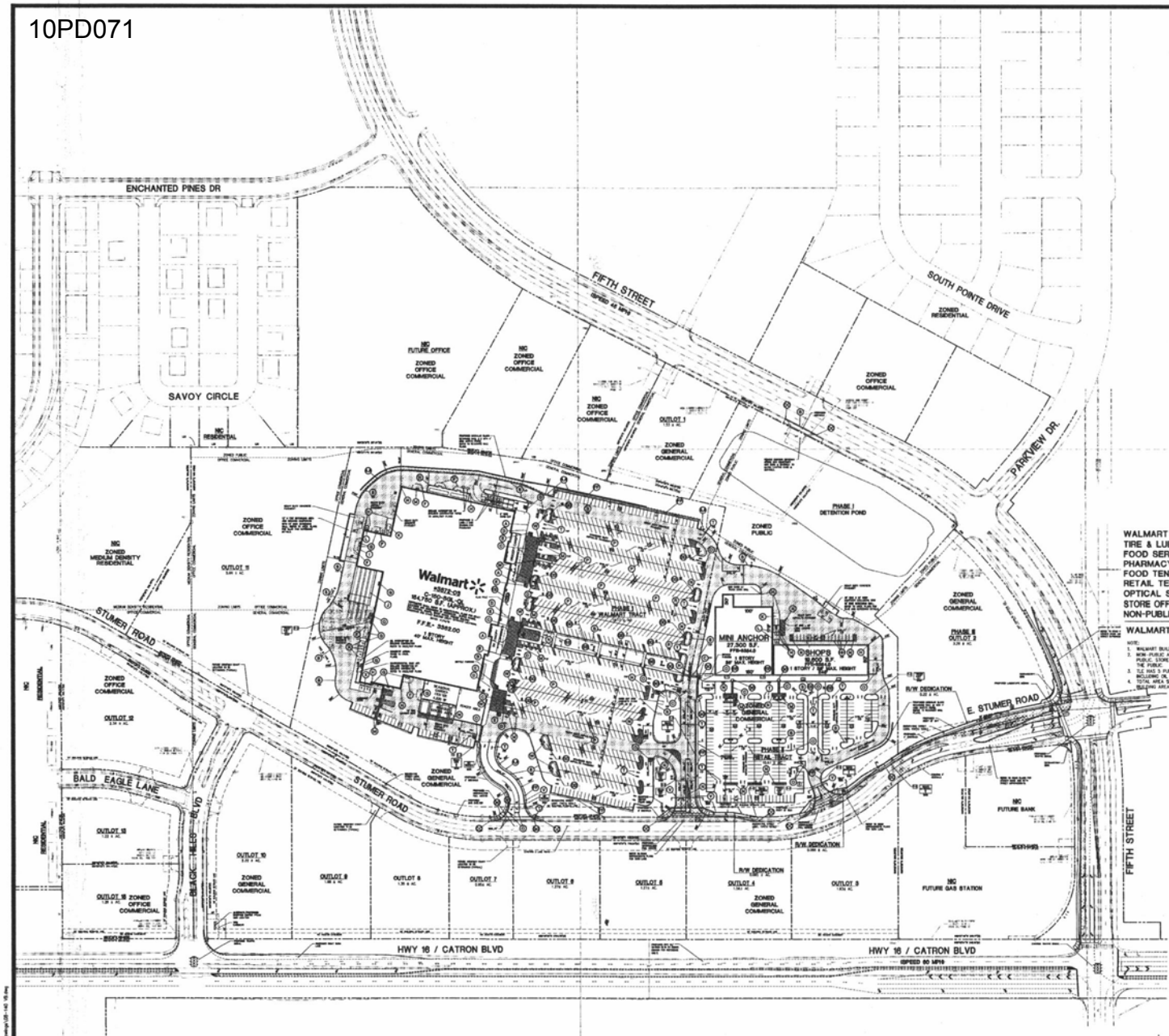
Project Job No.: #2464

Sheet Title: DETAILED PROPERTY MAP

Sheet: 2 of 2

10PD071

10PD071



LOCATION MAP

NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4, SECTION 24, T1N, R1E, 6PM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

OVERALL SITE ANALYSIS

WALMART	154,750 S.F.
RETAIL	46,900 S.F.
TOTAL GROSS AREA	201,650 S.F.
TOTAL PARKING	1,007 SPACES
PROPOSED RATIO	4.99/1,000 S.F.

WALMART SITE ANALYSIS

WALMART	154,750 S.F.
STANDARD SPACES	714 SPACES
ACCESSIBLE SPACES	22 SPACES
CART CORRALS	28 SPACES
TOTAL PARKING	736 SPACES
RATIO	4.75/1,000 S.F.

RETAIL SITE ANALYSIS

RETAIL	46,900 S.F.
TOTAL PARKING	271 SPACES
RATIO	5.78/1,000 S.F.

SITE AREA ANALYSIS

WALMART	19.17 ± AC.
RETAIL	10.97 ± AC.
R/W DEDICATION	0.40 ± AC.
OUTLOTS 1 TO 14	27.97 ± AC.
SITE AREA	58.51 ± AC.

WALMART SUPPLEMENTAL PARKING RATIO BY USE

WALMART MAIN SALES	125,978 S.F.	@ 5.0/1,000 S.F.	= 629.9 SP
TIRE & LUBE EXPRESS (TLE)	1,279 S.F.	@ 10.0/1,000 S.F.	= 12.8 SP
FOOD SERVICE	802 S.F.	@ 11.0/1,000 S.F.	= 8.8 SP
PHARMACY	771 S.F.	@ 5.0/1,000 S.F.	= 3.9 SP
FOOD TENANT	710 S.F.	@ 11.0/1,000 S.F.	= 7.8 SP
RETAIL TENANT	670 S.F.	@ 5.0/1,000 S.F.	= 3.3 SP
OPTICAL SALES	775 S.F.	@ 5.0/1,000 S.F.	= 3.9 SP
STORE OFFICE & PREPARATION AREAS	10,791 S.F.	@ 5.0/1,000 S.F.	= 54.0 SP
NON-PUBLIC ACCESSIBLE AREAS	21,436 S.F.	@ 0.25/1,000 S.F.	= 5.4 SP
WALMART GROSS AREA	163,212 S.F.		729.8 SP

NOTE:

1. WALMART BUILDING AREAS BASED ON AREAS PROVIDED BY ARCHITECTURAL FLOOR PLAN DATE: 04/20/2010.
2. NON-PUBLIC ACCESSIBLE AREAS INCLUDES STORAGE, RECEIVING, ELECTRICAL/MECHANICAL ROOMS, WAREHOUSE USE, TLE, ETC. NOT OPEN TO THE PUBLIC. STORE OFFICE AND PREPARATION AREAS INCLUDE OFFICE AREAS, BAKERY, DELI, LAW AND OTHER SMOOTH, NOT STORE SIZE NOT OPEN TO THE PUBLIC.
3. TLE HAS 3 FULL-IN/BACK-OUT SERVICE BAYS. SERVICES PROVIDED INCLUDE TIRE SALES AND SERVICE AND CUSTOMARY VEHICLE SERVICES INCLUDING OIL CHANGES AND BATTERY REPLACEMENT.
4. TOTAL AREA SHOWN HERE INCLUDES CERTAIN OUTDOOR AND SERVICE AREAS NOT REPRESENTED IN THE OVERALL SITE ANALYSIS TABLE. OVERALL BUILDING AREA PER IBC 1002.1 DEFINITION.

SITE PLAN NOTES

1. ALL WORK AND MATERIALS SHALL COMPLY WITH ALL CITY/COUNTY REGULATIONS AND CODES AND O.S.H.A. STANDARDS.
2. CONTRACTOR SHALL REFER TO THE ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF VESTIBULES, SLOPE PAVING, SIDEWALKS, EXIT PORCHES, TRUCK DOCKS, TRUCK RAMPS, BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.
3. ALL DISTURBED AREAS ARE TO RECEIVE FOUR INCHES OF TOPSOIL, SEED, MULCH AND WATER UNTIL A HEALTHY STAND OF GRASS IS ESTABLISHED.
4. ALL ISLANDS NEW CURB & GUTTER SHALL BE LANDSCAPED. TRIPLE ISLANDS ARE TO HAVE 18" CURB & GUTTER. ALL ISLANDS ARE TO BE STRIPED AS SHOWN.
5. ALL CURBED RADII ARE TO BE 5' UNLESS OTHERWISE NOTED. STRIPED RADII ARE TO BE 3'.
6. ALL DIMENSIONS AND RADII ARE TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
7. EXISTING STRUCTURES WITHIN CONSTRUCTION LIMITS ARE TO BE ABANDONED, REMOVED OR RELOCATED AS NECESSARY. ALL COST SHALL BE INCLUDED IN BASE BID.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL RELOCATIONS, INCLUDING BUT NOT LIMITED TO, ALL UTILITIES, STORM DRAINAGE, SIGNS, TRAFFIC SIGNALS & POLES, ETC. AS REQUIRED. ALL WORK SHALL BE IN ACCORDANCE WITH GOVERNING AUTHORITIES SPECIFICATIONS AND SHALL BE APPROVED BY SUCH. ALL COST SHALL BE INCLUDED IN BASE BID.
9. THE PRELIMINARY DEVELOPMENT PLAN FOR THIS PROJECT WAS APPROVED BY CITY COUNCIL JUNE 29, 2010. REFER TO CASE NUMBER # 10PD071 AND THE STAFF REPORT DATED JUNE 14, 2010 FOR CONDITIONS OF APPROVAL.
10. THE SITE WORK FOR THIS PROJECT SHALL MEET OR EXCEED "THE WALMART SITE WORK SPECIFICATIONS".
11. SHOPPING CENTER SIGN SHALL BE COMPLETED BY DEVELOPER'S SIGN CONTRACTOR.
12. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING ELECTRICAL PLAN.
13. THE CURRENT ZONING OF ALL PROPERTY SHOWN FOR DEVELOPMENT IS "GENERAL COMMERCIAL", "OFFICE COMMERCIAL" AND "PUBLIC". ADJACENT PROPERTY ZONED AS SHOWN.
14. ACCESS ACROSS WALMART AND RETAIL TRACTS ARE PROVIDED PER PRIVATE AGREEMENT BETWEEN THE PROPERTY OWNERS.

OVERALL MASTER PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 200 ft.

811 Know what's below. Call before you dig. (800)781-7474 Outside SD

Wolverton & Associates
Consulting Engineers + Land Surveyors
8744 Superhighway - Suite 100 - Dakota, Georgia 30097
Phone (770) 447-0588 - Fax (770) 447-6020
WWW.WOLVERTONASSOCIATES.COM

Registered Professional Engineer
JEFFREY G. BEVSA
20110
SOUTH DAKOTA

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

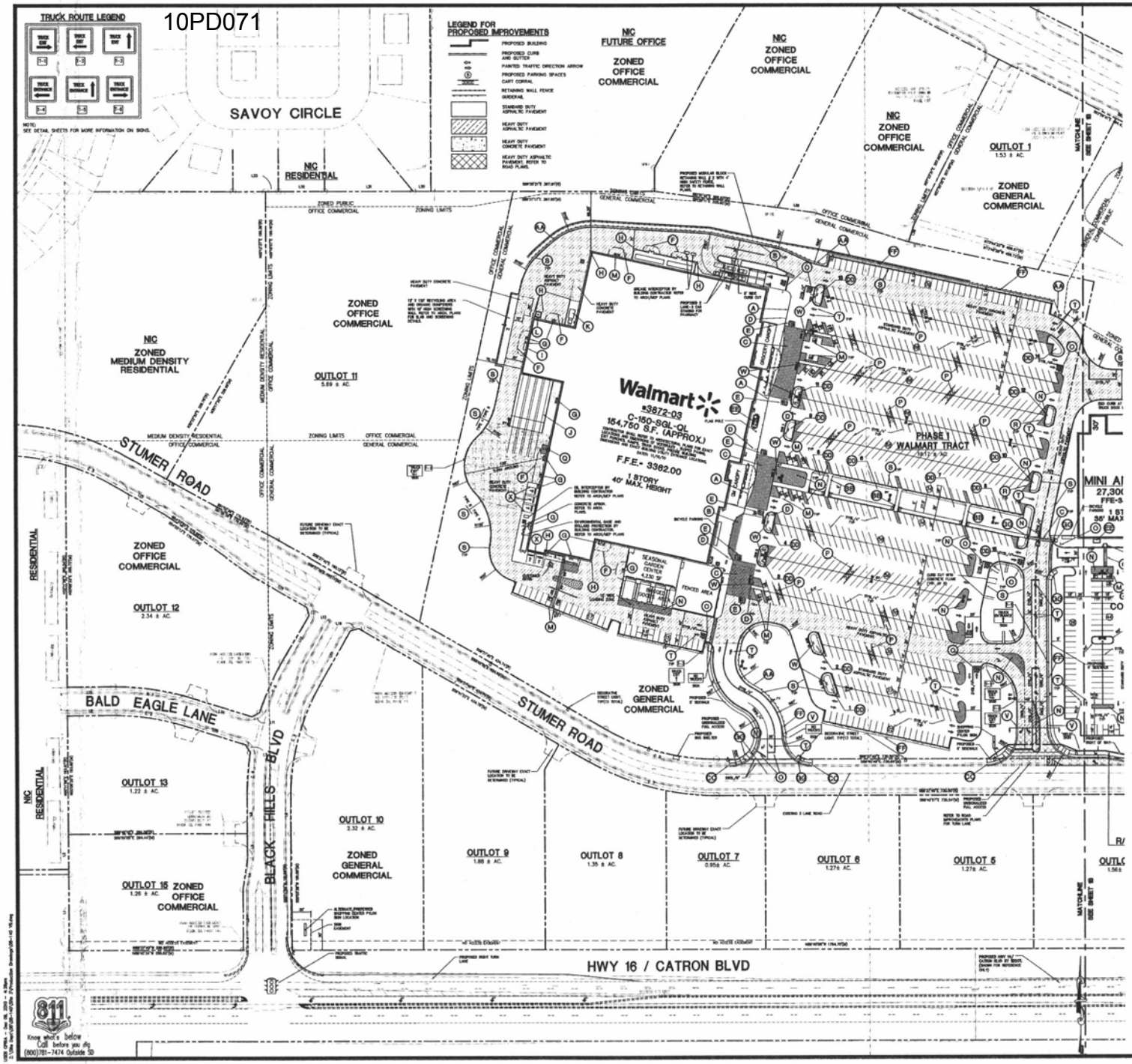
PROPOSED BLACK HILLS CENTER
Walmart # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY DMN/CRP
CHECKED BY KJW
DATE: 12/09/2010
SCALE: 1"= 100'
JOB No. 08-140
SHEET NUMBER C-1
OF SHEETS

08-140 V5.DWG

10PD071



LOCATION MAP

NOT TO SCALE

THE SITE IS LOCATED IN THE SE1/4 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4, SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

OVERALL SITE ANALYSIS

WALMART	154,750 S.F.
RETAIL	46,900 S.F.
TOTAL GROSS AREA	201,650 S.F.
TOTAL PARKING	1,007 SPACES
PROPOSED RATIO	4.99/1,000 S.F.

WALMART SITE ANALYSIS

WALMART	154,750 S.F.
STANDARD SPACES	714 SPACES
ACCESSIBLE SPACES	22 SPACES
CART CORRALS	26 SPACES
TOTAL PARKING	736 SPACES
RATIO	4.75/1,000 S.F.

RETAIL SITE ANALYSIS

RETAIL	46,900 S.F.
TOTAL PARKING	271 SPACES
RATIO	5.78/1,000 S.F.

SITE AREA ANALYSIS

WALMART	19.17 ± AC.
RETAIL	10.97 ± AC.
R/W DEDICATION	0.40 ± AC.
OUTLOTS 1 TO 14	27.97 ± AC.
SITE AREA	58.51 ± AC.

SITE LEGEND

- (A) 6" WIDE FIRE LANE STRIPING PAINTED SAFETY RED WITH "NO PARKING-FIRE LANE" PAINTED WITH 4" HIGH WHITE LETTERING AT 25' INTERVALS.
- (B) AREA STRIPED WITH SWL/4" AT 45° AT 2' O.C.
- (C) PEDESTRIAN CROSSWALK WITH 6" WIDE PAINTED WHITE STRIPING PARALLEL TO DIRECTION OF TRAFFIC AT 2'-0" O.C. AND (1)-4" WHITE STRIPE AT EACH EDGE UNLESS NOTED OTHERWISE. SEE SITE PLAN FOR MORE.
- (D) PEDESTRIAN CROSSING SIGN W11-2 AND W16-7P TYPICAL AT PEDESTRIAN CROSSWALKS AS NOTED ON PLANS.
- (E) "YIELD" PAINTED WHITE ON PAVEMENT TYPICAL. SEE DETAIL SHEET.
- (F) RAMPED PAVEMENT TO BE FLUSH WITH TOP OF SIDEWALK AT 5.0% MAXIMUM. REFER TO ARCHITECTURAL PLANS.
- (G) EXIT PORCH. SEE ARCHITECTURAL PLANS FOR EXACT SIZE, LOCATION FOR STOOPS, STAIRS AND/OR RAMPS THAT MAY BE REQUIRED. RAMP PAVEMENT FLUSH WITH THE TOP OF STOOP.
- (H) 6"ø PIPE BOLLARD TYPICAL UNLESS NOTED OTHERWISE. SEE DETAIL SHEET.
- (I) AT GRADE OVERHEAD DOOR LOCATION. SEE ARCHITECTURAL PLANS FOR EXACT SIZE AND LOCATION FOR COORDINATION WITH CIVIL PLANS.
- (J) 4" WIDE x 130' LONG YELLOW PAINTED TRUCK ALIGNMENT STRIPES.
- (K) CONCRETE COMPACTOR PAD. REFER TO ARCHITECTURAL PLANS FOR EXACT SIZE, LOCATION, SCREENING AND SLOPE.
- (L) CONCRETE TRANSFORMER PAD. CONTRACTOR TO COORDINATE WITH LOCAL POWER COMPANY FOR DETAILS.
- (M) ACCESSIBLE PARKING SPACE TYPICAL. SEE DETAIL SHEET FOR ACCESSIBLE PARKING SPACE SIZE, SIGN AND SYMBOL ("VAN"-INDICATES VAN ACCESSIBLE SPACE)
- (N) PAINTED ISLAND TYPICAL UNLESS NOTED OTHERWISE. STRIPES SHALL BE PAINTED SYS/4" AT 2'-0" O.C. AT 45° AND SEE DETAIL SHEET.
- (O) R1-1 STOP SIGN WITH 24" WIDE STOP BAR AND "STOP" PAINTED WHITE ON THE PAVEMENT (WHERE INDICATED) WITH SYS/4" CONTINUING STRIPING PER PLAN.
- (P) CART CORRAL TYPICAL-SEE DETAIL SHEET FOR WAL-MART CART CORRAL DETAIL.
- (Q) 18" X 15' STRIPED AREA PAINTED SYS/4" AT 45° @ 2'-0" O.C. AT JBI CRANE LOCATION. SEE ARCH. PLANS
- (R) SIGNING SIGN AT ALL CURBED ISLANDS. 4" PAINTED YELLOW STRIPING AT 2'-0" O.C. PERPENDICULAR TO PARKING SPACE. SEE DETAIL SHEET.
- (S) 18" CONCRETE CURB AND GUTTER TYPICAL. TYPE "A" UNLESS SPECIFIED OTHERWISE. SEE PLAN FOR LOCATION OF 2' CONCRETE BUFFERS. SEE DETAILS SHEET.
- (T) PAINTED DIRECTIONAL ARROW TYPICAL -SEE DETAIL SHEET.
- (U) BUILDING SETBACK PER GOVERNING AUTHORITY CODE.
- (V) 10' TRANSITION FROM 30" CURB AND GUTTER TO 18" CURB AND GUTTER.
- (W) MBLE INDICATOR SIGNS TYPICAL – SEE DETAIL SHEET.
- (X) TLE DIRECTIONAL STRIPING. SEE DETAIL SHEET
- (Y) "NO TRUCKS" SIGN. SEE DETAIL SHEET.
- (Z) "TRUCK ROUTE" SIGN. SEE TRUCK ROUTE LEGEND (THIS SHEET) FOR SIGN DESIGNATION.
- (AA) WALMART STANDARD GUIDE RAIL, TYPICAL – SEE DETAIL SHEET. FACE OF GUIDE RAIL SHALL BE 2' BEHIND BACK OF CURB. BREAK GUIDE RAIL AT EACH FIRE HYDRANT.
- (BB) CART CROSSING IN SIDEWALK. REFER TO DETAIL SHEETS.
- (CC) MATCH EXISTING CURB IN ALIGNMENT AND GRADE.
- (DD) PARKING LOT INTERNAL LANDSCAPE ISLAND WITH CURB AND GUTTER.
- (EE) RAISED LANDSCAPE PLANTER.
- (FF) "NO CAMPING OR OVERNIGHT PARKING" SIGN. SEE DETAIL SHEET.
- (GG) ACCESSIBLE RAMP. SEE DETAIL SHEET.
- (HH) WHEEL BUMPER BLOCK. SEE DETAIL SHEET.

PAVEMENT PAINT STRIPING LEGEND

SWS/4" – SINGLE WHITE SOLID LINE / 4" WIDE
SYS/4" – SINGLE YELLOW SOLID LINE / 4" WIDE
SYD/4" – SINGLE YELLOW DASHED LINE / 4" WIDE
DYS/4" – DOUBLE YELLOW SOLID LINE / 4" WIDE EACH
SYS/12" – SINGLE YELLOW SOLID LINE / 12" WIDE
SWD/4" – SINGLE WHITE DASHED LINE / 4" WIDE
SWS/24" – SINGLE WHITE SOLID LINE / 24" WIDE

SITE PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

Wolverton & Associates
Consulting Engineers + Land Surveyors
8148 Baymeadows Parkway - Suite 100 Orlando, Georgia 32256
Phone: (770) 457-9988 - Fax: (770) 457-9970
www.wolverton-associates.com

Registered Professional Engineer
Kevin J. Wolverton
No. 19125
Georgia

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

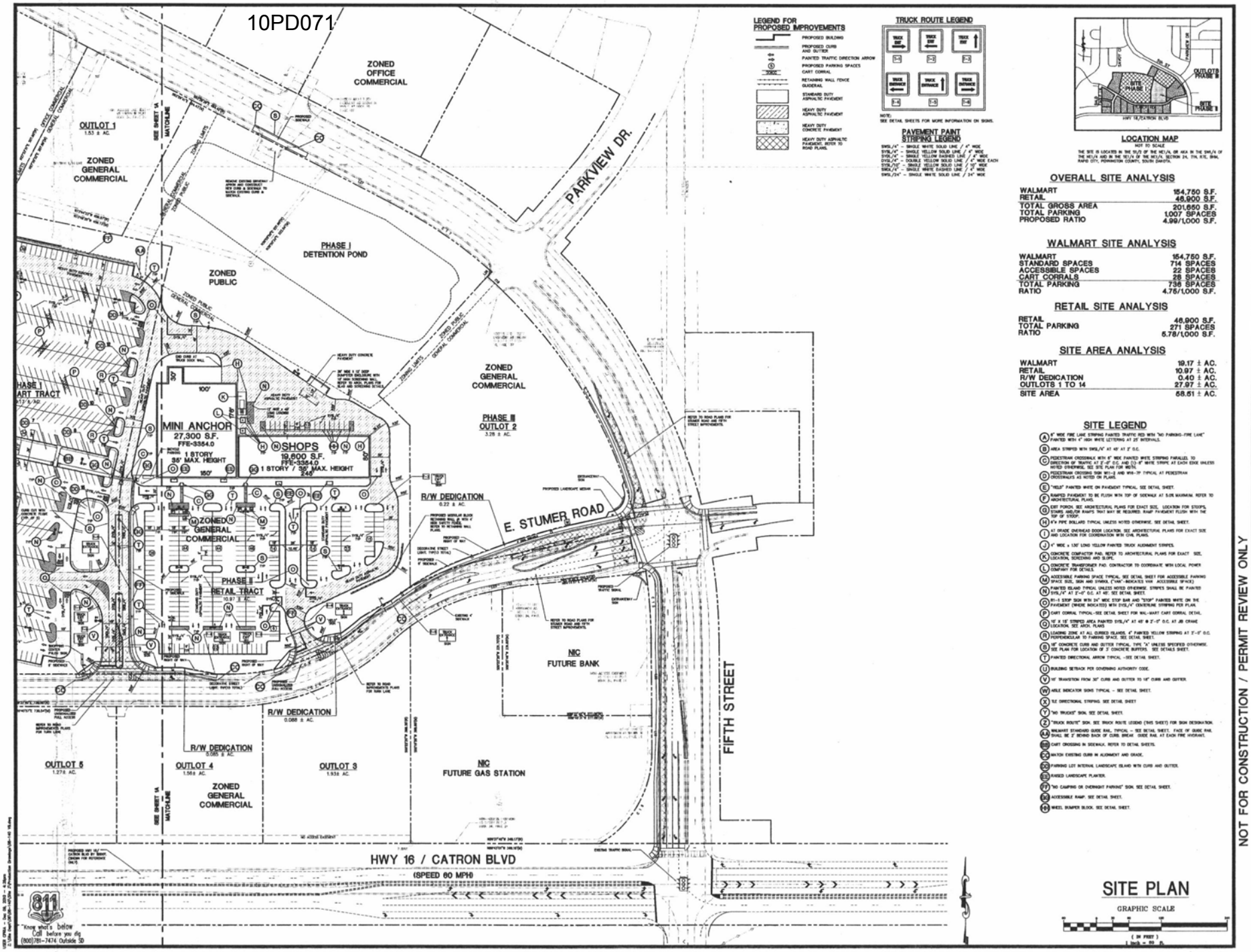
PROPOSED BLACK HILLS CENTER
Walmart #3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY	DMN/CRP
CHECKED BY	KJW
DATE	12/09/2010
SCALE	1"= 60'
JOB No.	08-140
SHEET NUMBER	C-1A
OF	SHEETS

08-140 V8.DWG

10PD071



LEGEND FOR PROPOSED IMPROVEMENTS

- PROPOSED BUILDING
- PROPOSED CURB AND GUTTER
- PAINTED TRAFFIC DIRECTION ARROW
- PROPOSED PARKING SPACES
- CART CORRAL
- RETAINING WALL FENCE GUARDRAIL
- STANDARD DUTY ASPHALTIC PAVEMENT
- HEAVY DUTY ASPHALTIC PAVEMENT
- HEAVY DUTY CONCRETE PAVEMENT
- HEAVY DUTY ASPHALTIC PAVEMENT, REFER TO ROAD PLANS.

TRUCK ROUTE LEGEND

NOTE:
SEE DETAIL SHEETS FOR MORE INFORMATION ON SIGNS.

PAVEMENT PAINT STRIPING LEGEND

SWSL/4" - SINGLE WHITE SOLID LINE / 4" WIDE
SYSL/4" - SINGLE YELLOW SOLID LINE / 4" WIDE
SYDL/4" - SINGLE YELLOW DASHED LINE / 4" WIDE
DYSL/4" - DOUBLE YELLOW SOLID LINE / 4" WIDE EACH
SYSL/12" - SINGLE YELLOW SOLID LINE / 12" WIDE
SWDL/4" - SINGLE WHITE DASHED LINE / 4" WIDE
SWSL/24" - SINGLE WHITE SOLID LINE / 24" WIDE

LOCATION MAP

NOT TO SCALE

THE SITE IS LOCATED IN THE W1/2 OF THE NE1/4 OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE NE1/4 OF THE NE1/4, SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

OVERALL SITE ANALYSIS

WALMART	154,750 S.F.
RETAIL	46,900 S.F.
TOTAL GROSS AREA	201,650 S.F.
TOTAL PARKING	1,007 SPACES
PROPOSED RATIO	4.99/1,000 S.F.

WALMART SITE ANALYSIS

WALMART	154,750 S.F.
STANDARD SPACES	714 SPACES
ACCESSIBLE SPACES	22 SPACES
CART CORRALS	26 SPACES
TOTAL PARKING	736 SPACES
RATIO	4.75/1,000 S.F.

RETAIL SITE ANALYSIS

RETAIL	46,900 S.F.
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RATIO	5.78/1,000 S.F.

SITE AREA ANALYSIS

WALMART	19.17 ± AC.
RETAIL	10.97 ± AC.
R/W DEDICATION	0.40 ± AC.
OUTLOTS 1 TO 14	27.97 ± AC.
SITE AREA	58.51 ± AC.

SITE LEGEND

- (A) 6" WIDE FIRE LANE STRIPING PAINTED TRAFFIC RED WITH "NO PARKING-FIRE LANE" PAINTED WITH 4" HIGH WHITE LETTERING AT 25' INTERVALS.
- (B) AREA STRIPED WITH SWSL/4" AT 45° AT 2' O.C.
- (C) PEDESTRIAN CROSSWALK WITH 6" WIDE PAINTED WHITE STRIPING PARALLEL TO DIRECTION OF TRAFFIC AT 2'-0" O.C. AND (3)-8" WHITE STRIPE AT EACH EDGE UNLESS NOTED OTHERWISE. SEE SITE PLAN FOR NOTE.
- (D) PEDESTRIAN CROSSING SIGN W11-2 AND W16-7P TYPICAL AT PEDESTRIAN CROSSWALKS AS NOTED ON PLANS.
- (E) "HELP" PAINTED WHITE ON PAVEMENT TYPICAL. SEE DETAIL SHEET.
- (F) RAMPED PAVEMENT TO BE FLUSH WITH TOP OF SIDEWALK AT 5.0% MAXIMUM. REFER TO ARCHITECTURAL PLANS.
- (G) EXIT PORCH. SEE ARCHITECTURAL PLANS FOR EXACT SIZE, LOCATION FOR STOOPS, STAIRS AND/OR RAMPS THAT MAY BE REQUIRED. RAMP PAVEMENT FLUSH WITH THE TOP OF STOOP.
- (H) 6"ø PIPE BOLLARD TYPICAL UNLESS NOTED OTHERWISE. SEE DETAIL SHEET.
- (I) AT GRADE OVERHEAD DOOR LOCATION. SEE ARCHITECTURAL PLANS FOR EXACT SIZE AND LOCATION FOR COORDINATION WITH CIVIL PLANS.
- (J) 4" WIDE x 130' LONG YELLOW PAINTED TRUCK ALIGNMENT STRIPES.
- (K) CONCRETE COMPACTOR PAD. REFER TO ARCHITECTURAL PLANS FOR EXACT SIZE, LOCATION, SCREENING AND SLOPE.
- (L) CONCRETE TRANSFORMER PAD. CONTRACTOR TO COORDINATE WITH LOCAL POWER COMPANY FOR DETAILS.
- (M) ACCESSIBLE PARKING SPACE TYPICAL. SEE DETAIL SHEET FOR ACCESSIBLE PARKING SPACE SIZE, SIGN AND SYMBOL ("VAN"-INDICATES VAN ACCESSIBLE SPACE)
- (N) PAINTED ISLAND TYPICAL UNLESS NOTED OTHERWISE. STRIPES SHALL BE PAINTED SYSL/4" AT 2'-0" O.C. AT 45°. SEE DETAIL SHEET.
- (O) R1-1 STOP SIGN WITH 24" WIDE STOP BAR AND "STOP" PAINTED WHITE ON THE PAVEMENT (WHERE INDICATED) WITH SYDL/4" CENTERLINE STRIPING PER PLAN.
- (P) CART CORRAL TYPICAL-SEE DETAIL SHEET FOR WAL-MART CART CORRAL DETAIL.
- (Q) 10' x 13' STRIPED AREA PAINTED SYSL/4" AT 45° @ 2'-0" O.C. AT JB CRANE LOCATION. SEE ARCH. PLANS
- (R) LOADING ZONE AT ALL CURBED ISLANDS. 4" PAINTED YELLOW STRIPING AT 2'-0" O.C. PERPENDICULAR TO PARKING SPACE. SEE DETAIL SHEET.
- (S) 18" CONCRETE CURB AND GUTTER TYPICAL, TYPE "A" UNLESS SPECIFIED OTHERWISE. SEE PLAN FOR LOCATION OF 3' CONCRETE BUFFERS. SEE DETAILS SHEET.
- (T) PAINTED DIRECTIONAL ARROW TYPICAL. -SEE DETAIL SHEET.
- (U) BUILDING SETBACK PER GOVERNING AUTHORITY CODE.
- (V) 10' TRANSITION FROM 30" CURB AND GUTTER TO 18" CURB AND GUTTER.
- (W) ADA INDICATOR SIGNS TYPICAL - SEE DETAIL SHEET.
- (X) ILE DIRECTIONAL STRIPING. SEE DETAIL SHEET
- (Y) "NO TRUCKS" SIGN. SEE DETAIL SHEET.
- (Z) "TRUCK ROUTE" SIGN. SEE TRUCK ROUTE LEGEND (THIS SHEET) FOR SIGN DESIGNATION.
- (AA) WALMART STANDARD GUIDE RAIL, TYPICAL - SEE DETAIL SHEET. FACE OF GUIDE RAIL SHALL BE 2' BEHIND BACK OF CURB. BREAK GUIDE RAIL AT EACH FIRE HYDRANT.
- (AB) CART CROSSING IN SIDEWALK. REFER TO DETAIL SHEETS.
- (AC) MATCH EXISTING CURB IN ALIGNMENT AND GRADE.
- (AD) PARKING LOT INTERNAL LANDSCAPE ISLAND WITH CURB AND GUTTER.
- (AE) RAISED LANDSCAPE PLANTER.
- (AF) "NO CAMPING OR OVERNIGHT PARKING" SIGN. SEE DETAIL SHEET.
- (AG) ACCESSIBLE RAMP. SEE DETAIL SHEET.
- (AH) WHEEL BUMPER BLOCK. SEE DETAIL SHEET.

SITE PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

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6140 Sugarloaf Parkway - Suite 100 - Duluth, Georgia 30097
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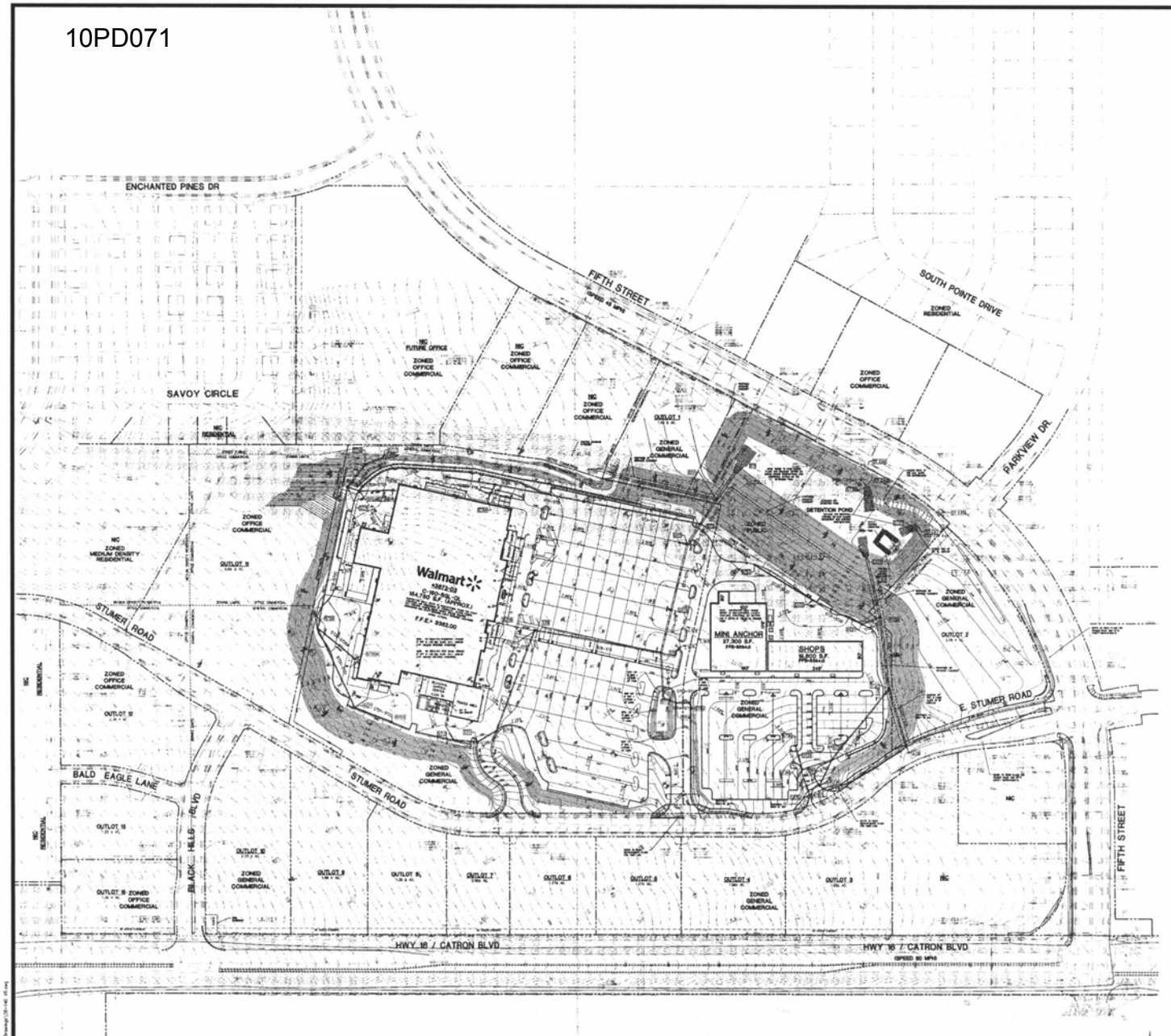
Walmart ; # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY	DMN/CRP
CHECKED BY	KJW
DATE	12/09/2010
SCALE	1"= 60'
JOB No.	08-140
SHEET NUMBER	C-1B
OF	SHEETS

08-140 V8.DWG

10PD071



LOCATION MAP

NOT TO SCALE

THE SITE IS LOCATED IN THE SE/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE NE1/4 OF THE NE1/4 SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

SITE GRADING NOTES

1. CONTRACTOR IS RESPONSIBLE FOR DEMOLITION OF EXISTING STRUCTURES INCLUDING REMOVAL OF ALL UTILITIES SERVING THE STRUCTURE. UTILITIES ARE TO BE REMOVED TO THE RIGHT-OF-WAY.
2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ALL EXISTING UTILITIES (ABOVE OR BELOW GROUND) AS SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE LOCATED BASED ON EITHER VISUAL OBSERVATIONS AT THE SITE, EXISTING SURVEYS AND/OR FROM UTILITY OWNERS. WOLVERTON AND ASSOCIATES, INC. DOES NOT GUARANTEE THAT EXISTING UTILITY LOCATIONS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND) BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND THE UTILITIES PROTECTION SERVICE AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY OWNER AND/OR ENGINEER OF ANY UTILITY CONFLICTS WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
3. ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
4. PRECAST STRUCTURES MAY BE USED AT CONTRACTORS OPTION. PRECAST STRUCTURES ARE NOT ALLOWED IN CITY R/W OR EASEMENTS.
5. STORM PIPE SHALL BE AS FOLLOWS UNLESS OTHERWISE NOTED:
   TYPE 1: RCP PER ASTM C-76, WITH FLEXIBLE PLASTIC BITUMEN GASKETS AT JOINTS.
   - FILLS UP TO 15' OVER TOP OF PIPE, CLASS III OR GREATER MAY BE USED
   - FILLS 15' OVER TOP OF PIPE, CLASS IV OR GREATER MAY BE USED
   - FILLS GREATER THAN 20' OVER TOP OF PIPE, CLASS V MUST BE USED.

   TYPE 2: CORRUGATED POLYETHYLENE PIPE (CPP). SMOOTH INTERIOR WITH EXTERIOR OPEN CORRUGATIONS. PER AASHTO M294 MAY BE USED FOR PIPES 4" TO 48". JOINTS SHALL BE WATER TIGHT. APPROVED PRODUCTS ARE ANACONDA A-LOK WITH SURE-LOK JOINTS, ADS N-12. NOT ALLOWED IN CITY R/W OR EASEMENTS.
6. EXISTING DRAINAGE STRUCTURES TO BE INSPECTED AND REPAIRED AS NEEDED, AND EXISTING PIPES TO BE CLEANED OUT TO REMOVE ALL SILT AND DEBRIS.
7. EXISTING GRADE CONTOUR SHOWN AT 1 FOOT INTERVALS.
8. PROPOSED GRADE CONTOUR SHOWN AT 1 FOOT INTERVALS.
9. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITIONS OR BETTER.
10. ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
11. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT, AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 1" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
12. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT AND CITY EROSION CONTROL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
13. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
14. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
15. TOPOGRAPHIC INFORMATION SHOWN FROM A TOPOGRAPHIC SURVEY BY REMKER & ASSOCIATES, LLC. CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION. IT SHALL HAVE MADE, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
16. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FARING TO ALL SLOPES AS INDICATED ON THE EROSION CONTROL PLANS. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH CITY/COUNTY SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
17. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO THAT.
18. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT-IN TO INVERT-OUT.
19. CONTRACTOR TO CONTACT THE CITY/COUNTY FIRE DEPARTMENT FOR ACCESS REQUIREMENTS.
20. WHITE ASPHALT OVERLAY IS SPECIFIED ON THE PLANS. THE CONTRACTOR SHALL PROVIDE GROUTING WHERE NECESSARY TO ACHIEVE THE PROPOSED GRADES SPECIFIED ON THE GRADING PLAN. THE CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

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* STRUCTURE TYPE

CURB INLET - SEE DETAIL SHEETS
GRATE INLET - SEE "GRATE INLET DETAIL FOR GRATE TYPE" SEE DETAIL SHEETS
JUNCTION BOX - SEE DETAIL SHEETS
SWCB - SINGLE WING CATCH BASIN - SEE DETAIL SHEETS
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** PIPE TYPE

UNLESS A PIPE TYPE MATERIAL IS SPECIFIED IN THE DRAINAGE SCHEDULE, THE CONTRACTOR MAY USE AT HIS DISCRETION ANY OF THE PIPE MATERIALS LISTED AS APPROVED STORM PIPE MATERIALS IN THE SITE GRADING NOTES

GRADING/DRAINAGE PLAN LEGEND

- STORM SEWER PIPING
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- CONCRETE FLUME
- RIP-RAP APRON
- PRECAST HEADWALL STRUCTURE
- CURB INLET (W/ NON-MOUNTABLE GRADE & GRATE)
- SINGLE GRATE INLET
- DOUBLE GRATE INLET
- AREA INLET
- OUTLET CONTROL STRUCTURE
- FLARED END SECTION
- TG = TOP OF CURB
- TP = TOP OF PAVEMENT

OVERALL GRADING PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

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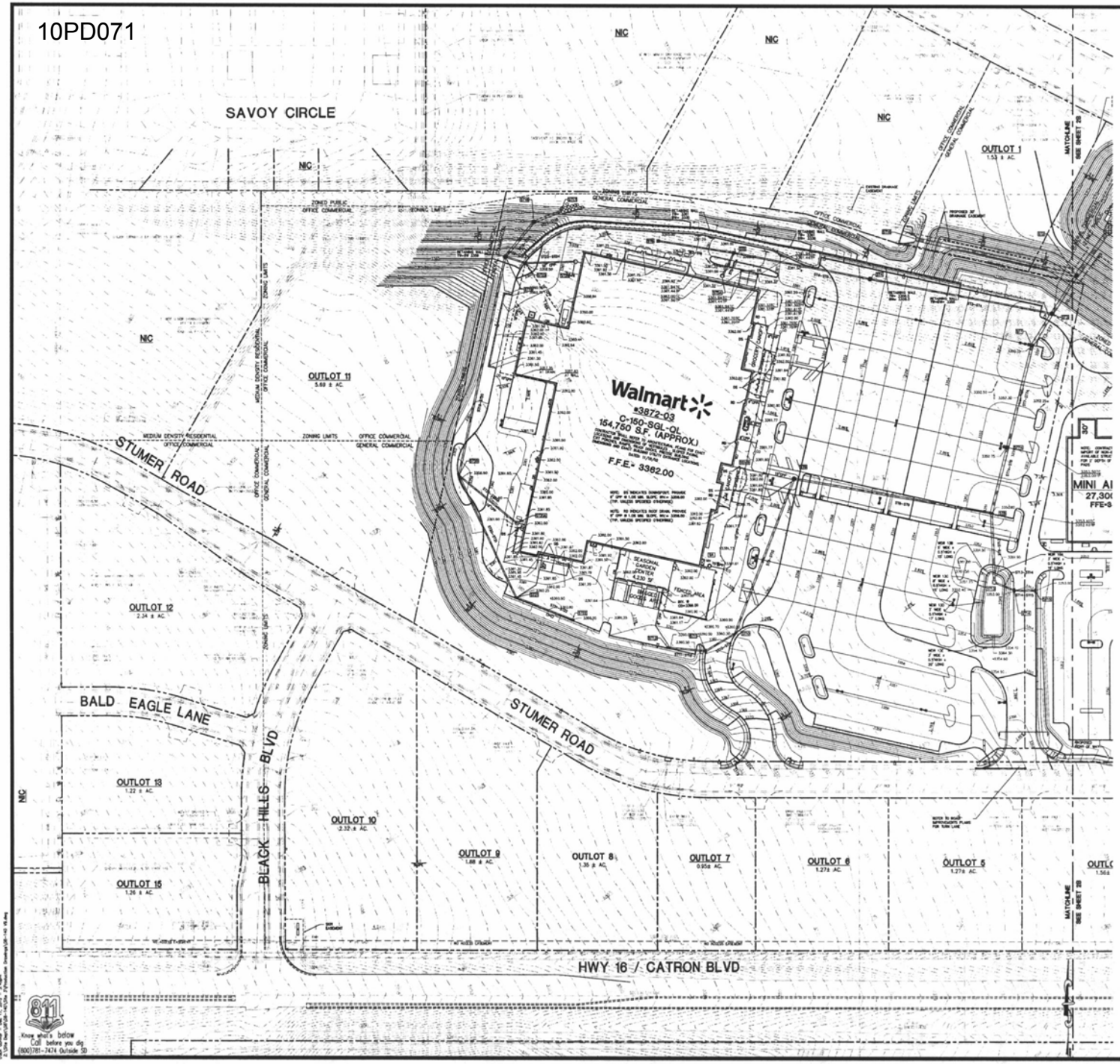

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GRADING PLAN

GRAPHIC SCALE

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Registered Professional Engineer
JEFFREY G. WEBER
No. 9415
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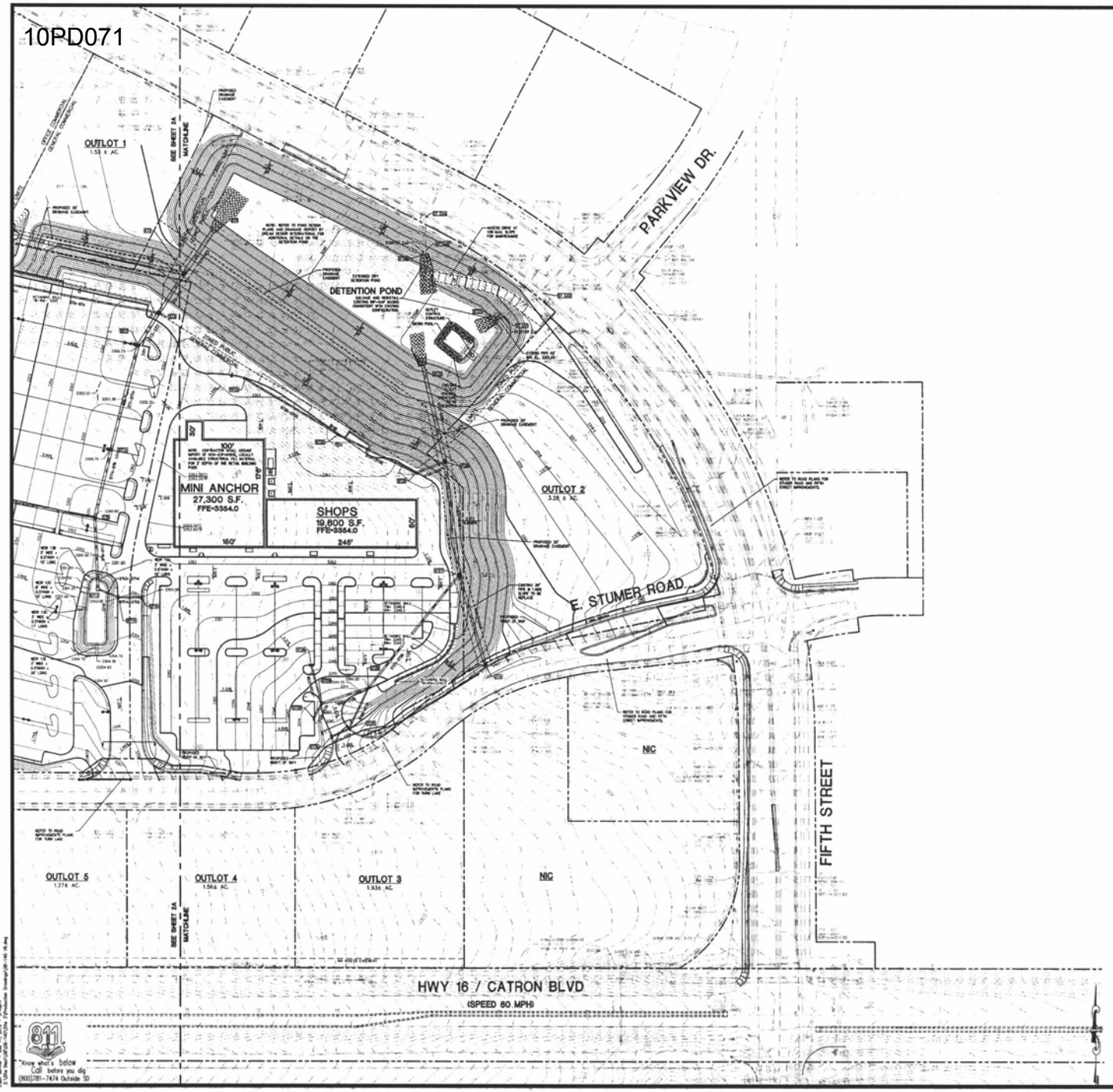

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10. ALL STORM PIPE INTERIOR STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.
11. ALL STORM SEWER MANHOLES IN PAVED AREAS SHALL BE FLUSH WITH PAVEMENT AND SHALL HAVE TRAFFIC BEARING RING & COVERS. MANHOLES IN UNPAVED AREAS SHALL BE 6" ABOVE FINISH GRADE. LIDS SHALL BE LABELED "STORM SEWER".
12. THE CONTRACTOR SHALL ADHERE TO ALL TERMS & CONDITIONS AS OUTLINED IN THE GENERAL N.P.D.E.S. PERMIT AND CITY EROSION CONTROL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES.
13. CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
14. CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE AWAY FROM BUILDINGS FOR ALL NATURAL AND PAVED AREAS.
15. TOPOGRAPHIC INFORMATION TAKEN FROM A TOPOGRAPHIC SURVEY BY RENNER & ASSOCIATES, LLC. IF CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, HE SHALL HIRE, AND PAY, AT HIS EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR AND SUBMIT IT TO THE OWNER FOR REVIEW.
16. ALL UNSURFACED AREAS DISTURBED BY GRADING OPERATION SHALL RECEIVE 4 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES AS INDICATED ON THE EROSION CONTROL PLANS. CONTRACTOR SHALL GRASS DISTURBED AREAS IN ACCORDANCE WITH CITY/COUNTY SPECIFICATIONS UNTIL A HEALTHY STAND OF GRASS IS OBTAINED.
17. CONSTRUCTION SHALL COMPLY WITH ALL APPLICABLE GOVERNING CODES AND BE CONSTRUCTED TO SAME.
18. ALL STORM STRUCTURES SHALL HAVE A SMOOTH UNIFORM POURED MORTAR INVERT FROM INVERT-IN TO INVERT-OUT.
19. CONTRACTOR TO CONTACT THE CITY/COUNTY FIRE DEPARTMENT FOR BLASTING REQUIREMENTS.
20. WHERE ASPHALT OVERLAY IS SPECIFIED ON THE PLANS, THE CONTRACTOR SHALL PROVIDE LEVELING, WHERE NECESSARY, TO ACHIEVE THE PROPOSED GRADES SPECIFIED ON THE GRADING PLAN. THE CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID.

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF ALL EXISTING UTILITIES (ABOVE OR BELOW GROUND) AS SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE LOCATED BASED ON EITHER VISUAL OBSERVATIONS AT THE SITE, EXISTING SURVEYS AND/OR FROM UTILITY OWNERS. WOLVERTON AND ASSOCIATES INC. DOES NOT GUARANTEE THAT EXISTING UTILITY LOCATIONS SHOWN ARE EXACT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXACT LOCATIONS OF EXISTING UTILITIES (ABOVE OR BELOW GROUND) BEFORE BEGINNING ANY CONSTRUCTION. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND THE UTILITIES PROTECTION CENTER AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO NOTIFY OWNER AND/OR ENGINEER OF ANY UTILITY CONFLICTS WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

* STRUCTURE TYPE

CURB INLET - SEE DETAIL SHEETS.
GRATE INLET - SEE "GRATE INLET" DETAIL FOR GRATE TYPE. SEE DETAIL SHEETS.
JUNCTION BOX - SEE DETAIL SHEETS.
SWGB - SINGLE WING CATCH BASIN - SEE DETAIL SHEETS.
AREA INLET - SEE DETAIL SHEETS.
HEADWALL - SEE DETAIL SHEETS.
OUTLET CONTROL STRUCTURE - SEE DETAIL SHEETS.

** PIPE TYPE

UNLESS A PIPE TYPE MATERIAL IS SPECIFIED IN THE DRAINAGE SCHEDULE, THE CONTRACTOR MAY USE AT HIS DISCRETION ANY OF THE PIPE MATERIALS LISTED AS APPROVED STORM PIPE MATERIALS IN THE SITE GRADING NOTES.

GRADING/DRAINAGE PLAN LEGEND

- STORM SEWER PIPING
- JUNCTION BOX/STORM MANHOLE
- SIPHONIC BREAK MANHOLE
- DRAINAGE STRUCTURE INDICATOR
- DOUBLE WING CATCH BASIN
- SINGLE WING CATCH BASIN
- SLOPE ARROW
- CONCRETE FLUME
- RIP-RAP APRON
- PRECAST HEADWALL STRUCTURE
- CURB INLET (W/ NON-MOUNTABLE HOOD & GRATE)
- SINGLE GRATE INLET
- DOUBLE GRATE INLET
- AREA INLET
- OUTLET CONTROL STRUCTURE
- FLARED END SECTION
- TC = TOP OF CURB
- TP = TOP OF PAVEMENT

GRADING PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 80 ft.

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STATE OF SOUTH DAKOTA
KEITH J. WOLVERTON
6/16/10

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Walmart # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

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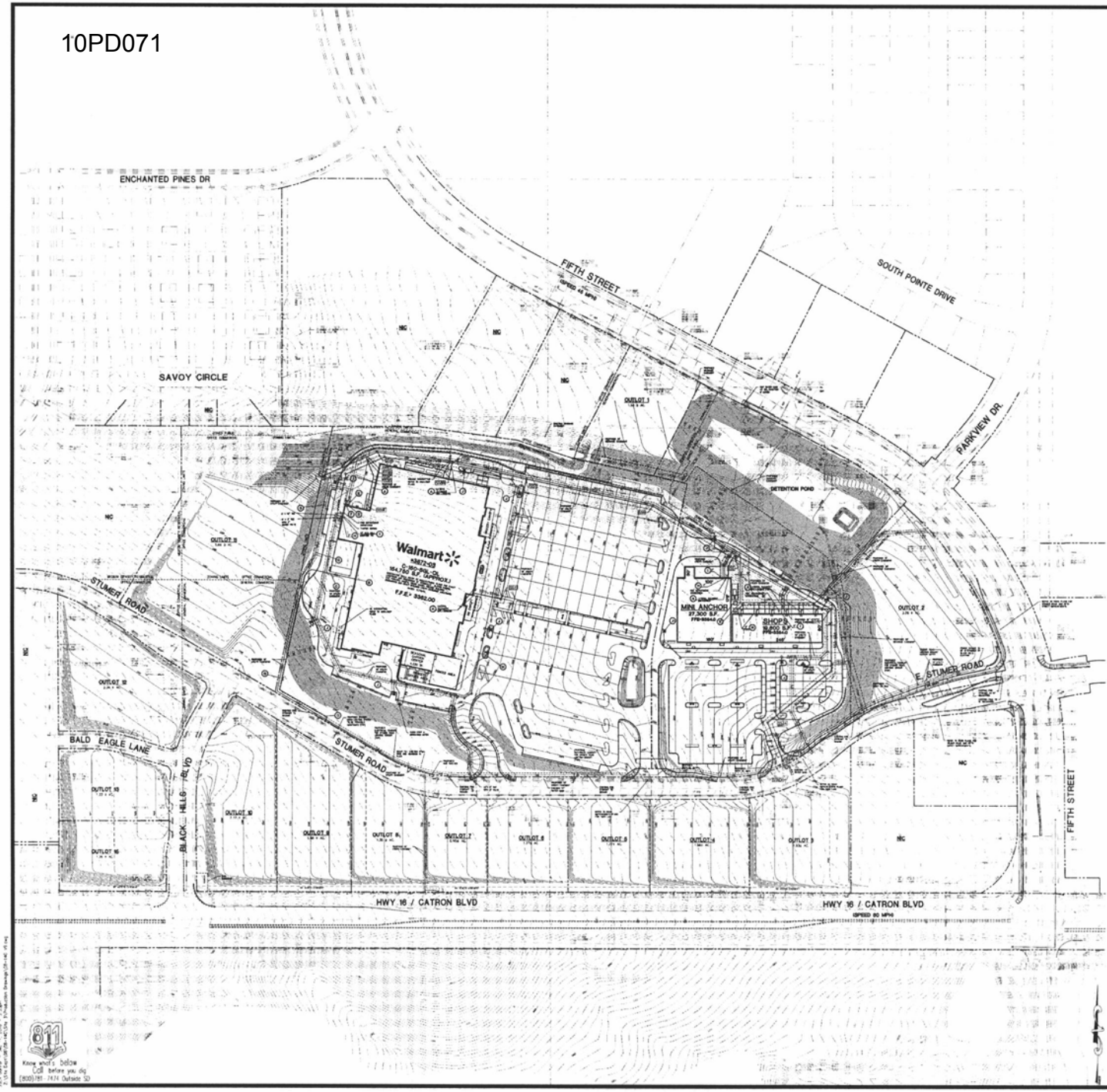
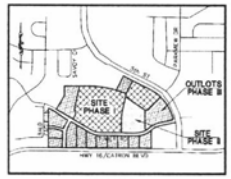
REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1" = 80'
JOB No.: 08-140
SHEET NUMBER: C-2B
OF SHEETS

08-140 VS.DWG

10PD071





LOCATION MAP

NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, FOR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4, SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA

SITE UTILITY NOTES

1. ALL FILL MATERIAL IS TO BE IN PLACE, AND COMPACTED BEFORE INSTALLATION OF PROPOSED UTILITIES. CONTRACTOR SHALL NOTIFY THE UTILITY AUTHORITIES INSPECTORS 72 HOURS BEFORE CONNECTING TO ANY EXISTING LINE.
2. SANITARY SEWER PIPE SHALL BE AS FOLLOWS:
   4" PVC SDR35 PER ASTM D 3034, FOR PIPES LESS THAN 12' DEEP
   8" PVC SDR26 PER ASTM D 3034, FOR PIPES MORE THAN 12' DEEP
   8" PVC SDR 35 PER ASTM D 3034
3. WATER LINES SHALL BE AS FOLLOWS:
   A. PIPE SIZES LESS THAN 3 INCHES THAT ARE INSTALLED BELOW GRADE AND OUTSIDE BUILDING SHALL COMPLY WITH ONE OR A COMBINATION OF THE FOLLOWING:
      1. SEAMLESS COPPER TUBING - TYPE "K" SOFT COPPER, ASTM B 88.
         A. FITTINGS - WROUGHT COPPER (95-5 TIN ANTIMONY SOLDER JOINTS), ASME B 16.22
      B. PIPE SIZES 3-INCHES AND LARGER THAT ARE INSTALLED BELOW GRADE AND OUTSIDE BUILDING SHALL COMPLY WITH ONE OR A COMBINATION OF THE FOLLOWING:
      1. POLYVINYL CHLORIDE (PVC) WATER PIPE: PIPE, AWWA C900, RATED DR 18 (CLASS 150), CONTINUALLY MARKED AS REQUIRED.
         A. ELASTOMERIC GASKETS AND LUBRICANT - ASTM - F477 FOR SMALLER PIPES.
         B. JOINTS - INTEGRALLY MOLDED BELL ENDS, ASTM D 3139.
5. MINIMUM TRENCH WIDTH SHALL BE 2 FEET.
6. ALL WATER JOINTS ARE TO BE MECHANICAL JOINTS WITH THRUST BLOCKING AS CALLED OUT IN SPECIFICATIONS.
7. ALL UTILITY CROSSINGS SHALL CONFORM TO SECTIONS 8.3.0 AND 8.3.0.07 OF THE RAPID CITY INFRASTRUCTURE DESIGN CRITERIA.
8. CONTRACTOR SHALL MAINTAIN A MINIMUM OF 4'-0" COVER ON ALL WATERLINES.
9. IN THE EVENT OF A VERTICAL CONFLICT BETWEEN WATERLINES, SANITARY LINES, STORM LINES AND GAS LINES (EXISTING AND PROPOSED), THE SANITARY LINE SHALL BE DUCTILE IRON PIPE WITH MECHANICAL JOINTS AT LEAST 10 FEET ON BOTH SIDES OF CROSSING. THE WATERLINE SHALL HAVE MECHANICAL JOINTS WITH APPROPRIATE THRUST BLOCKING AS REQUIRED TO PROVIDE A MINIMUM OF 18" CLEARANCE MEETING REQUIREMENTS OF AND ACCOUNTS AND 2.0.11 (AWWA C-150) CLASS 150.
10. LINES UNDERGROUND SHALL BE INSTALLED, INSPECTED AND APPROVED BEFORE BACKFILLING.
11. SUPS OF EXISTING MANHOLES SHALL BE RAISED AS NECESSARY TO BE FLUSH WITH PROPOSED GLEAN GRADES, AND TO BE ONE FOOT ABOVE FINISHED GROUND ELEVATIONS WITH WATER TIGHT LIDS.
12. ALL CONCRETE FOR ENCASEMENTS SHALL HAVE A MINIMUM 28 DAY COMPRESSION STRENGTH AT 3000 P.S.I.
13. DRAWINGS DO NOT PURPORT TO SHOW ALL EXISTING UTILITIES.
14. EXISTING UTILITIES SHALL BE VERIFIED IN FIELD PRIOR TO INSTALLATION OF ANY NEW LINES.
15. REFER TO INTERIOR PLUMBING DRAWINGS FOR TIE-IN OF ALL UTILITIES.
16. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE TO THE SPECIFICATIONS OF THE LOCAL AUTHORITIES WITH REGARDS TO MATERIALS AND INSTALLATION OF THE WATER AND SEWER LINES.
17. ALL NECESSARY INSPECTIONS AND/OR CERTIFICATIONS REQUIRED BY CODE AND/OR UTILITY SERVICE COMPANIES SHALL BE PERFORMED PRIOR TO MANDATED BUILDING POSSESSION AND THE FINAL CONNECTION OF SERVICE.
18. CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES FOR INSTALLATION REQUIREMENTS AND SPECIFICATIONS.
19. CONTRACTOR TO PROVIDE TRENCHING, CONDUIT, PULL WIRE, AND BACKFILL FOR TELEPHONE AND ELECTRIC LINES.
20. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFYING THE EXACT LOCATION, SIZE, AND MATERIAL OF ANY EXISTING WATER OR SEWER FACILITY PROPOSED FOR CONNECTION OR USE BY THIS PROJECT. THE RELOCATION OF ANY WATER/SEWER FACILITY REQUIRED TO AVOID ANY PART OF THIS DEVELOPMENT IS THE RESPONSIBILITY OF THE DEVELOPER.
21. ALL CONSTRUCTION TO CONFORM TO APPLICABLE CITY/COUNTY SPECIFICATIONS AND IN ACCORDANCE WITH CITY/COUNTY ORDINANCES.
22. TRENCHES OF 20 FEET OR GREATER REQUIRE SHORING. DESIGN TO BE CERTIFIED BY A PROFESSIONAL ENGINEER. TRENCH SAFETY REQUIREMENTS WILL BE STRICTLY ENFORCED. CONTRACTOR TO MEET OF CNSTS ALL OSHA STANDARDS.
23. REFER TO ARCHITECTURAL PLANS FOR SITE LIGHTING AND ELECTRICAL PLANS.
24. ALL WATER MAINS ARE PRIVATE. ALL 8-INCH SANITARY SEWER LINES SHOWN ON THIS PLAN ARE PROPOSED TO BE PUBLIC.

UTILITY PLAN LEGEND

- UGE — ELECTRICAL CONDUIT
- UGT — TELEPHONE CONDUIT
- 8"SS — SANITARY SEWER PIPE
- 8"W — WATER MAIN PIPE
- 3"W — DOMESTIC WATER PIPING
- GAS — GAS PIPE
- TS — TAMPER SWITCH CONDUIT
- UGP — UTILITY INSTALLATION POWER
- TAPPING SLEEVE & VALVE
- WATER VALVE
- FIRE HYDRANT
- THRUST BLOCK
- SANITARY SEWER MANHOLE
- POWER POLE
- GAS METER

OVERALL UTILITY PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

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REVISIONS	BY

DRAWN BY DMN/CRP
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SCALE 1"= 100'
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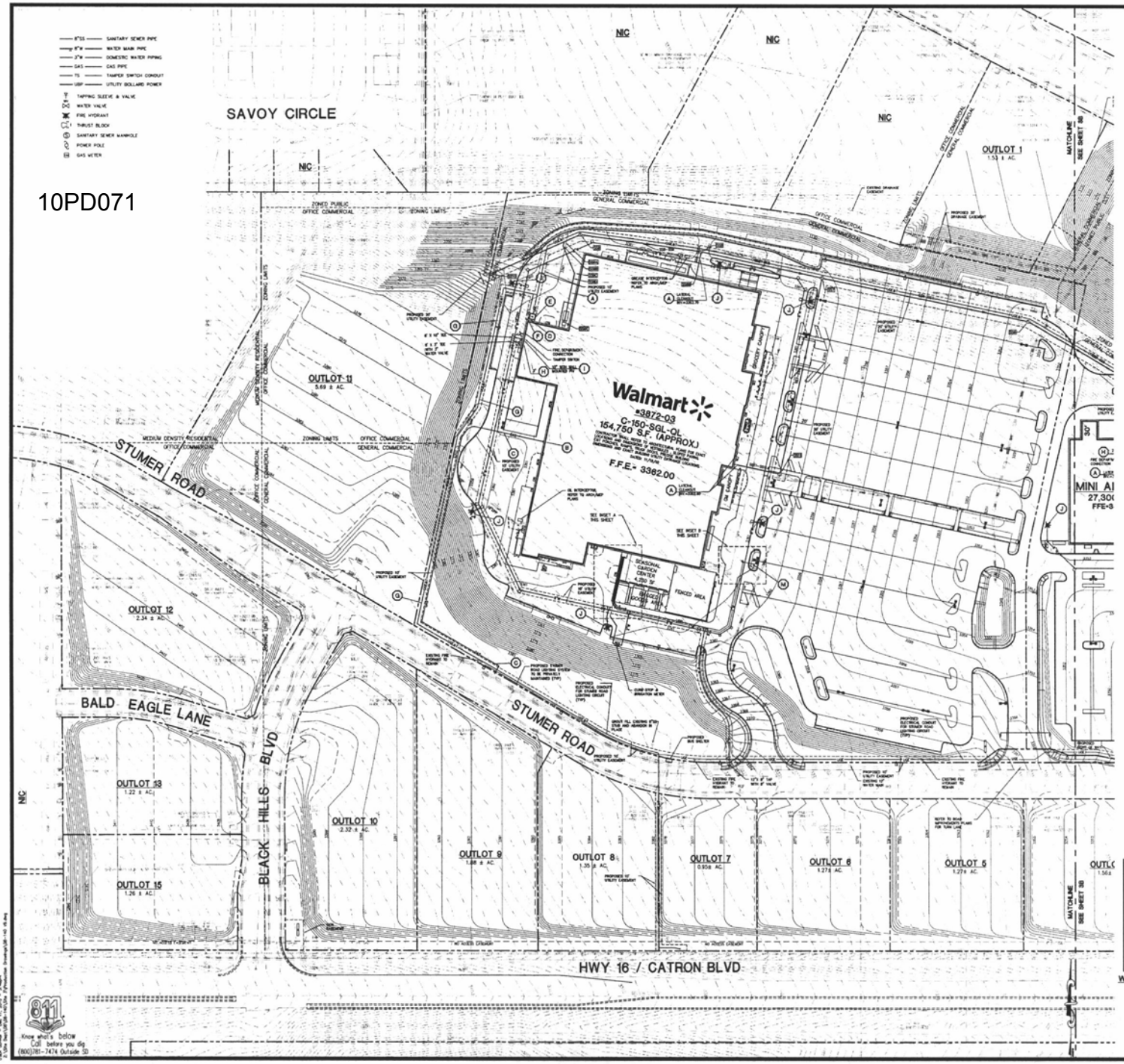
OF SHEETS

08-140 V8.DWG

10PD071



LOCATION MAP

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UTILITY LEGEND

(A) 6" SANITARY SEWER LATERAL AT MINIMUM 1.0% SLOPE. COORDINATE WITH ARCHITECTURAL PLANS.

(B) GAS ENTRY WITH GAS METER AT BUILDING. CONTRACTOR RESPONSIBLE FOR INSTALLING PIPE BOLLARD PROTECTION AT METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYPING OF INDIVIDUAL METER.

(C) CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH GAS COMPANY REGARDING THE SIZE AND INSTALLATION OF GAS SERVICE LINE.

(D) UNDERGROUND ELECTRIC SERVICE FROM POLE TO BUILDING. CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BEDDING, CONDUIT, CABLES, PULL WIRES, SECONDARY CONDUCTORS, SWITCHES, BACKFILL, ETC., WHICH MAY BE REQUIRED BY ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH ELECTRIC COMPANY. THE CONTRACTOR IS CONSIDERING THE UTILITY COMPANY SHALL DETERMINE THE AMOUNT OF UTILITY LINE HE IS TO PROVIDE OUTSIDE THE UTILITY COMPANY'S ALLOWANCE.

(E) PROPOSED LOCATION OF TRANSFORMER PAD. CONTRACTOR TO VERIFY EXACT LOCATION AND SIZE WITH POWER COMPANY PRIOR TO INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF CONCRETE PAD, CONDUIT AND PIPE BOLLARDS AS REQUIRED BY THE ELECTRIC COMPANY. CONTRACTOR SHALL COORDINATE SAID WORK WITH THE ELECTRIC COMPANY.

(F) UNDERGROUND TELEPHONE FROM POLE TO BUILDING TO BE EXTENDED BY TELEPHONE COMPANY. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY TRENCHING, BEDDING, CONDUIT, PULL WIRES, SWITCHES, BACKFILL, ETC., WHICH MAY BE REQUIRED BY TELEPHONE COMPANY. CONTRACTOR SHALL COORDINATE WITH TELEPHONE COMPANY FOR SAID WORK. PROVIDE CONDUITS AS SHOWN.

(G) CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE UTILITY COMPANIES FOR THE INSTALLATION OF OVERHEAD/UNDERGROUND ELECTRIC AND TELEPHONE LINES. TYPICAL CONTRACTOR SHALL COORDINATE THE TYPING OF INDIVIDUAL METER WITH THE ELECTRIC COMPANY. SEE NOTE 2, E, & F FOR ADDITIONAL NOTES PERTAINING TO ELECTRIC AND TELEPHONE LINES.

(H) DOMESTIC WATERLINE ENTRY WITH METER PER LOCAL WATER COMPANY REQUIREMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING ANY APPURTENANCES ON THE DOMESTIC LINE IN SIDE BLDG. SUCH AS BACKFLOW PREVENTION DEVICES, GATE VALVES, ETC., WHICH MAY BE REQUIRED TO COORDINATE WITH WATER COMPANY.

(I) SPRINKLER ENTRY. CONTRACTOR SHALL BE REQUIRED TO INSTALL ANY APPURTENANCES ON THE SPRINKLER LINE SUCH AS, BUT NOT LIMITED TO, A DOUBLE DETECTOR CHECK BACKFLOW PREVENTION DEVICE, IN SERIES WITH A CHECK VALVE, GATE VALVES, ETC., MEETING WATER COMPANY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE WITH ARCHITECTURAL PLANS.

(J) PROPOSED FIRE HYDRANT, AND ASSEMBLY, TYPICAL AS INDICATED. CONTRACTOR TO PROVIDE PIPE BOLLARD PROTECTION WHEN FIRE HYDRANT IS LOCATED IN PAVED AREA OR WHERE SHOWN.

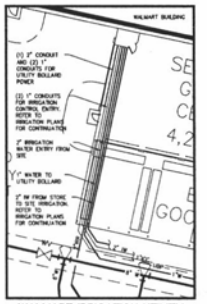
(K) NOT USED

(L) CONDUIT FOR FIBER OVAL MONITED SECURITY CAMERAS.
A PULL BOX SHALL BE LOCATED WITHIN THE SIDEWALK AREA ON AS CLOSE TO THE BUILDING AS POSSIBLE. THE CONDUIT FROM THE BUILDING TO THE FIRST PULL BOX SHALL BE 2" DIAMETER CARLON TYPE "SW" DIRECT BURIAL TELEPHONE DUCT OR 3" SCHEDULE 40 PVC. INSTALL GALVANIZED PULL WIRE OR PURPLE PROPYLPOLYETHYLENE ROPE WITH A MINIMUM PULLING TENSION OF 100 POUNDS. THE MINIMUM BURIAL DEPTH SHALL BE 24". INSTALL AN ORANGE DETECTABLE HAZARD TAPE WITH INTEGRAL "BURIED CABLE" WARNING, 12" ABOVE CONDUIT. WHEN THE SECURITY CAMERA LIGHT POLES ARE LOCATED FURTHER THAN 400 FEET FROM THE FIRST PULL BOX, WHICH IS NEXT TO THE BUILDING, EXTEND THE 2" CONDUIT FROM THE FIRST PULL BOX TO A SECOND PULL BOX. EACH SECURITY CAMERA LIGHT POLE SHALL HAVE A DEDICATED 2" CONDUIT FROM THE NEAREST PAVED AREA PULL BOX TO THE LIGHT POLE BASE JUNCTION BOX. THE CONDUIT SHALL BE CARLON TYPE "SW" DIRECT BURIAL TELEPHONE DUCT OR SCHEDULE 40 PVC. INSTALL GALVANIZED PULL WIRE OR PURPLE PROPYLPOLYETHYLENE ROPE WITH A MINIMUM PULLING TENSION OF 100 POUNDS. THE MINIMUM BURIAL DEPTH SHALL BE 24". INSTALL AN ORANGE DETECTABLE HAZARD TAPE WITH INTEGRAL "BURIED CABLE" WARNING, 12" ABOVE CONDUIT. THE 2" LP CAMERA CONDUIT SHALL BE SEPARATED FROM THE 480VAC LIGHT FIXTURE POWER BY A DIVIDER PLACED IN THE LIGHT POLE BASE JUNCTION BOX.

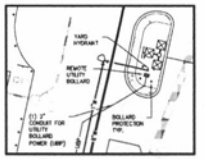
ALL CHANGES IN DIRECTION OF THE CONDUIT SHALL UTILIZE STANDARD SWEEPS. WITH A MINIMUM BENDING RADIUS LISTED IN THE NEC. NO MORE THAN (3) 90-DEGREE BENDS WILL BE ALLOWED BETWEEN PULLING POINTS, OR A TOTAL OF 180 DEGREES COMBINED IN SEVERAL BENDS. PULL BOXES SHALL BE LOCATED EVERY 400 FEET UNLESS THE COMBINED TOTAL OF BENDS REQUIRES ADDITIONAL BOXES.

ALL PULL BOXES LOCATED IN PAVED AREAS SUBJECT TO TRUCK TRAFFIC SHALL BE "H-20" LOAD RATED. THE TYPICAL PULL BOX SIZE WILL BE 17" X 30" X 24" "QUAZITE" POLYCRIMAR BOX WITH POLYBRIDGE LID, OR APPROVED EQUAL. DEEPER BOXES MAY BE REQUIRED WHEN THE CONDUIT ALIGNMENT IS AFFECTED BY OTHER UTILITIES. THE PULL BOX SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATION WITH A CONCRETE COLLAR AND A MINIMUM OF 6" OF GRAVEL COMPACTED PER PROJECT SPECIFICATIONS.

(M) UTILITY BOLLARD. SEE DETAIL SHEET.



WALMART IRRIGATION UTILITY ENTRY INSET A
N.T.S.



WALMART UTILITY BOLLARD INSET B
N.T.S.

UTILITY PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

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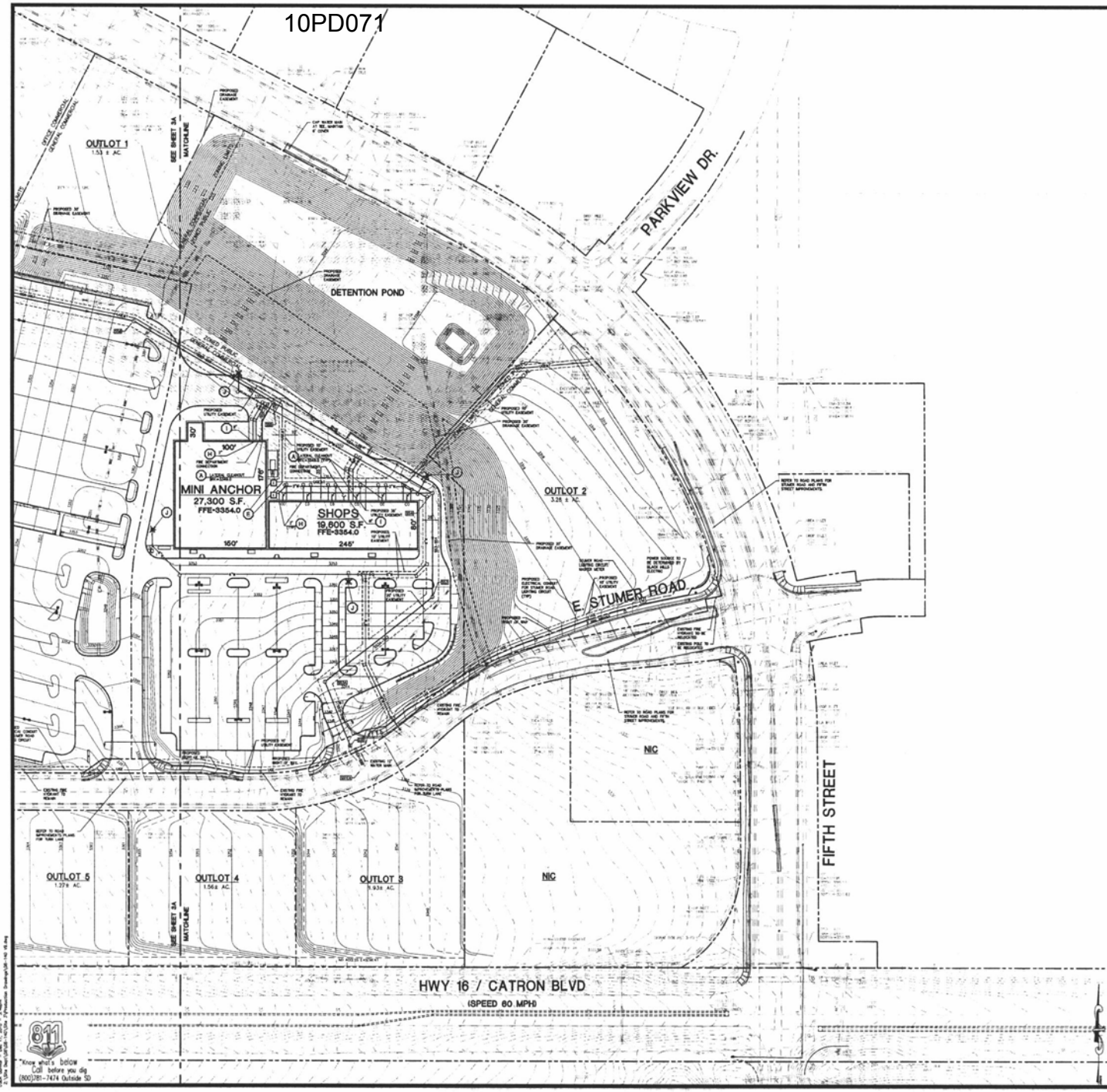

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(B) GAS ENTRY WITH GAS METER AT BUILDING. CONTRACTOR RESPONSIBLE FOR INSTALLING PIPE BOLLARD PROTECTION AT METER. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY FOR TYING OF INDIVIDUAL METER.

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(G) CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH THE UTILITY COMPANIES FOR THE INSTALLATION OF OVERHEAD/UNDERGROUND ELECTRIC AND TELEPHONE LINES TYPICAL. CONTRACTOR SHALL COORDINATE THE TYING OF INDIVIDUAL METER WITH THE ELECTRIC COMPANY. SEE NOTE D, E, & F FOR ADDITIONAL NOTES PERTAINING TO ELECTRIC AND TELEPHONE LINES.

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(L) CONDUIT FOR CINER POLE MOUNTED SECURITY CAMERAS.
A PULL BOX SHALL BE LOCATED WITHIN THE SIDEWALK AREA OR AS CLOSE TO THE BUILDING AS POSSIBLE. THE CONDUIT FROM THE BUILDING TO THE FIRST PULL BOX SHALL BE 2" DIAMETER CARLON TYPE "DW" DIRECT BURIAL TELEPHONE DUCT OR 3" SCHEDULE 40 PVC. INSTALL GALVANIZED PULL WIRE OR PURPLE PROPYLENE/POLYTHELENE ROPE WITH A MINIMUM PULLING TENSION OF 100 POUNDS. THE MINIMUM BURIAL DEPTH SHALL BE 24". INSTALL AN ORANGE DETECTABLE HAZARD TAPE WITH INTEGRAL "BURIED CABLE" WARNING, 12" ABOVE CONDUIT. WHEN THE SECURITY CAMERA LIGHT POLES ARE LOCATED FURTHER THAN 400 FEET FROM THE FIRST PULL BOX, WHICH IS NEXT TO THE BUILDING, EXTEND THE 2" CONDUIT FROM THE FIRST PULL BOX TO A SECOND PULL BOX. EACH SECURITY CAMERA LIGHT POLE SHALL HAVE A DEDICATED CONDUIT FROM THE NEAREST PAVED AREA PULL BOX TO THE LIGHT POLE BASE JUNCTION BOX. THE CONDUIT SHALL BE CARLON TYPE "DW" DIRECT BURIAL TELEPHONE DUCT OR SCHEDULE 40 PVC. INSTALL GALVANIZED PULL WIRE OR PURPLE PROPYLENE/POLYTHELENE ROPE WITH A MINIMUM PULLING TENSION OF 100 POUNDS. THE MINIMUM BURIAL DEPTH SHALL BE 24". INSTALL AN ORANGE DETECTABLE HAZARD TAPE WITH INTEGRAL "BURIED CABLE" WARNING, 12" ABOVE CONDUIT. THE 2" LP CAMERA CONDUIT SHALL BE SEPARATED FROM THE ARENAC LIGHT FIXTURE POWER BY A DIVIDER PLACED IN THE LIGHT POLE BASE JUNCTION BOX.

ALL CHANGES IN DIRECTION OF THE CONDUIT SHALL UTILIZE STANDARD SWEEPS. WITH A MINIMUM BENDING RADIUS LISTED IN THE NEC. NO MORE THAN (2) 90-DEGREE BENDS WILL BE ALLOWED BETWEEN PULLING POINTS, OR A TOTAL OF 180 DEGREES COMBINED IN SEVERAL BENDS. PULL BOXES SHALL BE LOCATED EVERY 400 FEET UNLESS THE COMBINED TOTAL OF BENDS REQUIRES ADDITIONAL BOXES.

ALL PULL BOXES LOCATED IN PAVED AREAS SUBJECT TO TRUCK TRAFFIC SHALL BE "H-20" LOAD RATED. THE TYPICAL PULL BOX SIZE WILL BE 17" X 30" X 24" "QUAZITE" POLYGRADE BOX WITH POLYGRAND LID, OR APPROVED EQUAL. DEEPER BOXES MAY BE REQUIRED WHEN THE CONDUIT ALIGNMENT IS AFFECTED BY OTHER UTILITIES. THE PULL BOX SHALL BE INSTALLED PER THE MANUFACTURER'S SPECIFICATION WITH A CONCRETE COLLAR AND A MINIMUM OF 6" OF GRAVEL COMPACTED PER PROJECT SPECIFICATIONS.

(M) UTILITY BOLLARD. SEE DETAIL SHEET.

- 8"SS — SANITARY SEWER PIPE
- 8"W — WATER MAIN PIPE
- 3"W — DOMESTIC WATER PIPING
- GAS — GAS PIPE
- TS — TAMPER SWITCH CONDUIT
- UBP — UTILITY BOLLARD POWER
- TAPPING SLEEVE & VALVE
- WATER VALVE
- FIRE HYDRANT
- THRUST BLOCK
- SANITARY SEWER MANHOLE
- POWER POLE
- GAS METER

UTILITY PLAN

GRAPHIC SCALE

(IN FEET)
1 inch = 60 ft.

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Wolverton & Associates
Consulting Engineers + Land Surveyors
8142 Sugarloaf Parkway - Suite 100 - Duluth, Georgia 30097
Phone (770) 447-8448 - Fax (770) 447-8070
www.wolverton-associates.com

REGISTERED PROFESSIONAL ENGINEER
JEFFREY G. WEBER
SOUTH DAKOTA

PROPOSED BLACK HILLS CENTER
Walmart: # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1"= 60'
JOB No.: 08-140
SHEET NUMBER: C-3B
OF SHEETS

08-140 V8.DWG

10PD071

MULCHING SCHEDULE Ds1

MULCHING MATERIAL	RATE/ACRE
DRY STRAW OR HAY	2.5 TONS
WOOD WASTE, CHIPS, SAWDUST, OR BARK	6 TO 9 TONS (2 TO 2" INCH)

TEMPORARY SEEDING SCHEDULE Ds2

SPECIES (MIXTURE OF)	RATE/ACRE	PLANTING DATES
BLUE FESCUE (50%)	200 LBS	APRIL1 – SEPT 1
ANNUAL RYE GRASS (50%)		

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

PERMANENT SEEDING SCHEDULE Ds3

SPECIES	RATE/ACRE	PLANTING DATES
KENTUCKY BLUE GRASS (80%) (MIXTURE OF 3 VARIETIES)	175 LBS	SEPT 1 – DEC 31
PERENNIAL RYE GRASS (20%)		

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

SOD PLANTING AND FERTILIZATION REQUIREMENTS Ds4

SPECIES	FERTILIZER (N-P-K)	RATE (lbs/AC)	NITROGEN TOP DRESSING RATE (lbs/AC)
FESCUE	6-12-12	50-100	500

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
TEMPORARY CONTROL MEASURES																								
SEDIMENT CONTROL BASINS																								
STRIP & STOCKPILE TOPSOIL																								
ROUGH GRADE																								
STORM FACILITIES																								
SITE CONSTRUCTION																								
PERMANENT CONTROL STRUCTURES																								
FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS- TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASONRY AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE I

1. *INSTALL STABILIZED CONSTRUCTION EXIT(S) AND SWPPP INFORMATION SIGN.*
2. *INSTALL SILT FENCE(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).*
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMP's. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH CEC, WAL-MART CONSTRUCTION MANAGER, AGENCY(IES) AND GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

ALL EXCEPTIONS NOTED ON THE BMP CERTIFICATION FORM MUST BE ADDED TO THE FIRST DAILY REPORT AS A DEFICIENCIES AND REBOLVED WITHIN 24-HOURS. BMP's CAN NOT BE CERTIFIED IF ANY EXCEPTION REQUIRES GREATER THAN 24-HOURS TO RESOLVE.

DAILY INSPECTIONS AND REPORTING USING THE SWPPP MANAGEMENT TOOL MUST START THE DAY OF OR IMMEDIATELY AFTER BMP CERTIFICATION.

4. *CONSTRUCT AND STABILIZE SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS.)*
5. *INSTALL ANY STABILIZE HYDRAULIC CONTROL STRUCTURES (DIKES, SWALES, CHECK DAMS, ETC.) (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL HYDRAULIC CONTROL STRUCTURES.)*

6. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMP's.

7. BEGIN CLEARING AND GRUBBING THE SITE.
8. BEGIN GRADING THE SITE.
9. START CONSTRUCTION OF RETAINING WALLS.
10. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.

PHASE II

1. TEMPORARY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED.
4. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
5. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
6. PREPARE SITE FOR PAVING.
7. PAVE SITE.
8. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
9. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS INCLUDING OUTLETS.
10. OBTAIN CONCURRENCE WITH THE CONSTRUCTION MANAGER THAT THE SITE IS STABILIZED THEN
    A. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES,
    B. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF BMP's, AND
    C. ASK THE CM TO CONTACT THE CEC TO COMPLETE THE CEC NOT SITE INSPECTION AND REPORT.
11. CONTINUE DAILY INSPECTION REPORTS UNTIL THE FINAL DAILY INSPECTION REPORT, MARKED READY TO TERMINATE PERMIT, IS SIGNED BY THE CONSTRUCTION MANAGER AND SUBMITTED VIA THE SWPPP MANAGEMENT TOOL.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF PRECEDING BMP's HAVE BEEN COMPLETELY INSTALLED. BMP-RELATED STEPS IN THE ABOVE SEQUENCE ARE ITALICIZED FOR CLARITY.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FINAL STABILIZATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

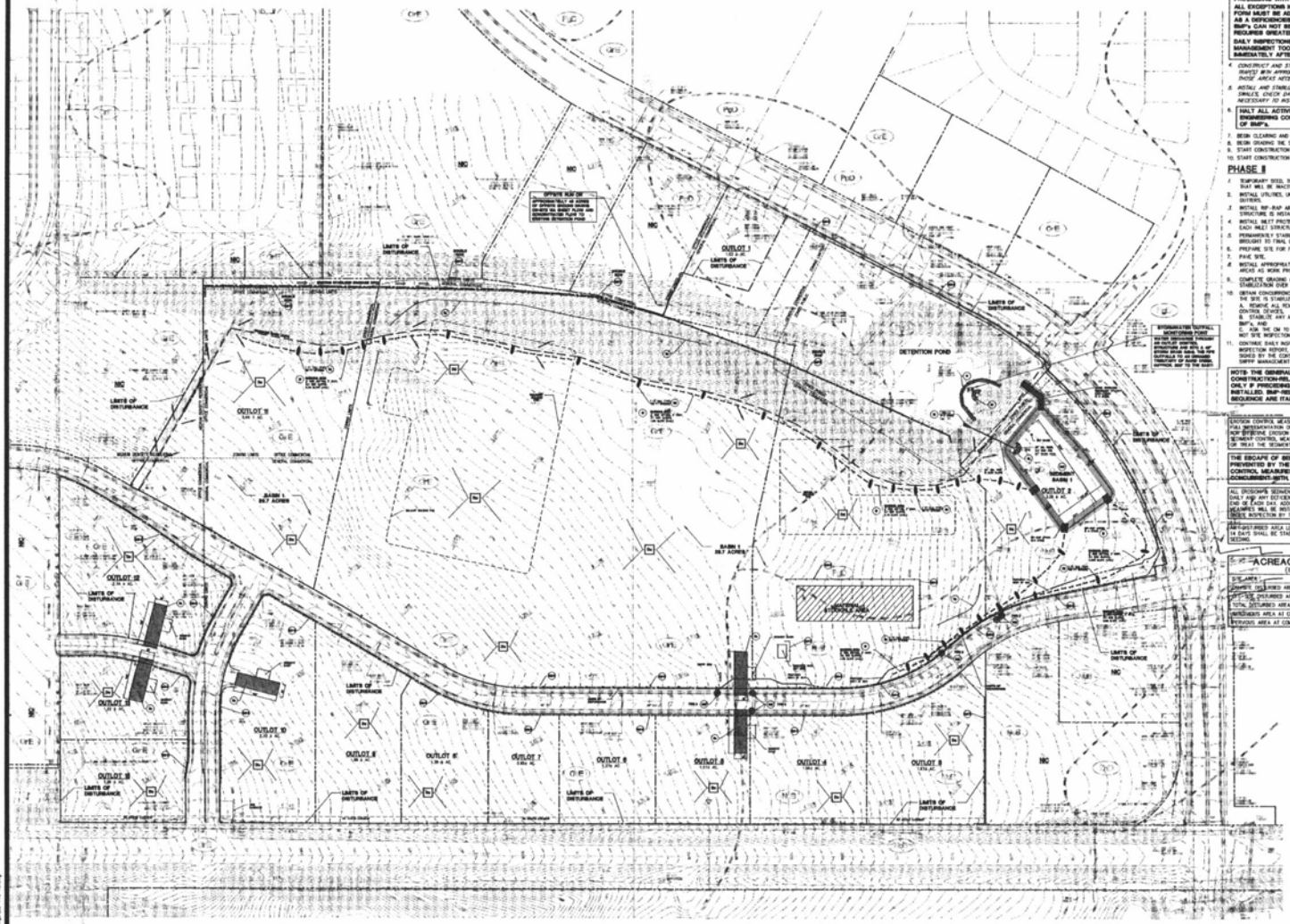
THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER FIELD INSPECTION BY THE ISSUING AUTHORITY.

DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

ACREAGE SUMMARY (IN ACRES)

SITE AREA	58.51 ACS
DISTURBED AREA	58.51 ACS
NON-DISTURBED AREA	0.31 ACS
TOTAL DISTURBED AREA (SHARP WATER ADD)	58.82 ACS
DISTURBED AREA AT COMPLETION	ACS
PERVIOUS AREA AT COMPLETION	ACS



LOCATION MAP

NOT TO SCALE

THE SITE IS LOCATED IN THE E1/2 OF THE NE1/4 OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4 SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECK DAM			A small temporary barrier placed across a drainage ditch to reduce the velocity of concentrated stormwater flows.
Co	CONSTRUCTION EXIT			A stabilized stone area adjacent to a paved roadway to reduce the amount of mud and dirt being transported onto paved roadways.
Ch	CHANNEL STABILIZATION			Impeding, constricting or stabilizing an open channel, adding broken to slow.
Di	DIVERSION			An earth channel or dike located above or below a disturbed area to divert runoff. Also used as a temporary or permanent structure.
Dwl	TEMPORARY DOWN DRAIN STRUCTURE			A flexible conduit of heavy duty fabric or pipe used to convey water to a stable channel without causing erosion. Used in place of a temporary or permanent structure.
Fr	FILTER RING			A temporary filter barrier constructed of straw bale, sand bags, and silt fence.
Re	RETAINING WALL			A wall installed to stabilized cut and fill slopes where maintain a steeper slope than is normally possible. Used primarily on slopes with steep
Rd	ROCK FILTER DAM			A permanent or temporary dam that holds back water and allows it to pass through a rock filter. Used in place of a temporary or permanent structure.
Rt	RETROFITTING			A structure or structural control is built in a completed or partially developed area to control runoff and improve water quality.
Sdt	SEDIMENT BARRIER		(TYPE "C")	A barrier constructed of wattles, hay bales, fine mesh silt fence, or other material to control sediment from sheet flow. Used in place of a temporary or permanent structure.
Sdt2	SEDIMENT TRAP TEMPORARY			An impoundment area created by excavation and/or construction of a dam or dike. Used in place of a temporary or permanent structure.
Sd3	SEDIMENT BASIN DETAIL			A basin created by excavation and/or construction of a dam or dike. Used in place of a temporary or permanent structure.
St	STORM DRAIN OUTLET PROTECTION			A stone, concrete block, or gabion structure placed at the end of a storm drain to prevent scour and erosion.
Su	SURFACE ROUGHENING			A rough soil surface with alternating ridges and furrows formed on a slope and on a level plane parallel to the contours.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (MULCHING ONLY)		Ms	Establishing temporary protection on disturbed areas where weather may not have it suitable growing season to produce an erosion resistant cover.
Ds2	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)		Ms2	Establishing a temporary vegetative cover on disturbed areas by seeding. Used in place of Permanent cover.
Ds3	DISTURBED AREA STABILIZATION (PERMANENT SEEDING)		Ms3	Establishing permanent vegetative cover on disturbed areas by seeding. Used in place of temporary cover.
Ds4	DISTURBED AREA STABILIZATION (SOD)		Ms4	A permanent vegetative cover on disturbed areas by sodding.
Mb	DISTURBED AREA STABILIZATION (BIODEGRADABLE BLANKETS)		Mb	A protection covering (blanket) of seed and mulch/straw that used on disturbed areas to protect against erosion of slopes, channels, or shorelines.
Du	SOD COVERING ON DISTURBED AREAS		Du	Covering surface area of disturbed soil with sod. Used in place of temporary or permanent cover.

REFER TO PLAN SHEET ES-4 FOR FOR GENERAL NOTES, MAINTENANCE NOTES, SITE DATA & QUAD MAP

EROSION CONTROL LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- GRADE BREAK
- CONTOUR ELEVATIONS
- STORM DRAIN
- DIRECTION OF OVERLAND FLOW
- LIMITS OF DRAINAGE SUB-BASIN
- SOIL SERIES BOUNDARY
- SILT FENCE
- SWPPP INFORMATION SIGN
- STAGING AREA/ALL WEATHER ACCESS DRIVE

NOTE: SEE SURVEY FOR EXISTING LEGEND SYMBOLS

SOIL SERIES LEGEND

- CdF — CANYON-ROCK OUTCROP COMPLEX, 15 TO 60 PERCENT SLOPES
- NuB — NUNI LOAM, 2 TO 6 PERCENT SLOPES
- SbD — SAVAGE-CANYON LOAMS, 6 TO 15 PERCENT SLOPES
- PcD — PIERRE-DRUMMET CLAYS, 6 TO 15 PERCENT SLOPES
- DrE — DRUMMET-ROCK OUTCROP COMPLEX, 6 TO 40 PERCENT SLOPES
- ZeD — ZOMER-NIHILL COMPLEX, 6 TO 15 PERCENT SLOPES

OFF-SITE RUN-ON ACREAGE SUMMARY

OFF-SITE DRAINAGE AREA	ACREAGE	AVERAGE SLOPE	MAXIMUM SLOPE *	COVER TYPE **
AREA 1	48 +/-	5 %	33 %	VARIES

* IDENTIFY UPP-GRADIENT RUN-ON AREAS FOR EACH PERMEATE AREA RECEIVING RUN-ON
** STATE PREDOMINANT TYPE OF SURFACE COVER (I.E. VEGETATED, PAVED, ROOFED, ETC.)

TEMPORARY SEDIMENT BASIN 1 CALCULATIONS

DRAINAGE AREA= 29.7 ACRES
DISTURBED AREA= 29.7 ACRES
RUOTO Q (C)*(I)*(A) (48) = 8.2 CFS
REQ'D VOLUME (C1)*(Q) (48) = 30,108 CF
SEDIMENT STORAGE PROVIDED= 31,107 CF @ 2813 ELEV.
CLEANOUT VOLUME PROVIDED=11,846 CF@ 2811.2 ELEV.
PROVIDE 24" PRINCIPAL SPILLWAY WITH 36" DIA. RISER, 2.5' HIGH AND 54" TRASH RACK.

OFF-SITE MATERIAL AREA(S) INFORMATION

BORROW SITE NAME:	DISPOSAL SITE NAME:
BORROW SITE ADDRESS:	DISPOSAL SITE ADDRESS:
BORROW SITE PERMIT HOLDER:	DISPOSAL SITE PERMIT HOLDER:
BORROW SITE PERMIT NO.	DISPOSAL SITE PERMIT NO.
BORROW SITE PERMITING AGENCY:	DISPOSAL SITE PERMITING AGENCY:

1) CONTRACTOR SHALL FILL IN BORROW AND DISPOSAL INFORMATION ABOVE.
2) BORROW AND DISPOSAL INFORMATION IS NEEDED FOR SOIL FILL AND SPOIL MATERIALS ONLY.
3) CONTRACTOR SHALL OBTAIN "NOV REQUIRED FOR THIS PROJECT" IF ONE OR BOTH ARE NOT REQUIRED FOR PROJECT.

24 HR LOCAL EMERGENCY CONTACT

CONTRACTOR'S NAME	PHONE NUMBER
ROBERT GREEN THF, STONERIDGE DEVELOPMENT LLC	(314)429-0900

NOTE: CONTRACTOR TO PROVIDE UPDATED INFORMATION ONCE CONTRACT IS AWARDED.

DEVELOPER/OWNER:
THF, STONERIDGE DEVELOPMENT LLC
INNERBELT BUSINESS CENTER DR.
SUITE 200 ST. LOUIS MO 63114
314-429-0900

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

PHASE I - SITE MAP
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

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Phone: (605) 342-1586 Fax: (605) 342-0480
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Registered Professional Engineer
Mark A. Wolverton
Date 12/10
SOUTH DAKOTA

PROPOSED BLACK HILLS CENTER
Walmart ✱ # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1" = 100'
JOB No.: 08-140
SHEET NUMBER: ES-1
OF SHEETS

08-140 V5.DWG

10PD071

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
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STRIP & STOCKPILE TOPSOIL																								
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STORM FACILITIES																								
SITE CONSTRUCTION																								
PERMANENT CONTROL STRUCTURES																								
FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
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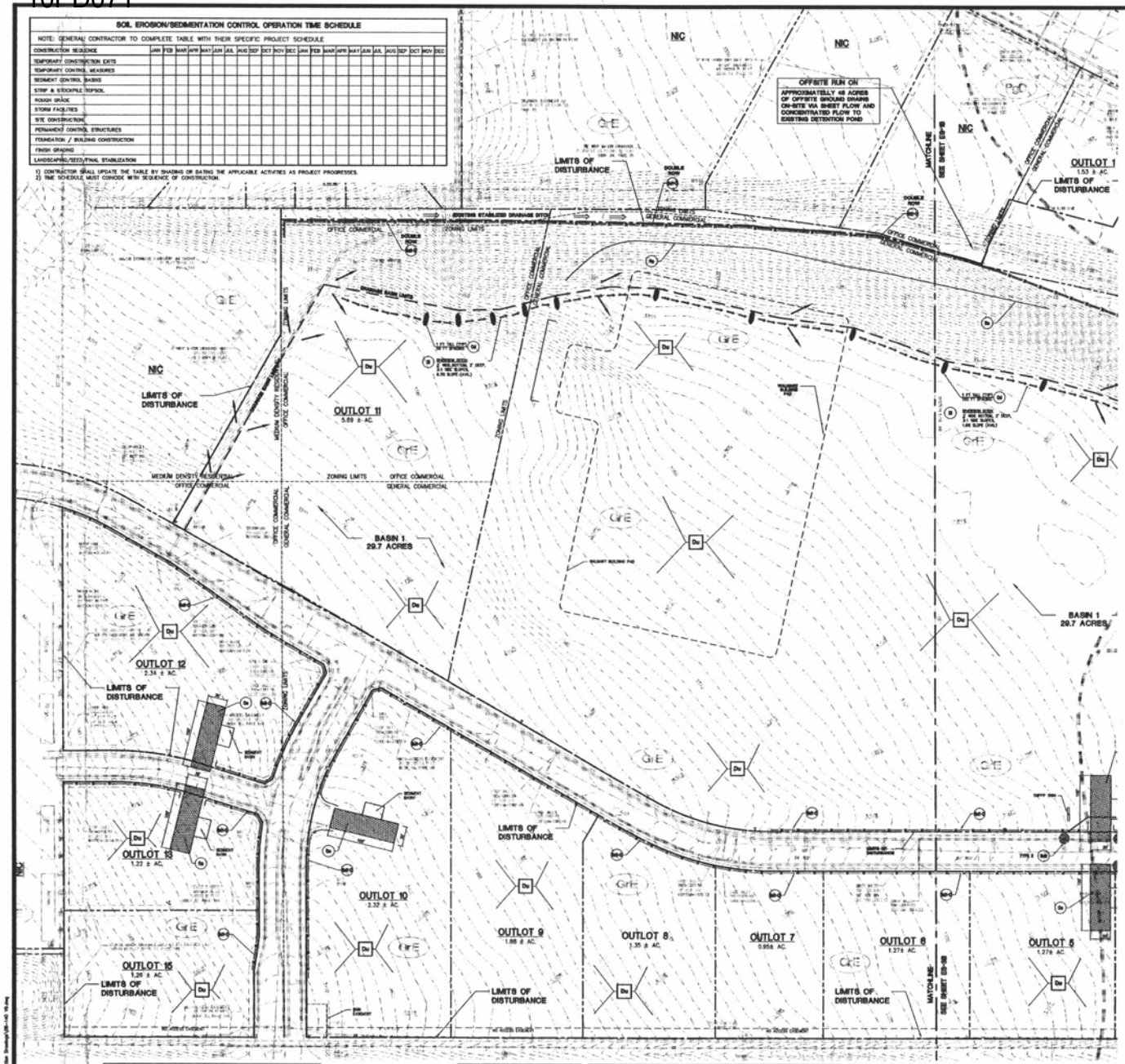
1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.



BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS: TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASONRY AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE I

1. INSTALL STABILIZED CONSTRUCTION EXIT(S) AND SWPPP INFORMATION SIGN.
2. INSTALL SILT FENCE(S) ON THE SITE (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE).
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMP's. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH CIEC, WAL-MART CONSTRUCTION MANAGER, AGENCY(IES) AND GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

ALL EXCEPTIONS NOTED ON THE BMP CERTIFICATION FORM MUST BE ADDED TO THE FIRST DAILY REPORT AS A DEFICIENCIES AND RESOLVED WITHIN 24-HOURS. BMP's CAN NOT BE CERTIFIED IF ANY EXCEPTION REQUIRES GREATER THAN 24-HOURS TO RESOLVE.

DAILY INSPECTION AND REPORTING USING THE SWPPP MANAGEMENT TOOL MUST START THE DAY OF OR IMMEDIATELY AFTER BMP CERTIFICATION.

4. CONSTRUCT AND STABILIZE SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES. (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS.)
5. INSTALL AND STABILIZE HYDRAULIC CONTROL STRUCTURES (DIKES, BERMS, CHECK DAMS, ETC.) (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL HYDRAULIC CONTROL STRUCTURES.)
6. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMP's.
7. BEGIN CLEARING AND GRUBBING THE SITE.
8. BEGIN GRADING THE SITE.
9. START CONSTRUCTION OF RETAINING WALLS.
10. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER DAILY INSPECTION BY THE CIVIL ENGINEERING AUTHORITY.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

ACREAGE SUMMARY
(IN ACRES)

SITE AREA	58.51 ACS
ON-SITE DISTURBED AREA	58.51 ACS
OFF-SITE DISTURBED AREA	0.31 ACS
TOTAL DISTURBED AREA (NEAR WATER WK)	58.82 ACS
IMPERVIOUS AREA AT COMPLETION	ACS
PERVIOUS AREA AT COMPLETION	ACS

MULCHING SCHEDULE Ds1

MULCHING MATERIAL	RATE/ACRE
DRY STRAW OR HAY	2.5 TONS
WOOD WASTE, CHIPS, SAWDUST, OR BARK	6 TO 8 TONS (1 TO 2" DEEP)

TEMPORARY SEEDING SCHEDULE Ds2

SPECIES (MIXTURE OF)	RATE/ACRE	PLANTING DATES
BLUE FESCUE (50%) ANNUAL RYE GRASS (50%)	200 LBS	APRIL 1 – SEPT 1

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

PERMANENT SEEDING SCHEDULE Ds3

SPECIES	RATE/ACRE	PLANTING DATES
KENTUCKY BLUE GRASS (80%) (MIXTURE OF 3 VARIETIES) PERENNIAL RYE GRASS (20%)	175 LBS	SEPT 1 – DEC 31

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

SOD PLANTING AND FERTILIZATION REQUIREMENTS Ds4

SPECIES	FERTILIZER (N-P-K)	RATE (lbs/AC)	NITROGEN TOP DRESSING RATE (lbs/AC)
FESCUE	6-12-12	50-100	500

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE NE1/4 OF THE NE1/4, SECTION 24, T44, R7E, 5PM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECK DAM			A small temporary barrier or dam constructed across a drainage channel or swale to reduce the velocity of concentrated stormwater flows.
Co	CONSTRUCTION EXIT			A surface stabilized area and/or a mud scraper or grate that is placed at the entrance to a construction site to remove mud from vehicle tires before leaving and potentially polluting public streets.
Ch	CHANNEL STABILIZATION			Impeding conveyance or diverting flow from an existing channel, or ditch.
Di	DIVERSION			An earth channel or dike located across, below, or above a slope to intercept and divert runoff to a stable outlet or sediment basin.
Dsd	TEMPORARY DOWN SLOPE DRAIN STRUCTURE			A flexible conduit or heavy duty hose or other covered channel used to convey concentrated runoff from a slope. This is temporary soil bioengineering.
Fr	FILTER RING			A temporary stone berm constructed at storm drain inlets to pond water.
Re	RETAINING WALL			A wall installed to stabilize soil and prevent erosion on a permanently steep or soil unstable slope where soil erosion and mass wasting occur.
Rd	ROCK FILTER DAM			A permanent or temporary stone dam placed in a drainage ditch or channel to reduce the velocity of the water flowing over it.
Rt	RETROFITTING			A BMP or structural control to stabilize or improve an existing BMP or structural control that was called for in a previously approved plan.
Sd1-2	SEDIMENT BARRIER		(TYPE "C")	A barrier to prevent sediment from leaving a site by filtering sediment laden runoff or trapping sediment on site. Sediment barriers are installed on the downslope side of a disturbance.
Sd3	SEDIMENT TRAP, TEMPORARY			An impounding area created by constructing a dike or dam across a drainage way or by filling and stabilizing an excavation. Used to control sediment from small areas of construction or disturbance.
Sd5	SEDIMENT BASIN DETAIL			A basin created by excavation and/or construction of a dam or berm across a drainage way. Used to temporarily detain runoff to allow for settling of sediment. Sediment basins are designed for a particular drainage area and are sized accordingly.
St	STONE DRAIN OUTLET PROTECTION			A paved or stone apron at the outlet of a pipe, culvert, or channel to prevent scour.
Su	SURFACE ROUGHENING			A rough soil surface with alternating depressions and a random or sinusoidal pattern that grades across the slope.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	MULCHED AREA (MULCHED AREA WITH NO SEEDING)		Ds1	Establishing temporary protection to disturbed areas when weather or other factors prevent the use of seeding or permanent vegetation.
Ds2	MULCHED AREA (TEMPORARY SEEDING)		Ds2	Establishing a temporary vegetative cover with fast growing annual grasses or Sudan-type grass.
Ds3	MULCHED AREA (PERMANENT SEEDING)		Ds3	Establishing permanent vegetative cover with a mixture of grasses and legumes on disturbed areas.
Ds4	MULCHED AREA (SOD/SODDING) PLANTING		Ds4	A permanent vegetative cover using sods or rolls, sections of virtually whole sward.
Mb	MULCHED AREA (MULCHED AREA WITH NO SEEDING) PLANTING		Mb	A vegetative covering intended to protect the soil from erosion and to establish permanent vegetation on steep slopes, channels, or shorelines.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface dust on construction or other disturbed areas, roadways, parking areas, and similar sites.

REFER TO PLAN SHEET ES-4 FOR FOR GENERAL NOTES, MAINTENANCE NOTES, SITE DATA & QUAD MAP

EROSION CONTROL LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- GRADE BREAK
- XXX CONTOUR ELEVATIONS
- STORM DRAIN
- X.XXX DIRECTION OF OVERLAND FLOW
- LIMITS OF DRAINAGE SUB-BASIN
- SOIL SERIES BOUNDARY
- SILT FENCE
- SWPPP INFORMATION SIGN
- STAGING AREA/ALL WEATHER ACCESS DRIVE

NOTE: SEE SURVEY FOR EXISTING LEGEND SYMBOLS

SOIL SERIES LEGEND

- CdF — CANYON-ROCK OUTCROP COMPLEX, 15 TO 60 PERCENT SLOPES.
- SbD — SATANTA-CANYON LOAMS, 6 TO 15 PERCENT SLOPES.
- GrE — GRUNER-ROCK OUTCROP COMPLEX, 6 TO 40 PERCENT SLOPES.
- NtuB — NUNN LOAM, 2 TO 6 PERCENT SLOPES.
- PgD — PIERRE-GRUNER CLAYS, 6 TO 15 PERCENT SLOPES.
- ZcD — ZONECO-HAYLI COMPLEX, 6 TO 15 PERCENT SLOPES.

PHASE I - SITE MAP
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

GRAPHIC SCALE
0 50 100 200 400
(IN FEET)
1 inch = 50 ft.

OFF-SITE RUN-ON ACREAGE SUMMARY

OFF-SITE DRAINAGE AREA	ACREAGE	AVERAGE SLOPE	MAXIMUM SLOPE *	COVER TYPE **
AREA 1	48 +/-	5 %	30 %	VARIES

* IDENTIFY UP-GRADIENT RUN-ON AREAS FOR EACH PERIMETER AREA RECEIVING RUN-ON.
** STATE PREDOMINANT TYPE OF SURFACE COVER (I.E. VEGETATION, PAVED, ROOFED, ETC.)

TEMPORARY SEDIMENT BASIN 1 CALCULATIONS

DRAINAGE AREA= 29.7 ACRES
DISTURBED AREA= 29.7 ACRES
REQ'D Q (3.1"/24 HR) = 6.3 CFS
REQ'D VOLUME (3.1"/24 HR) = 33,118 CF
SEDIMENT STORAGE PROVIDED= 71,937 CF @ 2313 ELEV.
CLEANOUT VOLUME PROVIDED=17,940 CFB 2311.5 ELEV.
PROVIDE 24" PRINCIPAL SPILLWAY WITH 24" DIA. RISER, 3.5' HIGH AND 24" TRASH RACK.

OFF-SITE MATERIAL AREA(S) INFORMATION

BORROW SITE NAME:	DISPOSAL SITE NAME:
BORROW SITE ADDRESS:	DISPOSAL SITE ADDRESS:
BORROW SITE PERMIT HOLDER:	DISPOSAL SITE PERMIT HOLDER:
BORROW SITE PERMIT NO:	DISPOSAL SITE PERMIT NO:
BORROW SITE PERMITTING AGENCY:	DISPOSAL SITE PERMITTING AGENCY:

1) CONTRACTOR SHALL FILL IN BORROW AND DISPOSAL INFORMATION ABOVE.
2) BORROW AND DISPOSAL INFORMATION IS NOTED FOR SOIL FILL AND SPOIL MATERIALS ONLY.
3) CONTRACTOR SHALL STATE "NOT REQUIRED FOR THIS PROJECT" IF ONE OR BOTH ARE NOT REQUIRED FOR PROJECT.

24 HR LOCAL EMERGENCY CONTACT

ROBERT GREEN (314)429-0900
THF, STONERIDGE DEVELOPMENT LLC

[CONTRACTOR'S NAME] [PHONE NUMBER]

NOTE: CONTRACTOR TO PROVIDE UPDATED INFORMATION ONCE CONTRACT IS AWARDED.

DEVELOPER/OWNER:
THF, STONERIDGE DEVELOPMENT LLC
INNERBELT BUSINESS CENTER DR.
SUITE 200 ST. LOUIS MO 63114
314-429-0900

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

811 Know what's below. Call before you dig. (800)781-7474 Outside SD

Wolverton & Associates
Consulting Engineers + Land Surveyors
6748 Superior Drive • Lake Ski • Dakota, Dakota 55007
Phone: (651) 462-1150 • Fax: (651) 462-1151
www.wolverton-associates.com

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

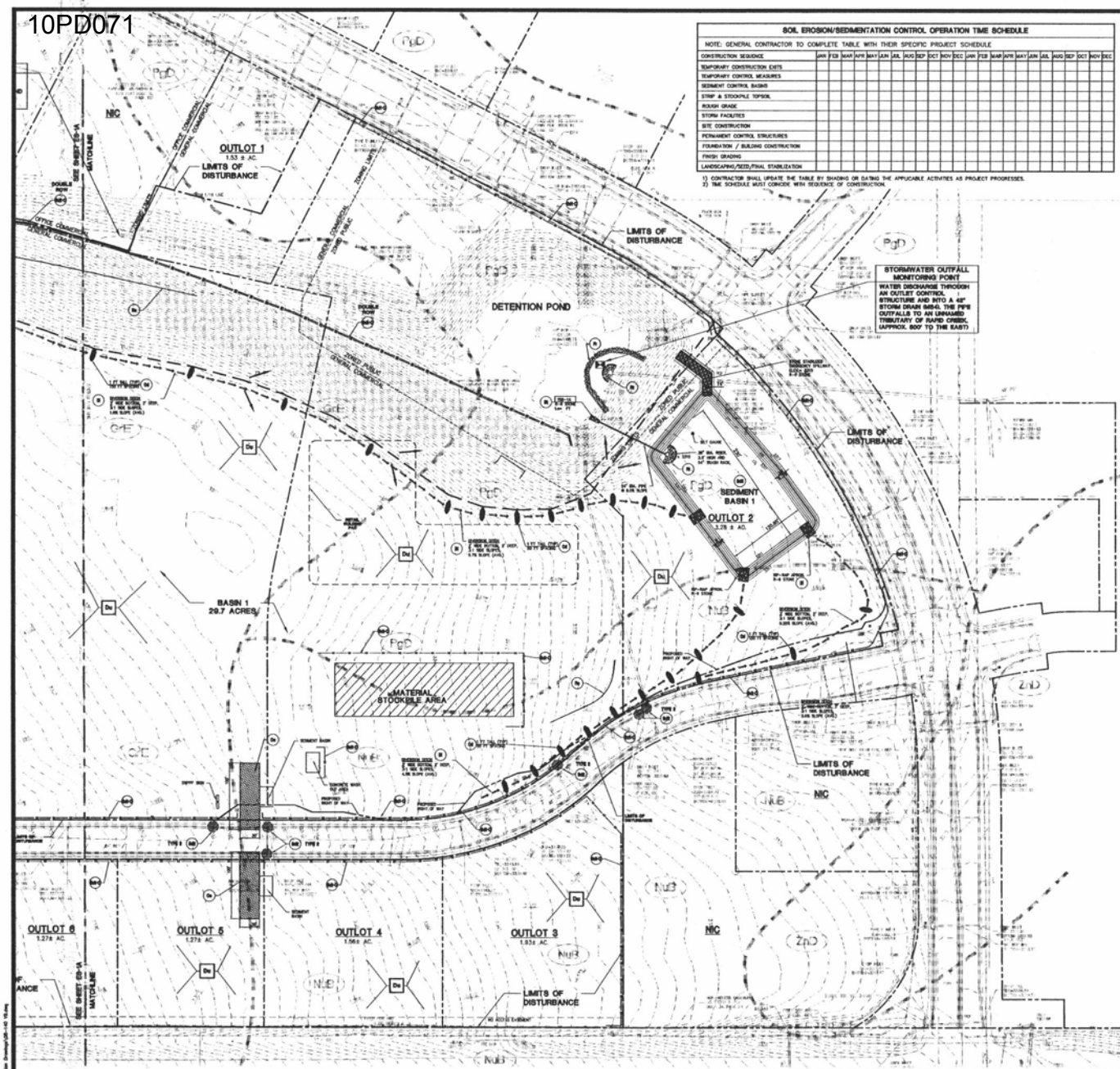
PROPOSED BLACK HILLS CENTER
Walmart ✱ # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1"= 50'
JOB No.: 08-140
SHEET NUMBER: ES-1A
OF SHEETS

08-140 V9.DWG

10PD071



SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
TEMPORARY CONTROL MEASURES																								
SEDIMENT CONTROL BASINS																								
STRIP & STOCKPILE TOPSOIL																								
ROUGH GRADE																								
STORM FACILITIES																								
SITE CONSTRUCTION																								
PERMANENT CONTROL STRUCTURES																								
FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS- TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WASH, WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., SHOULDER DIRECTLY THEIR ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE I

1. INSTALL STABILIZED CONSTRUCTION EXIT(S) AND SWPPP INFORMATION SIGN.
2. INSTALL SILT FENCE(S) ON THE SITE. (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE)
3. PREPARE TEMPORARY PARKING AND STORAGE AREA.

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMP's. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH CBC, WAL-MART CONSTRUCTION MANAGER, ARBENGINEER AND GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.

ALL EXCEPTIONS NOTED ON THE BMP CERTIFICATION FORM MUST BE ADDED TO THE FIRST DAILY REPORT AS A DEFICIENCIES AND RESOLVED WITHIN 24-HOURS. BMP's CAN NOT BE CERTIFIED IF ANY EXCEPTION REQUIRES GREATER THAN 24-HOURS TO RESOLVE.

DAILY INSPECTIONS AND REPORTING USING THE SWPPP MANAGEMENT TOOL MUST START THE DAY OF OR IMMEDIATELY AFTER BMP CERTIFICATION.

4. CONSTRUCT AND STABILIZE SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS.)
5. INSTALL AND STABILIZE HYDRAULIC CONTROL STRUCTURES (DIKES, SWALES, CHECK DAMS, ETC.) (CLEAR ONLY THOSE AREAS NECESSARY TO INSTALL HYDRAULIC CONTROL STRUCTURES.)
6. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMP's.
7. BEGIN CLEARING AND GRUBBING THE SITE.
8. BEGIN GRADING THE SITE.
9. START CONSTRUCTION OF RETAINING WALLS.
10. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER OWN'S INSPECTION BY THE ISSUING AUTHORITY.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

ACREAGE SUMMARY
(IN ACRES)

SITE AREA	58.51 ACS
ON-SITE DISTURBED AREA	58.51 ACS
OFF-SITE DISTURBED AREA	0.31 ACS
TOTAL DISTURBED AREA (SHOW WORK AREA)	58.82 ACS
IMPERVIOUS AREA AT COMPLETION	ACS
PERVIOUS AREA AT COMPLETION	ACS

MULCHING SCHEDULE Ds1

MULCHING MATERIAL	RATE/ACRE
DRY STRAW OR HAY	2.5 TONS
WOOD WASTE, CHIPS, SAWDUST, OR BARK	6 TO 8 TONS (3 TO 7 DEEP)

TEMPORARY SEEDING SCHEDULE Ds2

SPECIES (MIXTURE OF)	RATE/ACRE	PLANTING DATES
BLUE FESCUE (50%) ANNUAL RYE GRASS (50%)	200 LBS	APRIL1 -- SEPT 1

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

PERMANENT SEEDING SCHEDULE Ds3

SPECIES	RATE/ACRE	PLANTING DATES
KENTUCKY BLUE GRASS (50%) (MIXTURE OF 3 VARIES) PERENNIAL RYE GRASS (20%)	175 LBS	SEPT 1 -- DEC 31

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

SOD PLANTING AND FERTILIZATION REQUIREMENTS Ds4

SPECIES	FERTILIZER (N-P-K)	RATE (lbs/AC)	NITROGEN TOP DRESSING (N-P-K) (lbs/AC)
FESCUE	6-12-12	50-100	500

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE SE/4 OF THE NE1/4 OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE NE1/4 OF THE NE1/4, SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECK DAM			A small temporary barrier placed across a drainage ditch or swale.
Ce	CONSTRUCTION EXIT			A stabilized stone area at a point of ingress or egress to a construction site. Used to reduce the amount of mud and dirt transported onto paved roadway surfaces.
Ch	CHANNEL STABILIZATION			Impeding scouring or stabilizing a channel, diverting a channel, or slowing down water in a ditch.
Di	DIVERSION			An earth mound or dike located across the slope. Used to divert runoff to a stable outlet. Temporary or permanent structure.
Dm1	TEMPORARY DOWN SLOPE STRUCTURE			A flexible conduit of fabric with a spiral rib. Used to carry concentrated surface runoff down a slope. This is temporary or permanent structure.
Fr	FILTER RING			A temporary stone berm around a storm drain inlet and paved surface.
Re	RETAINING WALL			A wall structure is constructed out and/or above where maximum slope or space is needed. Used to control erosion and stabilize cut slopes and/or fills.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam constructed across a drainage way. Used to control gully erosion and to stabilize the channel and adjacent areas.
Rt	RETROFITTING			A device or structure placed in an existing drainage system to control erosion and sediment. Used to retrofit existing systems.
SdT-C	SEDIMENT BARRIER			Temporary barrier to control sediment. Used to control sediment from sheet flow. Temporary and for stabilized drainage areas.
SdB	SEDIMENT TRAP TEMPORARY			An impounding area created by a dam across a drainage way. Used to control sediment from drainage areas. Temporary and for stabilized drainage areas.
SdD	SEDIMENT BASIN DETAIL			A basin created by excavation or a dam across a drainage way. Used to control sediment from various areas. Used for a period of time. Temporary and for stabilized drainage areas.
St	TERRAIN DRAIN SLOPE PROTECTION			A series of small gabions of stone placed on the face of a steep slope.
Sw	SURFACE ROUGHENING			A rough and surface with roughness or irregularities of a small scale. Used to control runoff and erosion and stabilize slopes.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (MULCHING ONLY)		Sw	Establishing temporary protection on disturbed areas where they may not have sufficient growth season to produce an adequate stand of cover.
Ds2	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)		Sw	Establishing a temporary vegetative cover on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (PERMANENT SEEDING)		Sw	Establishing permanent vegetative cover such as perennials on disturbed areas. Used on areas not to be disturbed or disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SOD)		Sw	A permanent vegetative cover consisting of sod placed on disturbed areas.
Mb	DISTURBED AREA STABILIZATION (MULCHING ONLY)		Sw	A protective covering (blanket or sod) stabilization that uses natural or synthetic fibers. Used on areas with erosion potential, steepness, or sensitivity.
Du	DUST CONTROL ON DISTURBED AREAS		Sw	Controlling surface dust on disturbed areas. Used on areas subject to roadways and surface areas.

REFER TO PLAN SHEET ES-4 FOR FOR GENERAL NOTES, MAINTENANCE NOTES, SITE DATA & QUAD MAP

EROSION CONTROL LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- GRADE BREAK
- XXX CONTOUR ELEVATIONS
- STORM DRAIN
- X.XXS DIRECTION OF OVERLAND FLOW
- LIMITS OF DRAINAGE SUB-BASIN
- SOIL SERIES BOUNDARY
- SILT FENCE
- SWPPP INFORMATION SIGN
- STAGING AREA/ALL WEATHER ACCESS DRIVE

NOTE: SEE SURVEY FOR EXISTING LEGEND SYMBOLS

SOIL SERIES LEGEND

- CdF — CANYON-ROCK OUTCROP COMPLEX, 15 TO 40 PERCENT SLOPES.
- SbD — SATANTA-CANYON COMPLX, 8 TO 15 PERCENT SLOPES.
- GrE — GRUNDAT-ROCK OUTCROP COMPLEX, 8 TO 40 PERCENT SLOPES.
- NuB — NUNN LOAM, 2 TO 6 PERCENT SLOPES.
- PeD — PIERRE-GRUNDAT CLAYS, 8 TO 15 PERCENT SLOPES.
- ZnD — ZENTED-NIRA COMPLEX, 8 TO 15 PERCENT SLOPES.

OFF-SITE RUN-ON ACREAGE SUMMARY

OFF-SITE DRAINAGE AREA	ACREAGE	AVERAGE SLOPE	MAXIMUM SLOPE *	COVER TYPE **
AREA 1	48 +/-	5 %	33 %	VARIES

* IDENTIFY UP-GRADIENT RUN-ON AREAS FOR EACH PERVIOUS AREA RECEIVING RUN-ON.
** STATE PREDOMINANT TYPE OF SURFACE COVER (I.E. MEADOWS, FARMS, ROCKS, ETC.)

TEMPORARY SEDIMENT BASIN 1 CALCULATIONS

DRAINAGE AREA= 29.7 ACRES
DISTURBED AREA= 28.7 ACRES
REQ'D Q (3.1"/24 HR) = 5.2 CFS
REQ'D VOLUME (3.1"/24 HR) = 30,118 CF
SEDIMENT STORAGE PROVIDED= 15,507 CF @ 2312 ELEV.
CLEANOUT VOLUME PROVIDED=13,840 CF@ 2311.2 ELEV.
PROVIDE 24" PRINCIPAL SPILLWAY WITH 36" DIA. RISER, 3.5' HIGH AND 54" TRASH RACK.

OFF-SITE MATERIAL AREA(S) INFORMATION

BORROW SITE NAME:	DISPOSAL SITE NAME:
BORROW SITE ADDRESS:	DISPOSAL SITE ADDRESS:
BORROW SITE PERMIT HOLDER:	DISPOSAL SITE PERMIT HOLDER:
BORROW SITE PERMIT NO:	DISPOSAL SITE PERMIT NO:
BORROW SITE PERMITING AGENCY:	DISPOSAL SITE PERMITING AGENCY:

1) CONTRACTOR SHALL FILL IN BORROW AND DISPOSAL INFORMATION ABOVE.
2) BORROW AND DISPOSAL INFORMATION IS NEEDED FOR SOIL FILL AND SPIL MATERIALS ONLY.
3) CONTRACTOR SHALL STATE "NOT REQUIRED FOR THIS PROJECT" IF ONE OR BOTH ARE NOT REQUIRED FOR PROJECT.

24 HR LOCAL EMERGENCY CONTACT

CONTRACTOR'S NAME:	PHONE NUMBER:
ROBERT GREEN THF, STONERIDGE DEVELOPMENT LLC	(314)429-0900

NOTE: CONTRACTOR TO PROVIDE UPDATED INFORMATION ONCE CONTRACT IS AWARDED.

DEVELOPER/OWNER:
THF, STONERIDGE DEVELOPMENT LLC
INNERBELT BUSINESS CENTER DR.
SUITE 200 ST. LOUIS MO 63114
314-429-0900

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

Know what's below
Call before you dig
(800)781-7474 Outside SD

PHASE I - SITE MAP
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

GRAPHIC SCALE
0 50 100 150 200
(IN FEET)
1 inch = 50 ft.

Wolverton & Associates
Consulting Engineers • Land Surveyors
6142 Sugarloaf Parkway • Suite 100 • Duluth, Georgia 30097
Phone: 770-495-8308 • Fax: 770-495-8309
www.wolverton-assoc.com

PROPOSED BLACK HILLS CENTER
Walmart ■ 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

REVISIONS	BY

DRAWN BY DMN/CRP
CHECKED BY KJW
DATE 12/09/2010
SCALE 1" = 60'
JOB No. 08-140
SHEET NUMBER
ES-1B
OF SHEETS

08-140 V8.DWG

10PD071

MULCHING SCHEDULE Ds1

MULCHING MATERIAL	RATE/ACRE
DRY STRAW OR HAY	2.5 TONS
WOOD WASTE, CHIPS, SANDUST, OR BARK	5 TO 9 TONS (2 TO 2" MEDIA)

TEMPORARY SEEDING SCHEDULE Ds2

SPECIES (MIXTURE OF)	RATE/ACRE	PLANTING DATES
BLUE FESCUE (50%) ANNUAL RYE GRASS (50%)	200 LBS	APRIL1 – SEPT 1

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO CS-4 FOR FERTILIZER REQUIREMENTS

PERMANENT SEEDING SCHEDULE Ds3

SPECIES	RATE/ACRE	PLANTING DATES
KENTUCKY BLUE GRASS (80%) (MIXTURE OF 3 VARIETIES) PERENIAL RYE GRASS (20%)	175 LBS	SEPT 1 – DEC 31

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO CS-4 FOR FERTILIZER REQUIREMENTS

SOD PLANTING AND FERTILIZATION REQUIREMENTS Ds4

SPECIES	FERTILIZER (N-P-K)	RATE (lbs/AC)	NITROGEN TOP DRESSING RATE (lbs/AC)
FESCUE	6-12-12	50-100	500

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO CS-4 FOR FERTILIZER REQUIREMENTS

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
TEMPORARY CONTROL MEASURES																								
SEDIMENT CONTROL BASINS																								
STRIP & STOCKPILE TOPSOIL																								
ROUGH GRADE																								
STORM FACILITIES																								
SITE CONSTRUCTION																								
PERMANENT CONTROL STRUCTURES																								
FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) BMP SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS-TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASONYS AREA, FUEL, AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DEMOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE I

1. INSTALL STABILIZED CONSTRUCTION EXIT(S) AND SWPPP INFORMATION SIGN
2. INSTALL SILT FENCE(S) ON THE SITE (SO FAR ONLY THOSE AREAS NECESSARY TO INSTALL SILT FENCE)
3. PREPARE TEMPORARY PARKING AND STORAGE AREA

HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION AND CERTIFICATION OF BMP's. GENERAL CONTRACTOR SHALL SCHEDULE AND CONDUCT STORM WATER PRE-CONSTRUCTION MEETING WITH CEC, WAL-MART CONSTRUCTION MANAGER, AGENCY(IES) AND GROUND-DISTURBING CONTRACTORS BEFORE PROCEEDING WITH CONSTRUCTION.
ALL EXCEPTIONS NOTED ON THE BMP CERTIFICATION FORM MUST BE ADDED TO THE FIRST DAILY REPORT AS A DEFICIENCIES AND RESOLVED WITHIN 24 HOURS. BMP's CAN NOT BE CERTIFIED IF ANY EXCEPTION REQUIRES GREATER THAN 24-HOURS TO RESOLVE.
DAILY INSPECTIONS AND REPORTING USING THE SWPPP MANAGEMENT TOOL MUST START THE DAY OF OR IMMEDIATELY AFTER BMP CERTIFICATION.

4. CONSTRUCT AND STABILIZE SEDIMENT BASIN(S) AND SEDIMENT TRAP(S) WITH APPROPRIATE OUTFALL STRUCTURES (SO FAR ONLY THOSE AREAS NECESSARY TO INSTALL BASINS AND TRAPS)
5. INSTALL AND STABILIZE HYDRAULIC CONTROL STRUCTURES (INLET GRATES, CHECK DAMS, ETC) (SO FAR ONLY THOSE AREAS NECESSARY TO INSTALL HYDRAULIC CONTROL STRUCTURES)

6. HALT ALL ACTIVITIES AND CONTACT THE CIVIL ENGINEERING CONSULTANT TO PERFORM INSPECTION OF BMPs.

7. BEGIN CLEARING AND GRUBBING THE SITE
8. BEGIN GRADING THE SITE
9. START CONSTRUCTION OF RETAINING WALLS
10. START CONSTRUCTION OF THE BUILDING PAD AND STRUCTURES

PHASE II

1. TEMPORARY SEED THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE
2. INSTALL OUTLETS, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS
3. INSTALL BMP SWAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED
4. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED
5. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE
6. PREPARE SITE FOR PAVING
7. PAVE SITE
8. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES
9. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS INCLUDING OUTLOTS
10. OBTAIN CONCURRENCE WITH THE CONSTRUCTION MANAGER THAT THE SITE IS STABILIZED THEN
   A. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES,
   B. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF BMP's, AND
   C. ASK THE CM TO CONTACT THE CEC TO COMPLETE THE CEC WET SITE INSPECTION AND REPORT
11. CONTINUE DAILY INSPECTION REPORTS UNTIL THE FINAL DAILY INSPECTION REPORT MARKED READY TO TERMINATE PERMIT IS SIGNED BY BMP CONSTRUCTION MANAGER AND SUBMITTED VIA THE SWPPP MANAGEMENT TOOL

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF PRECEDING BMP's HAVE BEEN COMPLETELY INSTALLED. BMP-RELATED STEPS IN THE ABOVE SEQUENCE ARE ITALICIZED FOR CLARITY.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVE TO EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

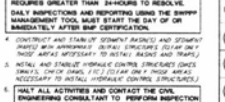
THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ON-SITE INSPECTION BY THE ISSUING AUTHORITY

ANY DISTURBED AREA THAT REMAINS IDLE FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING

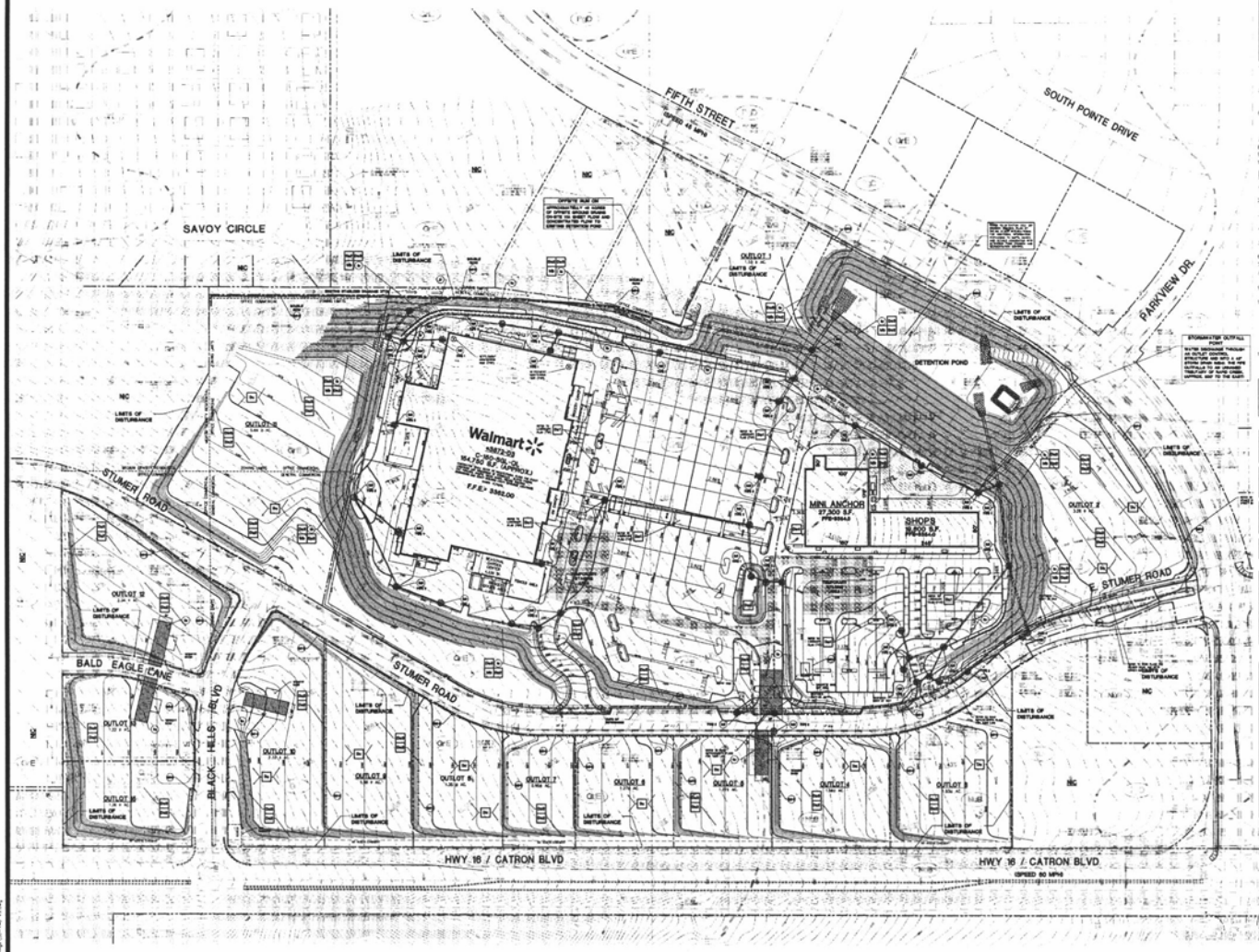
ACREAGE SUMMARY
(IN ACRES)

SITE AREA	58.51 ACS
ON-SITE DISTURBED AREA	58.51 ACS
OFF-SITE DISTURBED AREA	0.31 ACS
TOTAL DISTURBED AREA (INCLUDE ABOVE AREA)	58.82 ACS
IMPERVIOUS AREA AT COMPLETION	ACS
PERVIOUS AREA AT COMPLETION	ACS



NOTE: TYPICAL PERMANENT STABILIZATION FOR ALL CURBED ISLANDS UNLESS NOTED OTHERWISE ON THE PLANS.

TYPICAL PERMANENT STABILIZATION FOR RAISED ISLANDS INSET DETAIL



LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE SOUTH OF THE NE1/4, ON AND IN THE SWLVN OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4 SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECK DAM			A small temporary dam constructed across a drainage ditch, swale, or channel. Used to reduce the velocity of concentrated flow.
Co	CONSTRUCTION EXIT			A stabilized area and/or structure at a point where traffic leaves a construction site. Used to reduce the amount of sediment carried off site. Also known as a stabilized construction entrance.
Ch	CHANNEL STABILIZATION			Lining, construction or vegetation in a channel or swale, existing stream, or drain.
Di	DIVERSION			An earth channel or dike located above or below a site. Used to divert water around a site or to divert the flow of a temporary or permanent structure.
Dmt	TEMPORARY DOWN CHUTE STRUCTURE			A flume consist of heavy duty plastic, rubber, or metal material. Used to convey water runoff from a high to a lower elevation. Also a temporary slope drain.
Fr	FILTER RING			A temporary drain basin constructed around drain inlets and grated inlets.
Re	RETAINING WALL			A wall constructed in addition or not to cut slopes where sufficient space does not exist. Also used to stabilize cut slopes and fill slopes.
Rd	ROCK FILTER DAM			A permanent or temporary dam constructed across a drainage swale to reduce the velocity of concentrated flow.
Rt	RETROFITTING			A device or structure placed in an existing drainage system to reduce the velocity of concentrated flow and to trap sediment.
Sdh-C	SEDIMENT DAMMER			A temporary dam constructed in a drainage swale. Used to reduce the velocity of concentrated flow and to trap sediment.
Sd2	SEDIMENT TRAP TEMPORARY			An impoundment area created by a dam or excavation. Used to reduce the velocity of concentrated flow and to trap sediment.
Sd3	SEDIMENT BASIN DETAIL			A basin created by excavation and/or construction of a dam. Used to reduce the velocity of concentrated flow and to trap sediment.
Sf	FOCUSING TERRACE OUTLET PROTECTION			A channel or terrace section of gentle slopes or flat bottom. Used to reduce the velocity of concentrated flow.
Sv	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour. Used to reduce the velocity of concentrated flow and erosion.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	EXPOSED AREA PERMANENT MULCHING (MLCH)			Temporary vegetative protection for areas that have been cleared but are not to be brought to final grade or planted for a short period of time.
Ds2	EXPOSED AREA TEMPORARY SEEDING			Establishing a temporary vegetative cover on disturbed areas.
Ds3	EXPOSED AREA PERMANENT SEEDING			Establishing a permanent vegetative cover such as grass, legumes, or trees on disturbed areas.
Ds4	EXPOSED AREA STABILIZED WITH SOD			A permanent vegetative cover on disturbed areas.
Mb	EXPOSED AREA STABILIZATION WITH MULCH BLANKETS			A protective covering (mulch) or soil stabilization mat used to protect exposed areas.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on disturbed areas during construction and backfill.

REFER TO PLAN SHEET ES-4 FOR FOR GENERAL NOTES, MAINTENANCE NOTES, SITE DATA & QUAD MAP

EROSION CONTROL LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- GRADE BREAK
- CONTOUR ELEVATIONS
- STORM DRAIN
- DIRECTION OF OVERLAND FLOW
- LIMITS OF DRAINAGE SUB-BASIN
- SOIL SERIES BOUNDARY
- SILT FENCE
- SWPPP INFORMATION SIGN
- STAGING AREA/ALL WEATHER ACCESS DRIVE

NOTE: SEE SURVEY FOR EXISTING LEGEND SYMBOLS

SOIL SERIES LEGEND

CaD	CANYON-ROCK OUTCROP COMPLEX, 15 TO 60 PERCENT SLOPES.	MnB	MANN LOAM, 2 TO 6 PERCENT SLOPES.
SaD	SATANKA-CANYON LOAMS, 6 TO 15 PERCENT SLOPES.	PrD	PIERRE-GRUMMIT CLAYS, 6 TO 15 PERCENT SLOPES.
GrD	GRUMMIT-ROCK OUTCROP COMPLEX, 6 TO 40 PERCENT SLOPES.	ZoD	ZOMBA-NIHILL COMPLEX, 6 TO 15 PERCENT SLOPES.

OFF-SITE RUN-ON ACREAGE SUMMARY

OFF-SITE DRAINAGE AREA	ACREAGE	AVERAGE SLOPE	MAXIMUM SLOPE *	COVER TYPE **
AREA 1	48 +/-	3 %	33 %	VARIES

* ESTIMATE OF SEDIMENT RUN-ON AREAS FOR EACH PERIMETER AREA REQUIRING RUN-ON.
** STATE PREDOMINANT TYPE OF SURFACE COVER (I.E. WEEDS/GRASS, PAVED, ROOFS, ETC.)

OFF-SITE MATERIAL AREA(S) INFORMATION

BORROW SITE NAME:	DISPOSAL SITE NAME:
BORROW SITE ADDRESS:	DISPOSAL SITE ADDRESS:
BORROW SITE PERMIT HOLDER:	DISPOSAL SITE PERMIT HOLDER:
BORROW SITE PERMIT NO:	DISPOSAL SITE PERMIT NO:
BORROW SITE PERMITTING AGENCY:	DISPOSAL SITE PERMITTING AGENCY:

1) CONTRACTOR SHALL FILL IN BORROW AND DISPOSAL INFORMATION ABOVE.
2) BORROW AND DISPOSAL INFORMATION IS NEEDED FOR SOIL FILL AND SPOIL MATERIALS ONLY.
3) CONTRACTOR SHALL STATE "NOT REQUIRED FOR THIS PROJECT" IF ONE OR BOTH ARE NOT REQUIRED FOR PROJECT.

24 HR LOCAL EMERGENCY CONTACT

ROBERT GREEN (314)429-0900
THF, STONERIDGE DEVELOPMENT LLC

(CONTRACTOR'S NAME) (PHONE NUMBER)

NOTE: CONTRACTOR TO PROVIDE UPDATED INFORMATION ONCE CONTRACT IS AWARDED

DEVELOPER/OWNER:
THF, STONERIDGE DEVELOPMENT LLC
INNERBELT BUSINESS CENTER DR.
SUITE 200 ST. LOUIS MO 63114
314-429-0900

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

811 Know what's below. Call before you dig. (800)781-7474 Outside 50

PHASE II - SITE MAP
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

Wolverton & Associates
Consulting Engineers + Land Surveyors
8140 Beaufort Parkway - Suite 100 - Duluth, Georgia 30097
Phone: 770-476-0046 - Fax: 770-476-0076
www.wolvertonassocs.com

PROPOSED BLACK HILLS CENTER
Walmart # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1"= 100'
JOB No.: 08-140
SHEET NUMBER: ES-2
OF SHEETS

08-140 v5.DWG

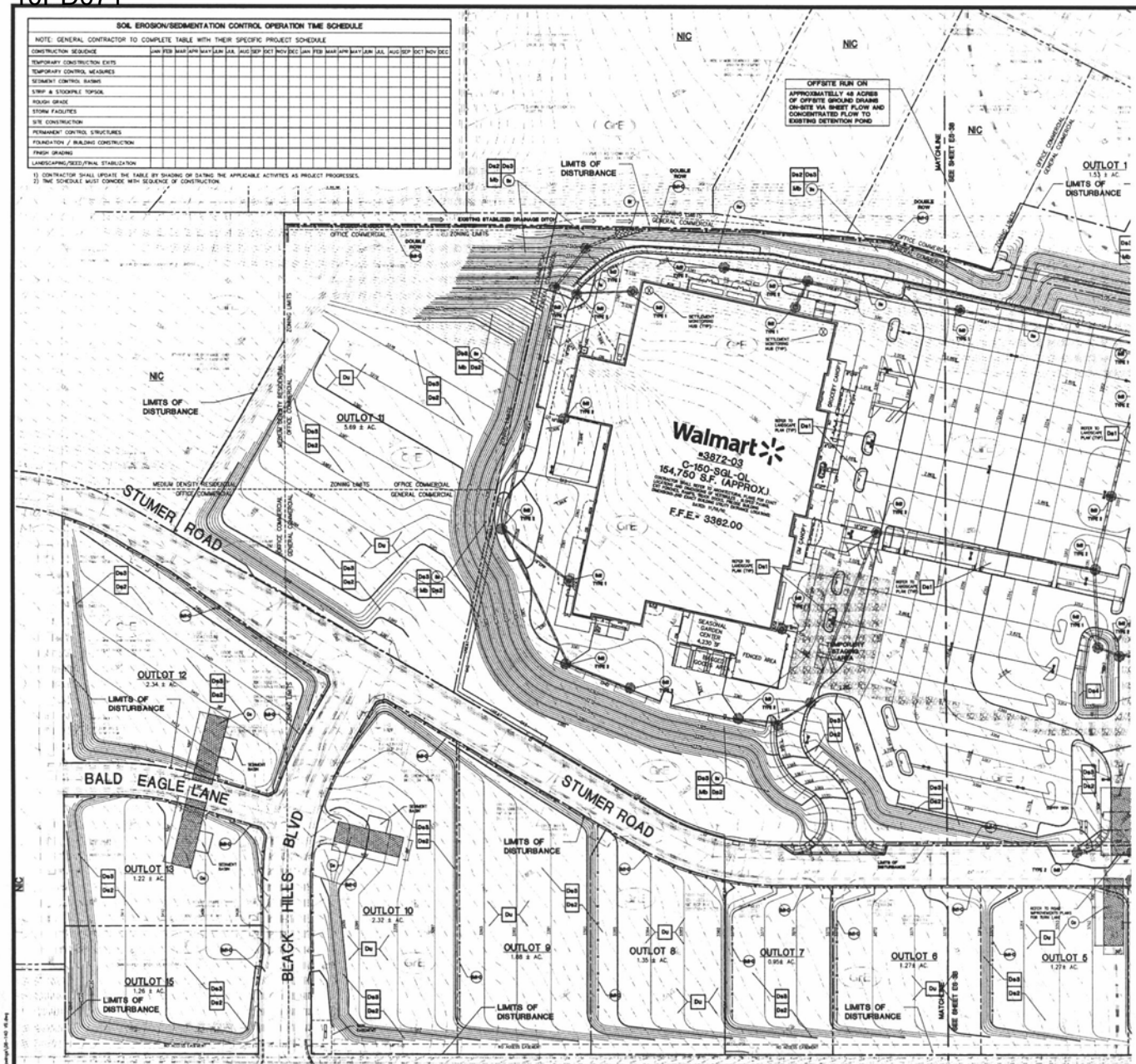
10PD071

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

CONSTRUCTION SEQUENCE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
TEMPORARY CONSTRUCTION EXITS																								
TEMPORARY CONTROL MEASURES																								
SEDIMENT CONTROL BASINS																								
STRIP & STOCKPILE TOPSOIL																								
ROUGH GRADE																								
STORM FACILITIES																								
SITE CONSTRUCTION																								
PERMANENT CONTROL STRUCTURES																								
FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.



BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS-TRAILER, PARKING LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASONS' AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DEMOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE II

1. TEMPORARY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED.
4. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
5. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
6. PREPARE SITE FOR PAVING.
7. PAVE SITE.
8. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
9. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS INCLUDING OUTLOTS.
10. OBTAIN CONCURRENCE WITH THE CONSTRUCTION MANAGER THAT THE SITE IS STABILIZED THEN:
    A. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
    B. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF SWPP, AND
    C. ASK THE ON TO CONTACT THE GEC TO COMPLETE THE GEC NOT SITE INSPECTION AND REPORT.
11. CONTINUE DAILY INSPECTION REPORTS UNTIL THE FINAL DAILY INSPECTION REPORT, MARKED READY TO TERMINATE PERMIT, IS SIGNED BY THE CONSTRUCTION MANAGER AND SUBMITTED VIA THE SWPP MANAGEMENT TOOL.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF PRECEDING BMP's HAVE BEEN COMPLETELY INSTALLED. BMP-RELATED STEPS IN THE ABOVE SEQUENCE ARE FLAGGED FOR CLARITY.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

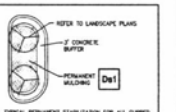
THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER ONSITE INSPECTION BY THE ISSUING AUTHORITY.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

ACREAGE SUMMARY
(IN ACRES)

SITE AREA	58.51 AC±
ON-SITE DISTURBED AREA	58.51 AC±
OFF-SITE DISTURBED AREA	0.31 AC±
TOTAL DISTURBED AREA - (MUST MATCH NOI)	58.82 AC±
IMPERVIOUS AREA AT COMPLETION	AC±
PERVIOUS AREA AT COMPLETION	AC±



NOTE: TYPICAL PERMANENT STABILIZATION FOR ALL CURBED ISLANDS UNLESS NOTED OTHERWISE ON THE PLANS.

TYPICAL PERMANENT STABILIZATION FOR RAISED ISLANDS INSET DETAIL
N.T.S.

TEMPORARY SEEDING SCHEDULE Ds2

SPECIES (MIXTURE OF)	RATE/ACRE	PLANTING DATES
BLUE FESCUE (50%)	200 LBS	APRIL1 – SEPT 1
ANNUAL RYE GRASS (50%)		

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

PERMANENT SEEDING SCHEDULE Ds3

SPECIES	RATE/ACRE	PLANTING DATES
KENTUCKY BLUE GRASS (80%) (MIXTURE OF 3 VARIETIES)	175 LBS	SEPT 1 – DEC 31
PERENNIAL RYE GRASS (20%)		

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

SOD PLANTING AND FERTILIZATION REQUIREMENTS Ds4

SPECIES	FERTILIZER (N-P-K)	RATE (lbs/AC)	NITROGEN TYPE & RATE (lbs/AC)
FESCUE	6-12-12	50-100	500

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4, SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECK DAM			A short temporary barrier in a drainage channel to reduce the velocity of concentrated stormwater flow.
Co	CONSTRUCTION EXIT			A stabilized stone area adjacent to a paved road to minimize a vehicle from tracking mud onto the road.
Ch	CHANNEL STABILIZATION			Improving, maintaining, or restoring a natural drainage channel.
Di	DIVERSION			An earth diversion or dike located across slope of a gently sloping area to intercept runoff and divert it to a stable outlet.
Dsi	TEMPORARY STORM DRAIN DIVERSION			A flume consist of hard, flexible or rigid material used to divert stormwater runoff from a disturbed area.
Fr	FILTER RING			A temporary stone barrier constructed of gravel, crushed stone and sand bags.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes from hazardous conditions. Engineer has not completed design for wall. Wall shall be designed by a licensed engineer.
Rd	ROCK FILTER DAM			A temporary or permanent stone filter dam installed across small drainage ditches or channels.
Rt	RETROFITTING			Adding or enhancing stormwater control measures to existing developed sites without adequate stormwater control measures.
Sb	SEDIMENT BARRIER		(FIRE "X")	A temporary barrier constructed of gravel, crushed stone and sand bags. Used to control sediment from a disturbed area.
Sd2	SEDIMENT TRAP, EMPHASIS			An impoundment area created by excavation and/or construction of a dam. Sediment is allowed to settle out of runoff water before it leaves the site. Used for drainage areas of 5 acres or less.
Sd3	SEDIMENT BASIN DETAIL			A basin created by excavation or a dam across a waterway or at a point where stormwater flows leave a site. Used to control sediment leaving the site and to detention the flow of runoff to the predevelopment rate. Used for drainage areas of 5 acres or more. Requires an engineered design.
St	STORM DRAIN INLET PROTECTION			A barrier or other protective device placed around or adjacent to a stormwater inlet. Prevents sediment from entering the storm drain system.
Su	SURFACE roughening			A rough soil surface with alternating ridges and furrows left on the land after construction. Helps to control runoff and erosion.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (NO MULCH)		Ds1	Establishing temporary protection on disturbed areas where vegetation may not have a sufficient growing period to mature and provide erosion control benefits.
Ds2	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)		Ds2	Establishing a temporary vegetative cover on disturbed areas that are not growing sufficiently for permanent stabilization.
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)		Ds3	Establishing permanent vegetation on areas such as lawns, cemeteries, parks, and golf courses.
Ds4	DISTURBED AREA STABILIZATION (WITH SODDING)		Ds4	A dense mat of vegetative cover on a disturbed area. Used to control erosion.
Mb	DISTURBED AREA STABILIZATION (WITH MULCH ONLY)		Mb	A protective covering (blanket) of straw or other material placed on a disturbed area to control erosion and promote vegetation on steep slopes, waterways, or stockpiles.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on construction sites, roadways and spoil piles.

REFER TO PLAN SHEET ES-4 FOR FOR GENERAL NOTES, MAINTENANCE NOTES, SITE DATA & QUAD MAP

EROSION CONTROL LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- GRADE BREAK
- XXX — CONTOUR ELEVATIONS
- STORM DRAIN
- X.XXS — DIRECTION OF OVERLAND FLOW
- LIMITS OF DRAINAGE SUB-BASIN
- SOIL SERIES BOUNDARY
- XX — SILT FENCE
- SWPPP INFORMATION SIGN
- STAGING AREA/ALL WEATHER ACCESS DRIVE

NOTE: SEE SURVEY FOR EXISTING LEGEND SYMBOLS

SOIL SERIES LEGEND

- CANYON-ROCK OUTCROP COMPLEX, 15 TO 60 PERCENT SLOPES.
- SATANTA-CANYON LOAMS, 6 TO 15 PERCENT SLOPES.
- GRUMMIT-ROCK OUTCROP COMPLEX, 6 TO 40 PERCENT SLOPES.
- HURON LOAM, 2 TO 6 PERCENT SLOPES.
- PIERRE-GRUMMIT CLAYS, 6 TO 15 PERCENT SLOPES.
- DONDER-HAILL COMPLEX, 6 TO 15 PERCENT SLOPES.

OFF-SITE RUN-ON ACREAGE SUMMARY

OFF-SITE DRAINAGE AREA	ACREAGE	AVERAGE SLOPE	MAXIMUM SLOPE *	COVER TYPE **
AREA 1	48 +/-	5 %	33 %	VARIES

* IDENTIFY UP-GRADIENT RUN-ON AREAS FOR EACH PERIMETER AREA REQUIRING RUN-ON
** STATE PREDOMINANT TYPE OF SURFACE COVER (I.E. VEGETATED, PAVED, ROOFED, ETC.)

MULCHING SCHEDULE Ds1

MULCHING MATERIAL	RATE/ACRE
DRY STRAW OR HAY	2.5 TONS
WOOD WASTE, CHIPS, SAWDUST, OR BARK	6 TO 8 TONS (2 TO 9 DEPTH)

OFF-SITE MATERIAL AREA(S) INFORMATION

BORROW SITE NAME:	DISPOSAL SITE NAME:
BORROW SITE ADDRESS:	DISPOSAL SITE ADDRESS:
BORROW SITE PERMIT HOLDER:	DISPOSAL SITE PERMIT HOLDER:
BORROW SITE PERMIT NO:	DISPOSAL SITE PERMIT NO:
BORROW SITE PERMITTING AGENCY:	DISPOSAL SITE PERMITTING AGENCY:

1) CONTRACTOR SHALL FILL IN BORROW AND DISPOSAL INFORMATION ABOVE.
2) BORROW AND DISPOSAL INFORMATION IS NEEDED FOR SOIL FILL AND SPOIL MATERIALS ONLY.
CONTRACTOR SHALL STATE "NOT REQUIRED FOR THIS PROJECT" IF ONE OR BOTH ARE NOT REQUIRED FOR PROJECT.

24 HR LOCAL EMERGENCY CONTACT

ROBERT GREEN (314)429-0900
THF, STONERIDGE DEVELOPMENT LLC

[CONTRACTOR'S NAME] [PHONE NUMBER]

NOTE: CONTRACTOR TO PROVIDE UPDATED INFORMATION ONCE CONTRACT IS AWARDED.

DEVELOPER/OWNER:
THF, STONERIDGE DEVELOPMENT LLC
INNERBELT BUSINESS CENTER DR.
SUITE 200 ST. LOUIS MO 63114
314-429-0900

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

PHASE II - SITE MAP
EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

811 Know what's below. Call before you dig. (800)781-7474 Outside SD

NOT FOR CONSTRUCTION / PERMIT REVIEW ONLY

Wolverton & Associates
Consulting Engineers + Land Surveyors
8745 Sugarloaf Parkway - Suite 100 - Duluth, Georgia 30097
Phone (770) 447-9999 - Fax (770) 447-8370
www.wolvertonassociates.com

Registered Professional Engineer
Robert G. Silver
Date 12/9/10

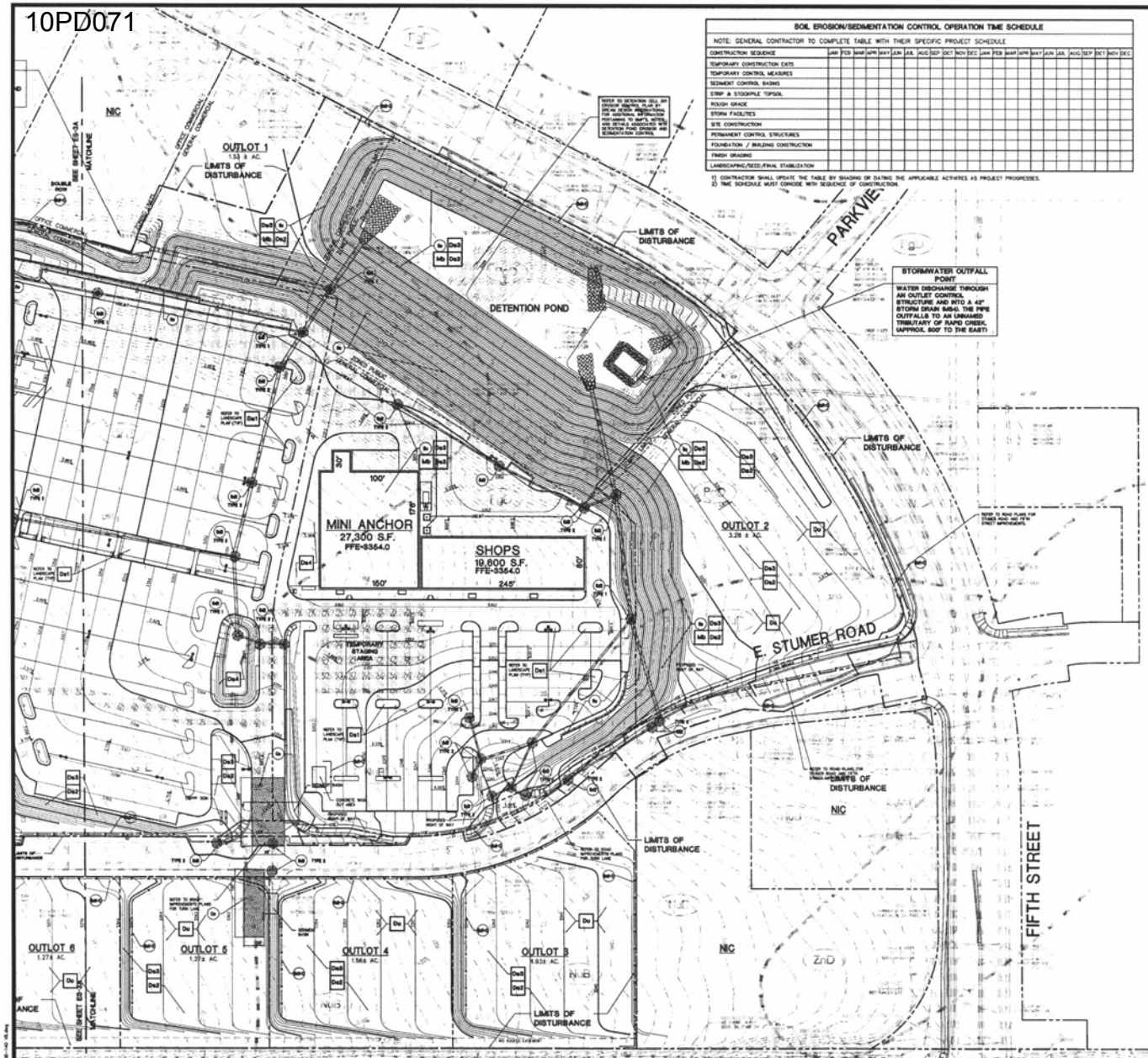
PROPOSED BLACK HILLS CENTER
Walmart #3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1" = 60'
JOB No.: 08-140
SHEET NUMBER: ES-2A
OF SHEETS

08-140 V8.2WG

10PD071



STORMWATER OUTFALL POINT

WATER DISCHARGE THROUGH AN OUTLET CONTROL STRUCTURE AND INTO A 42" STORM DRAIN B-854. THE PIPE OUTFALLS TO AN UNNAMED TRIBUTARY OF RAPID CREEK. (APPROX. 600' TO THE EAST)

SOIL EROSION/SEDIMENTATION CONTROL OPERATION TIME SCHEDULE

NOTE: GENERAL CONTRACTOR TO COMPLETE TABLE WITH THEIR SPECIFIC PROJECT SCHEDULE

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
CONSTRUCTION SEQUENCE																								
TEMPORARY CONSTRUCTION EXITS																								
TEMPORARY CONTROL MEASURES																								
SEDIMENT CONTROL BASINS																								
STRIP & STOCKPILE TOPSOIL																								
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STORM FACILITIES																								
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FOUNDATION / BUILDING CONSTRUCTION																								
FINISH GRADING																								
LANDSCAPING/SEED/FINAL STABILIZATION																								

1) CONTRACTOR SHALL UPDATE THE TABLE BY SHADING OR DATING THE APPLICABLE ACTIVITIES AS PROJECT PROGRESSES.
2) TIME SCHEDULE MUST COINCIDE WITH SEQUENCE OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES SEQUENCE

NOTE: UPON IMPLEMENTATION AND INSTALLATION OF THE FOLLOWING AREAS- TRAILER, PARKING, LAY DOWN, PORTA-POTTY, WHEEL WASH, CONCRETE WASHOUT, MASON'S AREA, FUEL AND MATERIAL STORAGE CONTAINERS, SOLID WASTE CONTAINERS, ETC., IMMEDIATELY DENOTE THEM ON THE SITE MAPS AND NOTE ANY CHANGES IN LOCATION AS THEY OCCUR THROUGHOUT THE CONSTRUCTION PROCESS. IN ADDITION NOTE ANY OFF-SITE AREA WHERE FILL IS IMPORTED FROM OR SOIL IS EXPORTED TO ON THE SITE MAPS.

PHASE II

1. TEMPORARY SEED, THROUGHOUT CONSTRUCTION, BONDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE.
2. INSTALL UTILITIES, UNDERDRAINS, STORM SEWERS, CURBS AND GUTTERS.
3. INSTALL RIP-RAP AROUND OUTLET STRUCTURES AS EACH OUTLET STRUCTURE IS INSTALLED.
4. INSTALL INLET PROTECTION AT ALL STORM SEWER STRUCTURES AS EACH INLET STRUCTURE IS INSTALLED.
5. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.
6. PAVE SITE FOR PAVING.
7. PAVE SITE.
8. INSTALL APPROPRIATE INLET PROTECTION DEVICES FOR PAVED AREAS AS WORK PROGRESSES.
9. COMPLETE GRADING AND INSTALLATION OF PERMANENT STABILIZATION OVER ALL AREAS INCLUDING OUTLOTS.
10. OBTAIN CONCURRENCE WITH THE CONSTRUCTION MANAGER THAT THE SITE IS STABILIZED THEN:
    A. REMOVE ALL REMAINING TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES.
    B. STABILIZE ANY AREAS DISTURBED BY THE REMOVAL OF BMP'S, AND
    C. ASK THE CM TO CONTACT THE CEC TO COMPLETE THE CEC NOT SITE INSPECTION AND REPORT.
11. CONTINUE DAILY INSPECTION REPORTS UNTIL THE FINAL DAILY INSPECTION REPORT, MARKED "READY TO TERMINATE PERMIT", IS SIGNED BY THE CONSTRUCTION MANAGER AND SUBMITTED VIA THE SWPPP MANAGEMENT TOOL.

NOTE: THE GENERAL CONTRACTOR MAY COMPLETE CONSTRUCTION-RELATED ACTIVITIES CONCURRENTLY ONLY IF PRECEDING BMP'S HAVE BEEN COMPLETELY INSTALLED. BMP-RELATED STEPS IN THE ABOVE SEQUENCE ARE ITALICIZED FOR CLARITY.

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

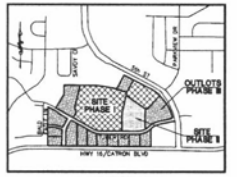
THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES.

ALL EROSION & SEDIMENT CONTROL MEASURES WILL BE CHECKED DAILY AND ANY DEFICIENCIES NOTED WILL BE CORRECTED BY THE END OF EACH DAY. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY AFTER DAILY INSPECTION BY THE ENGINEERING AUTHORITY.

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

ACREAGE SUMMARY
(IN ACRES)

SITE AREA	58.51 ACS
ON-SITE DISTURBED AREA	58.51 ACS
OFF-SITE DISTURBED AREA	0.31 ACS
TOTAL DISTURBED AREA (INCLUDE BORROW AREA)	58.82 ACS
IMPERVIOUS AREA AT COMPLETION	ACS
PERVIOUS AREA AT COMPLETION	ACS



LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4, SECTION 34, T14, R16, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.

STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECK DAM		Cd	A small temporary barrier or dam constructed across a gully, swale, or channel to reduce the velocity of concentrated stormwater flows.
Co	CONSTRUCTION EXIT		Co	A stabilized stone pad located at ingress and egress points to provide a place for mud and sediment to be knocked off prior to vehicles leaving the site.
Ch	CHANNEL STABILIZATION		Ch	Lining or reinforcing a channel to prevent erosion.
Di	DIVERSION		Di	An earth channel or dike located to the side of or across a slope. Intercepts and diverts runoff to a protected location.
Dn1	TEMPORARY DOWN-DRAIN STRUCTURE		Dn1	A flexible conduit or hard-walled pipe or other approved device to safely conduct surface runoff from a slope to a stable outlet. Used on slopes to prevent erosion.
Fr	FILTER RING		Fr	A temporary stone barrier constructed of gravel and sand and sand bags.
Re	RETAINING WALL		Re	A wall installed to stabilize or aid in slope stability. Used in conjunction with other erosion control practices. Can be used as a temporary or permanent wall.
Rd	ROCK FILTER DAM		Rd	A temporary or permanent check dam that installed across small channels or swales. Used to reduce the velocity of concentrated stormwater flows.
Rt	RETROFITTING		Rt	A dam or structure placed in an existing stormwater conveyance system to provide temporary water quality treatment.
Sd1-C	SEDIMENT BARRIER	(TYPE "C")		A barrier to sediment constructed of a flexible material with a specified opening that will pass water but retain sediment.
Sd2	SEDIMENT TRAP, TEMPORARY		Sd2	An impoundment area created by excavating, placing a dam or dike across a drainage swale, or a combination of both. Used to allow sediment to settle out.
Sd3	SEDIMENT BASIN DETAIL		Sd3	A basin shallow to moderate in size created by excavating and/or placing a dam across a drainage swale. Used to allow sediment to settle out.
St	TOTAL DRAIN INLET PROTECTION		St	A barrier or short section of curb placed around a drain inlet. Used to prevent sediment from entering the drainage system.
Su	SURFACE ROUGHENING		Su	A rough wall surface with alternating ridges and furrows or a series of terraces or benches created on a cut or fill slope or a roughened condition on a graded surface.

VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Ds1	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)		Ds	Establishing temporary protection for disturbed areas during construction when a suitable growing environment is not present.
Ds2	DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)		Ds	Establishing a temporary vegetative cover on disturbed areas that are not yet ready for final grading, seedbed preparation, or permanent seeding.
Ds3	DISTURBED AREA STABILIZATION (PERMANENT SEEDING)		Ds	Establishing a permanent vegetative cover on areas where, when, and how permanent seeding is appropriate.
Ds4	DISTURBED AREA STABILIZATION (SOD PLANTING)		Ds	A permanent vegetative cover established on disturbed areas by planting of sod.
Mb	DISTURBED AREA STABILIZATION (MULCHING ONLY OR WITH TEMPORARY SEEDING)		Mb	A protective covering (blanket or and mulches) used to protect exposed areas from the impact of rainfall, wind, temperature, or combinations.
Du	DUST CONTROL ON DISTURBED AREAS		Du	Controlling surface and air movement of dust on exposed soil surfaces during construction activities, roadways and service areas.

MULCHING SCHEDULE Ds1

MULCHING MATERIAL	RATE/ACRE
DRY STRAW OR HAY	2.5 TONS
WOOD WASTE, CHIPS, SAWDUST, OR BARK	6 TO 8 TONS (2 TO 2" DEEP)

TEMPORARY SEEDING SCHEDULE Ds2

SPECIES (MIXTURE OF)	RATE/ACRE	PLANTING DATES
BLUE FESCUE (50%) ANNUAL RYE GRASS (50%)	200 LBS	APRIL1 - SEPT 1

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

PERMANENT SEEDING SCHEDULE Ds3

SPECIES	RATE/ACRE	PLANTING DATES
KENTUCKY BLUE GRASS (80%) (MIXTURE OF 3 VARIETIES) PERENIAL RYE GRASS (20%)	175 LBS	SEPT 1 - DEC 31

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

SOD PLANTING AND FERTILIZATION REQUIREMENTS Ds4

SPECIES	FERTILIZER (N-P-K)	RATE (lbs/AC)	NITROGEN TOP DRESSING RATE (lbs/AC)
FESCUE	6-12-12	30-100	500

NOTE: APPLY LIME AT THE RATE OF 1 TON/ACRE
REFER TO ES-4 FOR FERTILIZER REQUIREMENTS

REFER TO PLAN SHEET ES-4 FOR FOR GENERAL NOTES, MAINTENANCE NOTES, SITE DATA & QUAD MAP

EROSION CONTROL LEGEND

- PROPERTY LINE
- LIMITS OF DISTURBANCE
- GRADE BREAK
- XXX CONTOUR ELEVATIONS
- STORM DRAIN
- DIRECTION OF OVERLAND FLOW
- LIMITS OF DRAINAGE SUB-BASIN
- SOIL SERIES BOUNDARY
- SILT FENCE
- SWPPP INFORMATION SIGN
- STAGING AREA/ALL WEATHER ACCESS DRIVE

NOTE: SEE SURVEY FOR EXISTING LEGEND SYMBOLS

SOIL SERIES LEGEND

- CaD — CANYON-ROCK OUTCROP COMPLEX, 15 TO 60 PERCENT SLOPES
- NuB — NUNN LOAM, 2 TO 6 PERCENT SLOPES
- SaD — SATANTA-CANYON LOAMS, 6 TO 15 PERCENT SLOPES
- PeD — PIERRE-DRUMMY CLAYS, 6 TO 15 PERCENT SLOPES
- DrD — DRUMMY-ROCK OUTCROP COMPLEX, 6 TO 40 PERCENT SLOPES
- ZnD — ZONED-WHITE COMPLEX, 6 TO 15 PERCENT SLOPES

OFF-SITE RUN-ON ACREAGE SUMMARY

OFF-SITE DRAINAGE AREA	ACREAGE	AVERAGE SLOPE	MAXIMUM SLOPE *	COVER TYPE **
AREA 1	40 +/-	5 %	30 %	VARIES

* IDENTIFY OF-GRADIENT RUN-ON AREAS FOR EACH PERIMETER AREA RECEIVING RUN-ON.
** STATE PREDOMINANT TYPE OF SURFACE COVER (I.E. VEGETATED, PAVED, PROCESS, ETC.).

OFF-SITE MATERIAL AREA(S) INFORMATION

BORROW SITE NAME:	DISPOSAL SITE NAME:
BORROW SITE ADDRESS:	DISPOSAL SITE ADDRESS:
BORROW SITE PERMIT HOLDER:	DISPOSAL SITE PERMIT HOLDER:
BORROW SITE PERMIT NO:	DISPOSAL SITE PERMIT NO:
BORROW SITE PERMITING AGENCY:	DISPOSAL SITE PERMITING AGENCY:

1) CONTRACTOR SHALL FILL IN BORROW AND DISPOSAL INFORMATION ABOVE.
2) BORROW AND DISPOSAL INFORMATION IS REQUIRED FOR SOIL FILL AND SPOIL MATERIALS ONLY.
3) CONTRACTOR SHALL STATE "NOT REQUIRED FOR THIS PROJECT" IF ONE OR BOTH ARE NOT REQUIRED FOR PROJECT.

24 HR LOCAL EMERGENCY CONTACT

ROBERT GREEN (314)429-0900
THF, STONERIDGE DEVELOPMENT LLC

(CONTRACTOR'S NAME) (PHONE NUMBER)

NOTE: CONTRACTOR TO PROVIDE UPDATED INFORMATION ONCE CONTRACT IS AWARDED.

DEVELOPER/OWNER:
THF, STONERIDGE DEVELOPMENT LLC
INNERBELT BUSINESS CENTER DR.
SUITE 200 ST. LOUIS MO 63114
314-429-0900

SITE OPERATOR/GENERAL CONTRACTOR:

SUPERINTENDENT:

PHASE II - SITE MAP EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN

GRAPHIC SCALE
(IN FEET)
1 inch = 60 ft.

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PROPOSED BLACK HILLS CENTER
Walmart # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1" = 60'
JOB No.: 08-140
SHEET NUMBER: ES-2B
OF SHEETS

08-140 V5.DWG

10PD071

GENERAL EROSION AND SEDIMENT CONTROL NOTES

A. THE STORMWATER POLLUTION PREVENTION PLAN IS COMPRISED OF THIS DRAWING ("SITE MAP"), THE STANDARD DETAILS, SPECIFICATIONS SECTION 02370 ("SWPPP"), INCLUDED IN SPECIFICATIONS SECTION 02370 ("SWPPP"), PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF GEORGIA OR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

D. BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

E. SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS. PERMITS FOR ANY CONSTRUCTION ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS MUST BE MAINTAINED ON SITE AT ALL TIMES.

F. CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

G. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES. CONTRACTOR SHALL CONSTRUCT TEMPORARY BERM ON DOWN STREAM SIDES IN COMPLIANCE WITH 02370 SPECIFICATION.

H. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

I. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

J. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED. RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE

K. DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.

L. ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

M. ALL DENUDED AREAS THAT WILL BE INACTIVE FOR 14 DAYS OR MORE, MUST BE STABILIZED TEMPORARILY WITH THE USE OF FAST-GERMINATING ANNUAL GRASS/GRAIN VARIETIES, STRAW/HAY MULCH, WOOD CELLULOSE FIBERS, TACKIFIERS, NETTING OR BLANKETS AS SHOWN ON SITE MAP.

N. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY STABILIZED AS SHOWN ON THE PLANS. THESE AREAS SHALL BE SEEDED, SODDED, AND/OR VEGETATED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN/OR LANDSCAPE PLAN.

O. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE INGRESS/EGRESS LOCATIONS AS PROVIDED.

P. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.

Q. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

R. ON-SITE & OFFSITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

S. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

T. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION AND POLLUTANT DISCHARGE.

U. SEE SITE MAP FOR PERMANENT AND TEMPORARY SIGNAGE.

V. GENERAL CONTRACTOR IS TO DESIGNATE/IDENTIFY AREAS ON THE SITE MAP, INSIDE OF THE LIMITS OF DISTURBANCE, FOR WASTE DISPOSAL AND DELIVERY AND MATERIAL STORAGE.

W. REFER TO THE SWPPP FOR REPORTABLE SPILL QUANTITIES OF PETROLEUM PRODUCTS AND/OR HAZARDOUS WASTES.

X. REFER TO 02370 SPECIFICATION FOR RUN-OFF SAMPLING/MONITORING REQUIREMENTS IF APPLICABLE TO SITE DURING CONSTRUCTION.

Y. CONTRACTOR TO LIMIT DISTURBANCE OF SITE IN STRICT ACCORDANCE WITH EROSION CONTROL SEQUENCING SHOWN ON THIS PLAN. NO UNNECESSARY OR IMPROPERLY SEQUENCED CLEARING AND/OR GRADING SHALL BE PERMITTED.

EROSION CONTROL NOTES

1. SILT FENCE MUST MEET THE REQUIREMENTS OF CITY OF RAPID CITY.
2. ADDITIONAL EROSION CONTROL MEASURES WILL BE EMPLOYED BY CONTRACTOR WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS TO ENSURE COMPLIANCE WITH REGULATIONS. ANY MEASURES IMPLEMENTED REQUIRING HYDRAULIC CALCULATIONS ARE TO BE COORDINATED WITH THE CIVIL ENGINEER OF RECORD.
3. PROVISIONS TO PREVENT EROSION OF SOIL FROM THE SITE SHALL BE, AT A MINIMUM, IN CONFORMANCE WITH THE REQUIREMENTS OF THE CITY EROSION AND SEDIMENTATION ORDINANCE AND THE SEDIMENT CONTROL REGULATIONS.
4. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH ENTRY TO OR EXIT FROM THE SITE. ALL OTHER DRIVEWAYS WITHOUT A CONSTRUCTION EXIT SHALL BE BARRICADED TO PROHIBIT INGRESS AND EGRESS TRAFFIC.
5. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLE FROM THE SITE ONTO PUBLIC ROADWAY OR INTO STORM DRAIN MUST BE REMOVED.
6. DURING AND AFTER CONSTRUCTION IS COMPLETE, THE DETENTION POND AND POND OUTLET STRUCTURE SHALL BE CLEANED OF ALL DEBRIS AND EXCESS SEDIMENT. BOTTOM OF POND SHALL BE BROUGHT TO ELEVATION AND SHAPED AS SHOWN ON THE GRADING PLAN.
7. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY TRAFFIC CONTROL DEVICES WHILE ROADWAY FRONTAGE IMPROVEMENTS ARE BEING MADE.
8. EROSION CONTROL DEVICES SHALL BE INSTALLED BEFORE GROUND DISTURBANCE OCCURS. THE LOCATION OF SOME OF THE EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM THAT SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR ALL DRAINAGE PATTERNS CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROLLING EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
9. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 1/2 OF THE ORIGINAL HEIGHT OF THE SILT FENCE UTILIZED FOR EROSION CONTROL. IN THE SEDIMENTATION PONDS, SILT SHALL BE REMOVED WHEN THE CLEANOUT VOLUME (22 CY/AC) IS REACHED. SEDIMENT STORAGE INDICATORS MUST BE INSTALLED IN EACH POND.
10. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED BACK TO LOCAL AND STATE STANDARDS.
11. A COPY OF THE APPROVED LAND DISTURBANCE PLAN AND PERMIT SHALL BE PRESENT ON THE SITE WHENEVER LAND DISTURBANCE ACTIVITY IS IN PROGRESS.
12. SILT BARRIERS ARE TO BE PLACED AT DOWNSTREAM TOE OF ALL FILL SLOPES.
13. ALL SLOPES AND AREAS DISTURBED DURING CONSTRUCTION SHALL BE GRADED SMOOTH AND 4" OF TOPSOIL APPLIED. THE AREA SHALL THEN BE SEEDED, FERTILIZED, MULCHED, WATERED AND MAINTAINED UNTIL A HEALTHY STAND OF PERMANENT VEGETATION HAS BEEN ESTABLISHED FOR ALL DISTURBED AREAS.
14. ABSOLUTELY NO SEDIMENT SHALL BE PERMITTED TO LEAVE THE SITE DURING CONSTRUCTION. IF HEAVY RAINS AND UNUSUAL SITE CONDITIONS RESULT IN THE POLLUTION OF ROADWAYS OR ADJACENT PARCELS THEN THE GRADING CONTRACTOR SHALL CLEAN THE DISTURBED AREAS IMMEDIATELY AND RESTORE THE AREAS TO THE ORIGINAL CONDITION.
15. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE GOVERNING OFFICIALS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO BE INTIMATE WITH THE LOCAL EROSION CONTROL LAWS AND TO REFLECT THIS KNOWLEDGE IN HIS/HER ACTIONS AND QUOTATIONS.
16. REFERENCE THE CONSTRUCTION SEQUENCE FOR THE RELATIONSHIP BETWEEN THE INSTALLATION OF EROSION CONTROL FEATURES AND GENERAL CONSTRUCTION.
17. MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES, WHETHER TEMPORARY OR PERMANENT, SHALL BE AT ALL TIMES THE RESPONSIBILITY OF THE PROPERTY OWNER AND THE CONTRACTOR.
18. ALL GRADED SLOPES STEEPER THAN 3:1 OR OVER 5' IN HEIGHT REGARDLESS OF SLOPE MUST BE HYDRA SEEDED AND COVERED WITH EXCELSIOR CURLEX BLANKETS OR APPROVED EQUAL FIBER MATTING. IF NOT HYDRA SEEDED, APPROVED MATTING THAT HAS BEEN IMPREGNATED WITH SEED AND FERTILIZER MUST BE USED. ALL SLOPES MUST BE PROPERLY PROTECTED UNTIL A PERMANENT VEGETATIVE STAND IS ESTABLISHED.
19. ALL DISTURBED AREAS MUST BE SEEDED AND MULCHED AS SOON AS FINAL GRADE IS ACHIEVED. THESE DISTURBED AREAS MUST BE PROTECTED UNTIL PERMANENT VEGETATION IS ESTABLISHED.
20. CONTRACTOR MUST HAUL OFF ALL SOLID WASTE TO AN APPROVED LAND FILL. SOLID WASTE BURNING ON SITE IS PROHIBITED.
21. ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
22. AMENDMENTS REVISIONS TO THE EROSION SEDIMENTATION AND POLLUTION CONTROL PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMP'S WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.
23. NO WASTE MATERIALS SHALL BE DISCHARGED INTO WATERS OF STATE, EXCEPT AS AUTHORIZED.

BMP MAINTENANCE EROSION NOTES

ALL MEASURES STATED ON THIS SITE MAP, AND IN THE STORM WATER POLLUTION PREVENTION PLAN, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEEDED AS NEEDED.
3. SILT FENCES SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE SILT FENCES WHEN IT REACHES ONE-HALF THE HEIGHT OF THE SILT FENCE.
4. THE CONSTRUCTION EXITS SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION EXITS AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AREA AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 33%.
7. PRIOR TO LEAVING THE SITE, ALL VEHICLES SHALL BE CLEANED OF DEBRIS. ANY DEBRIS AND/OR SEDIMENT REACHING THE PUBLIC STREET SHALL BE CLEANED IMMEDIATELY BY A METHOD OTHER THAN FLUSHING.

OWNER CERTIFICATION

"I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM, OR THOSE DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

PRINT NAME ____________________ DATE __________

SIGNATURE ____________________

811 Know what's below Call before you dig

EROSION, SEDIMENTATION, AND POLLUTION CONTROL NARRATIVE

SITE DESCRIPTION
DEVELOPER: THF STONE RIDGE DEVELOPMENT, L.L.C.
2127 INNERBELT BUSINESS CENTER DRIVE, STE. 200
ST. LOUIS, MO
24 HOUR CONTACT: ROBERT GREEN
TELEPHONE: (314) 429-0900

PROJECT DESCRIPTION:
THIS PROJECT CONSISTS OF COMMERCIAL BUILDINGS WITH ASSOCIATED PARKING AREAS AND STORMWATER MANAGEMENT FACILITIES. THE TOTAL SITE AREA AND TOTAL DISTURBED AREA ARE LISTED ON ES-1, ES-2 AND ES-3. THIS SITE IS LOCATED IN A DEVELOPED AREA.

ZONING:
THE PROPOSED DEVELOPMENT IS ZONED GENERAL COMMERCIAL.

ADJACENT AREA INFORMATION AND EXISTING CONDITIONS:
THIS SITE IS LOCATED IN THE CITY OF RAPID CITY, PENNINGTON COUNTY, SD. PRESENTLY IT IS A PRE-GRADED SITE WITH ROADWAY AND UTILITY INFRASTRUCTURE SERVING THE PROPERTY. THE SITE IS BOUND ON THE NORTH BY UNDEVELOPED COMMERCIAL PROPERTY, THE EAST BY 5TH STREET, THE SOUTH BY CATRON BLVD, AND THE WEST BY RESIDENTIAL PROPERTY.

EXISTING EROSION CONTROL PROBLEMS:
NO EROSION CONTROL PROBLEMS EXIST ON SITE. SITE IS CURRENTLY GRASSED.

DISTURBED AREA = XX ACRES (ROUNDED TO THE NEAREST ACRE)
AREA TO BE PAVED = X SF
AREA TO BE VEGETATED = X SF
AREA TO BE ROOFED = X SF

SOIL TYPES:
THE NRCS SOIL TYPES ARE AS FOLLOWS:
GrE GRUMMIT-ROCK OUTCROP COMPLEX, 6-40% SLOPES
PgD PIERRE-GRUMMIT CLAYS, 6-15% SLOPES
NuB NUNN LOAM, 2-6% SLOPES

SOIL DISTURBING ACTIVITIES INCLUDE:
INSTALLING A STABILIZED CONSTRUCTION EXIT, PERIMETER AND OTHER EROSION AND SEDIMENT CONTROLS
CLEARING AND GRUBBING
EXCAVATION OF SEDIMENTATION BASINS
GRADING AND EXCAVATION FOR THE STORM SEWER, UTILITIES AND BUILDING FOUNDATIONS
CONSTRUCTION OF DRIVEWAYS, SIDEWALKS AND PARKING AREAS
PREPARATION FOR FINAL PLANTING AND SEEDING.
COMPLETION OF ON-SITE STABILIZATION.

SEQUENCE OF MAJOR ACTIVITIES:
SEE SHEET ES-1, ES-2, AND ES-3 FOR ANTICIPATED ACTIVITY SCHEDULE.

NAME OF RECEIVING WATERS:
THE ENTIRE SITE DRAINS INTO AN UNNAMED TRIBUTARY OF RAPID CREEK.

EROSION AND SEDIMENT CONTROLS:
TEMPORARY AND PERMANENT STABILIZATION THROUGH VEGETATIVE BEST MANAGEMENT PRACTICES AND STRUCTURAL BEST MANAGEMENT PRACTICES WILL BE DESIGNED, INSTALLED AND MAINTAINED PER THE THE CITY OF RAPID CITY AND STATE OF SOUTH DAKOTA EROSION AND SEDIMENT CONTROL REQUIREMENTS. THE STABILIZATION MEASURES WILL PROTECT EXISTING VEGETATION WHERE POSSIBLE AND STABILIZED AREAS THAT ARE DISTURBED DURING CONSTRUCTION ACTIVITIES. STRUCTURAL MEASURES WILL BE USED TO DIVERT FLOWS FROM EXPOSED SOILS, STORE FLOWS OR OTHERWISE LIMIT RUNOFF AND THE DISCHARGE OF POLLUTANTS FROM EXPOSED AREAS. THE LOCATION AND SCHEDULING OF BMPS ARE SHOWN ON ES-1, ES-2 AND ES-3. SPECIFIC DETAILS FOR THESE BMPS ARE LOCATED IN THE DETAIL SHEETS OF THE CONSTRUCTION DRAWINGS.

STORM WATER MANAGEMENT:
DURING CONSTRUCTION, TEMPORARY SEDIMENT BASINS WILL BE CONSTRUCTED TO STORE RUNOFF FROM AREAS DRAINED. THESE BASINS WILL BE DESIGNED TO HOLD 2.1"/24 HOUR RAINFALL. OUTFALLS FOR THESE TEMPORARY SEDIMENT BASINS WILL BE MARKED TO INDICATE WHEN SEDIMENT FILLS TO A VOLUME OF 22 CUBIC YARDS PER ACRE FOR EACH ACRE WITHIN THAT DRAINAGE AREA. WHEN SEDIMENT REACHES THE INDICATOR, THE SEDIMENT WILL BE REMOVED TO RESTORE THE ORIGINAL DESIGN VOLUME. THIS SEDIMENT WILL BE PROPERLY DISPOSED OF PER LOCAL AND STATE REGULATIONS OR REUSED ON-SITE.
UPON COMPLETION OF CONSTRUCTION AND AFTER FINAL STABILIZATION, STORM WATER DRAINAGE WILL BE PROVIDED BY CURB AND GUTTER, STORM SEWER AND CATCH BASINS, FOR THE DEVELOPED AREAS. THE AREAS WHICH ARE NOT DEVELOPED WILL BE GRADED AS SHOWN ON C-2 AND WILL HAVE PERMANENT SEEDING OR PLANTINGS. THE DEVELOPED AREAS WILL DRAIN TO STORM WATER MANAGEMENT PONDS. UPON COMPLETION OF THE STORM WATER MANAGEMENT PONDS, THE ACCUMULATED SEDIMENT WILL BE REMOVED FROM THE BASIN AND THE SLOPES WILL BE PLANTED WITH VEGETATION. THE STORM WATER MANAGEMENT PONDS AND OUTLET STRUCTURES WERE DESIGNED BY A PROFESSIONAL ENGINEER TO MEET THE DESIGN REQUIREMENTS OF GOVERNING AGENCIES. THE OUTLET OF EACH STORM WATER MANAGEMENT POND WILL BE STABILIZED WITH A RIPRAP APRON.

WASTE DISPOSAL
NO WASTE WILL BE DISPOSED OF INTO STORM WATER INLETS.

WASTE MATERIALS:
ALL WASTE MATERIALS WILL BE COLLECTED AND STORED IN A SECURELY LIDDED METAL DUMPSTER. THE DUMPSTER WILL MEET ALL SOLID WASTE MANAGEMENT REGULATIONS. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE WILL BE DEPOSITED IN THE DUMPSTER. THE DUMPSTER WILL BE EMPTIED A MINIMUM OF ONCE PER WEEK OR MORE OFTEN IF NECESSARY AND TRASH WILL BE HAULED AS REQUIRED BY LOCAL REGULATIONS. NO CONSTRUCTION WASTE WILL BE BURIED ONSITE. ALL PERSONNEL WILL BE INSTRUCTED ON PROPER PROCEDURES FOR WASTE DISPOSAL. NOTICE STATING THESE PRACTICES WILL BE POSTED AT THE JOBSITE AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

HAZARDOUS WASTES:
ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER OF THE MATERIAL. ALL SITE PERSONNEL WILL BE INSTRUCTED IN THESE PROCEDURES AND THE CONTRACTOR WILL BE RESPONSIBLE FOR SEEING THAT THESE PROCEDURES ARE FOLLOWED.

SANITARY WASTES:
ALL SANITARY WASTES WILL BE COLLECTED FROM THE PORTABLE UNITS AND TEMPORARY SEPTIC SYSTEMS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY LOCAL OR STATE REGULATIONS.

OFFSITE VEHICLE TRACKING:
A STABILIZED CONSTRUCTION EXIT HAS BEEN PROVIDED TO HELP REDUCE VEHICLE TRACKING OF SEDIMENT. SEE SHEET ES-1, ES-2 AND ES-3 FOR CONSTRUCTION EXIT LOCATION(S). THE PAVED STREET ADJACENT THE SITE EXIT WILL BE INSPECTED DAILY FOR TRACKING OF MUD, DIRT OR ROCK. DUMP TRUCKS HAULING MATERIAL FROM THE CONSTRUCTION SITE WILL BE COVERED WITH A TARPAULIN.

TIMING OF CONTROLS
AS INDICATED ON THE ANTICIPATED ACTIVITY SCHEDULE ON SHEETS ES-1, ES-2, AND ES-3 SEDIMENT CONTROLS AT THE PERIMETER AND THE CONSTRUCTION EXIT(S) WILL BE CONSTRUCTED PRIOR TO CLEARING OR GRADING OF ANY PORTION OF THE SITE. AREAS WHERE CONSTRUCTION ACTIVITY TEMPORARILY CEASES FOR MORE THAN 21 DAYS WILL BE STABILIZED WITH A TEMPORARY SEED AND/OR MULCH WITHIN 14 DAYS OF THE LAST DISTURBANCE. ONCE CONSTRUCTION ACTIVE CEASES PERMANENTLY IN AN AREA, THAT AREA WILL BE STABILIZED WITH PERMANENT SEED AND MULCH. AFTER THE ENTIRE SITE IS STABILIZED, ALL ACCUMULATED SEDIMENT WILL BE REMOVED AND DISPOSED OF PROPERLY AND ALL PERIMETER SEDIMENT CONTROLS WILL BE REMOVED.

MAINTENANCE AND INSPECTION OF EROSION AND SEDIMENT CONTROLS
MAINTENANCE:
PRACTICES DESCRIBED IN THIS PLAN (SEE SHEETS ES-1,ES-2,ES-3 AND DETAIL SHEETS) AS WELL AS PRACTICES DESCRIBED IN THE CITY OF RAPID CITY ORDINANCES FOR EROSION AND SEDIMENT CONTROL WILL BE FOLLOWED IN A TIMELY MANNER SUCH THAT VEGETATION, EROSION AND SEDIMENT CONTROL MEASURES AND OTHER PROTECTIVE MEASURES IDENTIFIED IN THE PLAN ARE IN GOOD AND EFFECTIVE OPERATING CONDITIONS.

INSPECTION:
INSPECTIONS WILL BE PERFORMED AS SPECIFIED IN THE COMPREHENSIVE MONITORING PROGRAM AND IN ACCORDANCE WITH NPDES GENERAL PERMIT NO. SDR100000.

INVENTORY FOR POLLUTION PREVENTION PLAN
THE FOLLOWING MATERIALS ARE EXPECTED ONSITE DURING CONSTRUCTION: CONCRETE PRODUCTS, ASPHALT, PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, TAR, METAL BUILDING MATERIALS, LUMBER, SHEETROCK, FLOOR COVERINGS, ELECTRICAL WIRE AND FIXTURES, PAINTS/STAINS/FINISHING TREATMENTS, CLEANING SOLVENTS, FERTILIZERS, HERBICIDES, CRUSHED STONE, PLASTIC AND METAL PIPES.

SPILL PREVENTION
PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS AND SPILLS FROM DISCHARGING INTO STORM WATER RUNOFF.

GOOD HOUSEKEEPING:
1. QUANTITIES OF PRODUCTS STORED ONSITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
2. PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
3. PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER LABELS LEGIBLE AND VISIBLE.
4. PRODUCT MIXING, DISPOSAL OF PRODUCTS, AND THE DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURERS RECOMMENDATIONS.
5. THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

PRODUCT SPECIFIC PRACTICES:
PETROLEUM BASED PRODUCTS – CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ONSITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL BE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.
PAINTS/FINISHES/SOLVENTS – ALL PRODUCT WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS.
CONCRETE TRUCK WASHING – NO CONCRETE TRUCKS WILL BE ALLOWED TO BE WASHED OUT OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.
FERTILIZER/HERBICIDES – THESE PRODUCTS WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURERS SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR STATE GUIDELINES. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.
BUILDING MATERIALS – NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ONSITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

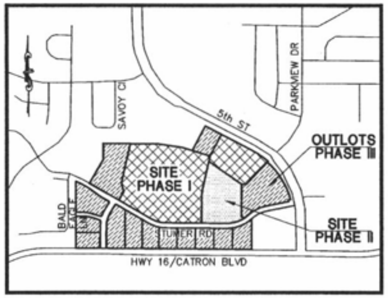
SPILL CLEANUP AND CONTROL PRACTICES:
LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND PROCEDURES SHALL BE MADE AVAILABLE TO SITE PERSONNEL.
MATERIAL AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS.
SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS SHALL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS.

FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) SHALL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) SHALL BE CONTACTED WITH 24 HOURS AT 1-800-424-8802.
FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD SHALL BE CONTACTED WITHIN 24 HOURS AT (404) 656-4863.
FOR SPILLS LESS THAT 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL SHALL BE CLEANED UP AND LOCAL AGENCIES SHALL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ONSITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS. THE CONTRACTOR SHALL HIRE A LICENSED PROFESSIONAL TO PREPARE A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN.

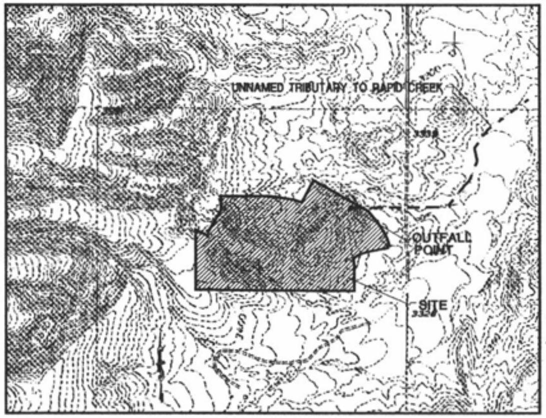
INITIAL INSPECTION NOTIFICATION
THE CONTRACTOR SHALL NOTIFY WOLVERTON & ASSOCIATES WITHIN 14 DAYS OF THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES SO THAT AN INSPECTION OF THE EROSION & SEDIMENTATION FACILITIES CAN BE PERFORMED.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)
THE CONTRACTOR SHALL REFER TO TECHNICAL SPECIFICATIONS SECTION 02370 FOR MORE SPECIFIC OR ADDITIONAL REQUIREMENTS AS MANDATED BY WAL-MART. THE MORE STRINGENT OF THESE PLANS, SPECIFICATIONS, LOCAL GOVERNMENT, AND THE NPDES GENERAL PERMIT NO. SDR100000 SHALL BE FOLLOWED.



LOCATION MAP
NOT TO SCALE

THE SITE IS LOCATED IN THE S1/2 OF THE NE1/4, OR AKA IN THE SW1/4 OF THE NE1/4 AND IN THE SE1/4 OF THE NE1/4. SECTION 24, T1N, R7E, BHM, RAPID CITY, PENNINGTON COUNTY, SOUTH DAKOTA.



U.S.G.S. QUADRANGLE MAP
NOT TO SCALE

EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN NOTES

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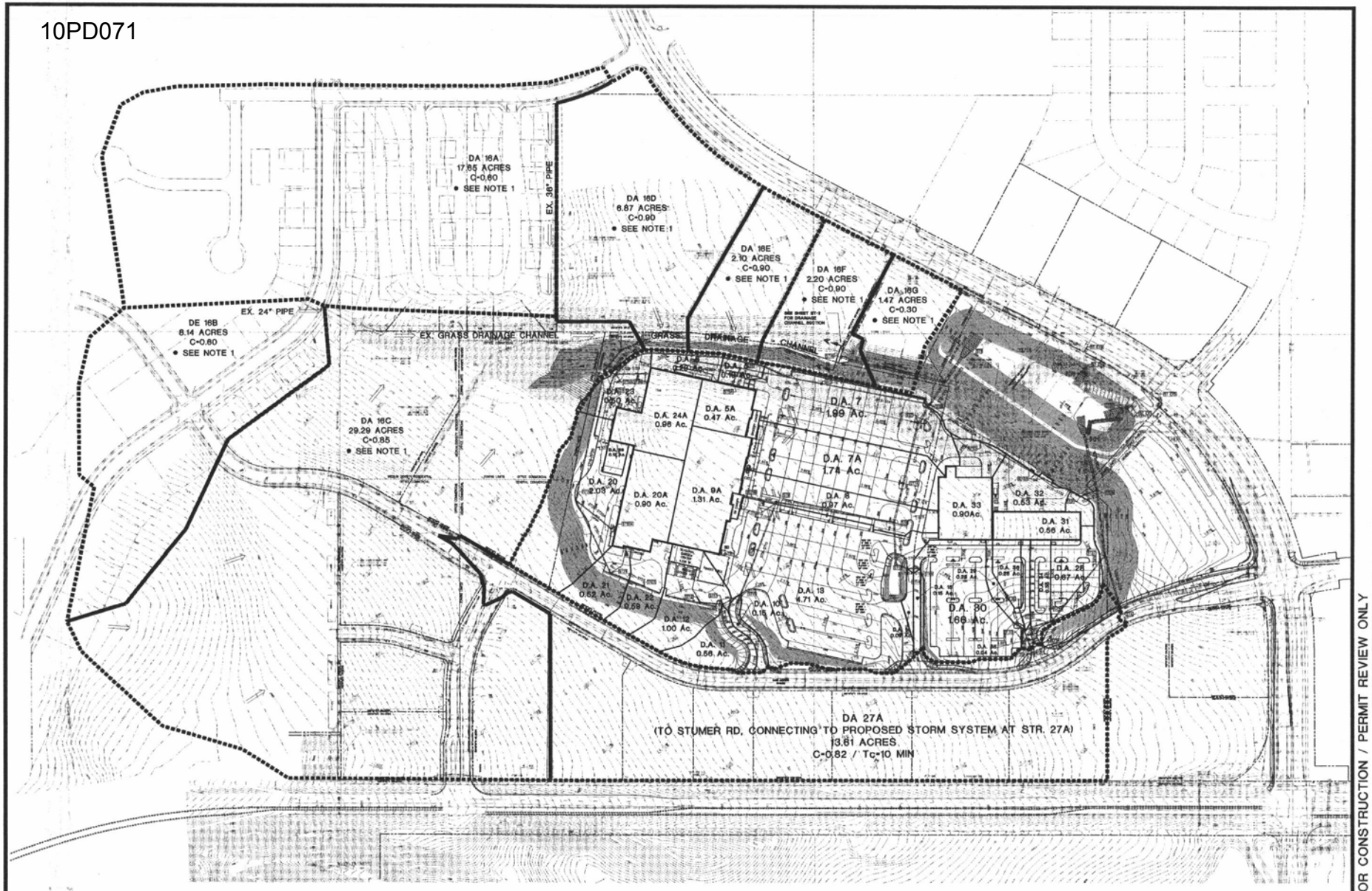
PROPOSED BLACK HILLS CENTER
Walmart # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: NO SCALE
JOB No. 08-140
SHEET NUMBER
ES-4
OF SHEETS

10PD071



NOTE:
1. AREA THAT EITHER CURRENTLY DRAINS TO THE GRASSED DRAINAGE CHANNEL (ALONG THE NORTH PROPERTY LINE OF THE WALMART PARCEL) OR WILL DRAIN TO THIS CHANNEL ONCE THE AREA IS BUILT OUT (AND DRAINAGE PIPED TO THE CHANNEL).
2. DRAINAGE AREAS NUMBERS CORRESPOND TO THE DRAINAGE STRUCTURE NUMBERS THAT THEY DRAIN TO (WHERE APPLICABLE)
3. TIME OF CONCENTRATION = 5 MINUTES FOR ALL DRAINAGE AREAS SHOWN UNLESS OTHERWISE NOTED.

INLET AREA DRAINAGE MAP

GRAPHIC SCALE

(IN FEET)
1 inch = 100 ft.

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www.wolverton-assoc.com

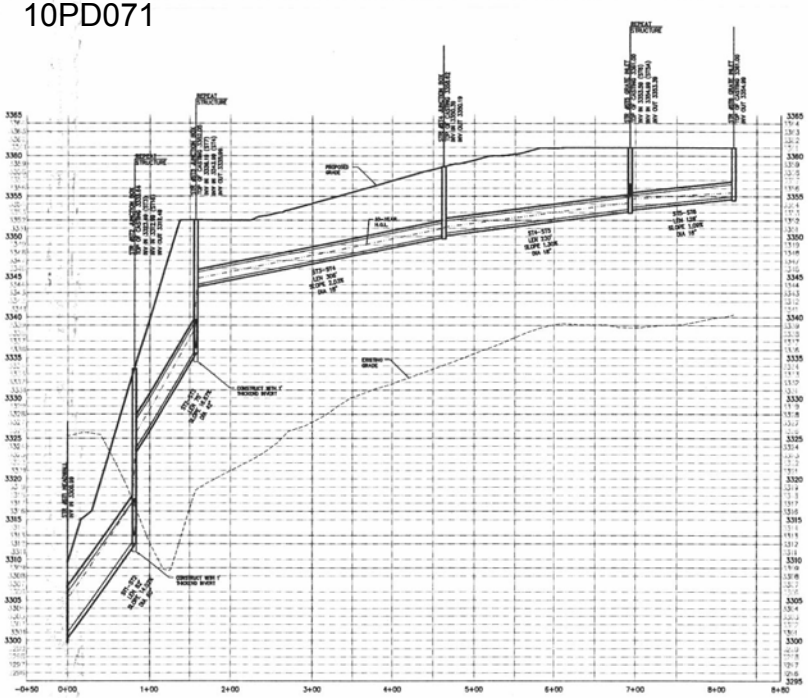
Registered Professional Engineer
Kevin J. Wolverton
No. 2003000114
STATE OF MISSOURI

PROPOSED BLACK HILLS CENTER
Walmart ✱ # 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: 1" = 100'
JOB No.: 08-140
SHEET NUMBER: IA-1
OF SHEETS

10PD071



ST1 THRU ST6
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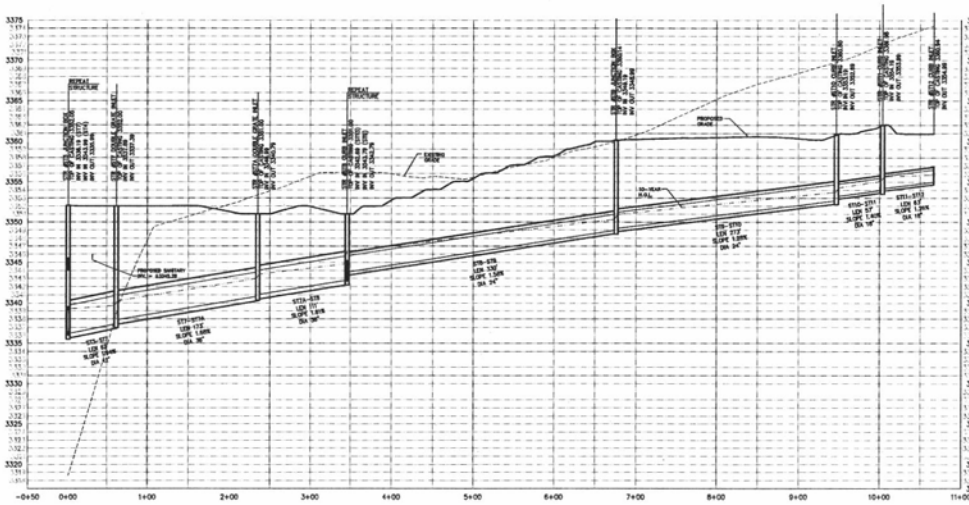
1"=6' vertical



ST3 TO ST7 THRU ST12
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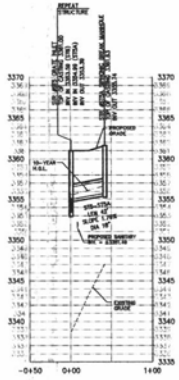

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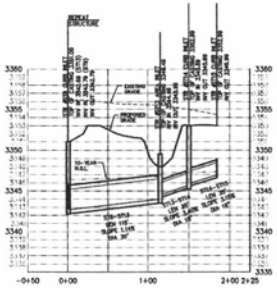

ST8 TO ST13 THRU ST15
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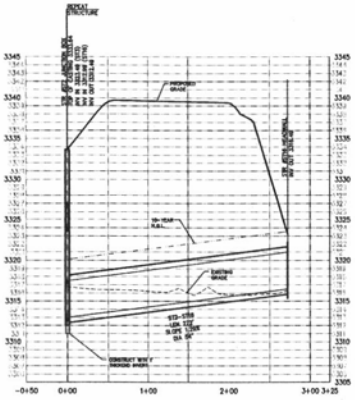

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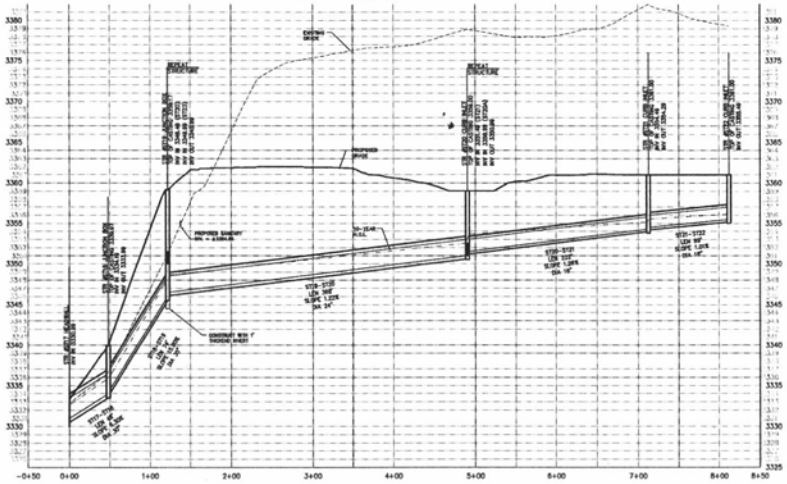

ST17 THRU ST22
scale: 1"=60' horizontal
1"=6' vertical

STORM SEWER PROFILES

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PROPOSED BLACK HILLS CENTER
Walmart ■ 3872-03
RAPID CITY, PENNINGTON COUNTY, S.D.
BY: THF, STONERIDGE DEVELOPMENT, LLC
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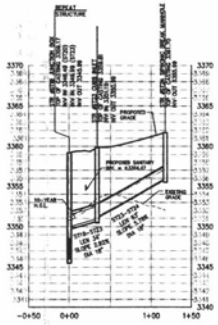
REVISIONS	BY

DRAWN BY: DMN/CRP
CHECKED BY: KJW
DATE: 12/09/2010
SCALE: AS NOTED
JOB No.: 08-140
SHEET NUMBER: ST-1
OF SHEETS

10PD071



ST19 TO ST23 TO ST24
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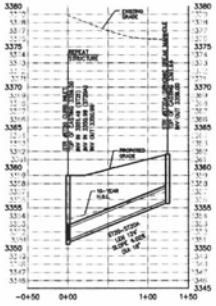

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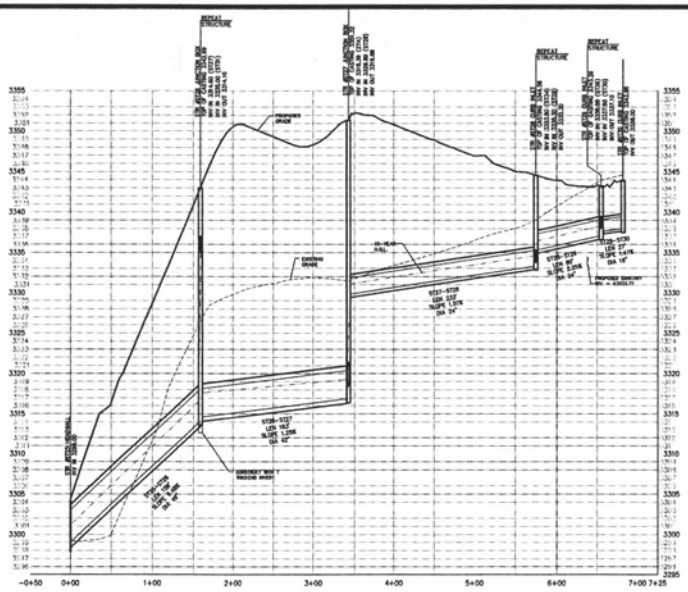

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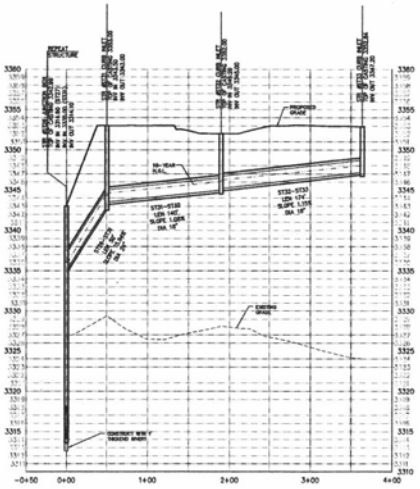

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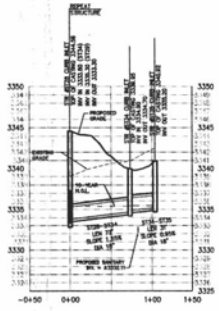

ST28 TO ST34 TO ST35
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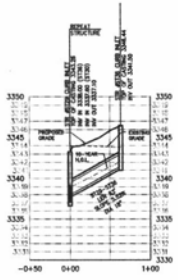

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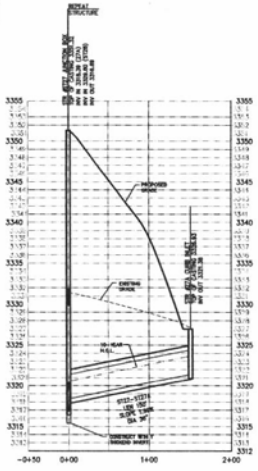

ST27 TO ST27A
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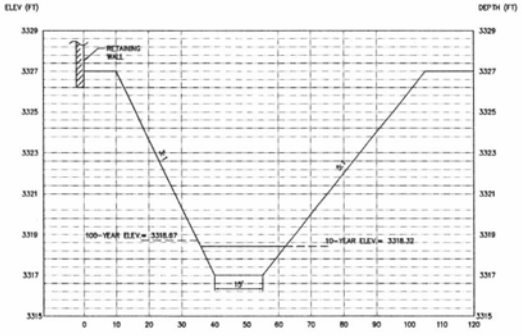
1"=6' vertical



DRAINAGE CHANNEL SECTION A-A
N.T.S.

STORM SEWER PROFILES

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BY: THF, STONERIDGE DEVELOPMENT, LLC
ST. LOUIS, MO

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DRAWN BY DMN/CRP
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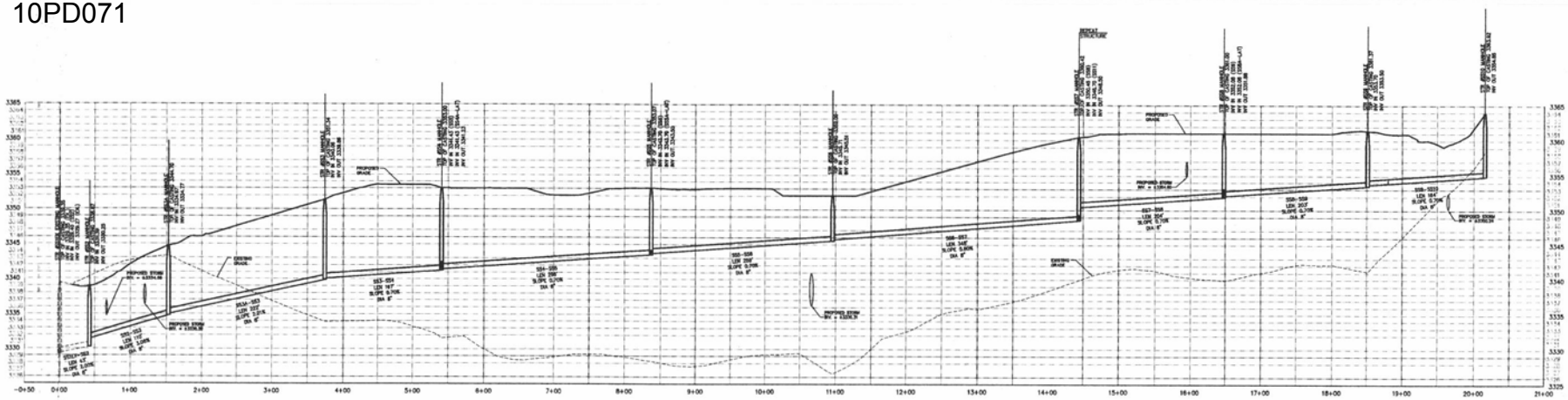
DATE 12/09/2010
SCALE AS NOTED
JOB No. 08-140
SHEET NUMBER ST-2
OF SHEETS

10PD071



SS1EX THRU SS10
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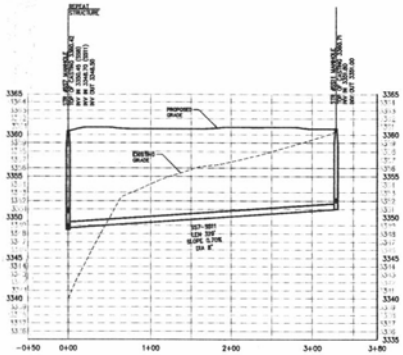

SS7 TO SS11
scale: 1"=60' horizontal
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Registered Professional Engineer
JEFFREY K. WELTER
2010-12-09
MISSOURI

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SCALE: AS NOTED
JOB No.: 08-140
SHEET NUMBER
SS-1
OF SHEETS

10PD071

SANITARY SEWER

STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP OF CASTING	INVERT OUT	INVERT IN
552	MANHOLE	3328.87	3326.28	3321.34 (S554)
553	MANHOLE	3325.34	3326.86	3340.06 (S54)
553A	MANHOLE	3344.70	3334.77	3334.87 (S53)
554	MANHOLE	3355.00	3341.23	3341.43 (S55) 3341.43 (S56A-L/A1)
555	MANHOLE	3353.07	3343.90	3343.70 (S56) 3343.70 (S56A-L/A1)
556	MANHOLE	3352.00	3343.01	3345.71 (S57)
557	MANHOLE	3366.42	3346.50	3361.40 (S58) 3346.70 (S57)
558	MANHOLE	3365.00	3351.66	3352.08 (S59) 3352.08 (S58A-L/A1)
559	MANHOLE	3365.27	3353.50	3355.70 (S60)
5550	MANHOLE	3363.00	3354.85	
5551	MANHOLE	3365.71	3361.00	3361.80 (S61A)

PIPE TABLE

PIPE NAME	LENGTH	SIZE	SLOPE
S53-S53	10	8	3.000
S53-S54	317	8	0.700
S53A-S53	302	8	3.310
S54-S55	276	8	0.700
S55-S56	239	8	0.700
S56-S57	348	8	0.805
S57-S58	254	8	0.700
S57-S5T1	379	8	0.700
S58-S59	233	8	0.700
S59-S5T2	34.4	8	0.700

STORM SEWER

STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP OF CASTING	INVERT OUT	INVERT IN
S73	HEADWALL	3357.24		3355.88 (S72)
S72	JUNCTION BOX	3333.64	3315.40	3333.48 (S73) 3313.88 (S74B)
S73	JUNCTION BOX	3352.05	3335.88	3335.18 (S71) 3343.88 (S74)
S74	JUNCTION BOX	3358.82	3350.19	3350.39 (S75)
S75	GRATE INLET	3361.85	3353.39	3353.59 (S76) 3354.89 (S75A)
S76	GRATE INLET	3361.50	3354.89	
S77	DOUBLE GRATE INLET	3362.00	3337.39	3337.89 (S77A)
S77A	DOUBLE GRATE INLET	3361.50	3340.79	3340.99 (S78)
S78	CURB INLET	3361.50	3341.79	3342.99 (S71.2) 3343.79 (S79)
S79	JUNCTION BOX	3360.14	3348.99	3348.19 (S79B)
S70	CURB INLET	3360.50	3351.99	3353.19 (S71.1)
S71	CURB INLET	3361.98	3353.99	3354.19 (S71.2)
S72	CURB INLET	3360.64	3354.99	
S73	AREA INLET	3348.49	3343.99	3344.49 (S74.4)
S74	CURB INLET	3352.99	3345.99	3345.99 (S75)
S75	CURB INLET	3352.99	3346.99	
S76	HEADWALL	3352.19	3346.49	

PIPE TABLE

PIPE NAME	LENGTH	SIZE	SLOPE
S71-S72	92	48	14.025
S72-S73	73	42	16.875
S73-S74	272	24	1.325
S73-S74	266	18	2.025
S73-S77	42	42	1.945
S74-S75	239	18	1.205
S75-S75A	42	18	1.700
S75-S76	169	18	1.205
S77-S77A	173	36	1.995
S77A-S78	93	36	1.615
S78-S79	336	24	1.995
S78-S71.2	115	18	1.145
S79-S70	273	24	1.295
S70-S71	57	18	1.400
S71-S71.2	43	18	1.395
S71.2-S71.4	33	18	3.485
S71.4-S75	35	18	3.125

STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP OF CASTING	INVERT OUT	INVERT IN
S74	CURB INLET	3359.43	3351.38	
S725	HEADWALL	3354.17		3346.00 (S726)
S726	JUNCTION BOX	3345.88	3341.00	3341.60 (S727) 3338.80 (S724)
S727	JUNCTION BOX	3351.32	3346.88	3346.38 (S74) 3338.80 (S724)
S728	CURB INLET	3344.38	3333.30	3333.80 (S724) 3338.30 (S729)
S729	CURB INLET	3343.38	3337.10	3338.80 (S726) 3337.80 (S730)
S730	CURB INLET	3343.88	3338.80	
S731	CURB INLET	3353.00	3343.80	3343.30 (S732)
S732	CURB INLET	3352.00	3345.80	3345.20 (S733)
S733	CURB INLET	3352.84	3347.30	
S734	CURB INLET	3338.85	3334.70	3334.60 (S735)
S735	CURB INLET	3343.60	3338.30	
S736	CURB INLET	3348.44	3341.30	

PIPE TABLE

PIPE NAME	LENGTH	SIZE	SLOPE
S725-S726	229	18	2.625
S726-S727	333	42	1.205
S726-S729	78	24	15.645
S727-S727A	216	36	1.995
S727-S728	233	24	1.615
S728-S729	68	24	2.205
S729-S734	72	18	1.205
S729-S730	27	18	1.470
S729-S731	63	18	5.525
S731-S732	149	18	1.395
S732-S733	174	18	1.155
S734-S735	34	18	0.885

STRUCTURE TABLE

STRUCTURE #	STRUCTURE TYPE	TOP OF CASTING	INVERT OUT	INVERT IN
S524	SIPHONIC BREAK MANHOLE	3361.70	3355.00	
S717	HEADWALL	3334.49		3330.99 (S716)
S718	JUNCTION BOX	3338.47	3333.99	3334.19 (S716)
S719	JUNCTION BOX	3356.17	3348.99	3348.49 (S719) 3348.99 (S719)
S720	CURB INLET	3356.00	3350.00	3350.40 (S721) 3350.60 (S724)
S720A	SIPHONIC BREAK MANHOLE	3361.64	3356.00	
S721	CURB INLET	3361.00	3354.20	3354.40 (S722)
S722	CURB INLET	3361.00	3355.40	
S723	CURB INLET	3356.01	3350.66	3351.10 (S724)

PIPE TABLE

PIPE NAME	LENGTH	SIZE	SLOPE
S717-S718	48	36	6.325
S718-S719	74	36	15.675
S719-S720	363	24	1.325
S719-S723	34	18	2.525
S720-S720A	324	18	4.325
S720-S721	222	18	1.395
S721-S722	99	18	1.205
S723-S724	63	18	0.795

STRUCTURE AND PIPE TABLES

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08-140 V6.DWG

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