

**GENOA CHARTER TOWNSHIP
BOARD OF TRUSTEES
REGULAR MEETING
MAY 7, 2012
6:30 p.m.**

AGENDA

Call to Order:

Pledge of Allegiance:

Call to the Public:

Approval of Consent Agenda:

1. Payment of Bills.
2. Request to approve minutes: April 16, 2012
3. Request for approval of a design phase services contract with Tetra Tech for the 2012 Sidewalk Program for the amount of \$17,000.

Approval of Regular Agenda:

4. Request for approval of amendment to the Township Litter Ordinance No. 120507.
 - A. Call to the public
 - B. Disposition of litter ordinance
5. Review of special use application, impact assessment, and site plan for a proposed 4,894 sq. ft. oil change facility located at 2798 E. Grand River, Howell, Sec. 6., petitioned by M. Krug Investments.
 - A. Approval of Special Use Application
 - B. Approval of Environmental Impact Assessment
 - C. Approval of Site Plan
6. Direct staff to issue a request for proposals for the construction of a Genoa Park Identification Sign.

Correspondence
Member Discussion
Adjournment

CHECK REGISTERS FOR TOWNSHIP BOARD MEETING

DATE : May 7, 2012

TOWNSHIP GENERAL EXPENSES: Thru May 7, 2012	\$67,844.51
April 27, 2012 Bi Weekly Payroll	\$70,607.66
May 1, 2012 Monthly Payroll	\$11,562.42
OPERATING EXPENSES: Thru May 7, 2012	\$86,161.85
TOTAL:	<u>\$236,176.44</u>

<u>Check Number</u>	<u>Vendor No</u>	<u>Vendor Name</u>	<u>Check Date</u>	<u>Check Amount</u>
28434	Genworth	Genworth Financial	04/17/2012	371.17
28435	CONSUMER	Consumers Energy	04/19/2012	174.30
28436	Mancuso	Mancuso & Cameron, P.C.	04/19/2012	12,695.65
28437	Tetra Te	Tetra Tech Inc	04/19/2012	1,692.50
28438	mhog	MHOG Utilities	04/19/2012	105.68
28439	RuthigJ	Josh Ruthig	04/19/2012	49.88
28440	Schindle	Schindler Elevator Corporation	04/19/2012	816.00
28441	VERIZONW	Verizon Wireless	04/19/2012	204.06
28442	Administ	Total Administrative Services	05/01/2012	227.27
28443	SOM-TRE	State Of Mich- Dept Of Treasur	04/24/2012	5,747.43
28444	Allstar	Allstar Alarm LLC	04/24/2012	270.00
28445	AT&T Fax	AT&T	04/24/2012	124.62
28446	ATT& IL	AT&T	04/24/2012	106.10
28447	BLUE CRO	Blue Cross & Blue Shield Of Mi	04/24/2012	22,647.13
28448	BullsEye	BullsEye Telecom	04/24/2012	1,070.86
28449	Clearwat	Clearwater Systems	04/24/2012	42.00
28450	COMCAST	COMCAST	04/24/2012	101.04
28451	Administ	Total Administrative Services	04/27/2012	930.72
28452	Equitabl	Equivest Unit Annuity Lock Box	04/27/2012	905.00
28453	DTE EN	DTE Energy	04/24/2012	205.36
28454	DYKEMA	Dykema Gossett PLLC	04/24/2012	773.80
28455	EHIM	EHIM, INC	04/24/2012	565.00
28456	FED EXPR	Federal Express Corp	04/24/2012	27.23
28457	GENOADPW	Genoa Township DPW Fund	04/24/2012	6,137.03
28458	Lincoln	Lincoln National Life Ins Co.	04/24/2012	2,127.11
28459	Lind Bry	Bryan Lindberg	04/24/2012	40.00
28460	MASTER M	Master Media Supply	04/24/2012	379.97
28461	Rose	Rose Pest Solutions	04/24/2012	218.40
28462	VERIZONW	Verizon Wireless	04/24/2012	336.00
28463	WALMART	Walmart Community	04/24/2012	198.06
28464	ARCHINAL	Michael Archinal	04/25/2012	500.00
28465	SHELL	Shell	04/25/2012	91.87
28466	EHIM	EHIM, INC	04/27/2012	7,001.32
28467	GNeil	GNeil	04/27/2012	97.36
28468	LEO'S CU	Leo's Custom Sprinkler Service	04/27/2012	342.10
28469	MASTER M	Master Media Supply	04/27/2012	477.49
28470	Net serv	Network Services Group, L.L.C.	04/27/2012	45.00

Report Total: 67,844.51

Accounts Payable

Computer Check Register

Genoa Township

2911 Dorr Road
Brighton, MI 48116

(810) 227-5225

User: diane

Printed: 04/20/2012 - 15:41

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
28451	Administ	Total Administrative Services	04/27/2012		930.72
			Check 28451 Total:		930.72
10267	AETNA LI	Aetna Life Insurance & Annuity	04/27/2012		25.00
			Check 10267 Total:		25.00
10268	EFT-FED	EFT- Federal Payroll Tax	04/27/2012		7,507.94 2,803.77 4,138.89 967.96 967.96
			Check 10268 Total:		16,386.52
10269	EFT-PENS	EFT- Payroll Pens Ln Pyts	04/27/2012		1,424.25
			Check 10269 Total:		1,424.25
28452	Equitabl	Equivest Unit Annuity Lock Box	04/27/2012		905.00
			Check 28452 Total:		905.00
10270	FIRST NA	First National Bank	04/27/2012		300.00 2,770.00 47,866.17

Check 10270 Total:

50,936.17

Report Total:

70,607.66

First National
Direct Deposit
APRIL 27, 2012
Bi-Weekly Payroll

<u>Employee Name</u>	<u>Debit Amount</u>	<u>Credit Amount</u>
Genoa Township	\$50,936.17	
Aaron Korpela		\$1,159.43
Adam Van Tassell		\$1,127.86
Alex Chimpouras		\$1,965.67
Amy Ruthig		\$1,009.12
Angela Williams		\$128.00
Caitlin Nims		\$1,189.45
Carol Hanus		\$1,242.61
Craig Bunkoske		\$1,554.34
Daniel Schlack		\$1,563.03
Dave Estrada		\$1,248.24
David Miller		\$1,949.95
Deborah Rojewski		\$1,612.07
Diane Zerby		\$702.44
Duane Chatterson		\$1,502.62
Greg Tatara		\$2,531.26
Jacob Mitchell		\$859.15
James Aulette		\$1,515.91
Jeffrey Meyers		\$1,175.45
Jenifer Kern		\$421.32
Joe Szabelski		\$0.00
Jonathan Morton		\$1,089.73
Judith Smith		\$1,218.57
Karen J. Saari		\$994.64
Kelly VanMarter		\$2,085.96
Kimberly MacLeod		\$975.78
Kristen Sapienza		\$386.16
Kyle Mitchell		\$963.87
Laura Mroczka		\$1,714.50
Martin Reich		\$1,609.71
Michael Archinal		\$2,973.79
Renee Gray		\$1,061.11
Richard Bigham		\$3,501.74
Robin Hunt		\$1,373.06
Scott Lowe		\$1,248.35
Steven Anderson		\$1,741.94
Susan Sitner		\$615.86
Tammy Lindberg		\$1,003.65
Tesha Humphriss		\$1,919.83
Total Deposit		<u><u>\$50,936.17</u></u>

Accounts Payable
Computer Check Register

Genoa Township

2911 Dorr Road
Brighton, MI 48116

(810) 227-5225

User: diane

Printed: 04/24/2012 - 12:22

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
28442	Administ	Total Administrative Services	05/01/2012		227.27
				Check 28442 Total:	227.27
10271	EFT-FED	EFT- Federal Payroll Tax	05/01/2012		1,712.71
					466.97
					689.37
					161.21
					161.21
				Check 10271 Total:	3,191.47
10272	EFT-PENS	EFT- Payroll Pens Ln Pyts	05/01/2012		212.66
				Check 10272 Total:	212.66
10273	FIRST NA	First National Bank	05/01/2012		7,881.02
					50.00
				Check 10273 Total:	7,931.02
				Report Total:	11,562.42

First National
Direct Deposit
MAY 1, 2012
Monthly Payroll

<u>Employee Name</u>	<u>Debit Amount</u>	<u>Credit Amount</u>
Genoa Township	\$7,931.02	
Adam Van Tassel		\$548.50
Gary McCririe		\$2,304.01
H.J. Mortensen		\$687.79
Jean Ledford		\$482.80
Paulette Skolarus		\$3,233.53
Steve Wildman		\$330.49
Todd Smith		\$343.90
Total Deposit		<u><u>\$7,931.02</u></u>

12:46 PM

#504 DPW RESERVE FUND
Payment of Bills
April 14 through May 1, 2012

Type Date Num Name Memo Amount

no checks issued

12:51 PM

#503 DPW UTILITY FUND
Payment of Bills
April 14 through May 1, 2012

<u>Type</u>	<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Memo</u>	<u>Amount</u>
Check	04/19/2012	2068	Carol Hanus	Reimburse for purchased summer shirts	-52.37
Check	04/19/2012	2069	Mancuso & Cameron	Re: Bigham Matter	-900.00
Check	04/25/2012	2070	D Hill Environmental	Wastewater Training (D. Miller)	-200.00
Check	04/25/2012	2071	TESHA HUMPHRISS	Monthly car allowance - May 2012	-500.00
Check	04/25/2012	2072	Greg Tatara	Monthly car allowance - May 2012	-500.00
Check	04/25/2012	2073	Shell Fleet Plus	March 2012 statement	-3,617.97
Check	04/25/2012	2074	Verizon Wireless	Inv 2728454710	-244.08
Check	04/27/2012	2075	GNeil	Poster Guard 1 year State/Fed Bulletin Board	-97.36
Grand Total					-6,111.78

12:57 PM

#593 LAKE EDGEWOOD W/S FUND
Payment of Bills
April 14 through May 1, 2012

<u>Type</u>	<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Memo</u>	<u>Amount</u>
Check	04/19/2012	2147	Consumers Energy	Service from 3/6/12 - 4/9/12	-457.68
Check	04/19/2012	2148	MHOG Utilities	7817 Bendix - 12/31/11 - 3/31/12	-22.18
Check	04/25/2012	2149	AT&T	Acct 053465-1001 001, 053465-1002 001	-18.45
Check	04/25/2012	2150	Brighton Analytical L.L.C.	Inv #'s 0412-76557	-77.00
Check	04/25/2012	2151	BullsEye Telecom	Inv # 13996204	-373.84
Check	04/25/2012	2152	Dexter Builders	Replacement Door - final payment	-1,250.00
Check	04/25/2012	2153	GENOA TWP-DPW FUND	Maintenance/billing fees April 2012	-9,338.66
Grand Total					-11,537.81

12:54 PM

#595 PINE CREEK W/S FUND

Payment of Bills

April 14 through May 1, 2012

<u>Type</u>	<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Memo</u>	<u>Amount</u>
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no checks issued

1:00 PM

#592 OAK POINTE WATER/SEWER FUND

Payment of Bills

April 14 through May 1, 2012

<u>Type</u>	<u>Date</u>	<u>Num</u>	<u>Name</u>	<u>Memo</u>	<u>Amount</u>
Check	04/19/2012	2358	AT & T	Acct 053 465 0885 001	-3.08
Check	04/19/2012	2359	COOPERS TURF MANAGEMENT, L	Inv # 9670	-200.00
Check	04/19/2012	2360	FONSON, INC.	Inv # 9979	-2,135.60
Check	04/19/2012	2361	McNaughton-McKay Electric	Inv 11955355-00	-791.75
Check	04/19/2012	2362	TETRA TECH, INC.	Inv # 50551826	-5,465.00
Check	04/19/2012	2363	UIS PROGRAMMABLE SERVICES	Inv 530339066	-1,362.77
Check	04/25/2012	2364	AT&T	Acct 810-227-4883 026 3	-134.16
Check	04/25/2012	2365	BRIGHTON ANALYTICAL, LLC	Inv #'s 0412-76556 & 0412-76589	-134.00
Check	04/25/2012	2366	Bullseye Telecom	Inv # 13978409	-708.10
Check	04/25/2012	2367	GENOA TWP UTILITY FUND	Maintenance/Billing fees April 2012	-36,464.50
Check	04/25/2012	2368	ETNA SUPPLY COMPANY	Inv S100352243.001	-9,990.00
Check	04/25/2012	2369	McNaughton-McKay Electric	Inv 11978858-00	-6,438.80
Check	04/25/2012	2370	PVS Nolwood Chemicals, Inc	Inv 365069	-1,172.00
Check	04/25/2012	2371	WATER MASTERS LLC	Inv 2289	-3,100.00
Check	04/25/2012	2372	Wolverine Power Systems, Inc.	Inv # 0060689-IN	-412.50
Grand Total					-68,512.26

GENOA CHARTER TOWNSHIP BOARD

Regular Meeting

April 16, 2012

6:30 p.m.

MINUTES

Supervisor McCririe called the regular meeting of the Genoa Charter Township Board to order at 6:30 p.m. The Pledge of Allegiance was then said. The following persons were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Robin Hunt, Steve Wildman, Jim Mortensen, Todd Smith and Jean Ledford. Also present were Township Manager Michael Archinal, Township Attorney Frank Mancuso and ten persons in the audience.

A Call to the Public was made with no response.

Approval of Consent Agenda:

Moved by Smith and supported by Ledford to approve all items listed under the consent agenda as requested. The motion carried unanimously.

1. Payment of Bills.

2. Request to approve minutes: April 2, 2012

Approval of Regular Agenda:

Moved by Mortensen and supported by Wildman to approve for action all items listed under the regular agenda. The motion carried unanimously.

3. Review of special use application, impact assessment, and site plan for a proposed 4,894 sq. ft. oil change facility located at 2798 E. Grand River, Howell, Sec. 6., petitioned by M. Krug Investments.

A call to the public was made with the following response: Jenny Carrender – I moved to Chilson Hills in July of 2008. Pictures were provided of the view from the homeowner' property and an aerial view of the Krug development. Snow pushed against the fence from the Krug site broke a couple of the boards in the privacy fence. Krug has worked with us on the lighting and things are much better. The 20' vegetative buffer would positively impact the expansion. Tom Dumond – With the buffer we would lose 54 parking spaces. Cheryl Williams – Some owners are concerned about adding trees to the west. Andy Klein – We agreed to work with the township but there is a money issue.

The board was not able to finalize an agreement concerning the buffering zone and the loss of parking places related to the combining of the two parcels and the requirements of the Township Zoning Ordinance. The petitioner will set a meeting with Archinal and VanMarter to establish a buffer zone between the residential and commercial development – specifically addressing the gravel area within the development and the impact on the residential area.

Moved by Smith and supported by Skolarus to table this petition until the next regular meeting of the board set for May 7, 2012. The motion carried unanimously.

4. Review of impact assessment for a proposed 2,659.5 sq. ft. addition to the existing Amerigas Propane building located at 2400 Dorr Road, Howell, Sec. 15, petitioned by American Excavating, L.L.C.

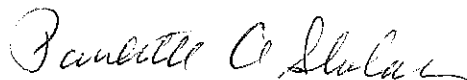
A. Disposition of Environmental Impact Assessment

Moved by Smith and supported by Ledford to approve the impact assessment dated April 11, 2012 as submitted. The motion carried unanimously.

6. Introduction of proposed amendment to the Township Litter Ordinance and request to set public hearing to consider adoption for the May 7, 2012 regular meeting.

Attorney Mancuso addressed the board concerning the conflict between the Township Zoning Ordinance and the Litter Ordinance. Minor changes were asked of the attorney. Moved by Ledford and supported by Mortensen to schedule the public hearing for May 7, 2012 and to publish a notice of that meeting and the availability of the complete document on the township web site. The motion carried unanimously.

The regular meeting of the Township Board adjourned at 7:30 p.m.



Paulette A. Skolarus
Genoa Township Clerk

MEMORANDUM

TO: Township Board

FROM: Michael Archinal 

DATE: 5/4/12

RE: 2012 Sidewalk Program
Tetra Tech Engineering Services Contract

This construction season we are proposing to install sidewalk on the north side of Grand River from Latson Road to Sunrise Park. This segment will connect to the two miles of path constructed to the west over the last two years. This project is a significant step towards achieving the goal of continuous sidewalks on Grand River. The project provides pedestrian access for a significant population living in Sunrise Park and Summerfield Pointe. We are expecting a total project cost of approximately \$150,000. This amount is included in the FY 2012/2013 Budget under Parks and Recreation.

Attached you will find a proposal from Tetra Tech in the amount of \$17,000 for construction plan development, MDOT permits, ADA compliance and assistance with easement acquisition. Please consider the following action:

Moved by _____, supported by _____, to approve a Design Phase Services Contract with Tetra Tech in the amount of \$17,000.



TETRA TECH

April 25, 2012

Mr. Michael Archinal, Manager
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: 2012 Sidewalk Program
Design Phase Services Proposal**

Mr. Archinal:

Pursuant to our recent meeting, Tetra Tech is pleased to present the following proposal for design engineering services on the 2012 Sidewalk Program project.

BACKGROUND

Over the last several years, the Township has installed sidewalks along the north side of Grand River Avenue from Latson Road to the City of Howell. The proposed project will connect the existing sections of sidewalk installed by developers on the north side of Grand River east of Latson Road and extending to the Chemung interchange.

Township staff have evaluated the costs of this section of pathways using the Sidewalk Management Database and determined that the budget for the project is just over \$150,000. The proposed sidewalk will be located in the Michigan Department of Transportation (MDOT) right-of-way. Tetra Tech's general approach to this job will be to prepare construction plans, assist the Township in obtaining the necessary permits from MDOT, solicit quotes from contractors, and, under a future proposal, administer the construction of the sidewalks. A detailed scope of services is outlined below:

SCOPE OF SERVICES

- Utilizing the topographic mapping supplied by the Township from MDOT, we will prepare a topographic plan of the project area. The mapping was obtained several years ago and is missing several new developments such as the Tractor Supply store, First National Bank and the Westbury development. Our survey crew will review the mapping and then gather data in the field to supplement the topographic mapping and complete the existing conditions map.
- We will research and create the rights-of-way along the north side of Grand River within the project area.

- MDOT design requirements for the installation of sidewalk require compliance with the American's with Disability Act (ADA Standards). To ensure compliance with ADA Standards for maximum allowable slopes the topographic survey will be used to prepare the design of the walk and driveway ramps. A site walk will be completed.
- Prepare a standard cross-section for the sidewalk. Two widths, 5-feet (along TW Friends frontage) and 8-feet wide, are proposed to facilitate placement within the existing right-of-way and grading/drainage concerns.
- Complete an analysis of the slopes of the existing driveways.
- Prepare sidewalk construction plans inclusive of removals along the bituminous portion of the walk and drainage culverts in the DTE corridor and at Lawson Road.
- Prepare legal description of TW Friends and First National Bank property easements.
- Prepare legal description for temporary grading easements for two parcels.
- Assist the Township in obtaining a permit from MDOT for the proposed sidewalk improvements.
- Incorporate any permit conditions in the final plans for the Township's use in obtaining a construction quote for the work.

Assumptions

- This proposal was written to outline Tetra Tech's scope of services through the design phase of this project. We will provide a separate proposal for construction phase services once the final scope of services is determined.
- To comply with ADA requirements, some of the existing driveways may need alteration. This proposal does not include working with property owners to complete any needed adjustments in driveway slope.

SCHEDULE

Pursuant to your verbal direction we are proceeding with the design phase immediately. We anticipate the following schedule for the project.

Task	Completion Date
Construction Plans	June 2012
Township Award of Contract	July 2012
Installation of Sidewalks	October 2012

COMPENSATION

Compensation for our services will be based on our hourly billable rates, plus subconsulted services, multiplied by 1.15, plus in house reimbursable expenses. We propose a budget of \$17,000 for this phase of the project.

Mr. Michael Archinal, Manager
Genoa Township
April 25, 2012
Page 3

Please review this proposal and if you approve, please sign in the space below and return one original copy of this proposal for our records. Our Standard Terms and Conditions are attached and considered part of this proposal.

We appreciate the opportunity to provide continuing professional services to Genoa Township.

Please call if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.
Unit Vice President

Attachments: Tetra Tech Standard Terms and Conditions

PROPOSAL ACCEPTED BY _____

TITLE _____ **DATE** _____



Tetra Tech of Michigan, PC Engineering Services Standard Terms & Conditions

Services Consultant will perform services for the Project as set forth in the provisions for Scope of Work/Fee/Schedule in the proposal and in accordance with these Terms & Conditions. Consultant has developed the Project scope of service, schedule, and compensation based on available information and various assumptions. The Client acknowledges that adjustments to the schedule and compensation may be necessary based on the actual circumstances encountered by Consultant in performing their services. Consultant is authorized to proceed with services upon receipt of an executed Agreement.

Compensation In consideration of the services performed by Consultant, the Client shall pay Consultant in the manner set forth above. The parties acknowledge that terms of compensation are based on an orderly and continuous progress of the Project. Compensation shall be equitably adjusted for delays or extensions of time beyond the control of Consultant. Where total project compensation has been separately identified for various tasks, Consultant may adjust the amounts allocated between tasks as the work progresses so long as the total compensation amount for the project is not exceeded.

Fee Definitions The following fee types shall apply to methods of payment:

- **Salary Cost** is defined as the individual's base salary plus customary and statutory benefits. Statutory benefits shall be as prescribed by law and customary benefits shall be as established by Consultant employment policy.
- **Cost Plus** is defined as the individual's base salary plus actual overhead plus professional fee. Overhead shall include customary and statutory benefits, administrative expense, and non-project operating costs.
- **Lump Sum** is defined as a fixed price amount for the scope of services described.
- **Standard Rates** is defined as individual time multiplied by standard billing rates for that individual.
- **Subcontracted Services** are defined as Project-related services provided by other parties to Consultant.
- **Reimbursable Expenses** are defined as actual expenses incurred in connection with the Project.

Payment Terms Consultant shall submit invoices at least once per month for services performed and Client shall pay the full invoice amount within 30 days of the invoice date. Invoices will be considered correct if not questioned in writing within 10 days of the invoice date. Client payment to Consultant is not contingent on arrangement of project financing or receipt of funds from a third party. In the event the Client disputes the invoice or any portion thereof, the undisputed portion shall be paid to Consultant based on terms of this Agreement. Invoices not in dispute and unpaid after 30 days shall accrue interest at the rate of one and one-half percent per month (or the maximum percentage allowed by law, whichever is the lesser). Invoice payment delayed beyond 60 days shall give Consultant the right to stop work until payments are current. Non-payment beyond 70 days shall be just cause for termination by Consultant.

Additional Services The Client and Consultant acknowledge that additional services may be necessary for the Project to address issues that may not be known at Project initiation or that may be required to address circumstances that were not foreseen. In that event, Consultant notify the Client of the need for additional services and the Client shall pay for such additional services in an amount and manner as the parties may subsequently agree.

Site Access The Client shall obtain all necessary approvals for Consultant to access the Project site(s).

Underground Facilities Consultant and/or its authorized subcontractor will conduct research and perform site reconnaissance in an effort to discover the location of existing underground facilities prior to developing boring plans, conducting borings, or undertaking invasive subsurface investigations. Client recognizes that accurate drawings or knowledge of the location of such facilities may not exist, or that research may reveal as-built drawings or other documents that may inaccurately show, or not show, the location of existing underground facilities. In such events, except for the sole negligence, willful misconduct, or practice not conforming to the Standard of Care cited in this Agreement, Client agrees to indemnify and hold Consultant and/or its Subcontractor harmless from any and all property damage, injury, or economic loss arising or allegedly arising from borings or other subsurface penetrations.

Regulated Wastes Client is responsible for the disposal of all regulated wastes generated as a result of services provided under this Agreement. Consultant and Client

mutually agree that Consultant assumes no responsibility for the waste or disposal thereof.

Contractor Selection Consultant may make recommendations concerning award of construction contracts and products. The Client acknowledges that the final selection of construction contractors and products is the Client's sole responsibility.

Ownership of Documents Drawings, specifications, reports, programs, manuals, or other documents, including all documents on electronic media, prepared under this Agreement are instruments of service and are, and shall remain, the property of Consultant. Record documents of service shall be based on the printed copy. Consultant will retain all common law, statutory, and other reserved rights, including the copyright thereto. Consultant will furnish documents electronically; however, the Client releases Consultant from any liability that may result from documents used in this form. Consultant shall not be held liable for reuse of documents or modifications thereof by the Client or its representatives for any purpose other than the original intent of this Agreement, without written authorization of and appropriate compensation to Consultant.

Standard of Care Services provided by Consultant under this Agreement will be performed in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. Consultant makes no warranty or guaranty, either express or implied. Consultant will not be liable for the cost of any omission that adds value to the Project.

Period of Service Consultant shall perform the services for the Project in a timely manner consistent with sound professional practice. Consultant will strive to perform its services according to the Project schedule set forth in the provisions for Scope of Work/Fee/Schedule above. The services of each task shall be considered complete when deliverables for the task have been presented to the Client. Consultant shall be entitled to an extension of time and compensation adjustment for any delay beyond Consultant control.

Insurance and Liability Consultant shall maintain the following insurance and coverage limits during the period of service. The Client will be named as an additional insured on the Commercial General Liability and Automobile Liability insurance policies.

Worker's Compensation – as required by applicable state statute
Commercial General Liability - \$1,000,000 per occurrence for bodily injury, including death and property damage, and \$2,000,000 in the aggregate
Automobile Liability - \$1,000,000 combined single limit for bodily injury and property damage
Professional Liability (E&O) - \$1,000,000 each claim and in the aggregate

The Client shall make arrangements for Builder's Risk, Protective Liability, Pollution Prevention, and other specific insurance coverage warranted for the Project in amounts appropriate to the Project value and risks. Consultant shall be a named insured on those policies where Consultant may be at risk. The Client shall obtain the counsel of others in setting insurance limits for construction contracts.

Indemnification Consultant shall indemnify and hold harmless the Client and its employees from any liability, settlements, loss, or costs (including reasonable attorneys' fees and costs of defense) to the extent caused solely by the negligent act, error, or omission of Consultant in the performance of services under this Agreement. If such damage results in part by the negligence of another party, Consultant shall be liable only to the extent of Consultant's proportional negligence.

Dispute Resolution The Client and Consultant agree that they shall diligently pursue resolution of all disagreements within 45 days of either party's written notice using a mutually acceptable form of mediated dispute resolution prior to exercising their rights under law. Consultant shall continue to perform services for the Project and the Client shall pay for such services during the dispute resolution process unless the Client issues a written notice to suspend work.

Suspension of Work The Client may suspend services performed by Consultant with cause upon fourteen (14) days written notice. Consultant shall submit an invoice for services performed up to the effective date of the work suspension and the Client shall pay Consultant all outstanding invoices within fourteen (14) days. If the work suspension exceeds thirty (30) days from the effective work suspension date, Consultant shall be entitled to renegotiate the Project schedule and the compensation terms for the Project.

Termination The Client or Consultant may terminate services on the Project upon seven (7) days written notice without cause or in the event of substantial failure by the other party to fulfill its obligations of the terms hereunder. Consultant shall submit an invoice for services performed up to the effective date of termination and the Client shall pay Consultant all outstanding invoices within fourteen (14) days. The Client may withhold an amount for services that may be in dispute provided that the Client furnishes a written notice of the basis for their dispute and that the amount withheld represents a reasonable value.

Authorized Representative The Project Manager assigned to the Project by Consultant is authorized to make decisions or commitments related to the project on behalf of Consultant. Only authorized representatives of Consultant are authorized to execute contracts and/or work orders on behalf of Consultant. The Client shall designate a representative with similar authority.

Project Requirements The Client shall confirm the objectives, requirements, constraints, and criteria for the Project at its inception. If the Client has established design standards, they shall be furnished to Consultant at Project inception. Consultant will review the Client design standards and may recommend alternate standards considering the standard of care provision.

Independent Consultant Consultant is and shall be at all times during the term of this Agreement an independent consultant and not an employee or agent of the Client. Consultant shall retain control over the means and methods used in performing Consultant's services and may retain subconsultants to perform certain services as determined by Consultant.

Compliance with Laws Consultant shall perform its services consistent with sound professional practice and endeavor to incorporate laws, regulations, codes, and standards applicable at the time the work is performed. In the event that standards of practice change during the Project, Consultant shall be entitled to additional compensation where additional services are needed to conform to the standard of practice.

Permits and Approvals Consultant will assist the Client in preparing applications and supporting documents for the Client to secure permits and approvals from agencies having jurisdiction over the Project. The Client agrees to pay all application and review fees.

Limitation of Liability In recognition of the relative risks and benefits of the project to both the Client and Consultant, the risks have been allocated such that the Client agrees, to the fullest extent permitted by law, to limit the liability of Consultant and its subconsultants to the Client and to all construction contractors and subcontractors on the project for any and all claims, losses, costs, damages of any nature whatsoever or claims expenses from any cause or causes, so that the total aggregate liability of Consultant and its subconsultants to all those named shall not exceed \$50,000 or the amount of Consultant's total fee paid by the Client for services under this Agreement, whichever is the greater. Such claims and causes include, but are not limited to negligence, professional errors or omissions, strict liability, breach of contract or warranty.

Consequential Damages Neither the Client nor Consultant shall be liable to the other for any consequential damages regardless of the nature or fault.

Waiver of Subrogation Consultant shall endeavor to obtain a waiver of subrogation against the Client, if requested in writing by the Client, provided that Consultant will not increase its exposure to risk and Client will pay the cost associated with any premium increase or special fees.

Environmental Matters The Client warrants that they have disclosed all potential hazardous materials that may be encountered on the Project. In the event unknown hazardous materials are encountered, Consultant shall be entitled to additional compensation for appropriate actions to protect the health and safety of its personnel, and for additional services required to comply with applicable laws. The Client shall indemnify Consultant from any claim related to hazardous materials encountered on the Project except for those events caused by negligent acts of Consultant.

Cost Opinions Consultant shall prepare cost opinions for the Project based on historical information that represents the judgment of a qualified professional. The Client and Consultant acknowledge that actual costs may vary from the cost opinions prepared and that Consultant offers no guarantee related to the Project cost.

Contingency Fund The Client acknowledges the potential for changes in the work during construction and the Client agrees to include a contingency fund in the Project budget appropriate to the potential risks and uncertainties associated with the Project. Consultant may offer advice concerning the value of the contingency fund; however, Consultant shall not be liable for additional costs that the Client may incur beyond the contingency fund they select unless such additional cost results from a negligent act, error, or omission related to services performed by Consultant.

Safety Consultant shall be responsible solely for the safety precautions or programs of its employees and no other party.

Information from Other Parties The Client and Consultant acknowledge that Consultant will rely on information furnished by other parties in performing its services under the Project. Consultant shall not be liable for any damages that may be incurred by the Client in the use of third party information.

Force Majeure Consultant shall not be liable for any damages caused by any delay that is beyond Consultant's reasonable control.

Waiver of Rights The failure of either party to enforce any provision of these terms and conditions shall not constitute a waiver of such provision nor diminish the right of either party to the remedies of such provision.

Warranty Consultant warrants that it will deliver services under the Agreement within the standard of care. No other expressed or implied warranty is provided by Consultant.

Severability Any provision of these terms later held to violate any law shall be deemed void and all remaining provisions shall continue in force. In such event, the Client and Consultant will work in good faith to replace an invalid provision with one that is valid with as close to the original meaning as possible.

Survival All provisions of these terms that allocate responsibility or liability between the Client and Consultant shall survive the completion or termination of services for the Project.

Assignments Neither party shall assign its rights, interests, or obligations under the Agreement without the express written consent of the other party.

Governing Law The terms of agreement shall be governed by the laws of the state where the services are performed provided that nothing contained herein shall be interpreted in such a manner as to render it unenforceable under the laws of the state in which the Project resides.

Collection Costs In the event that legal action is necessary to enforce the payment provisions of this Agreement if Client fails to make payment within sixty (60) days of the invoice date, Consultant shall be entitled to collect from the Client any judgment or settlement sums due, reasonable attorneys' fees, court costs, and expenses incurred by Consultant in connection therewith and, in addition, the reasonable value of Consultant's time and expenses spent in connection with such collection action, computed at Consultant's prevailing fee schedule and expense policies.

Equal Employment Opportunity Consultant will comply with federal regulations pertaining to Equal Employment Opportunity. Consultant is in compliance with applicable local, state, and federal regulations concerning minority hiring. It is Consultant's policy to ensure that applicants and employees are treated equally without regard to race, creed, sex, color, religion, veteran status, ancestry, citizenship status, national origin, marital status, sexual orientation, or disability. Consultant expressly assures all employees, applicants for employment, and the community of its continuous commitment to equal opportunity and fair employment practices.

Attorney Fees Should there be any suit or action instituted to enforce any right granted in this contract, the substantially prevailing party shall be entitled to recover its costs, disbursements, and reasonable attorney fees from the other party. The party that is awarded a net recovery against the other party shall be deemed the substantially prevailing party unless such other party has previously made a bona fide offer of payment in settlement and the amount of recovery is the same or less than the amount offered in settlement. Reasonable attorney fees may be recovered regardless of the forum in which the dispute is heard, including an appeal.

Third Party Beneficiaries Nothing in this Agreement shall create a contractual relationship with or a cause of action in favor of a third party against either the Client or the Consultant. The Consultant's services under this Agreement are being performed solely for the Client's benefit, and no other entity shall have any claim against the Consultant because of this Agreement or the performance or nonperformance of services hereunder. The Client agrees to include a provision in all contracts with contractors and other entities involved in this project to carry out the intent of this paragraph.

Captions The captions herein are for convenience only and are not to be construed as part of this Agreement, nor shall the same be construed as defining or limiting in any way the scope or intent of the provisions hereof.

LITTER ORDINANCE

AN ORDINANCE TO PROVIDE FOR THE REGULATION, CONTROL AND PROHIBITION OF LITTERING OF OR ON PROPERTY OR WATERS OF AND IN GENOA TOWNSHIP; AND TO PROVIDE PENALTIES FOR VIOLATION OF SAID ORDINANCE.

THE TOWNSHIP OF GENOA, LIVINGSTON COUNTY, MICHIGAN ORDAINS:

SECTION 1. DEFINITIONS

The term "litter" shall include, without limitation, all rubbish, refuse, water material, garbage, including but not limited to the following; waste composed of animal, fish, fowl fruit or vegetable matter, dead animals, putrescible and non-putrescible solid waste (except body wastes), glass, cans bottles, discarded or abandoned machinery, equipment or parts thereof, discarded or abandoned motor vehicles or parts thereof, parts of broken furniture, stoves or other appliances and industrial wastes.

The term "person" shall include all natural persons, firms, co-partnerships, corporations, and all associations of natural persons, incorporated or unincorporated, whether acting by themselves, or by agent or employee. All persons who violate any provision of this ordinance, whether as owner, occupant, lessee, agent or employee shall be equally liable as any principal.

The term "public and private property" includes, but is not limited to, any and all streets, right of way of any street, road or highway, sidewalk, boulevard, alley or other public way and any and all public park, square, open space, conservation or recreation area playground or building; and residential or farm properties or timberlands.

The term "vehicle" means every motor vehicle required to be registered under the provisions of Act. No. 300 of Public Act of 1949 of the State of Michigan, the Michigan Vehicle Code, as amended, (MCL 257.1, et seq) to operate on a public road.

The term "vessel" means every description of watercraft other than a seaplane on the water, used or capable of being used as a means of transportation on water.

The term "waters" means any body of water or watercourses, or the shore or beach thereof, including the ice above the water.

SECTION 2. LITTERING; PUBLIC AND PRIVATE PROPERTY

It shall be unlawful for any person knowingly, without consent of the township or the owner of private property in this township, to dump, deposit, place, throw or leave, or cause or permit the dumping, depositing, placing, throwing or leaving, of litter in or upon any public or private property or any waters within the township other than property

designated and set aside for such purposes, or except in public receptacles and private receptacles for collection.

SECTION 3. LITTER THROWN BY PERSONS IN VEHICLES

It shall be unlawful for any person while a driver or passenger in a vehicle or vessel to throw or deposit litter upon any street, roadway or waters or other public or private property within the township.

SECTION 4. PLACEMENT OF LITTER IN RECEPTACLES SO AS TO PREVENT SCATTERING

Persons placing litter in public or private receptacles designed for such purposes shall do so in such a manner as to prevent it from being carried or deposited by the elements or by animals upon any street, sidewalk or other public or private lands or place.

SECTION 5. TRUCK LOADS CAUSING LITTER

No person shall drive or move any motor vehicle or trailer within the township unless such vehicle or trailer is so constructed or loaded as to prevent any load, contents or litter from being blown or deposited upon any street, alley or public or private lands or place.

SECTION 6. PRESUMPTIONS RE VEHICLES OR VESSELS

- (1) In a proceeding for a violation of this ordinance involving litter from a motor vehicle or vessel, proof that the particular vehicle or vessel described in the citation, complaint or warrant was used in the violation, together with proof that the defendant named in the citation, complaint or warrant was the registered owner of the vehicle or vessel at the time of the violation, constitutes in evidence a presumption that the registered owner of the vehicle or vessel was the driver of the vehicle or vessel at the time of the violation.
- (2) The driver of a vehicle or vessel is presumed to be responsible for litter which is thrown, dropped, dumped, deposited, placed or left from the vehicle or vessel on public or private property or waters.
- (3) In a proceeding for a violation of this act involving litter from a leased vehicle or leased vessel, proof that the particular vehicle or vessel described in the citation, complaint or warrant was used in the violation, together with proof that the defendant named in the citation, complaint or warrant was the lessee of the vehicle or vessel at the time of the violation, constitutes in evidence a presumption that the lessee of the vehicle or vessel was the driver of the vehicle or vessel at the time of the violation.

SECTION 7. VIOLATION; PUNISHMENT

Any violation of this ordinance by any person shall be deemed a misdemeanor and shall be punishable by a fine not to exceed Five Hundred Dollars (\$500.00) plus costs of prosecution, or by imprisonment in the county jail not to exceed ninety (90) days, or by

both such fine and imprisonment plus costs of prosecution. The court in lieu of any sentence imposed, may direct a substitution of litter gathering labor, including, but not limited to, the litter connected with the particular violation, and proper disposal of said litter, under the supervision of the court. Each day that a violation continues shall be deemed to be a separate violation. This ordinance shall not prevent the township from using other methods or means available under Michigan law pertaining to litter problems or violations.

SECTION 8. CONFLICTING PROVISIONS REPEALED

Ordinances or parts of ordinances in conflict or inconsistent herewith are hereby repealed.

SECTION 9. SEVERABILITY

This ordinance and various parts, sections and clauses thereof are hereby declared severable. If any part, section, paragraph or clause is adjudged invalid, it is hereby provided that the remainder of the ordinance shall not be affected thereby.

This ordinance shall take effect on the

day of ,2012.

STATE OF MICHIGAN)
) SS.
COUNTY OF LIVINGSTON)

I hereby certify that the foregoing ordinance is a true copy of the ordinance enacted by the township board on the day of , 2012, and that the necessary legal provisions have been observed.

Polly Skolarus, Township Clerk

I, Polly Skolarus, Clerk of the Township of Genoa, hereby certify that the foregoing ordinance was published within ten days after adoption by printing the same in the Livingston County Press on the day of , 2012.

Polly Skolarus, Township Clerk

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both such fine and imprisonment plus costs of prosecution. The court in lieu of any sentence imposed, may direct a substitution of litter gathering labor, including, but not limited to, the litter connected with the particular violation, and proper disposal of said litter, under the supervision of the court. Each day that a violation continues shall be deemed to be a separate violation. This ordinance shall not prevent the township from using other methods or means available under Michigan law pertaining to litter problems or violations.

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Ordinances or parts of ordinances in conflict or inconsistent herewith are hereby repealed.

SECTION 9. SEVERABILITY

This ordinance and various parts, sections and clauses thereof are hereby declared severable. If any part, section, paragraph or clause is adjudged invalid, it is hereby provided that the remainder of the ordinance shall not be affected thereby.

This ordinance shall take effect on the

day of ,2012.

STATE OF MICHIGAN)
) SS.
COUNTY OF LIVINGSTON)

I hereby certify that the foregoing ordinance is a true copy of the ordinance enacted by the township board on the day of , 2012, and that the necessary legal provisions have been observed.

Polly Skolarus, Township Clerk

I, Polly Skolarus, Clerk of the Township of Genoa, hereby certify that the foregoing ordinance was published within ten days after adoption by printing the same in the Livingston County Press on the day of , 2012.

_____ Polly Skolarus, Township Clerk



2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

MEMORANDUM

TO: Honorable Board of Trustees
FROM: Kelly VanMarter, Planning Director
DATE: May 4th, 2012
RE: Krug Quick Lane – Site Plan/Special Land Use

It is my understanding that this item was tabled at the last Board meeting to allow the Township to work with the applicant on the unresolved issue of providing a buffer between the homes in the Chilson Hills subdivision and the Krug Ford car dealership. Trustee Smith, Supervisor McCririe and myself met with the applicant on May 2nd 2012. The applicant expressed their issues and concerns with removal of the existing asphalt parking area to establish a buffer along the full width of the property line. At the request of Mr. Smith and supported by Supervisor McCririe, the applicant has agreed to remove some of the gravel parking area and plant a row of 5 evergreen trees to screen the adjacent residential from the proposed Quick Lane. In the attached documentation please find a revised overall site plan sheet dated 5/2/12 indicating the location of the proposed trees. The applicant is requesting approval of this scenario in lieu of the full buffer recommended in the prior review letter.

Pending Board resolution of the buffer zone issue, I would like to make the following recommendation regarding the Special Use Permit, Impact Assessment and Site Plan:

Recommendation of Special Use Permit: I recommend approval of the Special Land Use Permit with the following conditions:

- 1.) Parcels 4711-06-200-058 and 4711-06-200-103 will be combined into one parcel.
- 2.) This Special Land Use is approved because it has been found to comply with the requirements of Sections 19.03 and 7.02.02(k) of the Township Zoning Ordinance.

Recommendation of Impact assessment (dated 04-04-12): I recommend approval of the impact assessment with the following conditions:

- 1.) The Spill Prevention Control and Countermeasure Plan is included in the approval.
- 2.) The petitioner shall document the retrofits to the existing light fixtures as stated in Item E so that the Township can verify this item is complied with.

SUPERVISOR
Gary T. McCririe

CLERK
Paulette A. Skolarus

TREASURER
Robin L. Hunt

MANAGER
Michael C. Archinal

TRUSTEES
H. James Mortensen
Jean W. Ledford
Todd W. Smith
Steven Wildman

Recommendation of Site Plan (dated 04-04-12): I recommend approval of the site plan with the following conditions:

- 1.) The proposed lighting shall meet the Township Ordinance. Additional lighting shall not be installed on the building if the location exceeds current ordinance footcandle standards.
- 2.) Additional detail shall be provided on the plans regarding the banked dumpster location to ensure fit and function.
- 3.) The petitioner shall satisfy the requirements of the Township Engineer prior to issuance of a Land Use Permit. This will include providing a Storm Water Easement in recordable form prior to issuance of a Land Use Permit.

Should you have any questions concerning this matter, please do not hesitate to contact me.

GENOA CHARTER TOWNSHIP BOARD

Regular Meeting

April 16, 2012

6:30 p.m.

MINUTES

Supervisor McCririe called the regular meeting of the Genoa Charter Township Board to order at 6:30 p.m. The Pledge of Allegiance was then said. The following persons were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Robin Hunt, Steve Wildman, Jim Mortensen, Todd Smith and Jean Ledford. Also present were Township Manager Michael Archinal, Township Attorney Frank Mancuso and ten persons in the audience.

A Call to the Public was made with no response.

Approval of Consent Agenda:

Moved by Smith and supported by Ledford to approve all items listed under the consent agenda as requested. The motion carried unanimously.

1. Payment of Bills.

2. Request to approve minutes: April 2, 2012

Approval of Regular Agenda:

Moved by Mortensen and supported by Wildman to approve for action all items listed under the regular agenda. The motion carried unanimously.

3. Review of special use application, impact assessment, and site plan for a proposed 4,894 sq. ft. oil change facility located at 2798 E. Grand River, Howell, Sec. 6., petitioned by M. Krug Investments.

A call to the public was made with the following response: Jenny Carrender – I moved to Chilson Hills in July of 2008. Pictures were provided of the view from the homeowner' property and an aerial view of the Krug development. Snow pushed against the fence from the Krug site broke a couple of the boards in the privacy fence. Krug has worked with us on the lighting and things are much better. The 20' vegetative buffer would positively impact the expansion. Tom Dumond – With the buffer we would lose 54 parking spaces. Cheryl Williams – Some owners are concerned about adding trees to the west. Andy Klein – We agreed to work with the township but there is a money issue.

The board was not able to finalize an agreement concerning the buffering zone and the loss of parking places related to the combining of the two parcels and the requirements of the Township Zoning Ordinance. The petitioner will set a meeting with Archinal and VanMarter to establish a buffer zone between the residential and commercial development – specifically addressing the gravel area within the development and the impact on the residential area.

Moved by Smith and supported by Skolarus to table this petition until the next regular meeting of the board set for May 7, 2012. The motion carried unanimously.

4. Review of impact assessment for a proposed 2,659.5 sq. ft. addition to the existing Amerigas Propane building located at 2400 Dorr Road, Howell, Sec. 15, petitioned by American Excavating, L.L.C.

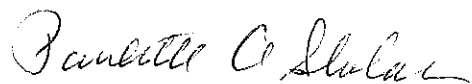
A. Disposition of Environmental Impact Assessment

Moved by Smith and supported by Ledford to approve the impact assessment dated April 11, 2012 as submitted. The motion carried unanimously.

6. Introduction of proposed amendment to the Township Litter Ordinance and request to set public hearing to consider adoption for the May 7, 2012 regular meeting.

Attorney Mancuso addressed the board concerning the conflict between the Township Zoning Ordinance and the Litter Ordinance. Minor changes were asked of the attorney. Moved by Ledford and supported by Mortensen to schedule the public hearing for May 7, 2012 and to publish a notice of that meeting and the availability of the complete document on the township web site. The motion carried unanimously.

The regular meeting of the Township Board adjourned at 7:30 p.m.



Paulette A. Skolarus
Genoa Township Clerk

5/4/12 - This e-mail was grabbed by the junk e-mail filter & was recovered after the 4/16/12 meeting. It is being included for your information. - K. VanMarter

From: [Pat Murphy](#)
To: [Kelly VanMarter](#)
Subject: Krug Ford oil change facility
Date: Monday, April 23, 2012 9:00:45 AM

Dear Kelly:

I am, unfortunately, unable to make tonight's meeting of the Board of Trustees but wanted to make sure you had my input as a Chilson Hills Homeowners Association Board member at large. As you know we did meet with the manager of Krug. As a result, the sound system in the rear of one buildings was shut off and two lights were adjusted. We did not get a timeline commitment to reduction of lighting. I did bring up the issue of cars being parked right up to the southeast fence line that abuts our subdivision's backyards(with no buffer). All that was promised was that Dan would tell his people that they should try not to park there. There was no promise of any other correction.

Without a buffer in that area, car sounds, horns, fumes as well as truck noises and sounds carry into our small yards and bedroom windows.

The same holds true for the area that was clear cut behind the proposed oil change site. One homeowner said his wife asked the people cutting the field to leave a line of trees in place. That appears to be the only reason that particular single line of trees was preserved.

It is important to create more of a buffer than what we have. And it appears, to me, that this will only happen if it is required in accordance with our township guidelines.

thank you. I hope my input into this matter is heard even though I cannot make it to the meeting.

Sincerely,
Patricia J. Murphy
409 Ventnor
Howell Mi 48843.



Jenny Carrender
369 Chalmers Ln
Howell, MI 48843
jenny.carrender@kroger.com
April 17, 2012

Genoa Township Board of Trustees
c/o Mr. Michael Archinal
2911 Dorr Rd
Brighton, MI 48116

Dear Genoa Township Board of Trustees:

Thank you for the opportunity to address the Board at the Genoa Township Board of Trustees meeting April 16, 2012. I felt my concerns were heard and feel there was a sincere appreciation for the residents of Chilson Hills Subdivision. However, I do have further concerns that I wish to express prior to the next meeting on May 7, 2012.

As I spoke at the April 16, 2012 meeting, I am not against the Krug project. I am glad their business is thriving and they have the ability to expand again (showroom expansion took place last year I believe). However, I do request a balance and reverence for the residential neighbors. I understand there wasn't a residential subdivision when Krug was first built, but as the business expands it should be held to the standards of other commercial properties that border residential property. I would appreciate for Krug to be held to ordinance standards outlined by the Township (or the standards recommended by the Planning Commission). Below are some personal observations that I wish be taken into consideration upon your reflection and assessment.

➤ **Suggestion of Providing Trees to Residents**

- Since this commercial property is currently (*or will be once the parcels are merged*) out of compliance with the zoning ordinance, I don't feel it's proper to possibly ask the residents to compromise their property by planting trees because the commercial property owners don't want to make modifications on their own property. The solution for the ordinance should be addressed by the applicant, on their property. Furthermore, on March 27, 2012 (note this is prior to the board meeting), I had a State of Michigan certified Arborist come to my property for a consultation. I inquired about planting evergreen trees on my property. She did point out that my back yard does have a lot of shade and for the evergreen trees to thrive; I would need to thin out some of my 20+ trees (including a mature Red Oak and several Hickory). However, the removal of canopy trees would significantly impact the shade I currently enjoy on my property.

➤ **Proven Need for a Buffer Zone**

- As previously stated at the April 16, 2012 meeting, there is also an issue with Krug's snowplow plowing snow into a section of my privacy fence (since there is no current buffer zone). In the past, this plowing has caused privacy fence panels to fall over. When I called Krug with concerns, they did come and re-attach the panels to the posts. However, the plowing continues to go up against my privacy fence (in the same area on the east side of my property). There is irreversible damage to at least 3 posts. I plan to have the posts replaced this summer. I am concerned about the possibility of additional snowplow damage next winter with the absence of a buffer zone.

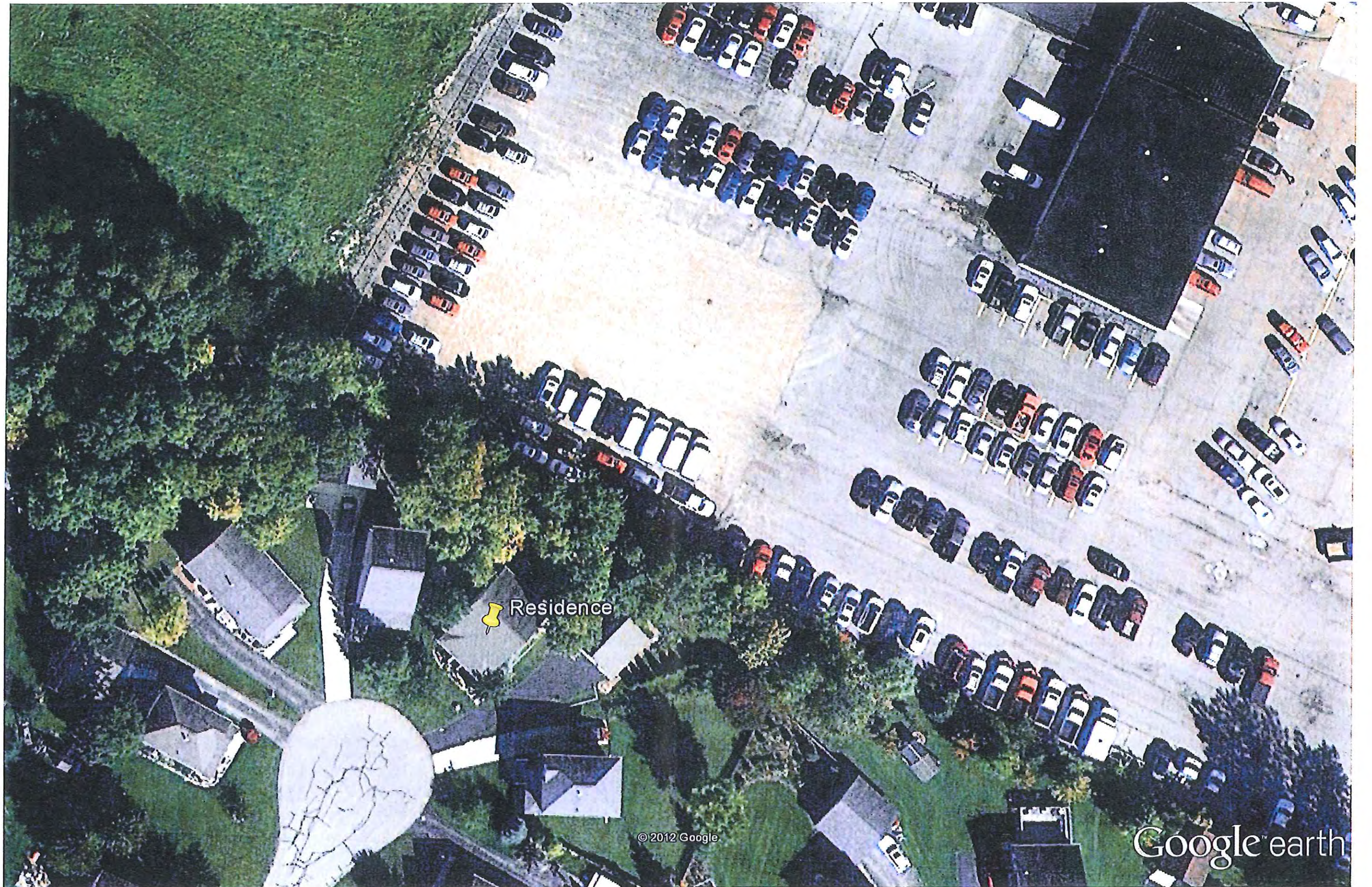
- At the April 16, 2012 meeting, a board member pointed out that I chose to live behind a car dealership. This is a fact; however, not having ever lived behind a dealership in the past, I didn't realize the only inventory control system they have is a car horn. Krug associates will allow a horn to honk until they locate the car. Moreover, at the April 16, 2012 meeting, the Krug representative stated that the vehicles parked at the south of their lot are mostly employee cars or cars waiting to be picked up. However, behind my home is one or two rows of (what appear to be new) cars with a large gap and then more cars. The gap is used for vehicle delivery. There is a semi-truck parked there several times a week. The semi-truck engine runs and vehicles are unloaded (or loaded in some cases). I understand deliveries are an essential part of business. However, the car horn honking is not a necessity of business. Using the horn to locate cars exemplifies a total disregard for their residential neighbors. A proper buffer zone would help suppress these noises; both the validated and the senseless.

Again, I appreciate the opportunity to express my concerns. I look forward to working collectively on an amicable solution for both the commercial property owner as well as the residential property owners.

Sincerely,

Jenny Carrender



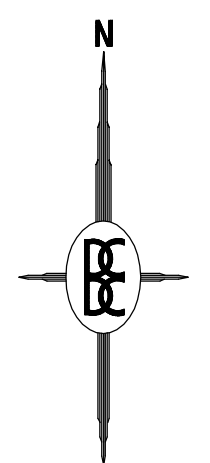
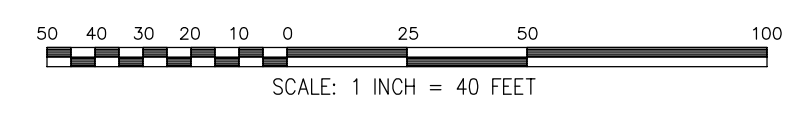


Residence

© 2012 Google

Google earth





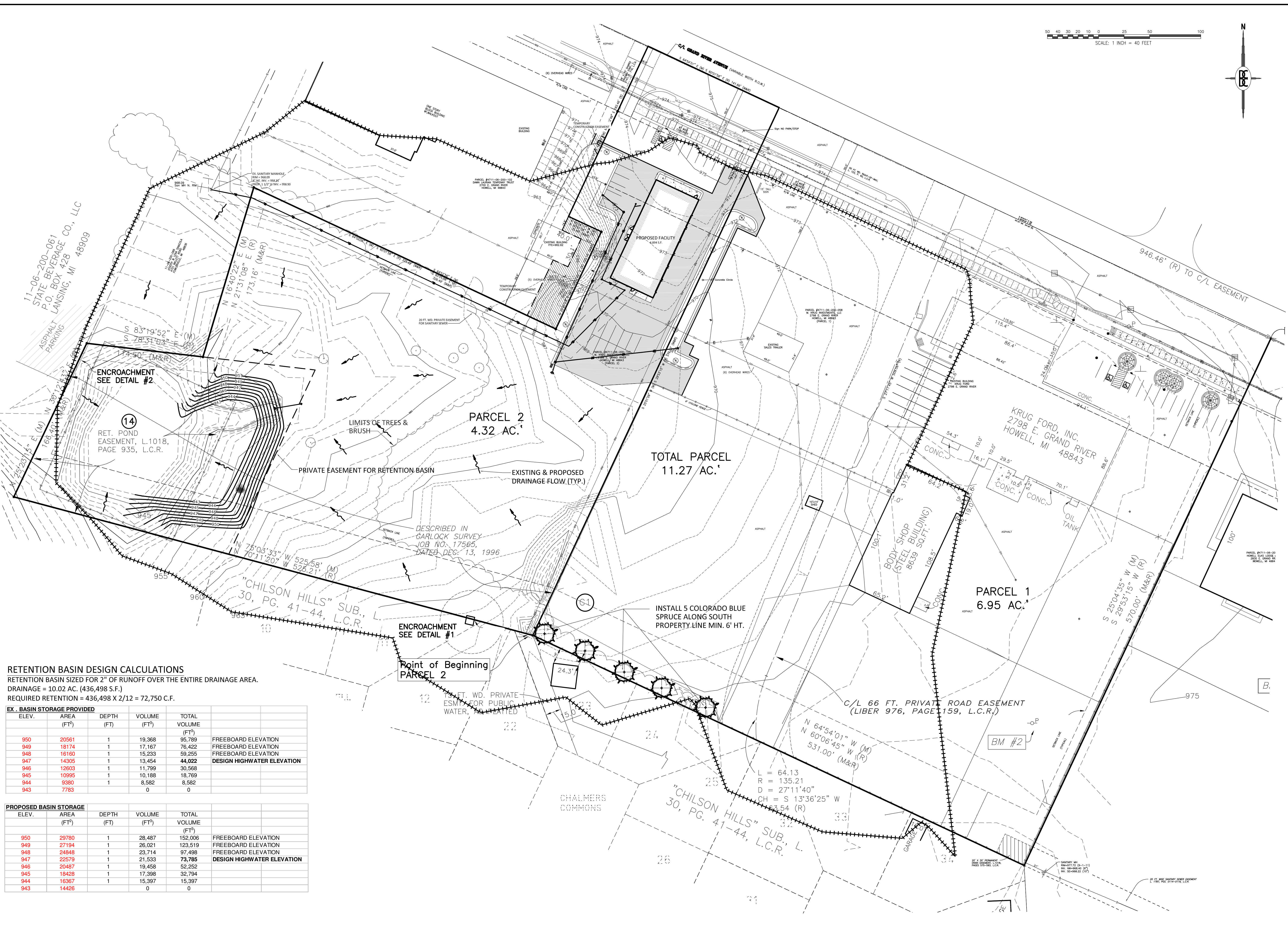
THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION SHOWN ON THIS PLAN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011
TITLE: OVERALL SITE PLAN

NO	BY	DATE	REVISION PER
1	TD	5-2-12	
2	TD	2-21-12	
3	TD	1-12-12	

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 40'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 12





2911 Dorr Road
 Brighton, MI 48116
 810.227.5225
 810.227.3420 fax
 genoa.org

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Planning Director

DATE: April 13, 2012

RE: Krug Quick Lane – Site Plan/Special Land Use

I have reviewed the revised site plan (dated 4/4/12), Environmental Impact Assessment (dated 4/4/12), and Spill Prevention Control and Countermeasure Plan (dated 3/16/12) proposing development of a new Krug Quick Lane automotive service facility located at 2798 E. Grand River, Howell. My review of the revised submittal was focused on compliance with the outstanding items discussed at the March 12, 2012 Planning Commission meeting at which this item was recommended for approval.

The PC required that the applicant meet with the adjacent homeowners association (Chilson Hills) to address the concerns of their letter dated March 12, 2012. I spoke with the secretary of the Association and she indicated that the meeting did occur and Krug has taken the following action:

- Two lights have been directed away from the homes;
- An announcement speaker impacting the residential has been removed.

The only outstanding item of concern for the homeowners is the establishment of a landscaped buffer along the shared property line. The PC requested that the applicant work with the Township to create a buffering plan along the south side of the site. The applicant has not contacted me regarding this requirement therefore I would like to make the following recommendation to the Township Board:

SUPERVISOR

Gary T. McCririe

CLERK

Paulette A. Skolarus

TREASURER

Robin L. Hunt

MANAGER

Michael C. Archinal

TRUSTEES

H. James Mortensen
 Jean W. Ledford
 Todd W. Smith
 Steven Wildman

Ordinance Requirement	Existing		Staff Recommendation
	East Side	West Side	
<ul style="list-style-type: none"> • 50' Buffer Zone • 6' wall or 4' berm • 53 Canopy Trees • 106 Evergreen Trees • 212 Shrubs 	<ul style="list-style-type: none"> • 0' Buffer • 6' Fence • No trees or shrubs 	<ul style="list-style-type: none"> • 250+' Buffer • No wall or berm • Existing landscaping includes multiple canopy trees and scrub shrubs 	<p>Year 1 (2012) - Install 20' buffer along the east side of the south property line adjacent to the existing fence.</p> <p>Years 2+ - Install 4 evergreen trees per year along the south property line moving from east to west until the Ordinance requirement for evergreen trees are met.</p>

In consideration of the aforementioned, I recommend the following action in this regard:

Recommendation of Special Use Permit: I recommend approval of the Special Land Use Permit with the following conditions:

- 1.) Parcels 4711-06-200-058 and 4711-06-200-103 will be combined into one parcel.
- 2.) The petitioner shall work with the Township Planning Director to develop a buffering plan along the south side of the combined parcels.
 - As stated above, I recommend the Board consider the following course of action in regard to this requirement:
 - o This plan shall include the establishment of a 20 feet wide (20') greenbelt in the first year (2012) with the addition of 4 evergreen trees per year beginning in year 2013. The evergreen trees shall be planted with 2 trees per each 20 linear feet along the property line placed from east to west. Tree plantings shall continue until the ordinance requirement for evergreen trees along the south line is met.
- 3.) This Special Land Use is approved because it has been found to comply with the requirements of Sections 19.03 and 7.02.02(k) of the Township Zoning Ordinance.

Recommendation of Impact assessment (dated 04-04-12): I recommend approval of the impact assessment with the following conditions:

- 1.) The Spill Prevention Control and Countermeasure Plan is included in the approval.
- 2.) The petitioner shall document the retrofits to the existing light fixtures as stated in Item E so that the Township can verify this item is complied with.

Recommendation of Site Plan (dated 04-04-12): I recommend approval of the site plan with the following conditions:

- 1.) The Buffering Plan as required by condition of Special Land Use approval shall be submitted prior to issuance of the Land Use Permit.
- 2.) The proposed lighting shall meet the Township Ordinance. Additional lighting shall not be installed on the building if the location exceeds current ordinance footcandle standards.
- 3.) Additional detail shall be provided on the plans regarding the banked dumpster location to ensure fit and function.
- 4.) The petitioner shall satisfy the requirements of the Township Engineer prior to issuance of a Land Use Permit. This will include providing a Storm Water Easement in recordable form prior to issuance of a Land Use Permit.

Should you have any questions concerning this matter, please do not hesitate to contact me.

**GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
MARCH 12, 2012
6:30 P.M.**

MINUTES

CALL TO ORDER: The meeting of the Genoa Charter Township planning Commission was called to order at 6:31 p.m. Present constituting a quorum were Barbara Figurski, Chairman Doug Brown, John McManus, Lauren Brookins, and Diana Lowe. Also present were Township Planner Kelly VanMarter and Brian Borden of LSL.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion by Barbara Figurski and support by John McManus, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: *(Note: The Board reserves the right to not begin new business after 10:00 p.m.)*

OPEN PUBLIC HEARING # 1... Review of special use application, impact assessment and site plan for a proposed 4,894 sq.ft. oil change facility located at 2798 E. Grand River, Howell. Sec. 6., petitioned by M. Krug Investments.

Dan Retherford of Krug Ford, Andy Klein of Rand Construction, and Brent LaVanway of Boss Engineering addressed the Planning Commission regarding the petition.

Mr. Klein presented the proposed building materials to the Planning Commission and gave a rough overview of the proposed building's exterior.

Brian Borden of LSL reviewed his letter dated March 6, 2012. The property in question is actually two contiguous parcels. The zoning ordinance and use requirements have a minimum frontage requirement for this type of use. This parcel does not meet that requirement alone, but when joined with the other parcel it does. Mr. Borden suggested that the applicant is willing to join those two parcels.

The zoning and buffer requirement for this parcel has a substantial setback. The vegetation there is mature and mostly deciduous. The applicant is seeking that the existing vegetation be retained. The petitioner admits there is no buffer

3-12-12 APPROVED PC minutes.

between the fence and where the cars are parked. Some of these are new vehicle, some used, and some employee vehicles.

Chairman Brown discussed the letter received from Chilson Hills Homeowners Association today. The petitioner agreed to review the letter and whether they would be willing to install a buffer zone to assist with noise control. The petitioner indicated that the berm was knocked down because of lot theft. The petitioner asked if the buffer would alleviate the issue with lighting and exhaust fumes. Chairman Brown indicated that he felt it may. The petitioner also indicated a willingness to meet with some representatives of Chilson Hills Homeowners Association to work out a mutually agreeable plan. Ms. Murphy from the Association was present and indicated that if Mr. Retherford met with their Board, it would be helpful.

The petitioner responded to some of the other issues listed in the Chilson Hills letter of March 12, 2012. He feels that the issues regarding parking and the Quick Lane oil change aren't realistic. The oil change cars would not be left overnight. Noise control and pollution would not be increased because the vehicles would not be near the back of the lot.

Brian Borden indicated that the building is encroaching onto the setback. The applicant has acknowledged this and plans to address it before the ZBA. He also addressed the parking and how it encroaches into the required setback. The petitioner will provide the documentation in the impact statement.

Brian Borden addressed the proposed materials for the building. The parking lot is on three sides of the building pursuant to the drawings. The material requirements are met on the front side of the building. The west side and rear of the building do not meet the material restrictions. The ordinance requires architectural detail and/or design features. Chairman Brown and the Planning Commission did not voice any objections to the plan as submitted as it relates to the building materials proposed.

The proposed loading zone was discussed. It is deficient in size by approximately three feet. The Planning Commission has the authority to modify that requirement. The petitioner indicated that the overhead wires were taken into account when determining the size. The Planning Commission is willing to allow the current size to remain.

The greenbelt plantings are insufficient due to parking and the sidewalk on the north side. There is room to do a hedgerow and the petitioner is proposing to install one. This must be cleared with MDOT prior to installing it. Brent LaVanway from Boss Engineering indicated that the shrubs are the only reason for contacting MDOT and therefore, he does not believe this needs to be done. He was concerned that MDOT will require more changes to be made to parking, etc. The Planning Commission suggests that the petitioner contact MDOT.

3-12-12 APPROVED PC minutes.

Waste receptacles were addressed. No proposed enclosure is on the plan. The applicant claims it is shared with existing receptacles on the dealership portion of the property. These are currently located at the southeast corner of the property.

Lighting was discussed by Brian Borden. The petitioner is willing to install lower wattage bulbs as the current bulbs burn out in an effort to lessen the light that is created on this site. The petitioner will explore this prior to meeting with the Chilson Hills Board. The petitioner will look into which light is shining into a home and will take steps to correct that.

The second wall sign request was addressed. This is discretionary. The petitioner believes that the view from the west is not clear and therefore, they would request an additional sign on that side. This is standard signage from Ford. The total square footage is less than what is permitted for the first sign. They will add this to the environmental impact statement.

Tesha Humphriss reviewed the February 28, 2012 letter from Tetra Tech. As it relates to storm water, a full site plan approval could be done or nothing could be done. The argument to review the entire site is that this is a substantial change to the site and they are changing the impervious area and changing the pipes. Alternately, the argument to do nothing is that they are decreasing the impervious area and there is no evidence of flooding. She believes the petitioner should do the existing calculations for the pond and bring it to current standards. She feels this is a compromise that both sides could live with. She addressed the proposed outlet of the storm sewage and water pipe. The water needs to be dissipated and slowed down. A sedimentation basin or something to slow the water should be installed at the pond. The petitioner agreed to do that. The proposed sanitary sewage system lead was discussed. The petitioner indicated the specifics of that would be provided during construction plan reviews.

Brent LaVanway from Boss Engineering agreed to provide the calculations for the basin that Tesha Humphriss needs. The petitioner will provide documentation of what they plan to do for storm water drainage. They will add it to the construction detail plans. The petitioner has not provided the profile views regarding utilities to the Township yet. They will do so within the construction details. The Township Engineer would prefer to see all of these on the site plan.

The Brighton Fire Department letter of March 2, 2012 indicates that their concerns have all been addressed.

The impact assessment was reviewed. Most of the concerns of the Planning Commission were addressed earlier this evening. The petitioner should delete the portion of E that discusses Genoa Township's site plan review process controlling fumes, vibration and smoke.

3-12-12 APPROVED PC minutes.

The PIP should be changed to reflect Livingston County Sheriff Department and Brighton Fire Department.

The self certification will be signed and submitted to the Township.

Ms. Murphy of Chilson Hills addressed the Planning Commission. She expressed hopes that the issues of noises, lighting and fumes are seriously considered and addressed by the Planning Commission.

Planning Commission disposition of petition

- A. Recommendation of Special Use Application.
- B. Recommendation of Impact Assessment dated 2-21-12.
- C. Recommendation of Site Plan dated 2-21-12.

Motion by Diana Lowe to recommend the approval of the special use application subject to:

- 1. Approval of the impact assessment and site plan;
- 2. Compliance with the Brighton Area Fire Department letters of 11/29/2011 and 3/2/2012;
- 3. ZBA approval of the front setback variance;
- 4. The petitioner combines the two existing lots;
- 5. Compliance with article 19.03.

Support by Barbara Figurski. Motion carried unanimously.

Motion by Barbara Figurski to recommend approval of the impact assessment, subject to:

- 1. The PIP plan dated 3/1/12 is to be attached with the corrections as noted;
- 2. Approval of the special use application.

Support by Diana Lowe. Motion carried unanimously.

Motion by Diana Lowe to recommend approval of the site plan, subject to:

- 1. Approval of the special use application and impact assessment;
- 2. The petitioner is going to work with the Township to develop a buffering plan on the south side of the site;
- 3. Modification of the loading area;
- 4. Additional sign due to visibility;
- 5. Applicant will work with MDOT at their discretion regarding the shrubbery row;
- 6. The lighting for the Quick Lane facility will meet the zoning ordinance;

3-12-12 APPROVED PC minutes.

7. Agreement by the petitioner to “bank” property that may be used in the future for a dumpster;
8. The petitioner will work with the homeowners association to reduce current candle power of current site as the bulbs need to be replaced;
9. The petitioner will adjust the lighting that is shining directly into a residential home;
10. The petitioner obtains a variance from the ZBA;
11. That construction details are put on the site plan;
12. That the petitioner comply with the Tetra Tech letter. Under drainage and grading #1, petitioner to complete calculations to determine the necessary land to restrict for future storm water detention and conveyance in the form of a recordable easement. Under #2, they will provide a method for dissipation of water. Under #4, they will provide a swale to direct water away from the existing shed; and
13. The petitioner adheres to 24.10 regarding parking.

Support by Barbara Figurski. Motion carried unanimously.

Administrative Business:

- *Staff report. Kelly VanMarter updated the Planning Commission as to possible agenda items for the April meeting.*
- *Approval of February 13, 2012 Planning Commission meeting minutes. Barbara Figurski. Support by John McManus. Motion carried unanimously.*
- *Member Discussion*

Adjournment. Motion by John McManus to adjourn the meeting. Support by Barbara Figurski. Motion carried unanimously. Motion adjourned at 8:35 p.m.

Kristi Cox

**APPLICATION FOR SPECIAL LAND USE
GENOA TOWNSHIP**

APPLICANT NAME* & ADDRESS: M. Krug Investments L.L.C.

OWNER NAME* & ADDRESS: 2798 E. Grand River Ave., Howell

SITE ADDRESS: Same PARCEL #(s): 4711-06-200-103

APPLICANT PHONE: (517) 546-0244 OWNER PHONE: ()

Location and brief description of site and surroundings:
The area of the proposed development is a automobile dealership vehicle display area. To the east is the existing dealership showroom and vehicle maintenance facility and to the west is a commercial strip center.

Proposed Use:
Minor vehicle maintenance.

Describe how your request meets the Zoning Ordinance General Review Standards (section 19.03):

- a. Describe how the use will be compatible and in accordance with the goals, objectives, and policies of the Genoa Township Comprehensive Plan and subarea plans, and will promote the Statement of Purpose of the zoning district in which the use is proposed.

Because the site is currently vehicle sales and service related, with the minor vehicle maintenance taking place in the existing facility, the new facility will fit into the current use.

- b. Describe how the use will be designed, constructed, operated, and maintained to be compatible with, and not significantly alter, the existing or intended character of the general vicinity.

The architectural and site design have been created to tie into the existing facility.

- c. How will the use be served adequately by essential public facilities and services such as highways, streets, police and fire protection, drainage structures, water and sewage facilities, refuse disposal and schools?

The facility has access onto Grand River. The site once constructed will reduce the amount of impervious surface on the property. Because of the use the facility will have little impact on the public utilities.

- d. Will the use involve any uses, activities, processes, or materials potentially detrimental to the natural environment, public health, safety, or welfare by reason of excessive production of traffic, noise, vibration, smoke, fumes, odors, glare, or other such nuisance? If so, how will the impacts be mitigated?

The storage and disposal of vehicle fluids will be in compliance with local, state and federal requirements.

e. Does the use have specific criteria as listed in the Zoning Ordinance (sections 3.03.02, 7.02.02, & 8.02.02)?
If so, describe how the criteria are met.

Sec. 3.03.02 - Nothing. Sec. 7.02.02 - All work will take place within the building in accordance with local, state and federal requirements. Sec. 8.02.02 - Nothing.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION ARE TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF. I AGREE TO DESIGN, CONSTRUCT AND OPERATE, AND MAINTAIN THESE PREMISES AND THE BUILDINGS, STRUCTURES, AND FACILITIES WHICH ARE GOVERNED BY THIS PERMIT IN ACCORDANCE WITH THE STATED REQUIREMENTS OF THE GENOA TOWNSHIP ZONING ORDINANCE, AND SUCH ADDITIONAL LIMITS AND SAFEGUARDS AS MAY BE MADE A PART OF THIS PERMIT.

THE UNDERSIGNED Dan Retherford STATES THAT THEY ARE THE FREE OWNER* OF THE PROPERTY OF PROPERTIES DESCRIBED ABOVE AND MAKES APPLICATION FOR THIS SPECIAL LAND USE PERMIT.

BY: Krug Ford-Concola

ADDRESS: 2798 E. Grand River Ave., Howell

*Submit a letter of Authorization from Property Owner if application is signed by Acting Agent.

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Mike Krug of Krug Ford-Concola at (517) 546-5642
Name Business Affiliation Fax No.

Note: This application must be accompanied by a site plan review application and the associated site plan review submittal requirements. (The Zoning Administrator may allow a less detailed sketch plan for a change in use.)

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: [Signature] DATE: 11/10/2011

PRINT NAME: Dan Retherford PHONE: 517-546-0244

ADDRESS: 2798 E. Grand River Ave., Howell

GENOA TOWNSHIP
APPLICATION FOR SITE PLAN REVIEW

NOV 18 2011
 RECEIVED

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS*: M. Krug Investments L.L.C.

OWNER'S NAME & ADDRESS: 2798 E. Grand River Ave., Howell

SITE ADDRESS: Same PARCEL #(s): 4711-06-200-103

APPLICANT PHONE: (517) 546-0244 OWNER PHONE: ()

LOCATION AND BRIEF DESCRIPTION OF SITE: Existing Ford, Lincoln Mercury Dealership on Grand River Ave. in Howell

BRIEF STATEMENT OF PROPOSED USE: Service Center for vehicle maintenance including oil changes, fluid level and filter check and replacements.

THE FOLLOWING BUILDINGS ARE PROPOSED: Oil Change facility with six service bays and a customer waiting area.

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Krug Ford-Lincoln

ADDRESS: 2798 E. Grand River Ave., Howell

** If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Thom Dumond of Boss Engineering at (517) 548-1670
 Name Business Affiliation Fax No.

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: [Signature] DATE: 11/10/2011
 PRINT NAME: Dan Retherford PHONE: 517-546-0244
 ADDRESS: 2798 E. Grand River Ave., Howell

Cheryl A. Williams
Chilson Hills Homeowners Association
c/o Pinnacle Condominium Management
2320 Washtenaw Ave., Suite 200
Ann Arbor, MI 48104
March 12, 2012

Kelly Van Marter
Planning Director
Genoa Charter Township
2911 Dorr Rd
Brighton, MI 48116

Planning Commission:

I am writing on behalf of the board and residents of the Chilson Hills Homeowners Association regarding the Special Land Use Permit being requested by M. Krug Investments, LLC. A number of our residents have expressed concerns to the board of the homeowners association about the proposed oil change facility, and I would like to present these here on behalf of the neighborhood.

Three of the streets in our neighborhood abut the Krug property (Springwell, Chalmers, and Ventnor), and residents at the ends of these streets already deal with light pollution, noise, and exhaust fumes. We are concerned about the impact of an additional facility with a potential 660 additional vehicles per day (see section I of the Impact Assessment dated 02/12/12). The following are areas of particular concern:

Noise control

There is very little in the way of a noise barrier between the proposed facility and the Chilson Hills neighborhood. Although there is a field located along the southwestern portion of the property that originally provided a small buffer for some of the homes when the neighborhood was built 15 years ago, this field was clear-cut in 2010 and 2011 and whatever noise barrier the trees and brush provided has been significantly reduced. In addition, this does not span the width of the property. In talking to homeowners in the neighborhood, we heard complaints about noise from the existing facility (such as employees using the panic button to locate cars parked at the rear of the property, leaving the phone/loudspeaker on after business hours), so we are greatly concerned about additional noise creating a livability concern for our neighborhood.

We would like to request that Krug erect and maintain some sort of screening/landscaping to separate the Chilson Hills neighborhood from the new building. One way to do this would be for Krug to plant and maintain a row of deciduous trees (pines, spruces, etc.) along the south side of the property, along the pavement indicated in the site plan, to help buffer noise from the houses located on Springwell, Chalmers, and Ventnor. Homeowners in the western portion of our subdivision have also requested that the field be allowed to return to its natural state to provide additional separation from the proposed building.

We also would like to request that Krug be required to keep the service bay doors shut during work to help mitigate additional noise.

Lighting

Section E of the Impact Assessment notes that:

Much of the site will be illuminated by the existing light fixtures on the site. Several of the existing fixtures will be removed or relocated to make room for the new facility. Wall mounted fixtures will be added to the building to supplement the existing lighting.

Kelly Van Marter
March 12, 2012
Page 2

The existing lighting on the site is problematic for homes in our neighborhood. We appreciate the need to maintain a safe, well-lit environment; however, at least one of the fixtures is currently mis-aimed so that it illuminates horizontally, directly into a house on Chalmers. Given the current lighting situation, we would like to request that special attention be paid when lighting the new facility to minimize light intrusion into the homes in our neighborhood while maintaining a secure environment for the dealership / oil change facility. This may require working with the adjoining homeowners to determine the best lighting configuration.

Exhaust fumes

The impact assessment acknowledges that one impact of this proposed facility is exhaust emissions from an increased number of vehicles. Homeowners of neighboring homes have remarked that from time to time, exhaust fumes have been noticeable from the current body shop. Given the current situation and that the proposal seeks to increase traffic by ~660 vehicles/day, we would like to register a particular interest in how “nuisances such as fumes, vibration, and smoke” will be “controlled through Genoa Township’s site plan review process” and are specifically interested in why it was stated further that “[n]one of these concerns will be associated with the proposed facility” (Section E, Impact Assessment).

We’d like to be as good neighbors as possible to the Krug dealership, and we would like Krug to return the favor and help us maintain a quiet, livable neighborhood without adversely affecting our quality of life or property values.

We appreciate the Planning Commission taking our concerns into consideration as you consider the Special Land Use Request for the new building.

Sincerely,

Cheryl A. Williams
secretary@chilsonhillsHOA.org
2012 Secretary, Chilson Hills Homeowners Association

**Tenpenny Furniture
2700 E. Grand River Ave.
Howell, MI 48843**

March 12, 2012

Genoa Township Planning Commission
2911 Dorr Road
Brighton, MI 48116

RE: Krug Quick Lane, Genoa Township, Livingston County

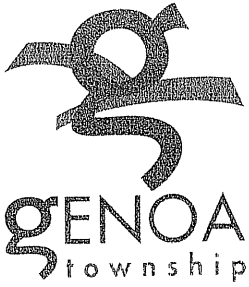
Dear Planning Commission members,

This letter is in response to the proposed Krug Quick Lane facility located adjacent to my property on Grand River Avenue. After reviewing the plans and building elevations, I approve of and endorse the project. I believe the design of the building will enhance the area and provide a needed service for the community.

Sincerely,

A handwritten signature in black ink, appearing to read "John Tenpenny", written in a cursive style.

Mr. John Tenpenny



MEMORANDUM

2911 Dorr Road
Brighton, MI 48116
810.227.5225
810.227.3420 fax
genoa.org

TO: Andy Klein, Rand Construction
FROM: Kelly VanMarter, Planning Director
DATE: October 11, 2011
RE: Krug Oil Change – 4711-06-200-103 (vacant Grand River)

In regards to the above mentioned, the tap fees will be as follows:

Assuming a 4,600 sq. ft. oil change facility with 6 service bays:

1 REU per premise plus 0.15 per stall: 2 REUs

New Connection Charge

Water	2 REU @ \$5,000	\$10,000
Sewer	2 REU @ \$5,500	\$11,000

Total Amount Due: \$21,000

Connection Fees must be paid at time of land use permit issuance.

A meter package will also need to be purchased including the appropriate sized meter and a MIU (meter interface unit) prior to land use permit issuance. I trust this satisfies your request. Should you have any questions please feel free to contact me at 227-5225.

SUPERVISOR
Gary T. McCririe

CLERK
Paulette A. Skolarus

TREASURER
Robin L. Hunt

TRUSTEES
H. James Mortensen
Jean W. Ledford
Todd W. Smith
Steven Wildman

MANAGER
Michael C. Archinal



LSL Planning, Inc.

Community Planning Consultants

March 6, 2012

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director
Subject:	Krug Quick Lane – Special Use and Site Plan Review #2
Location:	2798 E. Grand River – south side of Grand River, east of Chilson Road
Zoning:	GCD General Commercial District
Applicant:	M. Krug Investments LLC 2798 E. Grand River Avenue Howell, MI

Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan (dated 2/21/12) proposing development of a new minor auto repair establishment within the Krug Ford/Lincoln-Mercury site. The site is located on the south side of E. Grand River and is zoned GCD General Commercial District. The request has been reviewed in accordance with the Genoa Township Master Plan and Zoning Ordinance.

A. Summary

1. We recommend the Township include a condition requiring the applicant to combine the two parcels related to this request.
2. The Commission may require a berm or screen fencing to protect the adjacent residential properties to the south, or could deem the existing setback and vegetation sufficient to protect these residences.
3. The proposed building placement requires a front yard setback variance.
4. The applicant must demonstrate that the requirements of Section 24.10 are met with respect to the front yard parking encroachment.
5. The Planning Commission has approval authority over building elevations. In our opinion, the proposed elevations do not comply with the material and design requirements of Section 12.01.
6. The proposed loading area is slightly deficient in terms of its size; however, the Commission may modify the requirement.
7. The landscape plan is deficient in terms of greenbelt plantings; however, there is insufficient are to plant the required trees and the Commission may modify the requirement. MDOT approval is likely needed for any plantings within the right-of-way.
8. We recommend the applicant provide details of the existing dumpster to confirm compliance. If current standards are not met, we recommend the Township require improvements.
9. We recommend the Township require improvements to site lighting, such that it is more, if not fully compliant.
10. Planning Commission approval is required for the second wall sign.

B. Proposal

The applicant requests special use and site plan approval for development of a new “service center for vehicle maintenance including oil changes, fluid level and filter check and replacements” within the Krug dealership complex. This includes a new 4,894 square foot, 1-story building.

By definition, the proposed use is a minor auto repair establishment, which is allowed as a special land use in the GCD. The use is also subject to the specific requirements of Section 7.02.02(k). It is important to note that a request for a new special land use on a developed property provides the Township with an opportunity to require improvements to non-compliant site conditions.

C. Special Use Review

Section 19.03 of the Zoning Ordinance identifies the review criteria for Special Land Use applications as follows:

1. **Master Plan.** The Master Plan and Future Land Use Map identify the site and adjacent properties along Grand River Avenue as General Commercial. The properties to the south are planned for Medium Density Residential (5 units per acre).

The General Commercial classification includes “businesses which serve the requirements of the community at large including Genoa Township, Howell, Brighton, and pass-by traffic along Grand River Avenue.”

The site is already developed with an automobile related use and the addition of a maintenance and minor repair facility is expected to complement the established use and planned character of the area.

2. **Compatibility.** As noted above, the proposed use will be part of a larger automobile dealership complex and is expected to complement the established use, as well as the commercial character along Grand River Avenue.

Our only potential concern under this standard would be any impacts upon the residential properties south of site. The Zoning Ordinance requires screening between commercial and residential uses; however, the proposed layout provides a 355-foot setback and there is existing dense vegetation between the properties. Despite the separation and vegetation between these uses, the excessive light intensity (described in Section E of this letter) could also have an impact upon these residences.

3. **Public Facilities and Services.** The site is located on Grand River Avenue amongst already developed properties. As such, it is expected that necessary facilities and services are in place to properly serve the proposed development. With that being said, the applicant must address any issues identified by the Township Engineer.
4. **Impacts.** As a site that is currently paved and used for automobile storage, impacts upon the environment and natural features are not anticipated by its general development. Additionally, given the nature of the proposed use, the applicant has provided a Pollution Incidence Prevention (PIP) Plan as required by Section 7.02.02(k).
5. **Mitigation.** The Township may require mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed activities.

D. Review of Use Requirements

Section 7.02.02(k) of the Zoning Ordinance identifies the following use requirements for minor auto repair establishments. As a side note, we have only applied those requirements applicable to this request. (Standards 2, 8, 9, 10, 12 and 13 are specific to gasoline service stations.)

1. **There shall be a minimum lot area of one (1) acre and minimum lot frontage of two hundred fifty (250) feet.**

The Krug Dealership complex is currently situated on two separate parcels. On its own, Parcel 2 (subject site) does not meet the frontage requirement; however, on the cover sheet, the applicant states that the two parcels will be combined.

The resulting property will contain 11.27 acres and approximately 670 feet of frontage along Grand River. Since the combination is necessary for compliance, we recommend the Township include this item as a condition of approval.

- 3. Access driveways shall meet the standards of Article 15; turning movements may be restricted in consideration of traffic conditions. Only one driveway shall be permitted from each street unless the Planning Commission determines additional driveways will be consistent with the purpose of Article 15.**

The full dealership property maintains three existing drives, one of which is shared with the adjacent property to the west. The site plan notes there is a recorded easement for the shared drive and no new curb cuts are proposed. Provided the Township Engineer concurs, we are of the opinion this criterion is met without the need for further restrictions given the size and layout of the dealership property.

- 4. Where adjoining residentially zoned or used property, a solid fence or wall six (6) feet in height shall be erected along any common lot line. Such fence or wall shall be continuously maintained in good condition. The Planning Commission may approve a landscaped berm as an alternative.**

The site is adjacent to residential property along its southerly lot line (rear). However, the proposed building provides a 355-foot rear yard setback and the pavement ends approximately 250-plus feet from the rear lot line. Additionally, there is existing dense vegetation screening the residential land uses and the applicant states that this “buffer” area will be preserved.

The Commission may require the fence or berm noted, or could deem existing conditions (setback and landscaping) sufficient in terms of protecting the residential properties from adverse impacts. Although there is no waiver/modification listed for this criterion, the Commission generally has some amount of discretion over landscaping and screening requirements, especially given the presence of existing vegetation.

- 5. All repair work shall be conducted completely within an enclosed building. Garage doors shall not face any public roadway except as approved by the Planning Commission under the following circumstances:**
 - a. For through garages where doors are provided on the front and rear of the building;**
 - b. Garages located on corner or through lots; and,**
 - c. Where the Planning Commission determines that a rear garage would have a negative impact on an abutting residential district.**

Under these circumstances the Planning Commission may require additional landscape screening above and beyond what is required for street frontage landscaping.

The applicant has included a note on Sheet 3 stating that all work will be conducted inside the building. Additionally, all overhead doors are on the east side of the building, which does not face the roadway.

- 6. There shall be no outdoor storage or display of vehicle components and parts, supplies, or equipment or other merchandise, except within an area defined on the site plan approved by the Planning Commission and which extends no more than ten (10) feet beyond the building.**

The applicant has included a note on Sheet 3 stating that no outdoor storage is proposed.

- 7. Storage of wrecked, partially dismantled, or other derelict vehicles is prohibited, unless such storage is required under police or court order. Vehicles shall not be stored outdoors for more than seven (7) days in any thirty (30) day period.**

The applicant has included a note on Sheet 3 stating that no such vehicles will be stored on site.

11. The applicant shall submit a Pollution Incidence Protection Plan (PIPP) as part of the Impact Assessment. The PIPP shall describe measures to prevent groundwater contamination caused by accidental gasoline spills or leakage, such as: special check valves, drain back catch basins and automatic shut off valves.

The revised submittal includes the required PIP Plan (dated 3/1/12). The PIP Plan and a note on Sheet 3 of the site plan indicate that all fluids (new and waste) will be stored inside and that storage and disposal of these fluids will meet all local, state and federal requirements. The Commission should consider any comments provided on the PIP Plan by the Fire Department. Our only minor comment is that Section 2.2 should be revised to note that the site is in Genoa Township, as opposed to the City of Howell.

E. Site Plan Review

1. Dimensional Requirements. As shown in the table below, the site plan has been reviewed for compliance with the dimensional standards of the GCD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height (feet)	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
GCD	1	150	70	15	50	20 front 10 side/rear	35	35% building 75% impervious
Proposed	11.27	Approx 670	44.97	30 (E) 27 (W)	355	<i>Front encroaches into r-o-w</i> 285 rear	19.3	1% building 7% impervious

The dimensional deficiencies relate to the front yard setbacks – both building and parking. In response, the applicant states that they will seek a variance for the building setback and notes that the parking encroachment is an existing condition. The applicant must demonstrate that the standards of Section 24.10 are met as it relates to the front yard parking encroachment. If met, this may be considered a nonconforming condition that does not require a variance.

2. Building Materials and Design. The elevation drawings propose a combination of brick, block and glass as the primary building materials. Table 12.01.03 identifies the maximum percentages allowed for certain materials on building façades facing a street or parking lot. The front façade (facing Grand River) is comprised of brick and glass, which complies with requirements. The west and south façades are constructed almost entirely of block, which exceeds the maximum percentage allowed as these elevations face parking lots.

Additionally, Section 12.01.06 requires buildings to provide architectural features that are not present on this flat roof building. As such, we recommend the applicant upgrade the building materials and design in accordance with Section 12.01 of the Township Zoning Ordinance. Ultimately, the proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

- 3. Parking.** Section 14.04 requires 2 parking spaces per service bay plus 1 space for each employee. Based upon the information provided, the project requires a total of 20 parking spaces, while 25 are provided. The plan includes 1 barrier free space, which complies with the requirements of Section 14.05.
- 4. Loading.** Given the size of the building, Section 14.08.08 requires 1 loading space, which is to be located in a rear or side yard not directly visible to a public street. The site plan identifies the required space along the rear of the building; however, it is slightly smaller than required – 10 x 46, as opposed to 10 x 50. The Commission may modify the 500 square foot requirement if the use will involve smaller delivery trucks – the applicant states that the largest delivery truck will be 45 feet long.

5. Landscaping. The following table is a summary of the landscaping required by Section 12.02:

Location	Requirements	Proposed	Comments
Front yard greenbelt (N)	4 canopy trees 20-foot width 2-foot tall hedgerow OR 3-foot tall masonry wall	0 canopy trees 3-foot width inside sidewalk 2-foot tall hedgerow (47 shrubs)	The current front yard parking encroaches into the r-o-w, although it is unclear how this occurred. Given the proposed layout, there is not sufficient room to plant the required canopy trees. Authorization is likely needed from MDOT for plantings in the r-o-w.
Buffer zone "C" (W)	17 canopy trees OR 17 evergreens OR 68 shrubs 10-foot width	7 canopy trees 40 shrubs 10-20-foot width	In compliance.
Parking	3 trees 250 s.f. of landscaped area	10 trees 20 shrubs 250+ s.f. of landscaped area	In compliance.

On Sheet 6, there are 11 plantings towards the front of the property noted as "BV" that are likely the "CB" noted in the table. While this is a rather minor discrepancy, it needs to be corrected.

- 6. Waste Receptacle and Enclosure.** The site plan includes a note that the proposed use will share an existing dumpster with the auto dealership; however, the submittal does not show its location or design. As such, we cannot confirm compliance. We recommend the applicant provide details of the existing receptacle and enclosure to confirm compliance. If current standards are not met, we recommend improvements be required.
- 7. Pedestrian and Vehicular Circulation.** The plan includes a 7-foot wide concrete sidewalk along the front of the proposed building and also shows the existing 8-foot wide concrete sidewalk along Grand Rive Avenue. Our only concern is that the side entrance has doors very near the travel lane. In response, the applicant notes that bollards will be provided so as to avoid vehicular/pedestrian conflicts at this entry/exit point.

With respect to vehicular circulation, all drive aisles meet or exceed minimum dimensional standards.

- 8. Exterior Lighting.** The lighting plan includes a mixture of existing and proposed light fixtures. This portion of the site provides 3 existing light poles, 1 relocated light pole and 11 new wall mounted fixtures. It should be noted that the existing poles are nonconforming due to their height – 27'-6" where only 20' is allowed because the site is adjacent to residential property. However, the new fixtures are full cutoff and downward directed fixtures, per requirements.

The photometric plan provides a substantial number of readings that are well in excess of the maximum intensity allowed by Ordinance. What is difficult is determining how much of a factor the existing lighting plays in some of these readings.

For example, there are readings along the building that exceed the 10-footcandle maximum. If this is due entirely to the proposed fixtures, then they are not permitted. However, if these readings are elevated because of the existing nonconforming lighting, then the Commission may allow their continuance.

Our main concern is the fact that many of the readings are double and even triple the maximum allowed, which is why we recommend the applicant improve site lighting such that it is more, if not fully compliant. The focus of this recommendation is on the oil change portion of the site and not necessarily for the entire dealership property (although that would be a substantial improvement). In response to our first review, the applicant stated concerns over the costs related to improving site lighting. As such, this topic will likely warrant further discussion with the Commission.

9. **Signs.** The elevation drawings identify two wall signs – one each on the north and east sides of the building. The business is limited to no more than one wall sign, unless the Planning Commission authorizes a second sign in accordance with footnote (2) of Table 16.1. In order to allow the second sign, the Commission would need to make a finding that the building requires additional visibility due to obstructed views or building orientation.

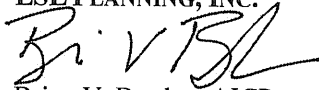
In terms of their size, we estimate the total sign area to be 75 square feet – 48 square feet on the north side and 27 square feet on the east. While these numbers are only an estimate (the submittal does not provide calculations), the total is within the maximum area allowed by Article 16.

10. **Impact Assessment.** A revised Impact Assessment (2/21/12) is included with the submittal. In summary, the revised Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic. Additionally, the project is not expected to generate sufficient traffic to warrant a traffic impact study.

Should you have any questions concerning this matter, please do not hesitate to contact our office. I can be reached by phone at (248) 586-0505, or via e-mail at borden@lsplanning.com.

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP
Senior Planner



TETRA TECH

February 28, 2012

Ms. Tesha Humphriss, P.E.
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Krug Quick Lane
Site Plan Review – February 22, 2012 Response Boss Engineering**

Dear Ms. Humphriss:

We have reviewed the revised site plan documents and the letter from Boss Engineering dated February 22, 2012 which was provided in response to the site plan review letter completed by Tetra Tech November 30, 2011 and offer the following additional comments. Only responses requiring further comment are included, all other responses were found to be acceptable by the reviewer.

GENERAL

- 1. The petitioner is showing a temporary grading easement for the adjacent property to the west of the site. If the intent is for any construction to take place outside of the owner's property, an easement agreement should be provided with the plan.*

Boss: A recorded easement will be provided to the Township prior to issuance of a land use permit.

TT comment: The petitioner did not respond to the concern about providing some type of grading solution to the drainage concern along the existing building. We recognize that it is not a large tributary area, but the storm water will run down the new slope and be trapped adjacent to the existing building. A swale needs to be constructed directing this runoff to the south away from the existing structure.

DRAINAGE AND GRADING

- 1. There is an existing retention basin located on the southwest corner of the property, which should be clearly shown on the drawings, along with the existing elevations, volume, and any details of existing structures. The petitioner states that the amount of impervious surface is reduced by approximately 2,600 square feet, so no additional storm water retention will be added as part of this project, if possible provide documentation from the original basin sizing calculations to verify that enough storage is provided.*

Boss: The existing retention basin has been added to the new overall site plan sheet. The retention basin was constructed a number of years ago with the construction of the original Krug Ford Facility. Since this initial phase the retention requirements from the Drain Commission have changed. To bring this project into compliance would require the removal of many of the large trees and underbrush around the existing basin. This would

Tetra Tech

123 Brighton Lake Road, Suite 203, Brighton, MI 48116
Tel 810.220.2112 Fax 810.220.0094 www.tetrattech.com

reduce the natural vegetative buffer which slows and filters the storm water flowing across the property.

TT comment: We recognize that the LCDC standards have changed since the original site plan was implemented. However, there are items in the new standards that should be implemented into this plan to improve the storm water management. Drainage calculations comparing the proposed design with the existing basin should be prepared, and then the extent of improvements can be better assessed. At a minimum the site would be enhanced by adding a sedimentation basin near the existing pavement. This could be sized to work in conjunction with the existing basin and being positioned near the existing pavement, not impact existing vegetation. It is possible that the combined size would meet the former standards while improving the quality of the storm water runoff. We suggest the petitioner review this approach and provide the requested calculations to support the design.

- 2. The plans show a small amount of rip rap at the proposed storm sewer end section. The impact assessment states that the current runoff gets to the basin by sheet flow and that existing vegetation filters out the sediment, will there be any sedimentation control measures taken at the end of the proposed piping?*

Boss: A rip rap detail has been added to the plans.

TT comment: Rip rap alone will provide some energy dissipation, however the concentration of that sheet flow to a point source outfall will likely result in erosion between the proposed outfall and the retention basin. The petitioner should account for some type of extended energy dissipation features, such as a sedimentation basin, or shallow pool to spread out the eventual discharge. Again this sedimentation basin may provide the necessary retention volume needed to bring the site into current compliance with drainage standards.

- 4. There is an area of steep grading proposed along the west property line, in the area where the temporary grading easement is called out. The existing steep slope will be increased as a result of the proposed grading. The petitioner needs to have an agreement from the owner of the adjacent property to permanently modify the existing grade. All proposed grading shall result in positive drainage in the direction of the existing drainage course, and not impact any existing structures. The petitioner should look into constructing a retaining wall in that area considering the existing slope is greater than recommended. Any slopes greater than 1:4 require additional soil erosion control measures such as slope stabilization.*

Boss: As noted on the plans, slope stabilization must be installed over this area.

TT comment: The petitioner did not provide a response to the concern about directing future runoff away from the existing structure at the bottom of the slope they plan to modify/increase. The grading at the toe of the slope needs to be revised to provide a route for the storm water to flow away from the structure.

- 5. Profiles of all proposed utilities should be provided, showing existing and proposed surface grades and all existing and proposed utilities to be crossed.*

Boss: Profiles will be provided as part of the construction submittal plan submittal.

TT comment: This is acceptable so long as all utility conflicts have been reviewed to ensure there will be no major changes to the site plan utility plan.

UTILITIES

1. *The petitioner shows a 502' long 6" sanitary sewer lead. We recommend installing the approximately 343 foot long portion of sanitary lead from the connection to the existing sewer by others to the 90-degree bend at the property line as an 8" sewer main to be owned, operated and maintained by the Sewer and Water Authority. The sewer lead should connect to the main using a wye connection installed just before the manhole. A long sanitary service lead poses maintenance issues.*

Boss: A meeting was held with township officials regarding sewer. At the meeting it was agreed the Township would extend the sanitary sewer to this property. From that point, Krug would extend a sanitary sewer lead to the new facility.

TT comment: The recommendation to extend the sanitary sewer closer to the development would be ideal (but not required), as sanitary service laterals of that length can become maintenance problems.

2. *Sewer profiles must be provided with elevations for both the existing and proposed sanitary sewer must be shown, including the location where the storm sewer crosses. An access and maintenance easement based on the main line sewer depth, shall be granted to the Sewer and Water Authority. This may impact the alignment along the adjacent property line.*

Boss: Profiles will be provided as part of the construction plan submittal.

TT comment: This comment was originally provided due to the lack of information provided on the sanitary sewer. Spot elevations should be provided at the minimum at the upstream and downstream ends of all proposed sewers along with existing information to ensure that adequate elevation is available for the proposed construction. The current plan includes no information showing that a gravity sanitary sewer lead can physically be constructed at the required 1% grade, or that there will be adequate distance from other existing or proposed utilities, or acceptable depth of cover.


We have listed areas where additional information is needed for us to recommend approval of the site plan. The Township should consider these issues in your action on the plan.

Please call if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.
Unit Vice President



Joseph C. Siwek, P.E.
Project Engineer

200-12736-12003

Copy: Brent W. LaVanway, P.E., Boss Engineering



Brighton Area Fire Department

615 W. Grand River

Brighton, Michigan 48116

810-229-6640 Fax: 810-229-1619

March 2, 2012

Amy Ruthig
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Krug Ford Quick Lane
2798 E. Grand River
Site Plan Review

Dear Amy:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on March 1, 2012 and the drawings are dated November 14, 2011 with latest revisions dated February 21, 2012. The project is based on a new building (service center). The plan review is based on the requirements of the International Fire Code (IFC) 2009 edition. Previous comments appear to be addressed by the applicant in the revised submittal.

Previous comments in our review letter dated November 29, 2011 numbers 1-7 appear to have been addressed by the applicants in the revised submittal dated February 21, 2012.

Specifications and measurements of addressed comments will be field verified on or about the final certificate of occupancy inspection.

If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in cursive script, appearing to read "J. Corcoran".

Jim Corcoran
Captain / Inspector



3121 E. Grand River Ave. Howell, MI 48843
 (517) 546-4836 Fax: (517) 548-1670 E-mail: be@bosseng.com

LETTER OF TRANSMITTAL

DATE 4/5/12	JOB NO. 11-190
ATTENTION Kelly VanMarter	
RE: Krug Quick Lane, Genoa Township, Livingston County	
Boss delivery	

TO
 Genoa Township Hall

GENOA TOWNSHIP

APR 05 2012

RECEIVED

WE ARE SENDING YOU Attached Under separate cover via _____ the following items:

- Shop drawings Prints Plans Samples Specifications
 Copy of letter Change order _____

COPIES	DATE	NO.	DESCRIPTION
2			Site Plan / Construction Plans (24" x 36")
2			Environmental Impact Assessment
2			Spill Prevention Control and Countermeasures Plan

THESE ARE TRANSMITTED as checked below:

- For approval Approved as submitted Resubmit _____ copies for approval
 For your use Approved as noted Submit _____ copies for distribution
 As requested Returned for corrections Return _____ corrected prints
 For review and comment _____
 FOR BIDS DUE _____ 20 _____ PRINTS RETURNED AFTER LOAN TO US

REMARKS

We have updated the Spill Prevention Plan and it is now signed and dated. We have incorporated the sanitary sewer profiles into the set. We have added a forebay type basin to the outlet of the new storm sewer system. A basin design has been added to the overall plan to show what is needed to meet the current County Drain Commission requirements. Also, an easement has been added around the entire basin area per the engineering's request. Drain is now directed around the small building at the base of the slope a long the west side of Krug.

COPY TO _____

SIGNED:

Thomas H. Dumond, R.L.A.



Aerial Photograph



Future Oil Change Facility

North

Buffer along south property line

Existing basin

**IMPACT ASSESSMENT
FOR
“KRUG QUICK LANE“**

**GENOA TOWNSHIP, LIVINGSTON COUNTY
MICHIGAN**

Prepared for:

**M. Krug Investments, L.L.C.
2798 E. Grand River
Howell, Michigan 48843
517.546.0244**

Prepared by:

**BOSS ENGINEERING COMPANY
3121 E. GRAND RIVER
HOWELL, MICHIGAN 48843
517-546-4836**

April 4, 2012

INTRODUCTION

The purpose of this Impact Assessment (IA) report is to show the effect that this proposed development has on various factors in the general vicinity of the project. The format used for presentation of this report conforms to the *Written Impact Assessment Requirements* guidelines in accordance with Section 18.07 of the published Zoning Ordinance for Genoa Township, Livingston County, Michigan.

DISCUSSION ITEMS

A. Name(s) and address(es) of person(s) responsible for preparation of the impact assessment and a brief statement of their qualifications.

Prepared By :
BOSS ENGINEERING COMPANY
3121 E. Grand River
Howell, Michigan 48843

Prepared For:
M. Krug Investments, LLC
2798 E. Grand River
Howell, Michigan 48843

B. Description of the site, including existing structures, man made facilities, and natural features, all-inclusive to within 100' of the property boundary.

The proposed Krug Quick Lane is located on 11.27 acres on the south side of Grand River Avenue just west of Krug Ford Lincoln Mercury. Approximately 6.75 acres of the property is currently being used by the automobile dealership. The remainder of the site (4.52 acres) has been left in its natural state and undeveloped except for a retention basin in the southwest corner of the property.

The property is higher along Grand River Avenue and slopes south and west to the existing retention basin area. The total elevation change across the property is approximately 32 feet. The undeveloped portion of the property is covered with scattered trees, brush and native grasses.

Existing utilities on-site and abutting the site include a 12" watermain along the south side of Grand River Ave., and a 8" watermain along the east side of the proposed building running through the center of the property. The sanitary sewer is located near the southwest corner of the property. The owner is working with Genoa Township to extend the sewer to the property. The storm sewer system is self contained on site.

Grand River Avenue is a five (5) lane roadway under the jurisdiction of the Michigan Department of Transportation (M.D.O.T.) with curb and gutter, and a center left turn lane.

Currently, an overhead utility service cuts across the southern half of the proposed site. Because of the utility, Krug has had to reduce the size of the building recommended by Ford Motor Company, and move the building forward into the front setback. The applicant has applied for a variance for a reduction in the front setback.

Also, a small portion of the existing parking lot currently extends into the Grand River Avenue right-of-way by 4 feet. Section 24.10 of the Genoa Township Ordinance states "Where a non-conforming front setback, parking lot setback or green belt is created as a result of additional road right-of-way width being acquired by a road agency, the building or parking lot may be improved or expanded without the need to obtain a variance from the ZBA, providing the following conditions are met:"

1. Conformed Prior to Right-of Way Widening – Even though Boss Engineering has been working on the Krug site since 1998, we do not have any record of the original site plan and how it related to the Grand River right-of-way. The asphalt was installed prior to Mike Krug purchasing the dealership which was in 1996.
2. Will Not Decrease Conformity – Our plan is to leave the front area untouched. Therefore, not decreasing the conformity.
3. Other Requirements Met – We are seeking a variance for the building setback due to an overhead utility service cutting through the property.

C. Impact on natural features: A written description of the environmental characteristics of the site prior to development, i.e., topography, soils, vegetative cover, drainage, streams, creeks or ponds.

As previously mentioned, the subject site slopes gradually from Grand River towards the southwest. The U.S.D.A. Soil Conservation Service "Soil Survey of Livingston County" indicates the soils to be as follows:

Percent of Site	Name	Percent Slopes
100%	Miami Loam	2-6%

The site contains no streams, creeks, lakes or wetlands per the National Wetland Inventory Plan prepared by the United States Department of the Interior, and site visit.

The undeveloped portion of the site contains a mix of trees, brush and grasses.

D. Impact on storm water management: description of soil erosion control measures during construction.

The existing storm drainage runoff is captured in a retention basin located at the southwest corner of the property. The area where the proposed oil change will be located is currently paved and part of the automobile dealership. The addition of the auto maintenance facility will reduce the amount of impervious surface by approximately 2,600 square feet. Therefore, no additional storm water retention or detention is proposed. An area has been set a side adjacent to the existing retention basin for expansion of the basin, if additional storage volume is needed at a later date. A forebay has been designed to collect and slow drainage from the proposed facility.

The Livingston County Drain Commissioner must issue a Soil Erosion Control permit to ensure proper soil erosion control measures are used during construction. All requirements will be met including temporary drainage control, temporary dust control and runoff control. The following methods will be used as required. Diversion berms, geotextile sediment control fences, diversion ditching, slope stabilization. Stone filters will be installed on catch basins, inlets and pipe inlets. Finish grades, redistribution of top soil and lawn with shrubbery will be installed upon building and paving construction completion. Pavements, swales, basins, etc will be cleaned after construction and properly maintained by Krug Ford.

At the time of construction, there may be some temporary dust, noise, vibration and smoke, but these conditions will be of relatively short duration and shall be controlled by applying appropriate procedures to minimize the effects, such as watering if necessary for dust control and working near adjacent buildings only during daytime hours.

E. Impact on surrounding land use: Description of proposed usage and other man made facilities; how it conforms to existing and potential development patterns. Effects of added lighting, noise or air pollution which could negatively impact adjacent properties.

The applicant is proposing to construct a 4,900 square foot building to be used for oil changes and other minor automobile maintenance. There will be a total of 6 service bays accessed on the east side of the building. Customers will be required to park their vehicles in the spaces provided out front of the facility along Grand River. Employees will then drive the vehicles into the service bays for servicing.

The service hours for the facility are as follows:

Monday-Friday: 7:00 a.m. – 7:00 p.m.

Saturday: 8:00 a.m. – 5:00 p.m.

Much of the site will be illuminated by the existing light fixtures on the property. Several of the existing fixtures will be removed or relocated to make room for the new facility. Krug Ford has agreed, where possible, to replace light bulbs in the existing fixture in the parking lot with lower watt bulbs once the existing bulbs have burned out. Krug Ford's electrical contractor will have to determine if lower wattage bulbs will work in the existing fixtures. Wall mounted fixtures will be added to the building to supplement the existing lighting.

Two wall signs are proposed for the building, one on the front and the other on the east side. Because of limited visibility for east bound traffic on Grand River Avenue due to the adjacent building to the west, an additional sign is need to identify the business. The size and location of the two wall signs will be in compliance with the current Genoa Township Ordinance. A monument sign is not proposed at this time.

F. Impact on public facilities and services: Description of number of residents, employees, patrons, and impact on general services, i.e., schools, police, fire.

The development will be served by public water and sewer systems adjacent to the site. The vehicle maintenance facility will employ eight (8) people on it's maximum shift. Because the use is based on quick servicing of vehicles, the users of the facility will be on site for a very limited period of time. Therefore, the impact on the general services will be minimal.

G. Impact on public utilities: Description of public utilities serving the project, i.e., water, sanitary sewer, and storm drainage system. Expected flows projected in residential units.

The site is located within the Genoa-Oceola Sanitary Sewer District. The applicant will work with Township staff to determine the number of Residential Equivalent Units (R.E.U.) for the proposed use.

Because the storm sewer system is located entirely on the site, limited impact is anticipated from storm events. Much of the existing and proposed site sheet flows towards the existing retention basin. Therefore, the existing vegetation between the development and the basin filters out much of the sediments in the storm water.

All other utilities, including gas, electric, and telephone are available at the site and are not expected to increase in size or capacity. All proposed dry utilities will be underground.

H. Storage or handling of any hazardous materials: Description of any hazardous materials used, stored, or disposed of on-site.

The automobile fluids (new and used) kept on site will be stored or disposed of in accordance with current local, state and federal requirements.

I. Impact on traffic and pedestrians: Description of traffic volumes to be generated and their effect on the area.

Based on the Institute of Transportation Engineers Publication TRIP GENERATION manual for quick lubrication vehicle shop, the number of trips in an average weekday is 660, with the peak being between 4:00 PM and 6:00 PM.

J. Special provisions: Deed restrictions, protective covenants, etc.

None

K. Description of all sources:

- Genoa Township's Submittal Requirements For Impact Assessment/Impact Statement
- Genoa Township Zoning Ordinances
- Soil Survey of Livingston County, Michigan, U.S.D.A. Soil Conservation Service
- Trip Generation 6th Edition, Institute of Transportation Engineers

Spill Prevention Control and Countermeasures Plan

Krug Quick Lane
2798 E. Grand River
Howell, Michigan 48643

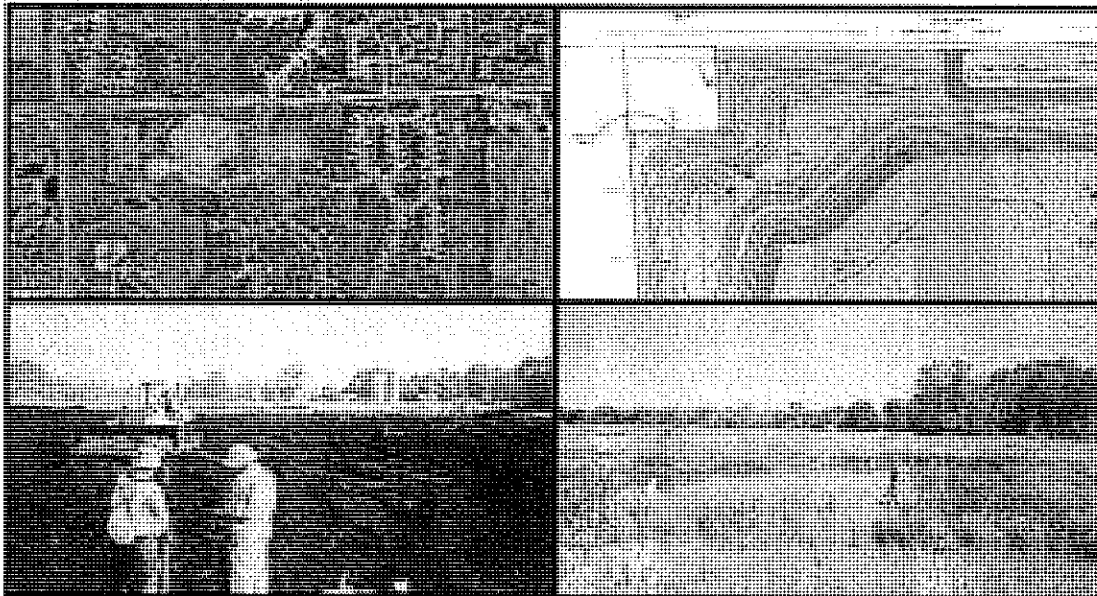
March 1, 2012

GENOA TOWNSHIP

APR 05 2012

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ASTi
ENVIRONMENTAL

Krug Quick Lane

Spill Prevention Control and Countermeasure Plan

March 1, 2012

Revised March 16, 2012

Report Prepared For:

Rand Construction
1270 Rickett Road
Brighton, MI 48116

M. Krug Investments, LLC
2798 E. Grand River
Howell, MI 48118

Report Prepared By:

Applied Science & Technology, Inc.
10448 Citation Drive
Brighton, Michigan 48116
1-800-395-ASTI

ASTI Project 7879

Report Prepared by:

Report Reviewed by:

Lisa Sullivan
Environmental Compliance Leader

Peter Collins
Director of Environmental Planning



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Appendix I - Spill Procedures

1.0 INTRODUCTION

The purpose of this Spill Prevention, Control, and Countermeasure (SPCC) Plan is to describe measures implemented by Krug Quick Lane to reduce the potential of environmental releases of oil products and to mitigate potential impacts if an environmental release occurs.

This Plan has been prepared prior to the construction of the facility and may require an update if the conceptual plans are changed or modified. This Plan meets the requirements of 40 CFR, Part 112 as of February 2012.

1.1 Substantial Harm Determination

Krug Quick Lane does not meet the criteria to be considered a risk of substantial harm under 40 CFR, Part 112 (Appendix A). Krug Quick Lane does not transfer oil over water to or from vessels. Krug Quick Lane has a total oil storage capacity significantly less than one million gallons.

1.2 Summary of Expectations

Krug Quick Lane will complete monthly site inspections that meet the requirements of this Plan. Krug Quick Lane will perform preventive maintenance on equipment, secondary containment, and discharge prevention systems as described in this Plan or under the guide of the respective equipment manufacturer. Krug Quick Lane will conduct annual employee training on the topics required by this Plan and provide documentation of such (Appendix B).

Krug Quick Lane will contact the parties listed in Section 9.1 and submit a copy of the SPCC to the EPA if either of the following occurs:

- an environmental release that exceeds one thousand gallons of oil with a potential of reaching navigable waters, or
- two environmental releases of quantities greater than forty-two gallons occur within a twelve month period.

Krug Quick Lane will review this Plan at least once every five years. Krug Quick Lane will amend this Plan within six months of a change in facility design, construction, operation, or maintenance that significantly affects the facility's spill potential. Krug Quick Lane will continue to evaluate effective prevention and control technology and will implement such technology if it is feasible and cost effective.

2.0 MANAGEMENT SUPPORT AND FACILITY INFORMATION

2.1 Facility, Owner, and Operator Information

Facility: Krug Quick Lane
2798 E. Grand River Avenue
Howell, Michigan 48116
Telephone: Not available at time of publication

Owner: M. Krug Investments, LLC
2798 E. Grand River Avenue
Howell, Michigan 48116

Operator: Same as Facility

2.2 Location of Facility

The site is located on the south side of E. Grand River Avenue, east of E. Michigan Avenue and west of S. Latson Road in Genoa Township, Livingston County, Michigan.

2.3 Designated Person Responsible for Oil & Polluting Material Spill Prevention

The person responsible for implementation and management of the SPCC is Dan Retherford. An alternate will be named at a later date. The alternate will be a General Manager, Supervisor, or other senior position.


2.4 Internal Emergency Notification Procedures

In the event of an environmental release, immediately contact the person responsible for the SPCC (listed above). If the person responsible for the SPCC is not available contact the alternate. Evacuate all non-essential employees from the immediate area.

2.5 Management Approval

This plan has full approval of Krug Quick Lane at a level of authority to commit the necessary resources to make this a successful program. The Letter of Commitment is located in Appendix C.

2.6 Self Certification Statement

I  of Krug Quick Lane certify that, to the best of my knowledge, the following statements are true and that Krug Quick Lane is in full compliance with the SPCC requirements as stated in 40 CFR Part 112.

As the certifier, I am familiar with the applicable SPCC requirements as stated in 40 CFR Part 112. I have conducted a site inspection and have examined the Krug Quick Lane facility. To the best of my knowledge, this Plan was prepared in accordance with accepted and sound industry practices and standards, and fit the requirements of 40 CFR Part 112. Krug Quick Lane has put into place, procedures that meet the requirements for inspections. The contents of the SPCC will be fully implemented by Krug Quick Lane under my supervision.

I certify that Krug Quick Lane has an aggregate aboveground oil storage capacity of 10,000 U.S. gallons or less.

I certify that Krug Quick Lane has not had a single discharge (defined in §112.1 (b)) exceeding 1,000 U.S. gallons or two discharges (defined in §112.1 (b)) each exceeding 42 U.S. gallons within any twelve month period in the three years prior to the SPCC self-certification date.

To the best of my knowledge, this Plan does not deviate from the requirements of 40 CFR 112 as allowed by §112.7(a)(2) and 112.7(d), or include an exemption or measures pursuant to §112.9(c)(6) for produced water containers and any associated piping and appurtenances downstream from the container, except as provided in §112.6(b)(3).

I certify that this Plan and the individual(s) responsible for implementation of this Plan have the full approval of management and I have committed the necessary resources to fully implement this Plan.

I understand it is my obligation to report any oil discharge to navigable waters or adjoining shorelines to the appropriate authorities. The notification requirements are detailed in Section 9.1 of this Plan. I also understand it is my obligation to have this Plan reviewed and amended whenever there is a material change at the facility that affects the potential for an oil discharge, and at least once every five years. Reviews and amendments are recorded in an attached log (Refer to Appendix D).

I understand that other obligations relating to the storage of oil may apply to our facility. I understand that a contingency plan may be used in lieu of secondary containment for qualified oil-filled operational equipment, in accordance with the requirements under §112.7 (k); and must include an established and documented inspection or monitoring program, follow the provisions of 40CFR Part 109, and include a written commitment of manpower, equipment, and materials to expeditiously remove any quantity of oil discharged that may be harmful. If applicable, a copy of the contingency plan and any additional documentation will be attached to this Plan as an attachment.

I certify that Krug Quick Lane is not an oil production facility; therefore, the requirements regarding flowlines and intra-facility gathering lines does not apply.

I certify that I have satisfied the requirement to prepare and implement a Plan under §112.3 and all of the requirements under §112.6 (a). I certify that the information contained in this Plan is true.

Signature

Name


Dan Retherford

Title

Date

Service Director
4/5/12

2.7 Document Cross Reference

Appendix E contains the Cross Reference Matrix for Non-production Facilities. This Plan does not follow the exact order of the Cross Reference Matrix. The rules referred to can be found on the EPA web site.

3.0 REPORT ON SPILLS

The facility has not had any reportable spill events since beginning operations in 2012.

4.0 IMPACT ANALYSIS

4.1 *Type of Facility*

The proposed Krug Quick Lane conceptual plan consists of a 4,894 square foot building with paved driveway and parking areas. The facility would be used for automobile maintenance, oil change, and diagnostics.

4.2 *Direction of Flow*

All oil containing materials will be stored inside the building. The facility will not have open floor drains in areas where oil containing materials are stored. The building floor will be sloped inward. The outdoor topography will be graded away from the building and drain to the south-southwest. Conceptual Drawings are provided as Appendix F.

4.3 *Quantity of Oil*

The site will contain eight ASTs ranging in size from 275 gallons to 400 gallons. It is estimated that two 55-gallon drums will also be kept at the facility. Total oil capacity is estimated at 2,960 gallons. Oil containing equipment including compressors will also be located on the facility. A complete list will not be available until construction is complete.

5.0 SPILL CONTAINMENT PROVISIONS & STRUCTURAL CONTROLS

5.1 Description of Oil Storage

Table 1
Oil Containing Materials Storage Containers

Quantity	Total Capacity (gallons)	Contents	Threshold Reporting Quantity
2	400	5w20 Motor Oil	50 pounds to soil Sheen on water
1	400	15w40 Diesel Motor Oil	50 pounds to soil Sheen on water
1	275	Mercon 5 Transmission Fluid	50 pounds to soil Sheen on water
1	300	Washer Solvent	50 pounds to soil Sheen on water
1	55	Brake Cleaner	50 pounds to soil Sheen on water
1	55	Mercon LV Transmission Fluid	50 pounds to soil Sheen on water
1	275	5w30 Motor Oil	50 pounds to soil Sheen on water
2	400	Waste Oil	50 pounds to soil Sheen on water

5.2 Description of Oil Containment Structures

All storage containers for oil containing materials listed in Table 1 are stored within the building. The bulk of the oil will be stored in the Compressor/Bulk Oil Room. The building will have sealed concrete floors with no floor drains (except for inside bathrooms) and the building is expected to contain any oil containing material released. The floors will be inwardly sloped to fully contain 110% of the largest container or 10% of total volume (whichever is larger). Spill kits will be stored in this area in the event of a spill.

5.2.1 Drainage

The floor inside the building will be sloped to the center of the room/building and any spills are therefore expected to remain inside the building.

5.2.2 Facility Transfer Operations

Prior to removal from the truck, drums are inspected for signs of leakage or damage. Krug Quick Lane will not accept leaking or damaged drums. Drums are transported via hand cart from the truck to the Compressor/Bulk Oil Room. Once unloaded from the hand cart, the drums are inspected for signs of damage that may have occurred during transport.

The waste oil ASTs are emptied via a vacuum truck. Only certified waste haulers are used. The truck tires are chocked and the vehicle is disengaged during the transfer. All connections are checked prior to engaging the vacuum. An employee is in attendance during the entire transfer to observe for leaks, spills, or improper procedures. After an AST is emptied, the vacuum is shut off and the lines are disconnected while monitoring for any residual oil that may be remaining in the line.

All ASTs are fitted with overfill protection. An employee is present to observe the AST during filling operations. The methods for filling the ASTs are unknown and will be described in detail once available.

5.2.3 Inspections, Testing and Recordkeeping

Visual inspections are conducted monthly on the ASTs, dispensers, and drums. All surfaces are inspected for signs of leakage and impaired container integrity (i.e. corrosion, dents, etc.). Gaskets and valves are inspected. All records of inspection and testing are kept for a minimum of five years. An inspection checklist is provided in Appendix G.

Table 2
Potential Spill Predictions, Volumes, Rates, and Control

Type of Container	Volume (gal)	Estimated Rate of Spill (gal/min)	Direction of Flow	Secondary Containment
New Oil AST	400	30*	Floor sloped inward	Building
Transmission Fluid AST	275	20*	Floor sloped inward	Building
Washer Solvent AST	300	22.5*	Floor sloped inward	Building
Drum	55	55	Floor sloped inward	Building
New Oil AST	275	20*	Floor sloped inward	Building
Waste Oil AST	400	25*	Floor sloped inward	Building

* based on small hole, tear, or seam separation

6.0 INFEASIBILITY ANALYSIS

Installation of secondary containment is considered feasible for Krug Quick Lane; therefore, an infeasibility analysis is not necessary for this Plan.

7.0 SECURITY

The facility is approximately 4.32 acres, is located in an area of high traffic volume and has restricted access. The parking area and building is adequately lit. All oil-containing materials are stored indoors. Public access to the inside of the building is restricted to the reception area. The building is locked and secured during non-operational hours.

8.0 NON-STRUCTURAL CONTROLS

8.1 *Employee Training Program*

Employee training programs are necessary to inform personnel at all levels of responsibility about the components of the SPCC Plan. Each employee receives job-specific training at his/her hire date. An annual briefing about discharge prevention is held in accordance to SPCC requirements. Employee training addresses the following:

- Proper maintenance of equipment to prevent oil discharges.
- Procedures for filling tanks, including:
 - Checking reserve prior to filling.
 - Be in continuous attendance while filling.
 - Following filling, secure valves and verify that disconnects have not resulted in a spill.
 - Make sure pumps are only accessible to authorized personnel.
 - Do not top off vehicles.
- Monthly inspections for spills or leaks of oils and significant materials.
- Materials Handling and Storage
 - Train employees which materials are hazardous and where those materials are stored.
 - Point out container labels and how to interpret them.
 - Instruct employee to use the oldest materials first.
 - Demonstrate how valves are tightly closed and how drums should be sealed.
 - Demonstrate Material Safety Data Sheets (MSDSs) location and interpretation.
- Proper disposition of waste materials (i.e., do not dispose of materials down the sewer).
- Particular features of the facility and its operations, which are designed to minimize a release of any polluting materials.
- Monthly inspection for integrity of tanks, appurtenances and containment structures.
 - Personnel are trained on how to conduct monthly inspections in all areas included in this Plan.
 - Procedures for using inspection checklists (Appendix G) will also be reviewed.
- Spill Control
 - In the event of a spill, implement emergency spill procedures outlined in Section 9.0. These procedures will be reviewed during training.
 - Identify spill areas and drainage routes.
 - Explain cause and prevention of any past spill events.
 - Drill on spill cleanup procedures.
 - Review locations of spill control equipment and the person responsible for operating equipment.

- General Housekeeping
 - Review and demonstrate basic cleanup procedures.
 - Clearly indicate proper disposal locations.
 - Inform employees about locations of spill control equipment.

All records of training and attendance are maintained in the facility files for at least five years (Appendix B).

8.2 *Spill Control Equipment*

Available spill control equipment includes pads, floor dry, and absorbent socks. Spill control equipment is located in an easily accessible location in the vicinity of oil storage and usage.

8.3 *Housekeeping*

Good housekeeping practices are designed to maintain a clean and orderly work environment. Housekeeping procedures are implemented at the site to minimize potential pollution from discharging off-site with the storm water run-off.

- Vehicle parking areas are inspected and maintained.
- Maintenance includes the use of absorbent materials and/or the removal of oils from drips and leaks.
- Interior floors are maintained and kept intact.
- Debris is routinely picked up around the site.
- Paved areas and floors are routinely swept.

8.4 *Comprehensive Inspections*

Areas of oil storage are inspected monthly. These inspections are documented and records are retained. The inspection report indicates areas of non-compliance with oil storage requirements and contains a certification that Krug Quick Lane is in compliance with the SPCC Plan. A copy of the SPCC Plan Inspection Report is included in Appendix G.

9.0 SPILL NOTIFICATION PROCEDURES

9.1 *Spills of Oil*

In the event of a spill of oil, which has reached or has the potential to reach any body of water, surface water, groundwater, or storm drain, the following notifications must be made.

1. Call the National Response Center (NRC) immediately at (800) 424-8801.
2. Call the Pollution Emergency Alerting System (PEAS) at (800) 292-4706.
3. Call the Local Emergency Planning Committee (LEPC) at (517) 546-4620.
4. Submit a written report to the SERC within 14 days and the EPA Regional Administrator within 60 days.

State Emergency Response Commission
P.O. Box 30457
Lansing, MI 48909-7957

U.S. EPA
1 North Wacker Drive
Chicago, IL 60606

5. Within 10 days after the release, Krug Quick Lane will file a written report with the chief of the DEQ waste management division outlining the cause of the release, discovery of the release, and the response measures taken or a schedule for completion of measures to be taken, or both, to prevent recurrence of similar releases.

9.2 *Other Emergency Notifications and Procedures*

9.2.1 Notification Numbers

Brighton Fire Department	(810) 225-6204	911 - Emergency
Michigan State Police Department	(810) 227-1051	
Livingston County Sheriff	(517) 546-2440	
Applied Science & Technology, Inc.	(810) 225-2800	
Safety Kleen	(248) 851-7349	

The MDEQ Spill Report is available in Appendix H.

9.2.2 Spill Control & Cleanup Procedures

Spill control equipment and supplies consist of pads, floor dry, and absorbent socks. Spill control equipment is located in an easily accessible location in the vicinity of oil storage and usage..

If a spill occurs, it will be mitigated on a case-by-case basis as determined by Dan Retherford, the person responsible for the SPCC. A basic guide is provided in Appendix I.

Spill material will be characterized before disposal as required in 40 CFR 261.10 and be properly disposed in accordance to federal, state, and local regulations.

10.0 REVIEW OF PLAN

The SPCC Plan regulation (40 CFR 112.5) states that a facility must review its SPCC Plan in accordance with the following three principles:

1. Conduct a review of the SPCC Plan at least every five (5) years,
2. Complete any amendments within 6 months, if required, and
3. Include more effective prevention or control technology if:
 - Technology will significantly reduce the likelihood of a spill event,
 - Technology has been field-proven at review time.

In compliance with 40 CFR 112.5, the plan will be amended within six months if "there is a change in facility design, construction, operation, or maintenance which materially affects the facility's potential for discharge of oil into or upon the navigable waters of the United States or adjoining shoreline."

In the event of an oil or oil product discharge (40 CFR 110) in excess of 1,000 gallons in a single spill event, or if two discharges occur in excess of 42-gallons within any twelve-month period, the details of the discharge, contingency measures, and updated preventative measures and a copy of this plan must be submitted to the EPA.

Appendix A

Certification of the Applicability of Substantial Harm Criteria

Facility Name Krug Quick Lane

Facility Address _____

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____ No ✓

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage tank area?

Yes _____ No ✓

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?

Yes _____ No ✓

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance such that a discharge from the facility would shut down a public drinking water intake?

Yes _____ No ✓

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable spill in an amount greater than or equal to 10,000 gallons within the last five years.

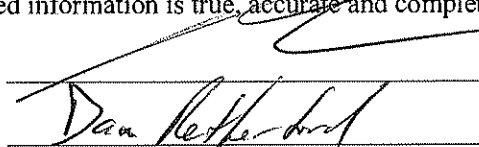
Yes _____ No ✓

If a facility answers "Yes" to any of the above questions, the facility must prepare a "Facility Response Plan" (FRP) according to 40 CFR 112.20.

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

Signature



Title

Service Director

Name (print or type)

Dan Heffernan

Date

4/5/2012

Appendix B

Appendix C

MANAGEMENT APPROVAL

I, the undersigned, having the necessary authority to commit Krug Quick Lane personnel to the implementation of this plan, hereby certify that this Spill Prevention, Control and Countermeasure Plan will be implemented as herein described. A copy of this plan shall be kept at the facility and will be made available to the United States Environmental Protection agency and/or State of Michigan government officials if requested.

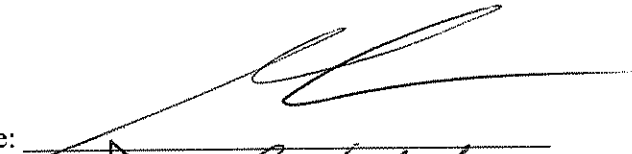
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons 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.

Authorized Facility Representative Signature: _____

Printed Name: _____

Title: _____

Date: _____



Dan Retherford
Service Director

4/5/2012

Appendix D

SPCC Review and Amendments

Date	Amendments

Appendix E

CROSS REFERENCE MATRIX FOR NON-PRODUCTION FACILITIES

Regulation	Description	Page #
§112.3(b)(1) or (c)	SPCC Plan prepared prior to facility becoming operational (effective 11/10/2010)	
§112.3(d)	Professional Engineer (PE) certification with five elements	
§112.5(a)	Amendment of SPCC Plan	
§112.5(b)	Review of Plan at least every 5 years with documentation (i.e. a log)	
§112.6	Qualified Facilities: meets qualification criteria	
§112.6(a) or (b)	Tier I or Tier II Self Certification with 8 elements	
§112.6(a)(2)	Technical amendments self-certified	
§112.6(a)(3)(i)	Template has failure analysis	
§112.6(a)(3)(ii)	Template has adequate secondary containment	
§112.6(a)(3)(iii)	Template has overfill protection	
§112.6(b)(2) / (i)	Technical amendment Self-Certified or PE certification for deviations from Plan requirements	
§112.6(c)(3)(i)	Environmental Equivalence certified by PE	
§112.6(c)(3)(ii)	Impracticability determination certified by PE	
§112.6(c)(4)	PE certification with three elements	
§112.7	General requirements for SPCC Plans for all facilities & all oil types	
§112.7	Management approval of Plan	
§112.7	Discussion of facilities, procedures, methods or equipment not yet fully operational with details of installation and operational start-up	
§112.7(a)(1)	General requirements; discussion of facility's conformance with rule requirements	
§112.7(a)(2)	Deviations from Plan requirements	
§112.7(a)(3)	Facility description and diagram, type of oil and capacity of each container, transfer stations and piping, buried containers on diagram	
§112.7(a)(3)(ii)	Discharge prevention measures	
§112.7(a)(3)(iii)	Discharge drainage controls	
§112.7(a)(3)(iv)	Countermeasures for discharge discovery, response and cleanup	
§112.7(a)(3)(v)	Methods of disposal of recovered materials in accordance with legal requirements	
§112.7(a)(3)(vi)	Contact list and phone numbers for facility response coordinator, National Response Center, cleanup contractors, all Federal, State, and local agencies who must be contacted in case of a discharge	
§112.7(a)(4)	Spill reporting information	
§112.7(a)(5)	Discharge procedures	
§112.7(b)	Failure prediction (sources, quantities, rates, and directions)	
§112.7(c)	Secondary containment for all areas from which a discharge of oil could occur (i.e. mobile refuelers, loading/unloading areas, transformers, oil filled operational equipment, etc.) other than bulk containers	
§112.7(d)	Explanation of impracticability of secondary containment	
§112.7(d)(1)	Oil spill contingency plan per part 109	
§112.7(d)(2)	Commitment of manpower, equipment & materials to remove a discharge	
§112.7(e)	Written procedures for inspections and tests	
§112.7(e)	Records of inspections and tests signed and kept 3 years	
§112.7(f)(1)	Employee training	
§112.7(f)(2)	Designated individual accountable for discharge prevention	

CROSS REFERENCE MATRIX FOR NON-PRODUCTION FACILITIES

Regulation	Description	Page #
§112.7(f)(3)	Discharge prevention briefings scheduled and conducted annually	
§112.7(g)	Security: How oil handling, processing and storage areas are secured and access is controlled	
§112.7(g)	Security: How master flow and drain valves of containers are secured	
§112.7(g)	Security: How unauthorized access to starter controls on oil pumps is prevented	
§112.7(g)	Security: How out-of-service and loading/unloading connections of oil pipelines are secured	
§112.7(g)(5)	Security: Appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges is addressed	
§112.7(h)	Loading/unloading rack (excluding offshore facilities)	
§112.7(h)(1)	Containment for contents of largest compartment	
§112.7(h)(2)	Warning light/sign, barrier system, wheel chocks, or break interlock system to prevent departure with connected lines	
§112.7(h)(3)	Inspect drains and outlets of vehicles	
§112.7(i)	Brittle fracture or catastrophic failure evaluation requirements	
§112.7(j)	Conformance with State requirements	
§112.3(k)(1)	Qualified Oil-Filled Operational Equipment: meets criteria	
§112.7(k)(2)(i)	Inspection procedures or monitoring program	
§112.7(k)(2)(ii)(A)	Oil spill contingency plan per part 109	
§112.7(k)(2)(ii)(B)	Written commitment of resources	
§112.8, §112.12	Requirements for Onshore Facilities (excluding production)	
§112.8(a), §112.12(a)	Meet general and specific requirements	
§112.8(b)(1), §112.12(b)(1)	Facility drainage: Restrain drainage from diked areas; inspect accumulation	
§112.8(b)(2), §112.12(b)(2)	Facility drainage: Manual valves to drain diked areas, inspect before discharging into watercourse	
§112.8(b)(3), §112.12(b)(3)	Facility drainage: Undiked drainage with a potential for a discharge designed to flow to ponds, lagoons, or catchment basins	
§112.8(b)(4), §112.12(b)(4)	Facility drainage: Final discharge of ditch drainage controlled	
§112.8(b)(5), §112.12(b)(5)	Facility drainage: Where pump transfer is needed, two lift pumps installed with one installed permanently	
§112.8(c), §112.12(c)	Bulk storage containers:	
§112.8(c)(1), §112.12(c)(1)	Containers compatible with material and conditions of storage	
§112.8(c)(2), §112.12(c)(2)	Secondary containment for capacity of largest container & sufficient freeboard for precipitation	
§112.8(c)(3), §112.12(c)(3)	Not allow drainage of rainwater from diked areas unless inspected, records kept of drainage events	
§112.8(c)(4), §112.12(c)(4)	Completely buried metallic containers corrosion protected, leak testing conducted	
§112.8(c)(5), §112.12(c)(5)	Partially buried containers corrosion protected	

CROSS REFERENCE MATRIX FOR NON-PRODUCTION FACILITIES

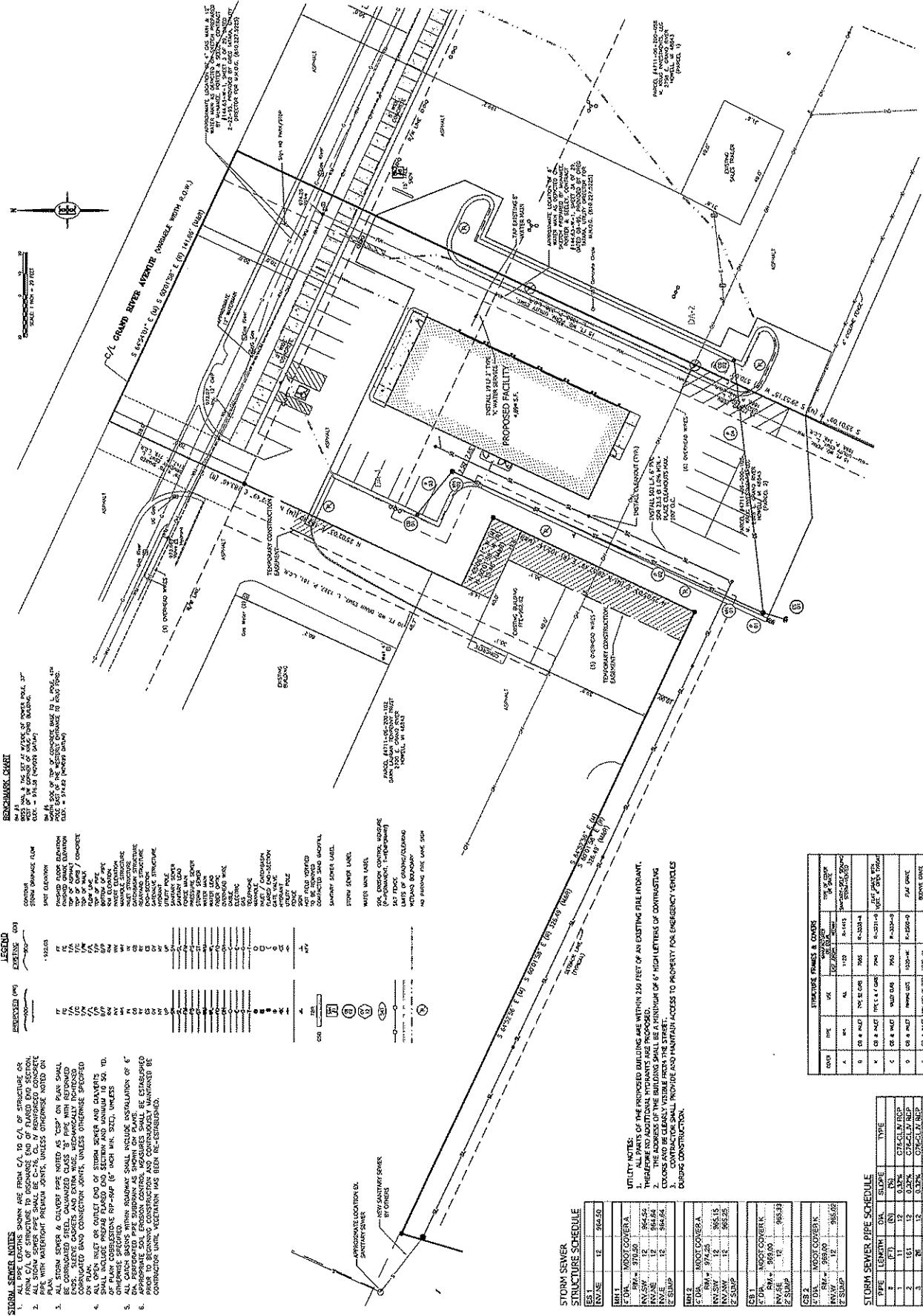
Regulation	Description	Page #
§112.8(c)(6), §112.12(c)(6)	Integrity testing, visual plus non-destructive shell testing, comparison records kept	
§112.8(c)(7), §112.12(c)(7)	Internal heating coils monitored	
§112.8(c)(7), §112.12(c)(7)	Internal heating coils monitored	
§112.8(c)(8), §112.12(c)(8)	Containers engineered to prevent discharges	
§112.8(c)(8)(v), §112.12(c)(8)(v)	Liquid level sensing devices tested to ensure proper operation	
§112.8(c)(9), §112.12(c)(9)	Observe effluent treatment facilities to detect system upsets	
§112.8(c)(10), §112.12(c)(10)	Correct visible leaks and remove accumulations of oil	
§112.8(c)(11), §112.12(c)(11)	Secondary containment for mobile/portable containers with capacity of largest container & sufficient freeboard for precipitation	
§112.8(d), §112.12(d)	Facility transfer operations, pumping and facility process:	
§112.8(d)(1), §112.12(d)(1)	Buried piping installed or replaced after 8/16/02 corrosion protected	
§112.8(d)(2), §112.12(d)(2)	Terminal connections capped/blank flanged when not in service or in standby service for an extended time	
§112.8(d)(3), §112.12(d)(3)	Pipe supports properly designed	
§112.8(d)(4), §112.12(d)(4)	Inspect aboveground piping, integrity and leak test buried piping	
§112.8(d)(5), §112.12(d)(5)	Warn vehicles of aboveground piping	
§112.20(e)	Completed and signed certification of substantial harm form (Appendix C)	

Appendix F



PROJECT: KRUG QUICK LANE
 BAND CONSTRUCTION
 1270 ROBERT ROAD
 BIRMINGHAM, AL 35242-7011
 UTILITY PLAN
 DATE: 1-11-12
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NO. 11-189
 SHEET NO. 5

BOSS ENGINEERING
 ENGINEERS - ARCHITECTS
 1111 N. CENTRAL
 P.O. BOX 141-122
 BIRMINGHAM, AL 35202

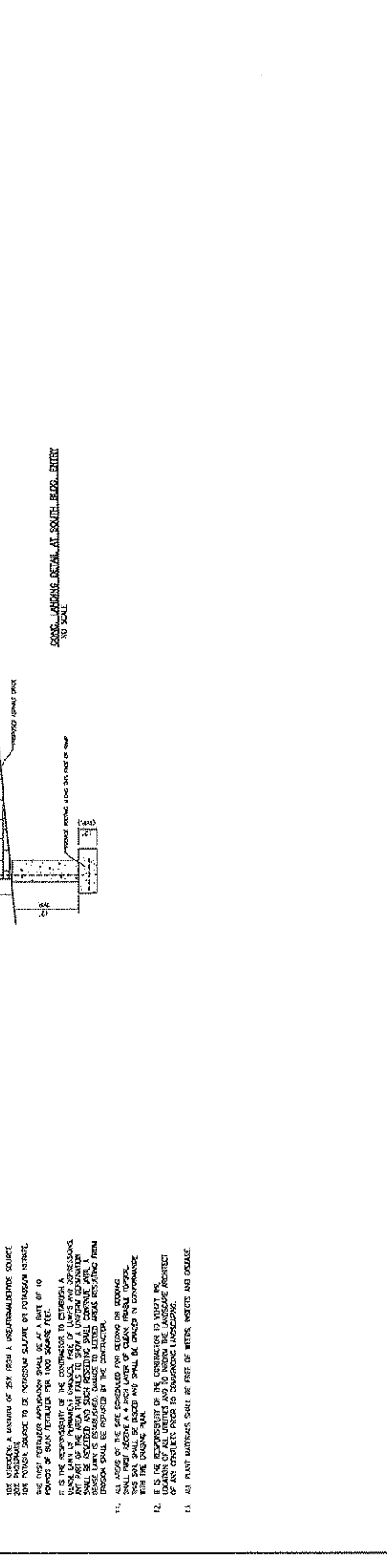
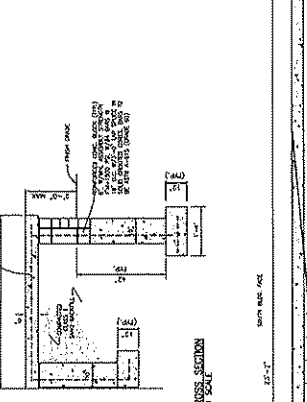
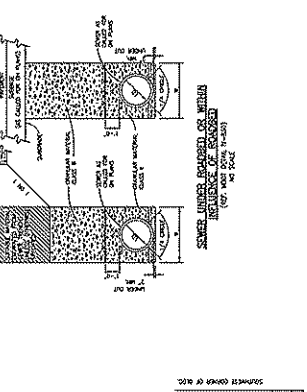
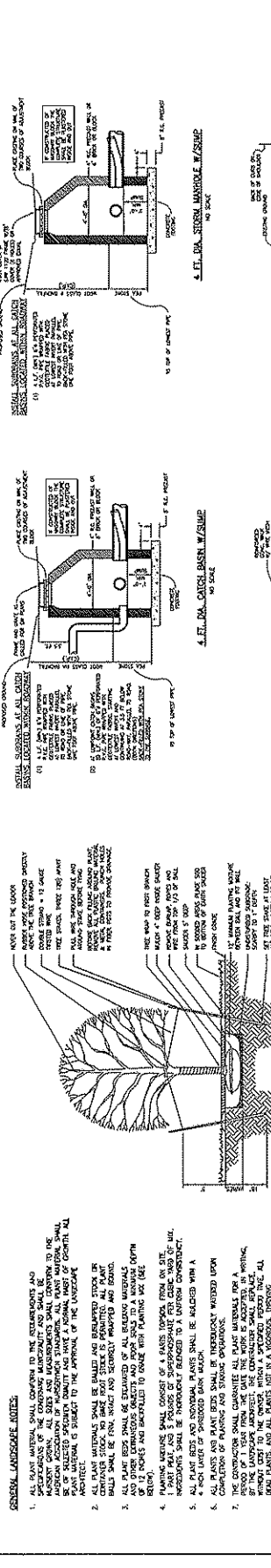


STORM SEWER STRUCTURE SCHEDULE

NO.	DESCRIPTION	DIAMETER	LENGTH	START ELEVATION	END ELEVATION
CS1-1	12" CONCRETE	12"	10'	984.52	984.52
CS1-2	12" CONCRETE	12"	10'	984.52	984.52
CS1-3	12" CONCRETE	12"	10'	984.52	984.52
CS1-4	12" CONCRETE	12"	10'	984.52	984.52
CS1-5	12" CONCRETE	12"	10'	984.52	984.52
CS1-6	12" CONCRETE	12"	10'	984.52	984.52
CS1-7	12" CONCRETE	12"	10'	984.52	984.52
CS1-8	12" CONCRETE	12"	10'	984.52	984.52
CS1-9	12" CONCRETE	12"	10'	984.52	984.52
CS1-10	12" CONCRETE	12"	10'	984.52	984.52
CS1-11	12" CONCRETE	12"	10'	984.52	984.52
CS1-12	12" CONCRETE	12"	10'	984.52	984.52
CS1-13	12" CONCRETE	12"	10'	984.52	984.52
CS1-14	12" CONCRETE	12"	10'	984.52	984.52
CS1-15	12" CONCRETE	12"	10'	984.52	984.52
CS1-16	12" CONCRETE	12"	10'	984.52	984.52
CS1-17	12" CONCRETE	12"	10'	984.52	984.52
CS1-18	12" CONCRETE	12"	10'	984.52	984.52
CS1-19	12" CONCRETE	12"	10'	984.52	984.52
CS1-20	12" CONCRETE	12"	10'	984.52	984.52
CS1-21	12" CONCRETE	12"	10'	984.52	984.52
CS1-22	12" CONCRETE	12"	10'	984.52	984.52
CS1-23	12" CONCRETE	12"	10'	984.52	984.52
CS1-24	12" CONCRETE	12"	10'	984.52	984.52
CS1-25	12" CONCRETE	12"	10'	984.52	984.52
CS1-26	12" CONCRETE	12"	10'	984.52	984.52
CS1-27	12" CONCRETE	12"	10'	984.52	984.52
CS1-28	12" CONCRETE	12"	10'	984.52	984.52
CS1-29	12" CONCRETE	12"	10'	984.52	984.52
CS1-30	12" CONCRETE	12"	10'	984.52	984.52

STORM SEWER PIPE SCHEDULE

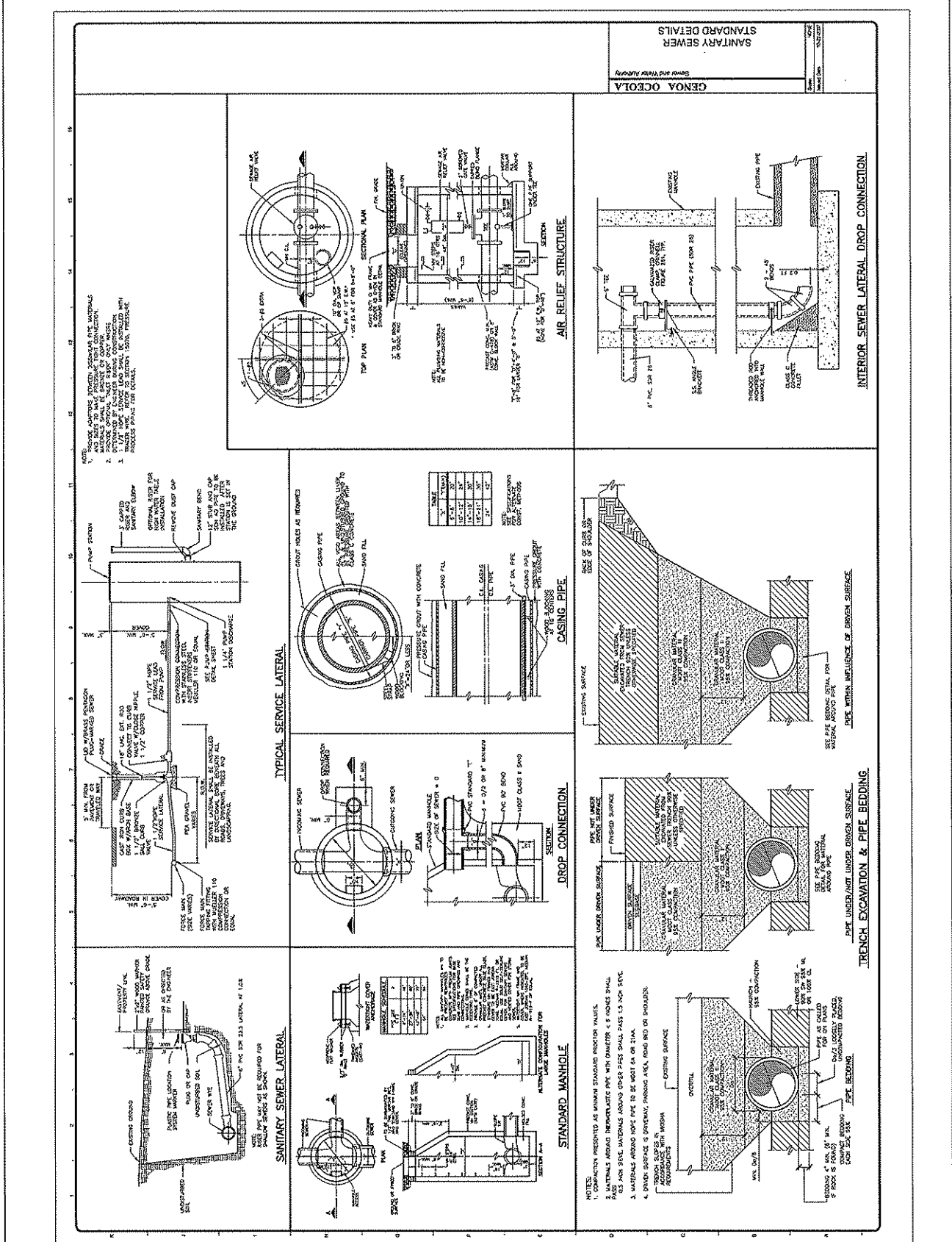
PIPE NO.	DIAMETER	LENGTH	START ELEVATION	END ELEVATION	TYPE
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3	12"	10'	984.52	984.52	CONCRETE
4	12"	10'	984.52	984.52	CONCRETE
5	12"	10'	984.52	984.52	CONCRETE
6	12"	10'	984.52	984.52	CONCRETE
7	12"	10'	984.52	984.52	CONCRETE
8	12"	10'	984.52	984.52	CONCRETE
9	12"	10'	984.52	984.52	CONCRETE
10	12"	10'	984.52	984.52	CONCRETE
11	12"	10'	984.52	984.52	CONCRETE
12	12"	10'	984.52	984.52	CONCRETE
13	12"	10'	984.52	984.52	CONCRETE
14	12"	10'	984.52	984.52	CONCRETE
15	12"	10'	984.52	984.52	CONCRETE
16	12"	10'	984.52	984.52	CONCRETE
17	12"	10'	984.52	984.52	CONCRETE
18	12"	10'	984.52	984.52	CONCRETE
19	12"	10'	984.52	984.52	CONCRETE
20	12"	10'	984.52	984.52	CONCRETE
21	12"	10'	984.52	984.52	CONCRETE
22	12"	10'	984.52	984.52	CONCRETE
23	12"	10'	984.52	984.52	CONCRETE
24	12"	10'	984.52	984.52	CONCRETE
25	12"	10'	984.52	984.52	CONCRETE
26	12"	10'	984.52	984.52	CONCRETE
27	12"	10'	984.52	984.52	CONCRETE
28	12"	10'	984.52	984.52	CONCRETE
29	12"	10'	984.52	984.52	CONCRETE
30	12"	10'	984.52	984.52	CONCRETE



STORM SEWER DESIGN CALCULATIONS

NO.	SIZING		DRAINAGE AREA			DRAINAGE DENSITY			DRAINAGE VOLUME			DRAINAGE RATE		
	AREA	PERCENT	AREA	PERCENT	PERCENT	AREA	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT	PERCENT
1	1.00	100.00	1.00	100.00	10.00	1.00	100.00	1.00	100.00	1.00	100.00	1.00	100.00	1.00
2	0.50	50.00	0.50	50.00	5.00	0.50	50.00	0.50	50.00	0.50	50.00	0.50	50.00	0.50
3	0.25	25.00	0.25	25.00	2.50	0.25	25.00	0.25	25.00	0.25	25.00	0.25	25.00	0.25
4	0.125	12.50	0.125	12.50	1.25	0.125	12.50	0.125	12.50	0.125	12.50	0.125	12.50	0.125
5	0.0625	6.25	0.0625	6.25	0.625	0.0625	6.25	0.0625	6.25	0.0625	6.25	0.0625	6.25	0.0625
6	0.03125	3.125	0.03125	3.125	0.3125	0.03125	3.125	0.03125	3.125	0.03125	3.125	0.03125	3.125	0.03125
7	0.015625	1.5625	0.015625	1.5625	0.15625	0.015625	1.5625	0.015625	1.5625	0.015625	1.5625	0.015625	1.5625	0.015625
8	0.0078125	0.78125	0.0078125	0.78125	0.078125	0.0078125	0.78125	0.0078125	0.78125	0.0078125	0.78125	0.0078125	0.78125	0.0078125
9	0.00390625	0.390625	0.00390625	0.390625	0.0390625	0.00390625	0.390625	0.00390625	0.390625	0.00390625	0.390625	0.00390625	0.390625	0.00390625
10	0.001953125	0.1953125	0.001953125	0.1953125	0.01953125	0.001953125	0.1953125	0.001953125	0.1953125	0.001953125	0.1953125	0.001953125	0.1953125	0.001953125
11	0.0009765625	0.09765625	0.0009765625	0.09765625	0.009765625	0.0009765625	0.09765625	0.0009765625	0.09765625	0.0009765625	0.09765625	0.0009765625	0.09765625	0.0009765625
12	0.00048828125	0.048828125	0.00048828125	0.048828125	0.0048828125	0.00048828125	0.048828125	0.00048828125	0.048828125	0.00048828125	0.048828125	0.00048828125	0.048828125	0.00048828125
13	0.000244140625	0.0244140625	0.000244140625	0.0244140625	0.00244140625	0.000244140625	0.0244140625	0.000244140625	0.0244140625	0.000244140625	0.0244140625	0.000244140625	0.0244140625	0.000244140625
14	0.0001220703125	0.01220703125	0.0001220703125	0.01220703125	0.001220703125	0.0001220703125	0.01220703125	0.0001220703125	0.01220703125	0.0001220703125	0.01220703125	0.0001220703125	0.01220703125	0.0001220703125
15	0.00006103515625	0.006103515625	0.00006103515625	0.006103515625	0.0006103515625	0.00006103515625	0.006103515625	0.00006103515625	0.006103515625	0.00006103515625	0.006103515625	0.00006103515625	0.006103515625	0.00006103515625

- GENERAL LANDSCAPE NOTES:**
1. ALL MATERIALS SHALL COMPARE TO THE MANUFACTURER'S AND MANUFACTURER'S SPECIFICATIONS. ALL MATERIALS SHALL BE KEPT IN A CLEAN, DRY, AND PROTECTED CONDITION AT ALL TIMES. ALL MATERIALS SHALL BE KEPT IN A CLEAN, DRY, AND PROTECTED CONDITION AT ALL TIMES.
 2. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 3. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 4. PLANTING MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 5. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 6. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 7. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 8. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 9. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 10. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 11. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 12. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.
 13. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION. ALL PLANT MATERIALS SHALL BE HEALTHY, MATURE, AND FREE FROM DISEASE, PESTS, AND DEFOLIATION.

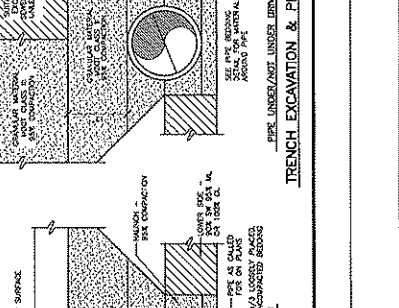
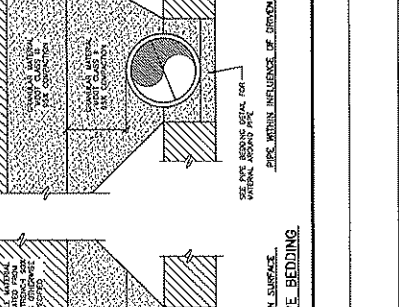
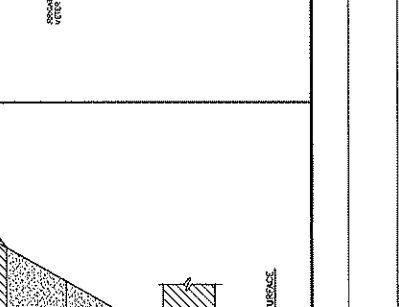
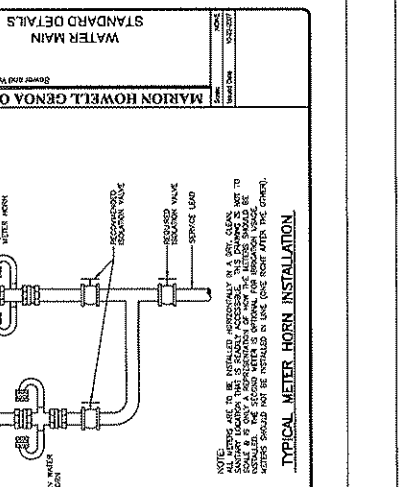
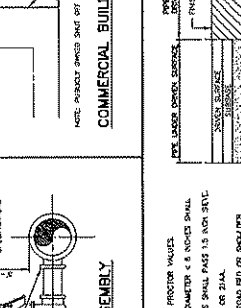
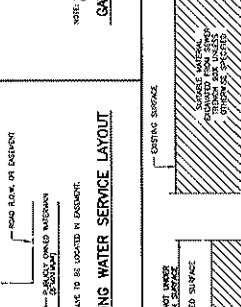
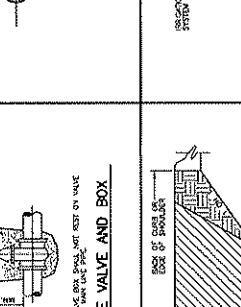
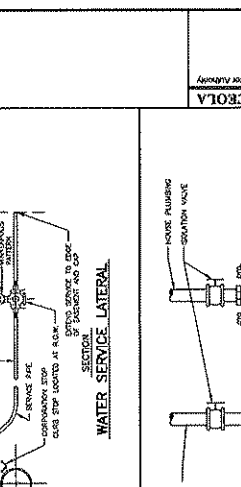
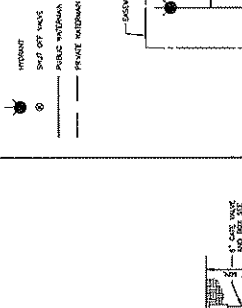
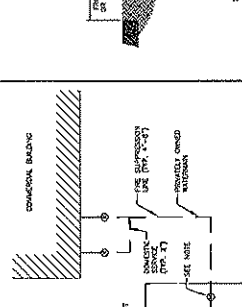
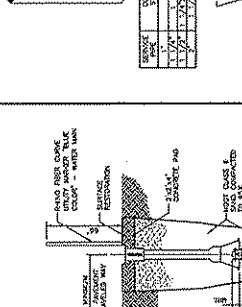
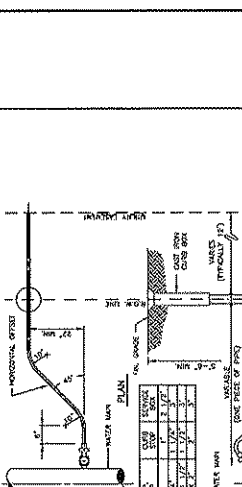


PIPE RESTRAINT SCHEDULE

GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED EXCITELE IRON PIPE

PIPE DIAMETER	PIPE WALL THICKNESS	11-1/2" BOND	31-1/2" BOND	ROAD BOND	SEWERS (SEE SEWER SCHEDULE)	SEWERS (SEE SEWER SCHEDULE)
4"	1.31	3	1	59	---	---
6"	1.57	5	1	59	---	---
8"	1.83	7	1	59	---	---
10"	2.09	9	1	59	---	---
12"	2.35	11	1	59	---	---
14"	2.61	13	1	59	---	---
16"	2.87	15	1	59	---	---
18"	3.13	17	1	59	---	---
20"	3.39	19	1	59	---	---
22"	3.65	21	1	59	---	---
24"	3.91	23	1	59	---	---
26"	4.17	25	1	59	---	---
28"	4.43	27	1	59	---	---
30"	4.69	29	1	59	---	---
32"	4.95	31	1	59	---	---
34"	5.21	33	1	59	---	---
36"	5.47	35	1	59	---	---
38"	5.73	37	1	59	---	---
40"	5.99	39	1	59	---	---
42"	6.25	41	1	59	---	---
44"	6.51	43	1	59	---	---
46"	6.77	45	1	59	---	---
48"	7.03	47	1	59	---	---
50"	7.29	49	1	59	---	---
52"	7.55	51	1	59	---	---
54"	7.81	53	1	59	---	---
56"	8.07	55	1	59	---	---
58"	8.33	57	1	59	---	---
60"	8.59	59	1	59	---	---
62"	8.85	61	1	59	---	---
64"	9.11	63	1	59	---	---
66"	9.37	65	1	59	---	---
68"	9.63	67	1	59	---	---
70"	9.89	69	1	59	---	---
72"	10.15	71	1	59	---	---
74"	10.41	73	1	59	---	---
76"	10.67	75	1	59	---	---
78"	10.93	77	1	59	---	---
80"	11.19	79	1	59	---	---
82"	11.45	81	1	59	---	---
84"	11.71	83	1	59	---	---
86"	11.97	85	1	59	---	---
88"	12.23	87	1	59	---	---
90"	12.49	89	1	59	---	---
92"	12.75	91	1	59	---	---
94"	13.01	93	1	59	---	---
96"	13.27	95	1	59	---	---
98"	13.53	97	1	59	---	---
100"	13.79	99	1	59	---	---

1. GRAVITY PIPE RESTRAINT AND COVER IS NOT TO BE USED UNLESS SPECIFICALLY NOTED OTHERWISE.
 2. THIS TABLE IS BASED ON A TEST PRESSURE OF 150 PSI (FOR TESTING PURPOSES) PLUS WATER WEIGHT. PIPE OTHER THAN THAT LISTED SHOULD BE TESTED AT 150 PSI.
 3. THE VALUES INDICATED IN THIS TABLE ARE THE MINIMUM VALUES FOR EACH CATEGORY.
 4. THE VALUES INDICATED IN THIS TABLE ARE THE MINIMUM VALUES FOR EACH CATEGORY.
 5. IF THE BOND AREA IS LESS THAN THAT INDICATED IN THIS TABLE, THE PIPE SHALL BE TESTED AT 150 PSI.
 6. SEE RESTRAINT IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
 7. BASED UPON:
 A. PIPE DIAMETER
 B. PIPE WALL THICKNESS
 C. PIPE COVER
 D. SAFETY FACTOR



WATER MAIN

STANDARD DETAILS

MARION HOWELL GENOVA OCEOLA

DATE: 11-14-11

SCALE: 1"=1'-0"

SHEET NO. 11



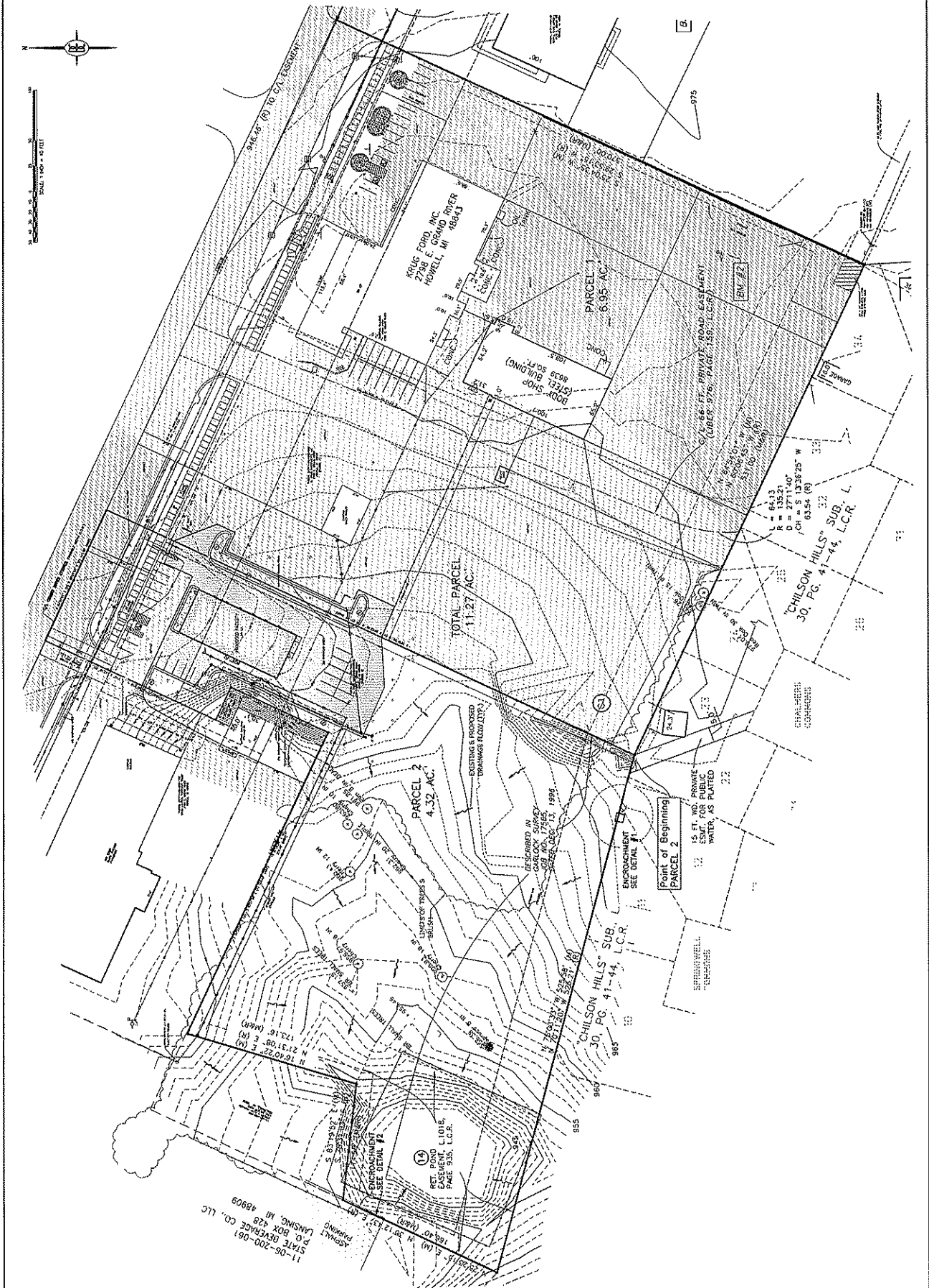
11-06-2006-061
STATE SERVICE CO., LLC
P.O. BOX 428
LANSING, MI 48909

BOSS ENGINEERING
ENGINEERS & SURVEYORS & PLANNERS
LANDSCAPE ARCHITECTS
315 E. BOND STREET
ANN ARBOR, MI 48106
(734) 769-2323 FAX (734) 769-1889

PROJECT: KRUG QUICK LANE
PREPARED BY: RAND CONSTRUCTION
LOCATION: 1270 ROCKY ROAD
ANN ARBOR, MI 48116
DATE: 01/22/2011

DATE:	11-14-11
JOB NO.:	11-190
SCALE:	1" = 40'
CHECKED BY:	
DRAWN BY:	
DESIGNED BY:	
DATE:	2-21-12
PERSON:	SMR REC
DATE:	1-13-12
TITLE:	OVERALL SITE PLAN

SHEET NO. 12



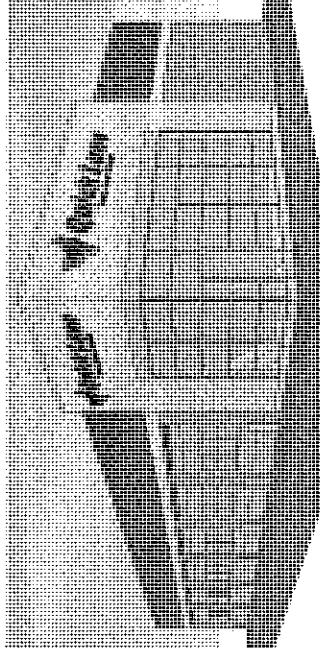
AIDESIGN ARCHITECTS
 2801 Comstock
 Grand Rapids, MI 49508
 Tel: 616-941-1407
 Fax: 616-941-1407

Construction Manager
Rand Construction
 14700 Eastland Road
 Jackson, Michigan 48314
 P.O. Box 227-7811 FL 810-227-7833

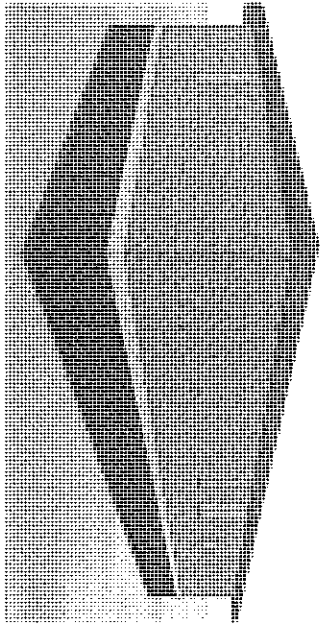
Project
KRUG HILLTOP
FORD / LINCOLN MERCURY
 2798 East Grand River
 Howell, Michigan 48843

Date	Description
11.11.11	Sheets Approved
12.20.11	Owner Review
01.03.12	S.P.A. - Revision 1
03.22.12	S.P.A. - Revision 2

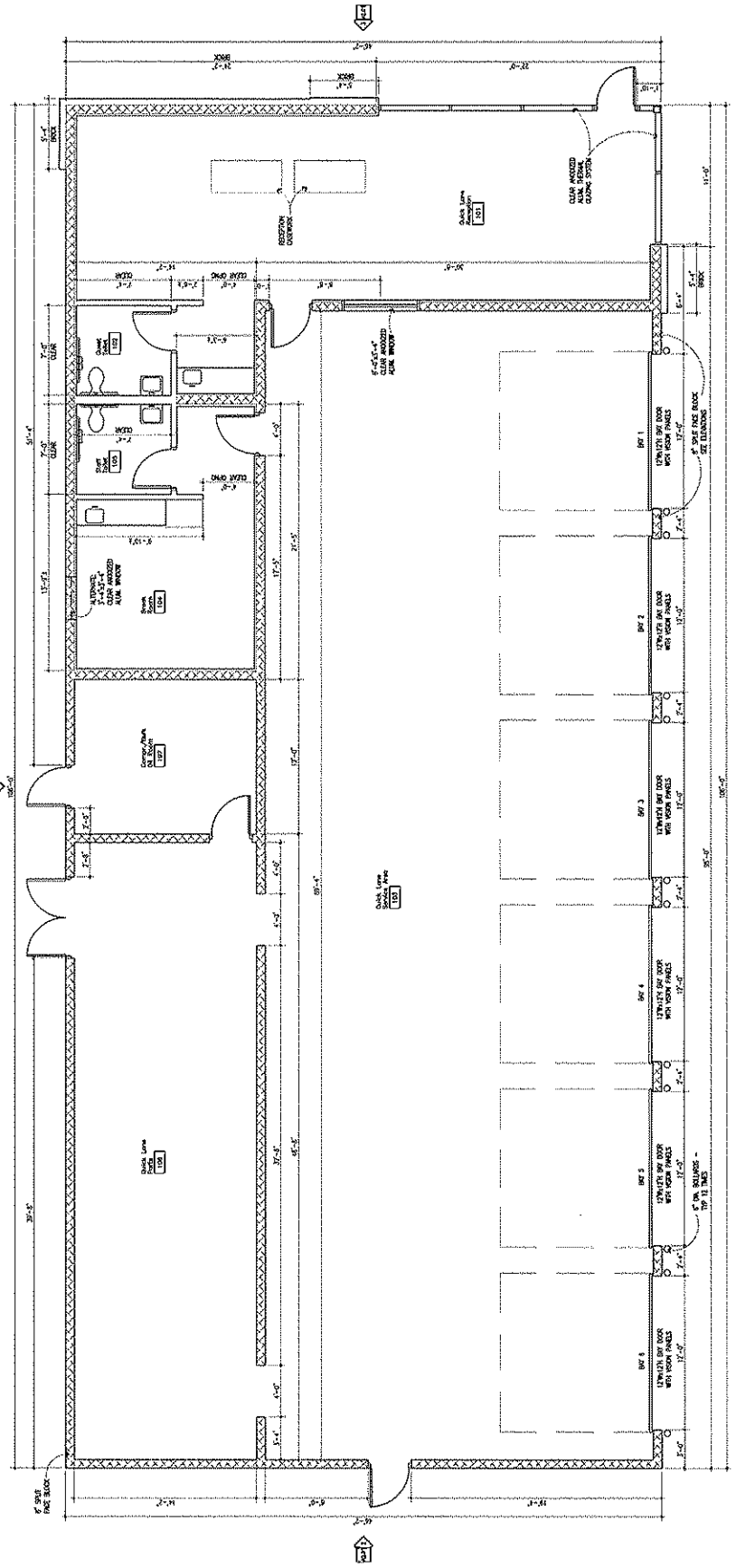
Sheet Title
Floor Plan
 Scale: 1/4" = 1'-0"
 Project Number: 2011.024
 Sheet Number: **A1.01**



2 North - East Perspective
 A1.01 REFERENCE



3 South - West Perspective
 A1.01 REFERENCE

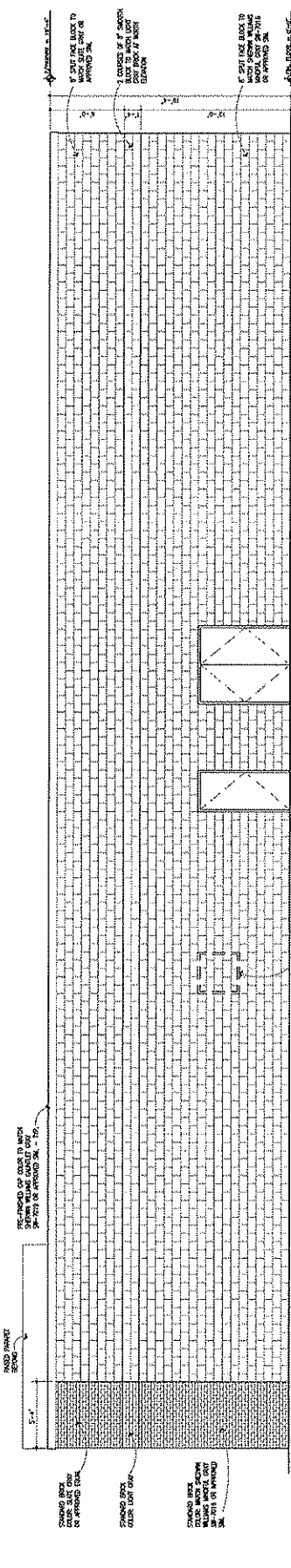


1 Floor Plan
 A1.01 SCALE: 1/4" = 1'-0"
 REFERENCE

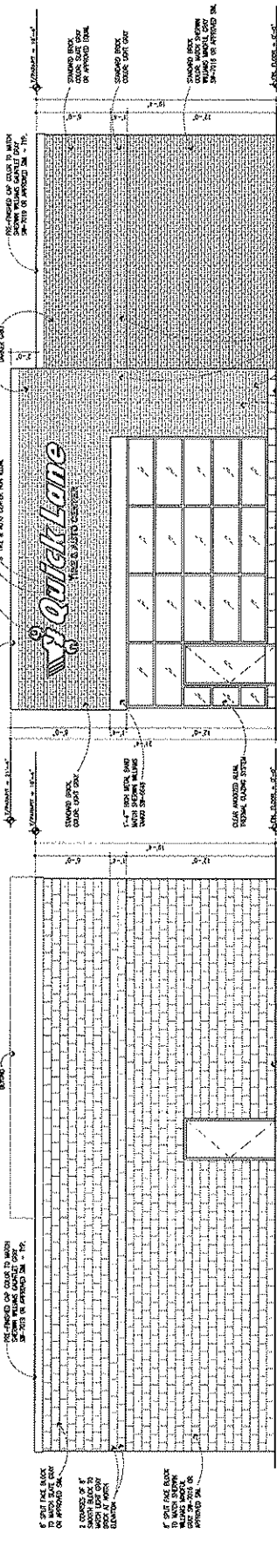
S.P.A. - Revision 2	08.22.12
S.P.A. - Revision 1	01.04.12
Site Plan Approval	11.14.11
Description	Date

Sheet Title	Project Number
Exterior Elevations	2011.0224
Scale: 3/8" = 1'-0"	Sheets/Package

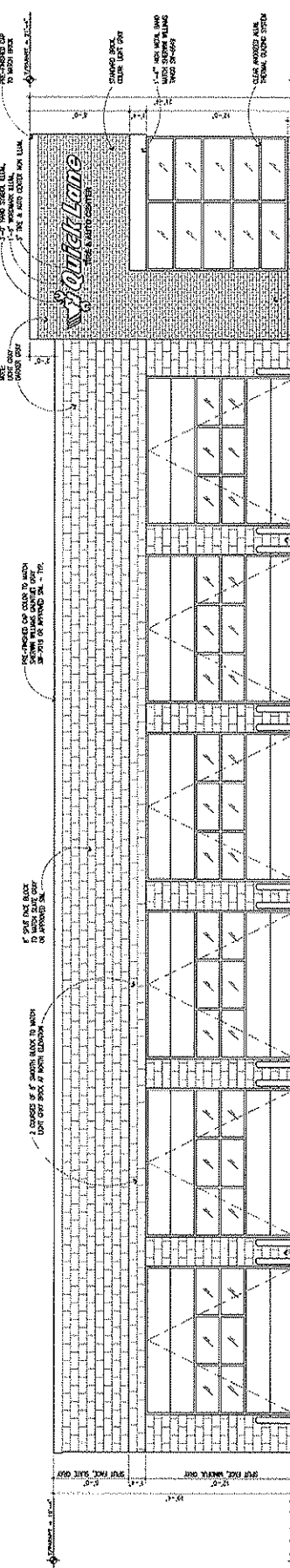
A2.01



4 West Elevation
SCALE: 3/8" = 1'-0"
NET



2 South Elevation
SCALE: 3/8" = 1'-0"
NET



3 North Elevation
SCALE: 3/8" = 1'-0"
NET



1 East Elevation
SCALE: 3/8" = 1'-0"
NET

AIDESIGN ARCHITECTS

3871 Caplain Court
 Howell, Michigan 48844
 Phone: 248-848-4116
 Fax: 248-848-4117

Construction Manager
Rand Construction
 19703 Rockwell Road
 Brighton, Michigan 48116
 Phone: 810-277-9311 Fax: 810-227-7038

Sheet

KRUG HILLTOP FORD / LINCOLN MERCURY QUICK LANE FACILITY

2798 East Grand River
 Howell, Michigan 48843

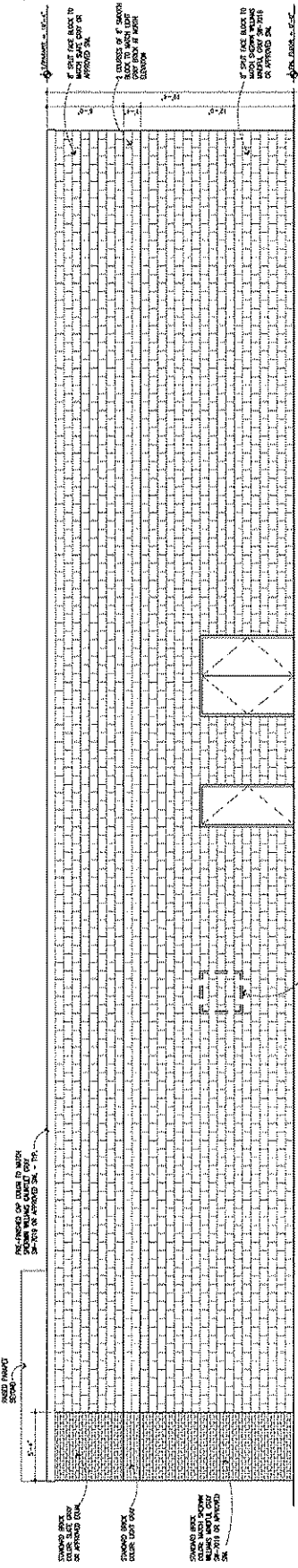
Sheet Title

Exterior Elevations

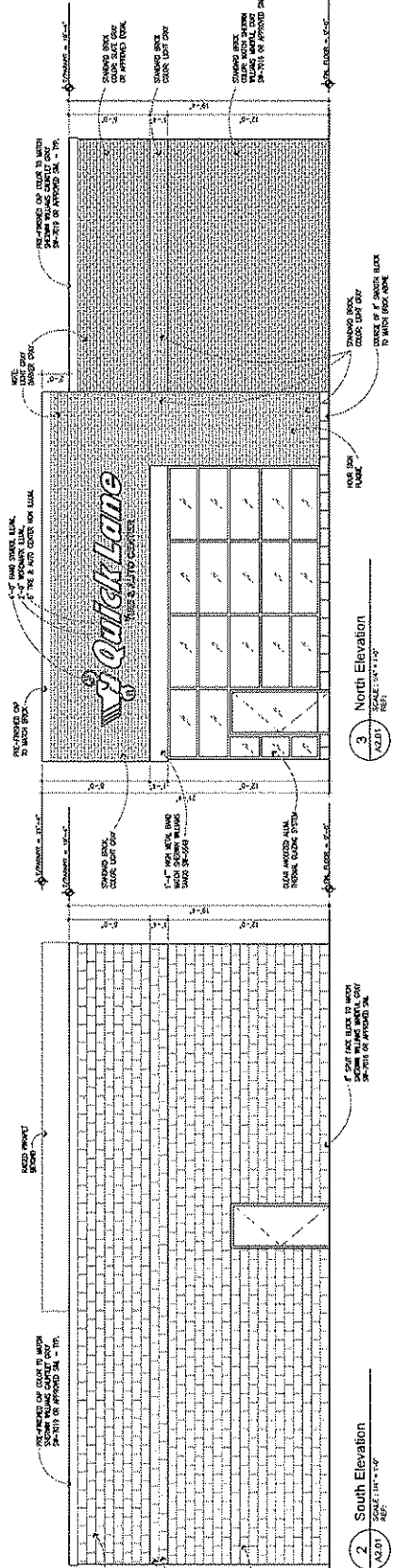
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 Revision: 2011.03.24
 Sheet Number

A2.01

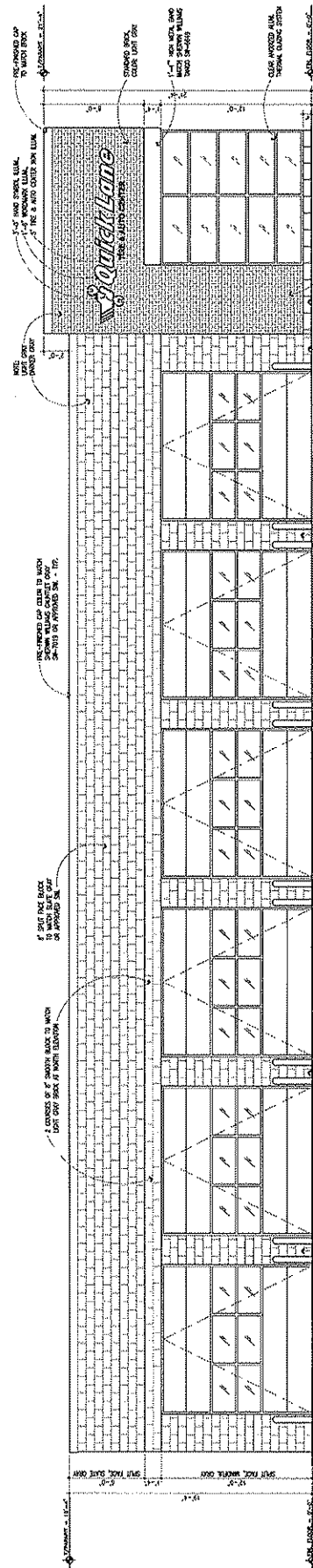
Rev.	Description	Date
02.22.13	S.P.A. - Revision 2	02.22.13
01.03.12	S.P.A. - Revision 1	01.03.12
11.14.11	Site Plan Approval Description	11.14.11



4 West Elevation
 SCALE: 1/4" = 1'-0"
 REF.



3 North Elevation
 SCALE: 1/4" = 1'-0"
 REF.



1 East Elevation
 SCALE: 1/4" = 1'-0"
 REF.

PERFORMED OF COLOR TO MATCH SHOWN ALONG CENTERLINE
 MATCH DRAWING

PERFORMED OF COLOR TO MATCH SHOWN ALONG CENTERLINE
 MATCH DRAWING

PERFORMED OF COLOR TO MATCH SHOWN ALONG CENTERLINE
 MATCH DRAWING

Appendix G

**Krug Quick Lane
Oil Storage Areas Monthly Inspection Checklist
Howell, Michigan**

Date: _____ Time: _____ am/pm Inspector: _____

	YES	NO*
<u>400-gallon 5w20 Motor Oil AST #1</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>400-gallon 5w20 Motor Oil AST #2</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>400-gallon 15w40 Diesel Motor Oil AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>275-gallon Mercon 5 Transmission Fluid AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
<u>300-gallon Washer Solvent AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____

**Krug Quick Lane
Oil Storage Areas Monthly Inspection Checklist Continued
Howell, Michigan**

Date: _____ Time: _____ am/pm Inspector: _____

	YES	NO
<u>275-gallon 5w30 Motor Oil AST</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
 <u>400-gallon Waste Oil AST #1</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
 <u>400-gallon 5w20 Motor Oil AST #2</u>		
Tank is free of visible signs of leakage (staining, wetness, etc.)	_____	_____
Tank is free of rust, corrosion, dents, or damage	_____	_____
Ground & surrounding area is free from staining/odor	_____	_____
Ground & surrounding area is free of cracks	_____	_____
Valves and gaskets are free of signs of leakage	_____	_____
Overfill Protection is functioning	_____	_____
 55-gallon drums		
Drums are free of visible signs of leakage or damage	_____	_____
Floor is free from signs of leakage.	_____	_____
Drums are properly closed	_____	_____
Drums are free of rust or corrosion	_____	_____
 Piping and Dispensers		
Piping is free from visible signs of leakage or damage	_____	_____
Ground is free from staining and odor	_____	_____
Dispensers are working properly with no signs of leakage	_____	_____
 Other		
1. Routine Maintenance is being performed on a regular basis	_____	_____
2. Good Housekeeping procedures are followed	_____	_____
3. The facility is in compliance with the SPCC Plan	_____	_____
4. Spill Kits are maintained and are easily accessible	_____	_____

If NO was initialed, **immediately notify the General Manager**, and begin spill response.

Note:

- 1 - Time the spill was discovered
- 2 - Action taken in response to the spill
- 3 - Explain spill response

Name _____

Date _____

Appendix H



SPILL OR RELEASE REPORT

Issued by authority of the Michigan Department of Environmental Quality.

NOTE: Some regulations require a specific form to use and procedures to follow when reporting a release. Those forms and procedures **MUST** be used and followed if reporting under those regulations. This report form is to aid persons reporting releases under regulations that do not require a specific form. This report form is not required to be used. **To report a release, some regulations require a facility to call the PEAS Hotline at 800-292-4706 (or the DEQ District Office that oversees the county where it occurred) and other agencies and provide information that is included in this form. A written follow-up report might be required. This form may be used for the written follow-up report and to document the initial report. If you prefer to submit this report electronically by FAX or e-mail, contact the regulating agency for the correct telephone number or e-mail address. Go to www.michigan.gov/chemrelease for more information.**

Please print or type all information.

Name and Title of Person Submitting Written Report		Telephone Number (provide area code) ()	
Name of Business		RELEASE LOCATION (Provide address if different than business, if known, and give directions to the spill location. Include nearest highway, town, road intersection, etc.)	
Street Address			
City, State, ZIP			
Business Telephone Number (provide area code) ()			
SITE IDENTIFICATION NUMBER AND OTHER IDENTIFYING NUMBERS (if applicable)		County	Township
Tier/Range/Section (if known)			

RELEASE DATA: Complete all applicable categories. Check all the boxes that apply to the release. Provide the best available information regarding the release and its impacts. Attach additional pages if necessary.

DATE & TIME OF RELEASE (if known) ____/____/____ am/pm	DATE & TIME OF DISCOVERY ____/____/____ am/pm	DURATION OF RELEASE (if known) ____ days ____ hours ____ minutes	TYPE OF INCIDENT <input type="checkbox"/> Explosion <input type="checkbox"/> Fire <input type="checkbox"/> Leaking container <input type="checkbox"/> Other _____	<input type="checkbox"/> Loading/unloading release <input type="checkbox"/> Pipe/valve leak or rupture <input type="checkbox"/> Vehicle accident
MATERIAL RELEASED (chemical or trade name) <input type="checkbox"/> CHECK HERE IF ADDITIONAL MATERIALS LISTED ON ATTACHED PAGE.	CAS NUMBER OR HAZARDOUS WASTE CODE	ESTIMATED QUANTITY RELEASED (indicate unit e.g. lbs, gals, cu ft or yds)	PHYSICAL STATE RELEASED (indicate if solid, liquid, or gas)	

FACTORS CONTRIBUTING TO RELEASE <input type="checkbox"/> Equipment failure <input type="checkbox"/> Operator error <input type="checkbox"/> Faulty process design	<input type="checkbox"/> Training deficiencies <input type="checkbox"/> Unusual weather conditions <input type="checkbox"/> Other _____	SOURCE OF LOSS <input type="checkbox"/> Container <input type="checkbox"/> Railroad car <input type="checkbox"/> Pipeline	<input type="checkbox"/> Ship <input type="checkbox"/> Tank <input type="checkbox"/> Other _____	<input type="checkbox"/> Tanker <input type="checkbox"/> Truck
--	---	--	--	---

TYPE OF MATERIAL RELEASED <input type="checkbox"/> Agricultural: manure, pesticide, fertilizer <input type="checkbox"/> Chemicals <input type="checkbox"/> Flammable or combustible liquid <input type="checkbox"/> Hazardous waste <input type="checkbox"/> Liquid industrial waste <input type="checkbox"/> Oil/petroleum products or waste <input type="checkbox"/> Salt <input type="checkbox"/> Sewage <input type="checkbox"/> Other _____ <input type="checkbox"/> Unknown	MATERIAL LISTED ON OR DEFINED BY <input type="checkbox"/> CAA Section 112(r) list (40 CFR Part 68) <input type="checkbox"/> CERCLA Table 302.4 (40 CFR Part 302) <input type="checkbox"/> EPCRA Extremely Hazardous Substance (40 CFR Part 355) <input type="checkbox"/> NREPA Part 31, Part 5 Rules polluting material <input type="checkbox"/> NREPA Part 111 or RCRA hazardous waste <input type="checkbox"/> NREPA Part 121 liquid industrial waste <input type="checkbox"/> Other list _____ <input type="checkbox"/> Unknown	IMMEDIATE ACTIONS TAKEN <input type="checkbox"/> Containment <input type="checkbox"/> Dilution <input type="checkbox"/> Evacuation <input type="checkbox"/> Hazard removal <input type="checkbox"/> Neutralization <input type="checkbox"/> System shut down <input type="checkbox"/> Other _____	<input type="checkbox"/> Diversion of release to treatment <input type="checkbox"/> Decontamination of persons or equipment <input type="checkbox"/> Monitoring
---	--	--	---

RELEASE REACHED <input type="checkbox"/> Surface waters (include name of river, lake, drain involved) _____ <input type="checkbox"/> Drain connected to sanitary sewer (include name of wastewater treatment plant and/or street drain, if known) _____ <input type="checkbox"/> Drain connected to storm sewer (include name of drain or water body it discharges into, if known) _____ <input type="checkbox"/> Groundwater (indicate if it is a known or suspected drinking water source and include name of aquifer, if known) _____ <input type="checkbox"/> Soils (include type e.g. clay, sand, loam, etc.) _____ <input type="checkbox"/> Ambient Air <input type="checkbox"/> Spill contained on impervious surface	Distance from spill location to surface water, in feet _____
---	--

EXTENT OF INJURIES (if any)	WAS ANYONE HOSPITALIZED? <input type="checkbox"/> Yes Number Hospitalized: _____ <input type="checkbox"/> No	NUMBER OF INJURIES TREATED ON SITE _____
-----------------------------	--	--

Describe the incident, the type of equipment involved in the release, how the volume of loss was determined, along with any resulting environmental damage caused by the release. Identify who immediately responded to the incident (own employees or contractor — include cleanup company name, contact person, and telephone number). Also identify who did further cleanup activities if performed or known when report submitted.

CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE

Estimated quantity of any recovered materials and a description of how those materials were managed (include disposal method if applicable)

CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE

Assessment of actual or potential hazards to human health (include known acute or immediate and chronic or delayed effects, and where appropriate, advice regarding medical attention necessary for exposed individuals.)

CHECK HERE IF DESCRIPTION OR ADDITIONAL COMMENTS ARE INCLUDED ON ATTACHED PAGE

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY NOTIFIED: INITIAL CONTACT BY: <input type="checkbox"/> Telephone <input type="checkbox"/> FAX <input type="checkbox"/> Email <input type="checkbox"/> Other DATE/TIME INITIAL CONTACT: _____ <input type="checkbox"/> PEAS: 800-292-4706 Log Number Assigned _____ <input type="checkbox"/> DEQ District or Field Office Divisions or Offices Contacted: <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> Bay City</td> <td><input type="checkbox"/> Gwinn</td> <td><input type="checkbox"/> Air Quality</td> </tr> <tr> <td><input type="checkbox"/> Cadillac</td> <td><input type="checkbox"/> Jackson</td> <td><input type="checkbox"/> Remediation</td> </tr> <tr> <td><input type="checkbox"/> Calumet</td> <td><input type="checkbox"/> Kalamazoo</td> <td><input type="checkbox"/> Office Geological Survey</td> </tr> <tr> <td><input type="checkbox"/> Crystal Falls</td> <td><input type="checkbox"/> Lansing</td> <td><input type="checkbox"/> Water Resources</td> </tr> <tr> <td><input type="checkbox"/> Detroit</td> <td><input type="checkbox"/> Newberry</td> <td><input type="checkbox"/> Resource Management</td> </tr> <tr> <td><input type="checkbox"/> Gaylord</td> <td><input type="checkbox"/> Warren</td> <td></td> </tr> <tr> <td><input type="checkbox"/> Grand Rapids</td> <td></td> <td></td> </tr> </table> NOTE: DEQ Office locations are subject to change NAME AND TITLE OF PERSON MAKING INITIAL REPORT: _____ DEQ STAFF CONTACTED & TELEPHONE NUMBER: _____ _____	<input type="checkbox"/> Bay City	<input type="checkbox"/> Gwinn	<input type="checkbox"/> Air Quality	<input type="checkbox"/> Cadillac	<input type="checkbox"/> Jackson	<input type="checkbox"/> Remediation	<input type="checkbox"/> Calumet	<input type="checkbox"/> Kalamazoo	<input type="checkbox"/> Office Geological Survey	<input type="checkbox"/> Crystal Falls	<input type="checkbox"/> Lansing	<input type="checkbox"/> Water Resources	<input type="checkbox"/> Detroit	<input type="checkbox"/> Newberry	<input type="checkbox"/> Resource Management	<input type="checkbox"/> Gaylord	<input type="checkbox"/> Warren		<input type="checkbox"/> Grand Rapids			OTHER ENTITIES NOTIFIED: <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> National Response Center (NRC): 800-424-8802</td> <td style="text-align: right;">Date: _____</td> <td style="text-align: right;">Time: _____</td> </tr> <tr> <td><input type="checkbox"/> US Coast Guard Office:</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td style="padding-left: 20px;"><input type="checkbox"/> Detroit <input type="checkbox"/> Grand Haven <input type="checkbox"/> Sault Ste. Marie</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> US Department of Transportation</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> US Environmental Protection Agency</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> 911 (or primary public safety answering point)</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Local Fire Department</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Local Police/State Police/Sheriff Dept</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Local Emergency Planning Committee</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> State Emergency Response Commission</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td style="padding-left: 20px;">via MI SARA Title III Program</td> <td></td> <td></td> </tr> <tr> <td><input type="checkbox"/> Wastewater Treatment Plant Authority</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Hazmat Team</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Local Health Department</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> MIOSHA</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Bureau of Fire Services Fire Marshal Division</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> MI Dept of Agriculture & Rural Dev: 800-405-0101</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> <tr> <td><input type="checkbox"/> Other _____</td> <td style="text-align: right;">_____</td> <td style="text-align: right;">_____</td> </tr> </table> PERSON CONTACTED & TELEPHONE NUMBER: _____ _____	<input type="checkbox"/> National Response Center (NRC): 800-424-8802	Date: _____	Time: _____	<input type="checkbox"/> US Coast Guard Office:	_____	_____	<input type="checkbox"/> Detroit <input type="checkbox"/> Grand Haven <input type="checkbox"/> Sault Ste. 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DATE WRITTEN REPORT SUBMITTED	SIGNATURE OF PERSON SUBMITTING WRITTEN REPORT
-------------------------------	---

Appendix I

POTENTIAL HAZARDS

FIRE OR EXPLOSION

- **HIGHLY FLAMMABLE:** Will be easily ignited by heat, sparks or flames.
- Vapors may form explosive mixtures with air.
- Vapors may travel to source of ignition and flash back.
- Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Vapor explosion hazard indoors, outdoors or in sewers.
- Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.
- Runoff to sewer may create fire or explosion hazard.
- Containers may explode when heated.
- Many liquids are lighter than water.
- Substance may be transported hot.
- If molten aluminum is involved, refer to GUIDE 169.

HEALTH

- Inhalation or contact with material may irritate or burn skin and eyes.
- Fire may produce irritating, corrosive and/or toxic gases.
- Vapors may cause dizziness or suffocation.
- Runoff from fire control or dilution water may cause pollution.

PUBLIC SAFETY

- **CALL Emergency Response Telephone Number on Shipping Paper first, if Shipping Paper not available or no answer, refer to appropriate telephone number listed on the inside back cover.**
- As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Keep out of low areas.
- Ventilate closed spaces before entering.

PROTECTIVE CLOTHING

- Wear positive pressure self-contained breathing apparatus (SCBA).
- Structural firefighters' protective clothing will only provide limited protection.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 300 meters (1000 feet).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

EMERGENCY RESPONSE

FIRE

CAUTION: All these products have a very low flash point; Use of water spray when fighting fire may be inefficient.

CAUTION: For mixtures containing alcohol or polar solvent, alcohol-resistant foam may be more effective.

Small Fire

- Dry chemical, CO₂, water spray or regular foam.

Large Fire

- Water spray, fog or regular foam.
- Use water spray or fog; do not use straight streams.
- Move containers from fire area if you can do it without risk.

Fire Involving Tanks or Car/Trailer Loads

- Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.
- Cool containers with flooding quantities of water until well after fire is out.
- Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- ALWAYS stay away from tanks engulfed in fire.
- For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

SPILL OR LEAK

- **ELIMINATE** all ignition sources (no smoking, flares, sparks or flames in immediate area).
- All equipment used when handling the product must be grounded.
- Do not touch or walk through spilled material. • Stop leak if you can do it without risk.
- Prevent entry into waterways, sewers, basements or confined areas.
- A vapor suppressing foam may be used to reduce vapors.
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. • Use clean non-sparking tools to collect absorbed material.

Large Spill

- Dike far ahead of liquid spill for later disposal.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

FIRST AID

- Move victim to fresh air. • Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- Wash skin with soap and water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin. • Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SITE / CONSTRUCTION PLANS FOR KRUG QUICK LANE

PART OF NE 1/4 SEC. 6, T.2N., R.6E. GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

PROPERTY DESCRIPTION:

(Per Metropolitan Title Company, Commitment No. NU-412578, effective date March 28, 2002 at 8:00 A.M.); Revision E, May 13, 2002

Land in the Township of Genoa, Livingston County, Michigan, described as follows:
Parcel 1: A part of the Northeast fractional 1/4 of Section 6, Town 2 North, Range 5 East, described as follows: Commencing at the East 1/4 corner of said Section 6; thence N 87°31'15" W 804.54 feet; thence N 1°34'30" E 1022.16 feet; thence N 60°06'45" W 616.07 feet along the centerline of Grand River Avenue to the point of beginning of the land to be described; running thence N 60°06'45" W 531.00 feet along the centerline of Grand River Avenue; thence S 29°53'15" W 570.00 feet; thence S 60°06'45" E 531.00 feet; thence N 29°53'15" E 570.00 feet to the point of beginning. Parcel 2: Part of the Northeast 1/4 of Section 6, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Commencing at the East 1/4 corner of said Section 6; thence N 87°24'40" W 1616.81 feet along the East-West 1/4 line to a found iron rod; thence N 01°33'53" E 796.77 feet to a found concrete monument; thence N 60°06'45" W 531.00 feet to a found concrete monument and to the point of beginning of the land to be described; running thence N 70°11'20" W 525.21 feet (recorded as N 70°16'30" W 525.00 feet) to a found 1/2 inch iron rod; thence N 30°12'43" E 166.40 feet (recorded as N 29°41'36" E 166.45 feet) to a found 1/2 inch iron rod; thence S 78°31'03" E 114.50 feet (recorded as S 78°38'13" E 114.55 feet) to a found 1/2 inch iron rod; thence N 21°31'08" E 173.16 feet (recorded as N 21°26'18" E 173.06 feet) to a found 1/2 inch iron rod; thence S 60°01'58" E 326.49 feet (recorded as S 60°06'45" E) to a set 1/2 inch iron rod; thence N 29°52'49" E 105.14 feet to a set 1/2 inch iron rod; thence N 60°01'58" W 35.46 feet to a set 1/2 inch iron rod; thence N 29°52'49" E 183.46 feet and passing through the centerline of a curb cut to the centerline of Grand River Avenue; thence S 60°01'58" E 141.66 feet (recorded as S 60°06'45" E) along the centerline of Grand River Avenue; thence S 29°52'49" W 570.00 feet (recorded as S 29°53'15" W 570.00 feet) to the point of beginning.

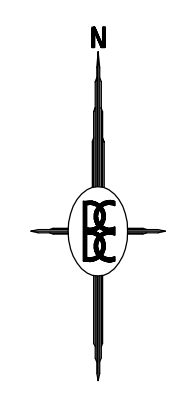
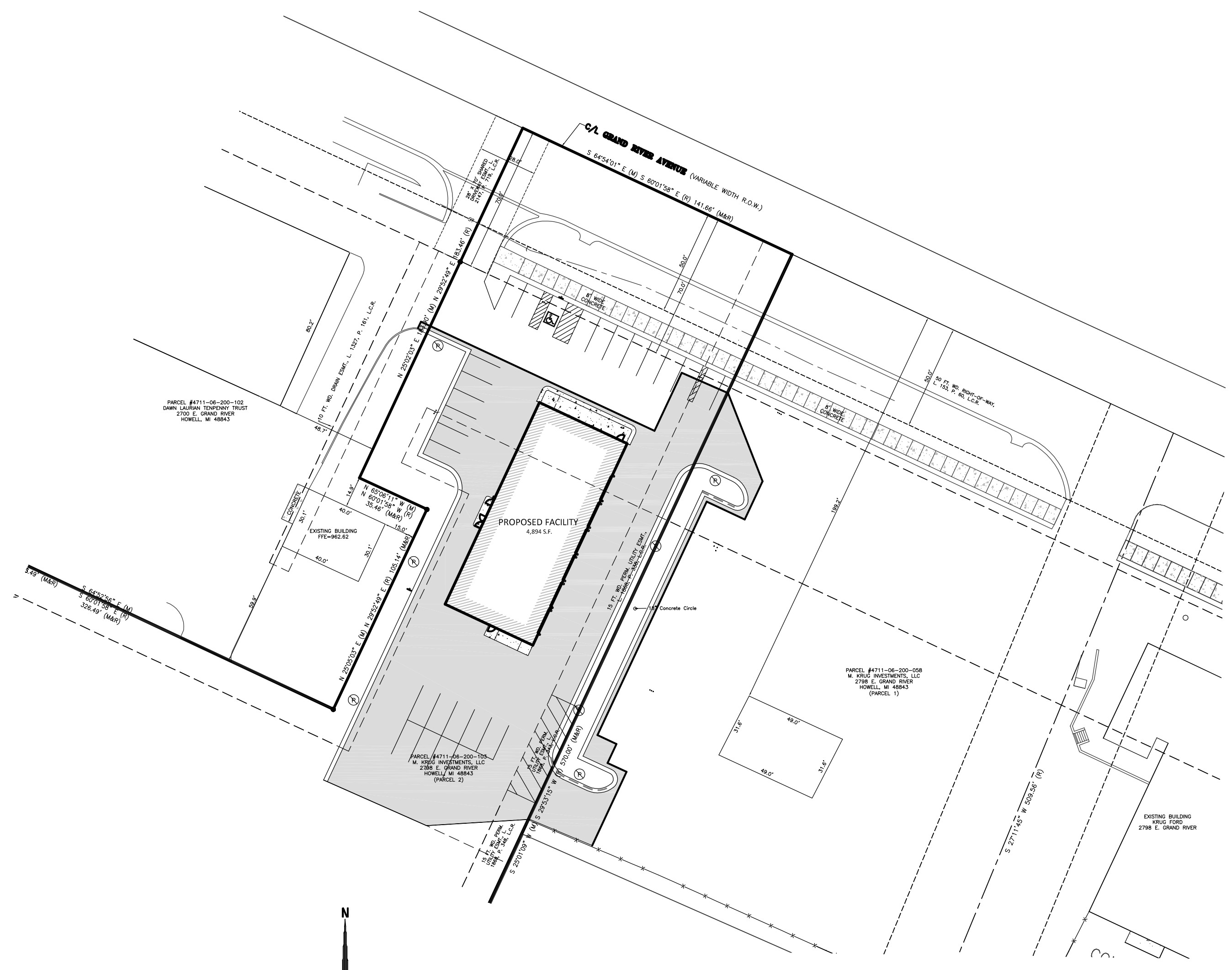
Easement Parcel:
Easement for Common Driveway as created, limited and defined in the document entitled Grant of Common Driveway Easement dated January, 15, 1997, recorded in Liber 2147, page 719, Livingston County Records.

Tax Item No. 11-06-200-058-201-47070, as to Parcel 1
Tax Item No. 11-06-200-103-201-47070, as to Parcel 2

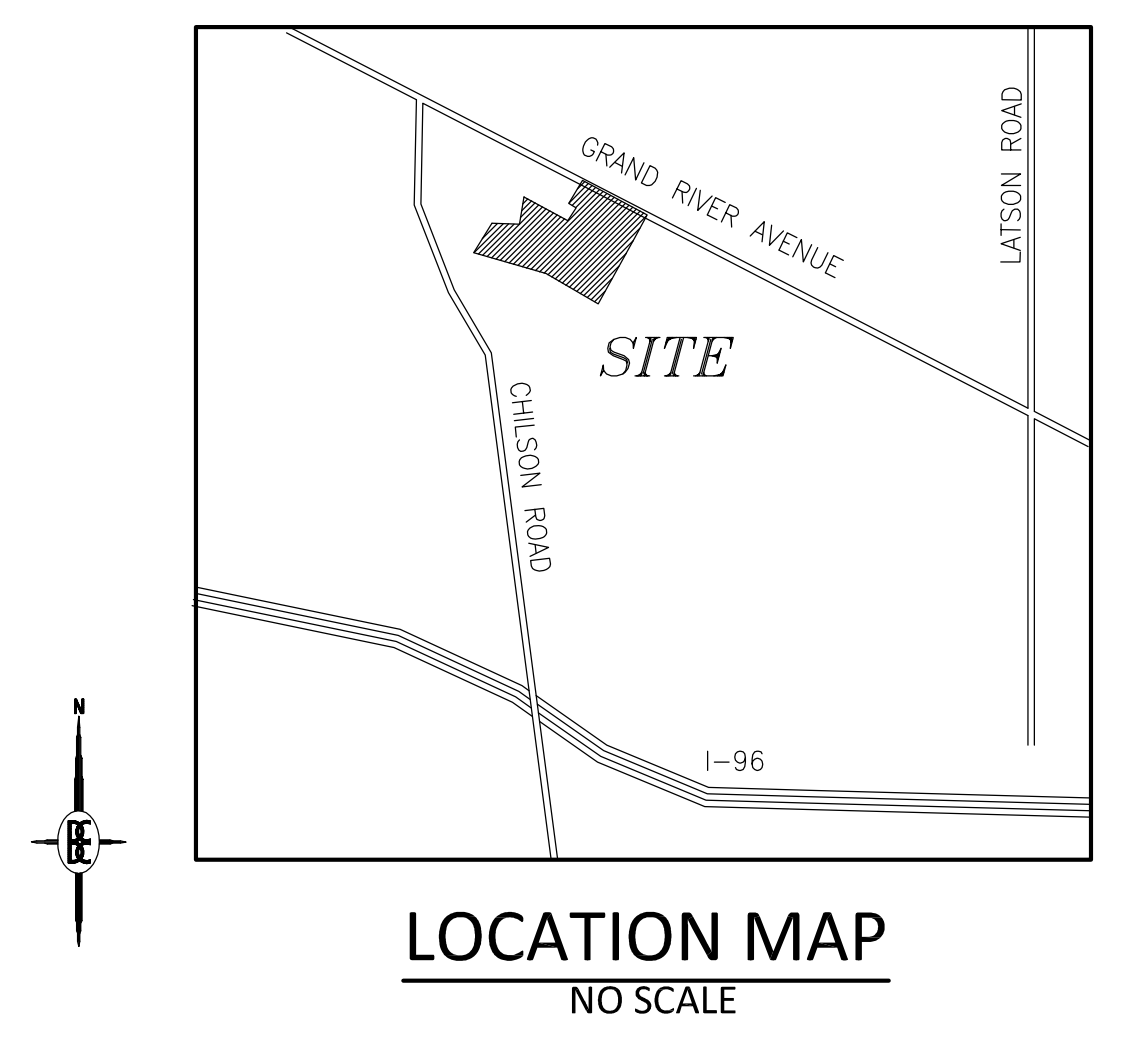
(AFTER SITE PLAN APPROVAL AND PRIOR TO ISSUANCE OF THE LAND USE PERMIT, A PARCEL COMBINATION WILL BE COMPLETED)

CONSTRUCTION NOTES

- THE CONTRACTOR SHALL COMPLY WITH THE FOLLOWING NOTES AND ANY WORK INVOLVED SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.
 - DO NOT SCALE THESE DRAWINGS AS IT IS A REPRODUCTION AND SUBJECT TO DISTORTION.
 - A GRADING PERMIT FOR SOIL EROSION-SEDIMENTATION CONTROL SHALL BE OBTAINED FROM THE GOVERNING AGENCY PRIOR TO THE START OF CONSTRUCTION.
 - IF DUST PROBLEM OCCURS DURING CONSTRUCTION, CONTROL WILL BE PROVIDED BY AN APPLICATION OF WATER, EITHER BY SPRINKLER OR TANK TRUCK.
 - ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH LOCAL MUNICIPAL STANDARDS AND SPECIFICATIONS.
 - THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED TOWNSHIP, COUNTY, AND STATE OF MICHIGAN PERMITS.
 - PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED.
 - ALL BARRIER-FREE FEATURES SHALL BE CONSTRUCTED TO MEET ALL LOCAL, STATE AND A.D.A. REQUIREMENTS.
 - ANY DISCREPANCY IN THIS PLAN AND ACTUAL FIELD CONDITIONS SHALL BE REPORTED TO THE DESIGN ENGINEER PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL SETBACKS, EASEMENTS AND DIMENSIONS SHOWN HEREON BEFORE BEGINNING CONSTRUCTION.
 - THE CONTRACTOR SHALL CONTACT ALL OWNERS OF EASEMENTS, UTILITIES AND RIGHTS-OF-WAY, PUBLIC OR PRIVATE, PRIOR TO THE START OF CONSTRUCTION.
 - THE CONTRACTOR SHALL COORDINATE WITH ALL OWNERS TO DETERMINE THE LOCATION OF EXISTING LANDSCAPING, IRRIGATION LINES & PRIVATE UTILITY LINES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING LANDSCAPING, IRRIGATION LINES, AND PRIVATE UTILITY LINES.
 - THE CONTRACTOR SHALL REMOVE ALL TRASH AND DEBRIS FROM THE SITE UPON COMPLETION OF THE PROJECT.
 - THE CONTRACTOR SHALL MAINTAIN THE SITE IN A MANNER SO THAT WORKMEN AND PUBLIC SHALL BE PROTECTED FROM INJURY, AND ADJOINING PROPERTY PROTECTED FROM DAMAGE.
 - THE CONTRACTOR SHALL KEEP THE AREA OUTSIDE THE "CONSTRUCTION LIMITS" BROOM CLEAN AT ALL TIMES.
 - THE CONTRACTOR SHALL CALL MISS DIG A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
 - ALL EXCAVATION UNDER OR WITHIN 3 FEET OF PUBLIC PAVEMENT, EXISTING OR PROPOSED SHALL BE BACKFILLED AND COMPACTED WITH SAND (MDOT CLASS II).
 - ALL PAVEMENT REPLACEMENT AND OTHER WORKS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE TOWNSHIP, INCLUDING THE LATEST MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGE TO EXISTING UTILITIES.
 - NO ADDITIONAL COMPENSATION WILL BE PAID TO THE CONTRACTOR FOR ANY DELAY OR INCONVENIENCE DUE TO THE MATERIAL SHORTAGES OR RESPONSIBLE DELAYS DUE TO THE OPERATIONS OF SUCH OTHER PARTIES DOING WORK INDICATED OR SHOWN ON THE PLANS OR IN THE SPECIFICATION OR FOR ANY REASONABLE DELAYS IN CONSTRUCTION DUE TO THE ENCOUNTERING OR EXISTING UTILITIES THAT MAY OR MAY NOT BE SHOWN ON THE PLANS.
 - DURING THE CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL NOT PERFORM WORK BY PRIVATE AGREEMENT WITH PROPERTY OWNERS ADJACENT TO THE PROJECT.
 - IF WORK EXTENDS BEYOND NOVEMBER 15, NO COMPENSATION WILL BE DUE TO THE CONTRACTOR FOR ANY WINTER PROTECTION MEASURES THAT MAY BE REQUIRED BY THE ENGINEER.
 - NO TREES ARE TO BE REMOVED UNTIL MARKED IN THE FIELD BY THE ENGINEER.
 - THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE PROPERTY BEYOND THE CONSTRUCTION LIMITS INCLUDING BUT NOT LIMITED TO EXISTING FENCE, LAWN, TREES AND SHRUBBERY.
 - ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND THE NORMAL CONSTRUCTION LIMITS OF THE PROJECT SHALL BE SODDED OR SEEDDED AS SPECIFIED OR DIRECTED BY THE ENGINEER.
 - ALL ROOTS, STUMPS AND OTHER OBJECTIONABLE MATERIALS SHALL BE REMOVED AND THE HOLE BACKFILLED WITH SUITABLE MATERIAL. WHERE GRADE CORRECTION IS REQUIRED, THE SUBGRADE SHALL BE CUT TO CONFORM TO THE CROSS-SECTION AS SHOWN IN THE PLANS.
 - TRAFFIC SHALL BE MAINTAINED DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SIGNS AND TRAFFIC CONTROL DEVICES. FLAG PERSONS SHALL BE PROVIDED BY THE CONTRACTOR IF DETERMINED NECESSARY BY THE ENGINEER. ALL SIGNS SHALL CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AT NO COST TO THE TOWNSHIP. NO WORK SHALL BE DONE UNLESS THE APPROPRIATE TRAFFIC CONTROL DEVICES ARE IN PLACE.
 - ALL DEMOLISHED MATERIALS AND SOIL SPOILS SHALL BE REMOVED FROM THE SITE AT NO ADDITIONAL COST, AND DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
 - AFTER REMOVAL OF TOPSOIL, THE SUBGRADE SHALL BE COMPACTED TO 95% OF ITS UNIT WEIGHT.
 - ALL GRADING IN THE PLANS SHALL BE DONE AS PART OF THIS CONTRACT. ALL DELETERIOUS MATERIAL SHALL BE REMOVED FROM THE SUBGRADE PRIOR TO COMPACTING.
 - NO SEEDING SHALL BE DONE AFTER OCTOBER 15 WITHOUT APPROVAL OF THE ENGINEER.
 - ANY EXISTING APPURTENANCES SUCH AS MANHOLES, GATE VALVES, ETC. SHALL BE ADJUSTED TO THE PROPOSED GRADE AND SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
 - SOIL EROSION MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.
 - ALL PERMANENT SIGNS AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION OF THE MICHIGAN MUTCD MANUAL AND SHALL BE INCIDENTAL TO THE CONTRACT.



OVERALL SITE MAP
NO SCALE



LOCATION MAP
NO SCALE

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS & DEMOLITION PLAN
3	SITE PLAN
4	GRADING, DRAINAGE & SOIL EROSION CONTROL PLAN
5	UTILITY PLAN
6	LANDSCAPE PLAN
7	LIGHTING PLAN
8	CONSTRUCTION NOTES & DETAILS
9	CONSTRUCTION NOTES & DETAILS
10	MHOG SANITARY SEWER DETAILS
11	MHOG WATER SERVICE DETAILS
12	OVERALL SITE PLAN
13	STORM SEWER PLAN & PROFILE
14	SANITARY SEWER PLAN & PROFILE
DRAWINGS PREPARED BY ARCHITECT	
A1.01	FLOOR PLAN
A2.01	EXTERIOR ELEVATIONS

KRUG QUICK LANE

OWNER:
M. KRUG INVESTMENTS, LLC
2798 E. GRAND RIVER
HOWELL, MICHIGAN 48843
CONTACT: MR. MIKE KRUG
PHONE: 517-546-0244

CONSTRUCTION MANAGER:
RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MICHIGAN 48116
CONTACT: MR. ANDY KLEIN
PHONE: 810-227-7011

ARCHITECT:
AJ DESIGN
2803 GREENLAWN
COMMERCE, MI 48382
PHONE: 248-672-7866

PREPARED BY:
 BOSS ENGINEERING
ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: boe@bosseng.com)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 (MI FAX) 517-546-1670

INDEMNIFICATION STATEMENT

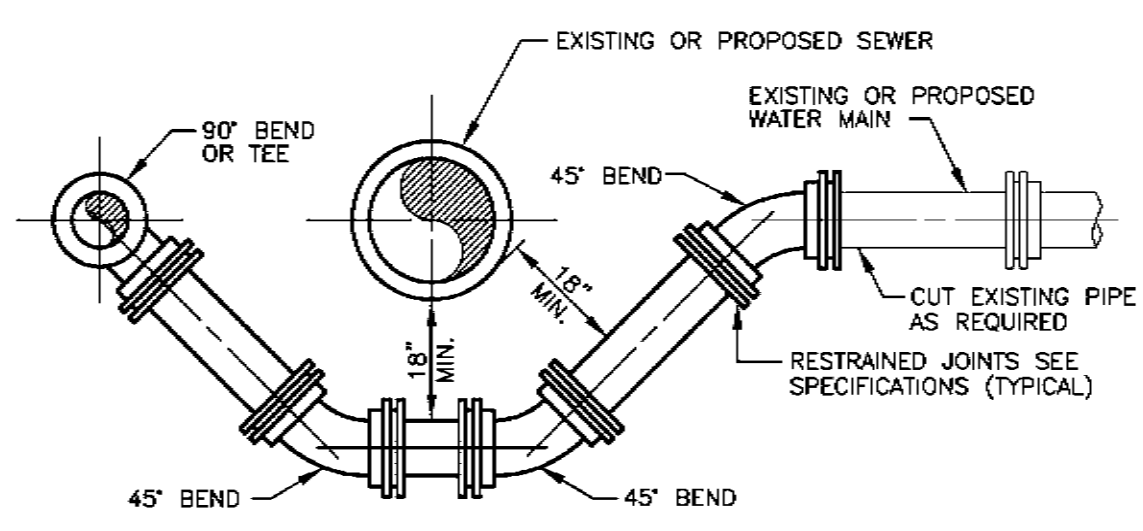
THE CONTRACTOR SHALL HOLD HARMLESS THE DESIGN PROFESSIONAL, MUNICIPALITY, COUNTY, STATE AND ALL OF ITS SUB CONSULTANTS, PUBLIC AND PRIVATE UTILITY COMPANIES, AND LANDOWNERS FOR DAMAGES TO INDIVIDUALS AND PROPERTY, REAL OR OTHERWISE, DUE TO THE OPERATIONS OF THE CONTRACTOR AND/OR THEIR SUBCONTRACTORS.

NO	BY	CK	REVISION	PER	DATE	JOB NO.	11-190
1							

PIPE RESTRAINT SCHEDULE
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

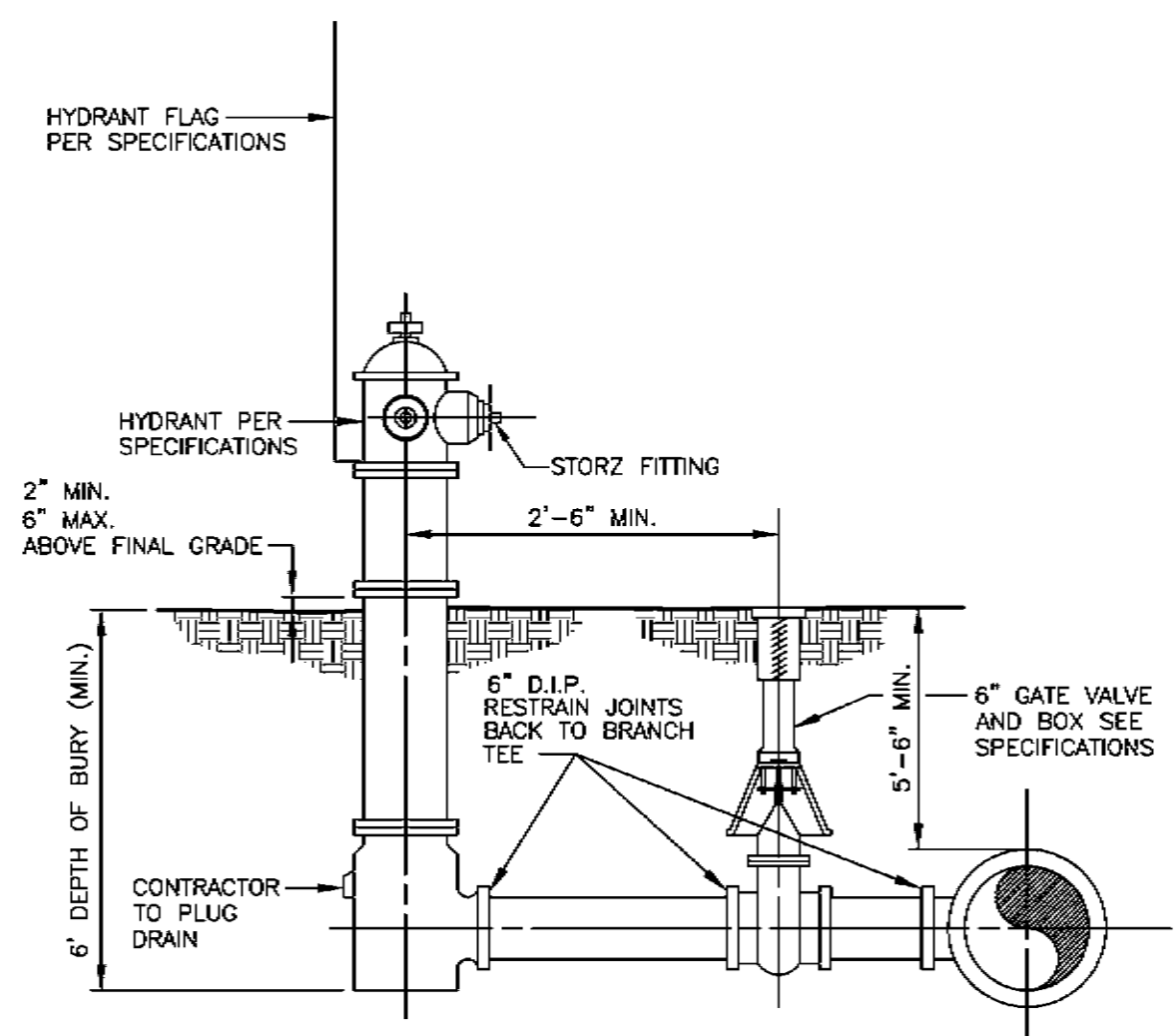
PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTION)*
4	13	5	3	1	40	--	--
6	19	8	4	2	58	31	--
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	65	168
36	84	35	17	8	281	84	188

- LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
 - IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
 - THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER). FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED PROPORTIONALLY.
 - THE VALUES PROVIDED OF RESTRAINT LENGTH ARE IN EACH DIRECTION FROM THE POINT OF DEFLECTION OR TERMINATION EXCEPT FOR TEES, AT WHICH ONLY THE BRANCH IN THE DIRECTION OF THE STEM.
 - IF TIE RODS ARE USED, USE FOUR RODS MINIMUM AND ADD 1/8-INCH TO BAR DIAMETER AS CORROSION ALLOWANCE.
- * SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.
BASED UPON:
INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2

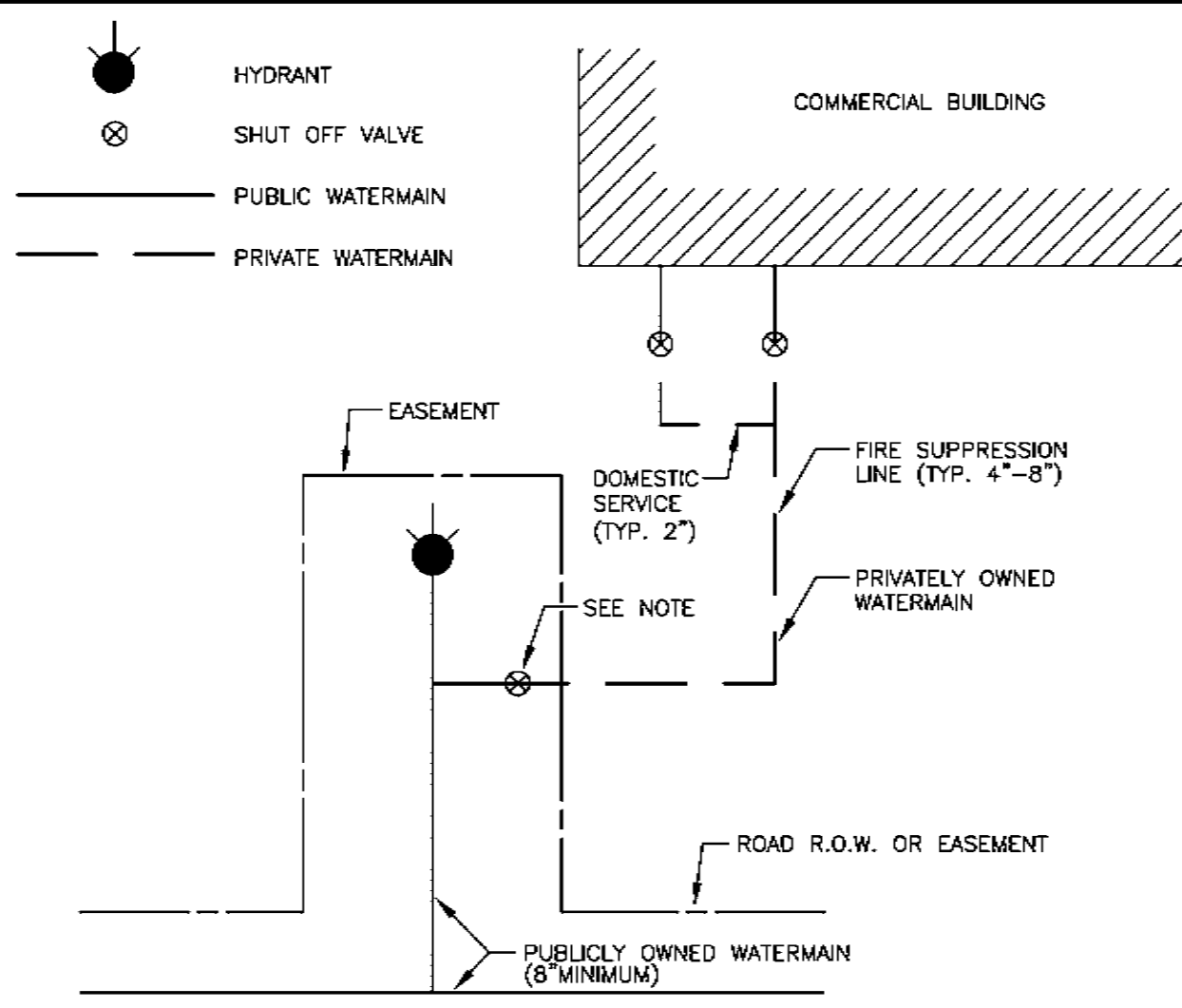


WATER MAIN RELOCATION

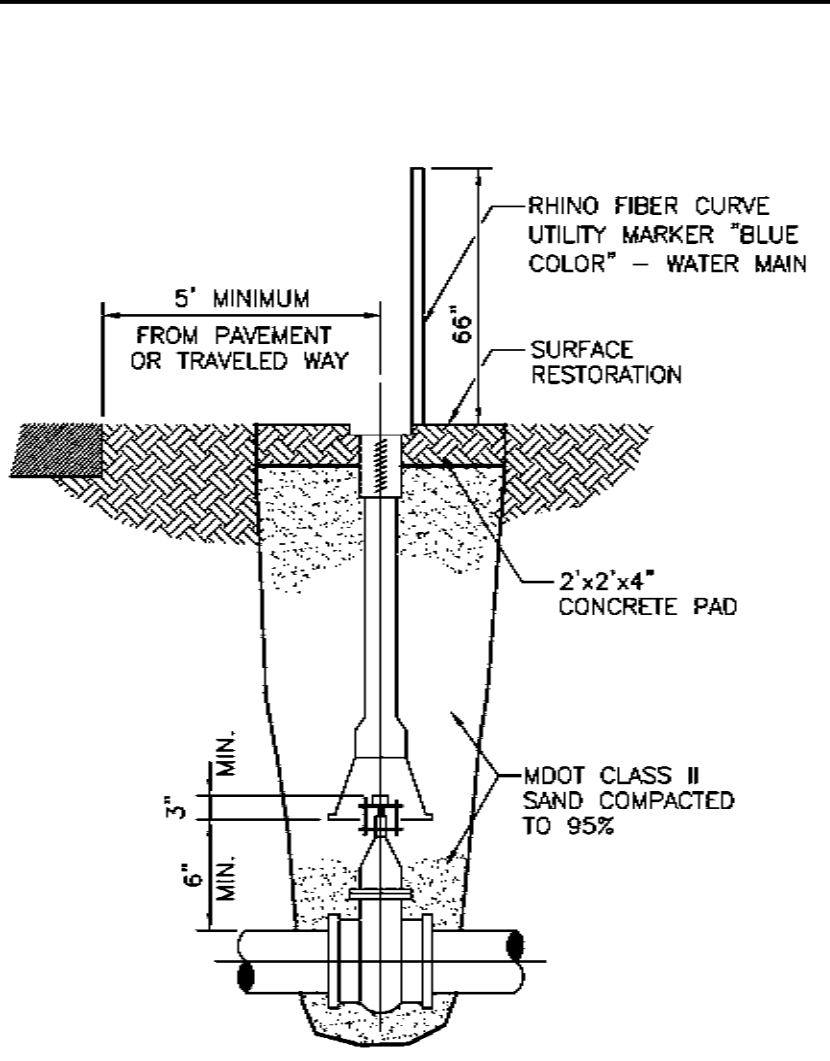
PRIOR TO CURB BOX INSTALLATION, CONTACT GENOA TOWNSHIP DPW FOR CURB BOX INSTALLATION REQUIREMENTS.



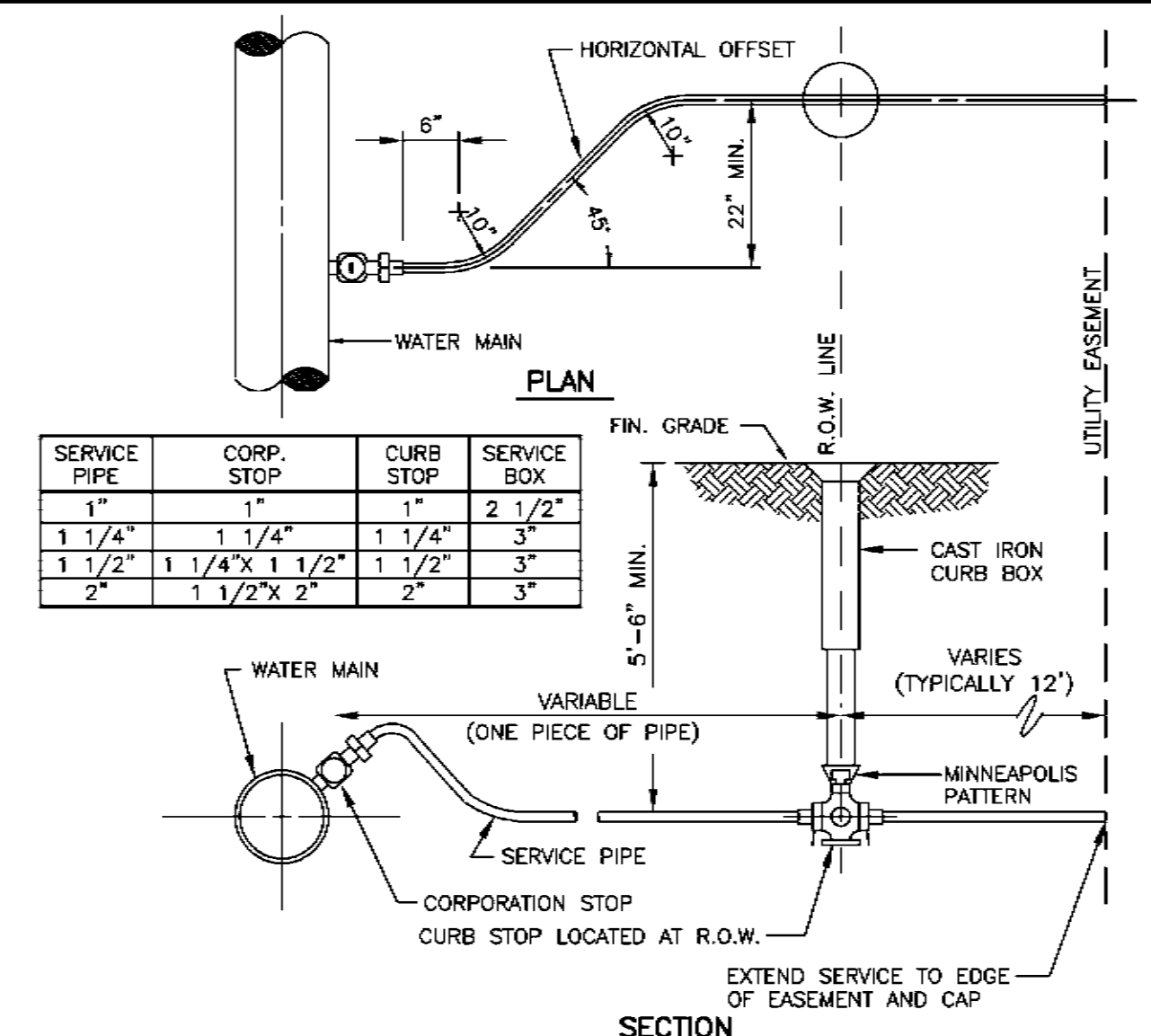
FIRE HYDRANT ASSEMBLY



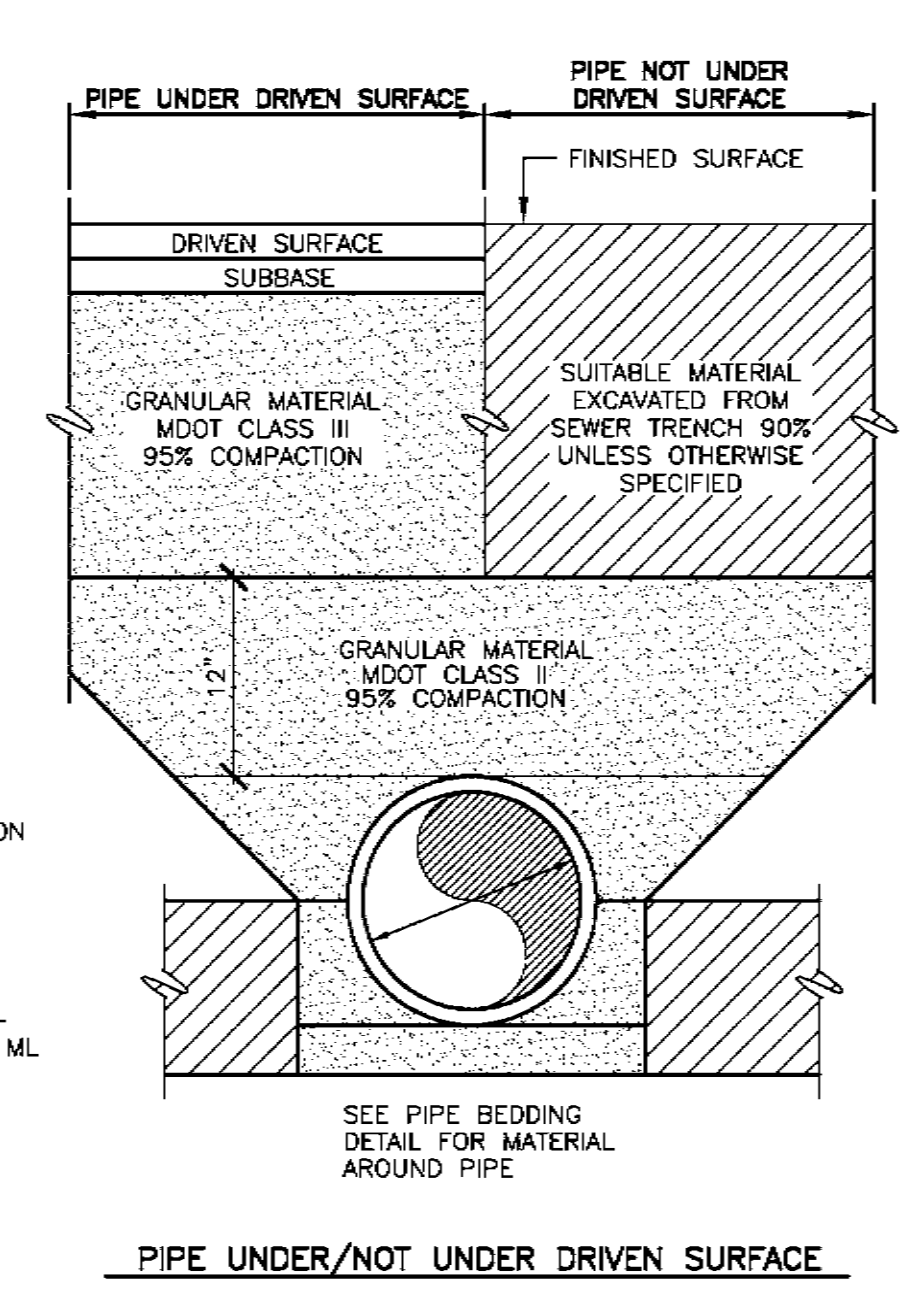
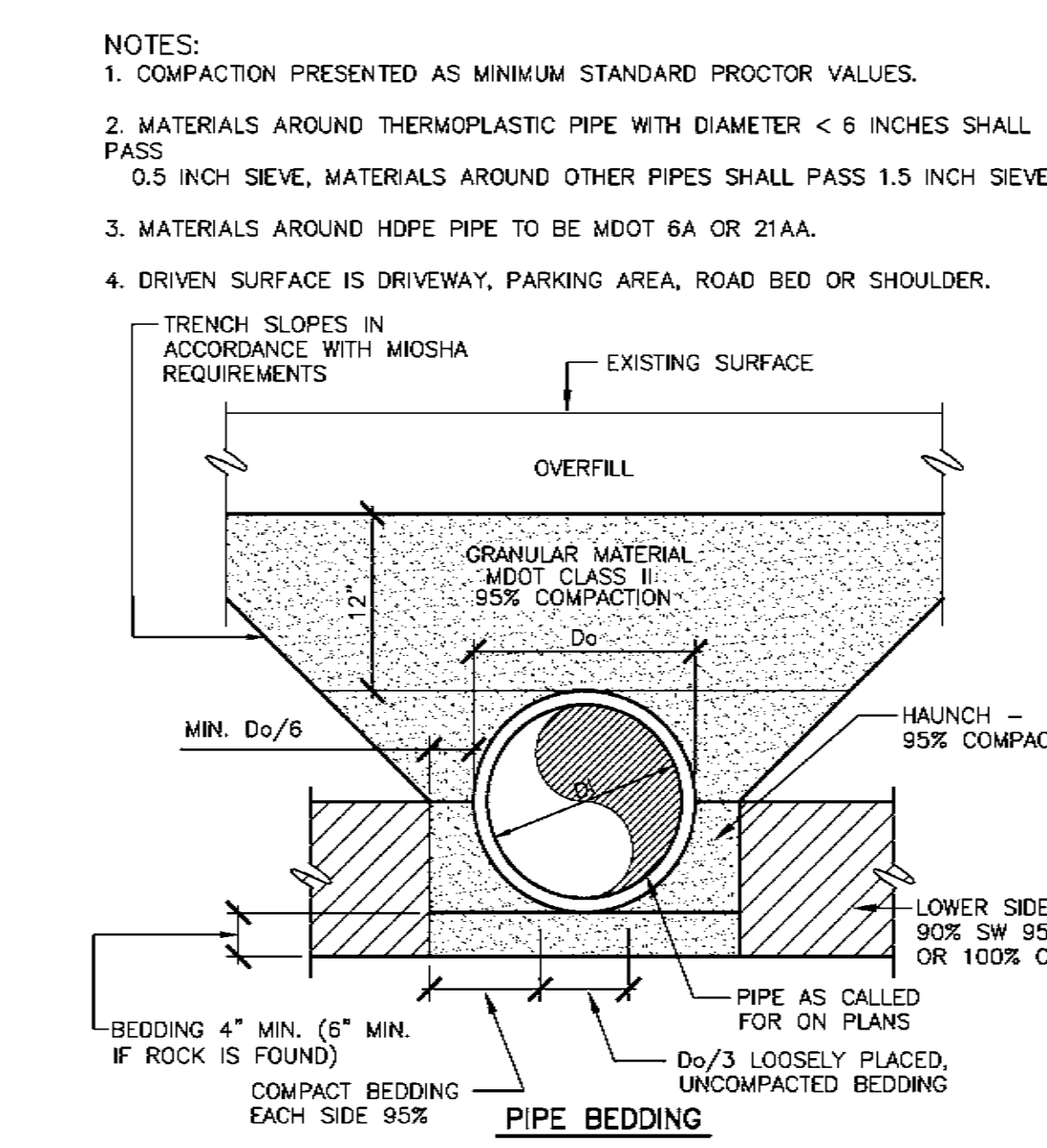
COMMERCIAL BUILDING WATER SERVICE LAYOUT



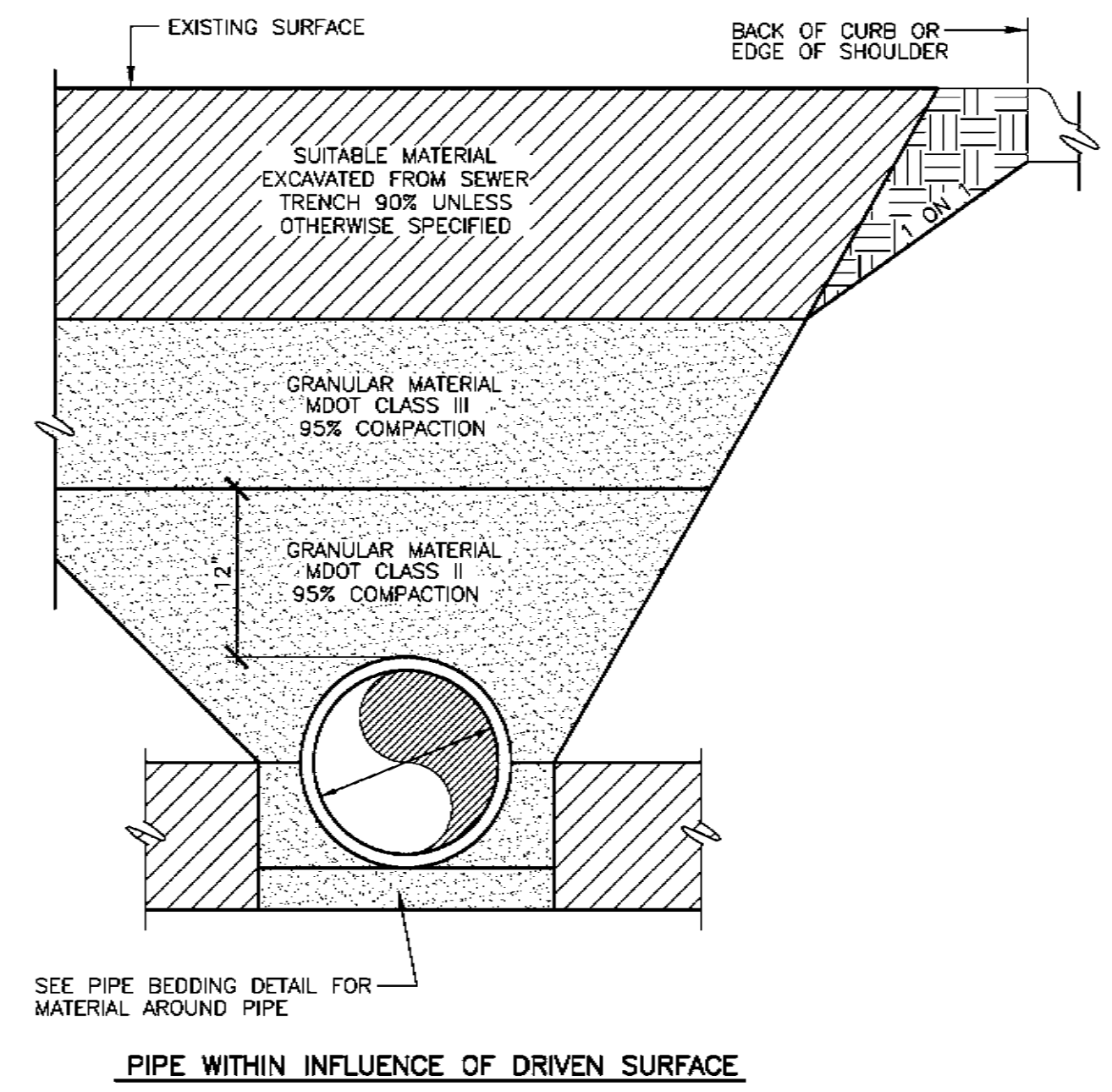
GATE VALVE AND BOX



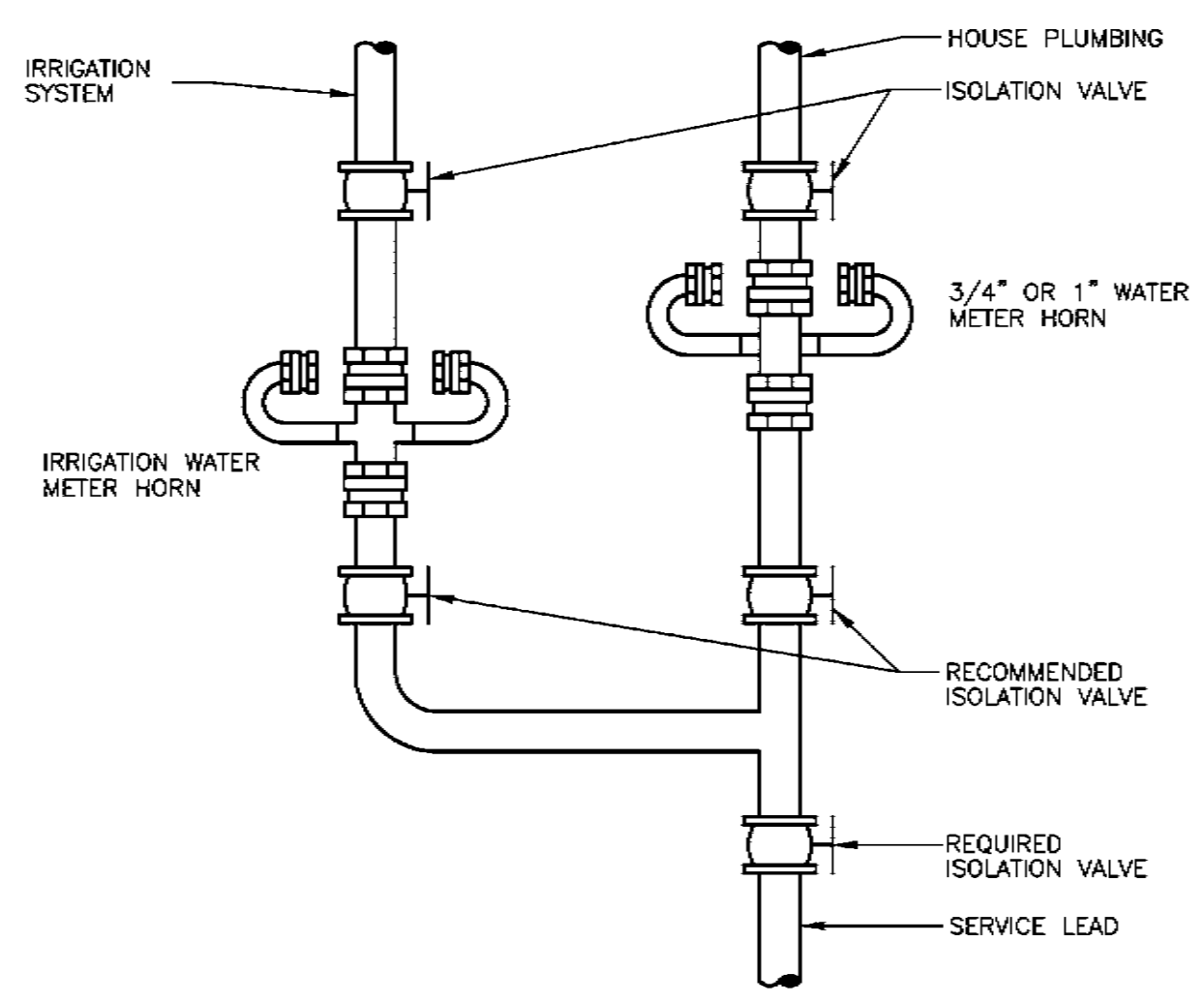
WATER SERVICE LATERAL



PIPE UNDER/NOT UNDER DRIVEN SURFACE TRENCH EXCAVATION & PIPE BEDDING



PIPE WITHIN INFLUENCE OF DRIVEN SURFACE



NOTE:
ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).

TYPICAL METER HORN INSTALLATION

MARION HOWELL GENOA OCEOLA
Sewer and Water Authority
WATER MAIN STANDARD DETAILS

Scale: NONE
Issued Date: 10-22-2007

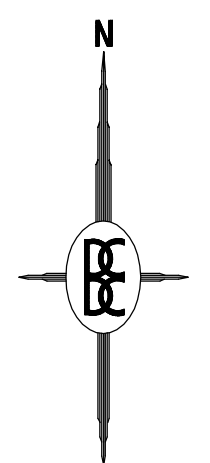
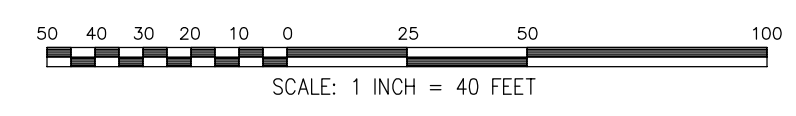
PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011
TITLE: MHOG WATER SERVICE DETAILS

NO	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 11

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(E-MAIL: bossengr.com)
3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6725 FAX (517) 548-1670

THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. THE USER SHALL BE RESPONSIBLE FOR OBTAINING NECESSARY PERMITS AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE.



THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL DATA UTILIZED AS SHOWN ON THESE DRAWINGS. THE USER APPROXIMATE, UNLESS OTHERWISE SPECIFIED, AND THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR OBTAINING THE EXACT LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT LOCATION OF ALL UTILITIES IN THE FIELD PRIOR TO CONSTRUCTION.

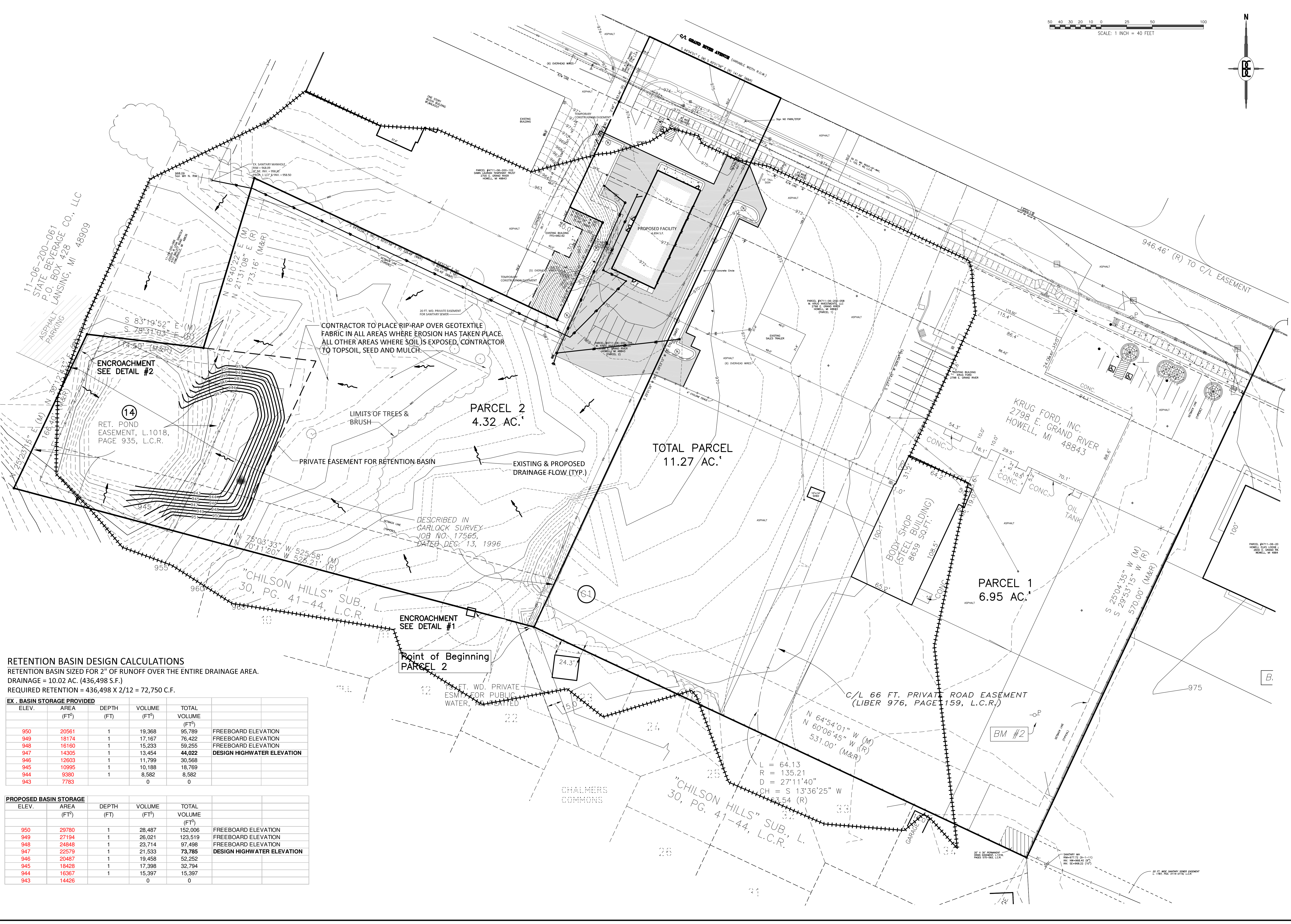
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3121 E. GRAND RIVER AVE.
HOWELL, MI 48843
(800) 246-6735 FAX (517) 548-4670

PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011
TITLE: OVERALL SITE PLAN

NO.	BY	DATE	REVISION PER
1	TD	11-14-11	ISSUE FOR PERMIT
2	TD	11-14-11	ISSUE FOR PERMIT
3	TD	11-14-11	ISSUE FOR PERMIT

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY: TD
SCALE: 1" = 40'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 12



CONTRACTOR TO PLACE RIP-RAP OVER GEOTEXTILE FABRIC IN ALL AREAS WHERE EROSION HAS TAKEN PLACE. ALL OTHER AREAS WHERE SOIL IS EXPOSED, CONTRACTOR TO TOPSOIL, SEED AND MULCH.

ENCROACHMENT SEE DETAIL #2

RET. POND EASEMENT, L.1018, PAGE 935, L.C.R.

PARCEL 2
4.32 AC.

TOTAL PARCEL
11.27 AC.

PARCEL 1
6.95 AC.

RETENTION BASIN DESIGN CALCULATIONS
RETENTION BASIN SIZED FOR 2" OF RUNOFF OVER THE ENTIRE DRAINAGE AREA.
DRAINAGE = 10.02 AC. (436,498 S.F.)
REQUIRED RETENTION = 436,498 X 2/12 = 72,750 C.F.

EX. BASIN STORAGE PROVIDED

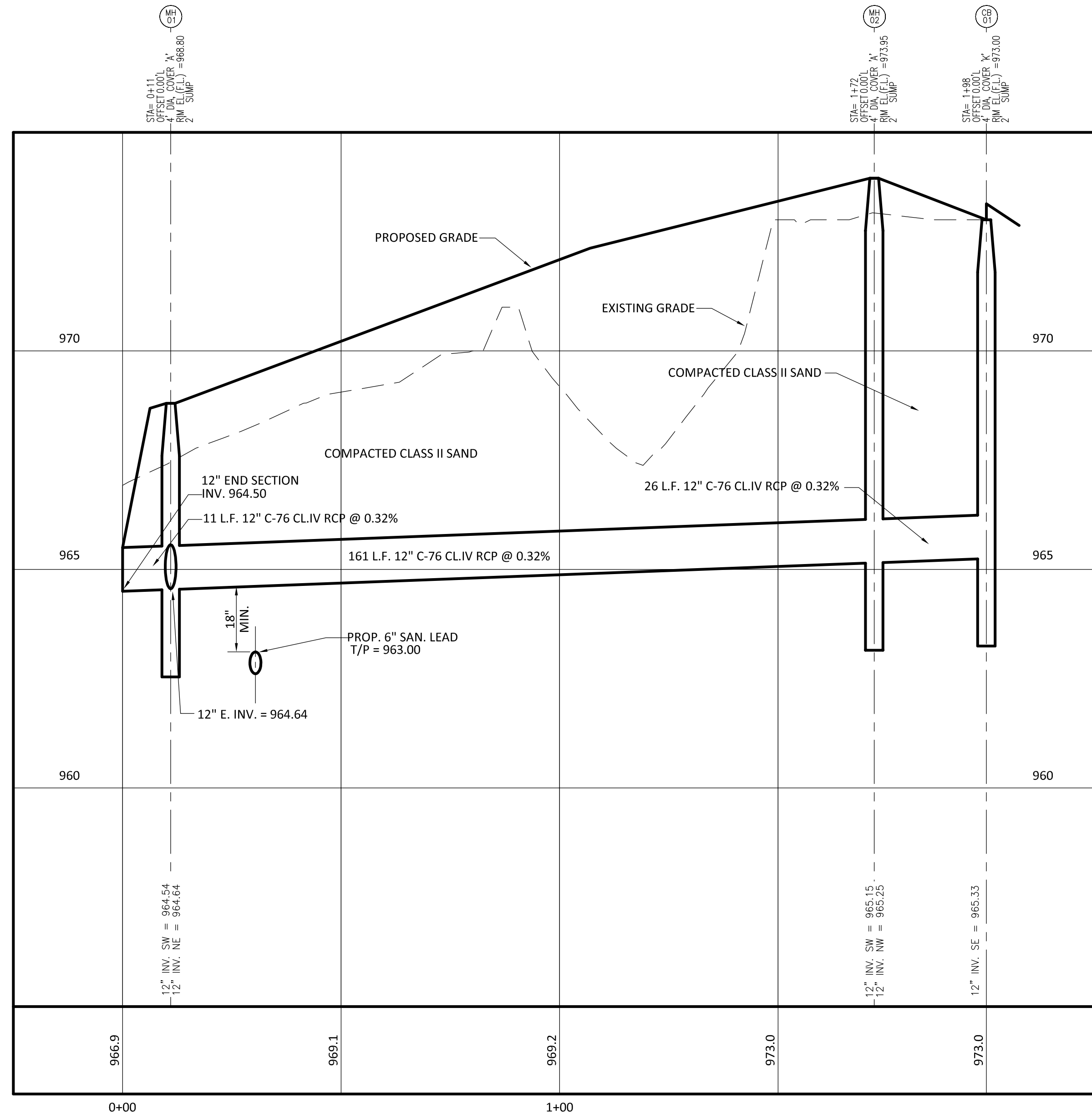
ELEV.	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	
950	20561	1	19,368	95,789	FREEBOARD ELEVATION
949	18174	1	17,167	76,422	FREEBOARD ELEVATION
948	16160	1	15,233	59,255	FREEBOARD ELEVATION
947	14305	1	13,454	44,022	DESIGN HIGHWATER ELEVATION
946	12603	1	11,799	30,568	
945	10995	1	10,188	18,769	
944	9380	1	8,582	8,582	
943	7783	0	0	0	

PROPOSED BASIN STORAGE

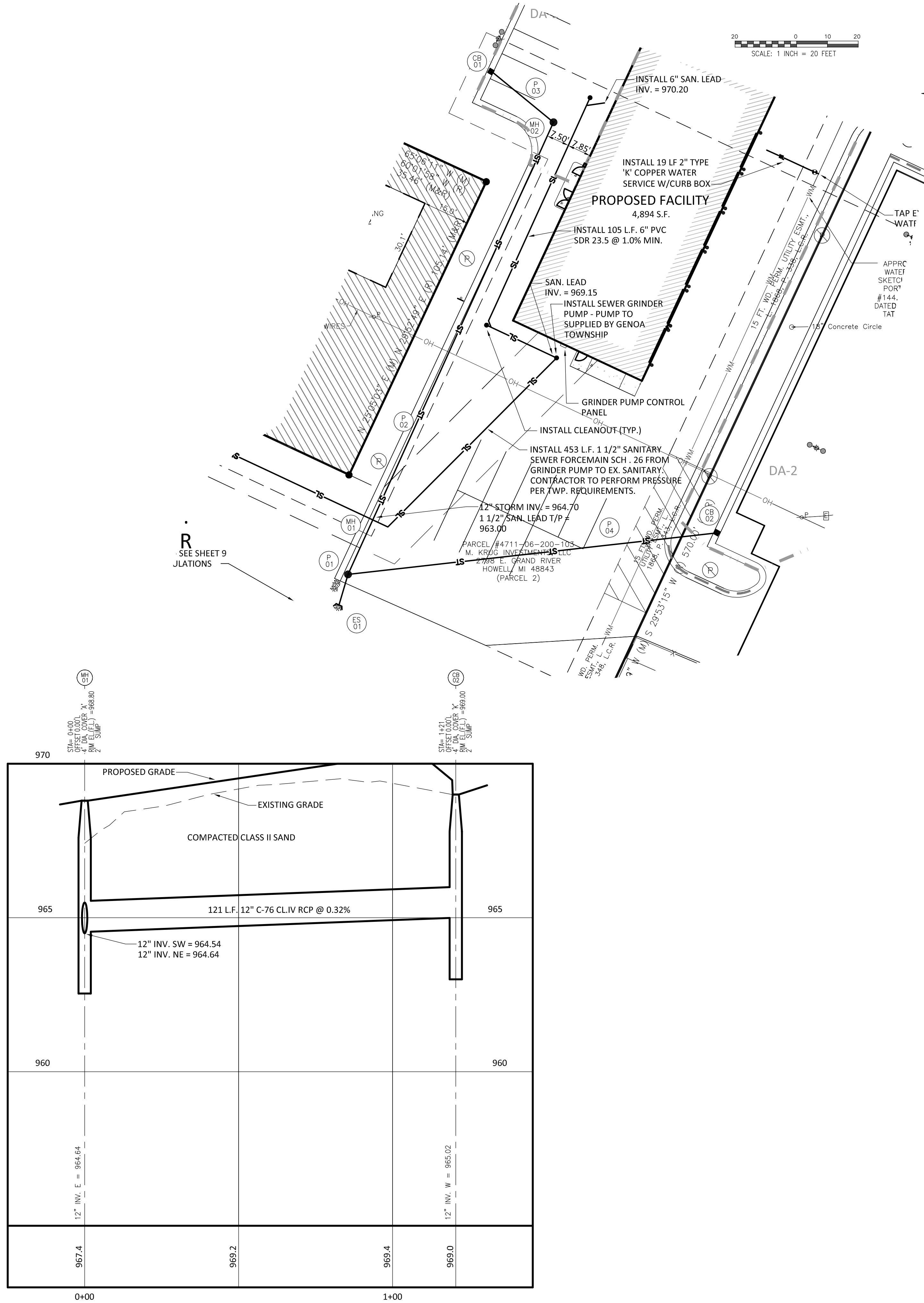
ELEV.	AREA (FT ²)	DEPTH (FT)	VOLUME (FT ³)	TOTAL VOLUME (FT ³)	
950	29780	1	28,487	152,006	FREEBOARD ELEVATION
949	27194	1	26,021	123,519	FREEBOARD ELEVATION
948	24848	1	23,714	97,498	FREEBOARD ELEVATION
947	22579	1	21,533	73,785	DESIGN HIGHWATER ELEVATION
946	20487	1	19,458	52,252	
945	18428	1	17,398	32,794	
944	16367	1	15,397	15,397	
943	14426	0	0	0	

STORM SEWER NOTES

1. ALL PIPE LENGTHS SHOWN ARE FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
2. ALL STORM SEWER PIPE SHALL BE C-76, CL. IV REINFORCED CONCRETE PIPE WITH WATERTIGHT PREMIUM JOINTS, UNLESS OTHERWISE NOTED ON PLAN.
3. ALL STORM SEWER & CULVERT PIPE NOTED AS "CSP" ON PLAN SHALL BE CORRUGATED STEEL, GALVANIZED CLASS "B" PIPE WITH REFORMED ENDS. SLEEVE GASKETS AND EXTRA WIDE, MECHANICALLY TIGHTENED CORRUGATED BAND CONNECTION JOINTS, UNLESS OTHERWISE SPECIFIED ON PLAN.
4. ALL OPEN INLET OR OUTLET END OF STORM SEWER AND CULVERTS SHALL INCLUDE PREFAB FLARED END SECTION AND MINIMUM 10 SQ. YD. OF PLAIN COBBLESTONE RIP-RAP (6" INCH MIN. SIZE), UNLESS OTHERWISE SPECIFIED.
5. ALL CATCH BASINS WITHIN ROADWAY SHALL INCLUDE INSTALLATION OF 6" DIA. PERFORATED PIPE SUBDRAIN AS SHOWN ON PLANS.
6. APPROPRIATE SOIL EROSION CONTROL MEASURES SHALL BE ESTABLISHED PRIOR TO BEGINNING CONSTRUCTION AND CONTINUOUSLY MAINTAINED BY CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.



STORM SEWER PROFILES
SCALE: HORIZ. 1" = 20', VERT. 1" = 2'



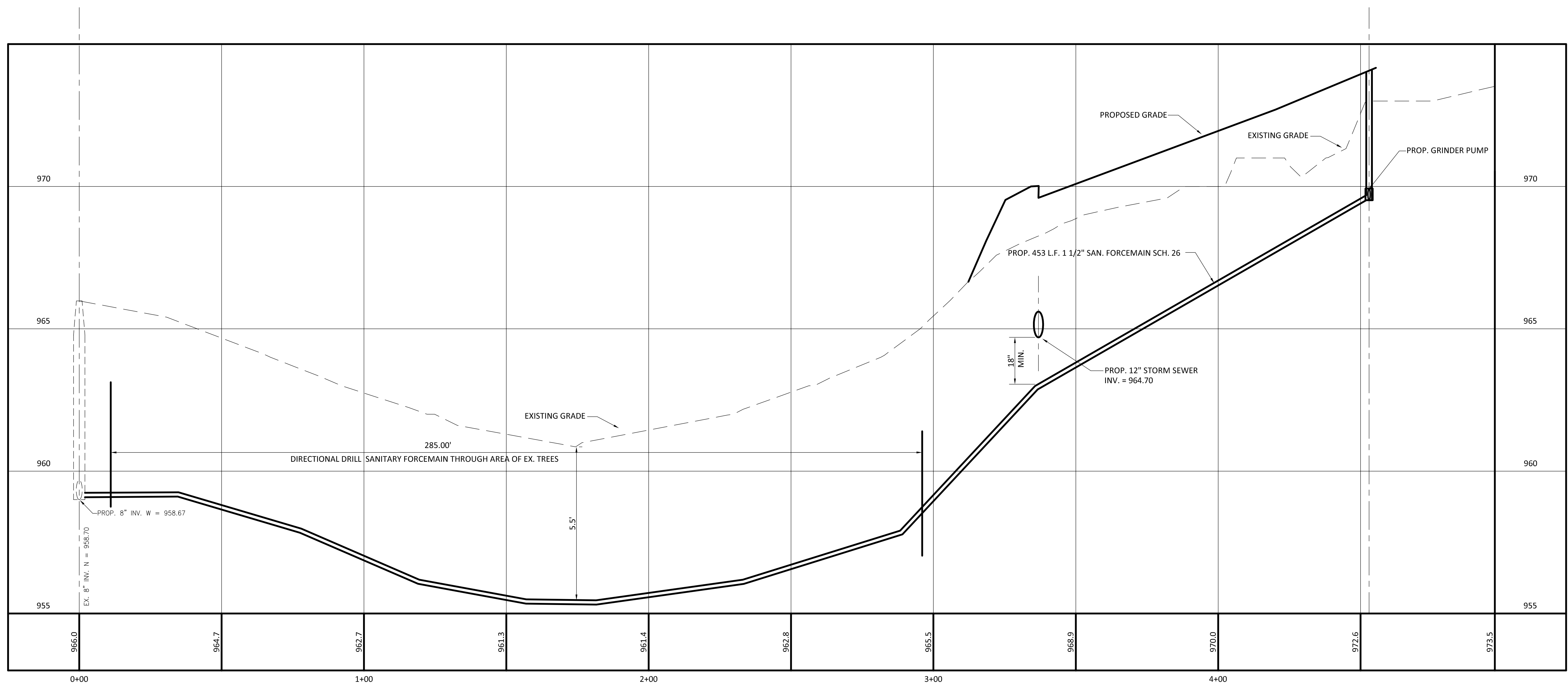
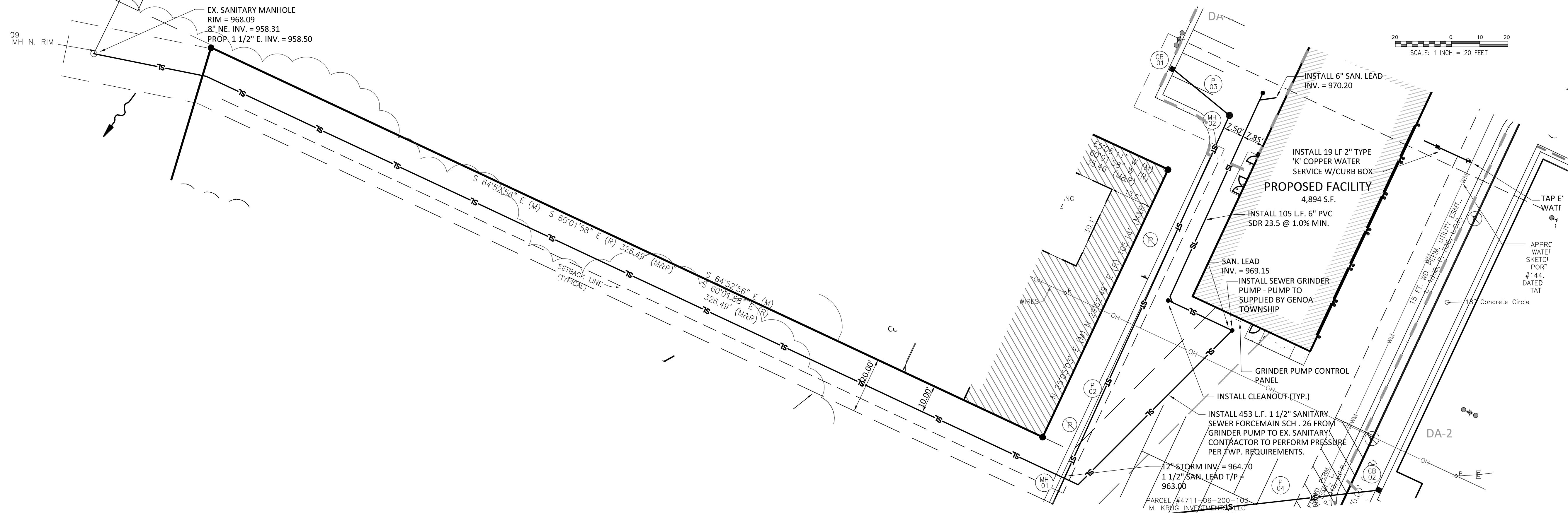
THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL INFORMATION SHOWN ON THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT.

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PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011
TITLE: STORM SEWER PROFILES

NO	BY	REVISION	PER	DATE
3	TD	TWP. REV.		4-4-12
2	TD	TWP. REV.		2-21-12
1	TD	TWP. REVIEW		1-12-12

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 13



SANITARY LEAD PROFILE
SCALE: HORIZ. 1" = 20', VERT. 1" = 2'

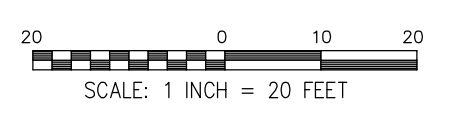
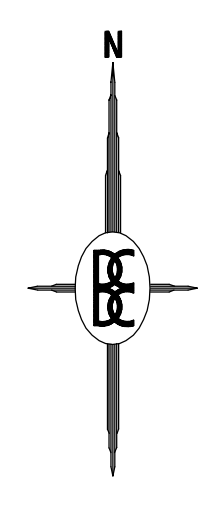
THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF ALL UTILITIES SHOWN ON THESE DRAWINGS. THE USER APPROXIMATE COMPLETION DATE OF THESE UTILITIES SHALL BE SHOWN ON THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING THE NECESSARY PERMITS AND APPROVALS FROM THE LOCAL GOVERNMENT.

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BRIGHTON, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT:	KRUG QUICK LANE
PREPARED FOR:	RAND CONSTRUCTION 1270 RICKETT ROAD BRIGHTON, MI 48116 810.227.7011
TITLE:	SANITARY LEAD PROFILE
DESIGNED BY:	TD
DRAWN BY:	TD
CHECKED BY:	TD
SCALE:	1" = 20'
JOB NO.:	11-190
DATE:	11-14-11
SHEET NO.:	14



LEGEND

900	EXISTING CONTOUR
+922.00	EXISTING SPOT ELEVATION
-P	POWER POLE
I	GUY WIRE
⊕	HYDRANT
⊗	GATE VALVE
⊙	WELL
⊖	MANHOLE
⊖	STORM INVERT
⊖	U.G. ELECTRIC MARKER
⊖	TELEPHONE RISER
⊖	GAS METER
⊖	GAS RISER
⊖	U.G. GAS MARKER
⊖	LIGHT POLE
⊖	SIGN
⊖	IRON SET
⊖	IRON FOUND
⊖	MONUMENT
⊖	SECTION CORNER
—SN—	SANITARY SEWER
—WM—	WATER MAIN
—ST—	STORM SEWER
—G—	GAS MAIN
—E—	ELECTRIC
—T—	TELEPHONE
—OH—	OVERHEAD WIRES
—X—	FENCE

GENERAL SURVEY NOTES:

- CURRENT ZONING: GCD (GENERAL COMMERCIAL)
- MINIMUM SETBACK REQUIREMENTS:
FRONT = 70' (30' IF NO PARKING IN FRONT YARD)
SIDES = 15'
REAR = 50'
PARKING LOT = 20' (10' SIDE & REAR)
- BEARINGS WERE ESTABLISHED FROM A PREVIOUS SURVEY BY BOSS ENGINEERING, JOB NO. 96500, AS RECORDED IN LIBER 2131, PAGE 176, LIVINGSTON COUNTY RECORDS.
- SUBSURFACE UTILITIES NOT LOCATED FOR THIS SURVEY MAY EXIST. IT IS THE RESPONSIBILITY OF THE OWNER OF THE RESPECTIVE UTILITY TO ACCURATELY LOCATE SUCH UTILITIES.
- EASEMENTS OR RESTRICTIONS OF RECORD NOT DEPICTED ON THIS DRAWING MAY EXIST.
- ELEVATIONS WERE ESTABLISHED RELATIVE TO BENCHMARK INFORMATION BY BOSS ENGINEERING AS SHOWN ON JOB NO. 00621, DATED 1/29/2001. (NGVD29 DATUM)
- CONTOURS ARE SHOWN AT 1 FOOT INTERVALS.
- ALL ELEVATIONS ARE SHOWN TO THE NEAREST 0.01 FOOT; HOWEVER SOFT-SURFACE ELEVATIONS CAN ONLY BE PRESUMED ACCURATE TO THE NEAREST 0.1 FOOT.

EX. SANITARY MANHOLE
RIM = 968.09
8" NE. INV. = 958.31
PROP. 1 1/2" E. INV. = 958.50

PARCEL #4711-06-200-102
DAWN LAURIAN TENPENNY TRUST
2700 E. GRAND RIVER
HOWELL, MI 48843

PARCEL #4711-06-200-103
M. KRUG INVESTMENTS, LLC
2708 E. GRAND RIVER
HOWELL, MI 48843
(PARCEL 2)



APPROXIMATE LOCATION OF 4" GAS MAIN & 12" WATER MAIN AS DEPICTED ON SKETCH PREPARED BY McNAMEE, PORTER & SEELEY, CONTRACT #144.63-W-1, SHEET 3 OF 29, DATED 2-22-95, PROVIDED BY GREG TATARIA, UTILITY DIRECTOR FOR M.H.O.G. (810.227.5225)

APPROXIMATE LOCATION OF 8" WATER MAIN AS DEPICTED ON SKETCH PREPARED BY McNAMEE, PORTER & SEELEY, CONTRACT #144.63-W-1, SHEET 3A OF 29, DATED 08-95, PROVIDED BY GREG TATARIA, UTILITY DIRECTOR FOR M.H.O.G. (810.227.5225)

BENCHMARK CHART
BM #3
BOSS NAIL & TAG SET AT W/SIDE OF POWER POLE, 37" WEST OF SW CORNER OF KRUG FORD BUILDING.
ELEV. = 976.38 (NGVD29 DATUM)
BM #6
NORTH SIDE OF TOP OF CONCRETE BASE TO L. POLE, 4TH POLE EAST OF THE WESTERLY ENTRANCE TO KRUG FORD.
ELEV. = 974.82 (NGVD29 DATUM)

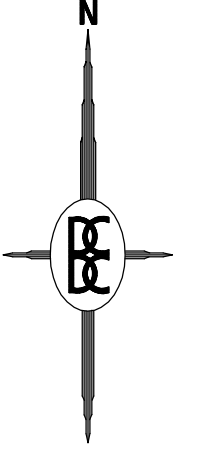
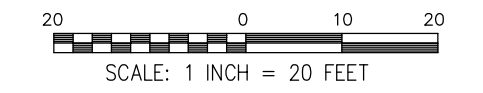
THE DRAWING AND ALL PARTS OF THE DRAWING, INCLUDING ANY UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. COMPLETELY RESPONSIBLE FOR THE ACCURACY OF THE DRAWING. THE CONTRACTOR SHALL BE COMPLETELY RESPONSIBLE FOR OBTAINING THE EXACT UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OR DEPTH OF UTILITIES SIGNIFICANTLY DIFFERENT FROM THE FIELD PRIOR TO CONSTRUCTION.

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PROJECT: KRUG QUICK LANE	
PREPARED FOR: RAND CONSTRUCTION	
1270 RICKETT ROAD BRIGHTON, MI 48116 810.227.7011	
TITLE: EXISTING CONDITIONS & DEMOLITION PLAN	
NO	DATE
3	TWP. REV. 4-4-12
2	TWP. REV. 2-21-12
1	TWP. REV. 1-12-12
NO	BY
DESIGNED BY:	TD
DRAWN BY:	TD
CHECKED BY:	
SCALE	1" = 20'
JOB NO.	11-190
DATE	11-14-11
SHEET NO.	2

LEGEND	
PROPOSED (PR)	EXISTING (EX)
FF	FF
FG	FG
T/A	T/A
T/C	T/C
T/W	T/W
F/L	F/L
T/P	T/P
B/P	B/P
RM	RM
INV	INV
MH	MH
IN	IN
CB	CB
RY	RY
ES	ES
GV	GV
HY	HY
UP	UP
SN	SN
SL	SL
FM	FM
PS	PS
ST	ST
WM	WM
WL	WL
FO	FO
OH	OH
C	C
G	G
T	T
M	M
U	U
F	F
S	S
NO PARKING SIGNS	



- GENERAL SURVEY NOTES:**
- CURRENT ZONING: GCD (GENERAL COMMERCIAL)
 - MINIMUM SETBACK REQUIREMENTS:
FRONT = 70' (30' IF NO PARKING IN FRONT YARD)
PROPOSED = 44.97' (VARIANCE REQUIRED)
SIDES = 15'
PROPOSED = 27'
REAR = 50'
PROPOSED = 35.5'
PARKING LOT = 20' (10' SIDE & REAR)
PROPOSED = 10' SIDE
 - EXISTING USE: NEW & PRE-OWNED AUTO SALES & SERVICE
 - PROPOSED USE: NEW & PRE-OWNED AUTO SALES & SERVICE, AND OIL CHANGE CENTER
 - PARKING CALCULATIONS
REQUIRED: 2 SPACES PER SERVICE BAY PLUS 1 SPACE PER EMPLOYEE ON MAX. SHIFT.
6 SERVICE BAYS X 2 PLUS 8 EMPLOYEES = 20 SPACES
PROVIDED: 25 SPACES.
 - SEE ARCHITECTURAL PLANS FOR ALL NEW SIGNAGE - NO NEW FREE STANDING SIGNAGE PROPOSED.
 - FACILITY TO SHARE EX. DUMPSTER WITH AUTO DEALERSHIP.
 - ALL VEHICLE MAINTENANCE WILL BE CONDUCTED INSIDE THE FACILITY.
 - NO OUTDOOR STORAGE IS PROPOSED.
 - NO WRECKED VEHICLES WILL BE STORED ON SITE.
 - ALL WASTE FLUIDS ARE TO BE STORED INSIDE THE FACILITY. THE STORAGE AND DISPOSAL OF ALL WASTE FLUIDS TO MET ALL CURRENT LOCAL, STATE AND FEDERAL REQUIREMENTS.
 - ACCORDING TO THE NATIONAL WETLAND INVENTORY MAP, NO WETLANDS EXISTING ON THIS PROPERTY.

THE DESIGNER HAS REVIEWED THE RECORD SURVEY AND UTILITIES AS SHOWN ON THESE DRAWINGS ARE ONLY APPROXIMATE. COMPLETION OF THIS PROJECT SHALL BE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL BE EXCLUSIVELY RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL UTILITIES AND FOR OBTAINING THE NECESSARY UTILITY CROSSINGS IN THE FIELD PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PUBLIC UTILITIES AND OTHER AGENCIES PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE PUBLIC UTILITIES AND OTHER AGENCIES PRIOR TO THE START OF CONSTRUCTION.

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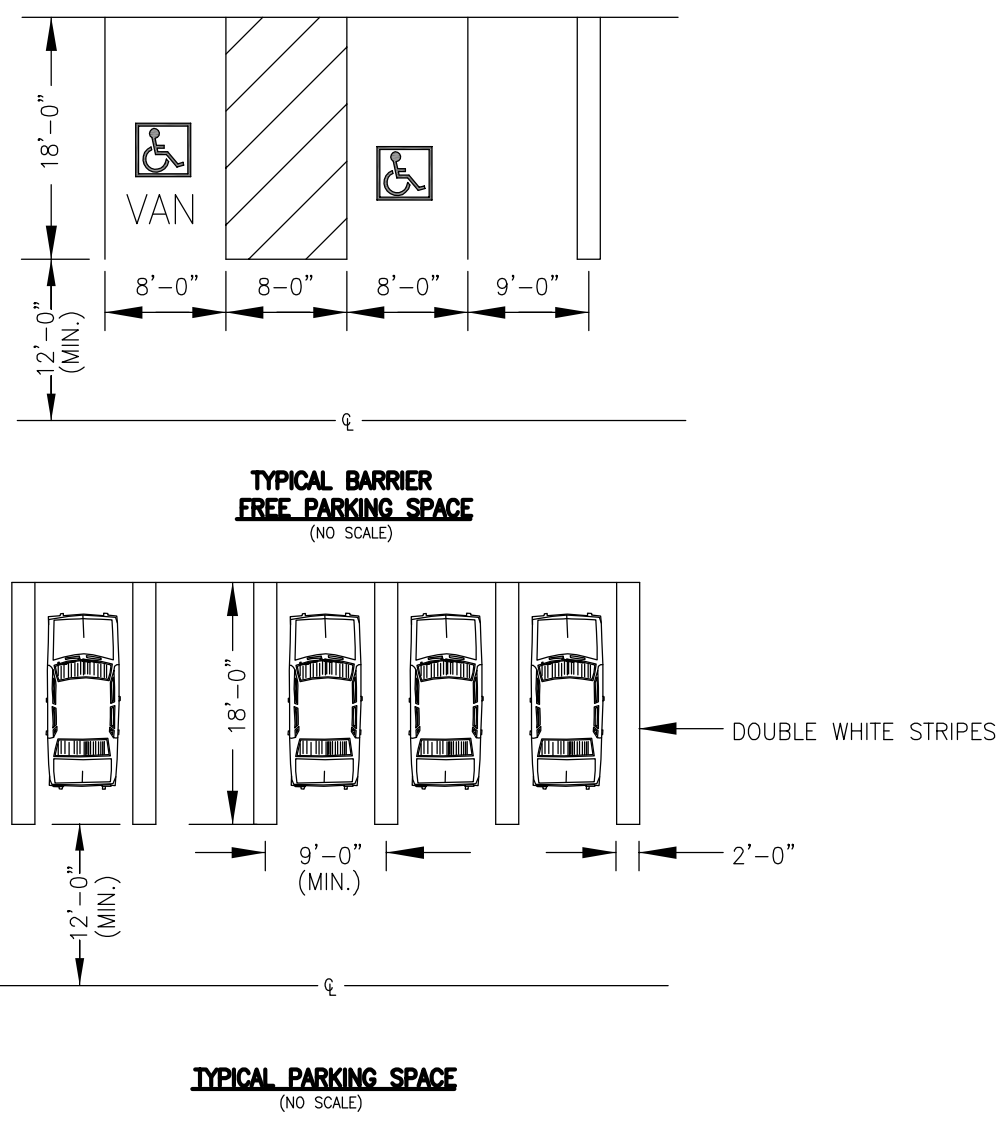
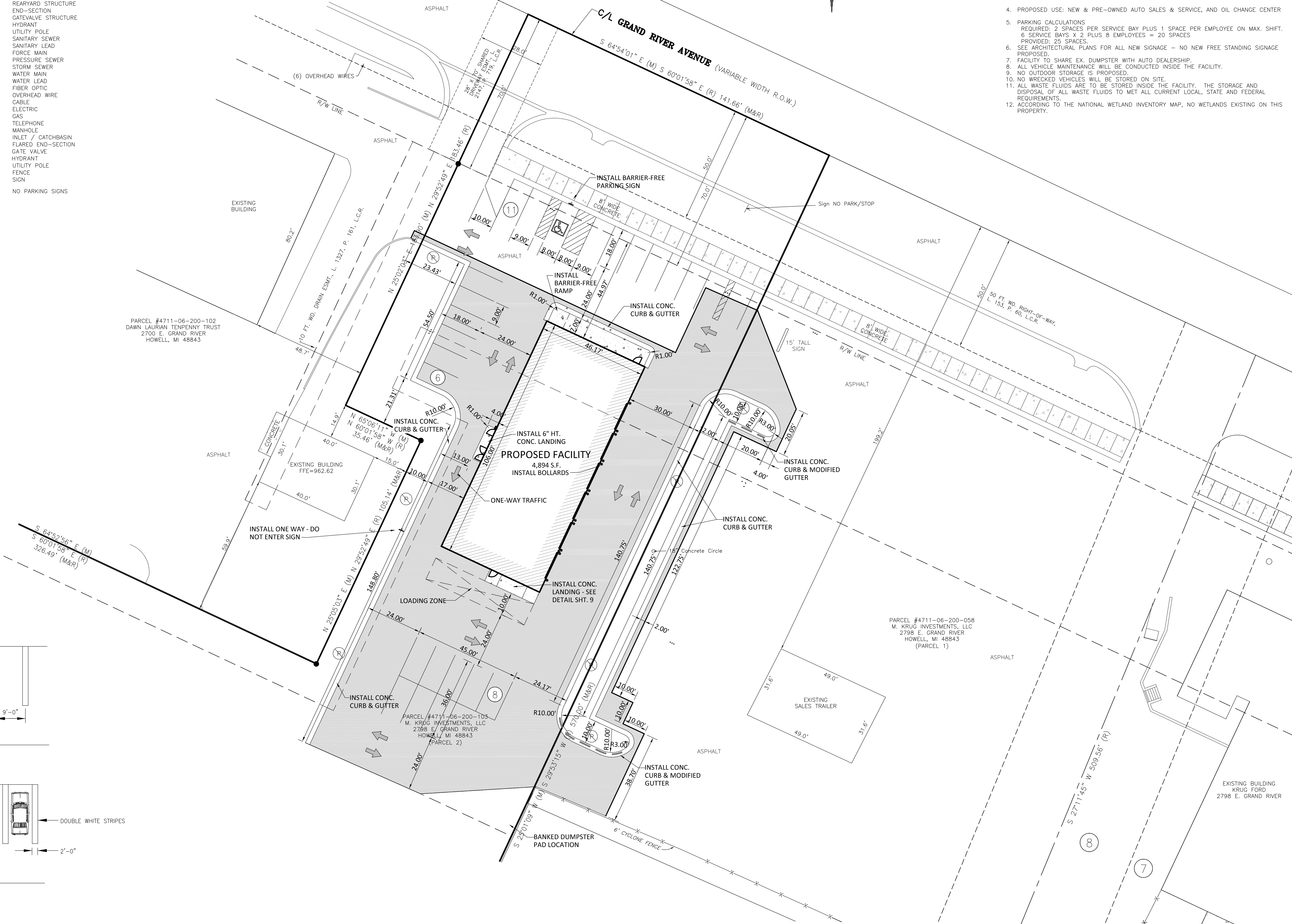
PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

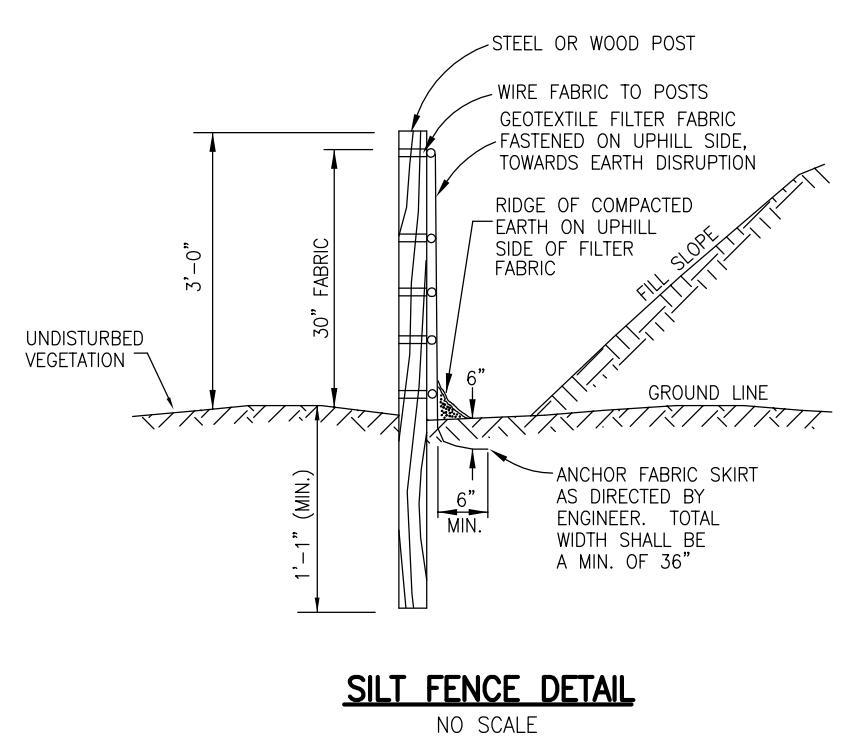
TITLE: SITE PLAN

NO	BY	DATE	REVISION PER
3	TD	4-4-12	
2	TD	2-21-12	
1	TD	1-12-12	
NO	BY	DATE	REVISION PER

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:

SCALE: 1" = 20'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 3





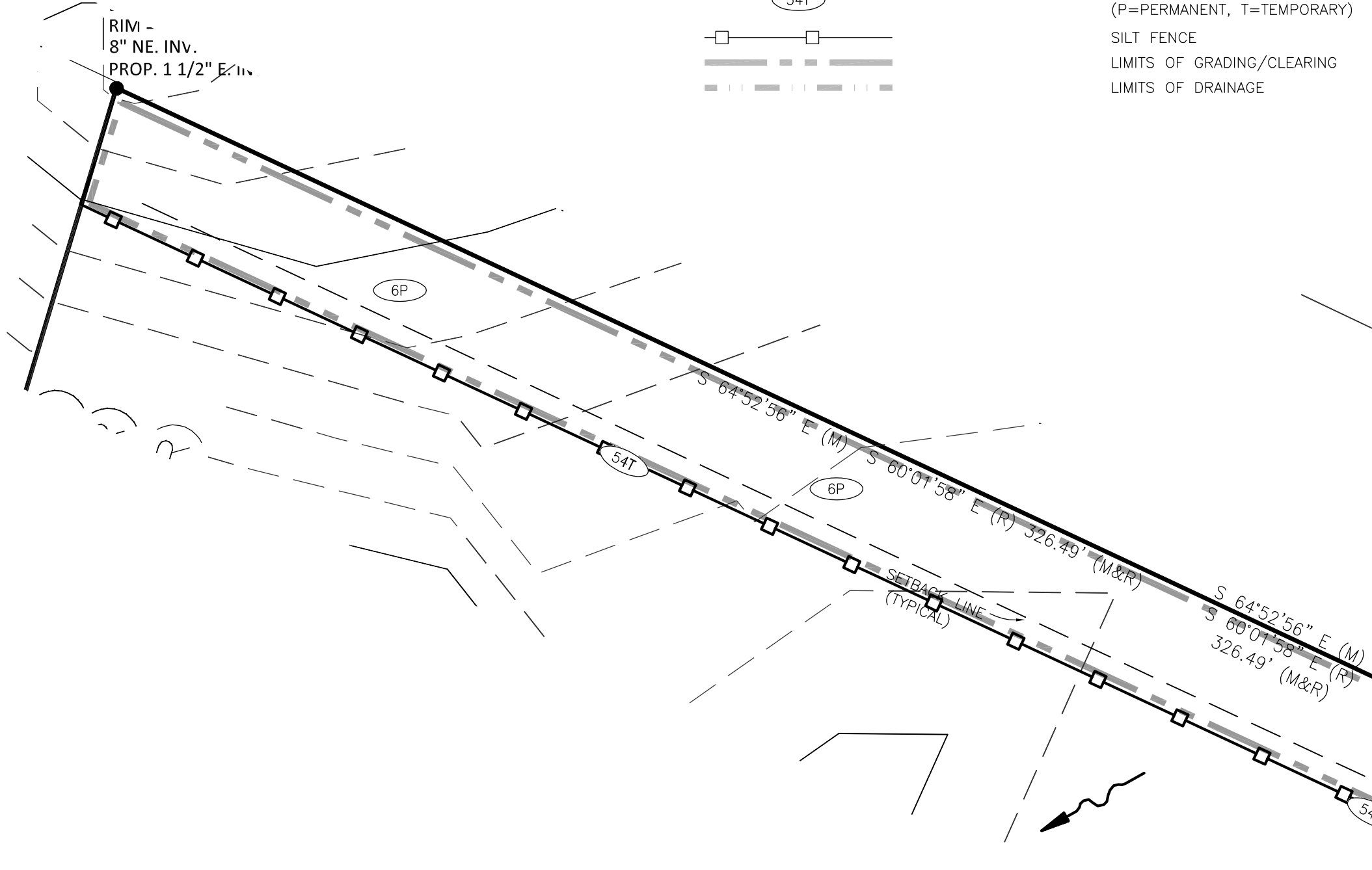
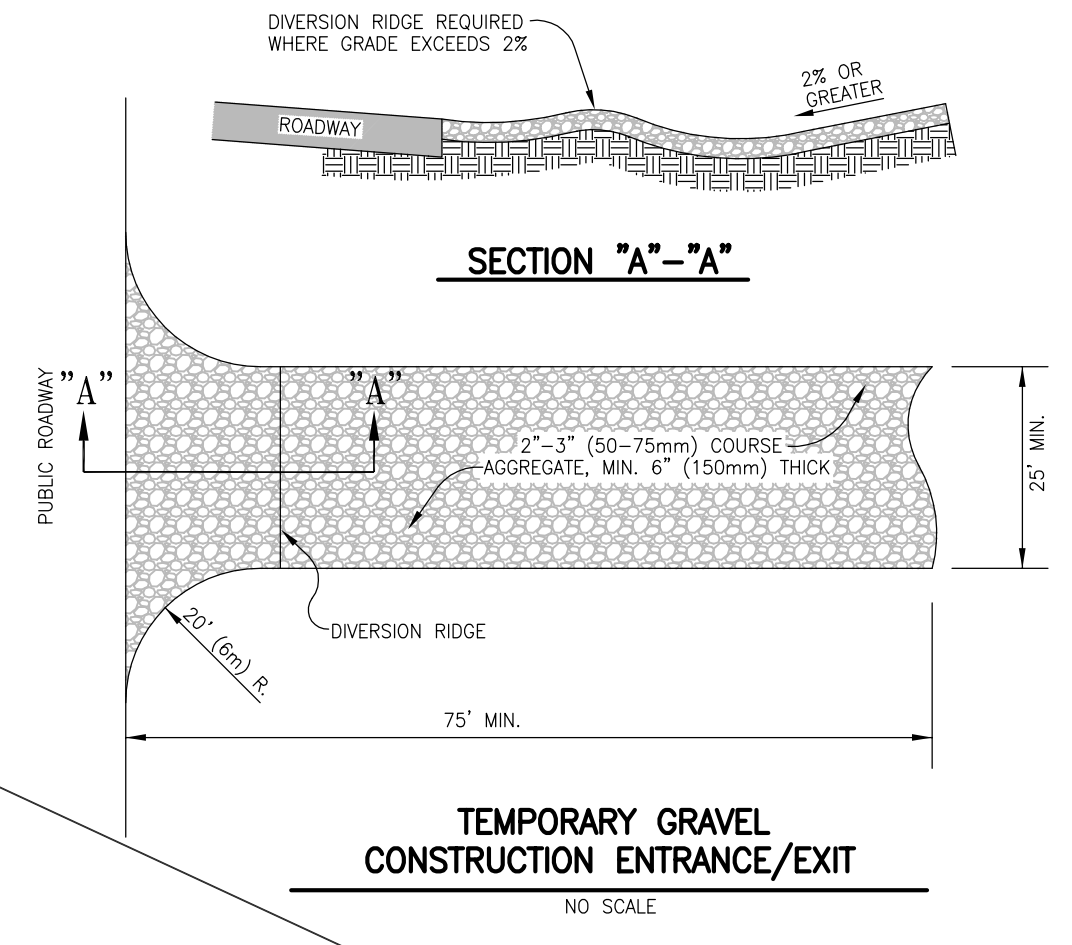
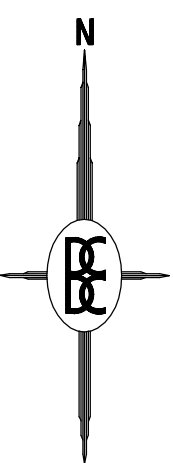
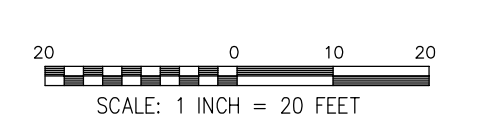
LEGEND

PROPOSED (PR)	EXISTING (EX)	
FF	FF	FINISHED FLOOR ELEVATION
T/A	T/A	FINISHED GRADE ELEVATION
T/C	T/C	TOP OF ASPHALT
T/W	T/W	TOP OF CURB / CONCRETE
F/L	F/L	TOP OF WALK
T/P	T/P	FLOW LINE
B/P	B/P	TOP OF PIPE
RIM	RIM	BOTTOM OF PIPE
INV	INV	RIM ELEVATION
MH	MH	INVERT ELEVATION
IN	IN	MANHOLE STRUCTURE
CB	CB	INLET STRUCTURE
RY	RY	CATCHBASIN STRUCTURE
ES	ES	REARYARD STRUCTURE
GV	GV	END-SECTION
HY	HY	GATEVALVE STRUCTURE
UP	UP	HYDRANT
SN	SN	UTILITY POLE
SL	SL	SANITARY SEWER
FM	FM	SANITARY LEAD
PS	PS	FORCE MAIN
ST	ST	PRESSURE SEWER
WM	WM	STORM SEWER
WL	WL	WATER MAIN
FO	FO	WATER LEAD
OH	OH	FIBER OPTIC
C	C	OVERHEAD WIRE
E	E	CABLE
G	G	ELECTRIC
T	T	GAS
U	U	TELEPHONE
○	○	MANHOLE
□	□	INLET / CATCHBASIN
○	○	FLARED END-SECTION
○	○	GATE VALVE
○	○	HYDRANT
○	○	UTILITY POLE
○	○	FENCE
○	○	SIGN
○	○	NOT FIELD VERIFIED TO BE REMOVED
○	○	COMPACTED SAND BACKFILL
TBR	TFV	
CSB		SANITARY SEWER LABEL
SAN #1		STORM SEWER LABEL
CR 02		WATER MAIN LABEL
GV 12		SOIL EROSION CONTROL MEASURE (P=PERMANENT, T=TEMPORARY)
SAT		SILT FENCE
		LIMITS OF GRADING/CLEARING
		LIMITS OF DRAINAGE

BENCHMARK CHART

BM #3
BOSS NAIL & TAG SET AT W/SIDE OF POWER POLE, 37' WEST OF SW CORNER OF KRUG FORD BUILDING.
ELEV. = 976.38 (NGVD29 DATUM)

BM #6
NORTH SIDE OF TOP OF CONCRETE BASE TO L. POLE, 4TH POLE EAST OF THE WESTERLY ENTRANCE TO KRUG FORD.
ELEV. = 974.82 (NGVD29 DATUM)



SOIL EROSION CONTROL MEASURES

1		TOPSOIL MAY BE STOCKPILED ABOVE BORROW AREAS TO ACT AS A DIVERSION STOCKPILE SHOULD BE TEMPORARILY SEEDED
6		FACILITATES ESTABLISHMENT OF VEGETATIVE COVER EFFECTIVE FOR GRADIENTS WITH LOW VELOCITY. EASILY PLACED IN SMALL QUANTITIES BY UNPROTECTED PERSONNEL. SHOULD INCLUDE PREPARED TOPSOIL BED.
13		USED WHERE VEGETATION IS NOT EASILY ESTABLISHED EFFECTIVE FOR HIGH VELOCITIES OR HIGH CONCENTRATIONS FORMS RUNOFF TO INERTIAL SOIL DISPERSES ENERGY FLUX AT SYSTEM OUTLETS
15		PROTECTS AREAS WHICH CANNOT OTHERWISE BE PROTECTED, BUT INCREASES RUNOFF VELOCITY. IRREGULAR SURFACE WILL HELP SLOW VELOCITY
35		SYSTEM REMOVES COLLECTED RUNOFF FROM SITE. PARTICULARLY FROM PAVED AREAS CAN ACCEPT LARGE CONCENTRATIONS OF RUNOFF CONDUCTS RUNOFF TO MUNICIPAL SEWER SYSTEM OR STABILIZED OUTFALL LOCATION (SEE FATCH BASIN TO COLLECT SEWAGE)
36		COLLECTS HIGH VELOCITY CONCENTRATED RUNOFF MAY USE FILTER CLOTH OVER INLET
54		USES GEOTEXTILE FABRIC AND POST OR POLES. EASY TO CONSTRUCT AND LOCATE AS NECESSARY. (SEE DETAIL THIS SHEET)

T = TEMPORARY P = PERMANENT
TOTAL AREA DISTURBED = 37,497 S.F. (0.86 AC)

THIS PROJECT REDUCES THE IMPERVIOUS AREA BY 2,225 S.F. OVER THE EXISTING CONDITIONS.

THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROPRIATE UTILITIES AS SHOWN ON THESE DRAWINGS.

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(800) 246-6735 FAX (517) 548-1670

PROJECT: KRUG QUICK LANE

PREPARED FOR: RAND CONSTRUCTION

DATE: 11-14-11

TITLE: GRADING, DRAINAGE & SOIL EROSION CONTROL

NO	BY	DATE	REVISION PER
1	TD	11-14-11	
2	TD	11-14-11	
3	TD	11-14-11	

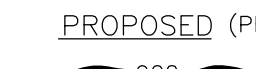

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY: TD

SCALE: 1" = 20'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 4

STORM SEWER NOTES

- ALL PIPE LENGTHS SHOWN ARE FROM C/L TO C/L OF STRUCTURE OR FROM C/L OF STRUCTURE TO DISCHARGE END OF FLARED END SECTION.
- ALL STORM SEWER PIPE SHALL BE C-76, CL. IV REINFORCED CONCRETE PIPE WITH WATER TIGHT PREMIUM JOINTS, UNLESS OTHERWISE NOTED ON PLAN.
- ALL STORM SEWER & CULVERT PIPE NOTED AS "CSP" ON PLAN SHALL BE CORRUGATED STEEL, GALVANIZED CLASS "B" PIPE WITH REFORMED ENDS. SLEEVE GASKETS AND EXTRA WIDE, MECHANICALLY TIGHTENED CORRUGATED BAND CONNECTION JOINTS, UNLESS OTHERWISE SPECIFIED ON PLAN.
- ALL OPEN INLET OR OUTLET END OF STORM SEWER AND CULVERTS SHALL INCLUDE PREFAB FLARED END SECTION AND MINIMUM 10 SQ. YD. OF PLAIN COBBLESTONE RIP-RAP (6" INCH MIN. SIZE), UNLESS OTHERWISE SPECIFIED.
- ALL CATCH BASINS WITHIN ROADWAY SHALL INCLUDE INSTALLATION OF 6" DIA. PERFORATED PIPE SUBDRAIN AS SHOWN ON PLANS.
- APPROPRIATE SOIL EROSION CONTROL MEASURES SHALL BE ESTABLISHED PRIOR TO BEGINNING CONSTRUCTION AND CONTINUOUSLY MAINTAINED BY CONTRACTOR UNTIL VEGETATION HAS BEEN RE-ESTABLISHED.

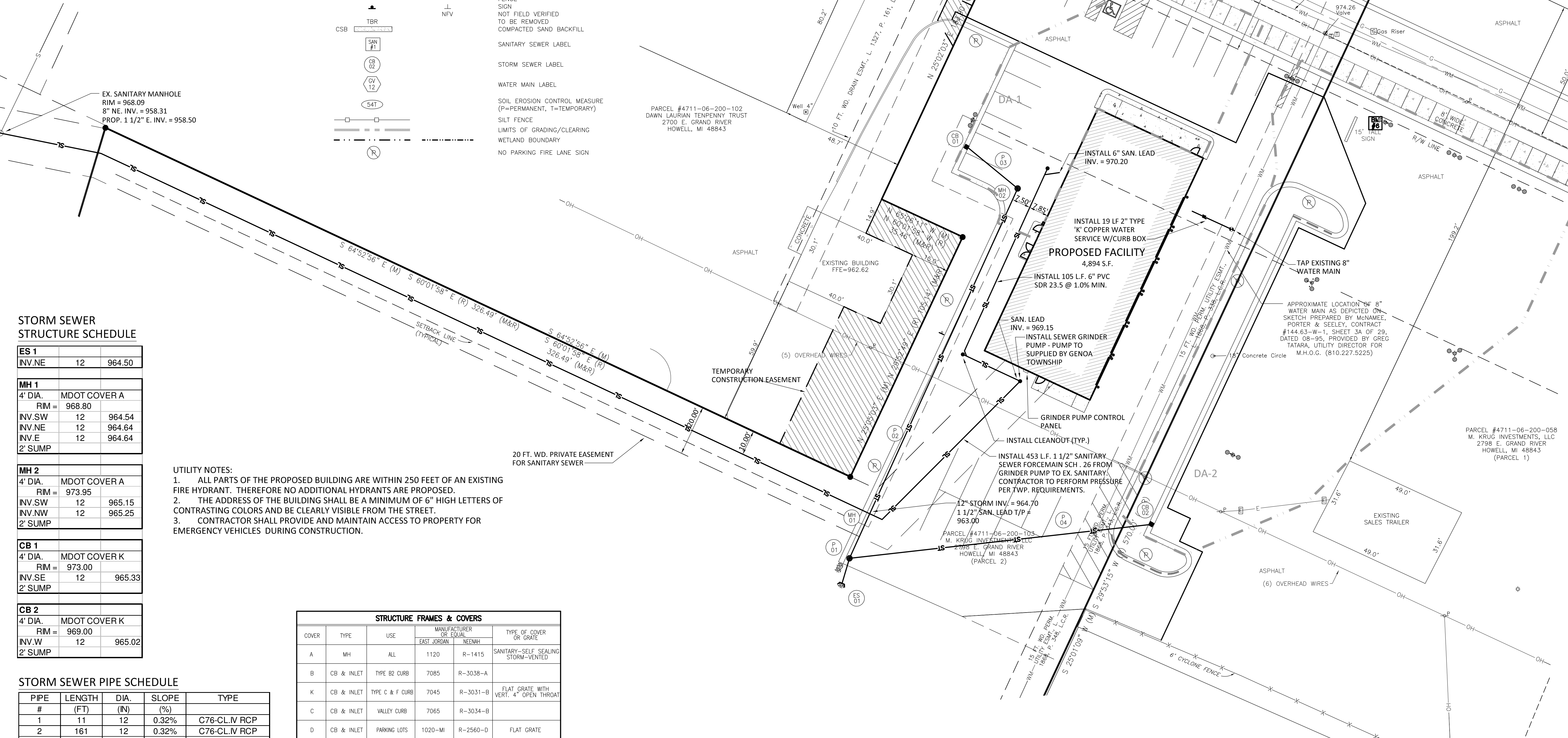
LEGEND

PROPOSED (PR)	EXISTING (EX)
	
FF	FF
T/A	T/A
T/C	T/C
T/W	T/W
F/L	F/L
T/P	T/P
B/P	B/P
RIM	RIM
INV	INV
MH	MH
IN	IN
CB	CB
RY	RY
ES	ES
GV	GV
HY	HY
UF	UF
SN	SN
SL	SL
FM	FM
PS	PS
ST	ST
WM	WM
WL	WL
FO	FO
OH	OH
C	C
E	E
G	G
T	T
U	U
F	F
CSB	NFV
SAN #1	
CB 02	
GV 12	
54T	

BENCHMARK CHART

BM #3
BOSS NAIL & TAG SET AT W/SIDE OF POWER POLE, 37" WEST OF SW CORNER OF KRUG FORD BUILDING.
ELEV. = 976.38 (NGVD29 DATUM)

BM #6
NORTH SIDE OF TOP OF CONCRETE BASE TO L. POLE, 4TH POLE EAST OF THE WESTERLY ENTRANCE TO KRUG FORD.
ELEV. = 974.82 (NGVD29 DATUM)

**STORM SEWER STRUCTURE SCHEDULE**

STRUCTURE	DIA.	COVER	RIM	INVERT
ES 1	12	964.50		
MH 1	4'	MDOT COVER A	968.80	
INV. SW	12	964.54		
INV. NE	12	964.64		
INV. E	12	964.64		
2' SUMP				
MH 2	4'	MDOT COVER A	973.95	
INV. SW	12	965.15		
INV. NW	12	965.25		
2' SUMP				
CB 1	4'	MDOT COVER K	973.00	
INV. SE	12	965.33		
2' SUMP				
CB 2	4'	MDOT COVER K	969.00	
INV. W	12	965.02		
2' SUMP				

STORM SEWER PIPE SCHEDULE

PIPE #	LENGTH (FT)	DIA. (IN)	SLOPE (%)	TYPE
1	11	12	0.32%	C76-CL-IV RCP
2	161	12	0.32%	C76-CL-IV RCP
3	26	12	0.32%	C76-CL-IV RCP
4	121	12	0.32%	C76-CL-IV RCP

STRUCTURE FRAMES & COVERS

COVER	TYPE	USE	MANUFACTURER OR EQUAL		TYPE OF COVER OR GRATE
			EAST JORDAN	NEFNAH	
A	MH	ALL	1120	R-1415	SANITARY-SELF SEALING STORM-VENTED
B	CB & INLET	TYPE B2 CURB	7085	R-3038-A	
K	CB & INLET	TYPE C & F CURB	7045	R-3031-B	FLAT GRATE WITH VERT. 4" OPEN THROAT
C	CB & INLET	VALLEY CURB	7065	R-3034-B	
D	CB & INLET	PARKING LOTS	1020-MI	R-2560-D	FLAT GRATE
E	CB & INLET	LAWN AREA OR DITCH	1020-01		BEEHIVE GRATE 4" HIGH

- UTILITY NOTES:**
- ALL PARTS OF THE PROPOSED BUILDING ARE WITHIN 250 FEET OF AN EXISTING FIRE HYDRANT. THEREFORE NO ADDITIONAL HYDRANTS ARE PROPOSED.
 - THE ADDRESS OF THE BUILDING SHALL BE A MINIMUM OF 6" HIGH LETTERS OF CONTRASTING COLORS AND BE CLEARLY VISIBLE FROM THE STREET.
 - CONTRACTOR SHALL PROVIDE AND MAINTAIN ACCESS TO PROPERTY FOR EMERGENCY VEHICLES DURING CONSTRUCTION.

EX. SANITARY MANHOLE
RIM = 968.09
8" NE INV. = 958.31
PROP. 1 1/2" E INV. = 958.50

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APPROXIMATE LOCATION OF 4" GAS MAIN & 12" WATER MAIN AS DEPICTED ON SKETCH PREPARED BY McNAMEE, PORTER & SEELEY, CONTRACT #144.63-W-1, SHEET 3 OF 29, DATED 2-22-95, PROVIDED BY GREG TATARIA, UTILITY DIRECTOR FOR M.H.O.G. (810.227.5225)

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PROJECT: KRUG QUICK LANE
PREPARED FOR: RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

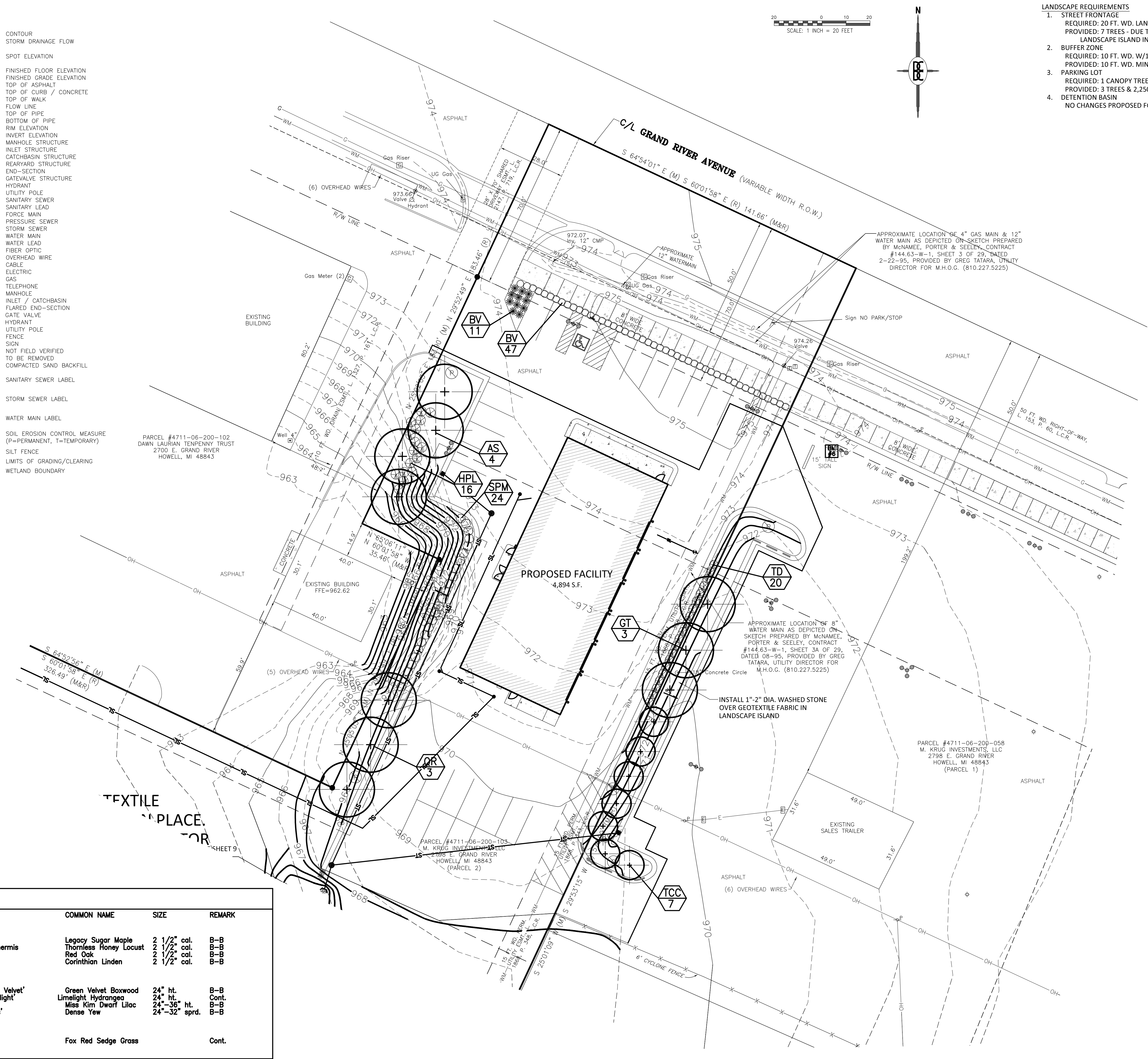
TITLE: UTILITY PLAN

NO.	BY	DATE	REVISION PER
1	TD	4-4-12	TMP. REV.
2	TD	2-21-12	TMP. REV.
3	TD	1-12-12	TMP. REVIEW

DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY: TD

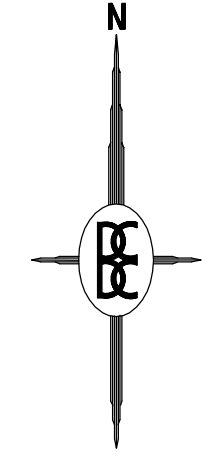
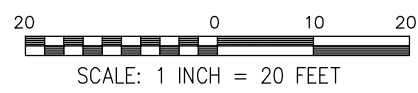
SCALE: 1" = 20'
JOB NO.: 11-190
DATE: 11-14-11
SHEET NO.: 5

PROPOSED (PR)	EXISTING (EX)	LEGEND
900	900	CONTOUR
		STORM DRAINAGE FLOW
		SPOT ELEVATION
FF	FF	FINISHED FLOOR ELEVATION
FG	FG	FINISHED GRADE ELEVATION
T/A	T/A	TOP OF ASPHALT
T/C	T/C	TOP OF CURB / CONCRETE
T/W	T/W	TOP OF WALK
F/L	F/L	FLOW LINE
T/P	T/P	TOP OF PIPE
B/P	B/P	BOTTOM OF PIPE
RM	RM	RIM ELEVATION
INV	INV	INVERT ELEVATION
MH	MH	MANHOLE STRUCTURE
IN	IN	INLET STRUCTURE
CB	CB	CATCHBASIN STRUCTURE
RY	RY	REARWARD STRUCTURE
ES	ES	END-SECTION
GV	GV	GATEVALVE STRUCTURE
HY	HY	HYDRANT
UP	UP	UTILITY POLE
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
MANHOLE	MANHOLE	MANHOLE
INLET / CATCHBASIN	INLET / CATCHBASIN	INLET / CATCHBASIN
FLARED END-SECTION	FLARED END-SECTION	FLARED END-SECTION
GATE VALVE	GATE VALVE	GATE VALVE
HYDRANT	HYDRANT	HYDRANT
UTILITY POLE	UTILITY POLE	UTILITY POLE
FENCE	FENCE	FENCE
SIGN	SIGN	SIGN
NOT FIELD VERIFIED	NOT FIELD VERIFIED	NOT FIELD VERIFIED
TO BE REMOVED	TO BE REMOVED	TO BE REMOVED
COMPACTED SAND BACKFILL	COMPACTED SAND BACKFILL	COMPACTED SAND BACKFILL
SANITARY SEWER LABEL	SANITARY SEWER LABEL	SANITARY SEWER LABEL
STORM SEWER LABEL	STORM SEWER LABEL	STORM SEWER LABEL
WATER MAIN LABEL	WATER MAIN LABEL	WATER MAIN LABEL
SOIL EROSION CONTROL MEASURE	SOIL EROSION CONTROL MEASURE	SOIL EROSION CONTROL MEASURE
(P=PERMANENT, T=TEMPORARY)	(P=PERMANENT, T=TEMPORARY)	(P=PERMANENT, T=TEMPORARY)
SILT FENCE	SILT FENCE	SILT FENCE
LIMITS OF GRADING/CLEARING	LIMITS OF GRADING/CLEARING	LIMITS OF GRADING/CLEARING
WETLAND BOUNDARY	WETLAND BOUNDARY	WETLAND BOUNDARY



- LANDSCAPE REQUIREMENTS**
- STREET FRONTAGE**
REQUIRED: 20 FT. WD. LANDSCAPE STRIP W/1 TREE PER 40 L.F. & 2 FT. HT. HEDGE ROW PROVIDED: 7 TREES - DUE TO EX. CONDITIONS REQUIRED TREES MOVED TO NEW LARGE LANDSCAPE ISLAND IN PARKING LOT. HEDGE ROW PROVIDED.
 - BUFFER ZONE**
REQUIRED: 10 FT. WD. W/1 TREE OR 4 SHRUBS PER 20 L.F. (214/20=11 TREES) PROVIDED: 10 FT. WD. MIN., 7 TREES & 40 SHRUBS
 - PARKING LOT**
REQUIRED: 1 CANOPY TREE & 100 S.F. PER 10 SPACES (25 SPACES/10 = 3 TREES & 300 S.F.) PROVIDED: 3 TREES & 2,250 S.F.
 - DETENTION BASIN**
NO CHANGES PROPOSED FOR DETENTION AREA.

KEY	QUAN.	BOTANICAL NAME	COMMON NAME	SIZE	REMARK
TREES					
AS	4	Acer saccharum 'Legacy'	Legacy Sugar Maple	2 1/2" cal.	B-B
GT	3	Gleditsia triacanthos var. inermis	Thornless Honey Locust	2 1/2" cal.	B-B
QR	3	Quercus rubra	Red Oak	2 1/2" cal.	B-B
TCC	7	Tilia cordata 'Corinthian'	Corinthian Linden	2 1/2" cal.	B-B
SHRUBS					
BV	47	Buxus x microphylla 'Green Velvet'	Green Velvet Boxwood	24" ht.	B-B
HPL	16	Hydrangea paniculata 'LimeLight'	LimeLight Hydrangea	24" ht.	Cont.
SPM	24	Syringa patula 'Miss Kim'	Miss Kim Dwarf Lilac	24"-36" ht.	B-B
TD	20	Taxus x media 'densiformis'	Dense Yew	24"-32" sprd.	B-B
PERENNIALS					
CB	11	Carex buchananii	Fox Red Sedge Grass		Cont.



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PROJECT: **KRUG QUICK LANE**
PREPARED FOR: **RAND CONSTRUCTION**
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

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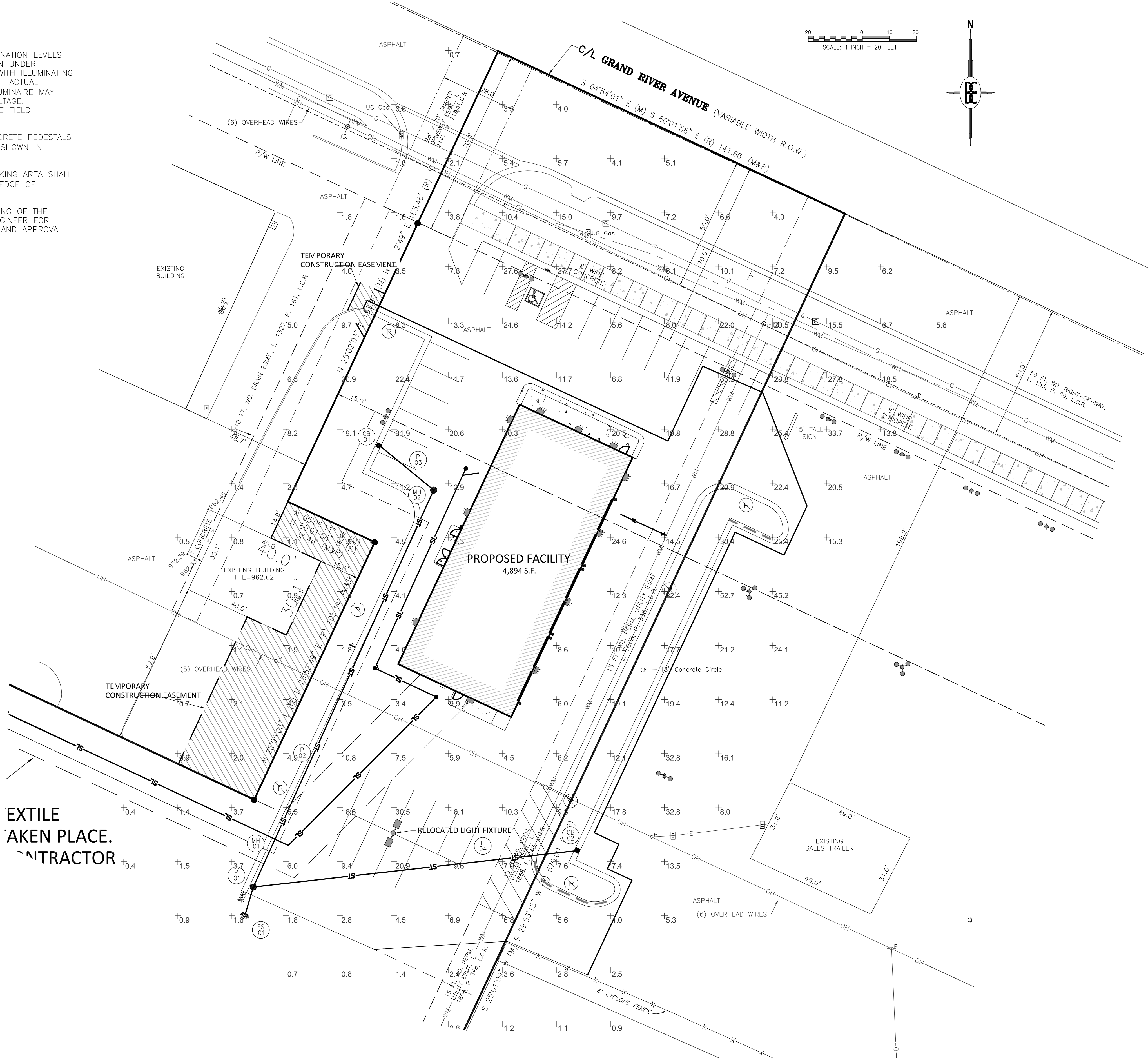
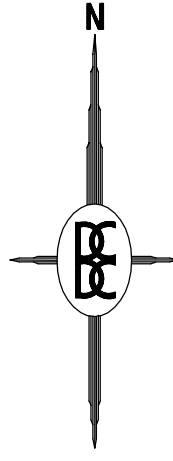
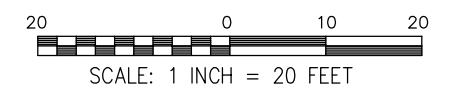
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PROPOSED (PR)	EXISTING (EX)	
SN	SN	SANITARY SEWER
SL	SL	SANITARY LEAD
FM	FM	FORCE MAIN
PS	PS	PRESSURE SEWER
ST	ST	STORM SEWER
WM	WM	WATER MAIN
WL	WL	WATER LEAD
FO	FO	FIBER OPTIC
OH	OH	OVERHEAD WIRE
C	C	CABLE
E	E	ELECTRIC
G	G	GAS
T	T	TELEPHONE
M	M	MANHOLE
I	I	INLET / CATCHBASIN
VS	VS	FLARED END-SECTION
CV	CV	GATE VALVE
H	H	HYDRANT
U	U	UTILITY POLE
S	S	FENCE SIGN

SYMBOL	DESCRIPTION
San #1	SANITARY SEWER LABEL
CS 02	STORM SEWER LABEL
CV 12	WATER MAIN LABEL
□	DOUBLE FIXTURE LIGHT POLE
○	SINGLE FIXTURE LIGHT FIXTURE
■	WALL MOUNTED LIGHT FIXTURE
●	GROUND LIGHT FIXTURE
○	FOOT CANDLES ON SITE

GENERAL LIGHTING NOTES

1. THE LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
2. ALL POLES ARE TO BE MOUNTED ON CONCRETE PEDESTALS 2'-6" ABOVE GRADE IN PARKING LOTS AS SHOWN IN DETAIL.
3. ALL POLES LOCATED OUTSIDE OF THE PARKING AREA SHALL BE LOCATED 3' FROM BACK OF CURB OR EDGE OF SIDEWALKS.
4. SHOP DRAWINGS FOR THE ELECTRICAL WIRING OF THE POLES NEED TO BE SUBMITTED TO THE ENGINEER FOR COORDINATION OF UNDERGROUND CONDUIT AND APPROVAL OF LAYOUT.



DESCRIPTION

The Streetworks Wal-Pak Series of wall luminaires provides traditional architectural style with high performance energy efficient illumination. Rugged die-cast aluminum construction, stainless steel hardware along with a sealed and gasketed optical compartment make the Wal-Pak virtually impervious to contaminants. IP65 Rated, UL and CUL wet location listed. The Wal-Pak wall luminaire is ideal for pathway illumination, building entrances, vehicle ramps, schools, tunnels, stairways and loading docks.



Catalog #	Type

SPECIFICATION FEATURES

Housing
Rugged one-piece die-cast aluminum housing and hinged, removable die-cast aluminum door. One-piece silicone gasket seals the optical chamber. UL 1558 wet location listed and IP65 ingress protection rated.

Electrical
Ballasts, LED driver and related electrical components are hand mounted to the die-cast housing for optimal heat sinking and operating efficiency. Wiring is extended through a silicone gasket at the back of the housing. Three 1/2" threaded conduit entry points allow for triu-branch wiring. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from LED source. Integral LED electronic driver incorporates internal fusing designed to withstand a 3KV surge test and is Class 2 rated for 120-277V with an operating temperature of -30° to 60°C. Wal-

Pak LED systems maintain greater than 70% of the initial light output after 50,000 hours of operation. UL listed HID high power factor ballasts are Class II insulation rated (metal halide: 150, 175, 200, 250, 320, 350, 400W / 30°C / 20°F); high pressure sodium: 50, 70, 100, 150, 250, 400W / 40°C / 40°F). High efficiency HID ballasts are available in 120V, 208V, 240V, 277V, 347V and 480V.

Optical
Highly reflective anodized aluminum reflectors provide high efficiency illumination. Optical assemblies include impact resistant borosilicate refractive glass. Soli™ flat diamond patterned glass and full cutoff ESNA compliant configurations. Patent pending, solid state LED luminaires are thermally optimized with 2400 or 4000 lumen package modules. HID models are offered in horizontal medium or mogul-based metal halide or high pressure sodium lamps.

Door Assembly
Single point, captive stainless steel hardware secures the removable hinged door allowing for ease of installation and maintenance. Door assembly is hinged at the bottom for easy removal, installation and re-lamping.

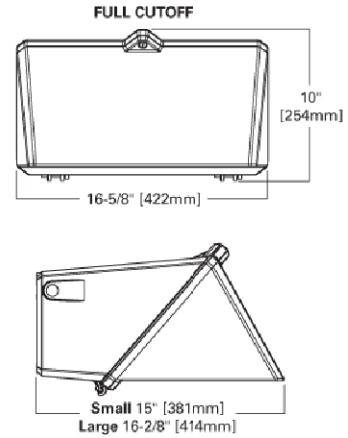
Finish
Housing and door are protected with Estage TGC dark bronze polyester powder coat paint. Premium TGC power coat finishes withstand extreme climate changes while providing optimal color and gloss retention. Optional premium colors are available.



WPK WAL-PAK
2400 - 4000 Lumens
LED
39 - 400W
High Pressure Sodium
Pulse Start Metal Halide
Metal Halide
WALL MOUNT LUMINAIRE



DIMENSIONS



TECHNICAL DATA
UL and CUL Wet Location Listed
IP65 Rated
90°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum
15A @ 100% THHN-Trip 20 Compliant

ENERGY DATA
Reactor Ballast Input Watts
50W HPS NPF (80 Watts)
70W HPS NPF (80 Watts)
90W HPS NPF (110 Watts)
100W HPS NPF (110 Watts)
150W HPS NPF (170 Watts)
High Resonance Ballast Input Watts
20W MP HPI (34 Watts)
30W MP HPI (34 Watts)
100W MP HPI (120 Watts)
150W MP HPI (180 Watts)

CWA Ballast Input Watts
200W HPS HPI (230 Watts)
300W MP HPI (227 Watts) @
500W MP HPI (280 Watts) @
330W MP HPI (380 Watts) @
350W MP HPI (400 Watts) @
600W HPS HPI (68 Watts)
800W MP HPI (80 Watts) @

SHIPPING DATA
Approximate Net Weight
23.42 lbs. (10.6 kg.)
2010-01-19 11:14:01

LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	DESCRIPTION	CATALOG NUMBER	LAMP	FILE	LUMENS	LLF	POLE DESCRIPTION	POLE HEIGHT	BASE HEIGHT	TOTAL HEIGHT
□		1	RELOCATED DOUBLE FIXTURE					.72		25'	2'-6"	27'-6"
■		11	COOPER LIGHTING STREETWORKS WPK WAL-PAK - FULL CUTOFF	WPK 15 P P 4 FC WH 2 L				.72	WALL MOUNTED			

ALL IES FILES PROVIDED BY MANUFACTURER FOR CALCULATION OF LIGHTING LEVEL.

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**LIVINGSTON COUNTY SOIL EROSION PERMIT TEMPLATE
TEMPORARY CONTROLS AND SEQUENCE**

- NOTIFY LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE 24 HOURS PRIOR TO START OF GRADE WORK.
- IN ACCORDANCE WITH PUBLIC ACT NO. 53, OF 1974 THE PERMIT HOLDER SHALL CALL MISS DIG FOR STAKING AND LOCATING OF UTILITIES, AT LEAST 72 HOURS IN ADVANCE OF THE START OF ANY WORK.

PERMITTING STANDARDS

- (IMPORTANT NOTICE) RETENTION/DETENTION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. INGRESS/EGRESS MUST HAVE LARGE CRUSHED ROCK TO REDUCE THE TRACKING OF SOIL ONTO THE PUBLIC TRAFFIC AREAS. SEE DETAIL ITEMS BELOW.
- 36" M.D.O.T SPECIFICATION TYPE SILT FABRIC FENCE AS SHOWN ON PLANS SHALL BE PLACED AND MAINTAINED ALONG PERIMETER ON ALL LOW LYING AREAS OF THE CONSTRUCTION SITE TO FILTER RUNOFF BEFORE LEAVING PROJECT SITE.
- ALL TEMPORARY EROSION CONTROL DEVICES AS NOTED ON PLANS SHALL BE INSTALLED PRIOR TO THE START OF MASSIVE EARTH DISTRIBUTION.
- PLAN DOES DENOTE A DETAILED EROSION CONTROL DEVICE TO RESTRICT TRACKING OF MATERIAL ONTO THE HIGHWAY. STONE DIAPERS SHALL BE INSTALLED AT ALL INGRESS/EGRESS AREAS OF THE SITE PRIOR TO THE START OF MASSIVE EARTH DISRUPTION. DIAPERS SHALL BE OF CRUSHED STONE AND SHALL HAVE A MINIMUM LENGTH OF 100' LINEAL FEET.

RETENTION PONDS

- RETENTION/DETENTION/SEDIMENTATION PONDS SHALL BE EXCAVATED, TOPSOILED, SEEDED, MULCHED AND TACKED PRIOR TO THE START OF MASSIVE EARTH DISRUPTION.
- DETENTION POND OUTLETS SHALL BE OF THE STANDPIPE AND STONE FILTER SYSTEM, WITH TRASH SCREEN. OUTLET FLOW SHALL NOT EXCEED 0.20 CUBIC FEET OF WATER PER SECOND/PER ACRE. POND DIMS SHALL HAVE A MINIMUM OF ONE (1) FOOT OF FREEBOARD. AN EMERGENCY SPILLWAY SHALL BE CONSTRUCTED WITHIN THE FREEBOARD LEVEL.
- THE EMERGENCY SPILLWAY FROM THE DETENTION POND SHALL BE SLODDED AND PEGGED, OR RIP RAPPED, 15 FEET PAST THE TOE OF THE SLOPE OF THE BERM.
- DIKES AND BERMS SHALL BE FREE OF ALL ORGANIC MATTER.
- RETENTION/DETENTION PONDS SHALL BE FENCED WITH A 4' CHAIN LINK FENCE, INCLUDING A 12' ACCESS GATE FOR MAINTENANCE UNLESS MINIMUM 5 FT. HORIZONTAL TO 1 FT. VERTICAL SIDE SLOPES ARE PROVIDED. THE FENCE SHALL BE INSTALLED AT THE OUTER PORTION OF THE BERM, TO ALLOW FOR MAINTENANCE WORK TO BE DONE INSIDE THE FENCE.
- ALL UNIMPROVED DISTURBED AREAS SHALL BE STRIPPED OF TOPSOIL WHICH WILL BE STORED ONSITE DURING THE EXCAVATING STAGE. TOPSOIL PILES SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW IN THE NON-GROWING SEASON, IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.
- SOIL EROSION CONTROLS SHALL BE MONITORED DAILY BY THE ON-SITE ENGINEER, OR CONTRACTOR, WHICHEVER CASE APPLIES.

SLOPES AND DITCHES

- ON SITE DITCHES SHALL BE OF THE FLAT BOTTOM TYPE MINIMUM WIDTH OF 2' WITH A MINIMUM OF 3 HORIZONTAL TO 1 VERTICAL SIDE SLOPES, 3:1.
- DITCHES WITH STEEP SLOPES WILL NEED FLOW CHECKS TO PREVENT SCOURING OF THE DITCH BOTTOM. THESE SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER OR INSPECTOR.
- SLOPES IN EXCESS OF 3 HORIZONTAL TO 1 VERTICAL SHALL NOT BE USED EXCEPT WITH A MECHANICAL DEVICE SUCH AS A RETAINING WALL, TERRACING, OR OTHER PRIOR APPROVED DEVICE.
- STORM DRAINS
- ALL STORM WATER STRUCTURES, CATCH BASINS AND/OR MANHOLES, IF BLOCK, SHALL BE PLASTERED ON BOTH THE INSIDE AND OUTSIDE OF THE STRUCTURES. GROUTING AND POINTING WILL BE NECESSARY AT THE CASTING AND STRUCTURE JOINT TO PREVENT LEAKAGE AND THE RESULTING SOIL MOVEMENT, AROUND THE STRUCTURE.

- STORM WATER INLETS SHALL HAVE AS A TEMPORARY CONTROL A STRAW BALE BARRIER AND STONE FILTER INSTALLED AROUND THE INLET DURING CONSTRUCTION. AS AN ALTERNATIVE TO THE STRAW BALE BARRIER, A BURLAP AND PEA STONE FILTER MAY BE USED. THREE LAYERS OF BURLAP FIBER AND A FILTER OF PEA STONE MINIMUM 1 FT. IN DEPTH CAN BE USED. DUE TO THE POROSITY OF THE BURLAP FILTER THE MINIMUM OF 1 FT. OF STONE IS VERY IMPORTANT. THE CONTROL SHALL BE INSTALLED AS SOON AS THE STRUCTURE IS BUILT AND INSPECTED DAILY.
- BURLAP AND PEA STONE FILTERS WILL NEED TO BE CHANGED AFTER EACH RAINFALL.
- COUNTY CODE REQUIRES A MINIMUM PIPE SIZE OF 12" IN DIAMETER. IF SMALLER PIPE IS NEEDED FOR OUTLET PURPOSES THE 12" CAN BE BARTLED TO THE CORRECT SIZE. ALL PIPE SHALL MEET THE 12" DIAMETER CODE SIZE.
- ALL STORM DRAIN OUTLETS 15" IN DIAMETER OR LARGER SHALL HAVE ANIMAL GUARDS INSTALLED TO PREVENT ENTRANCE TO THE SYSTEM.

- ALL STORM DRAINAGE PIPE 30" IN DIAMETER OR LARGER SHALL BE POINTED AT THE JOINTS ON THE INSIDE WITH MORTAR, AFTER BACKFILLING.
- ALL STORM DRAIN OUTLETS THAT DO NOT EMPTY INTO THE RETENTION/DETENTION POND SHALL HAVE A TEMPORARY 5'X10'X3" SUMP INSTALLED AT THE TERMINATION OF THE STORM SEWER. UPON COMPLETION OF THE STABILIZATION WORK THE SUMP AREA SHALL BE FILLED AND RIP RAPPED WITH COBBLE STONE. SILT TRAPS SHALL BE INSPECTED AFTER EACH STORM.
- STORM WATER OUTLETS DO DENOTE RIP RAP. ALL OUTLETS SHALL BE RIP RAPPED OVER KEYS FILTER FABRIC WITH A MINIMUM OF 15 SQ. YARDS OF 6" OR LARGER COBBLE STONE.
- RIE RAP AS NOTED ON THE PLAN SHALL BE OF A FUNNEL SHAPE CONSTRUCTION, WIDTH SHALL INCREASE AS DISTANCE FROM THE OUTLET POINT INCREASES AT A 3:1 RATIO.
- RIE RAP SHALL BE OF COBBLE STONE, 6" IN DIAMETER OR LARGER. GROUTING MAY BE NECESSARY, AND SHALL BE A MINIMUM OF 6" IN DEPTH WITH THE COBBLE SET IN THE CEMENT SLURRY.
- STORM WATER OUTLET IS IN LATER OF A SPLASH BLOCK WHICH IS NOT NOTED ON THE PLAN. INSTALL SPLASH BLOCK IF SLOPE OF THE PIPE IS 4% OR GREATER.
- IT WILL BE NECESSARY FOR THE DEVELOPER TO HAVE THE STORM DRAINAGE LINES CLEANED PRIOR TO FINAL INSPECTION BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE. IF REQUIRED, THIS WORK SHALL BE DONE BY A PROFESSIONAL SEWER CLEANING FIRM AND CERTIFIED IN WRITING BY THE PROJECT ENGINEER. ALL SUMPS AND TEMPORARY SILT TRAPS SHALL ALSO BE CLEANED AT THIS TIME.

STABILIZATION

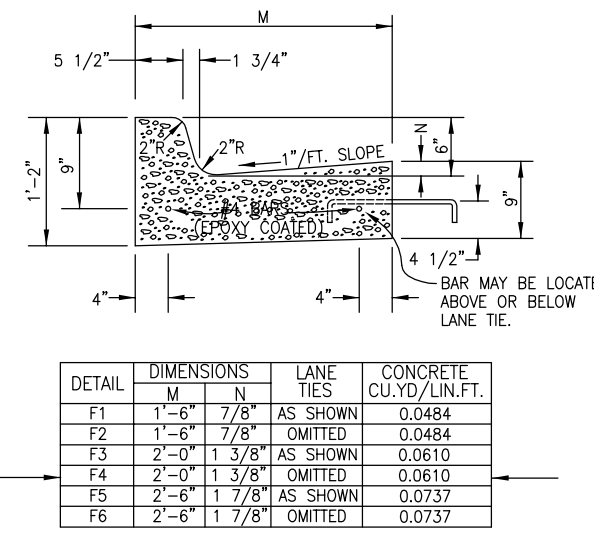
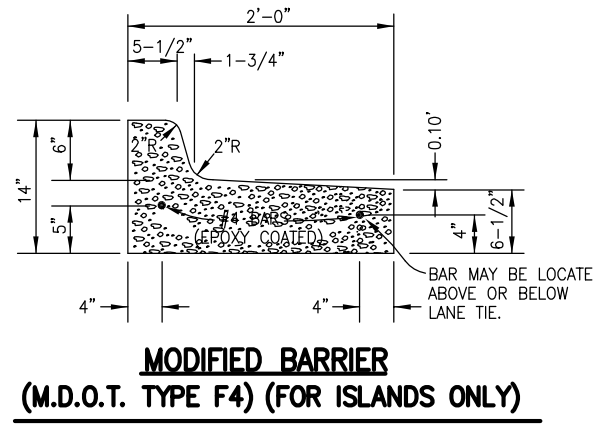
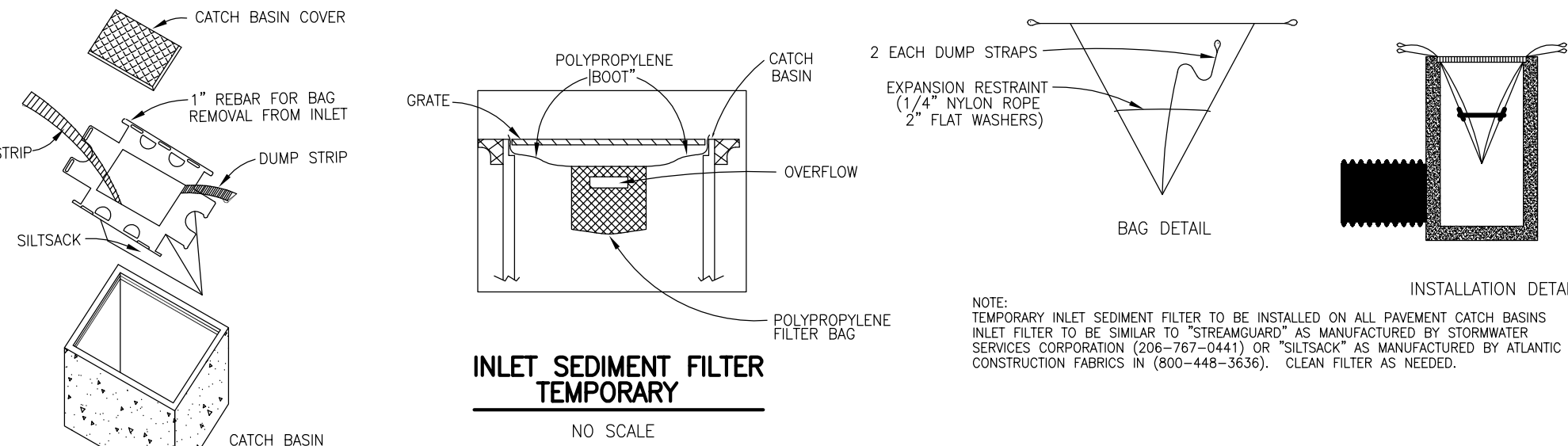
- ALL UNIMPROVED DISTURBED AREAS SHALL BE RE-TOP SOILED, WITH A MINIMUM OF 3" OF MATERIAL, SEEDED, MULCHED AND TACKED WITHIN 15 DAYS OF THE COMPLETION OF THE MASSIVE EARTH DISRUPTION. IN THE NON-GROWING SEASON STRAW MATTING WILL SUFFICE. HYDROSEEDING WILL BE AN ACCEPTABLE ALTERNATE FOR MULCHING. EXTREME CARE SHOULD BE EXERCISED IN SPRING AND FALL PERIODS AS A FROST WILL BREAK THE BIND OF THE HYDROSEEDING, WHICH WILL AFFECT THE EFFECTIVENESS OF THIS PROCEDURE.
- IN THE NON-GROWING SEASON, TEMPORARY STABILIZATION OF MASSIVELY EXPOSED AREAS FOR WINTER STABILIZATION SHALL BE DONE WITH STRAW MATTING.
- PERMIT FEES DURING THE WINTER PERIOD OF NON-CONSTRUCTION, (DECEMBER 1 THROUGH MARCH 31), SHALL NOT BE IMPOSED IF THE PERMIT HOLDER TEMPORARILY STABILIZES THE EXPOSED AREAS WITH STRAW MATTING, AND OTHER APPROVED CONTROLS, AND OBTAINS A WINTER STABILIZATION CERTIFICATE FROM THIS OFFICE.
- PERIODIC INSPECTIONS WILL BE MADE THROUGHOUT THE COURSE OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE MANAGERS OF THE PROJECT TO CONTACT THIS OFFICE FOR THE FINAL INSPECTION AT THE END OF THE PROJECT.
- THIS COMMERCIAL PERMIT IS VALID FOR THE MASS EARTH MOVEMENT, THE INSTALLATION OF ROADS, DRAINS, AND UTILITIES AND IS NOT FOR ANY SINGLE FAMILY RESIDENCE. ALL RESIDENTIAL BUILDERS WILL NEED TO SECURE MAINTENANCE AND/OR PERMITS AS NECESSARY FOR EACH LOT IN THIS DEVELOPMENT AT THE TIME APPLICATION FOR SINGLE FAMILY RESIDENCE IS MADE.
- THE ISSUING BUILDING DEPARTMENT SHALL NOT ISSUE THE CERTIFICATE OF OCCUPANCY UNTIL THE FINAL INSPECTION LETTER FROM THE LIVINGSTON COUNTY DRAIN COMMISSIONER'S OFFICE HAS BEEN OBTAINED.
- PER THE LIVINGSTON COUNTY DRAIN COMMISSIONER THE SEEDING, FERTILIZER AND MULCH MINIMUM QUANTITIES SHALL BE AS FOLLOWS:
TOP-SOIL 3" IN DEPTH
GRASS SEED 218 LBS. PER ACRE
SCOURING 150 LBS. PER ACRE
STRAW MULCH 3" IN DEPTH 1.5 TO 2 TONS PER ACRE (ALL MULCHING MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.)
- HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1%, IN SUCH CASES STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER.

SANITARY SEWERS

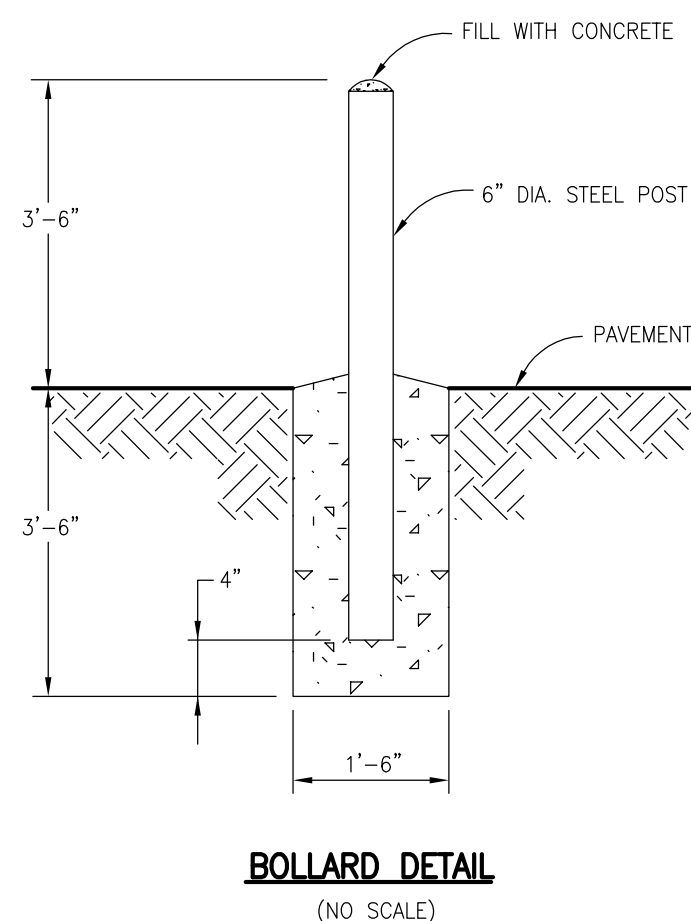
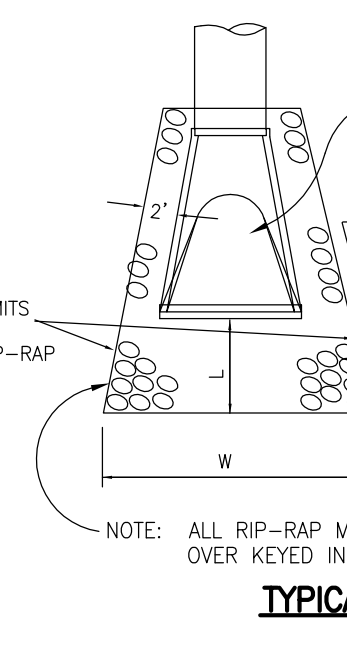
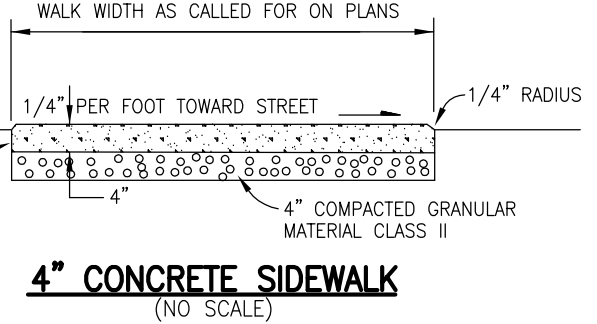
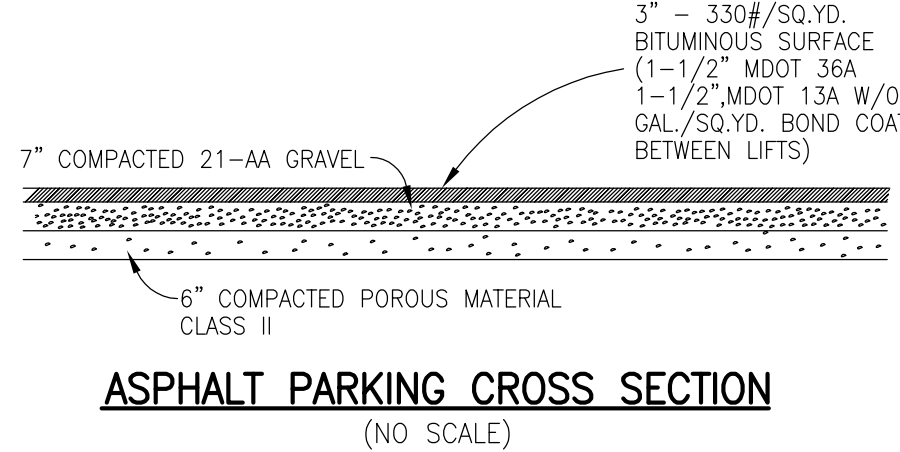
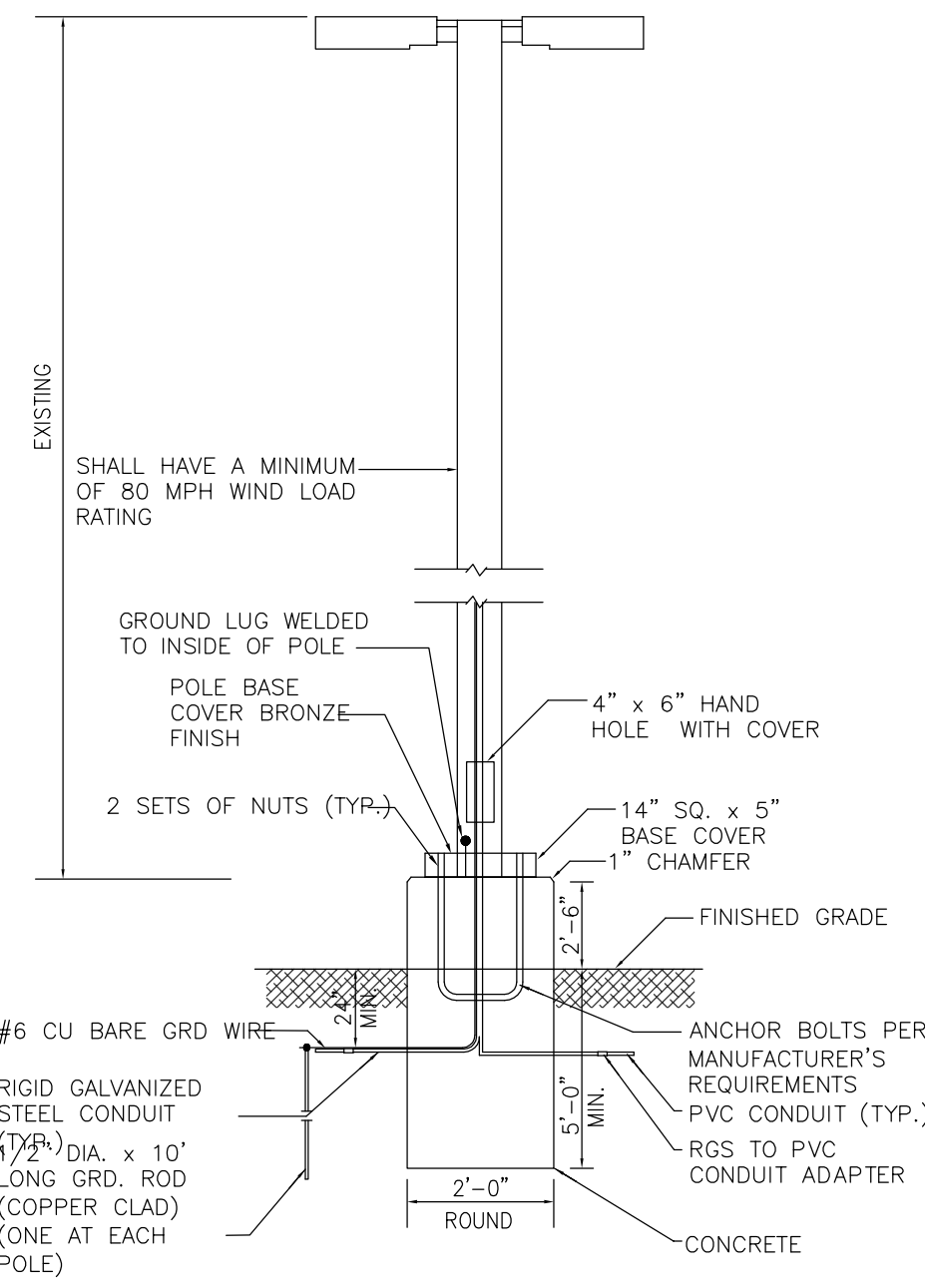
- SANITARY SEWER TAP TO THE _____ SANITARY COUNTY DRAIN, SHALL ONLY BE MADE AFTER SECURING IN WRITING CLEARANCE FROM THE _____ TOWNSHIP AND A SEWER TAP PERMIT FROM THE LIVINGSTON COUNTY DEPARTMENT OF BUILDING & SAFETY.
- A TAP PERMIT WILL BE NEEDED BY THE OWNER/DEVELOPER OF THIS PROJECT TO TAP TO THE LEGALLY ESTABLISHED COUNTY STORM DRAIN. THE OWNER/DEVELOPER SHALL MAKE A WRITTEN REQUEST TO THE DRAIN COMMISSIONER TO REQUEST THE TAP TO THE STORM SEWER. THE FEES FOR SUCH TAP ARE AS FOLLOWS:
A. NON REFUNDABLE ADMINISTRATIVE FEE OF \$50.00, TO BE PAID AT THE TIME OF APPLICATION.
B. INSPECTION FEES ARE BASED ON TIME AND MATERIAL BASIS FROM PORT TO PORT FOR THE ON-SITE INSPECTOR. INSPECTORS RATE, VEHICLE MILEAGE, AND 0.5 HOURS OF REPORT PREPARATION TIME WILL BE CHARGED, AS WELL AS ANY NECESSARY MATERIALS. TIME AND MATERIAL FEES ARE PAID AT THE COMPLETION OF THE TAP INSTALLATION.

MAINTENANCE SCHEDULE FOR SOIL EROSION CONTROLS

- SILT FENCE SHALL BE INSPECTED WEEKLY AND AFTER EACH MAJOR STORM EVENT. MAINTENANCE SHALL INCLUDE REMOVAL OF ACCUMULATED SILT AND REPLACEMENT OF TORN SECTIONS. SILT FENCE SHALL BE REMOVED WHEN ALL CONTRIBUTING AREAS HAVE BEEN STABILIZED.
- TRACKING PAD SHALL BE INSPECTED MONTHLY FOR ACCUMULATED DIRT. TRACKING PAD SHALL BE REPLACED WHEN THE STONES ARE CHOKED WITH DIRT. TRACKING PAD SHALL BE REMOVED IMMEDIATELY PRIOR TO THE FIRST COURSE OF ASPHALT BEING LAID.
- DETENTION/RETENTION POND SHALL BE INSPECTED QUARTERLY ON A PERMANENT BASIS. MAINTENANCE SHALL INCLUDE SEDIMENT REMOVAL, EMBANKMENT STABILIZATION AND MAINTAINING THE OUTLET STRUCTURE IN GOOD CONDITION. NO TREES SHALL BE ALLOWED TO GROW ON THE EMBANKMENT.
- CATCH BASINS SHALL BE INSPECTED ANNUALLY FOR ACCUMULATION OF SEDIMENT. ALL SEDIMENT MUST BE REMOVED AND DISPOSED OF PROPERLY WHEN THE SUMP IS FULL.
- COMMON AREAS SHALL BE STABILIZED NO LATER THAN 15 DAYS AFTER GRADE WORK, PURSUANT TO RULE 1709 (5).



DETAIL	DIMENSIONS	LANE	CONCRETE
	M	N	CU.YD./LIN.FT.
F1	1'-0"	2'-0"	RS SHOWN 0.0484
F2	1'-0"	2'-0"	RS SHOWN 0.0484
F3	2'-0"	1'-0"	RS SHOWN 0.0610
F4	2'-0"	1'-0"	RS SHOWN 0.0610
F5	2'-0"	1'-0"	RS SHOWN 0.0737
F6	2'-0"	1'-0"	RS SHOWN 0.0737



CONSTRUCTION SEQUENCE

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THAT EROSION IS MINIMIZED AND THAT COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL LAWS, REGULATIONS, AND ORDINANCES IS MAINTAINED THROUGHOUT EXECUTION OF THIS PROJECT.

- | | |
|--------|---|
| 1 DAYS | 1. INSTALL SILT FENCE AS SHOWN ON PLANS. |
| 5 DAYS | 2. ROUGH GRADE AND INSTALL STORM DRAINAGE. |
| 1 DAY | 3. INSTALL INLET PROTECTION ON STORM INLETS. |
| 80 DAY | 4. START BLOCK CONSTRUCTION. |
| 4 DAYS | 5. INSTALL PAVEMENT. |
| 4 DAYS | 6. FINE GRADE AROUND BUILDING, SPREAD TOPSOIL, SEED OR SOD AS APPLICABLE. |
| 1 DAY | 7. REMOVE ALL EROSION CONTROL STRUCTURES. |
| 1 DAY | 8. REMOVE ACCUMULATED SILT FROM ALL EXISTING DRAINAGE. |

**CONTROLS & MEASURES
POST CONSTRUCTION SEQUENCE**

ACTIVITY	WEEKLY	MONTHLY	AS REQUIRED
MAINTAIN LANDSCAPING, REPLACE MULCH	X	X	X
CLEAN INLETS		X	X
COLLECT LITTER	X		X
SWEEP PARKING LOT		X	X

CONTROLS & MEASURES NARRATIVE

ACTIVITY	DESCRIPTION
MAINTAIN LANDSCAPING, REPLACE MULCH	COLLECT GRASS, TREE, AND SHRUB CLIPPINGS. DISPOSE IN APPROVED CONTAINER. REPLACE DEAD SOD, TREES AND SHRUBS.
CLEAN INLETS	REMOVE LITTER, SEDIMENT, AND DEBRIS. DISPOSE OF IN APPROVED LANDFILL.
COLLECT LITTER	DISPOSE OF WITH INLET DEBRIS.
SWEEP PARKING LOT	REMOVE MUD, DIRT, GREASE AND OIL WITH PERIODIC SWEEPING.
DUST CONTROL	SPRINKLE WATER AS NEEDED



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ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-Mail: bossengr@aol.com)
1121 E. GRAND RIVER AVE.
BRIGHTON, MI 48843
(800) 246-6735 FAX (517) 548-1670

KRUG QUICK LANE
RAND CONSTRUCTION
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

PROJECT: _____
PREPARED FOR: _____
TITLE: _____

NO	BY	REVISION PER	DATE
1	TD		4-4-12
2	TD		2-21-12
3	TD		1-12-12

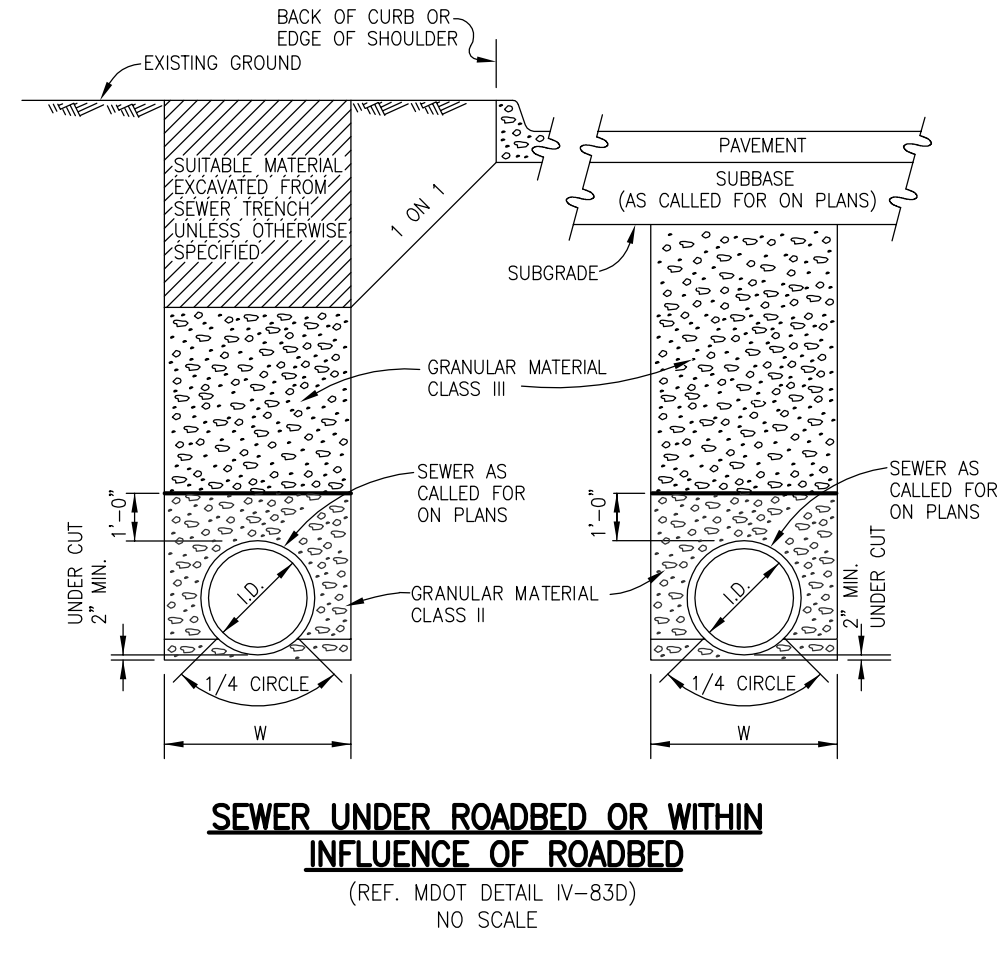
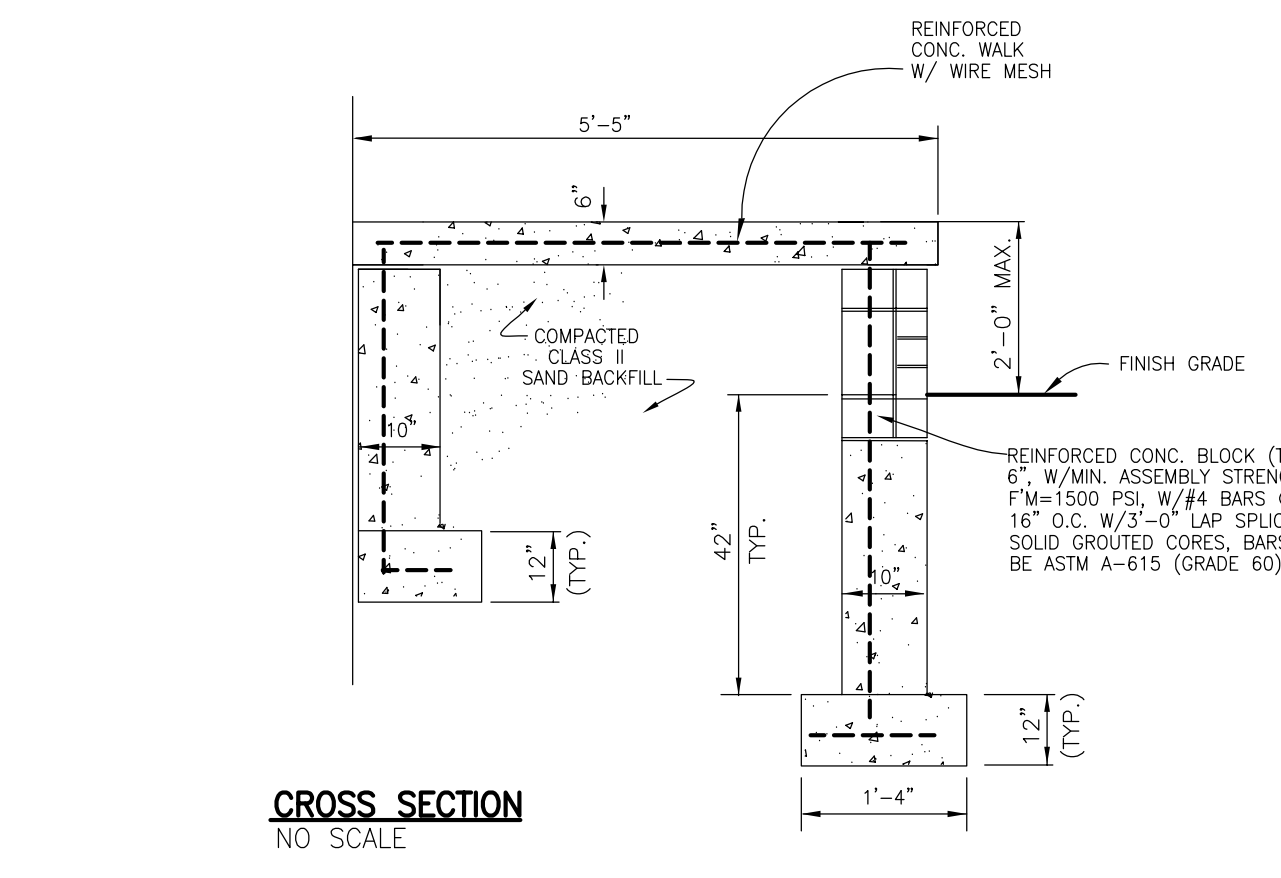
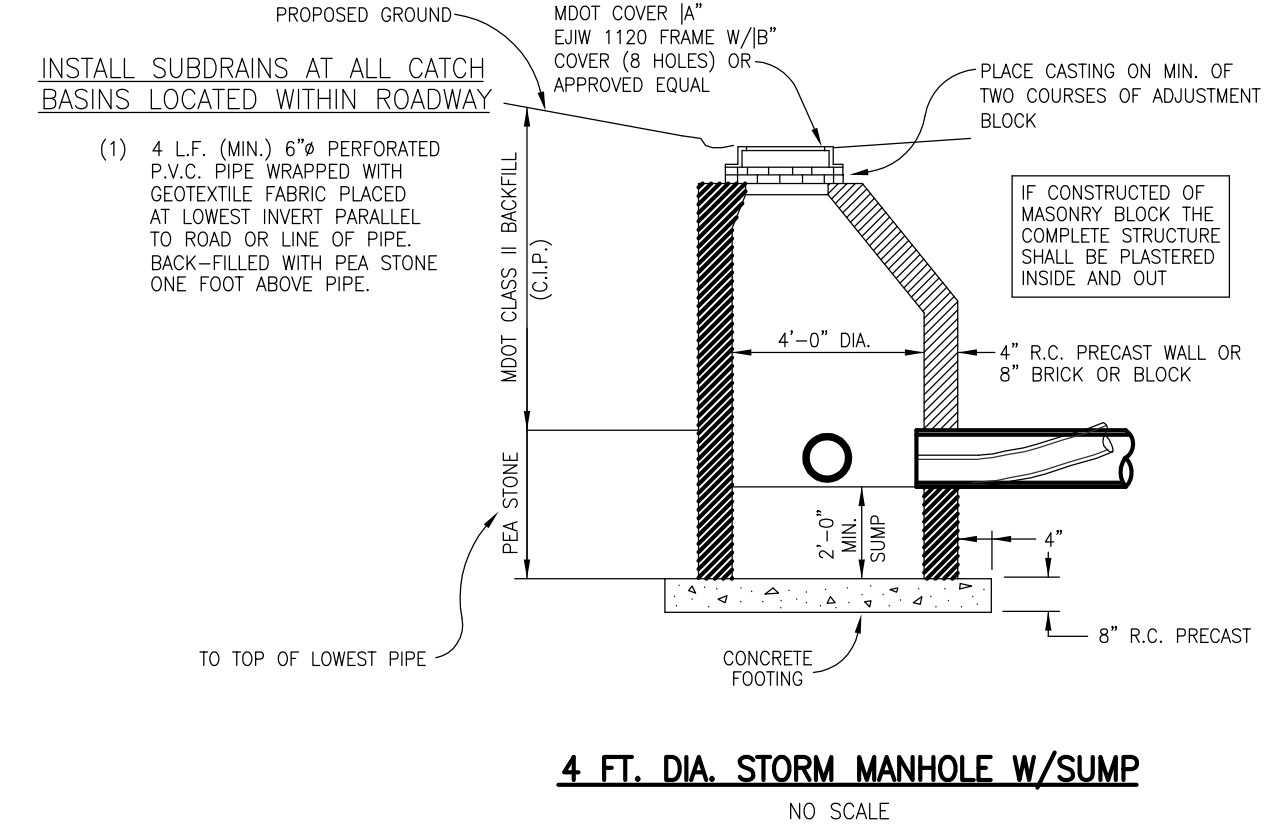
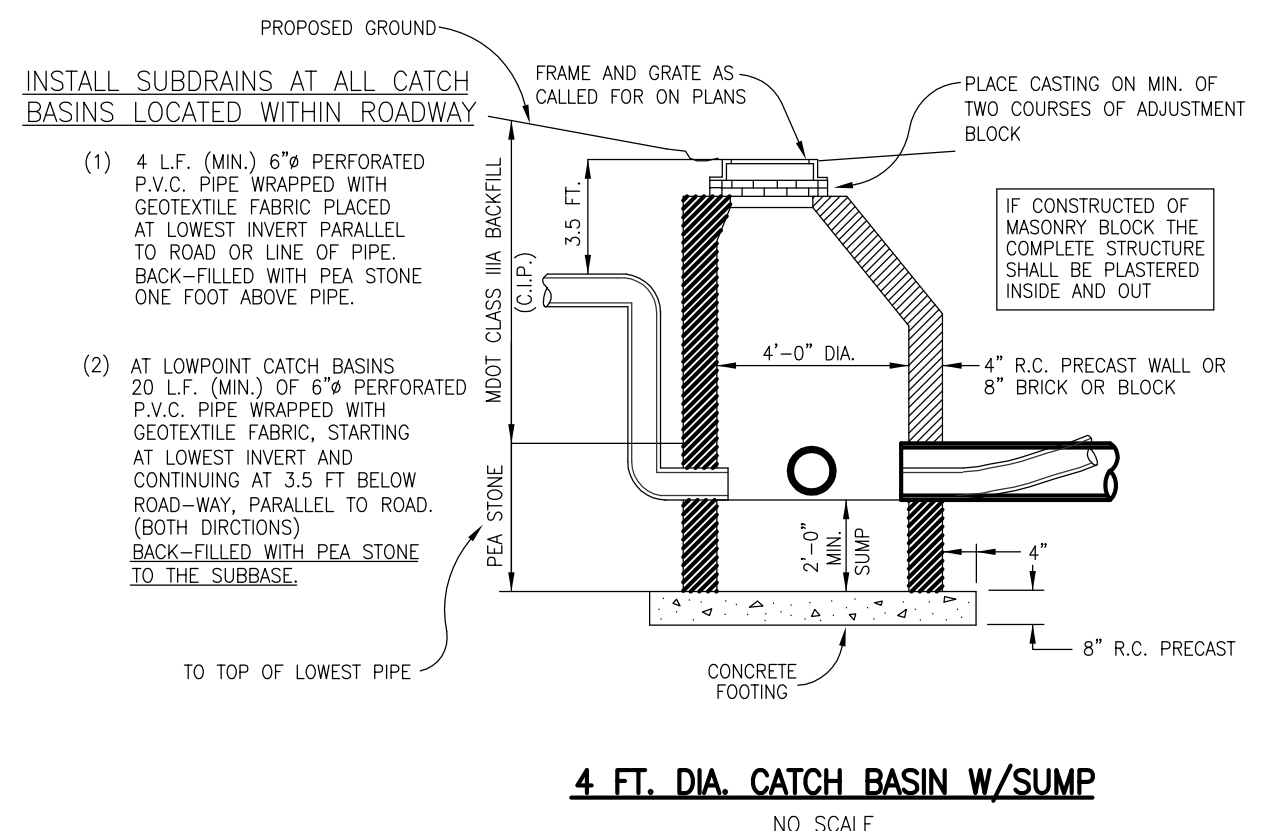
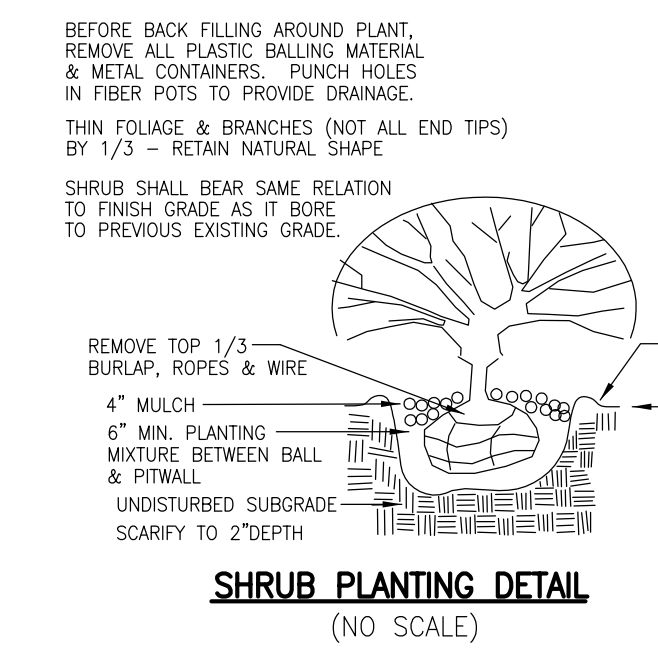
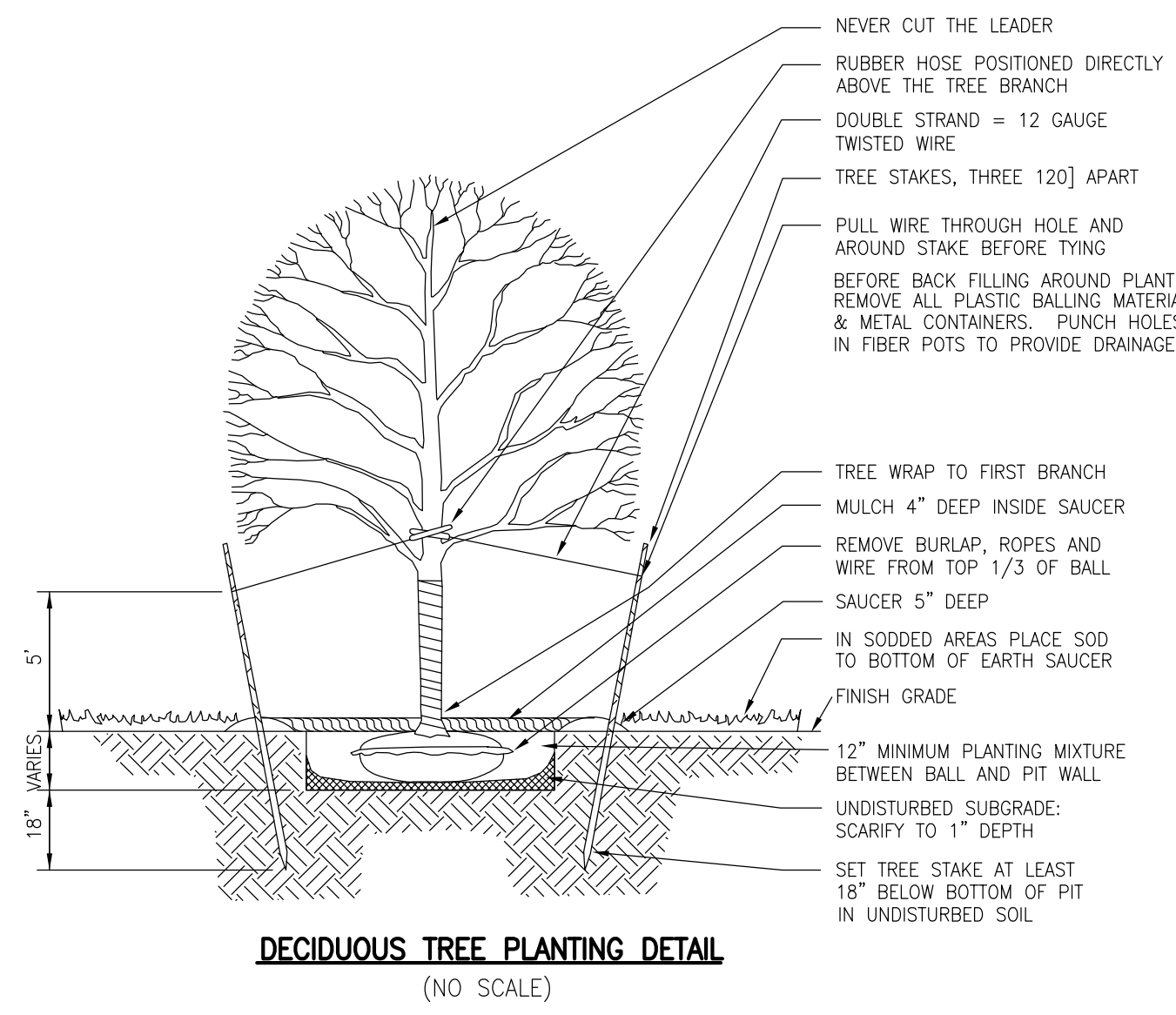
DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY: _____

SCALE 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 8



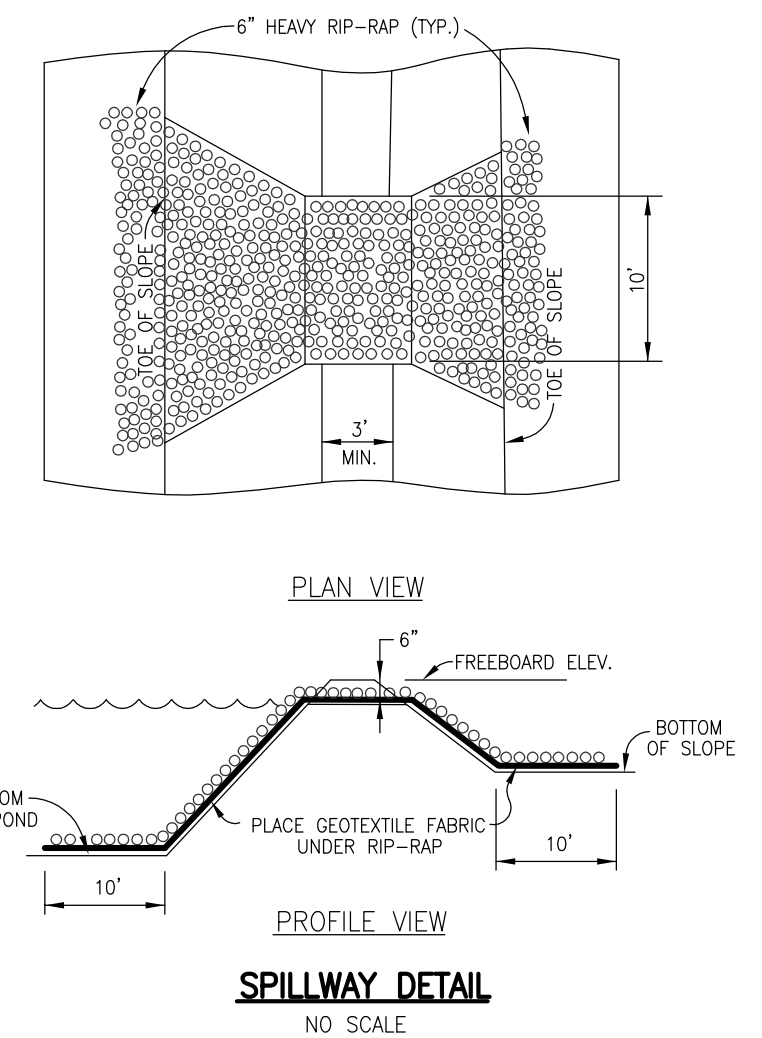
GENERAL LANDSCAPE NOTES:

- ALL PLANT MATERIAL SHALL CONFORM TO THE REQUIREMENTS AND SPECIFICATIONS OF THE GOVERNING MUNICIPALITY AND SHALL BE NURSERY GROWN. ALL SIZES AND MEASUREMENTS SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. ALL PLANT MATERIAL SHALL BE OF SELECTED SPECIMEN QUALITY AND HAVE A NORMAL HABIT OF GROWTH. ALL PLANT MATERIAL IS SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT.
- ALL PLANT MATERIALS SHALL BE BALLED AND BURLAPPED STOCK OR CONTAINER STOCK. NO BARE ROOT STOCK IS PERMITTED. ALL PLANT BALLS SHALL BE FIRM, INTACT AND SECURELY WRAPPED AND BOUND.
- ALL PLANT BEDS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND OTHER EXTRANEIOUS OBJECTS AND POOR SOILS TO A MINIMUM DEPTH OF 12 INCHES AND BACKFILLED TO GRADE WITH PLANTING MIX (SEE BELOW).
- PLANTING MIXTURE SHALL CONSIST OF 4 PARTS TOPSOIL FROM ON SITE, 1 PART PEAT, AND 5 POUNDS OF SUPERPHOSPHATE PER CUBIC YARD OF MIX. INGREDIENTS SHALL BE THOROUGHLY BLENDED TO A UNIFORM CONSISTENCY.
- ALL PLANT BEDS AND INDIVIDUAL PLANTS SHALL BE MULCHED WITH A 4 INCH LAYER OF SHREDDED BARK MULCH.
- ALL PLANTS AND PLANT BEDS SHALL BE THOROUGHLY WATERED UPON COMPLETION OF PLANTING AND STAKING OPERATIONS.
- THE CONTRACTOR SHALL GUARANTEE ALL PLANT MATERIALS FOR A PERIOD OF 1 YEAR FROM THE DATE THE WORK IS ACCEPTED. IN WRITING, BY THE LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE, WITHOUT COST TO THE OWNER, WITHIN A SPECIFIED PERIOD TIME, ALL DEAD PLANTS, AND ALL PLANTS NOT IN A VIGOROUS, THRIVING CONDITION, AS DETERMINED BY THE LANDSCAPE ARCHITECT DURING AND AT THE END OF THE GUARANTEE PERIOD. REPLACEMENT STOCK SHALL CONFORM TO THE ORIGINAL REQUIREMENTS.
- EDGING, WHERE NOTED ON THE PLANS, SHALL BE BLACK ALUMINUM EDGING, 3/16" X 4". INSTALL PER MANUFACTURER'S INSTRUCTIONS. ALL EDGING SHALL BE INSTALLED IN STRAIGHT LINES OR SMOOTH CURVES WITHOUT IRREGULARITIES.
- SOD SHALL BE DENSE, WELL ROOTED TURF, FREE OF WEEDS. IT SHALL BE COMPOSED OF A BLEND OF AT LEAST TWO KENTUCKY BLUEGRASSES AND ONE FESCUE. IT SHALL HAVE A UNIFORM THICKNESS OF 3/4 INCH, AND CUT IN UNIFORM STRIPS NOT LESS THAN 10 INCHES BY 18 INCHES. SOD SHALL BE KEPT MOIST AND LAID WITHIN 36 HOURS AFTER CUTTING.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ALL SODDED AREAS THAT BROWN OUT OR HAVE NOT FIRMLY KNITTED TO THE SOIL BASE WITHIN A PERIOD OF ONE MONTH SHALL BE REPLACED BY THE CONTRACTOR, AT NO COST TO THE OWNER.
- ALL AREAS OF THE SITE THAT BECOME DISTURBED DURING CONSTRUCTION AND ARE NOT TO BE PAVED, STONED, LANDSCAPED, OR SODDED SHALL BE SEEDDED AND MULCHED.
SEED MIXTURE SHALL BE AS FOLLOWS:
KENTUCKY BLUEGRASS (CHOOSE 3 VARIETIES: ADELPHI, RUGBY, GLADE OR PARADE) 30%
RUBY RED OR DAWSON RED FINE FESCUE 30%
ATLANTA RED FESCUE 20%
PENNFINE PERENNIAL RYE 20%
THE ABOVE SEED MIXTURE SHALL BE SOWN AT A RATE OF 250 POUNDS PER ACRE. PRIOR TO SEEDING, THE TOPSOIL LAYER SHALL BE FERTILIZED WITH A COMMERCIAL FERTILIZER WITH A 10-20-10 ANALYSIS:
10% NITROGEN: A MINIMUM OF 25% FROM A UREA-FORMALDEHYDE SOURCE
20% PHOSPHATE
10% POTASH: SOURCE TO BE POTASSIUM SULFATE OR POTASSIUM NITRATE.
THE FIRST FERTILIZER APPLICATION SHALL BE AT A RATE OF 10 POUNDS OF BULK FERTILIZER PER 1000 SQUARE FEET.
IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH A DENSE LAWN OF PERMANENT GRASSES, FREE OF LUMPS AND DEPRESSIONS. ANY PART OF THE AREA THAT FAILS TO SHOW A UNIFORM GERMINATION SHALL BE RESEEDDED AND SUCH RESEEDING SHALL CONTINUE UNTIL A DENSE LAWN IS ESTABLISHED. DAMAGE TO SEEDDED AREAS RESULTING FROM EROSION SHALL BE REPAIRED BY THE CONTRACTOR.
- ALL AREAS OF THE SITE SCHEDULED FOR SEEDING OR SODDING SHALL FIRST RECEIVE A 4 INCH LAYER OF CLEAN, FRIABLE TOPSOIL. THIS SOIL SHALL BE DISCED AND SHALL BE GRADED IN CONFORMANCE WITH THE GRADING PLAN.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF ALL UTILITIES AND TO INFORM THE LANDSCAPE ARCHITECT OF ANY CONFLICTS PRIOR TO COMMENCING LANDSCAPING.
- ALL PLANT MATERIALS SHALL BE FREE OF WEEDS, INSECTS AND DISEASE.



FOREBAY DESIGN CALCULATIONS

AREA (ACRES)	IMPERVIOUS FACTOR	ACRE IMPERVIOUS	
0.92	0.9	0.83	
0.00	0.7	0.00	
0.05	0.2	0.01	
COMPOUND C:		0.86	
TOTAL DRAINAGE AREA:		0.97 ACRES	
K1 = Ax C (Design Constant)		0.8342	
Qa = MAX ALLOW OUTFLOW (0.10 CFS / ACRE)		0.097 CFS	
FOREBAY VOLUME			
V(F) = 5% OF THE 100-YEAR STORM VOLUME BASED ON THE AREA TRIBUTARY TO THE INLET			
V(F) = (.05)(V100)		552 CF	
V(F) =		552 CF	
FOREBAY STORAGE VOLUME REQUIRED: 552 CF			
FOREBAY STORAGE VOLUME PROVIDED:			
		CUMMULATIVE	
ELEV	AREA	VOLUME	VOLUME
968	0	0	593
967	0	0	593
966	614	498	593
965	381	95	95
964.5	0		
STORAGE VOLUME			



STORM SEWER DESIGN CALCULATIONS

FROM	TO	DRAIN AREA	ACRES	AREA IMPERV	AREA PERV	RUNOFF COEFF C	EQUIV. AREA A * C	INTEN-SITY I	TIME OF CONC. Tc	ADDL. RUNOFF Q	RUNOFF (CFS) Q	PIPE LENGTH (LF)	PIPE DIA. (IN)	VELOCITY FLOWING FULL (FPS)	HYDRAULIC GRADIENT SLOPE %	ACTUAL SLOPE USED	MANNING FLOW CAPACITY	MANNING'S VELOCITY (FT/SEC)	TIME (MIN)	HG ELEV UPPER END	HG ELEV LOWER END	RIM ELEV UPPER END	INVERT UPPER END	INVERT LOWER END
CB-2	MH-1	2	0.4	0.05	0.35	0.29	0.115	4.38	15.00	0.00	0.50	121	12	0.64	0.02%	0.32%	2.02	2.57	0.78	965.82	965.44	969.00	965.02	964.64
CB-1	MH-2	1	0.15	0.15	0	0.90	0.135	4.38	15.00	0.00	1.09	26	12	1.39	0.09%	0.32%	2.02	2.57	0.17	966.13	966.05	973.00	965.33	965.25
MH-2	MH-1	3	0.11	0.11	0	0.90	0.099	4.36	15.17	0.00	0.43	161	12	0.55	0.01%	0.32%	2.02	2.57	1.04	965.95	965.44	974.25	965.15	964.64
MH-1	ES-1		0.01	0.01	0	0.90	0.009	4.25	16.21	0.00	0.04	11	12	0.05	0.00%	0.32%	2.02	2.57	0.07	965.34	965.30	970.50	964.54	964.50

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL, STATE AND FEDERAL AGENCIES.

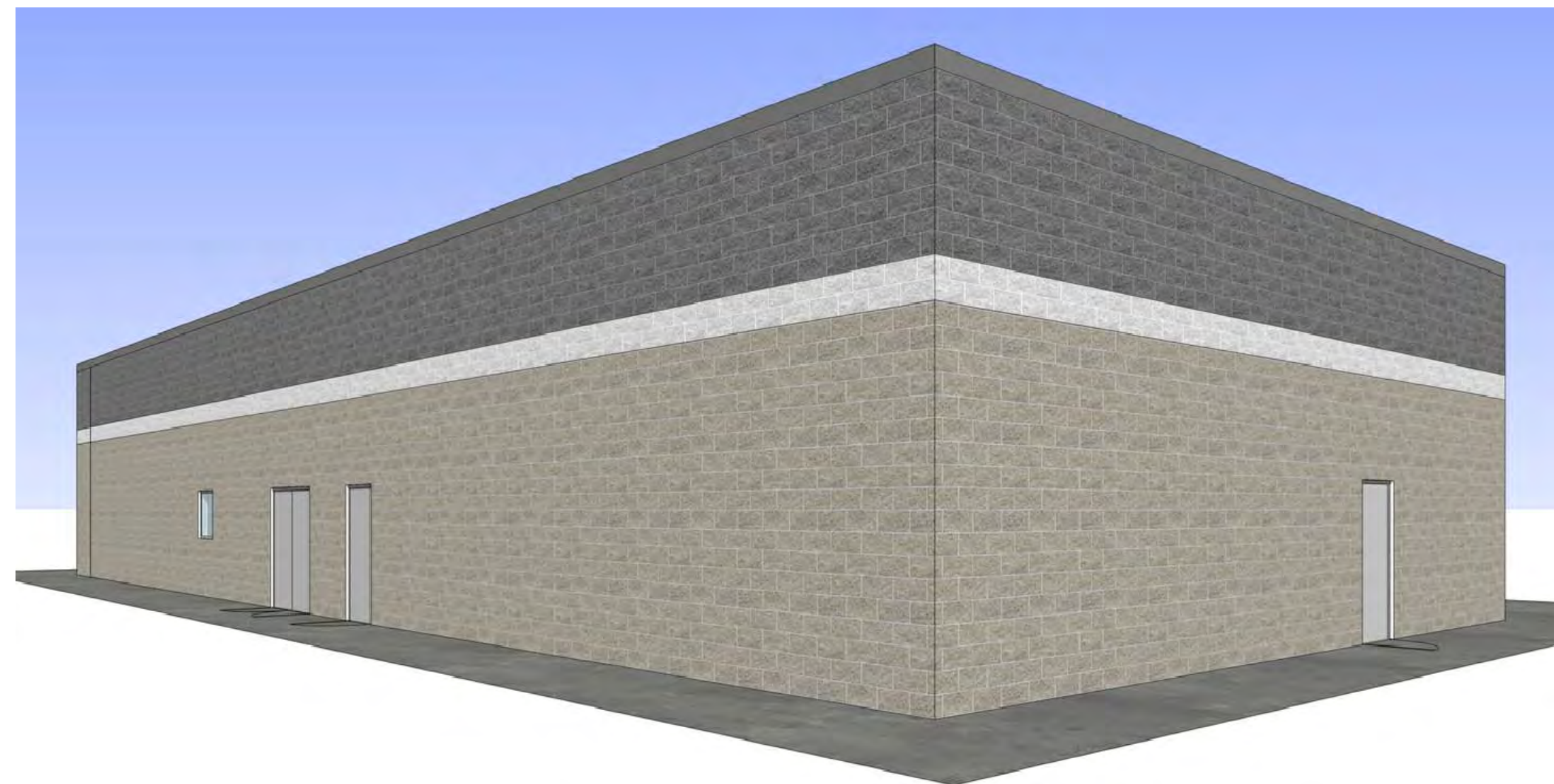
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ENGINEERS • SURVEYORS • PLANNERS
LANDSCAPE ARCHITECTS
(E-MAIL: bossengr@aol.com)
3121 E. GRAND RIVER AVE.
BRIGHTON, MI 48843
(800) 246-6735 FAX (517) 548-1670

PROJECT: **KRUG QUICK LANE**
PREPARED FOR: **RAND CONSTRUCTION**
1270 RICKETT ROAD
BRIGHTON, MI 48116
810.227.7011

TITLE: **CONSTRUCTION NOTES & DETAILS**

NO	BY	DATE	REVISION PER
1	TD	4-4-12	
2	TD	2-21-12	
3	TD	1-12-12	

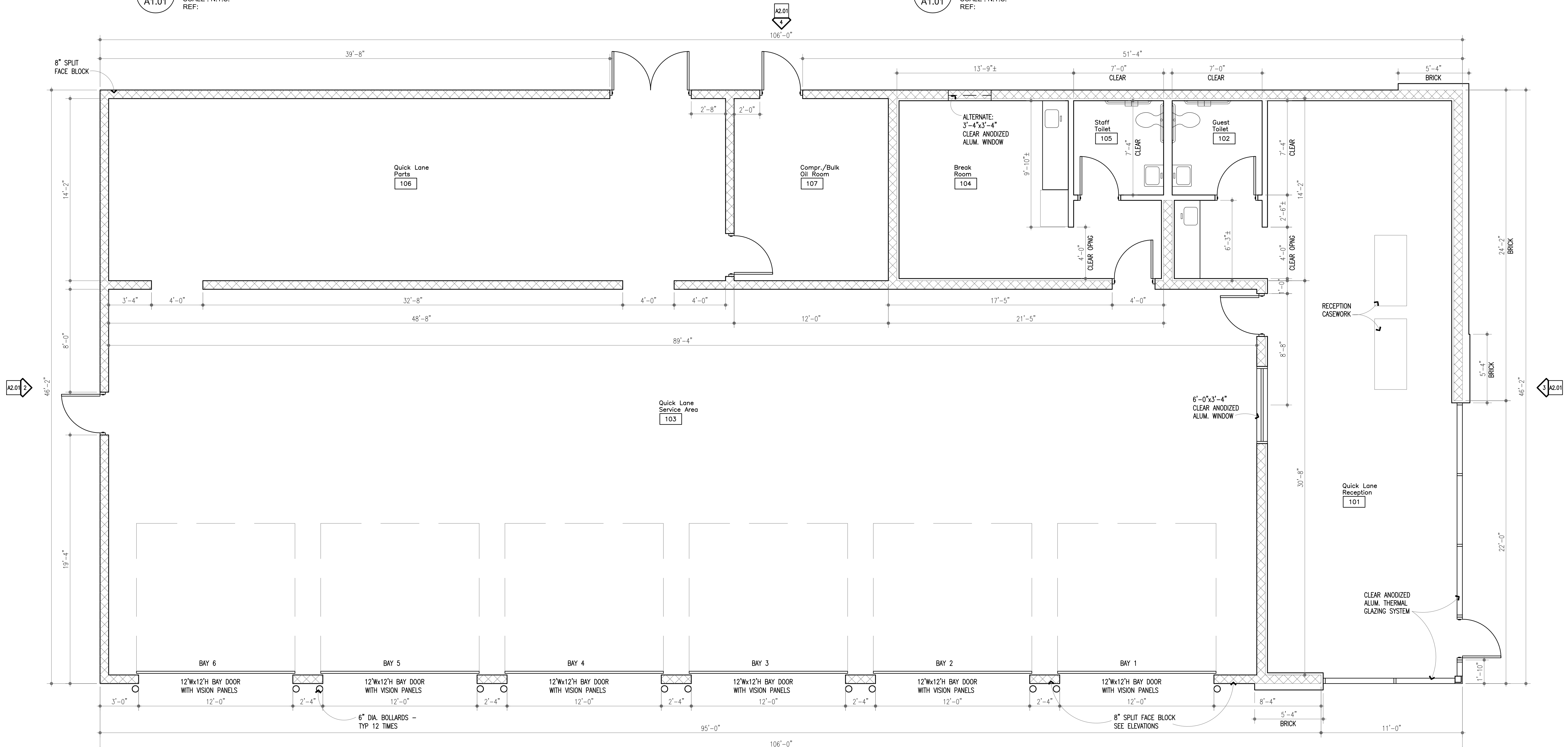
DESIGNED BY: TD
DRAWN BY: TD
CHECKED BY:
SCALE: 1" = 20'
JOB NO. 11-190
DATE 11-14-11
SHEET NO. 9



3 South - West Perspective
 A1.01 SCALE: N.T.S.
 REF:



2 North - East Perspective
 A1.01 SCALE: N.T.S.
 REF:



1 Floor Plan
 A1.01 SCALE: 1/4" = 1'-0"
 REF:

AJDESIGN
 ARCHITECTS
 2803 Greenlawn
 Commerce, MI 48382
 248.672.7866 ph
 248.232.0073 fx
 ajdarchitects.com

Construction Manager
Rand Construction
 1270 Rickett Road
 Brighton, Michigan 48116
 PH: 810-227-7011 FX: 810-227-7088

Consultant

Seal

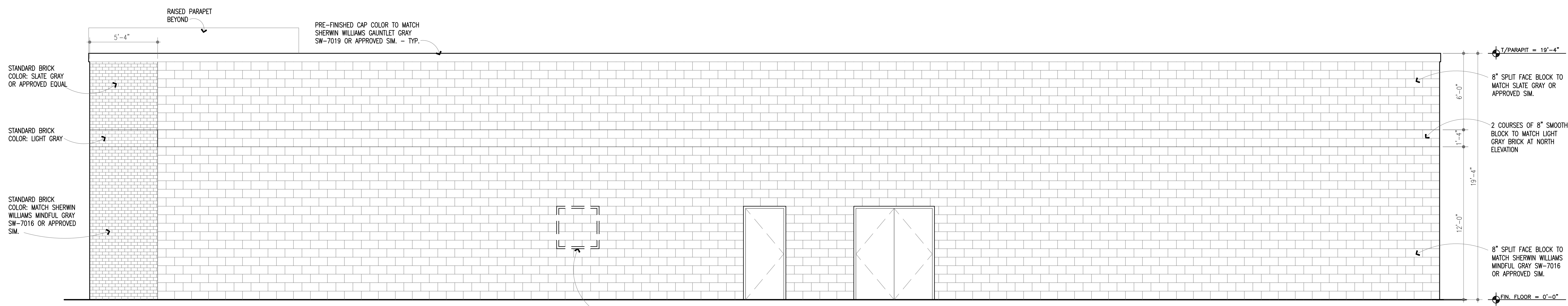
Project
KRUG HILLTOP
FORD / LINCOLN MERCURY
QUICK LANE FACILITY
 2798 East Grand River
 Howell, Michigan 48843

Description	Date
S.P.A. - Revision 2	02.22.12
S.P.A. - Revision 1	01.03.12
Owner Review	12.20.11
Site Plan Approval	11.14.11

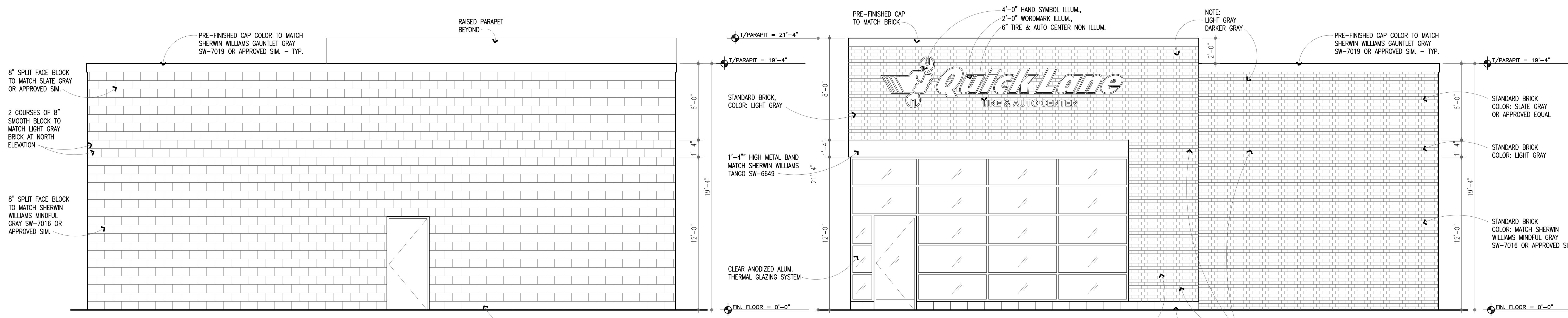
Sheet Title
Floor Plan
 Scale 1/4" = 1'-0" Project Number 2011.024
 Sheet Number
A1.01

Project

S.P.A. - Revision 2	02.22.12
S.P.A. - Revision 1	01.03.12
Site Plan Approval	11.14.11
Description	Date

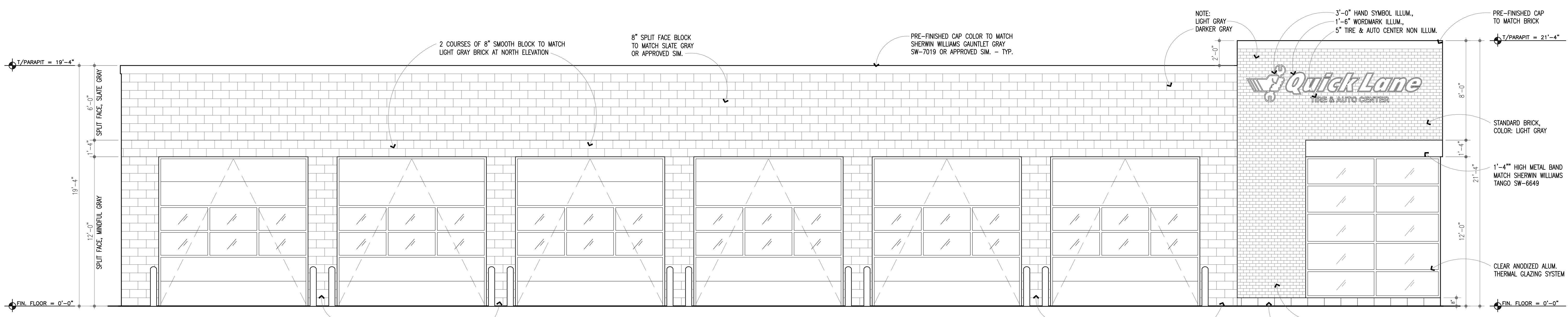


4 West Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:



2 South Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:

3 North Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:



1 East Elevation
A2.01 SCALE: 1/4" = 1'-0"
REF:

MEMORANDUM

TO: Township Board

FROM: Michael Archinal 

DATE: 5/4/12

RE: Genoa Park Sign

Please find attached an estimate from Lindhout Associates for the proposed Genoa Park sign facing I-96. Previous presentations to the Board anticipated a budget of approximately \$25,000. The estimate, with solar lighting and custom signage by Sign Works, is for \$44,318.10. Because of the small scope of this project there is a large contingency of 20% related to wall construction and site work. This contingency is equal to \$5,286. Removing the contingency puts the project cost in the upper \$30,000 range.

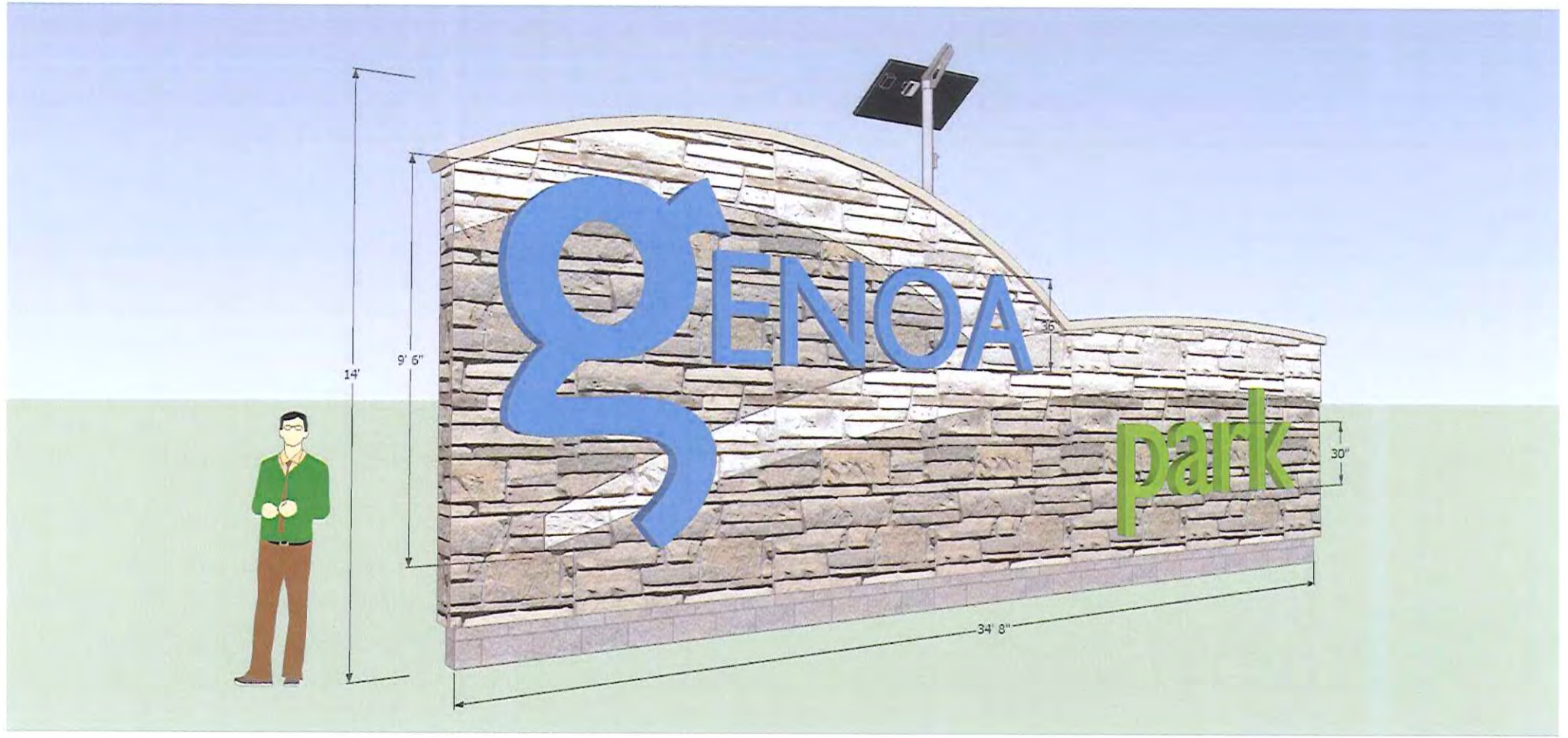
Although this estimate is higher than anticipated I believe the benefits of the project warrant the increased expenditure. As the concept of branding has developed we recognize the Township Hall/Park property as our most visible asset. The playground, lighted athletic fields, walking paths, large American flag, beautiful Township Hall and wind turbines have created significant interest in the property. These assets should be considered economic development tools that make Genoa Charter Township a desirable place to live and work. In addition to providing way finding for motorists I believe identifying ourselves as, "Genoa Township" is a key part of an economic development strategy.

We have all attended conferences where people ask, "Where is Genoa Township?" My usual response is, "Livingston County between Brighton and Howell." Or, "We are one half-hour north of Ann Arbor." Next time you are asked this question tell them, "the building with the five wind turbines and the big American flag. Every time I have said this the person knew exactly where I was talking about. I feel we should use our visibility on I- 96 to its full advantage.

Even though the estimate is higher than expected I believe the project still has value. Given the high contingency amount and a competitive construction climate I recommend we send the sign out for bids to test the market. The decision to move forward can be made when we have actual construction numbers.

Please consider the following action:

Moved by _____, supported by _____, to direct staff to draft a request for proposals for the construction of a Genoa Park identification sign.



14'

9' 6"

34' 8"

30"

GENOA

park



PROBABLE COST STATEMENT

Lindhout Associates architects aia pc

www.lindhout.com

10465 citation drive, brighton, mi 48116

810-227-5668 (fax) 810-227-5855

PROJECT NAME: Genoa Township Sign

COMM. NO. 1048

PRELIMINARY STATEMENT OF PROBABLE CONSTRUCTION COSTS

DATE:5-2-2012

REQUIRED BUILDING DATA

GROUND FLOOR AREA	0	SF
MEZZANINE LEVEL	0	SF
GROSS SQUARE FEET	0	SF
BASEMENT AREA	0	SF
NO. STORIES ABOVE GRADE	0	
BUILDING PERIMETER	0	LF
FLOOR TO FLOOR HEIGHT	0	FT
BUILDING SITE AREA	0	SF

BLDG. TYPE ENTER SYMBOL in Caps

Averages are used in Column M

GoTo Building Type Worksheet to Copy, Paste a specific project %'s to "to ESTIMATE Form" row if more suited to project at hand

Red Figures are updated to R.S. Means 2011

Y = updated per R.S. Means index 2011

DIVISION 01

GEN. COND. / CONTR. FEE	%	\$0.00
TOTAL G.C. + FEE		

Protected Cell

Avg. %
% of
Contr. of
Contr.

COMPONENT DESCRIPTION	UNITS	UNIT COST	TOTAL
-----------------------	-------	-----------	-------

DIVISION 02 - SITEWORK

Y	SITE EXCAVATION/GRADING	1	LS	2,000.00	\$2,000.00
	SITE RESTORATION (grade & seed as req'd)	2000	SY	1.50	\$3,000.00
Y	LANDSCAPING	0	ITEMS	266	\$0.00
Y	SITE LIGHTING	0	FIXT.	3,370.00	\$0.00
SUBSECTION TOTAL					

\$5,000.00 15.13 #N/A

DIVISION 03 - CONCRETE

Y	TRENCHED FOOTING	35	LF	50.00	\$1,750.00
A1010 110	STRIP FOOTING	0	LF	35.55	\$0.00
	SPECIAL	0		0.00	\$0.00
SUBSECTION TOTAL					

\$1,750.00 5.30 #N/A

DIVISION 04 - MASONRY Costs from Masonry Inst. Of MI - Feb 2004

	FOUNDATION (12" BLOCK)	0	LF	0.00	\$0.00
	WATERPROOFING (lf)	0	LF	20.57	\$0.00
B2010 132	4"BRICK / 8"BLOCK b	30.70	0 SF	30.30	\$0.00
B2010 125	BRICK VENEER a	19.35	0 SF	19.20	\$0.00
04.72.20	CULTURED STONE VENEER (over block)	400	SF	48.00	\$19,200.00
SUBSECTION TOTAL					

\$19,200.00 58.12 #N/A

DIVISION 05 - STEEL

	METAL COPING (4"thick X 16"W)	40	LF	12.00	\$480.00
SUBSECTION TOTAL					

\$480.00 1.45 #N/A

DIVISION 06 - CARPENTER

		0		0.00	\$0.00
SUBSECTION TOTAL					

\$0.00 0.00 #N/A

DIVISION 07 - THERMAL & MOISTURE PROTECTION

		0		0.00	\$0.00
SUBSECTION TOTAL					

\$0.00 0.00 #N/A

DIVISION 08 - DOORS, WINDOWS & GLASS

		0		0.00	\$0.00
SUBSECTION TOTAL					

\$0.00 0.00 #N/A

DIVISION 09 - FINISHES

	FINISH PACKAGE	0		0.00	\$0.00
	PAINING	0		0.00	\$0.00

	0	0.00	\$0.00						
		SUBSECTION TOTAL	\$0.00	\$0.00	0.00	#N/A			
DIVISION 10 - SPECIALTIES									
	0	0.00	\$0.00						
		SUBSECTION TOTAL	\$0.00	\$0.00	0.00	#N/A			
DIVISION 11 - EQUIPMENT									
	0	0.00	\$0.00						
		SUBSECTION TOTAL	\$0.00	\$0.00	0.00	#N/A			
DIVISION 14 - CONVEYING SYSTEMS									
	0	0.00	\$0.00						
		SUBSECTION TOTAL	\$0.00	\$0.00	0.00	#N/A			
DIVISION 15 - MECHANICAL SYSTEMS									
	0	0.00	\$0.00						
		SUBSECTION TOTAL	\$0.00	\$0.00	0.00	#N/A			
DIVISION 16 - ELECTRICAL SYSTEMS - see below for electrical									
	0	0.00	\$0.00						
		SUBSECTION TOTAL	\$0.00	\$0.00	0.00	#N/A			

GC + Site	19%	#N/A
Structure	81%	#N/A
Mech-Elect	0%	#N/A

			\$26,430.00	\$26,430.00 ck.
		CONTRACTORS FEE	0.00	
RECOMMENDED CONTINGENCY	5%	\$26,430.00	1,321.50	
RECOMMENDED SM SCALE PROJECT FACTOR	20%	\$26,430.00	5,286.00	
			<u>\$33,037.50</u>	

PROBABLE WALL CONSTR. + SITE COSTS \$33,037.50

SITWORK \$5,000.00
PROBABLE WALL CONSTRUCTION ONLY COSTS \$28,037.50

FEES / MISCELANEOUS

ARCHITECTURAL FEES	0%	HOURLY	T.B.D.
SITE ENGINEERING FEES	0%		\$0.00
	0	0.00	\$0.00

TOTAL PROBABLE WALL CONSTRUCTION COSTS INCLUDING FEES \$33,037.50

OTHER COST ITEMS

CUSTOM SIGNAGE (Sign A Rama)	1 LS	\$13,210.00	\$13,210.00
CUSTOM SIGNAGE (The Sign Works)	1 LS	\$6,800.00	\$6,800.00
SOLAR POWER PACKAGE (Green Panel)	1 LS	\$4,480.60	\$4,480.60
BLDG DISTRIBUTION (incl. wiring & trench)	1 LS	\$21,100.00	\$21,100.00
	0 LS	0	0
	0 LS	0	0
	0 LS	0	0

TOTAL PROBABLE WALL & SIGNAGE COSTS INCLUDING FEES \$67,347.50 HIGH
\$44,318.10 LOW

Adam VanTassell

From: Ann O'Reilly <annoreilly11@yahoo.com>
Sent: Saturday, April 14, 2012 11:35 PM
To: info
Subject: Noise Ordinance

Township Executives:

I would like to put on record a complaint that the noise level from the Chaldean Camp on Kellogg Rd. was amplified "in such a manner or with such volume as to unreasonably upset or disturb the quiet, comfort or repose of other persons."

It is after 11:00pm in a residential area. I am in my home with the windows closed and I can clearly hear the music, drums, and amplified music so loudly that I cannot sleep.

This is clearly a violation of the ordinance. Please contact the owners of the property and inform them that the township will enforce the published noise ordinance to protect the property rights of the residents of the township.

Thank you,
Ann O'Reilly
517.282.5924

Genoa Township Noise Ordinance:

"No person, firm or corporation or other legal entity shall cause or create any unreasonable or unnecessarily loud noise or disturbance, injurious to health, peace, or quiet of the residents and property owners of the township.

Specific violations the following noises and disturbances are hereby declared to be a violation of this ordinance; provided however, that the specification of the same is not thereby to be construed to exclude other violations of this ordinance not specifically enumerated:

1. The playing of any radio, phonograph, television, or other electronic or mechanical sound-producing device, including any musical instrument in such a manner or with such volume as to unreasonably upset or disturb the quiet, comfort or repose of other persons."

Ann O'Reilly

*"An Injustice anywhere
is a threat to justice everywhere"*
Dr. Martin Luther King, Jr.

Board Correspondence

PHONE MESSAGE		DATE	TIME	AM	PM
TO	Mike	4/10	12:00		
FROM	Caryl Haddell	PHONE ()			
OF	4190 Highcrest	CELL ()			
		FAX ()			
MESSAGE					
Wanted you to know how great Alameda Keep. co! They are very happy about the change of their service.					
E-MAIL ADDRESS					
SIGNED					
PHONED <input type="checkbox"/>	CALL BACK <input type="checkbox"/>	RETURNED <input type="checkbox"/>	WANTS TO SEE YOU <input type="checkbox"/>	WILL CALL AGAIN <input type="checkbox"/>	WAS IN <input checked="" type="checkbox"/>
					URGENT <input type="checkbox"/>

I thank you for providing
the Yard Waste, Electronic
Waste, & Hazardous Waste
events/information. It is
greatly appreciated!

Yermina



MICHIGAN MUNICIPAL
RISK MANAGEMENT
A U T H O R I T Y

April 30, 2012

Ms. Paulette Skolarus
Genoa Township
2911 Dorr Rd.
Brighton, MI 48116

Re: Porter vs Genoa Township
Occurrence No.: 2012-38305-002 GBIR
Our Claim No.: 157504
Date of Loss: 12/21/11

Dear Ms. Skolarus:

This letter acknowledges receipt of the Summons and Complaint and First Amended Complaint regarding the above lawsuit.

This file has been forwarded to defense counsel Johnson, Rosati, LaBarge, Aseltyne & Field, with instructions to enter an appearance on behalf of **Genoa Township** and to defend your interests in accordance with the Authority's contractual document.

Sincerely,

A handwritten signature in black ink that reads "Charles E. Stevens". The signature is written in a cursive style.

Charles E. Stevens, CPCU, AIC
Claims Manager

CES/dmc

cc: Carol A. Rosati, Esq.



MICHIGAN MUNICIPAL
RISK MANAGEMENT
A U T H O R I T Y

April 30, 2012

Carol A. Rosati, Esq.
Johnson, Rosati, Schultz & Joppich, P.C.
34405 W. Twelve Mile Rd., Suite 200
Farmington Hills, MI 48331-5627

Re: Porter vs Genoa Township
Occurrence No.: 2012-38305-002 GBIR
Our Claim No.: 157504
Date of Loss: 12/21/11
Matter No.: J157504

Dear Ms. Rosati:

This is a new assignment on behalf of the MMRMA. Enclosed find the Summons and Complaint and First Amended Complaint that was served upon Genoa Township on April 20, 2012 by certified mail. We are asking that you defend **Genoa Township. Please assign this case to Carol A. Rosati.**

I am asking that you act as referral counsel for the Michigan Municipal Risk Management Authority on the above entitled case for the Defendant. We are authorizing payment for legal services at a rate not to exceed \$135.00 per hour and \$70.00 per hour for paralegals. This rate covers all travel expenses and ordinary office expenses. Please submit billings on a monthly basis for payment. These billings are routed through this office for approval prior to payment.

If the retainer conditions are acceptable to you, please return the enclosed copy of this letter noting your acceptance at the bottom.

Our function with the Authority is to generally oversee litigation which the authority is involved in, to report on a timely basis to our reinsurers on those files that require reporting and quarterly reporting to our Membership on all matters of litigation pending before the Authority. We ask that you send status reports to Louise Duchesneau, claims adjuster at this address. The member contact is Paulette Skolarus who can be reached at 2911 Dorr Rd., Brighton, MI 48116, (810) 227-3420.

Within the next thirty (30) days please provide us with the following:

1. First Captioned Report
2. Answer and Appearance

We remind you of the established protocol for handling MMRMA matters and expect that the guidelines will be followed. Please do not hesitate to contact the assigned adjuster on this file at any time. We look

Carol A. Rosati, Esq.
Porter vs Genoa Township
April 30, 2012
Page 2

forward to working with you.

Sincerely,

Charles E. Stevens, CPCU, AIC
Claims Manager
Michigan Municipal Risk Management Authority

CES/dmc
Enclosures

cc: Paulette Skolarus, Genoa Township

Accepted by: