

**GENOA CHARTER TOWNSHIP BOARD**  
**Regular Meeting**  
**June 1, 2015**  
**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: May 18, 2015
3. Request to approve the 2015 Genoa Township Millage Rate as requested by Assessor Debra Rojewski.

**Approval of Regular Agenda:**

4. Consideration of PUD Amendment, environmental impact assessment and site plan for a proposed 60,000 square foot, three story medical office building located on parcel 4711-09-100-036 at 1201 S. Latson Road, Howell, Michigan. Petitioned by Providence Health System.
  - a. Disposition of PUD Amendment received on 5/21/15.
  - b. Disposition of Environmental Impact Assessment revised on 5/4/15.
  - c. Disposition of Site Plan revised on 5/20/15.
5. Consideration of a rezoning (Ordinance Z-15-02) for parcels 4711-11-300-021, 4711-11-300-27, and 4711-11-300-28 totaling approximately 4.19 acres located in Section 11 at 6253 Grand River Avenue, Howell. The requested rezoning is to remove the Town Center Overlay District from the property which will change the zoning from General Commercial District/Town Center Overlay (GCD/TC) to General Commercial District (GCD). The request is petitioned by Chestnut Development, LLC.
  - a. Public hearing and adoption of Ordinance Z-15-02.
6. Consideration of an environmental impact assessment corresponding to a site plan for a proposed 15,480 sq. ft. office building located at 6253 Grand River Avenue between Hughes Road and Kellogg Road on parcels 4711-11-300-021, 27, and 28. The request is petitioned by Chestnut Development, LLC.
  - a. Disposition of Environmental Impact Assessment dated 12/01/14.

7. Consider approval of a request to the Livingston County Road Commission for a speed study on McClements Road between Kellogg and Hacker.

8. Discussion of newsletter articles to be included in the summer tax bills.

Correspondence  
Member Discussion  
Adjournment

\*Citizen's Comments- In addition to providing the public with an opportunity to address the Township Board at the beginning of the meeting, opportunity to comment on individual agenda items may be offered by the Chairman as they are presented.

CHECK REGISTERS FOR TOWNSHIP BOARD MEETING

DATE: June 1, 2015

TOWNSHIP GENERAL EXPENSES: Thru June 1, 2015	\$73,968.58
May 22, 2015 Bi Weekly Payroll	\$80,477.99
June 1, Monthly Payroll	\$10,843.33
OPERATING EXPENSES: June 1, 2015	\$99,692.64
TOTAL:	<u>\$264,982.54</u>

<u>Check Number</u>	<u>Vendor No</u>	<u>Vendor Name</u>	<u>Check Date</u>	<u>Check Amount</u>
31810	BLUE CRO	Blue Cross & Blue Shield Of Mi	05/14/2015	27,882.04
31811	GENOA TW	Genoa Township	05/14/2015	605.28
31812	Livingco	Livingston County Clerks Assoc	05/14/2015	20.00
31813	RELIANCE	Reliance Standard Life Insuran	05/14/2015	2,539.54
31814	Unum	Unum Provident	05/14/2015	2,606.10
31815	VERIZONW	Verizon Wireless	05/14/2015	619.45
31816	A T & T	A T & T	05/19/2015	162.61
31817	BullsEye	BullsEye Telecom	05/19/2015	294.37
31818	DEL BUS	Deluxe For Business	05/19/2015	137.94
31819	Dyk	Dykema Gossett, PLLC	05/19/2015	61.80
31820	FED EXPR	Federal Express Corp	05/19/2015	120.05
31821	MASTER M	Master Media Supply	05/19/2015	121.86
31822	METRON	Metron-Farnier, LLC	05/19/2015	875.00
31824	VERIZONW	Verizon Wireless	05/19/2015	249.29
31827	ACCELA	ACCELA, INC #774375	05/19/2015	6,568.88
31828	ARCHINAL	Michael Archinal	05/26/2015	500.00
31829	CARDM	Chase Card Services	05/26/2015	368.11
31830	DTE LAKE	DTE Energy	05/26/2015	119.43
31831	EHIM	EHIM, INC	05/26/2015	4,834.67
31832	LINDHOUT	Lindhout Associates Architects	05/26/2015	902.00
31833	LSL	LSL Planning, Inc.	05/26/2015	5,876.49
31834	Mancuso	Mancuso & Cameron, P.C.	05/26/2015	4,674.00
31835	MICOM	Michigan.com	05/26/2015	1,840.00
31836	RELIANCE	Reliance Standard Life Insuran	05/26/2015	2,258.23
31837	Tetra Te	Tetra Tech Inc	05/26/2015	6,655.00
31838	TRI COUN	Tri County Supply, Inc.	05/26/2015	202.97
31839	Unum	Unum Provident	05/26/2015	2,606.10
31840	WALMART	Walmart Community	05/26/2015	267.37

**Report Total:**

**73,968.58**



Accounts Payable  
Computer Check Register

**Genoa Township**

2911 Dorr Road  
Brighton, MI 48116

(810) 227-5225

User: cindy

Printed: 05/14/2015 - 14:18

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
13331	EFT-FED	EFT- Federal Payroll Tax	05/22/2015		8,317.03 4,713.67 4,713.67 1,102.35 1,102.35
Check 13331 Total:					19,949.07
13332	EFT-PENS	EFT- Payroll Pens Ln Pyts	05/22/2015		2,864.69
Check 13332 Total:					2,864.69
13333	EFT-PRIN	EFT-Principal Retirement 457	05/22/2015		1,095.00
Check 13333 Total:					1,095.00
13334	EFT-ROTH	EFT-Principal Roth	05/22/2015		615.00
Check 13334 Total:					615.00
13335	EFT-TASC	EFT-Flex Spending	05/22/2015		1,034.97
Check 13335 Total:					1,034.97
13336	FIRST NA	First National Bank	05/22/2015		3,550.00 51,369.26

Check 13336 Total:

54,919.26

Report Total:

80,477.99

Accounts Payable  
Computer Check Register

**Genoa Township**

2911 Dorr Road  
Brighton, MI 48116

(810) 227-5225

User: cindy

Printed: 05/27/2015 - 12:21

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
13337	EFT-FED	EFT- Federal Payroll Tax	06/01/2015		1,918.79 657.08 657.08 153.67 153.67
			Check 13337 Total:		3,540.29
13338	EFT-PENS	EFT- Payroll Pens Ln Pyts	06/01/2015		394.21
			Check 13338 Total:		394.21
13339	EFT-ROTH	EFT-Principal Roth	06/01/2015		200.00
			Check 13339 Total:		200.00
13340	EFT-TASC	EFT-Flex Spending	06/01/2015		83.33
			Check 13340 Total:		83.33
13341	FIRST NA	First National Bank	06/01/2015		6,625.50
			Check 13341 Total:		6,625.50
			Report Total:		10,843.33

**#503 DPW UTILITY FUND**  
**Payment of Bills**  
 May 12 - 25, 2015

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	05/14/2015	3209	DELUXE BUSINESS PRODUCTS	Checks for DPW	-137.94
Bill Pmt -Check	05/14/2015	3210	LOWE'S		-3,428.92
Bill Pmt -Check	05/14/2015	3211	TalentWise Inc	Invoice #92871456, 92797438	-231.00
Bill Pmt -Check	05/14/2015	3212	Tractor Supply Co.	supplies	-492.87
Bill Pmt -Check	05/14/2015	3213	U.S. POSTMASTER	Oak pte billing	-350.72
Bill Pmt -Check	05/14/2015	3214	Verizon Wireless	481002220-00002	-287.30
Bill Pmt -Check	05/19/2015	3215	Abe's Auto Glass, Inc.	7 to 4 adapter	-15.45
Bill Pmt -Check	05/19/2015	3216	Belle Tire	Tires, brakes	-1,158.07
Bill Pmt -Check	05/19/2015	3217	Business and Legal Resources	Account # 6173578	-2,289.00
Bill Pmt -Check	05/19/2015	3219	Cruisers	2015 Chevy Silverado	-788.00
Bill Pmt -Check	05/19/2015	3220	Grundy Ace of Howell	Supples and Tools	-18.98
Bill Pmt -Check	05/19/2015	3221	MWEA	Chris Lewis -Fund of Maint Practices 1	-125.00
Bill Pmt -Check	05/19/2015	3222	PAETEC	Calls billed	-38.06
Bill Pmt -Check	05/19/2015	3223	Port City Communications, Inc.	5-1-15 to 5-31-2015	-334.79
Bill Pmt -Check	05/19/2015	3224	Red Wing Shoe Store	Brian Hewlett Boots	-175.49
Bill Pmt -Check	05/19/2015	3225	Springbrook Software, Inc.	VOID: Annual maintenance 7-1-15 to 6-30-15	0.00
Bill Pmt -Check	05/19/2015	3226	Staples Credit Plan	Office Supplies	-436.60
Bill Pmt -Check	05/19/2015	3227	TETRA TECH, INC.	Project #200-12736-15015	-440.00
Bill Pmt -Check	05/19/2015	3228	USABlueBook		-592.25
Bill Pmt -Check	05/19/2015	3229	Victory Lane Quick Oil Change	Fleet Oil Change Service	-63.97
Bill Pmt -Check	05/19/2015	3230	WEX Bank	Fleet Fuel	-2,428.00
Bill Pmt -Check	05/19/2015	3231	Chase Card Services	Supples -gas- phone- training	-1,475.14
Bill Pmt -Check	05/19/2015	3232	Blackburn Mfg. Co.	supples	-263.77
Bill Pmt -Check	05/21/2015	3233	Accela, Inc #774375		-6,664.18
<b>Total</b>					<b>-22,213.50</b>

**#595 PINE CREEK W/S FUND**  
**Paymnet of Bills**  
 May 12 - 25, 2015

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	05/18/2015	2144	City of Brighton	Site address 7359 Forrest Way	-9,500.00
<b>Total</b>					<b>-9,500.00</b>

11:13 AM

## #593 LAKE EDGEWOOD W/S FUND

## Payment of Bills

May 12 - 25, 2015

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	05/18/2015	2745	Brighton Analytical L.L.C.	Laboratory costs	-77.00
Bill Pmt -Check	05/18/2015	2746	BullsEye Telecom	5-10-2015 to 6-9-2015	-292.32
Bill Pmt -Check	05/18/2015	2747	Cooper's Turf Management	Lawn Care at LE wastewater plant and lift sta	-146.00
Bill Pmt -Check	05/18/2015	2748	GENOA TWP DPW FUND	Billing/maintenance fees May 2015	-10,453.92
Bill Pmt -Check	05/18/2015	2749	M & K Jetting and Televising		-2,275.00
Bill Pmt -Check	05/18/2015	2750	NORTHWEST PIPE AND SUPPLY, I	SUPPLIES	-26.82
Bill Pmt -Check	05/18/2015	2751	PVS NOLWOOD CHEMICALS, INC	Invoice #470684	-637.00
Bill Pmt -Check	05/18/2015	2752	Tetra Tech Inc.	Project # 117-1045032	-2,123.44
<b>Total</b>					<b>-16,031.50</b>

11:18 AM

## #592 OAK POINTE WATER/SEWER FUND

## Payment of Bills

May 12 - 25, 2015

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	05/18/2015	3318	AT&T	Telephone Internet Service April 12 thru M:	-79.51
Bill Pmt -Check	05/18/2015	3319	Bullseye Telecom	003CA32, 003CACC	-374.39
Bill Pmt -Check	05/18/2015	3320	DTE ENERGY	Electric bills	-2,045.26
Bill Pmt -Check	05/19/2015	3321	COOPERS TURF MANAGEMENT, LLC	Lawn Care at Wastwater plant and lift stati	-223.00
Bill Pmt -Check	05/19/2015	3322	DUBOIS COOPER ASSOCIATES INCORP	Supplies	-3,591.88
Bill Pmt -Check	05/19/2015	3323	FASTENAL	SUPPLIES	-28.65
Bill Pmt -Check	05/19/2015	3324	GENOA TWP DPW FUND	Maintenance/ Billing May 2015	-39,496.66
Bill Pmt -Check	05/19/2015	3325	GRUNDY ACE OF HOWELL	supplies	-8.13
Bill Pmt -Check	05/19/2015	3326	M & K Jetting and Televising	Sewer jetted 600" of plugged lines	-740.00
Bill Pmt -Check	05/19/2015	3327	NORTHWEST PIPE AND SUPPLY, INC.	SUPPLIES	-55.48
Bill Pmt -Check	05/19/2015	3328	TLS Construction LLC		-1,333.00
Bill Pmt -Check	05/19/2015	3329	USA Bluebook	SUPPLIES	-2,889.18
Bill Pmt -Check	05/19/2015	3330	Utilities Instrumentation Service	Service rendered at WTP through 4-23-20	-1,082.50
<b>Total</b>					<b>-51,947.64</b>

draft

**GENOA CHARTER TOWNSHIP BOARD**

Regular Meeting and Public Hearing

May 18, 2015

**MINUTES**

Supervisor McCririe called the regular meeting and public hearing of the Board to order at 6:30 p.m. The Pledge of allegiance was then said. The following board members were present constituting a quorum for the transaction of business: Gary McCririe, Paulette Skolarus, Robin Hunt, Linda Rowell, Jim Mortensen, Todd Smith and Jean Ledford. Also present were Township Manager Michael Archinal; Township Attorney Frank Mancuso; Township Assistant Manager Kelly VanMarter; and approximately 30 persons in the audience.

A Call to the Public was made with the following response: Bud Clark – I live on Homestead Drive. I am here on behalf of my father. In 1986 a record of variance was granted by the ZBA. During the trial the township was unable to provide a copy of the variance. This is the root cause issue that we are requesting this board address. Please review the matter and respond accordingly. My father no longer has safe ingress and egress to his home.

Peyton Clark – Act 267 of 1976 states that the township has responsibility in retaining public record. Those records should have been available for the trial. I spent \$60,000.00 in legal fees trying to retain my rightful property. I would not have lost the court case if the documents had been available. I am asking the appropriate people within the township to draft a letter as to the township not being able to provide documentation for my court case – just a letter of explanation.

Lisa Clark – I am the daughter. I came to the township with a second request for the documents while the trial was in session. Township staff checked the computer for the documents and said that they could not be found. The matter was referred to the Clerk who was able to locate the Minutes of the ZBA. Approximately twenty residents and neighbors of the Clark family stood in support of the request.

**Approval of Consent Agenda:**

Moved by Mortensen and supported by Smith to approve item 1 under the consent agenda and move approval of the minutes to the regular agenda. The motion carried unanimously.

**1. Payment of Bills.**

**Approval of Regular Agenda:**

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

## **2. Request to Approve Minutes: May 4, 2015**

Moved by Hunt and supported by Smith to approve the Minutes with minor corrections: Adding – The manager identified the west driveway with regard to Northshore. Further, correcting typographical errors. The motion carried unanimously.

## **3. Public Hearing on the Northshore Road Improvement Project.**

A Call to the Public was made with no response.

Moved by Smith and supported by Hunt to approve Resolution No. 5 [Confirming the Special Assessment Roll] for the Northshore Road Improvement Project inserting language from Resolution No. 2 under Exhibit A. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Rowell, Mortensen, Skolarus and McCririe. Nays – None.

## **4. Request for approval of PUD agreement amendment, environmental impact assessment, and site plan for the proposed redevelopment of an existing outparcel to create two (2) outlots and construct a 4,283 sq. ft. restaurant building for Panera Bread, located at 3950 E. Grand River Avenue, Howell, Michigan 48843, parcel # 4711-05-400-047. The request is petitioned by RG Properties, Inc. previously identified as Bennigan’s Restaurant.**

### **A. Disposition of PUD Agreement Amendment dated March 12, 2015.**

Moved by Smith and supported by Mortensen to approve the rendering titled Option (A) for the Panera Bread Company (signed and dated by the petitioner) as submitted this evening and to approve the PUD Amendment as reviewed by the Planning Commission with the following conditions:

1. Subject to the review and approval of the Township Attorney.
2. The changes proposed in regard to the gateway sign after the Planning Commission Meeting are not approved.

The motion carried unanimously.

### **B. Disposition of Environmental Impact Assessment dated April 28, 2015.**

Moved by Smith and supported by Hunt to approve the impact assessment as presented. The motion carried unanimously.

### **C. Disposition of Site Plan dated April, 28, 2015.**

Moved by Smith and supported by Skolarus to approve the site plan with the following conditions:

1. The revised building elevation (Option A” reviewed this evening is approved.
2. Signage shall not be allowed on the patio tables or umbrellas.
3. The building depicted on lot 4B is regarded as conceptual and will be subject to the site plan approval process.

4. The requirements of the Township Engineer in the letter dated April 24, 2015 will be complied with prior to issuance of a land use permit.
5. The requirements of the Brighton Area Fire Department as stated in their letter dated April 22, 2015 shall be complied with prior to issuance of a land use permit.

The motion carried unanimously.

**5. Consideration of a request to approve a special land use, environmental impact assessment, and site plan for a proposed remote bank ATM in an existing parking lot, located at 3599 E. Grand River Avenue, Howell, Michigan, parcel # 4711-05-400-031. The request is petitioned by Chase Bank.**

**A. Disposition of Special Land Use Permit**

Moved by Rowell and supported by Smith to approve the Special Land request that complies with the standards provided in Section 19.03 and because the use is consistent with the services provided on neighboring properties in the Regional Commercial District. The motion carried unanimously.

**B. Disposition of Environmental Impact Assessment dated 05-13-15**

Moved by Ledford and supported by Rowell to approve the impact assessment as requested. The motion carried unanimously.

**C. Disposition of Site Plan dated 05-13-15**

Moved by Ledford and supported by Rowell to approve the site plan dated 05/13/2015 with the following conditions:

1. Two small signs on the ATM will be permitted: one on the east and one on the west. No roof canopy signs shall be allowed.
2. The proposed concrete curb shall be extended 2 feet to the east to prevent cars from hitting the ATM structure. This change in the site plan will be subject to review by Township Staff;
3. The requirements of the Brighton Area Fire Authority in their letter of 4/29/15 shall be complied with.

The motion carried unanimously.

**6. Consideration of a request to approve the environmental impact assessment corresponding to a site plan for a 19,202 sq. ft. building addition and 152 new parking spaces, located at 7526 Grand River Avenue, Brighton, Michigan 48116, parcel # 4711-13-400-018. The request is petitioned by 2|42 Community Church.**

Moved by Smith and supported by Hunt to approve the impact assessment dated 04-22-15 relative to the site plan dated 04/22/2015 with the following conditions:



1. The building additions will match the existing materials and the display board presented will become Township property.
2. The applicant will work with Township staff and the neighbors to the west to refresh or reinstate the plantings in the buffer zone.
3. The traffic management plan developed in the original project will be continued and enhanced as recommended by the March 24, 2015 traffic engineer's memo.
4. The Township is aware that the underground retention system in the site plan might be eliminated which would increase the timing of the flow to Morse Lake. This deviation shall be approved by the County, the property owners on Morse Lake, and Genoa Township, as well as any other necessary governmental unit.
5. The requirements of the Township Engineer in their letter dated 5/5/15 and the Brighton Fire Authority in their letter of 4/29/15 will be complied with.

The motion carried unanimously.

**7. Introduction of a proposed rezoning and authorization of statutory notice for a public hearing on June 1, 2015 for parcels 4711-11-300-021, 4711-11-300-027, and 4711-11-300-028 totaling approximately 4.19 acres located in Section 11 at 6253 Grand River Avenue. The applicant has requested a rezoning to remove the Town Center Overlay District from the property which will change the zoning from General Commercial District/Town Center Overlay (GCD/TC) to General Commercial District (GCD). The request is petitioned by Chestnut Development, LLC.**

Moved by Smith and supported by Hunt to approve the first reading introducing the rezoning request and setting the first public hearing for June 1, 2015. This request is related the property known as Crest Housing. The motion carried unanimously.

**8. Discussion regarding Election Commission minutes.**

McCrie asked for clarification. Skolarus – Reference is made to the Zoning Board of Appeals and Planning Commission minutes that may not be corrected by the Township Board. The Election Commission is also an independent board and corrections may only be made by members of that board.

**9. Request for approval of contracts for the Assessor, Deputy Assessor, Assistant Township Manager/Community Development Director, and Township Manager.**

Moved by Rowell and supported by Hunt to approve the contracts with minor corrections. *The H.R Generalist should have electronic responses from all employees, both staff and contractual with reference to the Personnel Handbook.* The motion carried unanimously.

**10. Request to enter into a closed session to discuss pending litigation pursuant to MCL 15.268 § 8 (e).**

Moved by Ledford and supported by Smith to enter into closed session at 8:00 p.m. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Rowell, Mortensen, Skolarus and McCririe. Nays – None.

The regular meeting of the board was resumed at 8:13 p.m.

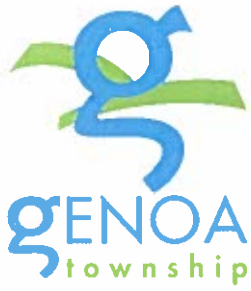
- Smith advised the board that he would be bringing a Howell Parks and Recreation budget to the board.
- Attorney Mancuso will correspond with the Clark family as requested in their address to the board.

The meeting of the board was adjourned at 8:14 p.m.



Paulette A. Skolarus, Clerk

Gary McCririe, Supervisor



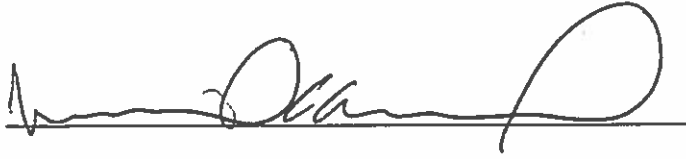
2911 Dorr Road  
Brighton, MI 48116  
810.227.5225  
810.227.3420 fax  
genoa.org

TO: Honorable Board of Trustees

FROM: Debra L. Rojewski, Assessor 

DATE: May 27, 2015

RE: 2015 Millage Rate

Manager's Signature: 

I have enclosed the 2015 Genoa Township Millage Rate that will be used to calculate the amount of taxes to be collected for each parcel in Genoa Township for the Winter Taxes of 2015. There has been no change from last year.

Michigan State Law requires the Township to approve the millage rate for each tax year.

I would recommend the following motion:

Moved by \_\_\_\_\_, supported by  
\_\_\_\_\_

To approve the Assessor's affidavit of the 2015 Millage levies for Genoa Township, establishing the Millage Rate at 0.8146.

**SUPERVISOR**

Gary T. McCririe

**CLERK**

Paulette A. Skolarus

**TREASURER**

Robin L. Hunt

**TRUSTEES**

H. James Mortensen

Jean W. Ledford

Todd W. Smith

Linda Rowell

**MANAGER**

Michael C. Archinal

**2015 Tax Rate Request** (This form must be completed and submitted on or before September 30, 2015)

**MILLAGE REQUEST REPORT TO COUNTY BOARD OF COMMISSIONERS**

Carefully read the instructions on page 2.

This form is issued under authority of MCL Sections 211.24e, 211.34 and 211.34d. Filing is mandatory; Penalty applies.

County(ies) Where the Local Government Unit Levies Taxes <b>LIVINGSTON COUNTY</b>	2015 Taxable Value of ALL Properties in the Unit as of 5-26-15 <b>1,046,316,089</b>
Local Government Unit Requesting Millage Levy <b>GENOA CHARTER TOWNSHIP</b>	For LOCAL School Districts: 2015 Taxable Value excluding Principal Residence, Qualified Agricultural, Qualified Forest, Industrial Personal and Commercial Personal Properties.

This form must be completed for each unit of government for which a property tax is levied. Penalty for non-filing is provided under MCL Sec 211.119. The following tax rates have been authorized for levy on the 2015 tax roll.

(1) Source	(2) Purpose of Millage	(3) Date of Election	(4) Original Millage Authorized by Election Charter, etc.	(5) ** 2014 Millage Rate Permanently Reduced by MCL 211.34d "Headlee"	(6) 2015 Current Year "Headlee" Millage Reduction Fraction	(7) 2015 Millage Rate Permanently Reduced by MCL 211.34d "Headlee"	(8) Sec. 211.34 Truth in Assessing or Equalization Millage Rollback Fraction	(9) Maximum Allowable Millage Levy *	(10) Millage Requested to be Levied July 1	(11) Millage Requested to be Levied Dec. 1	(12) Expiration Date of Millage Authorized
ALLOC	OPER	N/A		.8146	1.0000	.8146	1.0000	.8146		.8146	

Prepared by <b>DEBRA L. ROJEWSKI</b>	Telephone Number <b>810-227-5225</b>	Title of Preparer <b>ASSESSOR</b>	Date <b>5/26/2015</b>
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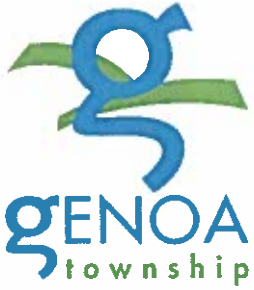
**CERTIFICATION:** As the representatives for the local government unit named above, we certify that these requested tax levy rates have been reduced, if necessary to comply with the state constitution (Article 9, Section 31), and that the requested levy rates have also been reduced, if necessary, to comply with MCL Sections 211.24e, 211.34 and, for LOCAL school districts which levy a Supplemental (Hold Harmless) Millage, 380.1211(3).

<input checked="" type="checkbox"/> Clerk	Signature	Print Name	Date
<input type="checkbox"/> Secretary		<b>PAULETTE A. SKOLARUS</b>	<b>5/26/2015</b>
<input checked="" type="checkbox"/> Chairperson	Signature	Print Name	Date
<input type="checkbox"/> President		<b>GARY MCCRIRIE</b>	

\* Under Truth in Taxation, MCL Section 211.24e, the governing body may decide to levy a rate which will not exceed the maximum authorized rate allowed in column 9. The requirements of MCL 211.24e must be met prior to levying an operating levy which is larger than the base tax rate but not larger than the rate in column 9.

\*\* **IMPORTANT:** See instructions on page 2 regarding where to find the millage rate used in column (5).

<b>Local School District Use Only. Complete if requesting millage to be levied. See STC Bulletin 3 of 2015 for instructions on completing this section.</b>	
Total School District Operating Rates to be Levied (HH/Supp and NH Oper ONLY)	Rate
For Principal Residence, Qualified Ag, Qualified Forest and Industrial Personal	
For Commercial Personal	
For all Other	



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

**MEMORANDUM**

**TO:** Honorable Board of Trustees

**FROM:** Kelly VanMarter, Assistant Township Manager/Community Development Director

**DATE:** May 27, 2015

**RE:** **PROVIDENCE MEDICAL CENTER**  
 PUD Amendment, Environmental Impact Assessment & Site Plan

**MANAGER'S REVIEW:** 

I have reviewed the proposed PUD agreement amendment, revised environmental impact assessment and revised site plan for a proposal to construct a 60,000 square foot three-story medical office building located at the former Latson Elementary School property at 1201 S. Latson Road, on parcel # 4711-09-100-036. This project was recommended for approval by the Township Planning Commission on May 11, 2015. My review of the revised submittal was focused on compliance with the outstanding items discussed at the Planning Commission and my recommendation is as follows:

**PUD AGREEMENT AMENDMENT**

The PUD Amendment was not reviewed by the Planning Commission and provides the following deviations from the original agreement:

1. Reduce the front yard parking setback from 20' to 0' in consideration of the old right-of-way for Latson Road.
2. Allow for a small delivery truck loading zone in the front yard.
3. Provide language regarding the location of the Township entranceway landmark feature.

In regard to the gateway feature, I present the following points for your consideration:

- The Board may wish to require that St. John construct or fund construction of this feature.
- The gateway feature should be required as part of phase 2 of the medical office building or upon construction of one of the outlots.
- The agreement should be clear that unless the Road Commission agrees to allow the sign within the right-of-way, the gateway feature will need to be located on the owner's property. This may involve the loss of a parking space along Latson Road and should be shown as a note on the approved site plan.

**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  
 Linda Rowell

In consideration of the above statements I recommend APPROVAL of the amendments to the PUD Agreement received on May 21, 2015 subject to the following:

1. Incorporation of requirements for the Township Gateway Feature as deemed appropriate by the Board.
2. Review and approval by the Township Attorney.

**IMPACT ASSESSMENT**

I recommend APPROVAL of the environmental impact assessment dated May 4, 2015.

**SITE PLAN**

I recommend APPROVAL of the site plan dated May 20, 2015 with the following conditions:

1. This approval is only for the phase one medical office building. Future phases and/or development of outlots will require site plan review and approval.
2. The proposed building colors and materials as shown in the renderings are subject to verification by Township Staff that they are consistent with what was presented to the Planning Commission.
3. Building material sample boards will become Township property.
4. The pedestrian crossing signs in the north/south marked walkway should be increased and placed so they are oriented to motorists in the drive aisles.
5. Easements for sanitary sewer and water shall be provided prior to issuance of a land use permit.
6. Construction plan review and approval shall be required by the MHOG Utility System.
7. Connection fees shall be paid upon issuance of a land use permit.

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

Sincerely,

Kelly VanMarter  
Assistant Township Manager/Community Development Director



**GENOA CHARTER TOWNSHIP**  
**Application for Site Plan Review**

**TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:**

APPLICANT NAME & ADDRESS: Frauenshuh Health Care Real estate Solutions, 3601 Minnesota Drive, Suite 800, Minneapolis, MN 55435  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: St. John Providence Health System, a Michigan nonprofit corporation; 18000 West Nine Mile Road, Suite 1200, Southfield, MI 48075

SITE ADDRESS: 1201 S. Latson Road; Genoa Township, MI 48843 PARCEL #(s): 2012R-020056

APPLICANT PHONE: 952-829-3489 OWNER PHONE: 248-331-4667

OWNER EMAIL: John.Yagerlener@ascensionhealth.org; Applicant Email: chris.lambrecht@frauenshuh.com

LOCATION AND BRIEF DESCRIPTION OF SITE: NE corner of the intersection of Latson Rd and I 96.

Previously developed Howell Public Schools site for Latson Elementary. The site has since been cleared  
and a portion of the original parcel was aquired by MDOT for construction of the Latson Rd interchange.

There are two existing and improved drive entry points near the NW property cornaer and another at Grand Oaks Dr.

BRIEF STATEMENT OF PROPOSED USE: The site will be developed as a Non-Residential PUD with the first  
phase including a 60,000 sf, 3 story medical office building including parking, MRI dock and required infrastructure.

Future phases may include additional healthcare related facilities north of Grand Oaks and retail/office  
commerical uses south of Grand Oaks. The first phase of development will include a site-wide stormwater basin.

THE FOLLOWING BUILDINGS ARE PROPOSED: 1 - 60,000 square foot, 3 story medical office building.

**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: Chris Lambrecht

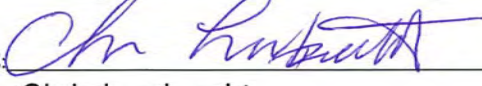
ADDRESS: 3601 Minnesota Drive, Suite 800, Minneapolis, MN 55435

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

1.) Chris Lambrecht of Frauenshuh Health Care Real Estate Solutions at Chris.lambrecht@frauenshuh.com  
Name Business Affiliation E-mail Address

**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:  DATE: 3/27/15  
PRINT NAME: Chris Lambrecht PHONE: 952-829-3489  
ADDRESS: 3601 Minnesota Drive, Suite 800, Minneapolis, MN 55435



Chairman Brown discussed the erection of a fence with the petitioner. The petitioner said there was no way to put a fence on the property line due to the trees, but would agree to look into putting a fence on the church property 10 to 15 feet into the property line.

Barbara Figurski indicated that she viewed the property earlier today. She addressed the trees. She believes the trees should be cleaned up. Some of the trees have died. The petitioner indicated they plan to clean up the trees.

Kelly VanMarter asked about the drop off lane versus parking. The petitioner gave a representation showing how the queue will work. The traffic guards will be parents and/or volunteers. The petitioner reminded the Planning Commission that traffic will be 15 minutes in the morning and 15 minutes in the afternoon. They anticipate 30 cars at any given time.

Jay Johnston, a neighbor to the church addressed the Planning Commission. He would like to see the dead trees replaced. The petitioner was asked to do that in 2003 and has not. He would like to see fencing for safety reasons. The security guard at the skate park is not doing what should be done because the kids are racing and speeding through the skate park. The police will not respond to the calls because it is private property. He expressed concern about the driver testing remaining located at the premises.

Andrea Spanstra addressed the Planning Commission. She indicated the church has not been honoring their promises and guarantees to their neighbors since 2000. She is concerned about what problems the traffic will create.

**Planning Commission recommendation of petition**

- A. Recommendation of Special Use
- B. Recommendation of Environmental Impact Assessment (03-16-15)
- C. Disposition of Sketch Plan (05-14-14)

**Motion** by James Mortensen to table this petition because more information is required to make a disposition of this petition including major traffic study and modus operandi of the church if this were to be approved. Support by Barbara Figurski. **Motion carried unanimously.**

NEW BUSINESS:

**OPEN PUBLIC HEARING #3...** Review of a site plan and environmental impact assessment for a proposed 60,000 sq. ft., three-story medical office building, located at 1201 S. Latson Road, Howell, Michigan, 48843, parcel # 4711-09-100-036. The request is petitioned by Providence Health System.

Chris Lambrecht, developer for medical office building addressed the Planning Commission. They are partnered with St. John Providence/Providence Health. He thanked Kelly VanMarter for all of her assistance over the last six months.

Tim Britton addressed the Planning Commission regarding the design of the project. A brief overview of the site plan was given by the petitioner.

Kelly VanMarter indicated the north driveway was discussed. The language in the PUD agreement encourages minimized curb cuts, but it is not exclusive of two driveways. The driveway to the apartments is misaligned pursuant to Kelly VanMarter.

The petitioner reviewed the renderings with the Planning Commission. The vestibule is over and under so that it is fully covered. The materials are brick and stone. Third floor is an EFIS material. The windows in the main lobby allow for a flood of natural light into the lobby. The stone is a combination of smooth and rough face. The petitioner does not have sample boards.

The petitioner is to provide sample boards.

Brian Borden addressed the Planning Commission. The proposed changes by the petitioner include that the building is set further back with more parking in the front. The EFIS calculations made by Brian Borden were incorrect and the petitioner has provided calculations regarding that and they are within ordinance requirements.

Parking is an issue. Phase 1 is 7 parking spaces deficient. The applicant is seeking a 7 space reduction for phase 1.

The petitioner is seeking front yard loading. The PUD agreement will need to be reviewed to determine if that is allowable. It would be screened to some degree by the landscaped island.

Eric Rauch discussed pedestrian walking paths in the parking lot and parking issues with the petitioner. Kelly VanMarter asked if a concrete walk path could be used for delineation. Eric Rauch indicated that snow removal would ruin the curb. Chris Grajek asked if striping would be sufficient to prevent parking in the pathways to the front door through the parking lot. The possibility of bollards were discussed. A shorter version of a bollard containing a handicapped parking sign was suggested by the petitioner. The Planning Commission and petitioner have agreed to changing the curb on the north side to a 6" curb with cut-in's at each sidewalk.

Brian Borden discussed trees and evergreen plantings. There is a shortage of three shrubs, which should be overlooked given all of the changes the petitioner has agreed to and the changes that will be made to the plan.

The bumper zones on the east and west are deficient on the proposed future phases. The lighting plan has a few minor clean up items according to Brian Borden.

Brian Borden addressed the mobile imaging dock. This is often done at odd hours. He has requested information on lighting and noise generation, as well as proposed hours of operation. The noise generation information was provided. The MRI hours of operation are 8 am to 6 pm. There will be no exterior lighting that would extend into the

parking lot. The petitioner explained how the seal between the MRI truck and building works.

James Mortensen asked about the welcome to Genoa Township sign that is proposed for that area. It can be waived. Eric Rauch indicated signage will be interested with the three buildings and the Township welcome sign. Brian Borden believes the logical location for the Township welcome sign would be outside a future phase area.

Gary Markstrom addressed the Planning Commission. He has met with the petitioner and the Road Commission. There will be public water and sanitary sewer. A construction plan review will be necessary and any concerns can be addressed at that time. There should be a link from the site to the sidewalk on Latson Road. The petitioner agrees to do that.

The petitioner requests that the PUD be amended to waive the 20 foot setback requirement along Latson Road. It impacts parking and would cause the petitioner to be unable to meet the standard. The Road Commission has agreed to allow the petitioner to plant in the right-of-way and install lighting fixtures, as well. Brian Borden wondered if the waiver for the parking set back should apply to phase one only.

**Planning Commission recommendation of petition**

- A. Recommendation of Environmental Impact Assessment (05-04-15)
- B. Disposition of Site Plan (04-23-15)

**Motion** by Barbara Figurski to recommend to the Township Board approval of the environmental impact assessment. Support by John McManus.

**Motion** by James Mortensen to recommend to the Township Board approval of the site plan dated 4/23/15, subject to:

1. This recommendation does not include the conceptual plans for the properties or any phase facility on the northern part of the site plan;
2. The proposed elevations and colors and materials shown in the renderings are acceptable to the Planning Commission subject to verification by Township Staff when reviewing sample boards and that they are consistent;
3. The sample boards will become Township property;
4. The sidewalk system within the site will tie into the sidewalk, the north/south sidewalk on Latson Road in the vicinity of Grand Oaks Drive;
5. The reduction of 7 parking spaces relative to the Township ordinance as to phase one are acceptable given that the applicant has demonstrated that it's consistent with its experience;
6. The site plan will necessitate certain amendments to the PUD agreement, including a reduction of the 20 foot parking lot setback from the right-of-way on Latson Road; establishment of a location for an entryway sign for the Township on the property. Further, the amendment will have to approve loading for small delivery trucks such as UPS in the front yard;

7. The northernmost driveway is not in the most desirable location. The Township attorney is requested to review whether the Township is obligated to permit this location under the existing PUD agreement;
8. A curb will be added to the north side of the east/west pedestrian pavement. The north/south pedestrian pavement will be striped and delineated with signage;
9. Minor corrections will be made to the site plan for consistency reasons as it relates to landscaping and lighting. This will be resolved with Township Staff prior to submission to the Township Board;
10. The requirements of the Township Engineer in his letter of 5/6/15 and the Brighton Area Fire Authority in their letter of 4/28/15 will be complied with;
11. The Planning Commission recognizes that this effectively is a corner lot and approves two signs as depicted in the site plan.

Support by John McManus. **Motion carried unanimously.**

**OPEN PUBLIC HEARING #4...** Review of a site plan and environmental impact assessment proposing a 19,202 sq. ft. building addition and 152 new parking spaces, located at 7526 Grand River Avenue, Brighton, Michigan 48116, parcel # 4711-13-400-018. The request is petitioned by 2|42 Community Church.

Eric Rauch indicated he has a conflict in this matter as he is employed by 2|42 and is a part of the design team. **Motion** by John McManus to recuse him from this hearing. Support by Barbara Figurski. **Motion carried unanimously.**

Dave Dummit addressed the Planning Commission on behalf of the petitioner. Wayne Perry of Desine Engineering addressed the Planning Commission. There will be changes in the parking lot and storm water detention system which will be expanded under the parking lot. The sanitary sewer and handicapped parking will be relocated.

The architect addressed the Planning Commission. They proposed increasing the auditorium by 30 percent. A rendering and material board were provided.

Brian Borden addressed the Planning Commission. The materials match the existing building. The buffer zone requirement on the west side of the site was addressed. The traffic impact study was provided.

Gary Markstrom addressed the Planning Commission. He reviewed his concerns about water mains and storm sewers. The main are being relocated, so a permitting process will be necessary. The traffic study was provided to him and he has reviewed it.

The traffic study said there are 12.09 acres. A portion of it, however, is in Morse Lake.

Barbara Figurski asked what the percentage is between the building and the pavement. They are both compliant. It is 19% building and 67% impervious surface.

A call to the public was made with the following response:

## Kathryn Poppy

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**From:** Kelly VanMarter  
**Sent:** Wednesday, May 20, 2015 2:54 PM  
**To:** Kathryn Poppy  
**Subject:** FW: Prentis Estates

Please add this e-mail to correspondence for Providence. It should also be included in Board packet.

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**From:** Frank Mancuso [mailto:fmancuso@voyager.net]  
**Sent:** Thursday, May 14, 2015 4:02 PM  
**To:** Kelly VanMarter  
**Cc:** Mike Archinal  
**Subject:** RE: Prentis Estates

Kelly:

I have reviewed the Howell Schools PUD file, including my notes, as well as the Board packets and minutes on this subject. Your recollection is correct, that is, while the School was attempting to include a guarantee in the PUD Agreement to include the existing driveway to the North, after much discussion/negotiation with the Schools, the Township agreed to delete any mention of permitting or not permitting the second driveway on the Howell Schools PUD property. The thought was that this issue would be addressed at the time of submission of a final PUD Site Plan. The PUD Agreement that was approved at the June 16, 2014 Township Board meeting is silent on the issue of the second (North) driveway.

I also acknowledge the fact that the North drive does align with the Lowes Driveway and you advise that from a planning perspective, it is the apartment drive that may create an issue and not the medical center North driveway. You also advise that the apartment owners have not consented to be included in a shared driveway on the Medical Center (PUD) property.

We discussed that Jim Mortensen called me when I did not have my file and that I was going by memory when I advised Mr. Mortensen that I recalled that the PUD Agreement did not permit the North Driveway. After reviewing the file (and in summary), the issue of whether or not the second (North) driveway would be permitted on the final Site Plan is an issue that can and should be addressed during the final PUD Site Plan approval process.

If you have any questions, please let me know.

Regards,

Frank J. Mancuso, Jr.  
Mancuso & Cameron, P.C.  
722 E. Grand River Ave.  
Brighton, MI 48116  
Ph: (810) 225-3300  
Fax: (810) 225-9110

**CONFIDENTIALITY NOTICE:** This electronic message and all of its contents contain information from the law firm of Mancuso & Cameron, P.C. which may be privileged, confidential or otherwise protected from disclosure. The information is intended to be for the addressee(s) only. If you are not an addressee, any disclosure, copying, distribution or use of the contents of this message, or any portion thereof, is strictly prohibited. If you have received this electronic message in error, please notify us immediately at (810) 225-3300 and destroy the original message and all copies.



May 5, 2015

Planning Commission  
 Genoa Township  
 2911 Dorr Road  
 Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Assistant Township Manager and Community Development Director
<b>Subject:</b>	Livingston Ambulatory – PUD Plan Review #2
<b>Location:</b>	East side of Latson Road, between Grand River Avenue and I-96
<b>Zoning:</b>	NR-PUD Non-Residential Planned Unit Development District

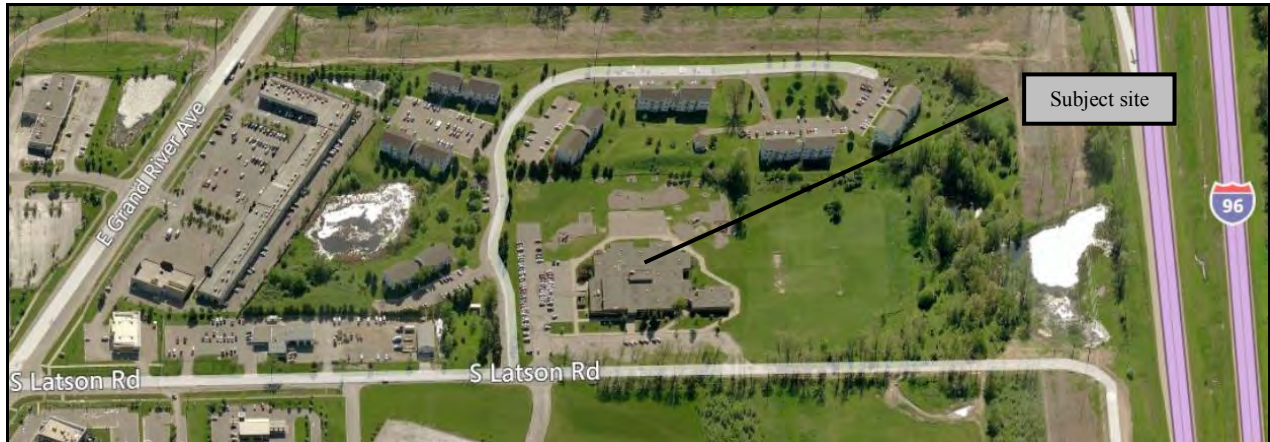
Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan (dated 4/23/2015) proposing a new 60,000 square foot medical office building for the 14.57-acre site as the first phase of a Non-Residential Planned Unit Development (NR-PUD).

The site is located north of the new I-96 interchange on the east side of Latson Road. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and PUD Agreement for this site.

**A. Summary**

1. The proposed site plan provides more parking (and less building) along the Latson Road frontage than envisioned by the PUD Concept Plan.
2. Proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.
3. The applicant seeks a reduction of 7 parking spaces for Phase I development based on their history with medical development.
4. The loading space is within the front yard, which is not permitted. The applicant must either relocate the space or seek an amendment to the PUD Agreement allowing such.
5. We believe the pavement markings proposed for pedestrian safety when crossing through the parking lot warrant further discussion.
6. The Phase I landscape plan is deficient by 3 shrubs within the northerly buffer zone; however, there is an excess of 41 canopy trees in the parking lot.
7. There are minor clean-up items on the landscape plan and it should be noted that the conceptual layout of future phases does not leave sufficient depth for fully compliant south and east side buffer zones.
8. There are inconsistencies between the lighting plan and electrical site plan with respect to exterior site lighting.
9. The Planning Commission may allow a 2<sup>nd</sup> wall sign.
10. Further discussion is warranted with respect to the required Township entranceway landmark.
11. We request the applicant identify the hours of operation for the mobile imaging unit and note whether there is exterior lighting associated with its use.



*Aerial view of site and surroundings prior to interchange construction and building demo (looking east)*

**B. Proposal/Process**

The applicant requests site plan review/approval for Phase I development of the former Latson Elementary School property. The project entails a new medical office building with a mobile MRI dock. The proposed building is 3 stories in height with a ground floor area of 20,500 square feet.

Hospitals, medical centers and medical offices are all permitted by right via the PUD Agreement for this site. Additionally, the PUD allows for buildings of up to 5 stories in height.

Procedurally, the Planning Commission is to review the PUD site plan and Environmental Impact Assessment and provide a recommendation to the Township Board. Since this is a PUD project, the Board has the final approval authority over both items.

**C. Site Plan Review**

**1. PUD Concept Plan.** Phase I of the project is generally consistent with the approved concept plan for this PUD, although we should point out that the concept(s) developed envisioned a greater proportion of building frontage along Latson Road (and subsequently less parking). The proposed layout does not preclude future development along the northerly portion of the Latson Road frontage, but this does not appear to be part of future plans at this time. The applicant has acknowledged this comment in their response letter (dated 4/23/15).

**2. Dimensional Requirements.** As described in the table below, Phase I complies with the dimensional requirements for this PUD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Lot Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
NR-PUD	1	120	20	10	20	10 front 5 side/rear	75	50% building 85% impervious
Proposed	14.57	627	240	80 (N) 700+ (S)	260 (E)	35 front 40 side (N) 370 side (S) 125 rear	56.5	3.2% building 27.8% impervious

- 3. Buildings Materials and Design.** Proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

The submittal includes elevation drawings showing a three-story building constructed of brick and stone with EIFS predominantly on the third story. The amount of EIFS proposed is within that allowed by Section 12.01.

Architectural elements include varying building lines, windows, brick banding between stories, and an entrance designed with large windows and a hipped roof. The entrance canopy is not connected to the building and seems like a freestanding pavilion. It could be better integrated into the overall building design, especially as it relates to the multi-story glass atrium it abuts.

The two facades that face existing residential (north and east) both lack the same vertical architectural elements that exist on the more public facades that face the interstate and Latson Road; however, the applicant has noted their intent “to create feature elements on those facades of the building facing the main road (Latson) and the highway.”

- 4. Parking.** Based on the requirement for medical office, Phase I requires 300 parking spaces, while only 293 are proposed.

Section 14.02.04 allows the Planning Commission to reduce the total amount of parking required when two or more uses/buildings with different peak demands share parking. In response, the applicant has noted a long history of medical development whereby a 4.5 spaces per 1,000 square feet has proven adequate and that the proposed ratio is 4.88 spaces per 1,000 square feet. If the Commission finds this ratio to be acceptable, they may allow the slight reduction.

Proposed parking spaces and drive aisles meet the minimum standards of Section 14.06, although the applicant should be aware that spaces are required to be double striped.

The number of barrier free spaces (31) exceeds the minimum amount required (8), which is typical (and generally advisable) for medical office uses.

- 5. Loading.** A 9’ by 36’ loading space is provided in the front yard. The location and dimensional requirements do not meet the standards of Section 14.08.

The Planning Commission has discretion to modify the size requirements based upon evidence from the applicant that the space will function properly for the use; however, the Ordinance does not provide discretion for the yard location.

In their response letter, the applicant indicates that the loading area is intended for short term deliveries (UPS, FedEx) with close proximity to a main entrance. Additionally, the space has been designed so as to not disrupt traffic flow through the parking lot.

If the Township is open to the proposed placement, this matter could be mitigated by an amendment to the PUD Agreement allowing a limited loading/unloading space in the front yard. Conversely, the applicant could relocate the space to a side or rear yard.

- 6. Vehicular Circulation.** The northerly driveway provides insufficient spacing from the adjacent driveway on the multiple-family property; however, these are both existing drives and the applicant proposes to restrict egress turning movements to right turns only.



During preliminary discussions with the applicant, it was suggested they contact the owner/manager of the multiple-family development to investigate a shared driveway between the two uses. It is our understanding that these discussions did not progress to a mutual agreement.

Our only additional comment is that the future side yard parking to the north will need to be modified to accommodate a 24-foot wide drive aisle and the mobile imaging unit.

7. **Pedestrian Circulation.** An 8-foot wide pathway is proposed along the east side of Latson Road, as required. Internal sidewalks are proposed between the parking lot and building entrances with future connections shown for future phases. Additionally, there are pedestrian aisles noted by pavement markings within the parking lot.

The NR-PUD site design standards require protection of pedestrians from vehicular circulation, and while these designated aisles are intended to assist pedestrians, we believe that there is potential for conflict between motorists and pedestrians. There could be an opportunity to increase safety for pedestrians by improving these aisles with a raised surface, alternative pavement material, additional signage and/or additional crossings.

In response, the applicant notes the use of similar treatments to pedestrian safety on nearby developments, although no specific examples are provided. If the Township is agreeable to this design, we are amenable; however, we felt it was worth discussion.

8. **Landscaping.** The table below contains our review of the proposed landscape plan for Phase I only:

Location	Requirements	Proposed	Comments
Front yard greenbelt	13 canopy trees 20' width	14 canopy trees 35' width	Requirements met
Detention pond	17 trees 170 shrubs	13 canopy trees 4 evergreen trees 170 shrubs	Requirements met
Parking lot	20 canopy trees 1,950 SF landscaped area Hedgerow or masonry wall	61 canopy trees 5,800 SF landscaped area Hedgerow	Requirement met
Buffer Zone "B" (north)	20 canopy trees 20 evergreen trees 78 shrubs 6' wall/fence or 3' berm 20' width	20 canopy trees 22 evergreen trees 75 shrubs berm 20' width	Deficient by 3 shrubs
Buffer Zone "B" (partial along I-96)	11 canopy trees 11 evergreen trees 44 shrubs 6' wall/fence or 3' berm 20' width	11 canopy trees 11 evergreen trees 44 shrubs 20' width	Wall/fence or berm required – applicant requests to defer this in conjunction with development of the south side of the site

There are two clean-up items on the landscape plan:

- The shrubs in northerly buffer zone are not identified by type; and
- There is a note of 3 River Birch trees on the north side of the building that are not depicted.

Lastly, it should be noted that future phases do not leave sufficient buffer zone depths to the south or east. In response, the applicant has indicated that their depiction of future phases is only conceptual at this time.

**9. Waste Receptacle and Enclosure.** Phase I includes a waste receptacle area north of the proposed building, in a permitted location. The enclosure and concrete base pad also comply with Ordinance requirements.

**10. Exterior Lighting.** The revised submittal includes two different lighting plans – one of which is the electrical site plan. Complicating review is the fact that the two plans contain different information. The applicant must correct these plans for consistency and to avoid any future confusion.

The lighting plan includes 19 pole mounted light fixtures throughout the parking lot and 10 bollard fixtures on the south side of the proposed building (though the electrical site plan shows only 7 bollards).

Fixture details, pole heights and photometric readings comply with Ordinance standards.

Lastly, the PUD Agreement and NR-PUD site design standards require ornamental lighting along Latson Road – the electrical site plan provides 2 decorative acorn-style fixtures (but these are not shown on the lighting plan).

**11. Signage.** The submittal proposes a number of signs, including 1 highway sign, 2 wall signs, 1 monument sign and several directional signs (which are exempt from the sign regulations).

The highway sign meets the provisions of the PUD Agreement, although it appears to be mislabeled as a directional sign on Sheet C1.0. Additionally, the main wall sign and monument sign comply with the standards of Table 16.1, while the Planning Commission may allow the 2<sup>nd</sup> wall sign per Footnote (2).

Additionally, the site design standards for an NR-PUD require inclusion of a Township entranceway landmark at the intersection of an arterial street and expressway ramp. In response, the applicant notes that this was discussed with the Township previously and that they are “willing to explore the idea of providing land for a Township funded gateway.” This item likely warrants further discussion, as it is a requirement of the Ordinance and not something, in our opinion, that necessitates Township funding.

**12. Impact Assessment.** The submittal includes a revised Impact Assessment (dated 5/4/15). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities or surrounding land uses. Given the size and nature of the proposal, a traffic impact study was also prepared.

Additionally, we previously requested that the Assessment address the potential impacts of the mobile imaging unit, which is included as paragraph (K). In summary:

- The unit will be on site 2 days per week and will arrive during normal business hours (8AM to 6PM);
- The tractor that drives the unit will not run during operation, while power is supplied by the building;
- There is noise associated with the unit that “may” be heard from up to 150’ away, but a berm is proposed along the north side lot line which should help mitigate the noise.

Our only remaining concerns are tied to the hours of operation for the imaging unit when located on site and any exterior lighting associated with its use.

**13. Additional Considerations.** Additional NR-PUD site design standards (not already noted above) include:

- Pedestrian gathering and seating plazas;
- Site amenities, such as bike racks, benches, information kiosks, art, planters and streetscape elements; and
- Visible detention areas shall be designed to have a natural appearance (such as variable shape, natural arrangement or landscape materials, aerated fountains, and boulder accent walls).

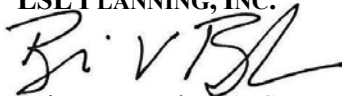
The revised plan includes bike racks and seating areas in Phase I and the response letter provided by the applicant states that “the stormwater basin is natural in form and includes a naturalized planting scheme to enhance its appearance.”

The applicant also indicates that future amenities will be evaluated during individual site plan reviews.

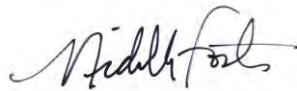
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [foster@lslplanning.com](mailto:foster@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Michelle Foster  
Project Planner



May 6, 2015

Ms. Kelly Van Marter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

**Re: Livingston Ambulatory Facility Site Plan Review**

Dear Ms. Van Marter:

We have reviewed the updated site plan documents for the Livingston Ambulatory Facility by Frauenshuh Healthcare Real Estate Solutions dated April 23, 2015. The site is located on the east side of Latson Road, just north of the I-96 off ramps on the previous Latson Elementary School site. The petitioner is planning to construct a new 20,500 sq. ft. (footprint) medical office facility as the first phase of a development planned to include up to 74,700 square feet of additional building coverage on the site.

Tetra Tech has reviewed the documents and offers the following comments for consideration by the planning commission:

**SUMMARY**

1. Impact statement should include the petitioned building usage(s) on site and associated water usage calculations for the current proposed development. A development of this size will likely require an impact determination, consisting of a development-wide water main basis of design.
2. New valve required on existing water main to complete loop.
3. Existing sewer and manhole on site isn't currently owned and operated by MHOG.
4. On-site sanitary layout concerns.

**SITE PLAN**

1. The petitioner responded to our previous comment regarding our recommendation that they provide anticipated water demands for the entire build out of the site. They provided documentation through email correspondence from MHOG and Tetra Tech that there would be adequate water supply capacity on the site with a looped distribution network, as shown in the attached sketches. What is being sought out is a development-wide basis of design for the projected usage off this distribution line. Based on the Genoa Township Equivalent User Table, Doctor's Offices are considered to account for 0.6 REUs per 1,000 sq. ft. of floor space. For this phase of the development, that calculation would be  $0.6 \text{ REU} / 1000 \text{ sft} \times 56,060 \text{ sft (usable space)} = \text{approximately } 33.6 \text{ REU's}$ . Using the approved/assumed usage for the other lots within the overall development, a table could be generated showing all potential usage rates upon ultimate build-out. This may impact the size of piping needed to provide adequate service. These calculations will also be used to estimate the taps fees for this site. The

petitioner should include the information in the impact assessment for discussions with the Township Utility Departments.

2. Per correspondence with the Township Engineer on March 30, 2015, in order to complete the looping of the water main on site, a new isolation valve will be required on the existing water main, as shown on the drawings attached to the emails. The petitioner shows notes to utilize a tapping sleeve and valve for the eastern looped connection and to connect to an existing valve for the western connection. A review of MHOG record drawings showed that there is no existing valve to connect to for the western connection, requiring a tapping sleeve and valve for that tie-in also. Additionally, the isolation valve MHOG requested has not been included in the site plan. This valve is needed to provide a normally-closed isolation point between the two loop connections. See the attached sketch for clarification on the existing and proposed connections.
3. The existing manhole the petitioner is planning to connect to for reuse was previously a private manhole. The local municipality does not have any record of ownership or maintenance, and found the structure to be out of standard. If the petitioner is planning to reuse the existing manhole and sewer on site, a note on the drawings must be included to inspect and rehab the existing sewer as necessary and to repair the existing manhole to meet current Township Standards. This portion of sewer will also need to have an easement granted to the Township to perform future maintenance work.
4. The petitioner should work closely with the Township Utility Department during development of construction plans for the route and discharge location of the proposed force main(s) to serve future phases on the south side of the site. The proposed gravity manhole to accept the future force main discharge will require an interior corrosion-resistant lining, per standards. There is no location for the sanitary service lateral for Building 2, so in order to avoid removing pavement in the future, the manhole should be moved east, or a lateral be stubbed outside of the Phase I paving limits. Consideration of having a single, larger force main extended across the parking lot to limit only one discharge pipe into the manhole is preferred.

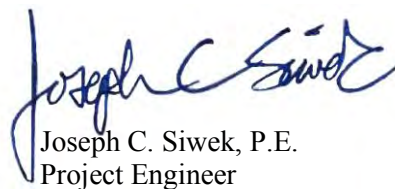
The Township should consider these issues in your discussion of the site plan application. Since the water improvements will be public infrastructure and require a plan review and permitting through MHOG and the MDEQ, we suggest the petitioner address the above comments in their construction plan submittal. We have no other engineering-related objections to the site plan as proposed.

Please call if you have any questions.

Sincerely,



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



Joseph C. Siwek, P.E.  
Project Engineer

Copy: Chris Lambrecht, Frauenshuh Health Care Real Estate Solutions



# BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.  
Brighton, MI 48116  
o: 810-229-6640 f: 810-229-1619

April 28, 2015

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Providence Medical Office – Phase 1  
1201 S. Latson Rd.  
Revised Site Plan Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on April 24, 2015 and the drawings are dated April 23, 2015. The project is based on a new 3-story, 60,000 square foot Medical Office Building. This is Phase 1 of a multi-phase project with multiple out lot building planned for the future. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition. Previous comments appear to be addressed by the applicant in the revised submittal.

The applicant's revised plans and rebuttal letter have addressed the majority of the fire code issues and the submittal is now in general conformity with the adopted fire prevention code with the following items to be verified.

1. **CORRECTED:** The access roads to the buildings shall be a minimum of 26' wide. This should include the access drive on the north side, south side, and the two primary north/south drives through the parking lots to the building. The proposed location of the Mobile Imaging Trailer will impede the traffic flow on the north side of the building. ***The applicant needs to re-dimension the north access drive to show that it is 26' wide.***

IFC D105.1
2. **TO BE VERIFIED:** Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds and shall be designed to accommodate a 50' outside turning radius. ***The applicant needs to add a note to the paving notes that reflects this design standard.***

IFC 503.2
3. **TO BE VERIFIED:** The access roads to the building shall posted as "No Parking – Fire Lane". ***Additional signage is need on the north access drive.***

IFC D103.6
4. **CORRECTED:** The drive under the canopy at the building main entrance shall be confirmed to have a minimum clearance of 13' 6" above the finish grade.

IFC 503.2.1
5. **CORRECTED:** The following modifications shall be made to the proposed hydrant locations:
  - A. The hydrant at the northeast corner of the property should be relocated to the end of the cul-de-sac turnaround or to future parking island approximately 60' to the south of its current location. The current location would be blocked future parked cars.



- B. The hydrant proposed near the dumpster enclosure can be eliminated. The hydrant spacing is adequate without this hydrant.

IFC C105

- 6. **CORRECTED:** The building will be provided with an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*. The following revisions shall be made regarding this proposed system.

- A. The Fire Department Connection shall be relocated to the front/address side of the building (S. Latson Rd). Suggested to remain in the area of the northwest corner of the building in an accessible location within 100' of the hydrant.

- B. The size and a controlling gate valve for the fire protection lead shall be indicated on the utility site plan. ***The size of the FP main is shown as 4". The applicant will verify with their FP designer that this is adequate.***

IFC 903

- 7. **CORRECTED:** During the construction process the building will be evaluated for approved emergency responder radio coverage. If coverage is found to be inadequate, the contractor, building owner will need to provide an approved system in the building. This is to ensure that public safety agencies have adequate radio coverage while operating inside the building. ***Applicant has acknowledged the need to evaluate the radio coverage.***

IFC 510

- 8. **CORRECTED:** A KNOX rapid access box shall be located adjacent to the front door of the structure. The location of a key box (Knox Box) should be indicated on future submittals.

IFC 506.1

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

Cordially,

Michael Evans, EFO, CFPS  
Deputy Fire Chief

**AMENDMENT TO  
PLANNED UNIT DEVELOPMENT AGREEMENT FOR FORMER LATSON  
ELEMENTARY SCHOOL PROPERTY**

THIS AMENDMENT TO PLANNED UNIT DEVELOPMENT AGREEMENT (the "Amendment") is made and entered into by **St. John Providence Health System**, a Michigan nonprofit corporation, whose address is 28000 Dequindre, Warren, Michigan 48092 (referred to as "St. John") and **Genoa Charter Township**, a Michigan municipal corporation, whose address is 2911 Dorr Road, Brighton, Michigan 48\_\_\_\_ (referred to as "Township").

**RECITALS**

A. St. John possesses fee title to certain real property situated in the Genoa Charter Township, County of Livingston, and State of Michigan, more particularly described in **Exhibit A** (referred to as the "Property").

B. The Property is currently subject to a Planned Unit Development Agreement dated June 16, 2014, and recorded on January 15, 2015, at Instrument No. 2015R-001603, Livingston County Register of Deeds (the "PUD").

C. St. John is in the process of developing the Property and has met with the Township officials in connection with its site plan and proposed development plan and it has been determined that certain provisions of the PUD need to be amended to accommodate St. John's proposed development.

D. The Township and St. John desire to amend the PUD to reduce the required 20-foot front yard setback, allow short-term parking/loading/unloading in the front yard of the building for commercial delivery trucks, and to establish a location for the Township Gateway sign.

NOW, THEREFORE, for valuable consideration, the parties have agreed as follows:

1. Notwithstanding the current zoning ordinance adopted by the Township, the PUD is hereby amended by reducing the required 20' front yard parking lot setback requirement to 0' from the right-of-way on Latson Road.

2. Notwithstanding the current zoning ordinance adopted by the Township, the Township agrees to waive the front yard loading restriction to allow small delivery trucks such as Federal Express and/or UPS for a dedicated short term standing area to conduct routine business deliveries and package pick-ups.



3. The Township and St. John agree to work together to locate the entranceway, or "Township Gateway Feature" along the Latson Road corridor in future phases of development. Both parties agree that the Township Gateway Feature may be located in the Latson Road R.O.W.

In all other respects, the PUD is hereby ratified and confirmed by the Township and St. John.

The parties have executed this Amendment as of the date set forth beneath each signature block below.

St. John Providence Health System,  
a Michigan nonprofit corporation

By: \_\_\_\_\_

Its: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF MICHIGAN     )  
  )SS  
COUNTY OF \_\_\_\_\_ )

This Amendment was acknowledged by me in \_\_\_\_\_ County, Michigan, this \_\_\_\_\_ day of \_\_\_\_\_, 2015, by \_\_\_\_\_, the \_\_\_\_\_ of St. John Providence Health System, a Michigan nonprofit corporation, on behalf of the corporation.

\_\_\_\_\_(signature)  
\_\_\_\_\_(printed)  
Notary Public, \_\_\_\_\_ County,  
Michigan  
My Commission Expires: \_\_\_\_\_  
Acting in the County of \_\_\_\_\_

[Signatures continued on next page]

Genoa Charter Township,  
a Michigan municipal corporation

By: \_\_\_\_\_

Its: \_\_\_\_\_

Date: \_\_\_\_\_

STATE OF MICHIGAN     )  
  )SS  
COUNTY OF \_\_\_\_\_ )

This Amendment was acknowledged by me in \_\_\_\_\_ County, Michigan, this \_\_\_\_\_ day of \_\_\_\_\_, 2015, by \_\_\_\_\_, the \_\_\_\_\_ of Genoa Charter Township, a Michigan municipal corporation, on behalf of the corporation.

\_\_\_\_\_(signature)  
\_\_\_\_\_(printed)  
Notary Public, \_\_\_\_\_ County,  
Michigan  
My Commission Expires: \_\_\_\_\_  
Acting in the County of \_\_\_\_\_

DRAFTED BY AND WHEN RECORDED  
RETURN TO:

Nancy Yucha, Esq.  
Hall Render Killian Heath & Lyman, PLLC  
201 W. Big Beaver Rd., Suite 1200  
Troy, Michigan 48084

## EXHIBIT A

### Property Description

Land located within the Charter Township of Genoa, Livingston County, Michigan, legally described as follows:

Part of the Northwest 1/4 of Section 9, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Northwest corner of Section 9; thence along the North line of Section 8, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, South 87 degrees 15 minutes, 42 seconds West, 3.27 feet; thence along the Proposed Latson Road construction centerline, the following three (3) courses: 1) Southerly along an arc right, having a length of 159.72 feet, a radius of 10000.00 feet, a central angle of 00 degrees 54 minutes 55 seconds, and a long chord which bears South 00 degrees 40 minutes 20 seconds West, 159.72 feet; 2) South 01 degrees 07 minutes 48 seconds West, 913.15 feet; 3) southerly along an arc left, having a length of 273.34 feet, a radius of 10000.00 feet, a central angle of 01 degrees 33 minutes 58 seconds, and a long chord which bears South 00 degrees 20 minutes 49 seconds West, 273.33 feet; thence North 89 degrees 34 minutes 04 seconds East, 66.39 feet, to the Point of Beginning of the Parcel to be described; thence along the existing centerline of Latson Road and the West line of Section 9, North 01 degrees 46 minutes 12 seconds West (recorded as North 02 degrees 33 minutes 37 minutes West) 627.95 feet, said point being the following course from the Northwest corner of Section 9; along the existing centerline of Latson Road and West line of Section 9, South 01 degrees 46 minutes 12 seconds East (recorded as South 02 degrees 33 minutes 37 seconds East), 718.36 feet; thence North 88 degrees 08 minutes 18 seconds East (recorded as North 87 degrees 20 minutes 53 seconds East, 700.00 feet; thence South 01 degrees 46 minutes 12 seconds East (recorded as South 02 degrees 33 minutes 37 seconds East), 995.34 feet; thence along the Proposed Limited Access Right of Way line, the following five (5) courses: 1) North 74 degrees 17 minutes 55 seconds West, 134.50 feet (recorded as 134.45 feet); 2) North 80 degrees 34 minutes 02 seconds West, 243.16 feet; 3) North 88 degrees 29 minutes 51 seconds West, 222.00 feet; 4) North 45 degrees 07 minutes 09 seconds West, 114.42 feet; 5) North 01 degrees 46 minutes 12 seconds West, 182.00 feet; thence South 89 degrees 34 minutes 04 seconds West, 33.00 feet, to the Point of Beginning.

Tax Parcel Identification No. 11-09-100-036

IMPACT ASSESSMENT  
“LIVINGSTON AMBULATORY FACILITY”  
GENOA TOWNSHIP  
LIVINGSTON COUNTY, MI

03.23.15  
Rev. 05.04.15

The following assessment follows the requirements of Section 18.07 “Written Impact Assessment Requirements” of The Genoa Township Zoning Ordinance

**A. Prepared for:**

FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS  
c/o Mr. Chris Lambrecht  
3601 Minnesota Drive, Suite 800  
Minneapolis, MN 55435

Prepared by:  
VIRIDIS Design Group  
313 North Burdick St.  
Kalamazoo, MI 49007  
269.978.5143

**B. Description of the site including improvements, natural feature, and location.**

The 14.57 acre former Latson Elementary School site (1201 S. Latson Road) is located northeast of the new I-96 interchange at Latson Road. The previous buildings have been removed from the site with the exception of minor sanitary structure and related pipe which will be removed as part of the development of the first phase of the site. There are two (2) existing commercial drives located on the west side of the site at the Grand Oaks intersection and at the northwest corner of the site. The concrete drives have been constructed for three lanes each.

The site is relatively flat and gently slopes from the Northwest to the Southeast eventually surface draining into the MDOT R.O.W. for I-69 and the west bound Latson Road off ramp. The elevations range from 1017 at the Grand Oaks drive entry to 994 at the southeast corner of the parcel

Existing on-site utilities include an 8” sanitary sewer along Latson Road. An 8” public water main is located approximately 15 feet south of the north property line. And there are existing stormwater catch basins that previously conveyed runoff to the southern portion of the property.

Adjacent properties include:

North – Genoa Place Apartments – Zoned - HDR  
East – Genoa Place Apartments – Zoned - HDR  
South – MDOT – I-96  
West – Lowes Home Centers – Zoned – NRPUD

### **C. Impact on Natural Features:**

The site is relatively flat gently sloping from the NW to the SE. USDA Soil conservation Service “Soil Survey of Livingston county, Michigan”, indicates native soils consist of:

1. MoB – Miami loam, 2-6 percent slopes. Surface runoff is slow, permeability is moderate and erosion hazard is slight.

Vegetative cover for the includes low grasses and beginning succession growth. There are no canopy trees present on the parcel.

The national wetland inventory indicates no regulated wetland areas exist on the site.

### **D. Impact on stormwater management and description of soil erosion control measures during construction.**

Surface runoff during construction will utilize BMPs and methods set forth by The Livingston County Drain Commissioner. These methods will include phased development, temporary and permanent seeding, mulching/blanketing, silt fence, silt sacks.

Construction may include periods of dust, vibration noise and smoke but will be controlled to the extent possible. Dust will be controlled using appropriate dust suppression measures.

The proposed development will include the construction of a site-wide stormwater detention basin in the southeast quadrant of the site. This basin has been sized for the entire build out and will include a slow release into the MDOT R.O.W. This has been design to current stormwater management requirements (100 year event). Runoff will be collected in a site-wide piped system and delivered to the basin where the first flush will be treated in a forebay before entering the storage facility.

### **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 would negatively impact adjacent properties.**

This parcel is identified as Regional Commercial in Master Plan and will be developed as a Non-Residential Planned Unit Development. The first phase is planned as a 3 story, 60,000 SF medical office building located on the northern portion of the site. This building will house physician offices and medical support services related to medical practice. The offices are compatible with normal business hours associated with retail or other allowable uses within the NRPUS classification. The north side of the first phase building will include a recessed dock for a mobile MRI trailer unit which will be periodically stationed at the site for scheduled patient services. The second (approximately - 10,000 SF) and third phases (approximately - 40,000 SF) are planned to be medical related facilities and may include additional medical office floor space as well as an outpatient surgical center. All of these services are consistent with similar and allowable uses within the NRPUD designation. The configuration of the medical portion of the development shields the main parking area from the adjacent residential uses. The site plan includes generous buffers between the adjacent uses to provide adequate separation from

adjoining properties.

The south portion of the site will be developed to include allowable uses such as retail, restaurants or financial services. These uses generally operate within normal business hours between 8 AM and 10 PM. The locations of these facilities places later hour businesses further from the adjacent residential development. In addition the location of these services is well suited to the I-96 access thus reducing additional traffic impacts further north on Latson Road.

Site lighting has been designed to meet current Township standards and minimize impacts on adjacent properties by utilizing cut-off fixtures.

**F. Impact on public facilities and services.**

This development will support its share of the service costs through appropriate taxing methods.

**G. Impact on public utilities.**

The development will be served by public water and sewer systems currently located on the site. Per the South Latson Utility Study Prepared by Tetra Tech, the existing systems have sufficient capacity to serve the anticipated development (See attached email from MHOG). The site plan includes a future looped water service main and a individual lift stations to serve the southern development pads. The medical related buildings will be served by gravity sanitary sewer.

**H. Storage or handling of hazardous materials.**

All hazardous wastes related to medical services will comply with current health requirements and include required emergency planning procedures and protocols. No other hazardous waste related uses are planned for the site. .

**I. Traffic Impact Study.**

Please see attached traffic impact study.

**J. Historical and Cultural Resources.**

There are no historical or culturally significant features related to this site.

**K. Mobile Imaging Unit.**

The mobile imaging unit is scheduled to be on site 2 days per week. The unit would arrive on site sometime during the night and would operate between 8 AM and 6 PM during those days. The tractor does not run during operations and the power is supplied from the building. There is a slight chirping sound associated with the imaging unit that may be heard from up to 150' away. The unit is recessed and there is a berm to the north of the dock which creates a 4' earth wall which should help to deflect/absorb a majority of the sound.

**Water Usage Calculation Worksheet - Genoa Twsp - 1201 N. Latson Road**

REU = 218 Gallons per Day  
 REU Cost = \$5000/unit (Water)  
 REU Cost = \$5500/unit (Sewer)

	Current Property	Add. Twsp. Allowance	Total REUs Available at No Cost
Current Property San REUs:	22	5	27
Current Property Wtr REUs:	20	5	25

**Proposed Frauenshuh Medical Office Bldg. (1201 N. Latson Road - Howell, MI)**

**Comparative Analysis**

Similar Facilities		
Facility 1: Alexander Bldg. Castle Rock, CO Size: 57,550 SF	Facility 2: Bellevue Bldg. Omaha, NE Size: 58,169 SF	Facility 3: Boardman Bldg. Boardman, OH Size: 57,508 SF
<b>Usage Data</b>	<b>Usage Data</b>	<b>Usage Data</b>
Q1: 111,000 Gallons	Q1: 109,208 Gallons	Q1: 49,200 Gallons
Q2: 92,000 Gallons	Q2: 118,932 Gallons	Q2: 65,900 Gallons
Q3: 105,000 Gallons	Q3: 92,004 Gallons	Q3: 63,200 Gallons
Q4: 125,000 Gallons	Q4: 95,744 Gallons	Q4: 68,300 Gallons
Days: 90/Quarter	Days: 90/Quarter	Days: 90/Quarter
Daily Usage (gal) 1389	Daily Usage (gal) 1321	Daily Usage (gal) 759
Bldg. Usage (REUs) (Daily Usage/ 218 GPD) 6.37	Bldg. Usage (REUs) (Daily Usage/ 218 GPD) 6.06	Bldg. Usage (REUs) (Daily Usage/ 218 GPD) 3.48
Bldg. REUs/Bldg SF/1,000 0.11	Bldg. REUs/Bldg SF/1,000 0.10	Bldg. REUs/Bldg SF/1,000 0.06
Average of 0.11, 0.10, 0.06		
0.09		

Avg. Daily Usage (gallons)  
 Avg. Daily Usage (REUs)  
 Daily REUs/1000 SF  
 Avg. Daily REUs/1000 SF

Proposed Latson Road Facility: 61,116 SF
<b>REU Assessment: 5.61</b>
(0.09 REU/1000 SF X 60000 SF)
Available Water REUs w/ Parcel: 25
Available Sanitary REUs w/ Parcel: 27

**Net Available REUs After Phase 1 MOB (Water): 19.39**  
**Net Available REUs After Phase 1 MOB (Sanitary): 21.39**

**Future Site Development**

Future MOB: 10,700 SF	<b>Estimated REU Assessment: 1.00</b>	*Based on Comp. REU Value Calc. Above
Future Sugery Center: 22,400 SF	<b>Estimated REU Assessment: 7.56</b>	*No Comparable Facility in Twsp. Table so use Urgent Care/Medical Clinics (0.27 REU/Doctor)
		(Use 5 doctors/4000 SF)
Future Bank w/ Drive-thru: 3600 SF	<b>Estimated REU Assessment: 1.00</b>	*Equiv. User Table - 0.12 REU/employee but total not less than 1.0
Future Restaurant (Fast Food) w/ Drive-thru: 3600 SF	<b>Estimated REU Assessment: 7.5</b>	*Equiv. User Table - 7.5 REU/premise
Future Restaurant (w/ Liquor License): 6700 SF	<b>Estimated REU Assessment: 26.8</b>	*Equiv. User Table - 4.0 REU/1000 SF
Future Restaurant (w/ Liquor License): 7200 SF	<b>Estimated REU Assessment: 28.8</b>	*Equiv. User Table - 4.0 REU/1000 SF

**Net Available REUs After Future Development (Water): -53.27**  
**Net Available REUs After Future Development (Sanitary): -51.27**

<b>Estimated REU Cost (Water): \$266,357.08</b>
<b>Estimated REU Cost (Sanitary): \$281,992.79</b>
<b>Total Estimated Future REU Cost: \$548,349.87</b>

February 27, 2015

Chris Lambrecht  
Vice President Construction and Development  
Frauenshuh Healthcare Real Estate Solutions  
3601 Minnesota Drive, Suite 800  
Minneapolis, MN 55435

Regarding: Revised Traffic Impact Study for Providence Medical Building, Genoa Township, Michigan

Mr. Lambrecht,

The services of RS Engineering, LLC (RSE) were retained by Frauenshuh Healthcare Real Estate Solutions to provide a traffic impact study (TIS) for the proposed Providence Medical Building development in Genoa Township, Michigan. The objective of this study was to determine the impact of the trips generated by the proposed site development on the existing and proposed adjacent roadways and intersections. A focus of this study was the operations of the North Site Driveway and the impact on the adjacent existing Prentis Apts. driveway to determine if they would operate safely, with adequate mobility, access and circulation.

The final TIS dated February 3, 2015 was reviewed by both the Genoa Township (represented by their traffic consultant, Tetra Tech) and the Livingston County Road Commission (LCRC). The comments provided by both organizations and the responses to those comments from RSE are provided herein. In addition, these comments were also discussed verbally with both Tetra Tech and the LCRC to ensure all parties agreed upon these responses to the comments and the subsequent traffic impact study revisions.

#### **Genoa Township Review Comments (Tetra Tech)**

**Comment #1:** *For the trip generation forecast, why were the medical office building sizes split out, but the restaurants were combined? If the medical office sizes are combined to a single 120,000 sq. ft., the trip generation forecasts are the same (AM peak hour) or higher (Daily; PM peak hour).*

**Response:** The site plan shows the MOB in phases, it was assumed that each phase would generate trips as each building came on board. The restaurant land uses are currently undetermined. A total sqft for the outlots was provided by the developer. Since restaurant trip generation use rates calculate trips they may be combined into a total amount, whereas equations are used to calculate the medical offices trip generation and need to be separate.

**Comment #2:** *The pass-by rate for the restaurant uses does not match the rate provided by ITE Trip Generation Handbook, 2<sup>nd</sup> Edition. Additionally, the rate that is provided is only for the PM peak hour, yet the "assumed" rate was applied to Daily, AM and PM peak forecasts. Similarly, a generic rate was applied to the Daily, AM and PM peak hours for the background developments, even though some have separate rates for the AM and PM peak hours. Finally, some pass-by rates were applied to uses that don't have published rates in the ITE Trip Generation Handbook, 2<sup>nd</sup> Edition.*

**Response:** The PM pass-by rates have a range between 23-63%, with an average of 43%. It is expected that the majority of people that would access the proposed restaurants would be site generated, however



some of the traffic may be pass-by on their way home from work and stop at the restaurant. For this site location it was determined that a pass-by rate of 43% is too high, and a conservative number of 25% was applied to the PM peak hour trips only. The use of pass-by trips during the AM and reference to daily pass-by calculations will be removed from the revised analysis and table.

**Comment #3:** *The internal capture reductions seemed a bit high, considering there are only two different land uses on the site, the great difference in sizes of those uses, and the relatively low rates provided by the ITE Trip Generation Handbook, 2<sup>nd</sup> Edition. Additionally, no rates are provided by the AM peak hour (although reductions were applied), there appeared to be internal capture between the medical office buildings (which I do not agree with), and internal capture rates were applied to the background developments, which I don't believe are on the same, interconnected site.*

**Response:** The internal trip capture was between the medical office and the restaurants. The internal trip capture will be removed from this site to provide a conservative analysis.

**Comment #4:** *I don't agree with the same trip distributions being applied during both the AM and PM peak hours. There are likely different patterns during these times.*

**Response:** The site distribution show is a regional distribution. Additional trip generation exhibits will be created to clarify the site traffic distribution.

**Comment #5:** *The LOS analysis sheets in the back of the report were not 2010 HCM Signalized reports; rather the default reports provided by Synchro. However, results likely would not be significantly different.*

**Response:** The signalized intersections timing plans provided by LCRC and MDOT do not conform to HCM standard phasing; including the yellow time, red time and phases. Therefore, to evaluate the operations with the phasing provided, the Synchro methodology was used at the signalized intersections.

**Comment #6:** *Overall intersection operational results were not provided for signalized intersections, nor were overall approach results. It would have been nice to have these documented in the tables in the report.*

**Response:** The overall intersection LOS and Approach LOS will be added to the tables.

---

**LCRC Comments** (responses per conversation with Mike Goryl on 02/24/15)

**Comment #1:** *Table 1 shows very few trips in the a.m. peak for the restaurants. Restaurants open for breakfast would generate about 227 trips in the a.m. versus the 29 shown. Not sure why such a low rate was shown, unless I am missing some info on the future use that would exclude them being open for breakfast.*

**Response:** It will be assumed for analysis purposes the proposed restaurants will not be open during the AM peak period and therefore no trips will be generated. If at a later date the proposed restaurants are open for breakfast, the township may request the restaurants to be further evaluated.

**Comment #2:** *It seems like the volumes on Exhibit 5 are high. I agree with growing the existing Latson volumes per page 9, but it appears that the Table 3 volumes were also grown to get the numbers on Exhibit 5. Need more info on how these numbers were obtained. Also would be nice to have a distribution exhibit for Table 3.*

**Response:** Additional exhibits will be provided to show the trips generated for the adjacent land uses.

**Comment #3:** *Don't agree with the premise on Exhibit 6 that 60 percent of the trips from the north will use the south drive and only 10 percent will use the north drive. The signal at the south drive should create adequate gaps for left turns at the north driveway. I believe that most of the medical office trips will enter at the north drive (unless of course there are restrictions to do so) and most of the restaurant trips will enter at the south drive. Likewise, there should be plenty of gaps for most of the medical office right-turn exiting trips to do so at the north driveway.*

**Response:** Per conversation with Mike Goryl, the revised distribution for the north driveway will include 70% MOB trips enter/exiting from the north at this driveway and 30% enter/exiting from Grand Oaks.

**Comment #4:** *The entering and exiting volumes on Exhibit 7 don't match the totals shown in Table 2. The a.m. trips shown on Exhibit 7 are very close to the total new trips shown in Table 2, but the p.m. trips are much closer to the unadjusted p.m. trips shown in Table 2.*

**Response:** The exhibit will be reviewed to ensure the volumes are correct.

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The traffic study was revised to incorporate the recommendations and revisions outlined the comments and provided during the conversations. The revised traffic study is attached for your use.

If you have any questions, comments or need anything additional, please do not hesitate to contact me.

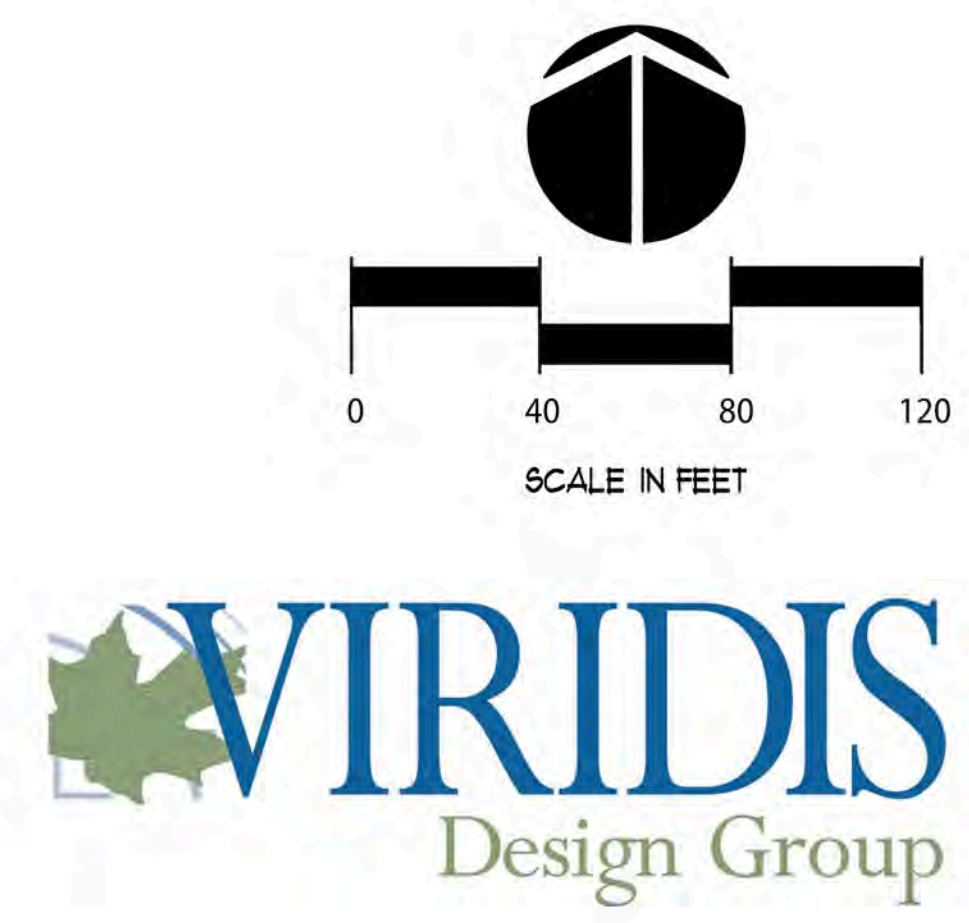
Regards,  
RS Engineering, LLC

Julie Kroll, PE, PTOE  
Traffic Engineer, Project Manager

JMK/jmk

Attachments

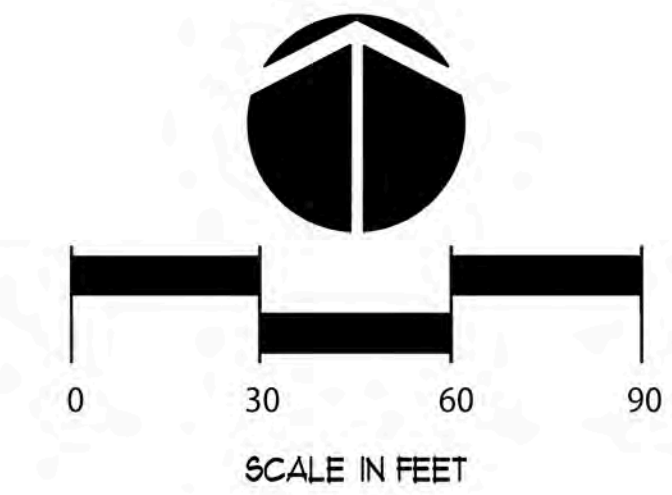




**LIVINGSTON AMBULATORY FACILITY**  
 FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS  
 GENOA TOWNSHIP, MICHIGAN  
 MAY 11, 2015

**DIEKEMA HAMANN**  
 architecture & engineering





**LIVINGSTON AMBULATORY FACILITY**  
 FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS  
 GENOA TOWNSHIP, MICHIGAN  
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 architecture & engineering



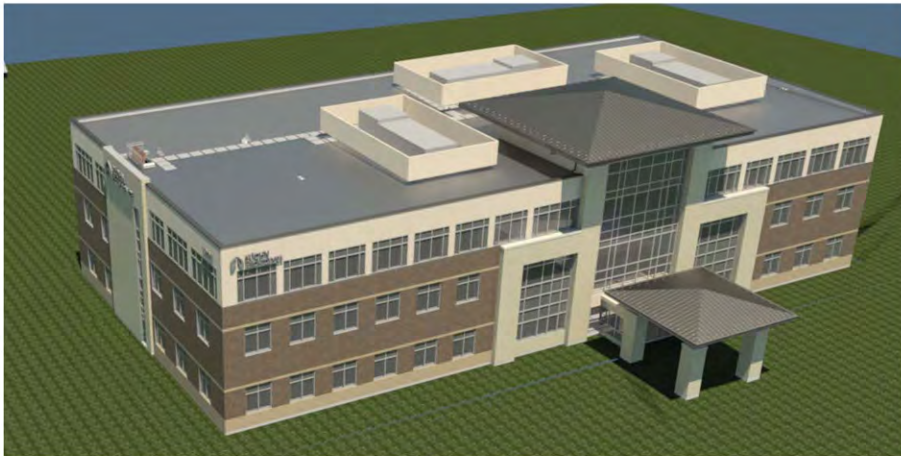


**RENDERING LOOKING NORTH EAST**

**LIVINGSTON AMBULATORY FACILITY**  
FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS  
GENOA TOWNSHIP, MICHIGAN  
MAY 11, 2015

**DIEKEMA HAMANN**  
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**RENDERING - BIRDS EYE VIEW**



**RENDERING - LOOKING NORTH EAST**



**RENDERING - LOOKING SOUTH EAST**



**RENDERING - LOOKING NORTH WEST**

**LIVINGSTON AMBULATORY FACILITY**  
FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS  
GENOA TOWNSHIP, MICHIGAN  
MAY 11, 2015

**DIEKEMA HAMANN**  
architecture & engineering

# NEW MEDICAL OFFICE BUILDING - NON-RESIDENTIAL PUD: FRAUENSHUH HEALTH CARE DEVELOPMENT GENOA TOWNSHIP, MICHIGAN

SITE PLAN REVIEW DOCUMENTS

PROJECT TEAM

DRAWING SHEET INDEX

OWNER:  
**FRAUENSHUH HEALTH CARE  
REAL ESTATE SOLUTIONS**  
3601 MINNESOTA DRIVE, SUITE 800  
MINNEAPOLIS, MN 55435

ARCHITECTURE:  
**DIEKEMA HAMANN ARCHITECTURE**  
612 SOUTH PARK STREET  
KALAMAZOO, MI 49007  
PH: 269.373.1108  
FX: 269.373.1186  
WEB: DHAE.COM

LANDSCAPE ARCHITECTURE/CIVIL ENGINEERING (Site Plan Review document preparation):  
**VIRIDIS Design Group**  
313 N. BURDICK STREET  
KALAMAZOO, MI 49007  
PH: 269.978.5143  
FX: 866.683.5060  
WEB: www.virdg.com

MECHANICAL / ELECTRICAL ENGINEERING:  
**DIEKEMA HAMANN ENGINEERING**  
KALAMAZOO, MI

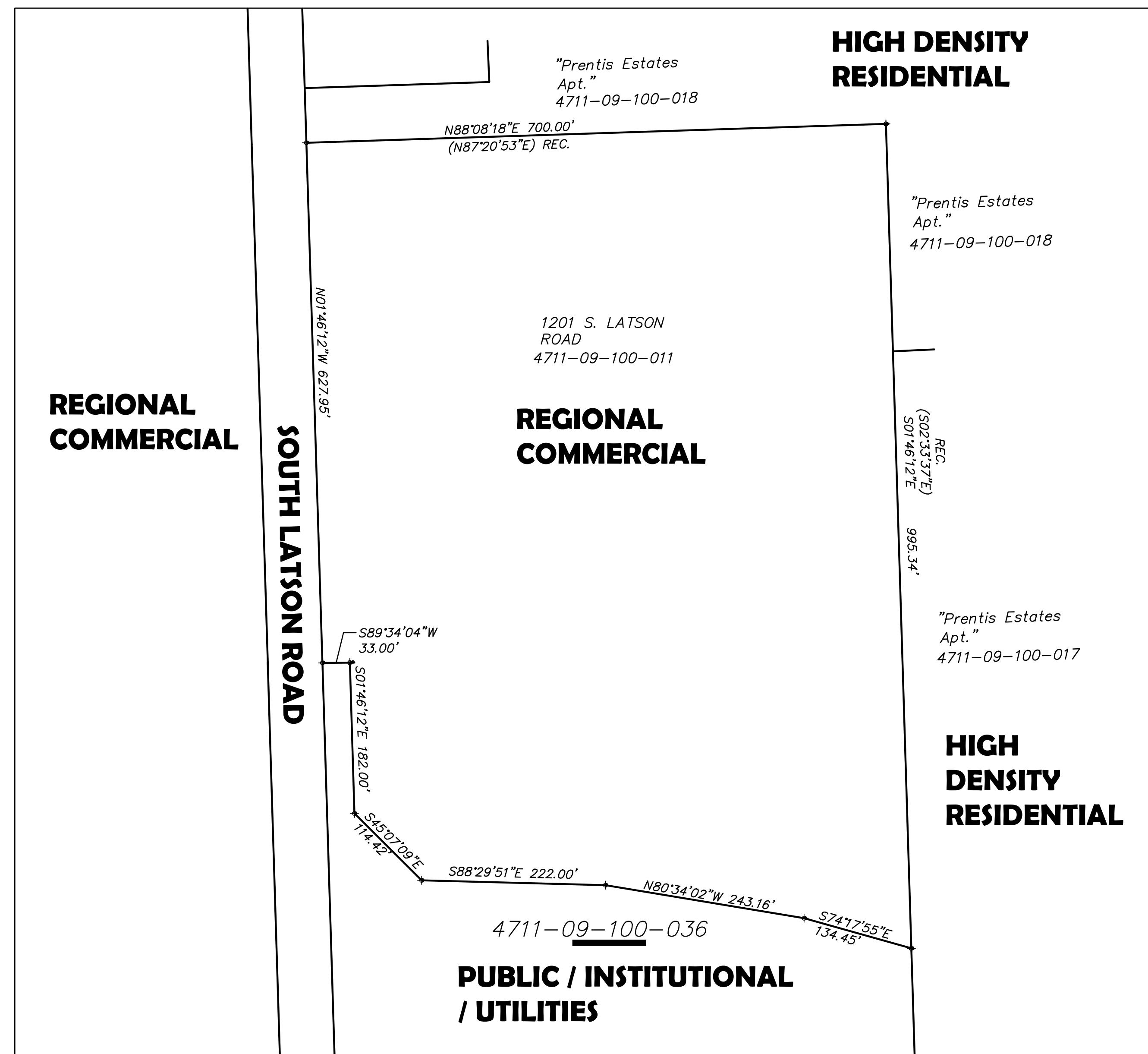
CONSTRUCTION MANAGER:  
**CSM GROUP**  
444 W. MICHIGAN AVENUE, SUITE 100  
KALAMAZOO, MI 49007  
PH: 269.746.5600  
FX: 269.746.5699  
WEB: CSMGROUP.COM

SHEET	DESCRIPTION	ISSUE DATE	NOTE
C0.0	SITE SURVEY / EXISTING CONDITIONS PLAN	APRIL 1, 2015	
C1.0	SITE LAYOUT PLAN	APRIL 1, 2015	
C2.0	SITE GRADING AND DRAINAGE PLAN	APRIL 1, 2015	
C2.1	OVERALL SITE GRADING AND DRAINAGE PLAN (FINAL PUD)	APRIL 1, 2015	
C3.0	LANDSCAPE PLAN	APRIL 1, 2015	
C4.0	STANDARD SANITARY DETAILS	APRIL 23, 2015	
C4.1	STANDARD WATER MAIN DETAILS	APRIL 23, 2015	
A1.1	FIRST FLOOR PLAN	APRIL 1, 2015	
A1.2	SECOND FLOOR PLAN	APRIL 1, 2015	
A1.3	ATHIRD FLOORS PLAN	APRIL 1, 2015	
A1.4	ROOF PLAN AND DETAILS	APRIL 1, 2015	
A3.1	EXTERIOR ELEVATIONS	APRIL 1, 2015	
A3.2	EXTERIOR ELEVATIONS	APRIL 1, 2015	
A3.3	EXTERIOR 3D VIEWS	APRIL 1, 2015	
E0.1	SITE LIGHTING	APRIL 1, 2015	

APRIL 1, 2015  
REV. APRIL 23, 2015

SITE / ZONING M A P

1" = 100'



LEGAL DESCRIPTION

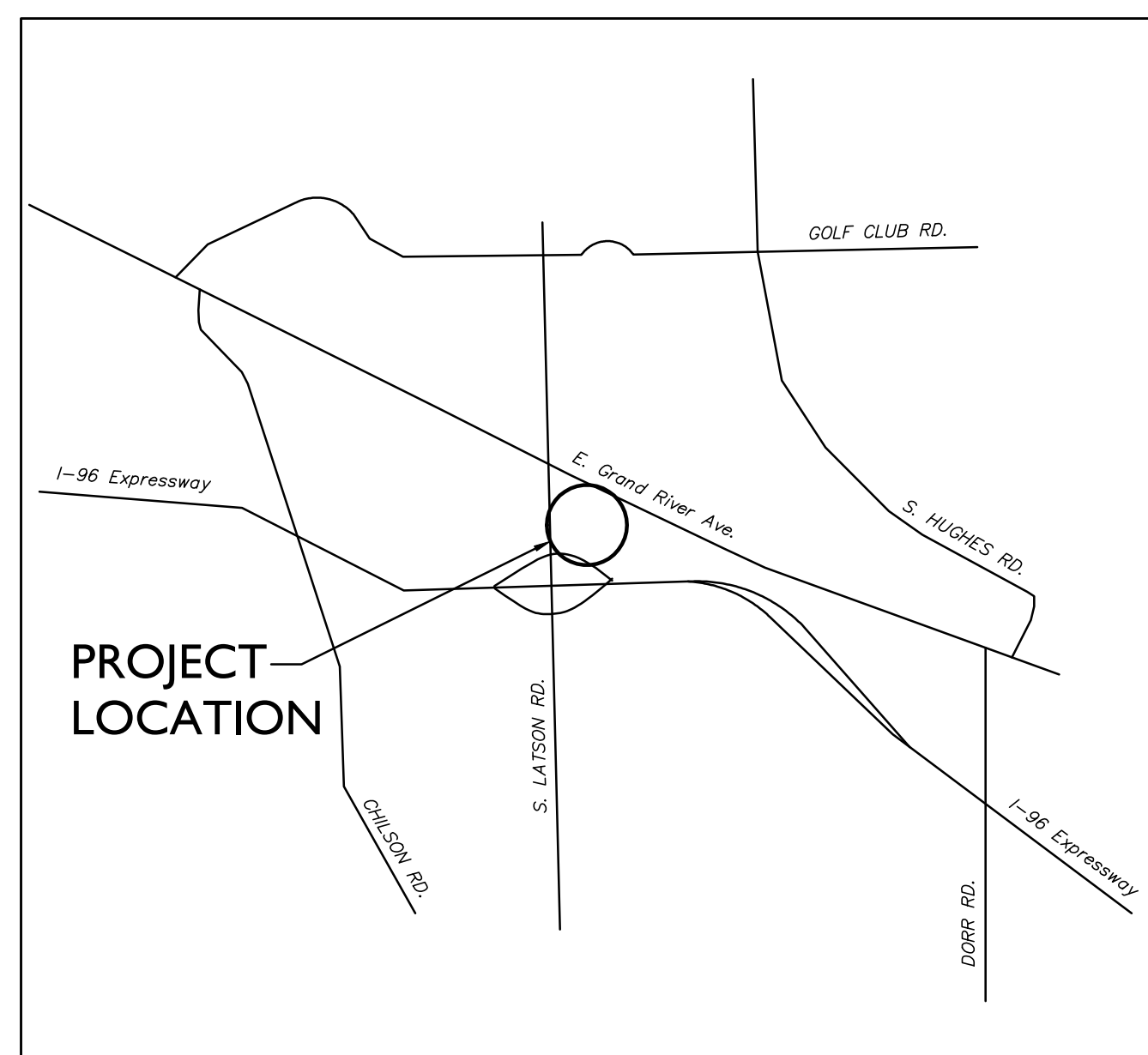
PART OF THE NORTHWEST 1/4 OF SECTION 9, TOWN 2 NORTH, RANGE 5 EAST, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE NORTHWEST CORNER OF SECTION 9; THENCE ALONG THE NORTH LINE OF SECTION 8, T2N-R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, S 87°15'42" W, 3.27 FEET; THENCE ALONG THE PROPOSED LATSON ROAD CONSTRUCTION CENTERLINE, THE FOLLOWING THREE (3) COURSES: 1) SOUTHERLY ALONG AN ARC RIGHT, HAVING A LENGTH OF 159.72 FEET, A RADIUS OF 10000.00 FEET, A CENTRAL ANGLE OF 00°54'55", AND A LONG CHORD WHICH BEARS S 00°40'20" W, 159.72 FEET; 2) S 01°07'48" W, 913.15 FEET; 3) SOUTHERLY ALONG AN ARC LEFT, HAVING A LENGTH OF 273.34 FEET, A RADIUS OF 10000.00 FEET, A CENTRAL ANGLE OF 01°33'58", AND A LONG CHORD WHICH BEARS S 00°20'49" W, 273.33 FEET; THENCE N 89°34'04" E, 66.39 FEET, TO THE POINT OF BEGINNING TO THE PARCEL TO BE DESCRIBED; THENCE ALONG THE EXISTING CENTERLINE OF LATSON ROAD & THE WEST LINE OF SECTION 9, N 01°46'12" W (RECORDED AS N 02°33'37" W), 627.95 FEET, SAID POINT BEING THE FOLLOWING COURSE FROM THE NORTHWEST CORNER OF SECTION 9: ALONG THE EXISTING CENTERLINE OF LATSON ROAD AND WEST LINE OF SECTION 9, S 01°46'12" E (RECORDED AS S 02°33'37" E), 718.36 FEET; THENCE N 88°08'18" E (RECORDED AS 87°20'53" E), 700.00 FEET; THENCE S 01°46'12" E (RECORDED AS S 02°33'37" E), 995.34 FEET; THENCE ALONG THE PROPOSED LIMITED ACCESS RIGHT OF WAY LINE, THE FOLLOWING FIVE (5) COURSES: 1) N 74°17'55" W, 134.50 FEET (RECORDED AS 134.45 FEET) 2) N 0°34'02" W, 243.16 FEET; 3) N 88°29'51" W, 222.00 FEET; 4) N 45°07'09" W, 114.42 FEET; 5) N 01°46'12" W, 182.00 FEET; THENCE S 89°34'04" W, 33.00 FEET, TO THE POINT OF BEGINNING, CONTAINING 14.57 ACRES, MORE OR LESS, AND INCLUDING THE USE OF LATSON ROAD. ALSO SUBJECT TO ANY OTHER EASEMENTS OR RESTRICTIONS OF RECORD.

SOILS INFORMATION

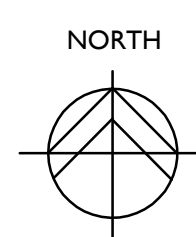
ACCORDING TO USDA SOIL SURVEY, ENTIRE SITE IS COMPOSED OF MIAMI LOAM, 2 TO 6 PERCENT SLOPES.

LOCATION MAP

NOT TO SCALE



GENOA TOWNSHIP, MICHIGAN



DIEKEMA | HAMANN architecture+engineering

**VIRIDIS**  
Design Group

Landscape Architecture - Planning - Design Services  
www.virdg.com

set number

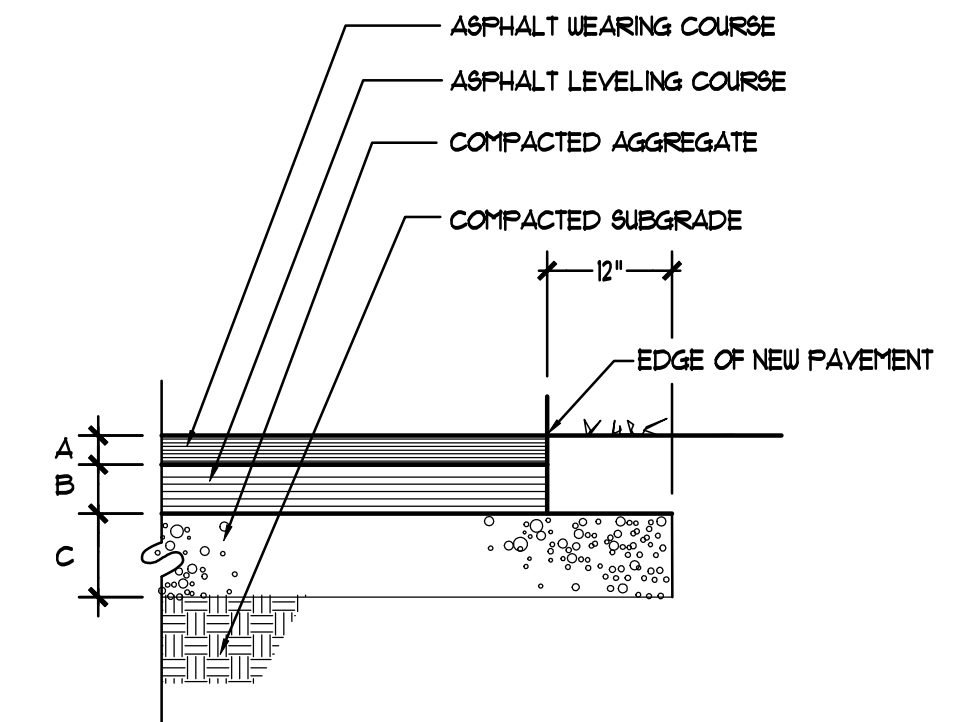
NEW MOB  
GENOA TWP

project no.  
14094.00



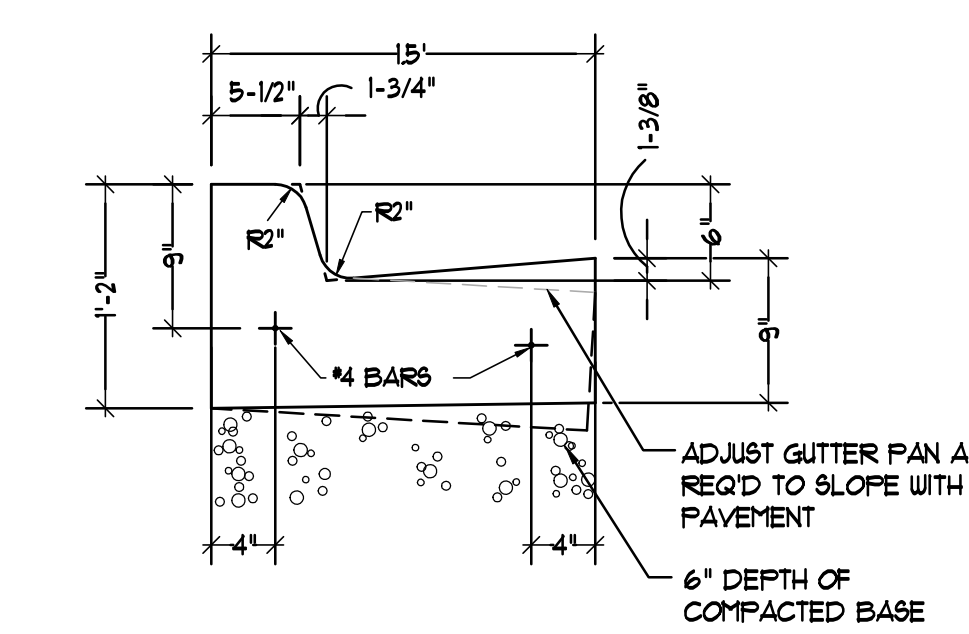
DIM.	DRIVEWAYS	PARKING LOTS
A	2"	2"
B	3"	2"
C	11"	10"

NOTE: PAVEMENT SECTION TO BE CONFIRMED WITH SOIL BORINGS AND GEOTECHNICAL ENGINEERING RECOMMENDATIONS. PAVEMENTS MAY BE DECREASED IN THICKNESS IF APPROPRIATE BASED ON SOIL CONDITIONS. PAVEMENT DESIGNED TO SUPPORT 15,000 LB EMERGENCY VEHICLE LOAD.



**Asphalt Paving Detail**

Not to Scale

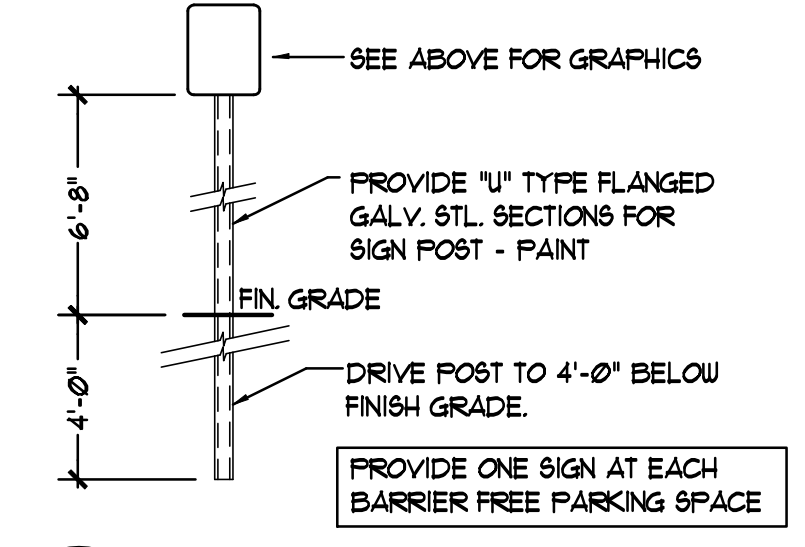


**Concrete Curb & Gutter**

Not to Scale

NOTE: SIGN PANELS SHALL BE 0.0080" ALUMINUM WITH 3 MIL REFLECTIVE VINYL LETTERS

- 1. BARRIER FREE PARKING ONLY SIGN (12" x 18") INT'L SYMBOL IN WHITE ON BLUE BACKGROUND
- 2. VAN ACCESSIBLE SIGN (12" x 18") INT'L SYMBOL IN WHITE ON BLUE BACKGROUND



**Barrier Free Signage Detail**

**TRAFFIC SIGN LEGEND**

Symbol	STOP SIGN	SIGNAL SIDED	MDOT
(A)	STOP SIGN	SIGNAL SIDED	MDOT
(B)	ONE WAY	SINGLE SIDED WITH DIRECTIONAL ARROW	MDOT
(C)	ONE WAY - DO NOT ENTER	SINGLE SIDED	MDOT
(D)	RIGHT TURN ONLY	SINGLE SIDED	MDOT
(E)	BARRIER FREE PARKING SIGN	SINGLE SIDED	SEE ABOVE
(F)	POST SIGN	DOUBLE SIDED	A31
(G)	MONUMENT SIGN	DOUBLE SIDED	A31
(H)	DIRECTIONAL SIGN	DOUBLE SIDED	A31
(J)	NO PARKING - FIRE LANE	SINGLE SIDED	MDOT
(K)	PLYON SIGN	DOUBLE SIDED	A31
(L)	PEDESTRIAN CROSSING	SIGNAL SIDED	MDOT

**BUILDING / LOT STATISTICS**

TOTAL SITE AREA: 14.51 ACRES

PHASE I BUILDING COVERAGE:	20,500 SF
OTHER PAVED SURFACES:	156,333 SF
LOT COVERAGE:	176,833 SF
IMPERVIOUS SURFACE RATIO:	28%
<b>FUTURE PHASES:</b>	
BUILDING COVERAGE:	54,200 SF
OTHER PAVED SURFACES:	200,428 SF
<b>TOTAL:</b>	
BUILDING COVERAGE:	74,700 SF
OTHER PAVED SURFACES:	356,761 SF
LOT COVERAGE:	431,461 SF
IMPERVIOUS SURFACE RATIO:	68%
OPEN SPACE:	32%
<b>GROSS FLOOR AREA, PHASE I</b>	
USABLE FLOOR AREA, PHASE I	56,060 SF

**PARKING PROVIDED - PHASE I**

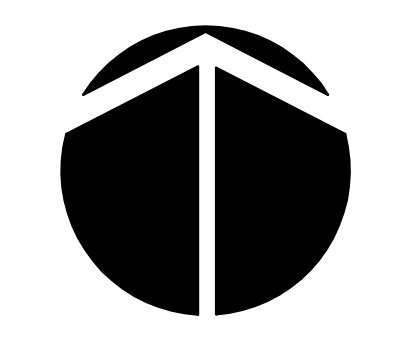
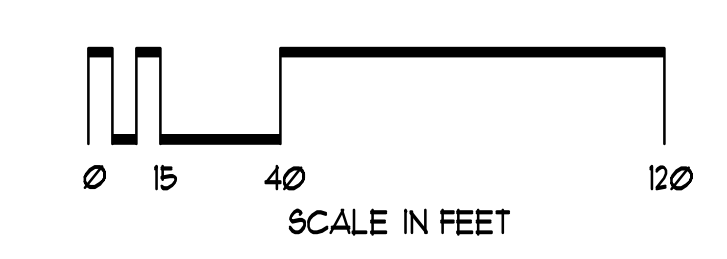
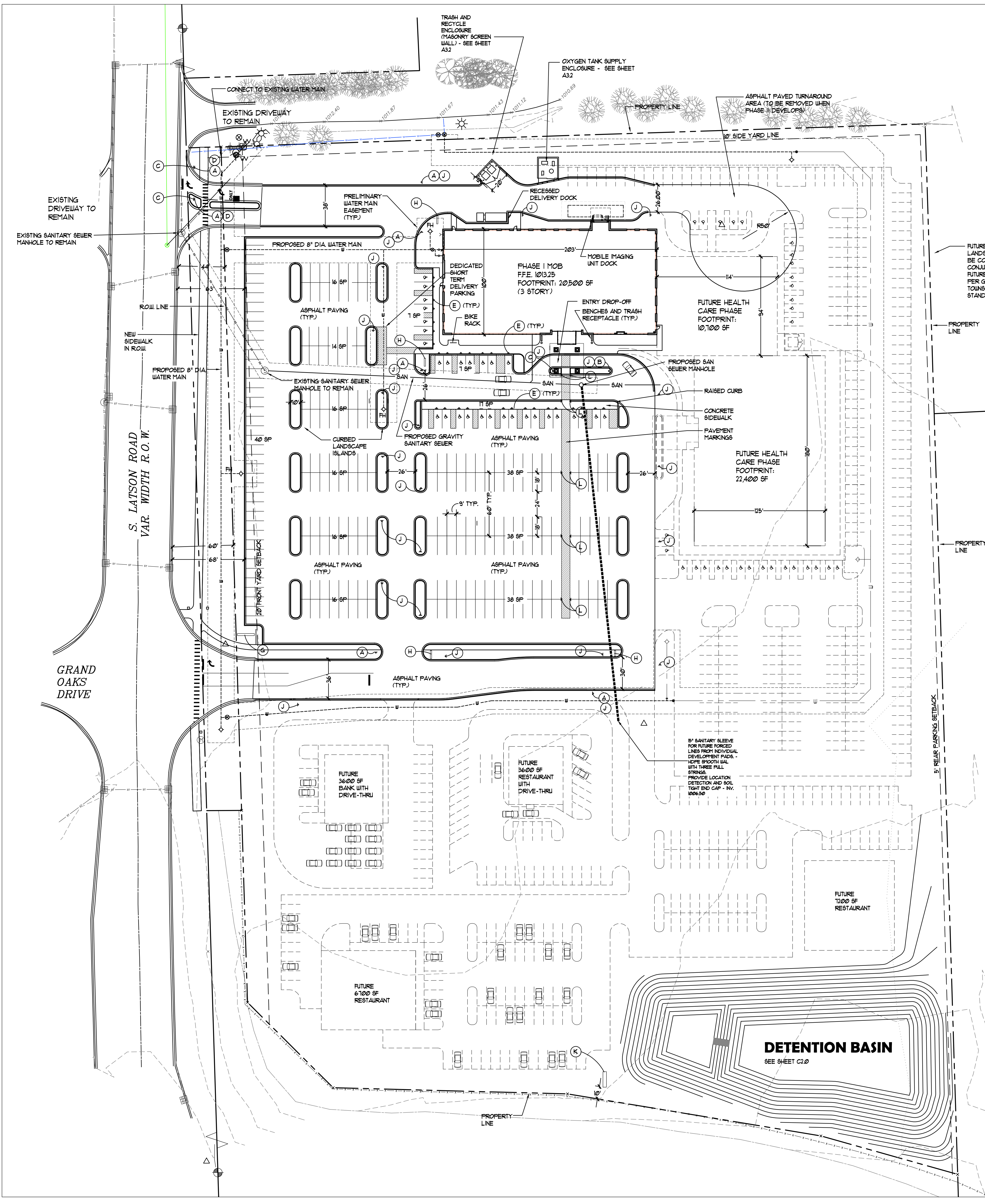
BARRIER-FREE SPACES	31
STANDARD SPACES	248
<b>TOTAL</b>	<b>279</b>

**GENERAL NOTES**

- ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CALL "MISS DIG" AND VERIFY ALL UNDERGROUND UTILITIES BEFORE EXCAVATION AT THE SITE. ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. USE PRIVATE UTILITY LOCATOR SERVICE FOR ANY UTILITIES MISS DIG WILL NOT TRACE.
- ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHOULD BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
- ALL DIMENSIONS ARE GIVEN TO OUTSIDE EDGE (FACE) OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
- ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION SHALL RECEIVE 6" TOPSOIL AND LAWN ESTABLISHMENT PER SPECIFICATIONS (UNLESS OTHER PLANTINGS ARE SHOWN). SUPPLEMENT WITH IMPORTED TOPSOIL AS REQUIRED TO PROVIDE 6" DEPTH.
- PROVIDE EXPANSION JOINTS IN NEW CONCRETE WALKS AND CURBS AT 50' MAXIMUM SPACING (AS SPECIFIED) AND CONTROL JOINTS AS SHOWN ON PLANS. PROVIDE EXP. JOINTS WHERE NEW CONCRETE MEETS EXISTING CONCRETE OR OTHER STRUCTURES.
- ALL EXISTING VALVE BOXES, STORM AND SANITARY STRUCTURES TO REMAIN WITHIN THE AREA UNDER CONSTRUCTION SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATIONS.
- THE EXISTING AND PROPOSED STORM DRAINAGE SYSTEM SHALL BE CLEANED AND FREE FROM SEDIMENT AT THE END OF CONSTRUCTION. THE PROPOSED STORM DRAINAGE SYSTEM IS PRIVATE AND THE PROPERTY OWNER IS RESPONSIBLE FOR ONGOING MAINTENANCE OF THE SYSTEM.
- ALL NEW SIDEWALKS AND PAVEMENTS SHALL BE PLACED AT AN ELEVATION THAT PROVIDES POSITIVE DRAINAGE AND CONSISTENT SLOPES. ENSURE NO LOW SPOTS ARE CREATED. NEW WALKS SHALL MEET EXISTING WALKS FLUSH AT EXISTING GRADE. NOTIFY OWNER AND/OR ENGINEER IF GRADES ON PLAN CANNOT BE MET TO ENSURE POSITIVE DRAINAGE.
- MATCH ADJACENT PAVEMENT GRADES WHERE NEW PAVEMENT BUTTS TO EXISTING PAVING.
- PLACE SILT FENCE ALONG EDGE OF PAVEMENT OR BACK OF CURB FOLLOWING GRADING OPERATIONS UNTIL SLOPES ARE STABILIZED.
- ALL CONSTRUCTION SHALL COMPLY WITH THE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF LIVINGSTON COUNTY AND THE STATE OF MICHIGAN. PROTECTIVE MEASURES SHALL BE PROVIDED AT A MINIMUM AND CONFIRMED WITH LOCAL AGENCY REQUIREMENTS.
- ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER PERMANENT GROUND COVER IS ESTABLISHED. TEMPORARY EROSION CONTROL DEVICES SHOULD BE IN PLACE PRIOR TO EXCAVATION, TO THE EXTENT POSSIBLE.

**BARRIER-FREE NOTES**

- BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
- 1:48 (2%) MAXIMUM CROSS-SLOPE ON ACCESSIBLE ROUTE.
  - NO CHANGES IN LEVEL GREATER THAN 1/4" ALONG ACCESSIBLE ROUTE, RAMP OR LANDINGS.
  - 1:20 (5%) MAXIMUM LONGITUDINAL SLOPE ON ACCESSIBLE ROUTE (EXCEPT WHERE RAMPS ARE PROVIDED).
  - 1:50 (2%) MAXIMUM SLOPE (IN ANY DIRECTION) IN BF. PARKING AND ACCESSIBLES.



ISSUED: 4/1/2015  
 REVISIONS:  
 4/23/15  
 5/07/15  
 5/20/15

PROJECT NUMBER:  
 14094.00

SHEET TITLE:  
 SITE LAYOUT PLAN

SHEET NUMBER:  
**C1.0**  
 PUD SUBMITTAL



### GRADING AND DRAINAGE LEGEND

SYMBOL	DESCRIPTION
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE
	EXISTING SANITARY SEWER
	PROPOSED 1' CONTOURS
	PROPOSED 3' CONTOURS
	PROPOSED PHASE I STORM SEWER
	PROPOSED PHASE I STORM SEWER CATCH BASIN
	PROPOSED PHASE I WATER MAIN AND SERVICE
	PROPOSED PHASE I HYDRANT
	PROPOSED PHASE I SANITARY FORCED MAIN
	PROPOSED PHASE I SANITARY GRAVITY SEWER
	PROPOSED PHASE II WATER MAIN AND SERVICE
	PROPOSED PHASE II HYDRANT
	PROPOSED PHASE II STORM SEWER AND CATCH BASIN

#### Frauenshuh Storm Water Calculations

1 Pre Development Watershed Area, A <sub>p</sub>	14.566 acres
2 Undeveloped, C <sub>u</sub>	0.30
3 Overland Flow Distance, D	1215 ft
4 Elevation at Top of Overland Flow	1014.00
5 Elevation at Bottom of Overland Flow	994.00
6 Slope, S [(Line 4 - Line 5) / Line 3] x 100	1.65 %
7 Time of Concentration, T <sub>c</sub> [(1.81 - C <sub>u</sub> ) <sup>0.2</sup> / S <sup>0.5</sup> ] <sup>2</sup>	9 min
8 Pre Development Runoff Rate (Q <sub>pc</sub> x I <sub>10</sub> x A)	13.68 cfs
9 Post Development Watershed Area	14.566 acres
10 Composite C developed, C <sub>c</sub>	0.50
11 Design Constant (K) = A x C	9.66
12 Allowable Release Rate (0.2 cfs/acre)	2.91 cfs

#### Computation Sheet for Storm Water Storage Calculations

Storm Duration (Mins)	Storm Duration (Secs)	Intensity (In/Hr)	Col #2 x Col #3	Inflow Volume Col #2 x Col #4 (cfs)	Outflow Volume Col #2 x Col #5 (cfs)	Storage Volume Col #5 - Col #6 (cfs)
5	300	9.17	2751.00	26567.73	873.97	25693.76
10	600	7.86	4716.00	45544.68	1747.94	43796.75
15	900	6.88	6592.00	59799.13	2621.90	57177.22
20	1200	6.11	7332.00	70808.66	3495.87	67312.78
30	1800	5.00	9000.00	86917.33	5243.81	81673.52
60	3600	3.24	11664.00	112664.87	10487.62	102177.25
90	5400	2.39	12906.00	124639.46	15731.43	108908.03
120	7200	1.90	13680.00	133114.35	20975.24	112139.11
180	10800	1.34	14472.00	139763.07	31462.86	108300.21

Elev.	Area (sqft)	Volume (cft)	Accd. Vol. (cft)
993.00	9,605	11,241	11,241
994.00	12,877	13,431	24,672
995.00	13,985	15,897	40,569
996.00	17,809	19,183	59,752
997.00	20,556	22,033	81,785
998.00	23,510	25,072	106,858
999.00	26,633	28,239	135,095
1000.00	29,845	31,595	166,690

#### Appendix B: Outlet Control Structure Sample Calculations

Tributary Area (A) = 14.566 Acres  
Run-off Coefficient (C) = 0.66  
Design Constant (K) = A x C = 9.66  
Allowable Outflow Rate (Q<sub>a</sub>) = 0.2 cfs/acre x A = 2.91 cfs  
Required Volume (From Table on A-1) = 111,139 cubic feet  
Bankfull Flood Volume (V<sub>b</sub>) = 8160 x A x C = 78,447 cubic feet  
First Flush Volume (V<sub>f</sub>) = 1815 x A x C = 17,449 cubic feet

#### Detention Basin Elevations

Bottom of Basin (elev<sub>bb</sub>) = 993.00 feet  
First Flush Volume Elevation (elev<sub>ff</sub>) = 994.46 feet  
Bankfull Volume Elevation (elev<sub>b</sub>) = 997.32 feet  
100 Year Storm Volume Elevation (elev<sub>100</sub>) = 999.35 feet  
Spillway Elevation = 100 Year Storm + 0.5' = 999.85 feet  
Top of Basin = Spillway + 0.5' = 1000.35 feet

#### First Flush Volume Orifice Calculations

First Flush Flow (Q<sub>ff</sub>) = V<sub>f</sub> / 86400 = 0.20 cfs  
h<sub>ff</sub> = 2.5(elev<sub>ff</sub> - elev<sub>bb</sub>) = 0.97 feet  
Orifice Area (A<sub>o</sub>) = Q<sub>ff</sub> / (0.62 x (84.4 x h<sub>ff</sub>)<sup>0.5</sup>) = 0.041 ft<sup>2</sup>  
d = (4A<sub>o</sub>)<sup>0.5</sup> = 0.223 ft = 2.74 in "use 2.34"

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First Flush Flow (Q<sub>ff</sub>) = V<sub>f</sub> / 86400 = 0.20 cfs  
h<sub>ff</sub> = 2.5(elev<sub>ff</sub> - elev<sub>bb</sub>) = 0.97 feet  
Orifice Area (A<sub>o</sub>) = Q<sub>ff</sub> / (0.62 x (84.4 x h<sub>ff</sub>)<sup>0.5</sup>) = 0.041 ft<sup>2</sup>  
d = (4A<sub>o</sub>)<sup>0.5</sup> = 0.223 ft = 2.74 in "use 2.34"

#### Appendix B: Outlet Control Structure Sample Calculations

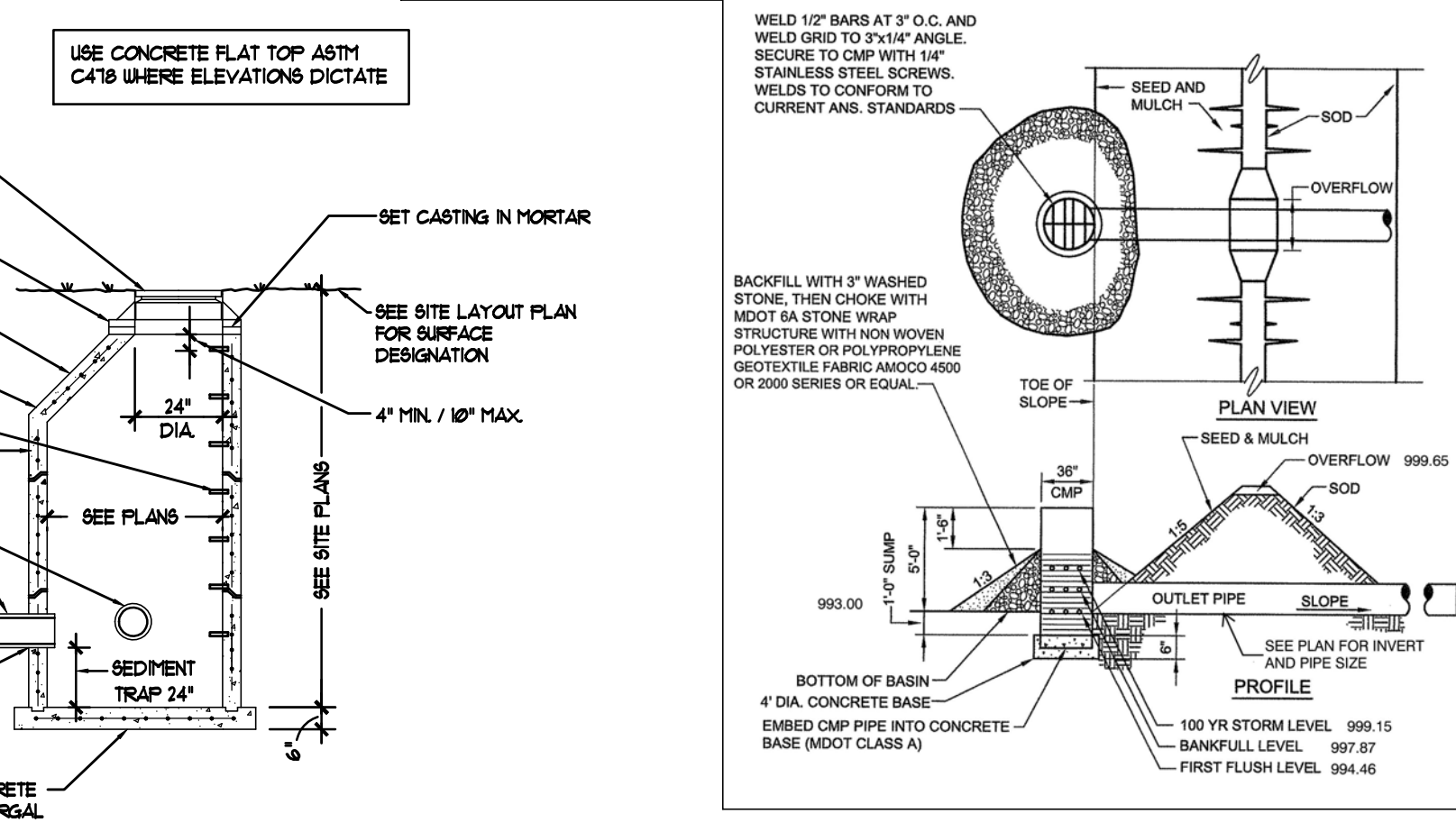
Tributary Area (A) = 14.566 Acres  
Run-off Coefficient (C) = 0.66  
Design Constant (K) = A x C = 9.66  
Allowable Outflow Rate (Q<sub>a</sub>) = 0.2 cfs/acre x A = 2.91 cfs  
Required Volume (From Table on A-1) = 111,139 cubic feet  
Bankfull Flood Volume (V<sub>b</sub>) = 8160 x A x C = 78,447 cubic feet  
First Flush Volume (V<sub>f</sub>) = 1815 x A x C = 17,449 cubic feet

#### Detention Basin Elevations

Bottom of Basin (elev<sub>bb</sub>) = 993.00 feet  
First Flush Volume Elevation (elev<sub>ff</sub>) = 994.46 feet  
Bankfull Volume Elevation (elev<sub>b</sub>) = 997.32 feet  
100 Year Storm Volume Elevation (elev<sub>100</sub>) = 999.35 feet  
Spillway Elevation = 100 Year Storm + 0.5' = 999.85 feet  
Top of Basin = Spillway + 0.5' = 1000.35 feet

#### First Flush Volume Orifice Calculations

First Flush Flow (Q<sub>ff</sub>) = V<sub>f</sub> / 86400 = 0.20 cfs  
h<sub>ff</sub> = 2.5(elev<sub>ff</sub> - elev<sub>bb</sub>) = 0.97 feet  
Orifice Area (A<sub>o</sub>) = Q<sub>ff</sub> / (0.62 x (84.4 x h<sub>ff</sub>)<sup>0.5</sup>) = 0.041 ft<sup>2</sup>  
d = (4A<sub>o</sub>)<sup>0.5</sup> = 0.223 ft = 2.74 in "use 2.34"



**Catch Basin Detail**  
Not to Scale

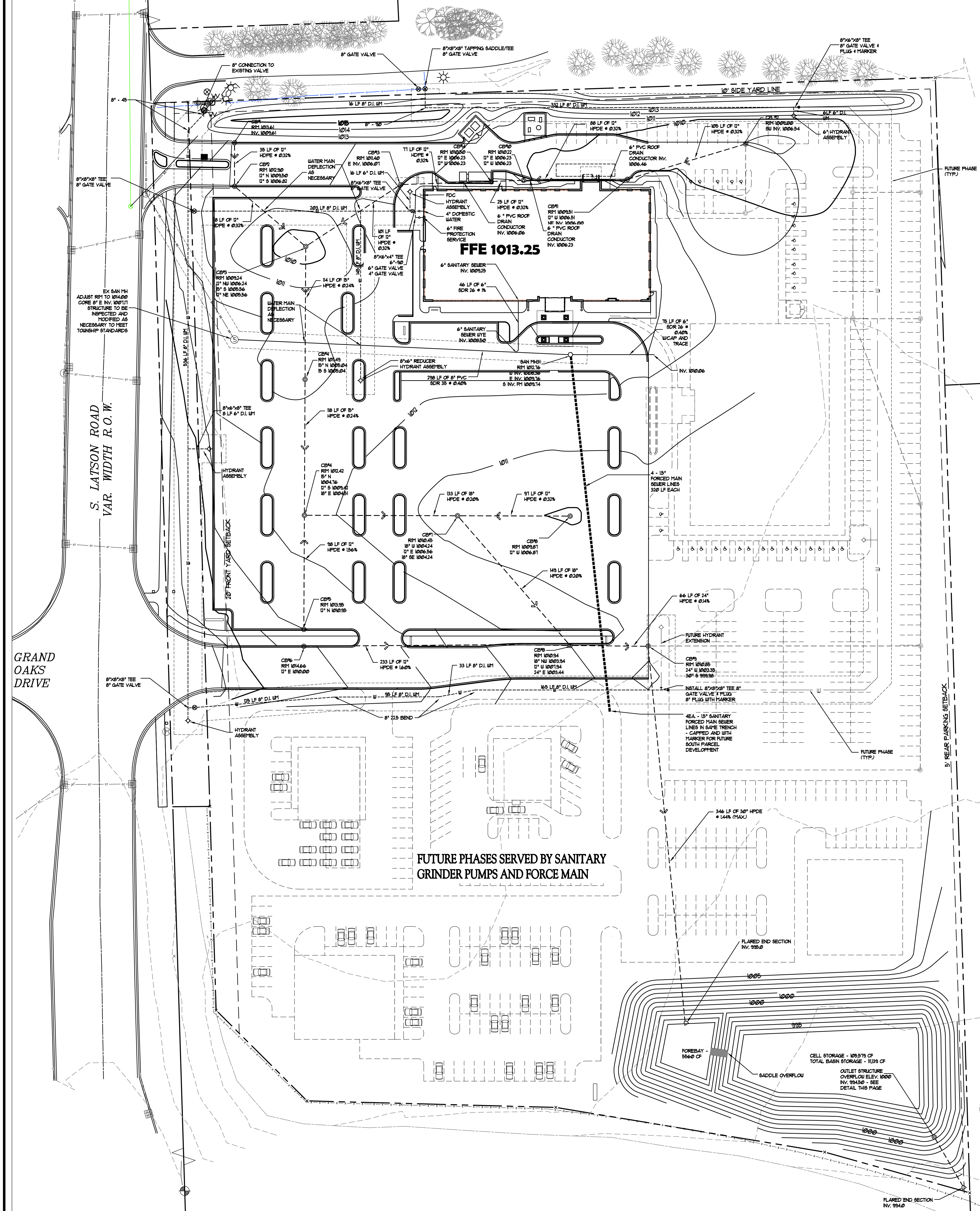
**OUTLET STRUCTURE**  
Not to Scale

### BARRIER-FREE NOTES

- BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
  - 1:48 (2%) MAXIMUM CROSS-SLOPE ON ACCESSIBLE ROUTE
  - NO CHANGES IN LEVEL GREATER THAN 1/4" ALONG ACCESSIBLE ROUTE, RAMPS OR LANDINGS
  - 1:20 (5%) MAXIMUM LONGITUDINAL SLOPE ON ACCESSIBLE ROUTE (EXCEPT WHERE RAMPS ARE PROVIDED)
  - 1:50 (2%) MAXIMUM SLOPE (IN ANY DIRECTION) IN B.F. PARKING AND ACCESSIBLES.

### GENERAL NOTES

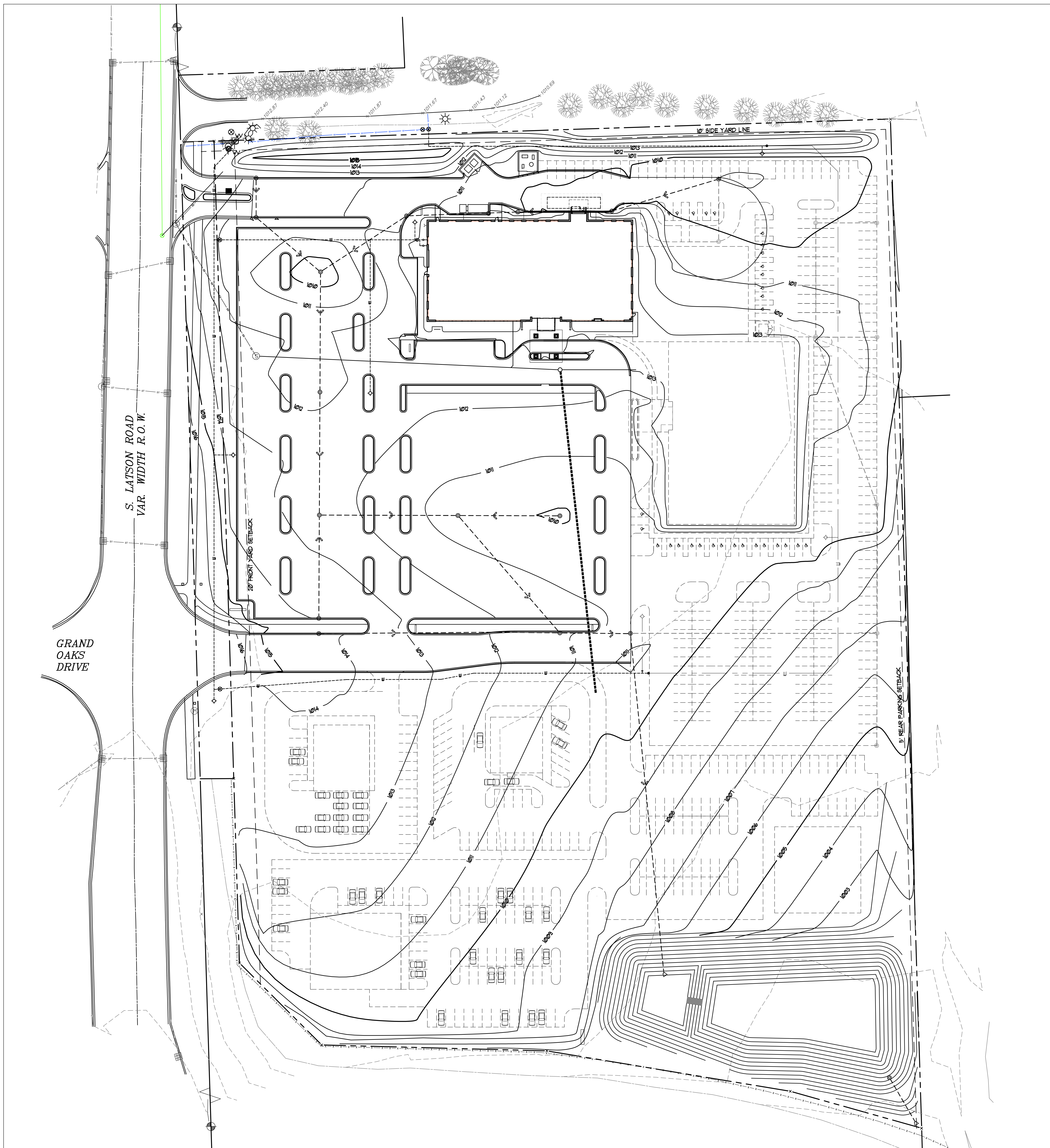
- ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CALL "MISS DIG" AND VERIFY ALL UNDERGROUND UTILITIES BEFORE EXCAVATION. AT THE SITE, ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. USE PRIVATE UTILITY LOCATOR SERVICE FOR ANY UTILITIES MISS DIG WILL NOT TRACE.
- ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHOULD BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
- ALL DIMENSIONS ARE GIVEN TO OUTSIDE EDGE (FACE) OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
- ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION SHALL RECEIVE 6" TOPSOIL AND LAWN ESTABLISHMENT PER SPECIFICATIONS (UNLESS OTHER PLANTINGS ARE SHOWN). SUPPLEMENT WITH IMPORTED TOPSOIL AS REQUIRED TO PROVIDE 6" DEPTH.
- PROVIDE EXPANSION JOINTS IN NEW CONCRETE WALKS AND CURBS AT 50' MAXIMUM SPACING (AS SPECIFIED) AND CONTROL JOINTS AS SHOWN ON PLANS. PROVIDE EXP. JOINTS WHERE NEW CONCRETE MEETS EXISTING CONCRETE OR OTHER STRUCTURES.
- ALL EXISTING VALVE BOXES, STORM AND SANITARY STRUCTURES TO REMAIN WITHIN THE AREA UNDER CONSTRUCTION SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATIONS.
- THE EXISTING AND PROPOSED STORM DRAINAGE SYSTEM SHALL BE CLEANED AND FREE FROM SEDIMENT AT THE END OF CONSTRUCTION. THE PROPOSED STORM DRAINAGE SYSTEM IS PRIVATE AND THE PROPERTY OWNER IS RESPONSIBLE FOR ONGOING MAINTENANCE OF THE SYSTEM.
- ALL NEW SIDEWALKS AND PAVEMENTS SHALL BE PLACED AT AN ELEVATION THAT PROVIDES POSITIVE DRAINAGE AND CONSISTENT SLOPES. ENSURE NO LOW SPOTS ARE CREATED. NEW WALKS SHALL MEET EXISTING WALKS FLUSH AT EXISTING GRADE. NOTIFY OWNER AND/OR ENGINEER IF GRADES ON PLAN CANNOT BE MET TO ENSURE POSITIVE DRAINAGE.
- MATCH ADJACENT PAVEMENT GRADES WHERE NEW PAVEMENT BUTTS TO EXISTING PAVING.
- PLACE SILT FENCE ALONG EDGE OF PAVEMENT OR BACK OF CURB FOLLOWING GRADING OPERATIONS UNTIL SLOPES ARE STABILIZED.
- ALL CONSTRUCTION SHALL COMPLY WITH THE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF LIVINGSTON COUNTY AND THE STATE OF MICHIGAN. PROTECTIVE MEASURES SHALL BE PROVIDED AT A MINIMUM AND CONFIRMED WITH LOCAL AGENCY REQUIREMENTS.
- ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER PERMANENT GROUND COVER IS ESTABLISHED. TEMPORARY EROSION CONTROL DEVICES SHOULD BE IN PLACE PRIOR TO EXCAVATION, TO THE EXTENT POSSIBLE.



**Catch Basin Detail**  
Not to Scale

**OUTLET STRUCTURE**  
Not to Scale





**GRADING AND DRAINAGE LEGEND**

SYMBOL	DESCRIPTION
	EXISTING DECIDUOUS TREE
	EXISTING EVERGREEN TREE
	EXISTING SANITARY SEWER
	PROPOSED 1' CONTOURS
	PROPOSED 5' CONTOURS
	PROPOSED PHASE I STORM SEWER
	PROPOSED PHASE I STORM SEWER CATCH BASIN
	PROPOSED PHASE I WATER MAIN AND SERVICE
	PROPOSED PHASE I HYDRANT
	PROPOSED PHASE I SANITARY FORCED MAIN
	PROPOSED PHASE I SANITARY MANHOLE
	PROPOSED PHASE I SANITARY GRAVITY SEWER
	PROPOSED PHASE II WATER MAIN AND SERVICE
	PROPOSED PHASE II HYDRANT
	PROPOSED PHASE II STORM SEWER AND CATCH BASIN

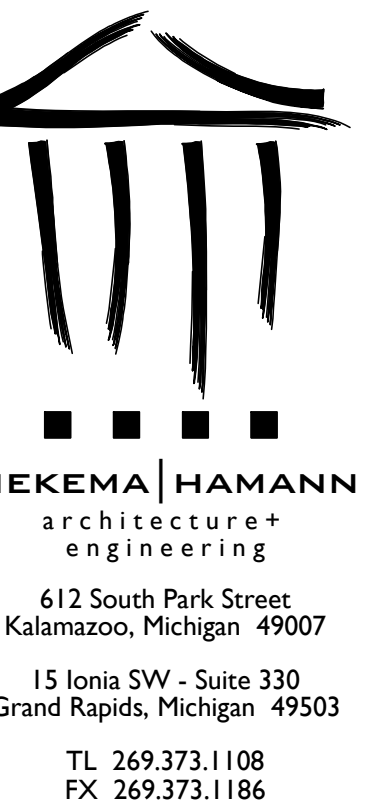
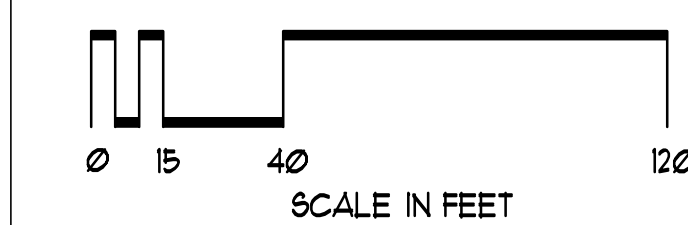
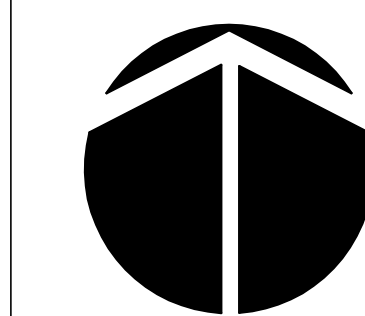
**BARRIER-FREE NOTES**

BARRIER-FREE PARKING AND ACCESSIBLE ROUTE(S) MUST COMPLY WITH THE AMERICANS WITH DISABILITIES ACT, INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

- 1:48 (2% MAXIMUM CROSS-SLOPE ON ACCESSIBLE ROUTE.
- NO CHANGES IN LEVEL GREATER THAN 1/4" ALONG ACCESSIBLE ROUTE, RAMP OR LANDINGS.
- 1:20 (5% MAXIMUM LONGITUDINAL SLOPE ON ACCESSIBLE ROUTE (EXCEPT WHERE RAMPS ARE PROVIDED).
- 1:50 (2% MAXIMUM SLOPE (IN ANY DIRECTION) IN B.F. PARKING AND ACCESSIBLES.

**GENERAL NOTES**

1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CALL "MISS DIG" AND VERIFY ALL UNDERGROUND UTILITIES BEFORE EXCAVATION AT THE SITE. ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. USE PRIVATE UTILITY LOCATOR SERVICE FOR ANY UTILITIES MISS DIG WILL NOT TRACE.
2. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHOULD BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
4. ALL DIMENSIONS ARE GIVEN TO OUTSIDE EDGE (FACE) OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
5. ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION SHALL RECEIVE 6" TOPSOIL AND LAWN ESTABLISHMENT PER SPECIFICATIONS (UNLESS OTHER PLANTINGS ARE SHOWN). SUPPLEMENT WITH IMPORTED TOPSOIL AS REQUIRED TO PROVIDE 6" DEPTH.
6. PROVIDE EXPANSION JOINTS IN NEW CONCRETE WALKS AND CURBS AT 30' MAXIMUM SPACING (AS SPECIFIED) AND CONTROL JOINTS AS SHOWN ON PLANS. PROVIDE EXP. JOINTS WHERE NEW CONCRETE MEETS EXISTING CONCRETE OR OTHER STRUCTURES.
7. ALL EXISTING VALVE BOXES, STORM AND SANITARY STRUCTURES TO REMAIN WITHIN THE AREA UNDER CONSTRUCTION SHALL BE ADJUSTED TO NEW FINISH GRADE ELEVATIONS.
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9. ALL NEW SIDEWALKS AND PAVEMENTS SHALL BE PLACED AT AN ELEVATION THAT PROVIDES POSITIVE DRAINAGE AND CONSISTENT SLOPES. ENSURE NO LOW SPOTS ARE CREATED. NEW WALKS SHALL MEET EXISTING WALKS FLUSH AT EXISTING GRADE. NOTIFY OWNER AND/OR ENGINEER IF GRADES ON PLAN CANNOT BE MET TO ENSURE POSITIVE DRAINAGE.
10. MATCH ADJACENT PAVEMENT GRADES WHERE NEW PAVEMENT BUTTS TO EXISTING PAVING.
11. PLACE BILT FENCE ALONG EDGE OF PAVEMENT OR BACK OF CURB FOLLOWING GRADING OPERATIONS UNTIL SLOPES ARE STABILIZED.
12. ALL CONSTRUCTION SHALL COMPLY WITH THE SOIL EROSION AND SEDIMENTATION CONTROL REQUIREMENTS OF LIVINGSTON COUNTY AND THE STATE OF MICHIGAN. PROTECTIVE MEASURES SHALL BE PROVIDED AT A MINIMUM AND CONFIRMED WITH LOCAL AGENCY REQUIREMENTS.
13. ALL TEMPORARY EROSION CONTROL DEVICES SHALL BE REMOVED AFTER PERMANENT GROUND COVER IS ESTABLISHED. TEMPORARY EROSION CONTROL DEVICES SHOULD BE IN PLACE PRIOR TO EXCAVATION, TO THE EXTENT POSSIBLE.



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ISSUED	4/11/2015
REVISIONS	4/23/15 5/07/15 5/20/15

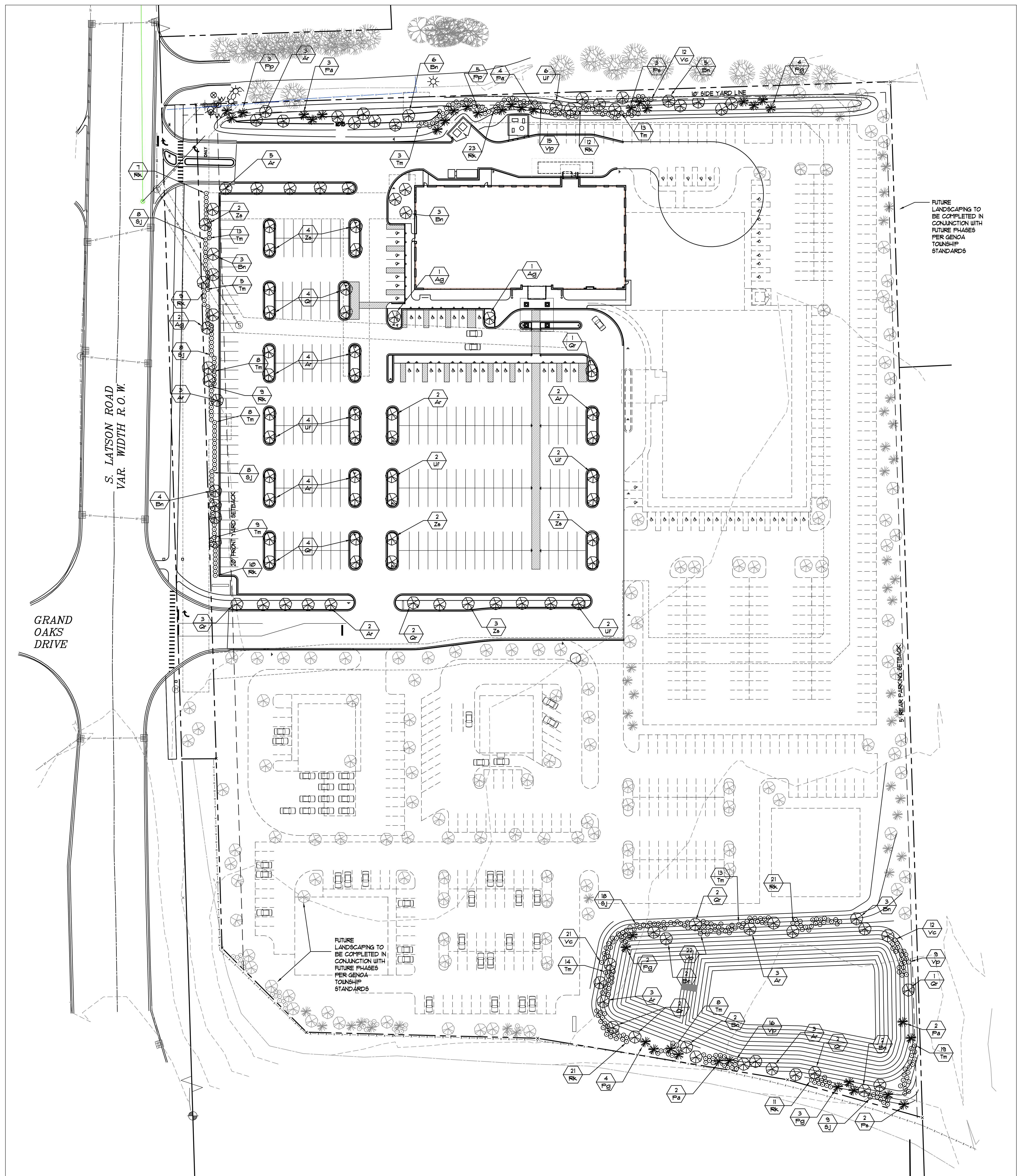
PROJECT NUMBER  
14094.00

SHEET TITLE  
OVERALL SITE GRADING AND DRAINAGE PLAN

SHEET NUMBER  
**C2.1**  
PUD SUBMITTAL

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**GENERAL NOTES**

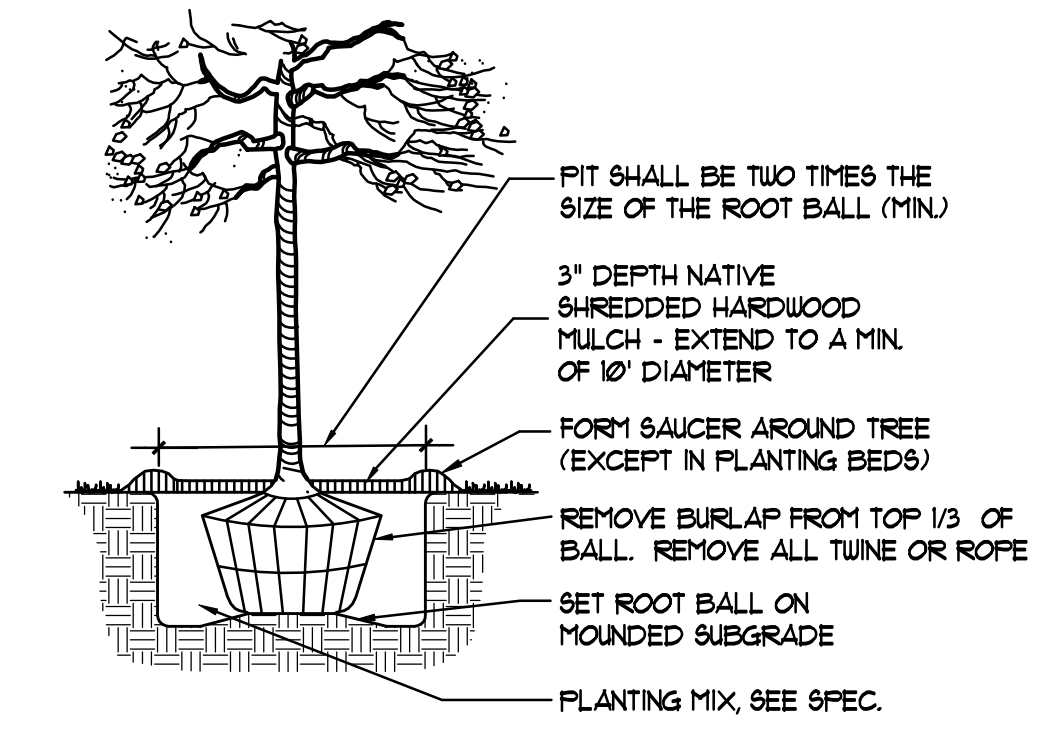
1. ALL UTILITY LOCATIONS SHOWN ARE APPROXIMATE. CALL "1166 DIG" AND VERIFY ALL UNDERGROUND UTILITIES BEFORE EXCAVATION AT THE SITE. ANY UTILITIES DISTURBED BY CONSTRUCTION SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE. USE PRIVATE UTILITY LOCATOR SERVICE FOR ANY UTILITIES HIS&G WILL NOT TRACE.
2. ANY DISCREPANCIES BETWEEN THESE PLANS AND ACTUAL FIELD CONDITIONS SHOULD BE REPORTED TO THE OWNER'S REPRESENTATIVE IMMEDIATELY FOR RESOLUTION.
3. EROSION SHALL BE CONTROLLED AS SPECIFIED AND AS REQUIRED BY LOCAL, STATE OR FEDERAL AUTHORITIES HAVING JURISDICTION.
4. ALL DIMENSIONS ARE GIVEN TO OUTSIDE EDGE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED. ALL RADII ARE 8' UNLESS OTHERWISE NOTED.
5. ALL UNPAVED AREAS DISTURBED BY CONSTRUCTION SHALL RECEIVE 6" TOPSOIL AND LAWN PER SPECIFICATIONS. SUPPLEMENT WITH IMPORTED TOPSOIL AS REQUIRED TO PROVIDE 6" DEPTH.

**LANDSCAPE NOTES:**

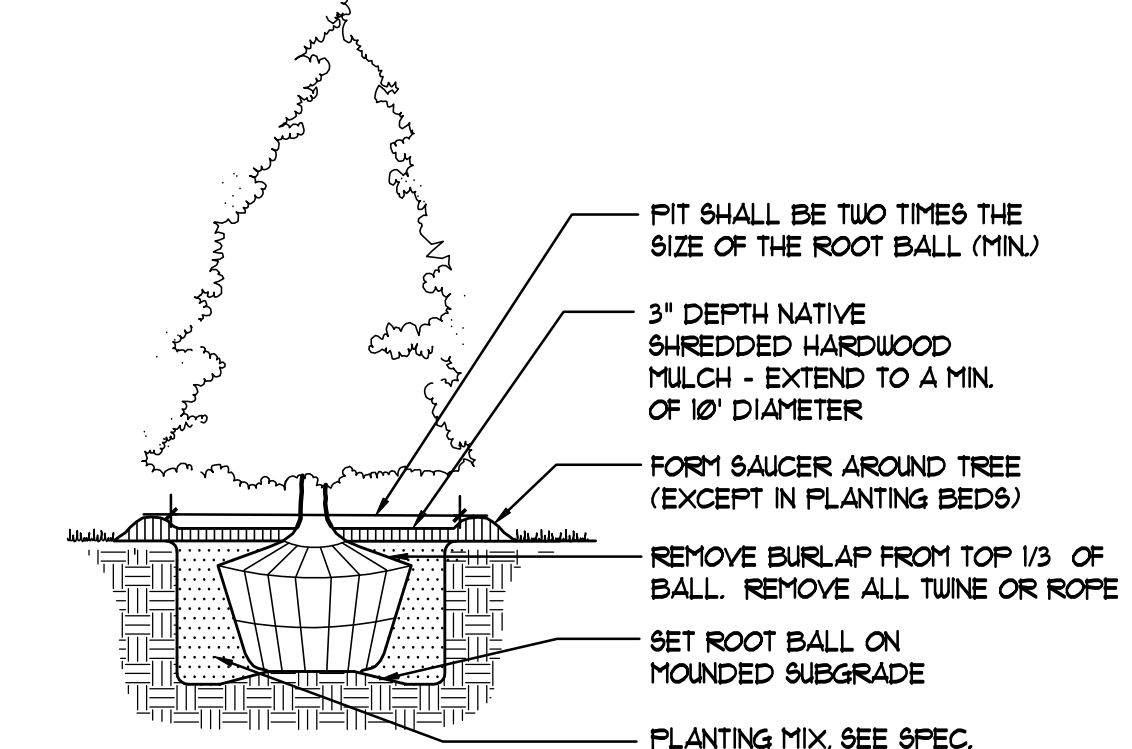
1. PLACE SHREDDED HARDWOOD MULCH TO A 3" DEPTH IN ALL TREE & SHRUB BEDS 4 TO A 2" DEPTH IN ALL GROUNDCOVER BEDS.
2. REPAIR AND RESTORE ANY DAMAGE OUTSIDE OF LIMIT OF WORK TO ORIGINAL CONDITION.
3. ALL NURSERY STOCK SHALL BE TRUE TO TYPE AND NAME. ALL STOCK SHALL BE FIRST CLASS QUALITY WITH WELL DEVELOPED BRANCH SYSTEMS AND VIGOROUS HEALTHY ROOT SYSTEMS. ALL STOCK SHALL BE WELL FORKED AND THE TRUNKS OF TREES SHALL BE UNIFORM AND STRAIGHT.
4. ALL UNPAVED AREAS WILL BE SEEDED AND INCLUDE IRRIGATION PARKING LOT ISLANDS SHALL BE COBBLESTONE WITH DRIP IRRIGATION FOR TREES.

**LANDSCAPE LEGEND:**

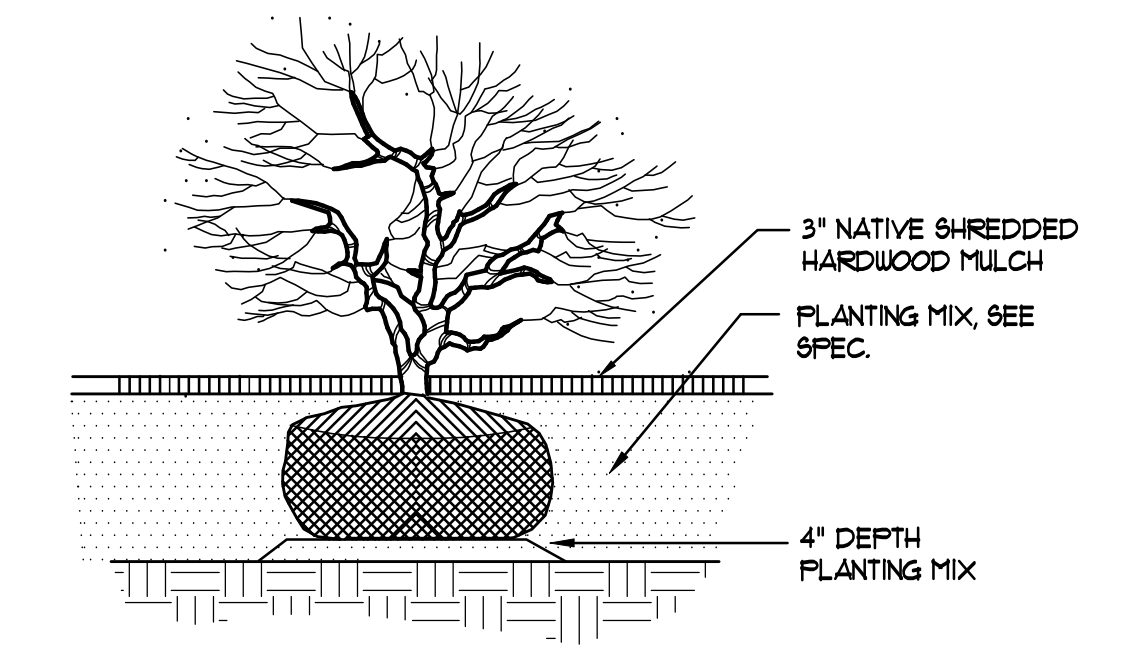
DECIDUOUS TREES	SYM.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	COM.
	Ar	<i>Aster sp.</i>	Aster	12'-14" HT.	B&B	HEAVY CLUMP
	Bn	<i>Betula nigra</i>	River Birch	12'-14" HT.	B&B	HEAVY CLUMP
	Gr	<i>Quercus robur</i>	Red Oak	2'-1/2' CAL.	B&B	
	Uf	<i>Ulmus x 'Frontier'</i>	Frontier Elm	2'-1/2' CAL.	B&B	
	Za	<i>Zelkova serrata 'Green Vase'</i>	Green Vase Zelkova	2'-1/2' CAL.	B&B	
EVERGREEN TREES						
	Pp	<i>Picea pungens</i>	Colorado Blue Spruce	6' HT.	B&B	
	Pa	<i>Picea abies</i>	Norway Spruce	6' HT.	B&B	
	Pt	<i>Picea canadensis</i>	Eastern White Pine	6' HT.	B&B	
SHRUBS						
	Rk	<i>Rosa 'Knockout'</i>	Knockout Rose Varieties	24" HT.	B&B	3' O.C.
	Sj	<i>Spiraea japonica 'Neon Flash'</i>	Neon Flash Spiraea	24" HT.	B&B	3' O.C.
	Ta	<i>Taxus x media 'Everolu'</i>	Everolu Yew	30" SP.	B&B	4' O.C.
	Vc	<i>Viburnum carlesii 'Cayuga'</i>	Cayuga Viburnum	30" HT.	B&B	4' O.C.
	Vp	<i>Viburnum p. 'Shasta'</i>	Shasta Viburnum	36" HT.	B&B	7' O.C.



**Tree Planting Detail**  
Not to scale



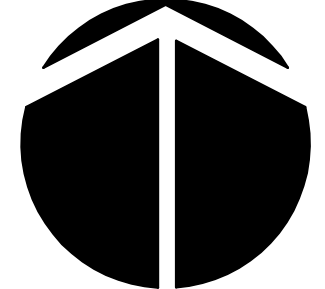
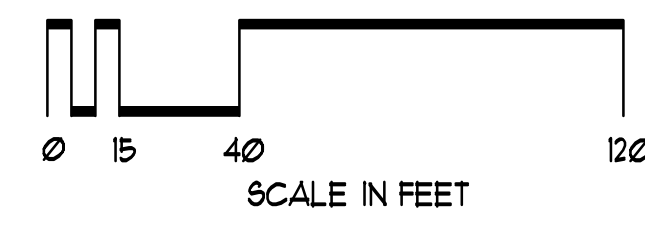
**Evergreen Tree Planting Detail**  
Not to scale



**Shrub Planting Detail**  
Not to scale

**LANDSCAPING STATISTICS**

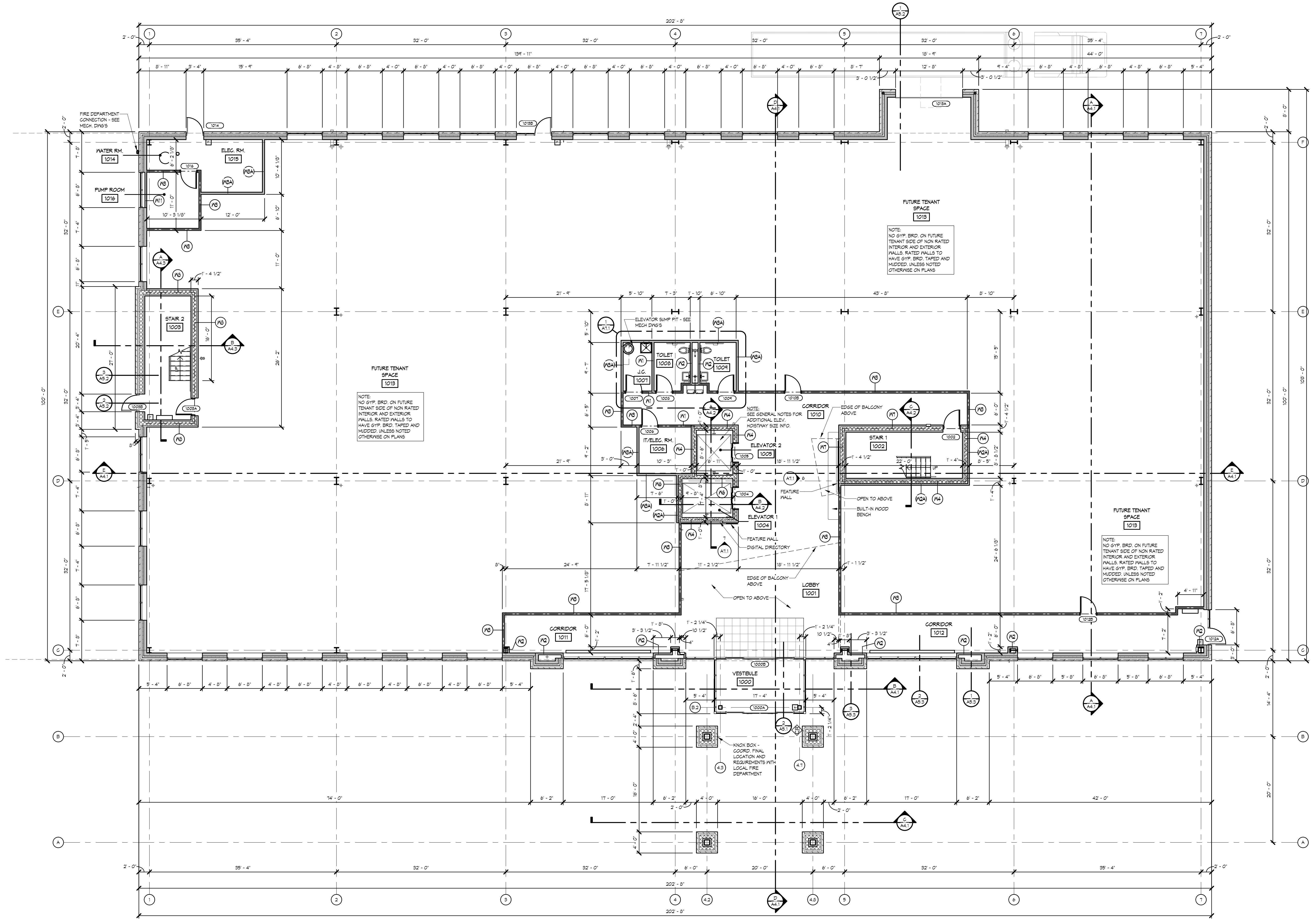
PHASE I	REQUIRED TREES	PROPOSED TREES	REQUIRED SHRUBS	PROPOSED SHRUBS	REQUIRED GREEN SPACE	PROPOSED GREEN SPACE
LATSON ROAD FRONTAGE	13	14	HEDGE ROW	96		
NORTH PROPERTY BUFFER	40	42	18	19	BERM1	BERM1
PARKING LOT	20	36	NA	NA	2,000 SF	5,000 SF
1-36 BUFFER (PHASE I)	22	22	44	44		
DETENTION BASIN LANDSCAPING	11	11	110	110		





FLOOR PLAN LEGEND	
	NON-FIRE RATED WALL
	1-HOUR FIRE RATED SEPARATION
	2-HOUR FIRE RATED SEPARATION
	1-HOUR SMOKE BARRIER - NFPA 101 - 8.5
	NEW DOOR

WALL TYPES	
(N1)	TYP. WALL FIN. RM. SIDE - 5/8" GYP. BRD. - 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION - 5/8" GYP. BRD. FIN. RM. SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.
(N2)	PLUMBING / FURRING WALL FIN. ROOM SIDE - 5/8" GYP. BRD. - 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION SHAFT / BACK SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. MOISTURE RESISTANT FIRECORE GYP. BRD. IN NET LOCATIONS UNLESS OTHERWISE NOTED. SEE FINISH SCHEDULE.
(N3A)	FURRING WALL (TENANT FINISH) FIN. ROOM SIDE - 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION SHAFT / BACK SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE.
(N3B)	TENANT SEPARATION WALL (RATED) PUBLIC SIDE - 5/8" GYP. BRD. - 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION - 5/8" GYP. BRD. FIRE TAPED (AT RATED WALLS ONLY) TENANT SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.
(N3C)	TENANT SEPARATION WALL (NOT RATED) PUBLIC SIDE - 5/8" GYP. BRD. - 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION TENANT SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE.
(N4)	FURRED OUT ELEVATOR SHAFT WALL PUBLIC SIDE - 5/8" GYP. BRD. - 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION - 5" CMU WALL SHAFT SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.
(N5)	NOT USED
(N6)	ELEVATOR SHAFT WALL ELEVATOR SIDE - 5" CMU WALL ELEVATOR SIDE WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALLS WHERE SHOWN ON PLANS.
(N7)	STAIR SHAFT WALL PUBLIC SIDE - 5/8" GYP. BRD. - 3/8" METAL STUD WALL WITH STUDS AT 16" O.C. WITH ACOUSTICAL BATT INS. - 5" CMU - 3/8" METAL STUD WALL WITH STUDS AT 16" O.C. WITH ACOUSTICAL BATT INS. - 5/8" GYP. BRD. STAIR SHAFT WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.
(N8)	STAIR SHAFT WALL TENANT SIDE - 3/8" METAL STUD WALL WITH STUDS AT 16" O.C. WITH ACOUSTICAL BATT INS. - 5" CMU - 3/8" METAL STUD WALL WITH STUDS AT 16" O.C. WITH ACOUSTICAL BATT INS. - 5/8" GYP. BRD. STAIR SHAFT WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.
(N9)	NOT USED
(N10)	NOT USED
(N11)	FURRING WALL AT SPANDREL LOCATIONS - 3/8" METAL STUDS AT 16" O.C. W/ FOL FACED BATT INSULATION TYP. AT ALL FUTURE TENANT BUILT OUT SPANDREL LOCATIONS. SETUP AND PREP FOR FUTURE GYP. BRD. FIN.



**FIRST FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

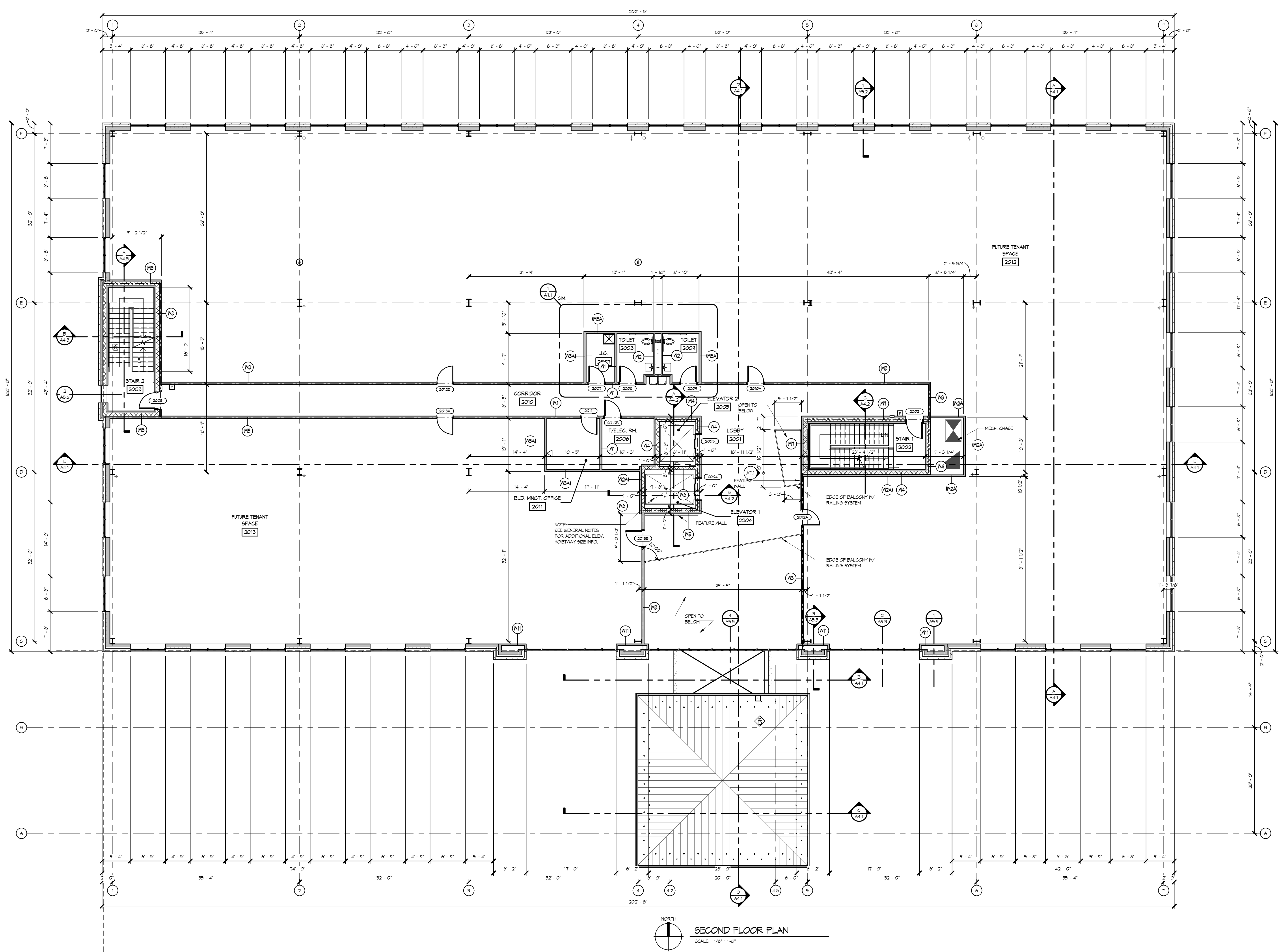
GENERAL NOTES	
1.	ALL WALL TYPES ARE (N1) UNLESS NOTED OTHERWISE.
2.	ALL WALL TYPES ARE (N2) AT ALL NON-RATED TOILET/ PLUMBING CHASES, UNLESS NOTED OTHERWISE.
3.	ALL WALLS SCHEDULED TO RECEIVE EPOXY PAINT SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP. BOARD UNLESS OTHERWISE NOTED. REFER TO FINISH SCHEDULE.
4.	ALL WALLS CARRYING PLUMBING FIXTURES SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP. BOARD UNLESS OTHERWISE NOTED. REFER TO FINISH SCHEDULE.
5.	PROVIDE BLOCKING IN WALLS FOR OWNER PROVIDED EQUIPMENTS SHOWN IN INTERIOR ELEVATIONS AND DIMENSIONED FLOOR PLANS.
6.	ELEVATOR HOISTWAY CONTRACTOR TO VERIFY HOISTWAY DIMENSIONS OF ELEVATOR MANUFACTURER SELECTED PRIOR TO CONSTRUCTION OF HOISTWAY WALLS AND FOUNDATION.
7.	SEE PLANS FOR RATED WALL REQUIREMENTS.

PRELIMINARY NOT FOR CONSTRUCTION

LIVINGSTON AMBULATORY FACILITY  
**FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS**  
1701 S. LATSON ROAD  
GENOA TOWNSHIP, MI 48843



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**SECOND FLOOR PLAN**  
SCALE: 1/8" = 1'-0"

FLOOR PLAN LEGEND	
	NON-FIRE RATED WALL
	1-HOUR FIRE RATED SEPARATION
	2-HOUR FIRE RATED SEPARATION
	1-HOUR SMOKE BARRIER - NFPA 101 - 8.3
	NON DOOR

WALL TYPES	
(N1)	<p>TYF. WALL</p> <p>FIN. RM. SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>- 5/8" GYP. BRD.</p> <p>FIN. RM. SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N2)	<p>PLUMBING / FURRING WALL</p> <p>FIN. ROOM SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>SHAFT / BACK SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. MOISTURE RESISTANT FIRECORE GYP. BRD. IN KET LOCATIONS UNLESS OTHERWISE NOTED. SEE FINISH SCHEDULE.</p> <p>FURRING WALL (FINISH FINISH)</p> <p>FIN. ROOM SIDE</p> <p>- 5/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>SHAFT / BACK SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE.</p>
(N3)	<p>TENANT SEPARATION WALL (RATED)</p> <p>PUBLIC SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>- 5/8" GYP. BRD. FIRE TAPED (AT RATED WALLS ONLY)</p> <p>TENANT SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N4)	<p>TENANT SEPARATION WALL (NOT RATED)</p> <p>PUBLIC SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>TENANT SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE.</p>
(N5)	<p>FURRED OUT ELEVATOR SHAFT WALL</p> <p>PUBLIC SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>- 2" CMU WALL</p> <p>SHAFT SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N6)	<p>FURRED OUT ELEVATOR SHAFT WALL</p> <p>TENANT SIDE</p> <p>- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)</p> <p>- 3/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>- 2" CMU WALL</p> <p>SHAFT SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N7)	<p>ELEVATOR SHAFT WALL</p> <p>ELEVATOR SIDE</p> <p>- 2" CMU WALL</p> <p>ELEVATOR SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALLS WHERE SHOWN ON PLANS.</p>
(N8)	<p>STAIR SHAFT WALL</p> <p>PUBLIC SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 3/8" METAL STUD WALL WITH STUDS AT 16" O.C.</p> <p>- 2" CMU</p> <p>- 3/8" METAL STUD WALL WITH STUDS AT 16" O.C.</p> <p>- 5/8" GYP. BRD.</p> <p>STAIR SHAFT</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N9)	<p>STAIR SHAFT WALL</p> <p>TENANT SIDE</p> <p>- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)</p> <p>- 3/8" METAL STUD WALL WITH STUDS AT 16" O.C.</p> <p>- 2" CMU</p> <p>- 3/8" METAL STUD WALL WITH STUDS AT 16" O.C.</p> <p>- 5/8" GYP. BRD.</p> <p>STAIR SHAFT</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N10)	<p>SHAFT WALL</p> <p>TENANT SIDE</p> <p>- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)</p> <p>- 4" CMU METAL STUDS AT 16" O.C. WITH 1" GYP. LINER PANEL.</p> <p>SHAFT SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N11)	<p>SHAFT WALL</p> <p>PUBLIC SIDE</p> <p>- 5/8" GYP. BRD.</p> <p>- 4" CMU METAL STUDS AT 16" O.C. WITH 1" GYP. LINER PANEL.</p> <p>SHAFT SIDE</p> <p>WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.</p>
(N12)	<p>SHAFT WALL</p> <p>TENANT SIDE</p> <p>- 5/8" METAL STUDS AT 16" O.C. W/ACOUSTICAL BATT INSULATION</p> <p>TYF. AT ALL FUTURE TENANT BUILT OUT SPANDREL LOCATIONS, SETUP AND PREP FOR FUTURE GYP. BRD. FIN.</p>

GENERAL NOTES	
1.	ALL WALL TYPES ARE (N1) UNLESS NOTED OTHERWISE.
2.	ALL WALL TYPES ARE (N2) AT ALL NON-RATED TOILET/ PLUMBING CHASES, UNLESS NOTED OTHERWISE.
3.	ALL WALLS SCHEDULED TO RECEIVE EPOXY PAINT SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP BOARD UNLESS OTHERWISE NOTED - REFER TO FINISH SCHEDULE.
4.	ALL WALLS CARRYING PLUMBING FIXTURES SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP BOARD UNLESS OTHERWISE NOTED - REFER TO FINISH SCHEDULE.
5.	PROVIDE BLOCKING IN WALLS FOR OWNER PROVIDED EQUIPMENT AS SHOWN IN INTERIOR ELEVATIONS AND ENLARGED FLOOR PLANS.
6.	ELEVATOR HOISTWAY CONTRACTOR TO VERIFY HOISTWAY DIMENSIONS OF ELEVATOR MANUFACTURER SELECTED PRIOR TO CONSTRUCTION OF HOISTWAY WALLS AND FOUNDATION.
7.	SEE PLANS FOR RATED WALL REQUIREMENTS.

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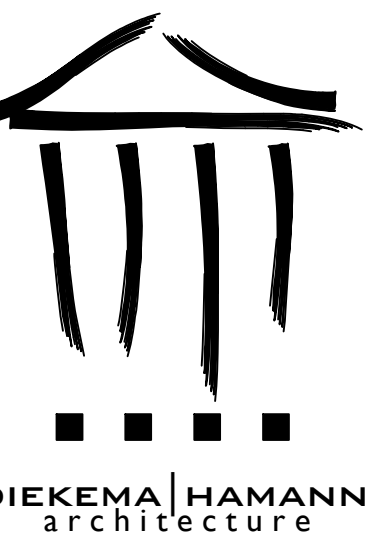
ISSUED  
APRIL 1, 2015

PROJECT NUMBER  
14094.00

SHEET TITLE  
SECOND FLOOR PLAN

SHEET NUMBER  
**A1.2**  
PUD SUBMITTAL

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### FLOOR PLAN LEGEND

- NEW NON-FIRED RATED WALL
- 1-HOUR FIRE RATED SEPARATION
- 2-HOUR FIRE RATED SEPARATION
- 1-HOUR SMOKE BARRIER - NFPA 101 - 8.3
- NEW DOOR

### WALL TYPES

(N1) TYP. WALL  
FIN. RM. SIDE  
- 5/8" GYP. BRD.  
- 3/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
- 5/8" GYP. BRD.  
FIN. RM. SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N2) PLUMBING / FURRING WALL  
FIN. ROOM SIDE  
- 5/8" GYP. BRD.  
- 3/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
SHAFT / BACK SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. MOISTURE RESISTANT FIRECORE GYP. BRD. IN NET LOCATIONS UNLESS OTHERWISE NOTED. SEE FINISH SCHEDULE.

(N2A) FURRING WALL (TENANT FINISH)  
FIN. ROOM SIDE  
- 5/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
SHAFT / BACK SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE.

(N3) TENANT SEPARATION WALL (RATED)  
PUBLIC SIDE  
- 5/8" GYP. BRD.  
- 3/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
- 5/8" GYP. BRD. FIRE TRIMMED (AT RATED WALLS ONLY)  
TENANT SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N3A) TENANT SEPARATION WALL (NOT RATED)  
PUBLIC SIDE  
- 5/8" GYP. BRD.  
- 3/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
TENANT SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO DECK ABOVE.

(N4) FURRED OUT ELEVATOR SHAFT WALL  
PUBLIC SIDE  
- 5/8" GYP. BRD.  
- 3/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
- 5/8" GYP. BRD. FIRE TRIMMED (AT RATED WALLS ONLY)  
SHAFT SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N5) FURRED OUT ELEVATOR SHAFT WALL  
TENANT SIDE  
- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)  
- 3/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
- 5/8" GYP. BRD. FIRE TRIMMED (AT RATED WALLS ONLY)  
SHAFT SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N6) ELEVATOR SHAFT WALL  
ELEVATOR SIDE  
- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)  
ELEVATOR SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N7) STAIR SHAFT WALL  
PUBLIC SIDE  
- 5/8" GYP. BRD.  
- 3/8" METAL STUD WITH STUDS AT 16" O.C.  
- 5/8" GYP. BRD. FIRE TRIMMED (AT RATED WALLS ONLY)  
- 5/8" METAL STUD WALL WITH STUDS AT 16" O.C.  
- 5/8" GYP. BRD.  
STAIR SHAFT  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N8) STAIR SHAFT WALL  
TENANT SIDE  
- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)  
- 3/8" METAL STUD WALL WITH STUDS AT 16" O.C.  
- 5/8" GYP. BRD. FIRE TRIMMED (AT RATED WALLS ONLY)  
- 5/8" METAL STUD WALL WITH STUDS AT 16" O.C.  
- 5/8" GYP. BRD.  
STAIR SHAFT  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

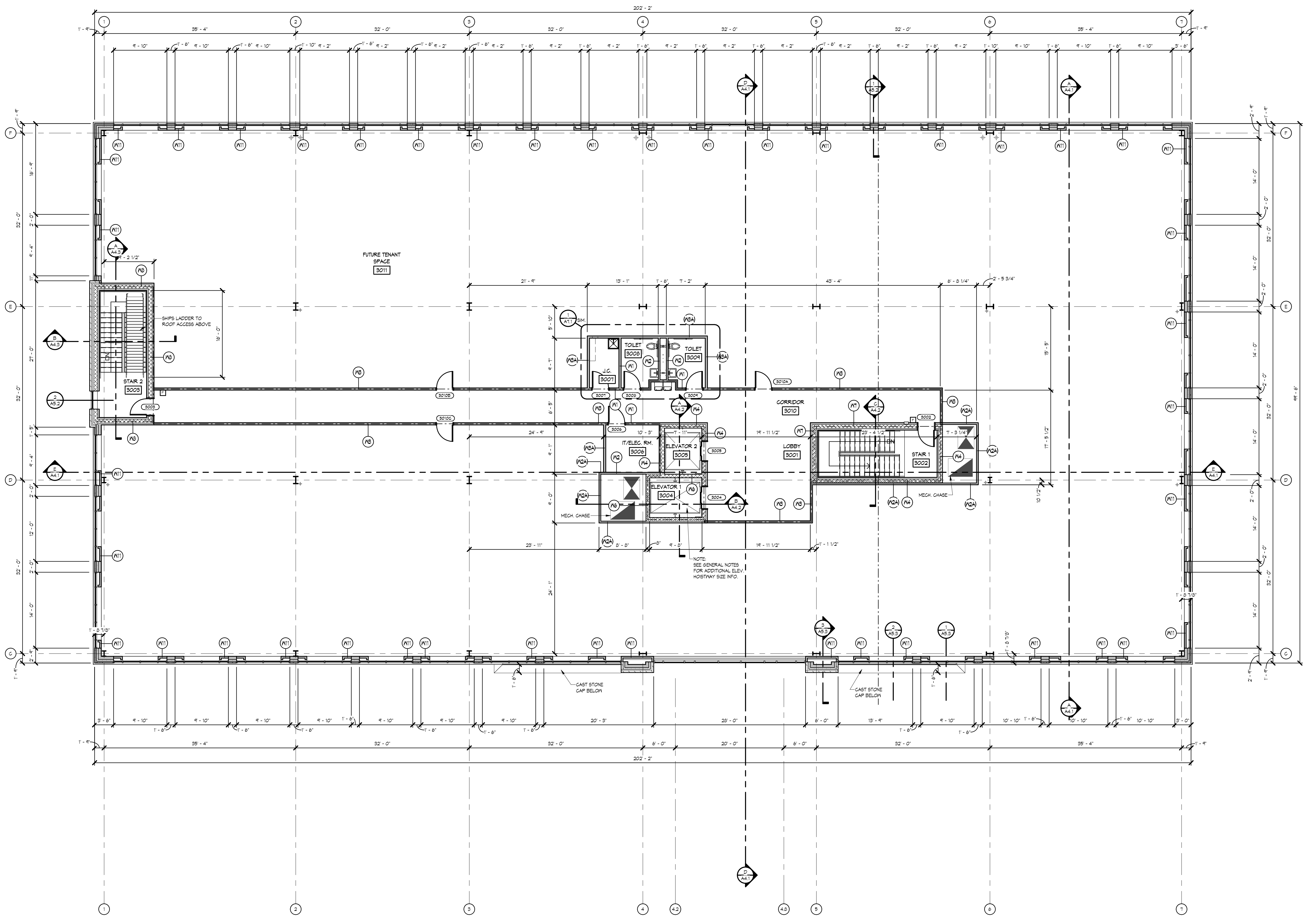
(N9) SHAFT WALL  
TENANT SIDE  
- 5/8" GYP. BRD. TAPE AND MUD (NO SANDING OR FINISHING)  
- 4" METAL STUDS AT 16" O.C. WITH 1" GYP. LINER PANEL.  
SHAFT SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

(N10) SHAFT WALL  
PUBLIC SIDE  
- 5/8" GYP. BRD.  
- 4" METAL STUDS AT 16" O.C. WITH 1" GYP. LINER PANEL.  
SHAFT SIDE  
WALL ASSEMBLY TO BE FULL HEIGHT TO ROOF DECK. PROVIDE RATED WALL ASSEMBLY WHERE SHOWN ON PLANS.

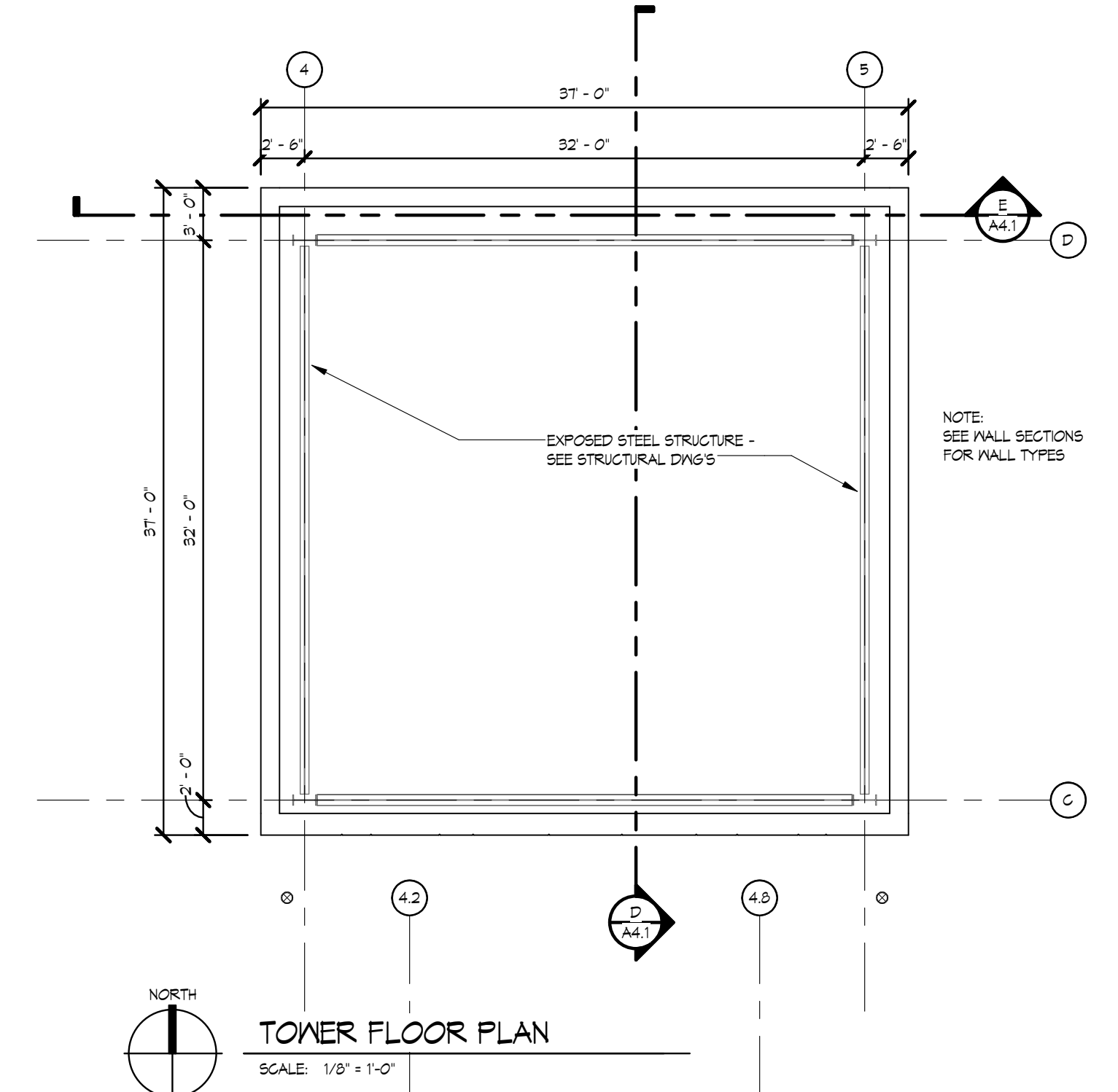
(N11) SHAFT WALL  
- 5/8" METAL STUDS AT 16" O.C. /ACOUSTICAL BATT INSULATION  
TYP. AT ALL FUTURE TENANT BUILT OUT SPANDREL LOCATIONS. SETUP AND PREP FOR FUTURE GYP. BRD. FIN.

### GENERAL NOTES

- ALL WALL TYPES ARE (N1) UNLESS NOTED OTHERWISE.
- ALL WALL TYPES ARE (N2) AT ALL NON-RATED TOILET/PLUMBING CHASES, UNLESS NOTED OTHERWISE.
- ALL WALLS SCHEDULED TO RECEIVE EPOXY PAINT SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP. BOARD UNLESS OTHERWISE NOTED - REFER TO FINISH SCHEDULE.
- ALL WALLS CARRYING PLUMBING FIXTURES SHALL BE 5/8" MOISTURE RESISTANT FIRECORE GYP. BOARD UNLESS OTHERWISE NOTED - REFER TO FINISH SCHEDULE.
- PROVIDE BLOCKS IN WALLS FOR OWNER PROVIDED EQUIPMENT AS SHOWN IN INTERIOR ELEVATIONS AND ENLARGED FLOOR PLANS.
- ELEVATOR HOISTWAY CONTRACTOR TO VERIFY HOISTWAY DIMENSIONS OF ELEVATOR MANUFACTURER SELECTED PRIOR TO CONSTRUCTION OF HOISTWAY WALLS AND FOUNDATION.
- SEE PLANS FOR RATED WALL REQUIREMENTS



**THIRD FLOOR PLAN**  
SCALE: 1/8" = 1'-0"



ISSUED: APRIL 1, 2015  
REVISIONS:

PROJECT NUMBER: 14094.00

SHEET TITLE: THIRD FLOOR PLAN



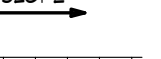
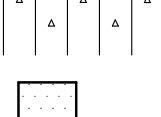
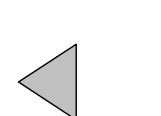
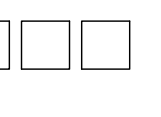
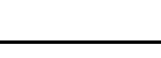
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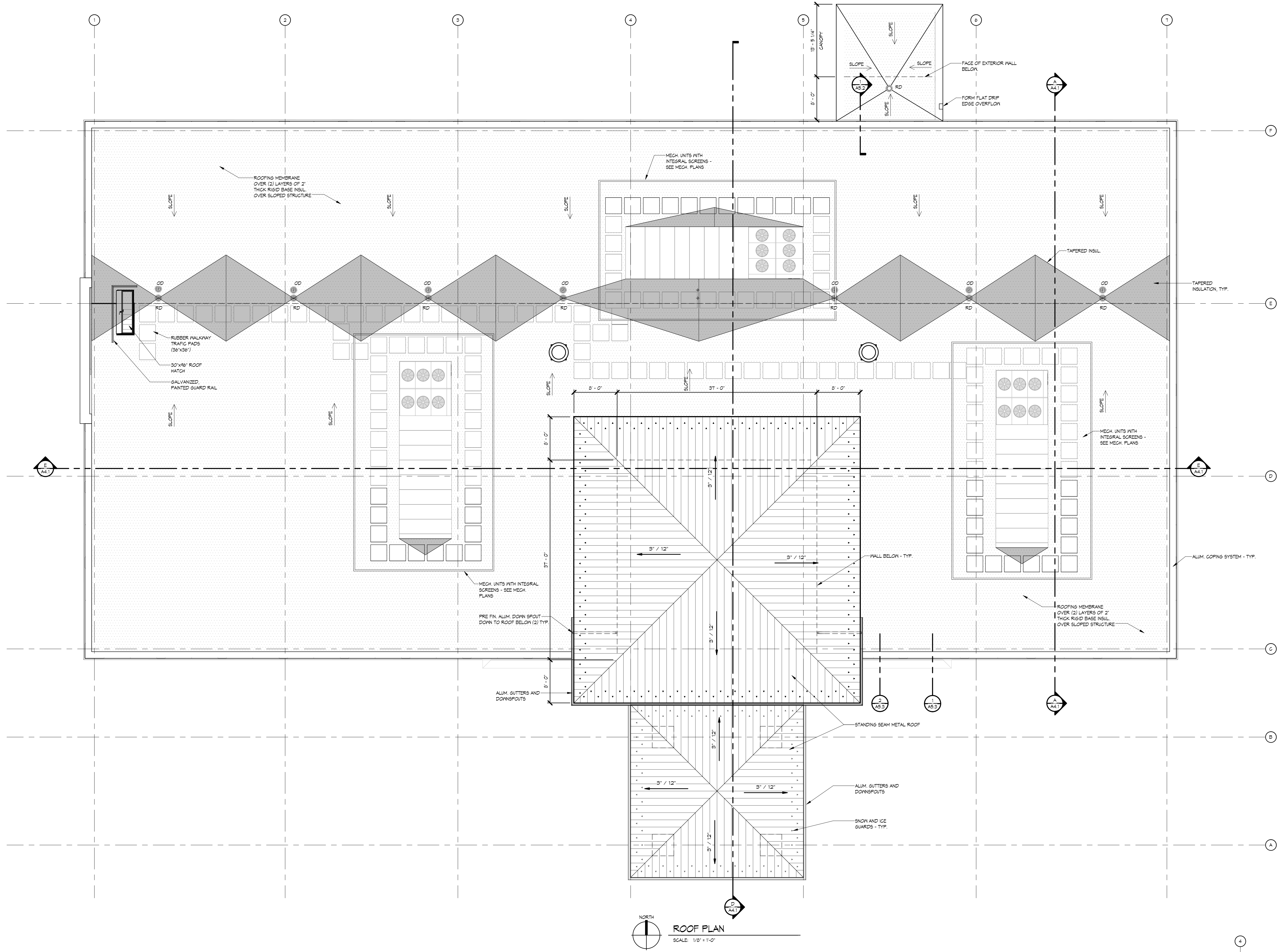
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### ROOF PLAN LEGEND

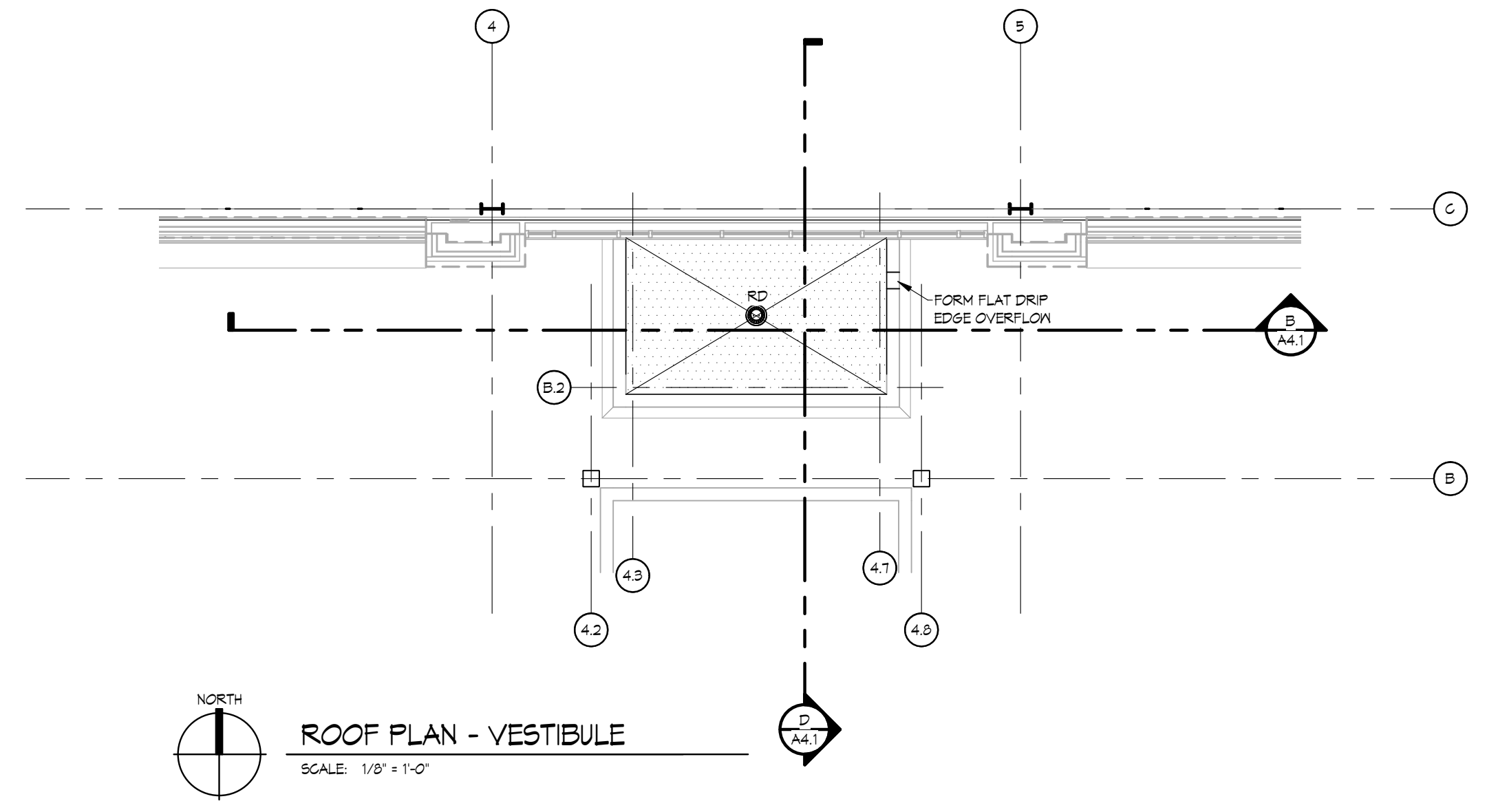
-  ROOF DRAIN WITH OVERFLOW
-  EXISTING EXHAUST FAN (E.F.) OR RELIEF VENT (R.V.) IN ROOF AREA
-  INDICATES ROOF PITCH
-  STANDING SEAM METAL ROOF WITH ICE AND SNOW GUARDS
-  TYPICAL ROOF IS FULLY ADHERED OR MECHANICALLY FASTENED SINGLE-PLY MEMBRANE ROOFING ON RIGID INSULATION ON METAL DECK.
-  AREAS OF TAPERED ROOF - TAPERED ROOF INSULATION
-  RUBBER MAT/WAY PADS ADHERE PADS TO ROOF MEMBRANE

### GENERAL NOTES - ROOF PLAN

1. SEE MECHANICAL DRAWINGS FOR LOCATIONS OF PLUMBING VENTS FLASH AS SPECIFIED.
2. SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL OPENINGS, IF ANY, IN ROOFS.
3. TYPICAL ROOF IS SINGLE-PLY MEMBRANE ROOFING ON RIGID INSULATION ON METAL DECK. (PROVIDE TAPERED INSULATION TO CREATE SLOPES TO DRAINS)
4. TAPERED INSULATION LAYOUTS ARE SCHEMATIC ONLY. FINAL LAYOUT FOR THE PROPOSED AREA SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. MINIMUM 1/4" PER FOOT SLOPE AT ALL NON-LOW SLOPE ROOF AREAS.

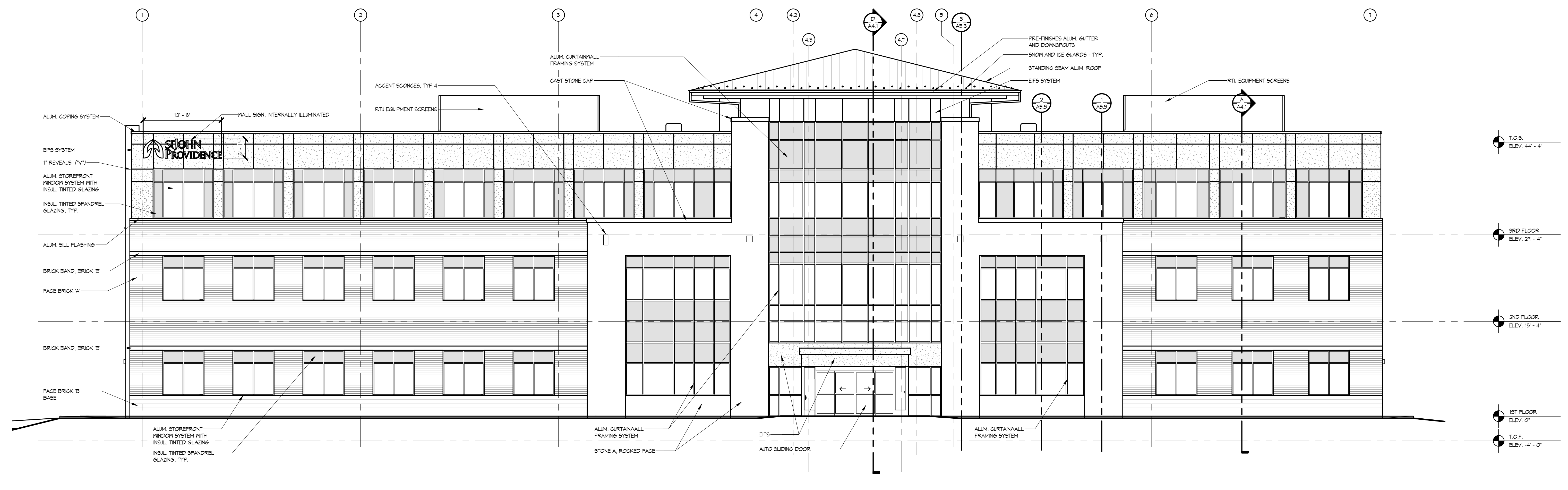


**ROOF PLAN**  
SCALE: 1/8" = 1'-0"

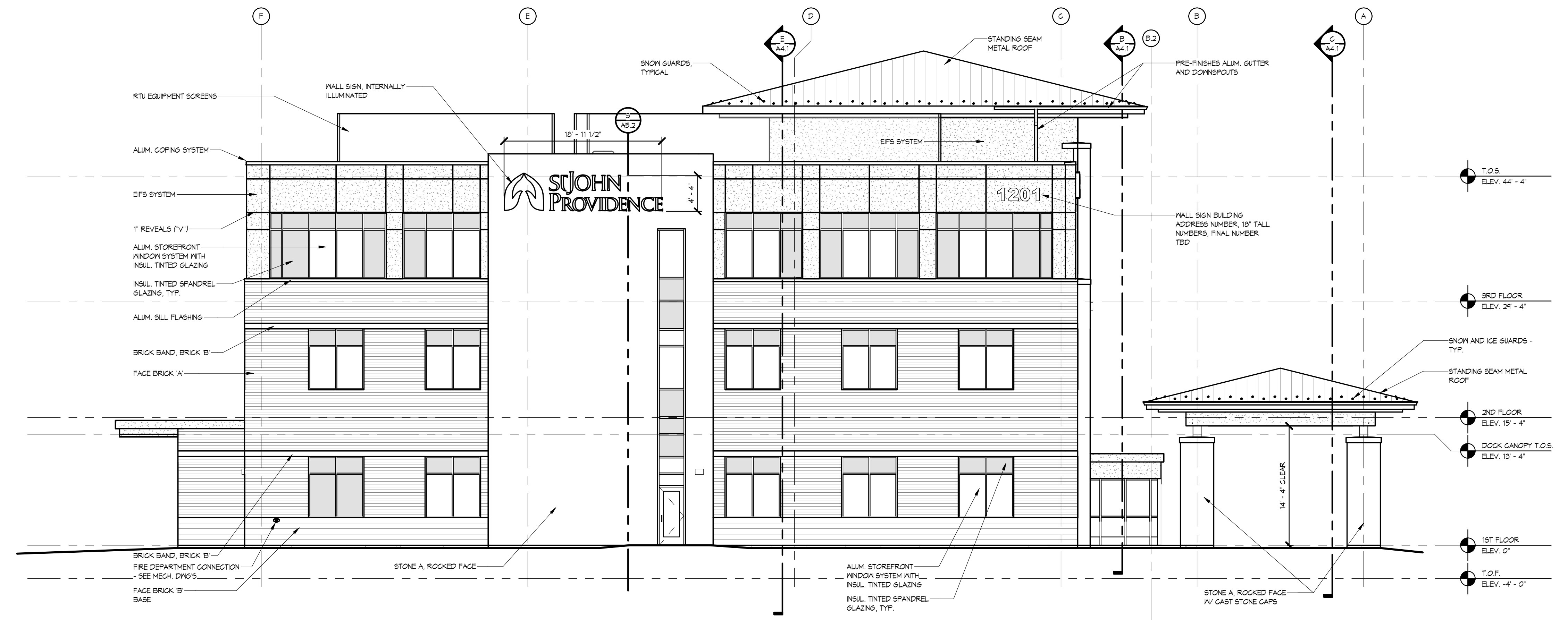


**ROOF PLAN - VESTIBULE**  
SCALE: 1/8" = 1'-0"





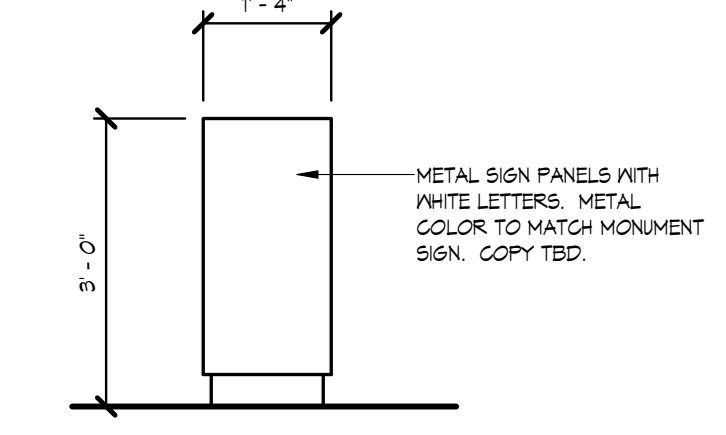
**SOUTH ELEVATION**  
SCALE: 1/8" = 1'-0"



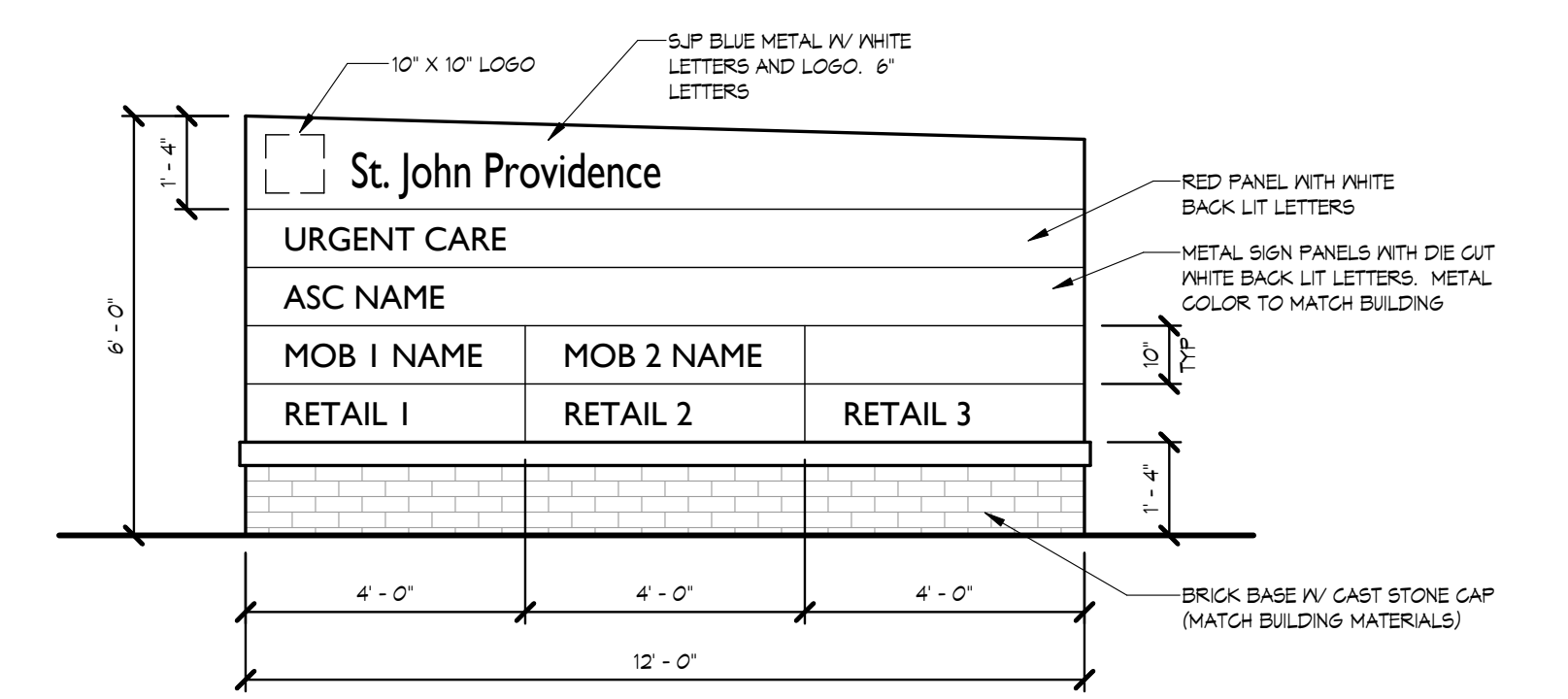
**WEST ELEVATION**  
SCALE: 1/8" = 1'-0"

	FACADE SUMMARY			
	TOTAL EIFS	TOTAL FACADE	TOTAL WINDOW AREA	PERCENTAGE OF EIFS
WEST FACADE	783.00	5,350.00	990.00	18%
SOUTH FACADE	1,353.00	9,940.00	3,930.00	23%
EAST FACADE	968.00	5,257.00	852.00	22%
NORTH FACADE	1,649.00	9,940.00	2,940.00	24%
<b>TOTAL</b>	<b>4,753.00</b>	<b>30,487.00</b>	<b>8,712.00</b>	<b>22% &lt; 25%</b>

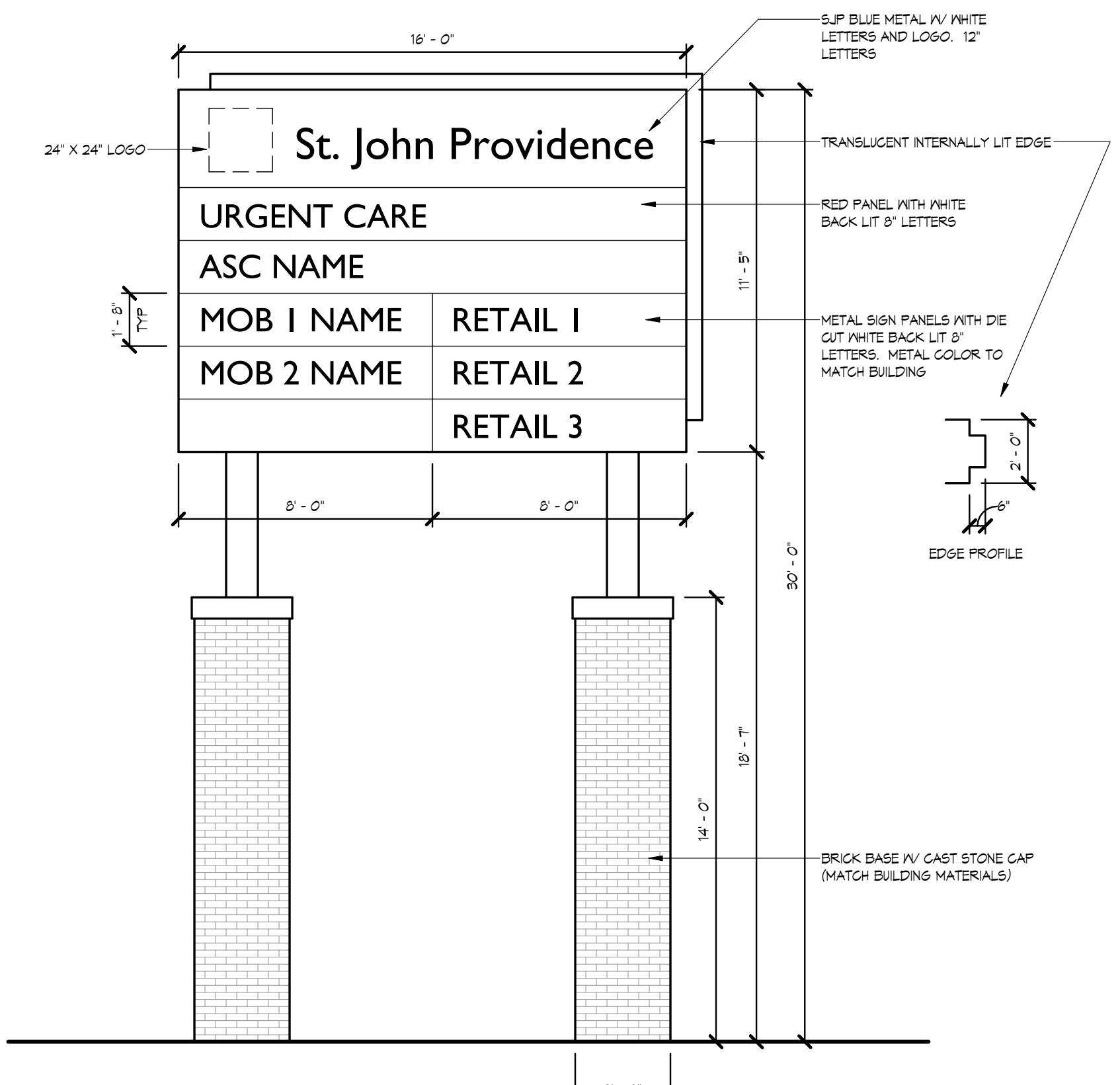
NOTE:  
TOTAL EIFS / (TOTAL FACADE - TOTAL WINDOW AREA) = PERCENTAGE OF EIFS



**3 DIRECTIONAL SITE SIGN (TYP 4)**  
SCALE: 1/2" = 1'-0"



**2 MONUMENT SIGN ELEVATION**  
SCALE: 3/8" = 1'-0"



**1 POST SIGN ELEVATION**  
SCALE: 1/4" = 1'-0"

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ISSUED: APRIL 23, 2015

REVISIONS:

PROJECT NUMBER:  
14094.00

SHEET TITLE:  
EXTERIOR ELEVATIONS

SHEET NUMBER:  
**A3.1**

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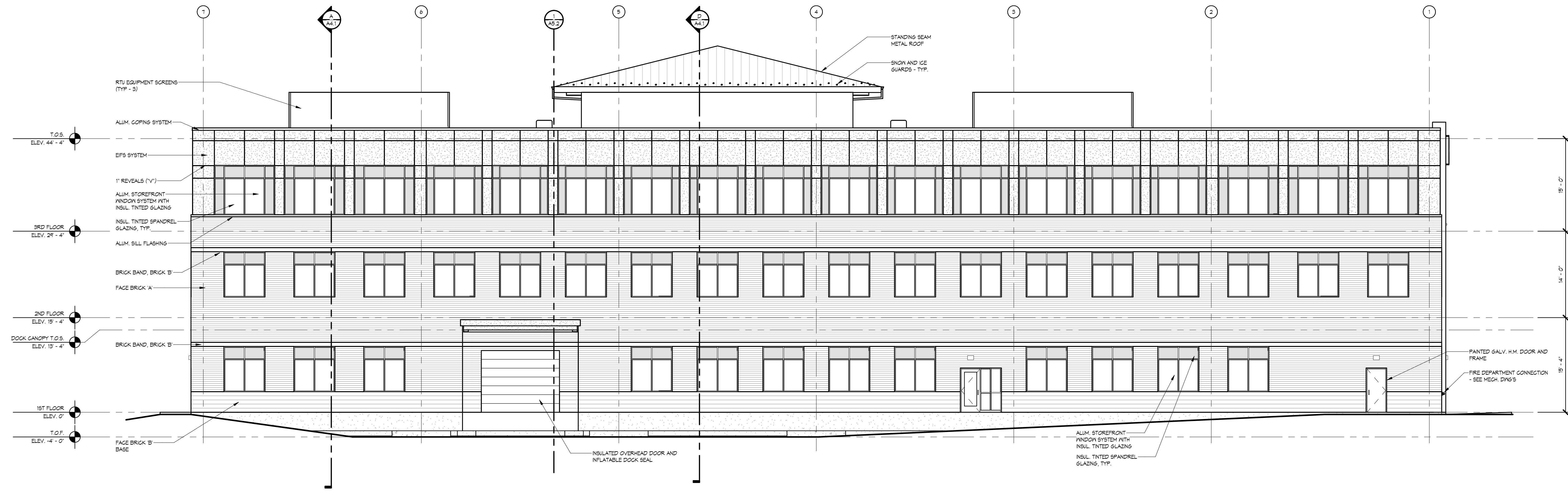




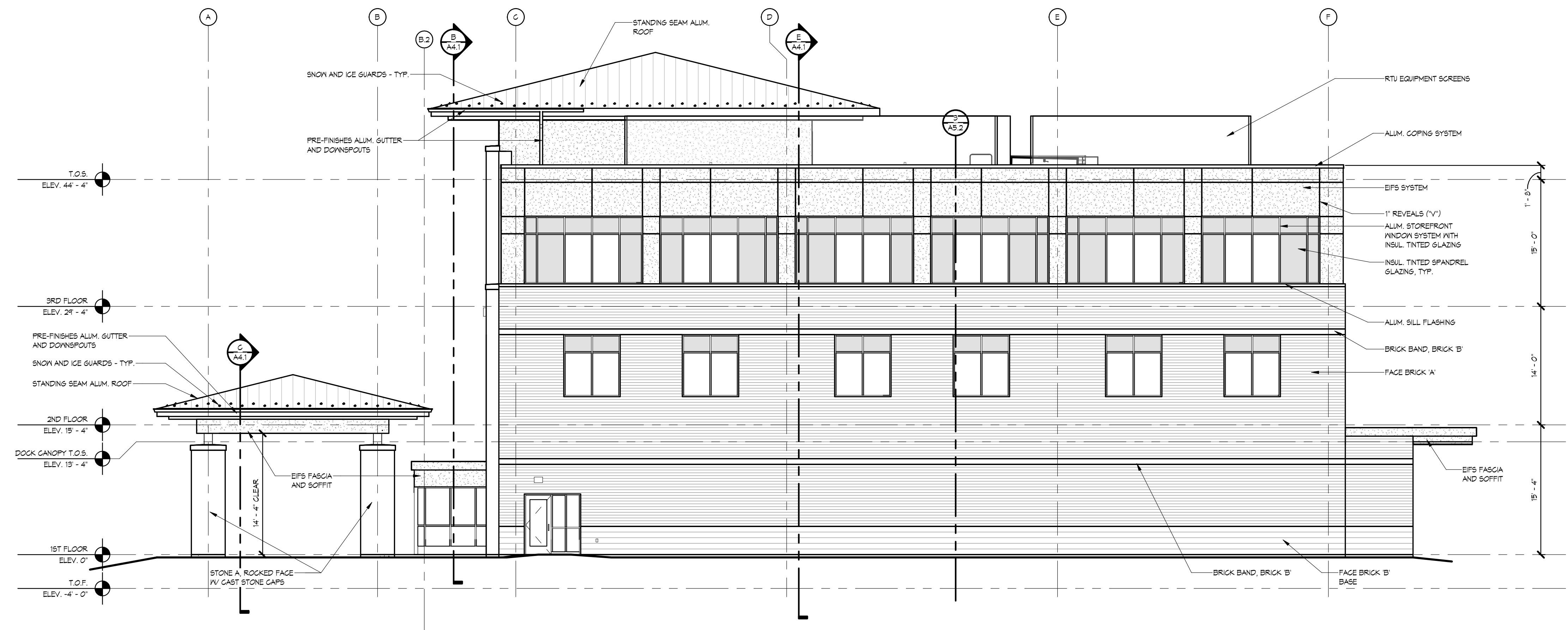
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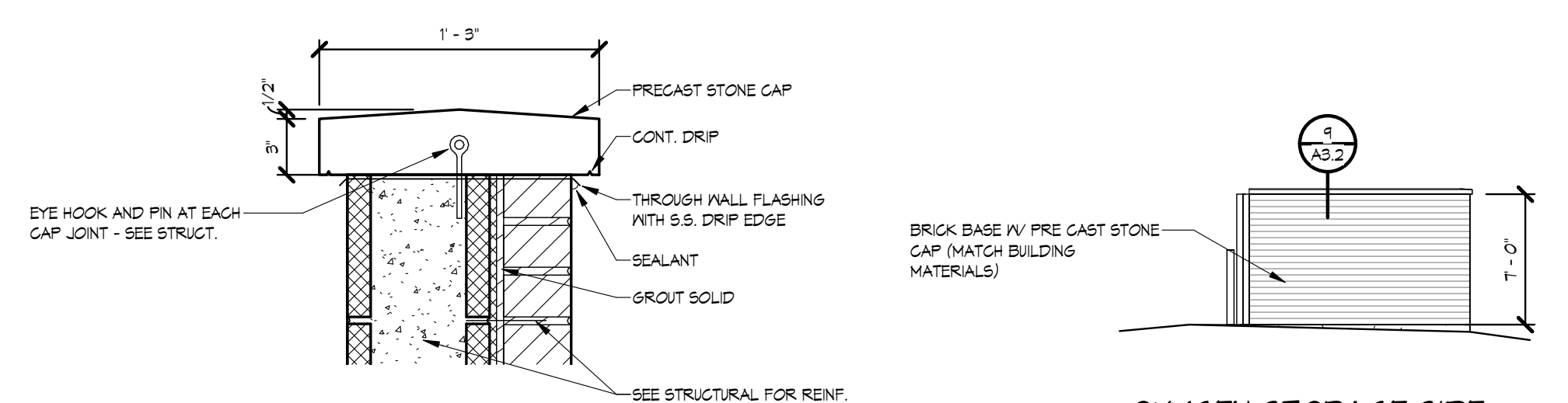
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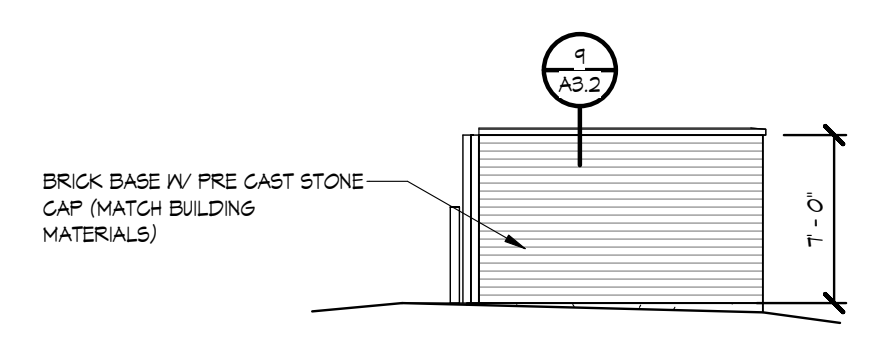
NORTH ELEVATION  
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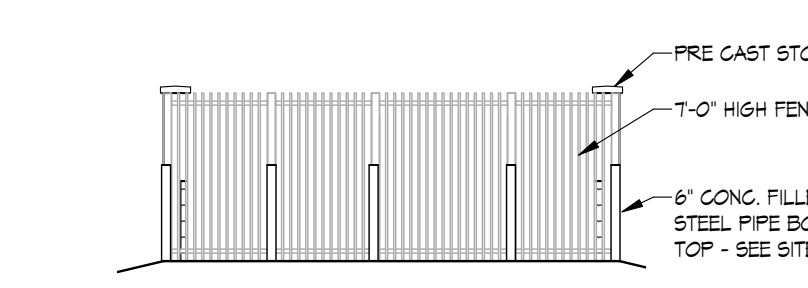
EAST ELEVATION  
SCALE: 1/8" = 1'-0"



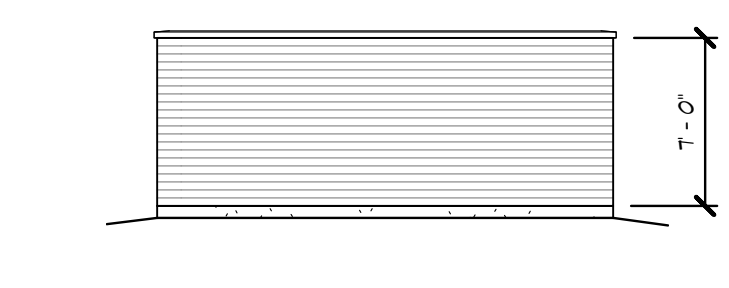
1 TOP OF WALL DETAIL  
AS.2 SCALE: 1 1/2" = 1'-0"



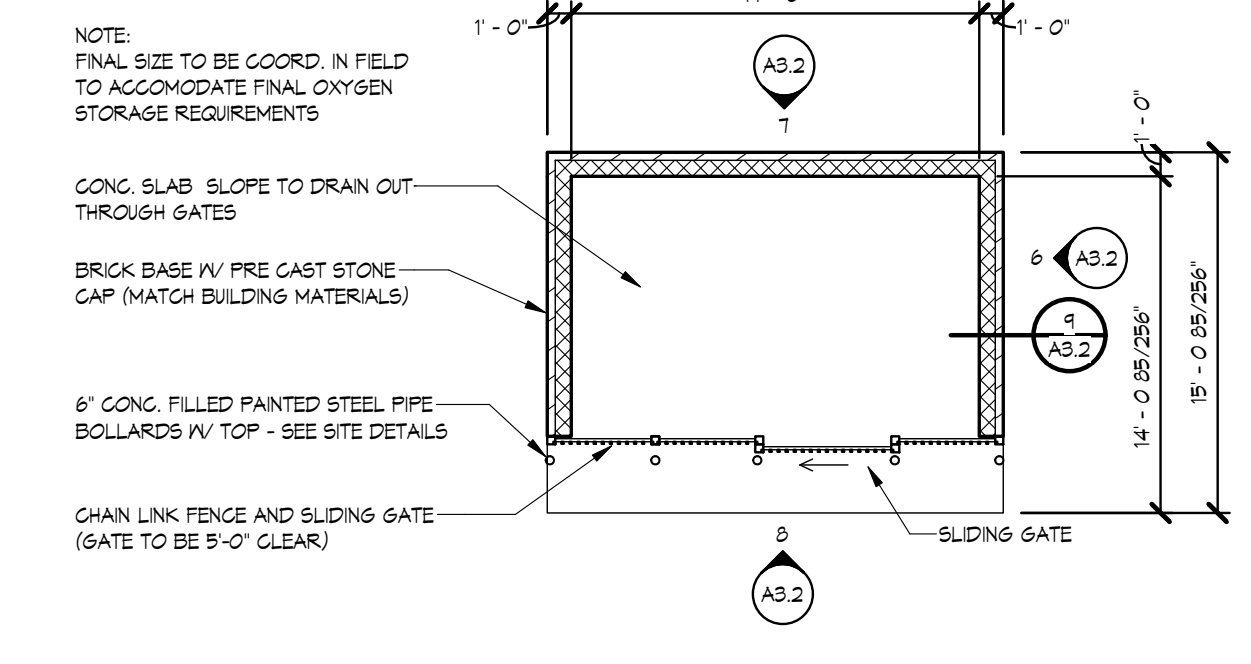
6 OXYGEN STORAGE SIDE ELEVATION  
AS.2 SCALE: 1/8" = 1'-0"



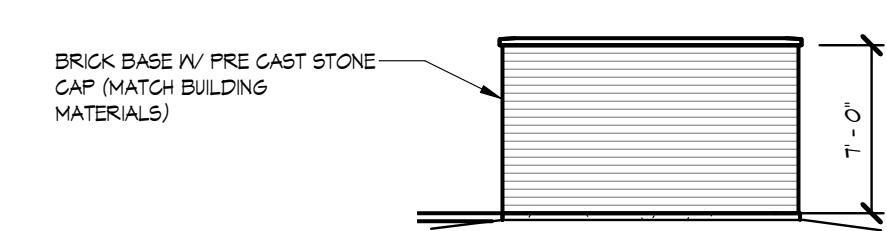
8 OXYGEN STORAGE FRONT ELEVATION  
AS.2 SCALE: 1/8" = 1'-0"



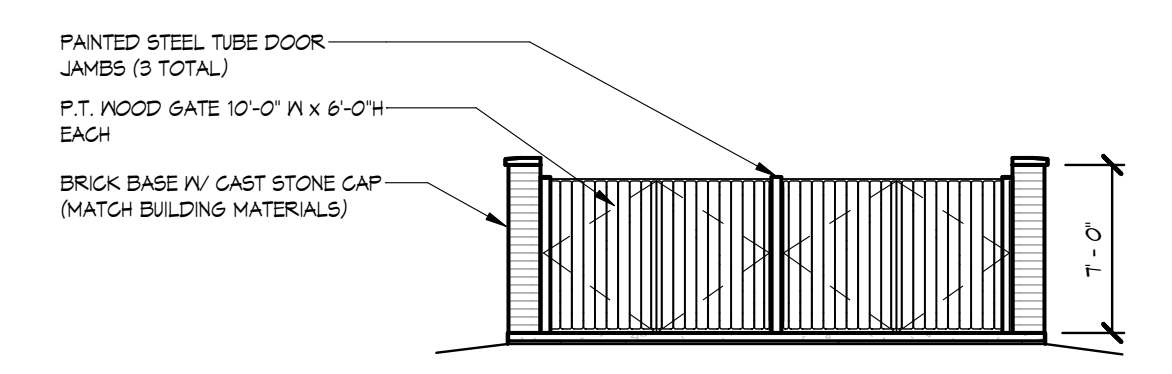
7 OXYGEN STORAGE BACK ELEVATION  
AS.2 SCALE: 1/8" = 1'-0"



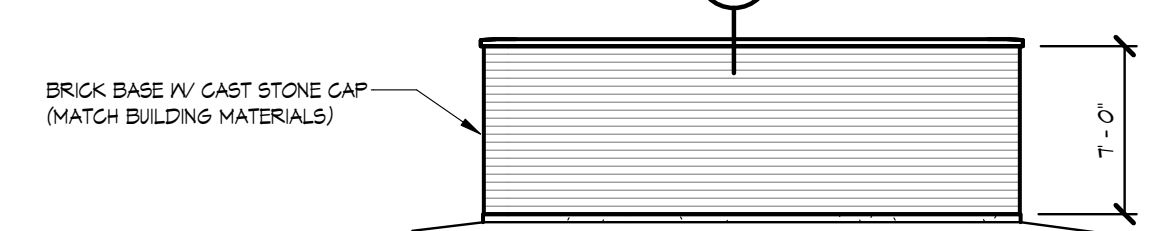
5 OXYGEN STORAGE ENCLOSURE  
SCALE: 1/8" = 1'-0"



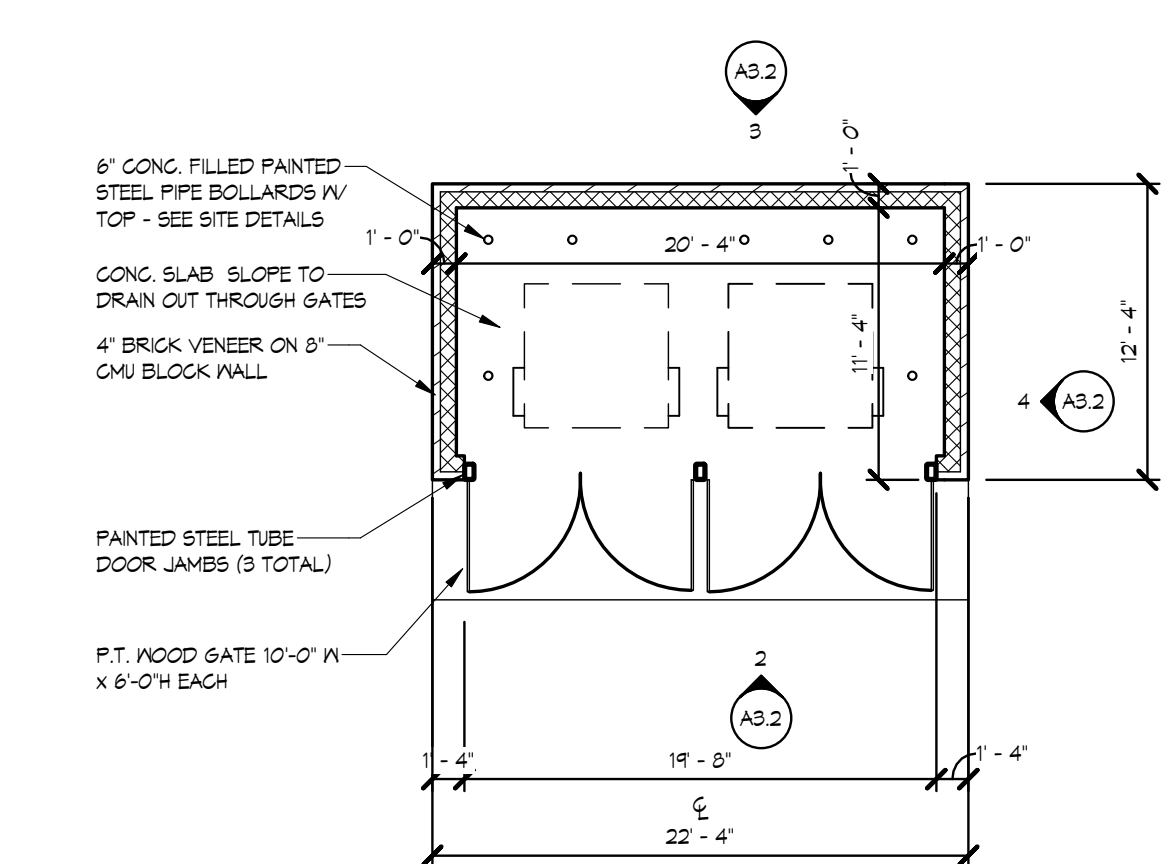
4 SIDE ELEVATION  
AS.2 SCALE: 1/8" = 1'-0"



2 FRONT ELEVATION  
AS.2 SCALE: 1/8" = 1'-0"



3 BACK ELEVATION  
AS.2 SCALE: 1/8" = 1'-0"



4 DUMPSTER ENCLOSURE PLAN  
SCALE: 1/8" = 1'-0"

LIVINGSTON AMBULATORY FACILITY  
FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS  
1701 S. LATSON ROAD  
GENOA TOWNSHIP, MI 48843

ISSUED: APRIL 23, 2015

REVISIONS:

PROJECT NUMBER:  
14094.00

SHEET TITLE:  
EXTERIOR ELEVATIONS

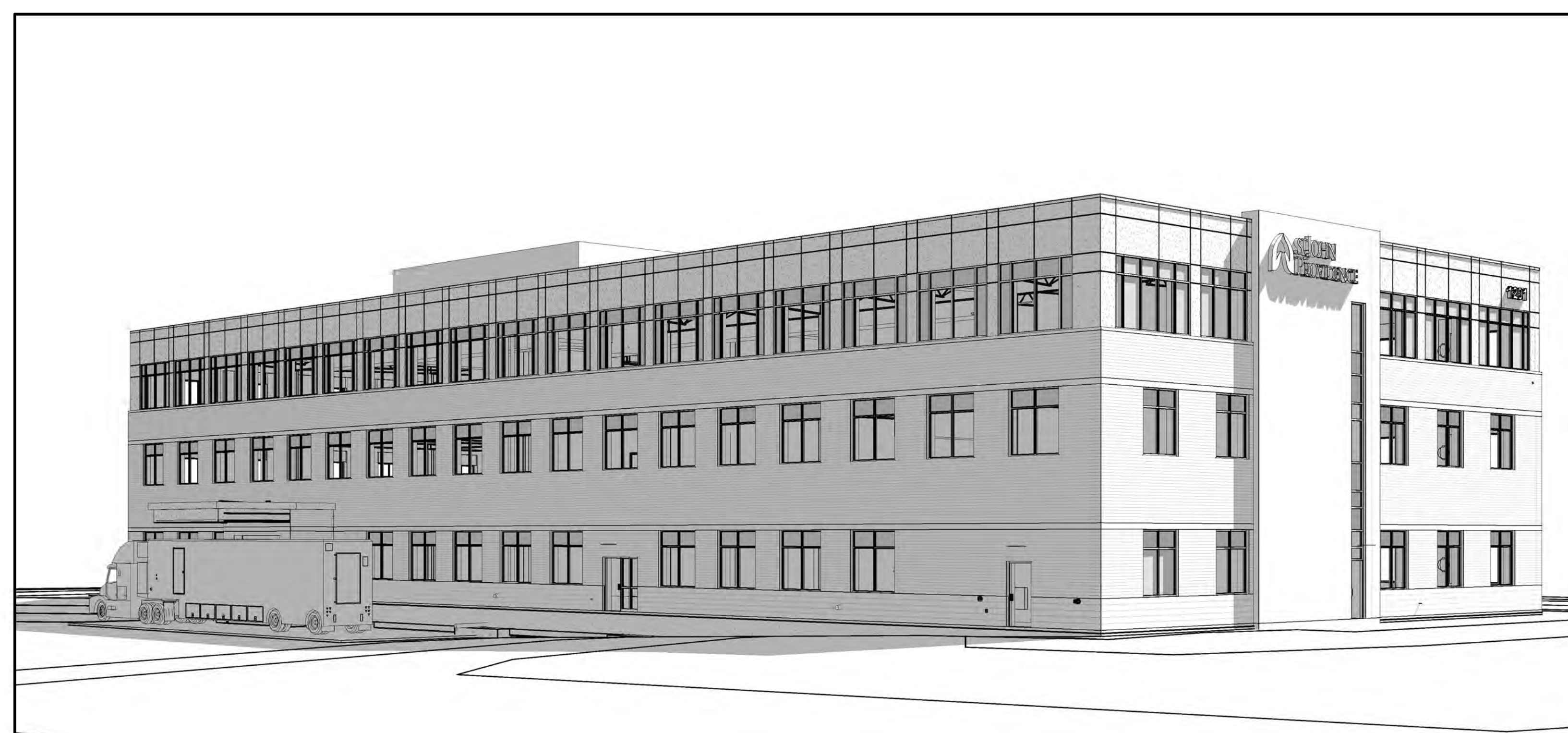
SHEET NUMBER:  
AS.2  
PUD SUBMITTAL

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3D VIEW - BIRDS EYE LOOKING NORTH EAST



3D VIEW - LOOKING SOUTH EAST



3D VIEW - LOOKING NORTH EAST



3D VIEW - LOOKING NORTH WEST



**DIEKEMA | HAMANN**  
architecture  
612 South Park Street  
Kalamazoo, Michigan 49007  
100 Grandville SW  
Grand Rapids, Michigan 49503  
TL 269.373.1108  
FX 269.373.1186

PERMANENTLY NOT  
FOR CONSTRUCTION

LIVINGSTON AMBULATORY FACILITY  
**FRAUENSHUH HEALTHCARE REAL ESTATE SOLUTIONS**  
1701 S. LATSON ROAD  
GENOA TOWNSHIP, MI 48843

ISSUED: APRIL 1, 2015

REVISIONS:

PROJECT NUMBER:

14094.00

SHEET TITLE:

EXTERIOR 3D VIEWS

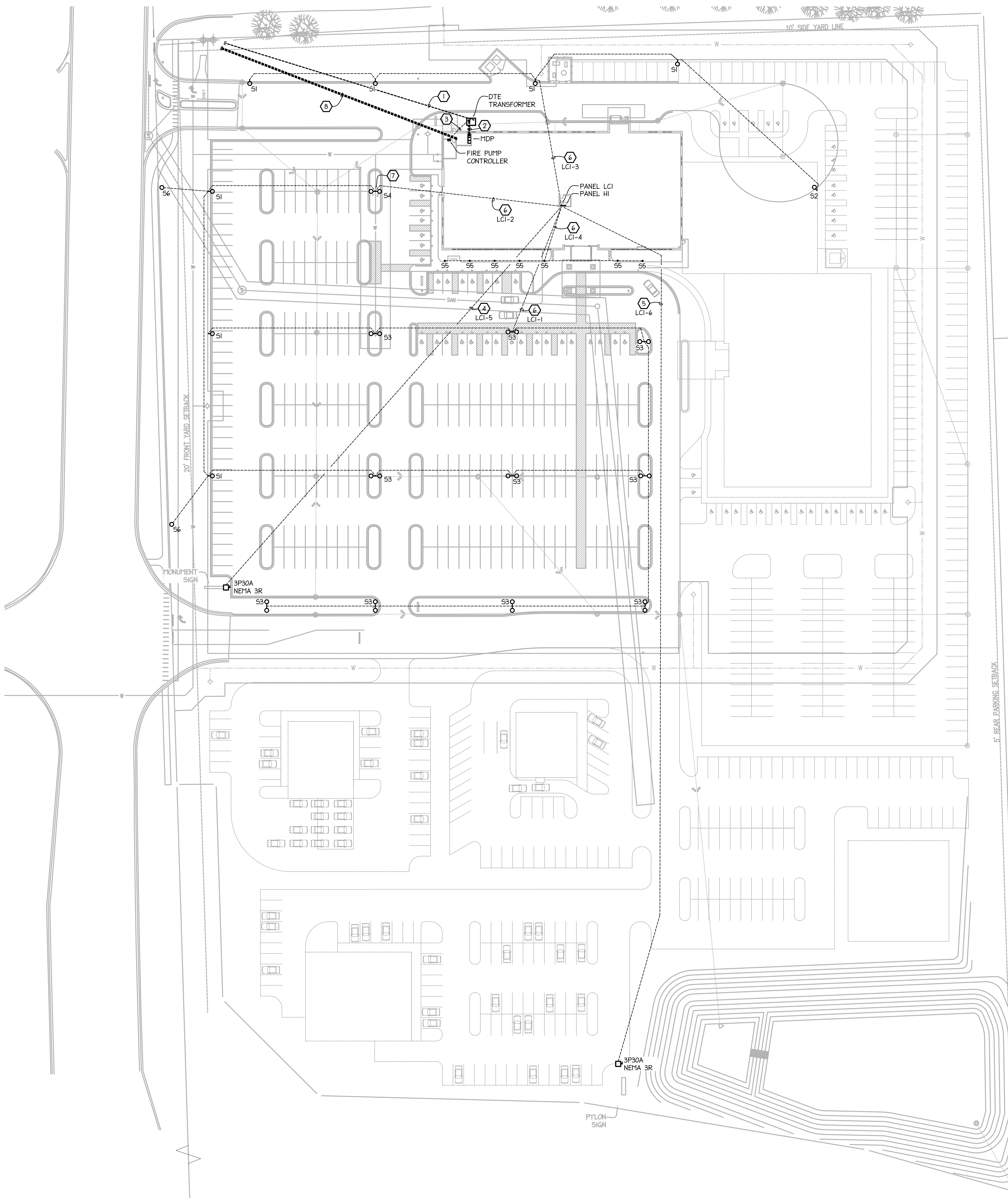
SHEET NUMBER:

**A3.3**

PLD SUBMITTAL

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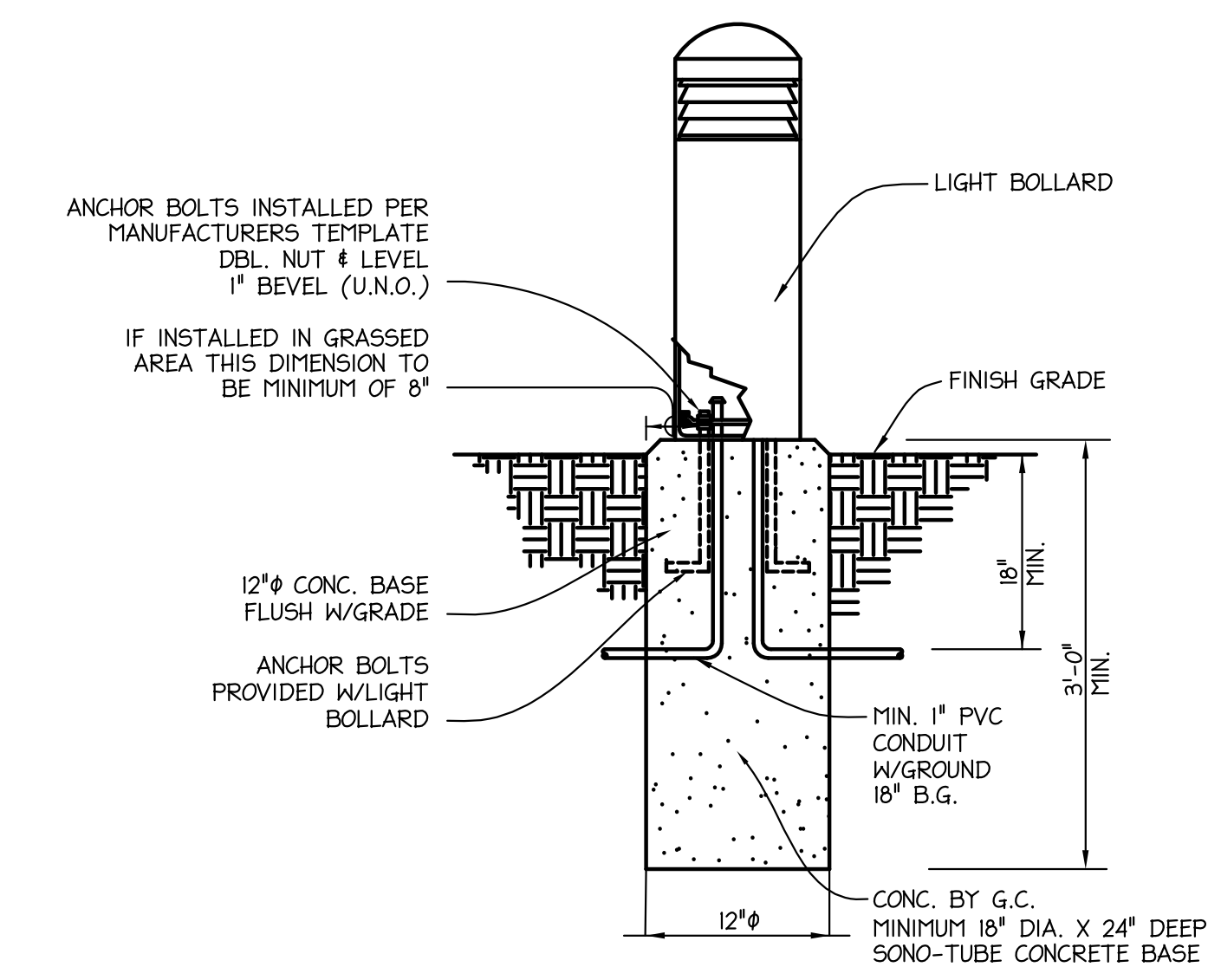
NORTH  
**ELECTRICAL SITE PLAN**  
 SCALE: 1" = 40'-0"

TAG	DESCRIPTION	MANUFACTURER	CATALOG NUMBER	LAMP DATA				NOTES
				TYPE	QTY	WATTS	INPUT VOLTS	
S1	LED AREA LUMINAIRE - SINGLE UNIT	LITHONIA	DSXI LED 40C 700 40K T3M MVOLT SPA HS DBLXD	LED	1	89	277	1,3
S2	LED AREA LUMINAIRE - SINGLE UNIT	LITHONIA	DSXI LED 40C 700 40K T3M MVOLT SPA HS DBLXD	LED	1	89	277	1,3
S3	LED AREA LUMINAIRE - 2 AT 180°	LITHONIA	DSXI LED 40C 700 40K T3M MVOLT SPA HS DBLXD	LED	2	89	178	2,3
S4	LED AREA LUMINAIRE - 2 AT 180°	LITHONIA	FIXTURE 1 - DSXI LED 40C 700 40K T3M MVOLT SPA HS DBLXD FIXTURE 2 - DSXI LED 40C 700 40K T3M MVOLT SPA HS DBLXD	LED	2	89	178	2,3
S5	LED BOLLARD	LITHONIA	DSXB LED 12C 350 40K ASY MVOLT DBLXD	LED	1	16	277	4
S6	LED DECORATIVE ACORN	ANTIQUE STREET LAMPS	AL25 A 32LED 525MA 4K ACT VOLT MT NS DBL	LED	1	77	277	5

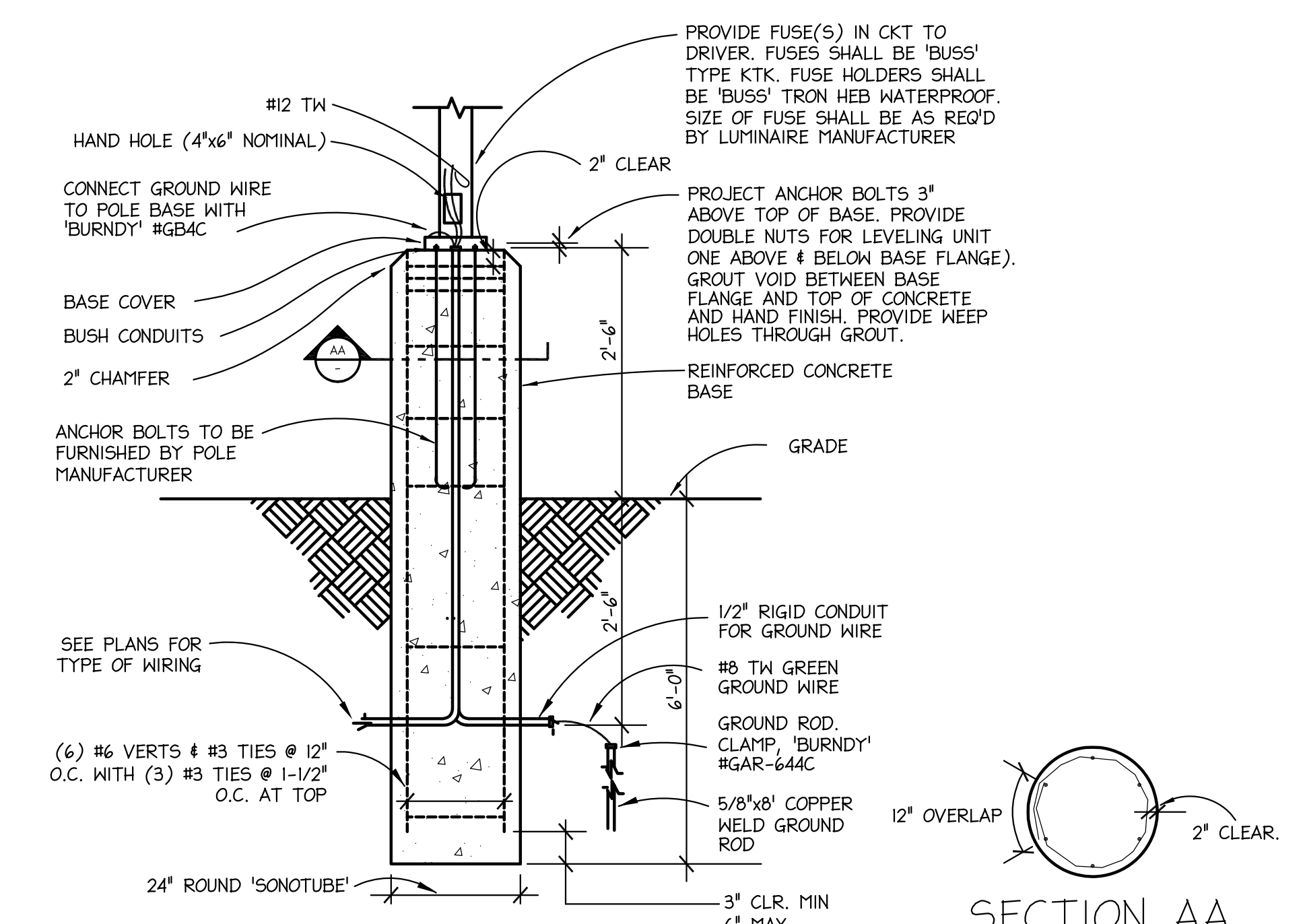
- NOTES:**
- NOMINAL MOUNTING HEIGHT OF 20'. POLE: LITHONIA 555 20 5G D198AS DBL.
  - NOMINAL MOUNTING HEIGHT OF 20'. POLE: LITHONIA 555 20 5G D128AS DBL.
  - REFER TO DETAIL 01/E01 FOR POLE BASE DETAIL.
  - REFER TO DETAIL 02/E01 FOR BOLLARD BASE DETAIL.
  - NOMINAL MOUNTING HEIGHT OF 10'. POLE: ANTIQUE STREET LAMPS PX PTFB18 10 F4

**ELECTRICAL SITE PLAN NOTES:**

- GENERAL NOTES:**
- COORDINATE EXACT LOCATION OF ISLANDS AND PARKING SPACE WITH CIVIL TRADES. POLES SHALL BE CENTERED IN ISLANDS AND UNDER NO CIRCUMSTANCES, SHALL NOT INFRINGE ON PARKING SPACES.
  - BRANCH CIRCUIT FOR SITE LIGHTING SHALL BE (2)#10+RGND IN MIN 1" CONDUIT.
  - REFER TO LUMINAIRE SCHEDULE - FIXTURE 1 SHALL BE POSITIONED TO THE WEST AND FIXTURE 2 SHALL BE POSITIONED TO THE EAST.
  - PROVIDE (4)4" AND (1)2" DIRECT BURIED SCHEDULE 40 PVC FROM MAIN ELECTRICAL ROOM TO THE PROPERTY LINE FOR TELECOMMUNICATIONS AND CABLE TV SERVICE.
- KEYED NOTES:**
- PROVIDE UNDERGROUND CONDUIT PER UTILITY'S REQUIREMENTS FOR UNDERGROUND PRIMARY FEED TO PADMOUNT TRANSFORMER.
  - SERVICE ENTRANCE CONDUCTORS TO THE MAIN DISTRIBUTION PANEL (MDP). REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR SIZING.
  - SERVICE ENTRANCE CONDUCTORS TO THE FIRE PUMP CONTROLLER. REFER TO ELECTRICAL ONE-LINE DIAGRAM FOR SIZING.
  - POWER FEED TO MONUMENT SIGN. BRANCH CIRCUIT FOR SITE LIGHTING SHALL BE (2)#8+RGND IN MIN 1-1/4" CONDUIT. BRANCH CIRCUIT SHALL BE METERED.
  - POWER FEED TO PYLON SIGN. BRANCH CIRCUIT FOR SITE LIGHTING SHALL BE (2)#8+RGND IN MIN 1-1/4" CONDUIT. BRANCH CIRCUIT SHALL BE METERED.



**02**  
**E0.1**  
 LIGHT BOLLARD  
 INSTALLATION DETAIL  
 NOT TO SCALE



**01**  
**E0.1**  
 SITE LIGHT  
 RAISED POLE BASE DETAIL  
 NOT TO SCALE

- GENERAL NOTES:**
- FOR INSTALLATION IN ALL LOCATIONS ADJACENT TO PARKING SPACES, DRIVEWAYS, ROADS, OR WHERE SUSCEPTIBLE TO VEHICLE TRAFFIC.

**PRELIMINARY**  
 NOT FOR CONSTRUCTION

ISSUED: APRIL 23, 2015

REVISIONS:

PROJECT NUMBER:  
 14094.00

SHEET TITLE:  
 ELECTRICAL SITE PLAN

SHEET NUMBER:  
**E0.1**  
 PUD SUBMITTAL

**Proposed Site Luminaire Package at:**

**Livingston Ambulatory Facility**  
Howell, Michigan

4/1/2015  
DHAE Project # 14094.00

**PREPARED BY: Brent Meyer**



DIEKEMA | HAMANN  
architecture+engineering



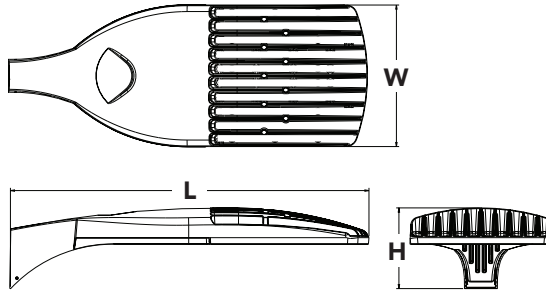
# D-Series Size 1 LED Area Luminaire



d<sup>series</sup>

## Specifications

<b>EPA:</b>	1.2 ft <sup>2</sup> (0.11 m <sup>2</sup> )
<b>Length:</b>	33" (83.8 cm)
<b>Width:</b>	13" (33.0 cm)
<b>Height:</b>	7-1/2" (19.0 cm)
<b>Weight (max):</b>	27 lbs (12.2 kg)



Catalog Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

## Introduction

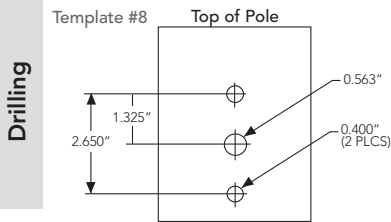
The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment.

The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing 100 – 400W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

## Ordering Information

EXAMPLE: DSX1 LED 60C 1000 40K T3M MVOLT SPA DDBXD

Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Mounting	Control options	Other options	Finish (required)
DSX1 LED	<b>Forward optics</b>	530 530 mA	30K 3000 K (80 CRI min.)	T1S Type I short	MVOLT <sup>3</sup>	<b>Shipped included</b>	<b>Shipped installed</b>	<b>Shipped installed</b>	DDBXD Dark bronze
	30C 30 LEDs (one engine)	700 700 mA	40K 4000 K (70 CRI min.)	T2S Type II short	120 <sup>3</sup>	SPA Square pole mounting	PER NEMA twist-lock receptacle only (no controls) <sup>7</sup>	HS House-side shield <sup>14</sup>	DBLXD Black
	40C 40 LEDs (two engines)	1000 1000 mA (1 A)	50K 5000 K (70 CRI)	T2M Type II medium	208 <sup>3</sup>	RPA Round pole mounting	DMG 0-10V dimming driver (no controls) <sup>8</sup>	WTB Utility terminal block <sup>15</sup>	DNAXD Natural aluminum
	60C 60 LEDs (two engines)		AMBPC Amber phosphor converted <sup>2</sup>	T3S Type III short	240 <sup>3</sup>	WBA Wall bracket	DCR Dimmable and controllable via ROAM <sup>9</sup> (no controls) <sup>9</sup>	SF Single fuse (120, 277, 347V) <sup>16</sup>	DWHXD White
	<b>Rotated optics<sup>1</sup></b>			T3M Type III medium	277 <sup>3</sup>	SPUMBA Square pole universal mounting adaptor <sup>5</sup>	DS Dual switching <sup>10,11</sup>	DF Double fuse (208, 240, 480V) <sup>16</sup>	DDBTXD Textured dark bronze
	60C 60 LEDs (two engines)			T4M Type IV medium	347 <sup>4</sup>	RPUMBA Round pole universal mounting adaptor <sup>5</sup>	PIR Motion sensor, 8-15' mounting height <sup>12</sup>	L90 Left rotated optics <sup>17</sup>	DBLBXD Textured black
				TFTM Forward throw medium	480 <sup>4</sup>	<b>Shipped separately<sup>6</sup></b>	PIRH Motion sensor, 15-30' mounting height <sup>12</sup>	R90 Right rotated optics <sup>17</sup>	DNATXD Textured natural aluminum
				T5VS Type V very short		KMA8 Mast arm mounting bracket adaptor (specify finish)	BL30 Bi-level switched dimming, 30% <sup>11,13</sup>		DWHGXD Textured white
				T5S Type V short			BL50 Bi-level switched dimming, 50% <sup>11,13</sup>		
				T5M Type V medium					
				T5W Type V wide					



<b>Drilling</b>	Template #8	Top of Pole
	1.325"	0.563"
	2.650"	0.400" (2 PLCS)

DSX1 shares a unique drilling pattern with the AERIS™ family. Specify this drilling pattern when specifying poles, per the table below.

<b>DM19AS</b>	Single unit	<b>DM29AS</b>	2 at 90°*
<b>DM28AS</b>	2 at 180°	<b>DM39AS</b>	3 at 90°*
<b>DM49AS</b>	4 at 90°*	<b>DM32AS</b>	3 at 120°**

Example: SSA 20 4C DM19AS DDBXD

Visit Lithonia Lighting's POLES CENTRAL to see our wide selection of poles, accessories and educational tools.

\*Round pole top must be 3.25" O.D. minimum.  
\*\*For round pole mounting (RPA) only.

## Tenon Mounting Slipfitter\*\*

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

## NOTES

- Rotated optics only available with 60C.
- AMBPC only available with 530mA or 700mA.
- MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options).
- Not available with single board, 530mA product (30C 530, or 60C 530 DS). Not available with DCR, BL30 or BL50.
- Available as a separate combination accessory: PUMBA (finish) U; 1.5 G vibration load rating per ANCI C136.31.
- Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
- Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Not available with DS option.
- DMG option for 347v or 480v requires 1000mA
- Specifies a ROAM<sup>9</sup> enabled luminaire with 0-10V dimming capability; PER option required. Not available with 347 or 480V. Additional hardware and services required for ROAM<sup>9</sup> deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roamservices.net. N/A with BL30, BL50, DS, PIR or PIRH.
- Requires 40C or 60C. Provides 50/50 luminaire operation via two independent drivers on two separate circuits. N/A with PER, DCR, WTB, PIR, or PIRH.
- Requires an additional switched circuit.
- PIR specifies the SensorSwitch SBGR-10-ODP control; PIRH specifies the SensorSwitch SBGR-6-ODP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with DS or DCR.
- Dimming driver standard. MVOLT only. Not available with DCR.
- Also available as a separate accessory; see Accessories information.
- WTB not available with DS.
- Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
- Available with 60 LEDs (60C option) only.
- Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Control.





# D-Series LED Bollard



d#series

## Specifications

**Diameter:** 8" Round  
(20.3 cm)

**Height:** 42"  
(106.7 cm)

**Weight (max):** 27 lbs  
(12.25 kg)



Catalog  
Number

Notes

Type

Hit the Tab key or mouse over the page to see all interactive elements.

## Introduction

The D-Series LED Bollard is a stylish, energy-saving, long-life solution designed to perform the way a bollard should—with zero uplight. An optical leap forward, this full cut-off luminaire will meet the most stringent of lighting codes. The D-Series LED Bollard's rugged construction, durable finish and long-lasting LEDs will provide years of maintenance-free service.

## Ordering Information

**EXAMPLE: DSXB LED 16C 700 40K SYM MVOLT DDBXD**

DSXB LED	Series	LEDs	Drive current	Color temperature	Distribution	Voltage	Control options	Other options	Finish <i>(required)</i>
DSXB LED	Asymmetric	12C 12 LEDs <sup>1</sup>	350 350 mA	30K 3000 K	ASY Asymmetric <sup>1</sup>	MVOLT <sup>5</sup>	PE Photoelectric cell, button type	SF Single fuse (120, 277, 347V) <sup>4,7</sup>	DWHXD White
		Symmetric	450 450 mA <sup>3,4</sup>	40K 4000 K	SYM Symmetric <sup>2</sup>	120 <sup>5</sup>			DMG 0-10V dimming driver (no controls)
16C 16 LEDs <sup>2</sup>	530 530 mA		50K 5000 K	AMBPC Amber phosphor converted AMBLW Amber limited wavelength <sup>3,4</sup>		208 <sup>5</sup>	ELCW Emergency battery backup <sup>6</sup>	H24 24" overall height	
	700 700 mA		240 <sup>5</sup>			H30 30" overall height			DBLXD Black
						277 <sup>5</sup>	H36 36" overall height	DDBTXD Textured dark bronze	
						347 <sup>4</sup>	FG Ground-fault festoon outlet	DBLBXD Textured black	
							L/AB Without anchor bolts	DNATXD Textured natural aluminum	
							L/AB4 4-bolt retrofit base without anchor bolts <sup>8</sup>	DWHGXD Textured white	

## Accessories

Ordered and shipped separately.

MRAB U Anchor bolts for DSXB<sup>8</sup>

## NOTES

- 1 Only available in the 12C, ASY version.
- 2 Only available in the 16C, SYM version.
- 3 Only available with 450 AMBLW version.
- 4 Not available with ELCW.
- 5 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz). Specify 120, 208, 240 or 277 options only when ordering with fusing (SF, DF options), or photocontrol (PE option).
- 6 Not available with 347V. Not available with fusing. Not available with 450 AMBLW.
- 7 Single fuse (SF) requires 120, 277, or 347 voltage option. Double fuse (DF) requires 208 or 240 voltage option.
- 8 MRAB U not available with L/AB4 option.



# ANTIQUE STREET LAMPS™

## AL25 LED ACORN STYLE

CATALOG # \_\_\_\_\_

PROJECT \_\_\_\_\_

TYPE \_\_\_\_\_



This acorn styled luminaire consists of a decorative luminaire base with an integral globe holder/ballast housing and an acorn shaped globe.

- Acorn globe in clear textured acrylic
- Optional Caged Globe available
- Stainless steel hardware
- 9 different styles of bases coordinate with this luminaire
- TGIC powder coat finish
- 3" O.D. x 3" tall tenon required for mounting
- Rated for -40° to 50° ambient (based on driver)
- ≥ 50,000 hrs. L70 40°C
- ≥ 70,000 hrs L70 25°C
- Performance Comparable to 70W-100W MH (3600-5600 delivered lumens)
- Input watts of 77 @ 700mA
- Driver life of 100,000hrs.at 25° C - all drive currents
- Optional surge protection to C62.41 C-Low (SPDL option)
- 5 year limited warranty



Max EPA: 1.30 sq feet  
 Max Height: 36-1/2 (92.7cm)  
 Max Width: 18-1/4" (46.4cm)  
 Max Weight: 27 lbs (12.2 kg)

Sample Catalog number:

<b>AL25</b> Fixture	<b>E</b> Base	<b>32LED 525MA</b> Source & Wattage	<b>3K</b> Color Temp	<b>ACT</b> Lens Option	<b>MVOLT</b> Voltage	<b>FPF</b> Trim	<b>N5</b> Distrib.	<b>SF</b> Electrical Options
<b>DBL</b> Finish								

### Ordering Guide:

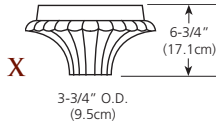
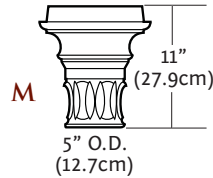
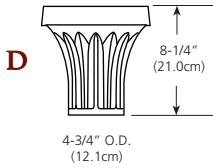
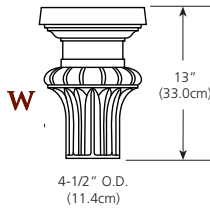
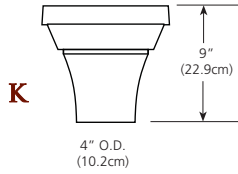
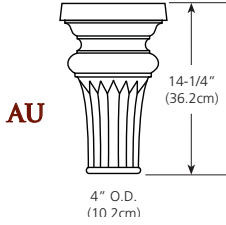
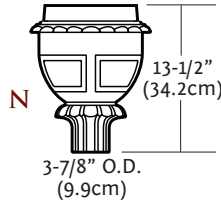
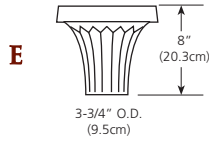
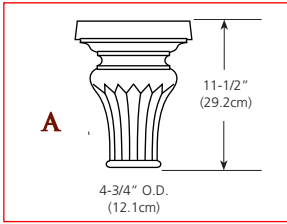
Fixture	Base	Source & Wattage	Color Temp	Lens Option	Voltage	Trim	Distribution	Electrical Options
AL25	A AU D E K M N W X	32LED 525MA 32LED 700MA 24LED 700MA	3K 4K 5K	ACT	MVOLT 347 480	FPF MT DCP	N5 N3*	SF DF PER PE1 PE3 PE4 PE7 PEB1 PEB2

- DBL
- DDB
- DNA
- DWH
- CS
- CM
- ANBK
- ANDB
- ANDG
- ANVG

\*N3 distribution only available with 24 LED 700MA source and wattage selection



BASE



SELECT YOUR CHOICE FROM

Mount to 3" O.D. x 3" tall tenon: 3T3

- A**       **K**       **X**
- AU**     **M**
- D**       **N**
- E**       **W**

Notes:

- Items in bold have shorter lead times.
- Consult factory for wattages available for LDB option.
- LDB option is not available with photocontrol options PEB1 and PEB2.

SOURCE & WATTAGE

SELECT YOUR OPTIONS FROM

- 32LED 525MA
- 32LED 700MA
- 24LED 700MA (Available in N3 Distribution Only)

COLOR TEMP

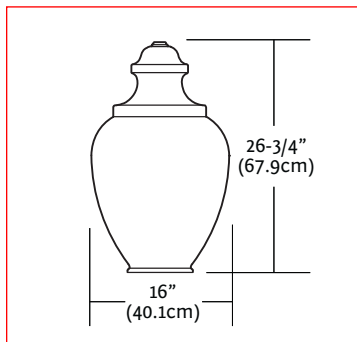
SELECT YOUR OPTIONS FROM

- 3K      3000K
- 4K      4000K
- 5K      5000K

LENS OPTION

ANTIQUE STREET LAMPS™

The luminaire has an acorn globe in clear textured acrylic or optional clear or white textured polycarbonate with a cast-aluminum base/ballast housing.



SELECT YOUR CHOICE FROM

- ACT**    Acrylic, Clear Textured (Standard)

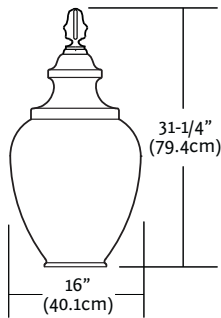
AL25 LED



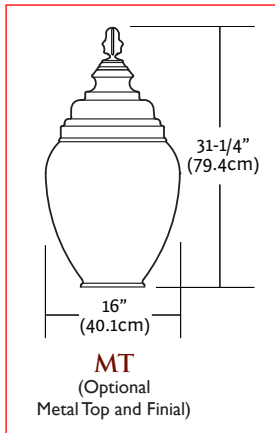
SELECT YOUR OPTIONS FROM

- MVOLT    MVOLT
- 347    347V
- 480    480V

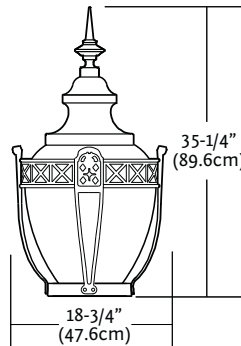
TRIM



**FPF**  
(Optional Cast Aluminum Finial)



**MT**  
(Optional Metal Top and Finial)



**DCP**  
(Optional Decorative Cage and Finial)

SELECT YOUR OPTIONS FROM

- FPF    Finial
- MT    Metal Top and Finial
- DCP    Decorative Cage & Finial

Medallion & Finial are matched to luminaire finish

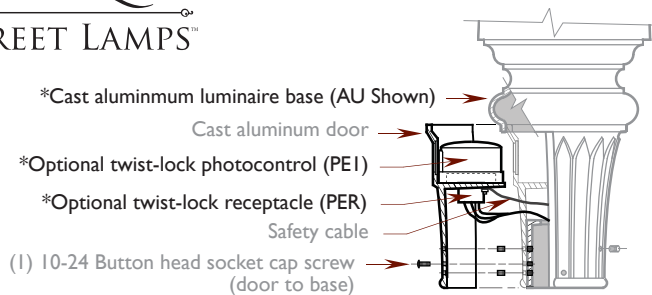
SELECT YOUR OPTIONS FROM

- N5    No Refractor, Type V
- N3\*    No Refractor, Type III

Notes:

\*Available in only 24 LED 700MA selection

ANTIQUE STREET LAMPS™



**\*TWIST & LOCK PHOTOELECTRIC CELL OPTIONS**  
available with luminaire bases AU only.



SELECT YOUR OPTIONS FROM

- Fuse Not Included*
- SF    Single Fuse
  - DF    Double Fuse
  - PER    Twist-Lock Photocontrol Receptacle
  - PE1    NEMA Twist & Lock PE 120, 208, 240 volt
  - PE3    NEMA Twist & Lock PE 347 volt
  - PE4    NEMA Twist & Lock PE 480 volt
  - PE7    NEMA Twist & Lock PE 277 volt
  - PEB1    Photoelectric Cell Button 120 volt
  - PEB2    Photoelectric Cell Button 208, 240, 277 volt









Notes:

- Twist-lock photocontrol only available with AU base.
- PER is required when PE1, PE3, PE4 or PE7 is used.

The luminaire has a powder coat finish utilizing a premium TGIC polyester powder. The finish is a three-stage process which consists of drying, powder application and curing. Before coating, the parts are treated with a five-stage pretreatment process, consisting of a heated alkaline cleaner; rinse, phosphate coating, rinse and sealant.

For a complete listing of colors, visit:  
[www.acuitybrandslighting.com/architecturalcolors](http://www.acuitybrandslighting.com/architecturalcolors)

SELECT YOUR CHOICE FROM

- DBL** Black 
- DDB** Dark Bronze 
- DNA** Natural Aluminum 
- DWH** White 
- CS** Custom Select (RAL colors)
- CM** Custom Match
- ANBK** ASL Black 
- ANDB** ASL Dark Bronze 
- ANDG** ASL Dark Green 
- ANVG** ASL Verde Green 

Notes:  
 • Consult factory for CM option.

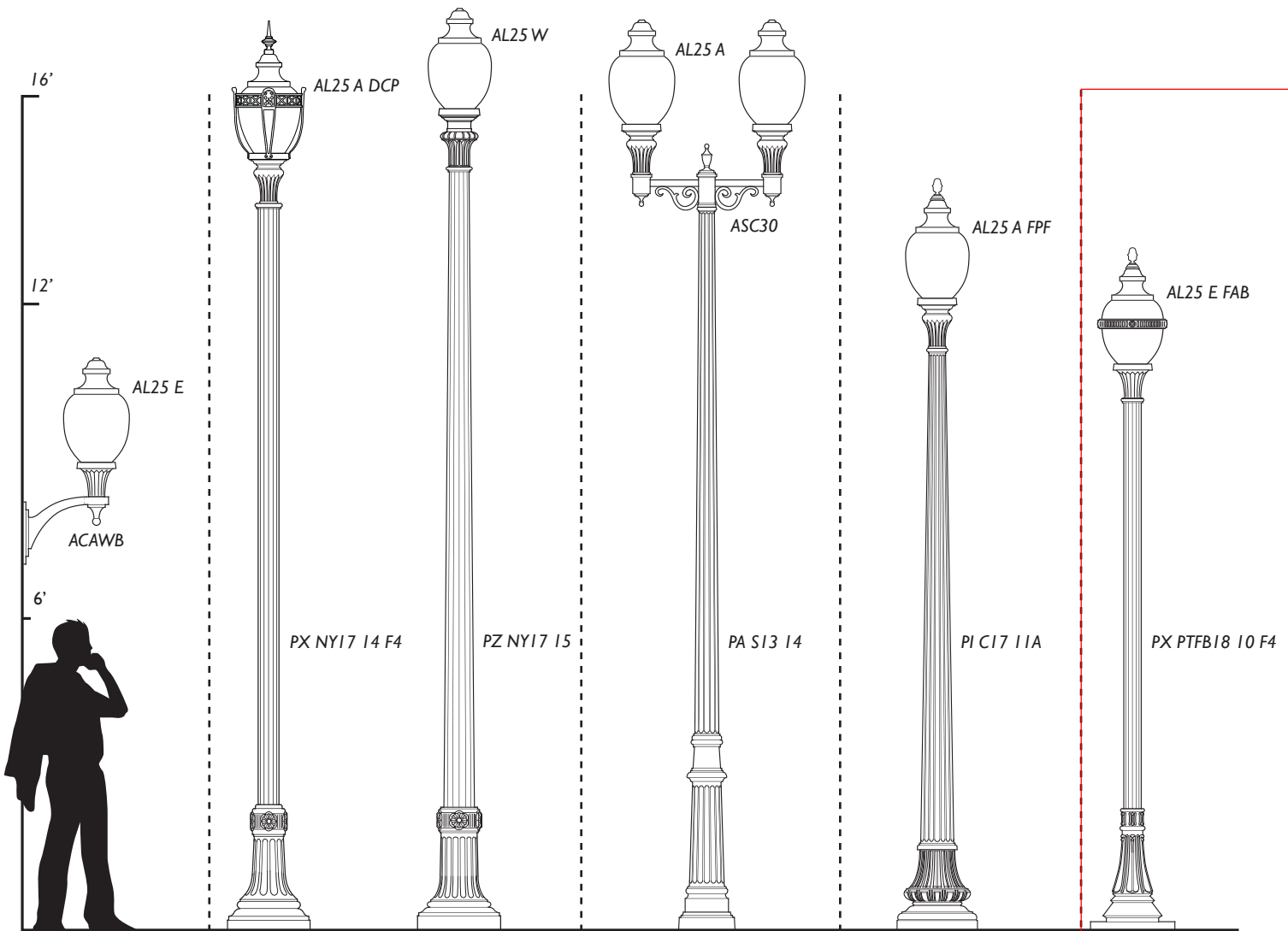
**ACA SERIES**  
CROSSARMS &  
WALL BRACKETS

**NEW YORK SERIES**  
CAST ALUMINUM POST  
IRON & STEEL POST

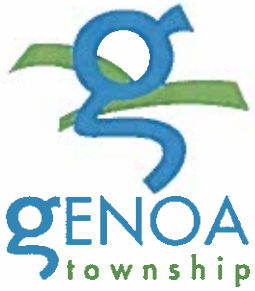
**SUSSEX SERIES**  
CAST ALUMINUM POST

**CAPITOL SERIES**  
IRON & STEEL POST

**PEACHTREE  
SERIES**  
CAST ALUMINUM POST



For detailed product specifications for Poles and Arm/Wall Mount see the Antique Street Lamps website.



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

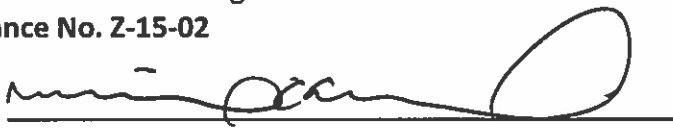
**MEMORANDUM**

**TO:** Honorable Board of Trustees

**FROM:** Kelly VanMarter, Assistant Township Manager/Community Development Director

**DATE:** May 27, 2015

**RE:** Chestnut Office Rezoning Ordinance No. Z-15-02

**MANAGER'S REVIEW:** 

I have prepared the proposed rezoning ordinance to amend the zoning map of the Charter Township of Genoa by rezoning approximately 4.19 acres located at 6253 Grand River Avenue affecting parcels 4711-11-300-021, 4711-11-300-027, and 4711-11-300-028. This rezoning will remove the subject parcel from the Town Center Overlay District and change the zoning from General Commercial District/Town Center Overlay (GCD/TC) to General Commercial District (GCD).

This application was recommended for approval by the Township Planning Commission on April 13, 2015 and by the County Planning Commission on May 20, 2015. Based on these recommendations and the criteria stated in the zoning ordinance I provide the following for your consideration:

**REZONING – REQUIRES CALL TO PUBLIC AND ROLL CALL VOTE**

I recommend APPROVAL AND ADOPTION of Ordinance No. Z-15-02 for a rezoning from GCD/TC to GCD for parcels 4711-11-300-021, 027 and 028 located at 6253 Grand River. This rezoning complies with Section 22.04 of the Township Zoning Ordinance and this recommendation is made because the district is consistent with the existing developed properties in the neighborhood and because compliance with the Township Overlay at this time would be inappropriate for the area. The Township Board supports the Planning Commission's encouragement for Township Staff to commence an investigation and study of the overlay zoning on all properties in the district for subsequent review by the Planning Commission and Township Board.

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

**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  
 Linda Rowell

ORDINANCE NO. Z-15-02

AN ORDINANCE ENTITLED "AN ORDINANCE TO AMEND THE ZONING MAP OF THE CHARTER TOWNSHIP OF GENOA BY REZONING APPROXIMATELY 4.19 ACRES LOCATED AT 6253 GRAND RIVER AVENUE (PARCELS 4711-11-300-021, 4711-11-300-027, and 4711-11-300-028) FROM GENERAL COMMERCIAL DISTRICT/TOWN CENTER OVERLAY (GCD/TC) TO GENERAL COMMERCIAL DISTRICT (GCD)".

THE CHARTER TOWNSHIP OF GENOA HEREBY ORDAINS that the Zoning Map, as incorporated by reference in the Charter Township of Genoa's Zoning Ordinance, is hereby amended as follows:

Real property situated on the north side of Grand River Avenue, east of Hughes Road and west of Kellogg Road is part of the Southwest 1/4 of Section 11, T2N-R5E, Genoa Charter Township, Livingston County, Michigan, more particularly described as follows:

(COMBINED TAX IDS: 11-11-300-027, 11-11-300-028, 11-11-300-021) Part of the Southwest 1/4 of Section 11, Town 1 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Southwest Corner of said Section 11; thence along the South line of Section 11, N 87°46'30"E (Previously recorded as N 87°56'50"E), 1338.82 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 328.24 feet to a point on the centerline of Grand River Avenue; Thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet to the POINT OF BEGINNING OF THE Parcel to be described; thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 262.51 feet; thence S 70°37'36"E (Previously recorded as S 68°20'56"E), 449.05 feet; thence S 02°41'13"E (Previously recorded as S 00°24'33"E), 564.96 feet to a point of the centerline of Grand River Avenue; thence continuing along the centerline of Grand River Ave., N 70°37'36"W (Previously recorded as N 68°20'56"W), 260.68 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet; thence N 70°37'36"W (Previously recorded as N 68°20'56"W), 195.00 feet to the POINT OF BEGINNING; Containing 4.19 acres, more or less, and subject to the rights of the public over existing Grand River Ave. Also subject to any other easements and restrictions of record.

Shall be rezoned from General Commercial District/Town Center Overlay (GCD/TC) to General Commercial District (GCD) Classification.

Severability If any provision of this Ordinance is found to be invalid, than the remaining portions of this Ordinance shall remain enforceable.

Effective Date This Ordinance shall be effective upon publication in a newspaper of general circulation as required by law.

On the motion to adopt the Ordinance the following vote was recorded:

Yeas: \_\_\_\_\_
Nays: \_\_\_\_\_
Absent: \_\_\_\_\_

I hereby approve the adoption of the foregoing Ordinance this 1<sup>st</sup> day of June, 2015.

Paulette Skolarus
Township Clerk

Gary McCririe
Township Supervisor

Township Board First Reading: May 18, 2015
Date of Publication of Proposed Ordinance: May 29, 2015
Township Board Second Reading and Public Hearing: June 1, 2015
Township Board Adoption:
Date of Publication of Ordinance Adoption:
Effective Date:

**ORDINANCE NO. Z-15-02**

**AN ORDINANCE ENTITLED “AN ORDINANCE TO AMEND THE ZONING MAP OF THE CHARTER TOWNSHIP OF GENOA BY REZONING APPROXIMATELY 4.19 ACRES LOCATED AT 6253 GRAND RIVER AVENUE (PARCELS 4711-11-300-021, 4711-11-300-027, and 4711-11-300-028) FROM GENERAL COMMERCIAL DISTRICT/TOWN CENTER OVERLAY (GCD/TC) TO GENERAL COMMERCIAL DISTRICT (GCD)”.**

**THE CHARTER TOWNSHIP OF GENOA HEREBY ORDAINS that the Zoning Map, as incorporated by reference in the Charter Township of Genoa’s Zoning Ordinance, is hereby amended as follows:**

Real property situated on the north side of Grand River Avenue, east of Hughes Road and west of Kellogg Road is part of the Southwest 1/4 of Section 11, T2N-R5E, Genoa Charter Township, Livingston County, Michigan, more particularly described as follows:

**(COMBINED TAX IDS: 11-11-300-027, 11-11-300-028, 11-11-300-021)**  
Part of the Southwest 1/4 of Section 11, Town 1 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Southwest Corner of said Section 11; thence along the South line of Section 11, N 87°46’30”E (Previously recorded as N 87°56’50”E), 1338.82 feet; thence N 02°03’40”W (Previously recorded as N 00°13’00”E), 328.24 feet to a point on the centerline of Grand River Avenue; Thence continuing N 02°03’40”W (Previously recorded as N 00°13’00”E), 300.00 feet to the POINT OF BEGINNING OF THE Parcel to be described; thence continuing N 02°03’40”W (Previously recorded as N 00°13’00”E), 262.51 feet; thence S 70°37’36”E (Previously recorded as S 68°20’56”E), 449.05 feet; thence S 02°41’13”E (Previously recorded as S 00°24’33”E), 564.96 feet to a point of the centerline of Grand River Avenue; thence continuing along the centerline of Grand River Ave., N 70°37’36”W (Previously recorded as N 68°20’56”W), 260.68 feet; thence N 02°03’40”W (Previously recorded as N 00°13’00”E), 300.00 feet; thence N 70°37’36”W (Previously recorded as N 68°20’56”W), 195.00 feet to the POINT OF BEGINNING; Containing 4.19 acres, more or less, and subject to the rights of the public over existing Grand River Ave. Also subject to any other easements and restrictions of record.

Shall be rezoned from General Commercial District/Town Center Overlay (GCD/TC) to General Commercial District (GCD) Classification.

**Severability** If any provision of this Ordinance is found to be invalid, than the remaining portions of this Ordinance shall remain enforceable.

**Effective Date** This Ordinance shall be effective upon publication in a newspaper of general circulation as required by law.

On the motion to adopt the Ordinance the following vote was recorded:

**Yeas:** \_\_\_\_\_

**Nays:** \_\_\_\_\_

**Absent:** \_\_\_\_\_

I hereby approve the adoption of the foregoing Ordinance this 1<sup>st</sup> day of June, 2015.

\_\_\_\_\_  
Paulette Skolarus  
Township Clerk

\_\_\_\_\_  
Gary McCririe  
Township Supervisor

Township Board First Reading: May 18, 2015  
Date of Publication of Proposed Ordinance: May 29, 2015  
Township Board Second Reading and Public Hearing: June 1, 2015  
Township Board Adoption:  
Date of Publication of Ordinance Adoption:  
Effective Date:



**GENOA CHARTER TOWNSHIP**  
**Application for Re-Zoning**

**GENOA TOWNSHIP**  
**MAR 03 2015**

APPLICANT NAME: Chestnut Development LLC ADDRESS: 3800 Chilson Rd. Howell

OWNER NAME: Chestnut Development LLC ADDRESS: 3800 Chilson Rd. Howell

PARCEL #(s): 6253 W. Grand River Brighton 4711-11-300-021 PRIMARY PHONE: (810) 599-5147

EMAIL 1: steve@chestnutdev.com EMAIL 2: office@chestnutdev.com

We, the undersigned, do hereby respectfully make application to and petition the Township Board to amend the Township Zoning Ordinance and change the zoning map of the township of Genoa as hereinafter requested, and in support of this application, the following facts are shown:

**A. REQUIRED SUBMITTAL INFORMATION**

1. A legal description and street address of the subject property, together with a map identifying the subject property in relation to surrounding properties;
2. The name, signature and address of the owner of the subject property, a statement of the applicant's interest in the subject property if not the owner in fee simple title, and proof of consent from the property owner;
3. It is desired and requested that the foregoing property be rezoned from:

GCD/TCOD to GCD

4. A site plan illustrating existing conditions on the site and adjacent properties; such as woodlands, wetlands, soil conditions, steep slope, drainage patterns, views, existing buildings, sight distance limitations, relationship to other developed sites, and access points in the vicinity;
5. A conceptual plan demonstrating that the site could be developed with representative uses permitted in the requested zoning district meeting requirements for setbacks, wetland buffers access spacing, any requested service drives and other site design factors;
6. A written environmental assessment, a map of existing site features as described in Article 18 describing site features and anticipated impacts created by the host of uses permitted in the requested zoning district;
7. A written description of how the requested rezoning meets Sec. 22.04 "Criteria for Amendment of the Official Zoning Map."
8. The property in question shall be staked prior to the Planning Commission Public Hearing.

**B. DESCRIBE HOW YOUR REQUESTED RE-ZONING MEETS THE ZONING ORDINANCE CRITERIA FOR AMENDING THE OFFICIAL ZONING MAP:**

1. How is the rezoning consistent with the goals, policies and future land use map of the Genoa Township Master Plan, including any subareas or corridor studies. If not consistent, describe how conditions have changed since the Master Plan was adopted?

The TCOD concept may not achieve the intended purpose as originally contemplated. To date, there has been little to no interest in new construction under this zoning classification.

2. Are the site's physical, geological, hydrological and other environmental features suitable for the host of uses permitted in the proposed zoning district?

Yes.

3. Do you have any evidence that a reasonable return on investment cannot be received by developing the property with one (1) of the uses permitted under the current zoning?

Yes, we will build and occupy a portion of the proposed facilities, and the TCOD design requirements present significant functional and cost challenges that jeopardize the feasibility of the project.

4. How would all the potential uses allowed in the proposed zoning district be compatible with surrounding uses and zoning in terms of views, noise, air quality, the environment, density, traffic impacts, drainage and potential influence on property values?

The properties to the east and west are existing sites built under GCD zoning prior to the TCOD, and our proposed use fits into all the existing township GCD requirements under GCD zoning.

5. Are infrastructure capacity (streets, sanitary sewer, water, and drainage) and services (police and fire protection, etc.) sufficient to accommodate the uses permitted in the requested district?

Yes, all utilities are present to accommodate the proposed use, including power, gas, cable, sewer, water, and approved storm water management.

6. Is there a demonstrated demand in Genoa Township or the surrounding area for the types of uses permitted in the requested zoning district? If yes, explain how this site is better suited for the zoning than others which may be planned or zoned to accommodate the demand.

The site already has underlying zoning which will accommodate a professional office use, and our real estate brokerage firm and our building company needs to relocate.

7. If you have a particular use in mind, is another zoning district more appropriate? Why should the Township re-zone the land rather than amend the list of uses allowed in another zoning district to accommodate your intended use?

GCD will allow an attractive, affordable, and beneficial use of the land, and provide a home for our companies as well as other professional users.



8. Describe any deed restrictions which could potentially affect the use of the property.

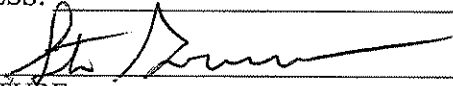
These are existing easements benefiting adjacent parcels, along with Drain Commission that are preserved in the proposed site plan.

**C. AFFIDAVIT**

The undersigned says that they are the owner (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

BY: Steve Gronow, Chestnut Development LLC

ADDRESS: 3800 Chilson Rd. Howell

 3-1-15  
SIGNATURE

The following contact should also receive review letters and correspondence:

Name: David LeClair Email: david@livingstoneng.com

Business Affiliation: Project Engineer

**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.

PROJECT NAME: Chestnut Landing

PROJECT LOCATON & DESCRIPTION: 6253 W. Grand River, Brighton

SIGNATURE:  DATE: 2/26/15

PRINT NAME: Steve Gronow PHONE: 810 599-5147

COMPANY NAME & ADDRESS: Chestnut Development 3800 Chilson Rd. Howell, MI



# Livingston County Department of Planning

May 21, 2015

**Kathleen J. Kline-Hudson**  
AICP, PEM  
Director

Genoa Township Board of Trustees  
c/o Polly Skolarus, Clerk  
2911 Dorr Road  
Brighton, MI 48116

**Robert A. Stanford**  
AICP, PEM  
Principal Planner

**Re: Planning Commission Review of Rezoning Request Z-21-15.**

**Scott Barb**  
AICP, PEM  
Principal Planner

Dear Board Members:

The Livingston County Planning Commission met on Wednesday, May 20, 2015 and reviewed the rezoning request referenced above. The County Planning Commissioners made the following recommendation:

**Z-21-15 Approval.** Staff believes the proposed rezoning is consistent with the overall objectives of the Genoa Township Master Plan and the Livingston County Comprehensive Plan.

Copies of the staff review and Livingston County Planning Commission meeting minutes are enclosed. Please do not hesitate to contact our office should you have any questions regarding county action.

Sincerely,

Kathleen Kline-Hudson

sb

Enclosures

c: Ron Akers, Township Zoning Administrator

Meeting minutes and agendas are available at:  
<http://www.livgov.com/plan/agendas.aspx>

## Department Information

Administration Building  
304 E. Grand River Avenue  
Suite 206  
Howell, MI 48843-2323

●  
(517) 546-7555  
Fax (517) 552-2347

●  
Web Site  
[co.livingston.mi.us](http://co.livingston.mi.us)

# LIVINGSTON COUNTY PLANNING DEPARTMENT – ZONING REVIEW

<b>CASE NUMBER:</b> Z-21-15	<b>LOCATION:</b> Genoa Township <b>SECTION NUMBER:</b> Section 11 <b>TOTAL ACREAGE:</b> 4.19 acres (3 parcels)	<b>APPLICANT/OWNER:</b> Chestnut Development, LLC
-----------------------------	--	---

CURRENT ZONING: GCD/TCOD  
General Commercial District/Town Center Overlay District

PERMITTED USES (Not all inclusive):  
GCD Permitted: Retail establishments and shopping centers, banquet halls, business services, child care centers, funeral homes, bed and breakfast, hotels, Laundromats, personal service establishments, restaurants, banks and credit unions, professional offices, medical offices and urgent care facilities, others uses as detailed.

TCOD: The intent is to facilitate the development of a traditional, pedestrian-oriented town center with mixed-use buildings containing retail and service uses on the first floor and residential or office on upper floors, similar to the traditional downtown character of Brighton and Howell.

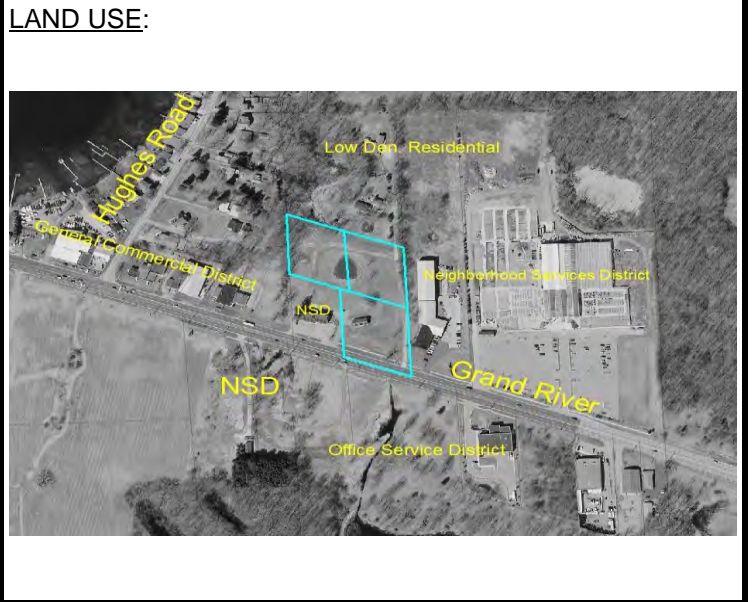
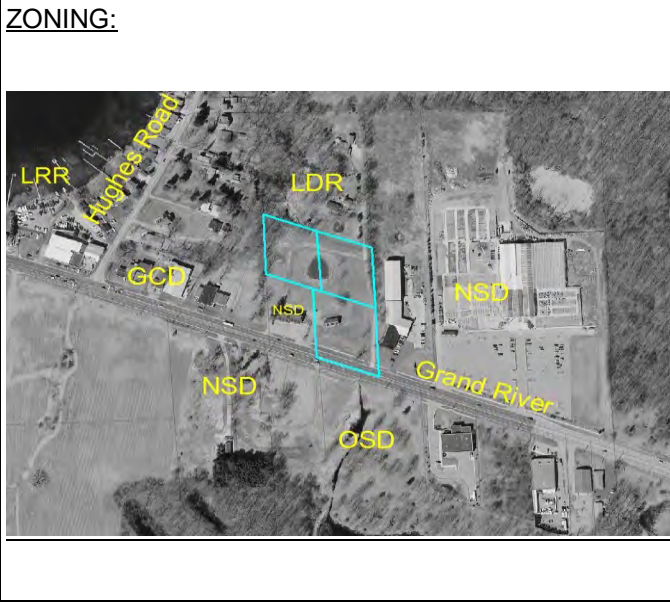
MINIMUM LOT AREA: 1 Acre

REQUESTED ZONING: GCD  
General Commercial District

PERMITTED/SPECIAL USES (Not all inclusive):  
Permitted: Retail establishments and shopping centers, banquet halls, business services, child care centers, funeral homes, bed and breakfast, hotels, Laundromats, personal service establishments, restaurants, banks and credit unions, professional offices, medical offices and urgent care facilities, others uses as detailed.

Special: Automobile sales, commercial outdoor storage and display, conference centers, kennels, drive in restaurants and coffee shops, auto repair and leasing, adult day care facilities, veterinary clinics, miniature gold, indoor recreation facilities, other uses as detailed in Ordinance.

MINIMUM LOT AREA: 1 Acre



TOWNSHIP PLANNING COMMISSION RECOMMENDATION AND PUBLIC COMMENTS:  
The Genoa Township Planning Commission recommended APPROVAL of this request at its April 13, 2015 public hearing. The minutes of the meeting reflect minor comments regarding the proposed rezoning.

ESSENTIAL FACILITIES:  
SANITARY SEWER: Public sewers available  
WATER SUPPLY: Public water supply available  
ACCESS ROAD(S): Property will be accessed via Grand River Avenue

**EXISTING CONDITIONS:**

The site proposed for the rezoning request is located in Section 11 of Genoa Township.

**Natural Areas:** According to the map "Livingston County's High Quality Natural Areas", there are no priority areas designated on or near the subject parcels proposed for rezoning.

**Land Use:** The site is currently vacant. A small pond is located on site with a vacant building on the forward parcel.


**Soils:** Numerous soil types are found on the site. Due to availability of public water and sewer, no potential concerns are anticipated.

**Wetlands:** The National Wetlands Inventory (NWI) indicates that the parcels are classified as uplands.

**Topography:** Predominantly flat with very minor changes in elevation throughout. A small pond is located on site.

**Vegetation:** The site is in its natural state; typical grass, small pond, etc. No major development at this time.

**CURRENT LAND USE, ZONING, AND MASTER PLANNING MATRIX:**

		<b><u>NORTH</u></b>	
		<p><b><u>Existing Land Use:</u></b> Residential</p> <p><b><u>Zoning:</u></b> LDR Low Density Residential</p> <p><b><u>Master Plan:</u></b> Mixed Use Town Center</p>	
<b><u>WEST</u></b>		<b><u>SUBJECT SITE</u></b>	
<p><b><u>Existing Land Use:</u></b> Multi-tenant office service</p> <p><b><u>Zoning:</u></b> GCD/TCOD and NSD/TCOD</p> <p><b><u>Master Plan:</u></b> Mixed Use Town Center</p>		<p><b><u>Existing Land Use:</u></b> Vacant</p> <p><b><u>Zoning:</u></b> GCD/TCOD General Commercial w/ Town Center Overlay</p> <p><b><u>Master Plan:</u></b> Mixed Use Town Center</p>	
<b><u>EAST</u></b>		<p><b><u>Existing Land Use:</u></b> Office/shop and nursery</p> <p><b><u>Zoning:</u></b> NSD/TCOD Neighborhood Service District/Town Center Overlay</p> <p><b><u>Master Plan:</u></b> Mixed Use Town Center</p>	
		<b><u>SOUTH</u></b>	
		<p><b><u>Existing Land Use:</u></b> Office/showroom and vacant</p> <p><b><u>Zoning:</u></b> NSD/TCOD and OSD Neighborhood Service/Town Center/and Office Service</p> <p><b><u>Master Plan:</u></b> Mixed Use Town Center</p>	

**TOWNSHIP MASTER PLAN:**

The Future Land Use map of Genoa Township designates the subject parcels as **General Commercial with a Mixed Use Town Center Overlay**. This particular future land use category is intended for a mix of uses that can be combined with traditional style developments of homes along with commercial, office, and retail related uses.

It is the intent of the petitioner to simply develop the parcel as General Commercial which requires the Town Center Overlay to be removed from the subject site. The proposed site plan for the site reflects a conventional development that is feasible under the General Commercial zoning, but is not compatible with the general goals and objectives outlined in the Mixed Use Town Center classification. The Mixed Use Town Center classification would require the developer to incorporate some elements of residential and non-residential which are not intended at this time. Furthermore, existing development along Grand River in this particular area is already in place under the General Commercial zoning and is compatible with current uses.

**COUNTY COMPREHENSIVE PLAN:**

The Livingston County Comprehensive Plan designates the site as a **New Growth Area**. According to the County Comprehensive Plan:

“New growth areas represent locations where development has occurred or is planned to occur in the future...”

*Genoa Town Center*

The intersection of Grand River Avenue, Dorr and Hughes Roads has been designated by Genoa Township as the Genoa Town Center. This area is planned to become a mixed use town center with local neighborhood service establishments, businesses, and traditional residential neighborhoods that will provide a wide range of housing types including apartments above commercial areas, traditional townhouses and single family homes on smaller lots. The plan is intended to create a pedestrian friendly area that connects community parks and other activity centers and provides a defined sense of place for Genoa Township.

The Township has created a Town Center Overlay Zone with specific design standards to create a highly successful mixed use development, which includes utilizing traditional architecture, sidewalks and streets in an interconnected pattern, a vertical mixture of uses, and creating a system of neighborhood parks to serve as focal points and to provide recreational amenities. Streetscape and open space guidelines also serve as a component to the plan by creating an identity for the Township. Preservation of natural features and the use of materials, textures, and colors that are in context with the area’s surrounding character are included in the plan to ensure the area becomes a focal point for Genoa Township.”

**COUNTY PLANNING STAFF COMMENTS:**

The Genoa Township Master Plan has designated the areas near Hughes Road and Grand River as a general commercial area with an overlay that encourages mixed use planning involving a variety of residential, neighborhood, and commercial services. To date, there appears to be little interest in development under this zoning classification of GC/TCOD as doing so would result in having to comply with the specific standards and guidelines of the Town Center Overlay District. The petitioner has requested a rezoning to essentially remove the Town Center Overlay from the subject parcels, which will allow the parcels to be developed under the General Commercial zoning classification. Currently, the existing properties along Grand River in the immediate area have already been developed by these GC standards. The Livingston County Comprehensive Plan has designated the area as a new growth area that will continue to grow due to its proximity and visibility along the Grand River and Hughes Road area. Due to existing properties that have been developed under traditional commercial zoning, staff can find no reason to not support the proposed rezoning back to General Commercial. There doesn’t appear to be any concerns with removing the overlay from the subject parcels, but county planning staff is in agreement with the Township’s planning consultant that a re-evaluation of the overlay district may be in order so as to avoid future inconsistencies in the future land use plan of this area. Master plans are intended to be general guides for future planning and occasional changes from that vision are acceptable.

**STAFF RECOMMENDATION:**

**Approval.** Planning staff is recommending approval of the proposed rezoning from GCD/TCOD (General Commercial District/Town Center Overlay District) to GCD (General Commercial District). The proposed rezoning is compatible with existing commercial zoning along the Grand River/Hughes Road area and the general intent of the Genoa Township Master Plan and the Livingston County Comprehensive Plan.

## 7. ZONING REVIEWS

### A. Z-21-15 GENOA CHARTER TOWNSHIP - REZONING

**Current Zoning: General Commercial District/Town Center Overlay District (GCD/TCOD)**

**Proposed Zoning: General Commercial District (GCD)**

**Proponents: Chestnut Development, LLC**

**Township Master Plan:** The Genoa Township Master Plan adopted in 2013 designates this site as **Regional Commercial**. Land uses within this category include higher intensity commercial uses that serve the comparison shopping needs of the entire community and the regional market. Uses include big box retail, large shopping centers, restaurants (including fast-food) and automobile service centers. Such land uses rely on higher traffic volumes and easy access via a major arterial or highway. Development within such areas should occur within a planned, integrated commercial setting. Site design for these uses should include high quality architectural and landscape design with parking areas and access points that promote safe and efficient circulation throughout the site. The location of this land use designation shall be focused along the Grand River Avenue corridor between Latson Road and Grand Oaks Drive to create a focused regional commercial center so that the Township, County and State agencies can more efficiently focus the infrastructure and services needed to support this regional center.

**County Comprehensive Plan:** The Livingston County Comprehensive Plan (as amended) designates this site as **Residential and Howell-Brighton Growth Corridor**. The Plan describes these designations as follows:

**Township Planning Commission Recommendation: Approval.** The Genoa Township Planning Commission recommended **Approval** of this request at its April 13, 2015 public hearing. The minutes of the meeting reflect minor comments regarding the proposed rezoning.

**Staff Recommendation: Approval.** Planning staff is recommending **Approval** of the proposed rezoning from GCD/TCOD (General Commercial District/Town Center Overlay District) to GCD (General Commercial District). The proposed rezoning is compatible with existing commercial zoning along the Grand River/Hughes Road area and the general intent of the Genoa Township Master Plan and the Livingston County Comprehensive Plan.

**Commission Discussion:** Commissioner Sparks inquired as to the overall size of the parcel. Commissioner Clum asked why this was being proposed. Principal Planner Barb stated that there is a lack of enthusiasm in the marketplace to develop this location as mixed use. Commissioner Clum asked if sidewalks were still required. Principal Planner Barb stated that they would still have to provide access to all modes of traffic, both motorized and non-motorized (sidewalks).

**Public Comment: None.**

**Commissioner Action: IT WAS MOVED BY COMMISSIONER PROKUDA TO RECOMMEND APPROVAL, SECONDED BY COMMISSIONER KENNEDY-CARRASCO.**

**All in favor, motion passed. 6-0**

### B. Z-22-15 MARION TOWNSHIP - PROPOSED AMENDMENTS TO ZONING ORDINANCE: Article XX Amendments (Conditional Rezoning).

The Marion Township Planning Commission proposes to revise Article XX, specifically adding new language regulating Conditional Rezoning.



**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
APRIL 13, 2015  
6:30 P.M.  
MINUTES**

CALL TO ORDER: The meeting of the Genoa Township Planning Commission was called to order at 6:31 p.m. Present were Chairman Doug Brown, James Mortensen, Barbara Figurski, Eric Rauch, Diana Lowe, and Chris Grajek. Also present were Kelly VanMarter, Township Community Development Director and Assistant Township Manager; Brian Borden of LSL; Gary Markstrom of Tetra Tech.

PLEDGE OF ALLEGIANCE: The Pledge of Allegiance was recited.

APPROVAL OF AGENDA: Upon motion of Barbara Figurski and support of James Mortensen, the agenda was approved as submitted. **Motion carried unanimously.**

CALL TO THE PUBLIC: No one wished to address the Planning Commission.  
*(Note: The Board reserves the right to not begin new business after 10:00 p.m.)*

**OPEN PUBLIC HEARING #1...** Review of a rezoning application, environmental impact assessment, and site plan for approximately 4.19 acres in Section 11, located at 6253 Grand River Avenue between Hughes Rd and Kellogg Rd, Howell, Michigan (Parcels 4711-11-300-021, 27, 28). The applicant has requested a rezoning to remove the Town Center Overlay District from the property (GCD/TC to GCD). The request is petitioned by Chestnut Development, LLC.

David LeClair of Livingston Architects and Heather Brandenburg of Lindhout Associates addressed the Planning Commission. The proposed site plan is for professional and medical offices. The project would be built in two phases. Each building is 14,500 square feet approximately. Each building would be split into two or four tenants. The existing drive would be reconfigured to align with the new development. The homes in back of the property have an easement currently and they would receive an easement for a new drive.

The materials are brick with stone banding above and below windows. There is a metal fascia, asphalt shingles and a similar style to the office buildings built at a later time. Photographs of the proposed materials were shown to the Planning Commission.

The petitioner is requesting the Town Center overlay designation be removed. The pond is not a wetland per the DEQ. The petitioner has obtained a permit for the portion of the wetland that will be interrupted. The outlet is to a county drain. The parking calculations reflect an abundance of parking. The petitioner is willing to do banked parking on the property along the back of the building. The front of the site appears to be sufficiently set up for parking. The petitioner believes the proposed plan is in line with what is currently along Grand River.



Mr. Borden reviewed his letter of March 17, 2015. Currently, the zoning and master plan are consistent. If changes are made to the zoning, then it's conceivable other changes may be needed. The two residences to the north are not part of the town center zoning, so they will not need to be considered.

Ms. VanMarter discussed expanding the area. The ordinance does not allow for staff to initiate rezoning. Mr. Mortensen discussed the history of the town center overlay briefly. He is of the opinion that it's time to address the overlay district as a whole. Ms. VanMarter indicated that there have been no inquiries about development in the overlay district in the last year. Chairman Brown expressed concern that the overlay district is proper.

Mr. Grajek discussed the fact that while this parcel is not developed and could be removed from the district easily, the neighboring parcels would not be since they were previously developed. He feels there's a reason that the district was established as it was, but at this point there is no need for a downtown area.

Mr. Rauch is in favor of removing this parcel, but would prefer to protect the areas at Hughes Road and Grand River as well as Dorr Road and Grand River. Ms. Figurski expressed agreement.

A call to the public was made. No one wished to address the Planning Commission regarding this agenda item.

**Planning Commission disposition of petition**

- A. Recommendation regarding Environmental Impact Assessment
- B. Recommendation regarding Rezoning from GCD/TC to GCD.

**Motion** by Barbara Figurski to recommend to the Township Board adoption of the environmental impact assessment dated March 4, 2015. Support by Diana Lowe.  
**Motion carried unanimously.**

**Motion** by James Mortensen to recommend to the Township Board approval of the rezoning of the property at 6253 Grand River Avenue from Town Center Overlay District to its original underlying zoning of General Commercial District. This recommendation is made because the use is consistent with the existing properties immediately to the east and west. Further, the Planning Commission is of the opinion that a township overlay type of building on this site in the absence of development of township overlay characteristics in the neighboring properties would be inappropriate. Further, the Planning Commission as part of this recommendation encourages Township Staff to commence an investigation and study of the township overlay zoning on all properties in the district for subsequent review by the Planning Commission and possible eventual recommendation to the township board. Support by Barbara Figurski.

Ayes: Lowe, Mortensen, Figurski, Rauch (4)

Nays: Grajek (1)

**Motion carried.**



March 17, 2015

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
<b>Subject:</b>	Proposed rezoning from GCD/TCOD to GCD – Review #1
<b>Location:</b>	6253 Grand River Avenue – north side of Grand River, east of Hughes Road
<b>Zoning:</b>	GCD General Commercial District and TCOB Town Center Overlay District

Dear Commissioners:

At the Township’s request, we have reviewed the proposed rezoning of the vacant 4.19-acre site from GCD General Commercial District and TCOB Town Center Overlay District to simply GCD General Commercial District. This proposal has been reviewed in accordance with the Genoa Township Zoning Ordinance and Master Plan.

**A. SUMMARY**

1. The Master Plan Future Land Use map identifies the site and adjacent parcels as Mixed-Use Town Center, which is consistent with current zoning in the subject area.
2. Granting of the request has the potential to impact the overall goal/vision of the Mixed-Use Town Center/TCOB.
3. The site plan submitted is for a conventional suburban office development and is not generally consistent with the goals/design standards of the Mixed-Use Town Center/TCOB.
4. The distinction between current and proposed zoning is primarily related to design standards, rather than uses. As such, development under simply the GCD would likely result in a project that is compatible with the area and capacity of infrastructure.
5. If the Township considers removing the site from the TCOB, we suggest consideration be given to also removing the adjacent properties to the north and east so as to not create a “hole” in the TCOB boundary.
6. The Planning Commission and/or Township Board have the authority to initiate a rezoning in accordance with Article 22.
7. Prior to initiating rezoning of a larger area, the Township must decide whether the original Town Center vision remains feasible or if the concept/zoning boundary need to be re-evaluated.

**B. PROCESS**


As described in Article 22 of the Zoning Ordinance, the process to amend the Official Township Zoning Map is as follows:

1. The Township Planning Commission holds a public hearing on the rezoning and makes its recommendation to the Township Board.
2. The Livingston County Planning Commission reviews the request and makes its recommendation to the Township Board.
3. The Township Board considers the recommendations and takes action to grant or deny the rezoning request.

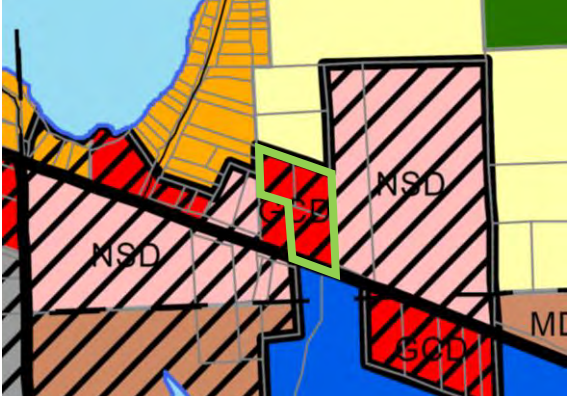
**C. PROJECT DESCRIPTION**

The site is located on the north side of Grand River Avenue, east of Hughes Road. Current zoning, as well as existing and planned land uses in the area are as follows:

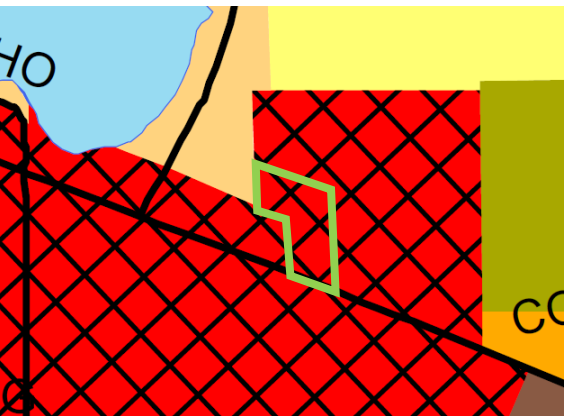
<b>Existing Land Use</b>	
<b>Site</b>	Vacant
<b>North</b>	Residential
<b>East</b>	Office/shop and nursery
<b>South</b>	Office/showroom and vacant
<b>West</b>	Multi-tenant office/service

<b>Zoning</b>	
<b>Site</b>	GCD/TCOD
<b>North</b>	LDR
<b>East</b>	NSD/TCOD
<b>South</b>	NSD/TCOD and OSD
<b>West</b>	GCD/TCOD and NSD/TCOD

<b>Master Plan</b>	
<b>Site</b>	Mixed-Use Town Center
<b>North</b>	Mixed-Use Town Center
<b>East</b>	Mixed-Use Town Center
<b>South</b>	Mixed-Use Town Center
<b>West</b>	Mixed-Use Town Center and Small Lot Single Family Residential



#### **D. REZONING REVIEW**

- 1. Consistency with the goals, policies and future land use map of the Genoa Township Master Plan, including any subarea or corridor studies. If conditions have changed since the Master Plan was adopted, the consistency with recent development trends in the area.***

The Township Master Plan and Future Land Use map identify the site and most of the surrounding area as Mixed-Use Town Center. This future land use category is intended for “a mixture of uses integrated into a traditional-style development of high density single family homes, attached and detached, along with various commercial uses including retail and office.” The site’s inclusion within the TCOD is consistent with this description.

In the submittal, the applicant states that “the TCOD may not achieve the intended purposes as originally contemplated” and references the lack of construction activity within the TCOD. Meanwhile, the site plan submitted for the property depicts a conventional suburban office development that does not generally reflect the goals outlined for the Mixed-Use Town Center.

- 2. Compatibility of the site's physical, geological, hydrological and other environmental features with the host of uses permitted in the proposed zoning district.***

The 4.19-acre site is currently vacant. The site plan submittal shows an existing wetland/small pond that will be filled in to accommodate the project. The Impact Assessment indicates that the applicant is currently in the review process with MDEQ for this activity, which would likely be needed regardless of whether or not the site remains within the TCOD boundary.

Aside from the wetland/pond, there do not appear to be any other environmental conditions that would impact development of the site with or without the TCOD standards.

- 3. The ability of the site to be reasonably developed with one (1) of the uses permitted under the current zoning.***

Aside from the ability to incorporate some mixture of residential and non-residential, the host of uses under current (GCD/TCOD) and proposed (GCD) zoning remain essentially the same. The distinctions between the two are primarily in the design standards.

In the submittal, the applicant states that “the TCOD design requirements present significant functional and cost challenges that jeopardize the feasibility of the project.”

- 4. The compatibility of all the potential uses allowed in the proposed zoning district with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure and potential influence on property values.***

Similar to the statement above, the TCOD allows a mixture of uses not permitted in the GCD on its own. Aside from that, the differences lie within the design requirements. Generally speaking, development of the site with or without TCOD design standards would not be expected to have an adverse impact on most of the conditions noted under this criterion.

However, one concern is that the Mixed-Use Town Center category in the Master Plan accounts for only 0.9% of the acreage within the Township. While the percentage change would be somewhat negligible, the removal of 4 acres from the TCOD has the potential to erode the feasibility of the original vision.

Furthermore, given the site’s proximity within the overall TCOD, its removal could adversely impact the adjacent properties to the north and east and would create a “hole” in the overall TCOD boundary.

If the Township sees merit in removing the subject site from the TCOD, we suggest consideration be given to also removing the adjacent properties to the north and east. This likely warrants additional analysis and discussion and should not be undertaken lightly as it would have an even greater impact on the overall feasibility of developing a Town Center as outlined in the Master Plan and Zoning Ordinance.

**5. *The capacity of Township infrastructure and services sufficient to accommodate the uses permitted in the requested district without compromising the "health, safety and welfare" of the Township.***

The site has access to existing public sewer, water and streets. The allowable uses are not expected to adversely impact the capacity of public infrastructure and services. With that being said, the Township should also consider any comments provided by the Township Engineer or Fire Department with respect to this criterion.

**6. *The apparent demand for the types of uses permitted in the requested zoning district in the Township in relation to the amount of land in the Township currently zoned to accommodate the demand.***

Similar to statements above, our biggest concern under this criterion is the impact removal of the TCOD designation would have on the overall area planned/zoned as Mixed-Use Town Center/TCOD.

**7. *Where a rezoning is reasonable given the above criteria, a determination the requested zoning district is more appropriate than another district or amending the list of permitted or Special Land Uses within a district.***

Since the distinction between existing and proposed zoning is primarily design related, we do not believe that amending TCOD uses is an appropriate option.

In our opinion, creating a hole in the TCOD is not a reasonable approach. Similar to statements above, if the Township deems the rezoning request reasonable, then thought should be given to also removing the adjacent properties to the north and east from the TCOD.

Ultimately, the Township must decide if original TCOD concept still has merit or warrants re-evaluation.

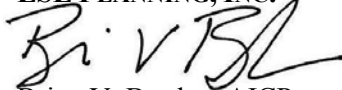
**8. *The request has not previously been submitted within the past one (1) year, unless conditions have changed or new information has been provided.***

No rezoning applications have been submitted for this property within the past year.

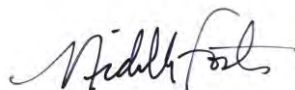
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [foster@lslplanning.com](mailto:foster@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Michelle Foster  
Project Planner



March 17, 2015

Ms. Kelly Van Marter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

**Re: Grand River Avenue Office Complex Rezoning Review**

Dear Ms. Van Marter:

We have reviewed the rezoning application for the Grand River Office Complex dated March 1, 2015, from Chestnut Development LLC. The site is located on the north side of Grand River Avenue between South Hughes and Kellogg Roads. The petitioner is planning to construct two new 15,480 sft medical office buildings in two separate phases. The existing parcel is zoned for General Commercial District/Town Center Overlay District (GCD/TCOD) and the petitioner is requesting the property to just be General Commercial District (GCD).

The petitioner argues that the adjacent sites to the east and west were complete prior to the application of the TCOD zoning, and that meeting the TCOD requirements would present significant functional and cost challenges to the site development.

Tetra Tech has reviewed the documents and did not find any engineering issues regarding site drainage, or water and sewer utilities that would arise from this change in zoning classification.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Gary Markstrom'.

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

A handwritten signature in blue ink, appearing to read 'Joseph C. Siwek'.

Joseph C. Siwek, P.E.  
Project Engineer

copy: Steve Gronow, Chestnut Development, LLC



# BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.  
Brighton, MI 48116  
o: 810-229-6640 f: 810-229-1619

March 16, 2015

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Chestnut Landing  
6253 E. Grand River  
Rezoning Review

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan for rezoning. The plans were received for review on March 9, 2015 and the drawings are dated December 1, 2014. The project is an existing B-use building and its associated property and rezoning it to be joined as a part of the proposed future two phase development of two (2) Type VB multi-tenant B-use structures. The plan indicates a single 15,480 square foot building with shared parking and access drive for phase one and a similar type development for phase two. There is no indication whether both phases will take place simultaneously or at different times. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

The fire authority sees no negative impact by the rezoning of the property; however the site development must meet the fire authority site development requirements identified below as copied from the plan review letter dated December 8, 2015.

1. Based upon Allowable Building Heights and Areas table square footage limitations, each building shall be provided with an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*.

**IFC 903  
MBC Table 503**

- A. The FDC shall be located in an approved and agreed upon location by the general, fire suppression contractors and fire authority through plan review.
- B. The location, size, gate valve, and connection of the fire protection lead for each structure shall be indicated on the utility site plan.
- C. There shall be a hydrant located within 100 feet of the FDC.

2. Based upon the construction type and square footage, the building is required to be fully fire suppressed. By providing each structure with an NFPA 13 compliant fire suppression system, a hydrant spacing increase is allowed up to 500 feet. Provide an additional fire hydrant for Phase 2 in the peninsula greenbelt area along the west edge of the drive. Also, relocate HYD11 sixty feet to the east adjacent to the dumpster enclosure.

**IFC C 105**

3. Future project submittals shall include the address and street name of the project in the title block.

**IFC 105.4.2**





4. The building shall include the building address on the building. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation.

**IFC 505.1**

5. The drives around both phases of building are considered access roads into the site and shall be a minimum of 26' wide. With a width of 26' wide, one side of the street shall be marked as a fire lane. Include the location of the proposed fire lane signage and include a detail of the fire lane sign in the submittal. Access roads to site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.

**IFC D 103.6**

**IFC D 103.1**

**IFC D 102.1**

**IFC D 103.3**

6. Access around building shall provide emergency vehicles with a turning radius of 50' outside and a minimum vertical clearance of 13 ½ feet.
7. Each building vestibule shall be provided with a Knox Box. The location of Knox Box shall be indicated on future submittals. The Knox box will be located adjacent to the vestibule door of the structure.

**IFC 506.1**

8. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

Capt. Rick Boisvert  
Fire Inspector





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

## NOTICE OF PUBLIC HEARING (REZONING)

March 25, 2015

To Whom It May Concern:

Please be advised that the Planning Commission of Genoa Charter Township will conduct a public hearing on Monday, April 13, 2015, commencing at 6:30 p.m. at the Genoa Charter Township Hall, 2911 Dorr Road, Brighton, Michigan, as required under the provisions of the Michigan Zoning Enabling Act.

As required by state law, you are receiving this notice because you have been identified as an owner or occupant of real property within 300 feet of the subject parcel. The property in question is approximately 4.19 acres in Section 11, located at 6253 W. Grand River Avenue between Hughes Rd and Kellogg Rd, Howell, Michigan (Parcels 4711-11-300-021, 27, 28).

The applicant has requested a rezoning to remove the Town Center Overlay District from the property (GCD/TC to GCD). The request is petitioned by Chestnut Development, LLC.

You are invited to attend this hearing. If you are unable to attend, written comments may be submitted by writing to the Planning Commission at the Genoa Township Hall, 2911 Dorr Road, Brighton, MI 48116 or via email at [kathryn@genoa.org](mailto:kathryn@genoa.org) up to the date of the hearing and may be further received by the Planning Commission at said hearing. In addition, all materials relating to these requests may be examined at the Township Hall during normal business hours.

Genoa Charter Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon seven (7) days' notice to the Township. Individuals with disabilities requiring auxiliary aids or services should contact the Township in writing or by calling at (810) 227-5225.

### **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

Linda Rowell

Sincerely,

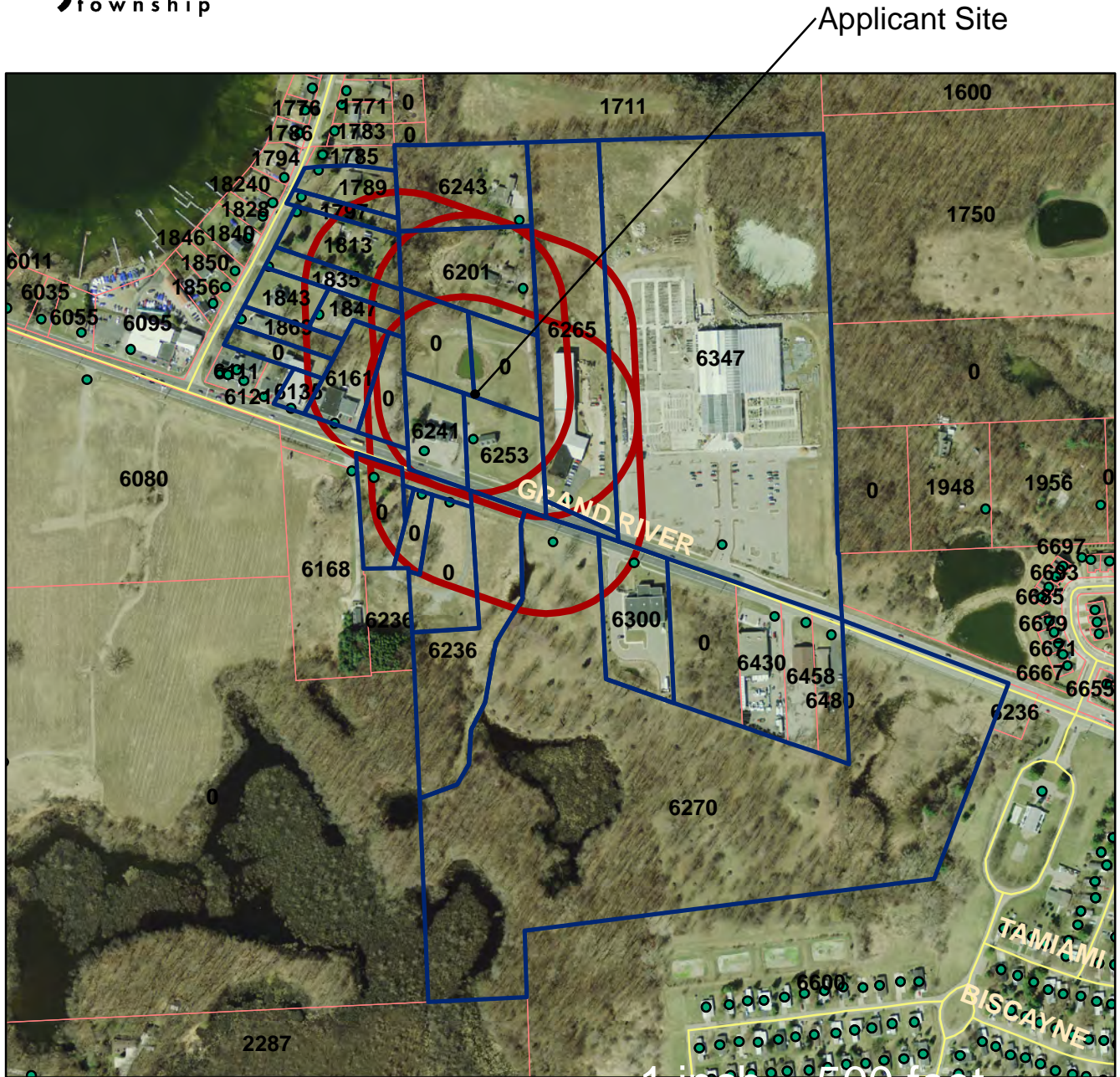
Kelly VanMarter

Assistant Township Manager / Community Development Director  
KKV/kp

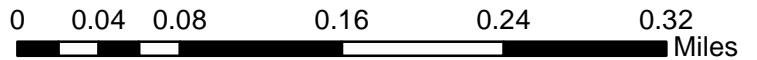


# 300' Buffer for Noticing

Blue outline identifies parcels which are within 300 feet.  
 Red outline indicates area within 300 feet of affected parcel.



Planning Commission Case #15-06  
 Applicant: Chestnut Properties  
 Address: 6253 W. Grand River  
 Parcels: 4711-11-300-021, 27, 28  
 Meeting Date: April 13, 2015



SBN HOLDING LLC  
1172 CRAVEN DR  
HIGHLAND, MI 48356

CHRISTENSEN RALPH & LAURA  
1789 S HUGHES RD  
BRIGHTON, MI 48114

OWNER OR OCCUPANT  
1797 S HUGHES RD  
BRIGHTON, MI 48114

DAVID & CAROL CARY  
1813 S HUGHES RD  
BRIGHTON, MI 48114

WADE ORTWINE  
1835 S HUGHES RD  
BRIGHTON, MI 48114

BORDINE INVESTMENT CO.  
1835 S ROCHESTER RD  
ROCHESTER, MI 48307

OWNER OR OCCUPANT  
1843 S HUGHES RD  
BRIGHTON, MI 48114

AMANDA BECKWITH & MARK  
IGNATOWSKI  
1847 S HUGHES RD  
BRIGHTON, MI 48114

OWNER OR OCCUPANT  
1869 S HUGHES RD  
BRIGHTON, MI 48114

DAKKOTA INTEGRATED SYSTEMS, LLC  
1875 HOLLOWAY DR.  
HOLT, MI 48842

RUSSELL & PHILLIS THOMAS  
22246 VIRGINIA ST  
EASTPOINTE, MI 48021

JASON & TIFFANY LINDER  
233 WALLACE WAY  
HOWELL, MI 48843

PUSTE ANDREA REVOCABLE TRUST  
2772 GOLF CLUB RD  
HOWELL, MI 48843

CHESTNUT DEVELOPMENT LLC  
3800 CHILSON RD  
HOWELL, MI 48843

PUSTE ANDREA REVOCABLE TRUST  
6135 W GRAND RIVER  
BRIGHTON, MI 48116

OWNER OR OCCUPANT  
6161 W GRAND RIVER  
BRIGHTON, MI 48116

SCOTT WEXLER  
6201 W GRAND RIVER  
BRIGHTON, MI 48114

TJS, LLC  
6236 W GRAND RIVER  
BRIGHTON, MI 48114

MITTEN MANAGEMENT, INC  
6241 GRAND RIVER AVE #300  
BRIGHTON, MI 48114

SHOWALTER EDWARD  
6243 W GRAND RIVER  
BRIGHTON, MI 48114

HOWELL MACHINE PRODUCTS  
6265 W GRAND RIVER  
BRIGHTON, MI 48114

OWNER OR OCCUPANT  
6270 W GRAND RIVER  
BRIGHTON, MI 48114

PUNCH & PAT INVESTMENTS LLC  
6300 W GRAND RIVER  
BRIGHTON, MI 48114

OWNER OR OCCUPANT  
6347 W GRAND RIVER  
BRIGHTON, MI 48116

JUDITH STRONG  
6905 VALLEY GREEN  
WILLIAMSBURG, VA 23188

TJS, LLC  
7200 CHALLIS  
BRIGHTON, MI 48116

CRAIG & JUDITH TOLLES  
7831 DEBORA  
BRIGHTON, MI 48114

**GENOA CHARTER TOWNSHIP  
LIVINGSTON COUNTY,  
MICHIGAN**

**NOTICE OF PUBLIC HEARING**

**PLEASE TAKE NOTICE** that the Planning Commission of Genoa Charter Township will conduct a public hearing on Monday, April 13, 2015, commencing at 6:30 p.m. at the Genoa Charter Township Hall, 2911 Dorr Road, Brighton, Michigan, as required under the provisions of the Michigan Zoning Enabling Act.

**PLEASE TAKE FURTHER NOTICE** that the items to be considered at said public hearing include, in brief, the following:

**OPEN PUBLIC HEARING #1...**Consideration of the rezoning of approximately 4.19 acres in Section 11, located at 6253 Grand River Avenue between Hughes Rd and Kellogg Rd, Howell, Michigan (Parcels 4711-11-300-021, 27, 28). The applicant has requested a rezoning to remove the Town Center Overlay District from the property (GCD/TC to GCD). The request is petitioned by Chestnut Development, LLC.

**OPEN PUBLIC HEARING #2...**Review of a special use, site plan, and environmental impact assessment for a proposed remote bank ATM in an existing parking lot. The property in question is located at 3599 E. Grand River Avenue, Howell, Michigan, being Parcel No. 4711-05-400-031. The request is petitioned by Chase Bank.

You are invited to attend this hearing. If you are unable to attend, written comments may be submitted by writing to the Planning Commission at the Genoa Township Hall, 2911 Dorr Road, Brighton, MI 48116 or via email at [kathryn@genoa.org](mailto:kathryn@genoa.org) up to the date of the hearing and may be further received by the Planning Commission at said hearing. In addition, all materials relating to these requests may be examined at the Township Hall during normal business hours.

Genoa Charter Township will provide necessary reasonable auxiliary aids and services to individuals with disabilities at the meeting/hearing upon seven (7) days' notice to the Township. Individuals with disabilities requiring auxiliary aids or services should contact the Township in writing or by calling at (810) 227-5225.

SIGNED: KELLY VANMARTER  
ASSISTANT TOWNSHIP MANAGER/COMMUNITY  
DEVELOPMENT DIRECTOR

(03-27-2015 DAILY 236345)

**Rezoning  
Impact Assessment  
for  
Grand River Office Complex  
Genoa Township  
Livingston County, Michigan**

**Prepared By**

**Livingston Engineering  
3300 S. Old US-23  
Brighton, MI 48114  
(810) 225-7100  
March 4, 2015**



This impact assessment has been prepared in accordance with section 18.07 of the Genoa Township, Livingston County, Michigan Zoning Ordinance. This section states that rezonings of this nature shall include such a report for review as part of the rezoning process. As such, this report has been prepared to provide the required information and project overview of the development, in accordance with current township requirements. More specifically, this report will look at the impacts of the proposed rezoning comparative to the proposed zoning classification.

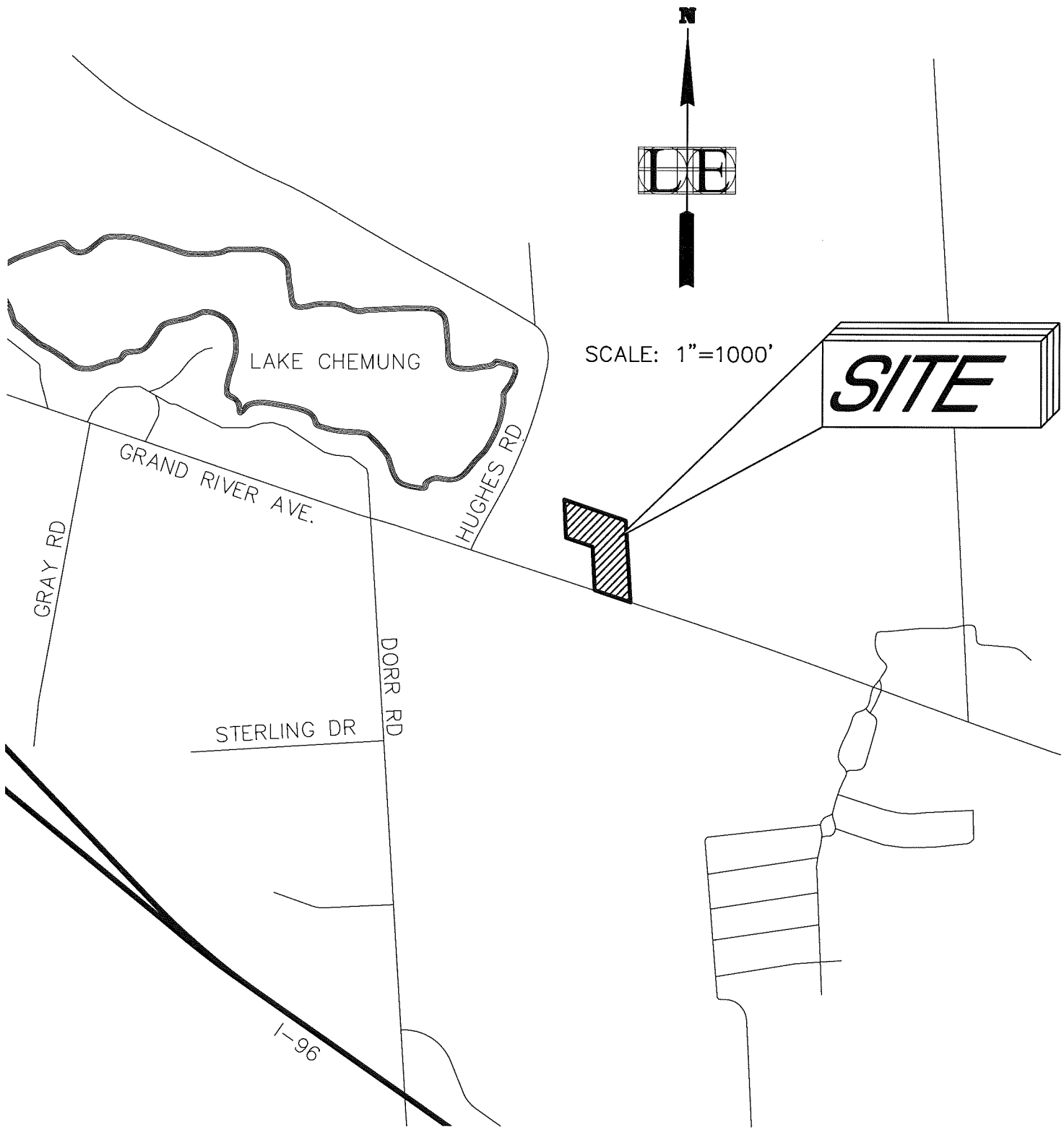
## **I. Party Responsible for preparation of Impact Statement**

This impact assessment has been prepared by Livingston Engineering, a professional services company offering civil engineering, land surveying, and site planning services throughout southeast Michigan. Livingston Engineering is licensed to provide engineering and surveying services in Michigan, as well as engineering licenses in the states of Arizona, Colorado, New Mexico, Tennessee and Utah.

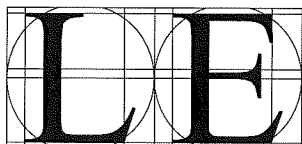
## **II. Site Location**

The subject site contains approximately 4.19 acres located in the southwest ¼ of section 11 of Genoa Township, Livingston County, Michigan. This parcel is located on the north side of Grand River Ave east of Dorr Rd. It is bordered by similar use office building to the west, a machine shop to the east and residential housing to the north. A location map and aerial photograph of the subject site is included in this report as Exhibit “A” and Exhibit “B” respectively.

Currently, the site is zoned GCD, General Commercial District with a Town Center Overlay. The proposal for the rezoning application is to remove the Town Center Overlay while maintaining the underlying GCD zoning.



LOCATION MAP - EXHIBIT A



**LIVINGSTON ENGINEERING**  
 CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114  
 PHONE: (810) 225-7100 FAX: (810) 225-7699

<http://www.livingstoneng.com>

DRAWN BY MJB JOB No. 14211

DESCRIPTION  
 GRAND RIVER OFFICE COMPLEX

DATE 12-1-14 SHEET No. 1 OF 5 SCALE 1"=1000'



AERIAL PHOTOGRAPH - EXHIBIT B



**LIVINGSTON ENGINEERING**  
 CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

<http://www.livingstoneng.com>

PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB JOB No. 14211

DESCRIPTION  
 GRAND RIVER OFFICE COMPLEX

DATE 12-1-14 SHEET No. 2 OF 5 SCALE 1"=200'



The site is bordered on the east and west by Neighborhood Services zoning (NS) with the TCO, to the north by Low Density Residential (LDR) and to the northwest by Lakeshore Resort Residential (LRR). Across Grand River from this site there are several commercial, service and residential districts, all with the TCO. A copy of the Genoa Township Zoning Map is included in this report as Exhibit “C”.

### **III. Impact on Natural Features**

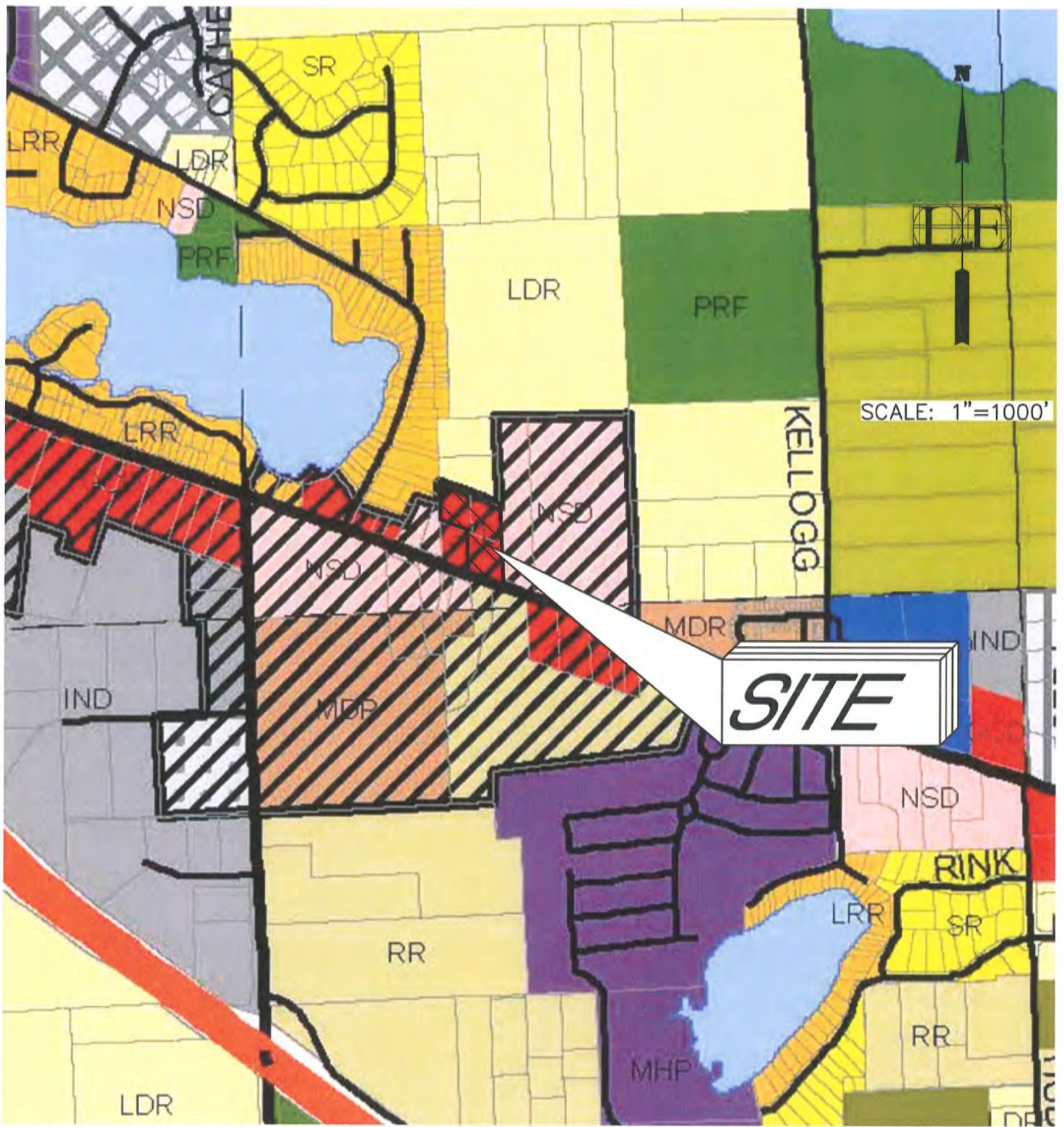
Currently, the site is vacant and consists of an open field with a small pond and several scattered trees, and a more densely wooded area to the northwest. The small on-site pond will be filled in, as part of this development. The pond is a non-regulated wetland. Along the north boundary of this property is a county drain that is also regulated wetland. The developer is currently in the process of acquiring a DEQ permit for discharging into this wetland area.

Soils on the site consist primarily of Miami Loam. Miami loam is described as poorly drained soils with slow runoff characteristics and moderate permeability. A soils map of the subject site is included as Exhibit “D”.

As depicted in Exhibit “E”, the site drains from south to north, or from Grand River Ave toward the outlet to the enclosed county drain located on the northwest side of the subject parcel. The county drain is located on the subject site and is enclosed in a 36” pipe located in an easement that runs along and near the easterly and northerly property lines. Storm water runoff will be collected and directed into a proposed on-site detention area.

Part of the wooded area located on the northwest side of the parcel will be removed to accommodate the proposed detention pond.

Landscape treatments and buffers will be placed both within the site and around its perimeters to compliment the vegetation that will remain in place.



PROPERTY ZONED - (GCD) GENERAL COMMERCIAL DISTRICT  
(TCO) TOWN CENTER OVERLAY

ZONING MAP - EXHIBIT C



**LIVINGSTON ENGINEERING**  
CIVIL ENGINEERING      SURVEYING      PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

<http://www.livingstoneng.com>

PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB      JOB No. 14211

DESCRIPTION  
GRAND RIVER OFFICE COMPLEX

DATE 12-1-14      SHEET No. 3 OF 5      SCALE 1"=1000'





SCALE: 1"=200'

**SOILS LEGEND**

- MoB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES
- MoC - MIAMI LOAM, 6 TO 12 PERCENT SLOPES
- MoD - MIAMI LOAM, 12 TO 18 PERCENT SLOPES
- Cc - CARLISLE MUCK
- FrC - FOX BOYER COMPLEX, 6 TO 12 PERCENT SLOPES

SOILS MAP - EXHIBIT D



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3300 S. OLD US-23, BRIGHTON, MI 48114

<http://www.livingstoneng.com>

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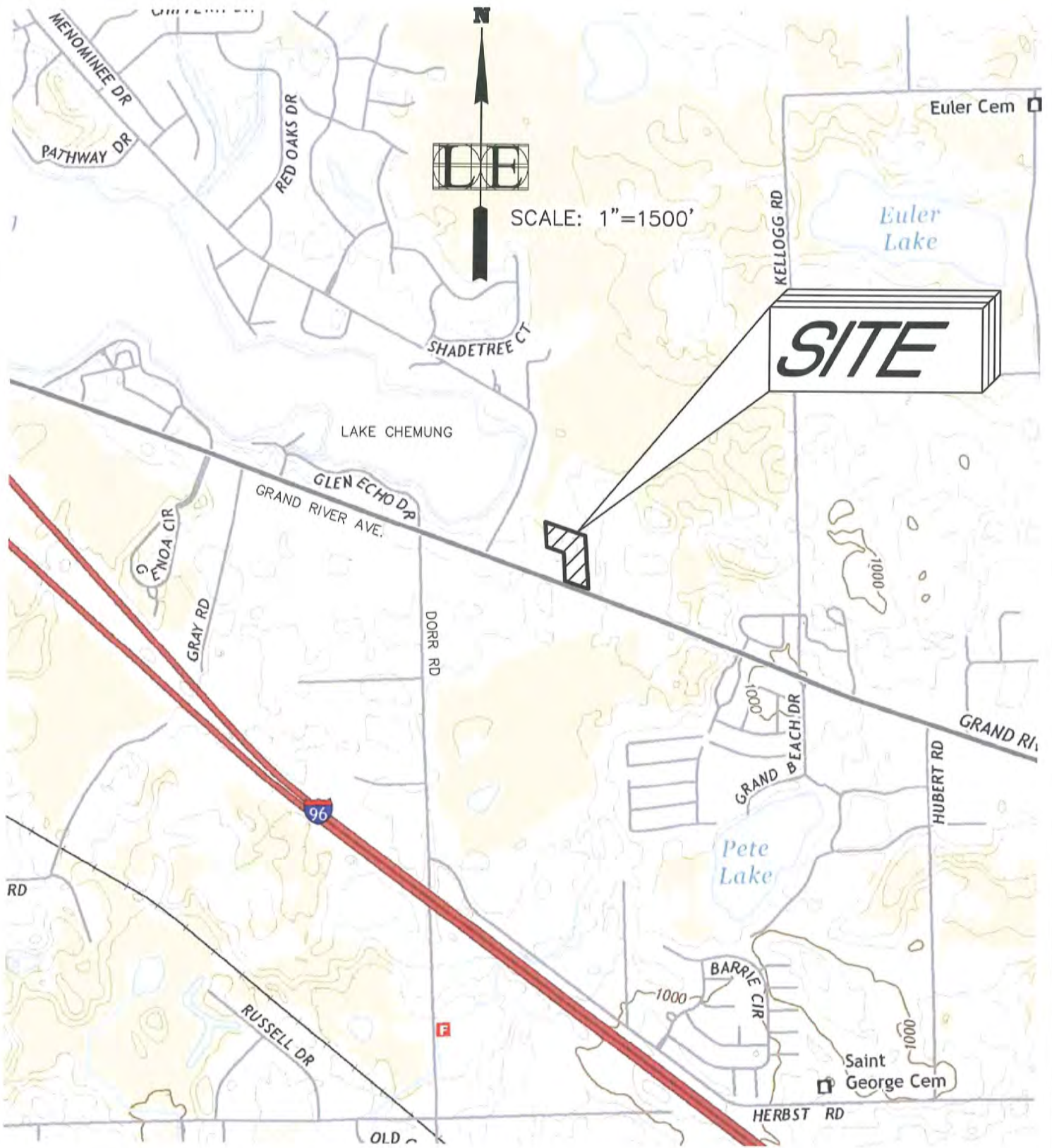
FAX: (810) 225-7699

DRAWN BY MJB      JOB No. 14211

DESCRIPTION  
 GRAND RIVER OFFICE COMPLEX

DATE 12-1-14      SHEET No. 4 OF 5      SCALE 1"=200'





EXISTING DRAINAGE - EXHIBIT E



**LIVINGSTON ENGINEERING**

CIVIL ENGINEERING      SURVEYING      PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB      JOB No. 14211

DESCRIPTION  
GRAND RIVER OFFICE COMPLEX

DATE 12-1-14      SHEET No. 5 OF 5      SCALE 1"=1500'

It is likely that the natural features on this site would be affected in a similar nature regardless of whether the TCO is removed as requested by the proposed rezoning.

#### **IV. Impact on Storm Water Management**

The proposed development will provide storm water quality and flood control treatment using an on-site storm water detention pond, located on the northwest end of the site. The detention pond is designed to meet the current standards of the Livingston County Drain Commissioner's Office and those of Genoa Township. The detention pond is designed to capture and treat storm water runoff from the subject site and the site located immediately to the west, prior to release to the county drain near the existing county drain outlet located on-site near the north property line.

Storm water runoff from Grand River Ave. and the adjacent property located to the east of the subject site currently drain to the existing county drain. Storm water runoff from these adjacent areas will continue to outlet to the county drain, as facilitated by the proposed site improvements associated with the subject development.

During construction, soil erosion and dust control measures will be implemented. Best management practices including silt fence, check dams, and inlet filter mechanisms will be utilized during this time. For dust control, soil watering to keep the site in a moisture optimum condition will be performed with a water truck on an as needed basis. Upon completion of mass grading and earthmoving operations, permanent restoration including topsoil, seed and mulch along with landscape installation will be performed.

A soil erosion and sedimentation control permit will be required prior to the start of any site grading or construction.

As uses for this property are similar in nature regardless of whether the TCO is removed as requested by the proposed rezoning, the impact on storm water management will not be significantly altered by the rezoning request.

## **V. Impact on Surrounding Land Uses**

As proposed, the addition being proposed is in conformance with the current GCD zoning designation and is similar to the adjacent businesses that border the parcel to the east and west.

The proposed building is for general office space only and is approximately 30,000 S.F. in size. Hours of operation for this establishment are expected to be common office hours anywhere between 7:00 a.m. and 6:00 p.m., Monday through Friday.

Access to this site will be from Grand River Ave.

For the proposed building, it is not anticipated that the noise levels will approach 65 decibels at the property lines.

Site lighting for this addition will be limited to wall mounted fixtures as shown on the architectural drawings and will remain within acceptable limits as allowed by Genoa Township. All proposed lighting shall be downward directed to reflect light toward and confined to ground areas as to not interfere with vision of persons on adjacent properties.

As uses for this property are similar in nature regardless of whether the TCO is removed as requested by the proposed rezoning, the impact on surrounding land uses will not be significantly altered by the rezoning request.

## **VI. Impact on Public Facilities and Services.**

As this project is consistent with other new developments along the Grand River corridor in this vicinity, it is not anticipated that this facility will adversely affect emergency services such as fire and police. Additionally, as the project is not a residential site, undesirable affects on local schools or recreation facilities is not expected.

As uses for this property are similar in nature regardless of whether the TCO is removed as requested by the proposed rezoning, the impact on public facilities and services will not be significantly altered by the rezoning request.

## **VII      Impact on Public Utilities**

Water supply for this project will be provided through a proposed water tap to an existing municipal supply system operated by Genoa Township. An Additional hydrant will be placed on site and approved by jurisdictional authorities as part of the site development. Additionally, sanitary sewer service will be provided by Genoa Township via a service lead extended into the site. It is not anticipated that either of these services will adversely affect available capacities for the water and sewer systems. In addition, electric and gas service is available along Grand River Ave. for extension into this site. As expected, such services will be extended into the site under ground.

As uses for this property are similar in nature regardless of whether the TCO is removed as requested by the proposed rezoning, the impact on public utilities will not be significantly altered by the rezoning request.

## **VIII.    Storage and Handling of Any Hazardous Materials**

There is no plan for storage or handling of any hazardous materials on this site. Use of any materials of this nature will need to be addressed during site plan approval.



## IX. Impact on Traffic

The location of the site is well suited for a development of this nature. It is located along Grand River Avenue that has an existing five(5) lane cross section (two(2) eastbound lanes, two(2) westbound lanes and a center left turn lane). Using the ITE Trip Generation Manual, 7th ed., Land Use: General Office Building(710)(see Exhibit F & G), and based upon building gross square footage, we calculated the following trips using the average rate for the A.M. and P.M. peak hours of traffic:

Input: South bldg.: 7740 sf + 7740 sf = 15480 sf  
North bldg.: 15480 sf  
Total: 30960 sf, use 31000 sf

Note: the existing office development located adjacent to and immediately west of the subject development is connected to the westerly drive approach to Grand River Ave. This existing development was not included in the square footage because no new trips will be generated from the existing development as a result of the subject development's proposed improvements.

Using 31,000 sf of gross floor area:

A.M. peak hour:

$$\begin{aligned} 1.55 \times (31000/1000) &= 48.05 \text{ trips} \times 88\% \text{ (entering)} \\ &= 42.28 \text{ directional trips} \end{aligned}$$

P.M. peak hour:

$$\begin{aligned} 1.49 \times (31000/1000) &= 46.19 \text{ trips} \times 83\% \text{ (exiting)} \\ &= 38.34 \text{ directional trips} \end{aligned}$$

As calculated above, the development, under the fully developed conditions shown in this site plan, will generate less than 50 directional trips in both the A.M. and P.M. peak hours of traffic.

# General Office Building (710)

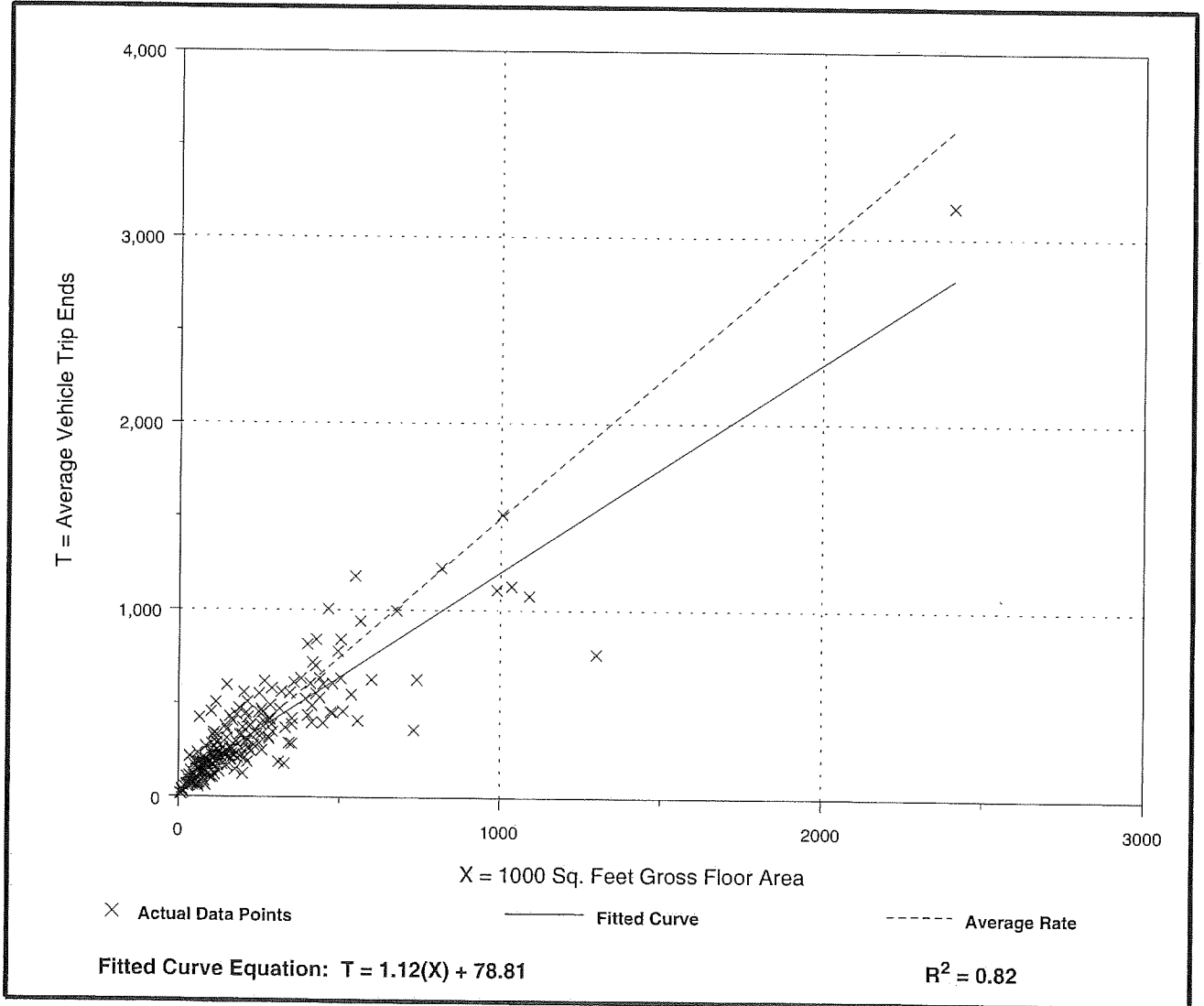
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday,**  
**P.M. Peak Hour**

Number of Studies: 235  
 Average 1000 Sq. Feet GFA: 216  
 Directional Distribution: 17% entering, 83% exiting

## Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.49	0.49 - 6.39	1.37

## Data Plot and Equation



# General Office Building (710)

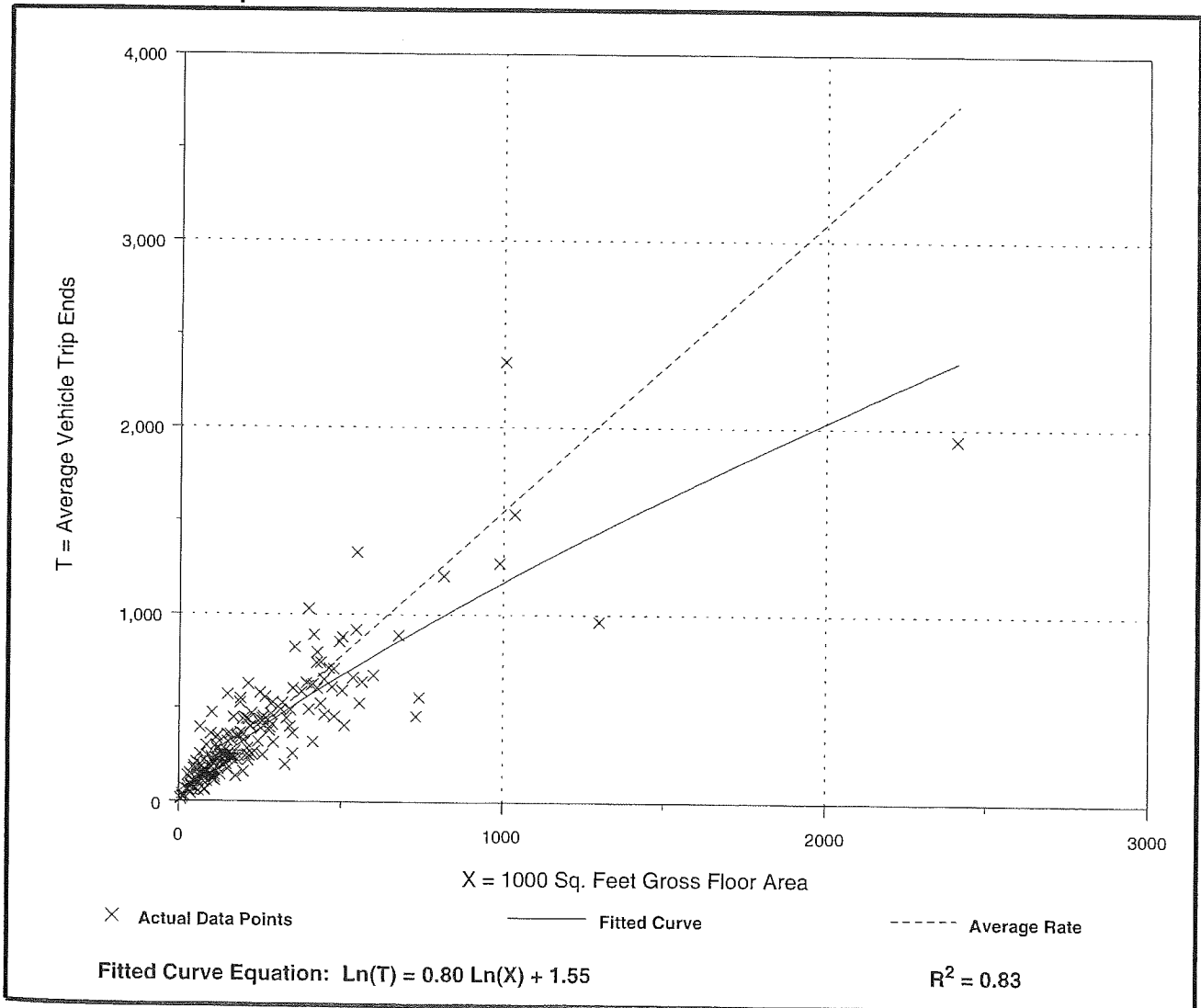
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday,**  
**A.M. Peak Hour**

Number of Studies: 217  
 Average 1000 Sq. Feet GFA: 223  
 Directional Distribution: 88% entering, 12% exiting

## Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.55	0.60 - 5.98	1.39

## Data Plot and Equation





LIVINGSTON COUNTY ROAD COMMISSION  
LAND SPLIT / SIGHT DISTANCE REVIEW

**\*\*NOTE: THIS IS NOT A  
DRIVEWAY PERMIT.\*\***

Review Number 1405-027

Property Owner and Applicant Information

Location

Owner: Chestnut Development LLC  
Street Address: 3800 Chilson Road  
City, State, ZIP: Howell, MI 48843  
Day Phone: (810) 599-5147 Fax:  
Applicant: Steve Gronow  
Company:  
Address: 3800 Chilson Road  
City, State: Howell MI, 48843  
Applicant Phone: (810) 599-5147 Applicant Fax:

Township: Genoa Section: 11  
Development: Chestnut Office  
Approach Type: Commercial  
Speed Limit (if posted): 50  
Speed Factors (if any):  
Roadway On: Grand River Side of Street: North

Field Measurements

Location of existing property corners from nearest crossroad: 893 and 1160 feet East of Hughes

Parcel	Property/ Easement Corners	Access Point(s)	Sight Distance Req.		Sight Distance Measured		Sight Distance Comply	Clear Vision Comply	Neighbor Consent Required	Approve
			Std	Min						
Commercial (East)		1160	800	550	800 East	800 West	Yes	Yes	No	Yes
Commercial (Shared)		878	800	550	800 East	800 West	Yes	Yes	No	Yes

Comments:

A commercial driveway approach can be located at 1160 feet east of Hughes Road on the east side of the property. The existing double driveway west of this property can be reconstructed as a shared driveway at 878 feet east of Hughes Road. A shared driveway easement will need to be secured before a commercial driveway approach permit could be issued at this location.

Inspection Date: 12/01/2014

Inspector:

Kim Hiller

Therefore, a traffic impact assessment or traffic impact study is not required by the Township per the Township Zoning Ordinance for the subject development.

The Livingston County Road Commission Site Distance Review permit for the proposed entrance is attached as Exhibit H.

As uses for this property are similar in nature regardless of whether the TCO is removed as requested by the proposed rezoning, the impact on traffic will not be significantly altered by the rezoning request.

## **X. Historic and Cultural Resources**

It is not believed that this addition will have any impact on any historic and/or cultural resources pertaining to the subject parcel and no known historic and/or cultural resources exist on this site that will be affected by this development.

As uses for this property are similar in nature regardless of whether the TCO is removed as requested by the proposed rezoning, the impact on historic and cultural resources will not be significantly altered by the rezoning request.

## **XI. Special Provisions**

No special provisions are part of this project.

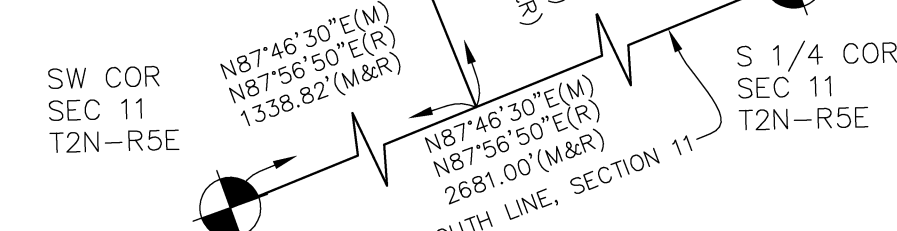
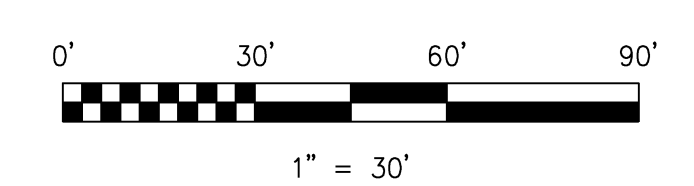
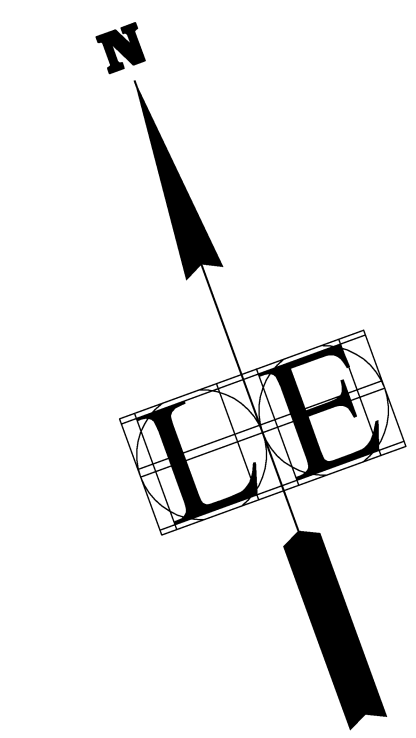
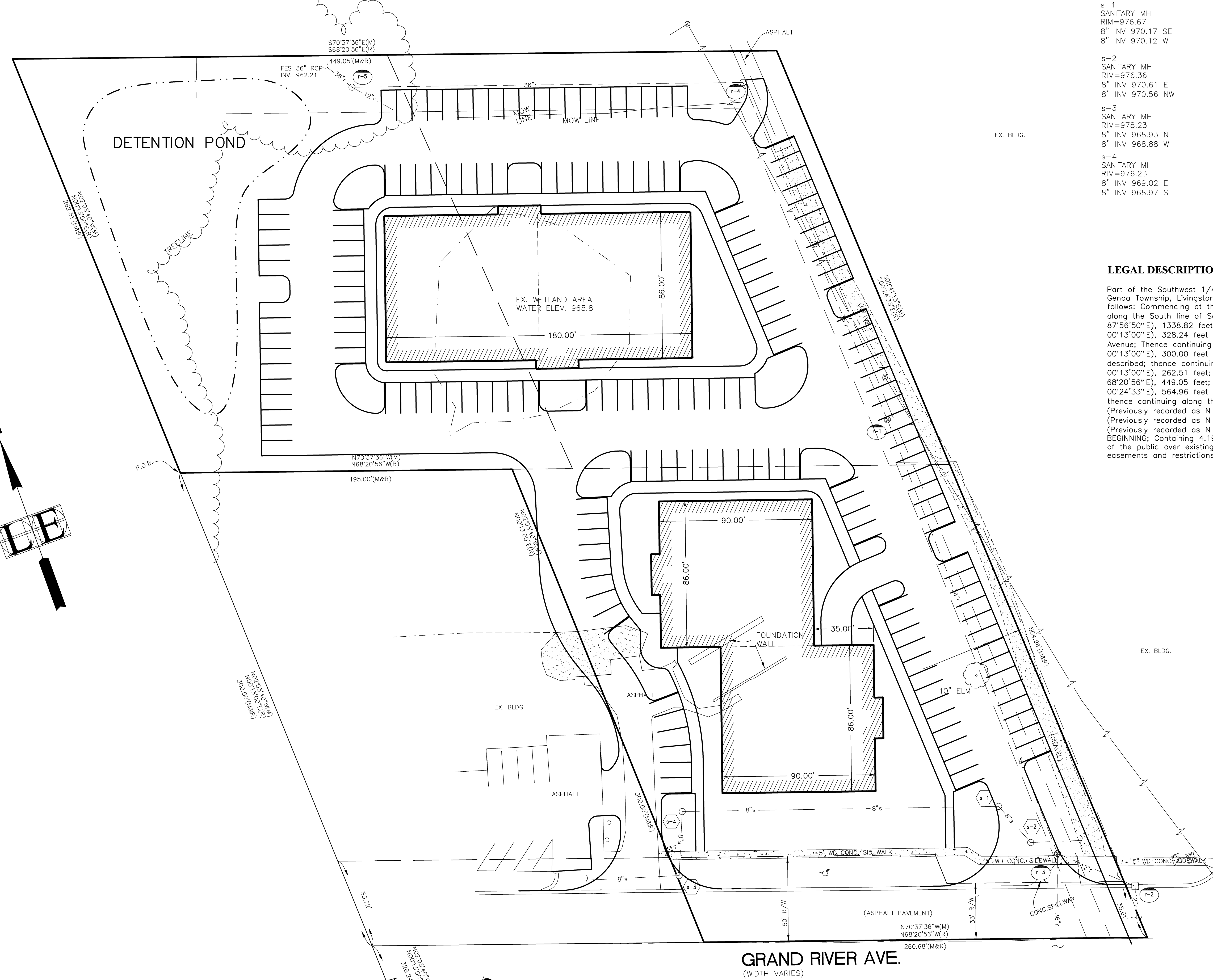
# CONCEPT PLAN

## EXISTING STRUCTURES

s-1 SANITARY MH RIM=976.67 8" INV 970.17 SE 8" INV 970.12 W	r-1 STORM CATCH BASIN RIM=972.75 36" RCP INV 966.45 N 36" RCP INV 966.55 S	r-5 STORM MANHOLE 4" ROUND RIM 966.86 36" RCP INV. 962.31 NW. 36" RCP INV. 962.41 E. 12" CMP INV. 962.71 SE. BOTTOM/SILT 962.31 T/WATER 962.86
s-2 SANITARY MH RIM=976.36 8" INV 970.61 E 8" INV 970.56 NW	r-2 STORM CATCH BASIN RIM=976.99 12" RCP INV 972.09 S 12" RCP INV 971.99 NW	r-3 STORM CATCH BASIN RIM=975.59 36" RCP INV 966.89 N 36" RCP INV 970.29 S 12" RCP INV 971.39 SE
s-3 SANITARY MH RIM=978.23 8" INV 968.93 N 8" INV 968.88 W	r-4 STORM MANHOLE RIM 969.75 2' CONCRETE COVER W/IRON RING	
s-4 SANITARY MH RIM=976.23 8" INV 969.02 E 8" INV 968.97 S		

### LEGAL DESCRIPTION SUBJECT PARCEL

Part of the Southwest 1/4 of Section 11, Town 1 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Southwest Corner of said Section 11; thence along the South line of Section 11, N 87°46'30"E (Previously recorded as N 87°56'50"E), 1338.82 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 328.24 feet to a point on the centerline of Grand River Avenue; Thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet to the POINT OF BEGINNING OF THE Parcel to be described; thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 262.51 feet; thence S 70°37'36"E (Previously recorded as S 68°20'56"E), 449.05 feet; thence S 02°41'13"E (Previously recorded as S 00°24'33"E), 564.96 feet to a point of the centerline of Grand River Avenue; thence continuing along the centerline of Grand River Ave., N 70°37'36"W (Previously recorded as N 68°20'56"W), 260.68 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet; thence N 70°37'36"W (Previously recorded as N 68°20'56"W), 195.00 feet to the POINT OF BEGINNING; Containing 4.19 acres, more or less, and subject to the rights of the public over existing Grand River Ave. Also subject to any other easements and restrictions of record.



FILE: G:\14211 Chestnut\_6253 Gr River\dwg\area\14211base.dwg

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 CIVIL ENGINEERING SURVEYING PLANNING  
 3300 S. OLD US. 23, BRIGHTON, MI 48114  
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 www.livingstoneng.com

---

**CONCEPT PLAN**

SOUTHWEST 1/4 SECTION 11,  
 T2N-R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN  
 VACANT LAND

---

DATE	REVISIONS	DRAWN: MMS/TEA	CHECKED:	APPROVED:	DATE: 11-11-14

---

Job no. **14211**  
 Scale: **1" = 30'**  
 Vertical: **1" = 30'**  
 Horizontal: **1" = 30'**

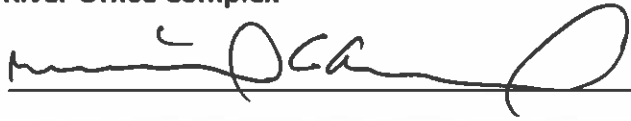
**1 OF 1**



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

## MEMORANDUM

**TO:** Honorable Board of Trustees  
**FROM:** Kelly VanMarter, Assistant Township Manager/Community Development Director  
**DATE:** May 28, 2015  
**RE:** Grand River Office Complex

**MANAGER'S REVIEW:** 

Attached please find the project case file for the Grand River Office Complex project. This case can only be considered at Monday's meeting if the proposed rezoning for this property is first approved. The applicant requests approval for a new office development to be constructed in two phases. Phase I includes a 15,480 square foot building and 74 parking spaces in the southerly half of the site, while Phase II entails another 15,480 square foot building and 105 parking spaces on the northerly half. The site is located at 6253 Grand River Avenue on parcels # 4711-11-300-021, 027, & 028.

The impact assessment was recommended for approval and the site plan was approved by the Planning Commission on April 13, 2015. The applicant failed to resubmit for the Board meeting therefore the conditions of the Planning Commission are outstanding and my recommendation is as follows:

**Environmental Impact Assessment:** I recommend approval of the impact assessment dated 12/01/2014 with the following conditions:

1. The three lots shall be combined into one parcel.
2. The number of REU's shall be indicated in the impact assessment as follows: Using "Office Buildings" each proposed building requires 2.2 REUs. This amount will be subject to increase if medical office or another user is proposed as provided in the Equivalent User Table.
3. Language shall be added to the impact assessment regarding banked parking for phase 2.
4. A statement that no large trucks will use the site shall be added.
5. A copy of the DEQ permit will be provided.

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

### **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

Linda Rowell





GENOA CHARTER TOWNSHIP  
Application for Site Plan Review

GENOA TOWNSHIP  
DEC 03 2014

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: STEVE GRONOW / CHESTNUT DEV., LLC  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: 3800 CHILSON ROAD 11-11-300-021

SITE ADDRESS: VACANT GRAND RIVER PARCEL #(s): 11-113-000-21

APPLICANT PHONE: (810) 599-5147 OWNER PHONE: ( ) SAME

OWNER EMAIL: STEVE @ CHESTNUT BUILDERS. COM

LOCATION AND BRIEF DESCRIPTION OF SITE: 4.19 ACRES VACANT  
LAND

BRIEF STATEMENT OF PROPOSED USE: OFFICE

THE FOLLOWING BUILDINGS ARE PROPOSED: 2 BUILDINGS PER  
ATTACHED SITE PLAN

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: STEVE GRONOW

ADDRESS: 3800 CHILSON RD, HOWELL MI 48843

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

1.) STEVE GRONOW of CHESTNUT DEV. at STEVE @  
Name Business Affiliation E-mail Address  
CHESTNUT BUILDERS LDM

**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: 12-3-14  
PRINT NAME: STEVE GRONOW PHONE: 610-599-5147  
ADDRESS: 3000 CHELSEA RD

**OPEN PUBLIC HEARING #2...** Review of a site plan and impact assessment for a proposed 15,480 sq. ft. office building, located at 6253 Grand River Avenue between Hughes Rd and Kellogg Rd, Howell, Michigan (Parcels 4711-11-300-021, 27, 28). The request is petitioned by Chestnut Development, LLC.

Mr. Borden addressed his letter of March 17, 2015 as it relates to this parcel. Approval of this site plan is inherently tied to the requested rezoning. The building will be 100% brick. The petitioner will submit a new drawing. The petitioner is requesting approval of phase one and phase two. Ms. VanMarter believes approval should be sought separately for phase two. Mr. Borden indicated phase one does not have sufficient parking for full occupancy. An area should be set aside for deliveries to occur without disrupting traffic around the site. Mr. LeClair anticipates UPS type deliveries but no other trucks. He will add that to the environmental impact assessment. They are deficient on the parking lot landscaping plan by one tree. Mr. LeClair agreed to add the tree. There is no anticipated outdoor lighting except wall packs on the building. Ms. VanMarter does want to see lighting plans and a photo metric.

Mr. Markstrom of Tetra Tech addressed his letter of April 2, 2015 with the Planning Commission. If a pump station is needed to service the lower building, it can be inside the building and maintained privately. The water main may need to be moved to prevent overlapping on the neighboring property. A lot of the storm water drainage is addressed in phase two, which caused concern. He has requested more information from the petitioner. The sewer line near Bordine's is shallow and this must be taken into consideration when grading. The plans should be re-submitted, splitting up what's done in each phase. Once usage is known, staff will make the final calculations for REU. The rates are \$15,100.00 per REU. (They have been increased).

The letters from the Livingston County Drain Commission and Brighton Area Fire Authority were reviewed. The requirements of the Brighton Area Fire Authority will be met, subject to further conversations regarding fire suppression systems.

Ms. VanMarter indicated that banked parking for phase two should be permitted.

Mr. Rauch inquired about the property immediately west of the phase one building. The parking for phase one encroaches onto that parcel of property. Mr. LeClair indicated that there is reciprocal parking with that neighbor. Mr. Borden reviewed ordinance section 14.06.11 and it indicates the Planning Commission may reduce setbacks where there is shared parking.

A call to the public was made. David Cary of Hughes Road addressed the Planning Commission. His property abuts phase two. His property is also adjacent to the drain for the swamp. He is concerned about runoff. The drain on the west side of Hughes Road is choked with weeds and is working poorly. He is concerned about the flooding risk to his property.

The Drain Commission has met with Tetra Tech and the petitioner regarding the drainage issue and the petitioner has addressed those concerns.



Carol Cary of Hughes Road addressed the Planning Commission, as well. She would like to see mature trees planted in the back corner. She is also concerned about the lighting plan.

**Planning Commission disposition of petition**

- A. Recommendation of Environmental Impact Assessment. (12-01-14)
- B. Disposition of Site Plan. (02-27-15)

**Motion** by Barbara Figurski to recommend to the Township Board adoption of the Environmental Impact Assessment dated 12/01/14, subject to them addressing the following additions:

- 1. REU's to be noted on the plans;
- 2. Banked parking;
- 3. No large trucks using the site;
- 4. DEQ permit will be provided.

This recommendation is subject to approval by the Township Board of the rezoning request. Support by Diana Lowe. **Motion carried unanimously.**

**Motion** by James Mortensen to recommend to the Township Board adoption of the site plan subject to:

- 1. Approval by the Township Board of the rezoning of this property from Township overlay district back to its original zoning of general commercial;
- 2. The Planning Commission recommends approval of the building elevations. The materials will be 100% brick rather than the block shown on the lower portion of the building. Petitioner will supply the materials board to the Township and it will become Township property;
- 3. The parking will be phased-in in such a way as to not be insufficient if sizeable medical use occurs in phase one. Consideration will be given to banking some of the parking in phase two if possible;
- 4. The petitioner understands that the granting of approval by the Township Board site plan is approved for one year with a potential of renewal each year for the next two years by Township staff;
- 5. The proposed spacing requirements between the two commercial driveways is recommended for approval in that it's indicated there's compliance with site distance standards;
- 6. Loading space will be provided at the northeast corner of the building in phase one;
- 7. One canopy tree will be added to the landscape plan on the west side of the property;
- 8. The petitioner understands that the lighting must comply with the Township standard in the ordinance. Further, the site plan includes no overhead lighting fixtures and is limited to wall packs on the building;
- 9. The Planning Commission recommends approval of the removal of the parking setback because of the presence of a shared driveway;

10. Further, this recommendation is conditioned upon the petitioner obtaining the easement to the property to the immediate west and the residential properties to the north;
11. The petitioner will comply with the requirements of the Township Engineer in his letter of 04/2/15. These requirements will be accomplished prior to the submission of the packet to the Board;
12. The requirements of the Livingston County Drain Commissioner in his letter of 03/25/15 will be complied with;
13. The requirements of the Brighton Area Fire Authority in their letter of 03/16/15 shall be complied with. It is understood that the petitioner will be discussing the requirements of a sprinkler system with the fire chief and that item may change.

Support by Barbara Figurski. **Motion carried unanimously.**

**OPEN PUBLIC HEARING #3...** Review of a special use, environmental impact assessment, and site plan for a proposed remote bank ATM in an existing parking lot, located at 3599 E. Grand River Avenue, Howell, Michigan, parcel # 4711-05-400-031. The request is petitioned by Chase Bank.

Andy Andre from Bud Design and John Krissoff from Chase Bank addressed the Planning Commission. They are hoping to install a remote ATM within the Grand River Plaza. The proposed light is smaller than the existing poles in the parking lot. There are three branch offices within 10 miles. They previously had a branch within Meijers, but no longer do.

Mr. Borden addressed the Planning Commission. Because it is a stand-alone ATM, it requires special scrutiny and a special use permit. The general special use standards have been met. The number of stacking spaces caused him concern. He believes a summary of the queuing study should be provided to the Township Board. It would be preferable to have a branch at this site, but the Township cannot require that. Mr. Mortensen inquired as to whether this site interfered with traffic. Mr. Rauch agreed.

Mr. Borden addressed the potential of a blind spot and traffic conflict. He believes it to be the most important consideration. The petitioner will install a "No Right Turn" sign. He believes this is an underutilized portion of the property and therefore, it should not be an issue. Mr. Mortensen disagrees. Moving it down a few traffic spots was discussed. The petitioner indicated that their margin for profit may not allow it.

Mr. Grajek inquired as to whether petitioner would be amenable to adding brick or another material to dress it up. Mr. Rauch asked about the six signs that are currently proposed. Mr. Rauch suggested moving the angle of the drive thru and ATM.

The construction would take approximately three weeks.

A call was made to the public. Rob Vedro from Blue Frog Books addressed the Planning Commission. He would like to see the road between the parking lot and the



March 30, 2015

Planning Commission  
 Genoa Township  
 2911 Dorr Road  
 Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Assistant Township Manager and Planning Director
<b>Subject:</b>	Grand River Office Complex – Site Plan Review #2
<b>Location:</b>	6253 Grand River Avenue – north side of Grand River, east of Hughes Road
<b>Zoning:</b>	GCD General Commercial District and TCOD Town Center Overlay District

Dear Commissioners:

At the Township’s request, we have reviewed the revised site plan (dated 2/27/2015) proposing a new office development on a vacant 4.19-acre site. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

**A. Summary**

1. The applicant is currently seeking to remove the subject site from the TCOD.
2. The proposed project complies with the dimensional standards of the GCD.
3. The Planning Commission has approval authority over the building elevations.
4. We request the applicant provide wall material calculations.
5. Planning Commission approval is needed for the excess parking proposed (approximately 138% of that required). The applicant should present information supporting the need for excess parking.
6. Phase I does not have enough parking to be occupied solely by medical office.
7. The proposal does not meet the spacing requirements between two commercial driveways along Grand River Avenue; however, the applicant supplied a review from the Road Commission noting compliance with sight distance standards. The Commission has the authority to reduce the spacing requirements.
8. The required loading spaces are not identified.
9. The landscape plan is deficient by 1 canopy tree in the parking lot.
10. The submittal does not include a lighting plan.

**B. Proposal/Process**

The applicant requests site plan review and approval for new office development to be constructed in two phases. Phase I includes a 15,480 square foot building and 74 parking spaces in the southerly half of the site, while Phase II entails another 15,480 square foot building and 105 parking spaces on the northerly half.

The cover sheet includes parking calculations indicating that half of the square footage will be for professional office and the other half for medical office. Professional and medical offices greater than 15,000 square feet are permitted by right in the GCD.

As a side note, the applicant is currently seeking a rezoning of the site from GCD/TCOD to simply GCD. As such, we have reviewed the revised site plan based only on conventional GCD requirements. (Our original site plan review letter (12/17/14) includes comments based upon TCOD requirements.)





*Aerial view of site and surroundings (looking north)*

**C. Site Plan Review**

**1. Dimensional Requirements.** As described in the table below, the proposed project meets the dimensional standards of the GCD:

District	Lot Size		Minimum Setbacks (feet)				Max. Height	Max. Coverage
	Lot Area (acres)	Width (feet)	Front Yard	Side Yard	Rear Yard	Parking		
GCD	1	150	35	15	50	20 front 10 side/rear	35'	35% building 75% impervious
Proposal	4.19	260	37.4	74 (E) 53 (W)	93.1	39 front 8 side (N) 100 side (S)	18.4'	17% building 63.6% impervious

**2. Building Design and Materials.** Proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

The submittal includes elevation drawings showing a pitched roof building constructed of brick and split face block. Architectural elements include a linear stone band, stone arches above the doorways and brick soldier courses above the windows.

We request the applicant provide calculations for wall materials to ensure compliance with the standards of Section 12.01. More specifically, use of split face block is limited to no more than 25%.

**3. Parking.** Based on a 50/50 split of medical and professional office uses, the full project requires 130 parking spaces, while 179 are proposed. This amount of parking represents approximately 138% of the minimum requirement; therefore, Planning Commission approval is needed for excessive parking in accordance with Section 14.02.06. The applicant should provide the Township with a rationale for/evidence in support of the amount of parking.

Additionally, the Phase I parking is not adequate if the building is fully occupied by medical office. While we do not believe this is the applicant's intent, they should be aware of this limitation.

Proposed parking spaces and drive aisles meet or exceed the minimum standards of Section 14.06, although the applicant should be aware that spaces are required to be doubled striped.

Lastly, the number of barrier free spaces exceeds the minimum amount required, which is generally advisable for medical office uses.

4. **Pedestrian Circulation.** The site plan identifies an existing 5-foot wide concrete sidewalk within the Grand River right-of-way. Internal sidewalks are proposed around both buildings, with connections to the public sidewalk.
5. **Vehicular Circulation.** The plan includes a shared drive with the adjacent property to the west, as well as a new drive on the east side of the subject site. As was noted in our first review letter, Section 15.06.02 requires 300 foot spacing between commercial driveways, while the plan provides approximately 225 feet. However, the revised submittal includes a sight distance review by the Livingston County Road Commission indicating compliance with their standards.

Section 15.06 gives the Planning Commission the ability to modify spacing requirements when the applicant can demonstrate that pre-existing conditions prohibit compliance.

6. **Loading.** Section 14.08.08 requires 1 loading space for each building, although the revised plan does not depict a dedicated loading space. Given the excess amount of parking proposed, the applicant may wish to remove some parking to accommodate the loading spaces.
7. **Landscaping.** The following table is a summary of the landscaping required by Section 12.02:

Location	Requirements	Proposed	Comments
Front yard greenbelt	7 canopy trees 20' width	7 canopy trees 37' width	Requirements met
Detention pond	12 trees 120 shrubs	12 evergreen trees 120 shrubs	Requirements met
Parking lot	15 canopy trees 1,491 SF landscaped area	14 canopy trees 3,469 SF landscaped area	1 additional canopy tree required (discrepancy is due to the revised parking lot)
Buffer Zone "B" (rear)	15 canopy trees 15 evergreen trees 60 shrubs 6' wall/fence or 3' berm 20' width	15 canopy trees 15 evergreen trees 60 shrubs 3' berm 20' width	Requirements met

8. **Waste Receptacle and Enclosure.** The site plan identifies a waste receptacle and enclosure southeast of the Phase II building, which is essentially centered on the two buildings to allow for convenient use of a common dumpster. Sheet 6 includes details showing a masonry enclosure faced with brick to match the building along with a wooden gate as required.
9. **Exterior Lighting.** The revised submittal does not include a lighting plan. A full lighting plan is required, including location and details of all proposed exterior fixtures and a photometric plan.
10. **Signs.** The site plan identifies a ground sign along Grand River. Details show an approximately 20-square foot sign on a brick base/surround with a limestone cap. The proposed size, height and setback comply with Ordinance standards, although the applicant will be required to obtain a sign permit prior to installation (if the site plan is approved).
11. **Impact Assessment.** The submittal includes an Impact Assessment (dated 12/1/14), which notes that the proposed project is not expected to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Additionally, the revised submittal includes a permit from MDEQ (issued on 2/12/15) authorizing the work within the pond and wetland area.

Genoa Township Planning Commission

**Grand River Office Complex**

Site Plan Review #2

Page 4

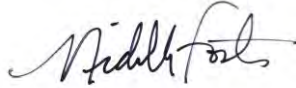
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [foster@lslplanning.com](mailto:foster@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Michelle Foster  
Project Planner





April 2, 2015

Ms. Kelly Van Marter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

**Re: Grand River Avenue Office Complex Site Plan Review #2**

Dear Ms. Van Marter:

We have reviewed the site plan documents for the Grand River Office Complex dated February 27, 2015, from Livingston Engineering which were delivered to the Township on March 3, 2015. The site is located on the north side of Grand River Avenue between South Hughes and Kellogg Roads. The petitioner is planning to construct two new 15,480 sft medical office buildings in two separate phases.

Tetra Tech has reviewed the updated documents and offers the following comments for consideration by the planning commission:

### **SUMMARY**

1. Impact statement and plans failed to note the proposed water and sewage usage rate.
2. MDEQ permit to fill the wetland must be obtained.
3. Sanitary sewer service to be provided via gravity sewer service to the public sewer main located near the front of the parcel. Private lift stations shall be installed inside buildings that cannot be serviced by gravity.
4. All sanitary sewer and water main and lateral sizes should be dimensioned and labeled on the drawings.
5. Show all proposed public utility easements on the drawings.
6. Clarify the project phasing and timing and provide information on any interim site conditions between phasing.
7. Detail the plan for removal of the existing gravel driveway along the eastern property line and any changes to local access.
8. Review number and location of driveway openings for the site.
9. Show grading for area between building and ROW.

## SITE PLAN

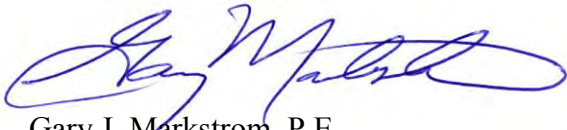
1. A 31,000 sft doctor's office use will result in an estimated 18.6 REUs (0.6 REUs/1000 sft \* 31,000 sft).
2. The site plan cannot be approved until a copy of an approved permit to fill in the existing wetland is provided from the MDEQ. A permit to place riprap in the existing wetland detention area was submitted, but the bigger concern is that according to the MDEQ wetland map viewer, a good portion of the site area to be developed is shown as a wetland, and the site plan and permit provided do not address this work, please clarify if a wetland delineation has been completed showing the impacts on the site to be minimal.
3. Per the Genoa Township Sanitary Sewer and Water Design Standards, July 2008, proposals for sanitary sewage pumping stations are to be discussed in detail with the Authority Engineer and the Authority prior to formalization of plans. With gravity sewer currently available in the front of the property, the development shall connect there. Buildings that cannot be serviced by gravity shall be served by a private pump station located inside the building to be owned and maintained by the private property owner. If the public sanitary sewer manhole is to be used for the pumped sewer lateral discharge, it must be coated to prevent deterioration of the concrete from hydrogen sulfide gases as part of the development.
4. Include labels and dimensions for pipe diameters, lengths and critical offsets on the utility plan. All piping and services should be depicted in their final arrangements, including proposed method of connection. Service details shall be in accordance with Authority details. Drawings should include MHOG & GO standard sewer and water details, which can be found online at: <http://www.genoa.org/articles/article/watersewerdesignstandards>
5. Public water main requires a minimum 25-foot-wide permanent easement. Review alignment of water main along the east side of the property to maintain adequate distances from both the county drain and the adjacent property line.
6. The drawings should include some more detail regarding the project phasing and timing. Some of the utility work is clearly identified to be completed in either Phase 1 or 2. If Phase 2 will not be constructed for a prolonged period of time, the developer should consider the construction of the water main as part of Phase 1 to reduce future construction impacts along the proposed route and to provide better fire protection coverage through the installation of the proposed hydrant. The grading plan shows a high point close to the proposed phasing line, and those interim conditions should be reviewed for the need to expand any potential soil erosion or other measures to isolate the completed work from the undeveloped land/future construction site.
7. There is an existing easement for ingress and egress along the eastern property line. The plans show a curb cut in the parking lot that will connect to the gravel drive as it heads north of the site. Is the plan to allow access through the complex parking lot to the properties adjacent to the site to the north? This new access easement should be detailed on the drawings and secured prior to approval of the project.
8. The eastern drive will have Grand River curb drainage running onto the site towards the new catch basin. We recommend a curb catch basin be installed where the concrete spillway is currently located to collect Grand River drainage in the road curb line. The driveway can then be sloped out to Grand River, as is typically seen.

Ms. Kelly Van Marter  
Re: Grand River Avenue Office Complex Site Plan Review #2  
April 2, 2015  
Page 3

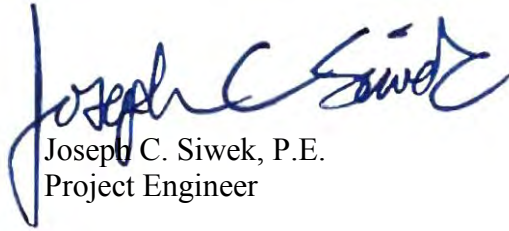
9. The front yard grading is not provided on the grading plan. This area is of concern, as the sanitary sewer has minimal cover and any grading that lowers the site grade may be detrimental to the utility. Proposed grading should be designed to maintain adequate cover (>4 feet) over the entire length of the sanitary sewer laterals.

The Township should consider these issues in your discussion regarding the site plan application. The petitioner should revise and resubmit the site plan to address the above comments prior to approval. Please call if you have any questions.

Sincerely,



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



Joseph C. Siwek, P.E.  
Project Engineer

copy: Timm Appleton, P.E., Livingston Engineering





**Brian Jonckheere**  
Livingston County Drain Commissioner  
2300 E. Grand River Ave., Suite 105, Howell, MI 48843  
Phone 517-546-0040 / Fax 517-545-9658  
Website: [www.livgov.com/drain](http://www.livgov.com/drain)

March 25, 2015

Mr. Steve Gronow  
Chestnut Development  
3800 Chilson Rd  
Howell, MI 48843

**GENOA TOWNSHIP**

Re: Grand River Office Complex  
Preliminary Site Plans Resubmittal  
Southwest 1/4 of Section 11  
Genoa Township

**MAR 27 REC'D**

**RECEIVED**

Dear Mr. Gronow,

We received revised Preliminary Site Plans for the development referenced above and have reviewed the submitted information for conformance with the "Procedures and Design Criteria for Stormwater Management Systems" and with our review letter dated January 30, 2015.

The revised plans have adequately addressed the majority of the items discussed in our previous review letter. We believe the remaining items, including the redesign of the 100-year frequency storm orifice, can be handled as part of the development's Construction Plans submittal.

Therefore, our review of the Preliminary Site Plans for the Grand River Office Complex having a revision date February 27, 2015, is complete, subject to the further review and approval of the project Construction Plans by our office.

Very truly yours,

A handwritten signature in cursive script that reads "Brian Jonckheere". The signature is written in black ink and includes a stylized flourish at the end.

Brian Jonckheere  
Livingston County Drain Commissioner

C: Environmental Engineers, Paul Lewsley  
Genoa Township: Tesha Humphriss, Kelly VanMarter  
Livingston Engineering, Timm Appleton  
TetraTech, Gary Markstrom



# BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.  
Brighton, MI 48116  
o: 810-229-6640 f: 810-229-1619

March 16, 2015

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Chestnut Landing  
6253 E. Grand River  
Site Plan Review – **2<sup>nd</sup> Review**

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on December 4, 2014 and the drawings are dated December 1, 2014. The project is based on a proposed two phase development of two Type VB multi-tenant B-use structures. The plan indicates a single 15,480 square foot building with shared parking and access drive for phase one and a similar development for phase two. There is no indication whether both phases will take place simultaneously or at different times. The plan review is based on the requirements of the International Fire Code (IFC) 2012 edition.

1. Based upon Allowable Building Heights and Areas table square footage limitations, each building shall be provided with an automatic sprinkler system in accordance with NFPA 13, *Standard for the Installation of Automatic Sprinkler Systems*.

**IFC 903  
MBC Table 503**

- A. The FDC shall be located in an approved and agreed upon location by the general, fire suppression contractors and fire authority through plan review.
- B. The location, size, gate valve, and connection of the fire protection lead for each structure shall be indicated on the utility site plan.
- C. There shall be a hydrant located within 100 feet of the FDC.

2. Based upon the construction type and square footage; the building is required to be fully fire suppressed. By providing each structure with an NFPA 13 compliant fire suppression system, a hydrant spacing increase is allowed up to 500 feet. Provide an additional fire hydrant for Phase 2 in the peninsula greenbelt area along the west edge of the drive. Also, relocate HYD11 sixty feet to the east adjacent to the dumpster enclosure. **(HYD11 was relocated on plan)**

**IFC C 105**

3. Future project submittals shall include the address and street name of the project in the title block.

**IFC 105.4.2**

4. The buildings shall include the building address on them. The address shall be a **minimum of 6"** high letters of contrasting colors and be clearly visible from the street. The location and size shall be verified prior to installation.

**IFC 505.1**



5. The drives around both phases of building are considered access roads into the site and shall be a minimum of 26' wide. With a width of 26' wide, one side of the street shall be marked as a fire lane. Include the location of the proposed fire lane signage and include a detail of the fire lane sign in the submittal. Access roads to site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds.

**IFC D 103.6**  
**IFC D 103.1**  
**IFC D 102.1**  
**IFC D 103.3**

6. Access around building shall provide emergency vehicles with a turning radius of 50' outside and a minimum vertical clearance of 13 ½ feet.

7. Each building vestibule shall be provided with a Knox Box. The location of Knox Box shall be indicated on future submittals. The Knox box will be located adjacent to the vestibule door of the structure.

**IFC 506.1**

8. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor.

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department.

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

Cordially,

Capt. Rick Boisvert  
Fire Inspector



**GENOA TOWNSHIP**

**DEC 03 2014**

**Impact Assessment  
for  
Grand River Office Complex  
Genoa Township  
Livingston County, Michigan**

**Prepared By**

**Livingston Engineering  
3300 S. Old US-23  
Brighton, MI 48114  
(810) 225-7100  
December 1, 2014**

This impact assessment has been prepared in accordance with section 18.07 of the Genoa Township, Livingston County, Michigan Zoning Ordinance. This section states that developments of this nature shall include such a report for review as part of the site plan review and approval process. As such, this report has been prepared to provide the required information and project overview of the development, in accordance with current township requirements.

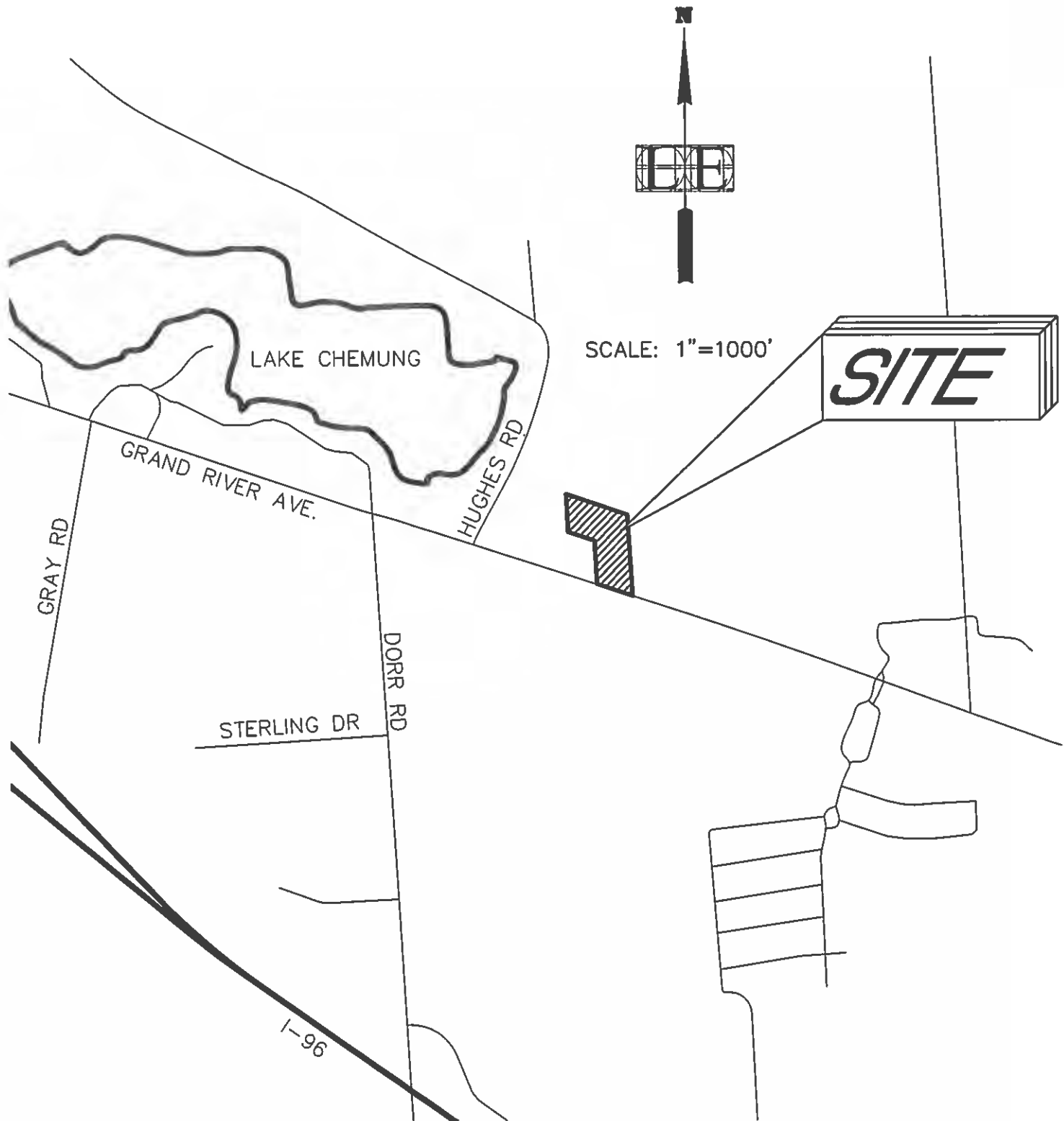
## **I. Party Responsible for preparation of Impact Statement**

This impact assessment has been prepared by Livingston Engineering, a professional services company offering civil engineering, land surveying, and site planning services throughout southeast Michigan. Livingston Engineering is licensed to provide engineering and surveying services in Michigan, as well as engineering licenses in the states of Arizona, Colorado, New Mexico, Tennessee and Utah.

## **II. Site Location**

The subject site contains approximately 4.19 acres located in the southwest ¼ of section 11 of Genoa Township, Livingston County, Michigan. This parcel is located on the north side of Grand River Ave east of Dorr Rd. It is bordered by similar use office building to the west, a machine shop to the east and residential housing to the north. A location map and aerial photograph of the subject site is included in this report as Exhibit “A” and Exhibit “B” respectively.

Currently, the site is zoned GCD, General Commercial District. The site is bordered on the east and west by Neighborhood Services (NS) to the north by Low Density Residential (LDR) and to the northwest by Lakeshore Resort Residential (LRR). A copy of the Genoa Township Zoning Map is included in this report as Exhibit “C”.



LOCATION MAP - EXHIBIT A



**LIVINGSTON ENGINEERING**

CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB JOB No. 14211

DESCRIPTION  
GRAND RIVER OFFICE COMPLEX

DATE 12-1-14 SHEET No. 1 OF 5 SCALE 1"=1000'



AERIAL PHOTOGRAPH - EXHIBIT B



**LIVINGSTON ENGINEERING**  
 CIVIL ENGINEERING      SURVEYING      PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

<http://www.livingstoneng.com>

PHONE: (810) 225-7100

FAX: (810) 225-7699

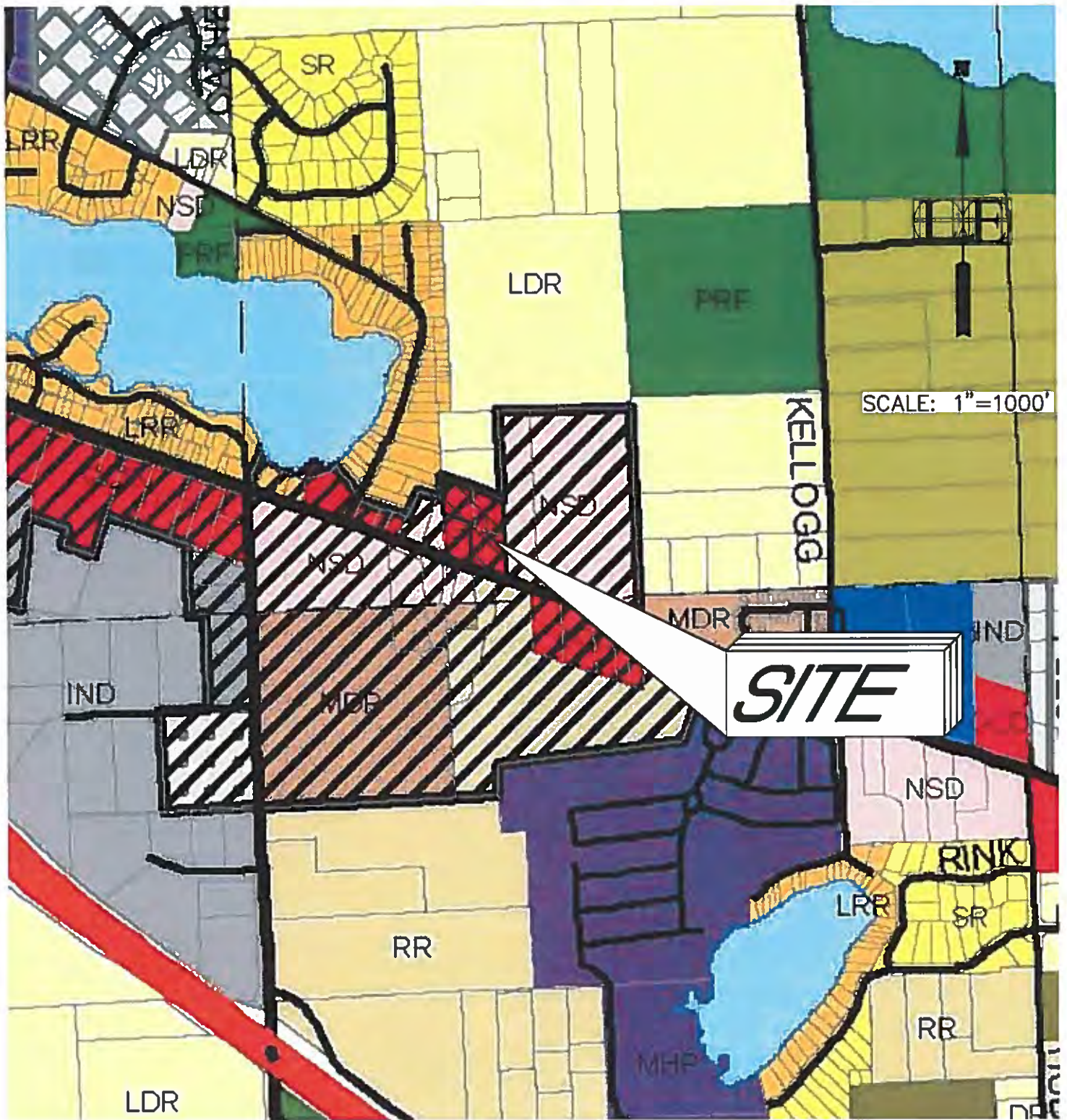
DRAWN BY MJB      JOB No. 14211

DESCRIPTION

GRAND RIVER OFFICE COMPLEX

DATE 12-1-14 SHEET No. 2 OF 5 SCALE 1"=200'





PROPERTY ZONED - (GCD) GENERAL COMMERCIAL DISTRICT  
(TCO) TOWN CENTER OVERLAY

ZONING MAP - EXHIBIT C



**LIVINGSTON ENGINEERING**  
CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB JOB No. 14211

DESCRIPTION  
GRAND RIVER OFFICE COMPLEX

DATE 12-1-14 SHEET No. 3 OF 5 SCALE 1"=1000'

### **III. Impact on Natural Features**

Currently, the site is vacant and consists of an open field with a small pond and several scattered trees, and a more densely wooded area to the northwest. The small on-site pond will be filled in, as part of this development. The pond is an MDEQ regulated wetland and the developer is currently in the process of acquiring a permit for the filling of the pond.

Soils on the site consist primarily of Miami Loam. Miami loam is described as poorly drained soils with slow runoff characteristics and moderate permeability. A soils map of the subject site is included as Exhibit “D”.

As depicted in Exhibit “E”, the site drains from south to north, or from Grand River Ave toward the outlet to the enclosed county drain located on the northwest side of the subject parcel. The county drain is located on the subject site and is enclosed in a 36” pipe located in an easement that runs along and near the easterly and northerly property lines. Storm water runoff will be collected and directed into a proposed on-site detention area.

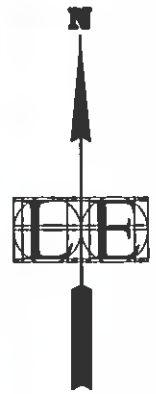
Part of the wooded area located on the northwest side of the parcel will be removed to accommodate the proposed detention pond.

Landscape treatments and buffers will be placed both within the site and around its perimeters to compliment the vegetation that will remain in place.

### **IV. Impact on Storm Water Management**

The proposed development will provide storm water quality and flood control treatment using an on-site storm water detention pond, located on the northwest end of the site. The detention pond is designed to meet the current standards of the Livingston County Drain Commissioner’s Office and those of Genoa Township. The detention pond is designed to capture and treat storm water runoff from the subject site and the site located immediately to the west,





SCALE: 1"=200'

**SOILS LEGEND**

MoB - MIAMI LOAM, 2 TO 6 PERCENT SLOPES

MoC - MIAMI LOAM, 6 TO 12 PERCENT SLOPES

MoD - MIAMI LOAM, 12 TO 18 PERCENT SLOPES

Cc - CARLISLE MUCK

FrC - FOX BOYER COMPLEX, 6 TO 12 PERCENT SLOPES

SOILS MAP - EXHIBIT D



**LIVINGSTON ENGINEERING**

CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

<http://www.livingstoneng.com>

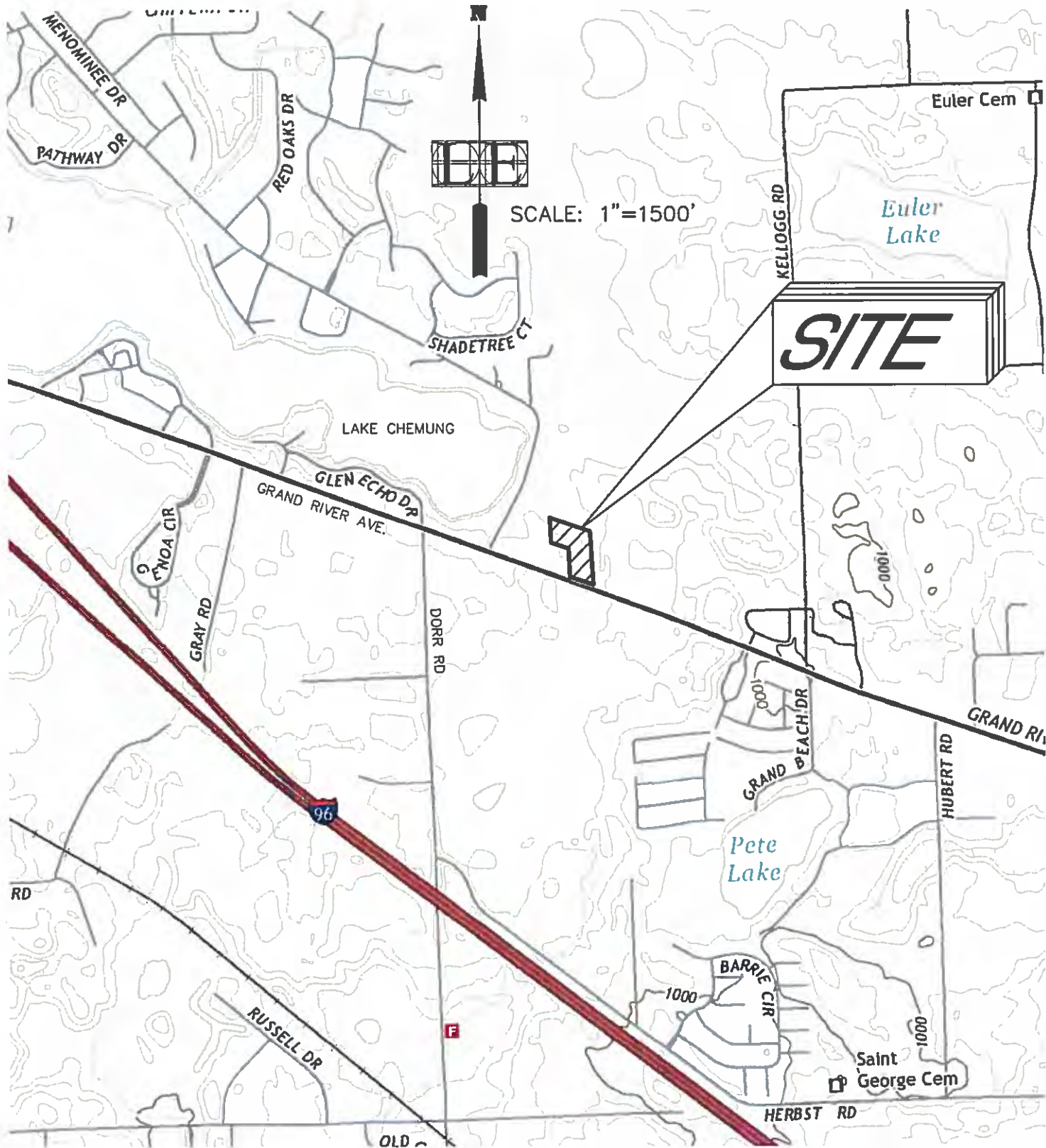
PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB JOB No. 14211

DESCRIPTION  
GRAND RIVER OFFICE COMPLEX

DATE 12-1-14 SHEET No. 4 OF 5 SCALE 1"=200'



EXISTING DRAINAGE - EXHIBIT E



**LIVINGSTON ENGINEERING**  
 CIVIL ENGINEERING      SURVEYING      PLANNING

3300 S. OLD US-23, BRIGHTON, MI 48114

<http://www.livingstoneng.com>

PHONE: (810) 225-7100

FAX: (810) 225-7699

DRAWN BY MJB      JOB No. 14211

DESCRIPTION

GRAND RIVER OFFICE COMPLEX

DATE 12-1-14      SHEET No. 5 OF 5      SCALE 1"=1500'



prior to release to the county drain near the existing county drain outlet located on-site near the north property line.

Storm water runoff from Grand River Ave. and the adjacent property located to the east of the subject site currently drain to the existing county drain. Storm water runoff from these adjacent areas will continue to outlet to the county drain, as facilitated by the proposed site improvements associated with the subject development.

During construction, soil erosion and dust control measures will be implemented. Best management practices including silt fence, check dams, and inlet filter mechanisms will be utilized during this time. For dust control, soil watering to keep the site in a moisture optimum condition will be performed with a water truck on an as needed basis. Upon completion of mass grading and earthmoving operations, permanent restoration including topsoil, seed and mulch along with landscape installation will be performed.

A soil erosion and sedimentation control permit will be required prior to the start of any site grading or construction.

## **V. Impact on Surrounding Land Uses**

As proposed, the addition being proposed is in conformance with the current GCD zoning designation and is similar to the adjacent businesses that border the parcel to the east and west.

The proposed building is for general office space only and is approximately 30,000 S.F. in size. Hours of operation for this establishment are expected to be common office hours anywhere between 7:00 a.m. and 6:00 p.m., Monday through Friday.

Access to this site will be from Grand River Ave.

For the proposed building, it is not anticipated that the noise levels will approach 65 decibels at the property lines.

Site lighting for this addition will be limited to wall mounted fixtures as shown on the architectural drawings and will remain within acceptable limits as allowed by Genoa Township. All proposed lighting shall be downward directed to reflect light toward and confined to ground areas as to not interfere with vision of persons on adjacent properties.

**VI. Impact on Public Facilities and Services.**

As this project is consistent with other new developments along the Grand River corridor in this vicinity, it is not anticipated that this facility will adversely affect emergency services such as fire and police. Additionally, as the project is not a residential site, undesirable affects on local schools or recreation facilities is not expected.

**VII Impact on Public Utilities**

Water supply for this project will be provided through a proposed water tap to an existing municipal supply system operated by Genoa Township. An Additional hydrant will be placed on site and approved by jurisdictional authorities as part of the site development. Additionally, sanitary sewer service will be provided by Genoa Township via a service lead extended into the site. It is not anticipated that either of these services will adversely affect available capacities for the water and sewer systems. In addition, electric and gas service is available along Grand River Ave. for extension into this site. As expected, such services will be extended into the site under ground.

**VIII. Storage and Handling of Any Hazardous Materials**

There is no plan for storage or handling of any hazardous materials on this site.

## IX. Impact on Traffic

The location of the site is well suited for a development of this nature. It is located along Grand River Avenue that has an existing five(5) lane cross section (two(2) eastbound lanes, two(2) westbound lanes and a center left turn lane). Using the ITE Trip Generation Manual, 7th ed., Land Use: General Office Building(710)(see Exhibit F & G), and based upon building gross square footage, we calculated the following trips using the average rate for the A.M. and P.M. peak hours of traffic:

Input: South bldg.: 7740 sf + 7740 sf = 15480 sf  
North bldg.: 15480 sf  
Total: 30960 sf, use 31000 sf

Note: the existing office development located adjacent to and immediately west of the subject development is connected to the westerly drive approach to Grand River Ave. This existing development was not included in the square footage because no new trips will be generated from the existing development as a result of the subject development's proposed improvements.

Using 31,000 sf of gross floor area:

A.M. peak hour:

$$1.55 \times (31000/1000) = 48.05 \text{ trips} \times 88\% \text{ (entering)} \\ = 42.28 \text{ directional trips}$$

P.M. peak hour:

$$1.49 \times (31000/1000) = 46.19 \text{ trips} \times 83\% \text{ (exiting)} \\ = 38.34 \text{ directional trips}$$

As calculated above, the development, under the fully developed conditions shown in this site plan, will generate less than 50 directional trips in both the A.M. and P.M. peak hours of traffic. Therefore, a traffic impact assessment or traffic impact study is not required by the Township per the Township Zoning Ordinance for the subject development.

# General Office Building (710)

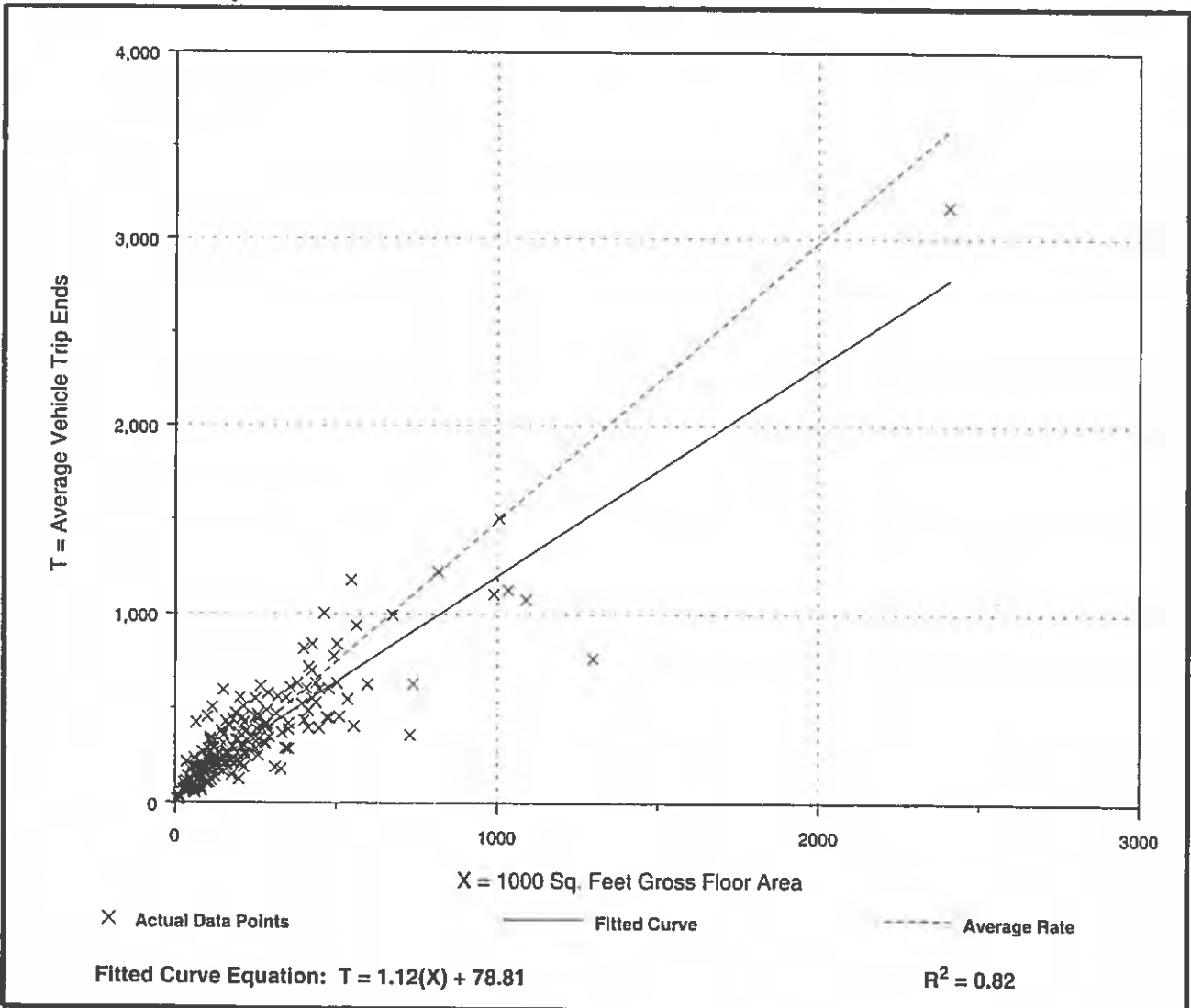
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday,**  
**P.M. Peak Hour**

Number of Studies: 235  
 Average 1000 Sq. Feet GFA: 216  
 Directional Distribution: 17% entering, 83% exiting

## Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.49	0.49 - 6.39	1.37

## Data Plot and Equation





# General Office Building (710)

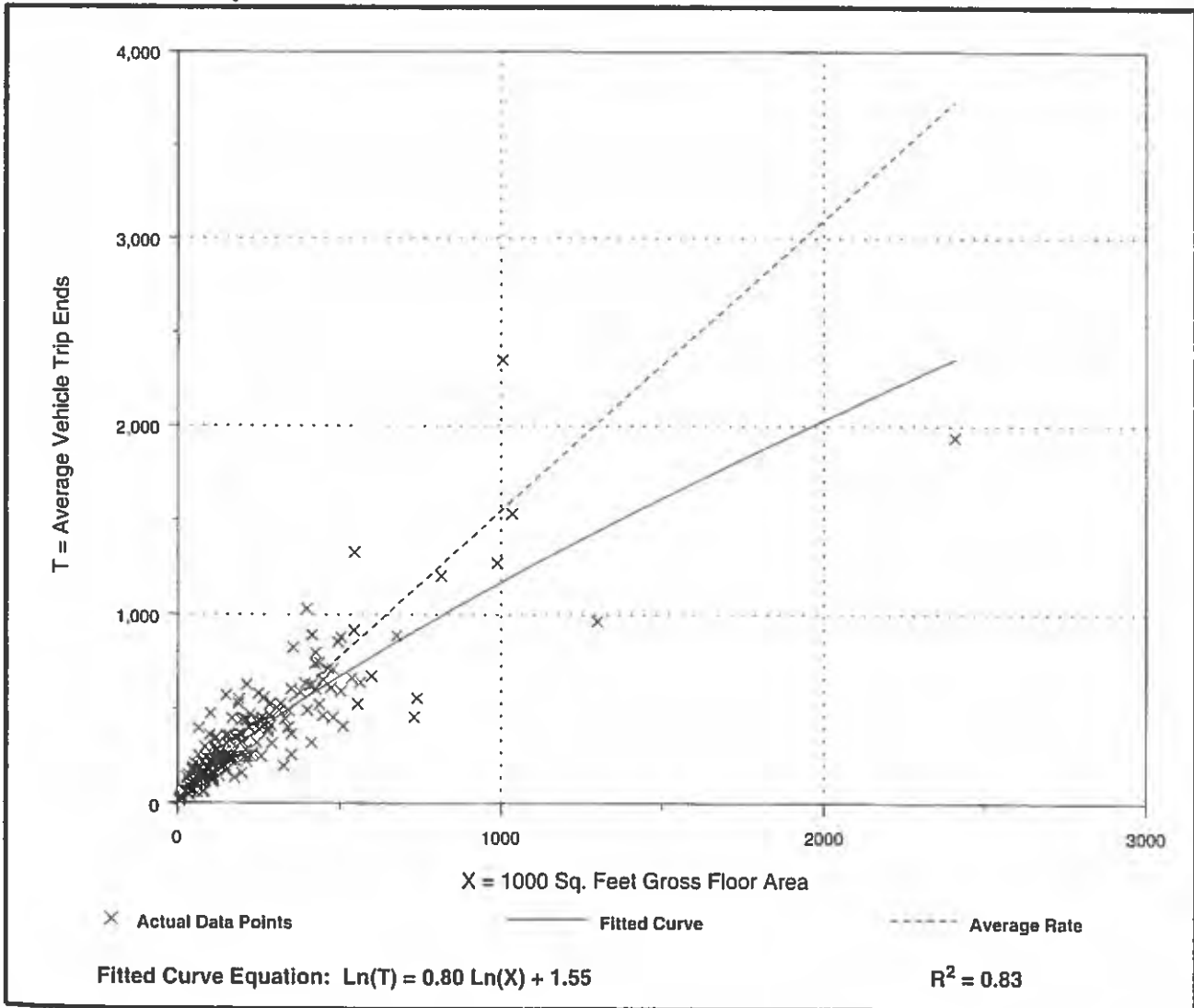
**Average Vehicle Trip Ends vs: 1000 Sq. Feet Gross Floor Area**  
**On a: Weekday,**  
**A.M. Peak Hour**

Number of Studies: 217  
 Average 1000 Sq. Feet GFA: 223  
 Directional Distribution: 88% entering, 12% exiting

## Trip Generation per 1000 Sq. Feet Gross Floor Area

Average Rate	Range of Rates	Standard Deviation
1.55	0.60 - 5.98	1.39

## Data Plot and Equation



The Livingston County Road Commission Site Distance Review permit for the proposed entrance is attached as Exhibit H.

**X. Historic and Cultural Resources**

It is not believed that this addition will have any impact on any historic and/or cultural resources pertaining to the subject parcel and no known historic and/or cultural resources exist on this site that will be affected by this development.

**XI. Special Provisions**

No special provisions are part of this project.



# LIVINGSTON COUNTY ROAD COMMISSION LAND SPLIT / SIGHT DISTANCE REVIEW

\*\* NOTE: THIS IS NOT A  
DRIVEWAY PERMIT. \*\*

**Review Number** 1405-027

**Property Owner and Applicant Information**

Owner: Chestnut Development LLC  
 Street Address: 3800 Chilson Road  
 City, State, ZIP: Howell, MI 48843  
 Day Phone: (810) 596-5147 Fax:  
 Applicant: Steve Greshow  
 Company:  
 Address: 3800 Chilson Road  
 City, State: Howell MI, 48843  
 Applicant Phone: (810) 596-5147 Applicant Fax:

**Location**

Township: Oceola Section: 11  
 Development: Chestnut Office  
 Approach Type: Commercial  
 Speed Limit (if posted): 50  
 Speed Factors (if any):  
 Roadway On: Grand River Side of Street: North

**Field Measurements**

Location of existing property corners from nearest crossroad: 893 and 1106 feet East of Hughes

Parcel	Property/ Easement Corners	Access Point(s)	Sight Distance Req.		Sight Distance Measured		Sight Distance Comply	Clear Vision Comply	Neighbor Consent Required	Approve
			Sid	Min	800 East	800 West				
Commercial (East)		1100	800	550	800 East	800 West	Yes	Yes	No	Yes
Commercial (Shared)		878	800	550	800 East	800 West	Yes	Yes	No	Yes

**Comments:**

A commercial driveway approach can be located at 1100 feet east of Hughes Road on the east side of the property. The existing double driveway west of this property can be reconstructed as a shared driveway at 878 feet east of Hughes Road. A shared driveway easement will need to be secured before a commercial driveway approach permit could be issued at this location.

Inspection Date: 12/01/2014

Inspector:

*Kevin H. Miller*  
 Kevin H. Miller



# Notice of Authorization

Permit Number 14-47-0087-P

Issued: 02/12/2015

Expiration Date: 02/12/2020

The Michigan Department of Environmental Quality, Water Resources Division, P.O. Box 30458, Lansing, Michigan 48909-7958, under provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and specifically:

- Part 31, Floodplain Regulatory Authority of the Water Resources Protection.
- Part 301, Inland Lakes and Streams.
- Part 303, Wetlands Protection
- Part 315, Dam Safety.
- Part 323, Shorelands Protection and Management
- Part 325, Great Lakes Submerged Lands.
- Part 353, Sand Dunes Protection and Management

Authorized activity:

**Minor Project #42: Storm Water Outfall Structure.**

Construct a 12-inch diameter storm water outfall, with 0.25 cubic yards of riprap, that will discharge to a County Drain.

All work shall be in accordance with the attached plans.

To be conducted at property located in: Livingston County, Waterbody: Wetland Section 11, Town 1N, Range 5E, Genoa Township.

Permittee: Chestnut Development  
3800 Chilson Road  
Howell, MI 48843

**GENOA TOWNSHIP**  
**MAR 03 2015**

  
Thomas Kolhoff  
Water Resources Division  
517-284-6665

*This notice must be displayed at the site of work.  
Laminating this notice or utilizing sheet protectors is recommended*

Please refer to the above Permit Number with any questions or concerns.





**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER RESOURCES DIVISION  
PERMIT**

**ISSUED TO:**

Chestnut Development  
3800 Chilson Road  
Howell, Michigan 48843

<b>Permit No.</b>	14-47-0087-P
<b>Issued</b>	February 12, 2015
<b>Extended</b>	
<b>Revised</b>	
<b>Expires</b>	February 12, 2020

This permit is being issued by the Michigan Department of Environmental Quality (MDEQ) under the provisions of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and specifically:

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Part 301, Inland Lakes and Streams  | <input type="checkbox"/> Part 315, Dam Safety                           |
| <input type="checkbox"/> Part 325, Great Lakes Submerged Lands          | <input type="checkbox"/> Part 323, Shorelands Protection and Management |
| <input checked="" type="checkbox"/> Part 303, Wetlands Protection       | <input type="checkbox"/> Part 353, Sand Dunes Protection and Management |
| <input type="checkbox"/> Part 31, Floodplain/Water Resources Protection |   |

Permission is hereby granted, based on permittee assurance of adherence to State of Michigan requirements and permit conditions, to:

**Permitted Activity:**

**Minor Project #42: Storm Water Outfall Structure.**

Construct a 12-inch diameter storm water outfall, with 0.25 cubic yards of riprap, that will discharge to a County Drain.

All work shall be in accordance with the attached plans.

**Water Course Affected:** Wetland

**Property Location:** Livingston County, Genoa Township, Section 11  
Subdivision, Lot                      Town/Range 1N, 5E Property Tax No.

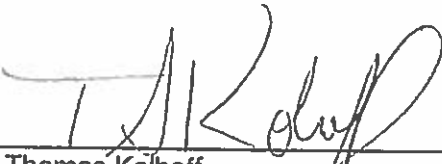
**Authority granted by this permit is subject to the following limitations:**

- A. Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit.
- B. The permittee, in exercising the authority granted by this permit, shall not cause unlawful pollution as defined by Part 31, Water Resources Protection, of the NREPA.
- C. This permit shall be kept at the site of the work and available for inspection at all times during the duration of the project or until its date of expiration.
- D. All work shall be completed in accordance with the approved plans and specifications submitted with the application and/or plans and specifications attached to this permit.
- E. No attempt shall be made by the permittee to forbid the full and free use by the public of public waters at or adjacent to the structure or work approved.
- F. It is made a requirement of this permit that the permittee give notice to public utilities in accordance with Act 53 of the Public Act of 1974 and comply with each of the requirements of that Act.
- G. This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights, nor does it waive the necessity of seeking federal assent, all local permits, or complying with other state statutes.
- H. This permit does not prejudice or limit the right of a riparian owner or other person to institute proceedings in any circuit court of this state when necessary to protect his rights.

- I. Permittee shall notify the MDEQ within one week after the completion of the activity authorized by this permit, by completing and forwarding the attached preaddressed postcard to the office addressed thereon.
- J. This permit shall not be assigned or transferred without the written approval of the MDEQ.
- K. Failure to comply with conditions of this permit may subject the permittee to revocation of permit and criminal and/or civil action as cited by the specific state act, federal act, and/or rule under which this permit is granted.
- L. All dredged or excavated materials shall be disposed of in an upland site (outside of floodplains, unless exempt under Part 31, and wetland).
- M. In issuing this permit, the MDEQ has relied on the information and data that the permittee has provided in connection with the submitted application for permit. If, subsequent to the issuance of a permit, such information and data prove to be false, incomplete, or inaccurate, the MDEQ may modify, revoke, or suspend the permit, in whole or in part, in accordance with the new information.
- N. The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the permittee, or employees, agents, or representative of the permittee, undertaken in connection with this permit. The permittee's obligation to indemnify the State of Michigan applies only if the State (1) provides the permittee or its designated representative written notice of the claim or cause of action within 30 days after it is received by the State and (2) consents to the permittee's participation in the proceeding on the claim or cause of action. It does not apply to contested case proceedings under the Administrative Procedures Act challenging the permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the permittee or any other person.
- O. Noncompliance with these terms and conditions and/or the initiation of other regulated activities not specifically authorized shall be cause for the modification, suspension, or revocation of this permit, in whole or in part. Further, the MDEQ may initiate criminal and/or civil proceedings as may be deemed necessary to correct project deficiencies, protect natural resource values, and secure compliance with statutes.
- P. If any change or deviation from the permitted activity becomes necessary, the permittee shall request, in writing, a revision of the permitted activity from the MDEQ. Such revision request shall include complete documentation supporting the modification and revised plans detailing the proposed modification. Proposed modifications must be approved, in writing, by the MDEQ prior to being implemented.
- Q. This permit may be transferred to another person upon written approval of the MDEQ. The permittee must submit a written request to the MDEQ to transfer the permit to the new owner. The new owner must also submit a written request to the MDEQ to accept transfer. The new owner must agree, in writing, to accept all conditions of the permit. A single letter signed by both parties which includes all the above information may be provided to the MDEQ. The MDEQ will review the request and if approved, will provide written notification to the new owner.
- R. Prior to initiating permitted construction, the permittee is required to provide a copy of the permit to the contractor(s) for review. The property owner, contractor(s), and any agent involved in exercising the permit are held responsible to ensure that the project is constructed in accordance with all drawings and specifications. The contractor is required to provide a copy of the permit to all subcontractors doing work authorized by the permit.
- S. Construction must be undertaken and completed during the dry period of the wetland. If the area does not dry out, construction shall be done on equipment mats to prevent compaction of the soil.
- T. Authority granted by this permit does not waive permit requirements under Part 91, Soil Erosion and Sedimentation Control, of the NREPA, or the need to acquire applicable permits from the County Enforcing Agent.
- U. Authority granted by this permit does not waive permit requirements under the authority of Part 305, Natural Rivers, of the NREPA. A Natural Rivers Zoning Permit may be required for construction, land alteration, streambank stabilization, or vegetation removal along or near a natural river.
- V. The permittee is cautioned that grade changes resulting in increased runoff onto adjacent property is subject to civil damage litigation.
- W. Unless specifically stated in this permit, construction pads, haul roads, temporary structures, or other structural appurtenances to be placed in a wetland or on bottomland of the waterbody are not authorized and shall not be constructed unless authorized by a separate permit or permit revision granted in accordance with the applicable law.
- X. For projects with potential impacts to fish spawning or migration, no work shall occur within fish spawning or migration timelines (i.e., windows) unless otherwise approved in writing by the MDNR, Fisheries Division.
- Y. Work to be done under authority of this permit is further subject to the following special instructions and specifications:
  1. This permit is being issued for the maximum time allowed and no extensions of this permit will be granted. Initiation of the construction work authorized by this permit indicates the permittee's acceptance of this condition. The permit, when signed by the MDEQ, will be for a five-year period beginning at the date of issuance. If the project is not completed by the expiration date, a new permit must be sought.
  2. No work shall commence within the County Drain easement without prior authorization from the Livingston County Drain Commissioner.

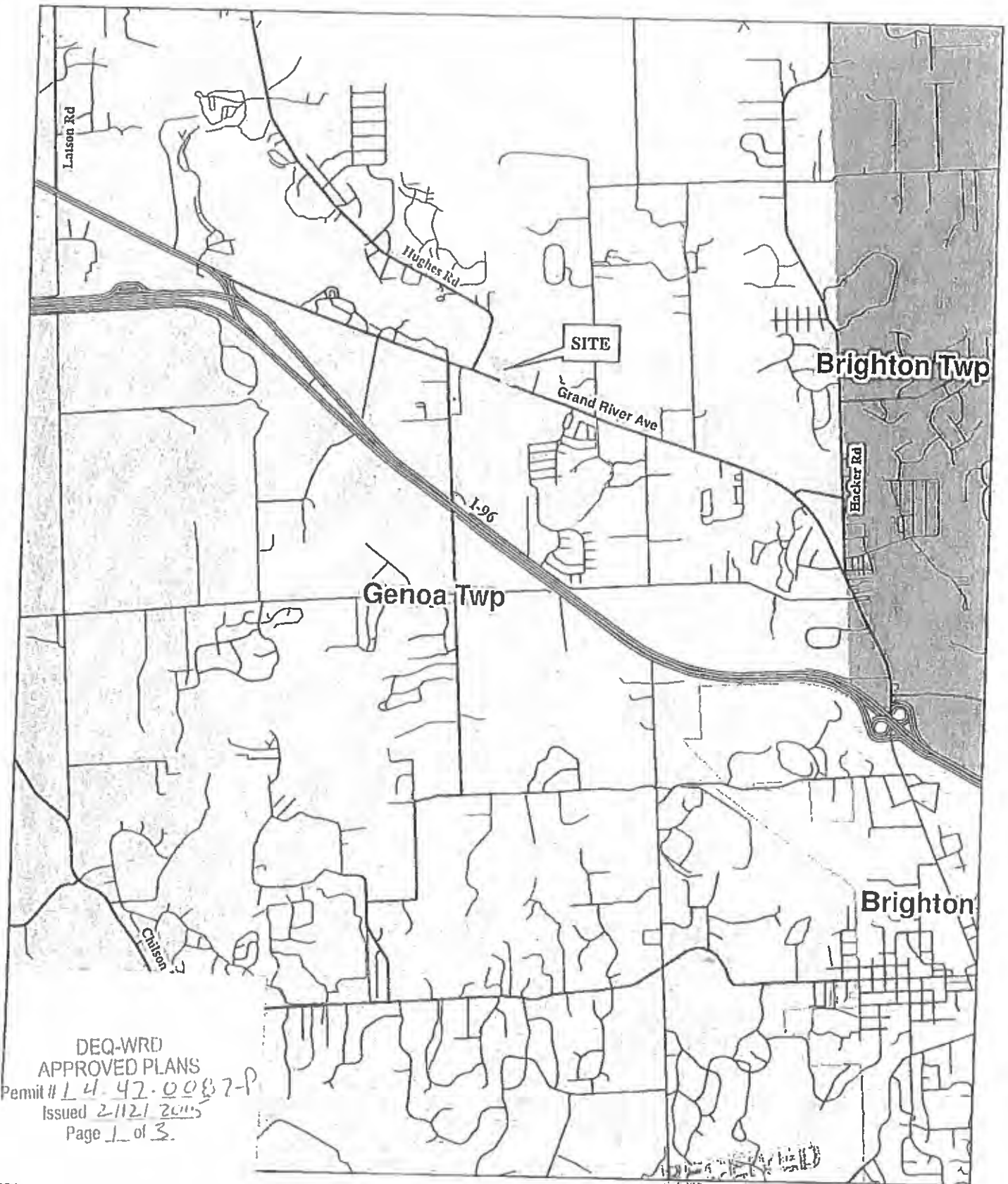
3. Discharge shall meet state water quality standards or the effluent from the outfall is otherwise in compliance with regulations issued under the NPDES program (Part 31, of the NREPA).
4. A storm water discharge permit may be required under the Federal Clean Water Act for construction activities that disturb one or more acres of land and discharge to surface waters. For sites over five (5) acres, the permit coverage may be obtained by a Part 91, Soil Erosion and Sedimentation Control (SESC) permit, or coverage as an Authorized Public Agency (APA), and filing a "Notice of Coverage" form to the MDEQ's Water Resource Division. For sites with disturbance from one acre up to five acres, storm water coverage is automatic once the SESC permit is obtained or if work is being conducted by an APA. These one to five acre sites are not required to apply for coverage, but are required to comply with storm water discharge permit requirements. Information on the storm water discharge permit is available from the Water Resource Division's Storm Water Permit Program at [www.michigan.gov/soilerosion](http://www.michigan.gov/soilerosion) under the "Construction Storm Water Info".
5. All raw areas in uplands resulting from the permitted construction activity shall be effectively stabilized with sod and/or seed and mulch (or other technology specified by this permit or project plans) in a sufficient quantity and manner to prevent erosion and any potential siltation to surface waters or wetlands. Temporary stabilization measures shall be installed before or upon commencement of the permitted activity, and shall be maintained until permanent measures are in place. Permanent measures shall be in place within five (5) days of achieving final grade.
6. All raw earth within 100 feet of a lake, stream, or wetland that is not brought to final stabilization by the end of the active growing season shall be temporarily stabilized with mulch blankets in accordance with the following dates: September 20<sup>th</sup> for the Upper Peninsula, October 1<sup>st</sup> for the Lower Peninsula north of US-10, and October 10<sup>th</sup> for the Lower Peninsula south of US-10.
7. All riprap shall be properly sized and graded based on wave action and velocity, and shall consist of natural field stone or rock (free of paint, soil or other fines, asphalt, soluble chemicals, or organic material). Broken concrete is not allowed.
8. No discharge is authorized from the storm water basins until the contributing drainage area is properly stabilized, or proper soil erosion measures are in place, to avoid uncontrolled sediment discharges.
9. No fill, excess soil, or other material shall be placed in the 100-year floodplain, any wetland or surface water area not specifically authorized by this permit, its plans, and specifications.
10. Prior to the start of construction, all adjacent non-work wetland areas shall be protected by properly trenched sedimentation barrier to prevent sediment from entering the wetland. Orange construction fencing shall be installed as needed to prohibit construction personnel and equipment from entering or performing work in these areas. Fence shall be maintained daily throughout the construction process. Upon project completion, the accumulated materials shall be removed and disposed of at an upland site, the sedimentation barrier shall then be removed in its entirety and the area restored to its original configuration and cover.
11. This permit is limited to authorizing the construction as specified above and carries with it no assurances or implications that associated lake, stream, wetland or floodplain areas can be developed and serviced by the structures authorized by this permit.
12. The authority to conduct the activity as authorized by this permit is granted solely under the provisions of the governing act as identified above. This permit does not convey, provide, or otherwise imply approval of any other governing act, ordinance, or regulation, nor does it waive the permittee's obligation to acquire any local, county, state or federal approval or authorization, necessary to conduct the activity.

- 13. This permit does not authorize or sanction work that has been completed in violation of applicable federal, state, or local statutes.
- 14. This permit placard shall be kept posted at the work site, in a prominent location at all times for the duration of the project, or until permit expiration.

By:   
Thomas Kolhoff  
Water Resources Division  
517-284-6666

cc: Mr. Ken Recker, Deputy Livingston County Drain Commissioner  
Livingston County CEA  
Genoa Township Clerk  
Mr. Jeff Bridgland, Niswander Environmental





**Figure 1. Site Location Map**  
 NE 1399 Chestnut Development Wetland Delineation  
 6253 Grand River Ave. Property (~ 4 acres)  
 Section 11 of Genoa Twp., Livingston Co., MI (T1N, R5E)  
 Aerial Photograph: MiGDL  
 Delineation Date: November 24, 2014  
 Map Created: December 9, 2014

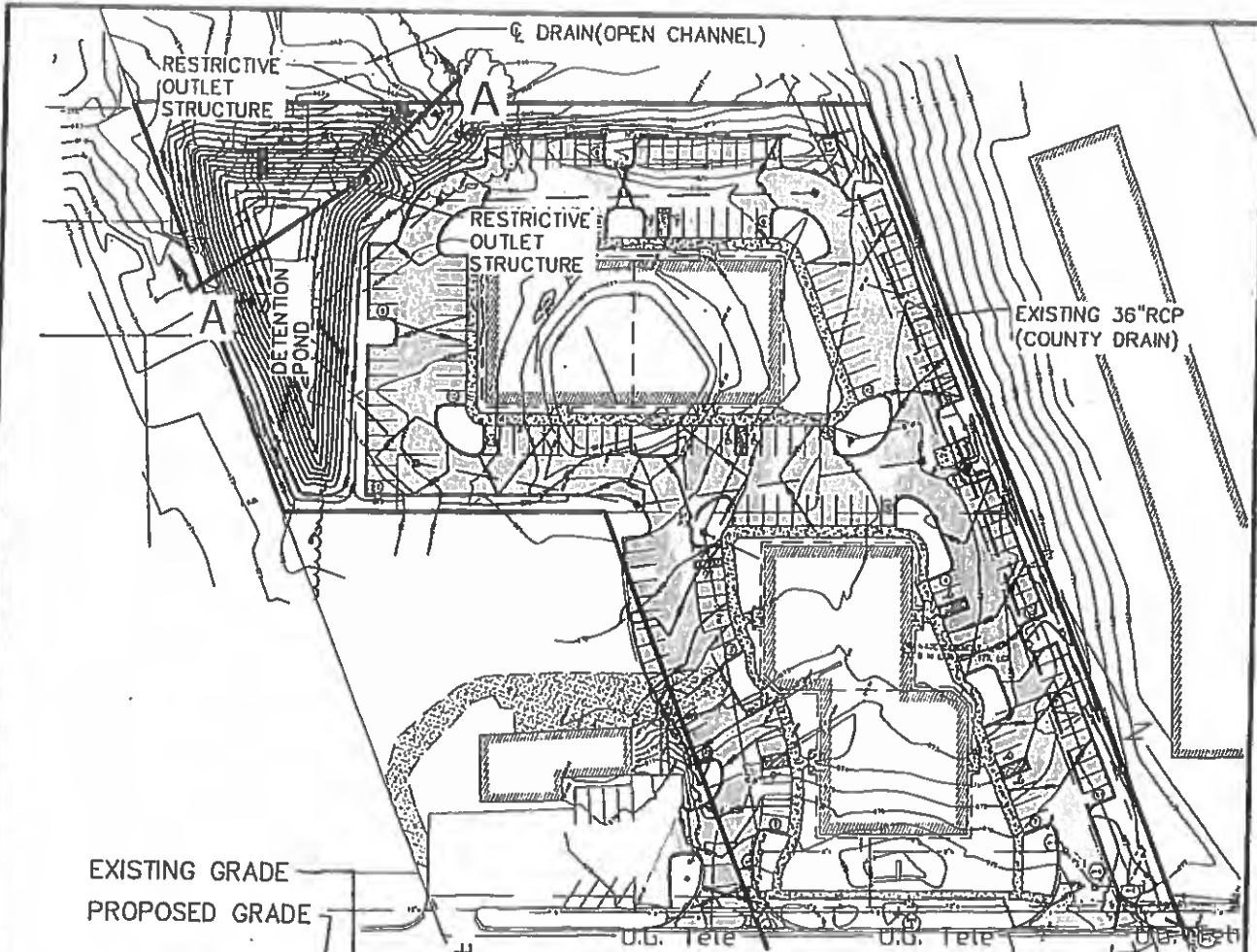
JAN 22 2015

DEQ-LANSING DC

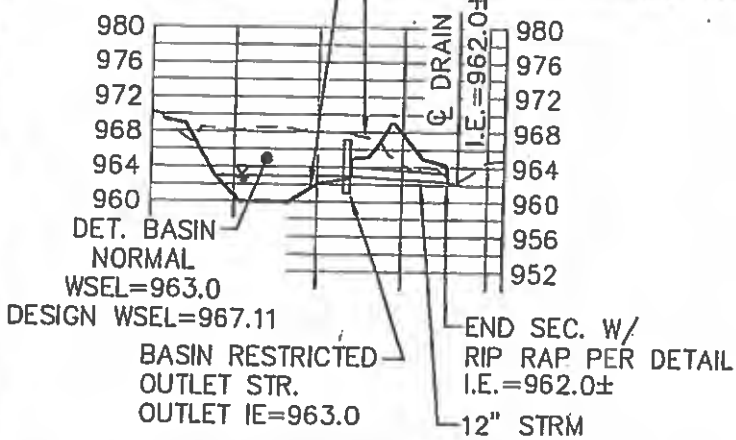


**NISWANDER  
ENVIRONMENTAL**

9136 Mokby Road, Brighton, MI 48116  
 510.225.0539 office | 510.225.0653 fax



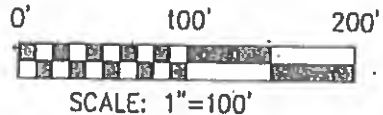
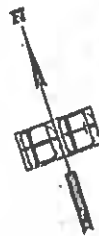
EXISTING GRADE  
PROPOSED GRADE



**SECTION A-A**

1"=100'HORIZ., 1" = 20' VERT.

GRAND RIVER AVE.

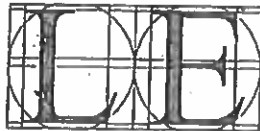


RECEIVED

JAN 22 2015

DEQ-LANSING DO

DEQ-WRD  
APPROVED PLANS  
Permit # 14-47-0087-P  
Issued 2/12/2015  
Page 2 of 3



**LIVINGSTON ENGINEERING**

CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD U.S. 23, BRIGHTON, MI 48114

PHONE: (810) 225-7100 FAX: (810) 225-7699

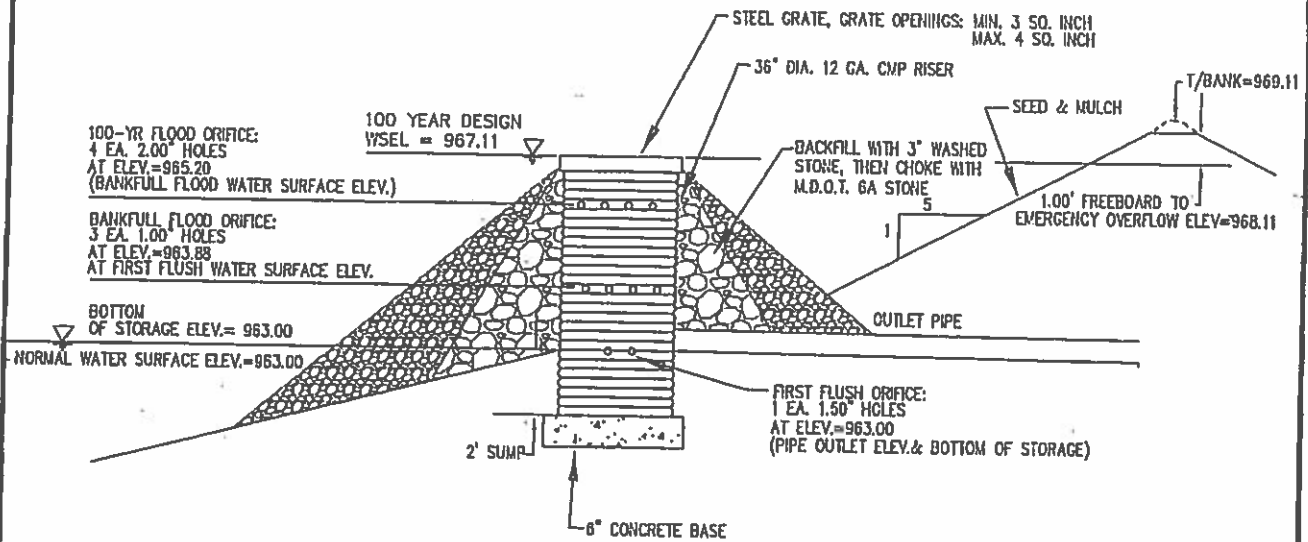
WWW.LIVINGSTONENG.COM

DRAWN BY TEA JOB No. 14211

DATE 1-22-15 SHEET No. 1 SCALE 1"=40'

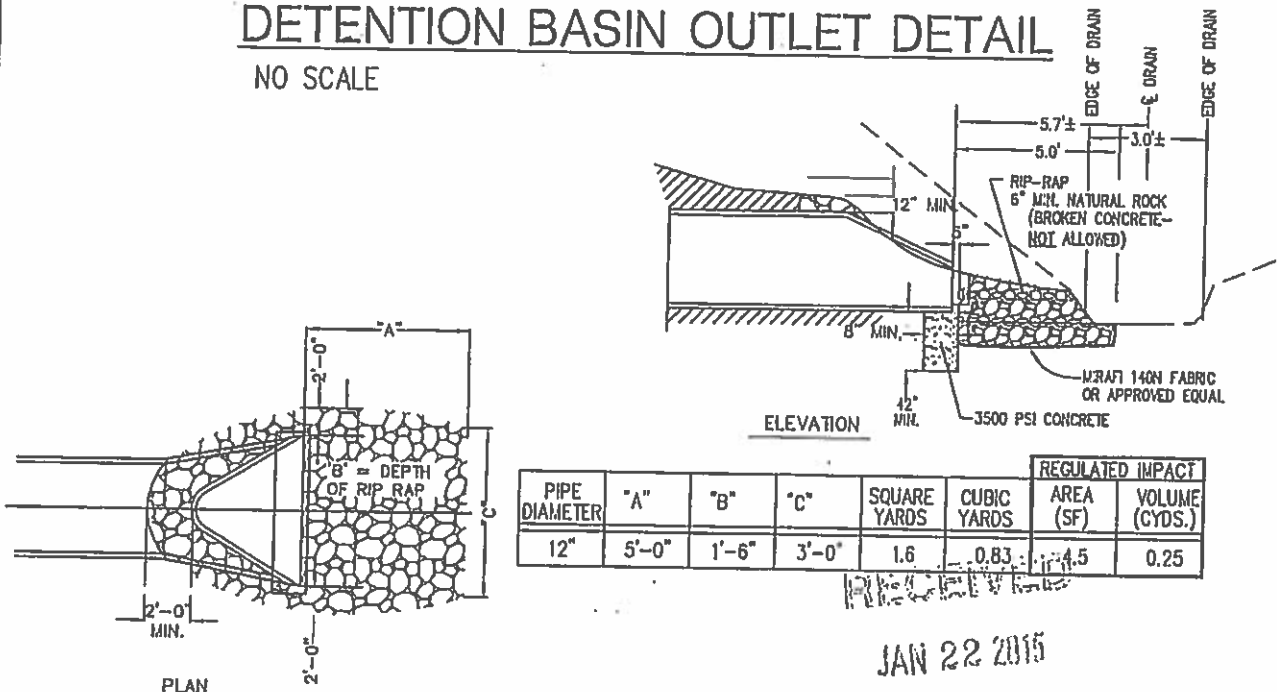
DESCRIPTION

GRAND RIVER OFFICE COMPLEX  
CHESTNUT DEVELOPMENT  
DRAINAGE DETAILS



## DETENTION BASIN OUTLET DETAIL

NO SCALE



PIPE DIAMETER	"A"	"B"	"C"	SQUARE YARDS	CUBIC YARDS	REGULATED IMPACT	
						AREA (SF)	VOLUME (CYDS.)
12"	5'-0"	1'-6"	3'-0"	1.6	0.83	4.5	0.25

JAN 22 2015

DEQ-LANSING DU

## FLARED END SECTION - RIP RAP DETAIL

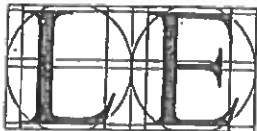
NOT TO SCALE

DEQ-WRD  
APPROVED PLANS

Permit # 14-47-0022

Issued 2/12/2015

Page 3 of 3



LIVINGSTON ENGINEERING

CIVIL ENGINEERING SURVEYING PLANNING

3300 S. OLD U.S. 23, BRIGHTON, MI 48114

PHONE: (810) 225-7100 FAX: (810) 225-7699

WWW.LIVINGSTONENG.COM

DRAWN BY TEA JOB No. 14211

DESCRIPTION

GRAND RIVER OFFICE COMPLEX  
CHESTNUT DEVELOPMENT  
DRAINAGE DETAILS

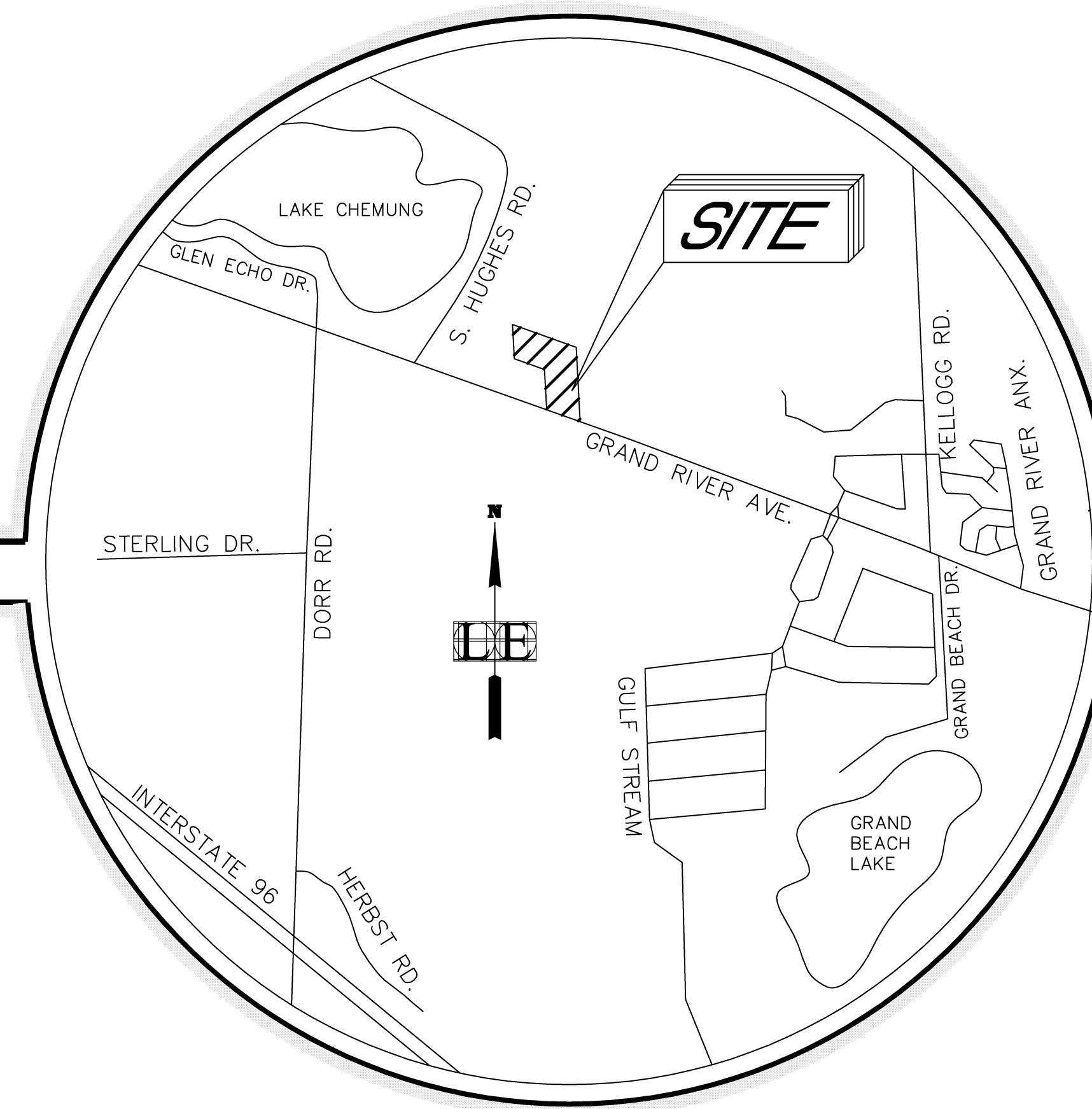
DATE 1-22-15 SHEET No. 2 SCALE N.T.S.

# SITE PLAN FOR

# GRAND RIVER OFFICE COMPLEX

## 6253 GRAND RIVER AVENUE

### GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



NOT TO SCALE  
SECTION 11, GENOA TOWNSHIP  
**LOCATION MAP**

### LEGAL DESCRIPTION

**LEGAL DESCRIPTION SUBJECT PARCEL  
(COMBINED TAX IDS: 11-11-300-027, 11-11-300-028, 11-11-300-021)**

Part of the Southwest 1/4 of Section 11, Town 1 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Southwest Corner of said Section 11; thence along the South line of Section 11, N 87°46'30"E (Previously recorded as N 87°56'50"E), 1338.82 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 328.24 feet to a point on the centerline of Grand River Avenue; Thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet to the POINT OF BEGINNING OF THE Parcel to be described; thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 262.51 feet; thence S 70°37'36"E (Previously recorded as S 68°20'56"E), 449.05 feet; thence S 02°41'13"E (Previously recorded as S 00°24'33"E), 564.96 feet to a point of the centerline of Grand River Avenue; thence continuing along the centerline of Grand River Ave., N 70°37'36"W (Previously recorded as N 68°20'56"W), 260.68 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet; thence N 70°37'36"W (Previously recorded as N 68°20'56"W), 195.00 feet to the POINT OF BEGINNING; Containing 4.19 acres, more or less, and subject to the rights of the public over existing Grand River Ave. Also subject to any other easements and restrictions of record.

### PARKING CALCULATIONS

REQUIRED PARKING:	
Professional/Business Office Area(50%): AREA PROPOSED: 30,860 S.F. x (0.50) @ 1 SP. PER 300 S.F. , 15,430/300	= 51.4 SPACES 52 SPACES
Medical Office Area(50%): AREA PROPOSED: 30,860 S.F. x (0.50) @ 1 SP. PER 200 S.F. , 15,430/200	= 77.2 SPACES 78 SPACES
<b>TOTAL PARKING REQUIRED</b>	<b>= 130 SPACES</b>
PROVIDED PARKING:	
<b>TOTAL SPACES PROPOSED:</b>	<b>= 179 SPACES</b>
	INCL/ 10 BARRIER FREE SPACES
A.D.A. MINIMUM REQUIRED SPACES FOR 151 TO 200 TOTAL SPACES = 6 BARRIER FREE SPACES.	

### SITE DATA TABLE

<b>LOT AREA</b>	<b>REQUIRED</b> 1 ACRES (min)	<b>PROVIDED</b> 4.19 ACRES
<b>LOT WIDTH</b>	150 FEET (min)	260.68 FEET
<b>LOT COVERAGE</b>		
<b>IMPERVIOUS SURFACE</b>	75%	63.6%
<b>BUILDING</b>	35%	17.0%
<b>BUILDING AREA:</b>		<b>30960 SF GROSS</b> <b>(15480 SF PHASE 1,</b> <b>15480 SF PHASE 2)</b>
<b>BUILDING SETBACKS(ZONING:GCD):</b>		
<b>FRONT</b>	70 FEET 35 FEET (NO PARKING IF FRONT)	37.56 FEET(SOUTH)
<b>SIDE</b>	15 FEET	41.66 FEET(WEST) 82.10 FEET(EAST)
<b>REAR</b>	50 FEET	93.18 FEET(NORTH)

### UTILITY DISCLAIMER



Utilities as shown indicate approximate location of facilities only, as described by the various companies and no guarantee is given either as to the completeness or accuracy thereof. Contractor shall call "MISS DIG" 1-800-482-7171 prior to the start of construction. Electric, gas, phone and television companies should be contacted prior to the commencement of field activities.

### SHEET INDEX

1. COVER SHEET
2. EXISTING CONDITIONS/REMOVALS
3. LAYOUT/UTILITY PLAN
4. PRELIMINARY GRADING PLAN
5. STORM WATER MANAGEMENT PLAN
6. DETAIL SHEET
- L-1 LANDSCAPE PLAN

### GENERAL NOTES

1. Property Zoning:  
Existing: GCD-TCO (General Commercial District-Town Center Overlay)  
Proposed: GCD (General Commercial District)
2. Contractor is responsible for protecting all existing and proposed utilities from damage during all stages of construction.
3. The engineer and applicable agency must approve, prior to construction, any alteration, or variance from these plans.
4. All signs shall meet the requirements of Genoa Township Zoning Ordinance.
5. Property to be serviced by sanitary sewer and water from utilities located along Grand River Ave.
6. Underground dry utilities shall be extended from existing locations to service this site as required by utility companies.
7. Barrier Free parking spaces shall be marked with above grade sign in accordance with current ADA standards.
8. Soils are of the Miami Loom series (U.S.D.A. "Soil Survey of Livingston Co.").
9. All construction shall be performed in accordance with the current standards and specifications of Milford Township and Oakland County.
10. The contractor shall telephone Milford Township 72 hours before beginning any construction.
11. Three working days prior to any excavation, the Contractor shall telephone MISS DIG (800-482-7171) for the location of underground utilities and shall also notify representatives of other utilities located in the vicinity of the work. It shall be the Contractor's responsibility to verify and/or obtain any information necessary regarding the presence of underground utilities which might affect this job.
12. Proposed site contains no wetlands or flood plains.
13. Site plan use: Office
14. Site storm drainage to outlet to a proposed on-site detention basin located to the northwest prior to release to the drainage course to the north of the site.
15. The proposed site storm water management system is to be privately owned and properly maintained by the property owner.

### OWNER / DEVELOPER

**CHESTNUT DEVELOPMENT**  
3800 CHILSON ROAD  
HOWELL, MI 48843

### ENGINEER

**LE LIVINGSTON ENGINEERING**  
CIVIL ENGINEERING SURVEYING PLANNING  
3300 S. OLD U.S.23 , BRIGHTON, MI 48114  
http://www.livingstoneng.com PHONE: (810) 225-7100 FAX: (810) 225-7699

**CHESTNUT DEVELOPMENT**  
GENOA TOWNSHIP, LIVINGSTON CO, MI  
**SITE PLAN**

ENGINEER'S SEAL

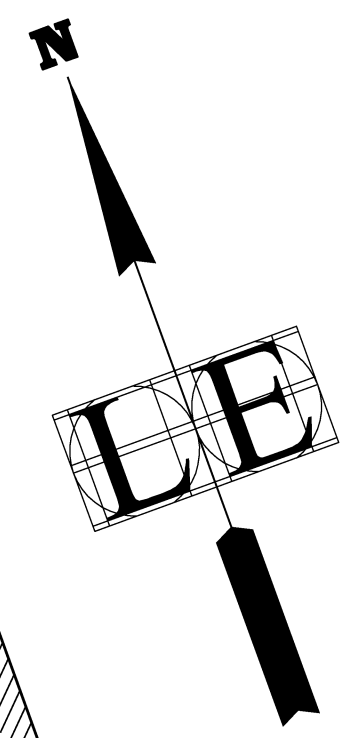
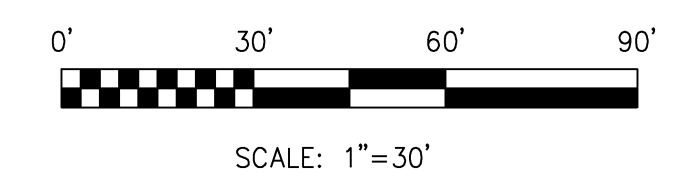
REVISIONS	DATE	PROJECT No. 14211
PER CLIENT	1/19/15	SHEET 1 OF 7
PER LCDC REVIEW	2/27/15	DATE: DEC. 1, 2014



# EXISTING CONDITIONS AND REMOVAL PLAN

**LEGEND**

SPOT GRADE	+ 615.51
CONTOUR	— 615 —
WATER MAIN	— 12" w —
SANITARY SEWER	— 10" s —
STORM SEWER	— 15" s —
OVERHEAD FENCE	— x — x — x —
GAS	— o — o — o —
WETLAND	— wavy lines —
SIGN	— square with X —
LIGHT POLE	— circle with cross —
UTILITY POLE	— circle with dot —
CONCRETE	[hatched pattern]
GRAVEL	[stippled pattern]
ASPHALT	[solid grey]

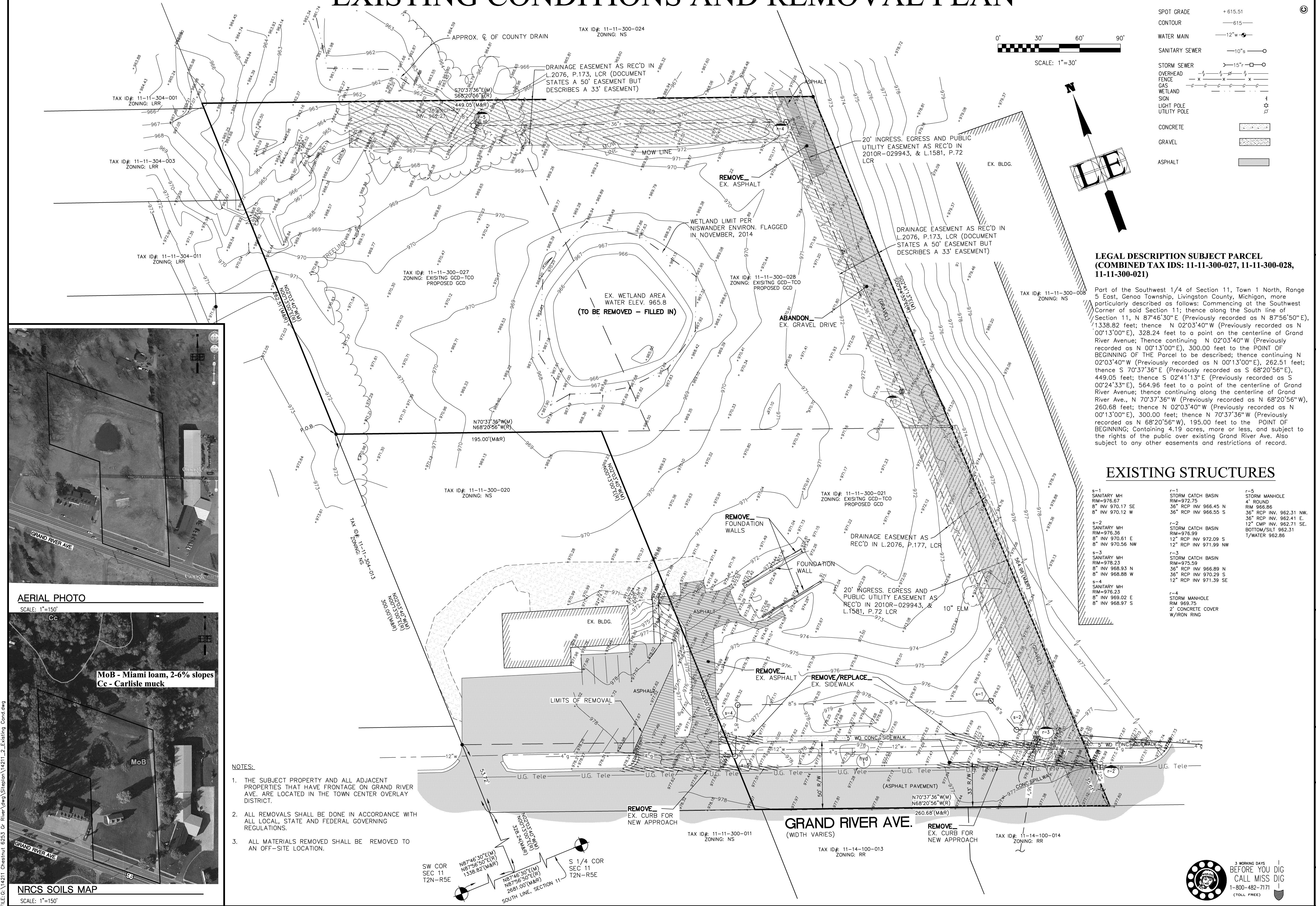


**LEGAL DESCRIPTION SUBJECT PARCEL  
(COMBINED TAX IDS: 11-11-300-027, 11-11-300-028, 11-11-300-021)**

Part of the Southwest 1/4 of Section 11, Town 1 North, Range 5 East, Genoa Township, Livingston County, Michigan, more particularly described as follows: Commencing at the Southwest Corner of said Section 11; thence along the South line of Section 11, N 87°46'30"E (Previously recorded as N 87°56'50"E), 1338.82 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 328.24 feet to a point on the centerline of Grand River Avenue; thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet to the POINT OF BEGINNING OF THE Parcel to be described; thence continuing N 02°03'40"W (Previously recorded as N 00°13'00"E), 262.51 feet; thence S 70°37'36"E (Previously recorded as S 68°20'56"E), 449.05 feet; thence S 02°41'13"E (Previously recorded as S 00°24'33"E), 564.96 feet to a point of the centerline of Grand River Avenue; thence continuing along the centerline of Grand River Ave., N 70°37'36"W (Previously recorded as N 68°20'56"W), 260.68 feet; thence N 02°03'40"W (Previously recorded as N 00°13'00"E), 300.00 feet; thence N 70°37'36"W (Previously recorded as N 68°20'56"W), 195.00 feet to the POINT OF BEGINNING; Containing 4.19 acres, more or less, and subject to the rights of the public over existing Grand River Ave. Also subject to any other easements and restrictions of record.

**EXISTING STRUCTURES**

s-1 SANITARY MH RIM=976.67 8" INV 970.17 SE 8" INV 970.12 W	r-1 STORM CATCH BASIN RIM=972.75 36" RCP INV 966.45 N 36" RCP INV 966.55 S	r-5 STORM MANHOLE 4" ROUND RIM 966.86 36" RCP INV. 962.31 NW 36" RCP INV. 962.41 E 12" CMP INV. 962.71 SE BOTTOM/SILT 962.31 T/WATER 962.86
s-2 SANITARY MH RIM=976.36 8" INV 970.61 E 8" INV 970.56 NW	r-2 STORM CATCH BASIN RIM=976.99 12" RCP INV 972.09 S 12" RCP INV 971.99 NW	r-3 STORM CATCH BASIN RIM=978.23 36" RCP INV 968.89 N 36" RCP INV 970.29 S 12" RCP INV 971.39 SE
s-3 SANITARY MH RIM=978.23 8" INV 968.93 N 8" INV 968.88 W	r-4 STORM MANHOLE RIM=976.23 8" INV 969.02 E 8" INV 968.97 S	
s-4 SANITARY MH RIM=976.23 8" INV 969.02 E 8" INV 968.97 S		

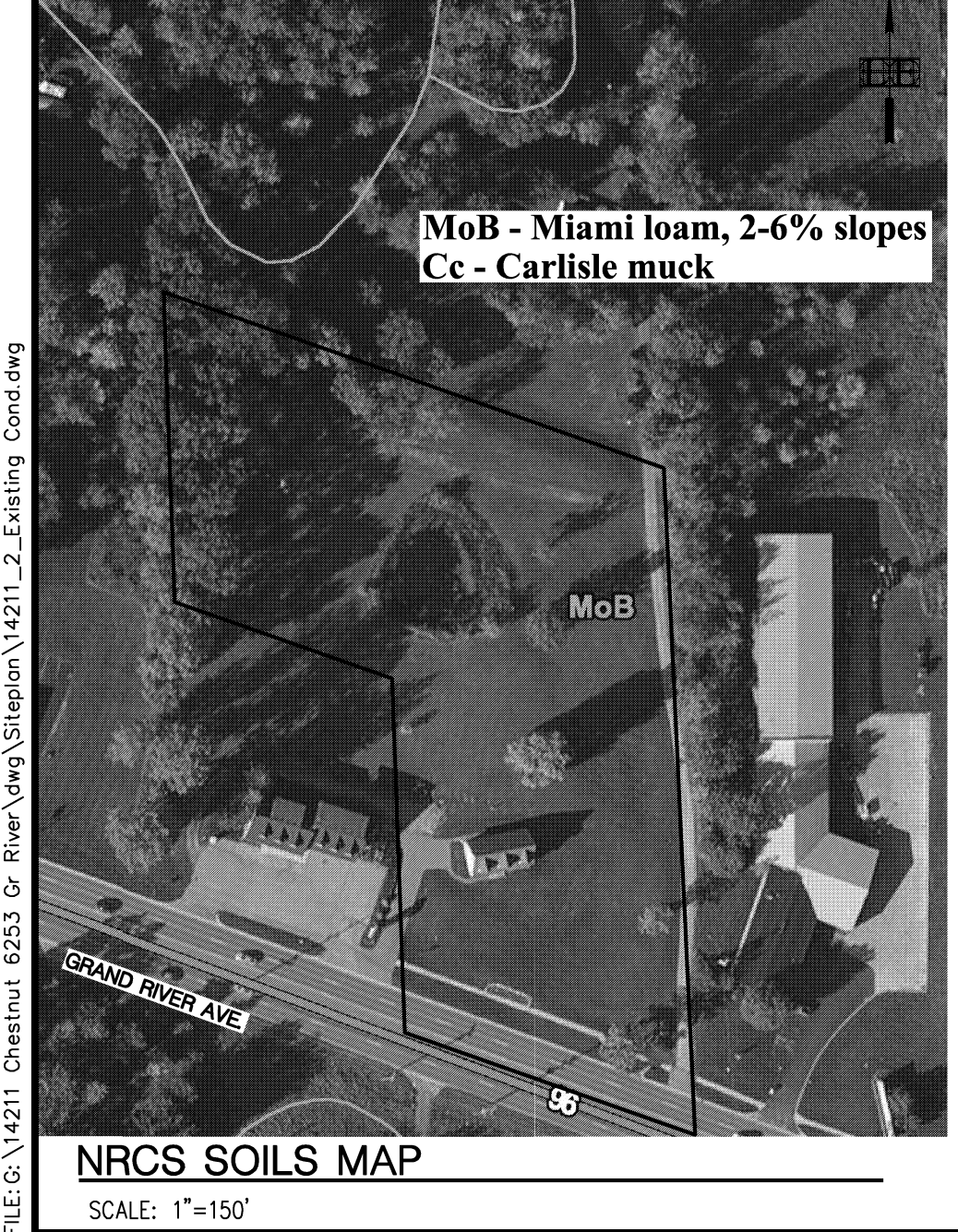


**NOTES:**

1. THE SUBJECT PROPERTY AND ALL ADJACENT PROPERTIES THAT HAVE FRONTAGE ON GRAND RIVER AVE. ARE LOCATED IN THE TOWN CENTER OVERLAY DISTRICT.
2. ALL REMOVALS SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL GOVERNING REGULATIONS.
3. ALL MATERIALS REMOVED SHALL BE REMOVED TO AN OFF-SITE LOCATION.



**AERIAL PHOTO**  
SCALE: 1"=150'  
CC



**NRCS SOILS MAP**  
SCALE: 1"=150'

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CIVIL ENGINEERING SURVEYING PLANNING  
3300 S. Old US 23, BRIGHTON, MI 48114  
PHONE: (810) 225-7000 FAX: (810) 225-7699  
http://www.livngstoneng.com

**LE**

Client  
3800 CHILSON ROAD  
CHESTNUT DEVELOPMENT  
HOWELL, MI 48843

**GRAND RIVER OFFICE COMPLEX**  
6255 GRAND RIVER AVENUE, BRIGHTON, LIVINGSTON COUNTY, MICHIGAN  
SITE PLAN  
EXISTING CONDITIONS & REMOVAL PLAN

DATE	REVISIONS
1-19-2015	PER CLIENT
2-27-2015	PER LOGIC REVIEW

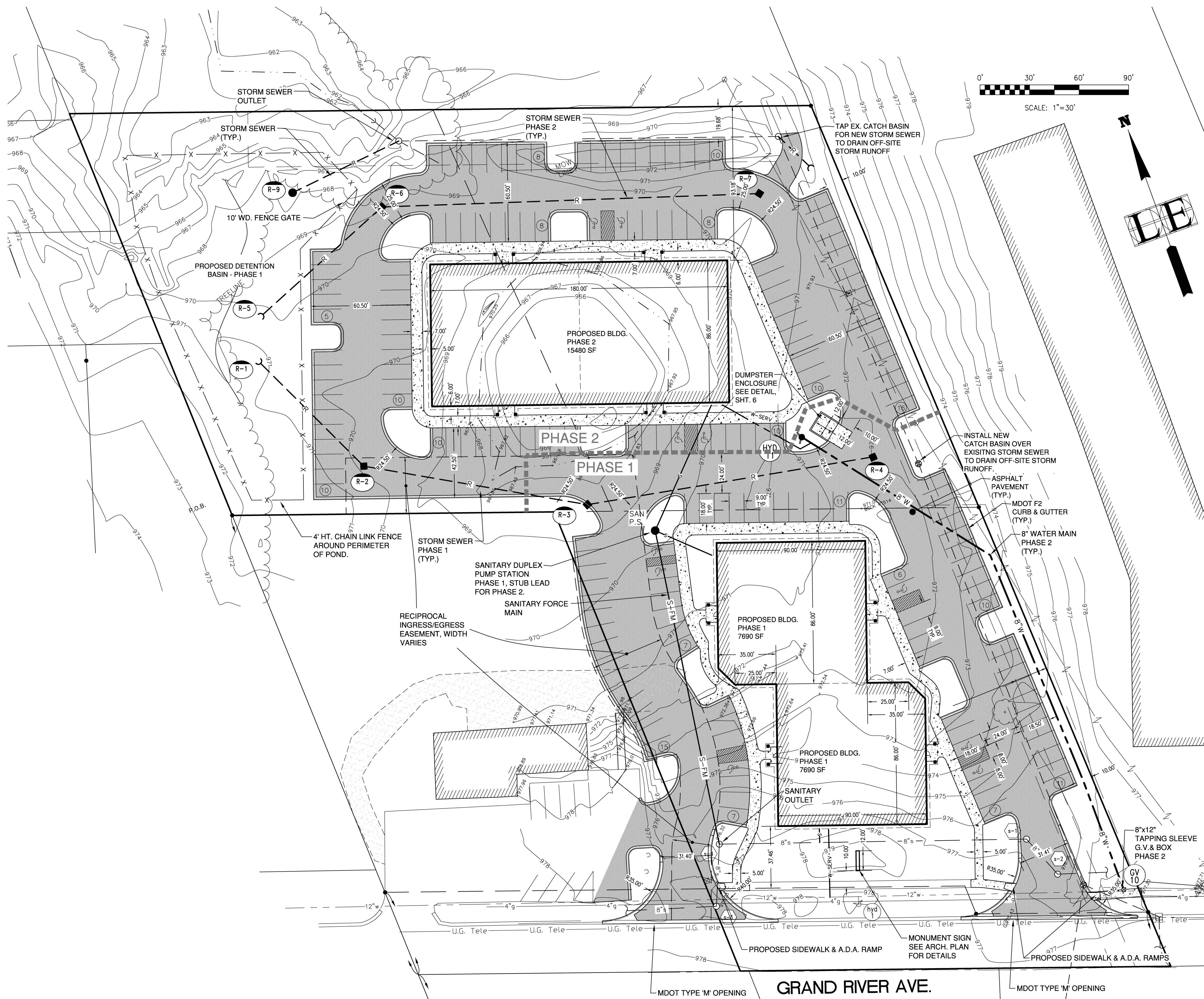
Drawn: TEA	Checked:	Approved:	Date: 12-11-2014
14211	Scale:	Vertical:	Horizontal:
			T = 90

2





# LAYOUT & UTILITY PLAN



**LEGEND**

	EXISTING	PROPOSED
SPOT GRADE	× 615.51	
WATER MAIN	— 615 —	— 8" W —
WATER MAIN LABEL	hyd	HYD
SANITARY SEWER	— 8" S —	— 8" S —
SANITARY SEWER LABEL	s-1	S-1
STORM SEWER	— 12" R —	— 12" R —
STORM SEWER LABEL	r-1	R-1
OVERHEAD	X	g
LIGHT POLE	☆	
UTILITY POLE	⊗	
GATE VALVE IN WELL	⊗	
DOMESTIC WATER WELL	⊗	
BITUMINOUS PAVEMENT-LIGHT DUTY		▨
CONCRETE PAVEMENT		▨
PHASE LINE		-----

**UTILITY NOTES**

- WATERMAIN NOTES:**
1. WATER MAIN SHALL BE DUCTILE IRON (PRESSURE CLASS 350 W/8 MIL POLYWRAP)
  2. ALL WATERMANS SHALL BE INSTALLED WITH A MINIMUM COVER OF 5.5' BELOW FINISHED GRADE.
  3. THE WATER MAIN SHALL BE BUILT IN ACCORDANCE WITH THE MARION, HOWELL, OCEOLA, GENOA SEWER & WATER AUTHORITY (MHOG SWATH) SANITARY SEWER & WATER DESIGN STANDARDS.
  4. ALL WATER MAIN SHALL BE PRESSURE TESTED AND DISINFECTED IN ACCORDANCE WITH M.H.O.G. STANDARDS.
  5. A PERMIT SHALL BE OBTAINED FROM THE LIVINGSTON COUNTY BUILDING DEPARTMENT AND A REPRESENTATIVE OF GENOA TOWNSHIP MUST BE PRESENT TO OBSERVE THE PROPOSED LIVE TAP TO THE WATER MAIN.
- STORM SEWER NOTES:**
1. ALL STORM SEWER SHALL BE SMOOTH LINED CORRUGATED POLYETHYLENE PIPE (SLC/P) (HDPE DUAL WALL) UNLESS OTHERWISE NOTED ON PLANS.
  2. ALL STORM SEWER UNDER PAVEMENT OR WITHIN 1:1 INFLUENCE OF EXISTING, PROPOSED, OR FUTURE PAVEMENT SHALL HAVE COMPACTED SAND BACKFILL.

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 http://www.livngstoneng.com

Client  
**3800 CHILSON ROAD**  
**CHESTNUT DEVELOPMENT**  
**HOWELL, MI 48843**

**GRAND RIVER OFFICE COMPLEX**  
 6255 GRAND RIVER AVENUE, BRIGHTON, LIVINGSTON COUNTY, MICHIGAN  
 SITE PLAN  
 LAYOUT & UTILITY PLAN

DATE	REVISIONS
1-19-2015	PER CLIENT
2-27-2015	PER LDCR REVIEW

Drawn: TEA  
 Checked: PER LDCR REVIEW  
 Approved:  
 Date: 12-1-2014

Sub. no. **14211**  
 Scale:  
 Vertical: **T = 30'**  
 Horizontal:



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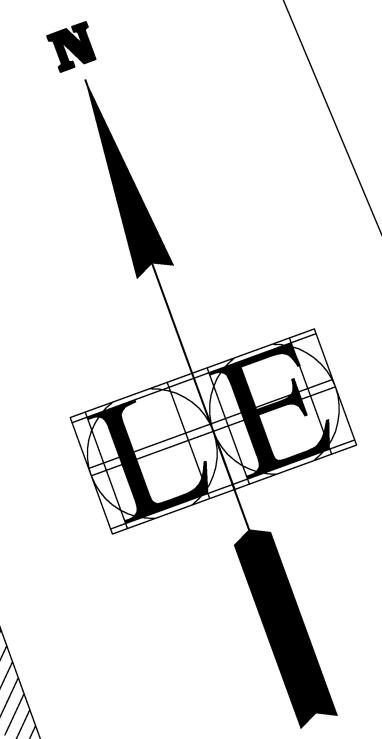


# PRELIMINARY GRADING PLAN



**LEGEND**

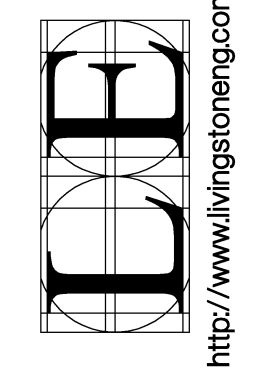
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CONTOUR	— 615 —	— 615 —



SCALE: 1" = 30'

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Client  
 3800 CHILSON ROAD  
 CHESTNUT DEVELOPMENT  
 HOWELL, MI 48843

**GRAND RIVER OFFICE COMPLEX**  
 6255 GRAND RIVER AVENUE, BRIGHTON, LIVINGSTON COUNTY, MICHIGAN  
 SITE PLAN  
 PRELIMINARY GRADING PLAN

DATE	REVISIONS
1-19-2015	PER CLIENT
2-27-2015	PER LDC REVIEW

Drawn: TEA	Checked:	Approved:	Date: 12-1-2014
14211			
Scale:	Vertical:	Horizontal:	T = 30'

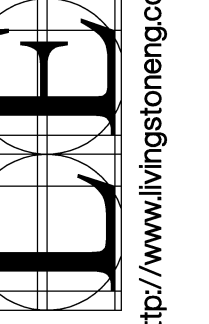


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# STORM WATER MANAGEMENT PLAN

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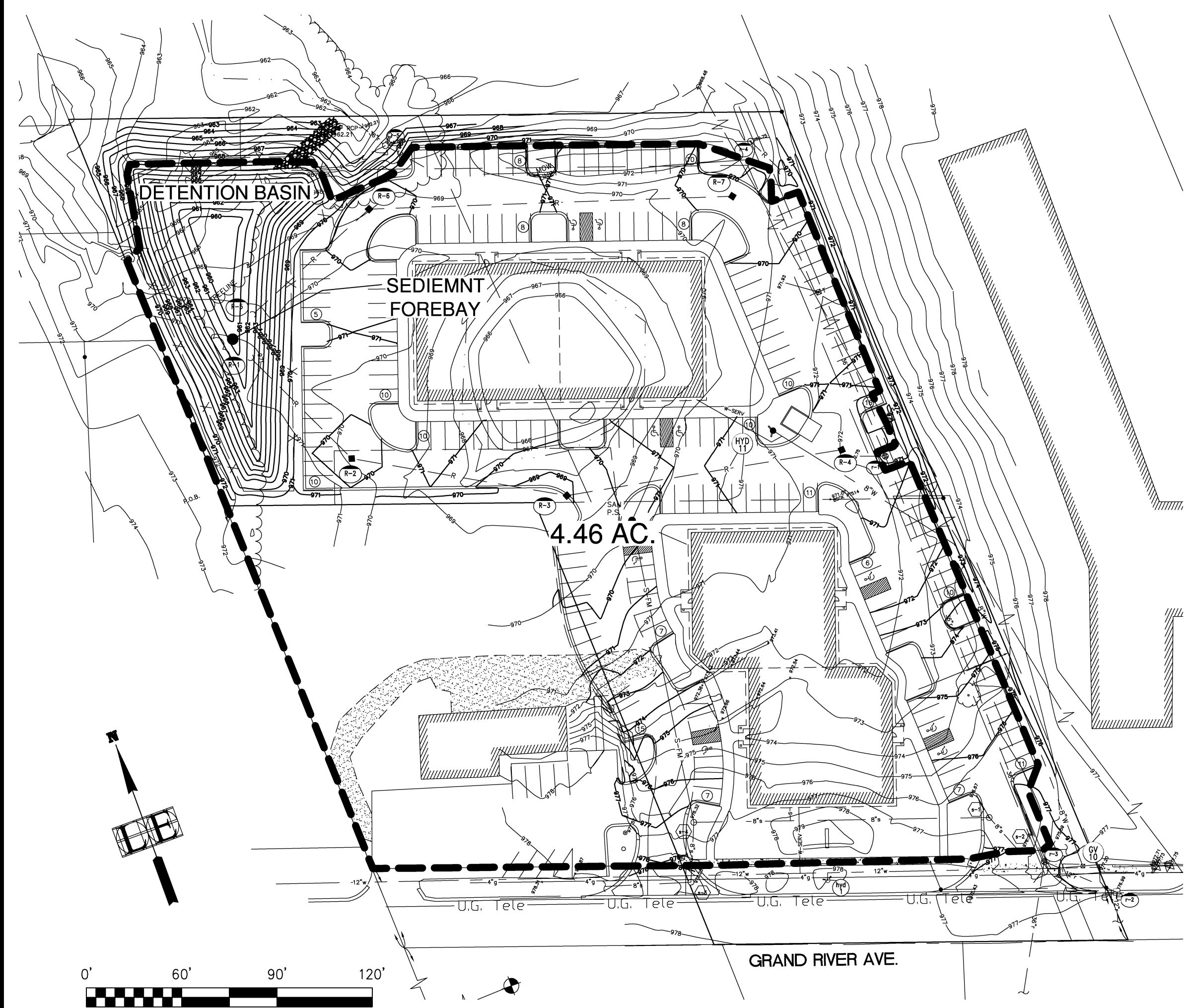
GRAND RIVER OFFICE COMPLEX  
 6255 GRAND RIVER AVENUE, BRIGHTON, LIVINGSTON COUNTY, MICHIGAN  
 SITE PLAN  
 STORM WATER MANAGEMENT PLAN

DATE	REVISIONS
1-19-2015	PER CLIENT
2-27-2015	PER LOGIC REVIEW

Drawn: TEA	Checked:	Approved:	Date: 12-1-2014
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Job No. 14211	Scale:	Vertical:	Horizontal: T = 60'
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## STORM WATER DETENTION POND CALCULATIONS Project: Grand River Office Complex Livingston Engineering Project No. 14211 Livingston County Drain Commission Method



### I. Common Items and Assumptions:

- A. First Flush =  $(0.57/12) \times 43,560 \times \text{area} \times \text{developed C}$
- B. Bankfull Flood =  $5,160 \times \text{area} \times \text{developed C}$
- C. Detention Volume Equation  
 $V = ((A_t + A_b) / 2) \times H$   
 where,  $A_t$  = Area at top of storage elevation  
 $A_b$  = Area at bottom of storage elevation  
 $H$  = Depth of analysis

### II. Detention Pond Volumes:

- A. First Flush, Bankfull Flood and 100-year Storm Event
- 1. Contributing Area = 4.46 Ac.
- 2. Developed Runoff Coefficient:

	Area (A), Ac.	Coefficient (C)	A x C
Rooftop / Asphalt Area	2.78	0.90	2.50
Gravel Area	0.12	0.70	0.08
Lawn/Landscaped Area	1.56	0.20	0.31
<b>Totals:</b>	<b>4.46</b>		<b>2.90</b>

- Developed C =  $2.90 / 4.46 = 0.65$

- 3. First Flush Volume:  
 $V = (0.57/12) \times 43,560 \times 0.65 \times 4.46 = 5262 \text{ CF}$
- 4. Bankfull Flood Volume:  
 $V = 5,160 \times 0.65 \times 4.46 = 14959 \text{ CF}$
- 5. 100-Year Flood Volume:  
 $Q_A = (0.10 \times 4.46) = 0.45 \text{ CFS}$   
 $V_T = 37138 \text{ CF}$

### B. Detention Volume Proposed

Elev.	Area(sf)	Vol (cf)	Acc. Vol.(cf)
963.0	5334		
964.0	6568	5951	5951
965.0	7951	7260	13211
966.0	9374	8663	21873
967.0	10890	10132	32005
968.0	12485	11688	43693
969.0	14146	13316	57008
<b>Total:</b>			<b>57008 CF</b>

The following interpolations determine the pond water elevations for the three different storm events:

First Flush:  $\frac{964.0 - 963.0}{5951 - 0} = \frac{x - 963.0}{5262 - 0}$   
 $x = \text{Elev}_{ff} = 963.88$

Bankfull Flood:  $\frac{966.0 - 965.0}{21873 - 13211} = \frac{x - 965.0}{14959 - 13211}$   
 $x = \text{Elev}_{bf} = 965.20$

100 Yr. Flood:  $\frac{968.0 - 967.0}{43693 - 32005} = \frac{x - 967.0}{37138 - 32005}$   
 $x = 967.44$

These yield pond water elevations of 963.88 for the First Flush, 965.20 for the Bankfull Flood, and 967.44 for the 100 Yr. Storm Event

Required Volume, V= 37138 cf

### C. Outflow Structure

The Detention Pond will have a 3-stage outlet. This will consist of a perforated manhole with a series of holes in three (3) tiers. The lower tier of holes will detain the first-flush volume in a timeframe to exceed 24 hours. The middle tier along with the lower tier will detain and drain the bankfull flood volume in a timeframe not-to-exceed 48 hours. The upper tier along with the middle and lower tiers will detain the runoff from the site. The perforated manhole will be surrounded by a stone filter.

- 1. First Flush:  
 The average allowable release rate for runoff is 0.5" over area of site in 24 hrs.  
 $Q_{ff} = (1/24 \text{ hrs}) \times (1 \text{ hr./3600 sec}) \times 5262 \text{ CF} = 0.061 \text{ CFS}$   
 Orifice area at Elev. 963.00 to produce this average discharge:  
 $H = 0.88 \text{ FT}$   
 $\text{Area of Orifice} = Q_{ff} / (0.62 \times (2gxH)^{0.5}) = 0.013 \text{ SF}$   
 Where,  
 $H = \text{Head}$   
 $g = \text{Gravitational Const (32.2 fps)}$   
 $\text{Area of } 1.50" \text{ hole} = 0.0123 \text{ SF}$   
 $\text{No. of } 1.50" \text{ hole(s)} = 0.0130 / 0.0123 = 1.06 \text{ hole(s)}$   
**Therefore, use One ( 1 ) 1.50" hole(s) at Elev. = 963.00**

The detention time for One( 1 ) 1.50" hole(s) is:  
 $Q(\text{new})_{ff} = A(\text{new})_{ff} \times (0.62/2gH_A)^{0.5}$   
 $Q(\text{new})_{ff} = (1 \times 0.0123) \times (0.62/2gH)^{0.5}$   
 $Q(\text{new})_{ff} = 0.057 \text{ CFS}$   
 $T(\text{new})_{ff} = V_{ff} / Q(\text{new})_{ff}$   
 $T(\text{new})_{ff} = 5262 / (0.057 \times 3600) = 25.5 \text{ hrs.}$

- 2. Bankfull Flood:  
 The bankfull flood must be detained in 36-48 hrs, check the discharge through the first-flush orifice to see if additional holes are necessary.  
 $H = 2.20 \text{ FT}$   
 $Q_{ff} = 0.62 ( 1 ) \text{ holes} \times 0.0123 \text{ sf/hole} \times (2 \times 32.2 \times 2.20)^{0.5}$   
 $Q_{ff} = 0.091 \text{ CFS}$   
 Time to empty Basin at this discharge:  
 $T_{ff} = (\text{sec} / 0.091 \text{ CF}) \times (14959 \text{ CF}) \times (1 \text{ hr./3600sec})$   
 $T_{ff} = 45.9 \text{ hrs.}$   
 Since  $T_{ff} > 40 \text{ hrs.}$ , additional holes are necessary.

A target release time of 40.0 hrs. will be chosen for the bankfull flood. The volume above the first-flush water surface and below the bankfull flood elevation is the volume remaining (V(rem)).

$V(\text{rem}) = V_{bf} - V_{ff}$   
 $V(\text{rem}) = 14959 \text{ CF} - 5262 \text{ CF} = 9697 \text{ CF}$   
 $T(\text{rem}) = T(\text{tot}) - T(\text{new})_{ff} = 40.0 \text{ hrs.} - 25.5 \text{ hrs.} = 14.5 \text{ hrs.}$   
 Volume through One( 1 ) 1.50" hole(s) in 14.5 hrs. is:  
 $H_{ff} = (\text{Elev}_{bf} - \text{Elev}_{ff}) + (\text{Elev}_{ff} - \text{Elev}_b)$   
 $H_{ff} = (965.20 - 963.88) + (963.88 - 963.00) = 2.20 \text{ FT}$   
 $Q_1 = \text{discharge through FF orifices when both the FF and BF holes are contributing.}$

$Q_1 = A_{ff} \times (2gH_{ff})^{0.5}$   
 $Q_1 = (1 \times 0.0123) \times (0.62/2gH_{ff})^{0.5}$   
 $Q_1 = 0.091 \text{ CFS}$   
 $V_1 = T(\text{rem}) \times Q_1 = 14.5 \times 0.091 \times 3600 = 4743.4 \text{ CF}$   
 $V_2 = V(\text{rem}) - V_1 = 9697 - 4743.37 = 4954 \text{ CF}$   
 $Q_2 = V_2 / T(\text{rem}) = 4954 / (14.5 \times 3600) = 0.095 \text{ CFS}$   
 $H_{bf} = (\text{Elev}_{bf} - \text{Elev}_{ff})$   
 $H_{bf} = (965.20 - 963.88) = 1.32 \text{ FT}$

$\text{Area of Orifice} = Q_2 / (0.62/2gH_{bf})^{0.5} = 0.0166 \text{ SF}$   
 $\text{Area of } 1.00" \text{ hole} = 0.0055 \text{ SF}$   
 $\text{No. of } 1.00" \text{ hole(s)} = 0.0166 / 0.0055 = 3.04 \text{ hole(s)}$   
**Therefore, use Three( 3 ) 1.00" hole(s) at Elev. = 963.88**

### 3. 100 yr. Flood:

This basin is designed to pass the 100-year storm event without overtopping the basin.

Flow Required to pass:  
 $Q_A = (0.20 \times 4.46 \text{ Ac.}) = 0.892 \text{ CFS}$   
 At the required 100-year detention volume elevation, the  
 One( 1 ) 1.50" hole(s) designed for the first flush and the  
 Three( 3 ) 1.00" hole(s) designed for the bankfull flood will discharge:  
 $Q = 0.62 ( 1 \times 0.0123 ) \times (2 \times 32.2 \times 4.44)^{0.5}$   
 $+ 0.62 ( 3 \times 0.0055 ) \times (2 \times 32.2 \times 3.55)^{0.5} = 0.2821 \text{ CFS}$   
 The remaining allowable outflow =  $0.892 - 0.2821 = 0.610 \text{ CFS}$   
 $0.62(A)(2 \times 32.2 \times (967.44 - 965.20))^{0.5} = 0.610 \text{ CFS}$   
 $A = 0.082 \text{ SF}$   
 $\text{Area of } 1.25" \text{ hole} = 0.0085 \text{ SF}$   
 $\text{No. of } 1.25" \text{ hole(s)} = 0.0819 / 0.0085 = 9.62 \text{ hole(s)}$   
**Therefore, use Nine( 9 ) 1.25" hole(s) at Elev. = 965.20**

### Storm Water Management Plan

The site drains from south to north, or from Grand River Ave toward the outlet to the enclosed county drain located on the northwest side of the subject parcel. The county drain is located on the subject site and is enclosed in a 36" pipe located in an easement that runs along and near the easterly and northerly property lines.

The proposed development will provide storm water quality and flood control treatment using an on-site storm water detention pond, located on the northwest end of the site. The detention pond is designed to meet the current standards of the Livingston County Drain Commissioner's Office and those of Genoa Township. The detention pond is designed to capture and treat storm water runoff from the subject site and the site located immediately to the west, prior to release to the county drain near the existing county drain outlet located on-site near the north property line.

Storm water runoff from Grand River Ave. and the adjacent property located to the east of the subject site currently drain to the existing county drain. Storm water runoff from these adjacent areas will continue to outlet to the county drain, as facilitated by the proposed site improvements associated with the subject development.

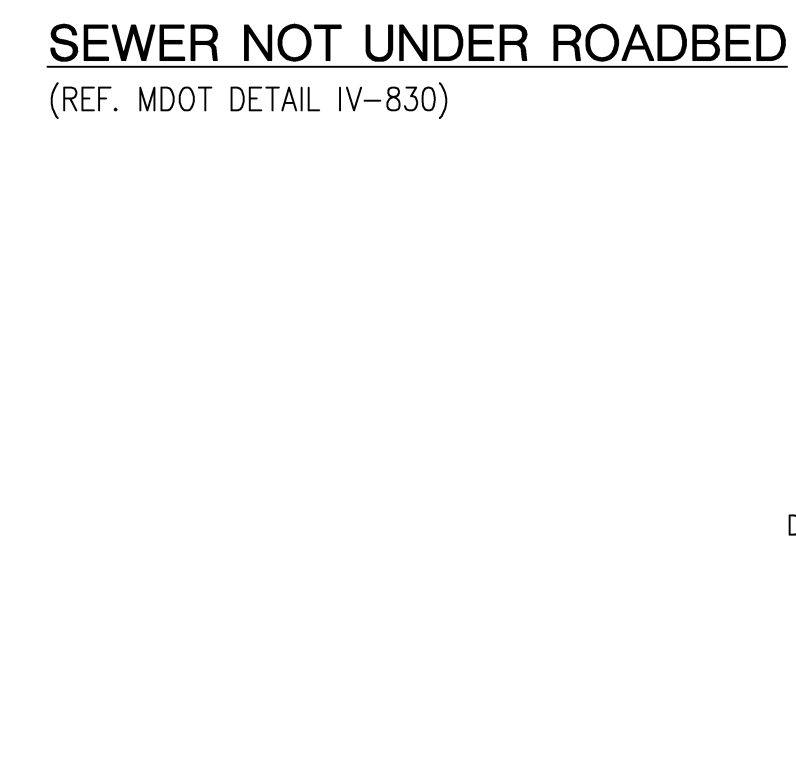
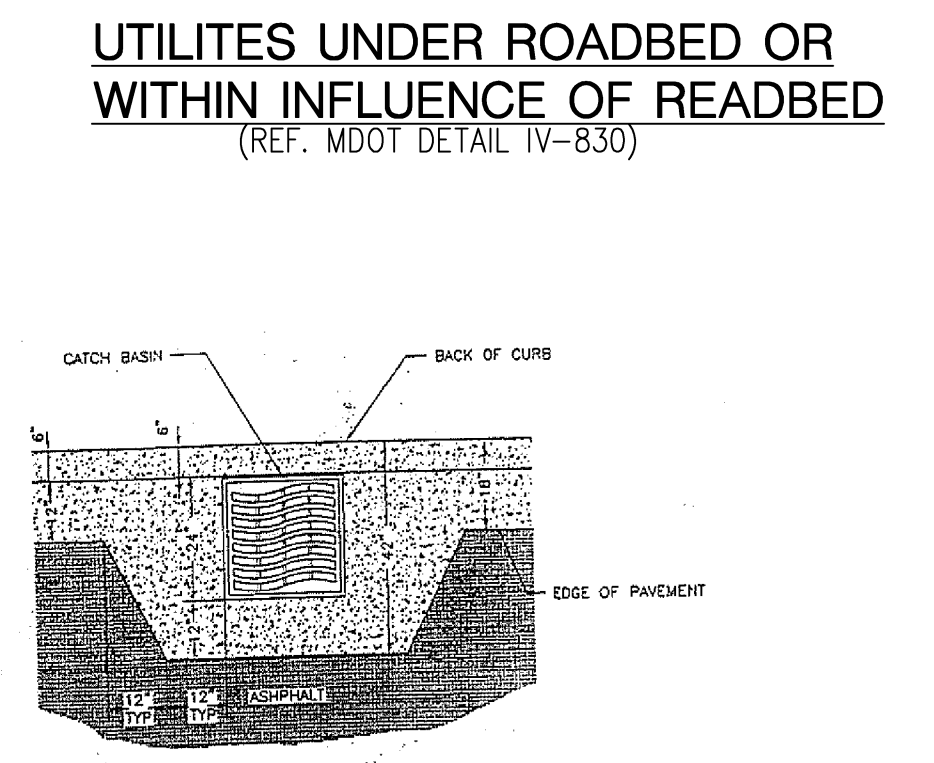
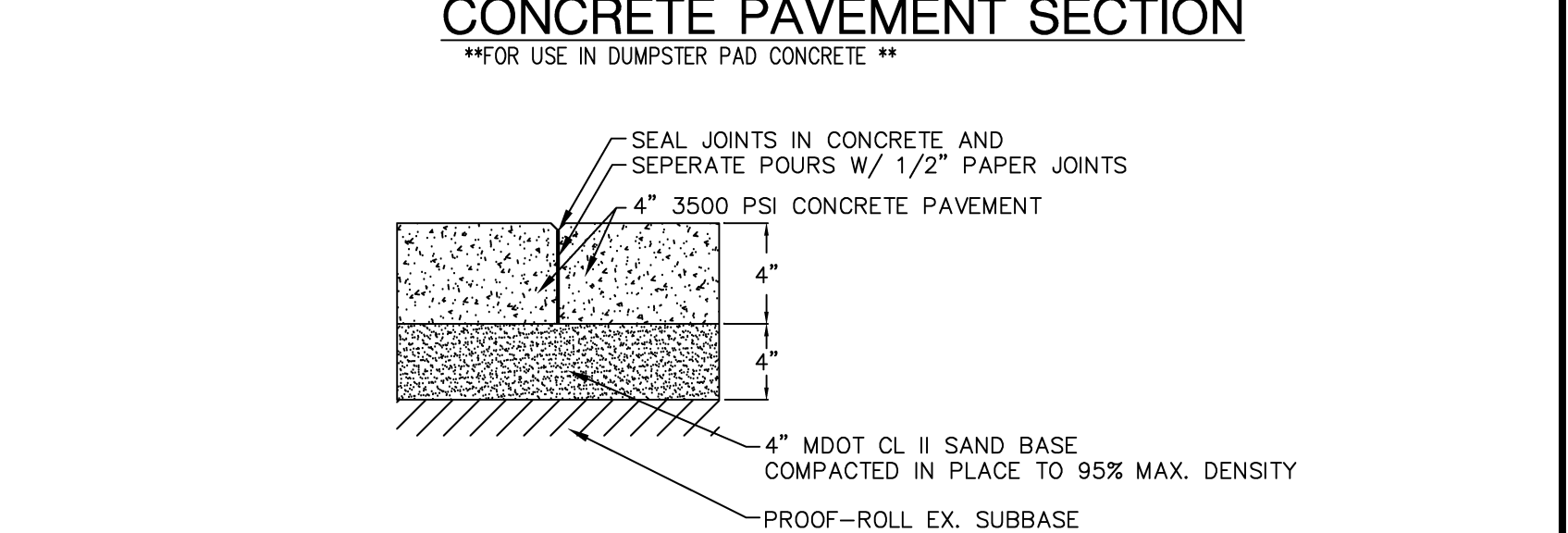
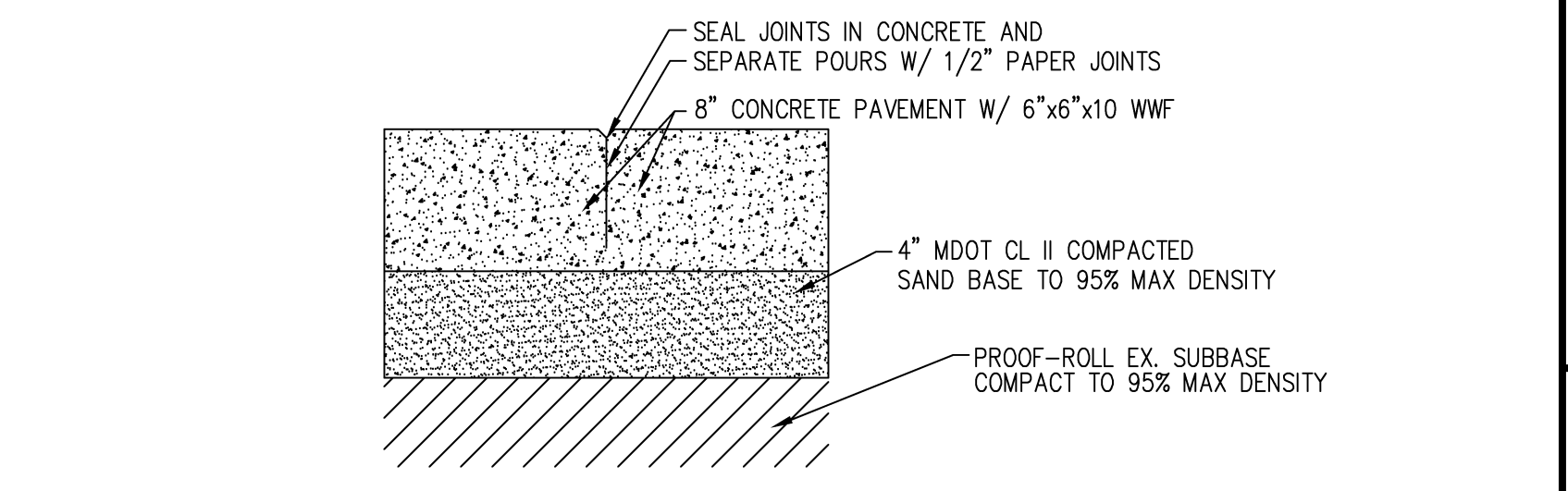
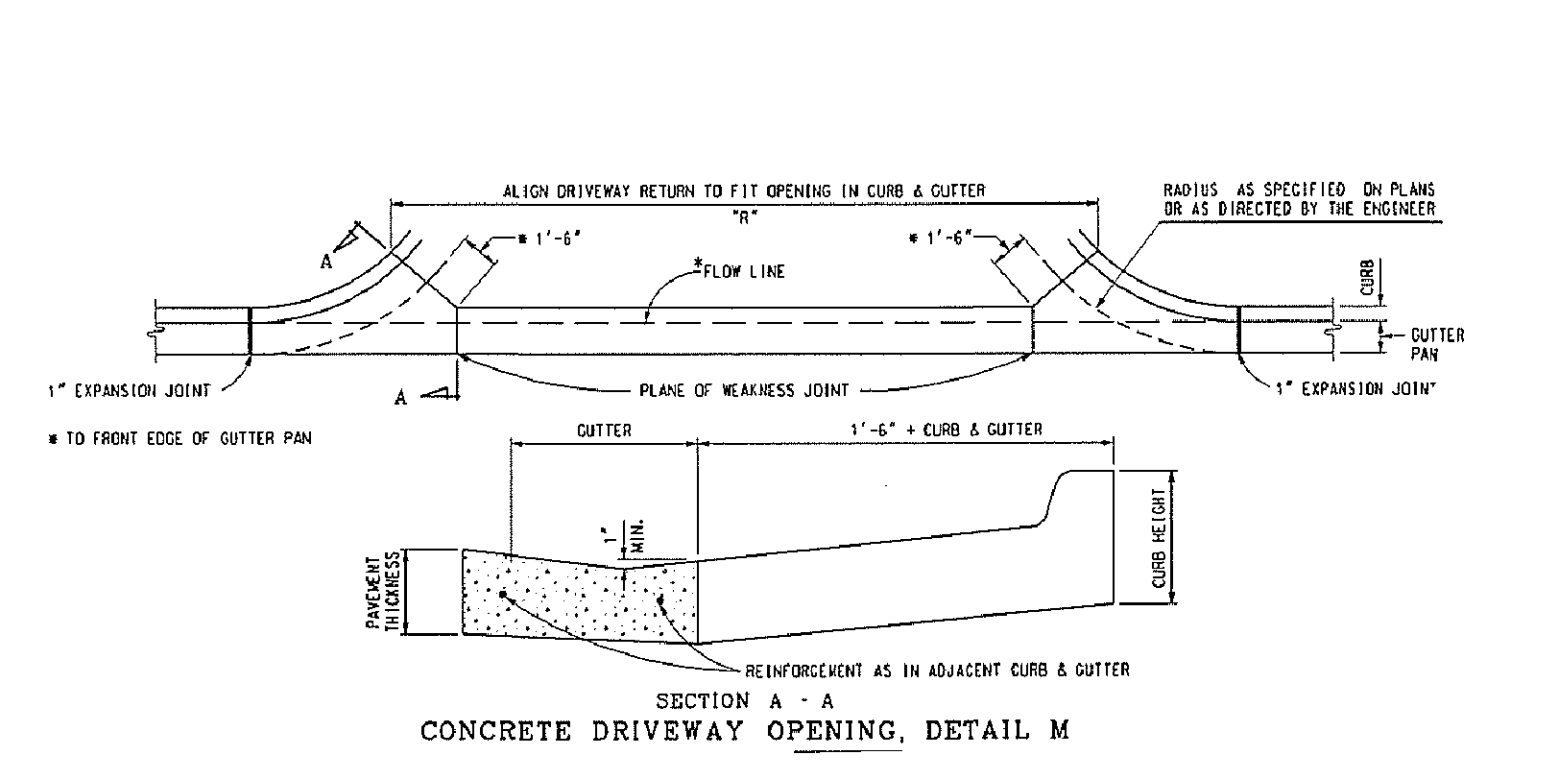
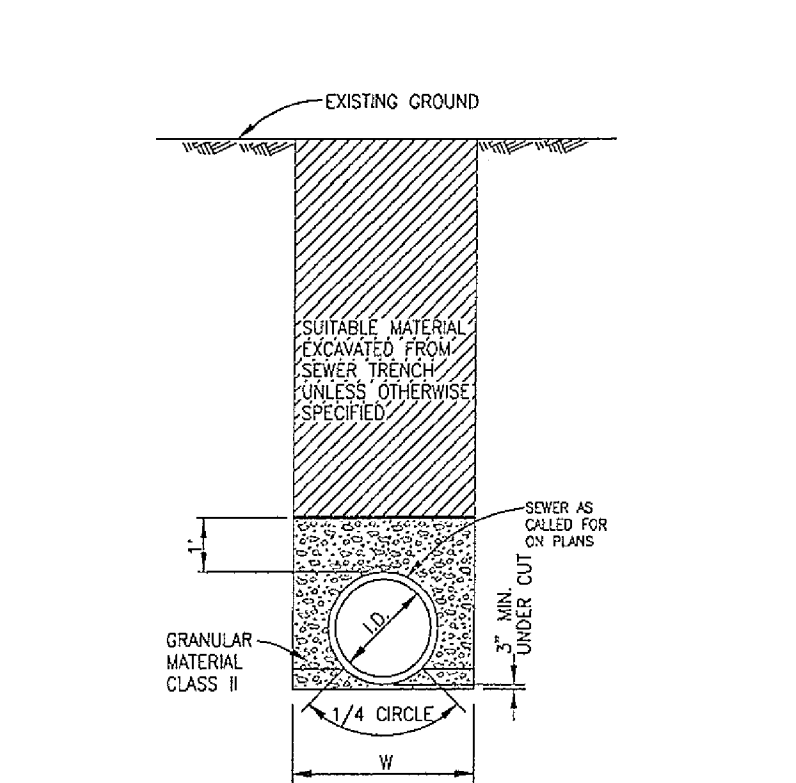
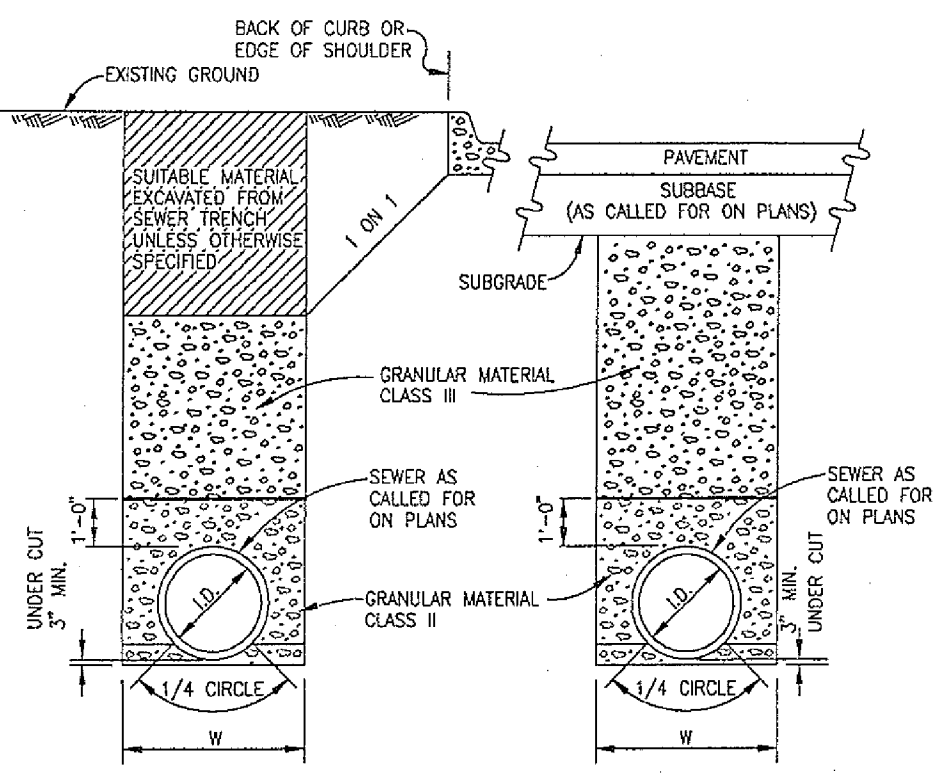
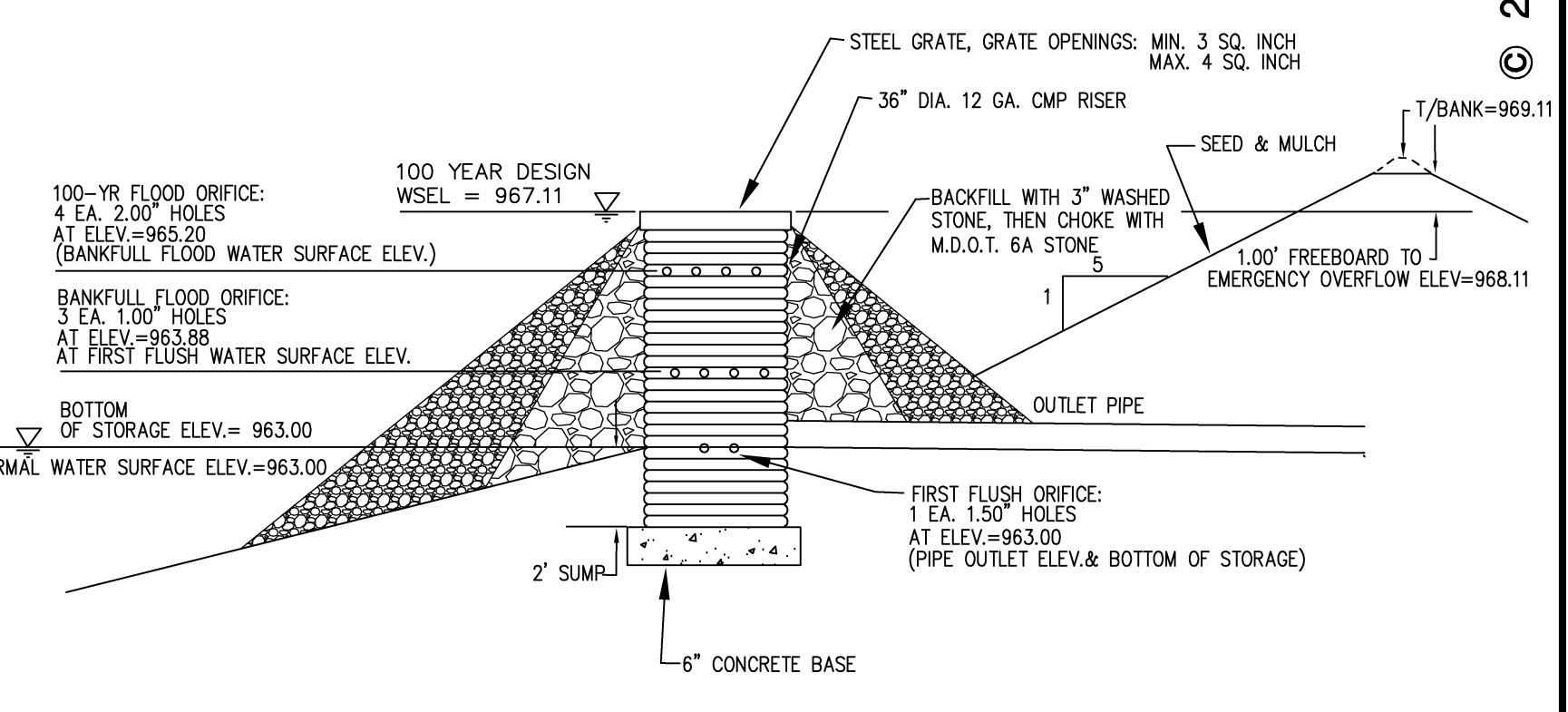
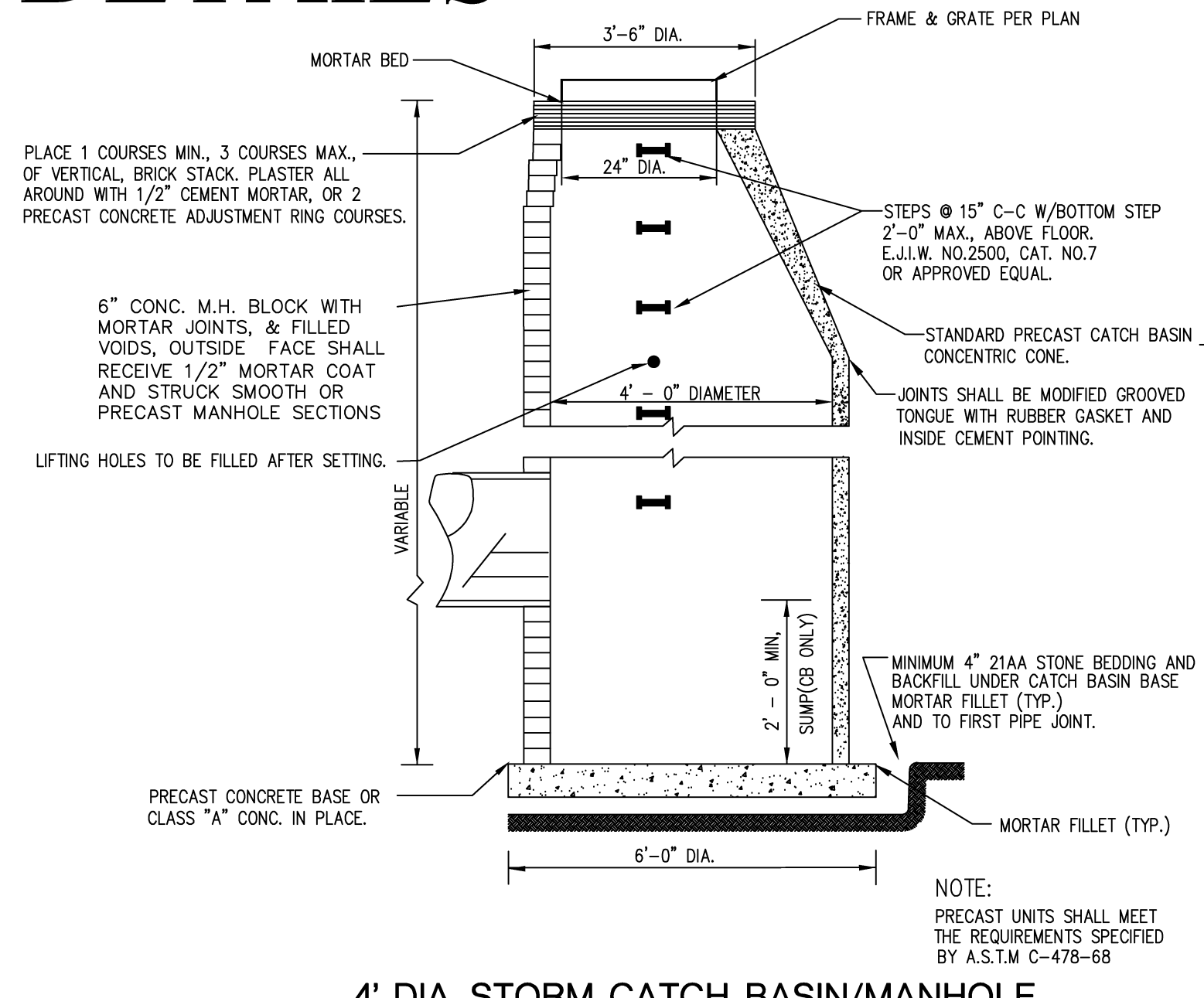
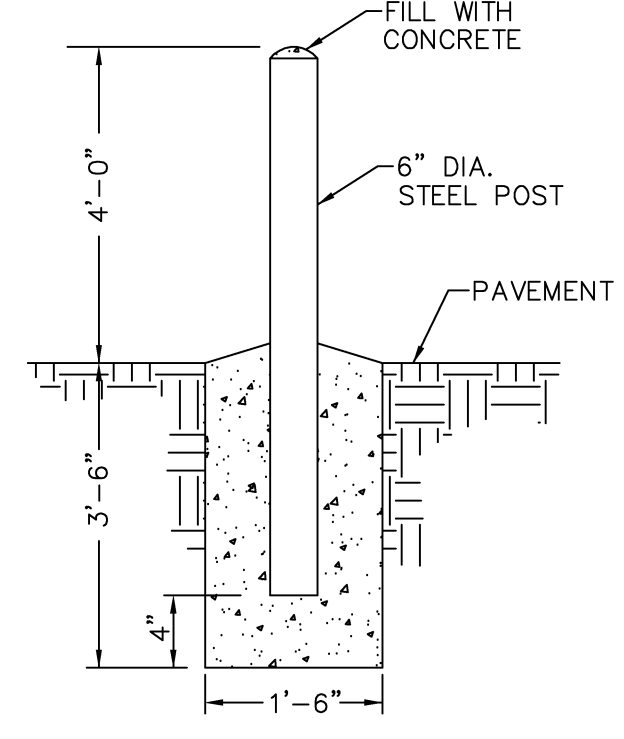
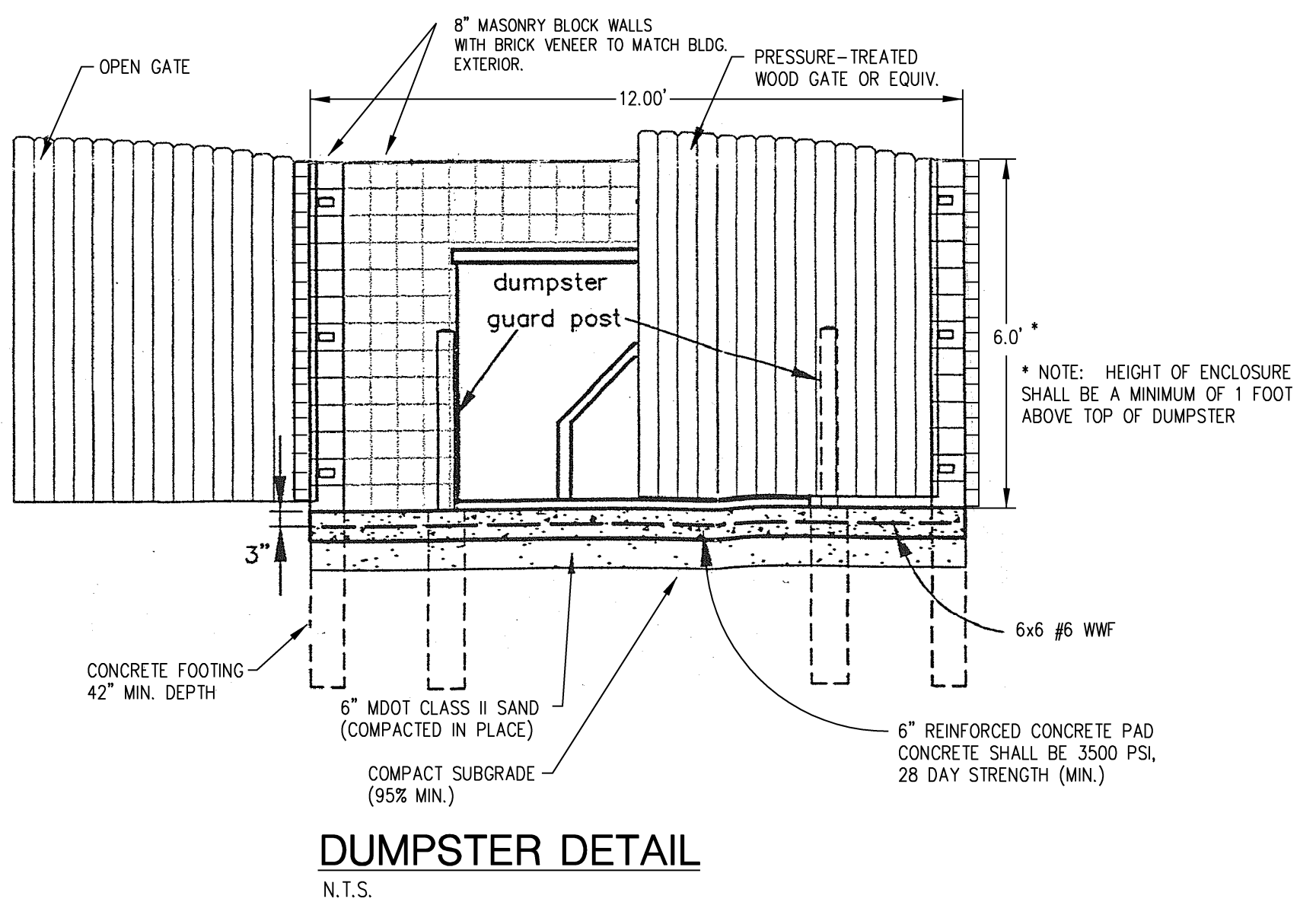
A small on-site pond will be filled in, as part of this development. The pond is a NON-regulated wetland, as determined by the MDEQ.



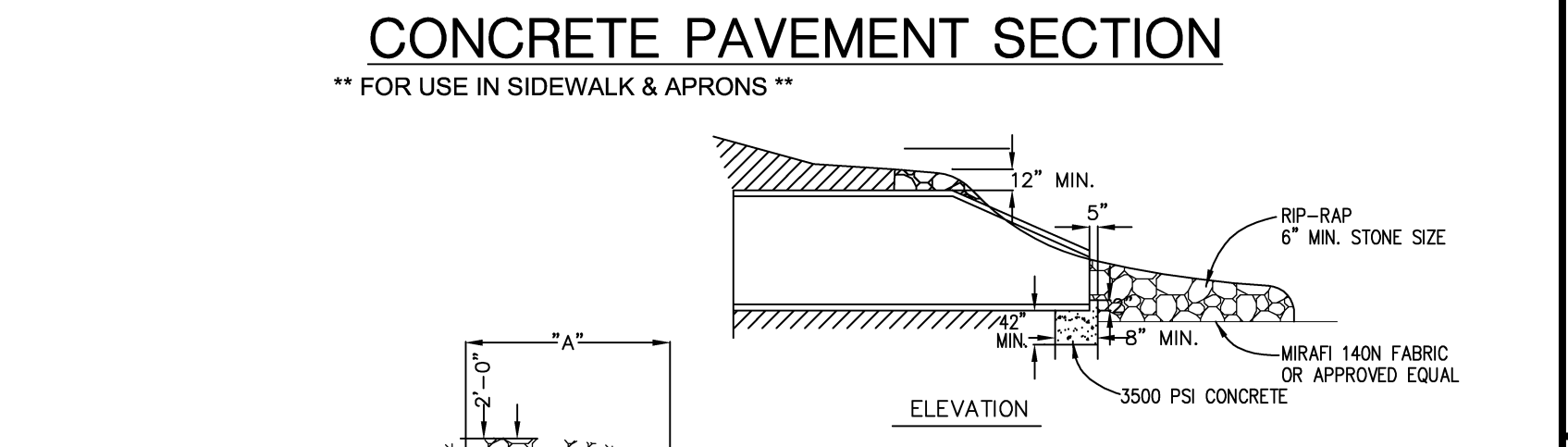
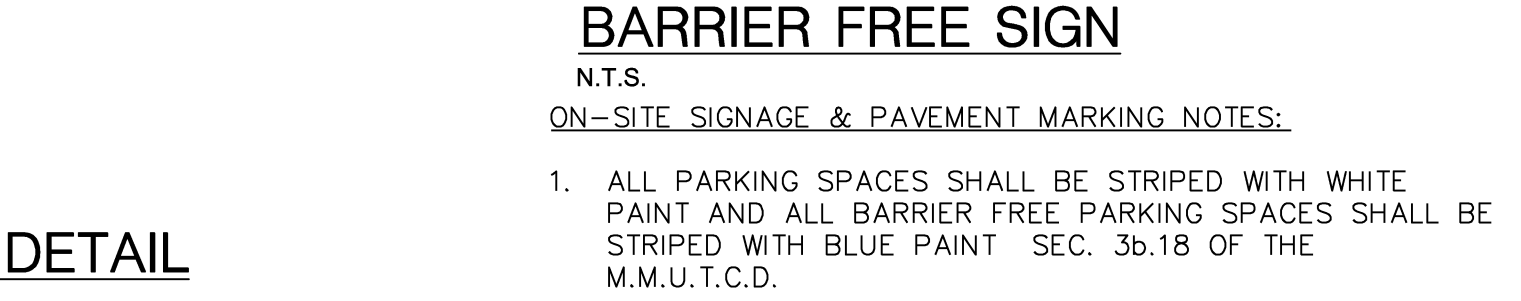
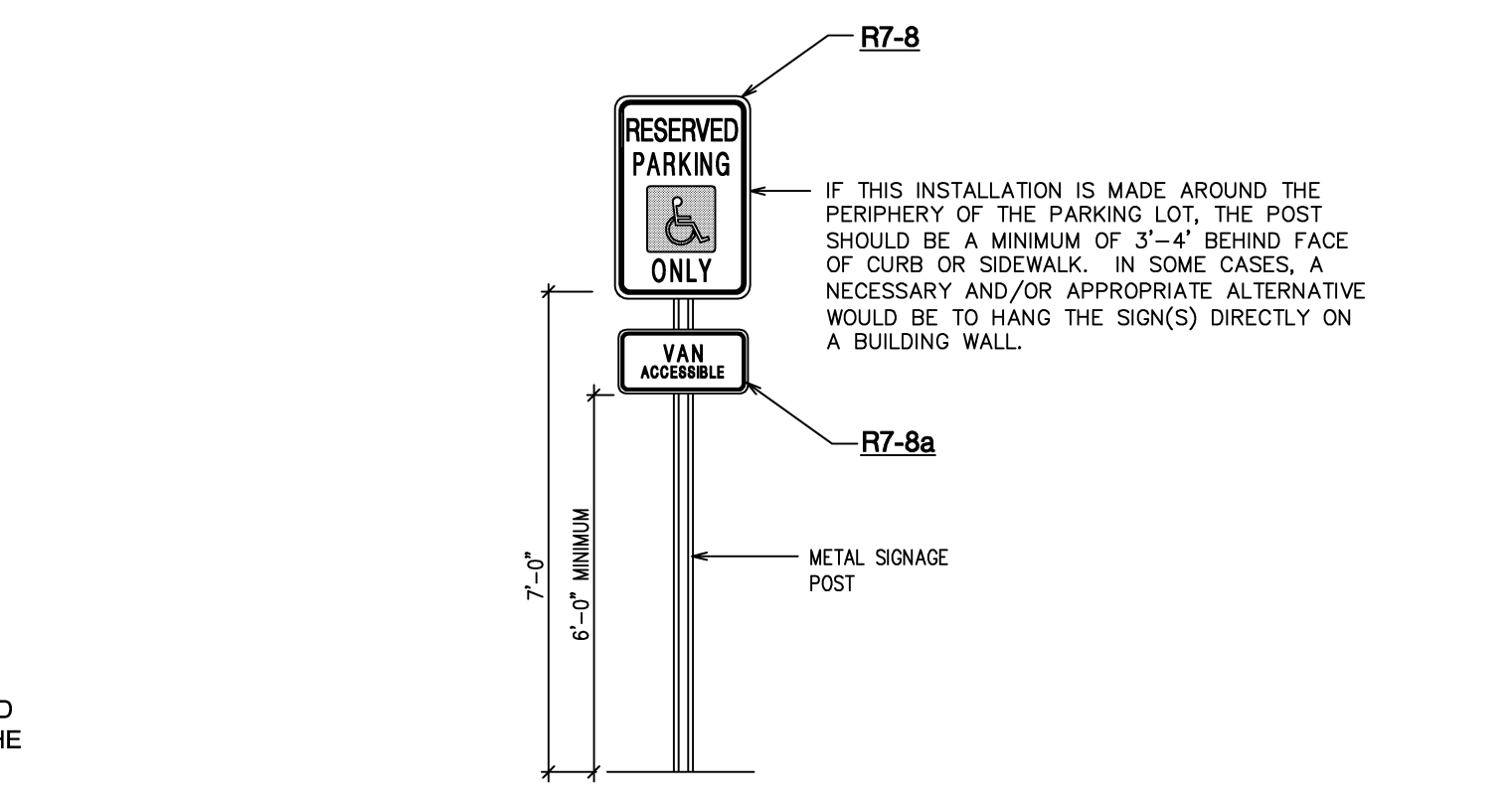
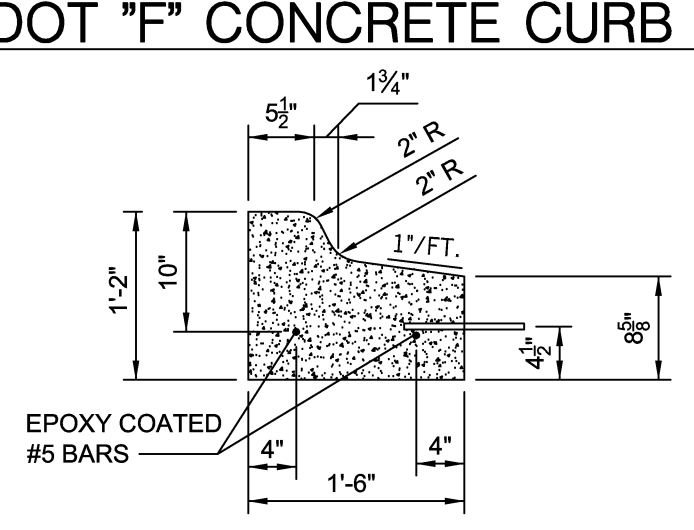
DATE	REVISIONS
1-19-2015	PER CLIENT
2-27-2015	PER LOGIC REVIEW

Drawn: TEA	Checked:	Approved:	Date: 12-1-2014
14211			

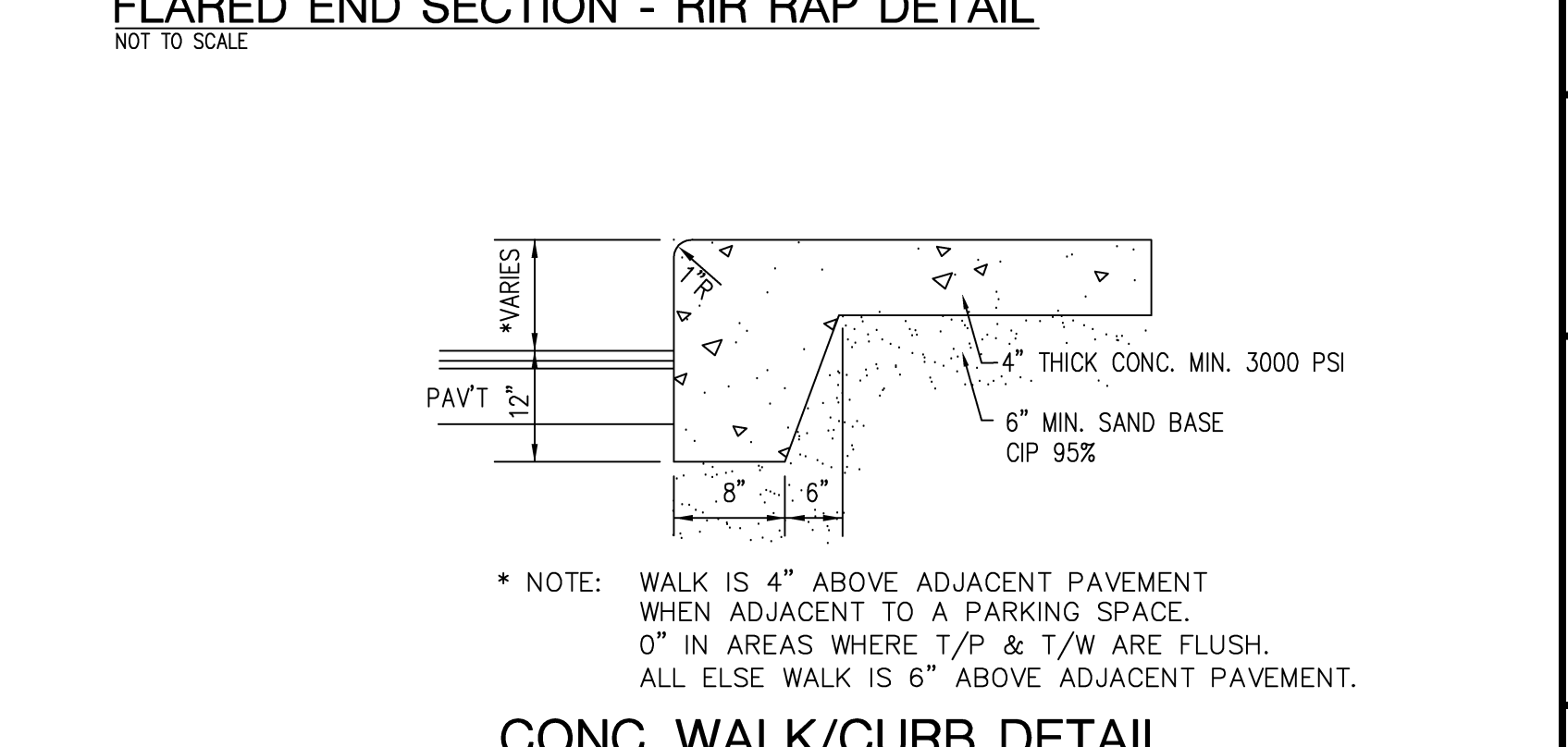
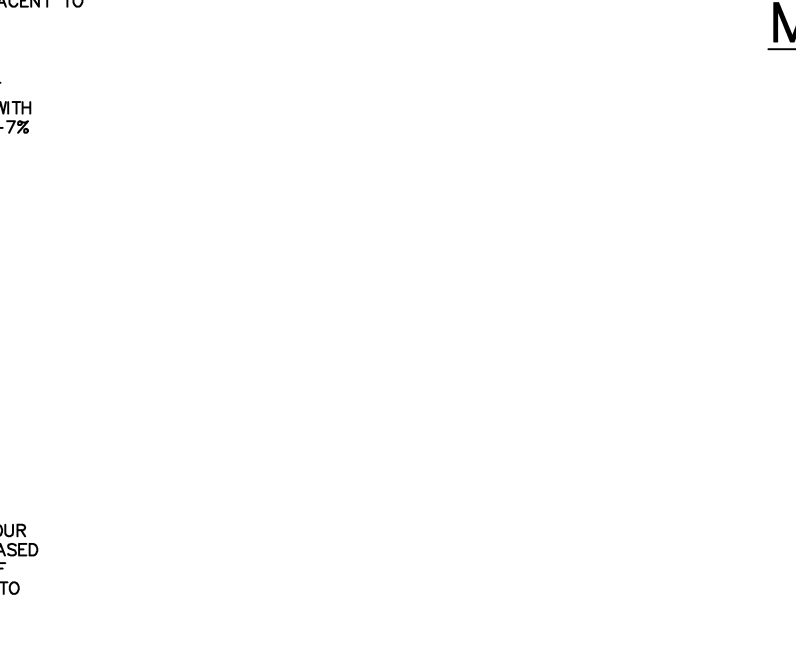
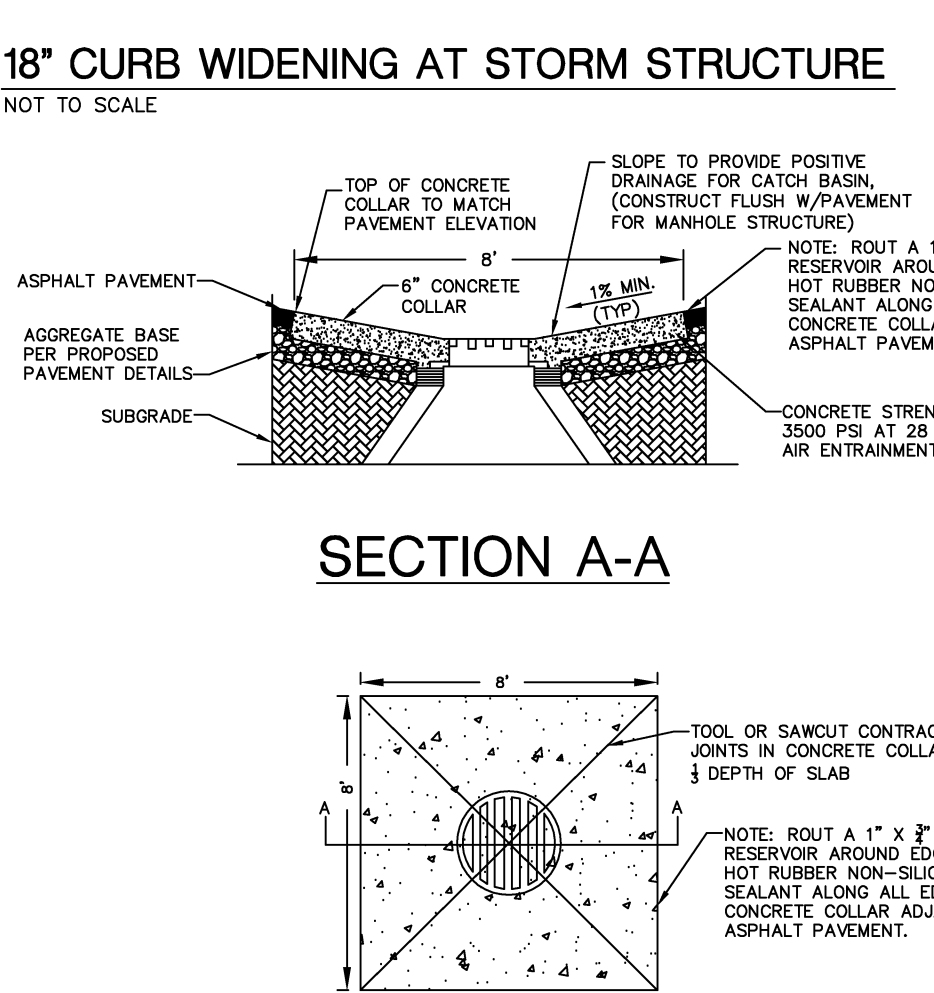
# DETAILS



DETAIL	DIMENSIONS	LANE TIES	CONCRETE CU. YD. / LIN. FT.
F1	1'-6"	7/8"	AS SHOWN 0.0484
F2	1'-6"	7/8"	OMITTED 0.0484
F3	2'-0"	1-3/8"	AS SHOWN 0.0810
F4	2'-0"	1-3/8"	OMITTED 0.0810
F5	2'-4"	1-7/8"	AS SHOWN 0.0737
F6	2'-4"	1-7/8"	OMITTED 0.0737



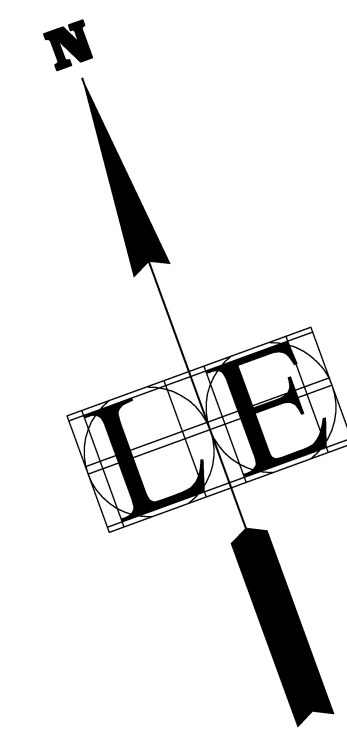
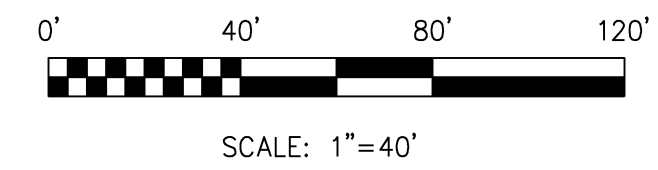
PIPE DIAMETER	"A"	"B"	"C"	SQUARE YARDS
12"	5'-0"	6'-6"	3'-0"	15 MIN
15"	5'-0"	7'-0"	3'-0"	15 MIN
18"	5'-0"	7'-6"	3'-6"	15 MIN
21"	5'-6"	8'-0"	4'-0"	15 MIN
24"	6'-0"	8'-6"	4'-6"	15 MIN



FILE:G:\14211 Chestnut 6253 Cr River.dwg\Sitetplan\14211\_6\_Details.dwg



# LANDSCAPE PLAN

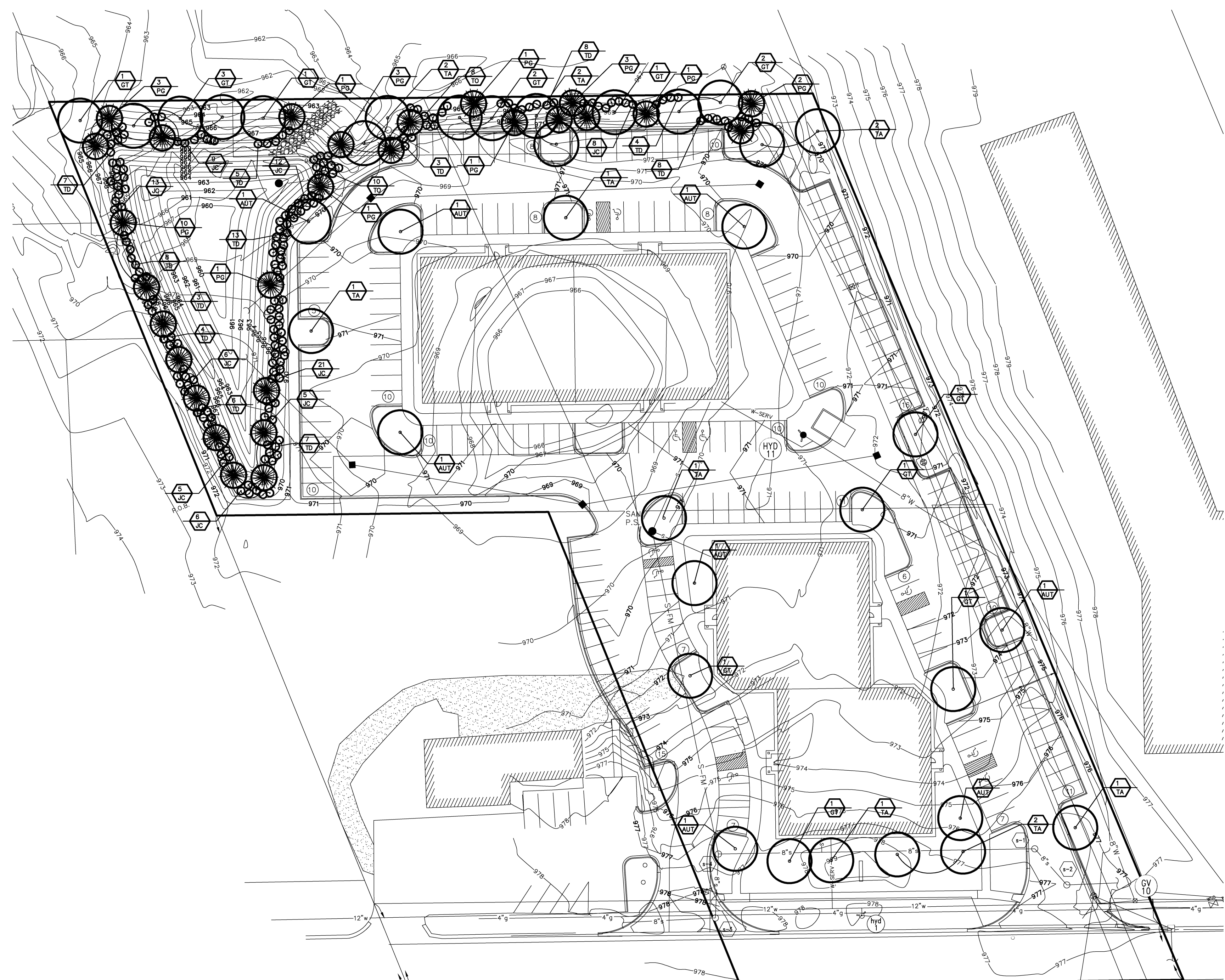


LEGEND	
SPOT GRADE	+ 615.51
CONTOUR	615
WATER MAIN	12" w
SANITARY SEWER	10" s
STORM SEWER	15" s
OVERHEAD FENCE	x
GAS	x
WETLAND	x
SIGN	x
LIGHT POLE	x
UTILITY POLE	x

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**LIVINGSTON ENGINEERING**  
 CIVIL ENGINEERING SURVEYING PLANNING  
 3300 S. OLD US. 23, BRIGHTON, MI 48114  
 PHONE: (810) 225-7700  
 FAX: (810) 225-7699  
<http://www.livingstoneng.com>

Client  
**3800 CHILSON ROAD**  
**CHESTNUT DEVELOPMENT**  
 HOWELL, MI 48843

**GRAND RIVER OFFICE COMPLEX**  
 6255 GRAND RIVER AVENUE, BRIGHTON, LIVINGSTON COUNTY, MICHIGAN  
 SITE PLAN  
 LANDSCAPE PLAN



## Notes

- The contractor(s) shall verify the location of all underground utilities prior to construction.
- All plant beds are spade edged and to be mulched with shredded bark.
- Plants shall conform to the sizes as shown on the drawings and shall be of sound health. All measurements such as spread, ball size, height, caliper and quality designations shall be in conformance to the latest edition of the American Standards for Nursery Stock.
- All evergreen tree species are to be full, dense plants branched fully to the ground.
- Prune all dead and broken branches from all plants immediately after installation.
- Planting soil mixture shall be prepared on-site by mixing 3 parts topsoil to 1 part existing site soils to 1 part peat, adding 5 lbs. of superphosphate to each cubic yard of the mixture.
- Organic mulch requirements: shade trees, ornamental trees and evergreen trees - 6" of shredded bark; shrubs and shrub beds - 4" of shredded bark; ground cover beds and perennial flowers - mulch with 1" of peat.
- All site landscaping shall be maintained in a livable condition pursuant to Section 32-5B7(d), Milford Township Ordinance.
- All site landscaping shall be irrigated, per Township standards.

## Legend

Plant Identification	
Trees	
Shrubs	

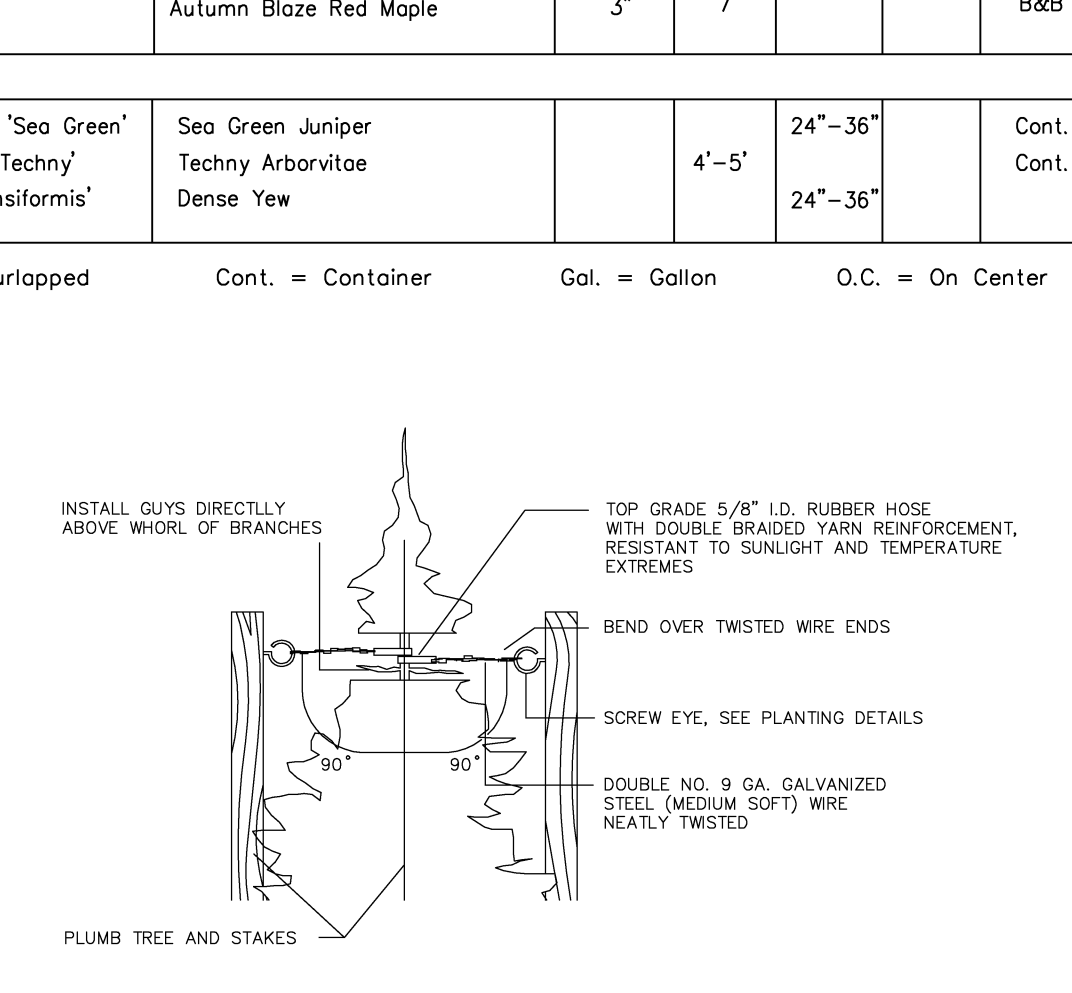
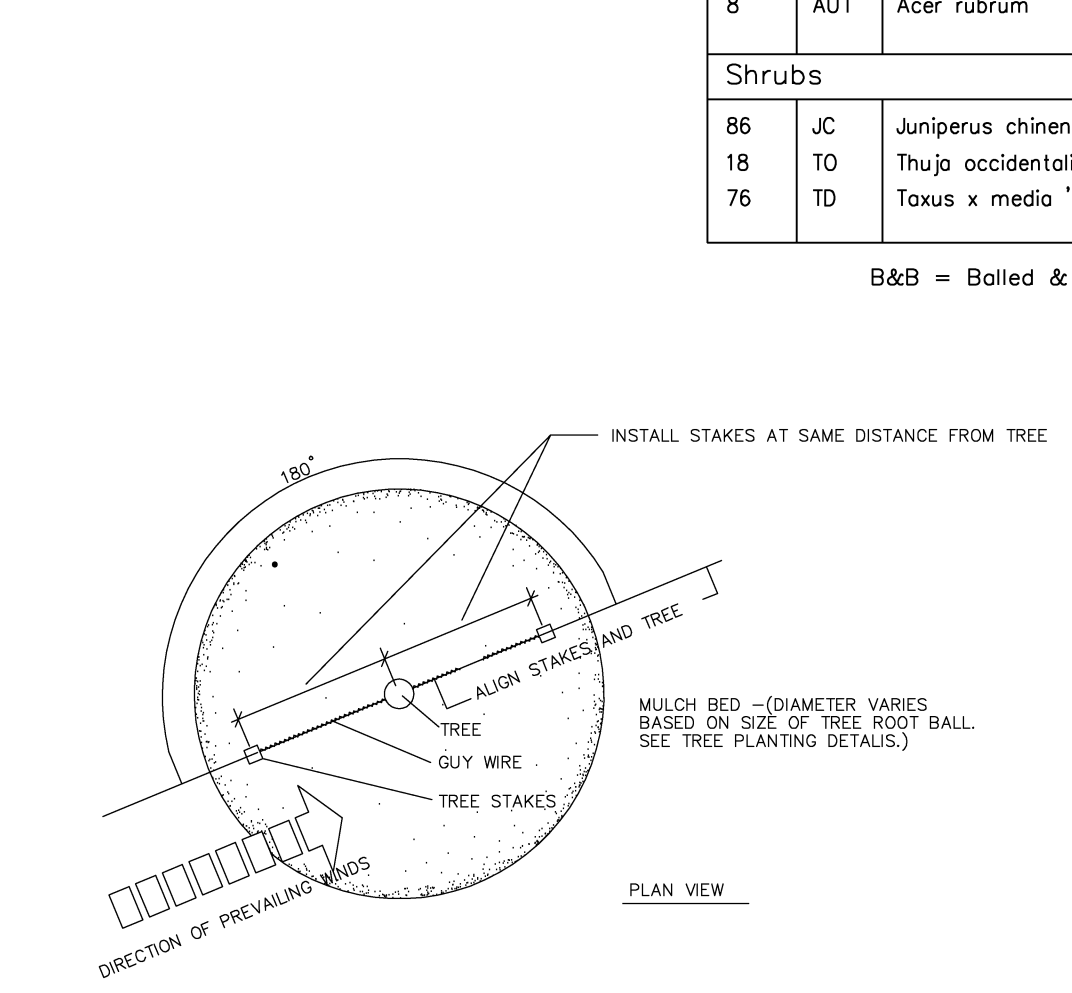
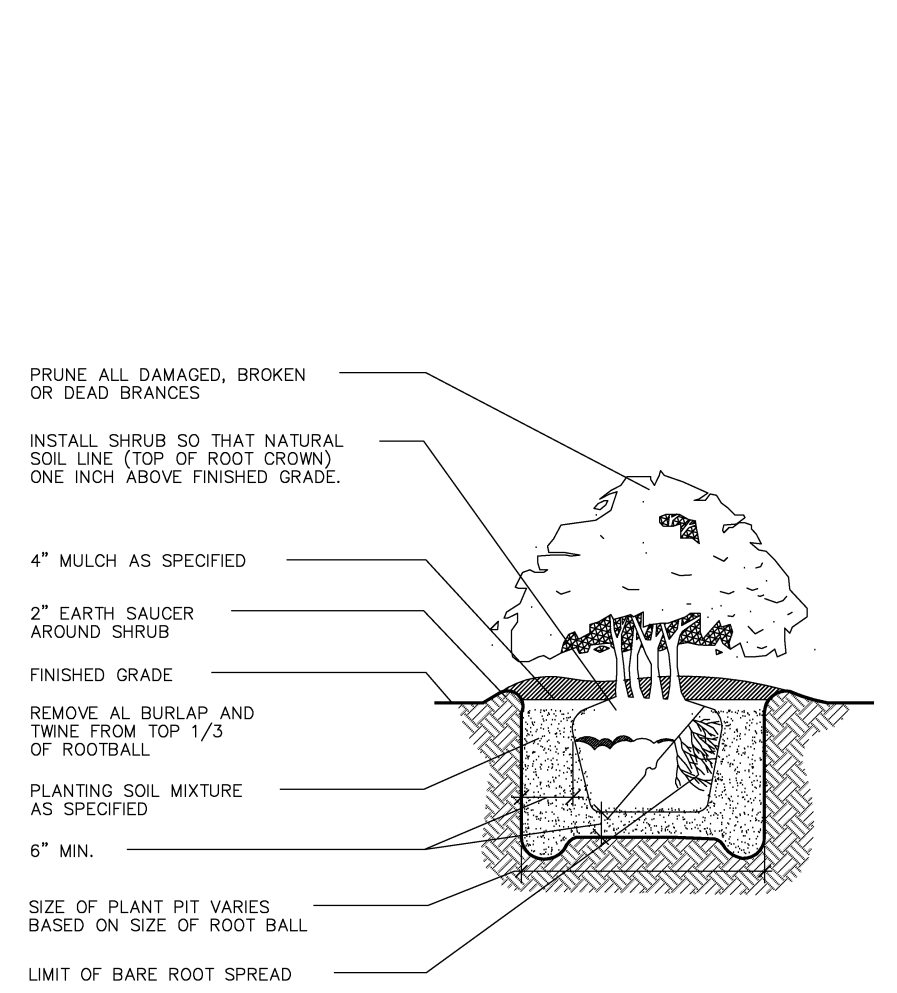
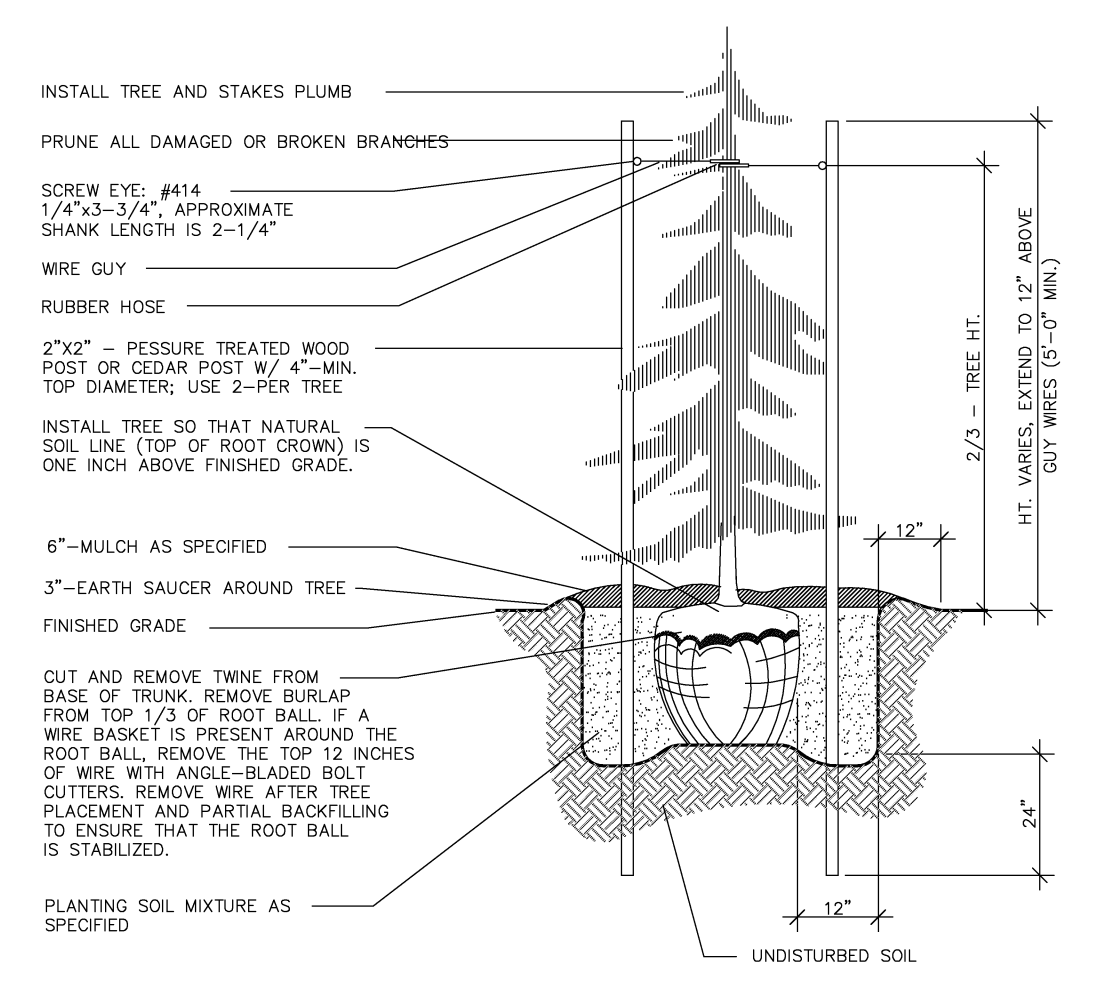
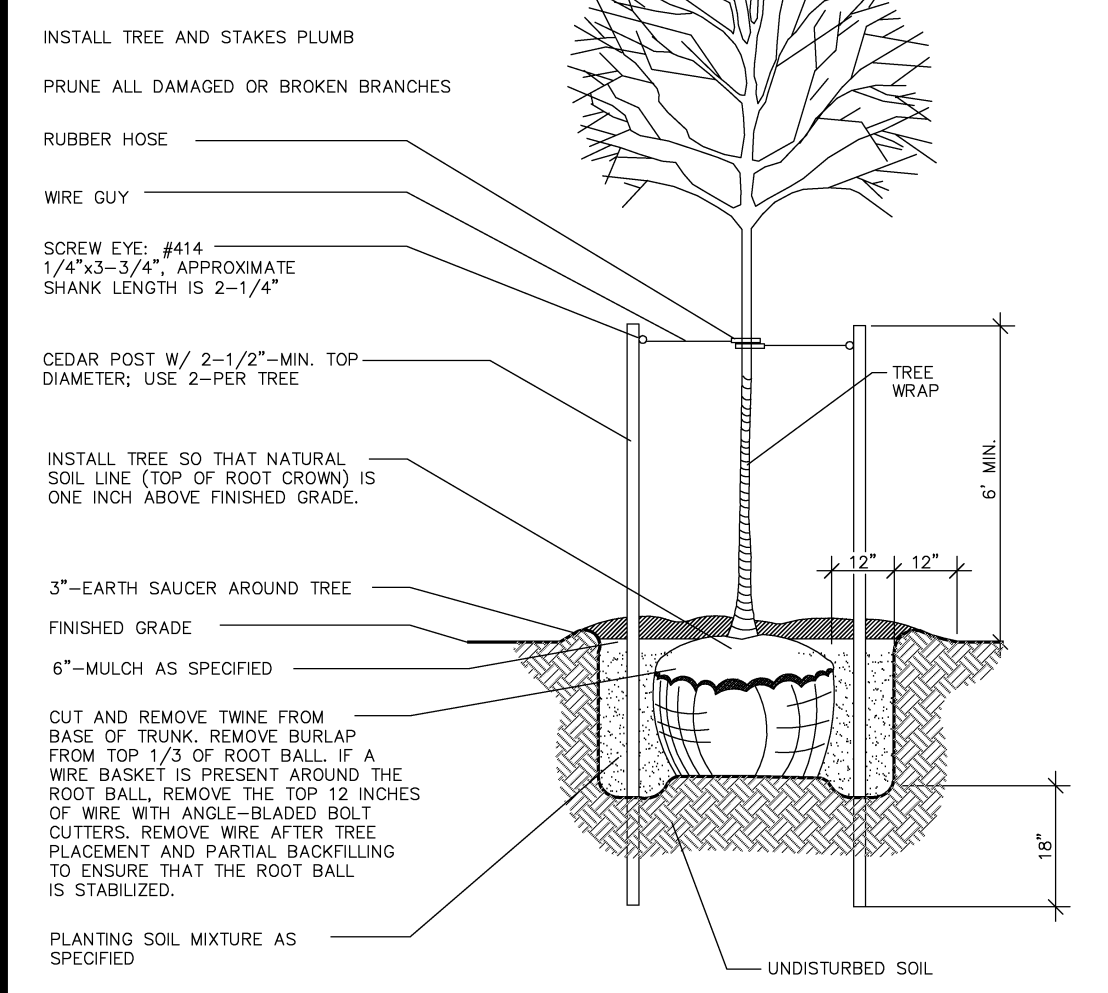
## Landscape Requirements

- Genoa Township Landscape Requirements
- A. Required Greenbelt Along Street Frontage**
- Required: One(1) canopy tree, rounded upward, for every forty(40) linear feet of frontage.
- 260.68 lf/40 = 6.52 deciduous trees
- Provided: 7 deciduous trees
- B. Required Parking Area Landscaping**
- Required: 101 through 200 spaces: 1 canopy tree per 12 spaces  
100 sq. ft. of landscaped area per 12 spaces
- 168 spaces/12 = 14  
14 x 1 = 14 canopy trees  
14 x 100 = 1400 sq. ft. of landscaped area
- Provided: 14 canopy trees  
3,469 sq. ft. of landscaped area
- C. Required Buffer Zones**  
Pursuant to Table 12.02.03.A
- Office=Service District Adjacent To:  
Single Family Residential District= Buffer zone B  
Office or Commercial District= No buffer zone required.
- Buffer zone B:  
Required: 20 ft minimum width  
8 ft high continuous wall or 3 ft high berm.  
1 canopy tree, 1 evergreen tree and 4 shrubs per each thirty (30) linear feet along the property line, rounded upward.
- 449 lf/30=14.97  
15x1 = 15 canopy trees and 15 evergreen trees  
15x4 = 60 shrubs
- Provided: 20 ft width  
3 ft high berm.  
15 canopy trees, 15 evergreen trees, 60 shrubs
- D. Detention/Retention Pond Landscaping**
- Required: One(1) deciduous shade or evergreen tree and ten(10) shrubs for every fifty(50) lineal feet of pond perimeter as measured along the top of the bank elevation.
- 449 lf/50 ft=11.18  
12x1=12 deciduous shade or evergreen trees  
12x10=120 shrubs
- Provided: 12 evergreen trees  
120 shrubs

## PLANT LIST

Qty.	Key	Botanical Name	Common Name	Size				Root	Remarks
				Caliper	Height	Spread	Other		
<b>Trees</b>									
15	GT	Gleditsia triacanthos 'Skyline'	Skyline Honeylocust	2.5"				B&B	
27	PG	Picea glauca	Norway Spruce		7'			B&B	
13	TA	Tilia americana	Linden	3"	7'			B&B	
8	AUT	Acer rubrum	Autumn Blaze Red Maple	3"	7'			B&B	
<b>Shrubs</b>									
86	JC	Juniperus chinensis 'Sea Green'	Sea Green Juniper			24"-36"		Cont.	
18	TO	Thuja occidentalis 'Techny'	Techny Arborvitae		4'-5'			Cont.	
76	TD	Taxus x media 'densiformis'	Dense Yew			24"-36"			

B&B = Balled & Burlapped    Cont. = Container    Gal. = Gallon    O.C. = On Center



Deciduous Tree Planting/  
 Staking Detail  
 UNDER 3" IN CALIPER

Evergreen Tree Planting/  
 Staking Detail  
 6" IN HEIGHT AND ABOVE

Shrub Planting Detail  
 SCALE: NO SCALE

Stake Placement Detail  
 FOR EVERGREEN AND DECIDUOUS TREES

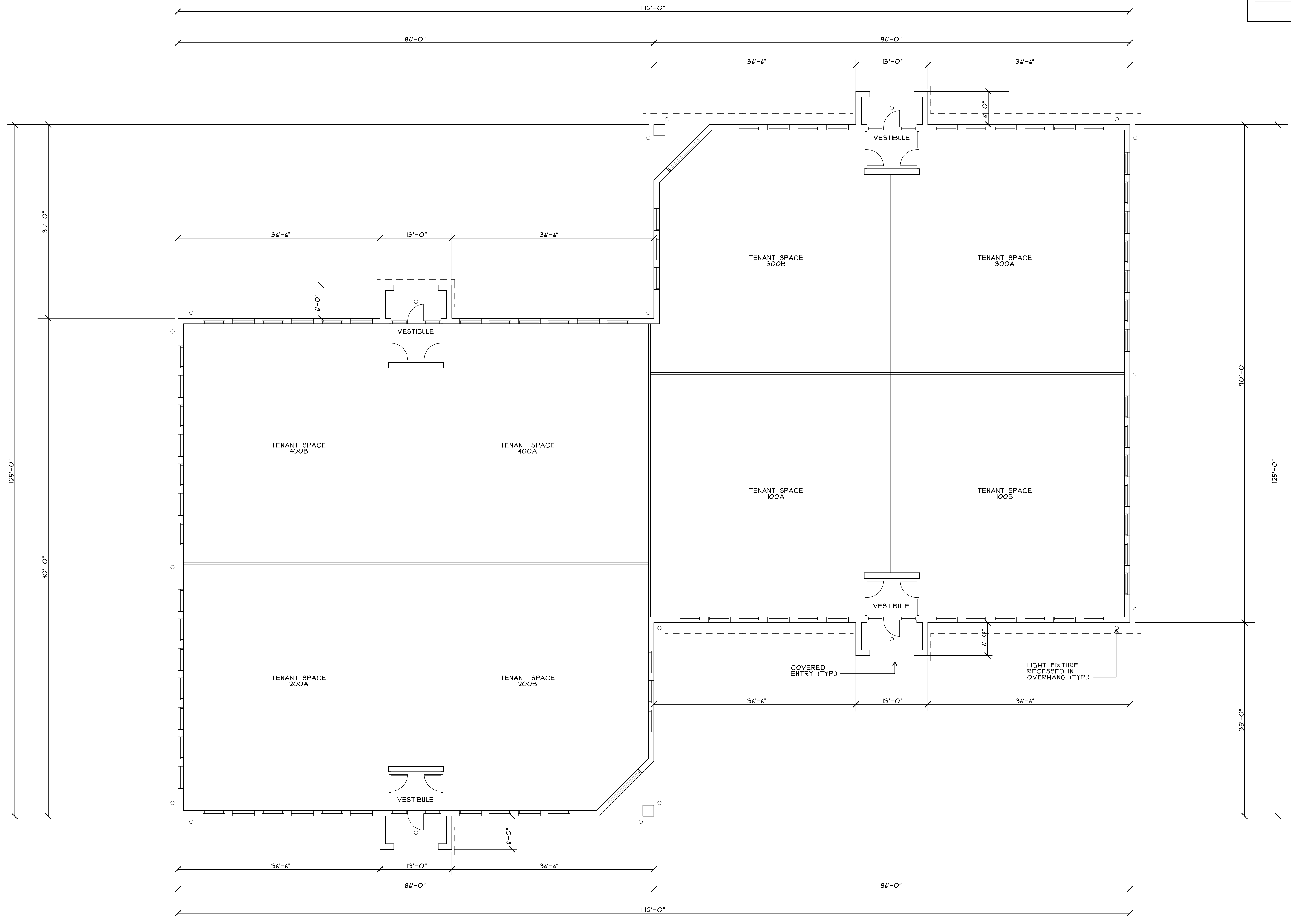
Guy Installation Detail  
 FOR EVERGREEN AND DECIDUOUS TREES



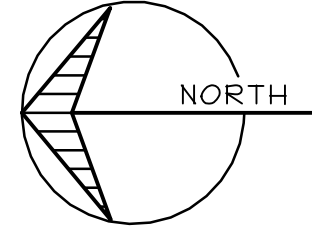
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2-27-2015					

14211  
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 Vertical: Horizontal

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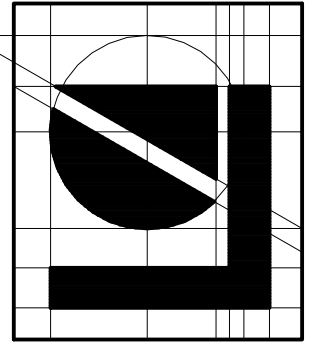


LINE LEGEND	
—	NEW CONSTRUCTION
- - -	HIDDEN WORK



FLOOR PLAN: SOUTH BUILDING FLOOR AREA = 14,801 SF

SCALE: 1/8" = 1'-0"



**Lindhout Associates**  
**architects aia pc**  
 10465 citation drive, brighton, michigan 48116-9510  
 www.lindhout.com (810)227-5668 fax: (810)227-5855

consultant

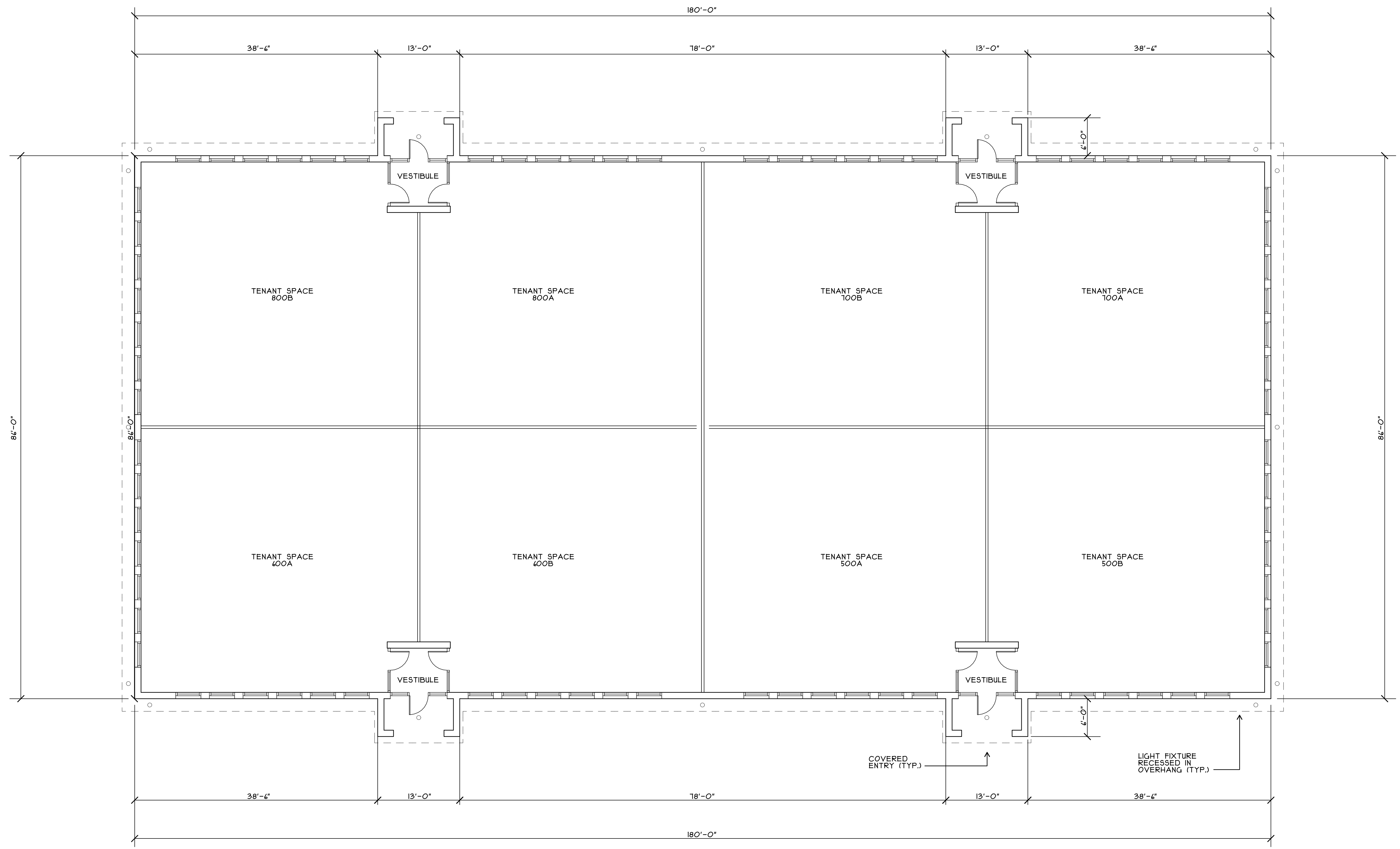
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 issued for

dr: HJB  
 ck'd: HJK  
 app'd: HJK  
 03-03-15  
 date

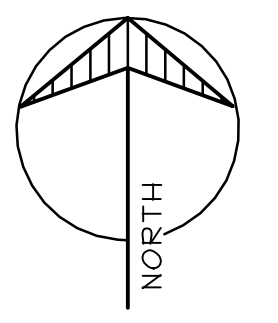
OFFICE BUILDING for:  
**CHESTNUT DEVELOPMENT, LLC**  
 GENOA TOWNSHIP, MICHIGAN  
**FLOOR PLAN**

**A1**  
**1491**

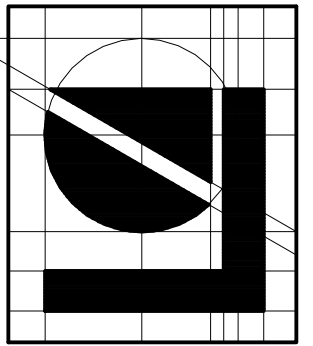
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LINE LEGEND	
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- - -	HIDDEN WORK



FLOOR PLAN: NORTH BUILDING FLOOR AREA = 15,480 SF SCALE: 1/8" = 1'-0"



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 architects aia pc  
 10465 citation drive, brighton, michigan 48116-9510  
 www.lindhout.com (810)227-5668 fax: (810)227-5655

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**CHESTNUT DEVELOPMENT, LLC**  
 GENOA TOWNSHIP, MICHIGAN  
**FLOOR PLAN**

A2  
 1491



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**NORTH ELEVATION** SCALE: 1/8" = 1'-0"



**SIGN ELEVATION** SCALE: 1/2" = 1'-0"



**EAST ELEVATION** SCALE: 1/8" = 1'-0"



**SOUTH ELEVATION** SCALE: 1/8" = 1'-0"



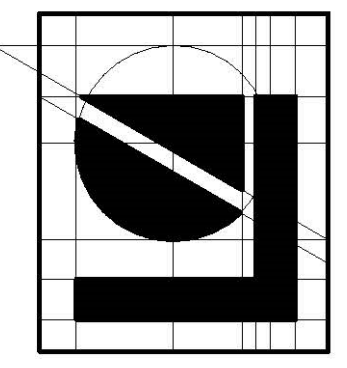
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**WEST ELEVATION** SCALE: 1/8" = 1'-0"



**SITE AXONOMETRIC**



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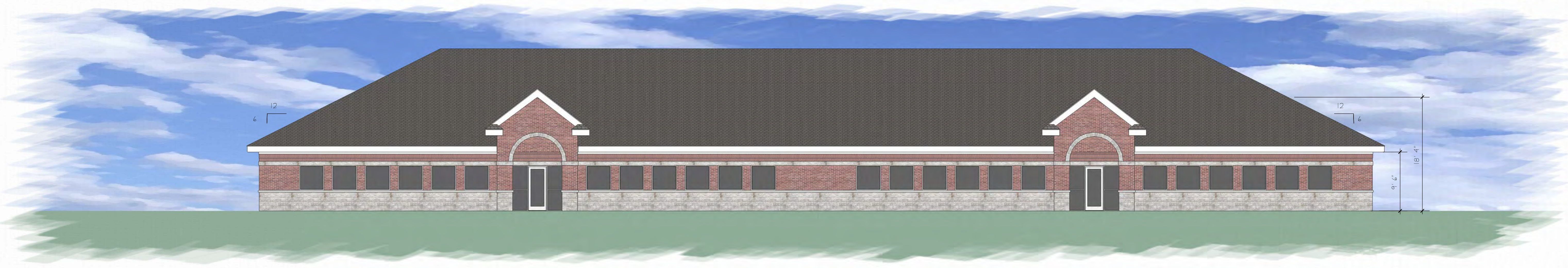
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 MJK  
 O3-03-15  
 date

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 GENOA TOWNSHIP, MICHIGAN  
**SOUTH BUILDING EXTERIOR ELEVATIONS**

**A3**  
**1491**



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PLOTTED BY: lester



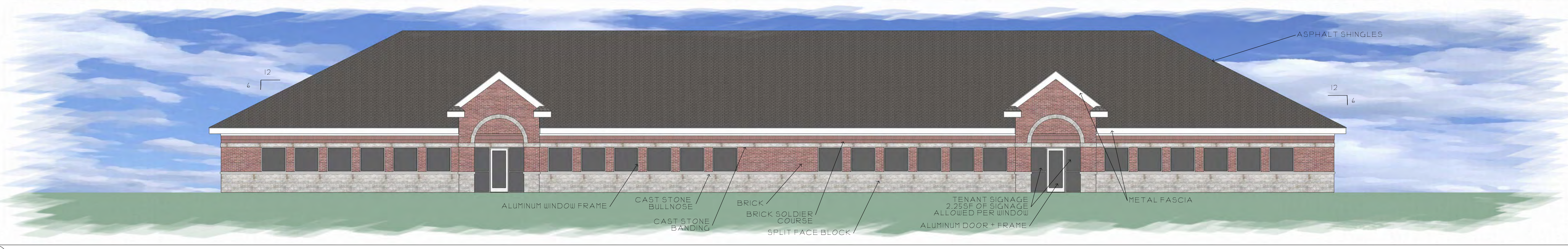
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SCALE: 1/8" = 1'-0"



**EAST ELEVATION**

SCALE: 1/8" = 1'-0"

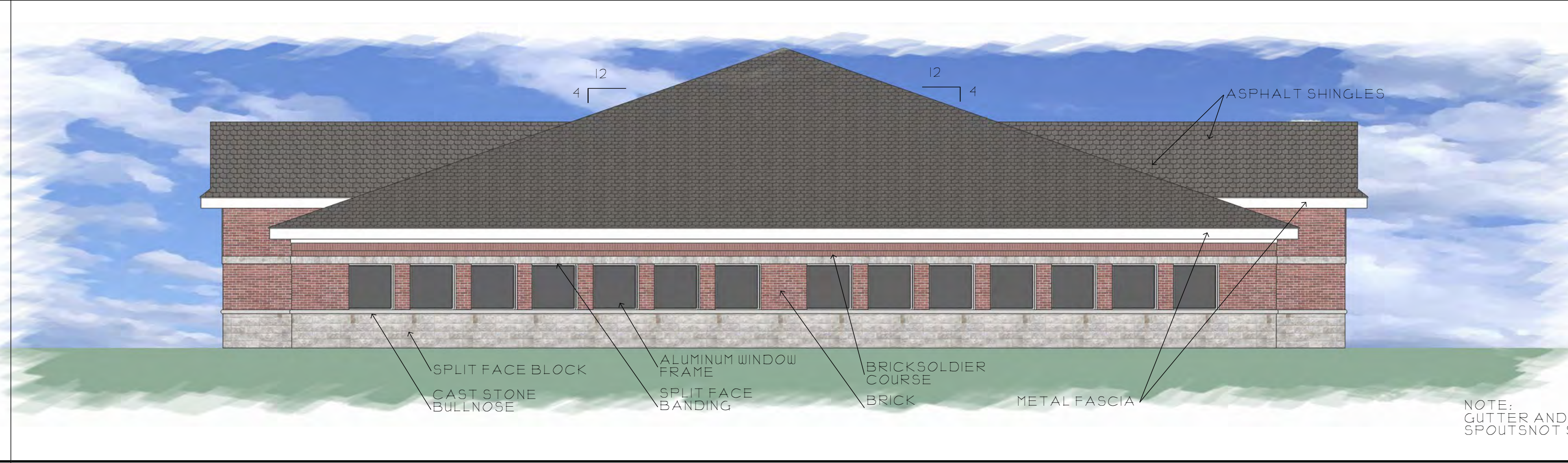


**SOUTH ELEVATION**

SCALE: 1/8" = 1'-0"



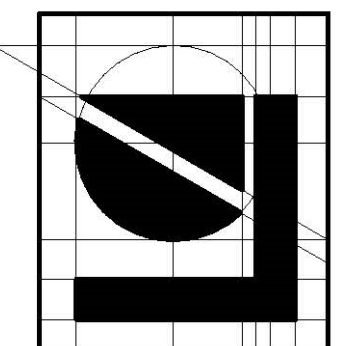
**SITE AXONOMETRIC**



**WEST ELEVATION**

SCALE: 1/8" = 1'-0"

NOTE: GUTTER AND DOWN SPOUTS NOT SHOWN



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date 03-03-15  
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ck'd: HJK  
HRL


OFFICE BUILDING FOR:  
**CHESNUT DEVELOPMENT, LLC**  
GENOA TOWNSHIP, MICHIGAN  
**NORTH BUILDING EXTERIOR ELEVATIONS**

**A4**  
**1491**



## MEMORANDUM

TO: Township Board

FROM: Michael Archinal 

DATE: 5/28/2015

RE: McClements Road Speed Study

We have received a request from a resident regarding speed limits on McClements Road, East of Hacker. An email from the customer is attached. I have spoken with the Livingston County Road Commission and they have indicated that to consider establishing a speed limit change they must complete a speed study. One of their qualifying criteria for completing a speed study is a written request from the local unit of government or appropriate law enforcement agency.

An aerial of the area is attached. The LCRC policy regarding speed limits is also attached. It appears that the area has close to the required density for a prima facie speed limit change. I recommend that the Board formally request a speed study for McClements Road between Kellogg and Hacker.

Please consider the following action:

**Moved by \_\_\_\_\_, supported by \_\_\_\_\_, to request a speed study from the Livingston County Road Commission for McClements Road between Kellogg and Hacker.**

## Mike Archinal

---

**From:** Matt Foisy <mattf@xelopack.com>  
**Sent:** Thursday, May 28, 2015 7:25 AM  
**To:** Mike Archinal  
**Cc:** maureenfoisy@yahoo.com  
**Subject:** Excessive speeds on McClements

Mike,

I believe you and my wife ( Maureen Foisy ) spoke yesterday about the excessive speeds cars and large trucks travel up and down McClements.

My wife and I have been living at 7666 McClements Rd for 10 years shortly after moving in we commented to our neighbors how fast cars and large trucks travel down the road. One neighbor told us that we needed more houses to be considered residential. Over the years the traffic has increased on McClements there have been many near misses with cars , large trucks driving too fast, I myself have been passed several times on the left side trying to turn into my driveway. There are no sidewalks, there for myself, my wife and my neighbors are forced to walk our dogs or jog on the side of the road also the majority of residents on the north side are elderly and need to cross the street to retrieve their mail and have been nearly rundown . One of the elderly residents is my Father. Now there are two new family's that just moved in with toddlers so please consider McClements residential and post a speed limit of 25 before we have a tragic loss of life

Thank you

Matthew Foisy

Plant Manager

Xelopack Inc  
8300 Boettner Rd.  
Bridgewater MI 48115  
Main 734-944-1300  
Fax 734-429-4714  
Cell 248-756-0993  
Email : [mattf@xelopack.com](mailto:mattf@xelopack.com)  
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## Speed Limits – Myths and Realities

**Myth #1:** Speed limits significantly affect traffic speeds.

**Reality:** Traffic speeds do not significantly change following the posting of new or revised speed limits. Most drivers travel at speeds that they consider safe, regardless of the speed limit.

**Myth #2:** Most drivers travel too fast for road conditions.

**Reality:** The majority of drivers travel at prudent speeds and are capable of recognizing driving conditions that require greater driving caution.

**Myth #3:** Lower speed limits result in safer roads.

**Reality:** The more uniform the speeds of vehicles in a traffic stream, the less chance there is for conflict and crashes. Speed limits that reflect the normal actions of the reasonable majority, therefore, usually provide the most uniform speeds. In fact, unrealistically low speed limits may actually lead to crashes by producing two distinct groups of drivers – those attempting to observe the speed limit and those driving at what they feel is reasonable and prudent. These differences in speeds may result in increased crashes due to tailgating, improper passing, reckless driving and weaving from lane to lane.

**Myth #4:** Lower speed limits allow for effective enforcement.

**Reality:** Unrealistically low speed limits cannot be enforced with reasonable enforcement. In addition, they make the behavior of the majority unlawful and create public antagonism toward the police. However, realistic speed limits (i.e., those that reflect the normal actions of the reasonable majority) allow police to target their enforcement efforts to those drivers clearly out of line with the normal flow of traffic.



Offices: 3535 Grand Oaks Drive  
Howell, Michigan 48843  
Phone: (517) 546-4250  
Fax: (517) 546-9628  
E-mail: [mail@livingstonroads.org](mailto:mail@livingstonroads.org)  
Web site: [www.livingstonroads.org](http://www.livingstonroads.org)

### LCRC Facts

The Livingston County Road Commission (LCRC) maintains and provides the following as part of the county road system:

- ◆ Maintains 1,300 total miles of roadway
- ◆ Maintains nearly 700 miles of gravel roads
- ◆ Accepts approximately 10 miles of new roads into the county road system each year
- ◆ Maintains more than 13,500 traffic signs
- ◆ Issues approximately 1,000 residential driveway approach permits each year

Also, the Livingston County Road Commission:

- ◆ Is funded directly by state gas tax and vehicle registration fees – not by property taxes
- ◆ Is located in a state with a gas tax below the national average and ranks in the bottom nine states in per capita road funding
- ◆ Receives no direct revenue from growth and development
- ◆ Is not part of the Livingston County general government

## SPEED LIMITS



**Policies and procedures for setting and posting speed limits on county roadways in Livingston County, Michigan**

## What types of speed limits are on county roads?

There are four types of speed limits on roadways under the jurisdiction of the Livingston County Road Commission (LCRC).

- ◆ Statutory (55 mph) Maximum Speed Limits
- ◆ Absolute (30 mph to 50 mph) Speed Limits
- ◆ Prima Facie (25 mph) Speed Limits
- ◆ School Zone Speed Limits

## Statutory Maximum Speed Limits

The statutory maximum limit on a county road is 55 mph. Statutory maximum limits will only be posted on paved county roads where a zone changes from a prima facie limit or absolute limit to a statutory maximum limit.

## Absolute Speed Limits

Absolute speed limits are often referred to as modified speed limits and are utilized on roadways requiring speed limits between the 25-mph prima facie and the statutory 55-mph maximum limits.

Absolute speed limits on a county road are established only by a joint administrative action between the Livingston County Road Commission and the Michigan State Police, based on a traffic engineering study. If you would like more information about the factors considered in this study, please ask us for the booklet **Establishing Realistic Speed Limits**.

The Livingston County Road Commission will only consider requests to determine the need for an absolute speed limit on a roadway if all of the following criteria are met.

### Qualifying Criteria:

- ✓ A written request is received from the local unit of government or appropriate law enforcement agency, and
- ✓ The roadway must be classified as a local road, collector road, or arterial highway, intended to serve through traffic, and
- ✓ The roadway is paved, and
- ✓ The roadway is at least one-half mile in length.

## Prima Facie Speed Limits

Prima facie is Latin for "on the face of it" and is the speed limit under most conditions. Prima facie 25-mph limits are intended for residential and business districts and are established by the legislature. These limits apply throughout the state and are not required to be posted.

The Livingston County Road Commission will only consider posting prima facie speed limits on the following streets and roads.

- ❖ Local Subdivision Street - A county street, not intended to serve through traffic, located entirely within the limits of a subdivision plat or site condominium. This type of street automatically qualifies for consideration of a posted 25-mph limit. However, speed limit signs will generally be posted only at each entrance to the subdivision or site condominium.
- ❖ Local Dead End Street – A county street that does not serve through traffic and is less than one-half mile in length.
- ❖ Local Access Road - A county local road intended to serve limited through traffic. Portions of local access roads may be within subdivision plats or site condominiums. Consideration of posting 25-mph prima facie limits will only be given toward sections of paved roads that are at least one-half mile in length and gravel roads at least one-quarter mile in length if the following criteria are met:

### Qualifying Criteria:

- ✓ A written request is received from the local unit of government or appropriate law enforcement agency, and
- ✓ The roadway is located entirely within the limits of a subdivision plat or site condominium, or the density of residential dwellings adjacent to the roadway equals or exceeds 16 in one-quarter mile, or the physical features of the roadway (curvature, width, surface, etc.) do not, under ideal conditions, allow for speeds much higher than 25 mph.

## School Zone Speed Limits

School zone speed limits are intended for the protection of students (eighth grade or below) walking to and from school. The need for such zones are determined from a study involving the LCRC, the Michigan State Police and the appropriate school district. If you would like additional information on the factors considered in this study, please ask us for a copy of **School Zone Speed Limits**

The Livingston County Road Commission will receive requests for school speed zone studies only from the school district's Superintendent.

If established, school zone speed limits are only in effect for 30-minute periods when children are walking to and from school. The limit that may be posted varies depending on roadway factors, but is never less than 25 mph.

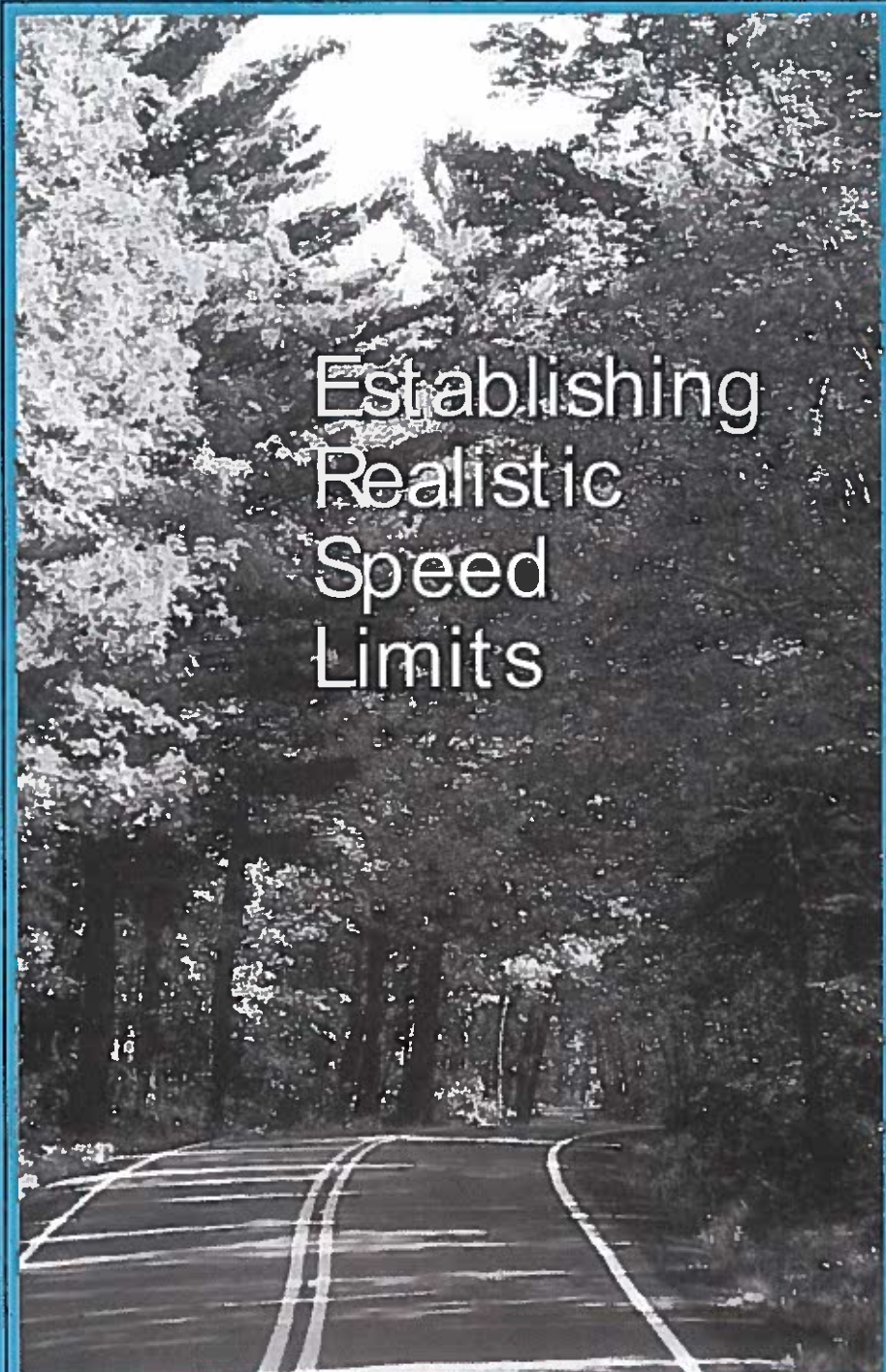
## What is the policy on gravel roads?

The Livingston County Road Commission will only consider posting a speed limit on a gravel road if it meets the criteria specified for Prima Facie Speed Limits. Gravel roads are not considered for absolute speed limits due to the continuously changing conditions of these roadways, which results in continuously changing speed patterns. However, any gravel road that is upgraded to a paved road is subject to consideration of an absolute speed limit, including those previously posted with a prima facie limit.

Motorists on Michigan roads, including unposted gravel roads, are required to drive in a manner consistent with statutory laws including the Basic Speed Law. The Basic Speed Law, as set forth in the Michigan Vehicle Code, reads:

*"A person driving a vehicle on a highway shall drive at a careful and prudent speed not greater than nor less than is reasonable and proper, having due regard to the traffic, surface, and width of the highway and any other condition then existing. A person shall not drive a vehicle upon a highway at a speed greater than that which will permit a stop within the assured, clear distance ahead." [MCL 257.627]*





# Establishing Realistic Speed Limits



# Establishing Realistic Speed Limits

**T**his publication updates the Setting Realistic Speed Limits booklet which was originally produced in the 1970s.

Technical references used to produce this booklet include:

- Transportation and Traffic Engineering Handbook
- Michigan Manual of Uniform Traffic Control Devices
- Michigan State Police Standards for Traffic Engineering Investigations
- Uniform Vehicle Code, National Committee on Uniform Laws and Ordinances
- “Speed Zoning on Texas Highways,” Texas Department of Highway and Public Transportation

# Introduction

The purpose of a speed limit is to provide for the safety of all highway users. To meet this purpose a speed limit must be acceptable to the public and be enforceable by police. This booklet provides background information regarding how this purpose is met through establishing realistic speed limits.

From a historical perspective, the imposition of speed limits became necessary because of changing times and conditions. In the early days of the automobile, the difference between rural and urban areas was well defined. Thus, it was simple to set speed limits—one for the open countryside and one for population centers.

With the spread of urbanization and the development of suburban communities, the situation changed. The differences between rural and urban areas became less clearly defined. During this same period, the number of motor vehicles and their speeds increased as did the number of miles traveled. A need developed for modified speed limits in these transitions between rural and urban areas.



## Types of Speed Limits

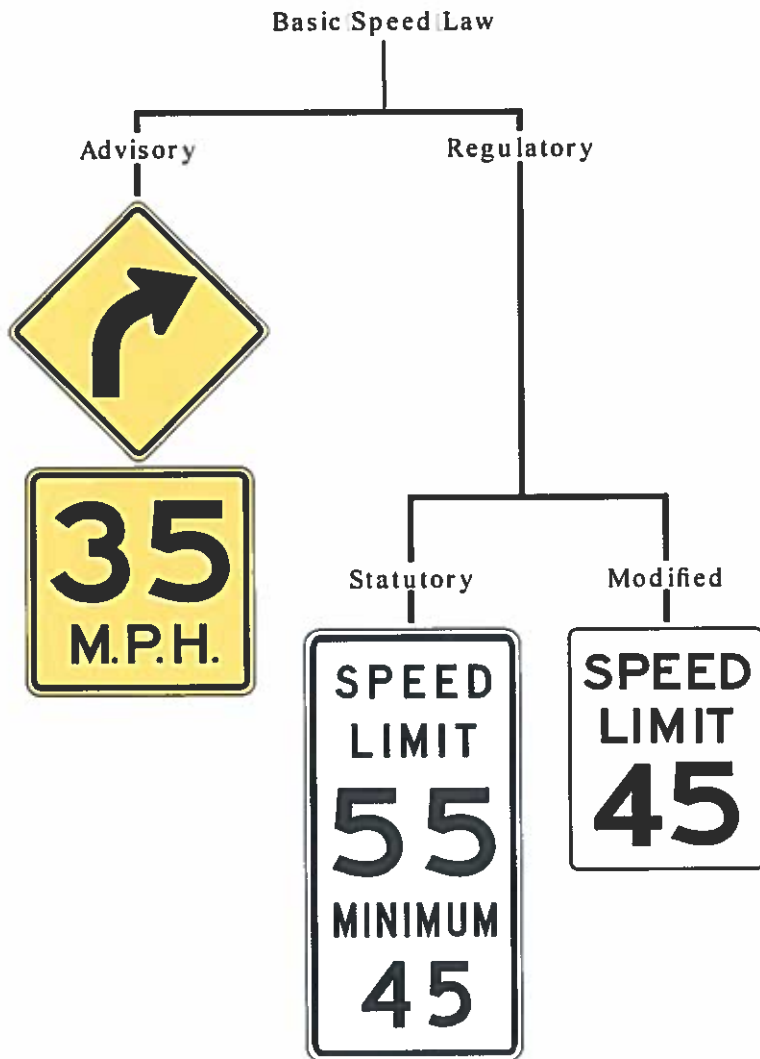
The basis of all speed limits predicated upon the nationally accepted principle that the majority of drivers are cautious, prudent and drive at speeds that are reasonable and proper, regardless of the posted speed limit. This “reasonable and proper” theme is part of the Basic Speed Law as set forth in the Michigan Vehicle Code. In part it reads:

“A person driving a vehicle on a highway shall drive at a careful and prudent speed not greater than nor less than is reasonable and proper, having due regard to the traffic, surface, and width of the highway and of any other condition then existing. A person shall not drive a vehicle upon a highway at a speed greater than that which will permit a stop within the assured, clear distance ahead.” [Sec. 257.627]

In other words, motorists must always drive at a speed which allows them to stop safely. The Basic Speed Law governs the speed of all drivers regardless of any posted speed limits. This is an important point because there are several types of speed limits.

The following chart shows the types of speed limits in use in Michigan:





Advisory speed limits are recommended safe driving speeds to alert drivers of the maximum recommended speed through a curve or for other special roadway conditions. They are posted only in combination with an appropriate warning sign. Advisory speeds are not enforceable in Michigan courts except under the Basic Speed Law provisions.

Regulatory speed limits are enforceable and are categorized as either statutory or modified.

Statutory speed limits are set either as maximum/minimum speed limits or as prima facie restrictions. Prima facie is Latin for “on the face of it” and is the speed limit under most conditions. These limits are established by the legislature and apply throughout the State. An example of maximum/minimum speed limits is freeway limits. There are also maximum speed limits set for school buses, heavy trucks and other special vehicles. Prima facie restrictions are primarily for residential and business districts and city and village streets and highways.

Modified speed limits are utilized in areas requiring speed limits between the statutory maximum speed limits on state and county roadways and the 25 mph prima facie speed limits in business and residential areas. These modified speed limits are established by administrative action based upon a traffic engineering study. They can only be set by agencies having legal authority and jurisdiction over the respective roadway. These modified speed limits are often referred to as absolute speed limits and are not to be exceeded regardless of conditions.

The remainder of this booklet describes how modified speed limits are established and the responsibilities we all share in their implementation.

## Authority to Establish Speed Limits

The Michigan Department of Transportation and county road commissions working with the Michigan Department of State Police, are authorized to establish modified speed limits. Representatives from these agencies comprise a traffic survey team which consists of an engineer and a state police officer. They conduct studies and recommend speed limits on state and county roadways including those within cities and villages.





The speed limits on streets under the jurisdiction of cities and villages are determined solely by the local authorities.

The establishment or review of speed zones originates for a variety of reasons. These may be road construction, changes in land use, violations, crashes, or poor compliance with an established speed limit. A study may also be conducted following a spectacular traffic crash or through periodic reviews. Usually, speed zones are reviewed as a result of concerns expressed by interested citizens who live nearby or drive along the roads in question. Their concerns are referred to the traffic survey team for review.

Occasionally citizens or public officials under citizen pressure, request that a particular speed limit be imposed or that some other type of corrective action be taken. For example, the idea persists that simply posting lower speed limits in the community will reduce speeds and improve safety. Any decisions regarding speed limits must be based on facts and an objective analysis of the characteristics of the roadway.

Once a study begins, the person requesting the survey may be contacted for further input or clarification of the problem. If a group of persons is involved, the traffic survey team may conduct a public meeting to explain why a study is necessary, what types of data will be collected and how the speed limit evaluation will be conducted. The meeting also provides an opportunity for public comment on proposed speed study locations, crash experience and other factors which may have a significant impact on the evaluation. The traffic survey team also requests input and participation of local representatives in the process.

The traffic survey team then gathers all the information needed to analyze the roadway conditions. This includes: speed studies, traffic crash data, the driving environment, and other pertinent information.

## Speed Limit Survey

**B**efore discussing the gathering and analysis of the speed study data, there are some facts about driver behavior which are the basis of all traffic laws, including modified speed limits.

Driver behavior is an extension of societal attitudes. Most drivers respond to traffic regulations in a safe and reasonable manner as demonstrated by their consistently favorable driving records. Traffic laws which reflect the behavior of the majority of motorists are usually respected and obeyed. In order for any traffic law to be enforceable, voluntary compliance must be practiced by the vast majority of drivers so violators can be easily identified. Realistic speed limits reflect this fact and recognize that unreasonable restrictions encourage widespread violations and disrespect for the entire traffic control system. Arbitrary laws unnecessarily restrict drivers, encourage violations and lack public support.

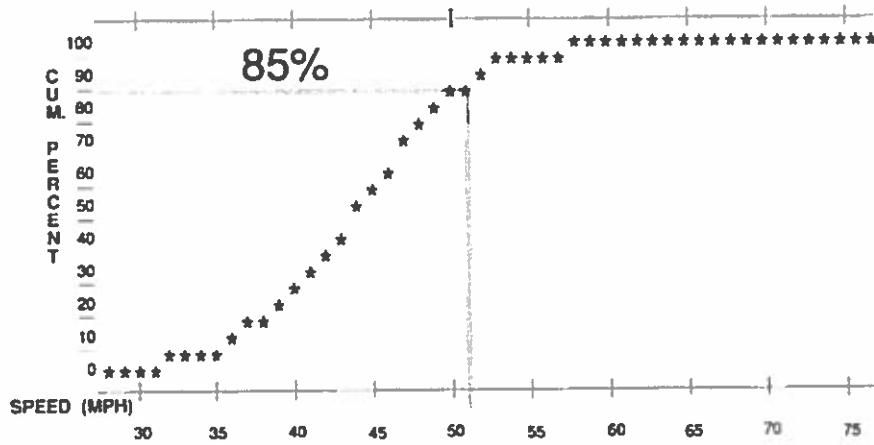
Posting unrealistically low speed limits may create a false sense of security. Actually, studies show that the driving environment, not the posted speed limit, is the main influence on motorists' speeds.

### *Speed Studies*

Speed studies are taken during light to medium traffic conditions on a weekday. Rush hours and adverse weather conditions are avoided because they do not represent normal, free-flow traffic. Areas such as intersections, railroad tracks, or other

# Speed Distribution Graph

Figure:1



DIRECTION(S) .....E-W  
 DATE .....01/10/91  
 TIME .....1:30 PM  
 POSTED SPEED LIMIT .....45  
  
 50TH PERCENTILE SPEED .....45  
 85TH PERCENTILE SPEED .....51  
 10 MPH PACE SPEED .....40 through 49  
 PERCENT IN PACE SPEED .....63.3  
 PERCENT OVER PACE SPEED .....18.8  
 PERCENT UNDER PACE SPEED .....17.9  
 RANGE OF SPEEDS .....28 to 61  
 VEHICLES OBSERVED .....218  
 AVERAGE SPEED .....44.6

SPEED	NO.	PCT.	CUM. PCT.
30	2	0.9	1.4
31	1	0.5	1.8
32	2	0.9	2.8
33	4	1.8	4.6
34	3	1.4	6.0
35	2	0.9	6.9
36	6	2.8	9.6
37	7	3.2	12.8
38	4	1.8	14.7
39	7	3.2	17.9
40	12	5.5	23.4
41	12	5.5	28.9
42	10	4.6	33.5
43	17	7.8	41.3
44	15	6.9	48.2
45	15	6.9	55.0
46	14	6.4	61.5
47	18	8.3	69.7
48	16	7.3	77.1
49	9	4.1	81.2
50	8	3.7	84.9
51	5	2.3	87.2
52	9	4.1	91.3
53	4	1.8	93.1
54	3	1.4	94.5
55	3	1.4	95.9
56	2	0.9	96.5
57	1	0.5	97.2
58	2	0.9	98.2
59	0	0.0	98.2
60	2	0.9	99.1
61	2	0.9	100.0



factors that will influence speed are avoided. Since modified speed limits are the maximum allowable speeds, the conditions under which speed studies are taken must be close to ideal.

The primary basis for establishing a proper, realistic speed limit is the nationally recognized method of using the 85th percentile speed. This is the speed at or below which 85% of the traffic moves. For example, if 85 of each 100 motor vehicles were recorded at 45 mph or under, then 45 mph is the 85th percentile speed.

Historically, before and after traffic engineering studies have shown that changing the posted speed limit does not significantly affect the 85th percentile speed. The driving environment, which includes other traffic on the road and roadway conditions, is the primary factor which influences the prevailing speed.

The driving environment is reflected by the 85th percentile speed. The majority of drivers, consciously or unconsciously, consider the factors in the driving environment and travel at a speed that is safe and comfortable regardless of the posted speed limit.

The speed data are collected by recording the speeds of free flowing motor vehicles using a radar or other speed measuring device. A representative sample of vehicular speeds is recorded and these speeds would include local residents who drive through the zone.

Use of the 85th percentile speed acknowledges that 15% of the drivers are traveling above a speed that is reasonable and proper. This is the 15% of motorists at which enforcement action is directed. Studies have shown that this is the group of motorists that cause many of the crashes and have the worst driving records.

There are other parameters used to evaluate speed data, such as the average, median and pace speeds. However, the 85th percentile speed is the most critical criterion in establishing realistic speed limits.

## Traffic Crash Data

Contrary to popular belief, lower speed limits do not necessarily improve safety. The more uniform the speeds of vehicles in a traffic stream, the less chance there is for conflict and crashes. Posting speed limits lower or higher than what the majority of drivers are traveling produces two distinct groups of drivers: those attempting to observe the speed limit and those driving at a speed they feel is reasonable and prudent. These differences in speeds can result in increased crashes due to tailgating, improper passing, reckless driving, and weaving from lane to lane. However, the number of traffic crashes along any highway is related to numerous factors.

Regardless of the roadway involved, there is a statistical number of crashes that can be expected to occur no matter how safe a roadway is made. The traffic survey team determines if the number of crashes is unusually high by analyzing the crash rate for the section of roadway under study. A crash



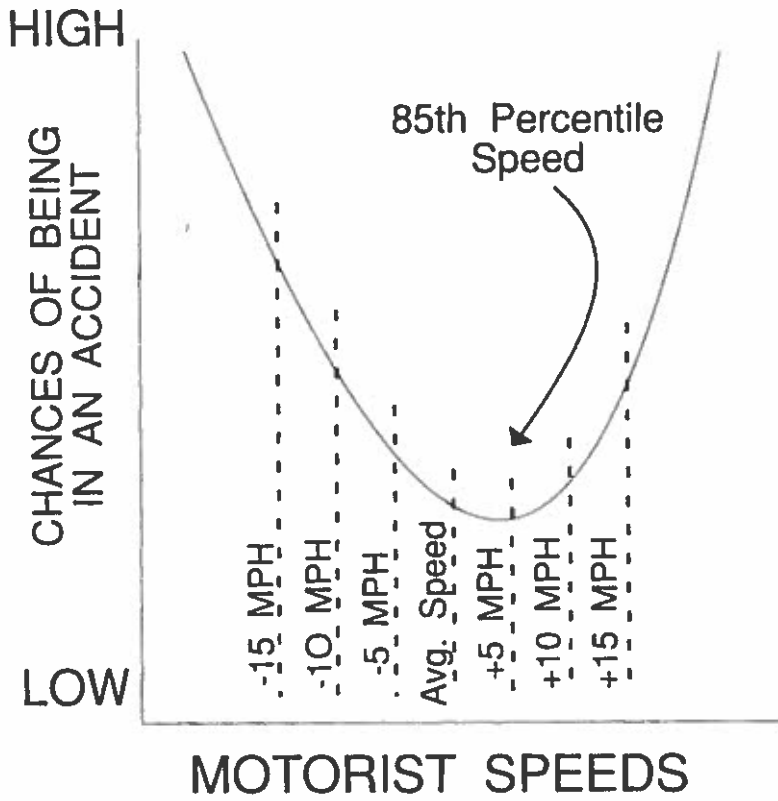
rate is based on the number of crashes and amount of traffic for a given segment of roadway. The traffic crash pattern is then taken into consideration when determining the speed limit.

Investigations of crashes reveal that in the majority of cases there was a clear violation of a traffic law or rule of good driving. A review of crash experience is an important component of any analysis of speed limits. Proper analysis and evaluation of these factors require the experience and expertise of the traffic survey team.

Studies have been conducted over the years to relate crashes to speed. Based on these studies and as illustrated in the graph, the lowest risk of being involved in a crash occurs at approximately the 85th percentile speed.



# Accident Involvement vs. Motorist Speeds



Source: "Speed Zoning on Texas Highways" State Department of Highways and Public Transportation, Austin, Texas, October 1990  
Figure 2

## Driving Environment

The design, physical condition, and use of a roadway has a profound effect on vehicle speeds because motorists vary their speeds depending on the driving environment. The traffic survey team considers significant items in the driving environment which are all reflected in the 85th percentile speed. For example these may include: traffic volumes, roadside development, roadway and shoulder widths, condition of the roadway, and the number of lanes, intersections, driveways, hills, curves, sidewalks, schools, parks, and any other factors recorded by the team.

The traffic survey team makes a personal inspection of the roadway to verify the accuracy of their data. They drive the roadway to determine if there are any hazards not readily apparent to the motoring public. Sometimes consideration is given to reduce a speed limit due to a certain condition. If a hazardous condition is found, an attempt should be made to



correct it. If it cannot be corrected, consideration should be given to posting an advisory speed control sign or, if several conditions are present, then the speed limit may be reduced. Of particular concern are hills and curves where vision is restricted. On long stretches of roadway, one or two hills or curves should not dictate the speed for the entire roadway. Motorists are warned of the reduced sight distance through the use of warning signs with advisory speed controls.

The number of changes in the speed limit along a given route should be minimized. With this in mind, the length of the speed zone should be a least one-half mile. Survey team members base their recommendation on the conditions that exist at the time of their evaluation and should not attempt to consider such things as future growth, anticipated enforcement, or concerns for something that hasn't happened.

Realistic speed limits provide for a uniform and orderly movement of traffic. There is a need for uniformity on all roadways especially where they carry large volumes of traffic through various roadside conditions or numerous adjoining communities.



## Recommendation

Once all the data have been collected and reviewed by the traffic survey team, the facts are analyzed and a recommendation is made. When the survey members agree that a modified speed zone should be established, their proposal is communicated to the requestor as well as any local units of government. If requested, a public presentation of their findings may be conducted. While local concurrence is desirable, it is not required by law. If the traffic survey team agrees that a modified speed limit is not justified, or if they cannot agree on a recommendation, the survey is concluded with no change in the existing speed limit.

The traffic survey team then submits a written report of their findings and recommendations to their respective agencies. When a modified speed limit is recommended, a Traffic Control Order is submitted to the respective road agency and the Director of the Michigan Department of State Police for their approval and signatures.

## Posting Speed Limit Signs

The modified speed limit becomes effective when the Traffic Control Order has been signed by both agencies, a copy of the order has been filed with the County Clerk and the signs have been installed. The Michigan Manual of Uniform Traffic Control Devices sets forth standards for installing speed limit signs and specifies the size, shape, color and location of the signs.

Signs should be installed at the start of a zone, beyond major intersections and at approximately one-half mile intervals. The speed limit is established in increments of 5 mph, as close as possible to the 85th percentile speed. "REDUCED SPEED AHEAD" signs may be posted to advise motorists of speed limit reductions. These signs are not normally required in urban areas where speeds are relatively low.

Generally the entire speed survey process from request to signs being posted takes anywhere from 3 to 9 months, depending on the complexity of the situation.



## Summary

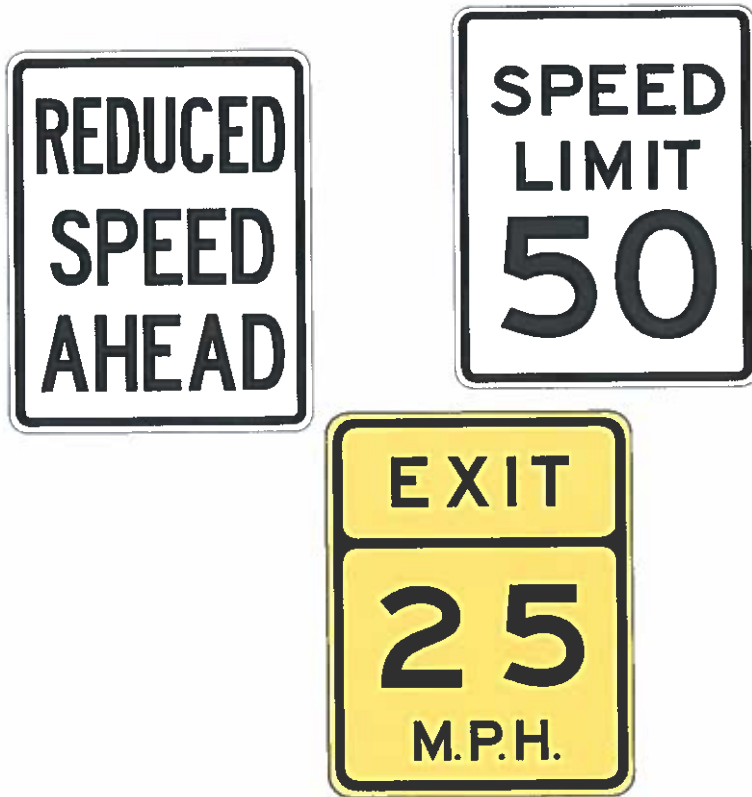
**R**ealistic speed limits are important for safe highways. A few points to remember about realistic speed limits are that they:

- Represent maximum speeds under ideal conditions and when conditions change, drivers must accordingly reduce their speed;
- Reinforce the credibility and acceptance of all traffic control devices;
- Provide smooth, orderly flow of traffic, a major factor in preventing highway crashes;
- Offer an effective traffic enforcement tool for police by clearly separating the flagrant violator from the majority of drivers; and
- Are based on the 85th percentile speed which is the most critical criterion in establishing realistic speed limits.



Realistic speed limits provide for a uniform and orderly movement of traffic. Some of our roadways carry large volumes of traffic through various roadside conditions and through numerous adjoining communities. It is important to encourage smooth traffic flow, not only for safety, but for the convenience and economy of every motorist.

Speed limits are based upon driving speeds—yours, your neighbors, and a percentage of everyone traveling on a roadway. You have shown that you are concerned about speed limits just by taking the time to read this booklet. Please obey the speed limit, not only on your street but on all street and highways of our state.



The Office of Highway Safety Planning wishes to express thanks to the Traffic Engineering Enforcement Committee.



Office of Highway Safety Planning  
4000 Collins Rd  
PO Box 30633  
Lansing, MI 48909-8133  
(517) 336-6477

OHSP 894

July 2015 newsletter

From the desk of Genoa Township Clerk Polly Skolarus

**ELECTIONS:**

- Genoa Township has many places within the township that are used for state and local elections. The 2/42 Community Church located on Grand River, directly across from St. Joe's Woodland, is our newest location and was first used for the State Election this last May. The Township Board just approved a 20,000 square foot expansion to the Church which will allow voters easy access to the facility beginning in August 2016.
- We also use Community Bible Church, Brighton Church of the Nazarene, Chilson Hills Baptist Church as well as Cleary University, Three Fires Elementary and Hornung Elementary. We wish to thank all those who allow us to use their beautiful facilities and appreciate their dedication to free elections within our Community.
- Several years ago the State approved and moved all elections to the responsibility of the local clerk. This action is economically important to those who seek millage increases or elected boards. Schools, Libraries and local millage requests, when added to State and Federal elections, result in no cost to local authorities when their proposals are added to those elections. The recent referendum for road funding requested by the State totaled cost the state \$20,524.39 just in Genoa Township. A Presidential Primary Election is scheduled for March of 2016. In addition, a primary election will be held in August and a general election is scheduled for November of 2016. All of these may be used for local millage requests or election of board members.

**NEW DEVELOPMENT:** We are growing by leaps and bounds.

- Genoa Township is pleased to welcome Providence Health Care to our community with easy access at the Latson Road and I-96 interchange Exit 140. The site plan was approved by the Township Planning Commission on May 11, 2015. The medical office building will be the first phase of a three-phase plan at the former Latson Elementary School property. Phase I includes a three-story building of 60,000 square-feet and will house physician offices and medical support services. Additional phases will include medical offices, an out-patient surgical center and development of out-lots for retail space such as restaurants and financial service.



- Panera Bread will redevelop the former Bennigan's site on the corner of Latson Rd. and Grand River Ave. The Township Board approved the site plan with a new façade that will be the first in the nation with that type of building style. Welcome Panera.
- A new USA2GO/Tim Horton's service center has recently started construction at the southwest corner of Grand Oaks and Latson Road with plans to be open for business later this year.
- The Red Olive restaurant has been approved to locate on the old Prairie House/TJ's BBQ at 3838 E. Grand River. The 3800 square foot restaurant will offer a warm and family friendly atmosphere with an expanded menu including Greek and Mediterranean entrees. We welcome them to our community.
- Nelligan's Outdoor Services, the previous home of Cadillac Brick at 7949 W. Grand River, is a brick paver & landscape design center which offers assistance and retails sales for residential & commercial landscaping projects. Welcome.
- Township staff recently issued a permit for a new Harbor Freight Tools to occupy the former ACO Hardware store. It will be nice to see a new use in this vacant space.

### **Refuse and Recycling**

All residential homes in Genoa Township are provided with household refuse removal and recycling through Duncan Disposal Systems. The Township contracts with a single carrier at an annual cost of \$135.00. A single residence pays \$112.00 annually on their winter tax bill. The difference of \$23.00 is paid from the township General Fund. This arrangement provides efficiency and saves our roads from having multiple trucks running through our neighborhoods throughout the week. This service includes removal of 96 gallons of household waste plus recycling each week.

### **Large Item Pickup Program**

As of January 1, 2015 each resident may pick up 1 FREE sticker per year for a single, large item disposal. Large items include appliances and furniture but do not include items containing Freon. Freon tags are \$50.00. Carpet will only be taken if it is rolled up and tied with duct tape or heavy twine. One ticket will take care of 3 rolls of carpeting in 4 foot widths (padding can be rolled with carpet). Each individual roll of carpet may not exceed 50 pounds. Additional large item stickers can be purchased by cash or check from the Treasurer's Department at the Township Hall. Residents may purchase additional stickers in each calendar year for \$10.00

each. Large items are picked up on your regular trash collection day.

### **Yard Waste Information**

Curbside removal of yard waste is not included in our refuse contract. However, the Township does provide a spring and fall collection of yard waste at the Township Hall. Collection times are from 9:00am to noon. Please check the Township website for dates. Please bring your leaves, small brush and other natural yard waste to the Township Hall on those dates for recycling. Please bring all branches in 3 foot long bundles. The Township encourages the use of brown paper yard waste bags. Plastic bags are not acceptable in the recycling process.

Another option is to contact our waste hauler directly. Duncan Disposal provides a curbside disposal of yard waste for an additional charge. Please call them directly @ 1-866-679-DUMP (3867). The cost is \$10.00 per for up to 10 bags or bundles and \$1.00 per bag or bundle over 10. Yard waste is picked up the first Friday of each month from April through November. PLEASE NO PLASTIC BAGS OF ANY KIND - paper yard waste bags or bundles only.

Please check the Township website @ [www.genoa.org](http://www.genoa.org) for more information or call us at (810) 227-5225.

### *From the Treasurer's Office:*

**The 2015 Summer Tax Bills** were mailed out to all Genoa Township property owners on Wednesday, July 1, 2015. The Summer Taxes are due September 14, 2015. As of September 15<sup>th</sup> a 1% per month interest charge is assessed on unpaid summer taxes. Postmarks are not accepted as the date paid. Once you receive your tax bill you can begin making payments toward your taxes due. Partial payments can be made as often as you like and for any dollar amount.

**Tax Bill Payment Options:** Tax payments can be made online with a credit card or electronic check, by mail with a check or at the township offices by cash or check. For your convenience there are two drop boxes located at the Township offices for after hour payments. All payments paid by mail or put in the drop box will be mailed a paid receipt.

With online banking becoming more prevalent, we wanted to bring a few items to your attention. Most banks use a third party to process checks requested through their online bill payment system. This means that your money is deducted from your account and sent to third party processor, not directly to the designated payee. **Bills paid through your on-line banking system may take up to 15 business days to be received.**

#### **Watch for Important Tax Mailings Three Times a Year**

- Mid February – The Township Assessor's Office mails to all property owners the Assessment Notice that tells you what they are proposing your Taxable and Assessed Values to be for the upcoming tax year. The March Board of Review is your opportunity to appeal the values if you do not agree.
- July 1<sup>st</sup> - Summer taxes are mailed to all Township property owners
- December 1<sup>st</sup> - Winter taxes are mailed to all Township property owners

**Please contact the Township Office's at 810-227-5225 if you do not receive any of the above mailings.**



LAW OFFICES OF  
**MANCUSO & CAMERON, P.C.**  
ATTORNEYS AND COUNSELORS

FRANK J. MANCUSO, JR.  
DOUGLAS D. CAMERON

VICTORIA L. LESNER  
BRUCE A. MAYRAND, JR., of Counsel

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May 20, 2015

Mr. Peyton Clark  
3750 Noble Avenue  
Brighton, MI 48116

Re: 3750 Noble Avenue/3746 Noble Avenue

Dear Mr. Clark:

At the May 18, 2015 Genoa Township Board of Trustees meeting you mentioned that you were working with an attorney related to the boundary issue with your neighbor, William Wernet. You also asked for the township to cooperate by providing an explanation of the events surrounding your request for documents related to the 1986 Variance. I have been asked by the Board to cooperate with your attorney in this matter. As such, please ask your attorney to contact me at his/her earliest convenience.

Sincerely,

MANCUSO & CAMERON, PC



Frank J. Mancuso, Jr.

FJM/kdl

**Adam VanTassell**

---

**From:** Amanda Whitesell (via Twitter) <notify@twitter.com>  
**Sent:** Friday, May 15, 2015 5:25 PM  
**To:** info  
**Subject:** Amanda Whitesell (@mandywhitesell) mentioned you in conversation on Twitter!



Amanda Whitesell  
mentioned you.

Reply



**Amanda Whitesell**  
@mandywhitesell

May 15

Thankful for the sidewalks along Grand River  
in @GenoaTownship and  
@DowntownHowell tow ork!  
#smmlbiketowork



[View conversation](#)

[Settings](#) | [Help](#) | [Opt-out](#) | [Download app](#)

Twitter, Inc. 1355 Market Street, Suite 900 San Francisco, CA 94103



# Custom Community Profile

YOU ARE VIEWING DATA FOR:

## Genoa Township

2911 Dorr Rd  
Brighton, MI 48116-9436  
<http://www.genoa.org/>

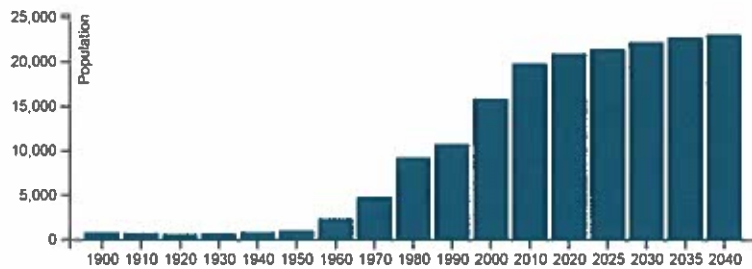


Census 2010 Population:  
19,821  
Area: 36.3 square miles

### Population and Households

Link to American Community Survey (ACS) Profiles:  Social | Demographic  
Population and Household Estimates for Southeast Michigan, December 2014

### Population Forecast



Source: U.S. Census Bureau and SEMCOG 2040 Forecast produced in 2012.

### Population and Households

Population and Households	Census 2010	Change 2000-2010	Pct Change 2000-2010	SEMCOG Dec 2014	SEMCOG 2040
<b>Total Population</b>	19,821	3,920	24.7%	20,164	23,061
<b>Group Quarters Population</b>	21	-24	-53.3%	21	23
<b>Household Population</b>	19,800	3,944	24.9%	20,143	23,038
<b>Housing Units</b>	8,418	2,072	32.7%	8,481	-
<b>Households (Occupied Units)</b>	7,807	1,968	33.7%	8,204	9,133
<b>Residential Vacancy Rate</b>	7.3%	-0.7%	-	3.3%	-
<b>Average Household Size</b>	2.54	-0.18	-	2.46	2.52

Source: U.S. Census Bureau and SEMCOG 2040 Forecast produced in 2012.

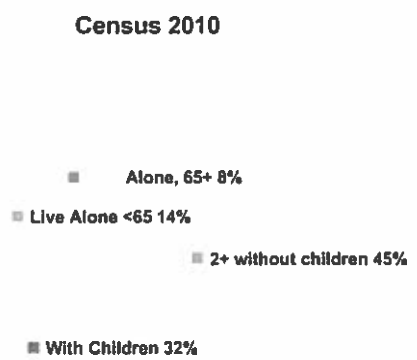
### Components of Population Change

Components of Population Change	2000-2005 Avg.	2006-2010 Avg.
<b>Natural Increase (Births - Deaths)</b>	49	13
<b>Births</b>	147	115
<b>Deaths</b>	98	102
<b>Net Migration (Movement In - Movement Out)</b>	677	45
<b>Population Change (Natural Increase + Net Migration)</b>	726	58

Source: Michigan Department of Community Health Vital Statistics U.S. Census Bureau, and SEMCOG.

## Demographics

### Household Types

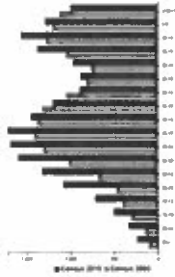


Household Types	Census 2000	Census 2010	Pct Change 2000-2010
<b>With Seniors 65+</b>	1,031	1,987	92.7%
<b>Without Seniors</b>	4,808	5,820	21.0%
<b>Two or more persons without children</b>	2,600	3,532	35.8%
<b>Live alone, 65+</b>	324	641	97.8%
<b>Live alone, under 65</b>	688	1,105	60.6%
<b>With children</b>	2,227	2,529	13.6%
<b>Total Households</b>	<b>5,839</b>	<b>7,807</b>	<b>33.7%</b>

Source: U.S. Census Bureau and Decennial Census.



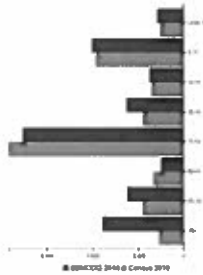
**Population Change by Age, 2000-2010**



Age Group	Census 2000	Census 2010	Change 2000-2010
<b>Under 5</b>	1,124	993	-131
<b>5-9</b>	1,205	1,288	83
<b>10-14</b>	1,280	1,565	285
<b>15-19</b>	1,050	1,380	330
<b>20-24</b>	762	966	204
<b>25-29</b>	821	879	58
<b>30-34</b>	1,049	889	-160
<b>35-39</b>	1,325	1,200	-125
<b>40-44</b>	1,391	1,457	66
<b>45-49</b>	1,426	1,722	296
<b>50-54</b>	1,318	1,694	376
<b>55-59</b>	1,023	1,604	581
<b>60-64</b>	685	1,325	640
<b>65-69</b>	473	1,083	610
<b>70-74</b>	404	711	307
<b>75-79</b>	303	502	199
<b>80-84</b>	151	330	179
<b>85+</b>	111	233	122
<b>Total</b>	15,901	19,821	3,920
<b>Median Age</b>	37.5	42.7	5.2

Source: U.S. Census Bureau and Decennial Census.

### Forecasted Population Change 2010-2040



Source: SEMCOG 2040 Forecast produced in 2012.

Age Group	2010	2015	2020	2025	2030	2035	2040	Change 2010 - 2040
Under 5	993	940	1,092	1,175	1,245	1,113	1,105	112
5-17	3,808	3,626	3,329	3,321	3,746	3,998	3,998	190
18-24	1,391	1,614	1,640	1,487	1,291	1,329	1,476	85
25-34	1,768	2,083	2,702	3,080	2,901	2,692	2,496	728
35-59	7,677	7,092	6,489	5,989	6,176	6,553	7,015	-662
60-64	1,325	1,503	1,629	1,596	1,353	1,143	971	-354
65-74	1,794	2,140	2,555	2,925	3,109	2,931	2,468	674
75+	1,065	1,173	1,533	1,913	2,472	3,038	3,532	2,467
<b>Total</b>	<b>19,821</b>	<b>20,171</b>	<b>20,969</b>	<b>21,486</b>	<b>22,293</b>	<b>22,797</b>	<b>23,061</b>	<b>3,240</b>

Source: U.S. Census Bureau and SEMCOG 2040 Forecast produced in 2010.

### Senior and Youth Populations

Senior and Youth Population	Census 2000	Census 2010	Pct Change 2000-2010	SEMCOG 2040	Pct Change 2010-2040
65 and over	1,442	2,859	98.27%	6,000	109.86%
Under 18	4,323	4,801	11.06%	5,103	6.29%
5 to 17	3,199	3,808	19.04%	3,998	4.99%
Under 5	1,124	993	-11.65%	1,105	11.28%

Note: Population by age changes over time because of the aging of people into older age groups, the movement of people, and the occurrence of births and deaths.

Source: U.S. Census Bureau, Decennial Census and SEMCOG 2040 Forecast produced in 2012.

### Race and Hispanic Origin

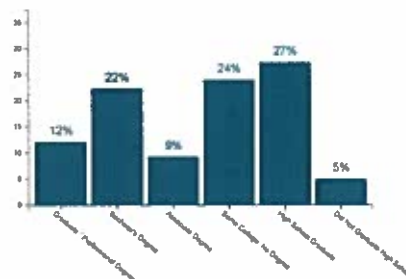
Race and Hispanic Origin	Census 2000	Percent of Population (2000)	Census 2010	Percent of Population (2010)	Percentage Point Change 2000-2010
<b>Non-Hispanic</b>	15,742	99.0%	19,398	97.9%	-1.1%
<b>White</b>	15,361	96.6%	18,758	94.6%	-2.0%
<b>Black</b>	30	0.2%	121	0.6%	0.4%
<b>Asian</b>	113	0.7%	203	1.0%	0.3%
<b>Multi-Racial</b>	161	1.0%	231	1.2%	0.2%
<b>Other</b>	77	0.5%	85	0.4%	-0.1%
<b>Hispanic</b>	159	1.0%	423	2.1%	1.1%
<b>Total</b>	15,901	100.0%	19,821	100.0%	0.0%

Source: U.S. Census Bureau and Decennial Census.

### Highest Level of Education

Highest Level of Education*	5-Yr ACS 2010	Percentage Point Chg 2000-2010
<b>Graduate / Professional Degree</b>	12.1%	1.6%
<b>Bachelor's Degree</b>	22.3%	0.1%
<b>Associate Degree</b>	9.2%	0.6%
<b>Some College, No Degree</b>	24.0%	1.9%
<b>High School Graduate</b>	27.4%	-0.4%
<b>Did Not Graduate High School</b>	5.0%	-3.7%

\* Population age 25 and over



Source: U.S. Census Bureau, Census 2000 and 2010 American Community Survey 5-Year Estimates.

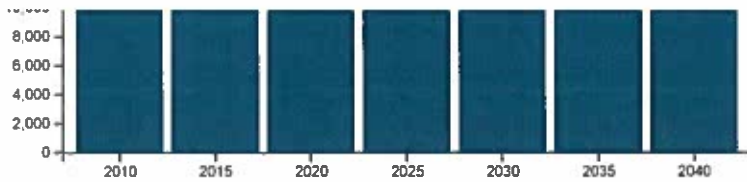
### Economy & Jobs

Link to American Community Survey (ACS) Profiles: 2009-2013 Economic

### Forecasted Jobs







Source: SEMCOG 2040 Forecast produced in 2012.

### Forecasted Jobs by Industry

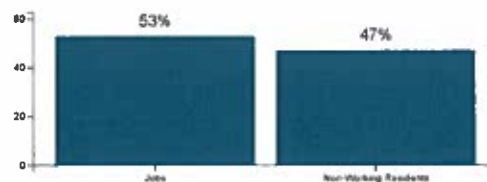
Forecasted Jobs By Industry	2010	2015	2020	2025	2030	2035	2040	Change 2010 - 2040
Natural Resources, Mining, & Construction	889	1,066	1,174	1,237	1,299	1,266	1,271	382
Manufacturing	633	639	577	572	557	549	564	-69
Wholesale Trade, Transportation, Warehousing, & Utilities	513	506	477	486	474	507	528	15
Retail Trade	2,336	2,386	2,354	2,343	2,470	2,511	2,506	170
Knowledge-based Services	1,417	1,627	1,732	1,861	2,019	2,018	1,931	514
Services to Households & Firms	2,089	2,230	2,298	2,363	2,377	2,548	2,549	460
Private Education & Healthcare	591	742	795	880	941	990	1,007	416
Leisure & Hospitality	1,580	1,687	1,737	1,814	1,849	1,932	2,026	446
Government	1,382	1,386	1,446	1,489	1,542	1,600	1,647	265
<b>Total</b>	<b>11,430</b>	<b>12,269</b>	<b>12,590</b>	<b>13,045</b>	<b>13,528</b>	<b>13,921</b>	<b>14,029</b>	<b>2,599</b>

Source: SEMCOG 2040 Forecast produced in 2012.

Note: "C" indicates data blocked due to confidentiality concerns of ES-202 files.

### Daytime Population

Daytime Population	SEMCOG and ACS 2010
Jobs	11,430
Non-Working Residents	10,207
Age 15 and under	4,183
Not in labor force	5,043
Unemployed	981
<b>Daytime Population</b>	<b>21,637</b>



Source: SEMCOG 2040 Forecast produced in 2012, U.S Census Bureau, and 2010 American Community Survey 5-Year Estimates.

Note: The number of residents attending school outside Southeast Michigan is not available. Likewise, the number of students commuting into Southeast Michigan to attend school is also not known.

### Where Workers Commute From 5-Yr ACS 2010

Rank	Where Workers Commute From *	Workers	Percent
1	Genoa Township	1,415	21.2%
2	Marion Township	495	7.4%
3	Howell	445	6.7%
4	Oceola Township	420	6.3%
5	Brighton Township	410	6.1%
6	Hamburg Township	350	5.2%
7	Fowlerville or Handy Township	315	4.7%
8	Brighton	265	4.0%
9	Green Oak Township	200	3.0%
10	Howell Township	175	2.6%
-	Elsewhere	2,193	32.8%
* Workers, age 16 and over employed in Genoa Township		6,683	

Source: U.S. Census Bureau - CTPP/ACS Commuting Data.  
Commuting Patterns in Southeast Michigan

### Resident Population

#### Where Residents Work 5-Yr ACS 2010

Rank	Where Residents Work *	Workers	Percent
1	Genoa Township	1,415	15.0%
2	Brighton	980	10.4%
3	Brighton Township	585	6.2%
4	Howell	550	5.8%
5	Howell Township	550	5.8%
6	Novi	390	4.1%
7	Green Oak Township	310	3.3%
8	Farmington Hills	305	3.2%
9	Ann Arbor	290	3.1%
10	Southfield	220	2.3%
-	Elsewhere	3,827	40.6%
* Workers, age 16 and over residing in Genoa Township		9,422	203

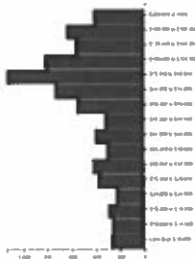
Source: U.S. Census Bureau - CTP/ACS Commuting Data.

### Household Incomes

Income	5-Yr ACS 2010	Change 2000-2010	Percent Change 2000-2010
<b>Median Household Income (in 2010 dollars)</b>	\$ 67,548	\$ -25,902	-27.7%
<b>Per Capita Income (in 2010 dollars)</b>	\$ 34,680	\$ -7,990	-18.7%

Source: U.S. Census Bureau, Census 2000, and 2010 American Community Survey 5-Year Estimates.

### Annual Household Incomes



Annual Household Income	5-Yr ACS 2010
\$200,000 or more	420
\$150,000 to \$199,999	645
\$125,000 to \$149,999	574
\$100,000 to \$124,999	824
\$75,000 to \$99,999	1,137
\$60,000 to \$74,999	743
\$50,000 to \$59,999	562
\$45,000 to \$49,999	329
\$40,000 to \$44,999	408
\$35,000 to \$39,999	316
\$30,000 to \$34,999	430
\$25,000 to \$29,999	389
\$20,000 to \$24,999	239
\$15,000 to \$19,999	302
\$10,000 to \$14,999	272
Less than \$10,000	274
<b>Total</b>	<b>7,864</b>

Source: U.S. Census Bureau and 2010 American Community Survey 5-Year Estimates.

### Poverty

Poverty	Census 2000	% of Total (2000)	5-Yr ACS 2010	% of Total (2010)	% Point Chg 2000-2010
<b>Persons in Poverty</b>	430	2.7%	1,171	6.0%	3.3
<b>Households in Poverty</b>	162	2.8%	468	6.0%	3.2



Source: U.S. Census Bureau and 2010 American Community Survey 5-Year Estimates.

## Housing

Link to American Community Survey (ACS) Profiles: 2009-2013 Housing

### Building Permits 2000 - 2015

Year	Single Family	Two Family	Attach Condo	Multi Family	Total Units	Total Demos	Net Total
2000	256	4	42	164	466	2	464
2001	222	0	74	6	302	8	294
2002	210	0	44	188	442	5	437
2003	195	2	47	96	340	5	335
2004	113	12	84	32	241	8	233
2005	64	0	46	16	126	10	116
2006	38	0	9	0	47	6	41
2007	14	0	4	0	18	7	11
2008	8	0	0	0	8	4	4
2009	4	0	0	0	4	5	-1
2010	6	0	0	0	6	9	-3
2011	6	0	0	0	6	0	6
2012	13	0	0	0	13	0	13
2013	24	0	4	0	28	1	27
2014	35	0	8	0	43	7	36
2015	10	0	0	0	10	0	10
<b>2000 to 2015 totals</b>	<b>1,218</b>	<b>18</b>	<b>362</b>	<b>502</b>	<b>2,100</b>	<b>77</b>	<b>2,023</b>

Source: SEMCOG Development.

Note: Permit data for most recent years may be incomplete and is updated monthly.

### Housing Types

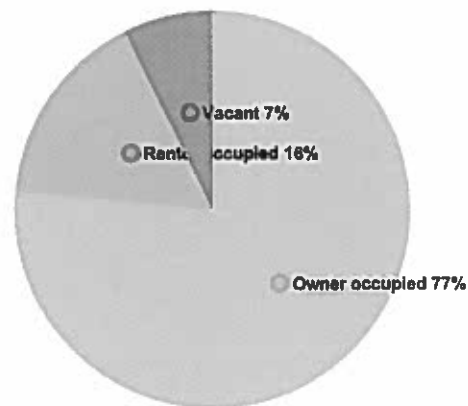
Housing Type	Census 2000	5-Yr ACS 2010	Change 2000-2010	New Units Permitted 2010-2014
Single Family Detached	4,472	5,548	1,076	94
<b>Total</b>	<b>6,334</b>	<b>8,614</b>	<b>2,280</b>	<b>106</b>
Units Demolished				-17
Net (Total Permitted Units - Units Demolished)				89 <sup>205</sup>

Housing Type	Census 2000	5-Yr ACS 2010	Change 2000-2010	New Units Permitted 2010-2014
Duplex	66	45	-21	0
Townhouse / Attached Condo	471	946	475	12
Multi-Unit Apartment	311	1,097	786	0
Mobile Home / Manufactured Housing	967	978	11	0
Other	47	0	-47	
<b>Total</b>	<b>6,334</b>	<b>8,614</b>	<b>2,280</b>	<b>106</b>
Units Demolished				-17
Net (Total Permitted Units - Units Demolished)				89

Source: U.S. Census Bureau, Census 2000, and 2010 American Community Survey 5-Year Estimates.

### Housing Tenure

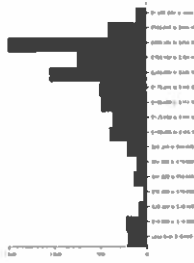
Housing Tenure	Census 2000	Census 2010	Change 2000-2010
Owner occupied	5,183	6,440	1,257
Renter occupied	656	1,367	711
Vacant	507	611	104
Seasonal/migrant	231	201	-30
Other vacant units	276	410	134
<b>Total Housing Units</b>	<b>6,346</b>	<b>8,418</b>	<b>2,072</b>



Source: U.S. Census Bureau, Census 2000, 2010 American Community Survey 5-Year Estimates.

### Housing Value (in 2010 dollars)

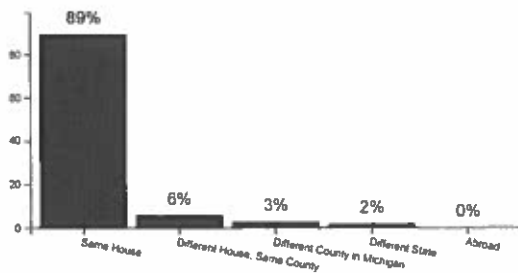
Housing Value (in 2010 dollars)	5-Yr ACS 2010	Change 2000-2010	Percent Change 2000-2010
Median housing value	\$225,500	\$-44,853	-16.6%
Median gross rent	\$887	\$-108	-10.8%



Housing Value	5-Yr ACS 2010
\$1,000,000 or more	102
\$500,000 to \$999,999	416
\$300,000 to \$499,999	1,507
\$250,000 to \$299,999	754
\$200,000 to \$249,999	1,053
\$175,000 to \$199,999	506
\$150,000 to \$174,999	488
\$125,000 to \$149,999	364
\$100,000 to \$124,999	403
\$80,000 to \$99,999	210
\$60,000 to \$79,999	104
\$40,000 to \$59,999	139
\$30,000 to \$39,999	33
\$20,000 to \$29,999	82
\$10,000 to \$19,999	223
Less than \$10,000	207
<b>Owner-Occupied Units</b>	<b>6,591</b>

Source: U.S. Census Bureau and 2010 American Community Survey 5-Year Estimates.

### Residence One Year Ago \*



\* This table represents persons, age 1 and over, living in Genoa Township from 2009-2013. The table does not represent person who moved out of Genoa Township from 2009-2013.

Source: 2010 American Community Survey 5-Year Estimates.

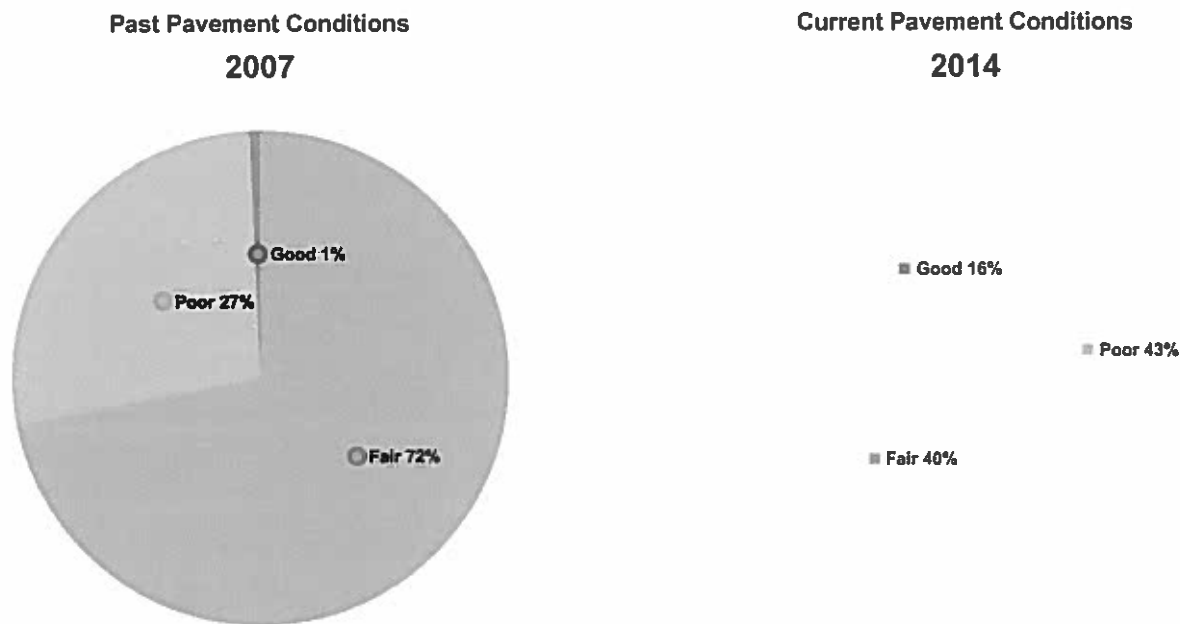
### Transportation

Miles of public road (including boundary roads): 192

Source: Michigan Geographic Framework



### Pavement Condition (in Lane Miles)



Note: Poor pavements are generally in need of rehabilitation or full reconstruction to return to good condition. Fair pavements are in need of capital preventive maintenance to avoid deteriorating to the poor classification. Good pavements generally receive only routine maintenance, such as street sweeping and snow removal, until they deteriorate to the fair condition.  
 Source: SEMCOG

### Bridge Status

Bridge Status	2008	2008 (%)	2009	2009 (%)	2010	2010 (%)	Percent Point Chg 2008-2010
Open	8	100.0%	8	100.0%	9	100.0%	0.0%
Open with Restrictions	0	0.0%	0	0.0%	0	0.0%	0.0%
Closed*	0	0.0%	0	0.0%	0	0.0%	0.0%
<b>Total Bridges</b>	<b>8</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>	<b>9</b>	<b>100.0%</b>	<b>0.0%</b>
<b>Deficient Bridges</b>	<b>2</b>	<b>25.0%</b>	<b>2</b>	<b>25.0%</b>	<b>2</b>	<b>22.2%</b>	<b>-2.8%</b>

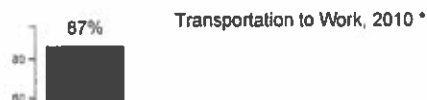
\* Bridges may be closed because of new construction or failed condition.

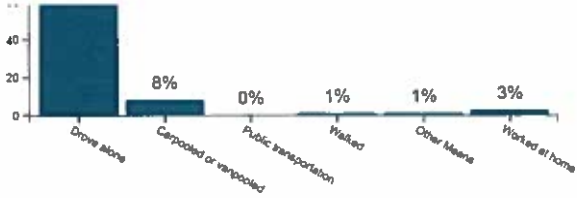
Note: A bridge is considered deficient if it is structurally deficient (in poor shape and unable to carry the load for which it was designed) or functionally obsolete (in good physical condition but unable to support current or future demands, for example, being too narrow to accommodate truck traffic).

Source: Michigan Structure Inventory and Appraisal Database

### Detailed Intersection & Road Data

### Travel





\* Resident workers age 16 and over

**Transportation to Work**

Transportation to Work	Census 2000	Census 2000 (%)	Census 2010	Census 2010 (%)	% Point Chg 2000-2010
Drove alone	7,333	89.7%	8,258	87.0%	-2.8%
Carpooled or vanpooled	425	5.2%	768	8.1%	2.9%
Public transportation	0	0.0%	28	0.3%	0.3%
Walked	52	0.6%	97	1.0%	0.4%
Other Means	21	0.3%	97	1.0%	0.8%
Worked at home	341	4.2%	249	2.6%	-1.6%
<b>Resident workers age 16 and over</b>	<b>8,172</b>	<b>100.0%</b>	<b>9,497</b>	<b>100.0%</b>	<b>0.0%</b>

Source: U.S. Census Bureau | Census 2000 | 2010 American Community Survey 5-Year Estimates

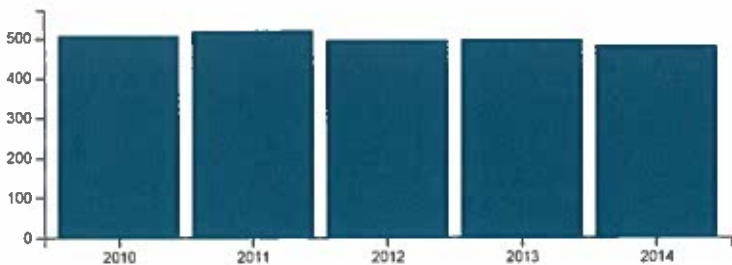
**Mean Travel Time to Work**

Mean Travel Time To Work	Census 2000	5-Yr ACS 2010	Change 2000-2010
For residents age 16 and over who worked outside the home	29.8 minutes	29.6 minutes	-0.2 minutes

Source: U.S. Census Bureau Census 2000 2010 American Community Survey 5-Year Estimates

**Safety**

**Crashes, 2010-2014**



### Crash Severity

Crash Severity	2010	2011	2012	2013	2014	Percent of Crashes 2010 - 2014
Fatal	1	2	4	3	4	0.6%
Incapacitating Injury	10	12	3	2	9	1.4%
Other Injury	90	75	95	85	79	17.0%
Property Damage Only	407	430	393	407	389	81.0%
<b>Total Crashes</b>	<b>508</b>	<b>519</b>	<b>495</b>	<b>497</b>	<b>481</b>	<b>100.0%</b>

### Crashes by Involvement

Crashes by Involvement	2010	2011	2012	2013	2014	Percent of Crashes 2010 - 2014
Red-light Running	12	10	15	12	5	2.2%
Lane Departure	118	116	100	123	120	23.1%
Alcohol	19	19	20	23	15	3.8%
Drugs	9	2	4	5	1	0.8%
Deer	77	67	57	48	57	12.2%
Train	0	0	1	1	0	0.1%
Commercial Truck/Bus	12	16	14	25	20	3.5%
School Bus	1	3	1	0	1	0.2%
Emergency Vehicle	7	2	2	4	2	0.7%
Motorcycle	9	1	4	7	7	1.1%
Intersection	144	162	163	138	134	29.6%
Work Zone	0	0	1	46	13	2.4%
Pedestrian	0	0	3	3	2	0.3%
Bicyclist	0	2	0	0	1	0.1%
Older Driver (65 and older)	71	65	68	72	77	14.1%
Young Driver (16 to 24)	71	65	68	197	203	24.2%

### High Frequency Intersection Crash Rankings

Local Rank	County Rank	Region Rank	Intersection	Annual Avg 2010-2014
1	2	134	<u>Grand River Rd E @ Latson Rd S</u>	28.6
2	23	1,119	<u>Grand River Rd E @ Golf Club Rd</u>	11.0
3	25	1,451	<u>Grand River Rd E @ Chilson Rd</u>	9.0
4	28	1,554	<u>Latson Rd N @ Golf Club Rd</u>	8.6
5	38	1,819	<u>Brighton Rd @ Bauer Rd</u>	7.6
6	43	2,029	<u>Brighton Rd @ Brighton Rd</u>	7.0



Local Rank	County Rank	Region Rank	Intersection	Annual Avg 2010-2014
7	48	2,188	<u>Grand River Rd E @ Lawson Dr</u>	6.6
8	54	2,379	<u>Grand River Rd E @ Glen Echo Dr</u>	6.2
9	58	2,598	<u>Grand River Rd E @ Grand Oaks Dr</u>	5.8
10	70	3,222	<u>W I 96/Grand River Ramp @ Grand River Rd E</u>	4.8

Note: Intersections are ranked by the number of reported crashes, which does not take into account traffic volume. Crashes reported occurred within 150 feet of the intersection.

Source: Michigan Department of State Police with the Criminal Justice Information Center SEMCOG

### High Frequency Road Segment Crash Rankings

Local Rank	County Rank	Region Rank	Segment	From Road - To Road	Annual Avg 2010-2014
1	1	35	<u>Grand River Rd E</u>	Chilson Rd - Latson Rd S	64.0
2	7	369	<u>Grand River Rd E</u>	Latson Rd S - Grand River/E I 96 Ramp	31.8
3	9	428	<u>E I 96/Grand River Ramp</u>	E I 96 - Grand River Ave W	30.0
4	10	468	<u>Latson Rd S</u>	Grand River Rd E - Golf Club Rd	28.6
5	16	599	<u>Brighton Rd</u>	Chilson Rd - Bauer Rd	25.6
6	24	881	<u>Grand River Ave E</u>	Hughes Rd S - Bendix Rd	20.8
7	29	993	<u>W I 96</u>	Dorr Rd - Grand River Ave E	19.6
8	30	1,022	<u>E I 96</u>	Chilson Rd - Grand River/E I 96 Ramp	19.2
9	30	1,022	<u>E I 96</u>	Dorr Rd - E I 96/Grand River Ramp	19.2
10	38	1,098	<u>Brighton Rd</u>	Bauer Rd - Main St	18.6

Note: Segments are ranked by the number of reported crashes, which does not take into account traffic volume.

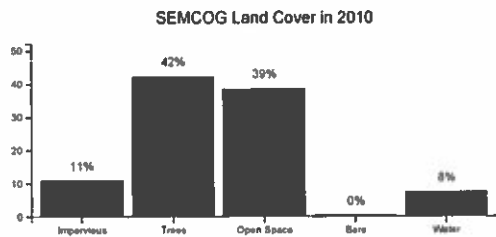
## Environment

### SEMCOG 2008 Land Use

SEMCOG 2008 Land Use	Acres	Percent
Agricultural	2,298	9.9%
Single-family residential	13,396	57.4%
Multiple-family residential	135	0.6%
Commercial	1,104	4.7%
Industrial	499	2.1%
Governmental/Institutional	1,098	4.7%
Park, recreation, and open space	1,677	7.2%
Airport	0	0.0%
Transportation, Communication, and Utility	1,517	6.5%
Water	1,604	6.9%
<b>Total</b>	<b>23,329</b>	

Note: Land Cover was derived from SEMCOG's 2010 Leaf off Imagery.

Source: SEMCOG



Type	Description	Acres	Percent
Impervious	buildings, roads, driveways, parking lots	2,552	11.0%
Trees	woody vegetation, trees	9,811	42.4%
Open Space	agricultural fields, grasslands, turfgrass	8,958	38.7%
Bare	soil, aggregate piles, unplanted fields	101	0.4%
Water	rivers, lakes, drains, ponds	1,743	7.5%
<b>Total Acres</b>		<b>23,164</b>	

Source Data  
SEMCOG - Detailed Data