

**GENOA CHARTER TOWNSHIP BOARD**

**April 4, 2016  
Regular Meeting  
6:30 p.m.**

**AGENDA**

Call to Order:

Pledge of Allegiance:

Call to the Public (Public comment will be limited to two minutes per person)\*:

**Approval of Consent Agenda:**

1. Payment of Bills.
2. Request to Approve Minutes: March 21, 2016

**Approval of Regular Agenda:**

3. Request for approval of Resolution No. 1 (to proceed with the project and direct the preparation of plans and cost estimates) for the East Coon Lake Trail Road Improvement Project for the summer of 2016.
4. Request for approval of Resolution No. 2 (to approve the project, scheduling the first hearing and directing the issuance of statutory notices) for the East Coon Lake Trail Road Improvement Project for the summer of 2016.
5. Review of impact assessment and final PUD site plan for the proposed Gilden Woods child care facility located on the north side of Grand Oak Drive in Howell on parcel #11-08-200-012. The project is located within the Livingston Commons Phase 2 Planned Unit Development and is petitioned by BBI Holdings, LLC.
  - A. Disposition of Environmental Impact Assessment
  - B. Disposition of Final PUD Site Plan
6. Review of a special land use, impact assessment and sketch plan to allow for outdoor storage located at 5775 Brighton Pines Court, Brighton on parcel #11-15-200-025. The request is petitioned by CRW Plastics.
  - A. Disposition of Special Land Use
  - B. Disposition of Environmental Impact Assessment
  - C. Disposition of Sketch Plan

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: April 4, 2016

TOWNSHIP GENERAL EXPENSES: Thru April 4, 2016	\$79,949.24
March 25, 2016 Bi Weekly Payroll	\$78,321.89
March 31, 2016 Quarterly Payroll	\$7,331.01
April 1, 2016 Monthly Payroll	\$11,364.36
OPERATING EXPENSES: Thru April 4, 2016	\$7,404.45
TOTAL:	<u>\$184,370.95</u>

<u>Check Number</u>	<u>Vendor No</u>	<u>Vendor Name</u>	<u>Check Date</u>	<u>Check Amount</u>
32626	som - dm	State of Michigan	03/18/2016	6,292.64
32627	Beacome	Paige Beacome	03/22/2016	25.00
32628	BLUE CRO	Blue Cross & Blue Shield Of Mi	03/22/2016	30,872.58
32629	Brighton	Brighton Analytical , L.L.C.	03/22/2016	124.00
32630	FED EXPR	Federal Express Corp	03/22/2016	201.98
32631	J & P	J & P Carpentry, LLC	03/22/2016	595.00
32632	LC REG D	Livingston Co. Register Of Dec	03/22/2016	38.00
32633	Mancuso	Mancuso & Cameron, P.C.	03/22/2016	3,643.46
32634	Mcintosh	Jessica Mcintosh	03/22/2016	25.00
32635	USBNA	US Bank, N.A.	03/22/2016	1,656.84
32636	VERIZONW	Verizon Wireless	03/22/2016	316.24
32637	Winders	Lindsay Winders	03/22/2016	25.00
32638	AT&T Fax	AT&T	03/24/2016	121.33
32639	CARDM	Chase Card Services	03/24/2016	406.71
32640	COMC	Comcast	03/24/2016	140.56
32641	EHIM	EHIM, INC	03/24/2016	9,749.67
32642	Genworth	Genworth Life	03/24/2016	371.17
32643	LC REG D	Livingston Co. Register Of Dec	03/24/2016	20.00
32644	LCIT	Livingston County Information	03/24/2016	340.00
32645	RELIANCE	Reliance Standard Life Insuran	03/24/2016	2,826.21
32646	Unum	Unum Provident	03/24/2016	2,708.60
32647	WALMART	Walmart Community	03/24/2016	207.96
32648	ClassicC	Classic Carpet and Floors	03/29/2016	8,040.81
32649	ARCHINAL	Michael Archinal	03/30/2016	500.00
32650	MASTER M	Master Media Supply	04/04/2016	434.16
32651	Neopost	Neopost USA Inc	04/04/2016	3,084.10
32652	PRINTING	Printing Systems	04/04/2016	354.85
32653	SECHMIAS	S Estrn Chap MI Assrs Assn	04/04/2016	30.00
32654	STofMI	State of Michigan	04/04/2016	6,649.30
32655	TRI COUN	Tri County Supply, Inc.	04/04/2016	148.07
<b>Report Total:</b>				<b>79,949.24</b>

Accounts Payable  
Computer Check Register

**Genoa Township**

2911 Dorr Road  
Brighton, MI 48116

(810) 227-5225

User: cindy

Printed: 03/17/2016 - 15:06

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
13587	EFT-FED	EFT- Federal Payroll Tax	03/25/2016		7,714.07 4,579.79 4,579.79 1,071.11 1,071.11
Check 13587 Total:					19,015.87
13588	EFT-PENS	EFT- Payroll Pens Ln Pyts	03/25/2016		2,317.20 72.53
Check 13588 Total:					2,389.73
13589	EFT-PRIN	EFT-Principal Retirement 457	03/25/2016		1,007.00
Check 13589 Total:					1,007.00
13590	EFT-ROTH	EFT-Principal Roth	03/25/2016		615.00
Check 13590 Total:					615.00
13591	EFT-TASC	EFT-Flex Spending	03/25/2016		444.43 646.21
Check 13591 Total:					1,090.64



Report Total:

24,118.24

3/25/16 Payroll 54,202.65

\$ 78,321.89

Genoa Charter Township  
User: cindy

Electronic Clearinghouse  
Distribution Report

Printed: 03/17/16 15:32  
Batch: 625-03-2016

Account Number	Debit	Credit	Account Description
101-000-002-000	0.00	54,203.65	Cash-checking Account Only
101-000-259-000	54,203.65	0.00	Payroll Direct Deposit
	54,203.65	54,203.65	
Report Totals:	54,203.65	54,203.65	

Accounts Payable  
Computer Check Register

**Genoa Township**

2911 Dorr Road  
Brighton, MI 48116

(810) 227-5225

User: cindy

Printed: 03/21/2016 - 12:40

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
13592	EFT-FED	EFT- Federal Payroll Tax	03/31/2016		20.00
					423.65
					423.65
					99.08
					99.08
					<hr/>
				Check 13592 Total:	1,065.46
					<hr/> <hr/>
13593	FIRST NA	First National Bank	03/31/2016		4,425.03
					<hr/>
				Check 13593 Total:	4,425.03
					<hr/> <hr/>
				Report Total:	5,490.49
				4 checks 3/31/16	1840.52
					<hr/> <hr/>
					\$7331.01

Genoa Charter Township  
User: cindy

Payroll  
Computer Check Register

Printed: 03/21/16 12:25  
Batch: 631-03-2016

<u>Check No</u>	<u>Check Date</u>	<u>Employee Information</u>	<u>Amount</u>
12239	03/31/2016	MatkinRona Ronald Matkin	554.10
12240	03/31/2016	McManus John McManus	155.14
12241	03/31/2016	PetratPat Patricia Petrat	438.66
12242	03/31/2016	Thomas Patricia Thomas	692.62
Total Number of Employees: 4			Total for Payroll Check Run: 1,840.52

Accounts Payable  
Computer Check Register

**Genoa Township**

2911 Dorr Road  
Brighton, MI 48116

(810) 227-5225

User: cindy

Printed: 03/28/2016 - 11:35

Bank Account: 101CH

Check	Vendor No	Vendor Name	Date	Invoice No	Amount
13595	EFT-FED	EFT- Federal Payroll Tax	04/01/2016		1,947.98 691.84 691.84 161.80 161.80
Check 13595 Total:					3,655.26
13596	EFT-PENS	EFT- Payroll Pens Ln Pyts	04/01/2016		394.21
Check 13596 Total:					394.21
13597	EFT-TASC	EFT-Flex Spending	04/01/2016		83.33
Check 13597 Total:					83.33
13598	FIRST NA	First National Bank	04/01/2016		7,231.56
Check 13598 Total:					7,231.56
Report Total:					11,364.36

2:27 PM

## #593 LAKE EDGEWOOD W/S FUND

## Payment of Bills

March 22 - 28, 2016

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	03/22/2016	2930	.Complete Battery Source	SUPPLIES	-10.20
Bill Pmt -Check	03/24/2016	2931	BullsEye Telecom	01/10-04/19/2016	-323.35
Bill Pmt -Check	03/24/2016	2932	GENOA TWP DPW FUND	Water and Sewer Admin Fees	-1,022.95
<b>Total</b>					<b>-1,356.50</b>

2:38 PM

## #592 OAK POINTE WATER/SEWER FUND

## Payment of Bills

March 22 - 28, 2016

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	03/24/2016	3591	AT & T	Monthly service 3-12-16 to 4-11-2016	-65.00
Bill Pmt -Check	03/24/2016	3592	Bullseye Telecom	003CA32, 003CACC	-410.80
Bill Pmt -Check	03/24/2016	3593	DTE ENERGY	02-16 to 3-2-16	-40.92
<b>Total</b>					<b>-516.72</b>

2:29 PM

## #595 PINE CREEK W/S FUND

## Payment of Bills

March 22 - 28, 2016

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	03/24/2016	2162	GENOA TWP - DPW FUND	Water and Sewer admin Fee	-3,463.06
<b>Total</b>					<b>-3,463.06</b>

2:41 PM

03/28/16

## #503 DPW UTILITY FUND

## Payment of Bills

March 22-28, 2016

Type	Date	Num	Name	Memo	Amount
Bill Pmt -Check	03/24/2016	3544	Greg Tatara	April Car Allowance	-500.00
Bill Pmt -Check	03/24/2016	3545	HUMPHRISS	April Car Allowance	-250.00
Bill Pmt -Check	03/24/2016	3546	Kimberly Lane	First Aid meeting food reimbursement	-58.17
Bill Pmt -Check	03/24/2016	3547	Mancuso & Cameron		-1,260.00
<b>Total</b>					<b>-2,068.17</b>



**Economic Development Council of  
Livingston County**

**INVOICE**

218 E. Grand River, Brighton, MI 48116  
Phone: (517) 586-0822

Bill To:

**Genoa Charter Township**  
2911 Dorr Road  
Brighton, MI 48116

Invoice Number: 9659GT-160318

Date: March 18, 2016

Due Date: June 18, 2016

DESCRIPTION	AMOUNT
2016 Partnership - Contract Services	\$22,000.00

**Draft**  
**GENOA CHARTER TOWNSHIP BOARD**  
**March 21, 2016**  
**Regular Meeting and Public Hearing**

**MINUTES**

Supervisor McCririe called the regular meeting 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; and eight persons in the audience.

A Call to the Public was made with no response.

**Approval of Consent Agenda:**

Moved by Smith and supported by Ledford to approve all items listed under the consent agenda changing the Sundance Road Improvement contract with the LCRC to \$250,000.00. The motion carried unanimously.

**1. Payment of Bills.**

**2. Request to Approve Minutes: March 7, 2016**

**3. Request to approve the purchase of the Utility Billing Module and associated services from BS&A using the available surplus funds from the Fiscal Year DPW Budget as recommended by the Utility Director.**

**4. Request for approval of a contract agreement with the Livingston County Road Commission for the Sundance Road Improvement Project in an amount not to exceed \$250,000.00 as previously approved by petition and resolution of the Township Board.**

**Approval of Regular Agenda:**

Moved by Ledford and supported by Hunt to approve for action all items listed under the regular agenda reversing the sequence of items 7 & 8. The motion carried unanimously.

**5. Request for approval of a rezoning (Ordinance Z-16-01) involving 27.80 acres of land located on the east side of Chilson Road south of Grand River on parcel 4711-06-400-015. The application is petitioned by The Lockwood Companies and the requested rezoning is from Medium Density Residential (MDR) to High Density Residential (HDR).**

A call to the public was made with no response. Moved by Smith and supported by Skolarus to approve the rezoning as requested. The motion carried by roll call vote as follows: Ayes – Ledford, Smith, Hunt, Rowell, Mortensen, Skolarus and McCririe. Nays – None. Absent – None.



**6. Request for consideration regarding the abandoned and dangerous building located at 4815 Richardson Road.**

Reference is made to Township Attorney Mancuso's letter of March 17, 2016 in which the Hearing Officer's order were set forth and outlined. Ms. Stillianos agreed to the conditions set forth in the March 17, 2016 correspondence from Attorney Mancuso. This case will be heard again on May 2, 2016 to determine if the plan set forward has been followed. In addition, all contents of the home that will be removed from the home and retained will be placed into a pod-closed container for storage. No further action was taken by the board.

**7. Consider a request from the Howell Area Parks & Recreation Authority to approve language for a .75-mil recreation millage on the August 2, 2016 ballot.**

Moved by Smith and supported by Hunt to support a request from Executive Director Paul F. Rogers of the Howell Area Parks & Recreation Authority to approve language for a .75-mill recreation millage as to be placed on the August 2, 2016 ballot. The motion carried as follows: Ayes – McCririe, Hunt, Skolarus, Rowell, Smith and Ledford. Nay – Mortensen.

**8. Request for approval of a three-year lease agreement with the Howell Area Parks & Recreation Authority for the use of the Township athletic fields.**

Moved by Hunt and supported by Rowell to approve the three-year lease agreement removing the language related to common operating expenses that will be shared by the township related to maintenance of the athletic fields including mowing fertilizing, aerating, grass seeding and watering (costs for maintenance services will be solely the responsibility of the tenant.) The motion carried as follows: Ayes – McCririe, Hunt, Skolarus, Rowell, Smith and Ledford. Nay – Mortensen.

**9. Request to approve a Refuse Removal and Recycling Services Contract with Duncan Disposal.**

Moved by Smith and supported by Skolarus to approve a refuse removal and recycling contract with Duncan Disposal at a cost of \$140.64 per unit for the year beginning August 1, 2016 and ending July 31, 2017 as requested. The motion carried unanimously.

**10. Consider approval of refuse collection fee changes for FY 2016/2017**

Moved by Smith and supported by Rowell to approve a distribution of costs as follows: Property owners participating in the service will pay \$117.00 and the Township General Fund will contribute \$23.64 per unit for the next fiscal year with Duncan Disposal beginning August 1, 2016. This action allows a \$3.00 per parcel increase to participants. The motion carried unanimously.

**11. Request for approval of an amendment to the Building Reserve/Cemetery Fund 271 for the Fiscal Year ending March 31, 2016.**

Moved by Smith and supported by Hunt to approve an amendment to Fund 271 as requested. The motion carried unanimously.

**12. Request for approval of the General Fund Budget Fund 101.**

A call to the public was made with no response.

Moved by Hunt and supported by Skolarus to allow for a 2.5% increase in salary for all clerical staff. The motion carried unanimously.

Moved by Smith and supported by Rowell to allow a 2.5% lump sum bonus to contractual staff effective April 1, 2016. *(This action does not increase their base pay.)* The motion carried unanimously.

Moved by Smith and supported by Mortensen to provide no increase in compensation for the next fiscal year. The motion carried unanimously.

Moved by Smith and supported by Hunt to provide no increase in compensation to the Zoning Board of Appeals or the Planning Commission for the next fiscal year. The motion carried unanimously.

Moved by Smith and supported by Mortensen to provide no increase in compensation the Supervisor, Clerk or Treasurer for the next fiscal year. The motion carried unanimously.

Moved by Ledford and supported by Smith to approve the General Fund Budget for the fiscal year beginning April 1, 2016 through March 31, 2017 as submitted by Skolarus. The motion carried unanimously.

**13. Request for approval of budgets related to Township Funds 212, 260, 264, 270 and 271 for the Fiscal Year ending March 31, 2017.**

Moved by Mortensen and supported by Skolarus to approve all budgets related to township funds as requested by Skolarus. The motion carried unanimously.

**14. Request for approval of the following debt service fund budgets for the Fiscal Year ending March 31, 2017: 852, 857-859, 862, 870, 872, 873 and 875 as provided by Treasurer Hunt.**

A call to the public was made with no response. Moved by Ledford and supported by Skolarus to approve all debt service budgets as requested by Hunt. The motion carried unanimously.

**15. Review of a draft satellite Smart Zone Designation Approval Application.**

Draft information was received by the board with no formal action taken.

The regular meeting of the Genoa Charter Township Board was adjourned at 7:35 p.m.



Paulette A. Skolarus, Clerk  
Genoa Charter Township Board

Gary McCririe, Supervisor  
Genoa Charter Township Board

Resolution #1 – East Coon Lake Trail Road Improvement Project  
Special Assessment Project (Summer 2016)

**GENOA CHARTER TOWNSHIP**

At a regular meeting of the Township Board of the Genoa Charter Township, Livingston County, Michigan, (the "Township") held at the Township Hall on April 4, 2016, at 6:30 p.m., there were

PRESENT: McCririe, Skolarus, Hunt, Ledford, Rowell, Mortensen and Smith

ABSENT: None

The following preamble and resolution were offered by \_\_\_\_\_, and seconded by \_\_\_\_\_.

**Resolution to Proceed with the  
Project and Direct  
Preparation of the Plans and Cost Estimates**

WHEREAS, the Clerk reported that petitions have been filed with her for the East Coon Lake Trail Road Improvement Project (the "Project") under the authority of Act No 188, Michigan Public Acts of 1954, as amended;

WHEREAS, the Supervisor and the Clerk reported that they had checked the signatures on the petitions by record owners of land within the Township contained within the district described above and had prepared and filed a report setting forth the percentage of record owners of lands by frontage within the district who signed the petitions which amounted to more than fifty-eight percent (58%); and

WHEREAS, the creation of a Special Assessment District for the East Coon Lake Trail Road Improvement project is appropriate pursuant to Section 2 of Act No. 188, Michigan Public Acts of 1954.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. In accordance with Act No. 188, Michigan Public Acts of 1954, as amended, and the laws of the State of Michigan, the Township Supervisor is directed to have plans prepared illustrating the Project, the location of the Project, and an estimate of the cost of the Project.
2. The plans and estimates identified in paragraph 1, when prepared, shall be filed with the Township Clerk.

A vote on the foregoing resolution was taken and was as follows:

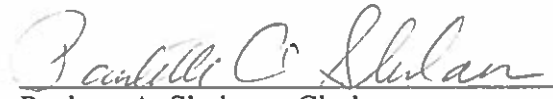
YES: Ledford, Smith, Hunt, Rowell, Mortensen, Skolarus and McCririe

NO: None

ABSENT: None.

CLERK'S CERTIFICATE

The undersigned, being the duly qualified and acting Clerk of the Township, hereby certifies that (1) the foregoing is a true and complete copy of a resolution duly adopted by the Township Board at a meeting of the Township Board on April 4, 2016, at which meeting a quorum was present and remained throughout; (2) the original thereof is on file in the records in my office; (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended); and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

A handwritten signature in cursive script, reading "Paulette A. Skolarus", written over a horizontal line.

Paulette A. Skolarus, Clerk  
Genoa Charter Township

Corporate Office  
9633 Northwest Court  
P.O. Box 1290  
Clarkston, Michigan 48347-1290  
248.625.9581 Fax 248.625.3360  
www.alliedasphalt.com



*The Allied Advantage*

Brighton/Howell 810.229.5511  
Milford 248.684.2343  
Lapeer 810.797.6080

February 6, 2016

East Coon Lake Trail HOA  
C/O: Mr. Robyn Cleveland  
2416 East Coon Lake Trail  
Howell, MI 48843

RE: East Coon Lake Trail (Private Common Drive)  
Asphalt Paving Improvements

Dear Mr. Cleveland,

We are pleased to notify you of our ability to hold pricing on our last revised quote of September 18, 2015 for the asphalt paving of East Coon Lake Trail. The pricing on this quote is held provided we are contracted for the work before the end of May, 2016 for work to be provided before the end of June, 2016.

We look forward to assisting you and your neighbors with this paving. Feel free to contact us with any questions or additional information you may require.

Best regards,

F. Allied Construction Co., Inc.

  
Kenneth A. Frenger, Jr.  
Resident Engineer

cc: Andrew Foster, V.P.

# Proposal



9633 Northwest Court  
P.O. Box 1290  
Clarkston, MI 48347-1290  
  
(248) 625-9581  
Fax (248) 625-3360



Brighton / Howell  
(810) 229-5511  
White Lake / Milford  
(248) 684-2343  
Lapeer  
(810) 797-6080  
E-Mail: [robcleve81@gmail.com](mailto:robcleve81@gmail.com)



PROPOSAL SUBMITTED TO <b>East Coon Lake Trail HOA</b>		PHONE <b>(734) 545-2641</b>	DATE <b>Sept. 18, 2015, Rev 3</b>
STREET <b>2416 E. Coon Lake Trail</b>		JOB NAME <b>Private Shared Common Drive Asphalt Paving</b>	
CITY, STATE and ZIP CODE <b>Howell, MI 48843</b>		JOB LOCATION <b>S side of Coon Lake Road ~1.8 Miles W of Chilson Rd</b>	
ARCHITECT	DATE OF PLANS	JOB PHONE	

We Propose hereby to furnish material and labor – complete in accordance with specifications below, for the sum of:

— **One Hundred Twenty-Three Thousand, Nine Hundred & 00/100** — dollars (\$ **123,900.00** ).

Payment to be made as follows:

**Within 10 Days**

All agreements contingent upon strikes, accidents, weather or delays beyond our control. Workers compensation and liability coverage provided by Allied Construction. Any deviation from specifications by owner shall become an extra charge above and beyond the estimate. All work shall be carried out in a workmanlike manner. All material guaranteed to be as specified. Guarantee for residential driveways is one (1) year against abscoring and five (5) years against pot holes (not at edges). Guarantee does not cover gas or oil spills, lightning or fire marks, cracks, base root cracks, reflective cracks, small water depressions and settling. Asphalt guaranteed in the 97% water base. Customer agrees to pay Allied a time price differential interest of 1.5% per month on any and all unpaid balances in the event Allied pursues collection of any balances due, whether by suit or otherwise, then owner agrees to pay actual legal fees, costs, fees and expenses incurred by Allied.

Authorized  
Signature

*[Handwritten Signature]*  
**Ken Eranger, Resident Engineer - M: (248) 640-8043**  
Note: This proposal may be  
withdrawn by us if not accepted within 14 days.

We hereby submit specifications and estimates for:

**East Coon Lake Trail – Private Common Drive Asphalt Paving – 49,520 SF**

1. Brush hog saplings under 3" diameter, brush, and weeds 4' to 6' off edges of the road.
2. Import/place (average thickness) 2" 21AA crush concrete base to supplement existing gravel base and adjust drainage as needed with up to 600 tons @ \$24.00/ton (allowance included, variance charged/credited as noted below). A small windrow of gravel will be left along the edges to grade down after paving for shoulders.
3. Grade and compact gravel base for drainage in prep for new asphalt paving.
4. Construct a compacted 2" MDOT #1100L, 20AA hot mixed asphalt leveling course with 605 tons.
5. Apply an SS-1h bond coat for asphalt adhesion.
6. Construct a compacted 2" MDOT #1100T, 20AA hot mixed asphalt wearing course with 605 tons.
7. Grade down edge of road gravel windrows for 4" - 6" wide gravel shoulders.

All above noted base bid work for \$123,900.00

**Notes:**

1. See sketch on reverse of this proposal for road paving areas and drainage directions.
2. Late model MDOT approved heavy highway class track mounted paver utilized for the asphalt paving.
3. Asphalt approaches 2' wide will be provided at existing gravel driveways with paved driveways tied into the new common road edge.
4. If required: added 21AA crush concrete to supplement existing gravel base provided at \$24.00/ton; undercutting of unstable soils with 21AA crush concrete backfill provided at \$45.00/ton.
5. Scope and price excludes: permits; bonds; testing or inspection fees; engineering survey staking or layout; tree clearing (brush hog only); erosion controls; storm sewer or culvert work (beyond road grading for drainage directions); or landscaping restoration.

**ALL MATERIALS, EQUIPMENT, AND WORK PROCEDURES SHALL MEET OR EXCEED M.D.O.T. STANDARD SPECIFICATIONS FOR CONSTRUCTION LATEST EDITION WHERE APPLICABLE. ALL EQUIPMENT IS LATE MODEL AND COMPANY OWNED.**



M.D.O.T. PREQUALIFIED

**Acceptance of Proposal** – The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature \_\_\_\_\_

Date of Acceptance: \_\_\_\_\_

Signature \_\_\_\_\_

Resolution #2  
East Coon Lake Trail Road Improvement Project  
Special Assessment Project (Summer 2016)

**GENOA CHARTER TOWNSHIP**

At a regular meeting of the Township Board of the Genoa Charter Township of Livingston County, Michigan, (the "Township") held at the Township Hall on April 4, 2016, at 6:30 p.m., there were

PRESENT: McCririe, Skolarus, Hunt, Ledford, Smith, Rowell and Mortensen

ABSENT: None

The following preamble and resolution were offered by        and seconded by        :

**Resolution to Approve the Project,  
Scheduling the First Hearing  
and Directing the Issuance of Statutory Notices**

**WHEREAS**, the Township has received petitions signed by owners of more than fifty percent (50%) of the property owners fronting East Coon Lake Trail (a private road) within the Township in accordance with Act No. 188, Michigan Public Acts of 1954, as amended, and as described in Exhibit A (the "Project"); and

**WHEREAS**, preliminary plans and cost estimates for the Project have been filed with the Township Clerk;

**NOW, THEREFORE, BE IT RESOLVED THAT:**

1. The Board of Trustees of the Township hereby tentatively declares its intent to proceed with the Project.
2. The Board of Trustees of the Township hereby declares its intention to make the improvement and tentatively designates the special assessment district against which the cost of the improvement is to be assessed is described in Exhibit A.
3. In accordance with Act No. 188, Michigan Public Acts of 1954, as amended, and the laws of the State of Michigan, there shall be a public hearing to hear any objections to the petition, to the improvement and to the proposed Special Assessment District for the Project which is known as the East Coon Lake Trail Road Improvement Project Special Assessment District (Summer 2016).
4. The public hearing will be held on April 18, 2016 at 6:30 p.m., at the offices of Genoa Charter Township, Livingston County, Michigan.
5. The Township Clerk is directed to mail, by first class mail, a notice of the public hearing to each owner of or party in interest in property to be assessed, whose name appears upon the last Township tax assessment records. The last Township tax assessment records means the last assessment roll for ad valorem tax purposes which has been reviewed by the Township Board of Review, as supplemented by any subsequent changes in the names or addresses of such owners or

parties listed thereon. The notice to be mailed by the Township Clerk shall be similar to the notice attached as Exhibit B and shall be mailed by first class mail on or before April 8, 2016. Following the mailing of the notices, the Township Clerk shall complete an affidavit of mailing similar to the affidavit set forth in Exhibit C.

6. The Township Clerk is directed to publish a notice of the public hearing in the Livingston County Daily Press & Argus, a newspaper of general circulation within the Township. The notice shall be published twice, once on or before April 8, 2016, and once on or before April 15, 2016. The notice shall be in a form substantially similar to the notice attached as Exhibit B-2.

A vote on the foregoing resolution was taken and was as follows:

YES: Ledford, Smith, Hunt, Rowell, Mortensen, Skolarus and McCririe.

NO: None.

ABSTAIN: None.

#### CLERK'S CERTIFICATE

The undersigned, being the duly qualified and acting Clerk of the Township, hereby certifies that (1) the foregoing is a true and complete copy of a resolution duly adopted by the Township Board at a meeting of the Township Board held on April 4, 2016, at which meeting a quorum was present and remained throughout; (2) the original thereof is on file in the records in my office; (3) the meeting was conducted, and public notice thereof was given, pursuant to and in full compliance with the Open Meetings Act (Act No. 267, Public Acts of Michigan, 1976, as amended); and (4) minutes of such meeting were kept and will be or have been made available as required thereby.

---

Paulette A. Skolarus, Clerk  
Genoa Charter Township



## EXHIBIT A

### EAST COON LAKE TRAIL ROAD IMPROVEMENT PROJECT (A Private Road)

#### DESCRIPTION OF PROJECT A SIX-YEAR SPECIAL ASSESSMENT DISTRICT WITH PROJECTED COSTS AS FOLLOWS:

The project (the "Project") will consist of:

1. Brush hog saplings under 3" in diameter, brush, and weeds 4' to 6' off edges of the road.
2. Import/place (average thickness) 2" 21AA crush concrete base to supplement existing gravel base and adjust drainage as needed with up to 600 tons @\$24.00/ton with a small windrow of gravel left along the edges to grade down after paving for shoulders.
3. Grade and compact gravel base for drainage in prep for new asphalt paving.
4. Construct a compacted 2" MDOT #1100L, 20AA hot mixed asphalt leveling course with 605 tons.
5. Apply an SS-1h bond coat for asphalt adhesion
6. Construct a compacted 2" MDOT #1100T, 20AA hot mixed asphalt wearing course with 605 tons.
7. Grade down edge of road gravel windrows for 4" – 6" wide gravel shoulders.

The bid relative to this project (including publications) is \$125,000.00 projected for work to begin in May of 2016. The project costs will be divided on a benefit basis between 17 parcels situated on East Coon Lake Trail at approximately \$7,352.94 with annual payments of \$1,225.49 beginning in the summer of 2016.

EXHIBIT B

Genoa Charter Township  
Livingston County, Michigan

NOTICE OF PUBLIC HEARING  
EAST COON LAKE TRAIL ROAD IMPROVEMENT PROJECT (Summer 2016)  
AND SPECIAL ASSESSMENT DISTRICT FOR THE PROJECT

NOTICE IS HEREBY GIVEN:

1. The Township Board of Genoa Charter Township, Livingston County, Michigan, in accordance with the laws of the State of Michigan, will hold a Public Hearing on April 18, 2016, at 6:30 p.m., at the Genoa Charter Township Offices, 2911 Dorr Road, Brighton, Michigan 48116, to review the following proposed special assessment district:

GENOA CHARTER TOWNSHIP  
EAST COON LAKE TRAIL ROAD IMPROVEMENT PROJECT  
AND SPECIAL ASSESSMENT DISTRICT (Summer 2016)  
(A six-year program with costs as follows)

WITH PROJECTED COSTS AS FOLLOWS:

The bid relative to this project (including publications) is \$125,000.00 for work to begin in May of 2016. The project costs will be divided on a benefit basis between 17 parcels situated on East Coon Lake Trail at approximately \$7,352.94 with annual payments of \$1,225.49 beginning in the summer of 2016. Further, to hear any objections to the petition, to the improvement and to the special assessment district. The Township Board may revise, correct, amend or change the plans, estimate of cost, or special assessment district.

The project (the "Project") will consist of:

- a. Brush hog saplings under 3" in diameter, brush, and weeds 4' to 6' off edges of the road.
- b. Import/place (average thickness) 2" 21AA crush concrete base to supplement existing gravel base and adjust drainage as needed with up to 600 tons @\$24.00/ton with a small windrow of gravel left along the edges to grade down after paving for shoulders.
- c. Grade and compact gravel base for drainage in prep for new asphalt paving.
- d. Construct a compacted 2" MDOT #1100L, 20AA hot mixed asphalt leveling course with 605 tons.
- e. Apply an SS-1h bond coat for asphalt adhesion
- f. Construct a compacted 2" MDOT #1100T, 20AA hot mixed asphalt wearing course with 605 tons.
- g. Grade down edge of road gravel windrows for 4" – 6" wide gravel shoulders.

**Total amount per parcel - \$7,352.94; Amount per year for six- years - \$1,225.49**

**Periodic redeterminations of cost may be made without a change in the special assessment district and without further notice to record owners or parties in interest in the property.**

2. The Project is being designed to serve the properties in the Special Assessment District, which district is illustrated on the map (included) and includes the specific properties that are identified by the following permanent parcel numbers:

4711-30-100-002	4711-30-100-010	4711-30-100-011	4711-30-100-013
4711-30-100-015	4711-30-100-016	4711-30-100-017	4711-30-100-022
4711-30-100-023	4711-30-100-024	4711-30-100-029	4711-30-100-030
4711-30-100-040	4711-30-100-041	4711-30-300-007	4711-30-300-008
4711-30-300-009			



3. The Township plans to impose special assessments on the properties located in the Special Assessment District to pay for the costs of the Project.
4. The preliminary plans and cost estimates for the proposed Project and the boundaries of the Special Assessment District are now on file in the office of the Township Clerk for public examination from the date of this notice until and including the date of the public hearing and may be examined at the hearing.
5. The Township has received petitions signed by owners of more than fifty-eight percent (58%) of the total frontage within the East Coon Lake Trail Road Improvement Project within the Township in accordance with Act No. 188, Michigan Public Acts of 1954, as amended.
6. Record owners and any party in interest of land have the right to object in person or to file written objections to the petition, to the improvement and to the special assessment district. Any person objecting in writing to the petition, the improvement, or the proposed special assessment district shall file the objection with the Township Clerk before the close of the April 18, 2016 hearing or within such further time as the Township Board may grant. Appearance and protest at the hearing is required in order to appeal the amount of the special assessment to the state tax tribunal.

This notice is given by order of the Genoa Township Board.

Dated: April 4, 2016

Paulette A. Skolarus, Clerk  
Genoa Charter Township

Exhibit B-2  
GENOA CHARTER TOWNSHIP  
Livingston County, Michigan

NOTICE OF PUBLIC HEARING  
FOR THE PROPOSED EAST COON LAKE TRAIL  
ROAD IMPROVEMENT PROJECT  
AND SPECIAL ASSESSMENT DISTRICT FOR THE PROJECT

(1) The Township Board of Genoa Charter Township, Livingston County, Michigan, in accordance with the laws of the State of Michigan, will hold a Public Hearing on April 18, 2016, at 6:30 p.m., at the Genoa Charter Township Offices, 2911 Dorr Road, Brighton, Michigan 48116, to review the following proposed special assessment district:

GENOA CHARTER TOWNSHIP – EAST COON LAKE ROAD IMPROVEMENT PROJECT  
AND SPECIAL ASSESSMENT DISTRICT (Summer 2016)

and to hear any objections to the petition, to the improvement and to the special assessment district. The Township Board may revise, correct, amend or change the plans, estimate of cost, or special assessment district.

The East Coon Lake Special Road Improvement Project is a Six-year program at a cost of \$125,000.00 for improvement to East Coon Lake Trail (from Coon Lake Road to the end of the cul-de-sac. The total amount per parcel is \$7,352.94; the amount per parcel per year is: \$1,225.50 (including publication and mailing cost).

(2) The Project is being designed to serve the properties in the Special Assessment District, described above.

(3) The Township plans to impose special assessments on the properties located in the Special Assessment District to pay for the costs of the Project.

(4) The preliminary plans and cost estimates for the proposed Project and the boundaries of the Special Assessment District are now on file in the office of the Township Clerk for public examination from the date of this notice until and including the date of the public hearing and may be examined at the hearing.

(5) The Township has received petitions signed by owners of more than fifty-eight percent (58%) of the total frontage within the East Coon Lake Road Improvement Project within the Township in accordance with Act No. 188, Michigan Public Acts of 1954, as amended.

(6) Record owners and any party in interest of land have the right to object in person or to file written objections to the petition, to the improvement and to the special assessment district. Any person objecting in writing to the petition, the improvement, or the proposed special assessment district shall file the objection with the Township Clerk before the close of the April 18, 2016 hearing or within such further time as the Township Board may grant. Appearance and protest at the hearing is required in order to appeal the amount of the special assessment to the state tax tribunal.

This notice is given by order of the Genoa Township Board.

Dated: April 4, 2016

Paulette A. Skolarus, Clerk  
Genoa Charter Township Board

(lcp 04/08/2016 and 04/15, 2016)

EXHIBIT C

AFFIDAVIT OF MAILING

STATE OF MICHIGAN     )  
                                          )  
COUNTY OF LIVINGSTON)

PAULETTE A. SKOLARUS, being first duly sworn, deposes and says that she personally prepared for mailing, and did on April 4, 2016, send by first-class mail, the notice of hearing, a true copy of which is attached hereto, to each record owner of or party in interest in all property to be assessed for the improvement described therein, as shown on the last local tax assessment records of the Township of Genoa; that she personally compared the address on each envelope against the list of property owners as shown on the current tax assessment rolls of the Township; that each envelope contained therein such notice and was securely sealed with postage fully prepaid for first-class mail delivery and plainly addressed; and that she personally placed all of such envelopes in a United States Post Office receptacle on the above date.

Paulette A. Skolarus, Clerk  
Genoa Charter Township



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:** March 30, 2016

**RE:** **GILDEN WOODS CHILD CARE - LIVINGSTON COMMONS PHASE 2**  
Environmental Impact Assessment and Final PUD Site Plan

---

I have reviewed the revised impact assessment, final PUD site plan, and architectural plans for a proposed a new child care facility located on a vacant 2.19-acre site on the northwest side of Grand Oaks Drive on parcel 11-08-200-012. The project includes a new 11,968 square foot building and related exterior site improvements with licensing for up to 164 children. The site is part of the Livingston Commons PUD and is zoned NR-PUD.

This project was recommended for approval by the Township Planning Commission on March 15, 2016. 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:

**IMPACT ASSESSMENT** - I recommend **APPROVAL** of the Environmental Impact Assessment submitted on March 17, 2016.

**SITE PLAN** - I recommend **APPROVAL** of the final PUD site plan dated 3/17/16 and corresponding architectural plans dated March 16, 2016 with the following conditions:

1. The requirements of the Brighton Area Fire Department shall be complied with.
2. Tap fees will be paid at the time of Land Use Permit issuance.

As a final note I would like to commend the applicant and their design team for the excellent plan preparation and cooperation throughout the approval process. Should you have any questions concerning this matter, please do not hesitate to contact me.

Sincerely,

Kelly VanMarter  
Assistant Township Manager/Community Development Director

### 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

## 03-15-16 Unapproved Minutes

- The requirements of the Brighton Area Fire Authority's letter of March 9, 2016 are met
- A traffic study shall be completed by the applicant in advance of submission to the Township Board, showing no deterioration in the level of service at Tahoe and Grand River and further subject to review by the Township Engineer.
- The building material samples shall become property of the Township.

The building materials were reviewed this evening and are acceptable to the Planning Commission, with additional landscaping around Unit #5 to shield it from the properties to the southwest of the site and the fitness center shall be all brick, with that material to be reviewed and approved by Township Staff. **The motion carried unanimously.**

**OPEN PUBLIC HEARING #4...**Review of a site plan and impact assessment for a proposed Gilden Woods child care facility located on the north side of Grand Oaks Drive in Howell on Parcel #11-08-200-012. The request is located within the Livingston Commons Phase 2 Planned Unit Development and is petitioned by BBI Holdings, LLC.

### **Planning Commission disposition of petition**

- A. Recommendation of Environmental Impact Assessment
- B. Recommendation of Final PUD Site Plan

Mr. Steve Witte, of Nederveld, Inc., and Dan Boverhof of BBI Holdings, were present.

Mr. Witte stated they are proposing to build an 11,968 square foot building as a day care center. Gilden Woods was previously Apple Tree. Mr. Boverhof has built approximately 20 of these facilities for Gilden Woods. The day care facility will accommodate up to 164 children. There will be an 18,834 square foot, fenced-in playground area. He showed the proposed site plan, building elevations, and building materials. They need a larger number of parking spaces than what is allowed because each of the parents must park and escort their children into and out of the building. He distributed replies to the planner's, engineer's, and Brighton Area Fire Authority's letters.

Commissioner Rauch has no issue with the additional parking; however, he noted that the indoor play area does not meet the requirements.

Mr. Borden stated that the applicant has addressed all of his concerns. With regard to the indoor play area, it is calculated on the maximum capacity of the facility and the applicant is proposing 49.5 square feet per child instead of the 50 square foot required by ordinance. He noted that they do meet the requirements of the State of Michigan.

They have added more stone to the building; however, they have not met the 80% requirement for natural materials per the PUD Agreement. Commissioner Rauch likes the proposed building materials; however, he would like to have more stone added to the sides of the building.

Mr. Boverhof stated these are the standard materials that are used on all Gilden Woods facilities.

Mr. Witte stated he can add stone to the north side of the building and extend the fence on the south side of the building so it will not be seen. The fence is opaque. It was also suggested to carry the lap siding on the north side of the building to match the front. Both Mr. Witte and Mr. Boverhof agreed to this suggestion.



Mr. Borden advised that a second drive is recommended to accommodate vehicle circulation and emergency vehicle turnaround. Mr. Witte stated that MDOT will not allow the second drive due to sight distance issues.

The call to the public was made at 9:16 pm with no response.

**Moved** by Commissioner Lowe, seconded by Commissioner Grajek, to recommend to the Township Board approval of the Environmental Impact Assessment dated 2-24-16 subject to the following:

- Final PUD site plan approval by the Township Board
- Approval of the proposed excess parking by the Township Board

**The motion carried unanimously.**

**Moved** by Commissioner Mortensen, seconded by Commissioner Grajek, to recommend to the Township Board approval of the Final PUD site plan for Gilden Woods child care facility subject to the following:

- Approval of the building materials
- The six-foot vinyl fence will be extended on the south side of the building.
- The north side of the building will have three-feet of cultured stone off grade and the remainder will be lap siding consistent with the front.
- The requirements of the Brighton Area Fire Authority's March 9, 2016 letter shall be met.
- Approval of parking proposed by the applicant of more than 120% of the maximum allowed by ordinance as the Planning Commission finds this acceptable as it is consistent with the applicant's business model and experience.

The site is a transitional property from industrial zoning.

**The motion carried unanimously.**

#### **Administrative Business:**

- Staff Report

Mr. VanMarter stated that Flagstar Bank has submitted plans for a new branch located on the same property as the proposed Providence Medical Center. Also, an application for a new medical office on the north side of Grand River across from Bob Maxi Ford has been submitted.

- Approval of February 8, 2016 Planning Commission meeting minutes:

**Moved** by Commissioner Lowe, seconded by Commissioner Grajek, to approve the minutes from the February 8, 2016 Planning Commission Meeting as presented.

**The motion carried unanimously.**

- Member Discussion:

Mr. Borden stated that the Michigan Association of Planning's Spring Institute will be held in mid-April if any commissioners are interested in attending.



March 17, 2016

Ms. Kelly VanMarter  
Genoa Charter Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Gilden Woods Learning Center – Grand Oaks Drive; Genoa Township

Dear Ms. VanMarter:

Enclosed please find a copy of the current site plan and Environmental Impact Assessment pertaining to the above referenced project. Note that I am also emailing a pdf of the enclosed information to you for your records and files.

Please note that the following changes have been made to the plans/information as a result of the Planning Commission meeting on March 14, 2016:

- 1). The proposed southern fence which was previously proposed as chain link has been modified to be a 6 ft solid vinyl fence, which is the same as the remainder of the proposed fencing that will face Grand Oaks Drive.
- 2). The north side elevation of the building has been modified to provide the same stone veneer base and lap siding that is present on the front building elevation.

It would be appreciated if you would keep this project on the April 4 Township Board agenda for final approval.

Please contact me at (616) 575-5190, if you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Steve Witte", with a long horizontal stroke extending to the right.

Steve Witte, PE  
Project Engineer

sw

Enclosures



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

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

APPLICANT NAME & ADDRESS: BBI Holdings, LLC; Attention: Dan Boverhof (see address below)  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: 5475 Settlers Pass, Kentwood, MI 49512

SITE ADDRESS: Grand Oaks Drive (no add. assigned) PARCEL #(s): 47-11-08-200-012

APPLICANT PHONE: (616 ) 291-4192 OWNER PHONE: ( )

OWNER EMAIL: san@boverhofbuilders.com

LOCATION AND BRIEF DESCRIPTION OF SITE: On Grand Oaks Drive; Southern end of Livingston Commons PUD. South of Lowe's, on north/west side of Grand Oaks

BRIEF STATEMENT OF PROPOSED USE: Proposed use is a Gilden Woods Day Care Facility. The facility will be licensed for approximately 164 children. Sufficient parking and playground area will also be provided on the property.

THE FOLLOWING BUILDINGS ARE PROPOSED: 11,968 sf day care facility/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: Dan Boverhof 


ADDRESS: 5475 Settlers Pass, Kentwood, MI 49512

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

1.) Steve Witte of Nederveld, Inc. at switte@nederveld.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: January 29, 2016  
PRINT NAME: Dan Boverhof PHONE: (616)291-4192  
ADDRESS: 5475 Settlers Pass, Kentwood, MI 49512

## REQUIRED SITE PLAN CONTENTS

Each site plan submitted to the Township Planning Commission shall be in accordance with the provisions of the Zoning Ordinance. No site plan shall be considered until reviewed by the Zoning Administrator. The following information shall be included in the site plan submittal packet:

<u>SUBMITTED</u>	<u>NOT APPLICABLE</u>	<u>ITEM</u>												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Application form and fee:</b> A completed application form and payment of a non-refundable application fee. (A separate escrow fee may be required for administrative charges to review the site plan submittal.)												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Applicant information:</b> The name and address of the property owner and applicant, interest of the applicant in the property, the name and address of the developer, and current proof of ownership of the land to be utilized or evidence of a contractual ability to acquire such land, such as an option or purchase agreement.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Scale:</b> The site plan should be drawn at an engineers scale on sheets measuring 24x36 inches at the scale noted below.												
		<table border="0"> <thead> <tr> <th style="text-align: left;"><u>ACREAGE</u></th> <th style="text-align: left;"><u>SCALE</u></th> </tr> </thead> <tbody> <tr> <td>160 or more</td> <td>1" = 200'</td> </tr> <tr> <td>5- 159.9</td> <td>1" = 100'</td> </tr> <tr> <td>2- 4.99</td> <td>1" = 50'</td> </tr> <tr> <td>1- 1.99</td> <td>1" = 30'</td> </tr> <tr> <td>0- .99</td> <td>1" = 20'</td> </tr> </tbody> </table>	<u>ACREAGE</u>	<u>SCALE</u>	160 or more	1" = 200'	5- 159.9	1" = 100'	2- 4.99	1" = 50'	1- 1.99	1" = 30'	0- .99	1" = 20'
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1- 1.99	1" = 30'													
0- .99	1" = 20'													
		<b><u>COVER SHEET CONTAINING</u></b>												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The name and address of the project.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	The name, address and professional seal of the architect, engineer, surveyor or landscape architect responsible for preparation of the site plan.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A complete and current legal description and size of property in acres and square feet. Where a metes and bound description is used, lot line angles or bearings shall be indicated on the plan. Lot line dimensions and angles or angles or bearings shall be based upon a boundary survey and shall correlate with the legal description.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	A small location sketch of sufficient size and scale to locate the property within the Township.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Title block with north arrow, date of preparation and any revisions.												
		<b><u>EXISTING CONDITION SHEETS ILLUSTRATING</u></b>												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	All existing lot lines and dimensions, including setback lines and existing or proposed easements.												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing topography (minimum contour interval of two feet)												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing natural features such as streams, marshes, ponds; wetlands labeled with size and type (upland, emergent, etc)												
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Existing woodlands shall be shown by an approximate outline of the total canopy; individual deciduous trees of eight inch caliper or larger and individual evergreen trees six feet in height or higher, where not a part of a group of trees, shall be accurately located and identified by species and size (caliper for deciduous, height for evergreen).												

<input checked="" type="checkbox"/>	<input type="checkbox"/>	Soil characteristics of the parcel to at least the detail as provided by the Soil Conservation Service Soil Survey of Livingston County. A separate map or overlay at the same scale as the site plan map may be used.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Zoning and current land use of applicant's property and all abutting properties and of properties across any public or private street from the site.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Indication of existing drainage patterns, surface or water bodies.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	The limits of any wetland regulated by the MDEQ, including attachment of any MDEQ approved wetland determination or documentation that an application for an MDEQ review has been submitted. If an MDEQ regulated wetland is to be impacted, an indication of the status of application for an MDEQ wetland permit or copy of a permit including description of any wetland migration required attached.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Aerial photograph indicating the limits of the site, surrounding land uses and street system.
<b><u>PROPOSED PROJECT INFORMATION</u></b>		
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Base information:</b> The location of all existing buildings, structures, street names and existing right-of-way, utility poles, towers, drainage ditches, culverts, pavement, sidewalks, parking areas and driveways on the property and within one-hundred feet of the subject property (including driveways on the opposite side of any street). Notes shall be provided indicating those which will remain and those which are to be removed.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Building information:</b> Footprints, dimensions, setbacks, typical floor plans, and a sketch of any rooftop or ground mounted equipment to scale.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Building elevations:</b> Elevation drawings shall be submitted illustrating the building design and height, and describing construction materials for all proposed structures. Elevations shall be provided for all sides visible from an existing or proposed public street or visible to a residential district. The Planning Commission may require color renderings of the building. Proposed materials and colors shall be specified on the plan and color chips or samples shall also be provided at the time of site plan review. These elevations, colors, and materials shall be considered part of the approval site plan (as amended 4/15/95).
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Building and lot coverage:</b> Percentage of building coverage and impervious surface ratio (all paved areas and building v. total lot area) compared to the percentages specified in the Table of Dimensional Standards Article 4.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<b>For residential developments:</b> Number of units for each project phase divided by acreage exclusive of any public right-of-way or private road access easement; lot area for each lot; and a description of the number of each unit by size and number of bedrooms; if a multi-phase development is proposed, identification of the areas included in each phase.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>For commercial and office uses:</b> The Gross Floor Area and Useable Floor Area of each use or lease space. For industrial uses: The floor area devoted to industrial uses and the area intended for accessory office use.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<b>Streets, driveways, and circulation:</b> The layout and dimensions of proposed lots, streets and drives (including grades, existing or proposed right-of-way or easement and pavement width, number of lanes and typical cross section showing surface and sub base materials and dimensions,

grades of all entrances and exits, location and typical detail of curbs, intersection radii), access points (including deceleration or passing lanes, distance from adjacent driveways or street intersection), sidewalks (width, pavement type and distance from street) and recreation areas. Written verification of any access easements or agreements for shared access or driveway curb return extending beyond the property line shall be required.

**Utilities:** Existing and proposed locations of utility services (with sizes), degrees of slope of sides of retention/detention ponds; calculations for size of storm drainage facilities; location of electricity and telephone poles and wires; location and size of surface mounted equipment for electricity and telephone services; location and size of underground tanks where applicable; location and size of outdoor incinerators; location and size of wells, septic tanks and drain fields; location of manholes, catch basins and fire hydrants; location, size, and inverts for storm and sanitary sewers, any public or private easements; notes shall be provided clearly indicating which existing services will remain and which will be removed.

**Grading and drainage:** A site grading plan for all developments where grading will occur, with existing and proposed topography at a minimum of two (2) foot contour intervals and with topography extending a minimum of twenty (20) feet beyond the site in all directions and a general description of grades within fifty (50) feet, and further where required to indicate stormwater runoff into an approved drain or detention/retention pond so as to clearly indicate cut and fill required. All finished contour lines are to be connected to existing contour lines at or before the property lines. A general description and location of the stormwater management system shall be shown on the grading plan. The Township Engineer may require detailed design information for any retention/detention ponds and stormwater outfall structures or basins. If MDEQ regulated wetlands are to be used, status of MDEQ permit application or copy of permit with attached conditions shall be provided.

**Landscape and screening:** A landscape plan indicating proposed ground cover and plant locations and with common plant name, number, and size at installation. For any trees over eight (8) inch caliper to be preserved. A detail shall be provided to illustrate protection around the tree's drip line. Berms, retaining walls or fences shall be shown with elevations or cross section from the surrounding average grade. The location, type and height of proposed fences shall be described.

**Waste receptacles:** Location of proposed outdoor trash container enclosures; size, typical elevation, and vertical section of enclosures; showing materials and dimensions in compliance with Zoning Ordinance Standards.

**Signs:** Locations of all signs including location, size, area type, height, and method of lighting. Note that all regulatory signs shall meet the standards from the Michigan Manual of Uniform Traffic Control Devices (MMUTCD).

**Lighting:** Details of exterior lighting including location, height, method of shielding and style of fixtures.

**Parking:** Parking, storage and loading/unloading areas, including the dimensions of typical space, aisle, and angle of spaces. The total number of parking and loading/unloading spaces to be provided and the method by which the required parking was calculated shall be noted.

The applicant shall erect flagged stakes at the perimeter points of the property to assist Township officials and staff in reviewing the site.



March 8, 2016

Planning Commission  
Genoa Township  
2911 Dorr Road  
Brighton, Michigan 48116

<b>Attention:</b>	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
<b>Subject:</b>	Gilden Woods Day Care – Site Plan Review #2
<b>Location:</b>	Grand Oaks Drive – vacant parcel on northwest side of Grand Oaks, west of Latson Road
<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 2/23/16) proposing a new day care facility for the vacant 2.19-acre site on the northwest side of Grand Oaks Drive. The site is part of the Livingston Commons PUD and is zoned NR-PUD. We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

**A. Summary**

1. The amount of indoor play area exceeds State requirements, but is slightly deficient by Township standards.
2. The proposed building elevation drawings do not meet the material standards of the PUD Agreement, which includes a minimum requirement of 80% natural materials to be used.
3. Planning Commission approval is required for the excess parking proposed (120% maximum allowed; 187% proposed).
4. Crosswalk striping needs to be added to the connection between the public and private sidewalks.
5. We request the applicant present the preferred alternative for vehicular circulation, given roadway constraints and to accommodate the required area for emergency response vehicles.
6. The depth of the concrete base pad for the waste receptacle must be extended.
7. The landscape plan is deficient in terms of buffer zone plantings along the side and rear lot lines.
8. Modifications are needed to the monument sign (height and style) to bring it into compliance with the Ordinance and PUD Agreement.
9. The Impact Assessment should be updated to reflect the correct number of parking spaces.

**B. Proposal**

The applicant requests site plan review and approval of a new child care facility with licensing for up to 164 children. The project includes a new 11,968 square foot building and related exterior site improvements. Child care facilities are permitted by right, but must comply with the specific use requirements of Section 7.02.02, as outlined in Section C of this letter.



**Gilden Woods**

Site Plan Review #2

Page 2



*Aerial view of site and surroundings (looking north)*

**C. Use Conditions (Child Care Facilities)**

Section 7.02.02(e) provides the following use conditions for child care facilities:

**Child day care shall provide a minimum of fifty (50) square feet of indoor play area for each child cared for. There shall be one hundred (100) square feet of outdoor play area for each child that would be using the play area at any one given time, provided the minimum outdoor play area shall be no less than one thousand (1,000) square feet. The required play area shall be fenced.**

Based on the number of children proposed, 8,200 square feet of indoor play area is required. The revised submittal notes that 8,111 square feet is provided, which results in a ratio of 49.5 square feet per child. While this does not meet the Township's standard, it exceeds the amount of space required by the State of Michigan. The applicant also notes that the site will not have all 164 children on site at any given time.

With respect to outdoor play area, the project includes 19,730 square feet of fenced outdoor play area, which exceeds the amount required by Ordinance.

**D. Site Plan Review**

**1. Dimensional Requirements.** As described in the table below, the project complies with the dimensional standards 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	175	50	20	20	20 front 10 side/rear	75' / 5 stories	35% building 85% impervious
Proposal	2.19	480	74	40.5 (W) 81.7 (N)	185	20 front 10 side/rear	19' / 1 story	12.5% building 35.2% impervious

- 2. Building Materials and Design.** The proposed elevations, including colors and materials, are subject to review and approval by the Planning Commission.

The front façade includes cement board siding with a stone veneer base and shake siding accents. The side and rear of the building are predominantly precast concrete panels with cement board trim as accents. The roof is peaked with asphalt shingles.

The PUD agreement states that the intent of building design within the PUD is to promote and encourage a development that incorporates varying building lines, natural earth tone construction materials (at least 80% of wall faces) and other elements intended to enhance the appearance of the development overall in the interest of visual aesthetics.

Building material calculations have been added to the elevation drawings; however, none of the building sides meets the requirement for 80% natural materials.

- 3. Parking and Vehicular Circulation.** Child care centers require 2 spaces plus 1 per each 8 children of licensed authorized capacity. While 43 parking spaces are proposed, sheet C-205 notes the need for 23 spaces for a facility licensed for 164 children. Given the excess amount of parking proposed, Planning Commission approval is required.

In response, the applicant notes that this development typically requires 40 to 50 spaces, an estimate based on other locations throughout the State. Furthermore, the additional parking is necessary for the number of employees anticipated (approximately 15).

Parking spaces and drive aisles either meet or exceed the dimensional standards of the Ordinance and the two required barrier-free spaces are provided.

- 4. Pedestrian Circulation.** An 8-foot wide concrete sidewalk is proposed along Grand Oaks Drive along with internal sidewalks between the building and parking lot. A connection is also provided between the Grand Oaks and internal sidewalks; however, crosswalk striping should be added across the driveway to alert drivers to the potential for pedestrians in this area.
- 5. Vehicular Circulation.** The revised plan includes two drive approaches along Grand Oaks Drive. There has been much discussion amongst the project team, Fire Department and Road Commission with respect to driveways and turn-arounds for emergency response vehicles.

A recent sketch provided to our office eliminated the southerly driveway and incorporated a “hammerhead” turn-around area for emergency vehicles. The preferred alternative is unclear at this point in the review process; however, our hope is that all parties involved present the best option to the Commission at next week’s meeting.

- 6. Waste Receptacle and Enclosure.** The project includes a new waste receptacle and enclosure at the north end of the parking lot. Section 12.04 requires a rear yard or non-required side yard location, unless otherwise approved by the Planning Commission. The proposed placement complies with these standards.

Details on Sheet A-22 identify a concrete base pad and a painted concrete enclosure, which is to match materials used on the building. Our only comment is that the depth of the concrete base pad must be extended to support the weight of refuse removal vehicles.

- 7. Exterior Lighting.** The revised submittal includes a lighting plan and fixture specifications. The lighting plan provides for 5 wall-mounted fixtures with a maximum on-site intensity of 7 footcandles. The proposed LED fixtures are downward directed and shielded, as per Ordinance requirements.

**8. Landscaping.** We have reviewed the landscape plan as follows:

Location	Requirements	Proposed	Comments
Front yard greenbelt	7 canopy trees 20' width	8 canopy trees 2 evergreen trees 1 existing tree 20' width	Requirements met
Parking lot	5 canopy trees 430 SF of landscaped area	5 canopy trees 966 SF of landscaped area	Requirements met
Buffer Zone "C" (N)	16 canopy trees OR 16 evergreen trees OR 64 shrubs 10' width	1 existing tree 10' width (minimum)	Additional plantings required
Buffer Zone "C" (W)	30 canopy trees OR 30 evergreen trees OR 120 shrubs 10' width	17 existing trees 15' width	Additional plantings required

**9. Signs.** The project proposes 1 wall sign and 1 monument sign. The wall sign's area is 20 square feet, while the monument sign is 32 square feet. Accordingly, the area of both signs is compliant. With that said, monument signs are limited to a maximum height of 6 feet, while the proposal is slightly taller.

Additionally, the PUD Agreement calls for channel or individual lettering, as opposed to panels. The wall sign appears to comply; however, the monument sign appears to be a sign panel.

The applicant must revise the proposed monument sign for compliance, as indicated above.

**10. Impact Assessment.** The submittal includes an Impact Assessment (not dated). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

Our only comment is that there is an incorrect reference to the amount of parking provided in Section D – 41 spaces noted; 43 actually proposed. We suggest this minor item be corrected for consistency with the site plan.

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 [penn@lslplanning.com](mailto:penn@lslplanning.com).

Sincerely,

**LSL PLANNING, INC.**



Brian V. Borden, AICP  
Principal Planner



Josh Penn  
Project Planner I



March 9, 2016

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

**Re: Gilden Woods Preschool Site Plan Review #2**

Dear Ms. Van Marter:

We have reviewed the updated impact assessment and site plan documents prepared by Nederveld, Inc. for the Gilden Woods preschool facility dated February 22, 2016. The site is on the north side of Grand Oaks Drive, east of Fendt Drive in the Livingston Commons PUD. The petitioner is planning to construct a 12,000 sft early care and preschool facility.

We offer the following comments for consideration by the planning commission:

**SUMMARY**

1. Show existing utility easements on site plan.

**SITE PLAN**

1. 20-foot-wide easement limits for existing water mains should be shown on the drawings.

The petitioner has successfully addressed all previous engineering comments. We recommend that the outstanding comment above be addressed on the construction drawings. Work regarding the public water main and sanitary sewer including extending hydrants and valves and service connections will require that the construction drawings receive an MHOG utility review, however no state permits appear to be necessary.

Please call if you have any questions.

Sincerely,

A blue ink signature of Gary J. Markstrom, written in a cursive style.

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

A blue ink signature of Joseph C. Siwek, written in a cursive style.

Joseph C. Siwek, P.E.  
Project Engineer

copy: Steve Witte, P.E., Nederveld, Inc.



# BRIGHTON AREA FIRE AUTHORITY

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

March 9, 2016

Kelly VanMarter  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: Gildden Woods Daycare  
Grand Oaks Drive  
Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on February 25, 2016 and the drawings are dated February 2, 2016 with latest revisions dated February 23, 2016. The project is based on a new 11,968 square foot Educational-use (Day-care) building. The facility will provide care for up to 164 children. This plan review is based on the requirements of the International Fire Code (IFC) 2015 edition.

1. Future project submittals shall include the address and street name of the project in the title block. **(Noted on drawing that address will be provided in accordance with item #2)**  
IFC 105.4.2
2. 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. **(Noted to be provided when assigned and construction begins)**  
IFC 505.1
3. The access onto and through the site shall be a minimum of 26' wide. With a width of 26' wide, the East curb edge must 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. **(Revised on drawing, signage added)**  
IFC D 103.6  
IFC 503.2.2
4. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 75,000 pounds. **(Revised by note on drawing)**  
IFC D 102.1
5. Access onto and through site access to building shall provide emergency vehicles with a turning radius of 50' outside and 30' inside radius wall to wall and a minimum vertical clearance of 13 ½ feet. **(Revised by note on drawing)**  
IFC 503.2.1
6. Access drives onto and on the site dead-ends beyond 150' limitation with means of turn-around for emergency vehicles. An approved emergency vehicle turn-around shall be provided and meet the design criteria of Appendix D Section 103.4, or an alternative access from these dead-ends shall be provided. This applies to the drive along the East side of the structure. **(As submitted the drawing was sufficient for emergency vehicle access. Since receipt of the submittal, further discussion has taken place and an alternative means of turn around has been proposed. The new proposal has been reviewed electronically and appears to meet the intent of the fire code requirements for emergency vehicle turn-around)**



**IFC 503.1.1**

7. The location of a key box (Knox Box) shall be located adjacent to the biometric locking system control at the main entrance. **(Revised by note on drawing)**

**IFC 506.1**

8. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor. **(Provided on Cover Sheet of drawing)**

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,

A handwritten signature in black ink, appearing to read "R. Boisvert".

Rick Boisvert  
Captain - Fire Inspector



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

## MEMORANDUM

**TO:** File

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

**DATE:** March 8, 2016

**RE:** Gilden Woods Connection Fees

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This memo will describe the water and sewer connection fees for the proposed Gilden Woods day care facility.

Using the formula for Child Care Centers in the Equivalent User Table which provides for 0.45 REU per 1,000 square feet the 11,968 center will necessitate 5.4 REUs.

**CONNECTION CHARGES:**

<b>Water</b>	5.4 REU @ \$7,900 (MHOG Water) =	\$ 42,660.00
<b>Sewer</b>	5.4 REU @ \$7,200 (G/O Sewer) =	\$ 38,880.00
<b>Total amount due:</b>		<b>\$ 81,540.00</b>

**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





# GILDEN WOODS – GRAND OAKS DRIVE

GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

## IMPACT ASSESSMENT

***A. Name and address of person responsible for preparation of the impact assessment and a brief statement of their qualifications.***

This narrative was written by:

Steve Witte, PE  
Nederveld, Inc.  
217 Grandville Avenue, SW  
Suite 302  
Grand Rapids, MI 49503

Mr. Witte has over 19 years of experience in site plan design, permitting, and plan approval. For typical site plans, Mr. Witte oversees the project from beginning to end – including due diligence, conceptual layouts, final layout, engineering design, attending meetings, and obtaining approvals from the municipality and affected agencies.

***B. Map(s) and written description/analysis of the project site including all existing structures, manmade facilities, and natural features. The analysis shall also included information for areas within 10 feet of the property. An aerial photograph or drawing may be used to delineate these areas.***

An aerial photograph is attached. The property is currently vacant. There are trees/vegetation along the west property line.

***C. Impact on natural features: A written description of the environmental characteristics of the site prior to development and following development, i.e., topography, soils, wildlife, woodlands, mature trees (eight-inch caliper or greater), wetlands, drainage, lakes, streams, creeks or ponds. Documentation by a qualified wetland specialist shall be required wherever the Township determines that there is a potential regulated wetland. Reduced copies of the Existing Conditions Map(s) or aerial photographs may accompany written material.***

The site plan includes an existing conditions plan that illustrates the topography of the site, as well as the existing trees/vegetation on the property

The topography of the site varies from a high elevation of approximately 1032 near the north end of the property, down to a low elevation of approximately 1022 at the south end of the property. Grand Oaks Drive is at an elevation of approximately 1025. The proposed grading of the site follows as closely as possible the existing grades of the site, while attempting to balance the grading. This minimizes impact to the area and reduces hauling soil to/from the site.



Based on the USDA Soil Survey Maps, the site soil is Conover Loam and Miami Loam.

This property is part of the Livingston Commons PUD and has been intended for development. As much of the vegetation as possible will remain, and a large portion of the property will remain green. This will provide habitat for any wildlife that may be in the area.

As mentioned above, the site plan illustrates the trees/vegetation on the property. The larger/more mature trees along/on the west property line will remain, as shown on the site plan set. The proposed playground fence will be located 25 ft off the west property line to protect/preserve as much of the vegetation as possible.

A copy of the US Fish and Wildlife Service National Wetlands Inventory Map does not illustrate wetland on the property. To our knowledge, there are no wetland present on this site.

Currently, the storm water runoff from the site sheet flows to the south. Per the original PUD approval, as part of their ramp construction, MDOT has provided regional storm water holding for this site/area. An 18" storm lead has been provided to the southeast corner of the property, which is where the storm water runoff from the site will be directed/discharged to.

There are no lakes, streams, creeks or ponds in the vicinity of this property.

***D. Impact on stormwater management: Description of measures to control soil erosion and sedimentation during grading and construction operations and until a permanent ground cover is established. Recommendations for such measures may be obtained from the Livingston County Drain Commission at (517) 546-0040.***

Best Management Practices will be utilized during and after construction to reduce/eliminate soil erosion on the site. The Soil Erosion Control Measures are indicated on the Grading and Utility Plan that is in the site plan set. A SESC permit will be obtained from Livingston County prior to start of construction, and all of the county's requirements will be met.

***E. Impact on surrounding land used: Description of the types of proposed uses and other man-made facilities, including any project phasing, and an indication of how the proposed use conform or conflicts with existing and potential development patterns. A description shall be provided of any increases of light, noise or air pollution which could negatively impact adjacent properties.***

The project involves construction of an approximate 11,968sf building that will be used as a day care facility. In addition to the building, an outdoor play area will be provided, as well as 42 parking spaces. The facility will be licensed for up to 164 children. The proposed use is consistent with commercial uses that are normally allowed in commercial districts and the surrounding area. The proposed use compliments the areas commercial uses and provides a needed service to the area and the community.

The project will be completed in one phase, with construction beginning promptly pending approvals and permits. It is envisioned that construction of the project will be completed in 2016.

All lighting on the project will be shielded with full cut off fixtures. The project will not create any air pollution. The only noise generated from the site will be a minimal amount of noise from the playground area. Note that the children are taken to the playground in smaller groups of children (32-40 children at one time), and the outdoor play is always supervised by staff who are outside with the children. The traffic generated from the site is consistent with other commercial uses and will not have a negative impact on adjacent properties.

***F. Impact on public facilities and services: Describe the number of expected residents, employees, visitors, or patrons, and the anticipated impact on public schools, police protection and fire protection. Letters from the appropriate agencies may be provided, as appropriate.***

The facility will be licensed for up to approximately 164 children. There will be approximately 25-30 total people employed by Gilden Woods to operate the site, with approximately 15 of them working at any given time.

On an average day, it is anticipated that there will be approximately 130 children at the site. The busiest time of day for drop off will be between 7:30 and 8:30 am, when it is anticipated that there will be approximately 40 families dropping their children off. Regarding traffic and safety internal to the site, please note that Gilden Woods requires all people dropping off and picking up their children to walk their children to/from the building. Therefore, no children will be outside by themselves and no formal drop off area is required or desired. Access to the site will be via a single drive entrance off Grand River Avenue.

This use will not have any impact to the public schools, as the use serves residents that are already living in the area. There is adequate police and fire protection to this area.

***G. Impact on public utilities: Describe the method to be used to service the development with water and sanitary sewer facilities, the method to be used to control drainage on the site and from the site, including runoff control during periods of construction. For sites serviced with sanitary sewer, calculations for pre- and post development flows shall be provided in comparison with sewer line capacity. Expected sewage rates shall be provided in equivalents to a single family home. Where septic systems are proposed, documentation or permits from the Livingston County Health Department shall be provided.***

The proposed building will be serviced by public sanitary sewer and watermain. There is a 12" watermain running along the north side of Grand Oaks Drive. There is an 8" sanitary sewer main on the south side of Grand Oaks Drive, and a 6" sanitary sewer lateral has been stubbed to the property. The proposed use uses a relatively small amount of water, and is roughly the equivalent of 1 to 2 residential homes.

For drainage, on-site drainage catchbasins have been provided that will collect the storm water runoff from the site and direct the runoff to the existing 18" storm sewer lead that was provided to the site. It is our understanding that a regional storm water holding area has been provided for the entire PUD, including this property, as part of the MDOT work on the highway ramps.

***H. Storage and handling of any hazardous materials: A description of any hazardous substances expected to be used, stored or disposed of on the site. The information shall describe the type of materials, location within the site and method of containment. Documentation of compliance with federal and state requirements, and a Pollution Incident Prevention Plan (PIPP) shall be submitted, as appropriate.***

The site does not use, store or dispose of any hazardous substances.

***I. Impact on Traffic and Pedestrians: A description of the traffic volumes to be generated based on national reference documents, such as the most recent edition of the Institute of Transportation Engineers Trip Generation Manual, other published studies or actual counts of similar uses in Michigan. A detailed traffic impact study shall be submitted for any site over ten (10) acres in size which would be expected to generate 100 directional vehicle trips (i.e. 100 inbound or 100 outbound trips) during the peak hour of traffic of the generator or on the adjacent streets.***

The center will be licensed for approximately 164 children. On an average day, it is anticipated that there will be approximately 130 children at the site. The busiest time of day for drop off/pick up will be between 7:30 and 8:30 am, when a typical Gilden Woods has approximately 40 families dropping their children off. Regarding traffic and safety internal to the site, please note that Gilden Woods requires all people dropping off and picking up their children to walk their children to/from the building. Therefore, no children will be outside by themselves and no formal drop off area is required or desired.

***J. Special Provisions: General description of any deed restrictions, protective covenants, master deed or association bylaws.***

The project is located in the Livingston Commons PUD and shall be abide by the requirements of the approved PUD. We are not aware of any other deed restrictions, protective covenants, master deed, or association bylaws.

***K. A list of all sources shall be provided.***

USDA Soil Survey Map

National Wetland Inventory Map

Survey information from Nederveld, Inc.

Traffic and business operations information from Gilden Woods



Howell N



Grand Oaks Dr,  
Howell, MI 48843

Clarey University  
Clarey College

Clarey University

Lowe's Home Improvement

Wal-Mart Pharmacy (inside Wal-Mart)

S Latson Rd

Caesar's Pizza

Little W  
Los Tres W  
Amigos

Art Van Furniture - Howell

Figurski Dr

Whitehorse Rd

Howell MI

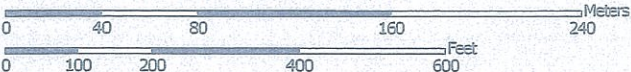


# USDA SOIL SURVEY MAP

Soil Map—Livingston County, Michigan



Map Scale: 1:2,960 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84


































Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

1/29/2016  
Page 1 of 3



## MAP LEGEND

 Area of Interest (AOI)	 Spoil Area
 Soils	 Stony Spot
 Soil Map Unit Polygons	 Very Stony Spot
 Soil Map Unit Lines	 Wet Spot
 Soil Map Unit Points	 Other
 Special Point Features	 Special Line Features
 Blowout	 Water Features
 Borrow Pit	 Streams and Canals
 Clay Spot	 Transportation
 Closed Depression	 Rails
 Gravel Pit	 Interstate Highways
 Gravelly Spot	 US Routes
 Landfill	 Major Roads
 Lava Flow	 Local Roads
 Marsh or swamp	 Background
 Mine or Quarry	 Aerial Photography
 Miscellaneous Water	
 Perennial Water	
 Rock Outcrop	
 Saline Spot	
 Sandy Spot	
 Severely Eroded Spot	
 Sinkhole	
 Slide or Slip	
 Sodic Spot	

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

**Warning:** Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Livingston County, Michigan  
 Survey Area Data: Version 13, Sep 18, 2015

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 18, 2011—Mar 21, 2012

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

## Map Unit Legend

Livingston County, Michigan (MI093)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CvA	Conover loam, 0 to 2 percent slopes	2.8	7.2%
MoB	Miami loam, 2 to 6 percent slopes	36.5	92.8%
<b>Totals for Area of Interest</b>		<b>39.4</b>	<b>100.0%</b>





**Wetlands**

- Wetlands
- Riparian
- Riparian Mapping Areas
- Data Source
- Source Type
- Image Scale
- Image Year
- Areas of Interest
- FWS Refuges
- Historic Wetland Data

**Wetlands Mapping Attributes**

- Estuarine and Marine Deciduous
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- No Data







*We provide quality, educational child care in a safe and nurturing environment.*

### **Company Narrative**

Gilden Woods Early Care and Preschool centers provide high quality child care and education to children 6 weeks to 12 years old, in a safe, nurturing environment where children can learn, play, and grow at their own pace. The schools are specifically designed to foster engaging, interactive learning that promotes Kindergarten Readiness and future school success.

Centers provide infant and toddler care and full- and half-day preschool. Before- and after-school care and fun, educational spring break, winter holiday, and summer day camps, are offered for school aged children. Transportation to and from several local schools is included in tuition.

With 15 schools open in Grand Rapids, Kalamazoo, Oshtemo, and East Lansing, Gilden Woods is a family of child care centers. The company has grown from 12 employees in 1998 to over 500 in 2015. We are celebrating 16 years of providing high quality child care and education in a safe, nurturing environment and are looking forward to the opening of additional Gilden Woods locations in 2015.

Our schools may provide care and education to up to (approximately):

- 12 children aged 6 weeks – 6 months
- 12 children aged 6 months – 12 months (1 year)
- 16 children aged 12 months (1 year) – 18 months
- 16 children aged 18 months – 24 months (2 years)
- 16 children aged 24 months (2 years) – 30 months
- 16 children aged 30 months – 36 months (3 years)
- 20 children aged 3 years – 4 years
- 24 children aged 4 years – 5 years
- 36 children aged 5 years and older – Young 5's and School Age (Before & After School Care and Explorers programs during school breaks in the spring, summer, and winter)

**Corporate Office**  
770 Kenmoor Ave SE Suite 100  
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**Nederveld**

Project:	Gilden Woods
Project #:	15500079
Date:	2/2/2006
Revised:	3/9/2016

**DRAINAGE CALCULATIONS FOR GILDEN WOODS**

**Information For Determining Runoff Coefficient**

**C-DEVELOPED**

A. Impervious Area (C=1.00)	Length (ft)	Width (ft)	Area (s.f.)	Quantity	Total Area	
					(s.f.)	Area (Ac)
Building	1	1	11968	1	11968	0.27
Asphalt (includes stub to north)	1	1	20700	1	20700	0.48
Concrete	1	1	4700	1	4700	0.11
Total						0.86

<b>B. 'Green' Area</b>	C=	0.20	
Total site area			95614 sf
Total impervious area			0.86
Change in impervious area			0.86
Total 'Green' area			1.34

**C. Calculate C-dev** =  $(1.0(\text{area } 1.0) + \text{Green Area } C(\text{Green Area})) / \text{total area}$  C-dev = 0.51

**NOTE: REGIONAL DETENTION OF STORM WATER IS PROVIDED.**



**Nederfeld**

Project:	Gilden Woods
Project #:	15500079
Date:	2/2/06

Revised: 3/9/2016

**Storm Sewer Design: 10 Year Storm  
MODEL OF DEVELOPED AREAS**

From	To	C*	Factored C, overall area	Time (min)**	Time Inc. (min)	Area Increment	Total Area (acres)	I (in/hr)	Q (cfs)	Full Flow Capacity (cfs)	L (ft)	Pipe Size (in)	Type of Pipe	Full Flow HGL (%)	Actual Pipe Grade (%)	Full Flow Velocity (ft/s)
	Blg	1	0.90	0.90	15.0	0.27	0.263	3.80	0.90	1.31	42	8	P	0.47	1.00	2.58
	1	2	0.20	0.59	15.3	0.84	0.474	3.78	1.05	2.18	68	12	P	0.07	0.32	1.34
	2	3	0.90	0.69	16.1	0.91	0.225	3.70	1.78	2.18	124	12	P	0.21	0.32	2.27
	3	4	0.90	0.75	17.0	0.61	0.273	3.62	2.63	2.73	122	12	P	0.47	0.50	3.35
	4	Existing	0.20	0.20	15.0	2.99	0.571	3.80	0.43	2.18	99	12	P	0.01	0.32	0.55
	Existing		0.90	0.59	18.0	0.50	0.229	3.53	3.70	4.95	91	15	P	0.28	0.50	3.02

**Formulas and Constants**

**Rational Equation**

$Q = C \cdot I \cdot A$ , where

- Q = Flow (cfs)
- C = Rational Coefficient
- i = Rainfall Intensity (in/hr)
- A = Tributary Area (ac)

**Mannings Equation**

$Q = (1.486/n) \times (R^{2/3}) \times S^{1/2} \times A$ , where

- Q = Flow (cfs)
- n = Mannings Roughness Coef.
- R = Hydraulic Radius
- S = Slope of Pipe (ft/ft)
- A = Area of Flow (sq. ft)

**Manning Roughness Coefficients**

Concrete	C	0.013
Cor. Metal	CM	0.024
Plastic	P	0.012

\* A Runoff Coefficient of 0.90 is used for drainage areas that consist mainly of pavement (this is conservative as it does not factor in a lower C-value for lawn areas).  
 A Runoff Coefficient of 0.20 is used for drainage areas that consist of lawn/grass.

\*\* An initial Time of Concentration of 15 minutes is used for storm sewer pipe sizing.









# D-Series Size 2 LED Wall Luminaire



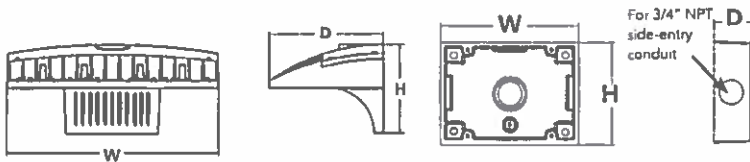
d"series

## Specifications Luminaire

**Width:** 18-1/2" (47.0 cm)  
**Depth:** 10" (25.4 cm)  
**Height:** 7-5/8" (19.4 cm)  
**Weight:** 21 lbs (9.5 kg)

## Back Box (BBW)

**Width:** 5-1/2" (14.0 cm)  
**Depth:** 1-1/2" (3.8 cm)  
**Height:** 4" (10.2 cm)  
**BBW Weight:** 1 lbs (0.5 kg)



Catalog Number	
Notes	
Type	A

## Introduction

The D-Series Wall luminaire is a stylish, fully integrated LED solution for building-mount applications. It features a sleek, modern design and is carefully engineered to provide long-lasting, energy-efficient lighting with a variety of optical and control options for customized performance.

With an expected service life of over 20 years of nighttime use and up to 76% in energy savings over comparable 400W metal halide luminaires, the D-Series Wall is a reliable, low-maintenance lighting solution that produces sites that are exceptionally illuminated.

## Ordering Information

EXAMPLE: DSXW2 LED 30C 700 40K T3M MVOLT DBBTD

DSXW2 LED													
Series	LEDs	Drive Current	Color temperature	Distribution	Voltage	Mounting	Control Options	Other Options	Finish (optional)				
DSXW2 LED	20C 20 LEDs (two engines)	350 350 mA	30K 3000 K	T2S Type II Short	MVOLT <sup>1</sup>	Shipped included (blank) Surface mounting bracket	Shipped installed	Shipped installed	DDBXD Dark bronze				
		530 530 mA	40K 4000 K	T2M Type II Medium	120 <sup>1</sup>					PE Photoelectric cell, button type <sup>4</sup>	SF Single fuse (120, 277, 347V) <sup>7</sup>		
30C 30 LEDs (three engines)	700 700 mA	50K 5000 K	50K 5000 K	T3S Type III Short	208 <sup>1</sup>	Shipped separately <sup>3</sup> BBW Surface-mounted back box (for conduit entry)	PER NFMA twist-lock receptacle only (no controls)	DF Double fuse (208, 240, 480V) <sup>7</sup>	DNAXD Natural aluminum				
		1000 1000 mA (1 A)	AMBPC Amber phosphor converted	T3M Type III Medium	240 <sup>1</sup>					HS House-side shield <sup>8</sup>	DWHXD White		
				T4M Type IV Medium	277 <sup>1</sup>					DMG 0-10V dimming driver (no controls)	SPD Separate surge protection <sup>1</sup>	DSSXD Sandstone	
				T4M Type IV Medium	347 <sup>1</sup>					DCR Dimmable and controllable via ROAM <sup>®</sup> (no controls) <sup>5</sup>		Shipped separately <sup>1</sup>	DBLBDX Textured dark bronze
				T4M Type IV Medium	480 <sup>1</sup>					PIRH 180° motion/ambient light sensor, 15-30' mty ht <sup>6</sup>		BSW Bird-deterrent spikes	DNATXD Textured natural aluminum
				T4M Type IV Medium								WG Wire guard	DWHGXD Textured white
		T4M Type IV Medium				VG Vandal guard	DSSTXD Textured sandstone						

### NOTES

- 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).
- Available with 30 LED/700mA options only (DSXW2 LED 30C 700). DMG option not available.
- Also available as a separate accessory; see Accessories information.
- Photocontrol (PE) requires 120, 208, 240 or 277 voltage option. Not available with motion/ambient light sensors (PIR or PIRH).
- Specifies a ROAM<sup>®</sup> enabled luminaire with 0-10V dimming capability; PER option required. Not available with 347V, 480V or PIRH. Additional hardware and services required for ROAM<sup>®</sup> deployment; must be purchased separately. Call 1-800-442-6745 or email: sales@roam-services.net.
- Specifies the Sensor Switch SBGR-6-DDP control; see Motion Sensor Guide for details. Includes ambient light sensor. Not available with "PE" option (button type photocell) or DCR. Dimming driver standard.
- Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
- See the electrical section on page 2 for more details.
- Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item.

## Accessories

Ordered and shipped separately.

DLL127F 1.5 CU	Photocell - SSL twist-lock (120-277V) <sup>1</sup>
DLL147F 1.5 CU LU	Photocell - SSL twist-lock (347V) <sup>1</sup>
DLL480F 1.5 CU LU	Photocell - SSL twist-lock (480V) <sup>1</sup>
SC U	Shorting cap <sup>1</sup>
DSXVHS U	House-side shield (one per light engine)
DSXVBS U	Bird deterrent spikes
DSXVWG U	Wire guard accessory
DSXVVG U	Vandal guard accessory
DSXV2BBW DDBXD U	Back box accessory (specify finish)



## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

LEDs	Drive Current (mA)	System Watts	Dist. Type	35K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	
20C (20 LEDs)	530	36W	T2S	3,649	1	0	1	101	3,876	1	0	1	108	3,429	1	0	1	95	
			T2M	3,478	1	0	1	97	3,694	1	0	1	103	3,267	1	0	1	91	
			T3S	3,609	1	0	1	100	3,833	1	0	1	106	3,390	1	0	1	94	
			T3M	3,572	1	0	1	99	3,794	1	0	1	105	3,356	1	0	1	93	
			T4M	3,500	1	0	2	97	3,717	1	0	2	103	3,288	1	0	1	91	
			FTM	3,638	1	0	1	101	3,864	1	0	1	107	3,418	1	0	1	95	
			ASYDF	3,252	1	0	2	90	3,454	1	0	2	96	3,056	1	0	2	85	
			T2S	4,502	1	0	1	96	4,776	1	0	1	102	4,794	1	0	1	102	
			T2M	4,290	1	0	1	91	4,552	1	0	1	97	4,569	1	0	1	97	
	T3S	4,452	1	0	1	95	4,723	1	0	2	100	4,741	1	0	2	101			
	T3M	4,407	1	0	2	94	4,675	1	0	2	99	4,693	1	0	2	100			
	T4M	4,318	1	0	2	92	4,581	1	0	2	97	4,598	1	0	2	98			
	FTM	4,488	1	0	2	95	4,761	1	0	2	101	4,779	1	0	2	102			
	ASYDF	4,012	1	0	2	85	4,257	1	0	2	91	4,273	1	0	2	91			
	T2S	5,963	2	0	2	81	6,327	1	0	1	84	6,351	1	0	1	85			
	T2M	5,681	2	0	2	77	6,029	1	0	2	80	6,052	1	0	2	81			
	T3S	5,896	1	0	2	80	6,256	1	0	2	83	6,280	1	0	2	84			
	T3M	5,837	2	0	3	79	6,193	1	0	2	83	6,216	1	0	2	83			
	T4M	5,719	1	0	2	77	6,067	1	0	2	81	6,090	1	0	2	81			
	FTM	5,944	1	0	2	80	6,307	1	0	2	84	6,330	1	0	2	84			
	ASYDF	5,314	1	0	2	72	5,638	2	0	2	75	5,660	2	0	2	75			
	30C (30 LEDs)	530	54W	T2S	4,333	1	0	1	80	5,280	1	0	1	98	5,769	1	0	1	107
				T2M	4,216	1	0	1	78	5,137	1	0	2	95	5,613	1	0	2	104
				T3S	4,279	1	0	1	79	5,214	1	0	1	97	5,696	1	0	1	105
T3M				4,349	1	0	2	81	5,298	1	0	2	98	5,789	1	0	2	107	
T4M				4,291	1	0	1	79	5,228	1	0	2	97	5,712	1	0	2	106	
FTM				4,267	1	0	1	79	5,223	1	0	2	97	5,707	1	0	2	106	
T2S				5,346	1	0	1	75	6,513	1	0	1	92	7,118	2	0	2	100	
T2M				5,201	1	0	2	73	6,337	2	0	2	89	6,925	2	0	2	98	
T3S				5,279	1	0	1	74	6,431	1	0	2	91	7,028	1	0	2	99	
T3M		5,365	1	0	2	76	6,536	1	0	2	92	7,143	2	0	3	101			
T4M		5,293	1	0	2	75	6,449	1	0	2	91	7,047	1	0	2	99			
FTM		5,289	1	0	2	74	6,444	1	0	2	91	7,042	1	0	2	99			
1000		109W	T2S	7,137	2	0	2	65	8,697	2	0	2	80	9,501	2	0	2	87	
			T2M	6,944	2	0	2	64	8,462	2	0	2	78	9,244	2	0	2	85	
			T3S	7,047	1	0	2	65	8,588	1	0	2	79	9,381	2	0	2	86	
			T3M	7,162	2	0	3	66	8,728	2	0	3	80	9,534	2	0	3	87	
			T4M	7,066	1	0	2	65	8,611	1	0	2	79	9,407	2	0	2	86	
			FTM	7,060	1	0	2	65	8,604	2	0	2	79	9,399	2	0	2	86	

**Note:**  
Available with phosphor-converted amber LED's (nomenclature AMBPC). These LED's produce light with 97+% >530 nm. Output can be calculated by applying a 0.7 factor to 4000 K lumen values and photometric files.



## Performance Data

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	1.00
40°C	104°F	0.98

### Electrical Load

LEDs	Drive Current (mA)	System Watts	Current (A)					
			72W	200V	240V	277V	347V	480V
20C	350	25 W	0.23	0.13	0.12	0.10	-	-
	530	36 W	0.33	0.19	0.17	0.14	-	-
	700	47 W	0.44	0.25	0.22	0.19	-	-
	1000	73 W	0.68	0.39	0.34	0.29	-	-
30C	350	36 W	0.33	0.19	0.17	0.14	-	-
	530	54 W	0.50	0.29	0.25	0.22	-	-
	700	71 W	0.66	0.38	0.33	0.28	0.23	0.18
	1000	109 W	1.01	0.58	0.50	0.44	-	-

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the DSXW2 LED 30C 1000 platform in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

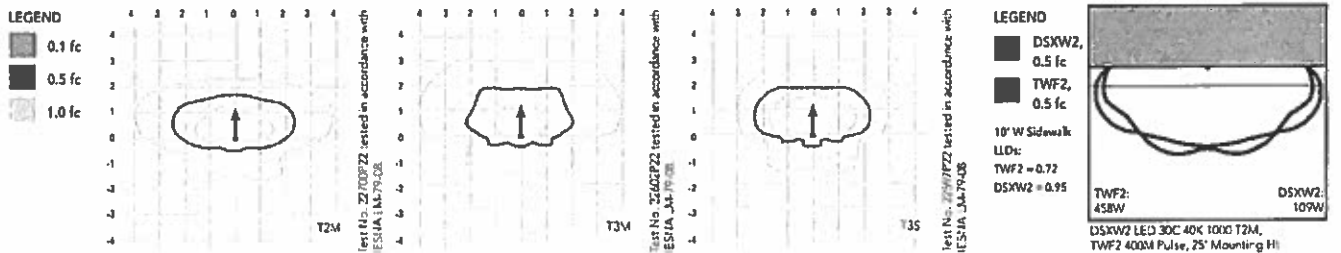
To calculate LM, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	0.95	0.92	0.87

## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Wall Size 2 homepage.

Isfootcandle plots for the DSXW2 LED 30C 1000 40K. Distances are in units of mounting height (25').



## FEATURES & SPECIFICATIONS

### INTENDED USE

The energy savings, long life and easy-to-install design of the D-Series Wall Size 2 make it the smart choice for building-mounted doorway and pathway illumination for nearly any facility.

### CONSTRUCTION

Two-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance. The LED driver is mounted to the door to thermally isolate it from the light engines for low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65).

### FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in textured and non-textured finishes.

### OPTICS

Precision-molded proprietary acrylic lenses provide multiple photometric distributions tailored specifically to building mounted applications. Light engines are available in 3000 K (80 min. CR), 4000 K (70 min. CR) or 5000 K (70 CR) configurations.

### ELECTRICAL

Light engine(s) consist of 10 high-efficacy LEDs mounted to a metal-core circuit board to maximize heat dissipation and promote long life (L87/100,000 hrs at 25°C). Class 1 electronic drivers have a power factor >90%, THD <20%, and a minimum 2.5KV surge rating. When ordering the SPD option, a separate surge protection device is installed within the luminaire which meets minimum Category C Low (per ANSI/IEEE C62.41.2).

### INSTALLATION

Included universal mounting bracket attaches securely to any 4" round or square outlet box for quick and easy installation. Luminaire has a slotted gasket wireway and attaches to the mounting bracket via corrosion-resistant screws.

### LISTINGS

CSA certified to U.S. and Canadian standards. Rated for -40°C minimum ambient.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org](http://www.designlights.org) to confirm which versions are qualified.

### WARRANTY

Five year limited warranty. Full warranty terms located at [www.acuitybrands.com/CustomerResources/Terms\\_and\\_conditions.aspx](http://www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx)

**Note:** Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.







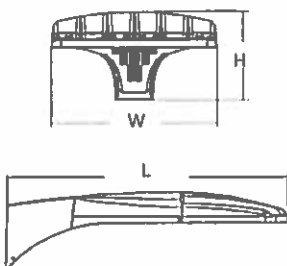
# D-Series Size 0 LED Area Luminaire



d"series

## Specifications

EPA:	0.8 ft <sup>2</sup> (0.07 m <sup>2</sup> )
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height:	7" (17.8 cm)
Weight (max):	16 lbs (7.25 kg)



Catalog Number	
Notes	
Type	B

## 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 up to 400W metal halide with typical energy savings of 65% and expected service life of over 100,000 hours.

## Ordering Information

EXAMPLE: DSX0 LED 40C 1000 40K T3M MVOLT SPA DDBXD

Series	LED	Drive current	Color temperature	Distribution	Voltage	Mounting	
DSX0 LED	Forward optics	530 530 mA	30K 3000 K 80 (CRI min.)	T1S Type I short	MVOLT <sup>11</sup>	Shipped included	
		700 700 mA	40K 4000 K (70 (CRI min.)	T2S Type II short			
	Rotated optics <sup>1</sup>	1000 1000 mA (1 A) <sup>2</sup>	50K 5000 K (70 (CRI)	T2M Type II medium	TFTM Forward throw medium	120 <sup>4</sup>	SPA Square pole mounting
		30C 30 LEDs (one engine)	AMBPC Amber phosphor converted <sup>3</sup>	T3S Type III short	T5VS Type V very short	208 <sup>4</sup>	RPA Round pole mounting
				T3M Type III medium	T5S Type V short	240 <sup>4</sup>	WBA Wall bracket
				T4M Type IV medium	T5M Type V medium	277 <sup>4</sup>	SPUMBA Square pole universal mounting adaptor <sup>1</sup>
					TSW Type V wide	347 <sup>4</sup>	RPUMBA Round pole universal mounting adaptor <sup>1</sup>
						480 <sup>4</sup>	Shipped separately <sup>2</sup>
							KMAB DDBXD U Mast arm mounting bracket adaptor (specify finish)

Control options	Other options	Finish (specify)
<p>Shipped installed</p> <p>PER NEMA twist-lock receptacle only (no controls)<sup>11</sup></p> <p>PERS Five-wire receptacle only (no controls)<sup>11</sup></p> <p>PER7 Seven-wire receptacle only (no controls)<sup>11</sup></p> <p>DMG 0-10V dimming driver (no controls)<sup>11</sup></p> <p>DCR Dimmable and controllable via ROAM<sup>®</sup> (no controls)<sup>11</sup></p> <p>PIR Motion sensor, 8-15' mounting height<sup>11</sup></p> <p>PIRH Motion sensor, 15-30' mounting height<sup>11</sup></p>	<p>Shipped installed</p> <p>HS House-side shield<sup>14</sup></p> <p>SF Single fuse (120, 277, 347V)<sup>11</sup></p> <p>DF Double fuse (208, 240, 480V)<sup>11</sup></p> <p>L90 Left rotated optics<sup>1</sup></p> <p>R90 Right rotated optics<sup>1</sup></p> <p>DDL Diffused drop lens<sup>14</sup></p>	<p>DDBXD Dark bronze</p> <p>DBLXD Black</p> <p>DHAXD Natural aluminum</p> <p>DWHXD White</p> <p>DDBTXD Textured dark bronze</p> <p>DBLTXD Textured black</p> <p>DNATXD Textured natural aluminum</p> <p>DWHGXD Textured white</p>

### Accessories

Ordered and shipped separately.

DL1127F 1.5 CU	PhotoCell - SSL twist-lock (120-277V) <sup>11</sup>
DL1147F 1.5 CU U	PhotoCell - SSL twist-lock (147V) <sup>11</sup>
DL1148DF 1.5 CU U	PhotoCell - SSL twist-lock (480V) <sup>11</sup>
SCU	Shorting cap <sup>11</sup>
DSX0-15-20C U	House-side shield for 20 LED unit <sup>14</sup>
DSX0-15-30C U	House-side shield for 30 LED unit <sup>14</sup>
DSX0-15-40C U	House-side shield for 40 LED unit <sup>14</sup>
DSX0DDL U	Diffused drop lens (polycarbonate) <sup>14</sup>
PUMBA DDBXD U <sup>1</sup>	Square and round pole universal mounting bracket adaptor (specify finish)
KMAB DDBXD U	Mast arm mounting bracket adaptor (specify finish) <sup>1</sup>

- ### NOTES
- 30 LEDs (30C opt'n) and rotated options (L90 or R90) only available together.
  - 1000mA is not available with AMBPC.
  - 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, 530 mA product (20C 530 or 30C 530).
  - 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.
  - If ROAM mode required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Not available with DCR.
  - DMG option for 347v or 480v requires 1000mA.

- Specifies a ROAM<sup>®</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>®</sup> deployment; must be purchased separately. Call 1-800-442-6745 or email sales@roamservices.net. N/A BL30, BL50, PIR, or PIRH.
- PIR specifies the SensorSwitch SBGR 10-ODP control; PIRH specifies the SensorSwitch SLGR 4-GDP control; see Motion Sensor Guide for details. Dimming driver standard. Not available with DCR.
- Requires an additional switched circuit. Dimming driver standard. MVOLT only. Not available with DCR.
- Also available as a separate accessory; see Accessories information. HS and DDL are not available together.
- Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
- Requires luminaire to be specified with PER option. Ordered and shipped as a separate line item from Acuity Brands Controls.

For more control opt'n, visit [www.abl.com](http://www.abl.com) and [www.lithonia.com](http://www.lithonia.com)

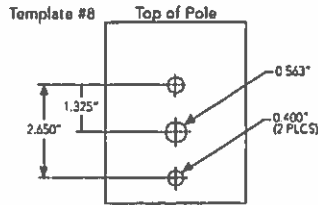


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DSX0-LED  
Rev. 06/09/15

## Drilling



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

DM19AS	Single unit	DM29AS	2 at 90° *
DM20AS	2 at 180°	DM39AS	3 at 90° *
DM49AS	4 at 90° *	DM32AS	3 at 120° **

Example: SSA 28 4C DM19AS DDBXD

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

\*No end pole top must be 2.25" O.D. minimum.

\*\*For round pole mounting ONLY 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

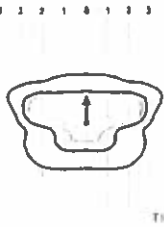
## Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area homepage.

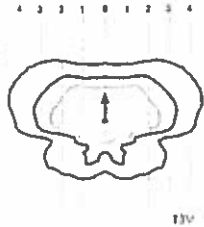
Isofootcandle plots for the DSXD LED 40C 1000 40K. Distances are in units of mounting height (20').

### LEGEND

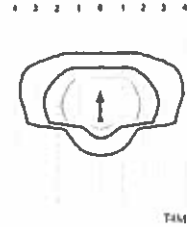
0.1 fc	4
0.5 fc	2
1.0 fc	1



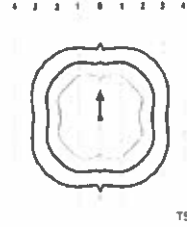
Test file: LT1232352P25 tested in accordance with IESNA LM-79-08



Test file: LT1232352P25 tested in accordance with IESNA LM-79-08



Test file: LT1232352P25 tested in accordance with IESNA LM-79-08



Test file: LT1232352P25 tested in accordance with IESNA LM-79-08

## Performance Data

### Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.02
10°C	50°F	1.01
20°C	68°F	1.00
25°C	77°F	1.00
30°C	86°F	1.00
40°C	104°F	0.99

### Electrical Load

Number of D.Six	D.Six (square foot)	System Watts	Current (A)					
			120	208	240	277	347	480
28C	530	35	0.34	0.22	0.21	0.20	—	—
	700	45	0.47	0.28	0.24	0.22	0.18	0.14
	1090	72	0.76	0.45	0.39	0.36	0.36	0.26
36C	530	57	0.51	0.31	0.28	0.25	—	—
	700	76	0.72	0.43	0.37	0.34	0.25	0.19
	1090	104	1.11	0.64	0.56	0.49	0.47	0.34
40C	530	68	0.71	0.41	0.36	0.33	0.25	0.19
	700	91	0.94	0.55	0.48	0.42	0.33	0.24
	1090	138	1.45	0.84	0.73	0.64	0.69	0.50

### Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	DSXD LED 20C 1000			
	1	0.97	0.94	0.90
	DSXD LED 40C 1000			
	1	0.94	0.90	0.84
DSXD LED 40C 700				
1	0.99	0.98	0.96	



## Performance Data

### Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics																								
LEDs	Drive Current (mA)	System Watts	Dist Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AMBPC (Amber Phosphor Converted)					
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	
20C (20 LEDs)	500mA	35W	T15	3,174	1	0	1	91	3,971	1	0	1	113	4,001	1	0	1	114	2,541	1	0	1	73	
			T25	3,234	2	0	1	92	4,045	2	0	1	116	4,075	1	0	1	116	2,589	1	0	2	74	
			T2M	3,171	2	0	1	91	3,967	2	0	1	113	3,997	1	0	1	114	2,539	2	0	1	73	
			T35	3,195	2	0	1	91	3,997	2	0	1	114	4,027	1	0	1	115	2,558	1	0	2	73	
			T3M	3,226	1	0	2	92	4,036	1	0	1	115	4,066	1	0	1	116	2,583	1	0	1	74	
			T4M	3,210	2	0	1	92	4,015	1	0	1	113	4,045	1	0	1	116	2,570	1	0	1	73	
			TFTM	3,173	1	0	1	91	3,969	2	0	2	113	3,999	1	0	2	114	2,540	1	0	2	73	
			TSVS	3,310	2	0	0	95	4,140	2	0	0	110	4,172	2	0	0	119	2,650	1	0	0	76	
			TSS	3,360	2	0	2	96	4,203	2	0	0	120	4,235	2	0	0	121	2,690	1	0	0	77	
			TSM	3,320	2	0	2	95	4,153	2	0	1	119	4,184	3	0	1	120	2,658	2	0	0	76	
			TSW	3,322	3	0	1	95	4,161	2	0	1	119	4,193	3	0	2	110	2,663	2	0	2	76	
			T25	3,927	1	0	2	87	4,913	2	0	1	109	4,950	1	0	2	114	3,144	2	0	2	70	
	T2S	4,000	2	0	1	89	5,004	2	0	1	111	5,042	1	0	2	112	3,203	2	0	2	71			
	T2M	3,924	2	0	2	87	4,908	2	0	1	109	4,945	1	0	2	110	3,141	1	0	2	70			
	T3S	3,953	2	0	1	88	4,945	2	0	1	110	4,982	1	0	1	111	3,165	2	0	2	70			
	T3M	3,991	2	0	2	89	4,994	2	0	2	111	5,031	1	0	2	112	3,196	1	0	2	71			
	T4M	3,971	2	0	1	88	4,967	1	0	2	110	5,005	1	0	2	111	3,179	2	0	2	71			
	TFTM	3,925	1	0	2	87	4,910	1	0	2	109	4,947	1	0	2	110	3,143	1	0	1	70			
	TSVS	4,095	2	0	0	91	5,122	2	0	0	114	5,161	2	0	0	115	3,278	2	0	0	73			
	TSS	4,157	2	0	0	92	5,200	2	0	0	116	5,239	2	0	0	116	3,328	2	0	0	74			
	TSM	4,107	2	0	1	91	5,138	2	0	1	114	5,177	3	0	1	115	3,288	2	0	2	73			
	TSW	4,116	2	0	1	91	5,148	3	0	1	114	5,187	3	0	1	115	3,295	2	0	2	73			
	T15	5,387	2	0	1	75	6,739	2	0	2	94	6,790	2	0	2	94								
	T2S	5,488	2	0	1	76	6,865	2	0	2	95	6,917	2	0	2	96								
	T2M	5,382	2	0	2	75	6,733	2	0	2	94	6,784	2	0	2	94								
	T3S	5,431	2	0	1	75	6,784	2	0	2	94	6,835	2	0	2	95								
	T3M	5,475	2	0	2	76	6,850	2	0	2	95	6,901	2	0	2	96								
	T4M	5,447	1	0	2	76	6,814	2	0	2	95	6,866	2	0	2	95								
	TFTM	5,385	2	0	2	75	6,736	2	0	2	94	6,787	2	0	2	94								
	TSVS	5,617	2	0	0	78	7,027	2	0	0	98	7,080	3	0	0	98								
	TSS	5,702	2	0	0	79	7,133	2	0	0	99	7,187	2	0	0	100								
	TSM	5,634	2	0	1	78	7,048	2	0	2	98	7,101	3	0	1	99								
	TSW	5,646	2	0	1	78	7,063	3	0	2	98	7,116	3	0	2	99								
	40C (40 LEDs)	530mA	68W	T15	6,093	2	0	2	90	7,622	2	0	2	112	7,679	2	0	2	113	4,878	1	0	2	72
				T25	6,207	2	0	2	91	7,764	2	0	2	114	7,823	2	0	2	115	4,969	2	0	1	73
				T2M	6,087	2	0	2	90	7,615	2	0	2	112	7,672	2	0	2	113	4,874	2	0	1	72
T3S				6,133	2	0	2	90	7,672	2	0	2	113	7,730	2	0	2	114	4,910	2	0	1	72	
T3M				6,193	2	0	2	91	7,747	2	0	2	114	7,805	2	0	2	115	4,958	1	0	2	73	
T4M				6,161	2	0	2	91	7,707	2	0	2	113	7,765	2	0	2	114	4,932	2	0	2	73	
TFTM				6,090	2	0	2	90	7,618	2	0	2	112	7,676	2	0	2	113	4,876	2	0	2	72	
TSVS				6,353	2	0	0	93	7,947	3	0	0	117	8,007	3	0	0	118	5,086	2	0	0	75	
TSS				6,449	2	0	0	95	8,068	2	0	2	119	8,128	3	0	1	120	5,161	2	0	0	76	
TSM				6,372	2	0	1	94	7,971	2	0	2	117	8,031	3	0	2	118	5,102	2	0	2	75	
TSW				6,385	3	0	2	94	7,988	2	0	2	117	8,048	2	0	2	118	5,112	2	0	2	75	
T15				7,752	2	0	2	85	9,697	2	0	2	107	9,770	2	0	2	107	6,206	2	0	2	68	
T25		7,897	2	0	2	87	9,878	2	0	2	109	9,953	2	0	2	109	6,322	2	0	2	69			
T2M		7,745	2	0	2	85	9,688	2	0	2	106	9,761	2	0	2	107	6,201	2	0	2	68			
T3S		7,803	2	0	2	86	9,761	2	0	2	107	9,834	2	0	2	108	6,247	2	0	2	69			
T3M		7,879	2	0	2	87	9,856	2	0	2	108	9,930	2	0	2	109	6,308	2	0	2	69			
T4M		7,838	2	0	2	86	9,805	2	0	2	108	9,879	2	0	2	109	6,275	2	0	2	69			
TFTM		7,748	2	0	2	85	9,693	2	0	2	107	9,765	2	0	2	107	6,203	2	0	2	68			
TSVS		8,083	2	0	0	89	10,111	2	0	2	111	10,187	3	0	1	112	6,569	2	0	0	72			
TSS		8,205	2	0	1	90	10,264	2	0	1	113	10,341	3	0	2	114	6,569	2	0	0	72			
TSM		8,107	2	0	2	89	10,142	3	0	2	111	10,210	3	0	2	112	6,491	3	0	2	71			
TSW		8,124	2	0	2	89	10,163	4	0	2	112	10,239	4	0	2	113	6,504	2	0	2	71			
T15		10,435	2	0	2	76	13,054	2	0	3	95	13,152	3	0	3	95								
T2S		10,630	2	0	2	77	13,297	2	0	2	96	13,398	3	0	3	97								
T2M		10,426	2	0	2	76	13,042	3	0	3	95	13,140	3	0	2	95								
T3S		10,503	2	0	2	76	13,139	2	0	2	95	13,238	2	0	2	96								
T3M		10,606	2	0	2	77	13,267	2	0	3	96	13,367	3	0	3	97								
T4M		10,551	2	0	2	76	13,199	2	0	3	96	13,298	3	0	3	96								
TFTM		10,430	2	0	2	76	13,047	2	0	3	95	13,146	2	0	3	95								
TSVS		10,891	2	0	2	79	13,611	2	0	2	99	13,714	4	0	2	99								
TSS		11,045	2	0	2	80	13,817	3	0	2	100	13,921	3	0	1	101								
TSM		10,914	4	0	2	79	13,652	4	0	2	99	13,755	4	0	2	100								
TSW		10,936	4	0	2	79	13,680	4	0	2	99	13,783	4	0	2	100								



## Performance Data

### L90 and R90 Rotated Optics

LEDs	Drive Current (mA)	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)					AM9FC (Amber Phosphor Converted)				
				Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
				30C (30 LEDs)																			
30C (30 LEDs)	530 mA	52 W	T1S	4,797	2	0	2	92	6,001	2	0	2	115	6,046	2	0	2	116	3,841	2	0	2	74
			T2S	4,887	2	0	2	94	6,113	2	0	2	118	6,159	3	0	3	118	3,912	2	0	2	75
			T2M	4,793	2	0	2	92	5,996	2	0	3	115	6,041	3	0	2	116	3,837	2	0	2	74
			T3S	4,879	2	0	2	97	6,041	3	0	3	116	6,086	3	0	3	117	3,866	2	0	2	74
			T3M	4,876	3	0	3	94	6,099	2	0	3	117	6,145	3	0	3	118	3,904	2	0	2	75
			T4M	4,851	2	0	3	93	6,068	3	0	2	117	6,114	3	0	3	118	3,884	2	0	2	75
			TF1M	4,795	2	0	3	92	5,998	2	0	3	115	6,043	3	0	2	116	3,819	2	0	2	74
			TSVS	5,002	2	0	0	96	6,258	2	0	0	120	6,305	2	0	0	121	4,005	2	0	0	77
			TSS	5,078	2	0	0	98	6,352	2	0	0	122	6,400	2	0	0	123	4,065	2	0	0	78
			TSM	5,017	2	0	1	96	6,276	3	0	1	121	6,324	3	0	1	122	4,017	2	0	1	77
			TSW	5,028	2	0	1	97	6,289	2	0	2	121	6,337	3	0	2	122	4,025	3	0	1	77
			T1S	5,975	2	0	2	85	7,474	2	0	1	107	7,530	3	0	2	108	4,781	2	0	2	68
			T2S	6,086	2	0	2	87	7,614	3	0	2	109	7,671	3	0	2	110	4,873	2	0	2	70
			T2M	5,969	2	0	3	85	7,467	2	0	3	107	7,524	1	0	2	107	4,779	2	0	2	68
			T3S	6,014	2	0	3	86	7,523	2	0	2	107	7,580	2	0	2	108	4,815	2	0	2	69
T3M	6,072	2	0	3	87	7,596	2	0	2	109	7,654	2	0	3	109	4,862	2	0	3	69			
T4M	6,041	2	0	3	86	7,557	2	0	2	108	7,614	3	0	3	109	4,837	3	0	3	69			
TF1M	5,972	3	0	1	85	7,471	2	0	2	107	7,527	3	0	3	108	4,781	2	0	3	68			
TSVS	6,230	2	0	0	89	7,793	3	0	0	111	7,852	2	0	0	112	4,988	2	0	0	71			
TSS	6,324	2	0	0	90	7,911	2	0	1	113	7,971	3	0	2	114	5,063	2	0	0	72			
TSM	6,249	3	0	1	89	7,817	2	0	2	117	7,876	2	0	2	113	5,003	3	0	1	71			
TSW	6,262	3	0	2	89	7,833	3	0	2	112	7,892	3	0	2	113	5,013	3	0	2	72			
T1S	7,956	2	0	3	76	9,952	3	0	1	96	10,027	2	0	2	96								
T2S	8,104	2	0	3	78	10,138	3	0	3	97	10,214	3	0	2	98								
T2M	7,949	2	0	3	76	9,943	3	0	3	96	10,018	3	0	3	96								
T3S	8,008	2	0	3	73	10,018	2	0	3	96	10,093	3	0	3	91								
T3M	8,086	2	0	3	78	10,115	4	0	4	97	10,191	4	0	4	98								
T4M	8,044	3	0	3	77	10,063	3	0	3	97	10,139	3	0	3	97								
TF1M	7,952	2	0	3	76	9,948	2	0	3	96	10,022	4	0	4	96								
TSVS	8,296	2	0	0	80	10,377	2	0	1	100	10,455	3	0	2	101								
TSS	8,421	2	0	1	81	10,534	3	0	1	101	10,613	2	0	2	102								
TSM	8,321	2	0	2	80	10,409	4	0	2	100	10,487	4	0	2	101								
TSW	8,338	4	0	2	80	10,430	4	0	2	100	10,509	4	0	2	101								

## FEATURES & SPECIFICATIONS

### INTENDED USE

The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and streetscapes.

### CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.8 ft) for optimized pole wind loading.

### FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

### OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in standard 4000 K (70 minimum CRI) or optional 3000 K (80 minimum CRI) or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

### ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to 1.96/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of

100,000 hours with <1% failure rate. Easily serviceable 10kV or 6kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

### INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern. Optional terminal block, tool-less entry, and NEMA photocontrol receptacle are also available.

### LISTINGS

UL Listed for wet locations. Light engines are IP66 rated, luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at [www.designlights.org](http://www.designlights.org) to confirm which versions are qualified.

### WARRANTY

Five year limited warranty. Full warranty terms located at: [www.acuitylighting.com/CustomerResources/Items\\_eng\\_warranty\\_conditions.aspx](http://www.acuitylighting.com/CustomerResources/Items_eng_warranty_conditions.aspx)

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25°C. Specifications subject to change without notice.



# ULTRA Light Disk LED

## Recessed and Surface Mount Downlight Kit



The SYLVANIA ULTRA Light Disk is an LED downlight kit creating high performing white light and is optimized for new construction and retrofit applications. Multiple installation options for both recessed and surface mount applications. Installation is done quickly and easily in most standard four-inch, five-inch and six-inch Insulated Ceiling (IC) housings, Airtight (AT) housings and non-IC housings. It can also be surface mounted to standard 4-inch J-Box or using specially designed Connector Box.

### Dimming

The SYLVANIA ULTRA Light Disk is dimmable to 20% with standard 120V electronic low voltage dimmers (recommended), incandescent or magnetic low voltage dimmers. In some cases, standard incandescent dimmers require a minimum load of typically >40 watts on the circuit for full range dimming performance (four LED modules). For dimming with digital (smart) multi-location dimmers or when dimming fewer than four LED modules, electronic low-voltage (ELV) dimmers are required (some ELV dimmers need a neutral connection in the wallbox).

### Application Information

#### Applications

- Healthcare
- Hospitality
- Office
- Property Management
- Residential
- Retail

### Key Features & Benefits

- Lumen package
  - 700 lumens @ 10 watts
  - 900 lumens @ 13 watts
  - 1100 lumens @ 13 watts
- Replacement for up to 120W incandescent lamps
- Fits into most 4", 5" and 6" recessed downlight fixtures
- Surface mount to standard 4" J-Box or using Connector Box
- CCT: 3000K, 5000K
- CRI of 82
- Dimmable down to 20%\*
- 50,000 hours life (L<sub>70</sub>)
- Suitable for dry, damp and wet locations
- Reduces energy consumption up to 87%
- Lasts up to 25 times longer than incandescent lamps
- No warm-up time, instant-on with full light output and stable lamp to lamp color
- Integrated white trim and medium base for direct replacement

### Quality of Light

The SYLVANIA ULTRA Light Disk provides good color rendering (82 CRI), and color temperatures of 3000K and 5000K. LEDs have virtually no UV or infrared radiation to damage or fade furnishings, art or other objects.

### Optical Design

Optical design efficiently directs light output in an 120° beam angle with low glare.

\* Performance may vary depending on dimmer use in application. Please refer to Dimmer Compatibility List (RETRO-DiFi) for a list of compatible dimmers or visit www.sylvania.com/LightDisk.

### Product Offering

Lumen Output	Wattage	Color Temperature	CRI
700	10	3000K	82
900	13	3000K	82
1100	13	5000K	82

### Specifications and Certifications



## Specification Data

Catalog #	Type
Project	
Comments	
Prepared by	

### Specifications

#### Energy Data

Minimum Starting Temp: -20°C (-4°F)  
 EMI/RFI: FCC Title 47 CFR, Part 15, Class B  
 Sound Rating: <24dBA  
 Input Voltage: 120V  
 Input Frequency: 60Hz  
 Power Factor: >0.90  
 THD: <20%  
 Input Power: 10W & 13W

Input Current: 0.08A & 0.1A  
 Maximum Ambient Operating Temperature (Insulated Ceiling): 40°C (104°F)  
 Maximum Ambient Operating Temperature (Non-Insulated Ceiling): 40°C (104°F)

#### Lighting Data

Lumen Output: 700, 900, 1100  
 Wattage: 10, 13  
 Lumens per Watt: 84

#### Color

Correlated Color Temperature (CCT): 3000K, 5000K  
 Color Rendering Index (CRI): 82  
 R9: 13

### Ordering Information

Item Number	Ordering Abbreviation	Recessed Housing	J-Box Size	Replaced Incandescent Wattage (W)	Nominal Wattage (W)	Delivered Light Output (lm)	Color Temperature	CRI	Avg. Rated Life (hrs.)*
73677	LEDLD/700/830/FL120	4", 5" & 6"	4"	65	10	700	3000K	82	50,000
73676	LED/900/LD/830/FL120	4", 5" & 6"	4"	100	13	900	3000K	82	50,000
73678	LED/1100/LD/850/RP	4", 5" & 6"	4"	120	13	1100	5000K	82	50,000

\* LED lamp life is defined as the number of hours when 50% of an average group of identical lamps reached 70% of initial lumens  
 Beam angle = 120°

### Ordering Guide

LED	900	LD	B	30	FL	120
LED	Light Output 900lm	Product Name Light Disk	CRI >80	Color Temperature 3000K 5000K	Flood	Beam Angle 120°

### Energy Savings

Basic Product Description	LED Lumens	LED Life	Traditional Lamp Types	Lumens	Life	Watts Saved With LD	LD Energy Savings*	LD Life Benefit
Light Disk	700	50,000	Incandescent 65BR30	680	2000	55	\$302	25x
			Halogen 50WPAR30LN/WFL	660	2500	40	\$220	20x
			Compact Fluorescent 15WBR30	700	8000	5	\$27	6.25x
Light Disk	900	50,000	Incandescent 100BR40	935	2000	87	\$478	25x
			Halogen 75WPAR38/WFL	1060	2500	62	\$341	20x
			Compact Fluorescent 16WBR30	750	8000	3	\$16	6.25x
Light Disk	1100	50,000	120W Incandescent	1150	2000	107	\$588	25x
			Halogen 75WPAR38	1060	2000	62	\$341	20x
			23W Compact Fluorescent	1250	8000	10	\$55	6.25x

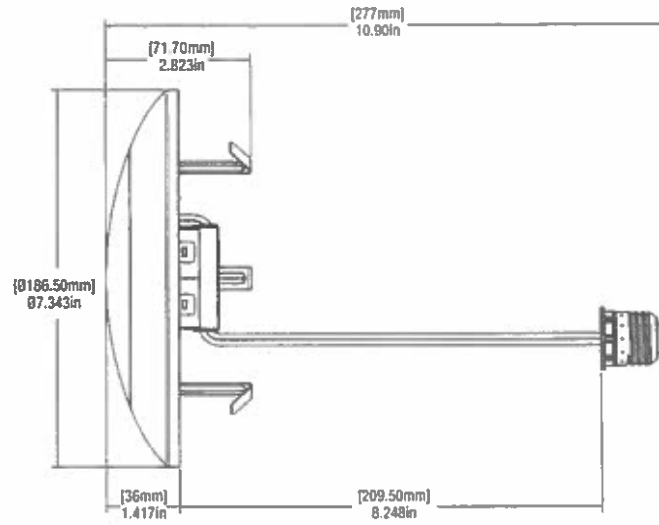
\* Based on \$0.11/kWh over 35,000 hours life

### Application Information

#### Application Notes

- Operating temperature range between -4°F and +104°F (-20°C and +40°C).
- Suitable for dry, damp and wet location environments.
- Suitable for dimmers or in housings controlled by a dimmer – see [www.sylvania.com/LightDisk](http://www.sylvania.com/LightDisk) for detailed dimmer compatibility list.
- Not intended for use with emergency light fixtures or exit lights.
- For use in housings that can structurally support a lamp weighing one pound.
- Designed to install in standard 4", 5" & 6" insulated and non-insulated housings or with standard 4" J-Box (not included) or using Connector Box (sold separately). For a list of compatible housings, please refer to [www.sylvania.com/LightDisk](http://www.sylvania.com/LightDisk).
- For detailed warranty information, please see [www.sylvania.com/LightDisk](http://www.sylvania.com/LightDisk).

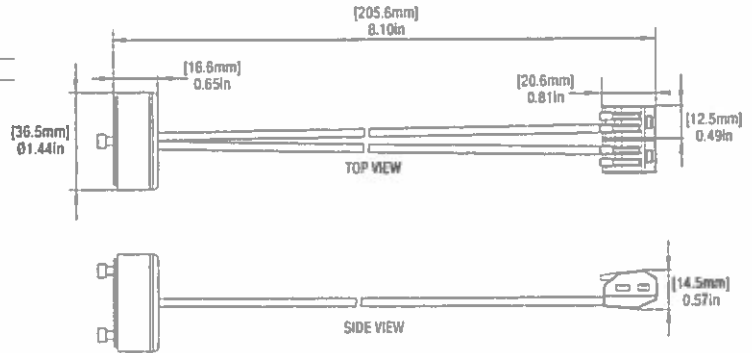
Assembly Diagram



Accessories

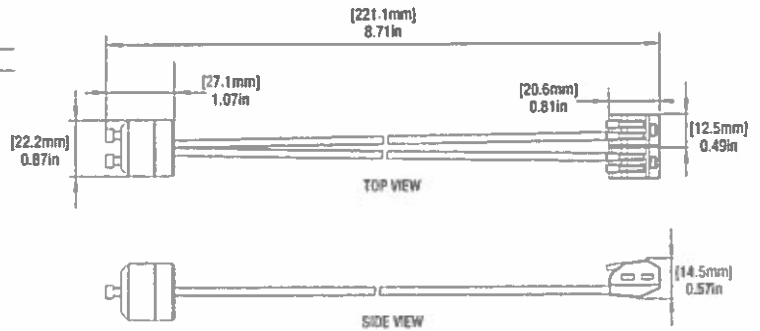
**GU24 Socket Adaptor**

75105 LD/GU24/ADAPTOR (sold separately)



**GU10 Socket Adaptor**

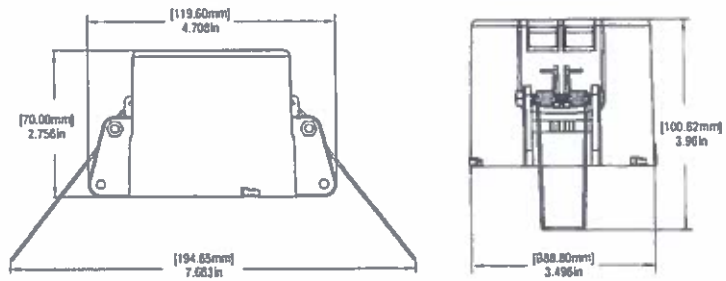
75106 LD/GU10/ADAPTOR (sold separately)



## Accessories

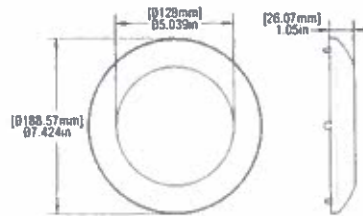
### Connector Box

75104 LD/CONNECTOR/BOX (sold separately)



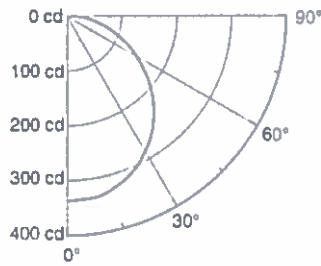
### Retrofit Trim

75100	LD/TRIM/BLK (Black)
75101	LD/TRIM/ORBZ (Bronze)
75102	LD/TRIM/SN (Satin Nickel)



## Photometric Information

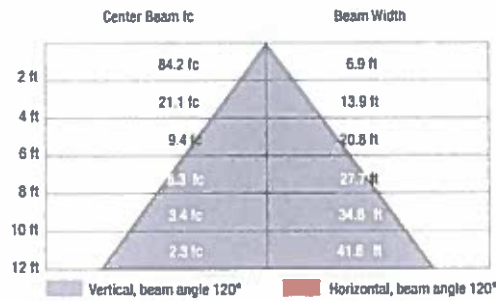
### Polar Chart



### Zonal Lumen Distribution

Zone	Lumens	% Fixture
0-30	258	27.6
0-40	418	44.7
0-60	721	77.2
60-90	205	22
0-90	926	99.2
90-180	7.7	0.8
0-180	934	100

### Illuminance at a Distance



### Spacing to Mounting Height Ratio

Spacing Criteria (0-180°)	1.24
Spacing Criteria (90-270°)	1.24
Spacing Criteria (Diagonal)	1.34

## OSRAM

Americas Headquarters

OSRAM SYLVANIA Inc.

100 Endicott Street

Danvers, MA 01923 USA

Phone 1-800-LIGHTBULB (1-800-544-4828)

www.sylvania.com

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Specifications subject to change without notice.

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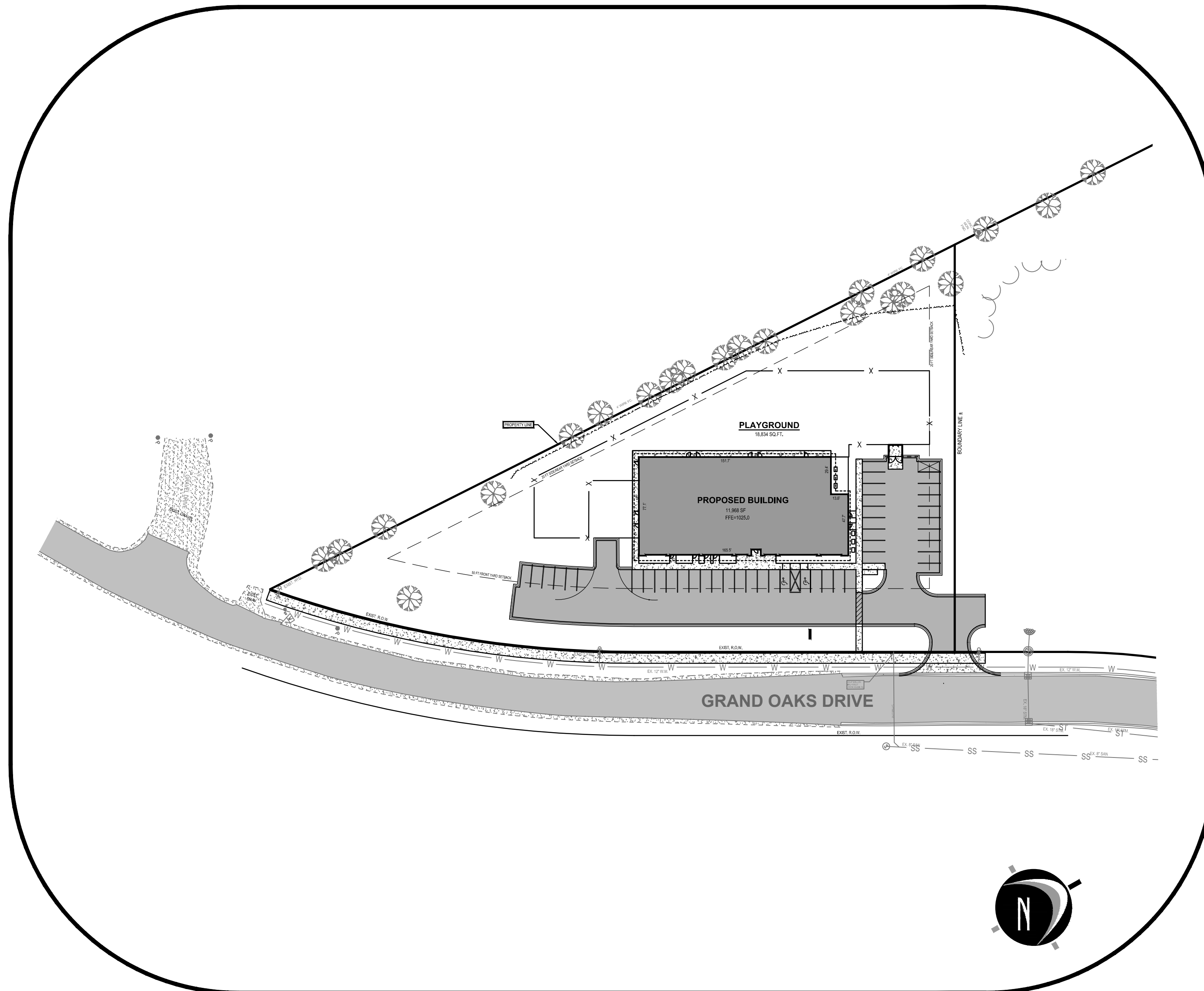
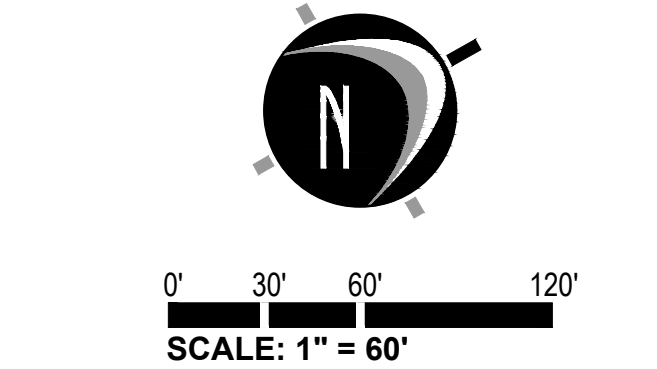
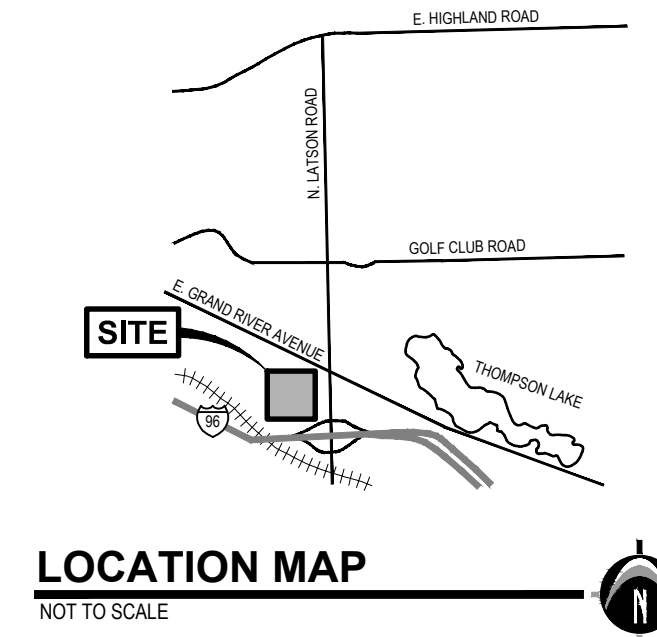
**SYLVANIA**





A PART OF THE NORTHEAST 1/4 OF SECTION 8, T2N, R5E,  
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

# SITE PLAN SET



### SHEET INDEX

Cover Sheet	C-100	Page 1
Existing Site Conditions & Demolition Plan	C-201	Page 2
Site Layout Plan	C-205	Page 3
S.E.S.C., Grading & Utility Plan	C-300	Page 4
Details & Specifications	C-500	Page 5
Landscape Plan	L-201	Page 6
Photometric Plan		
Architectural Plans		

### CONTACT INFORMATION:

**PROPERTY OWNER/DEVELOPER:**  
BBI HOLDINGS, LLC.  
ATTENTION: DAN BOVERHOF  
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TELEPHONE: (616) 291 - 4192  
EMAIL ADDRESS: dan@boverhofbuilders.com

**GENERAL CONTRACTOR (ON SITE SUPERVISOR):**  
BOVERHOF BUILDERS  
ATTENTION: DAN BOVERHOF  
5575 SETTLERS PASS  
KENTWOOD, MICHIGAN 49512  
TELEPHONE: (616) 291 - 4192  
EMAIL ADDRESS: dan@boverhofbuilders.com

**ARCHITECT:**  
ARCHITECTURAL CONCEPTS  
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EMAIL ADDRESS: archconcepts@sbglobal.net

**SITE CIVIL ENGINEER:**  
NEDERVELD, INC.  
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217 GRANDVILLE AVENUE  
SUITE 302  
GRAND RAPIDS, MI 49503  
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EMAIL ADDRESS: switte@nederveld.com

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

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www.nederveld.com  
800.222.1868  
**GRAND RAPIDS**  
217 Grandville Ave., Suite 302  
Grand Rapids, MI 49503  
Phone: 616.575.5190

ANN ARBOR  
CHICAGO  
COLUMBUS  
HOLLAND  
INDIANAPOLIS  
ST. LOUIS

**PREPARED FOR:**  
Boverhof Builders Inc.  
Attn: Dan Boverhof  
5475 Settlers Pass  
Kentwood, MI 49512

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Title: Fire Department Turn Around	V. Date: 03.08.16	
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**GILDEN WOODS HOWELL**  
Cover Sheet  
Grand Oaks Drive - Howell, MI 48843  
PART OF THE NE CORNER OF SECTION 8, T2N, R5E,  
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

**STAMP:**

**LEGAL DESCRIPTION**

TAX DESCRIPTION OF PARENT PARCEL/OVERALL PARCEL (PARCEL NUMBER 47-11-08-200-012):

SEC 8 T2N R5E COMM AT NE COR TH S87°16'42"W 3.27 FT TH S'LY ALONG ARC OF A CURVE RIGHT CHORD BEARING S00°40'20"W 159.72 FT TH S01°07'48"W 913.15 FT TH S'LY ALONG ARC OF A CURVE LEFT CHORD BEARING S00°42'13"W 148.82 FT TH S89°48'26"W 159.53 FT TH N00°15'45"E 40 FT TO POB TH S89°48'26"W 244.24 FT TH S'LY ALONG ARC OF A CURVE LEFT CHORD BEARING S57°22'16"W 579.27 FT TH S24°56'06"W 342.59 FT SWLY ON AN ARC OF A CURVE RIGHT CHORD BEARING S34°41'46"W 291.61 FT TH N01°46'39"W 1170.50 FT TH S66°55'38"E 785.76 FT TH N88°06'02"E 251.53 FT TH N10°21'54"E 310.18 FT TH N12°59'10"E 332.05 FT TH S79°09'02"E 22.66 FT TH N11°14'53"E 360.22 FT TH S01°07'48"W 874.11 FT TH S'LY ALONG ARC OF A CURVE LEFT CHORD BEARING S01°05'59"W 142.07 FT TO POB CONT. 10.53 AC ML SPLIT ON 01/25/2012 FROM 4711-08-200-009;

**PROJECT NO:**  
15500079

**SHEET NO:**  
**C-100**

**SHEET: 1 OF 6**



**REMOVAL / DEMOLITION NOTES**

- 1) THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANIES AT LEAST THREE WEEKS PRIOR TO THE BEGINNING OF CONSTRUCTION OPERATIONS. THERE ARE EXISTING UNDERGROUND UTILITIES WHICH CROSS THE PROPOSED REPLACEMENT WORK AREAS ALTHOUGH THEIR EXACT LOCATION CANNOT BE DETERMINED. IT IS KNOWN THESE UTILITIES ARE LOCATED WHERE DIGGING IS REQUIRED. THE CONTRACTOR SHALL CONDUCT THE REQUIRED EXCAVATION IN THESE AREAS WITH EXTREME CAUTION.
- 2) ALL EXISTING UTILITY INFORMATION SHOWN IS TAKEN FROM EXISTING RECORDS, AND FIELD VERIFIED WHERE ACCESSIBLE ONLY. INFORMATION OBTAINED FROM EXISTING RECORDS MAY NOT BE COMPLETE OR ACCURATE. THE LOCATION OF ALL EXISTING UTILITIES SHOWN ON THIS PLAN HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THEIR ACCURACY. THE CONTRACTOR SHALL FIELD VERIFY FOR ACCURACY, LOCATION AND CONDITION.
- 3) BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE TOWNSHIP AND BY THE OWNER, REPRESENTATIVES OF THE TOWNSHIP, THE OWNER AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING UTILITIES AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS AND EXISTING VIDEO TAPES. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE CONTRACTOR.
- 4) THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED FOR DEMOLITION WORK.
- 5) ALL EXISTING UTILITIES, SEWERS AND WATER LINES ARE TO REMAIN UNDISTURBED UNLESS OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH ALL APPLICABLE UTILITY COMPANIES, MUNICIPALITIES AND AGENCIES BEFORE COMMENCING ANY WORK.
- 6) THE CONTRACTOR SHALL COORDINATE WITH ALL UTILITY COMPANIES REGARDING REMOVAL OF EXISTING POLES, OVERHEAD WIRES, UNDERGROUND UTILITIES, GUY WIRES, GAS LINES, ETC. ALL ADJUSTMENT OR RECONSTRUCTION WORK, EXCEPT FOR THOSE STRUCTURES OTHERWISE NOTED ON THE PLANS, SHALL BE PERFORMED BY THE CONTRACTOR. EXISTING APPURTENANCES SUCH AS UTILITY POLES AND VALVES BOX SHALL NOT BE DISTURBED BY THE CONTRACTOR DURING CONSTRUCTION.
- 7) THE CONTRACTOR SHALL MAINTAIN EXISTING UTILITY SERVICE TO ALL ADJOINING PROPERTIES.
- 8) ALL DEBRIS SHALL BE REMOVED FROM THE SITE, AND NO STOCKPILING ON SITE SHALL BE ALLOWED UNLESS APPROVED BY THE OWNER OR THEIR REPRESENTATIVES.
- 9) THE CONTRACTOR SHALL LIMIT SAWCUT AND PAVEMENT REMOVAL TO ONLY THOSE AREAS WHERE REQUIRED OR AS SHOWN. ALL PAVEMENTS TO BE REMOVED SHALL BE SAWCUT AND REMOVED TO FULL DEPTH AT ALL PAVEMENT LIMITS OR EXISTING JOINTS. IF ANY DAMAGE IS INCURRED TO ANY OF THE SURROUNDING PAVEMENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ITS REMOVAL AND REPAIR AT NO ADDITIONAL COST TO ANYONE ELSE, INCLUDING THE TOWNSHIP OR OWNER.
- 10) ASPHALT AREAS SHOWN TO BE SAWCUT AND REMOVED FULL DEPTH ARE ACTUAL FACE OF PROPOSED CURBS. IT WILL BE NECESSARY TO MAKE OFF-SET SAWCUTS TO PROVIDE CLEARANCE FOR PROPOSED CURBS. THE CONTRACTOR SHALL DETERMINE THE AMOUNT OF OFF-SET NECESSARY TO CONSTRUCT THE PROPOSED CURBS. ADDITIONAL CUTS MAY BE DESIRED TO FACILITATE THE REMOVAL OF THE EXISTING PAVEMENT, BUT THERE WILL BE NO EXTRA PAYMENT FOR ADDITIONAL CUTS. PAVEMENT SHALL BE REMOVED WITHOUT DAMAGING OR UNDERMINING THE REMAINING PAVEMENT. IF ADJACENT PAVEMENT IS DAMAGED, THE CONTRACTOR SHALL MAKE ADDITIONAL FULL DEPTH SAWCUTS AND REMOVE THE DAMAGE AREAS AS NECESSARY.
- 11) ALL TREES AND VEGETATION WITHIN THE GRADING LIMITS SHALL BE REMOVED UNLESS OTHERWISE NOTED.

**REMOVAL / DEMOLITION NOTES**

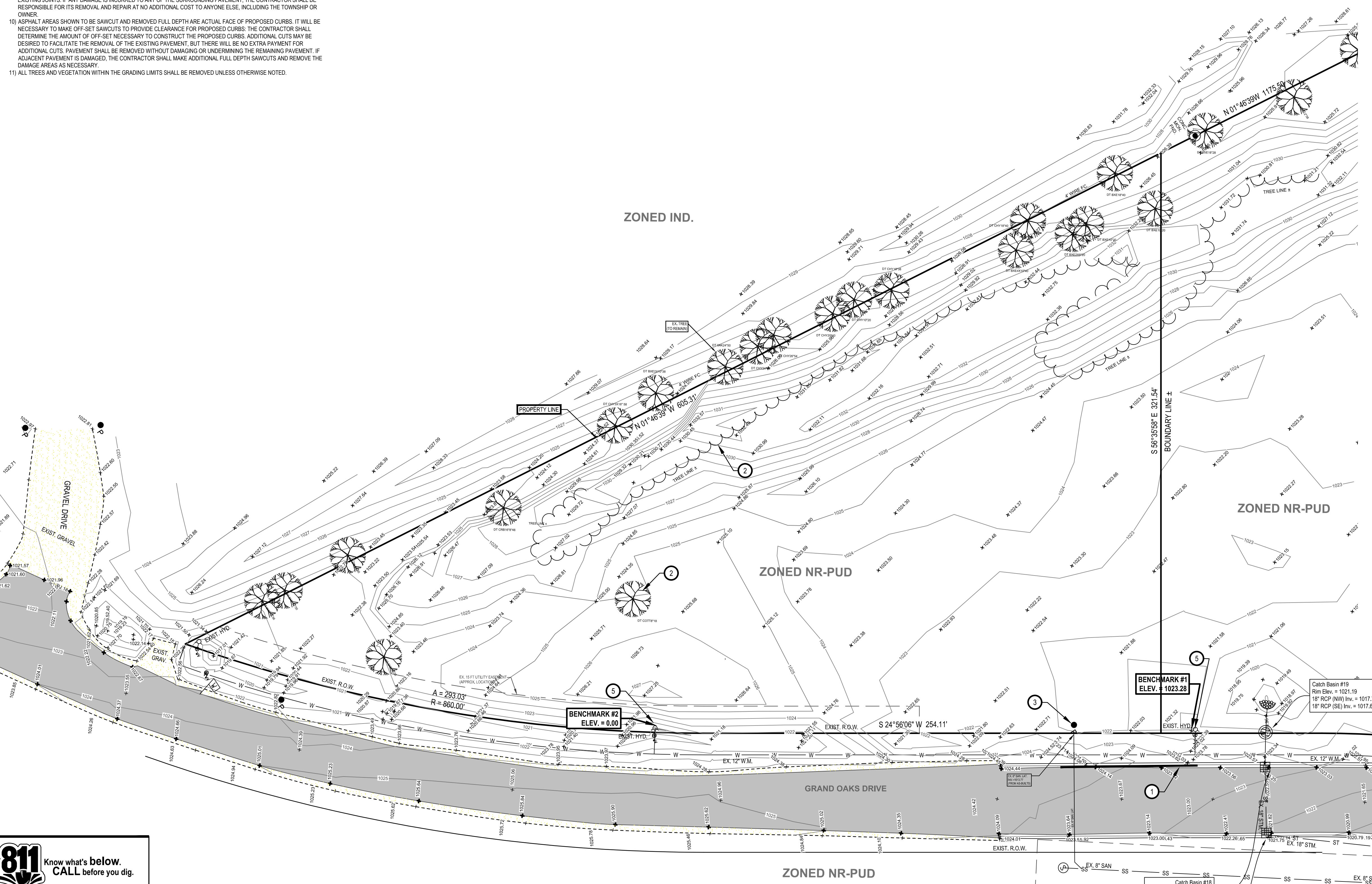
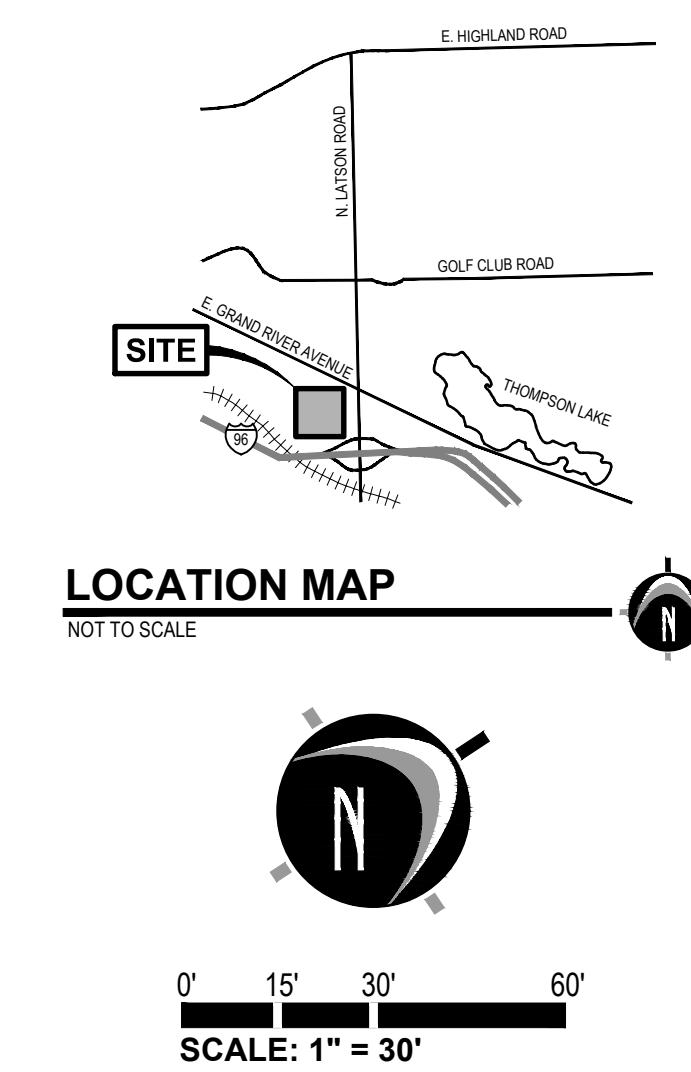
- 1 SAWCUT, REMOVE, AND REPLACE EX. PAVEMENT AND CURBS AS NECESSARY FOR CONSTRUCTION OF NEW DRIVE ENTRANCE
- 2 REMOVE EXISTING TREES/SHRUBS
- 3 REMOVE EXISTING SIGN
- 4 SAWCUT, REMOVE, AND REPLACE EDGE OF EXISTING PAVEMENT AND GRAVEL SHOULDER AS NECESSARY FOR CONSTRUCTION OF NEW DRIVE ENTRANCE
- 5 ADJUST HYDRANT AND VALVE & BOX GRADE AS NECESSARY
- 6
- 7

**LEGEND**

- EXISTING GRADE CONTOUR
- EXISTING BITUMINOUS REMOVAL
- EXISTING CONCRETE REMOVAL
- EXISTING UTILITY LINE REMOVAL
- EXISTING TREE REMOVAL

**BENCHMARKS**

- BENCHMARK #1** ELEV. = 1023.28 (DATUM - NAVD 88)  
Arrow on hydrant located ± North 441' and East 348' from the most Southwesterly property corner.
- BENCHMARK #2** ELEV. = 1023.48 (DATUM - NAVD 88)  
Arrow on hydrant located ± North 192' and East 182' from the most Southwesterly property corner.



**LEGEND**

- |     |                             |       |                        |
|-----|-----------------------------|-------|------------------------|
| AC  | Air Conditioner             | STOP  | Stop Sign              |
| B   | Benchmark                   | YIELD | Yield Sign             |
| CB  | Catch Basin - Round         | SS    | Sanitary Sewer Manhole |
| CS  | Catch Basin - Square        | ST    | Storm                  |
| CO  | Cleanout                    | TM    | Telephone Manhole      |
| CR  | Cable Riser                 | TR    | Transformer            |
| C   | Culvert                     | U     | Utility Pole           |
| DM  | Deciduous Tree              | UGM   | Underground Gas Marker |
| EM  | Electric Manhole            | WM    | Wellhead Marker        |
| ER  | Electric Riser              | W     | Water Meter            |
| ET  | Evergreen Tree              | WMH   | Water Manhole          |
| F   | Faucet                      | WV    | Water Valve            |
| FL  | Flag                        | WELL  | Water Well             |
| GM  | Gas Meter                   | YD    | Yard Drain             |
| GR  | Gas Riser                   | YU    | Miscellaneous/Unknown  |
| GV  | Gas Valve                   | C     | Cable TV               |
| GA  | Guy Anchor                  | E     | Electric               |
| GP  | Guy Pole                    | OE    | Overhead Electric      |
| H   | Hand Hole                   | UE    | Underground Electric   |
| HP  | Handicap Parking            | FO    | Fiber Optic            |
| I   | Iron - Set                  | G     | Gas                    |
| IF  | Iron - Found                | OH    | Overhead Utility       |
| LP  | Light Pole                  | SS    | Sanitary               |
| M   | Mailbox                     | ST    | Storm                  |
| MD  | Miss Dig Flag - Cable       | T     | Telephone              |
| ME  | Miss Dig Flag - Electric    | OT    | Overhead Telephone     |
| MF  | Miss Dig Flag - Fiber Optic | UT    | Underground Telephone  |
| MG  | Miss Dig Flag - Gas         | W     | Watermain              |
| MP  | Miss Dig Flag - Phone       | X     | Fence                  |
| MS  | Miss Dig Flag - Water       | GR    | Guard Rail             |
| MAN | Manhole                     | RR    | Railroad               |
| MW  | Monitor Well                | ZS    | Zoning Setback         |
| PM  | Parking Meter               | T     | Tree                   |
| P   | Post                        | GC    | Ex. Grade Contour      |
| PR  | Phone Riser                 | A     | Asphalt                |
| SB  | Soil Boring                 | C     | Concrete               |
| SBX | Stop Box                    | G     | Gravel                 |
| S   | Sign                        | B     | Building               |

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**NEDERVELD**  
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**GRAND RAPIDS**  
 217 Grandville Ave., Suite 302  
 Grand Rapids, MI 49503  
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**PREPARED FOR:**  
 Boverhof Builders Inc.  
 Attn: Dan Boverhof  
 5475 Settlers Pass  
 Kentwood, MI 49512

**REVISIONS:**

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Title: Site Plan Resubmittal	V. Date: 02.23.16	
Drawn: SW	Checked: SW	S. Date: 02.23.16
Title: Fire Department Turn Around	V. Date: 03.08.16	
Drawn: SW	Checked: SW	S. Date: 03.08.16
Title: Per Township Consultants	V. Date: 03.14.16	
Drawn: SW	Checked: SW	S. Date: 03.14.16
Title: Per Planning Commission	V. Date: 03.17.16	
Drawn: SW	Checked: SW	S. Date: 03.17.16

**GILDEN WOODS HOWELL**  
 Existing Conditions and Demolition Plan  
 Grand Oaks Drive - Howell, MI 48843  
 PART OF THE NE CORNER OF SECTION 8, T2N, R5E,  
 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

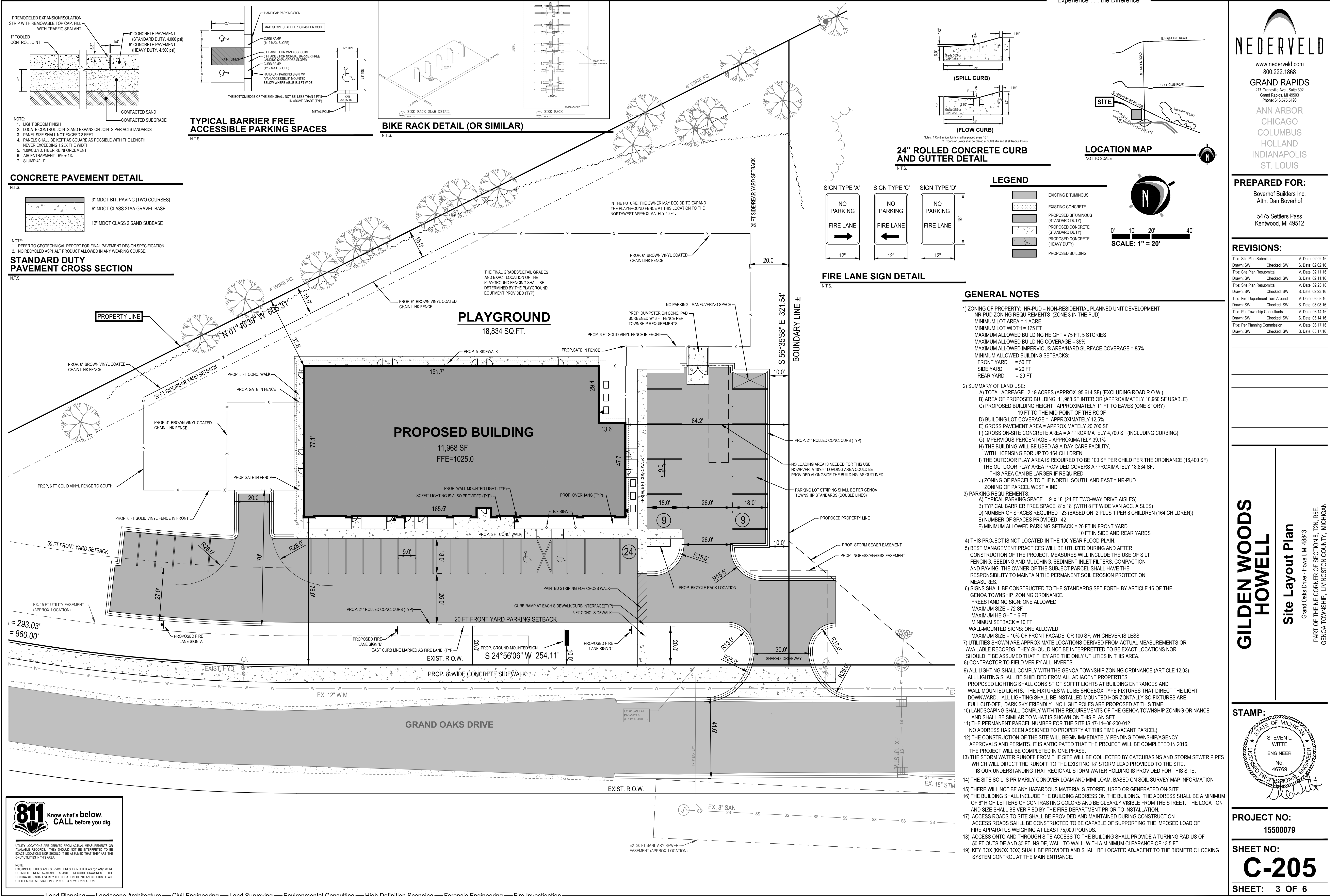
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**PROJECT NO:**  
15500079

**SHEET NO:**  
**C-201**

**SHEET: 2 OF 6**





**811** Know what's below. CALL before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETTED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

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**NEDERVELD**  
www.nederveld.com  
800.222.1868  
GRAND RAPIDS  
217 Grandville Ave., Suite 302  
Grand Rapids, MI 49503  
Phone: 616.575.5190

ANN ARBOR  
CHICAGO  
COLUMBUS  
HOLLAND  
INDIANAPOLIS  
ST. LOUIS

**PREPARED FOR:**  
Boverhof Builders Inc.  
Attn: Dan Boverhof  
5475 Settlers Pass  
Kentwood, MI 49512

**REVISIONS:**

Title	Drawn	Checked	SW	SW	V. Date	S. Date
Title: Site Plan Submittal	SW	SW			02/22/16	02/22/16
Title: Site Plan Resubmittal	SW	SW			02/11/16	02/11/16
Title: Site Plan Resubmittal	SW	SW			02/11/16	02/11/16
Title: Site Plan Resubmittal	SW	SW			02/23/16	02/23/16
Title: Fire Department Turn Around	SW	SW			03/08/16	03/08/16
Title: Per Township Consultants	SW	SW			03/14/16	03/14/16
Title: Per Planning Commission	SW	SW			03/17/16	03/17/16

**GILDEN WOODS HOWELL**  
**Site Layout Plan**  
Grand Oaks Drive - Howell, MI 48843  
PART OF THE NE CORNER OF SECTION 8, T2N, R9E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

**STAMP:**

STATE OF MICHIGAN  
LICENSED PROFESSIONAL ENGINEER  
STEVEN L. WITTE  
ENGINEER  
No. 48769

**PROJECT NO:**  
15500079

**SHEET NO:**  
C-205

**SHEET:** 3 OF 6



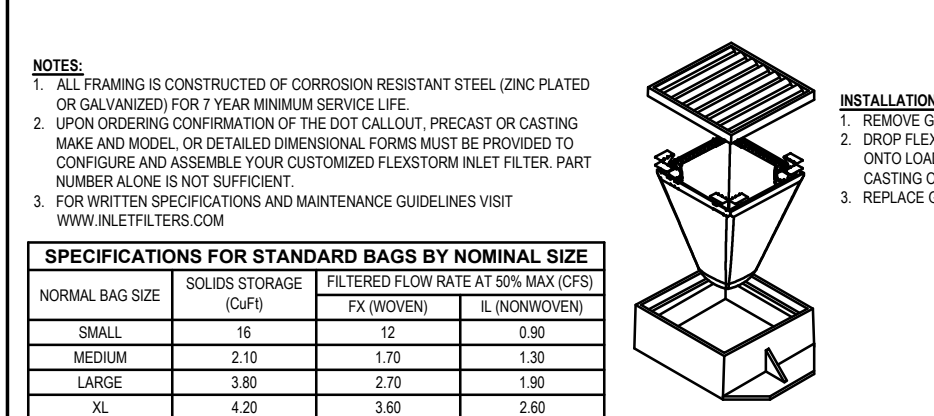
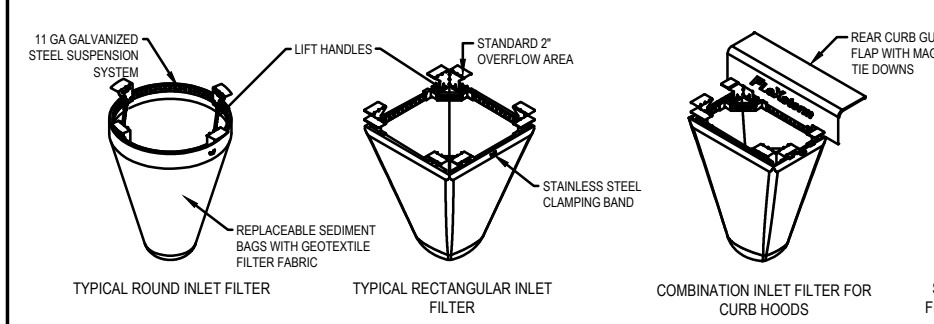
**CONSTRUCTION NOTES**

- ALL CONSTRUCTION AND MATERIAL SPECIFICATIONS INCLUDED FOR THIS PROJECT SHALL BE IN ACCORDANCE WITH THE MARION, HOWELL, OCEOLA AND GENOA SEWER AUTHORITY (MHOWSA) FOR ALL SANITARY SEWER AND WATER SERVICE DETAILS AND REQUIREMENTS. ALL WORK REGARDING THOSE ELEMENTS (E.G. CLEANOUTS) OF THE PROJECT SHALL REFERENCE THE LATEST VERSION OF THE MHOWSA SEWER AND WATER STANDARDS.
- VARIATION IN EXISTING SOIL CONDITIONS MAY IMPACT THE EARTHWORK QUANTITIES IF UNUSABLE SOILS ARE ENCOUNTERED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO THE EXISTING WATER AND SEWERAGE SYSTEMS RESULTING FROM NON-COMFORMANCE WITH THE APPLICABLE STANDARDS OR THROUGH GENERAL NEGLIGENCE.
- ALL WORK INCLUDING INSPECTIONS AND TESTING COST REQUIRED FOR REMOVAL, RELOCATION OR NEW CONSTRUCTION FOR PRIVATE OR PUBLIC UTILITIES, WILL BE DONE BY AND AT THE EXPENSE OF THE CONTRACTOR AND INCLUDED IN THE BID PRICE FOR THE VARIOUS WORK ITEMS UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL NECESSARY PERMITS FROM MHOWSA, THE TOWNSHIP AND COUNTY AND ANY OTHER AGENCY FOR ALL WORK DONE BY THE CONTRACTOR. ANY DEFECTS IN THE CONSTRUCTION, INCLUDING MATERIALS OR WORKMANSHIP, SHALL BE REPLACED OR CORRECTED BY REMOVAL AND REPLACEMENT OR OTHER APPROVED METHODS PRIOR TO ACCEPTANCE BY MHOWSA. THE TOWNSHIP OR OWNER WITHOUT ANY ADDITIONAL COST TO THE TOWNSHIP OR OWNER.
- ALL LAWN AREAS REMOVED OR DISTURBED SHALL BE REPLACED WITH TOPSOIL AND SOIL WHERE NEEDED AND SHALL BE RESEEDED AND MAINTAINED TO SATISFACTORY REESTABLISHMENT OF LAWN COVER UNLESS OTHERWISE NOTED.
- ALL PUNCH LIST AND DEFICIENCY WORK SHALL BE COMPLETED WITHIN 10% OF THE END OF CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN A STREET OPENING PERMIT FROM THE TOWNSHIP AND COUNTY BEFORE BEGINNING WORK WITHIN ANY PUBLIC STREET RIGHT-OF-WAY.
- THE CONTRACTOR SHALL MAINTAIN A CURRENT SET OF CONSTRUCTION DRAWINGS ON SITE AT ALL TIMES. THESE PLANS HAVE BEEN DEVELOPED FOR ELECTRONIC FILED LAYOUT. DIMENSIONS SHOWN ARE FOR GRAPHIC PRESENTATION ONLY AND SHOULD NOT BE USED FOR LAYOUT. CONTACT THE ENGINEER IF ANY DISCREPANCIES BETWEEN THE PLAN AND ELECTRONIC DATA ARE DISCOVERED.
- THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY LIGHTS, BARRICADES, FLAGMEN, ETC. AS REQUIRED TO PERFORM THE REQUIRED WORK. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES AS REQUIRED SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE SUCH ADDITIONAL TRAFFIC CONTROL DEVICES LOCATED OUTSIDE THE LIMITS OF CONSTRUCTION AS ARE REQUIRED ON THOSE STREETS WHICH ARE USED AS DETOURS, INCLUDING "ROAD CLOSED" SIGNS AND BARRICADES AT THE POINT WHERE THE ROAD IS CLOSED TO THROUGH TRAFFIC. THE CONTRACTOR SHALL PROTECT LOCATION OF ALL PROPERTY SIGNS AND BENCHMARKS.
- ALL WORK CONTEMPLATED SHALL AT ALL TIMES BE SUBJECT TO THE DIRECT INSPECTION OF MHOWSA. THE TOWNSHIP OWNER AND THEIR REPRESENTATIVES, MHOWSA, THE TOWNSHIP AND OWNER RESERVES THE RIGHT TO HALT ALL CONSTRUCTION ACTIVITY FOR NON-COMFORMANCE OF PLANS, SPECIFICATIONS AND OTHER APPLICABLE STANDARDS OR REGULATIONS.
- PIPPERS 30 PER FOOT FOR ALL PIPES BE COMPACTED IN PLACE REGARDLESS OF SOIL OR ROCK CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR ALL SIGNS, BARRICADES AND SAFETY FENCES TO DETER PEOPLE FROM ENTERING THE WORK AREA AND FOR MAINTAINING AND PROTECTING THE FLOW OF VEHICULAR AND PEDESTRIAN TRAFFIC AROUND THE JOB SITE. TRAFFIC CONTROL SHALL BE COORDINATED WITH THE POLICE DEPARTMENT AND THE TOWNSHIP.

- PRIOR TO ANY CONSTRUCTION OR GRADING, A PROTECTIVE BARRIER, FENCE, POST AND SIGN CLEARLY INDICATING LIMITS OF WORK/DISTURBANCE SHALL BE INSTALLED INDICATING NO TREE REMOVAL OR DISTURBANCE OUTSIDE LIMITS. THE TOWNSHIP AND OWNER SHALL BE CONTACTED UPON DETERMINATION OF LIMITS IN THE FIELD.
- ALL ROAD SURFACES, EASEMENTS OR RIGHT-OF-WAYS DISTURBED BY CONSTRUCTION OF ANY PART OF THIS IMPROVEMENT ARE TO BE RESTORED COMPLETELY TO THE SATISFACTION OF THE TOWNSHIP AND THE OWNER.
- NO PARKING OF CONTRACTOR OR CONTRACTOR EMPLOYEES VEHICLES ON ANY PUBLIC STREETS SHALL BE PERMITTED.
- ALL DISTURBED SIGNS, GUARDRAILS, MAIL BOXES, AND DRIVEWAYS SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE TOWNSHIP AND THE OWNER.
- DUST CONTROL: THE CONTRACTOR SHALL SUPPLY ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY SUCH AS CALCIUM CHLORIDE, WATER OR A MOTORIZED DUST-FREE STREET SWEEPING DEVICE TO MAINTAIN ALL ROADWAYS BEING USED FOR ACCESS TO THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL ORDINANCES OF THE TOWNSHIP, COUNTY, MHOWSA OR ANY OTHER GOVERNING AUTHORITY.
- ALL SEWERS, MANHOLES, JUNCTION CHAMBERS AND INLET BASINS MUST BE CLEANED BEFORE ACCEPTANCE BY MHOWSA, THE TOWNSHIP AND OWNER.
- # 40 SOIL OR OTHER DEBRIS IS DEPOSITED ON ADJACENT STREETS, ROADS OR OTHER PROPERTY, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF SUCH AT THE END OF EACH WORK DAY OR AS REQUIRED DURING THE WORK DAY.
- ADJUST TO GRADE OR RECONSTRUCT TO GRADE WORK SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF ANY EXISTING CONCRETE BLOCKOUT PAVEMENT. DAMAGED PAVEMENT DOWNLAYS OR OTHER SUCH ROAD TRANSFERS SERVICES SHALL BE REPLACED AS DIRECTED BY THE COUNTY AND THE ENGINEER.
- ALL EXISTING CASTINGS FOR STRUCTURES TO BE ADJUSTED OR RECONSTRUCTED TO GRADE SHALL BE FIELD CHECKED AT THE TIME OF CONSTRUCTION AND MARKED SUITABLE FOR SALVAGE AND REUSE OR REPLACED. COMPACTED PREMIUM BENTONITE (NOT CASHE SAND) WILL BE REQUIRED AT ALL FILL AREAS OR ANY STREETS WHERE REMOVAL AND REPLACEMENT OF PAVEMENT IS REQUIRED AND FOR ALL UNDERGROUND CONSTRUCTION UNDER ANY DRIVEWAY OR PAVEMENT INCLUDING THE 45 DEGREE ANGLE OF INFLUENCE FROM THE OUTSIDE EDGE OF PAVEMENT OR TOP OF CURB. COMPACTION TESTS SHALL BE REQUIRED EVERY 50 FEET UNDER PAVEMENT. PAVEMENT INCLUDES, BUT NOT LIMITED TO, ROADWAY SURFACES, SIDEWALKS, BIKE LANE SURFACES, SIDEWALKS, BUILDINGS, ETC.
- NO BUILDING MATERIAL, EQUIPMENT, VEHICLES OR CHEMICALS SHALL BE STORED OR PLACED OUTSIDE LIMITS OF WORK/DISTURBANCE.
- STORMWATER POLLUTION PREVENTION ITEMS SHALL BE IN PLACE PRIOR TO COMMENCING CLEARING OPERATIONS, EARTHWORK GRADING, OR ANY OTHER TYPE OF CONSTRUCTION ACTIVITY.
- ROOF DRAINS, FOUNDATION DRAINS AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER ARE PROHIBITED.
- CONSTRUCTION NOISE SHALL BE KEPT TO A MINIMUM DURING NIGHTTIME HOURS AND MUST COMPLY WITH MUNICIPAL CODE REQUIREMENTS.
- STORM WATER DRAINAGE SHALL BE CONSTRUCTED IN ACCORDANCE WITH GENOA TOWNSHIP ENGINEERING STANDARDS.

**SOIL EROSION CONTROL SCHEDULE** 2016

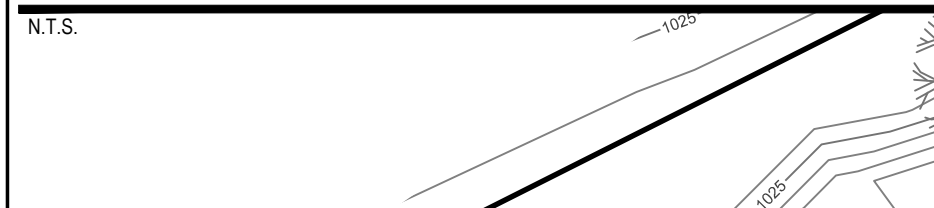
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PLACE SILT FENCE												
STRIP & STOCKPILE TOPSOIL												
CONSTRUCT CONNECTION TO STORM SEWER												
ROUGH GRADE SITE												
CONSTRUCT BUILDING FOUNDATION AND BUILDING												
CONSTRUCT IMPROVEMENTS AROUND BUILDING												
CONSTRUCT UTILITY LINES TO BUILDING												
FINISH GRADE SITE												
PAVE SITE												
RESURFACE TOPSOIL/COMPACTION												
SEED DISTURBED AREAS												
SITE RESTORATION/CLEAN UP												



**SPECIFICATIONS FOR STANDARD BAGS BY NOMINAL SIZE**

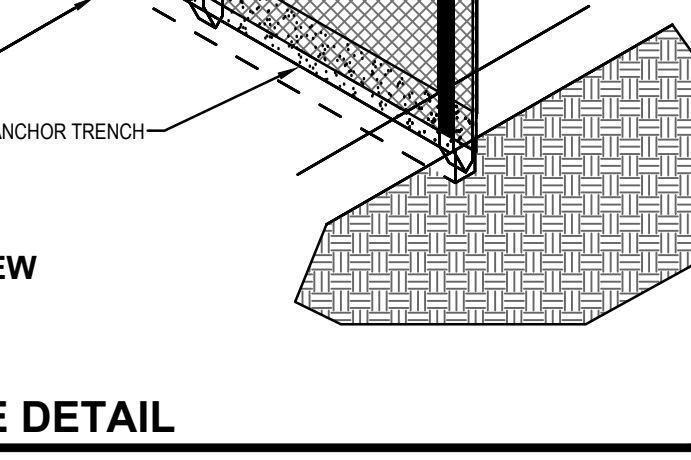
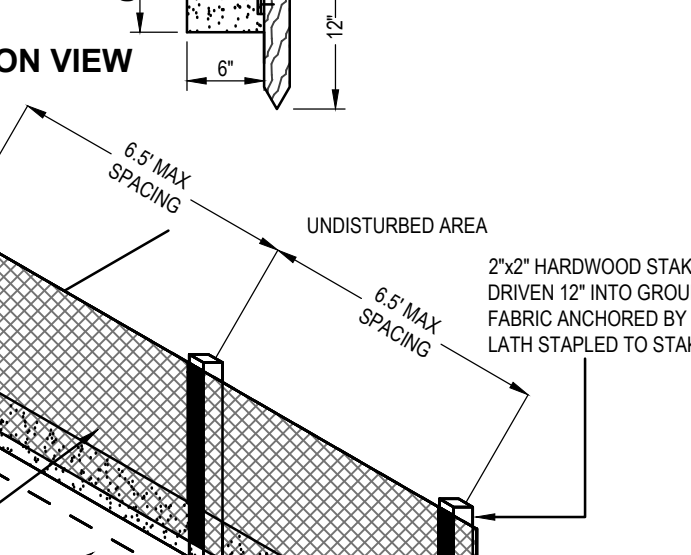
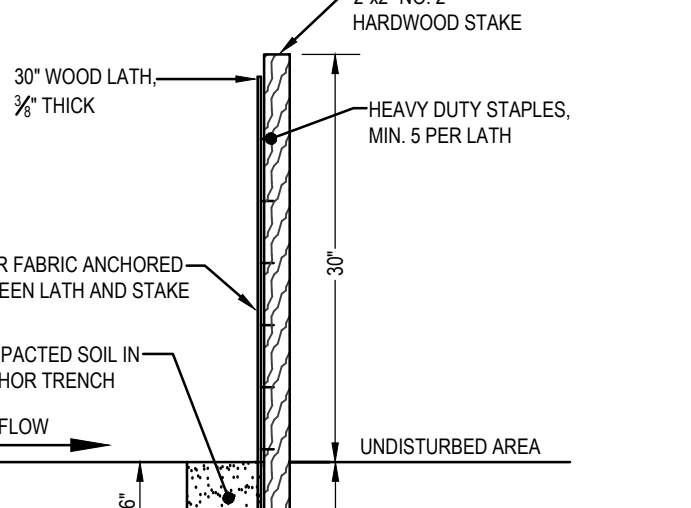
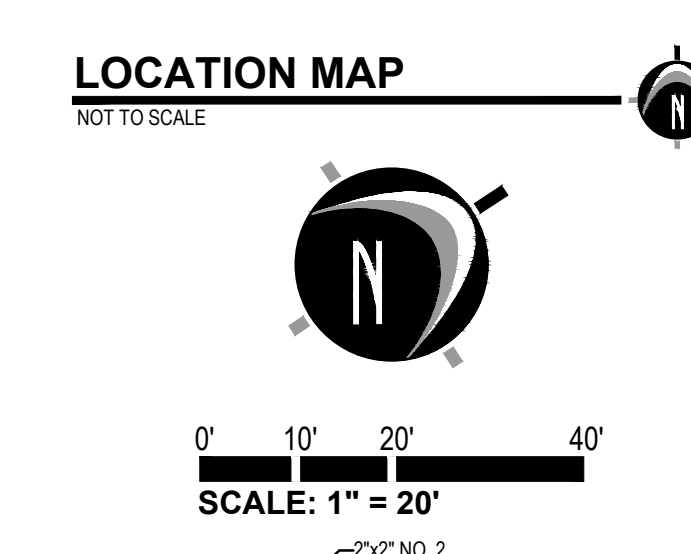
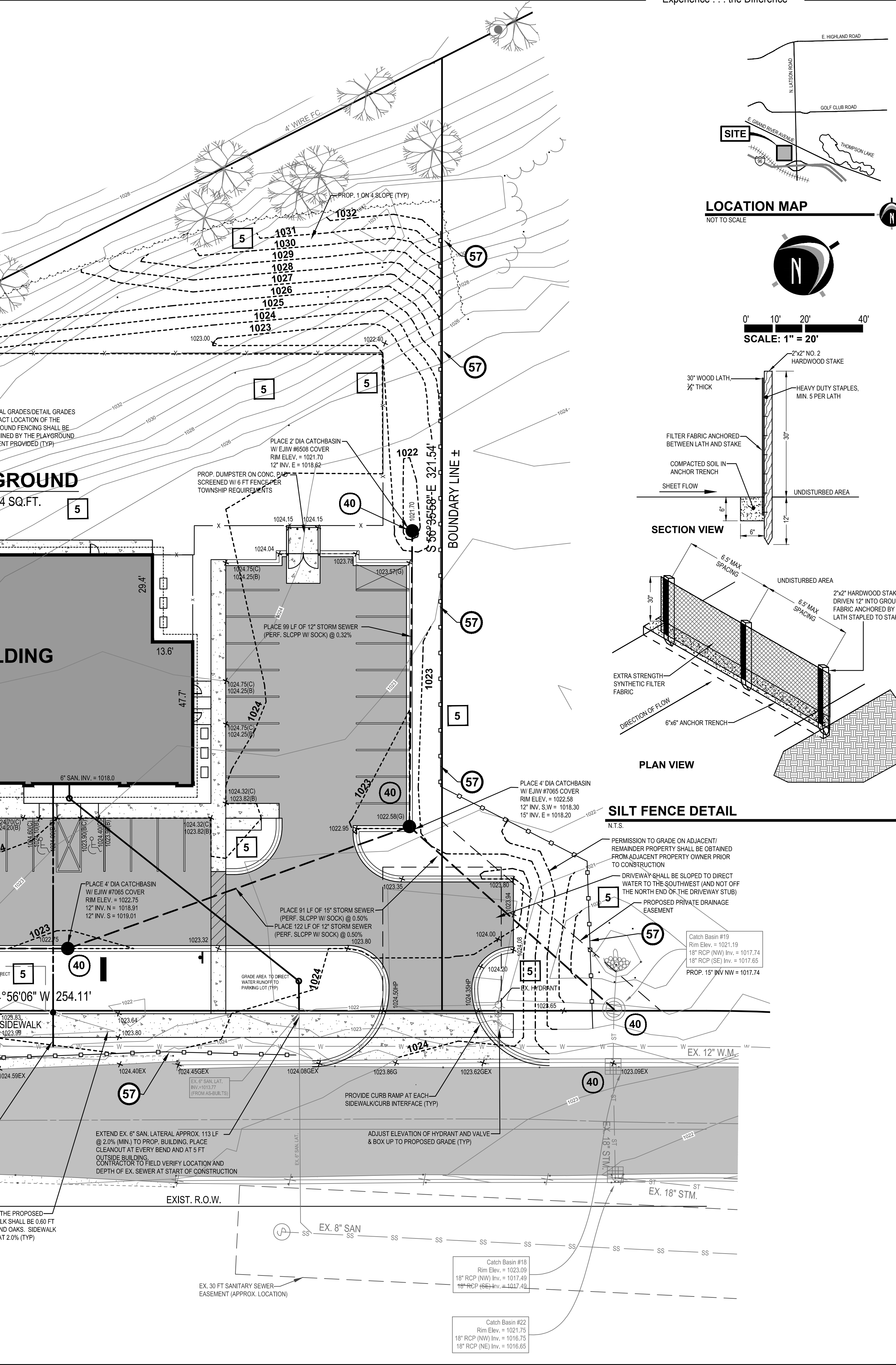
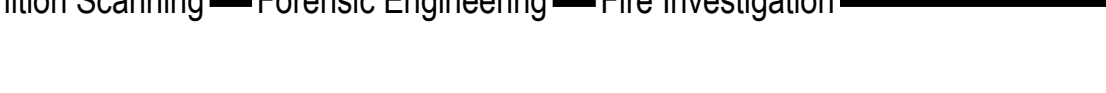
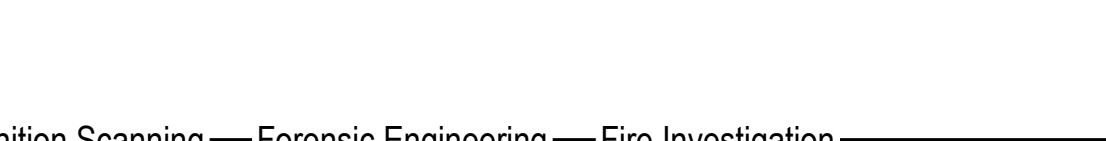
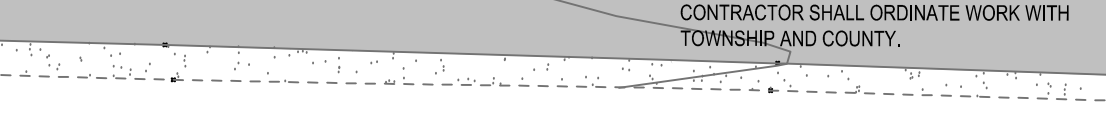
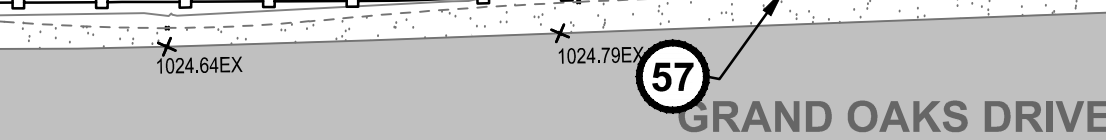
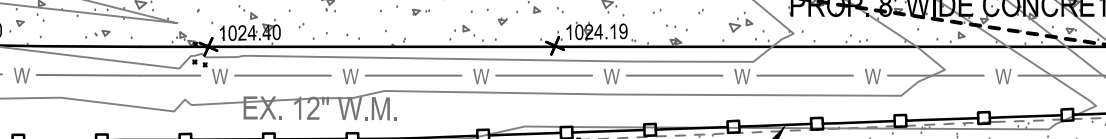
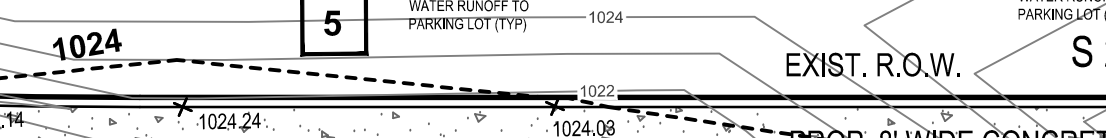
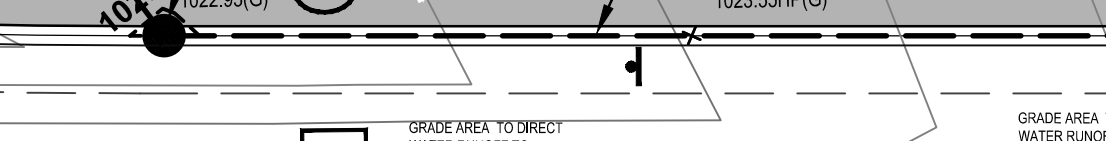
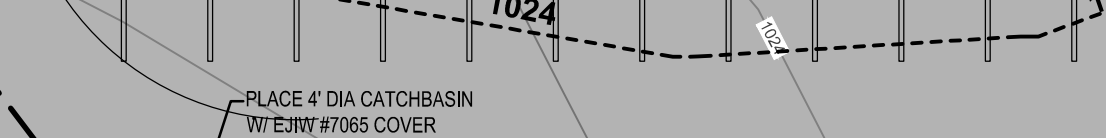
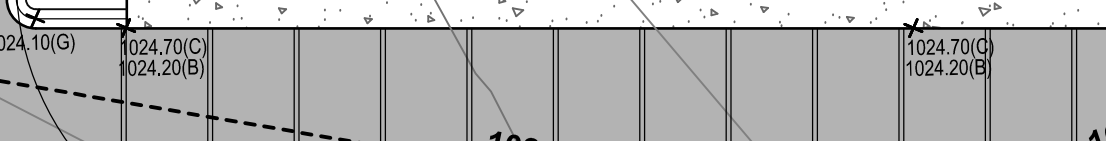
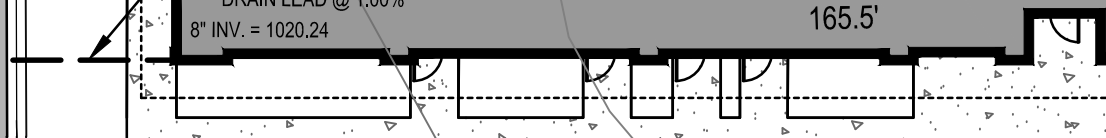
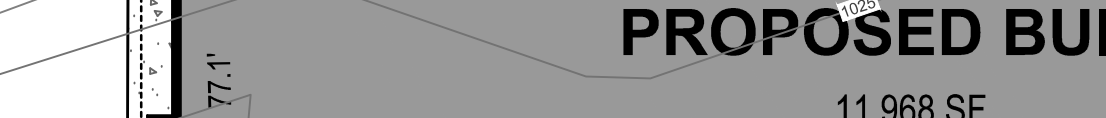
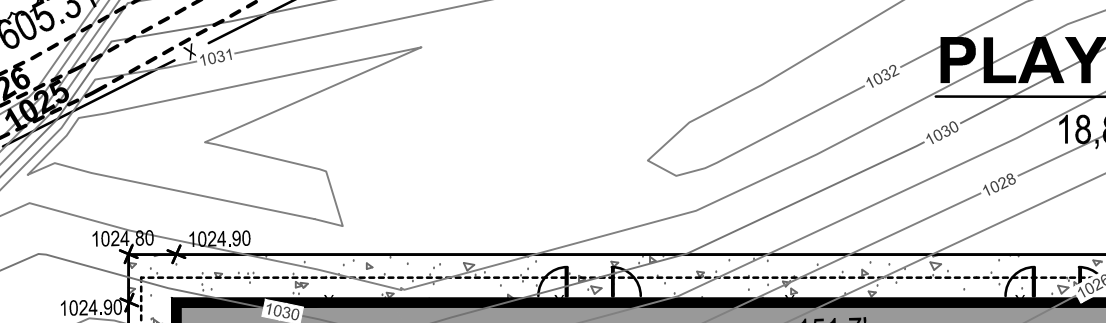
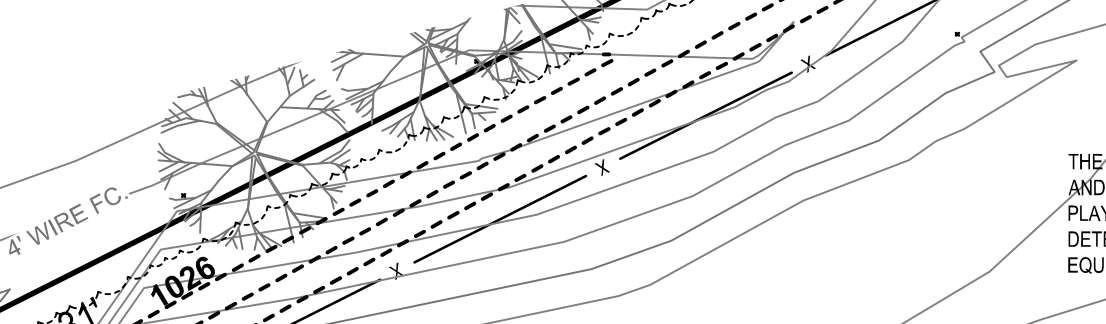
NORMAL BAG SIZE	SOIL STORAGE (Cu Ft)	FX PROTECT (Cu Ft)	L (INCHES)	W (INCHES)
SMALL	18	12	24	36
MEDIUM	27	18	36	54
LARGE	36	27	48	72
XL	45	36	60	90

**FLEXSTORM INLET FILTER DETAIL**



**SOIL EROSION AND SEDIMENTATION CONTROL NOTES**

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- CONTRACTOR SHALL MODIFY THIS SOIL EROSION AND SEDIMENTATION CONTROL PLAN TO SHOW THE ADDITIONAL CONTROL MEASURES INTENDED TO BE USED DURING CONSTRUCTION. SUBMIT MODIFICATIONS TO THE CONTROLLING AGENCY, THE OWNER, AND THE ENGINEER.
- EROSION PROTECTION SHALL BE PROVIDED AT ALL STORM SEWER INLETS AND OUTLETS. ALL BARE EARTH SHALL BE STABILIZED WITH SEEDING.
- LOCATION AND TYPE OF EROSION CONTROL MEASURES ARE IDENTIFIED ON THE SKETCH BY KEY NUMBERS, E.G. 5, 13, 40, 57 RELATING TO THE MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY UNIFIED KEYING SYSTEM AND BEST MANAGEMENT PRACTICES.
  - 5 DENOTES TEMPORARY PRACTICES
  - 40 DENOTES PERMANENT PRACTICES



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ST. LOUIS

**PREPARED FOR:**  
Boverhof Builders Inc.  
Attn: Dan Boverhof

5475 Settlers Place  
Kentwood, MI 49512

**REVISIONS:**

Title: Site Plan Submittal	V. Date: 02.22.16
Drawn: SW	Checked: SW
Title: Site Plan Resubmittal	V. Date: 02.11.16
Drawn: SW	Checked: SW
Title: Site Plan Resubmittal	V. Date: 02.11.16
Drawn: SW	Checked: SW
Title: Site Plan Resubmittal	V. Date: 02.23.16
Drawn: SW	Checked: SW
Title: Fire Department Turn Around	V. Date: 03.08.16
Drawn: SW	Checked: SW
Title: Per Township Consultants	V. Date: 03.08.16
Drawn: SW	Checked: SW
Title: Fire Department Turn Around	V. Date: 03.14.16
Drawn: SW	Checked: SW
Title: Fire Department Turn Around	V. Date: 03.17.16
Drawn: SW	Checked: SW

**GILDEN WOODS HOWELL**

**S.E.S.C., Grading & Utility Plan**

Grand Oaks Drive - Howell, MI 48843

PART OF THE NE CORNER OF SECTION 8, T2N, R9E,  
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

**STAMP:**

STATE OF MICHIGAN  
LICENSED PROFESSIONAL ENGINEER

STEVEN L. WITTE  
ENGINEER  
No. 45769

**PROJECT NO:**  
15500079

**SHEET NO:**  
C-300

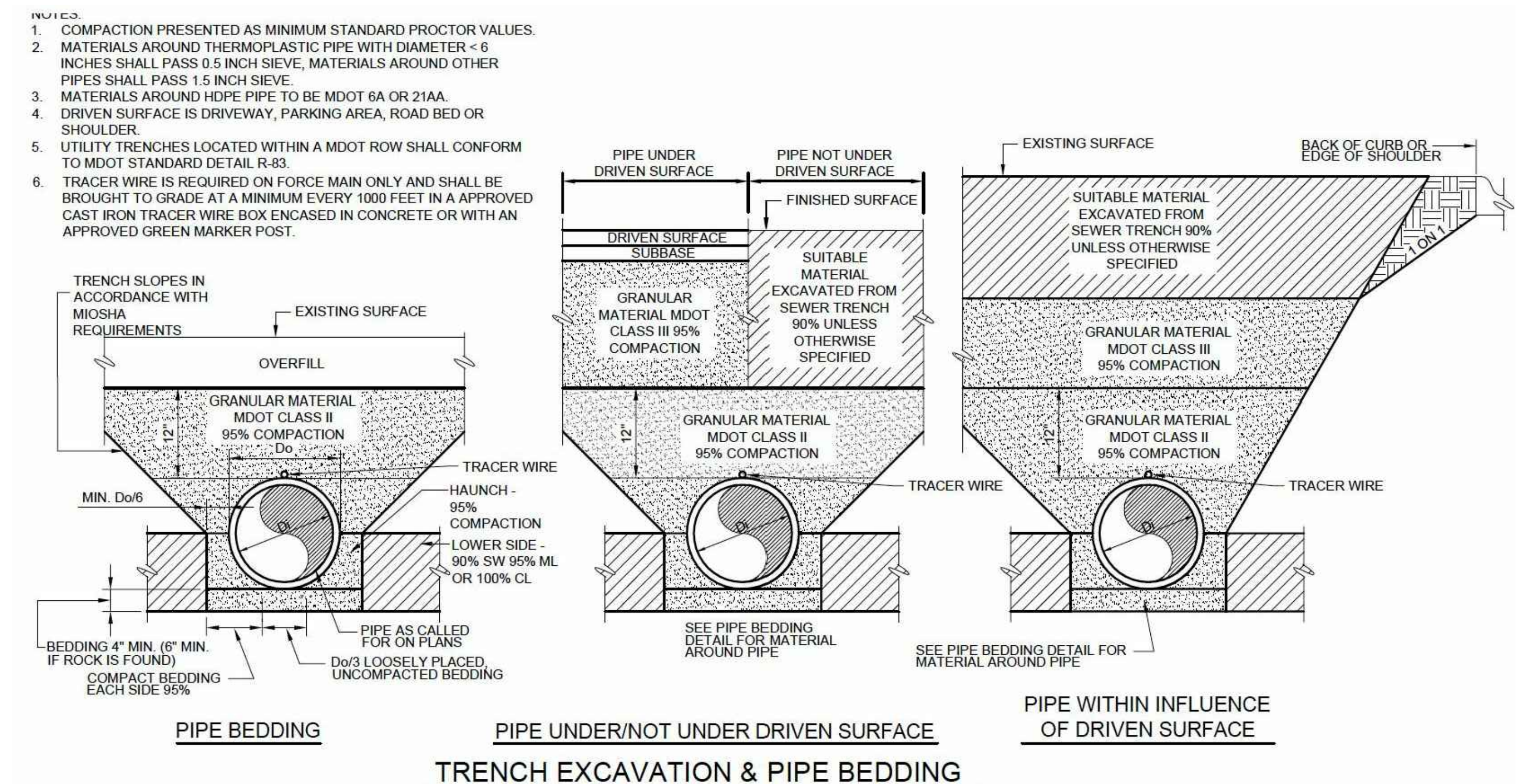
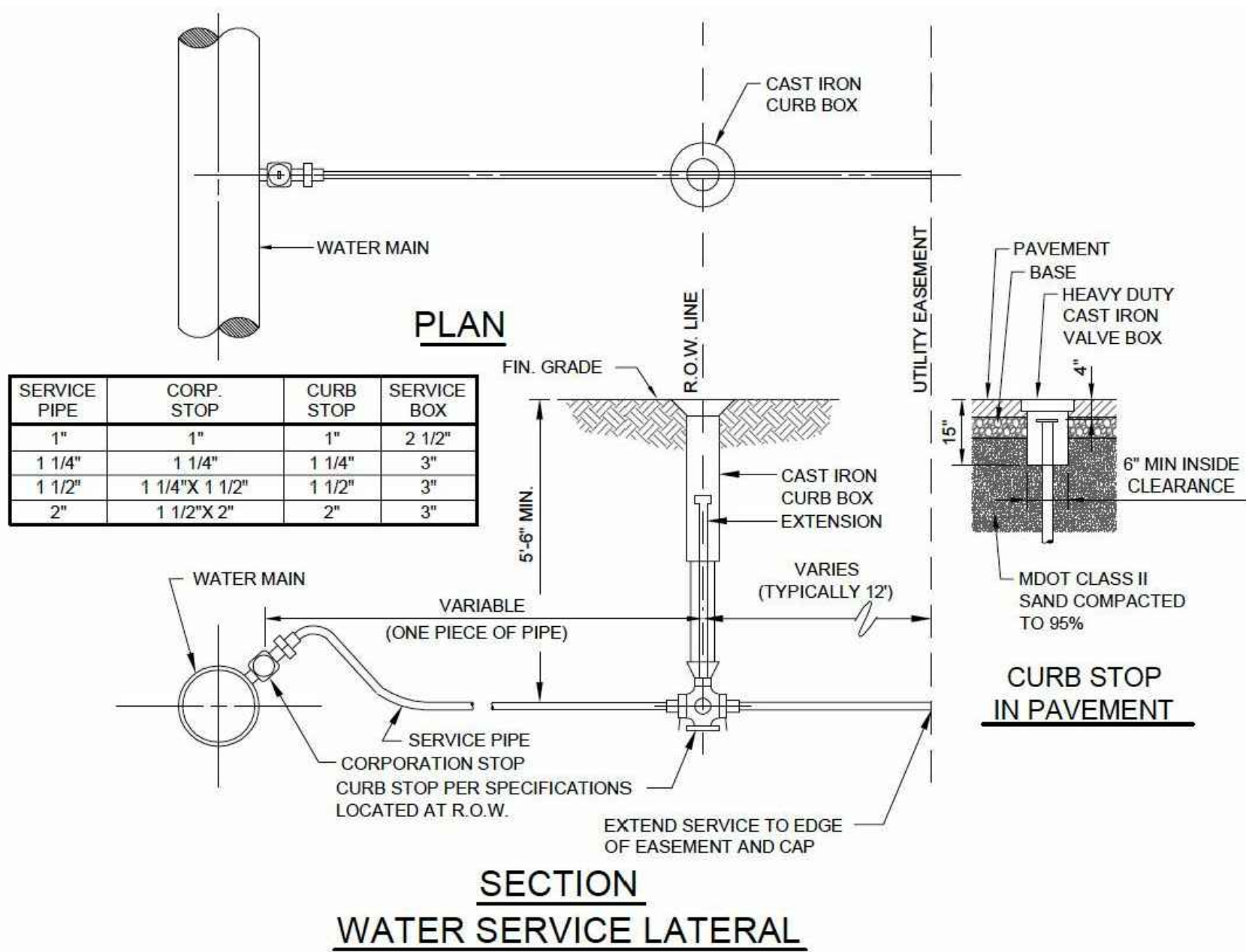
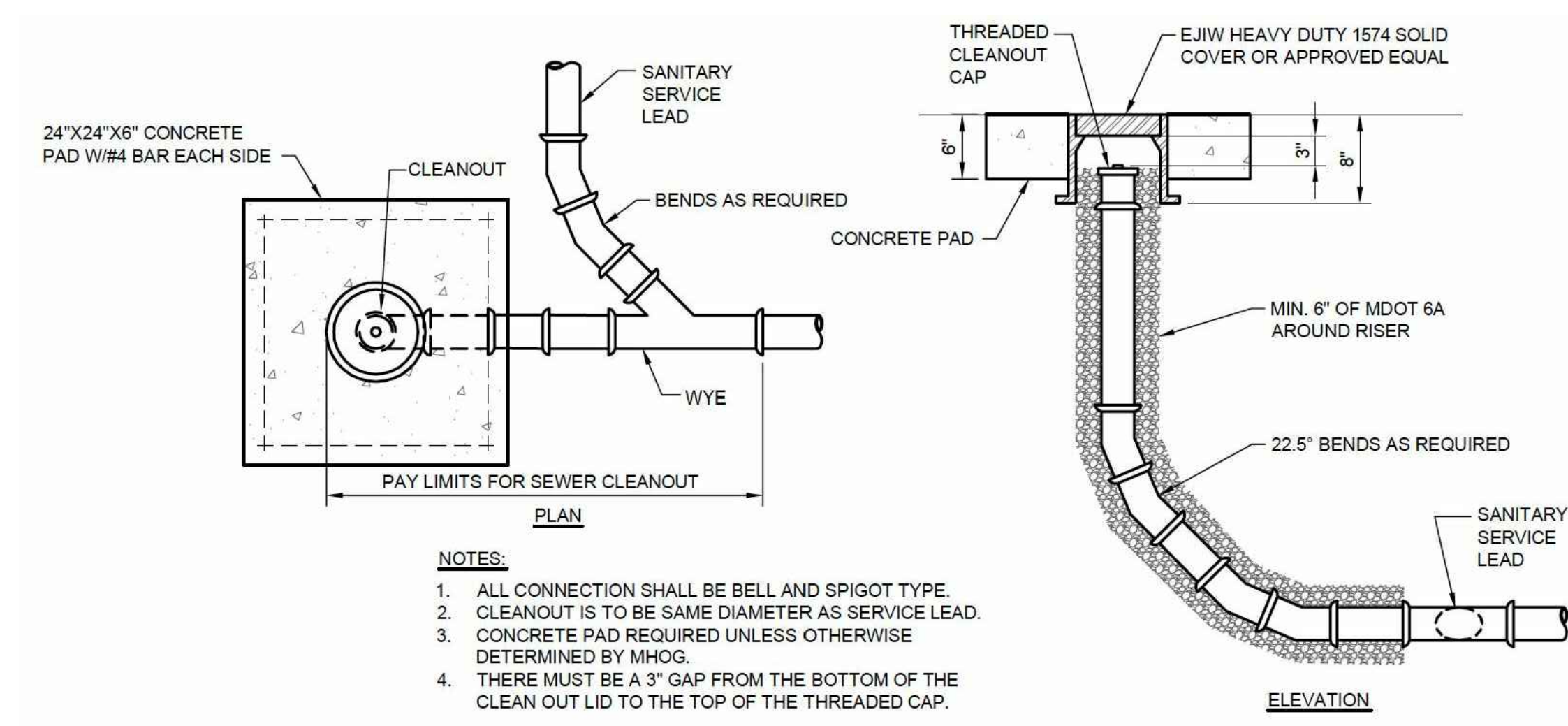
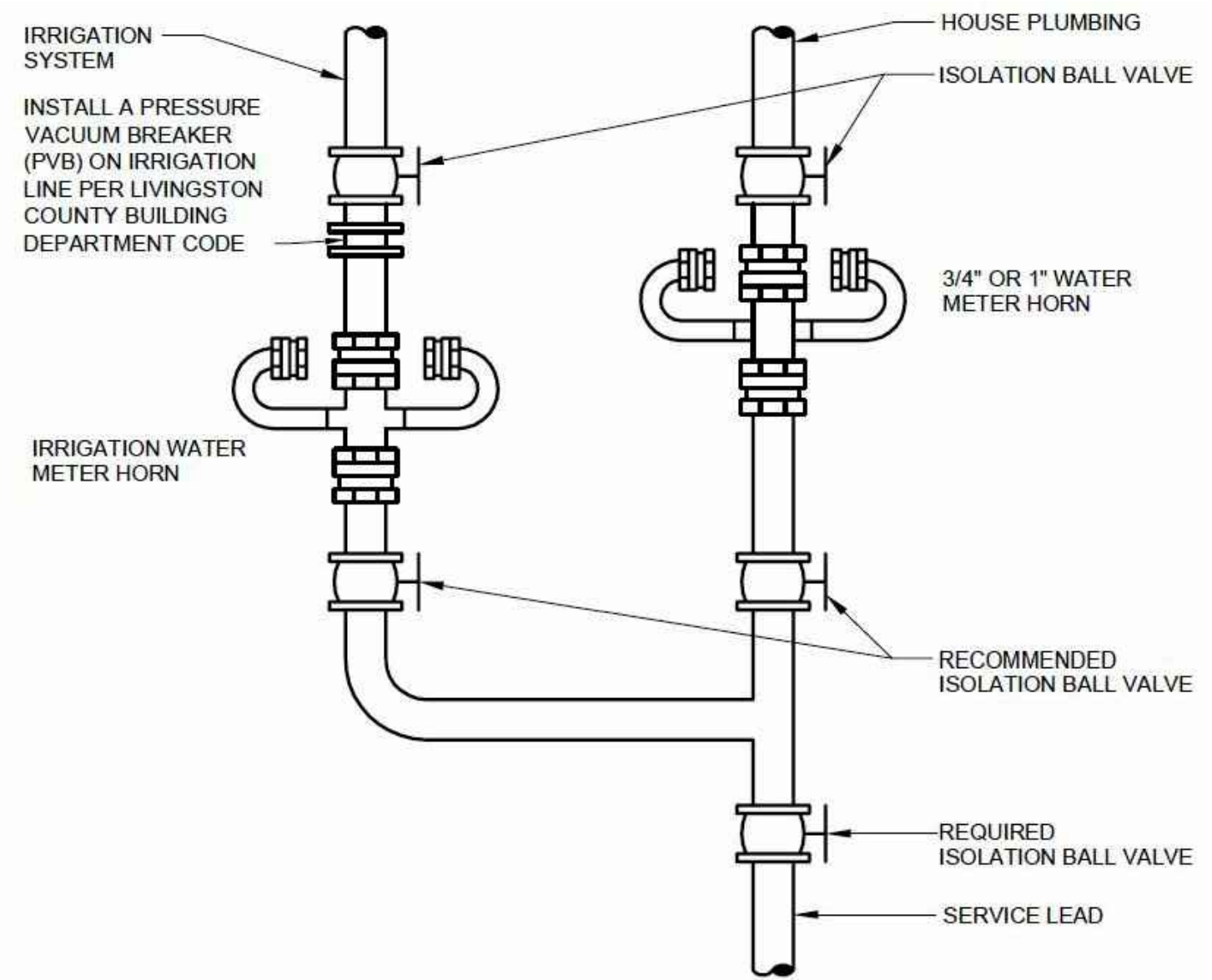
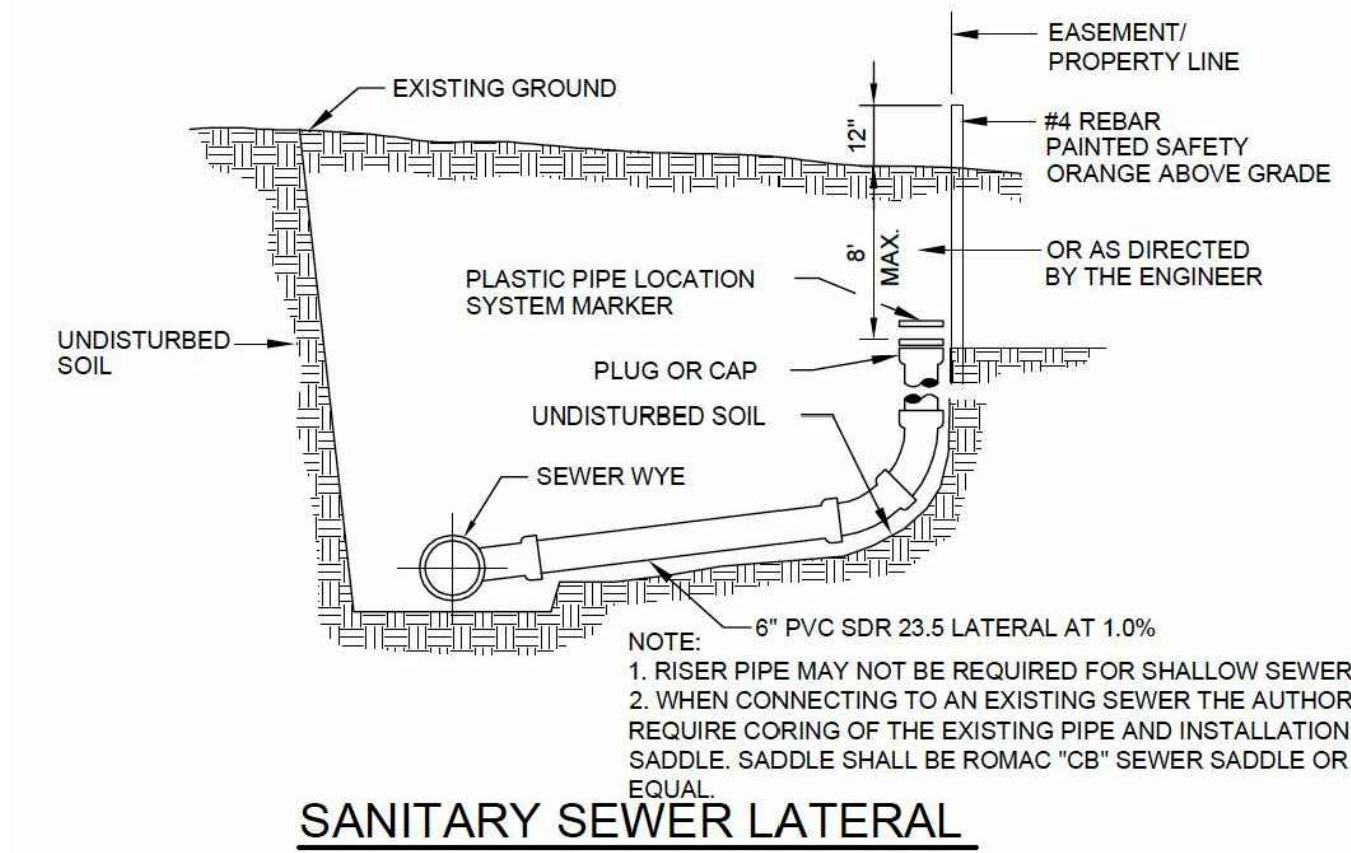
**SHEET: 4 OF 6**



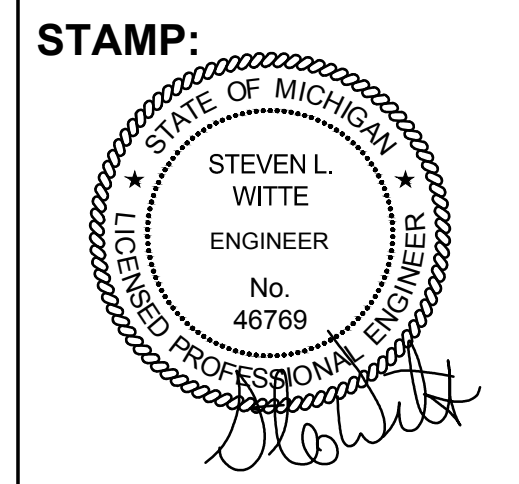
**PREPARED FOR:**  
 Boverhof Builders Inc.  
 Attn: Dan Boverhof  
 5475 Settlers Pass  
 Kentwood, MI 49512

**REVISIONS:**

Title: Site Plan Submittal	V. Date: 02.02.16
Drawn: SW	Checked: SW
Title: Site Plan Resubmittal	V. Date: 02.11.16
Drawn: SW	Checked: SW
Title: Site Plan Resubmittal	V. Date: 02.23.16
Drawn: SW	Checked: SW
Title: Fire Department Turn Around	V. Date: 03.08.16
Drawn: SW	Checked: SW
Title: Per Township Consultants	V. Date: 03.14.16
Drawn: SW	Checked: SW
Title: Per Planning Commission	V. Date: 03.17.16
Drawn: SW	Checked: SW



**GILDEN WOODS HOWELL**  
**Details & Specifications**  
 Grand Oaks Drive - Howell, MI 48843  
 PART OF THE NE CORNER OF SECTION 8, T2N, R9E,  
 GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



**PROJECT NO:**  
 15500079  
**SHEET NO:**  
**C-500**  
**SHEET: 5 OF 6**



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Title: Site Plan Submittal	V. Date: 02.02.16		
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Drawn: SW	Checked: SW	S. Date: 03.14.16	
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Drawn: SW	Checked: SW	S. Date: 03.17.16	

**LANDSCAPE LEGEND / SCHEDULE**

**TREES**

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
	AB	15	Abies balsamea	Balsam Fir	8' hgt. avg. <sup>(1)</sup>
	AR	10	Acer rubrum	Red Maple	2.5" cal. min.
	CC	8	Cercis canadensis	Eastern Redbud	2.5" cal. min.
	TT	10	Tilia tomentosa	Silver Linden	2.5" cal. min.

(1) Balsam Fir shall be planted at varying heights, approximately 6'-10'.

**SHRUBS**

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
	Fg	8	Fothergilla gardenii	Dwarf Fothergilla	#3 cont.
	Js	6	Juniperus sabina 'Broadmoor'	'Broadmoor' Juniper	#5 cont.
	Tm	5	Taxus x media 'Densiformis'	Compact Yew	#3 cont.

**GROUND COVER**

SYMBOL	KEY	QUANTITY	SCIENTIFIC NAME	COMMON NAME	SIZE
	As Needed <sup>(1)</sup>	N/A		Bark Mulch	3" depth
	As Needed <sup>(2)</sup>		Poa pratensis	Kentucky Bluegrass Sod	Roll

(1) All disturbed areas programmed as planting beds shall receive bark mulch to a depth of 3".  
 (2) All disturbed areas not otherwise programmed shall receive turf grass sod.

**NOTE:** THE EXACT SPECIES AND PLANTINGS SHOWN ON THIS PLAN MAY BE ADJUSTED IF MUTUALLY AGREED TO BY THE OWNER, THE TOWNSHIP, AND THE LANDSCAPE ARCHITECT.

**LANDSCAPE NOTES**

**PLANTING NOTES:**

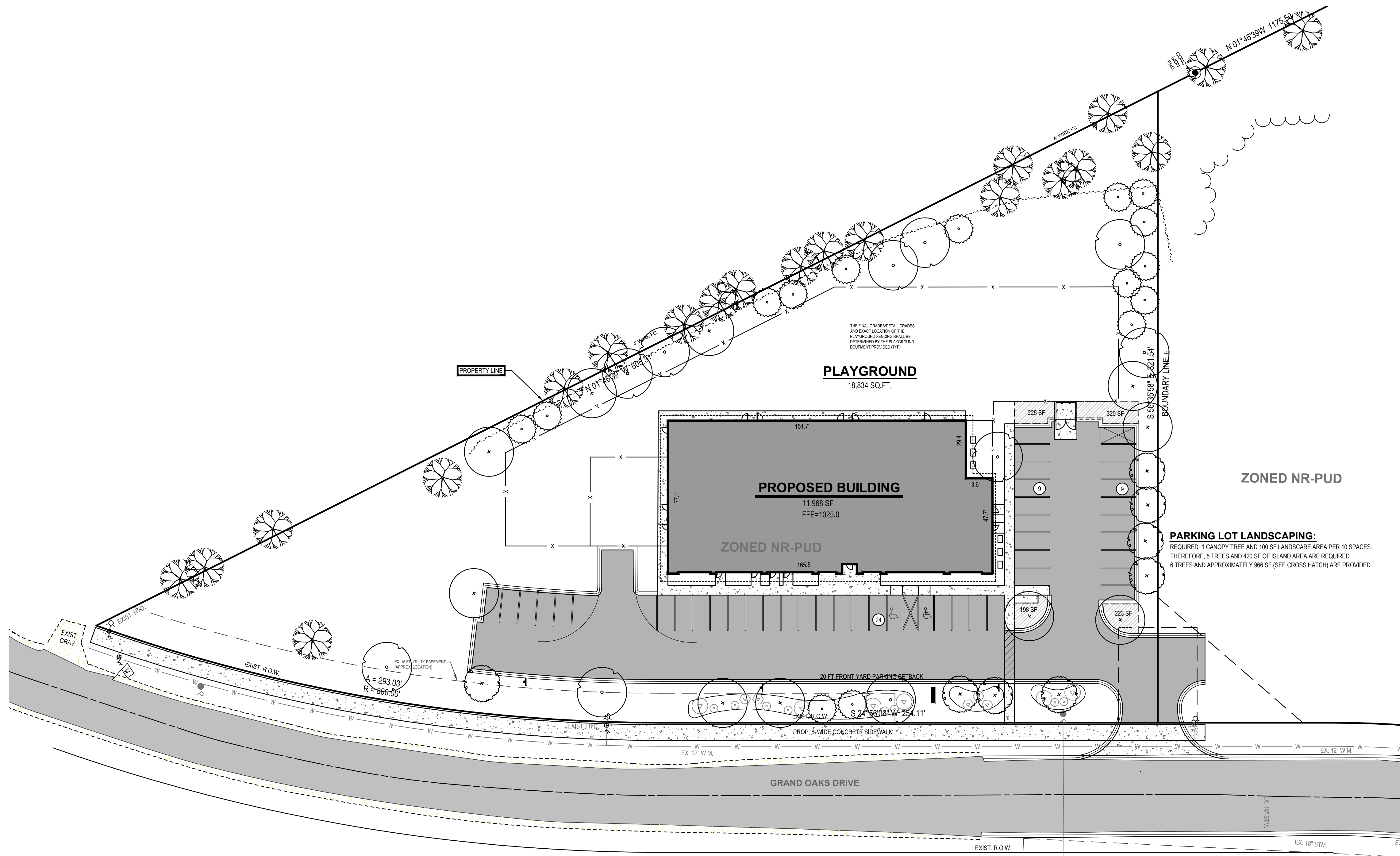
- ALL PLANT MATERIAL SHALL BE LOCALLY NURSERY GROWN NO.1 GRADE AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES. ALL PLANT MATERIALS SHALL MEET CURRENT AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS. DO NOT PLANT MATERIALS UNTIL DIRECTED BY OWNER, LANDSCAPE ARCHITECT, AND/OR CONSTRUCTION MANAGER. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL, FOR ANY REASON BEFORE OR AFTER IT IS INSTALLED.
- SIZES SPECIFIED ARE MINIMUM SIZES TO WHICH THE PLANTS ARE TO BE INSTALLED.
- ANY PLANT SUBSTITUTIONS SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT.
- MAINTENANCE OF LANDSCAPING ITEMS, TREES, AND PLANTS SHALL BE PERFORMED BY THE PROPERTY OWNER OR A QUALIFIED PROFESSIONAL. ALL LANDSCAPING SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH APPLICABLE MUNICIPAL STANDARDS AND IN ACCORDANCE WITH CURRENT INDUSTRY STANDARDS IN A NEAT, HEALTHY AND WEED FREE CONDITION. ANY DEAD, DISEASED OR DAMAGED PLANT MATERIALS ARE TO BE REPLACED IMMEDIATELY AFTER NOTIFIED TO DO SO.
- PLANT TREES AND SHRUBS IN ACCORDANCE WITH PLANTING DETAILS. DIG TREE PITS PER DETAILS. PLANT TREES AND SHRUBS AT THE SAME GRADE LEVEL AT WHICH THEY WERE GROWN AT THE NURSERY. IF HEAVY CLAY SOILS ARE EVIDENT, REMOVE TOP 14" OF THE ROOT BALL ABOVE GRADE, AND BACKFILL TO TOP OF ROOT BALL.
- REMOVE ALL TWINE, WIRE, NURSERY TREE GUARDS, TAGS AND INORGANIC MATERIAL FROM ROOT BALLS. REMOVE THE TOP 1/3 OF BURLAP FROM EARTH BALLS AND REMOVE BURLAP FROM AROUND TRUNK.
- FINELY SHREDDED HARDWOOD BARK MULCH, NATURAL COLOR (NON-COLORED), IS REQUIRED FOR ALL PLANTINGS AND PLANTING BEDS. MULCH PER PLANTING DETAILS. MULCH IN PLANT BEDS SHALL BE 3" THICK AT TIME OF INSPECTION AND AFTER COMPACTED BY RAIN OR IRRIGATION. ALL PLANTING BEDS SHALL BE EDGED WITH 6" X 12 GAUGE STEEL LANDSCAPE EDGING.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR THE VERIFICATION OF ALL UNDERGROUND AND OVERHEAD UTILITIES. IF A CONFLICT WITH UTILITIES EXIST, NOTIFY OWNER/CONSTRUCTION MANAGER PRIOR TO PLANTING.
- PLANT MATERIAL SHALL BE GUARANTEED FOR ONE YEAR AFTER PLANTING AND ACCEPTANCE.

**TOPSOIL AND TURF NOTES:**

- WHEREVER GROUND IN ITS NATURAL STATE HAS BEEN DISTURBED, APPROVED LANDSCAPING OR GRASS SHALL BE FULLY INSTALLED, AND ESTABLISHED WITHIN A REASONABLE PERIOD OF TIME, BUT NO LONGER THAN ONE GROWING SEASON (UNLESS OTHERWISE NOTED AND APPROVED).
- DURING EXCAVATION, GRADING, AND INSTALLATION OF REQUIRED LANDSCAPING, ALL SOIL EROSION AND SEDIMENTATION CONTROL REGULATIONS SHALL BE STRICTLY FOLLOWED AND COMPLIED WITH.
- ALL LAWN AREAS SHALL RECEIVE SOD OR HYDROSEED. TURF SHALL BE INSTALLED ON TOPSOIL UNLESS APPROVED OTHERWISE. DO NOT PLANT UNTIL ACCEPTANCE OF FINISH GRADE.
- SOD SHALL BE GROWN ON TOPSOIL UNLESS APPROVED OTHERWISE. SOD SHALL BE 2 YEARS OLD AND STRONGLY ROOTED. PLACE SOD TIGHTLY WITH NO GAPS AND WITH GRASS IN SAME DIRECTION. SEAMS OF SOD SHALL BE STAGGERED IN A RUNNING BOND PATTERN. SOD SHALL BE WATERED IMMEDIATELY TO AVOID DRYING OUT. DO NOT INSTALL SOD UNTIL ACCEPTANCE OF FINISH GRADE AND IRRIGATION SYSTEM IS OPERATING PROPERLY UNLESS DIRECTED IN WRITING TO DO OTHERWISE. FINISH ROLL SOD WITH A WATER FILLED LAWN ROLLER. ROLL PERPENDICULAR TO LENGTH OF SOD.
- TURF SHALL BE INSTALLED ON A MIN. OF 3" OF LIGHTLY COMPACTED APPROVED TOPSOIL. TOPSOIL SHALL BE FERTILE, SCREENED, FRIABLE TOPOSOIL, FREE OF STONES 1/2" IN DIA. AND LARGER, ROOTS, STICKS, OR OTHER EXTRANEIOUS MATERIAL INCLUDING NOXIOUS PLANTS. PH BETWEEN 6.0 AND 6.5, SALTS 500 PARTS PPM, ORGANIC CONTENT 3% MIN. DO NOT INSTALL TOPSOIL UNTIL APPROVED BY OWNER/C.M. TOPSOIL SHALL BE FINE GRADED TO A SMOOTH FINISH, FREE OF LUMPS AND DEPRESSIONS.
- ALL LANDSCAPE ISLANDS WITHIN PARKING LOTS SHALL BE BACK FILLED WITH TOPSOIL TO A DEPTH OF 18" MIN.

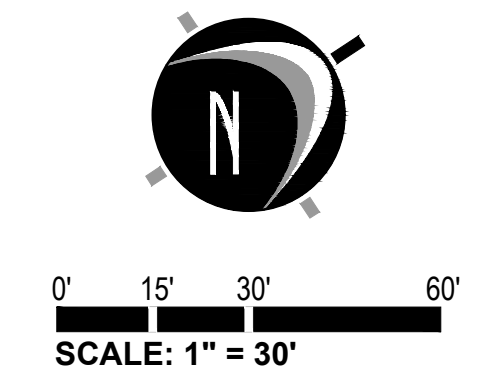
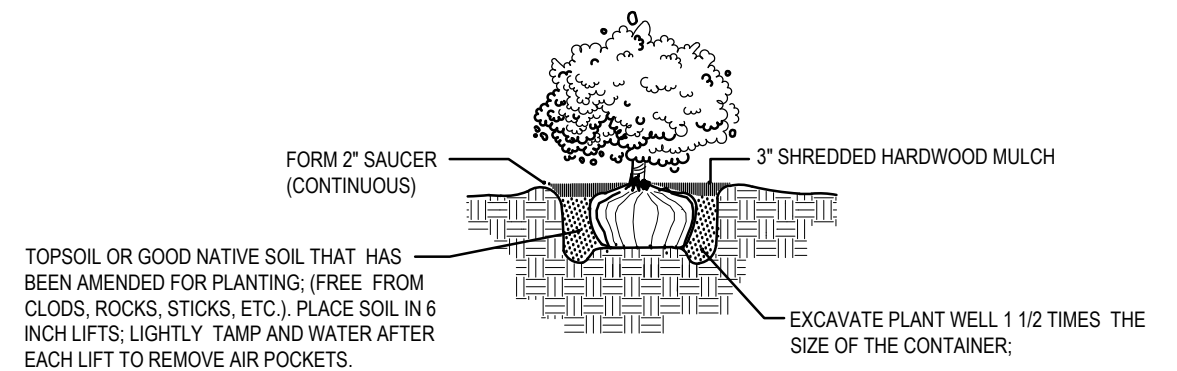
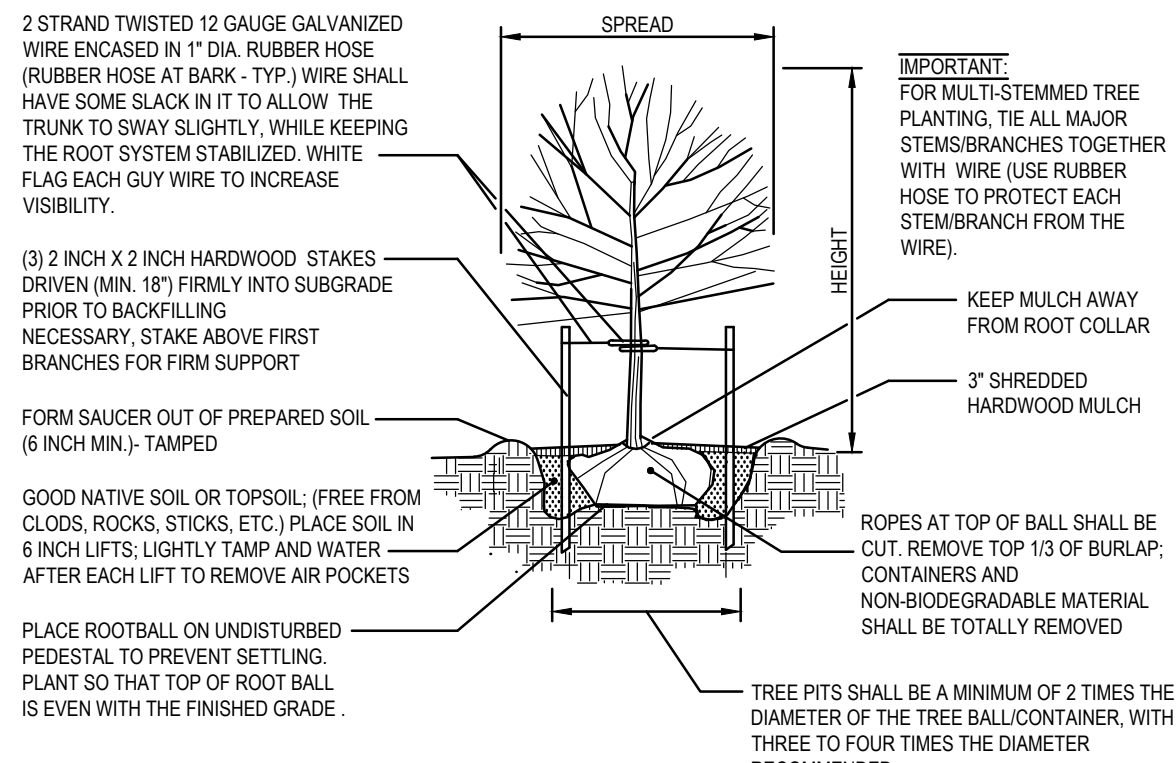
**IRRIGATION NOTES:**

- ALL PLANTING AREAS, LAWN AREAS AND LANDSCAPE ISLANDS SHOWN ARE TO HAVE A COMPLETE IRRIGATION SYSTEM. THE G.C. SHALL BE RESPONSIBLE FOR RETAINING A QUALIFIED FIRM FOR THE DESIGN OF THE IRRIGATION SYSTEM. THE DESIGN MUST SHOW HOW THE SYSTEM TIES INTO THE BUILDING AND MUST SHOW ALL OF THE NECESSARY EQUIPMENT FOR A COMPLETE SYSTEM. THE G.C. SHALL SUBMIT THE IRRIGATION SYSTEM DESIGN TO THE ARCHITECT/OWNER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.



**LEGEND**

	EXISTING BITUMINOUS
	PROPOSED BITUMINOUS (STANDARD DUTY)
	PROPOSED BUILDING
	PROPOSED CONCRETE (STANDARD DUTY)



**811** Know what's below. CALL before you dig.

UTILITY LOCATIONS ARE DERIVED FROM ACTUAL MEASUREMENTS OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS NOR SHOULD IT BE ASSUMED THAT THEY ARE THE ONLY UTILITIES IN THIS AREA.

NOTE: EXISTING UTILITIES AND SERVICE LINES IDENTIFIED AS "PLANS" WERE OBTAINED FROM AVAILABLE AS-BUILT RECORD DRAWINGS. THE CONTRACTOR SHALL VERIFY THE LOCATION, DEPTH AND STATUS OF ALL UTILITIES AND SERVICE LINES PRIOR TO NEW CONNECTIONS.

**STAMP:**

STATE OF MICHIGAN  
 JAMES C. WALTER, JR.  
 LANDSCAPE ARCHITECT  
 No. 1588  
 REGISTERED LANDSCAPE ARCHITECT

**PROJECT NO:**  
 15500079

**SHEET NO:**  
**L-201**

**SHEET: 6 OF 6**



**NEDERVELD**  
 www.nederveld.com  
 800.222.1868  
**GRAND RAPIDS**  
 217 Grandville Ave., Suite 302  
 Grand Rapids, MI 49503  
 Phone: 616.575.5190

ANN ARBOR  
 CHICAGO  
 COLUMBUS  
 HOLLAND  
 INDIANAPOLIS  
 ST. LOUIS

**Plan View**  
 Scale - 1" = 50'

**PREPARED FOR:**  
 Boverhof Builders Inc.  
 Attn: Dan Boverhof

5475 Settlers Pass  
 Kentwood, MI 49512

**REVISIONS:**

Title: Site Plan Submittal	V. Date: 02.23.16
Drawn: SW	Checked: SW
Title: Site Plan Reubmittal	V. Date: 02.23.16
Drawn: SW	Checked: SW

**GILDEN WOODS HOWELL**  
 Site Layout Plan  
 Grand Oaks Drive - Howell, MI 48843  
 PART OF THE NE CORNER OF SECTION 8, T2N, R1E,  
 CITY OF HOWELL, LIVINGSTON COUNTY, MICHIGAN

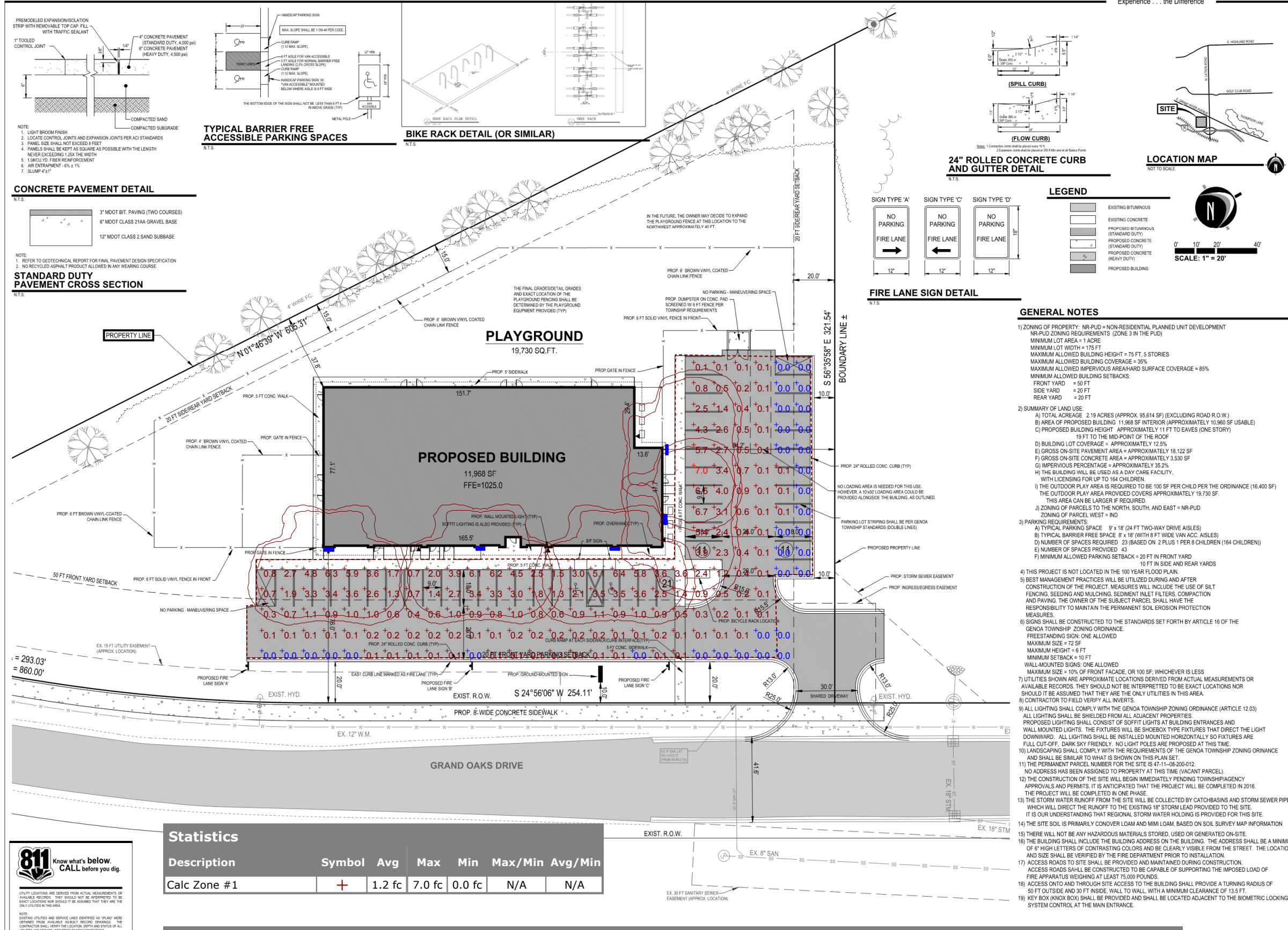
**STAMP:**

STEVEN L. WITTE  
 ENGINEER  
 No. 46769  
 PROFESSIONAL ENGINEER

**PROJECT NO:**  
 15500079

**SHEET NO:**  
**C-205**

**SHEET: 3 OF 6**



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**Statistics**

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Calc Zone #1	+	1.2 fc	7.0 fc	0.0 fc	N/A	N/A

**Schedule**

Symbol	Label	Quantity	Manufacturer	Catalog Number	Description	Lamp	Number Lamps	Filename	Lumens Per Lamp	Light Loss Factor	Wattage
	A	5	Lithonia Lighting	DSXW2 LED 30C 1000 40K T4M MVOLT	DSXW2 LED WITH 3 LIGHT ENGINES, 30 LED's, 1000mA DRIVER, 4000K LED, TYPE 4 MEDIUM OPTIC	LED	1	DSXW2_LED_30C_1000_40K_T4M_M VOLT.ies	8611	1	109



EXTERIOR MATERIALS

SYNTHETIC STONE - BORAL STONE PRODUCTS, SPRING STREAM STONE

PREFINISHED CEMENT BOARD SIDING -  
HARD-PLANK HORIZONTAL LAP AND SHAKE STYLE AS SHOWN  
LAP SIDING - "NAVALO BEIGE"  
SHAKE SIDING - "AUTUMN LEAF"

WINDOWS -  
1" GRAY TINTED INSULATED GLASS IN CLEAR ANODIZED ALUMINUM  
FRAME. PROVIDE OPERABLE WINDOWS AS SHOWN WITH INSECT SCREENS.

EXTERIOR PAINT COLORS -  
PT #1 - MATCH PREFINISHED LAP SIDING "NAVALO BEIGE"  
PT #2 - TO MATCH QUALITY EDGE, #522 "FOREST"

PRE FINISHED METAL FASCIA & DRIP EDGE -  
QUALITY EDGE, #606 "COZY COTTAGE"

PRE FINISHED METAL GUTTER -  
QUALITY EDGE, #606 "COZY COTTAGE"

PRE FINISHED METAL DOWN SPOUTS -  
QUALITY EDGE, #606 "COZY COTTAGE"

PRE FINISHED METAL SOFFIT PANEL -  
QUALITY EDGE, #606 "COZY COTTAGE"

ARCHITECTURAL DIMENSIONAL SHINGLES-  
OWENS CORNING, "DRIFTWOOD"

NOTE:

CAULK ALL JOINTS BETWEEN TRIM & SIDING

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DATE	REVISION
01-29-2016	FOR SITE PLAN APPROVAL
03-16-2016	REVISED PER PLANNING COMMISSION REVIEW

PROPOSED BUILDING FOR:



HOWELL  
GRAND OAKS DRIVE  
GENOA TWP., MICHIGAN

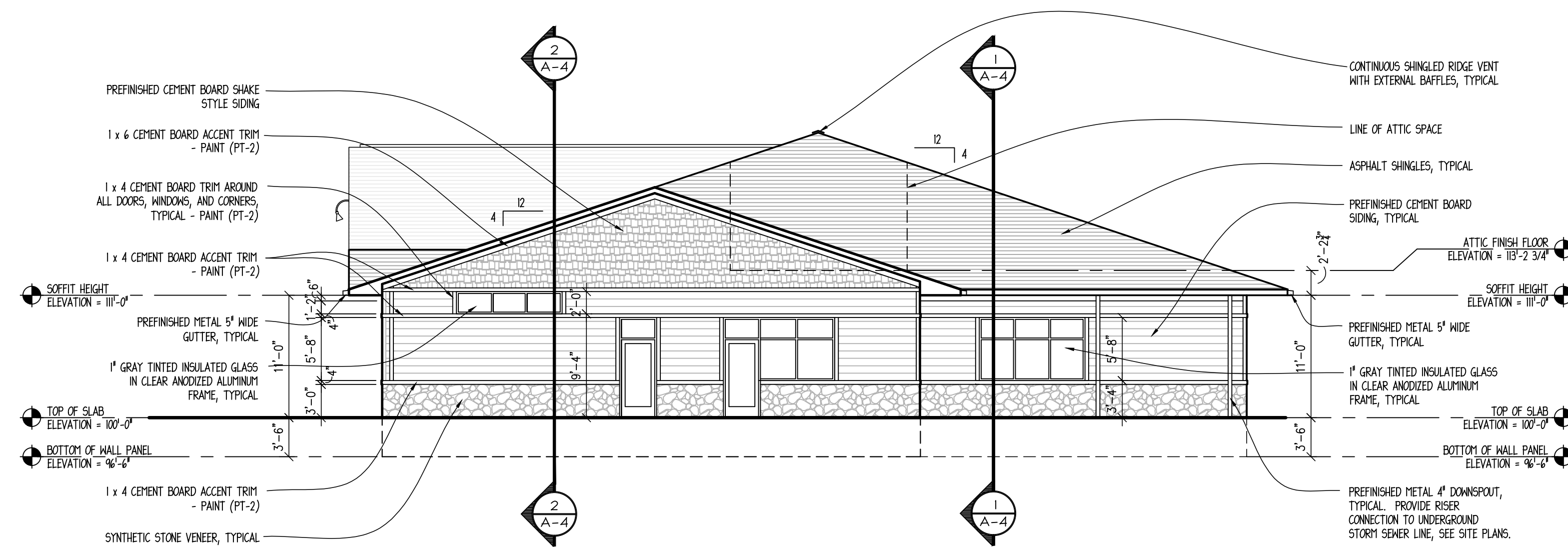


ARCHITECTURE  
PLANNING  
ENGINEERING  
6650 CROSSING DRIVE, S.E.  
GRAND RAPIDS, MI 49508  
(616) 554-1222  
FAX (616) 554-1225

DATE: JANUARY 29, 2016 PROJECT No. 16-05

SHEET No.

A-2



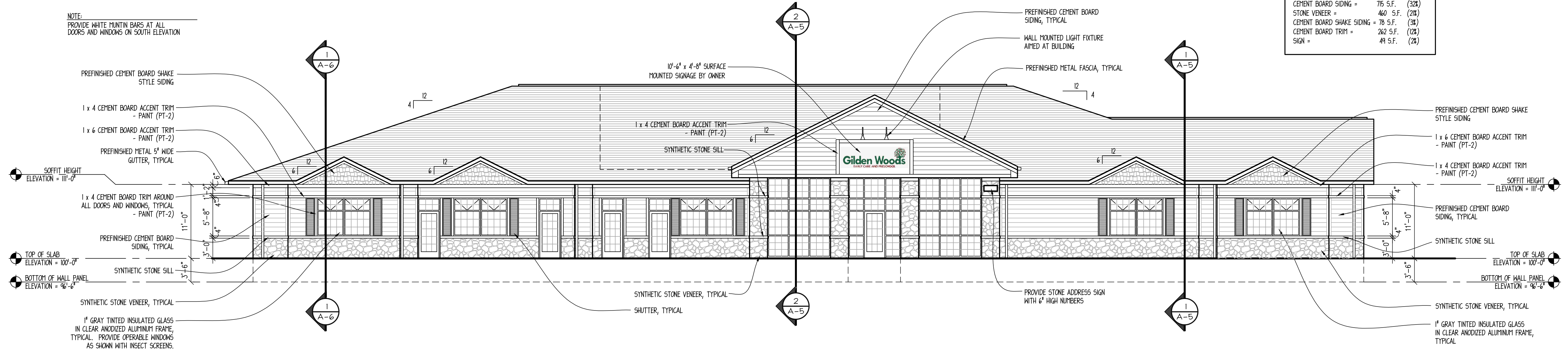
TOTAL Sq.F.L. = 1,104 S.F.

GLASS =	171 S.F.	(6%)
CEMENT BOARD TRIM =	125 S.F.	(11%)
CEMENT BOARD SHAKE SIDING =	191 S.F.	(17%)
CEMENT BOARD SIDING =	404 S.F.	(37%)
STONE VENEER =	213 S.F.	(20%)

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

TOTAL Sq.F.L. = 2,229 S.F.

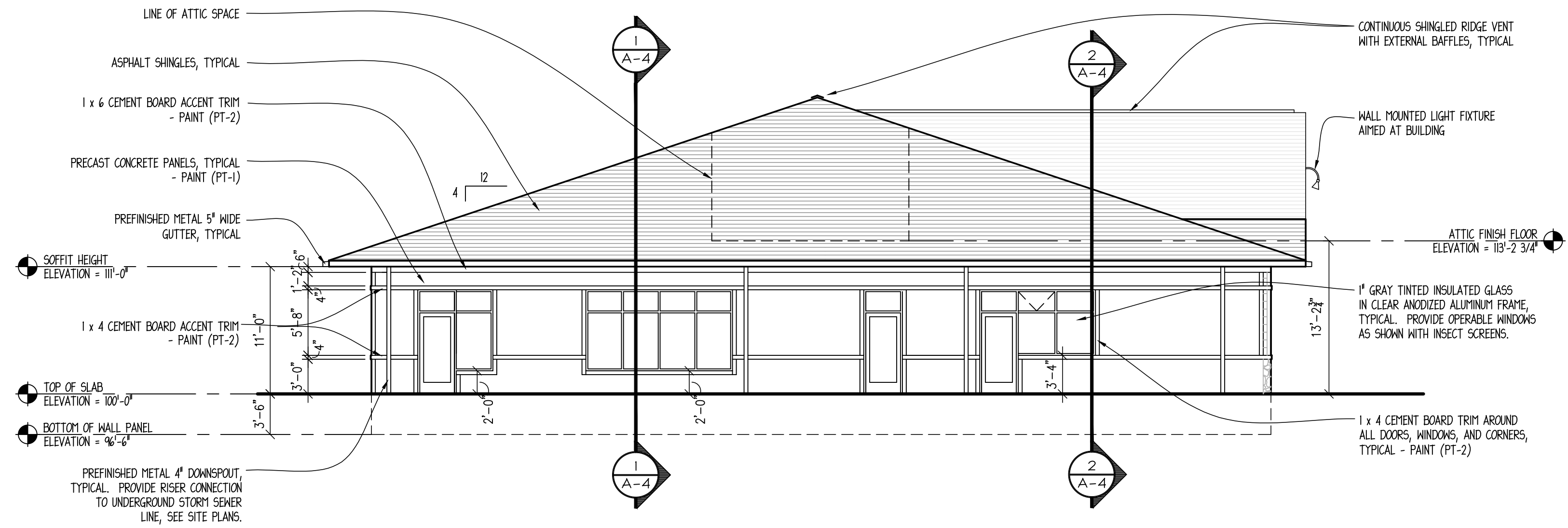
GLASS =	645 S.F.	(30%)
CEMENT BOARD SIDING =	715 S.F.	(32%)
STONE VENEER =	460 S.F.	(21%)
CEMENT BOARD SHAKE SIDING =	78 S.F.	(3%)
CEMENT BOARD TRIM =	262 S.F.	(12%)
SIGN =	49 S.F.	(2%)



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

NOTE:  
PROVIDE WHITE MUNTIN BARS AT ALL  
DOORS AND WINDOWS ON SOUTH ELEVATION





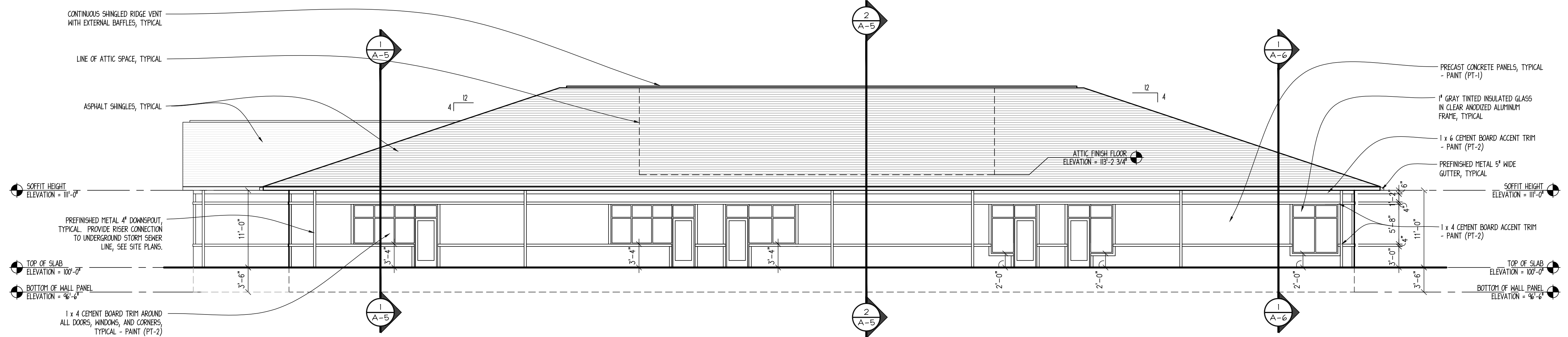
TOTAL Sq.Ft. = 855 S.F.	
GLASS =	238 S.F. (28%)
CONCRETE PANELS WITH	495 S.F. (58%)
SPRAY TEXTURED FINISH =	115 S.F. (13%)
CEMENT BOARD TRIM =	7 S.F. (1%)

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

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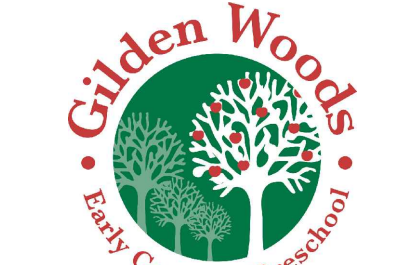
DATE	REVISION
01-29-2016	FOR SITE PLAN APPROVAL
03-16-2016	REVISED PER PLANNING COMMISSION REVIEW



TOTAL Sq.Ft. = 1,889 S.F.	
GLASS =	376 S.F. (20%)
CONCRETE PANELS WITH	1,214 S.F. (64%)
SPRAY TEXTURED FINISH =	229 S.F. (12%)
CEMENT BOARD TRIM =	

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

PROPOSED BUILDING FOR:



HOWELL  
GRAND OAKS DRIVE  
GENOA TWP., MICHIGAN

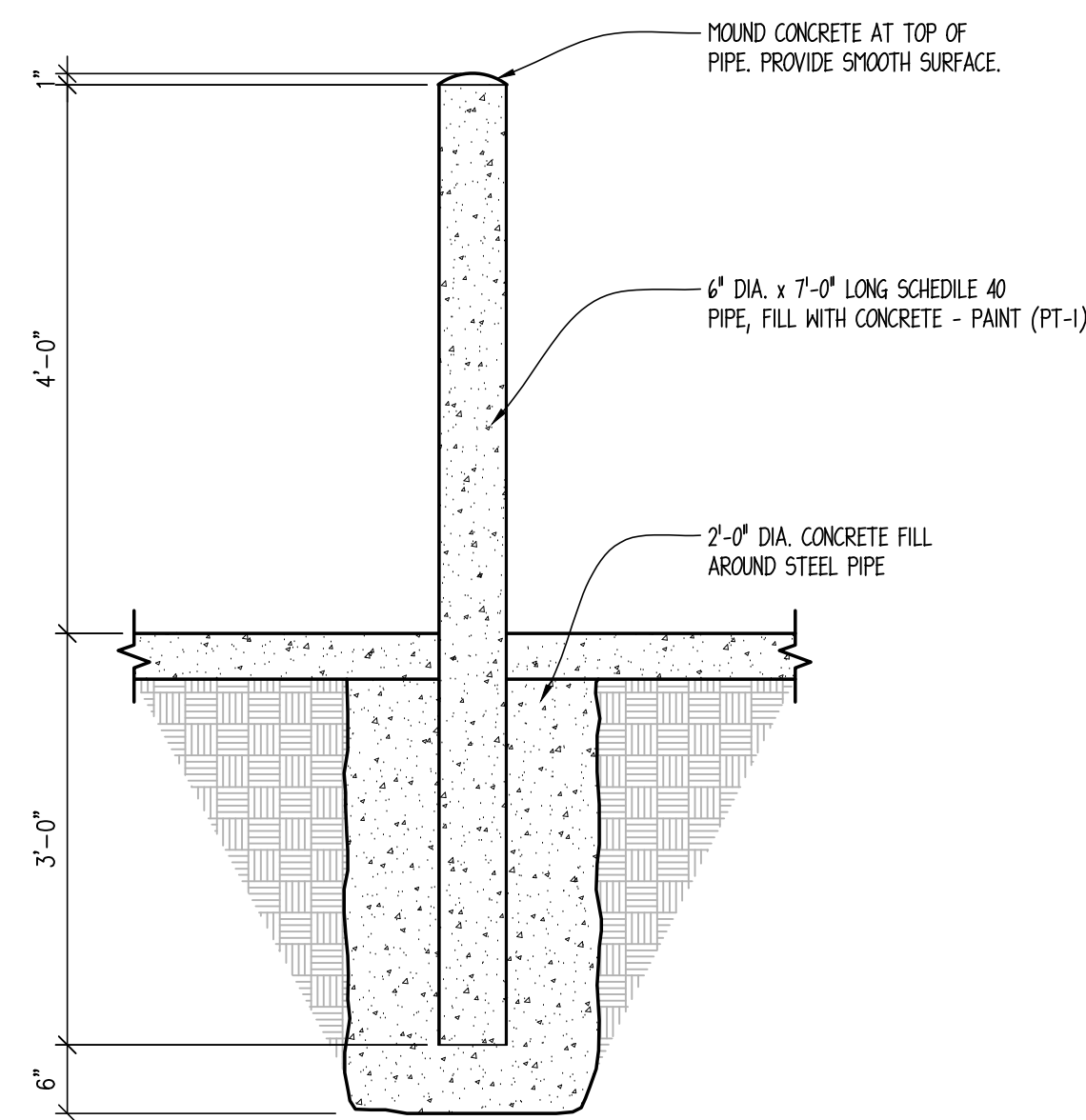


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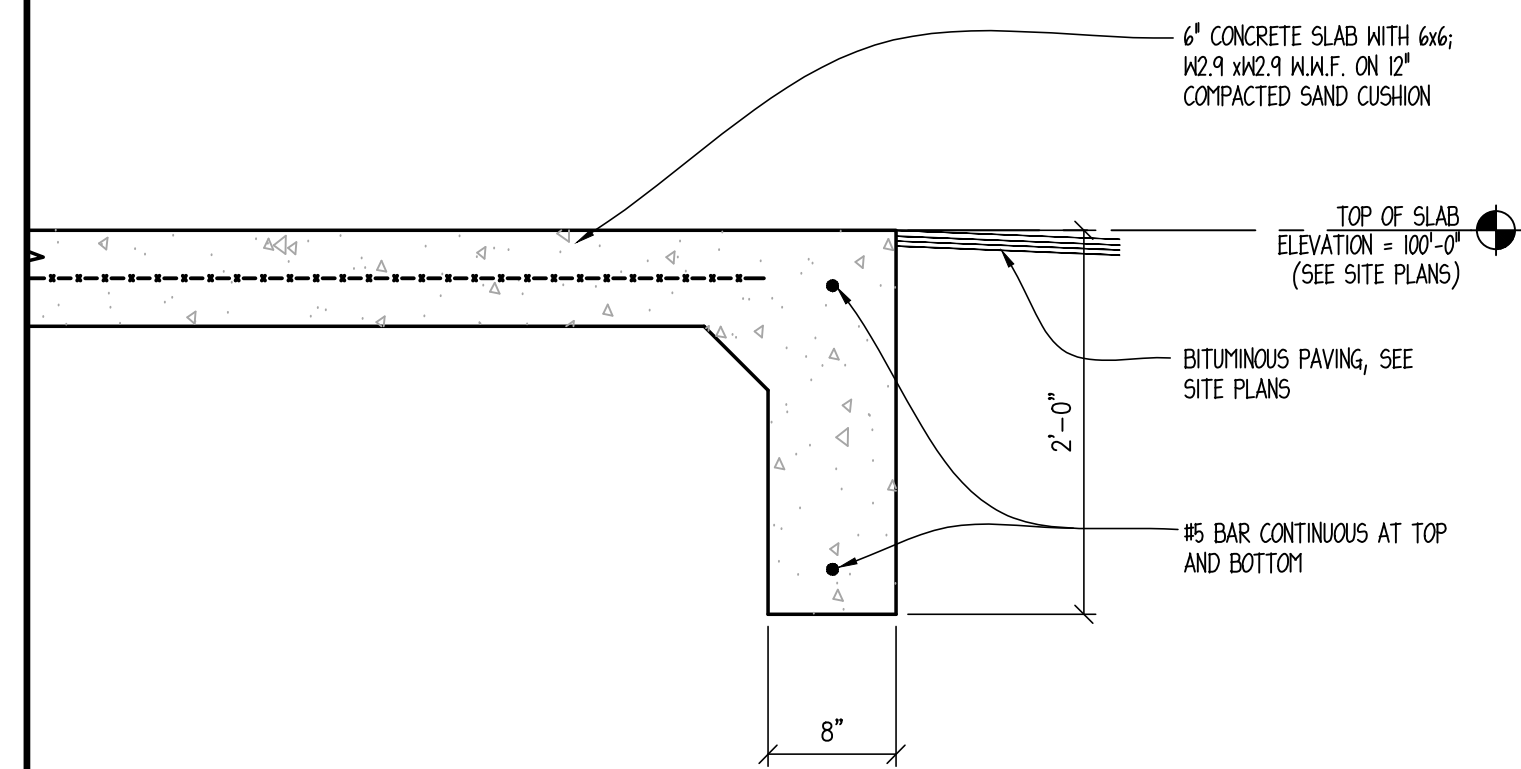
DATE: JANUARY 29, 2016 PROJECT No. 16-05

SHEET No.

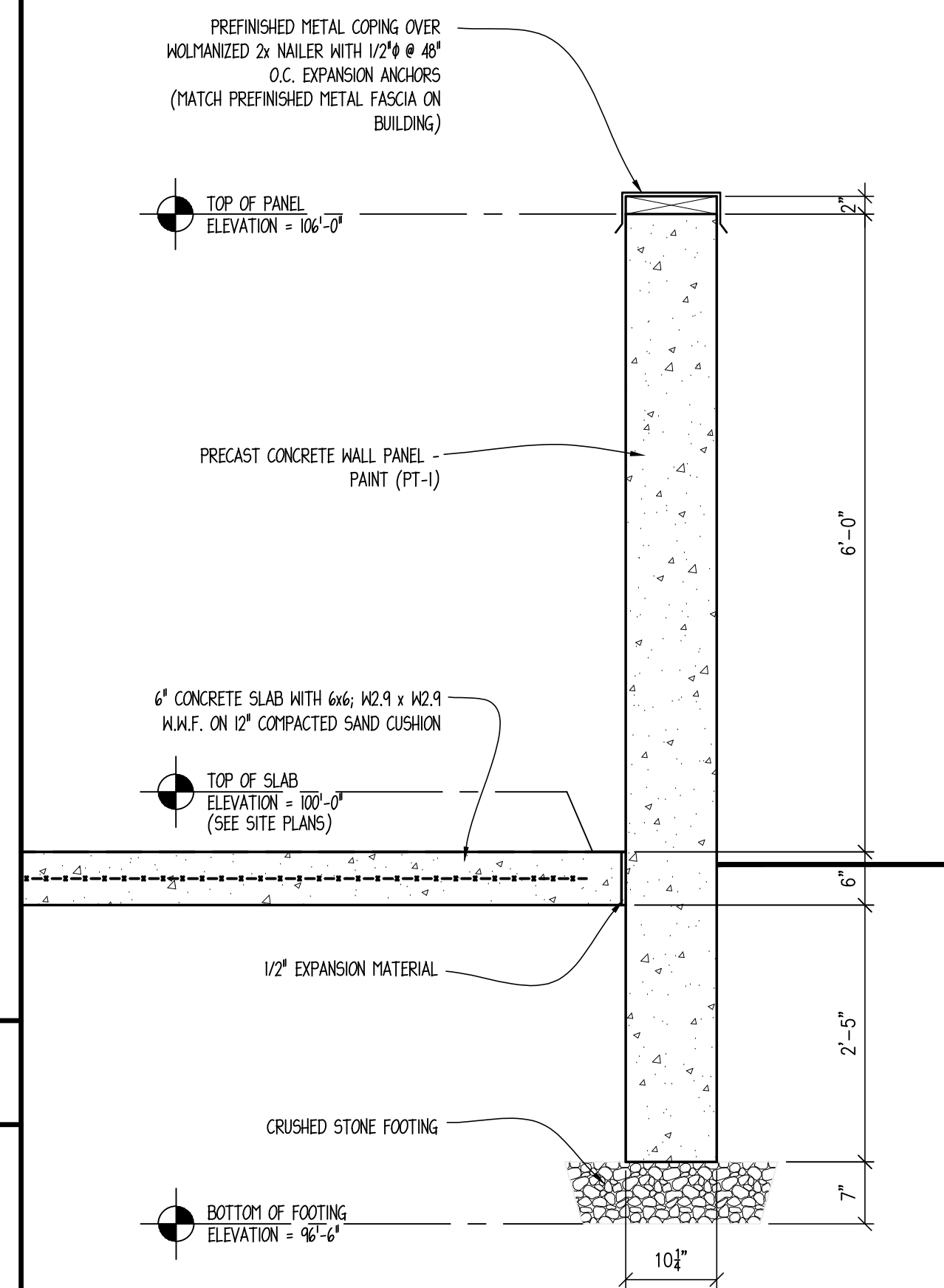
A-3



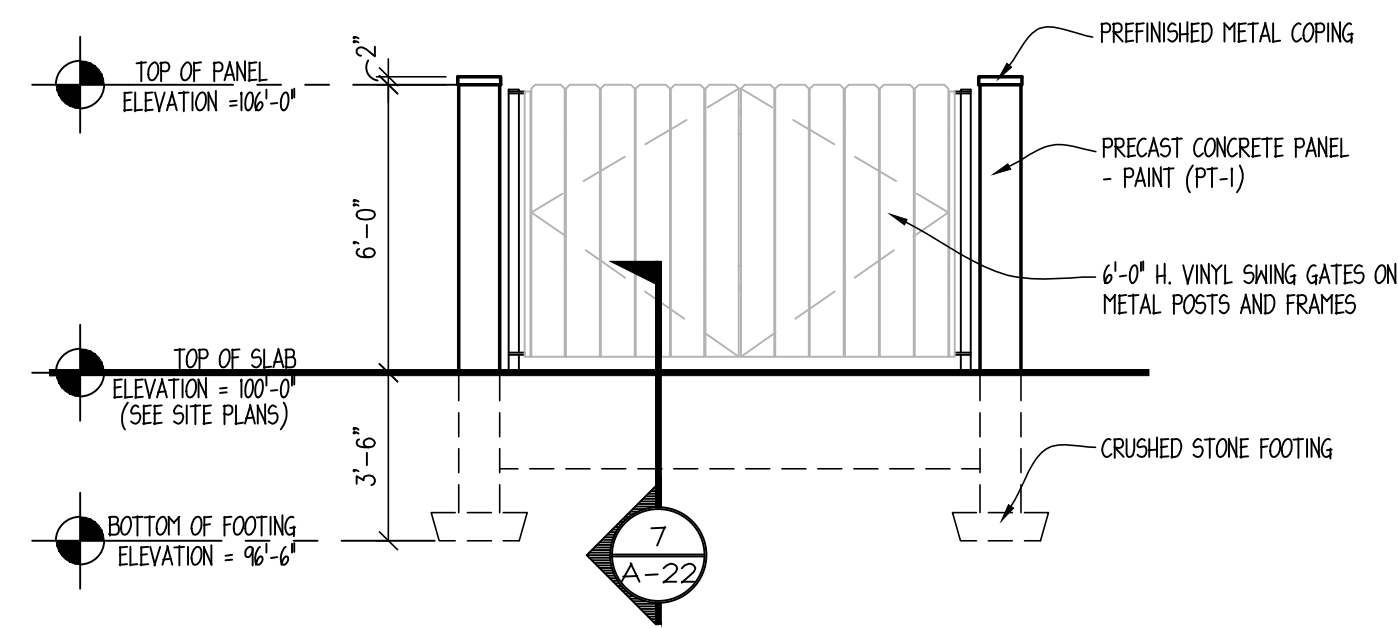
8 GUARDPOST DETAIL  
A-22 SCALE: 3/4" = 1'-0"



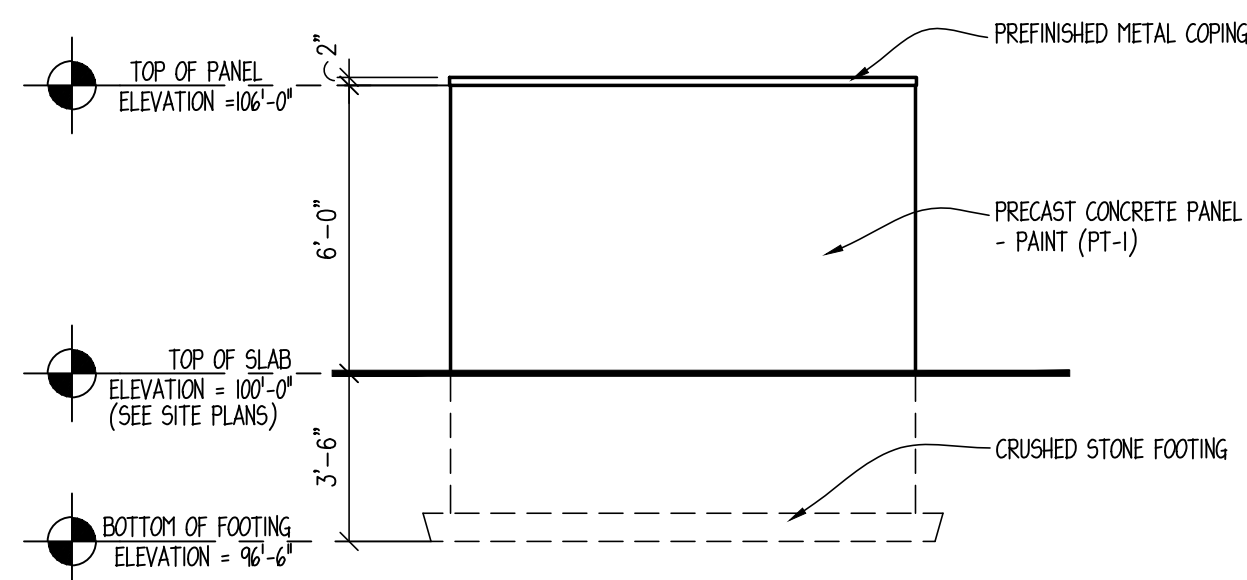
7 SLAB DETAIL  
A-22 SCALE: 1" = 1'-0"



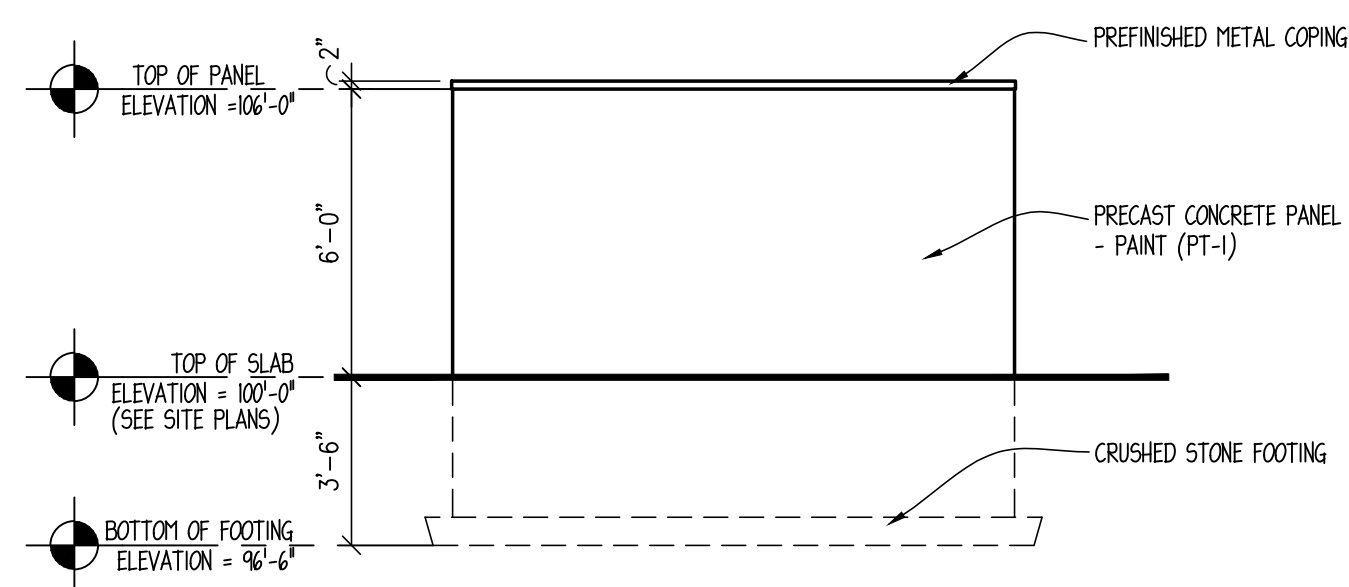
6 WALL SECTION  
A-22 SCALE: 3/4" = 1'-0"



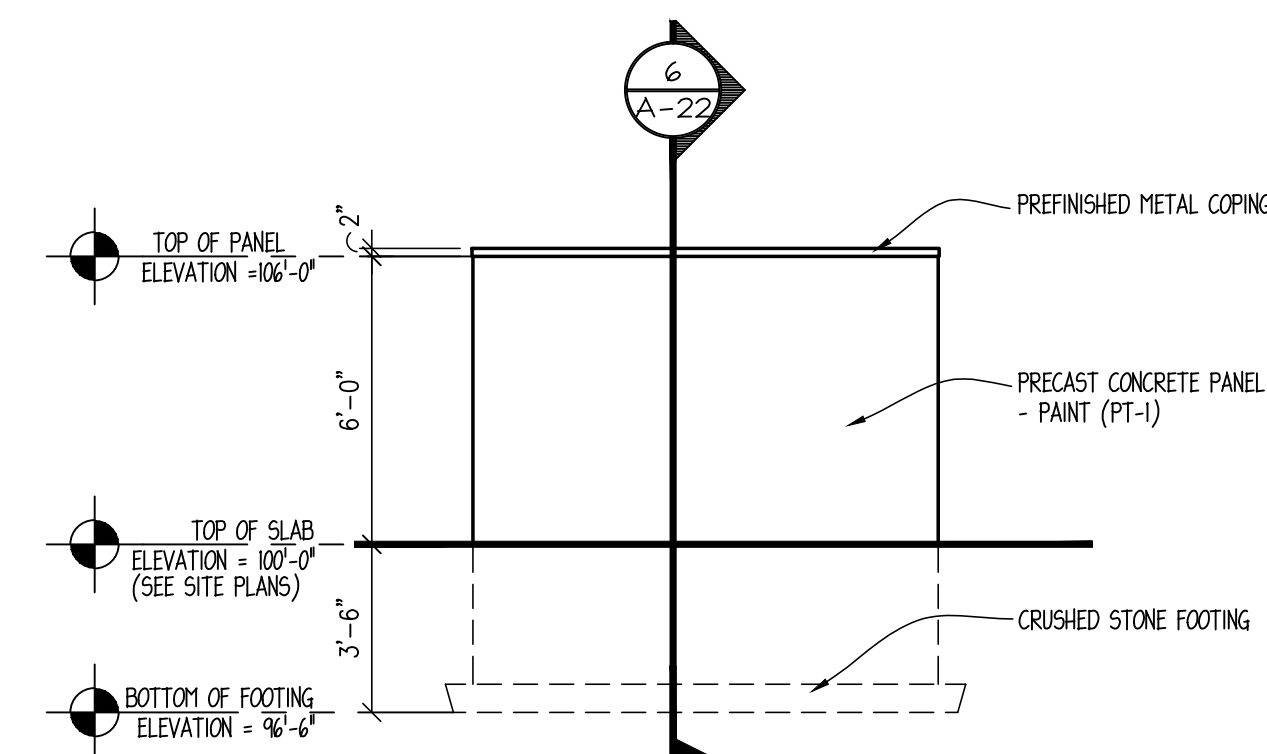
4 NORTH ELEVATION  
A-22 SCALE: 1/4" = 1'-0"



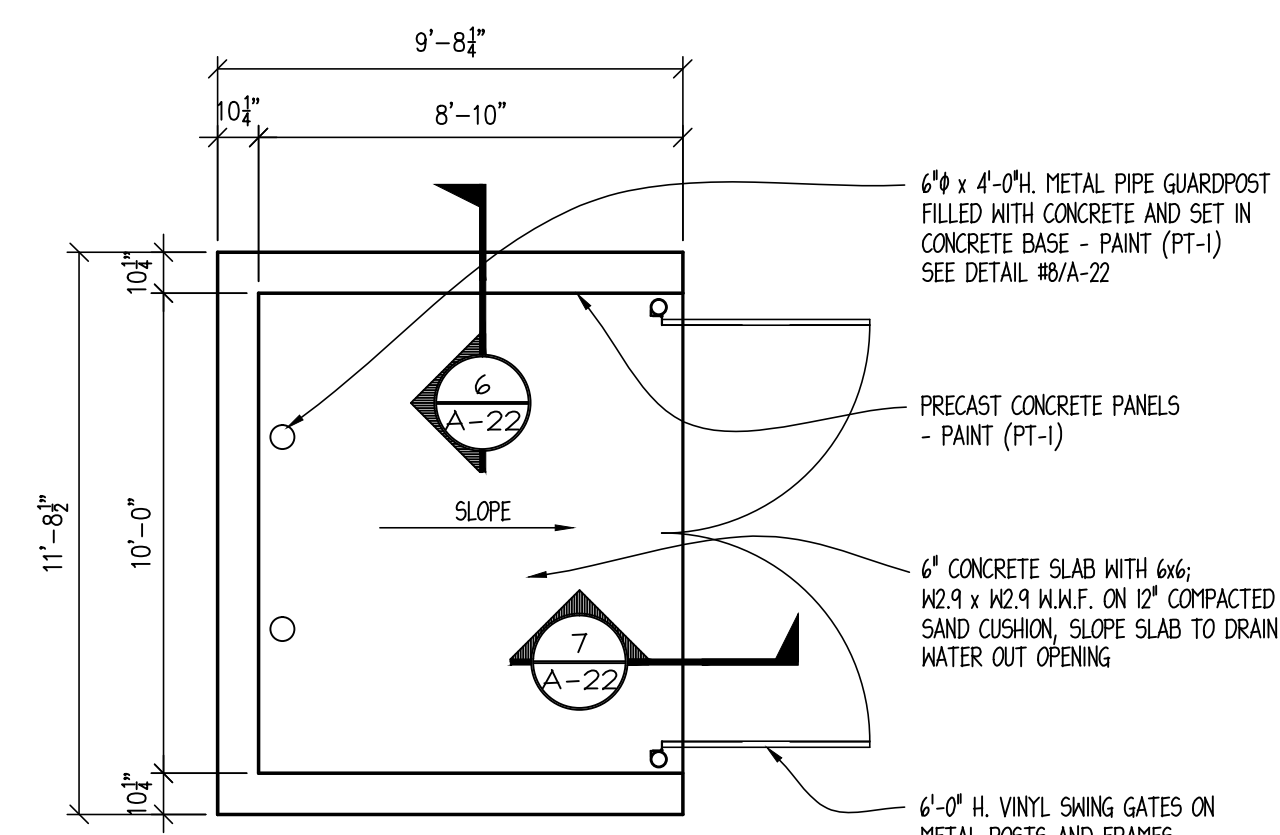
5 EAST ELEVATION  
A-22 SCALE: 1/4" = 1'-0"



3 SOUTH ELEVATION  
A-22 SCALE: 1/4" = 1'-0"



2 WEST ELEVATION  
A-22 SCALE: 1/4" = 1'-0"



1 DUMSTER ENCLOSURE PLAN  
A-22 SCALE: 1/4" = 1'-0"

PROJECT NORTH

EXTERIOR MATERIALS

PT #1 - MATCH PREFINISHED LAP SIDING 'NAVALO BEIGE'

PREFINISHED METAL COPING - QUALITY EDGE, #606 'COZY COTTAGE'

PRELIMINARY  
NOT FOR CONSTRUCTION

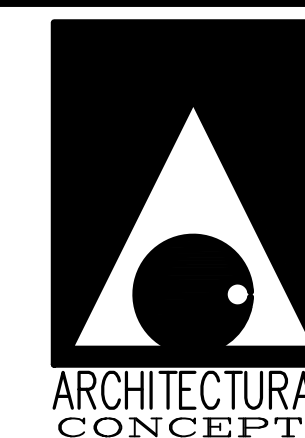
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DATE	REVISION
01-29-2016	FOR SITE PLAN APPROVAL

PROPOSED BUILDING FOR:



HOWELL  
GRAND OAKS DRIVE  
GENOA TWP., MICHIGAN



ARCHITECTURE  
PLANNING  
ENGINEERING

6650 CROSSING DRIVE, S.E.  
GRAND RAPIDS, MI 49508  
(616) 554-1222  
FAX (616) 554-1225

DATE: JANUARY 29, 2016 PROJECT No. 16-05

SHEET No.

A-22



**MOVEABLE PARTITION NOTES:**

- PARTITION SHALL BE HUFOR, 432 SERIES WITH PAIRED PANELS.
- PANELS SHALL BE 51C-47 AND SHALL BE FINISHED WITH NON-TACKABLE STANDARD VINYL AND 2" BOTTOM VINYL PATTERN AND COLOR SHALL BE SELECTED BY OWNER.
- PROVIDE UNISPAN SELF SUPPORT SYSTEM. PROVIDE HEADER SIDE PANELS AT HIGH CEILING ON GYM SIDE OF WALL IN VINYL FINISH TO MATCH DOOR PANELS.

NOTE:  
LAYOUT DIMENSIONS SHOWN ON THIS SHEET FOR INTERIOR WALLS ARE FROM INTERIOR FACE OF EXTERIOR WALL TO CENTERLINES OF INTERIOR WALLS.

**NOTES:**

- PROVIDE ALTERNATE COST FOR USE OF METAL FIBER REINFORCING IN CONCRETE SLAB IN LIEU OF M.I.F., SEE STRUCTURAL DRAWINGS.
- PROVIDE 3" x 3" STEEL ANGLES SET IN CONCRETE SLAB IN LOW-HEIGHT WALLS. PROVIDE ANGLES @ 10'-0" O.C. MAX. IN LOW-HEIGHT WALLS 20' LONG OR OVER. PROVIDE ANGLES AT ALL FREE ENDS OF LOW-HEIGHT WALLS SUCH AS AT EACH SIDE OF DOOR OPENINGS.
- ALL FURNITURE AND EQUIPMENT BY OWNER, N.I.C.
- ALL INTERIOR WALLS MAY BE FRAMED USING 3 5/8" AND 6" METAL STUDS AT CONTRACTOR'S OPTION.
- OWNER TO PROVIDE AND CONTRACTOR TO INSTALL ALL WALL MOUNTED AUTOMATIC PAPER TOWEL DISPENSERS AND SOAP DISPENSERS. VERIFY EXACT BRAND AND MODEL NUMBER WITH OWNER.
- PROVIDE "KIDDY" TOILET FIXTURES AT UNISEX #122, #123, #126, AND #127. DELETE H.C. GRAB BARS @ KIDDY TOILETS.
- PROVIDE RADIUS CORNERS ON ALL PLASTIC LAMINATE COUNTERS AND SILLS IN ALL AREAS OF BUILDING.
- ELECTRICAL CONTRACTOR TO INCLUDE ALL DATA, PHONE AND SECURITY CAMERA WIRING USING CAT 5 CABLES FOR DATA AND CAMERAS. ALL DATA, PHONE, SECURITY AND CAMERA EQUIPMENT IS TO BE PROVIDED AND INSTALLED BY OWNER.
- SEE ELECTRIC STRIKE NOTES ON SHEET A-11 FOR INFORMATION AND REQUIREMENTS FOR DOOR HARDWARE AT DOOR # 100A.
- PROVIDE AND INSTALL MANUAL ROLLER SHADES W/ CONTINUOUS CHAIN CONTROL ON ALL EXTERIOR WINDOWS.
- PROVIDE AND INSTALL KNIX BOX KEY HOLDER AT MAIN ENTRY. VERIFY EXACT MODEL NUMBER AND MOUNTING LOCATION WITH LOCAL FIRE DEPARTMENT.
- PROVIDE ADA COMPLIANT SIGNAGE AT ALL TOILET ROOMS.

**WALL TYPES**

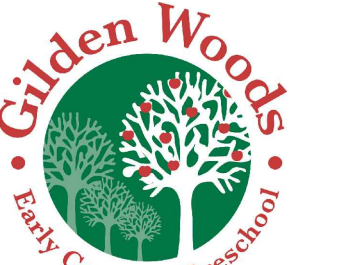
- TYPICAL EXTERIOR WALL CONSTRUCTION**
  - PRECAST INSULATED CONCRETE WALL PANELS
  - 6" FIBERGLASS BATT INSULATION (R-19)
  - 5/8" GYPSUM BOARD
  - (SYNTHETIC STONE VENEER TO 3'-0" A.F.F. WITH CEMENT BOARD SIDING ABOVE AT SOUTH WALL)
- TYPICAL EXTERIOR WALL CONSTRUCTION @ ENTRY**
  - SYNTHETIC STONE VENEER TO 3'-0" A.F.F. WITH CEMENT BOARD SIDING ABOVE
  - 1/4" ASPHALT BUILDING PAPER
  - PLYWOOD SHEATHING, SEE STRUCTURAL DRAWINGS
  - 2x6 STUDS @ 24" O.C.
  - 6" FIBERGLASS BATT INSULATION (R-19)
  - 5/8" GYPSUM BOARD
- TYPICAL INTERIOR PARTITION CONSTRUCTION**
  - 5/8" GYPSUM BOARD
  - 2x4 WOOD STUDS @ 16" O.C.
  - 3 1/2" FIBERGLASS BATT INSULATION
  - 5/8" GYPSUM BOARD
  - (EXTEND WALL CONSTRUCTION UP TO DRYWALL AT ROOF CONSTRUCTION ABOVE)
- TYPICAL LOW-HEIGHT PARTITION CONSTRUCTION**
  - 5/8" GYPSUM BOARD
  - 2x4 WOOD STUDS @ 16" O.C.
  - 5/8" GYPSUM BOARD
  - (TOP OF WALL @ 4'-0" A.F.F.) (SEE NOTE #2)
- INTERIOR PARTITION CONSTRUCTION**
  - 5/8" GYPSUM BOARD
  - 2x6 WOOD STUDS @ 16" O.C., U.N.O.
  - 6" FIBERGLASS BATT INSULATION
  - 5/8" GYPSUM BOARD
  - (EXTEND WALL CONSTRUCTION UP TO DRYWALL AT ROOF CONSTRUCTION ABOVE)

**PRELIMINARY  
NOT FOR CONSTRUCTION**

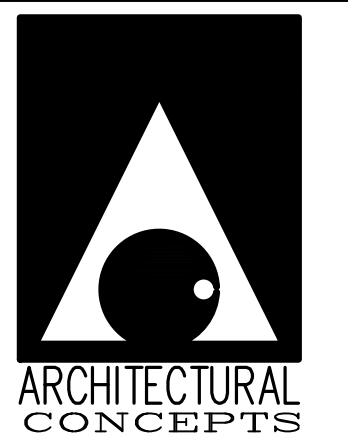
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DATE	REVISION
01-29-2016	FOR SITE PLAN APPROVAL

**PROPOSED BUILDING FOR:**



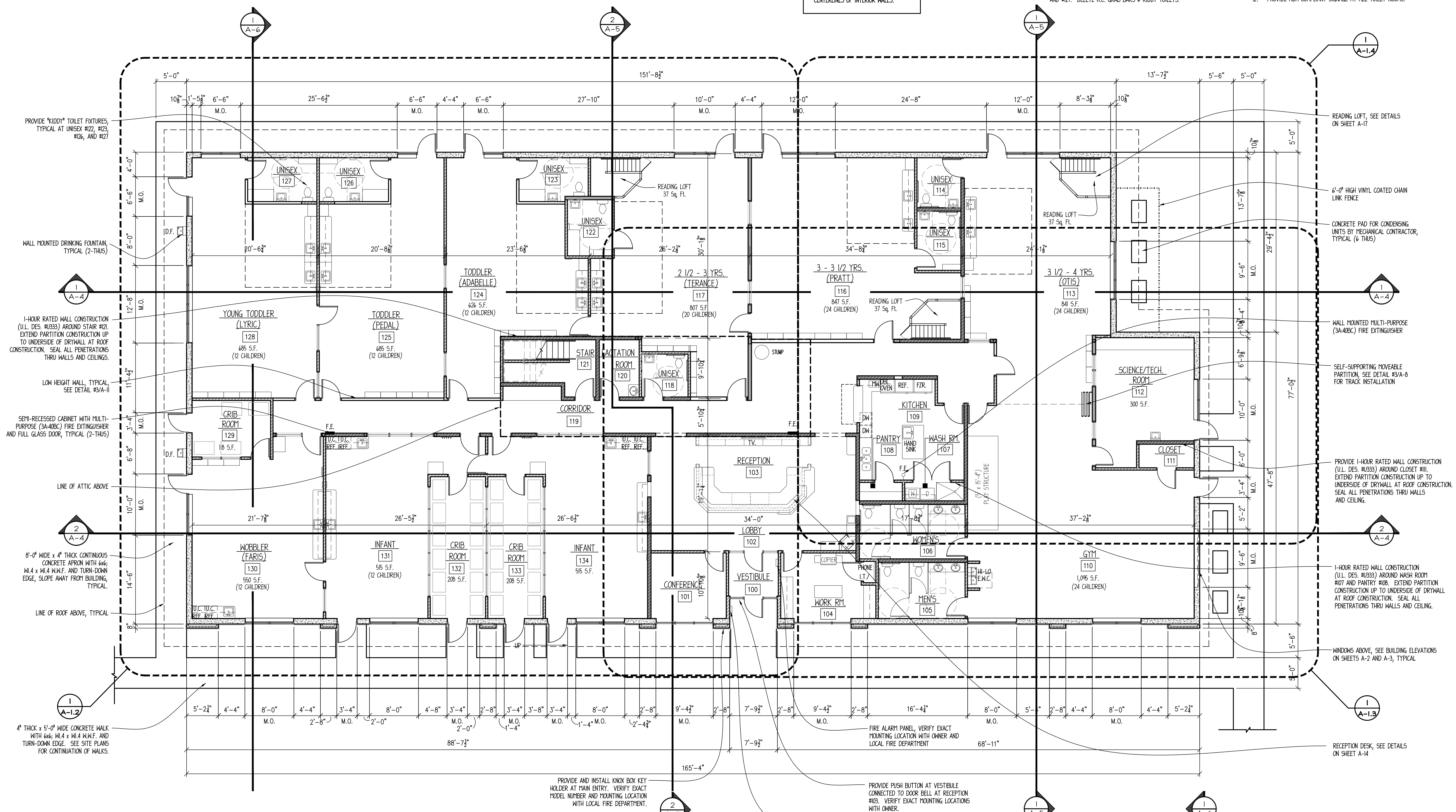
**HOWELL  
GRAND OAKS DRIVE  
GENOA TWP., MICHIGAN**



ARCHITECTURE  
PLANNING  
ENGINEERING  
6650 CROSSING DRIVE, S.E.  
GRAND RAPIDS, MI 49508  
(616) 554-1222  
FAX (616) 554-1225

DATE	PROJECT No.
JANUARY 29, 2016	16-05

SHEET No.
A-1



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



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:** March 30, 2016

**RE:** **CRW Plastics– Outdoor storage**  
Special Land Use, Environmental Impact Assessment & Sketch Plan

---

I have reviewed the proposed special land use, environmental impact assessment and sketch plan requesting approval of an existing outdoor storage area in the southerly side yard of CRW Plastics located at 5775 Brighton Pines Court. The applicant requests a 5,225 square feet storage yard intended for the storage of shipping containers. Table 8.02 of the Township Zoning Ordinance lists accessory outdoor material storage as a special land use in the IND Zoning District.

This project was recommended for approval by the Planning Commission on Monday, March 15, 2016. My review and recommendation is based on the action taken by the Planning Commission and is provided for your consideration as follows:

**SPECIAL LAND USE PERMIT** - I recommend **APPROVAL** of the Special Land Use permit. This approval is recommended because the use meets the requirements of Sections 19.03 and 8.02.02 of the Township Ordinance.

**IMPACT ASSESSMENT** - I recommend **APPROVAL** of the Environmental Impact Assessment dated February 15, 2016.

**SKETCH PLAN** - I recommend **APPROVAL** of the sketch plan dated December 15, 2015 with the corresponding landscape plan dated February 24, 2016.

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

Sincerely,

Kelly VanMarter  
Assistant Township Manager/Community Development Director

### 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





**SPECIAL USE PERMIT**

**2911 Dorr Road, Brighton, Michigan 48116**

**Phone: (810) 227-5225, Fax: (810) 227-3420**

**www.genoa.org**

**PROJECT NAME:** CRW Plastics - Outdoor Storage Yard

**ADDRESS:** 5775 Brighton Pines Court      **PARCEL ID NUMBER:** 11-15-200-025

**APPLICANT NAME:** Antonio Orlando, Logistics Manager, CRW Plastics

**APPLICANT PHONE:** (810) 531-0956

**ZONING:** Industrial (IND)

**SPECIAL LAND USE AUTHORIZED BY THIS PERMIT:** Outdoor Storage Yard (5,225 sq. ft.)

**DATE OF SPECIAL LAND USE APPROVAL BY TOWNSHIP BOARD:** April 4, 2016  
(proposed)

**CONDITIONS OF SPECIAL LAND USE APPROVAL:** None.

**DID THE SPECIAL USE REQUIRE A VARIANCE?**       YES       NO

**DOES THE SPECIAL USE HAVE AN EXPIRATION DATE:**       YES       NO

**DOES THE APPLICANT NEED TO SUBMIT NEW PLANS OR INFORMATION TO DEMONSTRATE COMPLIANCE:**  
 YES       NO

<b><u>SPECIAL LAND USE APPROVAL</u></b>	
APPLICANT SIGNATURE INDICATING AGREEMENT WITH CONDITIONS STATED WITHIN THIS PERMIT:	
NAME	DATE
ZONING OFFICIAL APPROVAL: _____	
NAME	
DATE OF ZONING ADMINISTRATOR APPROVAL: _____	





**GENOA CHARTER TOWNSHIP**  
**Special Land Use Application**

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

APPLICANT NAME & ADDRESS: CRW PLASTICS USA INC 5775 Brighton Pines Ct Howell (Genoa Twp)

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

APPLICANT PHONE: (517-545-0900 ext 216) EMAIL: aorlando@crwplasticos.us

OWNER NAME & ADDRESS: BRIVAR CONSTRUCTION CO. PO Box 309 Milford, MI 48381

SITE ADDRESS: 5775 Brighton pines Ct PARCEL #(s): Lot # 4 15-200-025

OWNER PHONE: 248-240-5880 EMAIL: Stan Brish (stan@briodevelopment.com)

**Location and brief description of site and surroundings:**

BrightonPines Ct Lot #4 – South of Grand River Ave. West of Dorr Road; Adjacent to I-96 Expressway.

Area affected will be the concrete/asphalt area next to Shipping/Receiving Dock on West side of building

**Proposed Use:**

This area will be dedicated for storage of empty shipping bins (totes) used for shipping of plastics automotive parts to CRW customers.

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

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

The area is planned for a reduction in stored items, there is minimal impact on public services. Property is in accordance with screening and distance allocation from the building.

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

The area is currently desinged and operated with reduction in quantity in the next 4 months. The area does have a tree line screening facing I-96, and is set behind Brighton pines court. The containers are within resonable distance from the building.

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

The area's use has not changed for its purpose, the amount of items stored in the area has been reduced. Reduction is continueing with-in the next few months.

There are no process water requirements for manufacturing and sewar discharge.

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

The area is maintained daily by CRW staff with no nuisance.

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

The area is in accordance with 8.02.02 with screening and distance from building. The screening is a tree line covering the view of I-96 (pouting to add more trees).

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

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

BY: \_\_\_\_\_


ADDRESS: 5775 Brighton Pines Court, Hazell ME 48843

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

Antonio Orlando of MP+L Manager at aorlando@crwplastics.com  
 Name Business Affiliation Email

**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: 7/30/15

PRINT NAME: Antonio Orlando PHONE: (603) 531-0956



**GENOA CHARTER TOWNSHIP APPLICATION**  
**Sketch Plan Review**

**TO THE GENOA TOWNSHIP PLANNING COMMISSION:**

APPLICANT NAME & ADDRESS: CRW Plastics  
*If applicant is not the owner, a letter of Authorization from Property Owner is needed.*

OWNER'S NAME & ADDRESS: Brivar Construction Co. P.O. Box 309  
Milford MI, 48381

SITE ADDRESS: 5775 Brighton Pines Court PARCEL #(s): LOT #4

APPLICANT PHONE: (517) 545-0900 OWNER PHONE: (248) 240-5880

LOCATION AND BRIEF DESCRIPTION OF SITE: Brighton Pines Ct Lot #4 -  
South of Grand River Ave. West of Dorr Road; Adjacent to I-96  
Expressway.

BRIEF STATEMENT OF PROPOSED USE: Outdoor Storage of  
Shipping Containers.

THE FOLLOWING IMPROVEMENTS ARE PROPOSED: None

**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: Antonio Orlando

ADDRESS: 5775 Brighton Pines Court

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

1.) [Signature] of CRW Plastics at antlando@crwplastics.us  
Name Business Affiliation Email Address

**FEE EXCEEDANCE AGREEMENT**

All sketch plans are allocated one (1) consultant review 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 for a Land Use Permit. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE: [Signature] DATE: 12/16/15  
PRINT NAME: Antonio Orlando PHONE: 510-531-0956

**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
FEBRUARY 8, 2016  
6:30 P.M.  
MINUTES**

CALL TO ORDER: The meeting of the Genoa Charter Township Planning Commission was called to order at 6:30 p.m. Present were Chairman Doug Brown, Diana Lowe, James Mortensen, Chris Grajek, John McManus and Eric Rauch. Absent was Barbara Figurski. Also present was Kelly VanMarter, Community Development Director/Assistant Township Manager.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

ELECTION OF OFFICERS: **Moved** by Commissioner Mortensen, seconded by Commissioner McManus, to reinstate Doug Brown as Chair, Diana Lowe as Vice Chair, and Barbara Figurski as Secretary. **The motion passed unanimously.**

APPROVAL OF AGENDA: **Moved** by Commissioner McManus, seconded by Commissioner Lowe, to approve the agenda as presented. **The motion passed unanimously.**

CALL TO THE PUBLIC: The call to the public was made at 6:32 pm with no response.

**OPEN PUBLIC HEARING #1...** Review of a special use application, impact assessment, and sketch plan to allow for outdoor storage located at 5775 Brighton Pines Court, Brighton, Parcel #11-15-200-025. The request is petitioned by CRW Plastics.

**Planning Commission disposition of petition**

- A. Recommendation of Special Use Application.
- B. Recommendation of Impact Assessment (12-14-15)
- C. Recommendation of Sketch Plan (12-15-15)

Mr. Antonio Orlando and Ms. Mikhail Rossignol were present to represent the applicant. Mr. Orlando stated they have been using this area for outdoor storage since CRW opened; however, now they need to obtain approval.

Mr. Borden, of LSL Planning, stated that the sketch plan requires Township Board approval so the Planning Commission will be making a recommendation tonight. The request complies with the requirements of the PUD; however, he is concerned with the impact on the surrounding properties, specifically if the landscaping and screening for both lot lines meet the requirements. He also noted that the items being stored cannot be higher than the buffer.

There was a brief discussion regarding the buffer. Mr. Orlando stated that they will do what is required. The Planning Commission would like to see what will be proposed.

02-08-16 Approved Minutes

Commissioner Mortensen feels the applicant needs to provide a plan. Commissioner Rauch provided some suggestions to the applicant for what can be put in the area.

Mr. Borden noted that at the time of Special Land Use approval, the Planning Commission can require additional improvements to the site, such as landscaping, lighting, etc.

The Call to the Public was made at 6:53 pm with no response.

Mr. Orlando asked for the item to be tabled so they can develop a plan and present it to the Planning Commission.

**Moved by Commissioner Lowe, seconded by Commissioner McManus, to table this item until the March 14, 2016 Planning Commission meeting. The motion passed unanimously.**

**OPEN PUBLIC HEARING #2...** Review of a sketch plan for proposed storage enclosures located at 3850 Grand River Avenue, Howell, Parcel #11-05-400-049. The request is petitioned by Wal-Mart.

#### **Planning Commission disposition of petition**

##### A. Disposition of Sketch Plan (1-4-16)

Mr. Paul Furtaw of Berman Associates was present to represent the applicant. They are requesting approval to place an enclosure to store their wood pallets as well as a new Dumpster enclosure. Both structures will use building materials that will match the building.

Mr. Borden stated that this is a sketch plan approval so it can be approved by the Planning Commission.

Commissioner Rauch stated that because the Dumpster enclosure proposed on the south side of the building will be protruding out into the drive lane, he would like to see some type of striping to redefine the drive aisle. Mr. Furtaw agrees.

It was noted that the engineer's letter states the proposed Dumpster enclosure is within 20 feet of a hydrant, which is not allowed. Mr. Furtaw stated they will move it further to the east.

The Brighton Area Fire Authority is requiring measurements of the access adjacent to the site. Mr. Furtaw will obtain those measurements.

The Call to the Public was made at 7:23 pm with no response.

**Moved** by Commissioner Mortensen, seconded by Commissioner Lowe to approve the sketch plan dated January 4, 2016 for two minor storage structures at Wal-Mart, subject to the following:

- Before the Land Use Permit is granted, the Township will be provided with a letter from RG Properties confirming approval of the potential building into the private storm sewer easement.
- The second smaller structure shall be moved slightly to the east to ensure it is not within 20 feet of the fire hydrant.



**GENOA CHARTER TOWNSHIP  
PLANNING COMMISSION  
PUBLIC HEARING  
March 15, 2016  
6:30 P.M.  
MINUTES**

CALL TO ORDER: The meeting of the Genoa Charter Township Planning Commission was called to order at 6:30 p.m. Present were Chairman Doug Brown, Diana Lowe, James Mortensen, Chris Grajek, and Eric Rauch. Absent were Barbara Figurski and John McManus. Also present was Kelly VanMarter, Community Development Director/Assistant Township Manager.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA: **Moved** by Commissioner Lowe, seconded by Commissioner Mortensen, to approve the agenda as presented. **The motion carried unanimously.**

CALL TO THE PUBLIC: The call to the public was made at 6:32 pm with no response.

**OPEN PUBLIC HEARING #1 (Postponed from February 8, 2016)...** Review of a special use application, impact assessment and sketch plan to allow outdoor storage located at 5775 Brighton Pines Court, Brighton, Parcel #11-15-200-025. The request is petitioned by CRW Plastics.

**Planning Commission disposition of petition**

- A. Recommendation of Special Use Application.
- B. Recommendation of Impact Assessment (12-15-16)
- C. Recommendation of Sketch Plan (12-15-15/Landscape Plan 2-24-16)

Mr. Antonio Orlando stated they hired a landscaper to develop a plan to meet the screening requirements made at the last Planning Commission meeting. He showed the proposal.

Mr. Brian Borden, of LSL Planning, feels the revised submittal meets the requirements for the special land use.

The call to the public was made at 6:37 pm with no response.

**Moved** by Commissioner Mortensen, seconded by Commissioner Grajek, to recommend to the Township Board approval of the special land use to allow outdoor storage for CRW Plastics located at 5775 Brighton Pines Court subject to the following:

- Approval of the sketch plan by the Township Board
- Approval of the Environmental Impact Assessment by the Township Board.

It is the finding of the Planning Commission that this special land use permit is consistent with the specific requirements of Section 19.03 of the Township Zoning Ordinance and is consistent with other activities in this industrial zone. It complies

Section 8.02.02 of the Township Zoning Ordinance. **The motion carried unanimously.**

**Moved** by Commissioner Lowe, seconded by Commissioner Rauch, to recommend to the Township Board approval of the Environmental Impact Assessment conditioned upon:

- Approval of the special land use and sketch plan by the Township Board.

**The motion carried unanimously.**

**Moved** by Commissioner Mortensen, seconded by Commissioner Grajek, to recommend to the Township Board approval of the sketch plan dated 12-15-15 and Landscape Plan dated 2-24-16 subject to:

- Approval of the special lane use by the Township Board.
- Approval of the Environmental Impact Assessment by the Township Board.
- Any signage must be consistent with the Township Ordinance.

It should be noted that both the Township Engineer and Brighton Area Fire Authority had only limited comments regarding this proposal. **The motion carried unanimously.**

**OPEN PUBLIC HEARING #2...**Review of a request for a rezoning from Medium Density Residential (MDR) to High Density Residential (HDR) for Parcel #11-06-400-015 which is located on the east side of Chilson Road, south of Grand River, in Howell. The request is petitioned by the Lockwood Companies.

**Planning Commission disposition of petition**

- A. Recommendation of Rezoning from MDR to HDR
- B. Recommendation of Environmental Impact Assessment (2-24-16)

Mr. Rod Lockwood of Lockwood Companies, Walter Coponen of Component Architects, Ken Weikal, the landscape architect, and Mark Jones of Boss Engineering were present.

Mr. Lockwood gave a review of the first two phases of this project. They are proposing to build 144 additional units with a separate entrance off of Chilson Road. Mr. Coponen showed colored renderings of the site plan and building elevations. He described and showed pictures of the proposed central trash collection station.

Mr. Borden stated that the rezoning will be addressed first and then the site plan can be reviewed. The rezoning will need to be reviewed and approved by Livingston County and then returned for review and approval by the Township Board. The recent Master Plan update shows this parcel as HDR and the surrounding properties are HDR.

Mr. Joseph Siwek, of Tetra Tech, stated they have concerns with the storm water flow. There are no calculations shown. The traffic engineer is recommending an updated traffic impact study to evaluate the operation of the intersection of Grand River and Tahoe.

Mr. Jones stated that he has spoken to Wendy Ramirez of MDOT who stated that due to the new Latson Road interchange, traffic volumes on Grand River are 50 percent less than what they were before. They also feel that the traffic from Phases 1 and 2 will shift to the Chilson Road entrance / exit.



March 9, 2016

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>	CRW Plastics outdoor storage – Special Land Use and Sketch Plan Review #2
<b>Location:</b>	5775 Brighton Pines Court – west of Dorr Road, between Grand River and I-96
<b>Zoning:</b>	IND Industrial District

Dear Commissioners:

As requested, we have reviewed the revised sketch plan (stamped received on 2/24/16) which proposes an outdoor storage area in the southerly side yard of the developed site at 5775 Brighton Pines Court.

Specifically, the applicant seeks special land use and sketch plan review/approval for the proposed project. We have reviewed the revised submittal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance and provide the following comments for your consideration.

**A. Summary**

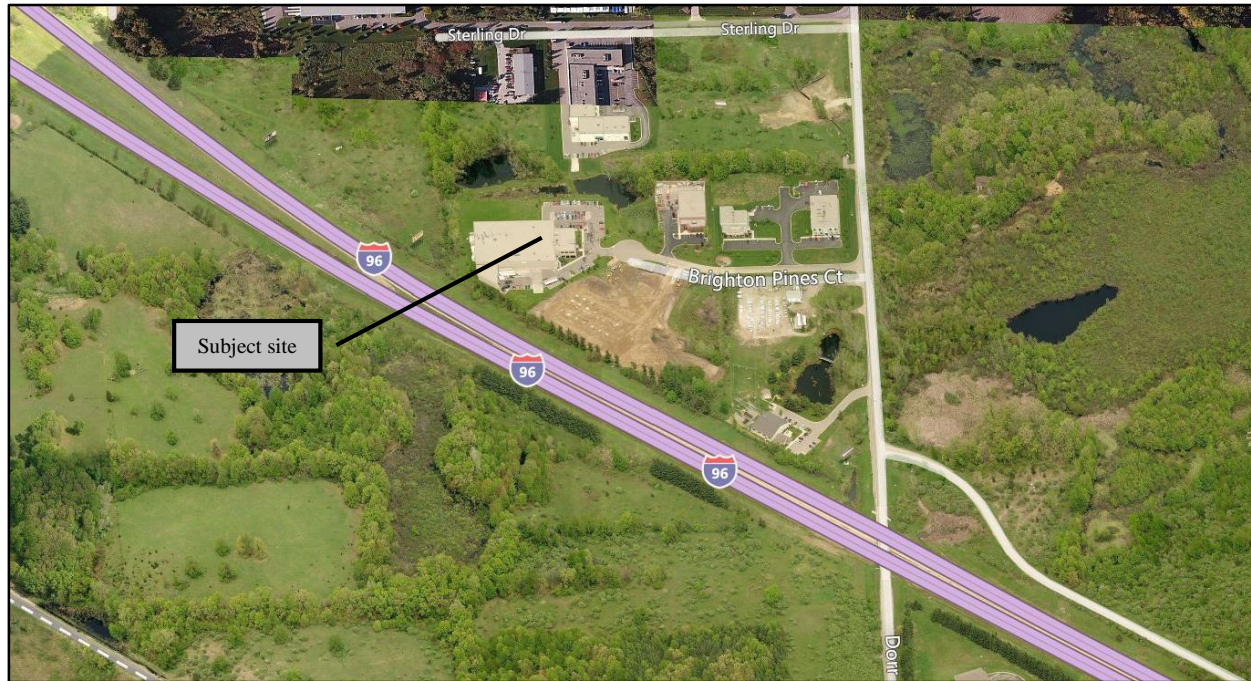
1. The submittal generally demonstrates compliance with the special use standards of Section 19.03 and the specific use requirements of Section 8.02.02.
2. We defer to the Township Engineer and Fire Department for any specific comments/concerns they may have.
3. If new signage is proposed, details must be provided. A permit will also be required.
4. The request for a new special land use on a developed property provides the Township with an opportunity to seek improvement to any existing site design deficiencies.

**B. Proposal/Process**

The applicant requests special land use and sketch plan review/approval for an outdoor storage yard on a developed industrial site. The submittal notes that the storage yard will be 5,225 square feet in area and is intended for the storage of shipping containers.

Table 8.02 of the Township Zoning Ordinance lists accessory outdoor material storage as a special land use in the GCD. Such uses are also subject to the specific use requirements of Section 8.02.02(b). Given the project's limited scope, it is eligible for sketch plan review (rather than conducting a full site plan review) in accordance with Article 18 of the Township Zoning Ordinance.

The request was originally presented to the Commission at their February 8<sup>th</sup> meeting. Discussion at that time revolved around the need for additional screening. In response, the applicant has submitted a revised plan showing a 4-foot tall berm with 9 evergreen trees on the south side of the outdoor storage yard.



*Aerial view of site and surroundings (looking north)*

### **C. Special Land Use Review**

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

- 1. Master Plan.** The Township Master Plan and Future Land Use map identify the site as Industrial, which is intended for “industrial uses such as research, wholesale and warehouse activities and light industrial operations which manufacture, compounding, process, package, assemble and/or treat finished or semi-finished products from previously prepared material.” Both the location and nature of the site as a developed light industrial property are consistent with this category and description.
- 2. Compatibility.** Surrounding uses are developed with and/or zoned and planned for industrial uses and activities. The rear of the site also abuts I-96. A review of aerial photos indicates existing outdoor storage that is accessory to other industrial operations in the vicinity. As a side note, it also appears that the applicant is already using the proposed area for outdoor storage.

As described in Paragraph D below, the use is subject to the specific requirements of Section 8.02.02(b), which are intended to protect surrounding properties from the potential adverse impacts of outdoor storage. The revised submittal provides sufficient detail to demonstrate compliance with these requirements.

- 3. Public Facilities and Services.** Given the nature of the proposal and the fact that the site is already developed, we do not anticipate issues with the capacity of public facilities and services. However, we defer to the Township Engineer and Fire Department for any specific comments/concerns they may have.
- 4. Impacts.** As a previously developed site with no increase in impervious surface proposed, adverse impacts upon the natural environment are not anticipated.
- 5. Mitigation.** The Township may deem mitigation necessary to limit or alleviate any potential adverse impacts as a result of the proposed project.

**D. Use Requirements**

Section 8.02.02(b) identifies the specific requirements for commercial outdoor display sales or storage as follows:

**1. Minimum lot area shall be one (1) acre.**

The submittal identifies a lot area of 6.235 acres. This standard is met.

**2. Any stockpiles of soils, fertilizer or similar loosely packaged materials shall be sufficiently covered or contained to prevent dust or blowing of materials.**

The submittal indicates that the storage area will be used for shipping containers. Based on the information provided this standard is met; however, should the nature of the materials stored change, the applicant will need to comply with this requirement.

**3. All outdoor storage areas shall be paved with a permanent, durable and dustless surface and shall be graded and drained to dispose stormwater without negatively impact adjacent property. The Township Board, following a recommendation of the Planning Commission and the Township Engineer, may approve a gravel surface for all or part of the display or storage area for low intensity activities, upon a finding that neighboring properties and the environment will not be negatively impacted.**

The application form provided indicates that the storage area is already surfaced with concrete and asphalt. This standard is met.

**4. No outdoor storage shall be permitted in any required yard (setback) of buildings for the district in which the outdoor display, sales or storage use is located. Any approved outdoor sales or display within a parking lot shall meet the required parking lot setback; provided the Planning Commission may require additional landscaping screening or ornamental fencing.**

Section 8.03 requires setbacks of 40 feet (rear) and 25 feet (side). While the exact setback provided is not shown on the plan, the storage area is clearly outside of the minimum setback requirements for the IND. This standard is met.

**5. The site shall include a building of at least five hundred (500) feet of gross floor area for office use in conjunction with the use.**

The plan submitted indicates that the existing building contains 53,550 square feet gross floor area. This standard is met.

**6. All loading and truck maneuvering shall be accommodated on-site.**

The site has existing vehicular access from Brighton Pines Court. Given there are truck wells located adjacent to the proposed storage yard, we anticipate that an adequate area is provided for truck maneuvering with no off-site ramifications. This standard is met.

**7. All outdoor storage area property lines adjacent to a residential district shall provide a buffer zone A as described in Section 12.02. A buffer zone B shall be provided on all other sides. The Planning Commission may approve a six (6) foot high screen wall or fence, or a four (4) foot high landscaped berm as an alternative.**

The revised proposal demonstrates compliance with the depth requirements of a buffer zone B along the rear (SW) and side (SE) lot lines. Additionally, the new plan now provides for 9 new evergreens that are 10' tall and will be planted on a 4' berm.



8. **The height of all material and equipment stored in an outdoor storage area shall not exceed the height of any landscape screening, wall or fence. Boats and recreational vehicles may exceed the height of the fence provided that they are setback from the fence a distance equal to their height. Storage of materials up to the height of the adjacent building wall may be permitted in the rear yard if it is illustrated on the site plan, the rear yard does not abut a residential district or face an expressway, and such storage is confined to within twenty (20) feet of the building.**

The Impact Assessment notes a requested storage height of 12 feet; and the proposed screening will now provide a noticeable screening benefit to the site.

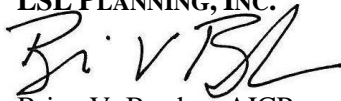
**E. Sketch Plan Review**

1. **Dimensional Requirements.** As noted above, the outdoor storage area complies with setback requirements. The only other applicable standard is the impervious surface coverage limitation of 85%, which is also met (51.5%).
2. **Parking.** The parking calculations note a surplus of parking, although the inclusion of an outdoor material storage yard does not alter the parking requirements for the development.
3. **Pedestrian Circulation.** As an industrial development in an industrial park, public sidewalks are not required or warranted. The plan identifies internal sidewalks between the parking lot and building.
4. **Vehicular Circulation.** As referenced above, the site has existing vehicular access from Brighton Pines Court and no changes are proposed to the ingress/egress or internal circulation pattern.
5. **Landscaping.** The revised submittal demonstrates compliance with screening/landscaping requirements given the presence of existing trees to be preserved and the berm/evergreen plantings proposed.
6. **Exterior Lighting.** The original plan noted that exterior lighting will not exceed 1 foot-candle at the property line.
7. **Waste Receptacles.** The plan identifies a compliant waste receptacle and enclosure.
8. **Signage.** The submittal does not identify any new signage. If proposed, the applicant should provide details for the Commission's consideration. A permit will also be required per Article 16 of the Township Zoning Ordinance.
9. **Impact Assessment.** The submittal includes a brief Impact Assessment (revised February 15, 2016). In summary, the Assessment notes that the project is not anticipated to adversely impact natural features, public services/utilities, surrounding land uses or traffic.

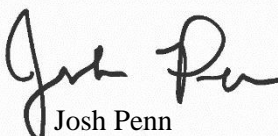
Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at [borden@lslplanning.com](mailto:borden@lslplanning.com) and [penn@lslplanning.com](mailto:penn@lslplanning.com).

Sincerely,

LSL PLANNING, INC.



Brian V. Borden, AICP  
Principal Planner



Josh Penn  
Project Planner



March 9, 2016

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

**Re: CRW Plastics Storage Area Special Use Site Plan Review #2**

Dear Ms. Van Marter:

We have reviewed the special use sketch plan documents for the CRW Plastics storage area dated December 16, 2015. The site is located at 5775 Brighton Pines Court, West of Dorr Road. The petitioner is planning to convert an approximately 55-foot by 95-foot paved area on the southwest corner of the existing parking area to be used as storage area. The screening that has been added to the site plan does not appear to result in an increase of the net impervious area on the site, and should have no impact on the existing on-site detention basin.

Our review found no engineering related impacts to the existing site from the proposed change in use as illustrated on the site plan. Therefore, we have no objections to the proposed renovation.

Sincerely,

A blue ink signature of Gary J. Markstrom, written in a cursive style.

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

A blue ink signature of Joseph C. Siwek, written in a cursive style.

Joseph C. Siwek, P.E.  
Project Engineer

Copy: Antonio Orlando, CRW Plastics

Tetra Tech

401 South Washington Square, Suite 100, Lansing, MI 48933  
Tel 517.316.3930 Fax 517.484.8140 www.tetrattech.com



# BRIGHTON AREA FIRE AUTHORITY

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

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March 1, 2016

Amy Ruthig  
Genoa Township  
2911 Dorr Road  
Brighton, MI 48116

RE: **Special Land Use Application**  
CRW Plastics – Outdoor Storage  
5775 Brighton Pines Court  
Genoa Twp., MI

Dear Amy:

The Brighton Area Fire Department has reviewed the above mentioned Special Land Use site plan. The plans were received for review on February 25, 2016 and the drawings are not dated. The project is for a special land use application of a proposed outdoor area to be used for the storage of shipping containers. The proposed storage area is located on the south side of an existing manufacturing facility. The proposed area is over 20' from the existing structure and on an existing concrete surface. The plan review is based on the requirements of the International Fire Code (IFC) 2015 edition.

At this time the Brighton Area Fire Department has no further comments or requirements regarding the proposed outside storage area. If you have any questions about the comments on this plan review please contact me at 810-229-6640.

Cordially,

A handwritten signature in black ink that reads "D Bunge".

---

Derrick Bunge  
Lieutenant - Fire Inspector

Impact Assessment

For

CRW Plastics

Article 19, Genoa Township,  
Livingston County, Michigan

Prepared for:

CRW Plastics  
5775 Brighton Pines Court  
Howell MI 48843

Prepared By:

Antonio Orlando  
Mikhail Rossignol

CRW Plastics  
5775 Brighton Pines Court  
Howell MI 48843

December 14, 2015

REVISED - February 15, 2016

## Introduction:

This assessment is for gaining approval for outdoor storage at CRW Plastics on the south side of the building, using approximately 5,346 square feet. The 5,346 square feet of space is paved, and is part of the parking lot. The storage space would be used for empty containers, which are shipped back and fourth from our customers.

- A. Name and address of person responsible for preparation of the impact assessment and a brief statement of their qualifications:

The impact assessment was prepared by Antonio Orlando and Mikhail Rossignol, of CRW Plastics, 5775 Brighton Pines Court, Howell MI 48843. Mikhail is a certified storm water pollution prevention operator certificate id: I-13576. Antonio Orlando is Logistics' manager in charge of maintaining the area.

- B. Map and written description/analysis of the project:

Our site consist of manufacturing facility which is 95' by 55' which is 5,225 square feet that sits on approximately on 6.235 acres at 5775 Brighton Pines Court, Howell MI, 48843. The building is comprised of manufacturing facility, an office and warehouse space. The facility operates 24 hours Monday through Friday some weekends when applicable. Within and around the building we have existing low areas, detention pond, grassy berm. CRW has a two truck wells, and shed within three feet next to the building. CRW is requesting a stack height of 12 feet.

- C. Impact on natural features:

The building of the structure will little impact the surrounding natural features. Drainage occurs to five sewer drains, which drain directly to a drainage pond on the north side of the building. This site will house only empty containers and involve no handling of hazardous materials that may affect the surrounding grassy areas or detention pond.

- D. Impact on storm water management:

The outside storage area on permanent ground cover that is already established, the permanent ground cover is sections of blacktop pavement, and concrete pavement. This has no effect storm water system.



E. Impact on surrounding land use:

The property is currently zoned industrial and surrounded by the north, east, and south sides by other industrial zoned property. The I-96 expressway runs on the west side of the building. The facility has minimal impact on the surrounding land uses, because it is similar in nature to the other surrounding industrial properties and is zoned appropriately for its use. Additional pine trees will be added if necessary to provide screening.

Quote is being provided by a Landscaper for screening: Plan and quote will be turned in when it is received the end of this week of 2/15/16.

F. Impact on public facilities and services:

CRW is doing this impact assessment for outdoor storage; it will have no further impact on public schools, police or fire.

G. Impact on public utilities:

This impact assessment for outdoor storage use, there will be no water or sanitary sewer facilities to impact on public utilities.

H. Storage and handling of any hazardous materials:

This outdoor storage area will house empty storage containers, and will have no contact with hazardous materials.

I. Impact on traffic and pedestrians:

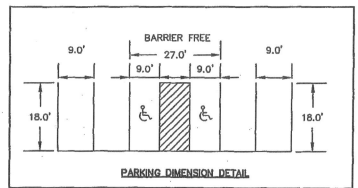
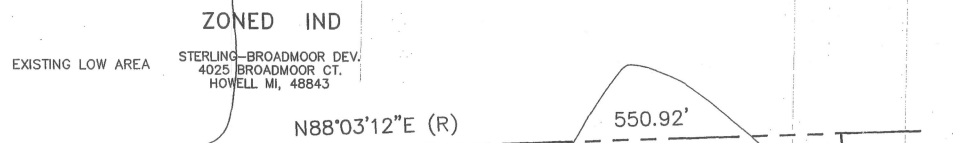
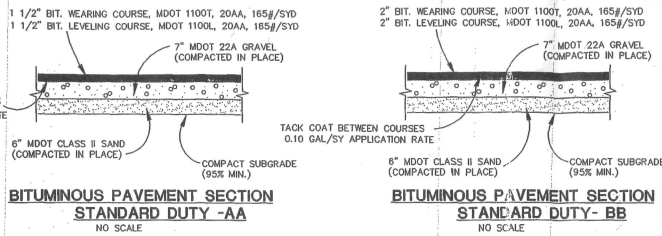
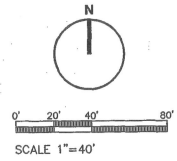
Not applicable.

J. Special provisions IE deed restrictions protective covenant's etc.

Not applicable. A copy of the previously approved impact assessment is attached for reference.

K. Description of all sources:

Genoa Township zoning ordinances.

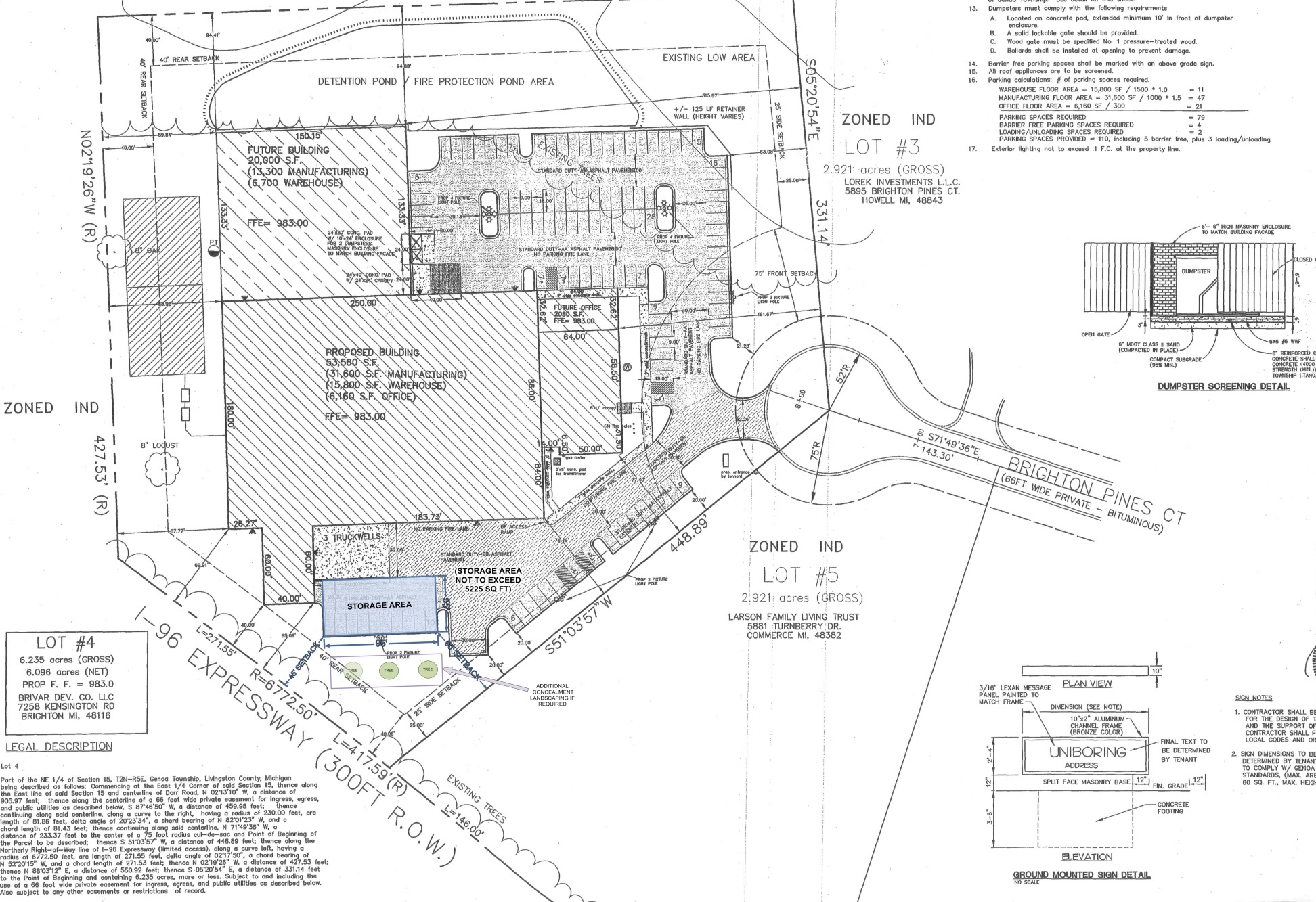
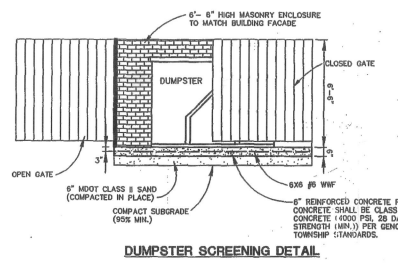


**SITE DATA TABLE**

	REQUIRED	PROVIDED
LOT AREA	2.00 AC.	6.235 AC.
SETBACKS		
FRONT	75'	93.49'
SIDE	25'	76.46'
REAR	40'	40.00'
MAX. COVERAGE		
BUILDING	40%	27.9%
IMPERVIOUS	75%	51.8%
MAX. HEIGHT		
HEIGHT	30'	30'
STORIES	2	2
ZONING:	IND (INDUSTRIAL DISTRICT)	

- GENERAL NOTES:**
- Properly zoned: IND (INDUSTRIAL DISTRICT)
  - Siteplan use: Manufacturing, Warehouse and Office building.
  - All construction shall be performed in accordance with the current standards and specifications of Livingston County and Genoa Township.
  - The Contractor shall telephone Genoa Township (810) 227-5225 at least 48 hours prior to construction.
  - Property to be serviced by an individual septic system that shall meet Genoa Township and Livingston County Health Department specifications.
  - Property to be serviced by an individual septic system that shall meet Genoa Township and Livingston County Health Department specifications.
  - Developer shall comply with soil erosion and sedimentation control measures as required by the Livingston County Drain Commissioner.
  - Seventy-two hours prior to any excavation, the Contractor shall telephone MISS DIG (800-482-7171) for the location of underground gas and cable facilities 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.
  - Underground utilities (i.e. elec., tele.) shall be extended from exist. locations along existing road to service this site as required by utility companies.
  - Floor drains shall not be connected to the storm sewer or septic system.
  - The soils on the site are predominantly loams (per the Soil Survey by the U.S.D.A.)
  - Proposed sign shall conform to the standards and specifications of Genoa Township. See detail on this sheet.
  - Dumpsters must comply with the following requirements:
    - Located on concrete pad, extended minimum 10' in front of dumpster enclosure.
    - A solid lockable gate should be provided.
    - Wood gate must be specified No. 1 pressure-treated wood.
    - Ballards shall be installed at opening to prevent damage.
  - Barrier free parking spaces shall be marked with an above grade sign.
  - All roof appliances are to be screened.
  - Parking calculations: # of parking spaces required.
 

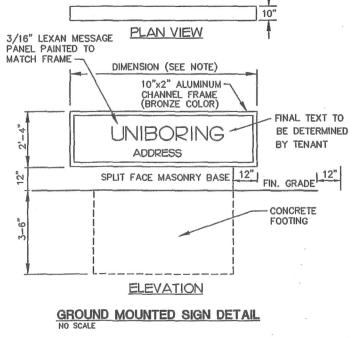
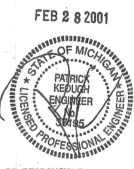
WAREHOUSE FLOOR AREA = 15,800 SF / 1500 * 1.0	= 11
MANUFACTURING FLOOR AREA = 31,600 SF / 1000 * 1.5	= 47
OFFICE FLOOR AREA = 6,160 SF / 300	= 21
PARKING SPACES REQUIRED	= 79
BARRIER FREE PARKING SPACES REQUIRED	= 4
LOADING/UNLOADING SPACES REQUIRED	= 2
PARKING SPACES PROVIDED = 110, including 5 barrier free, plus 3 loading/unloading.	
  - Exterior lighting not to exceed .1 F.C. at the property line.



**LOT #4**  
6.235 acres (GROSS)  
6.096 acres (NET)  
PROP F. F. = 983.0  
BRIVAR DEV. CO. LLC  
7258 KENSINGTON RD  
BRIGHTON MI, 48116

**LEGAL DESCRIPTION**

Part of the NE 1/4 of Section 15, T2N-R5E, Genoa Township, Livingston County, Michigan being described as follows: Commencing at the East 1/4 Corner of said Section 15, thence along the East line of said Section 15 and centerline of Dorr Road, N 02°13'10" W, a distance of 905.97 feet; thence along the centerline of a 66 foot wide private easement for ingress, egress, and public utilities as described below, S 87°48'50" W, a distance of 459.98 feet; thence continuing along said centerline, along a curve to the right, having a radius of 230.00 feet, arc length of 81.88 feet, delta angle of 20°23'34", a chord bearing of N 82°01'23" W, and a chord length of 81.43 feet; thence continuing along said centerline, N 71°49'36" W, a distance of 233.37 feet to the center of a 7.5 foot radius cut-to-also and Point of Beginning of the Parcel to be described; thence S 31°03'57" W, a distance of 448.89 feet; thence along the Northern Right-of-Way line of I-96 Expressway (limited access), along a curve left, having a radius of 6772.50 feet, arc length of 271.53 feet, delta angle of 02°17'50", a chord bearing of N 52°20'15" W, and a chord length of 271.53 feet; thence N 02°19'28" W, a distance of 427.53 feet; thence N 88°03'12" E, a distance of 550.92 feet; thence S 05°20'54" E, a distance of 331.14 feet to the Point of Beginning and containing 6.235 acres, more or less. Subject to and including the use of a 66 foot wide private easement for ingress, egress, and public utilities as described below. Also subject to any other easements or restrictions of record.



- SIGN NOTES**
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF THE FOOTINGS AND THE SUPPORT OF THE SIGN. CONTRACTOR SHALL FOLLOW ALL LOCAL CODES AND ORDINANCES.
  - FINAL DIMENSIONS TO BE DETERMINED BY TENANT AND TO COMPLY W/ GENOA TOWNSHIP STANDARDS, (MAX. AREA = 80 SQ. FT., MAX. HEIGHT = 6')

- LEGEND**
- EXTERIOR BUILDING LIGHT
  - LIGHT POLE
  - SIGN
  - UTILITY POLE
  - TELEPHONE RISER
  - CATCH BASIN
  - MANHOLE
  - VALVE
  - HYDRANT
  - WELL
  - EXISTING SPOT ELEVATION
  - PROPOSED SPOT ELEVATION
  - MAJOR EXIST. CONTOUR - 5' INTERVAL
  - MINOR EXIST. CONTOUR - 1' INTERVAL
  - PROPOSED CONTOUR
  - EXISTING STORM SEWER
  - EXISTING SANITARY SEWER
  - EXISTING WATER MAIN
  - PROPOSED STORM SEWER
  - GAS MAIN
  - UNDERGROUND TELEPHONE LINE
  - UNDERGROUND ELECTRIC LINE
  - FENCE LINE
  - GUARDRAIL
  - DITCH CENTERLINE, TOE OF SLOPE
  - SILT FENCE
  - PROPOSED RIPRAP
  - EXISTING DECIDUOUS TREE
  - EXISTING TREE AND BRUSH LINE

REVISIONS:

NO.	DATE	DESCRIPTION

OWNER/DEVELOPER:  
**BRIVAR CONSTRUCTION**  
7258 KENSINGTON ROAD  
BRIGHTON, STATE 48116  
248-446-8000

OWNER/DEVELOPER:  
**BRIVAR Construction Company**  
7258 Kensington Rd, Brighton, MI, 48116  
(248) 446-8000

PROPOSED SITE PLAN  
LOT #4 BRIGHTON PINES CT.

**BCC UNIBORING**

**ADVANTAGE CIVIL ENGINEERING**  
110 E. Grand Blvd., Howell, MI, 48843 517 546-4441 Fax 517 546-4448

DATE: 01-16-01  
DRAWN BY: CMF  
CHECKED BY: PCK  
JOB No.: 00186  
DRAWING No.: 1/4

# F & F Outdoors, Inc.

2073 Sandlewood Dr  
White Lake, MI 48383

# Quote

Date	Project No.
2/23/2016	1609

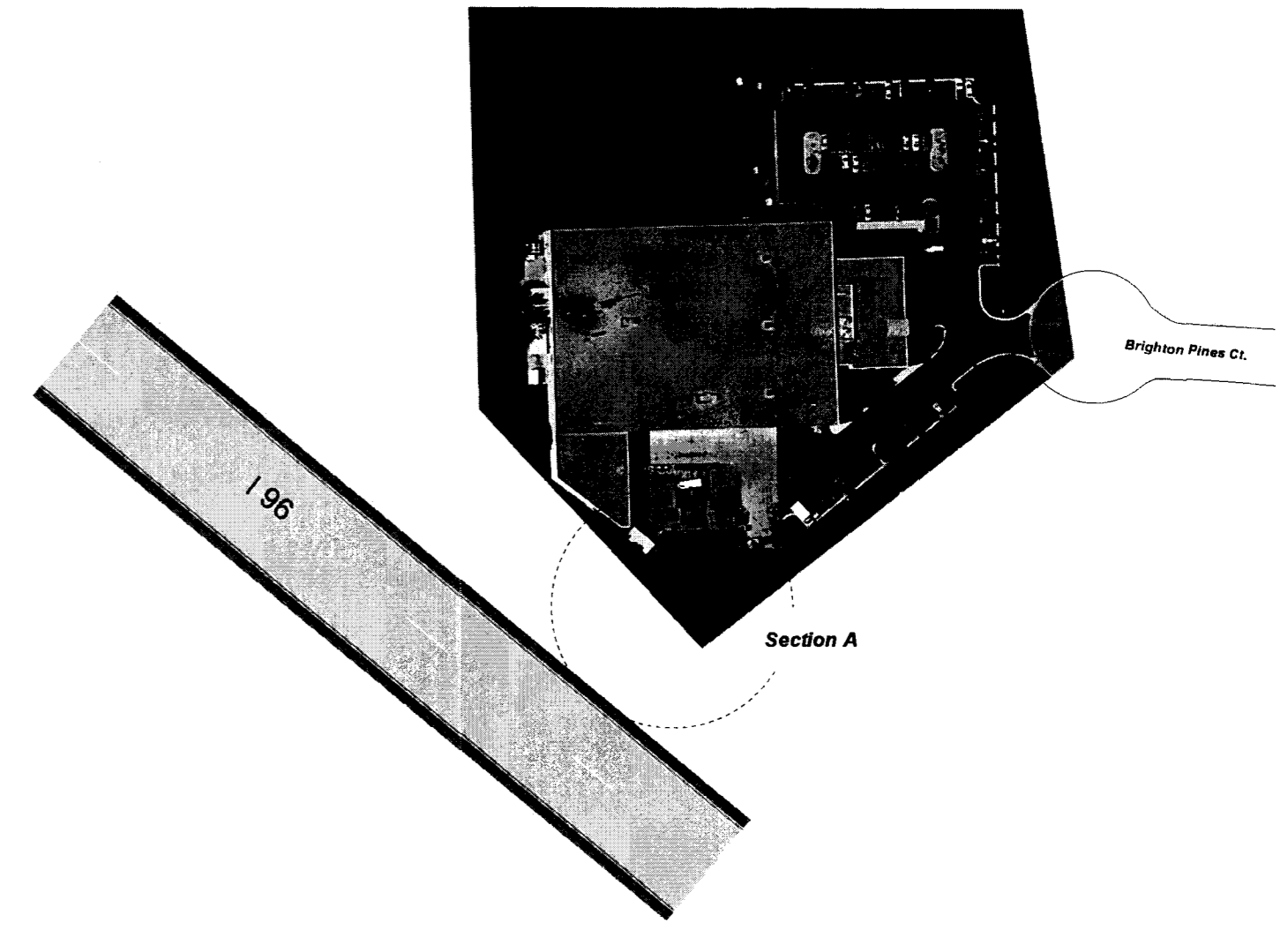
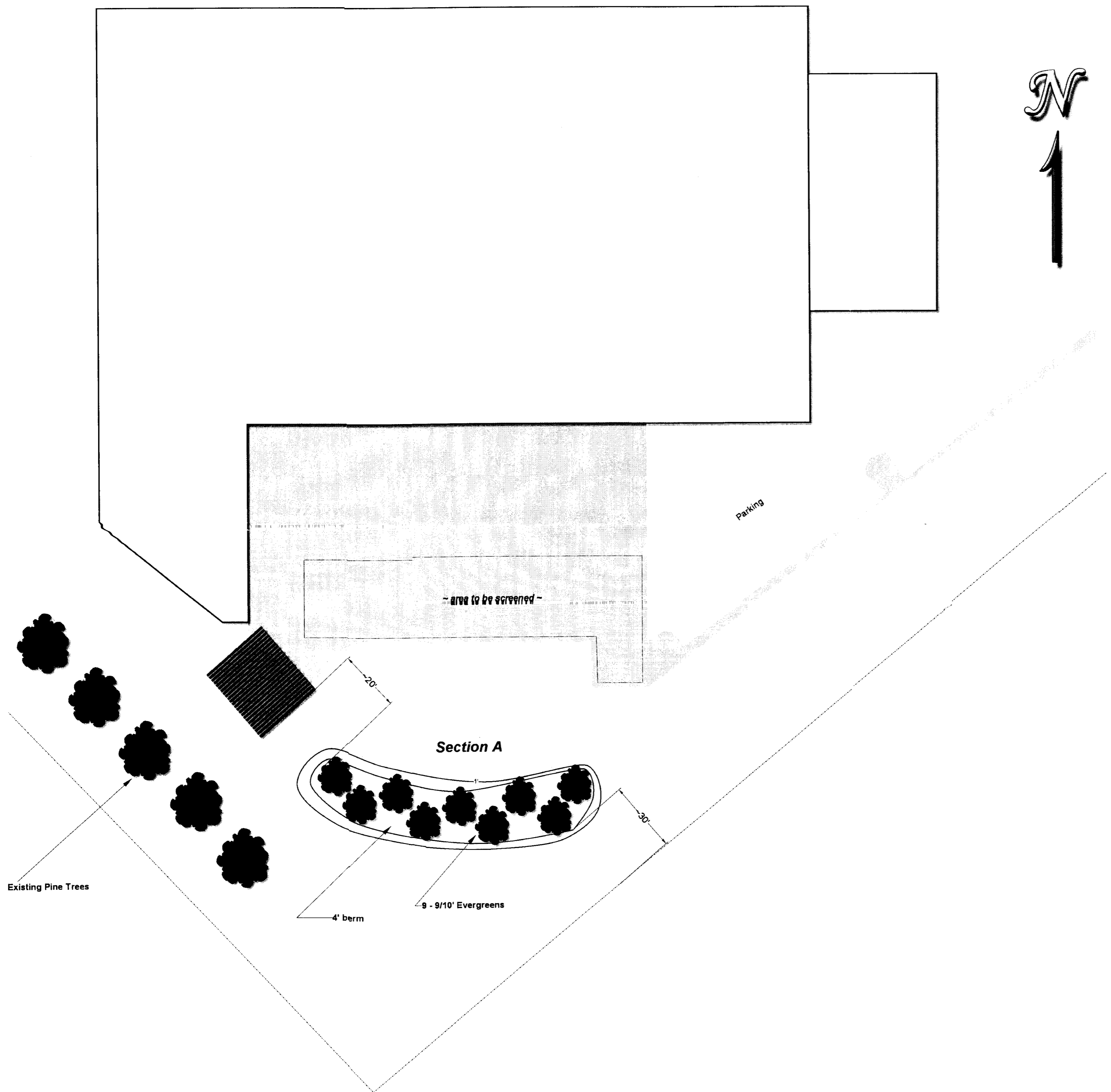
Customer
CRW Plastics, USA 5775 Brighton Pines Ct Howell, MI 48843

**GENDA TOWNSHIP**

FEB 24 REC'D 2016

**RECEIVED**

Description	Qty	Sales Rep	Timing
		JA	
		Amount	Total
Top Soil & preparation for berm (yds.)	40	30.00	1,200.00
Mulch & Stakes (per tree)	9	55.00	495.00
Colorado Blue Spruce - 9/10'	9	729.30	6,563.70T
<b>SUBTOTAL</b>			<b>8,258.70</b>
Customer Design - including 3 copies of prints	1	500.00	500.00
Design Credit	1	-500.00	-500.00
Consult Credit	1	-150.00	-150.00
** Plants and workmanship warranted for 1 year from time of planting. Warranty does NOT cover labor to deliver & replace plant material. Plant replacement NOT covered for; acts of God, accidental/willful damage or improper maintenance, i.e.; lack of or too much watering. **			
Sales Tax		6.00%	393.82
Phone #	Fax #	E-mail	Web Site
248-705-0282	248-887-6451	joe2know@icloud.com	www.fandfoutdoors.com
Thank you for the opportunity to quote your project.			<b>Total</b> \$8,502.52



GENOA TOWNSHIP

FEB 24 REC'D

RECEIVED

<p>Project: CRW Plastics, USA 5775 Brighton Pines Court Howell, MI 48843 Drawing: 1609</p>	<p>Design by: <b>F&amp;F Outdoors, Inc.</b> <i>'Your Landscaper for Outdoor Life'</i></p>	<p>Page 1 of 1 2073 Sandlewood Dr. White Lake, MI 48383 Phone Number: 248-705-0282 E-mail: email@fandfoutdoors.com</p>
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