GENOA CHARTER TOWNSHIP BOARD
Regular Meeting
October 17, 2022
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) *:

Consent Agenda:

1) Payment of Bills: October 17, 2022

2) Request to approve Minutes: October 3, 2022

Regular Agenda:

3) Request to approve water rate adjustments in response to the City of Brighton's revised fee schedule effective December 1, 2022 as recommended by the accountants and Utility Director as follows:
   a) Increase the Lake Edgewood Conference Center Quarterly Water Fee to $7.06/1,000 gallons from $6.43/1,000 gallons;
   b) Increase the Lake Edgewood Other Quarterly water fee to $6.76/1,000 gallons from $6.16/1,000 per 1,000 gallons;
   c) Hold the applicable Brighton City water connection fee at $2,802 per REU and the sewer connection at $7,198 per REU.

4) Consideration of a recommendation for approval of an amendment to the Saint Joseph Mercy Health Planned Unit Development Agreement, final PUD site plan and environmental impact assessment to construct a proposed 175,043 sq. ft. 4-story hospital addition to an existing medical building. The project is located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road. The request is petitioned by Trinity Health-Michigan.
   a) Disposition of the Amended and Restated PUD Agreement
   b) Disposition of the Environmental Impact Assessment (dated 3-30-22)
   c) Disposition of the Final PUD site plan (dated 9-16-22)

5) Consideration of a recommendation for approval of an amendment to a previously approved site plan for a climate-controlled indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road. The request is petitioned by Schafer Construction, Inc.

6) Request for approval of a transfer of a Class C liquor license from NPZ Group LLC at 7749 E. M-36, Hamburg Township to CBOCS Properties, Inc. (Cracker Barrel) at 7925 Conference Center Drive, Genoa Township.

7) Consideration of amendments to the Fiscal Year 2022/2023 Budget for the General Fund, Fund 101 to reflect the impact of the resignation of the Township Manager and the internal promotions to fill the Manager and Planning Director positions as follows:
   a) Increase Dept. 172 - Township Manager, “Salary” Line Item 101-172-702-014 from $139,513 to $166,435.08.
   b) Decrease Dept. 261 - Unallocated, “Retirement” Line Item 101-261-718-001 from $121,000 to $119,505.
   c) Decrease Dept. 701 - Planning and Zoning, “Planning and Zoning Wages and Salaries” Line Item 101-701-703-000 from $218,760 to $176,889.12.

8) Consideration of amendments to the Fiscal Year 2022/2023 Budget for the Parks and Recreation Fund, Fund 208 as follows:
   a) Increase Dept. 751 – Parks & Recreation, “Park Master Plan” Line Item 208-751-934-006 to cover the cost of survey work and wetland delineation for the Township park acquisition parcels from $10,000 to $20,850.
   b) Decrease to zero Dept. 751 – Parks & Recreation, Line Item 208-751-934-003 for the Pedestrian Crossing at Grand River and Speedway due to MDOT consideration for the project.
   c) Decrease to zero Dept. 751 – Parks & Recreation, Line Item 208-751-934-009 for the Pedestrian Crossing at Grand River and Golf Club due to MDOT consideration for the project.
   d) Create new Dept. 751 – Parks & Recreation, line item number 208-751-934-012 for the “Grand River Sidewalk Infill design/easement” project with a budget amount of $55,000.

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

MEETING DATE: October 17, 2022

All information below through October 12, 2022

TOWNSHIP GENERAL EXPENSES	$	175,710.70
October 14, 2022 Bi Weekly Payroll	$	113,757.34
OPERATING EXPENSES DPW	$	38,334.97
OPERATING EXPENSES Oak Pointe	$	5,244.84
OPERATING EXPENSES Lake Edgewood	$	50,979.97
TOTAL	$	384,027.82

CHECK REGISTER FOR GENOA TOWNSHIP
CHECK NUMBERS 37753 - 40000

Check Date	Check	Vendor Name	Amount
Bank FNBCK CHECKING ACCOUNT			
09/28/2022	37753	ACCIDENT FUND COMPANY	23,483.00
09/28/2022	37754	DTE ENERGY	27.36
10/03/2022	37755	COOPER'S TURF MANAGEMENT LLC	1,185.44
10/03/2022	37756	TAMMY LINDBERG	343.76
10/03/2022	37757	MEI TOTAL ELEVATOR SOLUTIONS	139.89
10/03/2022	37758	MICHIGAN OFFICE SOLUTIONS	347.94
10/03/2022	37759	MICHIGAN STATE UNIVERSITY	60.00
10/03/2022	37760	MMRMA	12,934.53
10/03/2022	37761	PRINTING SYSTEMS	273.64
10/03/2022	37762	DENISE SCHNIERS	8.25
10/03/2022	37763	SMART BUSINESS SOURCE	427.81
10/04/2022	37764	ALLSTAR ALARM LLC	345.00
10/04/2022	37765	DTE ENERGY	742.98
10/04/2022	37766	GORDON FOOD SERVICE	278.00
10/04/2022	37767	NETWORK SERVICES GROUP, L.L.C.	50.00
10/04/2022	37768	SMART BUSINESS SOURCE	145.84
10/12/2022	37769	COMCAST	637.20
10/12/2022	37770	COMCAST	713.15
10/12/2022	37771	CONTINENTAL LINEN SERVICE	132.33
10/12/2022	37772	DTE ENERGY	83.43
10/12/2022	37773	DTE ENERGY	213.84
10/12/2022	37774	FEDERAL EXPRESS CORP	48.42
10/12/2022	37775	LANDSCAPE DESIGN & ASSOCIATES LLC	3,320.00
10/12/2022	37776	LIVINGSTON COUNTY TREASURER	1.52
10/12/2022	37777	MANER COSTERISAN	12,900.00
10/12/2022	37778	MICHIGAN.COM	353.02
10/12/2022	37779	OAK POINTE NEW USER FUND	605.39
10/12/2022	37780	PFM FINANCIAL ADVISORS LLC	1,000.00
10/12/2022	37781	TERRY CROFT	62.50
10/12/2022	37782	WASTE MANAGEMENT CORP, SERVICES	114,776.39
10/12/2022	37783	WASTE MANAGEMENT CORP, SERVICES	70.07

FNBCK TOTALS:

Total of 31 Checks:	175,710.70
Less 0 Void Checks:	0.00
Total of 31 Disbursements:	175,710.70

Payroll ID: 224

Pay Period End Date: 10/07/2022 Check Post Date: 10/14/2022 Bank ID: FNBCK

* YTD values reflect values AS OF the check date based on all current adjustments, checks, void checks

TWP MED REIMBUR	0.00	0.00	0.00	0.00
UNIFORM ALLOW	0.00	0.00	0.00	4,275.00
VAC COVID 19	0.00	0.00	0.00	0.00
VACATION NONTAX	0.00	0.00	0.00	0.00
VACATION PAY	138.00	0.00	4,090.43	104,005.18
VACATION PTIME	0.00	0.00	0.00	4,782.15
WELL IQ	0.00	0.00	189.50	3,007.59
ZBA CHAIR	1.00	0.00	205.30	1,613.06
ZBA MINUTES	1.00	0.00	173.00	1,359.28
ZBA MINUTES OT	0.00	0.00	0.00	0.00
ZBA PER DIEM	4.00	0.00	775.04	5,631.16

Gross Pay This Period	Deduction Refund	Ded. This Period	Net Pay This Period	Gross Pay YTD	Dir. Dep.
112,559.36	0.00	34,048.23	78,511.13	2,218,105.51	78,387.79

Check Register Report For Genoa Charter Township

For Check Dates 10/14/2022 to 10/14/2022

Check Date	Bank	Check Number	Name	Check Gross	Physical Check Amount	Direct Deposit	Status
10/14/2022	FNBCK	13677	SEBASTIAN, PAUL J	140.00	123.34	0.00	Open
10/14/2022	FNBCK	EFT728	FLEX SPENDING (TASC)	807.30	807.30	0.00	Open
10/14/2022	FNBCK	EFT729	INTERNAL REVENUE SERVICE	27,483.93	27,483.93	0.00	Open
10/14/2022	FNBCK	EFT730	PRINCIPAL FINANCIAL	4,476.00	4,476.00	0.00	Open
10/14/2022	FNBCK	EFT731	PRINCIPAL FINANCIAL	2,355.64	2,355.64	0.00	Open
Totals:			Number of Checks: 005	35,262.87	35,246.21	0.00	

Total Physical Checks: 1

Total Check Stubs: 4

Net Pay This Period $78,511.13

Physical Check Amount $35,246.21

TOTAL $113,757.34

10/12/2022 10:56 AM
User: denise
DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
CHECK NUMBERS 5652 - 6000

Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 503FN DPW-UTILITIES #233			
10/03/2022	5652	MMRMA	11,565.72
10/04/2022	5653	GENOA TOWNSHIP	17,377.42
10/11/2022	5654	TRACTOR SUPPLY CO.	94.98
10/12/2022	5655	WEX BANK	9,296.85
503FN TOTALS:			
Total of 4 Checks:			38,334.97
Less 0 Void Checks:			0.00
Total of 4 Disbursements:			38,334.97

10/12/2022 10:57 AM
User: denise
DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
CHECK NUMBERS 5639 - 6000

Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 592FN OAK POINTE OPERATING FUND #592			
10/03/2022	5639	MMRMA	2,278.64
10/04/2022	5640	DTE ENERGY	985.00
10/11/2022	5641	DTE ENERGY	1,981.20
592FN TOTALS:			
Total of 3 Checks:			5,244.84
Less 0 Void Checks:			0.00
Total of 3 Disbursements:			5,244.84

10/12/2022 10:58 AM
User: denise
DB: Genoa Township

CHECK REGISTER FOR GENOA TOWNSHIP
CHECK NUMBERS 4190 - 5000

Page: 1/1

Check Date	Check	Vendor Name	Amount
Bank 593FN LAKE EDGEWOOD OPERATING FUND #590			
10/03/2022	4190	CITY OF BRIGHTON	9,694.73
10/03/2022	4191	CITY OF BRIGHTON	36,434.32
10/03/2022	4192	MMRMA	959.36
10/05/2022	4193	BRIGHTON TOWNSHIP	662.50
10/11/2022	4194	DTE ENERGY	3,229.06
593FN TOTALS:			
Total of 5 Checks:			50,979.97
Less 0 Void Checks:			0.00
Total of 5 Disbursements:			50,979.97

503FN	$38,334.97
592FN	$5,244.84
593FN	$50,979.97
TOTAL	$94,559.78

GENOA CHARTER TOWNSHIP BOARD
Regular Meeting
October 3, 2022

MINUTES

Supervisor Rogers called the regular meeting of the Genoa Charter Township Board to order at 6:30 pm at the Township Hall. The following members were present constituting a quorum for the transaction of business: Bill Rogers, Paulette Skolarus, Jean Ledford, Terry Croft, Jim Mortensen, Diana Lowe and Robin Hunt. Also present were Township Manager Michael Archinal, Kelly VanMarter, Planning Director / Asst. Township Manager, and Township Attorney Joe Seward, and three persons in the audience.

The Pledge of Allegiance was recited.

The call to the public was opened at 6:31 pm.

State Senator Lana Theis presented Mike Archinal with a Tribute from the State of Michigan. She thanked him for his service and dedication to the Township.

The call to the public was closed at 6:33 p.m.

Consent Agenda

Moved by Ledford, supported by Lowe, to approve the Consent Agenda as presented. **The motion carried unanimously**.

1. Payment of Bills: October 3, 2022

2. Request to approve Minutes: September 19, 2022

3. Request to amend FY 2022/2023 budget as recommended by the Election Commission.

4. A. Request to approve a proposal from DeBottis for Township Hall parking lot resealing and restriping in the amount of $21,290.

   B. Request to amend the FY 2022/2023 Budget, zeroing line item Township LED monument sign 249-265-981-003 and adding line item 249-265-981-007 in the amount of $21, 290.

Regular Agenda

Moved by Lowe, seconded by Croft, to approve the Regular Agenda as presented. **The motion carried unanimously**.

5. Request to amend the Township's personnel manual by compensating employees receiving a car allowance at 35% of the prevailing IRS mileage rate for eligible expenses.

Mr. Archinal stated they reviewed the personnel manual and are recommending that mileage expenses be 35 percent of the IRS mileage rate if an employee is receiving a car allowance.

Mr. Mortensen would like it to be clarified that the mileage reimbursement starts after a trip of 50 miles.

Moved by Mortensen, supported by Lowe, to amend the Township's personnel manual by compensating employees receiving a car allowance at 35 percent of the prevailing IRS mileage rate for eligible expenses beginning with a one-way trip of 50 miles. **The motion carried unanimously.**

6. Request to modify the Township's participation in the subdivision roads special assessments from 25% or $1,000 per home (whichever is less) to $25% or $1,500 per home.

Mr. Archinal stated they reviewed the policy and made changes. The fund that is used for these expenses has sufficient funds currently and this program was first enacted in 2004.

Mr. Mortensen noted that when the Township pays for these types of projects, bonding is usually done and interest rates are increasing. Mr. Archinal stated there are some upcoming projects that are able to be funded with money that the Township currently has and noted that each of these SAD's are approved by the Board on a case-by-case basis.

Ms. Skolarus stated this is a very generous program. Supervisor Rogers stated this is an existing policy and what is being requested is to adjust it slightly by increasing the per parcel expense from $1,000 to $1,500. Ms. Skolarus is not opposed to supporting the residents, but this is more than any other Townships provide.

Moved by Mortensen, supported by Croft, to approve the following policy with regard to the establishment of Special Assessment Districts for road projects:

- This policy amends and replaces the 10/4/2004 action of the Township Board.
- The Township may financially support the public road Special Assessment District up to 25 percent of the total project with a maximum of $1,500 per parcel from the General Fund.
- The maximum expended each year from Fund #202 shall be reviewed by the Township Board on a case-by-case basis.
- The maximum expended each year from the General Fund shall be determined by the Township Board as part of the annual budget process.

The motion carried (Ledford - no, Croft - yes, Hunt - yes, Lowe - yes, Mortensen - yes, Skolarus - yes, and Rogers - yes)

7. Request for approval and adoption of Resolution No. 221003 in appreciation of Michael C. Archinal for his over 24 years of Service to Genoa Charter Township.

Moved by Lowe, supported by Croft, to adopt Resolution No. 221003 in appreciation of Michael C. Archinal for his over 24 years of Service to Genoa Charter Township. **The motion carried unanimously with a roll call vote (Ledford - yes, Croft - yes, Hunt - yes, Lowe - yes, Mortensen - yes, Skolarus - yes, and Rogers - yes).**

Supervisor Rogers read aloud the Resolution of Appreciation.

Correspondence

Mr. Archinal provided the Board with information regarding the Livingston County Sheriff's responses in Genoa and the surrounding township. It also shows the number of responses vs. how much funding they provide to the Sheriff's Department. He noted that large retail stores and two I-96 interchanges are located in the Township.

Ms. Lowe stated she feels very safe in the Township and does not see the need for a police department.

Member Discussion

Mr. Archinal thanked all of the Board Members for their appreciation and for allowing him and his staff to accomplish all that they have. All Board Members thanked Mike for his service and congratulated him on his retirement.

Ms. Lowe stated that Park and Recreation may be seeking a millage in 2024.

Adjournment

Moved by Ledford, supported by Hunt, to adjourn the meeting at 7:04 pm. **The motion carried unanimously.**

Respectfully Submitted,

Patty Thomas
Recording Secretary

Approved:

Paulette Skolarus, Clerk
Genoa Charter Township

Bill Rogers, Supervisor
Genoa Charter Township

DRAFT

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

MEMO

TO: Genoa Charter Township Board

FROM: Greg Tatara, Utility Director

DATE: October 3, 2022

SUBJECT: Annual Rate Adjustments for the Lake Edgewood Water System Customers served by the City of Brighton

For consideration at the October 17th Board Meeting is the proposed annual rate adjustments for the Lake Edgewood Water System Customers serviced by the City of Brighton water.

Please find attached a letter dated September 30, 2022 from the City of Brighton regarding their adopted 2022 - 2023 fee schedule for water use, as well as connection fees. Correspondingly, please find attached a September 30th letter from Pfeffer, Hanniford, and Palka, which recommends the adjusted rates for these fees. These rates include the $0.15 per 1,000 gallon administrative charge from Genoa Township to cover meter reading, meter replacement, billing, postage, collection, and other fees. As staff, we concur with the proposed adjustments, and we recommend that the effective date of the changes be December 1st, 2022. This date corresponds with a new billing cycle for Lake Edgewood Water Customers.

Based on the above explanation and the attached documents, please consider the following motion:

Moved by_____, supported by_____ that December 1st, 2022, the following water rate adjustments will become effective:

- Increase the Lake Edgewood Conference Center Quarterly Water Fee to $7.06 / 1,000 gallons from $6.43/1,000 gallons;
- Increase the Lake Edgewood Other Quarterly water fee to $6.76 / 1,000 gallons from $6.16/1,000 per 1,000 gallons;
- Hold the applicable Brighton City water connection fee at $2,802 per REU and the sewer connection at $7,198 per REU.

SUPERVISOR
Bill Rogers
CLERK
Paulette A. Skolarus
TREASURER
Robin L. Hunt
TRUSTEES
Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe
MANAGER
Kelly VanMarter

PHP

PFEFFER ▪ HANNIFORD ▪ PALKA
Certified Public Accountants

John M. Pfeffer, C.P.A.
Patrick M. Hanniford, C.P.A.
Kenneth J. Palka, C.P.A.
Members:
AICPA Private Practice Companies Section
MACPA

225 E. Grand River - Suite 104
Brighton, Michigan 48116-1575
(810) 229-5550
FAX (810) 229-5578

September 30, 2022

Dr. Gregory Tatara
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Dear Greg:

As you have requested we have reviewed the City of Brighton's revised fee schedule effective July 1, 2022 for Lake Edgewood Water.

Based on our review we recommend the following rate changes be implemented by Genoa Township.

1. Lake Edgewood - Conference Center Quarterly Usage Fee - Water
   The water fee should increase to $7.06 per 1,000 gallons from $6.43 per 1,000 gallons.
   (It should be noted the City's rates increased from $6.28 to $6.91)

2. Lake Edgewood - Other Quarterly Usage Fee - Water
   The water fee should increase to $6.76 per 1,000 gallons from $6.16 per 1,000 gallons.
   (It should be noted the City's rates increased from $6.01 to $6.61)

We recommend the increase be started in the next billing cycle.

If you should have any questions please call.

Sincerely,

PFEFFER, HANNIFORD & PALKA
Certified Public Accountants

Kenneth J. Palka

CITY OF BRIGHTON

September 30, 2022

Mike Archinal, Manager
Genoa Township
2911 Dorr Road
Brighton, MI 48116

Mr. Archinal:

The City of Brighton's adopted FY 2022-2023 Fee Schedule for Sewer and Water user and connection fees, as they relate to Genoa Township, are listed below. These rates are effective July 1, 2022.

	Dillon	Northstar	Lake Edgewood
Water:			
Commodity (1,000 gal.)-	$6.61	$6.91	$6.61
PILOT (bi-monthly)	$16.66		

Connection Fees
(Per REU):

Water	$2,802
Sewer	$7,198

Please contact me if you have any questions at 810.225.8022.

Sincerely,

Gretchen Gomolka, City Manager

Cc: Corey Brooks, Deputy DPS Director
File

200 N. First St. Brighton, MI 48116
(810) 227-1911
www.brightoncity.org

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

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Township Manager

DATE: October 12, 2022

RE: Trinity Health/St. Joseph Mercy Brighton – Hospital Addition
PUD Amendment, Final PUD Site Plan and Impact Assessment

In consideration of the approval recommendation by the Township Planning Commission on August 8, 2022 please find the attached project case file for a 4-story hospital addition consisting of 175,043 square foot for the St. Joseph Mercy Brighton Health Center. The 80-acre site is located on the north side of Grand River Avenue, west of Bendix Road. The site is within an existing non-residential Planned Unit Development (NRPUD) which is proposed to be amended to accommodate the project. Procedurally, the Planning Commission is to make a recommendation to the Township Board on the amended development agreement, impact assessment and the final PUD site plan. The Township Board has the final review/approval authority over the proposal.

A revised site plan was received from the applicant which incorporated many of the Planning Commission comments as indicated in the enclosed review letters from the planning consultant, engineer and fire authority. There are a few minor comments from both myself and the planner regarding the PUD Agreement. Predominately my concerns relate to type and location of the proposed signage for the project. Prior to execution of the development agreement, I would like to request that the applicant work with staff to finalize details related to the sign design for the property. This is included in the following motion regarding the development agreement.

Based on the action of the Planning Commission and in response to the revised materials I offer the following action for your consideration:

<u>PUD Agreement</u>
Moved by _____, Supported by _____ to APPROVE the Amended and Restated Planned Unit Development (PUD) Agreement with the following conditions:

1.) The applicant will revise the Agreement to address the comments of the Planner and Township Manager. Additional detail shall be provided regarding the proposed signage and the applicant shall revise the PUD Agreement as necessary.
2.) The Township Attorney shall review and approve the final document prior to execution.
3.) The applicant shall ensure that the signed document is property recorded with the Register of Deeds prior to issuance of a land use permit for the project.
4.) Any site plan fee exceedances associated with the additional meetings and consultant reviews as indicated on the site plan and PUD applications shall be paid prior to issuance of the land use permit for the project.

SUPERVISOR
Bill Rogers
CLERK
Paulette A. Skolarus
TREASURER
Robin L. Hunt
TRUSTEES
Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe
MANAGER
Kelly VanMarter

<u>Environmental Impact Assessment</u>
Moved by _____, Supported by _____ to APPROVE the Environmental Impact Assessment dated March 30, 2022 as submitted.

<u>Final PUD Site Plan</u>
Moved by _____, Supported by _____ to APPROVE the Final PUD Site Plan dated September 16, 2022.

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

Sincerely,

Kelly VanMarter

GENOA CHARTER TOWNSHIP APPLICATION
Planned Unit Development (PUD)

APPLICANT NAME: Tom Tocco

APPLICANT EMAIL: tom.tocco@stjoeshealth.org

APPLICANT ADDRESS & PHONE: 1600 South Canton Center Road;Canton, MI 48155, (734) 712-2192

OWNER'S NAME: Trinity Health – Michigan d/b/a St. Joseph Mercy Livingston

OWNER ADDRESS & PHONE: St. Joseph Mercy Health System, (734) 712-2192

TAX CODE(S): ID: 4711-13-200-009

QUALIFYING CONDITIONS (To be filled out by applicant)

1. A PUD zoning classification may be initiated only by a petition.

2. It is desired and requested that the foregoing property be rezoned to the following type of PUD designation:

   - ☐ Residential Planned Unit Development (RPUD)
   - ☐ Planned Industrial District (PID)
   - ☐ Mixed Use Planned Unit Development (MUPUD)
   - ☐ Redevelopment Planned Unit Development (RDPUD)
   - ☒ Non-residential Planned Unit Development (NRPUD)
   - ☐ Town Center Planned Unit Development (TCPUD)

3. The planned unit development site shall be under the control of one owner or group of owners and shall be capable of being planned and developed as one integral unit.

EXPLAIN Trinity Health-Michigan d/b/a St. Joseph Mercy Health System are the current owners of the parcel.

4. The site shall have a minimum area of twenty (20) acres of contiguous land, provided such minimum may be reduced by the Township Board as follows:

   A. The minimum area requirement may be reduced to five (5) acres for sites served by both public water and public sewer.

   B. The minimum lot area may be waived for sites zoned for commercial use (NSD, GCD or RCD) where the site is occupied by a nonconforming commercial, office or industrial building, all buildings on such site are proposed to be removed and a new use permitted within the underlying zoning district is to be established. The Township Board shall only permit the PUD on the smaller site where it finds that the flexibility in dimensional standards is necessary to allow for innovative design in redeveloping the site and an existing blighted situation will be eliminated. A parallel plan shall be provided showing how the site could be redeveloped without the use of the PUD to allow the Planning Commission to evaluate whether the modifications to dimensional standards are the

minimum necessary to allow redevelopment of the site, while still meeting the spirit and intent of the ordinance.

C. The PUD site plan shall provide one or more of the following benefits not possible under the standards of another zoning district, as determined by the Planning Commission:

- preservation of significant natural or historic features
- a complementary mixture of uses or a variety of housing types
- common open space for passive or active recreational use
- mitigation to offset impacts
- redevelopment of a nonconforming site where creative design can address unique site constraints.

D. The site shall be served by public sewer and water. The Township may approve a residential PUD that is not served by public sewer or water, provided all lots shall be at least one (1) acre in area and the requirements of the County Health Department shall be met.

Size of property is 77.59 acres.

DESCRIBE BELOW HOW THE REQUESTED PUD DESIGNATION COMPLIES WITH AFOREMENTIONED MINIMUM LOT SIZE REQUIREMENTS.

A PUD currently governs the site and is being amended in order to accommodate the expanded hospital program to better serve the community.

STANDARDS FOR REZONING TO PLANNED UNIT DEVELOPMENT (RESPOND HERE OR WITHIN THE IMPACT STATEMENT)

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

The amended PUD will comply with the open space requirement from the township.

2. The compatibility of all the potential uses in the PUD with surrounding uses and zoning in terms of land suitability, impacts on the environment, density, nature of use, traffic impacts, aesthetics, infrastructure and potential influence on property values;

See attachment, Impact Statement and supporting appendices.

3. The capacity of infrastructure and services sufficient to accommodate the uses permitted in the requested district without compromising the “health, safety and welfare” of the Township;

See attachment, Impact Statement and supporting appendices.

4. The apparent demand for the types of uses permitted in the PUD:

See attachment, Impact Statement and supporting appendices.

AFFIDAVIT

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

BY: Tom Tocco

ADDRESS: 1600 South Canton Center Road, Canton, MI 48155

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

Tom Tocco	of Trinity dba St. Joseph Mercy Health System	at tom.tocco@stjoeshealth.org
Name	*Business Affiliation*	*E-mail*

FEE EXCEEDANCE AGREEMENT

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

PROJECT NAME: St. Joseph Mercy Brighton Expansion and Renovation

PROJECT LOCATON & DESCRIPTION: 7575 Grand River Rd., Brighton, MI 48114

Expansion and renovation of existing MOB and clinic to add Hospital function.

SIGNATURE: Tom Tocco DATE: March 29. 2022

PRINT NAME: Tom Tocco PHONE: 734-712-2192

COMPANY NAME & ADDRESS: St. Joseph Mercy Health; 1600 South Canton Center Road, Canton, MI 48155

GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Trinity Health-Michigan d/b/a St. Joseph Mercy Health System

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

OWNER'S NAME & ADDRESS: St. Joseph Mercy Health System

SITE ADDRESS: 7575 Grand River Existing Facility, 7555 Grand River for New Hospital PARCEL #(s): ID:4711-13-200-009

APPLICANT PHONE: (734) 712-2192 OWNER PHONE: (734) 712-2192

OWNER EMAIL: tom.tocco@stjoeshealth.org

LOCATION AND BRIEF DESCRIPTION OF SITE: Project site is located at 7575 Grand River Rd., Brighton, Michigan, 48114. Project to include expansion and renovation of existing facility known as St. Joseph Mercy Brighton.

BRIEF STATEMENT OF PROPOSED USE: Project is intended to expand community health service to Brighton area and includes development of new hospital addition (four stories plus basement), support spaces, 72 inpatient beds including mother/baby unit, expanded emergency department services, cafeteria, and associated upgrades to support spaces and utilities, with expanded onsite parking capacity.

THE FOLLOWING BUILDINGS ARE PROPOSED:

Hospital addition to existing facility = 175,043 gross sq.ft.

Expansion areas to Medical Office Building =11,114 gross sq.ft.

Renovation area within Medical Office Building = 23,326 net sq.ft

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: Tom Tocco

ADDRESS: 1600 South Canton Center Road, Canton, MI 48155

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

1.) Tom Tocco of Trinity dba St. Joseph Mercy Health System at Tom.Tocco@stjoeshealth.org

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: Tom Tocco DATE: March 29, 2022

PRINT NAME: Tom Tocco PHONE: Direct: 734-712-2192 Cell: 734-646-8730

ADDRESS: 1600 South Canton Center Road, Canton, MI 48155

GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
August 8, 2022
6:30 P.M.
MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Jeff Dhaenens, Marianne McCreary, Glynis McBain, Tim Chouinard and Diana Lowe. Absent was Eric Rauch. Also present was Kelly VanMarter, Community Development Director/Asst. Township Manager, Brian Borden of Safebuilt, and Shelby Byrne of Tetra Tech.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to approve the agenda as presented. **The motion carried unanimously**.

DECLARATION OF CONFLICT OF INTEREST: None

CALL TO THE PUBLIC:

The call to the public was made at 6:31 pm with no response.

OLD BUSINESS:

OPEN PUBLIC HEARING # 1……Consideration of an amendment to the Saint Joseph Mercy Health Planned Unit Development Agreement, final PUD site plan and environmental impact assessment to construct a proposed 186,157 sq. ft. 4-story hospital addition to an existing medical building. The project is located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road. The request is petitioned by Trinity Health-Michigan.

A. Recommendation of Amended and Restated PUD Agreement
B. Recommendation of Environmental Impact Assessment (dated 3-30-22)
C. Recommendation of Final PUD site plan (dated 7-20-22)

Ms. Cindy Pozolo, the project manager; Mr. Steven Russo, the transportation engineer; Darin Daguanno, the architect; and Michael Campos, the civil engineer, from The Smith Group, and Mr. Dave Raymond, the Director of Planning for Trinity Health, were present.

Ms. Pozolo stated that the applicant has submitted a revised traffic analysis. Mr. Russo stated this included the proposed multi-unit development near their property, noting that it did not have

a significant impact on traffic. There are no changes that are needed. Secondly, the delays exiting the property on to Grand River between existing and built conditions do increase, but remain within acceptable level of service limits. He noted that the Livingston County Road Commission will be making improvements to Grand River in this area, which will be one cause of the increase in delays.

Ms. Pozolo stated that additional calculations have been submitted regarding the detention basin and storm sewer management plan. She noted that the Livingston County Drain Commissioner has stated the detention pond will not drain into Woodland Lake. They contacted Brighton Township and they advised that they defer all of their reviews to the Livingston County Drain Commissioner. Mr. Campos provided a review of the stormwater management plan. He stated that the LCDC is currently reviewing their submission and they have submitted a permit to EGLE for their wetland permit. No stormwater from their site drains onto any township or county drains. There are also no flood concerns.

Mr. Borden reviewed his letter dated August 2, 2022.

1. The applicant must address the comments put forth by Township staff.
2. The applicant should be prepared to present a building elevation rendering from Grand River, as requested by the Commission. The applicant presented two separate renderings this evening.
3. The findings of the updated traffic impact study are subject to review and comment by the Township Engineer.
4. The applicant must clarify and/or correct the parking calculations on the site plan in relation to those noted in the PUD Agreement.
5. The Commission should consider comments provided by the Township Engineer and Brighton Area Fire Authority.

Ms. Pozolo stated they have submitted revised documents to address these concerns.

Mr. Richard Sundquist, legal counsel for Trinity Health, stated all four of the items raised by the planner this evening have been addressed in the revised PUD Amendment submitted this afternoon. They have indicated the specific building heights, the parking calculations, wetland buffer disturbances and restoration, and the details of the two new monument signs and two building signs.

Ms. Byrne reviewed her letter dated August 3, 2022.
Her items have been addressed. Her letter consisted mostly of information and approvals that are needed.

1. The impact assessment states that the proposed hospital expansion will include 72 beds. This will account for 78.5 residential equivalency units (REU), which comes from the Township's REU table that assigns 1.09 REUs per hospital bed. This number will be used to determine the proposed facility's tap-in fee. The impact assessment also notes

that the hospital will include shell space for an additional 16 beds, which would account for an additional 17.4 REUs.

2. The Petitioner completed a traffic impact study that recommended multiple offsite improvements to keep the existing intersection operating at a similar or better level of service at the current conditions, and recommended the improvements be made regardless of the proposed hospital. Recommended improvements include signal changes at the intersections of Latson Road and eastbound and westbound I- 96 and at the intersection of Latson Road and Grand River Avenue. The study also recommends the widening of the Grand River Avenue and I-96 crossover (near Hilton Road in Brighton) to three lanes. These improvements are something the Township, MDOT, and the City of Brighton should keep in mind
3. At the July 11, 2022, Planning Commission meeting there were concerns about traffic backing up around the on-site 3-way stop intersection, just north of the entrance drive to the site off Grand River Avenue. If outbound site traffic backs up to the intersection it may prohibit inbound traffic from making a left turn, which may cause a backup into Grand River Avenue. The Petitioner should determine if stacking into Grand River Avenue will be an issue, and if so, should come up with a plan to handle this stacking such as signage to prohibit a left turn at said on-site intersection or signage for southbound and eastbound traffic to not block the intersection.
4. A wetland inventory has been completed and added to the plans, and the petitioner is proposing to waive the 25-foot wetland buffer as part of their PUD Agreement. The Petitioner has submitted a Joint Permit Application to EGLE for their proposed wetland impacts and once the EGLE permit has been obtained it should be provided to the township for their records.
5. The Livingston County Drain Commission (LCDC) was asked to review the plans for the proposed hospital. Final Approval from the LCDC should be obtained and provided to the Township prior to final approval. If future reviews from either the LCDC or EGLE cause any major changes to the site plan, the Petitioner may be required to submit for additional review and approval.
6. Detention and storm sewer calculations should be included in the plans rather than being submitted as a separate package.
7. After final site plan approval, the petitioner will need to submit to MHOG Sewer and Water Authority for their approval and permitting of the public water and sanitary sewer improvements.

The Brighton Area Fire Authority's letter dated August 1, 2022 states that all of their previous concerns have been met.

Commissioner McCreary noted the traffic study did not include the potential 240 apartment complex on Latson Road. Mr. Russo stated the revised traffic study includes that proposed complex. Ms. VanMarter stated she has not received the revised traffic study referenced by the petitioner this evening. Mr. Russo reiterated that the apartment complex will not impact the traffic on Grand River. It will slightly increase the delays exiting their property on to Grand River.

Commissioner McBain does not believe it will be this hospital that will cause traffic issues; it will be the recently-approved residential development. Her main concern is how quickly an ambulance can enter the hospital.

Commissioner Dhaenens questioned how many more people will be employed at the new hospital. That will add traffic during shift change. Mr. Raymond stated the hospital is a 24/7 operation and their shifts are staggered so that alleviates issues that occur with a typical shift change.

Commissioner McCreary wants to ensure that there will be no negative impact to the adjacent subdivision with regard to stormwater. Mr. Campos explained what will be done to accommodate the additional impervious surface with the development on the site.

The call to the public was made at 7:30 pm.

Ms. Anita Grapentien of Highway Beach Drive is the president of the Organization of Woodland Lake. The existing lake in Pebble Creek drains into Woodland Lake and she wanted to ensure that no additional runoff will be draining into their lake. Mr. Campos explained the stormwater management plant to Ms. Grapentien.

Mr. Douglas Taylor of 3319 Oak Knoll Drive asked for confirmation that the drainage from this site will enter into the Pebble Creek pond and that there would be no direct drainage into Woodland Lake. Mr. Campos confirmed their development will drain only into the Pebble Creek pond. Mr. Taylor noted that the church across the street uses the hospital parking lot on special occasions and people walk across Grand River. He asked how this will be accommodated during construction. Mr. Raymond stated there is no formal agreement for them to use the parking lot so there will be no accommodations made; however, when they begin construction, the church will be notified. He noted most of the construction will be occurring at the back of the site.

Ms. Mary Durst of 2308 Rolling Rock Road noted that some residents in their subdivision did not receive the notice because they are just outside the 300-foot mailing radius. She asked for clarification on how the applicant will ensure that the additional runoff doesn’t end up on their properties. Ms. Campos stated they have submitted their plans to the Livingston County Drain Commission for review and approval. They will be improving the existing stormwater management conditions.

She asked about the additional wastewater that will be generated and if it will increase the odor in their neighborhood. There is a lot of wildlife in that area and this development will push them into their neighborhood. Will there be increased light pollution and will the people in the hospital be able to see into their homes? There will be helicopters coming out of this facility. This will decrease their property values. Her and her neighbors have these concerns.

The call to the public was closed at 7:52 pm.

Commissioner Dhaenens thanked the applicant for revisiting the traffic study and the stormwater management system. He is disappointed that Township staff did not receive the revised information from the applicant.

Moved by Commissioner Dhaenens, seconded by Commissioner Lowe, to recommend to the Township Board approval of the amended and restated PUD Agreement to construct a proposed 186,157 sq. ft. 4-story hospital addition to an existing medical building located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road, with the following conditions:

- Building heights shall be provided
- The parking calculations shall be provided
- The wetland buffer information shall be provided
- Stormwater calculations shall be provided
- All signage details shall be provided
- All additional information shall be reviewed and approved by township staff, planner, engineer, and the Brighton Area Fire Authority.

The motion carried unanimously.

Moved by Commissioner Lowe, seconded Commissioner Dhaenens, to recommend to the Township Board approval of the Environmental Impact Assessment dated March 30, 2022 to construct a proposed 186,157 sq. ft. 4-story hospital addition to an existing medical building located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road. **The motion carried unanimously**.

Moved by Commissioner Dhaenens, seconded by Commission Chouinard, to recommend to the Township Board approval of the Final PUD site plan dated 7/20/22 to construct a proposed 186,157 sq. ft. 4-story hospital addition to an existing medical building located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road, with the following conditions:

- Building heights shall be provided
- The parking calculations shall be provided
- The wetland buffer information shall be provided
- Stormwater calculations shall be provided
- All signage details shall be provided
- All additional information shall be reviewed and approved by township staff, planner, engineer, and the Brighton Area Fire Authority.

The motion carried unanimously.

OPEN PUBLIC HEARING # 2…Discussion and review of a conceptual site plan for 12 attached condominiums and 102 single family homes for the Summerfield Pointe PUD. The property in

GENOA CHARTER TOWNSHIP
PLANNING COMMISSION
PUBLIC HEARING
JULY 11, 2022
6:30 P.M.
MINUTES

CALL TO ORDER: Chairman Grajek called the meeting of the Genoa Charter Township Planning Commission to order at 6:30 p.m. Present were Chris Grajek, Jeff Dhaenens, Marianne McCreary, Eric Rauch, Glynis McBain, Tim Chouinard and Diana Lowe. Also present was Kelly VanMarter, Community Development Director/Asst. Township Manager, Brian Borden of SafeBuilt, and Shelby Byrne of Tetra Tech. There were approximately 75 people in attendance.

PLEDGE OF ALLEGIANCE: The pledge of allegiance was recited.

APPROVAL OF AGENDA:

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to approve the agenda as presented. **The motion carried unanimously.**

DECLARATION OF CONFLICT OF INTEREST: None

CALL TO THE PUBLIC: A call to the public was made at 6:31 p.m. with no response.

OLD BUSINESS:

OPEN PUBLIC HEARING # 1…Consideration of an amendment to the Saint Joseph Mercy Health Planned Unit Development Agreement, final PUD site plan and environmental impact assessment to construct a proposed 186,157 sq. ft. 4-story hospital addition to an existing medical building. The project is located at 7575 Grand River Avenue, north side of Grand River Avenue and west of Bendix Road. The request is petitioned by Trinity Health-Michigan.

A. Recommendation of Amended and Restated PUD Agreement
B. Recommendation of Environmental Impact Assessment (dated 3-30-22)
C. Recommendation of Final PUD site plan (dated 6-22-22)

From Trinity Health, Tom Tocco, Executive Director of Facilities and Construction, John O'Malley, President, Tiffany Spano, Senior Project Manager, and Beck Selter, Project Manager are present. Also attending are Richard Sundquist, Legal Counsel of Trinity Health, and Cindy Pozolo, Dino Lekos and Darin Daguanno from Smith Group on behalf of the petitioner.

Mr. Tocco gave an introduction of the health system and the core values of what is now called Trinity Health. He stated that the Board of Trinity Health is scheduled to review this project in December of 2022 for approval. Dino Lekos, Smith Group, gave an overview of the entire project including the extension of the ring road, improvement to stormwater, parking, and natural features buffer impacts. He stated that there is 8,000 sq. ft. of temporary and 425 sq. ft. of permanent encroachment into the buffer proposed. They are working to mitigate the Fire Department concerns for apparatuses that would travel through the ring road. Darin Daguanno, Smith Group, discussed the area of the addition of the 4 story, nearly 190,000 sq. ft. building and how it is meant to complement the existing building while respecting and enhancing the natural setting of the site. Some of the new features include but are not limited to a courtyard, dining area, on-site farm and walking trails.

Ms. Pozolo gave on overview of the guiding principles for the project with the expanded emergency room, leaving opportunity for growth within the footprint and continuous operations.

Mr. Border reviewed his letter dated July 1, 2022:

1. PUD Amendment:
   a. The applicant must address the comments put forth by Township staff.
   b. There are several elements of the draft that warrant additional discussions and/or edits such as: natural feature buffer encroachment details, sign standards, building height, banked parking process and to allow an appeal to the ZBA, etc.
2. PUD Site Plan:
   a. Sheet A0.X, which identifies the building material codes, must be provided to the Township.
   b. The findings of the traffic impact study are subject to review and comment by the Township Engineer.
   c. Unable to locate details of an enclosure for the refuse area, or for the “architectural covering” noted.
   d. The applicant must address comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.

Ms. Byrne reviewed her letter dated July 6, 2022:

1. The Petitioner completed a traffic impact study that recommended multiple offsite improvements to keep the existing intersection operating at a similar or better level of service at the current conditions, and recommended the improvements be made regardless of the proposed hospital. Recommended improvements include signal changes at the intersections of Latson Road and eastbound and westbound I-96 and at the intersection of Latson Road and Grand River Avenue. The study also recommends the widening of the Grand River Avenue and I-96 crossover (near Hilton Road in Brighton) to three lanes. These improvements are something the Township, MDOT, and the City of Brighton should keep in mind.
2. A wetland inventory has been completed and added to the plans, and the Petitioner is proposing to waive the 25-foot wetland buffer as part of their PUD Agreement. If a wetland permit is required, approval should be obtained from EGLE for any proposed work within the wetlands and for using the wetlands for detention. This approval should be provided prior to site plan approval.
3. The Livingston County Drain Commission (LCDC) was asked to review the plans for the proposed hospital. The LCDC has completed their initial review and no significant issues were found with the proposed storm drainage plan. We do not foresee future reviews from the LCDC causing any major changes to the layout of the site. Approval from the LCDC should be obtained and provided to the Township prior to final approval. If future reviews from either the LCDC or EGLE cause any major changes to the site plan, the Petitioner may be required to submit for additional review and approval.
4. After final site plan approval, the Petitioner will need to submit to MHOG Sewer and Water Authority for their approval and permitting of the public water and sanitary sewer improvements.

Chairman Grajak asked if the applicant had received the comments from the Fire Department. The petitioner stated that they are working through the issues with the the Brighton Area Fire Authority Fire Marshal’s letter dated July 5, 2022 with the Fire Marshal.

Commissioner McCreary stated that she is concerned about the stormwater draining into Woodland Lake. Mr. Lekos stated there is an existing pipe that drains into an adjacent pond that ultimately ends up in Woodland Lake. The pipe is not functioning properly. They are proposing to replace the existing pipe to restore functionality. They are replacing the same length of the pipe that is existing now.

Commissioner Rauch stated that he also has concerns about any impacts on Woodland Lake. He asked if there are any adverse impacts after the repair of the system to Woodland Lake or the properties around it. Mr. Lekos stated there may be a lack of control now with the pipe that is not working. The new control structure and improvement of the berm will help control the drainage. Commission Rauch asked if staff has received any contact from Brighton Township or Brighton Township residences in regards to this project. He asked staff if they could reach out to Brighton Township. Ms. VanMarter stated that the staff is working closely with the Drain Commissioner's office on the stormwater plan. The Township has deferred review of the stormwater design to the County due to their concerns with drainage and potential impacts to Woodland Lake and Ackerman Lake. Commission Rauch would like to see outreach to Brighton Township and the Drain Commissioner to make sure there will be no adverse impacts to the lake.

Mr. Sundquist reviewed the changes to the PUD Agreement. He indicated that he supplied a revised Agreement to Kelly VanMarter before the meeting and they intend to address the staff comments in regards to the PUD amendment. Ms. Pozolo stated that they will give a maximum height for the building with the screening and rooftop equipment.

Commissioner Rauch indicated that he believes the future addition of parking should have to follow the full site plan review process. He also asked for renderings showing what the new building will look like from the road. Mr. Daguanno responded that the top one story and the screen wall will be visible from Grand River.

Commission Dhaenens asked if the antennae system will be visible and if can be screened. Ms. Pozolo responded that the FAA is currently reviewing the antennae system and it is proposed to be in the northwest corner of the building behind the screen wall. Commissioner Rauch asked for the top height of the screening to be provided. Mr. Daguanno responded that they will provide a maximum height and add the antennas for review prior to approval.

A call to the public was made at 7:38 p.m. with the following response:

Robert Biegas, 1950 Genoa Circle, has concerns about the traffic inside the campus. There is a back up for cars waiting to turn at the light. It typically takes 2 -3 lights to get through to turn left.

The call to the public was closed at 7:41 p.m.

Mr. Lekos stated that they are not proposing any changes to the vehicle stacking at this time. Chairman Grajek asked if the traffic impact study included the proposed apartment project that is scheduled to be heard tonight.

Commissioner Rauch asked for information regarding the dumpster enclosure. Mr. Lekos responded that the trash compactors are self-contained and self-enclosed and will be screened inside the receiving area.

Commissioner Dhaenens stated that the traffic impact study should address the traffic from the proposed 200 apartment unit project that is on the agenda tonight and to address the issue with

turning left out of the campus. Commissioner Rauch commented that there isn't enough stacking room for left turns before it starts to block the ring road. The applicant should work with their traffic engineer to address the stacking and also to add signs or change the signal timing.

Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to postpone public hearing #1 located at 7575 Grand River Avenue for the consideration of an amendment to the Saint Joseph Mercy Health Planned Unit Development Agreement, final PUD site plan and environmental impact assessment to construct a proposed 186,157 sq. ft. 4-story hospital addition to give the applicant time to update the traffic impact study, update the PUD agreement, contact Livingston County Drain Commissioner and Brighton Township in regards to the drainage into Woodland Lake. **The motion carried unanimously.**

NEW BUSINESS:

OPEN PUBLIC HEARING # 2…Consideration of a special use application, environmental impact assessment and site plan for a contractor's yard with outdoor storage for Two Men and a Truck. The request is located at 840 Victory Drive, west side of Victory Drive, south of Grand River Avenue. The request is petitioned by Alan Oversmith, Two Men and a Truck.

A. Recommendation of Special Use Application.
B. Recommendation of Environmental Impact Assessment (dated 6-7-22)
C. Recommedation of Site Plan (dated 6-7-22)

Jennifer Austin, Boss Engineering and Alan Oversmith, 840 Victory Drive, were present for the petitioner.

Ms. Austin stated that the petitioner is seeking site plan and special use approval. There has been an expansion of parking in the rear of the buiding. Owner has been asked to obtain approval for the expansion of the parking lot. There is an additional tenant in the building.

Mr. Borden reviewed his letter dated June 22, 2022:

1. Section 19.03 General Special Land Use Standards:
   a. The project is generally consistent with the Master Plan recommendations for this site/area of the Township.
   b. In order to make favorable findings related to compatibility and impacts, the use conditions of Section 8.02.02(b) need to be met to the Township's satisfaction.
   c. The applicant must address any comments provided by the Township Engineer and/or Brighton Area Fire Authority regarding public facilities and services.
2. Section 8.02.02(b) Use Conditions:
   a. The Commission may allow gravel surfacing of the outdoor storage area, pending a recommendation from the Township Engineer.
   b. We suggest the applicant slightly extend the gravel area in the southwest corner to accommodate the truck turning template.
   c. The Commission may allow existing vegetation to remain in lieu of new buffer zone requirements along the rear and sides of the property.
3. Site Plan Review:
   a. The required parking spaces within the outdoor storage area are surfaced with gravel, which requires Planning Commission approval based on input from the Township Engineer.

October 12, 2022

Township Board of Trustees
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
Subject:	St. Joseph Mercy Health System – PUD Amendment and Site Plan Review #5
Location:	7575 Grand River Avenue – north side of Grand River, west of Bendix Road
Zoning:	NRPUD Non-Residential Planned Unit Development

Dear Board Members:

As requested, we have reviewed the revised submittal from St. Joseph Mercy Health System requesting an amendment to the approved PUD, as well as PUD site plan review (plans most recently dated 9/16/22).

A. Summary

1. PUD Amendment/Agreement:

a. The draft PUD Agreement addresses the conditions put forth by the Planning Commission.
b. The plan sheet reference in Section 2.3.4 (with respect to wetland buffer disturbance) must be corrected.
c. There is a discrepancy in the parking calculations between the Agreement and plan that must be corrected.
d. The applicant must address any additional comments provided by Township staff and/or the Township Attorney, including additional comment on project signage.

2. PUD Site Plan:

a. Building elevation drawings are in accordance with the Planning Commission's previous review and recommendations of approval.
b. The submittal includes an updated traffic impact study.
c. The Board should consider any review comments provided by the Township Engineer with respect to the traffic impact study and site engineering.
d. The Board should consider any review comments provided by the Brighton Area Fire Authority.

B. Proposal/Process

The applicant proposes to amend the approved PUD by renovating and expanding an existing hospital building. Per the draft PUD Agreement, the proposed 4-story hospital contains 175,043 square feet of gross floor area.

In accordance with Section 10.11, the PUD amendment requires review and recommendation by the Planning Commission, and final review/approval by the Township Board (including execution of an amended PUD Agreement).

At their August 8, 2022 meeting, the Planning Commission put forth conditional recommendations that the Township Board approve the amended and restated PUD Agreement, as well as the final PUD site plan.

Aerial view of site and surroundings (looking west)

C. PUD Amendment/Agreement

The current version of the draft PUD Agreement addresses the comments raised by the Planning Commission.

Of note, the following items have been addressed:

- Description of the encroachments into the 25-foot natural feature setback around wetland areas (Section 2.3.4). However, the plan sheet reference (Sheet CG-105) is incorrect.
- Detail on parking calculations for the proposal (Section 4.2.3). However, discrepancies remain between the Agreement and plan (Sheet CS-100). More specifically, the Agreement notes 753 built spaces and 246 unbuilt banked spaces, while the plan indicates 620 new spaces plus 226 spaces to remain (846 built) and 218 unbuilt banked spaces.
- Signage details (Section 5.2). However, Township staff has put forth additional comments as to the need for further clarification and discussion with respect to signage throughout the property.
- Clarification on building height, screen wall height, and height of roof-mounted mechanical equipment (Section 5.3).

D. PUD Site Plan

1. **Dimensional Requirements.** The proposed building expansion/addition is situated well outside of required setbacks – the smallest of which is nearly 250 feet from the west side lot line. The proposal will be approximately 750 feet from the easterly lot line, which includes existing residential uses.

   Provided the Township is amenable to the building height increase proposed as part of the amended PUD Agreement, the plans meet the applicable dimensional requirements.

2. **Buildings.** The proposed building is constructed of various materials, including brick, concrete block, metal and glass.

   The renderings depict a mixture of materials and colors, as well as horizontal and vertical features to help break up the overall mass of the building.

3. **Pedestrian Circulation.** The plan includes extension of the existing pedestrian pathway system, which connects parking areas to building entrances. Pedestrian crosswalk striping is also provided at appropriate locations.

Per the Township's request, the plan also includes an enhanced path/trail connecting the project area with Woodland Village to the northeast.

4. **Vehicular Circulation.** The project includes completion of a loop road around the entire medical facility, with internal drives connecting the various parking lots. The loop road and internal drive aisles meet or exceed the dimensional standards of the Zoning Ordinance.

   The revised submittal includes an updated traffic impact study. We defer to the Township Engineer for review and comment on the updated information.

   The Board should consider any additional comments provided by the Township Engineer and/or Brighton Area Fire Authority with respect to vehicular circulation.

5. **Parking.** Per the proposed amendment to the PUD Agreement, parking has been based on the owner's experience with other large medical complexes.

   The current submittal corrects the inconsistencies between the draft PUD Agreement and final PUD site plan.

   The plan provides 846 spaces with an additional 218 designed as banked parking (southeast of building). As previously noted, these numbers do not correspond to the numbers in the draft PUD Agreement.

   Parking spaces comply with the dimensional and design requirements of the Ordinance.

6. **Landscaping and Screening.** The landscape plan includes a significant number of new plantings within the parking lot, along the loop road, around the stormwater ponds, and within a courtyard area between the existing and proposed buildings.

   The minor discrepancies previously noted have been corrected, and a masonry screen wall is proposed around the "utility yard" north of the proposed building addition.

7. **Lighting.** The submittal includes a detailed lighting plan for the project area. Fixture/pole details and light intensities comply with the standards of Section 12.03.

8. **Grading, Drainage, and Utilities.** We defer to the Township Engineer for review and comment on site engineering elements.

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

Respectfully,
SAFEBUILT

Brian V. Borden, AICP
Michigan Planning Manager

October 11, 2022

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

Re: St. Joseph Mercy Hospital
Site Plan Review No. 5

Dear Ms. Van Marter:

Tetra Tech conducted a fifth review of the proposed St. Joseph Mercy Hospital site plan last dated September 16, 2022. The plans were prepared by SmithGroup on behalf of Trinity Health-Michigan/Saint Joseph Mercy Health System. The site is located on a 77.59-acre parcel on the north side of Grand River Avenue at the existing St. Joseph Mercy Brighton Healthcare. The proposed improvements include a 175,000 square foot hospital expansion at the existing site. Additional improvements include parking lot expansion, storm sewer and bioretention basins, and public water main and sanitary sewer improvements.

Since the Planning Commission meeting on August 8, the plans have been revised to address all of our remaining comments. The Petitioner has received approval from the Livingston County Drain Commission as of September 15, 2022. Additionally, the Petitioner has submitted a Joint Permit Application to EGLE for their proposed wetland impacts and they have sent the most updated plans to EGLE for their approval. Once the EGLE permit has been obtained it should be provided to the Township for their records.

We have no further engineering related concerns to the proposed site plan documents. If you have any questions please call.

Sincerely,

Gary J. Markstrom, P.E.
Vice President

Shelby Byrne, P.E.
Project Engineer

Tetra Tech
3497 Coolidge Road, East Lansing, MI 48823
Tel 517.316.3930 Fax 517.484.8140 www.tetratech.com

Kelly VanMarter

From: Rick Boisvert <rboisvert@brightonareafire.com>
Sent: Friday, October 7, 2022 3:05 PM
To: Amy Ruthig; Kelly VanMarter
Subject: St. Joes/Trinity Health

Kelly and Amy,

Do you want a new dated letter form me? There are no changes to the plan for me to comment on.

Cordially,

Rick Boisvert, FM, CFPS
Fire Marshal
Brighton Area Fire Authority
615 W. Grand River
Brighton, MI 48116
O:(810)229-6640 D:(810)299-0033
F:(810)229-1619 C:(248)762-7929
rboisvert@brightonareafire.com

SMITHGROUP

September 16, 2022

Kelly VanMarter, AICP
Assistant Township Manager/
Community Development Director
Genoa Charter Township Planning Department
2911 Dorr Road
Brighton, Michigan 48116
kelly@genoa.org

Re: St. Joseph Mercy – Brighton Site Plan Review
7575 Grand River Avenue, Brighton, Michigan
Site Plan Resubmittal No. R4

Dear Ms. VanMarter,

Trinity Health (Owner) and SmithGroup (A-E) are pleased to advise that, on September 16, 2022, we were notified that Livingston County Drain Commission (LCDC) approved the stormwater management design for the St. Joseph Mercy project site located at 7575 Grand River Avenue, Brighton, Michigan. Just as we have provided hard copy record documents to LCDC, we are now providing record documents to Genoa Township in accordance with your email dated August 19, 2017.

Noting that extensive dialogue between LCDC, the Owner and A-E has effected a stormwater management design that enhances stormwater management beyond the project site while also benefitting adjacent properties, we respectfully request that this lengthy, comprehensive approach be recognized and that the St. Joseph Mercy / Trinity Brighton project be brought forth for Genoa Township Board of Trustees approval at the meeting of October 3, 2022.

Please refer to the accompanying list of documents for description of changes associated with them since July 20, 2022.

Thank you for your guidance throughout this process!

Cynthia K. Pozolo, FAIA
Sr. Project Manager, SmithGroup
cindy.pozolo@smithgroup.com

Attachment: Summary list of items submitted and associated changes since July 20, 2022.

Cc: SJMH / Trinity – T, Tocco, D. Raymond, R. Selter, T. Spano
Clark Hill – R. Sundquist
SmithGroup – A. Kenyon, D. Lekas, T. Vandermuss, J. Vogt

DOCUMENT	CHANGES SINCE JULY 20, 2022
02 APPR 2022-0916 LCDC APPROVAL	DOCUMENT NOT PREVIOUSLY SUBMITTED. DOCUMENT CONFIRMS STORMWATER MANAGEMENT APPROVAL BY LIVINGSTON COUNTY DRAIN COMMISSION (LCDC)
03 RECEIPT EMAIL 2022-0915 MiWATERS (EGLE PERMIT FOR WETLANDS)	DOCUMENT NOT PREVIOUSLY SUBMITTED. DOCUMENT CONFIRMS THAT UPDATED RESUBMITTAL HAS BEEN PROVIDED TO MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY. THIS RESUBMITTAL ALIGNS WITH SCOPE DELINEATED ON ENGINEERING APPROVED BY LCDC. SUBMISSION REFERENCE NUMBER: HPK-DJK6-08W6Q
04 PUD AGREEMENT 0-13-2022 v7 AND COMPARISONS. REFER TO COMPARISON DOCUMENTS FOR TRACKED CHANGES THAT DENOTE DOCUMENT REVISIONS.	THIS FINAL VERSION OF THE PUD INCORPORATES PREVIOUS FEEDBACK PROVIDED BY THE REVIEWERS TO THE PETITIONER. --DETAILED COMPARISON OF CHANGES SINCE THE PREVIOUS DOCUMENT ARE PROVIDED IN ATTACHED COMPARISON PDF. - --CHANGES FROM THE ORIGINAL PUD ARE ALSO PROVIDED WITHIN A SECOND ATTACHED COMPARISON. PRIMARY CHANGES SINCE JULY 20, 2022 DRAFT PUD UPDATE ARE: --BUILDING HEIGHT LIMITS FOR HOSPITAL ADDITION, SINGLE STORY EMERGENCY DEPT ADDITION, AND OVERALL BULDING HEIGHT INCLUDING ROOFTOP EQUIPMENT. --PARKING CALCULATION CLARIFIED TO ALIGN WITH CALCULATIONS SHOWN ON DRAWING CS-100 (WHICH ALSO NOW SHOWS CALCULATIONS ON THE DRAWING). ALSO, COMMITMENT THAT ANY FUTURE BUILDOUT OF SPACES WILL COME BEFORE PLANNIGN COMMISSION FOR REVIEW. --UPDATED IDENTIFICATION AND DIRECTIONAL SIGN LOCATIONS AND ASSOCIATED DIMENSIONS. SIGNAGE TO DELINEATE EMERGENCY DEPARTMENT, MEDICAL OFFICE BUILDING ADDRESS, AND NEW HOSPITAL ADDRESS. CONFIRMED MAXIMUM DIMENSIONS FOR SITE AND BUILDING SIGNAGE. --LANGUAGE UPDATED IN MULTIPLE LOCATIONS TO ACKNOLWEDGE CURRENT REGULATIONS, SUCH AS ZONING MAP REVISION DATED SEPTEMBER 4, 2020.

(Continued) 04 PUD AGREEMENT 0-13-2022 v7 AND COMPARISONS. REFER TO COMPARISON DOCUMENTS FOR TRACKED CHANGES THAT DENOTE DOCUMENT REVISIONS.	--LANGUAGE UPDATED TO INCLUDE NEW HOSPITAL DEVELOPMENT, ASSOCIATED PURPOSE, SIZE, SERVICES, AND COMMUNITY BENEFIT. --LANGUAGE UPDATED TO REFERNCE GENOA TOWNSHIP REVIEW COMMENTS PROVIDED AT PLANNING COMMISSION MEETINGS OF JULY 20, 2022 AND AUGUST 8, 2022. --LANGUAGE ADDED TO REFERENCE NEW EXHIBITS FOR TO NEW HOSPITAL PROJECT, INCLUDING UPDATED SITE PLAN WITH NEGLIGIBLE IMPACT ON WETLANDS.
05 STU 2022-0802 ADDENDUM SJMH BRIGHTON TRAFFIC IMPACT STUDY	REVISED TRAFFIC STUDY WAS DISCUSSED AND ACCEPTED AT PLANNING COMMISSION MEETING OF AUGUST 8, 2022. RESUBMITTED AS REQUESTED. ADDENDUM INCLUDES ANALYSIS OF ADDITIONAL MULTI-FAMILY DEVELOPMENT, AS REQUESTED AFTER PLANNING COMMISSION MEETING OF JULY 20, 2022. NO CHANGES TO TRAFFIC STUDY SINCE AUG 2, 2022.
06 2022_0808 SG BRIGHTON GENOA TOWNSHIP MEETING	THIS POWER POINT EXHIBIT WAS PROVIDED TO THE TOWNSHIP AND PORTIONS WERE REVIEWED DURING THE MEETING OF AUGUST 8, 2022. THIS .pdf DOCUMENT INCLUDES CHANGES AFTER THE JULY 20, 2022 MEETING. THE SLIDE DECK INCLUDES CLARIFICATIONS TO: - TRAFFIC STUDY, VEHICLE LOAD, AND SITE EGRESS CONDITIONS WERE CLARIFIED AND DISCUSSED IN THE MEETING. - DETENTION AND STORM SEWER DESIGN UPDATES WERE PROVIDED, INCLUDING CALCULATIONS. - WETLAND PERMIT STATUS – EGLE; FURTHER UPDATED SINCE AUGUST 8, 2022 MEETING. - FIRE ACCESS LANE WIDTH NOW SHOWN ON CONSTRUCTION DOCUMENTS - BUILDING HEIGHT CLARIFIED - MATERIAL CODES ON SHEET A4.1.1 - RENDERING OF VIEW FROM GRAND RIVER AVE - ENCLOSURE AT LOADING DOCK - REVISED PUD LANGUAGE
07 MEM 2022-0824 LCDC STORMWATER REVIEW MEMORANDUM	THIS MEMORANDUM DETAILS OWNER AND A-E'S OFFICIAL RESPONSE TO LCDC REVIEW COMMENTS DATED AUGUST 5, 2022, AS WELL AS ADDITIONAL DISCUSSION FROM MEETING BTWN LCDC, OWNER, AND ARCHITECT-ENGINEER.

CONFORMED DRAWING SET. REFER TO SHEET INDEX FOR COMPREHENSIVE LIST OF DOCUMENTS BEING INCLUDED FOR GENOA TOWNSHIP RECORD.	CONFORMED DRAWING SET AS OF GENOA TOWNSHIP RESUBMITTAL DATE OF 9/16/2022. CHANGES SINCE JULY 20, 2022. -**UPDATED SURVEY** INCLUSIVE OF SURVEY DATA OF 'UNNAMED POND' AT WETLANDS AREA. --**CIVIL AND LANDSCAPE DRAWINGS** THAT INCORPORATE LCDC AND EGLE REVIEW COMMENTS RECEIVED SINCE JULY 20, 2022. REFER TO EXHIBIT '07 MEM 2022-0824…' FOR DETAILED LIST OF CHANGES. ----NEW SPILLWAY CONSTRUCTION TO REPLACE EXISTING. i.e. REWORK OF EXISTING POND TO INCREASE BERM, REPLACE OUTLET STRUCTURE, ACCOMMODATE INCREASED CAPACITY ACROSS ENTIRE SITE AT RATE PUBLISHED BY LCDC IN MARCH 2022. EXPAND RIPRAP AND REWORK PATH AT LOCATION WHERE IT CROSSES OVER OUTLET STRUCTURE SO THAT COMMUNITY AND MAINTENANCE ACCESS AROUND SITE IS MAINTAINED. ----ADDED FOREBAY OUTLET CONTROL DEVICE IN POND. ----ADDED PLUMBING DRAWING THAT SHOWS INCOMING VOLUME FROM TRENCH DRAIN AT LOADING DOCK. ----ADDED ENLARGED SCALE PLANS OF CONTOURS AND LABELED OTHERS TO CLARIFY EXISTING DRAINAGE PATTERNS. ----ADDED UPDATED CALCULATION TABLES TO DRAWING SET AT REQUEST OF LCDC. SEPARATE DOCUMENT WITH REVISED CALCUATIONS WILL NOT BE PROVIDED SINCE LCDC CONSULTANT REVIEWER DEMANDS THAT ALL CALCULATIONS ARE PLACED ON DRAWING(S). ----UPDATED CALCULATIONS RELATIVE TO EXTENDED AND 100 YEAR ORIFICE DEVICE. **ARCHITECTURAL SHEETS** REFLECT MATERIAL AND DIMENSIONAL CLARIFICATIONS DISCUSSED AT PLANNING COMMISSION MEETING OF AUGUST 8, 2022. MATERIALS WERE APPROVED AT MEETING AS PART OF CONDITIONAL APRPOVAL. DRAWINGS ARE BEING RESUBMITTED FOR RECORD PURPOSES. --ARCHITECTURAL DRAWINGS INCLUDE THE CHANGES DESCRIBED IN POWER POINT SLIDE DECK '06 2022_0808 SG BRIGHTON GENOA TOWNSHIP MEETING' BUILDING HEIGHT CLARIFIED, MATERIAL CODES, RENDERINGS

Brian Jonckheere

Livingston County Drain Commissioner
2300 E. Grand River Ave., Ste. 105
Howell, MI 48843-7581
Phone: 517-546-0040 FAX: 517-545-9658
Website: www.livgov.com/drain Email: drain@livgov.com

September 15, 2022

Mr. Michael Campos
SmithGroup
201 Depot St.
Ann Arbor, MI 48104

Re: St. Joseph Mercy Brighton Expansion
Construction Plans Resubmittal
Northeast 1/4 of Section 13
Genoa Township

Dear Mr. Campos:

I received revised Construction Plans for the above referenced site on August 26, 2022 and again on September 6, 2022. I subsequently received some revised plan sheets via e-mail on September 14, 2022. The submitted information has been reviewed for conformance with the recently updated L.C.D.C. "Procedures and Design Criteria for Stormwater Management Systems" and with our office's latest review letter dated August 5, 2022.

The received plans have adequately addressed the comments in the review letter. I am approving the Construction Plans for St. Joseph Mercy Brighton Expansion dated September 14,2022 subject to a full set of the revised plans being submitted to our office and Environmental Engineers.

As a reminder, a commercial soil erosion and sedimentation permit is required prior to the start of construction.

Very truly yours,

Kenneth E. Recker, II, P.E.
Chief Deputy Drain Commissioner

C: Mike Archinal, Genoa Twp. Manager
Kelly VanMarter, Genoa Twp. Community Development Director
Amy Ruthig, Genoa Township Zoning Official
Paul Lewsley, Environmental Engineers
Jenifer Kern, Genoa Township (MHOG)
Shelby Byrne, TetraTech
Tiffany Spano, St. Joseph Mercy Brighton

From:	Fran Thompson
To:	Jerry Vogt; Cindy Pozolo; Tony Vandermuss; Woody L. Held
Subject:	Fwd: Revised App/Request Receipt Acknowledgement - HPK-DJK6-08W6Q, 47-7575 Grand River Avenue - Brighton (St. Joseph Mercy Hosp)
Date:	Friday, September 16, 2022 9:20:35 AM

Tony-

Below is the revised application receipt from MiWaters.

Get Outlook for iOS

From: MiWaters Support <EGLE-WRD-MiWaters@michigan.gov>
Sent: Thursday, September 15, 2022 7:09 PM
To: Fran Thompson <FThompson@barr.com>
Subject: Revised App/Request Receipt Acknowledgement - HPK-DJK6-08W6Q, 47-7575 Grand River Avenue -Brighton (St. Joseph Mercy Hosp)

CAUTION: This email originated from outside of your organization.

fthompson@barr.com,

This is to notify you that Michigan Department of Environment, Great Lakes, and Energy has received your revised submission. Details of your submission are presented below:

Form Name: **Digital EGLE/USACE Joint Permit Application (JPA) for Inland Lakes and Streams, Great Lakes, Wetlands, Floodplains, Dams, Environmental Areas, High Risk Erosion Areas and Critical Dune Areas**

Submission Reference Number: **HPK-DJK6-08W6Q**

Submission Version Number: **3**

System Receipt Date: **9/15/2022 6:55 PM**

Facility, Site, or Project Name: **47-7575 Grand River Avenue -Brighton (St. Joseph Mercy Hosp)**

Additional notifications will be sent when key events are recorded or when submission processing milestones are achieved.

You can access MiWaters using the link below if you need to modify your submission.

https://miwaters.deq.state.mi.us/ncore/

Comments from Township Staff are shown in red boxes - KV

AMENDED AND RESTATED

PLANNED UNIT DEVELOPMENT AGREEMENT

THIS AMENDED AND RESTATED PLANNED UNIT DEVELOPMENT AGREEMENT (the "Agreement") is made as of _____, 2022, between the TOWNSHIP OF GENOA, a charter township, whose address is 2911 Dorr Road, Brighton, Michigan 48116 (the "Township") and TRINITY HEALTH-MICHIGAN, d/b/a SAINT JOSEPH MERCY HEALTH SYSTEM, formerly known as MERCY HEALTH SERVICES, a Michigan nonprofit corporation, whose address is 1600 South Canton Center Road, Canton, Michigan 48155 (the "Owner").

RECITALS

A. The Owner and the Township entered into a Planned Unit Development Agreement dated August 2, 1999 (the "Original PUD"), with respect to the development of property owned by Owner consisting of approximately 77.74 acres of land and located in the Township of Genoa, County of Livingston, State of Michigan, commonly known as 7575 Grand River Avenue (Parcel Identification Number 4711-13-200-009), more particularly described on **Exhibit A** attached hereto (the "Property"). The Original PUD was not recorded with the Livingston County Register of Deeds.

B. The Original PUD provided that the Owner develop the Property as a "Mixed Use Planned Unit Development District" pursuant to Article 10 of the zoning ordinance of the Township (as amended, the "Ordinance") under the "Conceptual Site Plan" in the form required by the Ordinance and attached as Schedule B to the Original PUD which identified the location and general configuration of each of such uses (the "Conceptual Plan").

C. The Township determined that the Conceptual Plan (1) properly achieved the purposes of Article 10 of the Ordinance, including the encouragement of innovation in land use, the preservation of open space in areas adjacent to Grand River Avenue to achieve compatibility with adjacent land uses, the promotion of efficient provision of public services and utilities, the reduction of adverse traffic impacts, and the provision of adequate employment, (2) is consistent with the Master Plan and the Grand River Avenue Corridor Study of the Township, and (3) promotes the public health, safety and welfare of the Township.

D. In accordance with the Ordinance and the requirements of Act No. 184 of the Michigan Public Acts of 1943, as amended (now Act No. 110 of 2006) (the "Act"), the Township

Planning Commission and Township Board of Trustees ("Township Board") approved the Conceptual Plan.

E. As part of the Original PUD, the Property was rezoned to Non-Residential Planned Unit Development ("NRPUD") in accordance with Section 10 of the Ordinance.

F. The Property is currently zoned NRPUD as identified in the Township Zoning Map adopted May 2, 2005 and revised September 4, 2020.

G. In accordance with Section 2.3 of the Original PUD, Owner developed a medical office building and clinic of up to 240,000 gross square feet of floor area, and a second office building of up to 55,000 gross square feet of floor area on the Property (collectively, "Medical Buildings"). The Medical Buildings are located east of the Genoa Business Park. The address for the Medical Buildings is 7575 Grand River, Brighton, Michigan 48114.

H. In accordance with Section 2.5 of the Original PUD and pursuant to that Ground Lease dated February 1, 2001 recorded at Liber 2901, Page 668, Livingston County Records, between the Owner (as lessor) and Village At Brighton, L.L.C. (now known as Village at Brighton 2, L.L.C. (as lessee) (the "Village"), the Village developed a two-story assisted living and independent living facility now known as "Sanctuary at Woodland" located at 7533 Grand River Avenue, Brighton, Michigan (the "Facility").

I. The Facility was constructed in 2001 and modified in 2003 and is located on approximately 7.49 acres of the Property. The Facility is licensed for forty (40) assisted living beds in thirty-eight (38) resident rooms and fifty (50) independent living apartment units. The licenses for the Facility are held by Trinity Senior Living Communities.

J. In connection with the development of the Facility, the Owner granted multiple access and utility easements in the Property to Village ("Village Easements").

K. The Owner and the Township entered into an Amendment to the Original PUD dated November 13, 2018, and recorded on January 16, 2019, as Document No. 2019R-001392, Livingston County Records ("Amendment") with respect to the then existing entry signage and the installation of new signage along Grand River Avenue. The Amendment was approved by the Township on October 15, 2018. The Original PUD and Amendment are collectively referred to as the "Existing PUD".

L. On March 30, 2022, the Owner submitted to the Township an Application-Planned Unit Development (PUD) ("PUD Application"). Also, on March 30, 2022 the Owner submitted to the Township an Application for Site Plan Review ("Site Plan Application"). The applications request review and approval of proposed amendments to the Existing PUD along with Final PUD Site Plan authorization for the expansion and renovation of the Medical Buildings ("Project"). The Project is intended to expand community health services to the Brighton, Livingston County, Michigan vicinity and to provide state-of-the art healthcare facilities in the area.

M. The PUD and Site Plan Applications included all submitted items set forth in Section 10.06 of the Ordinance except the hydrologic impact assessment. The submitted items include but are not limited to, proof of ownership of the Property and Owner authorization,

completed application and application fee, an impact assessment and traffic study meeting the requirements of Article 18 of the Ordinance, a demolition plan, site plan, grading and storm plan, utility plan, landscape plan, site development notes and details, and architectural plans (collectively, the "NRPUD Plans"). For purposes of this Agreement, the NRPUD Plans shall be deemed to be the Final PUD Site Plan attached as **Exhibit B**.

N. The Project entails the development of a new, four-story hospital addition (with basement) comprising 175,043 square feet and consisting of support spaces, seventy-two (72) inpatient beds, including expanded emergency department services, cafeteria and associated upgrades to existing support spaces and utilities, with expanded capacity for on-site parking. The Project will be located on and attached to the Medical Buildings. The two buildings will be connected to the first and second levels of the Medical Buildings. There will be additions to the existing Medical Buildings to expand the Emergency Department and Outpatient Surgery Services, as well as renovations to the Emergency Department, Outpatient Surgery Services, Imaging and Lab.

O. In addition to the existing Facility, the Project brings comprehensive health care to the community. In terms of open space, a courtyard shall be provided and a community garden is being considered (as detailed in the NRPUD Plans). The Project includes a creative yet cost-effective development of a community hospital addition, including enhanced Emergency Department, the addition of inpatient beds and adjacency to existing facilities which are already familiar to the community. There will be visibility of care center for wellness, acute and chronic health conditions. In addition, the Project shall provide the following community benefits under Section 10.02.05 of the Ordinance: (a) the Project shall maintain 25% of lake and pond areas, 50% of retention and detention ponds, landscaped areas, plazas and residential uses to protect natural habitats and beautification of surrounding areas, (b) provides two (2) additional detention ponds, a walking loop, and potentially, a new community garden, with a natural walkway in the future to connect to the Facility, (c) enhance traffic safety and alleviates further potential for congestion on Grand River by adding a ring road around the facility. This also provides a safer, faster service to buildings on the Property by local authorities, including Brighton Area Fire Authorities, (d) enhances the patient experience upon arrival due to the landscaped features, added signage, increased parking and specialty areas, natural landscape, walking paths and improved routing throughout the facility and adjacent buildings, (e) interior renovation allowing for improved patient flow, experience and ability to provide better service to the community, (f) state of the art equipment and facilities due to new equipment and patient flow and increased efficiency within departments, (g) better service to the community by having all services in one location and in a more accessible location, (h) improved energy efficiency as a result of new equipment and building material, leading to improved sustainability and a decreased carbon footprint, (i) the Project allows for new services to be provided within the existing Medical Buildings to support patient needs at one location, (j) implements improved HVAC and architectural designs to better support pandemic needs as a result of recent COVID experiences, (k) the new addition and design allows for shared central sterile services for in-patient and outpatient surgeries, and (l) allows for redundancies within equipment to alleviate impacts to areas and functions due to shutdowns for maintenance and/or repairs of MEP equipment.

P. The Township Planning Commission has reviewed the PUD Application, this Agreement, the Site Plan Application, the impact assessment and NRPUD Plans, conducted a

public hearing on August 8, 2022 and recommended approval of the Final PUD Site Plan, this Agreement, the impact assessment and the NRPUD Plans to the Township Board.

Q. The Township Board reviewed the PUD Application, this Agreement, the Site Plan Application, the impact assessment and NRPUD Plans on _____, and provided conceptual approval pursuant to Sections 10.04.03, 10.06, 10.07 and 10.08 of the Ordinance on _____.

R. The Ordinance requires the execution of this Agreement in connection with the Project, which agreement shall be binding on the Township and the Owner.

S. The Township has requested easements be granted to the Township similar to the Village Easements benefitting the Township relative to the existing water and sanitary sewer facilities located on the Property, all in accordance with those requirements specified in the Sewer and Water Connection Manual of Marion, Howell, Oceola and Genoa Sewer and Water Utilities ("MHOG"). See **Exhibit B** for the location of the Village Easements.

T. In connection with the Project, the hospital use classification for the Property requires mechanical, electrical, plumbing and fire protection design that addresses both code requirements and national certification standards for licensing and operations. Rooftop equipment is, therefore, sized to support *acuity adaptable rooms* in response to standards required for community pandemic response.

U. The Property is served by public sewer and water. Sanitary sewers and water facilities pertaining to the Project will be reviewed by the Township and MHOG.

V. To facilitate the Project, the Owner and the Township desire to amend and restate the Existing PUD. The Existing PUD is amended and restated in its entirety by this Agreement and as stated herein.

NOW, THEREFORE, in consideration of the foregoing and the remaining terms, conditions and covenants hereinafter set forth, the Township and the Owner agree as follows:

ARTICLE 1

THE CONCEPTUAL PLAN

1.1 Representations of Township. The Township warrants and represents to the Owner that (a) the Township has taken all actions necessary to approve the Conceptual Plan, including, without limitation, all required public hearings, notices to nearby landowners, and all other actions required by the Ordinance and the Act, (b) the Township has approved the Conceptual Plan and that no further action to approve the Conceptual Plan is required, (c) all uses contemplated by the Conceptual Plan are authorized by the Ordinance, and (d) the Owner may rely upon this Agreement for purposes of future development of the Property in accord with the Conceptual Plan.

1.2 Amendment of Conceptual Plan. The Owner and the Township may only amend the Conceptual Plan as permitted by, and in accord with the procedure therefor set forth in, the Ordinance; provided, however, that the Owner, with approval from the Township, may adjust the

size or shape of the various parcels of the Property dedicated to differing uses so long as any such adjustment does not alter the land use designation for any area of the Property or increase the intensity and/or density of use. In connection with any land division or combination, Owner shall comply with Article 20 (Land Divisions) of the Ordinance.

1.3 Site Plan Approvals. Except as otherwise specifically provided in this Agreement, the Owner shall develop the Property only in accord with the Conceptual Plan and subject to site plan approval in accord with the process therefor established in the Ordinance. Each site plan shall superimpose the approved plan of development upon the Conceptual Plan to clearly illustrate the final plan for each portion of the Property. In the event a portion of the Property is submitted for site plan approval and such approval is denied, the party submitting such site plan shall be entitled to appeal such decision to the Township Zoning Board of Appeals as provided by law, and all parties shall agree to proceed expeditiously to final resolution.

1.4 Final PUD Site Plan. The Owner shall submit a "Final PUD Site Plan" to the Township within the time limits prescribed by the Ordinance but otherwise determined by the Owner.

ARTICLE 2

LAND USE AUTHORIZATION

2.1 Phased Development. The Owner plans to further develop the Property in phases. The Medical Building and (assisted living) Facility were constructed as part of the original phases under the Original PUD which included land authorizations for an OSD-Professional Office-Service District and an HDR-High Density Residential (Multi-Family Residential District), and an OSD-Professional Office-Service District. The next phase shall consist of the Project. Additional potential phases may include building a community farm and food hub on the east portion of the Property as described in **Exhibit B**. Additional projects may be phased and separated as the Owner and Township deem necessary.

2.2 Detailed Development. The Owner may, in its discretion, develop the Property in accord with the Conceptual Plan and subject to the obligation to coordinate development of the Property as a whole pursuant to this Agreement. In connection with the discretionary development of the Property, the Owner shall submit to the Township for review and approval a plan in the form required by the Ordinance, including impact assessments required by the Ordinance. The Township shall review each of such plans within a reasonable time.

2.3 Permitted Special Uses. The Township acknowledges the Owner's plan to develop expanded medical uses of up to 175,043 gross square feet of floor area and other related improvements as part of Phase 1. Notwithstanding the requirement of a permit for any special land use under the Ordinance, the Township agrees that the following uses shall not require a Special Land Use Permit or fee, or submission of additional application forms beyond those normally required for general site plan approval.

2.3.1 The Medical Buildings developed under the Original PUD~~,~~.

2.3.2 The Project described in Recital N and in the NRPUD Plans~~;~~.

2.3.3 The above ground storage tanks within the Property which will not comply with Section 13.07.01 of the Ordinance, "Above Ground (Fuel) Storage Tanks," based on the nature of the medical facility. Instead, the facility will comply with state and federal codes for fuel oil storage.

2.3.4 Those four areas of wetland buffer disturbance required as part of the Project and identified in SmithGroup drawing CG-105 attached as **Exhibit E**. Three of the delineated disturbances are associated with the construction of the storm water management system as part of the Project and are identified as "temporary." After construction, the three areas of temporary disturbance will be returned to and maintained in a natural and undisturbed condition as required by Section 13.02.02 of the Ordinance. The fourth delineated wetland buffer disturbance consists of approximately 3,500 square feet which will be impacted by construction of a retaining wall and ring road. Approximately 425 square feet of this area will be permanently impacted by the new retaining wall and ring road. This area is identified as "permanent." Approximately 3,075 square feet of the impacted area will be returned to and maintained in a natural and undisturbed condition.

2.4 Open Space. The Owner shall develop a minimum of 50% of the Property as open/residential space, defined as undisturbed areas of key natural features, 25% of lake and pond areas, 50% of retention and/or detention ponds, landscaped areas, plazas, and residential uses. **Exhibit B** shows the calculation and location of open/residential space as shown on the Conceptual Plan.

2.4.1 Wetlands. In accordance with requirements of local municipal fire marshal requirements for continuous perimeter access to expanded land use for a community hospital, a loop fire ring road will be provided. Final construction of the wetland boundary north of loop fire ring road improvements within State of Michigan Department of Environment, Great Lakes and Energy ("EGLE") regulated wetlands shall be installed or constructed upon receiving necessary approvals of EGLE, and in accordance with all applicable EGLE rules and regulations, to comply with the State and Federal codes. See Exhibit E (refenced in Section 2.3.4 above).

ARTICLE 3

ACCESS TO AND WITHIN THE PROPERTY

3.1 Traffic Impact Study. The Owner shall submit to the Township for review and approval a traffic impact study as required by Articles 10 and 18 of the Ordinance. Such study shall evaluate the impact of the planned development of the Property at each access point and existing adjacent major intersections, specifically including any intersections where traffic from the Property will comprise at least five percent (5%) of the existing intersection capacity. Such

study shall also include proposals to mitigate any adverse impact of such development identified by the study and describe timing and responsibility for funding any improvements designed to implement any such proposals. The Owner shall provide an updated Traffic Impact Study at each phase of the development. At such time as the Township and Livingston County Road Commission determine that a signal is warranted at either entry to the Property, the Owner shall fund the installation of said traffic signal and such other traffic mitigation measures as are required by its development of the Property. However, nothing in this Agreement shall require the Owner to pay more than its pro-rata share of improvements as determined by the proportion of total traffic increase which is generated by developments on the Property.

3.2 Access to the Property. Access to the Property shall be limited to two major entrances from Grand River Avenue. Both access points shall be full movement, with Grand River Avenue ingress and egress from both directions. The Township will only consider additional access points if spaced a safe distance apart and a traffic impact study submitted by the Owner demonstrates that overall traffic operations and safety will be improved. The Owner shall determine the specific location of permitted access points utilizing safety standards established and approved by the Township and the Livingston County Road Commission. The Owner shall also locate access points such distances from existing signalized intersections to ensure sound traffic operations if the access points are signalized. The site design for the Property shall direct traffic flow to use the main access points to public thoroughfares. Stacking or queuing depth at access points shall be sufficient to accommodate expected peak hour volumes to minimize conflict with inbound or internal circulation.

3.3 Internal Roadways. The Owner shall plan and establish an internal system of vehicular thoroughfares throughout the Property in connection with development of portions of the Property as it occurs. The Owner shall design internal roads in such a way as to permit vehicular access between and among users of the Property, as ultimately developed, with the view and intent of minimizing the number of traffic movements onto adjoining public roads. The Township shall review and approve the precise locations and design of the overall system of internal thoroughfares as each site plan for development of portions of the Property is submitted to the Township for approval, taking into consideration the uncertainty of the development of the then undeveloped portions of the Property.

3.4 Pedestrian Walkways. The Owner has constructed a pedestrian walkway along Grand River Avenue that conforms with the Grand River Corridor Plan of the Township. The Owner shall also construct pedestrian walkways between each building and the parking area(s) that serve each such building, as the Property is developed. The pedestrian walkway will conform to the walkway plan shown conceptually in the Final PUD Site Plan. The Township and Owner agree that the purpose of any such pedestrian walkways is to serve the business needs of the Owner and other occupants of buildings on the Property, and to encourage recreational pedestrian use by the general public.

ARTICLE 4

SITE IMPROVEMENTS

4.1 Coordination of Site Improvements. The Owner shall coordinate the construction of site improvements within the Property as a whole to ensure that site improvements are integrated and mutually supportive among the respective portions of phases of development of the Property, including utilities, landscaping, and site lighting.

4.2 General Guidelines. The Owner shall observe the following guidelines in connection with the construction of site improvements on the Property:

4.2.1 Site design and landscaping shall diminish the prominence of parking lots as viewed from public roads, consistent with the need to orient visitors to parking areas.

the project and the existing medical buildings

4.2.2 Extensive greenways and tree-lined drives shall be located within parking lots to improve traffic operations and views.

This continues to be inconsistent with the plans. The site plan indicates that 952 spaces are required, with 620 proposed as new, 226 existing to remain and 218 to be banked for a total of 1064 parking spaces provided (banked and planned to construct).

4.2.3 Consistent with the Owner's experience developing large-scale hospital, clinical and medical office facilities, parking for ~~Phase I and Project uses~~ shall be at the ratio of one (1) space for each two hundred seventy-five square feet (275 SF) of eighty percent (80%) of gross building area. A minimum of 618 parking spaces are required. Owner will provide 753 built parking spaces and 246 unbuilt banked parking spaces. Development of the banked parking spaces shall be subject to Planning Commission approval.

4.2.4 Any storm water control devices visible from public streets shall have a maximum 6:1 slope (so as to not require a fence according to the Livingston County Drain Commission) and be designed to have a naturalistic appearance, such as variable shape, natural arrangement of landscape materials.

4.2.5 Landscaping shall demonstrate consistency in design and materials.

4.2.6 Site lighting shall be of a uniform type and color throughout.

4.3 Maintenance. The Owner shall be responsible for ongoing maintenance and repair or replacement of site design elements, such as open spaces, signage, landscaping, lighting, and pavement markings. Except as otherwise provided herein, the Owner shall be responsible for maintenance and repair or replacement of facilities serving the entire Property such as stormwater control devices and any roadways within the Property.

4.4 Residential Buffer Zone. The Owner shall create and maintain a buffer zone between the residential portion of the property and the adjacent residential properties to the north and east. The buffer zone shall be seventy-five (75) feet deep and shall preserve existing large trees in the zone along the north and east boundaries of the Property. The Owner shall provide a sculptured six to eight foot (6 ft.-8 ft.) high berm, interspersed among existing trees. The Owner

shall provide one (1) canopy tree, two (2) evergreen trees, and four (4) shrubs for every twenty (20) lineal feet along the property line of the residential building zone as shown in the Final PUD Site Plan. There shall be a credit of two (2) canopy trees for every existing canopy tree of eight (8) inches diameter or greater. The Owner shall also be permitted to substitute one (1) evergreen tree for five (5) shrubs, or one (1) canopy tree for eight (8) shrubs to develop an aesthetically pleasing landscape buffer.

ARTICLE 5

DESIGN OF BUILDINGS AND SIGNAGE

5.1 Building. The architecture, building materials, colors, and shapes of all buildings shall substantially conform with the guidelines set forth in the Grand River Corridor Plan, as it may be reasonably amended. The Owner shall develop buildings on the Property that incorporate varying building lines, natural earth tone construction materials, and other elements that are aesthetically pleasing. The Owner shall follow the following general guidelines:

5.1.1. large walls shall include varying building lines, setbacks, color accents, windows, or other elements to upgrade appearance;

5.1.2 each site plan shall include a narrative or illustration(s) that demonstrate the design of new buildings will be consistent with, or complement, architecture of the other sites;

5.1.3 buildings shall use high quality architecture with variable building lines, architectural accents, and, with the exception of the hospital addition which is part of the Project, pitched roof buildings shall be required.

5.1.4 brick or stone shall be used for all building faces;

5.1.5 other materials may be used for architectural accents, provided such materials shall have the appearance of cut or cast stone or stucco;

5.1.6 out-parcel office buildings shall treat all exterior wall surfaces with at least eighty percent (80%) natural materials; and

5.1.7 residential buildings shall be permitted to use siding for up to fifty percent (50%) of exterior wall surfaces.

5.2 Signage. Consistent with the Owner's experience developing large-scale hospital, clinical, and medical office facilities, signage within the Property will provide clear and safe wayfinding deemed necessary to best serve the community. Signage shall have materials, lighting, and mounting that is in line with the stated goal. Variations beyond approximate limits identified herein will be reviewed for approval with the Township as required by the Ordinance. Other than those sign dimensions and numbers specified in this Section 5.2, Owner shall comply with the sign standards in the Ordinance. Consistent with Table 16.1, footnote (7) of the Ordinance, the following signs shall be permitted on the Property:

Clarify the type of sign for the directional sign - are they monument or pole sign? Is this the same as wayfinding signs? What is a post and panel sign? Is that a pole sign.

The Village is the Assisted Living Facility in the back What do you consider the entrance to the Village? Why are there 4 signs at the entrance to the village? Are 2 monument signs, 1 pole sign and 1 directional sign really necessary?

5.2.1 one monument sign near the main entrance to Woodland Village, with a maximum height of 72 inches and maximum width of 72 inches; and

5.2.2 one monument sign at the main entrance to Woodland Village with a maximum height of 40 1/8" and maximum width of 92"; and

5.2.3 one post and panel sign at the main entrance to Woodland Village with a maximum height of 36" and maximum width of 42"; and

5.2.4 one directional sign near the main entrance to Woodland Village with a maximum height of 16" and maximum width of 25.5"; and

5.2.5 one directional sign near the main entrance with a maximum height of 7' 0" and maximum width of 7" 0: and

What is considered the main entrance? Consider including a plan to show locations of these signs.

5.2.6 two directional signs within the beltway with a maximum height of 4' 11' and maximum width of 4' 7"; and

5.2.7 two wall signs on building front facades with a maximum height of 37' ¼" in height and maximum width of 30' 5-1/2"; and

5.2.8 four directional signs near the building entrance with a maximum height of 2' 9" and maximum width of 4' 0"; and

Reminder - this PUD applies to the entire property. Are these 2 wall signs in addition to the existing signs or in place of? That should be clarified.

5.2.9 one post and panel sign within the beltway with a maximum height of 1' 10 ½" and maximum width of 2' 5 ½"; and

5.2.10 One (1) monument sign at the central entry (main entrance) from Grand River Avenue with a maximum height of no more than 13' 0" and maximum width of 6' 6"; and

5.2.11 Such other signs as may be required in connection with Owner's addition of medical services and as otherwise may be required by state and federal regulatory bodies or as may be required for emergent health care situation provided such signs comply with the Ordinance.

5.3 Building Height. The Owner shall be permitted to erect the hospital services portion of the addition as a four (4) story building with a general roof height not to exceed approximately sixty-four (64) feet from the first level finished floor to the top of the parapet (64' 0" AFF) measured as indicated in the Ordinance. The Owner shall be permitted to erect a roof mounted screen wall on the hospital services portion of the addition with a general height of approximately seventy-five feet eight inches (75' 8") from the first level finished floor to the top of the screen wall (75' 8" AFF) measured as indicated in the Ordinance. The Owner shall be permitted to erect a roof mounted mechanical unit on the hospital services portion of the addition with a general height of approximately eighty feet two inches (80' 2") from the first level finished floor to the top of the screen wall (80' 2" AFF) measured as indicated in the Ordinance. The Owner shall be permitted to build a connector of the existing medical office building to the hospital addition as a two (2) story addition with a general roof height of approximately thirty-two (32) feet

from the first level finished floor to the top of the parapet (32' 0" AFF) measured as indicated in the Ordinance. Roof-mounted equipment on the hospital addition may not exceed seventeen (17) feet and fifteen percent (15%) of the total roof area on the entire building. All other buildings on the Property shall meet the specific height limitations required by the Ordinance for the respective type of building. Variations beyond approximate limits identified herein will be reviewed for approval with the Township in accordance with Section 10.11 of the Ordinance. All elevations and heights referenced in this Section 5.3 are derived from Owner's Basis of Design documents and subject to industry-accepted construction tolerances.

ARTICLE 6

UTILITIES

6.1 Water. Each office and residential parcel/use on the Property must connect to the community water system. The Owner shall submit a master water plan for the Property as an attachment to the Final PUD Site Plan for approval by the Township and its Engineers. The Owner shall install and pay the cost of the internal water main for each developed portion of the Property prior to or concurrent with the site plan approval for such development.

6.2 Sanitary Sewer. All of the office and residential buildings constructed on the Property shall, as developed, be connected to and be served by the public sanitary sewer systems. The Township represents that there has been reserved for the Owner adequate municipal wastewater treatment capacity to service the approved use of the Property, and the adequacy of wastewater treatment capacity shall not limit the type of use or density of the development based on the Conceptual Plan. The Owner shall install and pay the cost of the infrastructure required by the Township and its engineers to connect the Property and additional improvements to the public sanitary sewer system.

6.3 Electrical. All electrical lines serving the buildings on the Property shall be underground. Public utility lines in existing or future easements shall be permitted overhead so long as the buildings are serviced from underground.

6.4 Fees. Fees, charges, and costs for utilities shall be as set forth in the REU Analysis/Memorandum of March 8, 2022 attached as **Exhibit C**. The connection fee for both water and sewer may be amended on a district-wide basis from time to time which shall be the then-prevailing rate of connection cost/REU, per connection, as set forth in the Equivalent User Table of the Genoa Charter Township as the same may be amended from time to time.

6.5 The above ground storage tanks within the Property will not comply with Section 13.07.01 of the Ordinance, "Above Ground (Fuel) Storage Tanks," based on the nature of the medical facility. Instead, the facility will comply with state and federal codes for fuel oil storage.

6.6 The Owner shall grant and convey easements on the Property to the Township or the authority designated by the Township to allow for ingress and egress for the maintenance, repair, improvement or replacement of the public sewer and water system including those reflected in the existing Village Easements.

6.7 Upon completion of the water and sewer infrastructure and the approval of the Township, the Owner will convey the infrastructure (the sanitary sewer, the water mains and their appurtenant components), excluding the leads, to the Township. The Township will then be responsible for the maintenance, repair, improvement and replacement of the infrastructure. The Owner and its successors in interest will be responsible for the perpetual maintenance, repair, improvement and replacement of the leads for both the water and the sewer extending from the [curb] to the buildings.

ARTICLE 7

MISCELLANEOUS

7.1 Amendment. This Agreement may not be modified, replaced, amended or terminated without the prior written consent of the parties to this Agreement.

7.2 Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective legal representatives, successors, and assigns. The rights and obligations under this Agreement shall run with the Property and shall bind and inure to the benefit of any successors-in-interest of the Owner in the Property.

7.3 Controlling Effect. In the event of any direct conflict between the terms and provisions of this Agreement and the Conceptual Plan, and the provisions of the Ordinance, or other Township ordinances, rules, or regulations, the provisions of this Agreement and the Conceptual Plan shall control.

7.4 Conditions Reasonable. The Owner acknowledges that the conditions imposed by this Agreement upon the development of the Property are reasonable and necessary to ensure that public services and facilities affected by the proposed land use or activity will be capable of accommodating increased service and facility loads caused by the land use or activity, to protect the natural environment and conserve natural resources and energy, to ensure compatibility with adjacent used of land, and to promote the use of land in a socially and economically desirable manner. The Owner further acknowledges that the conditions meet all of the requirements of MCL 125.3503.

7.5 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan, without giving effect to principles of conflicts of law.

7.6 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall constitute an original, and all of which shall constitute one and the same agreement.

7.7 Plans and Drawings. The plans and drawings listed in **Exhibit D** are attached to and made a part of this Agreement.

7.8 Sale. In the event that a portion of the Property is sold to another entity, coordination and control of the Property will be up to the determination of the current Owner at the time of the sale.

7.9 The terms of this Agreement, as hereby amended, shall run with the land and shall be recorded on title to the Property with the Livingston County Register of Deeds.

7.10 References in this Agreement to activities by the Owner in relation to development is intended to include Owner's transferees and assigns unless context dictates to the contrary.

[Remainder of Page Intentionally Left Blank.]

This Agreement has been executed by a duly authorized representative of the Owner as of the date first set forth above.

TRINITY HEALTH-MICHIGAN, d/b/a SAINT JOSEPH MERCY HEALTH SYSTEM, formerly known as MERCY HEALTH SERVICES,
a Michigan nonprofit corporation

By:_____
[Printed Name]
Its:_____

STATE OF MICHIGAN)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2022, by _____, the _____ of TRINITY HEALTH-MICHIGAN, d/b/a SAINT JOSEPH MERCY HEALTH SYSTEM, formerly known as MERCY HEALTH SERVICES, a Michigan nonprofit corporation, on behalf of the corporation.

_____
Notary Public _____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires:_____

[Signatures Continued on the Following Page.]

APPROVED by the Township Board for Genoa Charter Township on the _____ day of _____, 2022, at a meeting duly called and held.

GENOA CHARTER TOWNSHIP,
a Michigan charter township

By:_____
[Printed Name]
Its: Supervisor

By:_____
[Printed Name]
Its: Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF _____)

The foregoing instrument was acknowledged before me this _____ day of _____, 2022, by _____ and _____, the Supervisor and Clerk, respectively, of GENOA CHARTER TOWNSHIP, a Michigan charter township, on behalf of said Township.

_____
Notary Public _____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires:_____

Drafted by:

Richard A. Sundquist
Clark Hill PLC
500 Woodward Avenue, Suite 3500
Detroit, Michigan 48226
(313) 965-8227
rsundquist@clarkhill.com

When Recorded, Return to:

_____
_____
_____
_____

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

Commencing at the Northeast Corner of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; thence S 89°38'11" W 1355.85 feet (recorded as N 87°59'50" W 1355.93 feet) along the North line of said Section 13 for a PLACE OF BEGINNING; thence S 02°11'38" E 763.41 feet (recorded as S 00°08'31" E 763.54 feet); thence N 87°56'59" E 6.62 feet (recorded as S 89°20'22" E 6.57 feet); thence S 02°09'04' E 1733.44 feet; thence S 86°51'52" W 7.47 feet (recorded as S 89°16'32" W 7.47 feet); thence S 03°08'08" E 92.85 feet (recorded as S 00°38'37" E 92.41 feet); thence S 89°29'10" W 38.78 feet (recorded as N 88°05'08" W 38.78 feet); thence S 03°08'08" E (recorded as S 00°30'54" E) 176.36 feet; thence N 69°43'30" W 1410.63 feet (recorded as N 67°17'30" W 1402.44 feet) along the Northerly Right-of-Way of Grand River Avenue; thence N 02 °12'10" W 2268.75 feet along the North-South 1/4 line to the North 1/4 Corner of said Section 13; thence N 89°38'11" E 1341.07 feet (recorded as S 87°54'35" E 1341.18 feet) along the North line of said Section 13 to the Place of Beginning. Being a part of the Northeast 1/4 and the Southeast 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan. Containing 77.74 acres of land, more or less. Being subject to easements and restrictions of record, if any.

EXHIBIT B

NRPUD PLANS

The NRPUD Plans showing the existing (already improved) facilities including the Medical Buildings and the Facility as well as the proposed new hospital and expansion areas is attached to this Agreement as Sheet _____which also identifies a future community farm. Sheet ___ attached identifies the existing Village Easements.

EXHIBIT C

FEES, CHARGES, AND COSTS FOR UTILITIES

See attached pages.

EXHIBIT D

LIST OF ADDITIONAL PLANS AND DRAWINGS MADE A PART OF THIS AGREEMENT

- Renderings of existing facilities and proposed expansion and renovation of existing Medical Buildings.

EXHIBIT E

WETLAND BUFFER ENCROACHMENTS

See attached page.

~~AGREEMENT~~

AMENDED AND RESTATED

PLANNED UNIT DEVELOPMENT AGREEMENT

THIS AMENDED AND RESTATED PLANNED UNIT DEVELOPMENT AGREEMENT (the "Agreement") is made as of ~~AUGUST 2~~_____, ~~1999~~2022, between the TOWNSHIP OF GENOA, a ~~general law Township~~charter township, whose address is 2911 Dorr Road, Brighton, Michigan 48116 (the "Township") and TRINITY HEALTH-MICHIGAN, d/b/a SAINT JOSEPH MERCY HEALTH SYSTEM, formerly known as MERCY HEALTH SERVICES, a Michigan nonprofit corporation, whose address is ~~5301 E. Huron River Drive, P.O. Box 992, Ann Arbor~~1600 South Canton Center Road, Canton, Michigan ~~48106~~48155 (the "Owner").

RECITALS

A. The Owner ~~owns that certain real property~~and the Township entered into a Planned Unit Development Agreement dated August 2, 1999 (the "Original PUD"), with respect to the development of property owned by Owner consisting of approximately 77.74 acres of land and located in the Township of Genoa, County of Livingston, State of Michigan, commonly known as 7575 Grand River Avenue (Parcel Identification Number 4711-13-200-009), more particularly described on ~~Schedule~~**Exhibit A** attached hereto (the ~~"~~"Property~~"~~"). The Original PUD was not recorded with the Livingston County Register of Deeds.

B. The Original PUD provided that the Owner ~~desires to~~ develop the Property~~,~~ as a ~~"~~"Mixed Use Planned Unit Development District~~" under~~" pursuant to Article 10 of the zoning ordinance of the Township (as amended, the ~~"~~"Ordinance~~"~~") under the ~~"~~"Conceptual Site Plan~~"~~" in the form required by the Ordinance and attached ~~hereto~~ as Schedule B to the Original PUD which ~~identifies~~identified the location and general configuration of each of such uses (the ~~"~~"Conceptual Plan~~"~~").

C. The Township ~~has~~ determined that the Conceptual Plan (~~a~~1) properly ~~achieves~~achieved the purposes of Article 10 of the Ordinance, including the encouragement of innovation in land use, the preservation of open space in areas adjacent to Grand River Avenue ~~in order~~ to achieve compatibility with adjacent land uses, the promotion of efficient provision of public services and utilities, the reduction of adverse traffic impacts, and the provision of adequate employment, (~~b~~2) is consistent with the Master Plan and the Grand River Avenue Corridor Study of the Township, and ~~c~~(3) promotes the public health, safety~~,~~ and welfare of the Township.

D. In ~~accord~~accordance with the Ordinance and the requirements of Act No. 184 of the Michigan Public Acts of 1943, as amended (~~the "~~now Act~~"), the planning commission~~ No. 110 of 2006) (the "Act"), the Township Planning Commission and Township Board ~~have~~of Trustees ("Township Board") approved the Conceptual Plan.

E. As part of the Original PUD, the Property was rezoned to Non-Residential Planned Unit Development ("NRPUD") in accordance with Section 10 of the Ordinance.

F. The Property is currently zoned NRPUD as identified in the Township Zoning Map adopted May 2, 2005 and revised September 4, 2020.

G. In accordance with Section 2.3 of the Original PUD, Owner developed a medical office building and clinic of up to 240,000 gross square feet of floor area, and a second office building of up to 55,000 gross square feet of floor area on the Property (collectively, "Medical Buildings"). The Medical Buildings are located east of the Genoa Business Park. The address for the Medical Buildings is 7575 Grand River, Brighton, Michigan 48114.

H. In accordance with Section 2.5 of the Original PUD and pursuant to that Ground Lease dated February 1, 2001 recorded at Liber 2901, Page 668, Livingston County Records, between the Owner (as lessor) and Village At Brighton, L.L.C. (now known as Village at Brighton 2, L.L.C. (as lessee) (the "Village"), the Village developed a two-story assisted living and independent living facility now known as "Sanctuary at Woodland" located at 7533 Grand River Avenue, Brighton, Michigan (the "Facility").

I. The Facility was constructed in 2001 and modified in 2003 and is located on approximately 7.49 acres of the Property. The Facility is licensed for forty (40) assisted living beds in thirty-eight (38) resident rooms and fifty (50) independent living apartment units. The licenses for the Facility are held by Trinity Senior Living Communities.

J. In connection with the development of the Facility, the Owner granted multiple access and utility easements in the Property to Village ("Village Easements").

K. The Owner and the Township entered into an Amendment to the Original PUD dated November 13, 2018, and recorded on January 16, 2019, as Document No. 2019R-001392, Livingston County Records ("Amendment") with respect to the then existing entry signage and the installation of new signage along Grand River Avenue. The Amendment was approved by the Township on October 15, 2018. The Original PUD and Amendment are collectively referred to as the "Existing PUD".

L. On March 30, 2022, the Owner submitted to the Township an Application-Planned Unit Development (PUD) ("PUD Application"). Also, on March 30, 2022 the Owner submitted to the Township an Application for Site Plan Review ("Site Plan Application"). The applications request review and approval of proposed amendments to the Existing PUD along with Final PUD Site Plan authorization for the expansion and renovation of the Medical Buildings ("Project"). The Project is intended to expand community health services to the Brighton, Livingston County, Michigan vicinity and to provide state-of-the art healthcare facilities in the area.

M. The PUD and Site Plan Applications included all submitted items set forth in Section 10.06 of the Ordinance except the hydrologic impact assessment. The submitted items include but

are not limited to, proof of ownership of the Property and Owner authorization, completed application and application fee, an impact assessment and traffic study meeting the requirements of Article 18 of the Ordinance, a demolition plan, site plan, grading and storm plan, utility plan, landscape plan, site development notes and details, and architectural plans (collectively, the "NRPUD Plans"). For purposes of this Agreement, the NRPUD Plans shall be deemed to be the Final PUD Site Plan attached as **Exhibit B**.

N. The Project entails the development of a new, four-story hospital addition (with basement) comprising 175,043 square feet and consisting of support spaces, seventy-two (72) inpatient beds, including expanded emergency department services, cafeteria and associated upgrades to existing support spaces and utilities, with expanded capacity for on-site parking. The Project will be located on and attached to the Medical Buildings. The two buildings will be connected to the first and second levels of the Medical Buildings. There will be additions to the existing Medical Buildings to expand the Emergency Department and Outpatient Surgery Services, as well as renovations to the Emergency Department, Outpatient Surgery Services, Imaging and Lab.

O. In addition to the existing Facility, the Project brings comprehensive health care to the community. In terms of open space, a courtyard shall be provided and a community garden is being considered (as detailed in the NRPUD Plans). The Project includes a creative yet cost-effective development of a community hospital addition, including enhanced Emergency Department, the addition of inpatient beds and adjacency to existing facilities which are already familiar to the community. There will be visibility of care center for wellness, acute and chronic health conditions. In addition, the Project shall provide the following community benefits under Section 10.02.05 of the Ordinance: (a) the Project shall maintain 25% of lake and pond areas, 50% of retention and detention ponds, landscaped areas, plazas and residential uses to protect natural habitats and beautification of surrounding areas, (b) provides two (2) additional detention ponds, a walking loop, and potentially, a new community garden, with a natural walkway in the future to connect to the Facility, (c) enhance traffic safety and alleviates further potential for congestion on Grand River by adding a ring road around the facility. This also provides a safer, faster service to buildings on the Property by local authorities, including Brighton Area Fire Authorities, (d) enhances the patient experience upon arrival due to the landscaped features, added signage, increased parking and specialty areas, natural landscape, walking paths and improved routing throughout the facility and adjacent buildings, (e) interior renovation allowing for improved patient flow, experience and ability to provide better service to the community, (f) state of the art equipment and facilities due to new equipment and patient flow and increased efficiency within departments, (g) better service to the community by having all services in one location and in a more accessible location, (h) improved energy efficiency as a result of new equipment and building material, leading to improved sustainability and a decreased carbon footprint, (i) the Project allows for new services to be provided within the existing Medical Buildings to support patient needs at one location, (j) implements improved HVAC and architectural designs to better support pandemic needs as a result of recent COVID experiences, (k) the new addition and design allows for shared central sterile services for in-patient and outpatient surgeries, and (l) allows for redundancies within equipment to alleviate impacts to areas and functions due to shutdowns for maintenance and/or repairs of MEP equipment.

P. The Township Planning Commission has reviewed the PUD Application, this Agreement, the Site Plan Application, the impact assessment and NRPUD Plans, conducted a public

hearing on August 8, 2022 and recommended approval of the Final PUD Site Plan, this Agreement, the impact assessment and the NRPUD Plans to the Township Board.

Q. The Township Board reviewed the PUD Application, this Agreement, the Site Plan Application, the impact assessment and NRPUD Plans on _____, and provided conceptual approval pursuant to Sections 10.04.03, 10.06, 10.07 and 10.08 of the Ordinance on _____.

R. The Ordinance requires the execution of this Agreement in connection with the Project, which agreement shall be binding on the Township and the Owner.

S. The Township has requested easements be granted to the Township similar to the Village Easements benefitting the Township relative to the existing water and sanitary sewer facilities located on the Property, all in accordance with those requirements specified in the Sewer and Water Connection Manual of Marion, Howell, Oceola and Genoa Sewer and Water Utilities ("MHOG"). See **Exhibit B** for the location of the Village Easements.

T. In connection with the Project, the hospital use classification for the Property requires mechanical, electrical, plumbing and fire protection design that addresses both code requirements and national certification standards for licensing and operations. Rooftop equipment is, therefore, sized to support *acuity adaptable rooms* in response to standards required for community pandemic response.

U. The Property is served by public sewer and water. Sanitary sewers and water facilities pertaining to the Project will be reviewed by the Township and MHOG.

V. To facilitate the Project, the Owner and the Township desire to amend and restate the Existing PUD. The Existing PUD is amended and restated in its entirety by this Agreement and as stated herein.

NOW, THEREFORE, in consideration of the foregoing and the remaining terms, conditions and covenants hereinafter set forth, the Township and the Owner agree as follows:

ARTICLE 1

THE CONCEPTUAL PLAN

1.1 Representations of Township. The Township warrants and represents to the Owner that (a) the Township has taken all actions necessary to approve the Conceptual Plan, including, without limitation, all required public hearings, notices to nearby landowners, and all other actions required by the Ordinance and the Act, (b) the Township has approved the Conceptual Plan and that no further action to approve the Conceptual Plan is required, (c) all uses contemplated by the Conceptual Plan are authorized by the Ordinance, and (d) the Owner may rely upon this Agreement for purposes of future development of the Property in accord with the Conceptual Plan.

1.2 Amendment of Conceptual Plan. The Owner and the Township may only amend the Conceptual Plan as permitted by, and in accord with the procedure therefor set forth in, the Ordinance; provided, however, that the Owner, with approval from the Township, may adjust the size or shape of the various parcels of the Property dedicated to differing uses so long as any such

adjustment does not alter the land use designation for any area of the Property or increase the intensity and/or density of use. In connection with any land division or combination, Owner shall comply with Article 20 (Land Divisions) of the Ordinance.

1.3 Site Plan Approvals. Except as otherwise specifically provided in this Agreement, the Owner shall develop the Property only in accord with the Conceptual Plan and subject to site plan approval in accord with the process therefor established in the Ordinance. Each site plan shall superimpose the approved plan of development upon the Conceptual Plan to clearly illustrate the final plan for each portion of the Property. In the event a portion of the Property is submitted for site plan approval and such approval is denied, the party submitting such site plan shall be entitled to appeal such decision to the Township Zoning Board of Appeals as provided by law, and all parties shall agree to proceed expeditiously to final resolution.

1.4 Final PUD Site Plan. ~~Within the two (2) year limit prescribed by the Ordinance, the~~The Owner shall submit a "Final PUD Site Plan" to the Township within the time limits prescribed by the Ordinance but otherwise determined by the Owner.

ARTICLE 2

LAND USE AUTHORIZATION

2.1 Phased Development. The Owner plans to further develop the Property in phases. The ~~first phase encompasses the area shown on the Conceptual Plan and labeled as "Phase 1" and shall include a land use authorization for~~Medical Building and (assisted living) Facility were constructed as part of the original phases under the Original PUD which included land authorizations for an OSD-Professional Office-Service District~~. Future phases shall include land use authorization for~~ and an HDR-High Density Residential (Multi-Family Residential District), and an OSD-Professional Office-Service District. The next phase shall consist of the Project. Additional potential phases may include building a community farm and food hub on the east portion of the Property as described in **Exhibit B**. Additional projects may be phased and separated as the Owner and Township deem necessary.

2.2 Detailed Development. The Owner may, in its discretion, develop the Property in accord with the Conceptual Plan and subject to the obligation to coordinate development of the Property as a whole pursuant to this Agreement. In connection with the discretionary development of the Property, the Owner shall submit to the Township for review and approval a plan in the form required by the Ordinance, including impact assessments required by the ~~Township (including an updated Traffic Impact Study which meets the requirements of Section 13.05(I) of the Ordinance, showing how traffic will differ from that originally projected, a Natural Features Plan, and a Pollution Incident Prevention Plan)~~Ordinance. The Township shall review each of such plans within a reasonable time. ~~Unless the Conceptual Plan is materially altered at the request of the Owner, site plan and other review requirements with respect to any such plan shall be as in effect as of the date of this Agreement and shall not be subject to any subsequent amendments of the Ordinance which are inconsistent with this Agreement.~~

2.3 Permitted Special ~~Use~~Uses. The Township acknowledges the Owner's plan to develop ~~a~~expanded medical ~~office building and clinic~~uses of up to ~~240,000~~175,043 gross square feet of floor area~~,~~ and ~~a second office building of up to 55,000 gross square feet of floor area on the Property~~other related improvements as part of Phase 1. Notwithstanding the requirement of a

permit for any special land use under ~~Sections 8.403 (i) and (j) of~~ the Ordinance, the Township agrees that ~~such~~the following uses shall not require a Special Land Use Permit or fee, or submission of additional application forms beyond those normally required for general site plan approval.

2.3.1 The Medical Buildings developed under the Original PUD~~,~~.

2.3.2 The Project described in Recital N and in the NRPUD Plans~~,~~.

2.3.3 The above ground storage tanks within the Property which will not comply with Section 13.07.01 of the Ordinance, "Above Ground (Fuel) Storage Tanks," based on the nature of the medical facility. Instead, the facility will comply with state and federal codes for fuel oil storage.

2.3.4 Those four areas of wetland buffer disturbance required as part of the Project and identified in SmithGroup drawing CG-105 attached as **Exhibit E**. Three of the delineated disturbances are associated with the construction of the storm water management system as part of the Project and are identified as "temporary." After construction, the three areas of temporary disturbance will be returned to and maintained in a natural and undisturbed condition as required by Section 13.02.02 of the Ordinance. The fourth delineated wetland buffer disturbance consists of approximately 3,500 square feet which will be impacted by construction of a retaining wall and ring road. Approximately 425 square feet of this area will be permanently impacted by the new retaining wall and ring road. This area is identified as "permanent." Approximately 3,075 square feet of the impacted area will be returned to and maintained in a natural and undisturbed condition.

2.4 Open Space. The Owner shall develop a minimum of 50% of the Property as open/residential space, defined as undisturbed areas of key natural features, 25% of lake and pond areas, 50% of retention and/or detention ponds, landscaped areas, plazas, and residential uses. ~~Schedule~~**Exhibit B** shows the calculation and location of open/residential space as shown on the Conceptual Plan.

~~2.5 Assisted Living Development. The Owner shall be permitted to develop an Assisted Living facility of up to ninety (90) units and approximately ninety-four thousand square feet (94,000 SF) of floor area.~~

2.4.1 Wetlands. In accordance with requirements of local municipal fire marshal requirements for continuous perimeter access to expanded land use for a community hospital, a loop fire ring road will be provided. Final construction of the wetland boundary north of loop fire ring road improvements within State of Michigan Department of Environment, Great Lakes and Energy ("EGLE") regulated wetlands shall be installed or constructed upon receiving necessary approvals of EGLE, and in accordance with all applicable EGLE rules and regulations, to comply with the State and Federal codes. See Exhibit E (refenced in Section 2.3.4 above).

ARTICLE 3

ACCESS TO AND WITHIN THE PROPERTY

3.1 Traffic Impact Study. The Owner shall submit to the Township for review and approval a traffic impact study as required by ~~Article 13~~Articles 10 and 18 of the Ordinance. Such study shall evaluate the impact of the planned development of the Property at each access point and existing adjacent major intersections, specifically including any intersections where traffic from the Property will comprise at least five percent (5%) of the existing intersection capacity. Such study shall also include proposals to mitigate any adverse impact of such development identified by the study and describe timing and responsibility for funding any improvements designed to implement any such proposals. The Owner shall provide an updated Traffic Impact Study at each phase of the development. At such time as the Township and Livingston County Road Commission determine that a signal is warranted at either entry to the Property, the Owner shall fund the installation of said traffic signal and such other traffic mitigation measures as are required by its development of the Property. However, nothing in this Agreement shall require the Owner to pay more than its pro-rata share of improvements as determined by the proportion of total traffic increase which is generated by developments on the Property.

3.2 Access to the Property. Access to the Property shall be limited to two major entrances from Grand River Avenue. Both access points shall be full movement, with Grand River Avenue ingress and egress from both directions. The Township will only consider additional access points if spaced a safe distance apart and a traffic impact study submitted by the Owner demonstrates that overall traffic operations and safety will be improved. The Owner shall determine the specific location of permitted access points utilizing safety standards established and approved by the Township and the Livingston County Road Commission. The Owner shall also locate access points such distances from existing signalized intersections to ensure sound traffic operations if the access points are signalized. The site design for the Property shall direct traffic flow to use the main access points to public thoroughfares. Stacking or queuing depth at access points shall be sufficient to accommodate expected peak hour volumes to minimize conflict with inbound or internal circulation.

3.3 Internal Roadways. The Owner shall plan and establish an internal system of vehicular thoroughfares throughout the Property in connection with development of portions of the Property as it occurs. The Owner shall design internal roads in such a way as to permit vehicular access between and among users of the Property, as ultimately developed, with the view and intent of minimizing the number of traffic movements onto adjoining public roads. The Township shall review and approve the precise locations and design of the overall system of internal thoroughfares as each site plan for development of portions of the Property is submitted to the Township for approval, taking into consideration the uncertainty of the development of the then undeveloped portions of the Property.

3.4 Pedestrian Walkways. The Owner ~~shall construct~~has constructed a pedestrian walkway along Grand River Avenue that conforms with the Grand River Corridor Plan of the Township. The Owner shall also construct pedestrian walkways between each building and the parking area(s) that serve each such building, as the Property is developed. The pedestrian walkway will conform to the walkway plan shown conceptually in the Final PUD Site Plan. The Township and Owner agree that the purpose of any such pedestrian walkways is to serve the business needs

of the Owner and other occupants of buildings on the Property, and ~~not~~ to encourage recreational pedestrian use by the general public.

ARTICLE 4

SITE IMPROVEMENTS

4.1 Coordination of Site Improvements. The Owner shall coordinate the construction of site improvements within the Property as a whole to ensure that site improvements are integrated and mutually supportive among the respective portions of phases of development of the Property, including utilities, landscaping, and site lighting.

4.2 General Guidelines. The Owner shall observe the following guidelines in connection with the construction of site improvements on the Property:

4.2.1 Site design and landscaping shall diminish the prominence of parking lots as viewed from public roads, consistent with the need to orient visitors to parking areas.

4.2.2 Extensive greenways and tree-lined drives shall be located within parking lots to improve traffic operations and views.

4.2.3 Consistent with the Owner's experience ~~with~~developing large-scale hospital, clinical and medical office ~~buildings~~facilities, parking for ~~these~~Phase I and Project uses shall be at the ratio of one (1) space for each ~~one hundred~~two hundred seventy-five square feet (~~175~~275 SF) of eighty percent (80%) of gross building area. ~~The Owner shall provide areas where additional parking, up to the level required by the Ordinance, can be developed if needed, as determined by the Township Manager.~~ A minimum of 618 parking spaces are required. Owner will provide 753 built parking spaces and 246 unbuilt banked parking spaces. Development of the banked parking spaces shall be subject to Planning Commission approval.

4.2.4 Any storm water control devices visible from public streets shall have a maximum 6:1 slope (so as to not require a fence according to the Livingston County Drain Commission) and be designed to have a naturalistic appearance, such as variable shape, natural arrangement of landscape materials.

4.2.5 Landscaping shall demonstrate consistency in design and materials.

4.2.6 Site lighting shall be of a uniform type and color throughout.

4.3 Maintenance. The Owner shall be responsible for ongoing maintenance and repair or replacement of site design elements, such as open spaces, signage, landscaping, lighting, and pavement markings. ~~The~~ Except as otherwise provided herein, the Owner shall be responsible for maintenance and repair or replacement of facilities serving the entire Property such as stormwater control devices and any roadways within the Property.

4.4 Residential Buffer Zone. The Owner shall create and maintain a buffer zone between the residential portion of the property and the adjacent residential properties to the north and east. The buffer zone shall be seventy-five ~~feet~~ (75) feet deep and shall preserve existing large trees in the zone along the north and east boundaries of the Property. The Owner shall provide a sculptured six to eight foot (6 ft.-8 ft.) high berm, interspersed among existing trees. The Owner shall provide one (1) canopy tree, two (2) evergreen trees, and four (4) shrubs for every twenty (20) lineal feet ~~(20 lineal ft)~~ along the property line of the residential building zone as shown in the Final PUD Site Plan. There shall be a credit of two (2) canopy trees for every existing canopy tree of eight ~~inches~~ (8~~"~~) inches diameter or greater. The Owner shall also be permitted to substitute one (1) evergreen tree for five (5) shrubs, or one (1) canopy tree for eight (8) shrubs to develop an aesthetically pleasing landscape buffer.

ARTICLE 5

DESIGN OF BUILDINGS AND SIGNAGE

5.1 Building. The architecture, building materials, colors, and shapes of all buildings shall substantially conform with the guidelines set forth in the Grand River Corridor Plan, as it may be reasonably amended. The Owner shall develop buildings on the Property that incorporate varying building lines, natural earth tone construction materials, and other elements that are aesthetically pleasing. The Owner shall follow the following general guidelines:

~~5.1.1. pitched roof buildings are required;~~

~~5.1.2~~5.1.1. large walls shall include varying building lines, setbacks, color accents, windows, or other elements to upgrade appearance;

~~5.1.3~~5.1.2 each site plan shall include a narrative or illustration(s) that demonstrate the design of new buildings will be consistent with, or complement, architecture of the other sites;

~~5.1.4~~5.1.3 buildings shall use high quality architecture with variable building lines, ~~pitched roofs, and~~ architectural accents~~;~~, and, with the exception of the hospital addition which is part of the Project, pitched roof buildings shall be required.

~~5.1.5~~5.1.4 brick or stone shall be used for all building faces;

~~5.1.6~~5.1.5 other materials may be used for architectural accents, provided such materials shall have the appearance of cut or cast stone or stucco;

~~5.1.7~~5.1.6 out-parcel office buildings shall treat all exterior wall surfaces with at least eighty percent (80%) natural materials; and

~~5.1.8~~5.1.7 residential buildings shall be permitted to use siding for up to fifty percent (50%) of exterior wall surfaces.

5.2 Signage. ~~Freestanding signs within the PUD shall be ground-mounted (monument) signs. No pole signs shall be permitted. All freestanding signs shall have a base constructed of~~

~~materials that coordinate with and are consistent with the building, and with other freestanding signs within the PUD. All freestanding lighted signs shall be internally lit. All wall signs shall have channel lettering (not panels). The~~Consistent with the Owner's experience developing large-scale hospital, clinical, and medical office facilities, signage within the Property will provide clear and safe wayfinding deemed necessary to best serve the community. Signage shall have materials, lighting, and mounting that is in line with the stated goal. Variations beyond approximate limits identified herein will be reviewed for approval with the Township as required by the Ordinance. Other than those sign dimensions and numbers specified in this Section 5.2, Owner shall comply with the sign standards in the Ordinance. Consistent with Table 16.1, footnote (7) of the Ordinance, the following signs shall be permitted on the Property:

5.2.1 one ~~(1) ground sign at the east entry from Grand river Avenue of up to seventy-two square feet (72 SF) area;~~monument sign near the main entrance to Woodland Village, with a maximum height of 72 inches and maximum width of 72 inches; and

5.2.2 one ~~(1) ground sign at the west entry from Grand river Avenue of up to seventy-two square feet (72 SF) area;~~monument sign at the main entrance to Woodland Village with a maximum height of 40 1/8" and maximum width of 92"; and

5.2.3 one ~~(1) ground sign for each separate office building to be located on interior roads on the Property of up to six feet (6') in height and sixty square feet (60 SF) area;~~post and panel sign at the main entrance to Woodland Village with a maximum height of 36" and maximum width of 42"; and

5.2.4 one ~~(1) ground sign for the residential development located on interior roads on the Property of up to six feet (6') in height and thirty-six square feet (36 SF) area, consistent with Section 16.06 (s) of the Ordinance;~~directional sign near the main entrance to Woodland Village with a maximum height of 16" and maximum width of 25.5"; and

~~5.2.5 each building shall be entitled to one (1) wall sign of up to five percent (5%) of the building front facade;~~

~~5.2.6 the Saint Joseph Mercy Health System building shall be entitled to three (3) wall signs which together do not exceed five percent (5%) of the building front facade;~~

~~5.2.7 the size, materials, and other specifications of each such wall sign shall conform to the Ordinance;~~

~~5.2.8. all other signs, including directional and wayfinding signs, shall conform to the size, materials, and other specifications of the Ordinance; and~~

~~5.2.9 directional and wayfinding signs shall be provided throughout the site as shown on a master sign and pavement marking plan to be approved with the Site Plan for each phase of development, with the number of signs not~~

~~restricted to one per approved driveway, but as determined by the requirements of wayfinding and safety, and approved by the Township.~~

5.2.5 one directional sign near the main entrance with a maximum height of 7' 0" and maximum width of 7" 0: and

5.2.6 two directional signs within the beltway with a maximum height of 4' 11' and maximum width of 4' 7"; and

5.2.7 two wall signs on building front facades with a maximum height of 37' ¼" in height and maximum width of 30' 5-1/2"; and

5.2.8 four directional signs near the building entrance with a maximum height of 2' 9" and maximum width of 4' 0"; and

5.2.9 one post and panel sign within the beltway with a maximum height of 1' 10 ½" and maximum width of 2' 5 ½"; and

5.2.10 One (1) monument sign at the central entry (main entrance) from Grand River Avenue with a maximum height of no more than 13' 0" and maximum width of 6' 6"; and

5.2.11 Such other signs as may be required in connection with Owner's addition of medical services and as otherwise may be required by state and federal regulatory bodies or as may be required for emergent health care situation provided such signs comply with the Ordinance.

5.3 Building Height. The Owner shall be permitted to erect ~~a medical~~the hospital services portion of the addition as a four (4) story building with a general roof height ~~of thirty-seven feet above finished floor (37' AFF), with a roof height of forty-two feet above finished floor (42' AFF) in the section of the building that contains the surgery suite, and a central tower with a roof height of forty-six feet, one inch above finished floor (46' 1" AFF), both~~not to exceed approximately sixty-four (64) feet from the first level finished floor to the top of the parapet (64' 0" AFF) measured as indicated in the Ordinance. ~~This height is required to accommodate the Owner's surgery programs, and to screen mechanical units from view~~The Owner shall be permitted to erect a roof mounted screen wall on the hospital services portion of the addition with a general height of approximately seventy-five feet eight inches (75' 8") from the first level finished floor to the top of the screen wall (75' 8" AFF) measured as indicated in the Ordinance. The Owner shall be permitted to erect a roof mounted mechanical unit on the hospital services portion of the addition with a general height of approximately eighty feet two inches (80' 2") from the first level finished floor to the top of the screen wall (80' 2" AFF) measured as indicated in the Ordinance. The Owner shall be permitted to build a connector of the existing medical office building to the hospital addition as a two (2) story addition with a general roof height of approximately thirty-two (32) feet from the first level finished floor to the top of the parapet (32' 0" AFF) measured as indicated in the Ordinance. Roof-mounted equipment on the hospital addition may not exceed seventeen (17) feet and fifteen percent (15%) of the total roof area on the entire building. All other buildings on the Property shall meet the specific height limitations required by the Ordinance for the respective type of building. Variations beyond approximate limits identified herein will be reviewed for approval with the Township in accordance with Section 10.11 of the Ordinance. All elevations and heights referenced

in this Section 5.3 are derived from Owner's Basis of Design documents and subject to industry-accepted construction tolerances.

ARTICLE 6

UTILITIES

6.1 Water. Each office and residential parcel/use on the Property must connect to the community water system. The Owner shall submit a master water plan for the Property as an attachment to the Final PUD Site Plan for approval by the Township and its Engineers. The Owner shall install and pay the cost of the internal water main for each developed portion of the Property prior to or concurrent with the site plan approval for such development.

6.2 Sanitary Sewer. All of the office and residential buildings constructed on the Property shall, as developed, be connected to and be served by the public sanitary sewer systems. The Township represents that there has been reserved for the Owner adequate municipal wastewater treatment capacity to service the approved use of the Property, and the adequacy of wastewater treatment capacity shall not limit the type of use or density of the development based on the ~~Concept Plan.~~Conceptual Plan. The Owner shall install and pay the cost of the infrastructure required by the Township and its engineers to connect the Property and additional improvements to the public sanitary sewer system.

6.3 Electrical. All electrical lines serving the buildings on the Property shall be underground. Public utility lines in existing or future easements shall be permitted overhead so long as the buildings are serviced from underground.

6.4 Fees. Fees, charges, and costs for utilities shall be as set forth ~~on~~in the REU Analysis/Memorandum of March 8, 2022 attached ~~Schedule~~as **Exhibit C**~~, which~~. The connection fee for both water and sewer may be amended on a district-wide basis from time to time~~. The Owner shall pay REU and connection fees as required by the Township in accordance with Schedule C.~~ which shall be the then-prevailing rate of connection cost/REU, per connection, as set forth in the Equivalent User Table of the Genoa Charter Township as the same may be amended from time to time.

6.5 The above ground storage tanks within the Property will not comply with Section 13.07.01 of the Ordinance, "Above Ground (Fuel) Storage Tanks," based on the nature of the medical facility. Instead, the facility will comply with state and federal codes for fuel oil storage.

6.6 The Owner shall grant and convey easements on the Property to the Township or the authority designated by the Township to allow for ingress and egress for the maintenance, repair, improvement or replacement of the public sewer and water system including those reflected in the existing Village Easements.

6.7 Upon completion of the water and sewer infrastructure and the approval of the Township, the Owner will convey the infrastructure (the sanitary sewer, the water mains and their appurtenant components), excluding the leads, to the Township. The Township will then be responsible for the maintenance, repair, improvement and replacement of the infrastructure. The Owner and its successors in interest will be responsible for the perpetual maintenance, repair,

improvement and replacement of the leads for both the water and the sewer extending from the [curb] to the buildings.

ARTICLE 7

MISCELLANEOUS

7.1 Amendment. This Agreement may not be modified, replaced, amended or terminated without the prior written consent of the parties to this Agreement. ~~The Owner and the Township shall be entitled to modify, replace, or amend this Agreement without the consent of any other person or entity, regardless of whether such person or entity now or hereafter has any interest in any part of the Property, including subsequent purchasers, or their tenants, mortgagees, or others.~~

7.2 Binding Effect. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective legal representatives, successors, and assigns. The rights and obligations under this Agreement shall run with the Property and shall bind and inure to the benefit of any successors-in-interest of the Owner in the Property.

7.3 Controlling Effect. In the event of any direct conflict between the terms and provisions of this Agreement and the Conceptual Plan, and the provisions of the Ordinance, or other Township ordinances, rules, or regulations, the provisions of this Agreement and the Conceptual Plan shall control.

7.4 Conditions Reasonable. The Owner acknowledges that the conditions imposed by this Agreement upon the development of the Property are reasonable and necessary to ensure that public services and facilities affected by the proposed land use or activity will be capable of accommodating increased service and facility loads caused by the land use or activity, to protect the natural environment and conserve natural resources and energy, to ensure compatibility with adjacent used of land, and to promote the use of land in a socially and economically desirable manner. The Owner further acknowledges that the conditions meet all of the requirements of ~~MSA 5.2963(16d)(2)(a), (b), and (c)~~MCL 125.3503.

7.5 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Michigan, without giving effect to principles of conflicts of law.

7.6 Counterparts. This Agreement may be executed in one or more counterparts, each of which shall constitute an original, and all of which shall constitute one and the same agreement.

7.7 Plans and Drawings. The plans and drawings listed in ~~Schedule~~**Exhibit D** are attached to and made a part of this Agreement.

7.8 Sale. In the event that a portion of the Property is sold to another entity, coordination and control of the Property will be up to the determination of the current Owner at the time of the sale.

7.9 The terms of this Agreement, as hereby amended, shall run with the land and shall be recorded on title to the Property with the Livingston County Register of Deeds.

7.10 References in this Agreement to activities by the Owner in relation to development is intended to include Owner's transferees and assigns unless context dictates to the contrary.

[Remainder of Page Intentionally Left Blank.]

This Agreement has been executed by a duly authorized representative of the Owner as of the date first set forth above.

~~WITNESSES:~~

_____

_____

_____

~~MERCY HEALTH SERVICES~~
TRINITY HEALTH-MICHIGAN, d/b/a SAINT JOSEPH MERCY HEALTH SYSTEM, formerly known as MERCY HEALTH SERVICES,
a Michigan nonprofit corporation

By:_____
[Printed Name]
~~Name: C. W. Lauderbach, Jr.~~
~~Title: Vice President Patient Care, Ambulatory Services and Programs~~
Its: _____

STATE OF MICHIGAN)
) ss.
COUNTY OF ~~LIVINGSTON~~_____)

The foregoing instrument was acknowledged before me this _____ day of ~~_____, 1999, by _____, the _____, of Mercy Health Services~~_____, 2022, by _____, the _____ of TRINITY HEALTH-MICHIGAN, d/b/a SAINT JOSEPH MERCY HEALTH SYSTEM, formerly known as MERCY HEALTH SERVICES, a Michigan ~~non~~ nonprofit corporation, on behalf of the corporation.

_____
Notary Public
_____ County, Michigan
Acting in _____ County, Michigan
My Commission Expires:_____

[Signatures Continued on the Following Page.]

APPROVED by the Township Board for ~~the~~Genoa Charter Township ~~of Genoa~~ on the _____ day of ~~_____, 1999~~_____, 2022, at a meeting duly called and held.

~~WITNESSES:~~

~~_____~~
~~_____~~
~~_____~~

~~TOWNSHIP OF~~ GENOA CHARTER TOWNSHIP,
a Michigan charter township

By:_____
[Printed _____Name~~:~~
~~_____~~]
~~Title:~~ Its: Supervisor

By:_____
[Printed
Name~~:_____~~]
~~Title~~Its: Clerk

STATE OF MICHIGAN)
) ss.
COUNTY OF ~~LIVINGSTON~~_____)

The foregoing instrument was acknowledged before me this ~~_____~~ _____ day of ~~_____, 1999~~_____, 2022, by _____ and _____, ~~respectively~~ the Supervisor and Clerk ~~of the Township of Genoa~~, respectively, of GENOA CHARTER TOWNSHIP, a Michigan ~~municipal corporation~~charter township, on behalf of ~~the corporation~~said Township.

_____
Notary Public
_____ County, Michigan
Acting in _____County, Michigan
My Commission Expires:_____

Drafted by:

Richard A. Sundquist
Clark Hill PLC
500 Woodward Avenue, Suite 3500
Detroit, Michigan 48226
(313) 965-8227

When Recorded, Return to:

_____
_____
_____
_____

~~CLARKHILL\38802\440942\267134416.v1-5/11/22~~

rsundquist@clarkhill.com

~~SCHEDULE~~EXHIBIT A

~~Legal Description of Property~~

LEGAL DESCRIPTION OF THE PROPERTY

Commencing at the Northeast Corner of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan; thence S 89°38'11" W 1355.85 feet (recorded as N 87°59'50" W 1355.93 feet) along the North line of said Section 13 for a PLACE OF BEGINNING; thence S 02°11'38" E 763.41 feet (recorded as S 00°08'31" E 763.54 feet); thence N 87°56'59" E 6.62 feet (recorded as S 89°20'22" E 6.57 feet); thence S 02°09'04' E 1733.44 feet; thence S 86°51'52" W 7.47 feet (recorded as S 89°16'32" W 7.47 feet); thence S 03°08'08" E 92.85 feet (recorded as S 00°38'37" E 92.41 feet); thence S 89°29'10" W 38.78 feet (recorded as N 88°05'08" W 38.78 feet); thence S 03°08'08" E (recorded as S 00°30'54" E) 176.36 feet; thence N 69°43'30" W 1410.63 feet (recorded as N 67°17'30" W 1402.44 feet) along the Northerly Right-of-Way of Grand River Avenue; thence N 02 °12'10" W 2268.75 feet along the North-South 1/4 line to the North 1/4 Corner of said Section 13; thence N 89°38'11" E 1341.07 feet (recorded as S 87°54'35" E 1341.18 feet) along the North line of said Section 13 to the Place of Beginning. Being a part of the Northeast 1/4 and the Southeast 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan. Containing 77.74 acres of land, more or less. Being subject to easements and restrictions of record, if any.

~~SCHEDULE~~EXHIBIT B

~~Conceptual Site Plan~~NRPUD PLANS

The NRPUD Plans showing the existing (already improved) facilities including the Medical Buildings and the Facility as well as the proposed new hospital and expansion areas is attached to this Agreement as Sheet _____which also identifies a future community farm. Sheet ___ attached identifies the existing Village Easements.

~~The Conceptual Site Plan is attached to this Agreement as Sheet S-1 of the Rezoning/Conceptual PUD Submitted dated July 21, 1999.~~

~~SCHEDULE~~EXHIBIT C

FEES, CHARGES, ~~And~~AND COSTS FOR UTILITIES

~~To Be Determined~~

See attached pages.

~~SCHEDULE~~EXHIBIT D

LIST OF ADDITIONAL PLANS AND DRAWINGS MADE A PART OF ~~This~~THIS AGREEMENT

~~• Rendering of Assisted Living Project, showing conceptual image, dated 6/28/99.~~

~~• **RENDERING OF SAINT JOSEPH MERCY HEALTH SYSTEM AMBULATORY BUILDING.**~~

- Renderings of existing facilities and proposed expansion and renovation of existing Medical Buildings.

~~SCHEDULE E~~EXHIBIT E

~~List of Approved Deviations from Ordinance Standards~~

WETLAND BUFFER ENCROACHMENTS

~~Ordinance Standard~~	~~Deviation~~	~~Ordinance Reference~~	~~Agreement Reference~~
~~Building height 35'~~	~~Generally 37'; surgery area 42; entry tower 46'1"~~	~~4.4~~	~~5.3~~
~~Special Use Permit for medical offices over 40,000 GSF and general offices over 55,000 GSF~~	~~Special use authorized within the PUD Agreement~~	~~8.403(i) and (j)~~	~~2.3~~
~~Permitted ground signs in PUD district are (1) 72 SF and (1) 60 SF~~	~~Authorized signs are (2) at 72 SF each~~	~~Table 16.1~~	~~5.2.1, 5.2.2~~
~~Ground signs for individual non-residential buildings are not indicated by the Ordinance~~	~~One (1) ground sign of up to 60 SF for each non-residential building~~	~~Table 16.1~~	~~5.2.3~~
~~Wall signs: (1) per building, up to 10% of the facade area~~	~~(1) per building, up to 5% of the front facade, except the ambulatory services building, which shall be permitted up to (3) wall signs, together up to 5% of the front facade~~	~~Table 16.1~~	~~5.2.5, 5.2.6~~
~~Directional signs: (1) per approved driveway~~	~~Directional signs: as determined by the requirements of wayfinding and safety, and approved by the Township~~	~~16.12(b)~~	~~5.2.9~~
~~Parking for medical/dental offices: 7 spaces per 1,000 SF gross floor area [45,000 GSF = 315 spaces]~~	~~4.57 spaces per 1,000 SF gross floor area (1 space per 175 SF of net floor area, where net = 80% of gross [45,000 GSF = 206 spaces]~~	~~14.08~~	~~4.2.3~~

See attached page.

~~Ordinance Standard~~	~~Deviation~~	~~Ordinance Reference~~	~~Agreement Reference~~
~~Parking for medical clinics: 2.0 spaces per exam/ procedure/operating room, 1.0 space per lab or recovery room, 1.0 space for each (2) rooms for employee parking [14 exam, 18 procedure, 5 ORs = 37 rooms x 2 spaces=74 spaces; 5 lab, 8 recovery = 13 rooms x **1** space = 13 spaces; 50 rooms/2 = 25 employee spaces. Total = 99 spaces]~~ ~~Total parking required = 414 spaces~~	~~4.57 spaces per 1,000 SF gross floor area [54,350 GSF = 235 spaces]~~ ~~Total parking provided = 441 spaces~~	~~14.08~~	~~4.2.3~~
~~Required buffer zone between multi-family and single family residential: Type B, 20' width; 3' berm; 1 canopy, 1 evergreen, 4 shrubs per 30'~~	~~Provided buffer zone between multi-family and single family residential: 75' width, 6-8' berm; 1 canopy, 2 evergreen, 4 shrubs per 20'. Authorization to substitute canopy trees and evergreens for shrubs at a 1:8 and 1:5 ratio, respectively~~	~~3.5418~~	~~**4.4**~~

Summary report: **Litera Compare for Word 11.2.0.54 Document comparison done on 9/16/2022 1:14:12 PM**	
Style name: Default Style	
Intelligent Table Comparison: Active	
Original DMS: iw://clarkhill-mobility.imanage.work/CLARKHILL/267134416/1	
Description: Planned Unit Development Agreement - Original Agreement Converted to Word	
Modified DMS: iw://clarkhill-mobility.imanage.work/CLARKHILL/267574821/7	
Description: Planned Unit Development Agreement - 9-13-22	
Changes:	
Add	194
~~Delete~~	154
~~Move From~~	0
Move To	0
Table Insert	1
~~Table Delete~~	2
Table moves to	0
~~Table moves from~~	0
Embedded Graphics (Visio, ChemDraw, Images etc.)	0
Embedded Excel	0
Format changes	0
Total Changes:	351

IMPACT ASSESSMENT
St. Joseph Mercy Brighton Health Center
March 30, 2022

INTRODUCTION

The proposed development is a 77.59-acre medical use site residing north of Grand River Ave. Potential areas of concern are noted along with the proposed methods of addressing each item. The format conforms to the impact assessment requirements as outlined in section 18.07 of the published zoning ordinance for Genoa Township.

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

St. Joseph Mercy Brighton Health Center
7575 Grand River Ave Rd,
Brighton, MI 48114
(810) 844-7575

SmithGroup
Architecture architectural, engineering and planning firm
201 Depot St, Ann Arbor, MI 48104
(734) 662-4457

Michael Johnson |
michael.johnson@smithgroup.com | 734-712-2047

Dino Lekas | PLA
dino.lekas@smithgroup.com | 734-669-2678

Michael Campos | Civil, PE
michael.campos@smithgroup.com | 734-669-2749

Katherine DeKrey | Landscape Design
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Barr Engineering Co.
Wetland Consultant
3005 Boardwalk Dr Suite 100, Ann Arbor, Mi 48108

Woody L. Held | Senior Environmental Consultant
WHeld@barr.com | 734.922.4422

b. **Map(s) and written description/analysis of the project site**

The St. Joseph Mercy Brighton Health Center site (Parcel ID: 4711-13-200-009) is in Section 13 of Livingston County, north on Grand River Road, west of South Hacker Road and east of the Genoa Business Park. It is a 77.59-acre site that currently has a medical facility and a senior living facility residing on it. These establishments are supported by surface parking as well as an access road that has shared connections shared with the Business Park. Please see attached documentation Smith Group Site Submittal Package page CV-100 for easement information and surrounding zoning.

c. **Impact on natural features:**

1. Slopes and Grade: The site presents steeper slopes around the parking perimeter and road resulting from the excavation process from prior development. It is intended that this plan will minimize the amount of grading that will need to be done on-site. However, due to the nature of the medical building programming, a grade change over 3% will need to be performed in order to make it accessible. This grading will be performed on 11 acres of the site. The zoning administration will be notified of the grade change required for the building footprint, revised detention basin, parking, and utility yards. Smith Group Site Submittal Package page CG-100 to CG-104.

2. Wetland and Soils: The site contains two creeks and two wetland/detention ponds north of the existing medical building. Based on a Preliminary Wetland Analysis completed by SmithGroup, and a Wetland Inventory Study, currently being conducted by Barr engineering, wetland soils are present within the project area, and development and grading may fall within 25' of the wetland boundary north of the loop fire road. Mitigations will follow any state of Michigan EGLE regulated wetlands requirements and shall only be installed or constructed upon receiving all necessary approvals of EGLE and in accordance with all applicable EGLE rules and regulations. See attachment Smith Group Site Submittal Package page CV-200 and supporting wetland documentation.

3. Vegetation: There is significant existing vegetation on the site, as shown on the Site Plan. Most of this vegetation tends to be undergrowth and brush. Some of this vegetation will need to be removed in order to accommodate the required parking for the expanded medical building use. It is the intent of this design to minimize vegetation removal and the improvements will not be removing more than 25% of existing vegetation on site. See attachment Smith Group Site Submittal Package page CV-300.

d. **Impact on stormwater management:**

The existing stormwater drainage is contained within the site and drain to a regional pond/detention system. An existing wet pond with forebay is currently functioning as the stormwater mitigation system for the entirety of the site's drainage area. Existing on-site underground storm sewer will be utilized to continue to convey stormwater to the existing wet pond. Proposed underground storm sewer will be added to support the additional parking areas and impervious cover.

Based on revised Livingston County Drain Commission requirements, improvements will be made to the existing forebay by dredging the bottom of the pond and increasing its storage volume. Proposed improvements to the existing system also include reconstructing the outlet pipe of the larger wet pond prior to discharging into the adjacent lake. Infiltration rates have been determined by the Geotechnical Engineer and additions of bioretention infiltration ponds throughout the site will be installed.

The improvements to the existing detention system as well as the bioretention infiltration ponds are to enhance the overall quality of the stormwater system.

Surface runoff during construction will be controlled by silt fences, inlet filters, and seed and mulch.

e. **Impact on surrounding land used:**

The new medical facilities are planned to benefit the community by providing state-of-the-art healthcare facilities in the area. This development enhances the existing medical development on-site, which can be accessed from the south via I-96 expressway and Grand River Avenue. Site improvements include a complete loop road, drop-off areas, parking lots, relocation of the helistop, loading area, generators, oxygen tanks,

mobile PET scanner for trucks and ambulance access. Although exterior lighting will be required for the roadways and walks to provide safe access for staff and visitors, full cut-off fixtures are planned to decrease unnecessary light pollution. Lighting will also be required for the safe use of the helipad, currently planned to only pick up patients and take them to another facility if needed. Additional building and site accent lighting will be automatically shut off via timeclock curfew control. Although the generators, helicopters, vehicles and ambulances planned for the site may increase the noise and air pollution, this is not expected to be a significant issue, due to the current noise level and air pollution from the existing site usage, its proximity to I-96 and Grand River, and significant setbacks from other adjacent development.

f. **Impact on public facilities and services:**

St. Joseph Mercy Health of Michigan intends to build an 175,000 square foot, 4-story, 72 bed hospital with basement, (with shell space for an additional 16 beds) within Livingston County, thus replacing the existing facility on Byron Road in Howell. The project will be located on and attached to the St. Joseph Mercy Brighton Health Center. The two buildings will be connected to the first and second levels, but no inpatients will move into the existing facility for services. There will be additions to the existing Brighton Health Center to expand Emergency Department and Outpatient Surgery Services as well as renovations of the Emergency Department, Outpatient Surgery, Imaging, and Lab.

The facility is anticipated to employ the same number of people as the two existing facilities. This development is not expected to impact the public schools. Police and fire protection will be needed for both the hospital and MOB.

g. **Impact on public utilities**:

Sanitary sewer and water utilities are reviewed by Marion, Howell, Oceola, and Genoa (MHOG) Sewer and Water Utilities.

The existing hospital is serviced by a sanitary sewer located south of the building that connects to Grand River Avenue. The sanitary sewer for the proposed building is to exit the north of the building and connect to the existing 8-inch sewer main running along the eastern property line. In discussion with MHOG, there is sufficient capacity in the sewer located just north of the site.

The site is currently serviced by one 12” water main connection along Grand River Avenue. With the planned hospital expansion there will be an 8” watermain that will provide a looped system by connecting the watermain system from the existing stub north of the current staff entrance to the stub located at The Village development. An existing water main runs along the north of the existing St. Joseph Mercy building to the edge of the staff parking lot. Based on the proposed building outline, a portion of the existing watermain will be removed and capped at the west edge of the driveway to the emergency department. Separate domestic and fire protection water main services will connect into the building off an extension from the capped watermain. Existing hydrants will be maintained to ensure adequate building coverage as required by all applicable fire codes.

Sanitary sewer and water main design will meet the MHOG Sanitary Sewer and Water Design Standards. All utility connections will follow guidelines set forth by the MHOG Utility Connection Manual.

h. **Storage and handling of any hazardous materials:**

Fuel tanks and other utilities will be installed north of the building adjacent to the loading dock, will not comply with 13.07.01 Above Ground (Fuel) Storage Tanks based on the nature of medical facility. Instead, the facility will comply with the State and Federal codes for fuel oil storage which are more rigorous than the intent of the local ordinance. It is the policy of Saint Joseph Mercy Health System (SJMHS) to ensure the safe handling and disposal of medical waste throughout the organization, including the proposed development. SJMHS enforces a strict medical waste policy and plan, including obtaining certificates from regulatory agencies, oversight from SJMHS Safety Program personnel to ensure safe practices for the transportation, packaging, and storage of medical waste.

i. **Impact on Traffic and Pedestrians:**

A traffic study was completed by Bergmann on March 24, 2022. The report covers all of the items listed below with the exception of the crash analysis as it was not requested by LCRC or MDOT.
Please see attached Appendix I for the Traffic study's executive summary and full report.

Description of existing daily and peak hour traffic on adjacent street(s) and a description of any sight distance limitations along the right-of-way frontage of the site.

Forecasted trip generation of the proposed use for the a.m. and p.m. peak hour and average daily traffic generated.

For any project with a completion date beyond one year at the time of site plan approval, the analysis shall also include a scenario analyzing forecasted traffic at date of completion along the adjacent street network using a forecast based either on historic annual percentage increases and/or on expected development in the area.

Projected traffic generated shall be distributed (inbound v. outbound, left turn v. right turn) onto the existing street network to project turning movements at site driveways and nearby intersections. Rationale for the distribution shall be provided.

Capacity analysis at the proposed driveway(s) using the procedures outlined in the most recent edition of the *Highway Capacity Manual* published by the Transportation Research Board. Capacity analyses shall be provided for all street intersections where the excepted traffic will comprise at least five-percent (5%) of the existing intersection capacity.

Accident data for the previous three (3) years for roadway sections and intersections experiencing congestion or a relatively high accident rate, as determined by the township or staff from the Livingston County Road Commission or Michigan Department of Transportation.

Analysis of any mitigation measures warranted by the anticipated traffic impacts. Where appropriate, documentation shall be provided from the appropriate road agency regarding time schedule for improvements and method of funding.

A map illustrating the location and design of proposed access, including any sight distance limitations, dimensions from adjacent driveways and intersections within 250 feet of the edge of the property frontage, and other data to demonstrate that the driveway(s) will provide safe and efficient traffic operation and be in accordance with Article 15.

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

All easements are shown on Smith Group Site Submittal Package page CV-100.

k. **A list of all sources shall be provided.**
SmithGroup Survey and Plans
Traffic Study Appendix I
Preliminary Wetland Analysis Appendix II
Title Search Appendix III

TRAFFIC STUDY APPENDIX I

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

TECHNICAL MEMORANDUM

To: Ms. Kelly VanMarter, AICP
Genoa Township

Re: St. Joseph Mercy Health Center – Genoa Township, MI
Traffic Impact Study (TIS) Addendum

From: Steven J. Russo, PE
Transportation Engineer

Date: August 1, 2022

INTRODUCTION

This memorandum is intended as an addendum to the original Traffic Impact Study (TIS) completed by Bergmann, dated May, 2022, for the proposed St. Joseph Mercy Health Expansion project in Genoa Township. The project site is located on the north side of Grand River Avenue ¾ miles northwest of Hacker Road. The proposed development plans include construction of an approximately 150,000 square foot (SF) Hospital facility to accommodate 559 employees and 72 beds. Access for the site is currently provided via a single signalized driveway to Grand River Avenue aligned with the 2|42 Church Driveway. Additionally, a cross access connection is provided to the adjacent Genoa Business Park which provides access additional access to a STOP controlled driveway to Grand River Avenue. The existing access locations are not proposed to change as part of the development plans.

This addendum and the associated analyses have been completed in response to additional information provided by Genoa Township. The data and methodologies of the original TIS were implemented for the addendum analyses, except as indicated in this memorandum. Specifically, the analysis of no-build and build conditions were updated to include a 222-unit multi-family residential development located in the southeast quadrant of the Grand River Avenue & Dorr Road intersection.

The vehicle trips that would be generated by the multi-family residential development were assigned to the study intersections based on the TIS completed for the development by Rowe dated February, 2022. All other volume assumptions outlined in the original TIS remain the same; whereby the only change is the addition of traffic volumes generated by the multi-family development. The resulting revised no-build and build traffic volumes utilized in the addendum analysis are summarized on the attached **Figure 1** and **Figure 2**.

INTERSECTION CAPACITY ANALYSIS

An updated intersection analysis for no-build and build conditions with the multi-family residential development was performed for the AM and PM peak hours for all study intersections. This analysis was conducted based on the *Highway Capacity Manual, 6th Edition* methodologies outlined in the original report utilizing Synchro and SimTraffic, Version 11 traffic analysis software. The results of the revised no-build and build conditions analysis are summarized on the attached **Table 1** through **Table 4**.

The results of the revised no-build and build conditions analysis indicate that the additional traffic volumes from the proposed multi-family residential development would not have a significant impact on traffic operations at the study intersections. Changes in overall vehicle delay at the study intersections in the no-build and build conditions would be less than one second per vehicle, which is not significant. ***Therefore, the conclusions and recommendations from the original TIS remain acceptable and no additional improvements are necessary as a result of the additional traffic volumes from the proposed multi-family residential development project.***

Please direct any questions regarding this memorandum to Bergmann.

Attached: Tables 1-4
Figures 1-2
Synchro / SimTraffic Results

These attachments were removed from the packet to reduce the size. Please contact staff if you would like a copy. KV

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

July 15, 2022

Ms. Kelly VanMarter, AICP
Assistant Township Manager/Community Development Director
Genoa Township
2911 Dorr Road
Brighton, MI 48116

Dear Ms. VanMarter:

Thank you for your continued work and correspondence with Bergmann related to the proposed St. Joseph Mercy Brighton Health Center expansion project in Genoa Township, Livingston County, Michigan. We understand the Township has raised concerns related to operations of the egress movements from the St. Joseph Mercy Health drive approach to Grand River Avenue and we would like to offer the following information for your consideration.

A Traffic Impact Study (TIS) was completed by Bergmann for the subject project dated May, 2022. This study was completed in accordance with accepted traffic engineering practice and in accordance with the methodologies and practices published by ITE and the applicable requirements of LCRC, MDOT, and Genoa Township. All assumptions utilized in the study including study intersections, baseline traffic volumes, traffic growth projections, and trip generation forecasts and assignments were reviewed and approved by MDOT and LCRC.

As part of the study vehicle delays were calculated for all study intersections including the intersection of Grand River Avenue & St. Joseph Mercy Health / 2|42 Community Church drive. These delays were calculated in accordance with the methodologies presented in the *Highway Capacity Manual, 6th Edition (HCM6)* published by the Transportation Research Board (TRB) for the following three scenarios:

1. Existing Conditions: Traffic volumes that exist at the intersection today.
2. No-Build Conditions: Traffic volumes that will exist at the intersection in 2024 ***without the construction of the proposed St. Joseph Mercy Health expansion project***. Traffic volumes for this scenario were calculated by applying an annual traffic growth rate of 0.75% per year to the existing traffic volumes to the year 2024. Additionally, traffic volumes from the Versa Mixed-Use development project, Westbury Phase II residential project, Hilton Cove residential project, and U of M Brighton Diagnostic and Treatment Center were included.
3. Build Conditions: Traffic volumes that will exist at the intersection in 2024 ***with the construction of the proposed St. Joseph Mercy Health expansion project***. Traffic volumes for this scenario were calculated by forecasting the number of trips that will be generated by the proposed St. Joseph Mercy Health expansion and assigning them to the study intersections. These trips were then added to the no-build traffic volumes.

The calculated delay (in seconds per vehicle) and volume for the egress movements from the St. Joseph Mercy Health driveway to Grand River Avenue for existing, no-build, and build conditions are summarized in **Table 1**. This data indicates delays for the egress left-turn movement with the proposed development expansion are expected to increase by approximately four seconds during the AM peak hour and 15 seconds during the PM peak hour as compared to existing conditions; however, these future delays are acceptable per HCM standards.

Delays for the egress right-turn movement are expected to decrease in the future. This can be attributed to the traffic signal modernization at the intersection planned by the Livingston County Road Commission (LCRC). As part of this project, a left-turn phase will be installed for EB Grand River Avenue traffic turning left into the St. Joseph Mercy Health site. Additionally, an overlap phase will be provided for the egress right-turn movement from the site which will provide additional green time for this movement and subsequently reduce delays.

Review of network simulations also shows acceptable traffic operations for the St. Joseph Mercy Health drive approach during the peak hours. Vehicle queues are processed in each signal cycle while the higher volume Grand River Avenue movements are given preference for green time. Therefore, the delays experienced for the St. Joseph Mercy Health Drive approach are acceptable and no improvements are recommended.

Table 1: St. Joseph Mercy Health Drive Delays

Intersection	Control	Time Period	Scenario	SB Left-Turn		SB Right-Turn	
				Volume	Delay (s/veh)	Volume	Delay (s/veh)
Grand River Avenue & St. Joseph Mercy Health / 2|42 Church Drive	Signal	AM Peak	Existing	56	38.2	34	36.5
			No-Build	58	38.4	35	31.3
			Build	96	42.0	69	30.2
		PM Peak	Existing	135	38.5	75	33.9
			No-Build	140	41.9	78	31.8
			Build	211	53.6	141	29.2

We hope that this information provides adequate clarification to address the concerns of Genoa Township with specific regard to the Traffic Impact Study.

Sincerely,

Steven J. Russo

Steven J. Russo, PE
TRANSPORTATION ENGINEER, BERGMANN

Attached: HCM Results

BERGMANN
ARCHITECTS ENGINEERS PLANNERS

ST. JOSEPH MERCY BRIGHTON HEALTH CENTER EXPANSION

TRAFFIC IMPACT STUDY

Genoa Township, Michigan

Bergmann

Office: Midwest (Southfield)
29777 Telegraph Road, Suite 1640
Southfield, MI 48034

Phone: 248.663.1289

Email: srusso@bergmannpc.com
www.bergmannpc.com

ST. JOE'S
A Member of Trinity Health

March, 2022

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1.0 Executive Summary

This report presents the methodologies, analyses, results, and recommendations of a Traffic Impact Study (TIS) for the proposed St. Joseph Mercy Brighton Health Center expansion in Genoa Township, Livingston County, Michigan. The project site is located on the north side of Grand River Avenue ¾ miles northwest of Hacker Road and currently includes approximately 145,000 square feet (SF) of outpatient health services including primary care and specialty physicians, comprehensive diagnostic and testing services, emergency services, outpatient surgery, and cancer care. The purpose of this study is to identify the traffic related impacts, if any, of the proposed project on the adjacent road network. This study was conducted in accordance with accepted traffic engineering practice and guidelines published by the Institute of Transportation Engineers (ITE). Township Ordinance as well as Michigan Department of Transportation (MDOT) and Livingston County Road Commission (LCRC) standards were referenced as applicable.

The proposed development plans include construction of an approximately 150,000 square foot (SF) Hospital facility to accommodate 559 employees and 72 beds. This project is planned to be built out by 2024 and assumed to be fully occupied by that time for the purposes of this study. Access for the site is currently provided via a single signalized driveway to Grand River Avenue aligned with the 2|42 Church Driveway. Additionally, a cross access connection is provided to the adjacent Genoa Business Park which provides access additional access to a STOP controlled driveway to Grand River Avenue. The existing access locations are not proposed to change as part of the development plans. Traffic volumes that are expected to be generated by the development were forecast based on the rates and equations published by ITE in Trip Generation, as summarized below:

Land Use	ITE Code	Amount	Units	Average Daily Traffic	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Hospital	610	559	Employees	3,654	192	74	266	59	137	196

The Conclusions related to this Traffic Impact Study and relative analyses are as follows:

1. At the time of this study, traffic volumes throughout the State of Michigan were impacted by restrictions in place associated with the COVID pandemic. Therefore, historic turning movement count data collected between October, 2018 and November, 2019 was obtained and utilized to establish baseline traffic volumes.
2. All study intersection approaches and movements currently operate acceptably at a LOS D or better during both peak hours with the exception of the following:
    a. The NB right-turn movement at the signalized intersection of Grand River Avenue & Latson Road currently operates at a LOS E during the AM peak hour. During the PM peak hour, the NB left-turn movement operates at a LOS E while the WB right-turn movement and SB left-turn movement operate at a LOS F.
    b. The SB approach at the signalized intersection of Grand River Avenue & Dorr Road currently operates at a LOS E during the AM peak hour; however, the vehicle demand for this approach is only one vehicle. Therefore, preference for green time allocation is given to other movements at the intersection and the LOS E experienced is acceptable.
    c. The WB and SB left-turn movements at the signalized intersection of Grand River Avenue & Hilton Road currently operate at a LOS E or F during the peak hours. Additionally, the WB right-turn movement operates at a LOS E during the PM peak hour.
    d. The NB through movement at the signalized intersection of Grand River Avenue & WB I-96 Ramps currently operates at a LOS F during both peak hours. Additionally, the WB left-turn movement and right-turn movement operate at a LOS E during the AM and PM peak hours, respectively.

e. The STOP controlled left-turn movement from the EB I-96 off-ramp to Grand River Avenue operates at a LOS E or F during both peak hours. Additionally, the STOP controlled right-turn movement operates at a LOS E during the AM peak hour.

3. Ambient traffic growth of 0.75% was applied to establish 2024 no-build traffic volumes ***without the proposed development***. Several background developments were also identified in the study area and included in this study. Additionally, planned roadway improvements by MDOT and LCRC including construction of a DDI at the I-96 & Grand River Avenue interchange were included.
4. No-build (2024) conditions analyses indicate that several movements will experience degraded operations including the intersection of Grand River Avenue & Latson Road, and the left-turn movements from Latson Road to the EB and WB I-96 on-ramps. The planned DDI at the I-96 & Grand River Avenue interchange will result in improved operations for the interchange ramp terminal intersections and Hilton Road intersection.
5. Future build (2024) conditions analyses indicate that most study intersection approaches and movements will continue to operate acceptably; however, there are several locations with undesirable or failing conditions that are expected to worsen in the future if those movements operating at a LOS E or F are not improved under no-build conditions.
6. With the improvements outlined below, all study network intersections and site driveways will operate acceptably, or in a manner similar or improved compared to no-build conditions during the peak hours.

Based on the results of this study, the following should be considered to provide acceptable traffic operations due to existing deficiencies and other development projects, ***regardless of the proposed Hospital:***

1. Install permissive-protected left-turn phasing at the intersections of Latson Road with the EB and WB I-96 ramps.
2. Consider widening the Grand River Avenue & I-96 DDI crossover approaches to three lanes to increase available capacity for future growth and development.

Based on the results of this study, the following should be considered to provide acceptable traffic operations ***with all development projects, including the proposed Hospital:***

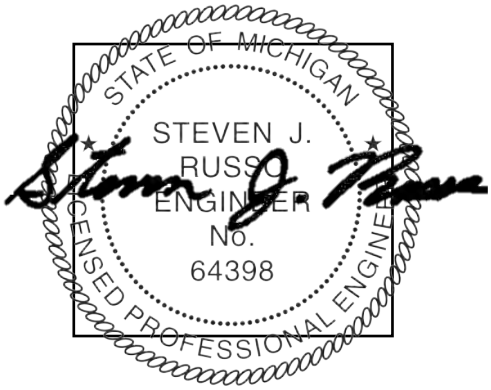
1. Optimize signal timings at the intersection of Grand River Avenue & Latson Road.

This report is intended for use by the Township, MDOT, and LCRC to guide decisions related to development project approvals, access permitting, and identifying future roadway improvement needs. The methodologies, analyses, results, and recommendations relevant to this study are described in detail herein. ***The opinions, findings, and conclusions expressed in this report are those of Bergmann and not necessarily those of the Owner, Genoa Township, MDOT, and/or LCRC.***

Prepared By:

Steven J. Russo, PE

Bergmann Associates



2.0 Project Overview

This report presents the methodologies, analyses, results, and recommendations of a Traffic Impact Study (TIS) for the proposed St. Joseph Mercy Brighton Health Center expansion in Genoa Township, Livingston County, Michigan. The project site is located on the north side of Grand River Avenue ¾ miles northwest of Hacker Road as shown on **Figure 1.** The existing facility includes approximately 145,000 square feet (SF) of outpatient health services including primary care and specialty physicians, comprehensive diagnostic and testing services, emergency services, outpatient surgery, and cancer care.

The proposed development plans include construction of an approximately 150,000 square foot (SF) Hospital facility to accommodate 559 employees and 72 beds. This project is planned to be built out by 2024 and assumed to be fully occupied by that time for the purposes of this study. Access for the site is currently provided via a single signalized driveway to Grand River Avenue aligned with the 2|42 Church Driveway. Additionally, a cross access connection is provided to the adjacent Genoa Business Park which provides access additional access to a STOP controlled driveway to Grand River Avenue. The existing access locations are not proposed to change as part of the development plans.

The study section of Grand River Avenue (I-96 BL) west of the WB I-96 off-ramp (Exit 141) and all I-96 ramp terminals are under the jurisdiction of the Michigan Department of Transportation (MDOT). All other study roadways are under the jurisdiction of the Livingston County Road Commission (LCRC). In accordance with LCRC standards a TIS is required for permitting of site access. Additionally, although no access is proposed to MDOT right-of-way, the potential impacts of the project at study intersections including the I-96 interchanges with Latson Road and Grand River Avenue may require MDOT involvement. The project is also subject to review by Genoa Township and their consultants through their site plan approval process.

The purpose of this study is to identify the traffic related impacts, if any, of the proposed project on the adjacent road network. This study therefore includes analysis of the existing site access points as well as key off-site intersections surrounding the site. Analysis of the site access points will determine appropriate lane configurations as well as traffic control to process site traffic safely and efficiently. Key off-site intersections were analyzed to determine if new site-generated traffic passing through these locations would require improvements to mitigate any impacted traffic operations.

The scope of this study was developed based on Bergmann's knowledge of the study area, understanding of the development program, accepted traffic engineering practice and information published by the Institute of Transportation Engineers (ITE). Additionally, Bergmann solicited input regarding the proposed scope of work from LCRC and MDOT. The study analyses were completed using Synchro and SimTraffic, Version 11 traffic analysis software and in accordance with the methodologies and practices published by ITE and the applicable requirements of LCRC, MDOT, and Genoa Township. This report is intended for use by LCRC, MDOT, and the Township to guide decisions related to development project approvals, access permitting, and identifying future roadway improvement needs.

PRELIMINARY WETLAND ANALYSIS APPENDIX II

SMITHGROUP

MEMORANDUM
www.smithgroup.com

PROJECT: Brighton Wetland Assessment

DATE: September 7, 2021

PROJECT NO.

PROJECT LOCATION: Brighton, MI

SUBJECT: Wetland Assessment

PREPARED BY: Neal Billetdeaux

The vacant property north of the St. Joseph Mercy Brighton Health Center was visited on the morning of September 7, 2021. The Michigan Department of Environment, Great Lakes and Energy (EGLE) Wetlands Mapper indicates wetlands are present on this property. The USDA Web Soil Survey indicates hydric soils are present on this property. The approximate location of the wetland boundaries observed is shown on the attached aerial photo.

The southern tip of the central wetland is an emergent wetland dominated by purple loosestrife (*Lythrum salicaria*) and glossy buckthorn (*Frangula alnus*). The vegetation in this area showed signs of being sprayed with an herbicide in the past as very little of the purple loosestrife had flowers and most of the glossy buckthorn was dead. Other plants observed included buttonbush (*Cephalanthus occidentalis*), wool grass (*Scirpus cyperinus*) and narrow-leaved cattail (*Typha angustifolia*). All the plants observed are indicators of wetland conditions. This area contained saturated soils, evidence of standing water and transitioned into an open water wetland with an emergent fringe to the north and east.

A swale with flowing water was observed connecting an open water wetland to the west of the central wetland. The swale was dominated by reed canary grass (*Phalaris arundinacea*) and narrow-leaved cattail.

It is anticipated that the central wetland would be considered jurisdictional under Part 303, Wetland Protection, of the Natural Resources and Environmental Protection Act because it is within 500' of an inland lake (to the east) that is greater than 5 acres in size. The open water wetland to the west would also be considered jurisdictional because it has a direct surface connection to the central wetland.

This wetland assessment was completed for planning purposes. A formal wetland delineation in accordance with EGLE procedures would be required to locate and survey the wetland boundaries if more accurate information is required.

201 Depot Street, 2nd Floor, Ann Arbor, MI 48104 T 734.662.4457 F 734.662.0779

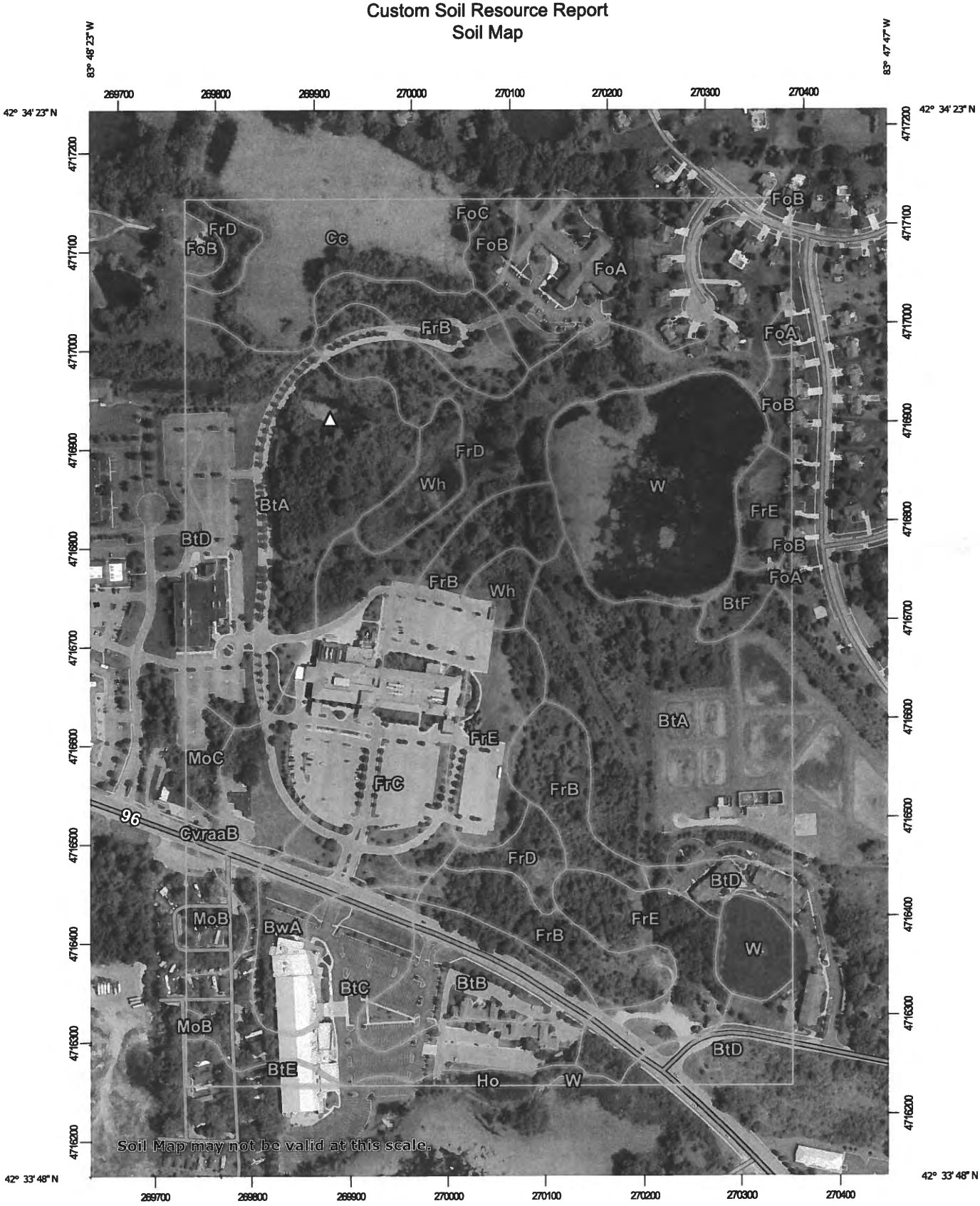
West Wetland
Swale
Central Wetland
Approximate wetland boundaries
Wetland boundary could be here; hard to tell on aerial photo
North
Brighton Wetland Assessment
September 7, 2021

Department of Environment, Great Lakes, and Energy
Wetlands Map Viewer

Part 303 Final Wetlands Inventory

- Wetlands as identified on NWI and MIRIS maps
- Soil areas which include wetland soils
- Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils

USDA Web Soil Survey
Custom Soil Resource Report
Soil Map



Map Scale: 1:5,250 if printed on A portrait (8.5" x 11") sheet.

Meters: 0 50 100 200 300

Feet: 0 250 500 1000 1500

N

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

TITLE SEARCH APPENDIX III

INFORMATIONAL TITLE REPORT

SCHEDULE A

1. **Effective Date**: November 24, 2021, 8:00 AM

2. **Fee Simple interest in the land described in this commitment is owned, at the commitment date by:** Mercy Health Services, a Michigan non-profit corporation, and Trinity Continuing Care Services, a Michigan non-profit corporation, as their interests appear of record

3. **The land referred to in this Commitment is described as follows:**

   Land situated in the Township of Genoa in the County of Livingston in the State of MI

   (See Attached Exhibit A - Legal Description)

   Client Reference: 7575 Grand River Genoa, MI 48114

This report contains information from public land records available in the county indicated above for whose accuracy and completeness we assume no responsibility. This report is released with the understanding that it is strictly confidential and only to be used by the party requesting it. This report is not to be construed as an opinion of title or as a commitment for title insurance. For matters of a legal nature, we suggest you contact your attorney. The liability of *Amrock, LLC* is limited to the amount paid for this report. *Amrock, LLC* assumes no liability, financial or otherwise, in association with the information in this report.

Issued By: Amrock, LLC
662 Woodward Ave.
Detroit, MI 48226
Phone: (800) 594-1044
Questions? Contact:

Fax:
Email:
Website: www.amrock.com

SCHEDULE B - Part I
(Requirements)

1. **This report is for informational purposes only.**

2. **TAXES:** 4711-13-200-009

TAX INFORMATION
GENOA TOWNSHIP
2911 DORR RD, BRIGHTON, MI 48116
(810) 227-5225

Property Tax ID: 4711-13-200-009
Tax Type: Summer
Tax Year: 2021
Next Bill Date: 07/01/2022
Duplicate Bill Fee: $0.00
Payment Frequency: ANNUAL

Paid/Due	Due Date	Delinquent Date	Amount	Amount Paid	Remaining Balance
Paid	07/01/2021	09/15/2021	$0.00	$0.00	None
Comments:					

TAX INFORMATION
GENOA TOWNSHIP
2911 DORR RD, BRIGHTON, MI 48116
(810) 227-5225

Property Tax ID: 4711-13-200-009
Tax Type: Winter
Tax Year: 2021
Next Bill Date: 12/01/2022
Duplicate Bill Fee: $0.00
Payment Frequency: ANNUAL

Paid/Due	Due Date	Delinquent Date	Amount	Amount Paid	Remaining Balance
Paid	12/01/2021	03/01/2022	$0.00	$0.00	None
Comments:					

SCHEDULE B - PART II
(Exceptions)

If a Policy of Policies are requested, Schedule B of the policy or policies to be issued will contain exceptions to the following matters unless the same are disposed of to the satisfaction of the Company:

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I - Requirements are met.

2. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land.

3. Rights or claims of parties in possession not shown by the Public Records.

4. Easements or claims of easements not shown by the Public Records.

5. Any lien or rights to lien for services, labor or material, heretofore or hereafter furnished, imposed by law and not shown by the Public Records.

6. Taxes and assessments that have become a lien against the property but are not yet due and payable. The Company assumes no liability for tax increases occasioned by retroactive revaluation, changes in the land usage or loss of any exemption status for the insured premises.

7. Release of Right of Way granted to the Board of County Road Commissioners of the County of Livingston, State of Michigan, recorded January 20, 1925 in Liber 153, Page 81.

8. Right of Way Agreement - Overhead - S/L Individual granted to The Detroit Edison Company, recorded April 5, 1984 in Liber 1090, Page 40.

9. Easement granted to Michigan Bell Telephone Company recorded October 17, 1994 in Liber 1872, Page 809.

10. Detroit Edison Overhead Easement (Right of Way), granted to The Detroit Edison Company, recorded February 22, 2000 in Liber 2728, Page 875.

11. Permanent Utility Easement granted to the Township of Genoa, recorded July 27, 2000 in Liber 2803, Page 165.

12. Ground Lease between Trinity Health - Michigan, a Michigan nonprofit corporation, doing business as Mercy Health Services ("Lessor"), and Village at Brighton, L.L.C., a Michigan limited liability company ("Lessee"), dated February 1, 2001 and recorded February 15, 2001 in Liber 2910, Page 668.

13. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 724.

14. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 731.

15. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 739.

16. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Access and Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 746.

17. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 754.

18. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 775.

19. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Access and Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 782.

20. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 789.

21. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 796.

22. Non-Exclusive Easement, Right-of-Way and Maintenance Agreement (Utilities), in favor of the Village at Brighton, L.L.C., a Michigan limited liability company, recorded February 15, 2001 in Liber 2910, Page 804.

23. Mortgage executed by Village at Brighton, L.L.C., a Michigan limited liability company, to U.S. Bank Trust National Association, a national banking association organized and existing under the laws of the United States of America ("Bond Trustee"), and Fannie Mae, a federally-chartered and stockholder-owned corporation organized and exiting under the Federal National Mortgage Association Charter Act, 12 U.S.C. § 1716, et seq., as a beneficiary, in the principal amount of $12,270,000.00, dated February 1, 2001 and recorded February 15, 2001 in Liber 2910, Page 811. Assignment by and among Michigan Strategic Fund (the "Issuer"), a Michigan corporation, U.S. Bank Trust National Association (together with any successor trustee, the "Trustee"), a national banking association, not in its individual or corporate capacity, but solely as trustee, to Fannie Mae, a corporation organized and existing under the Federal National Mortgage Association Charter Act, 12 U.S.C. § 1716 et seq., as amended, Glaser Financial Group, Inc. (the "Loan Servicer"), a Minnesota corporation, and Village at Brighton, L.L.C. (the "Borrower"), a Michigan limited liability company, dated February 1, 2001 and recorded February 15, 2001 in Liber 2911, Page 9.

24. Financing Statement between Village at Brighton, L.L.C., as Debtor, and Comerica Bank, as Secured Party, recorded February 15, 2001 in Liber 2910, Page 925. Continuations recorded September 9, 2005 in Liber 4907, Page 880; recorded October 12, 2010 in Instrument No. 2010R-027470; recorded September 25, 2020 in Instrument No. 2020R-033666.

25. Mortgage executed by Village at Brighton, L.L.C., a Michigan corporation, to Glaser Financial Group, Inc., a Minnesota corporation, in the principal amount of $12,270,000.00, dated February 1, 2001 and recorded February 15, 2001 in Liber 2910, Page 933. Said Mortgage was assigned from Glaser Financial Group, Inc., a Minnesota corporation, to Fannie Mae by Assignment of Mortgage dated February 1, 2001 and recorded February 15, 2001 in Liber 2911, Page 2. Assignment by and among Michigan Strategic Fund (the "Issuer"), a Michigan corporation, U.S. Bank Trust National Association (together with any successor trustee, the "Trustee"), a national banking association, not in its individual or corporate capacity, but solely as trustee, to Fannie Mae, a corporation organized and existing under the Federal National Mortgage Association Charter Act, 12 U.S.C. § 1716 et seq., as amended, Glaser Financial Group, Inc. (the "Loan Servicer"), a Minnesota corporation, and Village at Brighton, L.L.C. (the "Borrower"), a Michigan limited liability company, dated February 1, 2001 and recorded February 15, 2001 in Liber 2911, Page 9.

26. Detroit Edison Overhead Easement (Right of Way), granted to The Detroit Edison Company recorded June 26, 2001 in Liber 3032, Page 336.

27. Permanent Utility Easement granted to the Township of Genoa recorded May 3, 2006 in Instrument No. 2006R-001225.

28. Amendment to Planned Unit Development Agreement recorded January 16, 2019 in Instrument No. 2019R-001392.

29. Notice: Please be aware that due to the conflict between federal and state laws concerning the cultivation, distribution, manufacture or sale of marijuana, the Company is not able to close or insure any transaction involving Land that is associated with these activities.

30. Loss or damage sustained as a result of the failure to have the tax assessed legal description reassessed to accurately describe the land insured herein.

31. Rights of tenants now in possession of the land under unrecorded leases or otherwise.

32. Rights of the public and any governmental unit in any part of the land taken, deeded or used for street, road or highway purposes.

33. Rights of the public and adjoining riparian owners in any part of subject property lying beneath the waters of unnamed bodies of water.

34. Any adverse claim based on the assertion that the bed of unnamed bodies of water have changed location as a result of other than natural causes.

35. Any adverse claim that a portion of subject premises has been created by artificial means or has accretion to such portion so created.

36. Interest of others in oil, gas and mineral rights, if any, whether or not recorded in the Public Records.

37. Interest, if any, of the United States, State of Michigan, or any political subdivision thereof, in the oil, gas and minerals in and under and that may be produced from the captioned Land.

NOTE: Any map/plat that is furnished is only an aid in locating the herein described Land in relation to adjoining streets, natural boundaries and other land, and is not a survey of the land depicted. Except to the extent a policy of title insurance is expressly modified by endorsement, if any, the Company does not insure dimensions, distances, location of easements, acreage or other matters shown thereon.

NOTE: This report and any policy issued pursuant hereto omits any covenant, condition or restriction based on race, color, religion, age, sex, handicap, familial status or national origin, unless and only to the extent that the restriction is not in violation of state or federal law, or relates to a handicap, but does not discriminate against handicapped people.

EXHIBIT A - LEGAL DESCRIPTION

Tax Id Number(s): 4711-13-200-009

Land situated in the Township of Genoa, Livingston County, State of Michigan, more particularly described as:

A part of the West 1/2 of the Northeast 1/4 and part of the West 1/2 of the Southeast 1/4, Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Beginning at the North 1/4 corner of said Section 13; thence South 87° 58' 14" East along the North line of said Section 1348.27 feet; thence South 00° 14' 31" West 2496.64 feet; thence South 89° 15' 27" West 7.47 feet; thence South 00° 44' 33" East 92.85 feet; thence North 88° 07' 15" West 38.78 feet; thence South 00° 44' 33" East 250.00 feet to the centerline of Bendix Road; thence South 76° 18' 59" East along said centerline 41.48 feet; thence South 00° 14' 31" West 129.69 feet to the centerline of Grand River Avenue; thence along said centerline on an arc left, having a length of 1095.39 feet, a radius of 3404.83 feet, a central angle of 18° 26' 19" and a chord which bears North 59° 55' 42" West 1090.67 feet; thence continuing along said centerline North 69° 08' 51" West 419.11 feet to the North-South 1/4 line of said Section; thence North 00° 01' 00" East along said 1/4 line 2329.81 feet to the point of beginning. EXCEPTING THEREFROM, part of the Northeast 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Commencing at the Northeast corner of said Section 13; thence along the North line of said Section, using the North 1/4 corner of said Section 13, as set by Boss Engineering, North 87° 58' 25" West 1348.43 feet (recorded by Boss Engineering as North 87° 58' 14" West 1348.27 feet) to the point of beginning of the land to be described; thence along a line previously surveyed and monumented by Boss Engineering, South 00° 14' 31" West 0.22 feet to a found 1/2" iron rod and cap; thence continuing along said line South 00° 14' 31" West 762.97 feet to a set iron rod on the Northerly water's edge of a pond; thence perpendicular to the previous line, North 89° 45' 29" West 6.54 feet to a set iron rod in said pond; thence along a line delineated by a found Clay Gordon iron to the South and a point on the North, called for in a survey by George H. Ruhling and Company, Registered Civil Engineers of Detroit, Michigan, for John F. Linehan, dated June 21, 1927 and having Job Number 399, North 00° 10' 44" East 8.08 feet to a set iron rod on the Northerly water's edge of said pond; thence continuing along said line North 00° 10' 44" East 755.51 feet to a point on the North Section line of said Section, that is 1355.60 feet West of the Northeast corner of said Section 13 and called for in the Ruhling survey drawing; thence South 87° 58' 25" East 7.38 feet along the North line of said Section to the point of beginning.

Client Reference: 7575 Grand River, Genoa, MI 48114

Exhibit A

Tax Id Number(s): 4711-13-200-009

Land situated in the Township of Genoa, Livingston County, State of Michigan, more particularly described as:

A part of the West 1/2 of the Northeast 1/4 and part of the West 1/2 of the Southeast 1/4, Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Beginning at the North 1/4 corner of said Section 13; thence South 87° 58' 14" East along the North line of said Section 1348.27 feet; thence South 00° 14' 31" West 2496.64 feet; thence South 89° 15' 27" West 7.47 feet; thence South 00° 44' 33" East 92.85 feet; thence North 88° 07' 15" West 38.78 feet; thence South 00° 44' 33" East 250.00 feet to the centerline of Bendix Road; thence South 76° 18' 59" East along said centerline 41.48 feet; thence South 00° 14' 31" West 129.69 feet to the centerline of Grand River Avenue; thence along said centerline on an arc left, having a length of 1095.39 feet, a radius of 3404.83 feet, a central angle of 18° 26' 19" and a chord which bears North 59° 55' 42" West 1090.67 feet; thence continuing along said centerline North 69° 08' 51" West 419.11 feet to the North-South 1/4 line of said Section; thence North 00° 01' 00" East along said 1/4 line 2329.81 feet to the point of beginning. EXCEPTING THEREFROM, part of the Northeast 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Commencing at the Northeast corner of said Section 13; thence along the North line of said Section, using the North 1/4 corner of said Section 13, as set by Boss Engineering, North 87° 58' 25" West 1348.43 feet (recorded by Boss Engineering as North 87° 58' 14" West 1348.27 feet) to the point of beginning of the land to be described; thence along a line previously surveyed and monumented by Boss Engineering, South 00° 14' 31" West 0.22 feet to a found 1/2" iron rod and cap; thence continuing along said line South 00° 14' 31" West 762.97 feet to a set iron rod on the Northerly water's edge of a pond; thence perpendicular to the previous line, North 89° 45' 29" West 6.54 feet to a set iron rod in said pond; thence along a line delineated by a found Clay Gordon iron to the South and a point on the North, called for in a survey by George H. Ruhling and Company, Registered Civil Engineers of Detroit, Michigan, for John F. Linehan, dated June 21, 1927 and having Job Number 399, North 00° 10' 44" East 8.08 feet to a set iron rod on the Northerly water's edge of said pond; thence continuing along said line North 00° 10' 44" East 755.51 feet to a point on the North Section line of said Section, that is 1355.60 feet West of the Northeast corner of said Section 13 and called for in the Ruhling survey drawing; thence South 87° 58' 25" East 7.38 feet along the North line of said Section to the point of beginning.

Client Reference: 7575 Grand River, Genoa, MI 48114

Trinity Health

Brighton Project

Genoa Township Update

August 8, 2022

SJM BRIGHTON

GENOA TOWNSHIP
PLANNING COMMISSION PRESENTATION UPDATE

08/08/2022

SMITHGROUP

COMMENTS FROM GENOA TOWNSHIP MEETING OF JULY 11, 2022

- Traffic study, vehicle load, site egress
- Detention and storm sewer design
- Wetland permit status - EGLE
- Fire access lane width now shown on construction documents
- Building height clarified
- Material codes on Sheet A4.1.1
- Rendering of view from Grand River Ave
- Enclosure at loading dock
- Revised PUD language

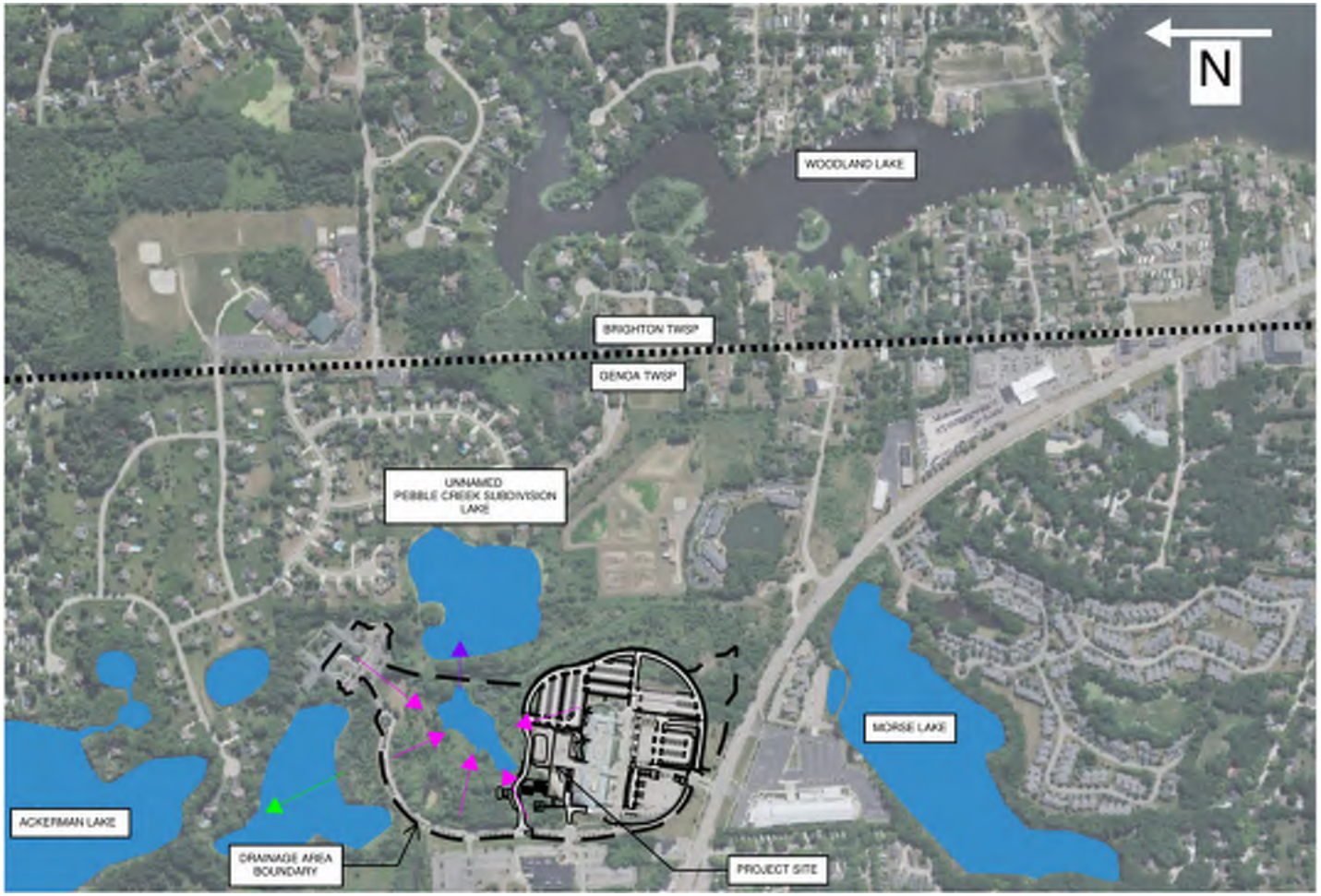
TRAFFIC STUDY

- **No additional improvements are necessary** as a result of the additional traffic volumes from the proposed multi-family residential development project
- Conclusions and recommendations from the original TIS remain acceptable

Intersection	Control	Time Period	Scenario	SB Left		SB Right	
				Volume	Delay (s/veh)	Volume	Delay (s/veh)
Grand River Avenue & St. Joseph Mercy Health / 2|42 Church Drive	Signal	AM Peak	Existing	56	38.2	34	36.5
			No-Build	58	38.4	35	31.3
			Build	96	42.0	69	30.2
		PM Peak	Existing	135	38.5	75	33.9
			No-Build	140	41.9	78	31.8
			Build	211	53.6	141	29.2

EXISTING AREA SITE PLAN

- **Improves Stormwater Management**
- Wetland boundary defined by existing site draining to localized detention pond
- Brighton Township defers to Livingston County Drain Commission (LCDC) for Stormwater Review (Email from Brighton Twp provided to Genoa Township)
- No direct discharge from unnamed Pebble Creek subdivision lake to Woodland Lake. Groundwater movement directed to unnamed lake.



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FEMA FLOOD MAP

- Unnamed Pebble Creek lake not within 100-year floodplain

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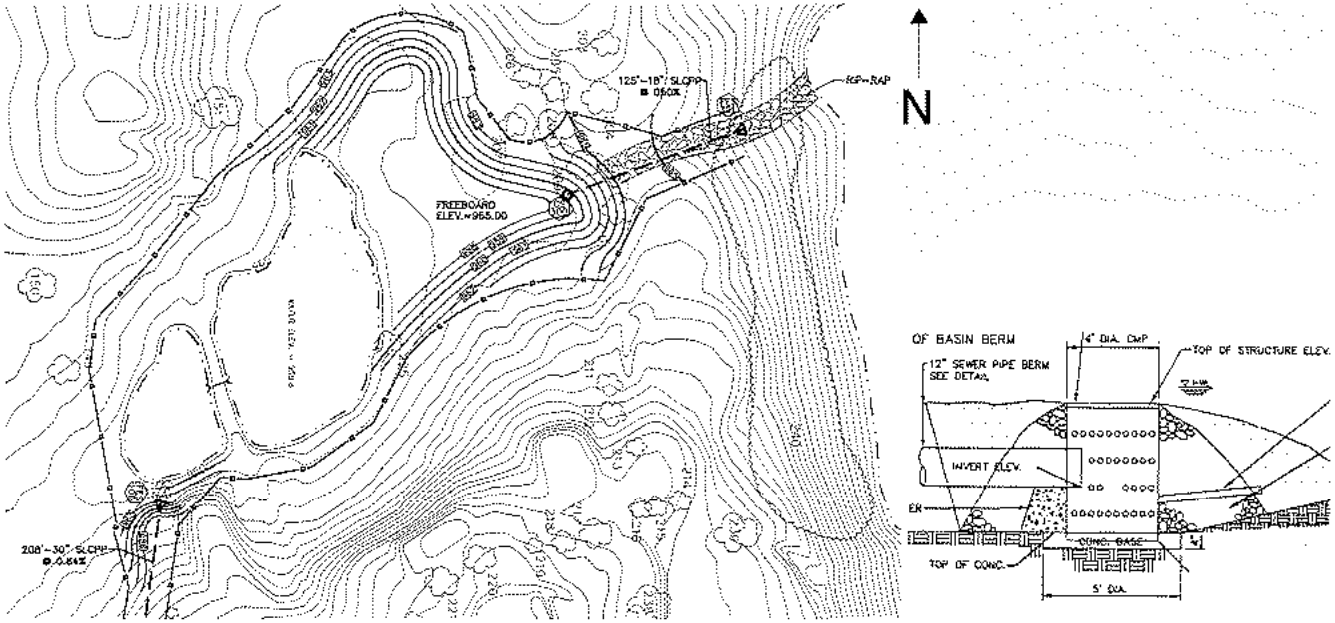
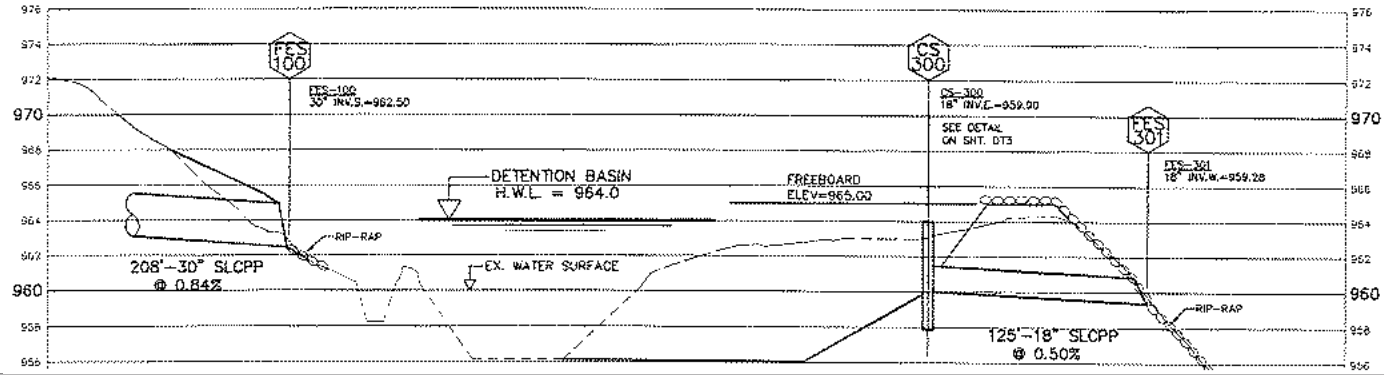
RECORD DRAWINGS

- 1999 Record Drawings of Mercy Health Services: Brighton Ambulatory Health Center
- History of drainage pattern: Golf course water hazard to detention pond
- Outlet control structure: Perforated pipe prone to clogging. Design water surface elevation (WSE): 959.9
- Current state of outlet control structure.
- Current extent of wetland formed at 961.5.





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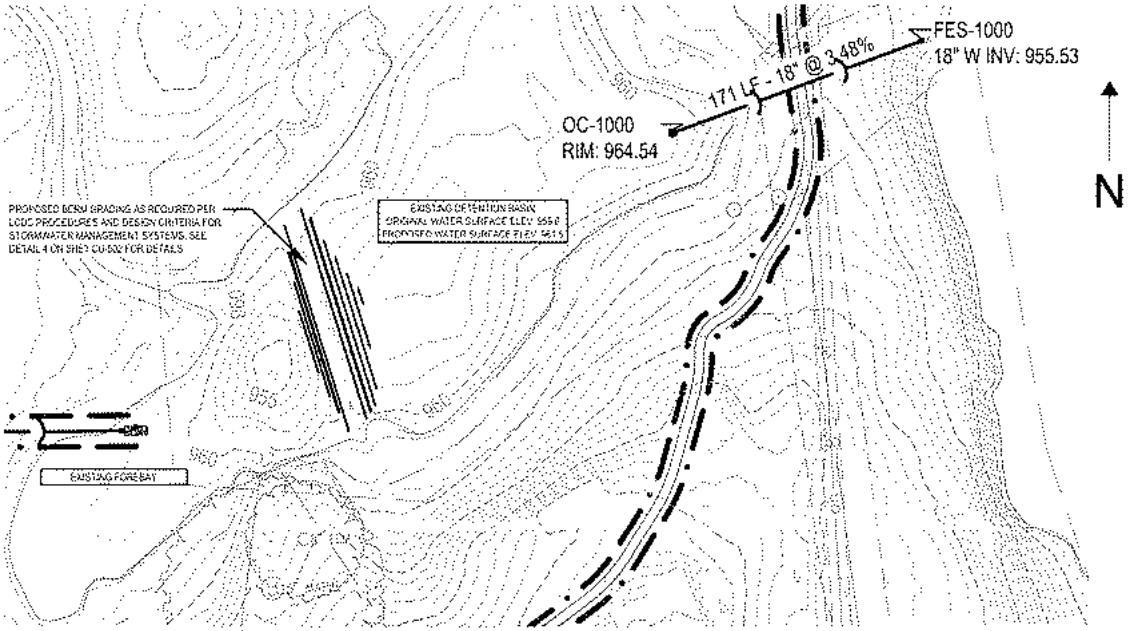
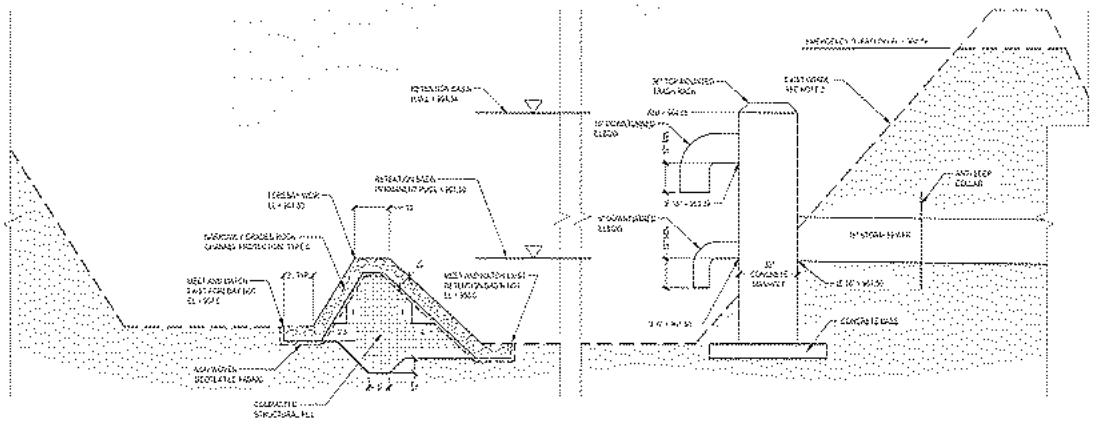
PROPOSED IMPROVEMENTS

- To minimize wetland impacts, detention pond will maintain existing WSE of 961.5.
- Utilized new LCDC Procedures and Design Criteria for Stormwater Management Systems, Adopted March 2022
- Proposed Improvements: Berm regrading to separate forebay and detention pond, replacement of outlet control structure and pipe, and providing bioretention.
- Requirement is to treat the increase in impervious cover due to new improvements (4.8 acres). Proposed stormwater improvements treats the impervious cover of the entire site, existing and proposed (20 acres), up to new LCDC peak rate requirements.
- Also, due to downstream limitations, Livingston County has required enhanced peak control of the 100-year storm: 0.15 CFS/ACRE vs 0.346 CFS/ACRE. Our site provides 0.13 CFS/ACRE.
- Bioretention ponds provide infiltration for new impervious surfaces. Volume of runoff leaving the site will remain the same as pre-development conditions.





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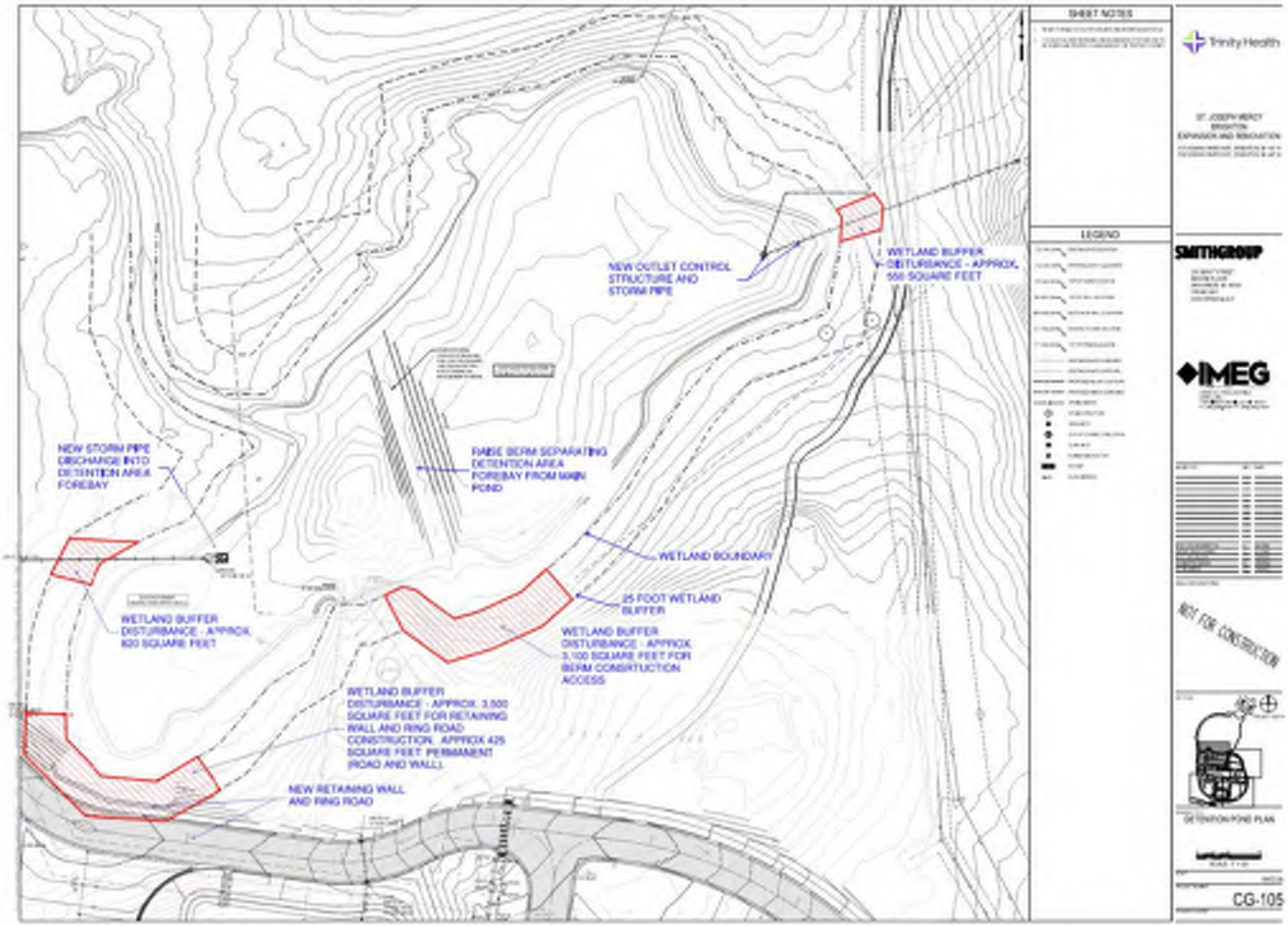
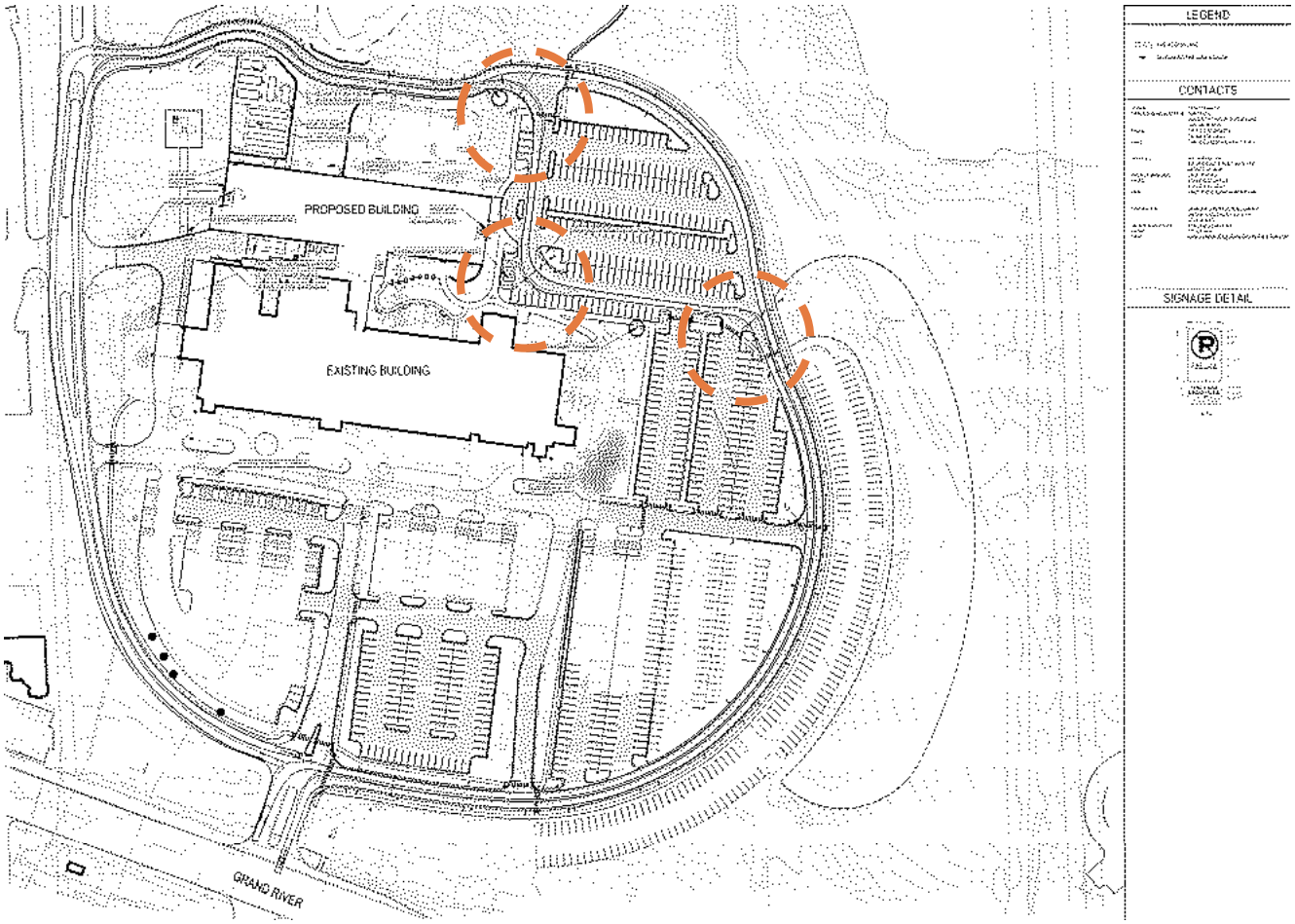
WETLANDS

- EGLE permitting underway
- Maintaining existing wetland habitat at water's edge
- Minor reconfiguration of pond with berm construction
- Wetlands buffer zone minimally impacted

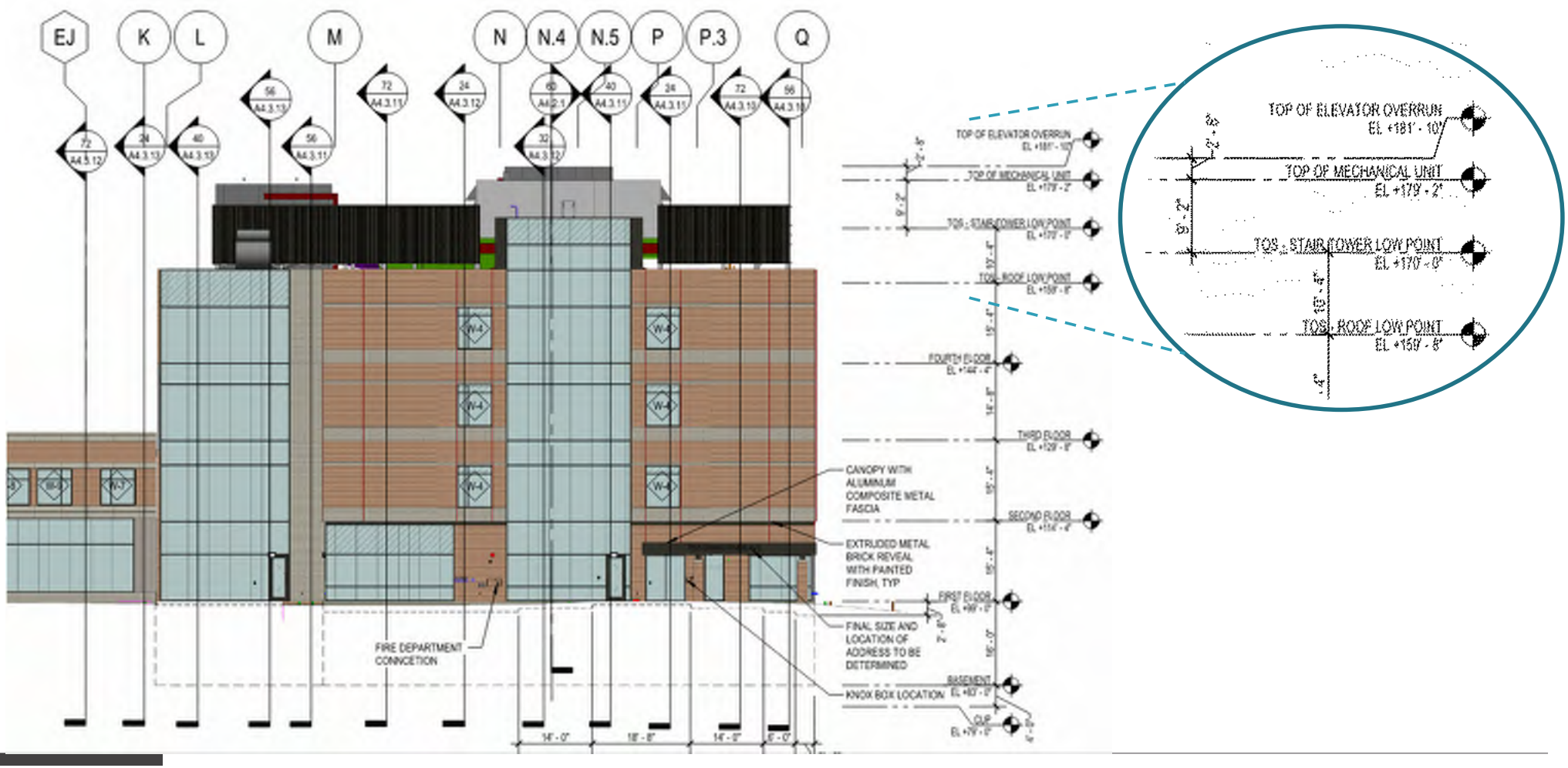


FIRE ACCESS LANE UPDATES NOW INCORPORATED ON DRAWINGS

- Three lanes in the northeast corner of the site (two right turns and one left turn) have been widened to nearly double the width reviewed by BAFA.
- Changes are incorporated in construction documents.



EXTERIOR ELEVATION INDICATING BUILDING HEIGHT



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VIEW LOOKING NORTHWEST

GRAND RIVER VIEW LOOKING NORTHEAST

GRAND RIVER VIEW LOOKING NORTHWEST

COURTYARD AERIAL

COURTYARD LOOKING NORTH

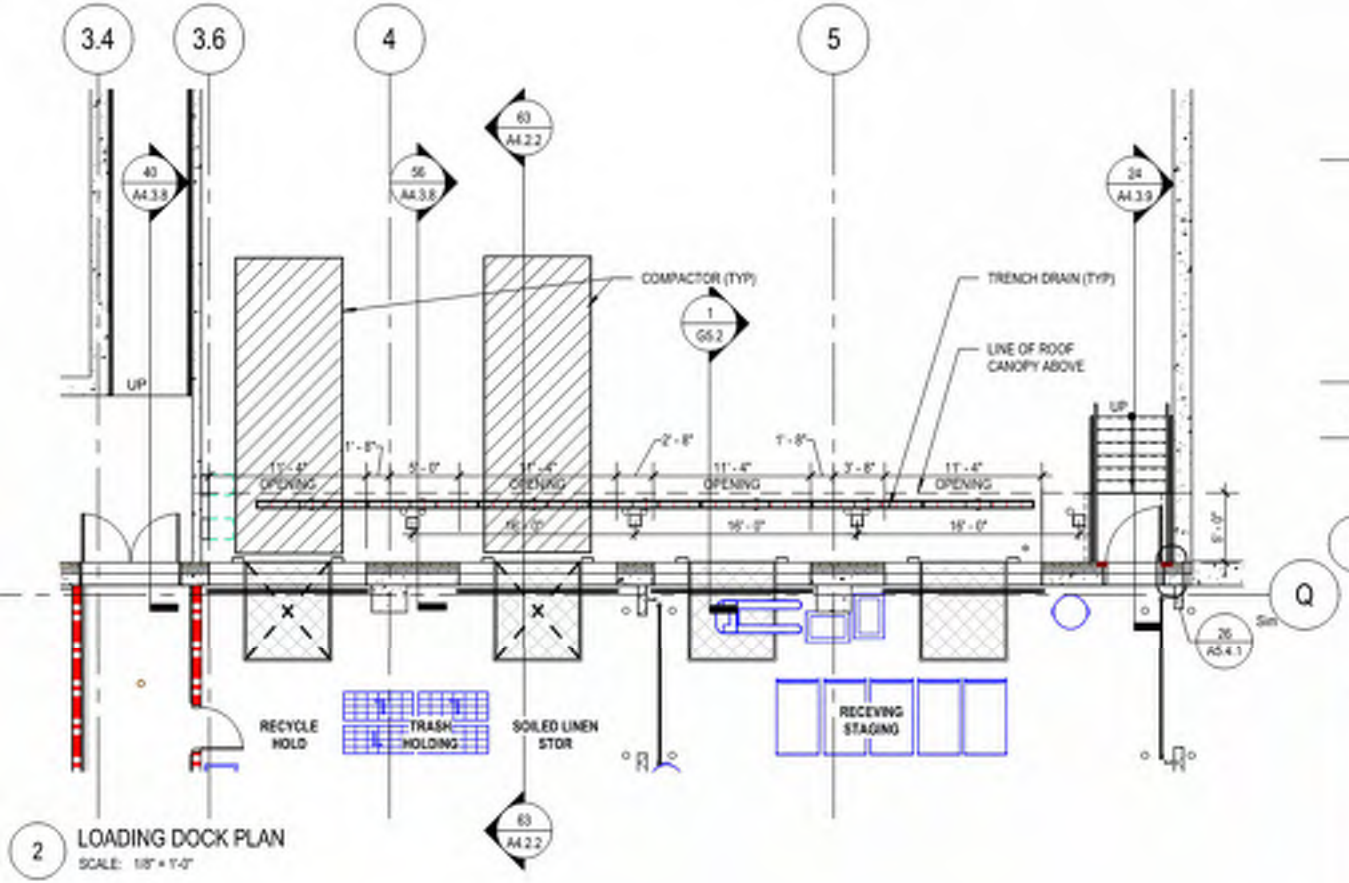
COURTYARD

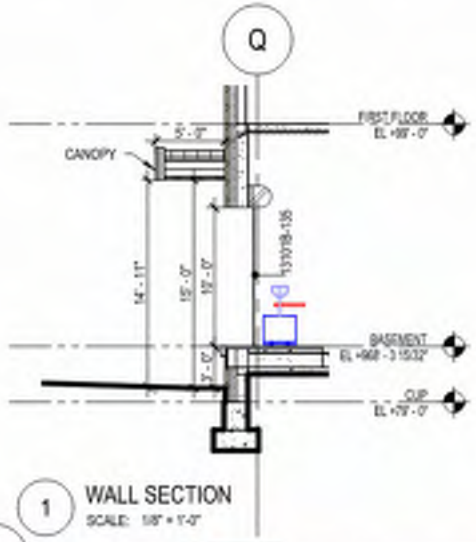
NORTH ELEVATION LOOKING SOUTHWEST

NORTH ELEVATION

NORTH ELEVATION

REFUSE CONTAINER AND DOCK PLAN





NORTH ELEVATION LOOKING SOUTHEAST

DETAIL OF COMMENTS FROM PREVIOUS MEETING

- **Address questions regarding traffic study, vehicle load, and site egress.**
  - Refer to clarification letter by traffic engineer, submitted to Genoa Township on July 20, 2022, and addendum dated August 1, 2022.
  - Regarding additional traffic volumes anticipated from the Dorr/Grand River apartment development

- **If a wetland permit is required, approval should be obtained from EGLE for any proposed work within the wetlands and for using the wetlands for detention. This approval should be provided prior to site plan approval.**
  - EGLE permitting for work within the wetland areas is underway.
  - Wetlands buffer addressed in PUD.

- **Fire lane adjustments**
  - The parking layout has been adjusted to accommodate apparatus truck circulation without entering opposing travel lanes.
  - Drawing of widened lanes were submitted to Genoa Township on July 20, 2022, and is included in this slide deck.

- **Detention and storm sewer calculations, including structure sizing, should be included as part of the site plan submittal.**
  - Updated detention and storm sewer calculations have been submitted to Livingston County Drain Commission.
  - Clarified that pond does not drain directly into Woodland Lake.
  - Overview of area drainage is provided in this slide deck.
  - Brighton Township has no jurisdiction. Defers to LCDC.

- **Further clarify extent of enclosure at loading dock.**
  - Views of loading dock and utility yard are provided and are included in this slide deck.

- **Material codes are on Sheet A4.1.1. Construction documents coordinated and submitted to Genoa Township.**
  - The GRAPHIC LEGEND and EXTERIOR MATERIAL LEGEND shown on sheet A4.1.1 should be used for referencing the exterior materials.

- **View from street to building, looking over the existing facility. Submitted and Included in slide deck.**

- **Revised PUD language that addresses items discussed in the meeting of July 11, 2022, has been submitted to Genoa Township.**
  - Building height, A4.1.1, (Item 5), signage, parking, compactor enclosure.

SMITHGROUP

MEMORANDUM

www.smithgroup.com

PROJECT	St. Joseph Mercy Brighton Expansion and Renovation	DATE	8/17/2022
PROJECT NO.	13472.000		
PROJECT LOCATION	Genoa Township, Michigan		
SUBJECT	Livingston County Drain Commission (LCDC) Stormwater Review Comments No. 2, August 5, 2022		
PREPARED BY	C. Pozolo, M. Campos, T. Vandermuss		

Below please find responses to the Livingston County Drain Commission Stormwater Review comments included in the letter dated August 5, 2022, from Kenneth E. Recker, II, PE, Chief Deputy Drain Commissioner, Livingston County Drain Commission, to Mr. Michael Campos, PE, Senior Civil Engineer, SmithGroup.

These responses were derived from an online meeting discussion with these attendees, held August 17, 2022:

Kenneth E. Recker, II, P.E.	Chief Deputy Drain Commissioner
Paul Lewsley	Environmental Engineers
Dave Raymond	Trinity / St. Joseph Mercy Brighton
Tiffany Spano	Trinity / St. Joseph Mercy Brighton
Ryan Snellenberger	Granger Construction Company
Sharon Ruonavaara	Granger Construction Company
Cindy Pozolo	SmithGroup
Dino Lekas	SmithGroup
Michael Campos	SmithGroup
Tony Vandermuss	SmithGroup

- Complete letter is attached to this Memorandum.
- Excerpted comments are below.
- *Responses and meeting notes are typed in italics.*

1.) Site Topographic Survey – The Topographic Survey should show the existing detention basin outlet structure and discharge pipe together with complete pipe size, rim and invert information. Any existing overflow spillway should also be shown, along with its crest elevation.
Response: SSI was contracted by Granger Construction Company to survey existing pond bathemetry and associated outlet infrastructure. That survey information is referenced in SmithGroup construction documents (CDs). Reviewer requested that survey of existing spillway be provided, and that preferred strategy is that top of outlet not be over the spillway.
Post Meeting Note: Based on unknown condition and capacity of existing spillway, a new spillway is to be constructed to achieve proper elevation, capacity, and adjusted pathway required by PUD.
Rework of existing spillway cannot ensure compliance. Revised spillway plan and details is included in package being resubmitted to LCDC.

2.) Drainage Area Plan – There are additional site areas to the north and east of the Village Center, and to the north and west of its access road, which should be included in the existing detention basin's tributary area. The following additional drainage area related items should also be addressed on the plans:
Response: P. Lewsly noted that existing LCDC plans show that much of the runoff is going into the water detention storage area on Trinity property. There are many areas along the main driveway where adjoining property is higher than curb line so those areas must be counted along with other inlets. The design team will revise the contributing areas to include the additional areas noted by P. Lewsley.

- *Design team evaluated the northeast quadrant of the building drains, up and around the new construction.*
- *Design team noted that this information was not noted in the first review.*
  P. Lewsley noted that they did not have all the information that they have now.
- *T. Vandermuss noted that the entire site -- not just the project area -- will be increased to new standards. Design Team noted that, if recalculated tributary loads exceed pond capacity, the recalculated volume could be adjusted to apply the new March 2022 guidelines to* only *the project area. Reviewers reiterated intent to review to newest criteria.*

K. Recker of LCDC raised new topic related to an adjacent tributary area. He advised that the region was not developed with an overall stormwater drainage plan and overall drainage outlet suitable to the level of ongoing development. Ackerman Lake does not have a surface drainage outlet and that water migrates/discharges into the ground. It probably discharges into the pond of which Trinity is now partial owner.

- *If Ackerman Lake property owners request an outlet then LCDC would have to request an easement through Trinity property.*
- *Dave Raymond noted that the intent is to be good neighbors and agreed that the issues could be addressed in the future. Reviewers agreed that such a consideration and easement is not within the scope of this project.*

a.) More existing contour labels should be shown on Sheet CG-101 to help clarify the existing drainage patterns.
Response: SmithGroup to add contour labels to CG-101 where larger scale plans or additional drawing do not provide sufficient annotations to clarify.

b.) The notes indicating the tributary area and "C" value of each drainage area on Sheet CG-101 should include the number of the corresponding drainage structure. In some areas, it is currently difficult to determine which information applies to which structure. I suggest presenting this information in tabular format for the purpose of clarity.
Response: SmithGroup to clarify tributary areas in tabular form.

c.) Drainage area information should be shown for the proposed catch basins located at south end of the existing parking lot expansion which are to connect to the existing storm sewer flowing around the west side of the building.
After P. Lewsley advised that he was referring to the very south end of the site,
T. Vandermuss clarified that the design directs *that area into a manhole. P. Lewsley noted that additional pipes also must be accounted for.*
Response: SmithGroup will add these pipes to the conveyance calculations and tabular data.

d.) The bioretention tributary area plans provided in the project stormwater narrative should be included on the Construction Plans.
Response: SmithGroup to organize the structure data tables to be specific to each receiving body on CG-101, such that the contributing area to each bioretention basin and the forebay can be easily identified.

3.) Stormwater Detention/Infiltration – The tributary area and runoff coefficient used in the detention basin design calculations should be revised to include the previously mentioned additional site areas draining to the basin. The weighted average "C" value calculations should be added on Sheet CU-502 of the plans. The following additional stormwater detention/infiltration related items should also be addressed on the plans.
Response: SmithGroup will add the C-value calculations to the CDs versus in the narrative where it is currently noted.

a.) The required forebay volume must be stored above the outlet elevation. To accomplish this, the top of proposed separation berm should be raised to approximately Elevation 963.0. An outlet control structure and an overflow spillway should be provided between the forebay and the detention basin. The orifice design for this outlet structure should be based on the same discharge rate used to control the extended detention volume discharge from the detention basin.

Response: Based on the revised tributary load and calculation, SmithGroup will submit revised CDs that indicate a higher berm elevation and include a forebay outlet control device.

b.) The currently proposed 100-year storm orifice design will result in a discharge exceeding the 0.15 CFS/acre maximum allowable rate. The full hydraulic head, rather than the average head, should be used when designing the 100-year storm outlet control.
Response: SmithGroup will submit revised calculations and tabular data using the average head for Extended Detention orifice sizing and the total head for 100-year orifice sizing calculations. These updates will be included in the revised CD set.

c.) Plan and profile views of the proposed detention basin outlet should be included in the plans. The outlet pipe should discharge within 2 feet of the downstream water surface to minimize the potential for erosion.
Response: Refer to detailed response in Item No. 1.) of this report. Outlet pipe location will be relocated to be 2 feet from the downstream water surface and along a different alignment from the spillway. A profile is included in the resubmitted CDs.

d.) A rip-rap lined detention basin overflow spillway, capable of conveying the 10-year storm flow should be provided, if one does not currently exist.
Response: Refer to detailed response in Item No. 1.) of this report. A new spillway will be placed along the alignment of the existing spillway.

e.) The proposed West Bioretention Area grading should be shown on Sheet CG-102. Its outlet control structure invert elevation must be lower than the FES-700 inlet invert elevation.
Response: SmithGroup to resubmit CDs, already updated to show additional information requested.

f.) The Bioretention Detail provided on Sheet CU-502 should specify the proposed bottom area, bottom elevation and complete outlet structure information for each of the bioretention areas. This information can be provided in tabular form and should include the outlet control structure diameter, which should be no less than 3 feet, its rim and invert elevations and its outlet pipe diameter.
Response: T. Vandermuss noted that minimum areas are included on plan. SmithGroup will add the information to the detail too. Tables will be adjusted to include diameter in plan
P. Lewsley requested that all overflows be 36" minimum diameter in accordance with updated requirements, for ease of future cleanup. Project would need to add 4' manhole to north bioretention basin to comply with 36" minimum design requirement to be outlined in future design criteria. *T. Vandermuss noted that assumed access was from manhole 600. Noting that this is a private system, LCDC suggested final direction be set by Trinity, the property owner. After collaborative analysis of engineering intent, volume, depth, constructability and serviceability, resubmitted CDs will include 30" overflows at each bioretention basin, as directed by Trinity.*

4.) Storm Sewer – Full design information and calculations should be provided for the proposed storm sewer located at the south end of the existing parking lot expansion shown connecting to existing CB-123. The complete storm sewer design calculations should be added to the Construction Plans. The following additional storm sewer related items should also be addressed on the plans:

a.) The storm sewer plans and profiles should specify the diameter and type of casting for each drainage structure.
Response: SmithGroup was requested to add a table to the drawings. Already indicated on CG-100 which will resubmitted.

b.) The storm sewer pipe 0.8 points should be matched when the proposed pipe size changes at drainage structures.
Response: Upon clarifying nomenclature of 0.8 points and 'matching crowns', SmithGroup advised that there are some locations where cover cannot be met without matching inverts instead of crowns. SmithGroup to confirm 0.8 points relative to final design. Submit final CDs with notation that addresses comment.

c.) The proposed loading dock trench drain detailed on Sheet CU-502 should be shown on Sheet CG-102, together with its grate and invert elevations.

Response: SmithGroup will include IMEG consultant's drawing(s) in next submittal and show the lower elevation trench drain on CG-102. .

d.) The proposed rip-rap aprons should be indicated on the storm sewer profiles at all the discharge end sections. The apron detail provided on Sheet CU-502 should be revised to specify no less than 10 square yards of rip- rap.
Response: SmithGroup will add riprap to the profiles and add a note to the detail referring to the 10 sy minimum requirement.

e.) The proposed drainage structure locations should be clearly defined using road stationing with offsets or a project coordinate system. If coordinates are used for this purpose, they should also be provided for the property corners.
Response: SmithGroup to add northing and easting as required.

f.) Proposed FES-600 should be shifted to the west to provide 12" minimum cover over the top of the pipe.
Response: SmithGroup will shift and resubmit revised CDs.

5.) Site Grading – The proposed grading surrounding the loading dock area should be clarified on the plans. Currently, there appears to be an undrained low area to the west of the loading dock ramp and a four foot drop in building finished floor grade. The proposed retaining wall north of the loading dock area should be labeled and extended as necessary to meet the existing ground
Response: SmithGroup will resubmit CDs with loading dock information and associated grading, already included in drawings.

Additional Meeting Notes:

6.) *As discussed during the call of August 17, 2022, in compliance with requirements identified during that call, SmithGroup will submit revised documents to address additional criteria clarified during the call, the request from LCDC to include all documentation on drawings (no narrative required), additional information added to the tabular data already provided, and additional documents that incorporate or clarify referenced tributary stormwater loads.*

7.) *Also discussed during the call was the critical timing of the resubmittal by SmithGroup and review by LCDC. The Genoa Township Planning Commission has conditionally recommended this project for approval by Genoa Township Trustees, pending comprehensive resubmittal of record documents and approval of stormwater design by LCDC.*

a.) Trinity Health and SmithGroup understand that LCDC will provide a preliminary review of the revised packet upon resubmittal.

b.) SmithGroup intends resubmittal on August 26, 2022.

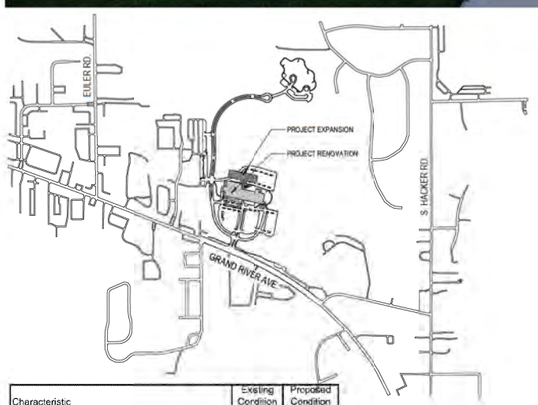
c.) Genoa Township Planning Commission request comprehensive resubmittal by August 31, 2022. SmithGroup understands that record documents shall include approved stormwater design and suggests that a more attenable date for resubmittal is between September 3-6, after review and feedback by LCDC. Sequencing to be finalized pending preliminary LCDC review.

d.) Genoa Township Trustee meeting is scheduled for September 19, 2022.

Distribution: Please forward within your organization and its consultants as appropriate.

Kenneth E. Recker, II	Chief Deputy Drain Commissioner
Kelly VanMarter	Genoa Twp. Community Development Director
Amy Ruthig	Genoa Township Zoning Official
Paul Lewsley	Environmental Engineers
Jenifer Kern	Genoa Township (MHOG) Shelby Byrne, TetraTech
Dave Raymond	Trinity/St. Joseph Mercy Brighton
Tiffany Spano	Trinity/St. Joseph Mercy Brighton
Tom Tocco	Trinity/St. Joseph Mercy Brighton
Richard Sundquist	Clark Hill
Ryan Snellenberger	Granger Construction Company
Sharon Ruonavaara	Granger Construction Company
Ann Kenyon	SmithGroup
Cindy Pozolo	SmithGroup
Dino Lekas	SmithGroup
John Kretschman	SmithGroup
Michael Campos	SmithGroup
Tony Vandermuss	SmithGroup
Jerry Vogt	SmithGroup

St. Joseph Mercy Brighton Expansion and Renovation



Characteristic	Existing Condition	Proposed Condition
Total Development Area (ac)	43.25	43.25
Impervious Area (ac)	16.42	20.75
Pervious Area (ac)	26.82	22.50
Pervious Area Breakdown by Cover Type		
Meadow/fallow/natural areas (non-cultivated)	7.92	7.12
Predominant NRCS Soil Type (A, B, C, or D)	C	C
Improved Areas (turf grass, landscape, row crops)	11.00	11.92
Predominant NRCS Soil Type (A, B, C, or D)	C	C
Wooded Areas	7.91	3.46
Predominant NRCS Soil Type (A, B, C, or D)	C	C
CPVC Volume Calculated (cubic feet)		21,495
CPVC Volume Provided (cubic feet)		23,638
CPRC Volume Provided (cubic feet)		187,733

The Professional Engineer who signs and seals this site plan certifies that the values in this table reflect the WRC stormwater calculations required for this development and that geotechnical investigations were performed that provide conclusive documentation that demonstrates whether infiltration (i.e., CPVC Volume Control) is practicable.

7575 Grand River Ave., Brighton, Michigan 48114
7555 Grand River Ave., Brighton, Michigan 48114

Trinity Health-Michigan/ Saint Joseph Mercy Health System

1600 South Canton Center Road
Canton, MI 48155
https://www.stjoeshealth.org/

Clinet Contact:
Stephen VanBrussel
Saint Joseph Mercy Health System
Regional Director of Construction
36475 Five Mile Road
Livonia, MI 48154
stephen.vanbrussel@stjoeshealth.org

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VOLUME I OF II

ISSUED FOR:
SITE PLAN RESUBMITTAL R4

ISSUE DATE:
SEPTEMBER 16, 2022

SG PROJECT #: 13472.000

IMEG PROJECT #: 21006742.00

Plot Date: 9/16/2022 10:21:15 PM

PROJECT SHEET INDEX

08_ARCHITECTURAL

SHEET NUMBER	SHEET NAME

09_INTERIORS

SHEET NUMBER	SHEET NAME

10_FOOD SERVICE

SHEET NUMBER	SHEET NAME

10_MEDICAL EQUIPMENT

SHEET NUMBER	SHEET NAME

08_ARCHITECTURAL

SHEET NUMBER	SHEET NAME

07_STRUCTURAL

SHEET NUMBER	SHEET NAME

08_ARCHITECTURAL

SHEET NUMBER	SHEET NAME
ARCHITECTURAL	
A2.0	BASEMENT COMPOSITE PLAN
A2.0.D	BASEMENT FLOOR PLAN - AREA D
A2.0.E	BASEMENT FLOOR PLAN - AREA E
A2.1	FIRST FLOOR COMPOSITE PLAN
A2.1.A	FIRST FLOOR PLAN - AREA A
A2.1.B	FIRST FLOOR PLAN - AREA B
A2.1.D	FIRST FLOOR PLAN - AREA D
A2.1.E	FIRST FLOOR PLAN - AREA E
A2.2	SECOND FLOOR COMPOSITE PLAN
A2.2.A	SECOND FLOOR PLAN - AREA A
A2.2.D	SECOND FLOOR PLAN - AREA D
A2.2.E	SECOND FLOOR PLAN - AREA E
A2.3	THIRD FLOOR COMPOSITE PLAN
A2.3.D	THIRD FLOOR PLAN - AREA D
A2.3.E	THIRD FLOOR PLAN - AREA E
A2.4	FOURTH FLOOR COMPOSITE PLAN
A2.4.D	FOURTH FLOOR PLAN - AREA D
A2.4.E	FOURTH FLOOR PLAN - AREA E
A2.5	ROOF PLAN - COMPOSITE PLAN
A2.5.D	ROOF PLAN - AREA D
A2.5.E	ROOF PLAN - AREA E
A4.1.1	EXTERIOR BUILDING ELEVATIONS & EXTERIOR FINISH SCHEDULE
A4.1.2	EXTERIOR BUILDING ELEVATIONS

00_GENERAL

SHEET NUMBER	SHEET NAME
GENERAL	
G0.0-'	PROJECT COVER SHEET
G0.1	PROJECT SHEET INDEX
G0.2	PROJECT SHEET INDEX
G1.2	EXTERIOR RENDERINGS

00_LIFE SAFETY

SHEET NUMBER	SHEET NAME

03_SURVEY

SHEET NUMBER	SHEET NAME
CIVIL	
CV-100	SITE SURVEY AND EXISTING ZONING
CV-200	SITE SOILS
CV-300	TREE IMPACTS
V.0.1	SURVEY COVER SHEET
V.1.1	TOPOGRAPHIC SURVEY DETAIL
V.1.2	TOPOGRAPHIC SURVEY DETAIL
V.1.3	TOPOGRAPHIC SURVEY DETAIL
V.1.4	TOPOGRAPHIC SURVEY DETAIL
V.1.5	TOPOGRAPHIC SURVEY DETAIL
V.1.6	TOPOGRAPHIC SURVEY DETAIL
V.1.7	TOPOGRAPHIC SURVEY DETAIL
V.1.8	TOPOGRAPHIC SURVEY DETAIL
V.1.9	TOPOGRAPHIC SURVEY DETAIL

05_CIVIL

SHEET NUMBER	SHEET NAME
CIVIL	
CE-100	SOIL EROSION AND SEDIMENT CONTROL PLAN
CE-200	PHASING PLAN
CE-500	SOIL EROSION AND SEDIMENT CONTROL DETAILS
CD-1.0	SITE DEMOLITION PLAN
CD-1.0	SITE DEMOLITION PLAN
CD-4.0	UTILITY DEMOLITION PLAN
CD-4.0	UTILITY DEMOLITION PLAN
CS-100	SITE PLAN
CS-101	SITE PLAN
CS-102	SITE PLAN
CS-103	SITE PLAN
CS-106	SITE PLAN
CS-200	FIRE DEPARTMENT ACCESS PLAN
CS-400	SITE ENLARGEMENTS
CS-401	SITE ENLARGEMENTS
CS-500	SITE DETAILS
CS-501	SITE DETAILS
CS-502	SITE DETAILS
CS-503	SITE DETAILS
CS-504	SITE DETAILS
CS-505	SITE DETAILS
CS-506	SITE DETAILS
CS-507	SITE DETAILS
CG-1.0	OVERALL GRADING AND STORM PLAN
CG-1.0	DRAINAGE AREA PLAN
CG-1.2	GRADING AND STORM PLAN
CG-1.3	GRADING AND STORM PLAN
CG-1.4	GRADING AND STORM PLAN
CG-1.5	GRADING AND STORM PLAN
CG-2.0	ROAD PROFILES
CG-2.0 E	DETENTION POND PLAN
CG-2.0	ROAD PROFILES
CU-1.0	OVERALL WATER AND SANITARY PLAN
CU-1.0	WATER AND SANITARY PLAN
CU-1.2	WATER AND SANITARY PLAN
CU-1.3	WATER AND SANITARY PLAN
CU-1.4	WATER AND SANITARY PLAN
CU-1.5	WATER AND SANITARY PLAN
CU-2.0	LIGHTING AND PHOTOMETRIC PLAN
CU-3.0	STORM SEWER PROFILES
CU-3.0	STORM SEWER PROFILES
CU-3.0	STORM SEWER PROFILES
CU-3.0	STORM SEWER PROFILES
CU-3.0	SANITARY SEWER PROFILES
CU-5.0	UTILITY DETAILS
CU-5.0	UTILITY DETAILS
CU-5.2	UTILITY DETAILS
CU-5.0	UTILITY DETAILS
CU-5.0	UTILITY DETAILS
CU-5.0	UTILITY DETAILS
CU-5.0	UTILITY DETAILS

06_LANDSCAPE

SHEET NUMBER	SHEET NAME
LANDSCAPE	
LP-100	LANDSCAPE PLAN
LP-400	LANDSCAPE ENLARGEMENTS
LP-500	LANDSCAPE DETAILS

Trinity Health

ST. JOSEPH MERCY
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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	M	16SEP2022
PROGRESS PRINT	L	16SEP2022
LCDC RESUBMITTAL R4	K	13SEP2022
BP1 BULLETIN 1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	25JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

SHEET TITLE
PROJECT SHEET INDEX

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
G0.4.1

Plot Date: 9/18/2022 10:21:16 PM

START Sheet

Plot Date: 9/18/2022 10:21:16 PM

PROJECT SHEET INDEX

17_TECHNOLOGY

SHEET NUMBER	SHEET NAME

15_ELECTRICAL

SHEET NUMBER	SHEET NAME

11_FIRE PROTECTION

SHEET NUMBER	SHEET NAME

12_PLUMBING

SHEET NUMBER	SHEET NAME
PLUMBING	
P0.0-SD	UNDERFLOOR - PLUMBING - AREA D

18_FALL PROTECTION

SHEET NUMBER	SHEET NAME

14_MECHANICAL

SHEET NUMBER	SHEET NAME

19_HELISTOP

SHEET NUMBER	SHEET NAME

20_VENDOR (FOR REFERENCE)

SHEET NUMBER	SHEET NAME

Trinity Health

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BRIGHTON
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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
LCDC RESUBMITTAL R4	E	13SEP2022
LCDC RESUBMITTAL R3	D	06SEP2022
LCDC RESUBMITTAL R2	C	26AUG2022
BID PACK 1	B	29JUL2022
DESIGN DEVELOPMENT	A	21JUN22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

SHEET TITLE
PROJECT SHEET INDEX

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
G0.2

Plot Date: 9/18/2022 10:21:16 PM

START Sheet

Plot Date: 9/18/2022 10:21:16 PM

Trinity Health

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	D	16SEP2022
SITE PLAN RESUBMITTAL REV 3	C	20JUL2022
SITE PLAN RESUBMITTAL	B	22JUN22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

SHEET TITLE
EXTERIOR RENDERINGS

SG PROJECT #: 13472.000
IMEG PROJECT #: 210006742.00

PROJECT NUMBER

SHEET NUMBER
G1.2

Plot Date: 9/18/2022 10:21:20 PM

Author
Plot Date: 9/18/2022 10:21:20 PM

BOUNDARY SURVEY

PART OF THE WEST 1/2 OF THE NORTHEAST QUARTER OF SECTION 13, T2N, R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

SCALE 1" = 150'

NOTES

1. HORIZONTAL DATUM IS ACCORDING TO MICHIGAN STATE PLANE GRID COORDINATES, SOUTH ZONE (2113), GEOID 2018, INTERNATIONAL FEET AS LINEAR UNIT OF MEASURE.
2. AT THE TIME OF SURVEY, SCHEDULE B TITLE EXCEPTION NO. 8, (TIE EASEMENT, RECORDED IN L.1096, P.40, L.C.R., LACKS THE REFERENCE DRAWING NOTED IN THE AGREEMENT (DWG NO. 45-2403), WHICH IS REQUIRED TO CONFIRM THE LOCATION OF SAID EASEMENT. SITE PLANNING WAS CONTACTED DEC 15, 2021, JAN. 6, 2022, JAN 26, 2022 – AWAITING RESPONSE.

   THE RECORD EASEMENT FOLLOWS OVERHEAD LINES AND IGNY WIRES. IN AN EFFORT TO DISPLAY POTENTIAL IMPACT OF THE EASEMENT, THE PRESCRIBED EASEMENT WIDTH HAS BEEN ASSIGNED TO SITE OVERHEAD LINES THAT APPEAR ON PROVIDED SITE UTILITY RECORDS THAT WERE NOT ALREADY ADDRESSED WITH OTHER RECORDED SITE EASEMENTS CONTAINED IN THE PROVIDED TITLE WORK. THERE IS NO CERTAINTY THAT THESE ARE THE SAME OVERHEAD LINES REFERENCED IN THE MISSING REFERENCE DRAWING.

RECORDED DOCUMENTS

- MDOT ROW MAP, TEE NO. 47-6-2, FRDU, NO. 47092, SHEET NO. 80
- RELEASE OF RIGHT-OF-WAY, OCT. 8, 1924, RECORDED IN L.153, P.81, L.C.R.
- L.C.R.C. #299 CORNERS L-5 & L-6, DATED SEPT. 29, 1981
- L.C.R.C. #363m CORNER L-5, DATED NOV. 14, 1994
- L.C.R.C. CORNER M-06, DATED DEC. 29, 2020, INSTRUMENT NO. 2020CR-0013, L.C.R.
- L.C.R.C. #364m CORNER M-05 DATED NOV. 16, 1994
- BOUNDARY SURVEY – BOSS ENG. CO., JOB NO. 81113, DATED JUNE 25, 1981
- BOUNDARY SURVEY – BOSS ENG. CO., JOB NO. 90006, DATED FEB. 9, 1990
- BOUNDARY SURVEY – BENTON LAND SURVEYS, JOB NO. 87-5-4646, DATED JUNE 1987
- BOUNDARY SURVEY – BOSS ENG. CO, JOB NO. 87516, DATED DEC. 7, 1987
- BOUNDARY SURVEY – DESINE INC., JOB NO. 01-10-13-83150, DATED JULY 1, 1994, RECORDED IN L.2047, P.97, L.C.R.
- "GENOA ONE CONDOMINIUM" REPLAT NO. 2 OF LIVINGSTON COUNTY CONDOMINIUM SUBDIVISION PLAN NO. 275, MASTER DEED RECORDED IN L.5002, P.603, L.C.R.
- "BIRKENSTOCK FARMS", RECD IN L.30 OF PLATS, P.48-52, INCLUSIVE, L.C.R.
- "PEBBLE CREEK" RECD IN L.37 OF PLATS, P.30-36, INCLUSIVE, L.C.R.
- AMROCK TITLE SEARCH, ORDER NO. 2000125006, DATED NOVEMBER 24, 2021.

RECORD LEGAL DESCRIPTION:

Land situated in the Township of Genoa, Livingston County, State of Michigan, more particularly described as:

A part of the West 1/2 of the northeast 1/4 and part of the West 1/2 of the Southeast 1/4 Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Beginning at the North 1/4 corner of said Section 13; thence South 87° 58' 14" East along the North line of said Section 1348.27 feet; thence South 00° 16' 31" West 2496.84 feet; thence South 89° 15' 27" West 7.47 feet; thence South 00° 44' 33" East 92.65 feet; thence North 88° 07' 15" West 38.78 feet; thence South 00° 44' 33" East 250.00 feet to the centerline of Bendix Road; thence South 76° 18' 59" East along said centerline 41.48 feet; thence South 00° 14' 31" West 173.69 feet to the centerline of Grand River Avenue; thence along said centerline on an arc left, having a length of 1060.39 feet, a radius of 3404.83 feet, a central angle of 18° 26' 19" and a chord which bears North 59° 55' 42" West 1056.67 feet; thence continuing along said centerline North 69° 08' 57" West 419.11 feet to the North-South 1/4 line of said Section; thence North 00° 01' 00" East along east 1/4 line 2329.81 feet to the point of beginning. EXCEPTING THEREFROM, part of the Northeast 1/4 of Section 13, Town 2 North, Range 5 East, Genoa Township, Livingston County, Michigan, described as follows: Commencing at the Northeast corner of said Section 13; thence along the North line of said Section, using the North 1/4 corner of said Section 13, as set by Boss Engineering, North 87° 58' 25" West 1348.43 feet (recorded by Boss Engineering as North 87° 58' 14" West 1348.27 feet) to the point of beginning of the land to be described; thence along a line previously surveyed and monumented by Boss Engineering, South 00° 14' 31" West 0.22 feet to a found 1/2" iron rod and cap; thence continuing along said line South 00° 14' 31" West 792.97 feet to a set iron rod on the Northerly water's edge of a pond; thence perpendicular to the previous line, North 89° 45' 29" West 6.54 feet to a set iron rod in said pond; thence along a line delineated by a found Clay Garden iron to the South and a point on the North, called for in a survey by George H. Ruhling and Company, Registered Civil Engineers of Detroit, Michigan, for John F. Leahan, dated June 21, 1927 and having Job Number 386, North 00° 02' 44" East 8.08 feet to a set iron rod on the Northerly water's edge of said pond; thence continuing along said line North 00° 02' 44" East 755.51 feet to a point on the North Section line of said Section, that is 1355.60 feet West of the Northwest corner of said Section 13 and called for in the Ruhling survey drawing; thence South 87° 58' 25" East 7.38 feet along the North line of said Section to the point of beginning.

AS-SURVEYED LEGAL DESCRIPTION:

BEGINNING at the North 1/4 corner of Section 13, T02N, R05E, Township of Genoa, Livingston County, Michigan; thence N89°24'13"E 1341.18 feet along the North line of said Section 13 also part of the South line of "Birkenstock Farms" as recorded in Liber 30 of Plats, Page 48-52, inclusive, Livingston County Records; thence the following three courses along the line established by Circuit Court Consent Judgement dated March 23, 1987, File # CZ 84-23972CZ, (1) S02°26'41"E 763.54 feet along the West line of "Pebble Creek" as recorded in Liber 37 of Plats, Pages 30-36, inclusive, Livingston County Records, and the Southerly extension thereof; (2) N87°58'28"E 6.57 feet; (3) S02°20'37"E 1733.54 feet; thence S88°35'20"W 7.47 feet; thence S03°19'49"E 92.41 feet; thence S89°15'40"W 38.78 feet; thence S03°17'06"E 176.42, thence N89°58'42"W 1402.31 feet along the Northerly Right-of-Way line of Grand River Avenue (variable width) as defined in the Release of Right-of-Way recorded in Liber 153 of Deeds, Page 81, Livingston County Records; thence N02°36'45"W 2272.71 feet along the North-South 1/4 of said Section 13 and the East line of "Genoa One Condominium" Replat No. 2 of Livingston County Condominium Subdivision Plan No. 275, Master Deed recorded in Liber 5002, Page 603, Livingston County Records to the Point of Beginning, being part a part of the Northeast 1/4 of said section 13 containing 77.59 acres of land, more or less, being subject to any terms, conditions, or restrictions of record, if any.

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

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33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2600 F: 248.344.1650

ISSUED FOR:	REV.	DATE:
SITE PLAN RESUBMITTAL R4	J	16SEP2022
LCDE RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
3D PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE:
SITE SURVEY AND EXISTING ZONING

SCALE: 1" = 150'

SCALE

PROJECT NUMBER: 13472.00

DRAWING NUMBER: CV-100

WETLAND AND SOIL SURVEY

PART OF THE WEST 1/2 OF THE NORTHEAST QUARTER OF SECTION 13,
T2N, R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

WORKING WETLAND BOUNDARY NOTE:

THE VACANT PROPERTY NORTH OF THE ST. JOSEPH MERCY BRIGHTON HEALTH CENTER WAS VISITED ON THE MORNING OF SEPTEMBER 7, 2021. THE MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES AND ENERGY (EGLE) WETLANDS MAPPER INDICATES WETLANDS ARE PRESENT ON THIS PROPERTY. THE USDA WEB SOIL SURVEY INDICATES HYDRIC SOILS ARE PRESENT ON THIS PROPERTY. THE APPROXIMATE LOCATION OF THE WETLAND BOUNDARIES OBSERVED IS SHOWN ON THE AERIAL PHOTO.

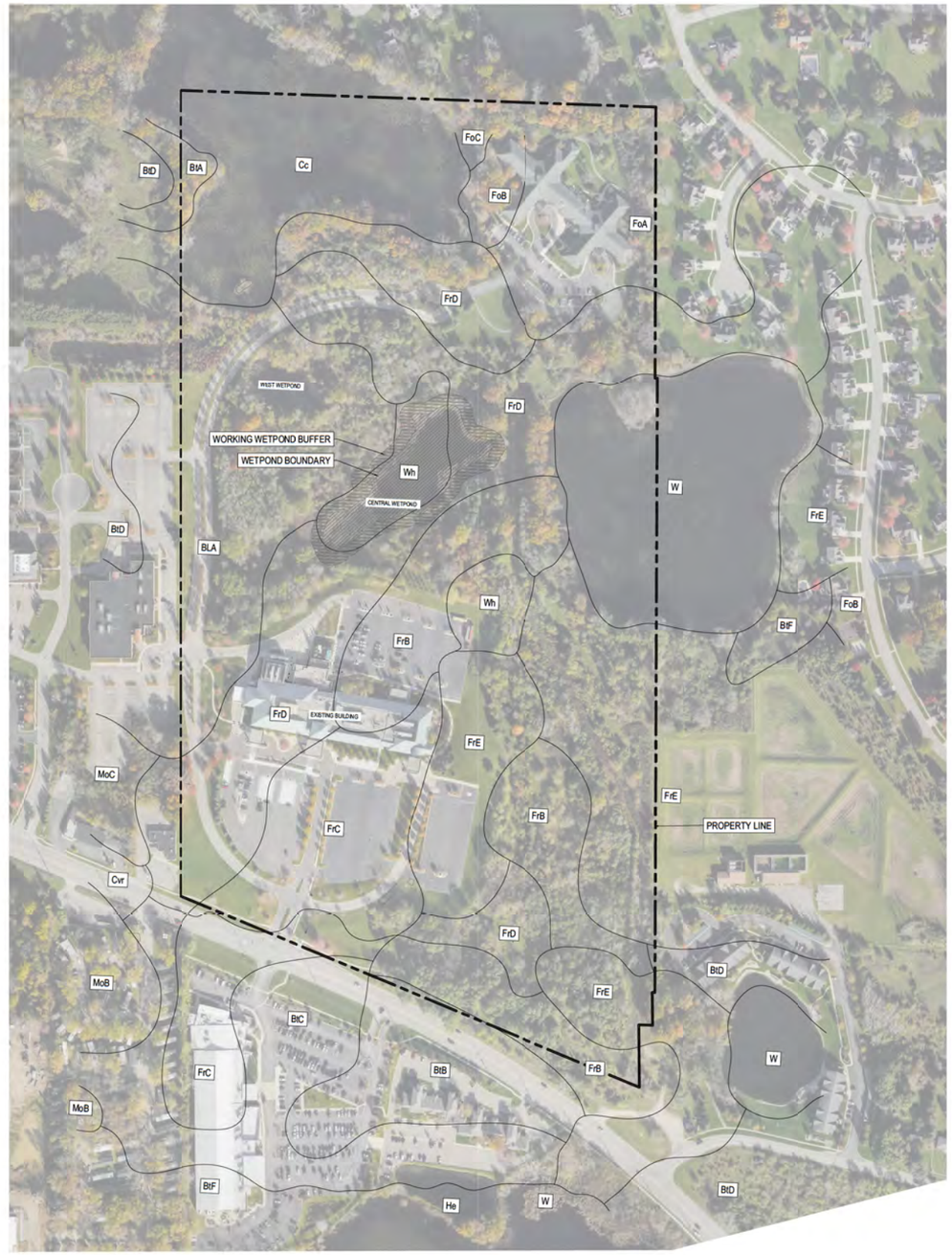
THE SEMI-PERMANENT TIP OF THE CENTRAL WETLAND IS AN EMERGENT WETLAND DOMINATED BY PURPLE LOOSESTRIFE (LYTHRUM SALICARIA) AND GLOSSY BUCKTHORN (FRANGULA ALNUS). THE VEGETATION IN THIS AREA SHOWED SIGNS OF BEING SPRAYED WITH AN HERBICIDE IN THE PAST AS VERY LITTLE OF THE PURPLE LOOSESTRIFE HAD FLOWERS AND MOST OF THE GLOSSY BUCKTHORN WAS DEAD. OTHER PLANTS OBSERVED INCLUDED BUTTONBUSH (CEPHALANTHUS OCCIDENTALIS), WOOL GRASS (SCIRPUS CYPERINUS) AND NARROW-LEAVED CATTAIL (TYPHA ANGUSTIFOLIA). ALL THE PLANTS OBSERVED ARE INDICATORS OF WETLAND CONDITIONS. THIS AREA CONTAINED SATURATED SOILS. EVIDENCE OF STANDING WATER AND TRANSITIONED INTO AN OPEN WATER WETLAND WITH AN EMERGENT FRINGE TO THE NORTH AND EAST.
A SWALE WITH FLOWING WATER WAS OBSERVED CONNECTING AN OPEN WATER WETLAND TO THE WEST OF THE CENTRAL WETLAND. THE SWALE WAS DOMINATED BY REED CANARY GRASS (PHALARIS ARUNDINACEA) AND NARROW-LEAVED CATTAIL.

IT IS ANTICIPATED THAT THE CENTRAL WETLAND WOULD BE CONSIDERED JURISDICTIONAL UNDER PART 303, WETLAND PROTECTION, OF THE NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION ACT BECAUSE IT IS WITHIN 500'OF AN INLAND LAKE (TO THE EAST) THAT IS GREATER THAN 5 ACRES IN SIZE. THE OPEN WATER WETLAND TO THE WEST WOULD ALSO BE CONSIDERED JURISDICTIONAL BECAUSE IT HAS A DIRECT SURFACE CONNECTION TO THE CENTRAL WETLAND.

THIS WETLAND ASSESSMENT WAS COMPLETED FOR PLANNING PURPOSES. A FORMAL WETLAND DELINEATION IN ACCORDANCE WITH EGLE PROCEDURES IS CURRENTLY BEING CONDUCTED AND WILL BE AVAILABLE FOR THE FORMAL REVIEW MAY 2014.

SOIL SURVEY DESCRIPTIONS:

MAP UNIT SYMBO...	
BtA	BOYER-OSHTEMO LOAMY SANDS
BtB	BOYER-OSHTEMO LOAMY SANDS
BtC	BOYER-OSHTEMO LOAMY SANDS
BtD	BOYER-OSHTEMO LOAMY SANDS
BtE	BOYER-OSHTEMO LOAMY SANDS
BtF	BOYER-OSHTEMO LOAMY SANDS
BWA	BRONSON LOAMY SAND
CC	CARLISLE MUCK
CvRAAB	CONOVER LOAM
FoA	FOX SANDY LOAM
FoB	FOX SANDY LOAM
FoC	FOX SANDY LOAM
FrB	FOX-BOYER COMPLEX
FrC	FOX-BOYER COMPLEX
FrD	FOX-BOYER COMPLEX
FrE	FOX-BOYER COMPLEX
FrF	FOX-BOYER COMPLEX
HO	HOUGHTON MUCK
MOB	MARKASEE LOAM
W	WATER
WH	WASHTENAW SILT LOAM



N

SCALE 1" = 150'

Trinity Health

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SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE

SITE SOILS

SCALE: 1" = 150'

SCALE

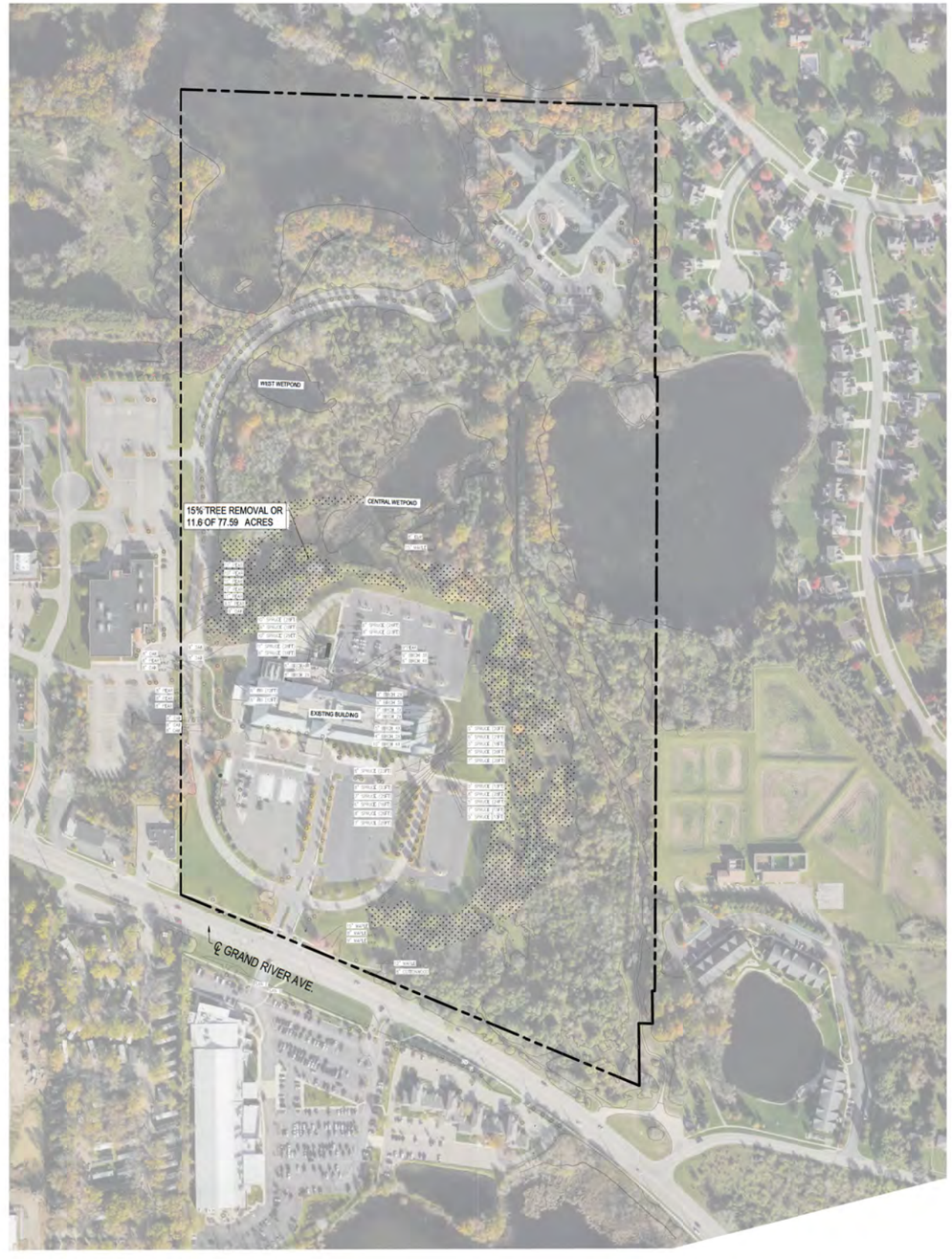
PROJECT NUMBER 13472.00

DRAWING NUMBER CV-200

FILE: C:\Users\kdelany\SmithGroup Companies Inc\VSU - 13472 - SmithGroup - SmithGroup\240\DS Draft\SHEET\13472-CV100.dwg USER: kdelany DATE: Sep. 18, 2022 TIME: 06:10 pm

TREE AND CANOPY SURVEY

PART OF THE WEST 1/2 OF THE NORTHEAST QUARTER OF SECTION 13,
T2N, R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN



N

SCALE 1" = 150'

Trinity Health

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SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
TREE IMPACTS

SCALE: 1" = 150'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CV-300

BOUNDARY & TOPOGRAPHIC SURVEY

PART OF THE WEST 1/2 OF THE NORTHEAST QUARTER OF SECTION 13,
T2N, R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

VICINITY SKETCH -
GENOA TOWNSHIP, MICHIGAN

N

SCALE 1" = 150'

BENCHMARKS

Point No.	Northing	Easting	Elevation	Description
1	389697.72	1327501.10	982.97	BM 1: TOP OF ARROW ON HYDRANT
2	389768.50	1327561.55	987.83	BM 2: TOP OF ARROW ON HYDRANT
3	389165.87	1327484.40	977.49	BM 3: TOP OF ARROW ON HYDRANT

CONTROL POINT TABLE

Point No.	Northing	Easting	Elevation	Description
21	389685.53	1327563.45	985.98	CP MAG NAIL
22	389604.84	1327556.85	985.89	CP SC CAP REBAR
23	389749.72	1327561.32	986.18	CP SC CAP REBAR
50	389682.27	1327494.33	983.29	CP MAG NAIL
51	389817.56	1327498.16	980.77	CP MAG NAIL
52	389883.02	1327494.19	977.39	CP MAG NAIL
53	389866.64	1327512.82	981.98	CP MAG NAIL
54	389936.74	1327517.86	980.06	CP MAG NAIL
55	389907.51	1327524.98	983.47	CP MAG NAIL
56	389807.83	1327537.48	985.18	CP NAIL-SPIKE
57	389774.76	1327552.24	985.50	CP MAG NAIL
58	389788.46	1327529.37	986.04	CP MAG NAIL

SURVEY LEGEND

	SECTION CORNER		SIGN		ELECTRIC TRANSFORMER
BM A	BENCHMARK		DOUBLE POST SIGN		CABLE OR TELECOM RISER
CP 1	CONTROL POINT		MAILBOX		UTILITY POLE
F	FOUND IRON BAR OR PIPE		BOLLARD OR POST		GUY WIRE
S	SET IRON WITH I.D. CAP		PAVEMENT MARKING - ADA PARKING		LIGHT POLE OR LAMP POST
S	SET MAG NAIL		CATCH BASIN (ROUND)		LIGHT BOLLARD
	ENDPOINT OF DIMENSION (DIM.)		CATCH BASIN (RECTANGULAR)		TRAFFIC SIGNAL POLE (TSP)
	DIM. CONTINUES BEYOND MATCHLINE		CATCH BASIN (SQUARE)		TSP WITH CROSSWALK SIGNAL
POB/POE	POINT OF BEGINNING/POINT OF ENDING		CURB INLET		CROSSWALK SIGNAL POST
ROW	RIGHT-OF-WAY		STORM MANHOLE		FLOODLIGHT
WCR	WAYNE COUNTY RECORDS		SANITARY MANHOLE	CCTV	CLOSED CIRCUIT CAMERA
LCRC	LAND CORNER RECORDATION CERTIFICATE		LIGHTING MANHOLE		ADA DETECTABLE WARNING MAT
L. P.	LIBER, PAGE		ELECTRIC MANHOLE		FIRE HYDRANT
N.S.E.W.	NORTH, SOUTH, EAST, WEST		COMMUNICATIONS MANHOLE	WVB	WATER SHUT OFF VALVE
(M)(R)	MEASURED, RECORDED VALUES		WATER MANHOLE	FDC	FIRE DEPT. CONNECTION
• 700.00	SPOT ELEVATION	DOWN	DOWNSPOUT	PIV	POST INDICATOR VALVE
• TC 700.00	TOP OF CURB ELEVATION	VENT O CO	VENT OR CLEANOUT		WELL
• GU 700.50	GUTTER ELEVATION		FLARED END SECTION - CULVERT		IRRIGATION CONTROL VALVE
• EM 700.70	EDGE OF METAL ELEVATION	HVAC	HEATING/COOLING UNIT (HVAC)		MONITORING WELL
• CC 700.70	CURB CUT ELEVATION		END OF UTILITY NOT KNOWN/SHOWN	GPV	GAS SHUT OFF VALVE
• TW 703.00	TOP OF WALL ELEVATION	EH-C	HANDHOLE CABLE	GM	ELECTRIC OR GAS METER
• BW 700.00	BOTTOM OF WALL ELEVATION	EH-E	HANDHOLE ELECTRIC		BUILDING PERIMETER
• FF 705.00	FINISH FLOOR ELEVATION	EH-F	HANDHOLE FIBER OPTIC		BUILDING ROOF OVERHANG
	TREE - DECIDUOUS	EH-L	HANDHOLE LIGHTING		BRICK PAVEMENT
	TREE - CONIFEROUS (HEIGHT)	EH-S	HANDHOLE SIGNALIZATION		COIL BORING
PT. DESC	MISC. POINT	EH-T	HANDHOLE TELECOM		TEST PIT

	EDGE OF WATER
	FENCE LINE
	HANDRAIL
	GUARDRAIL
	CENTERLINE OF TRAILS
	METALLIC DETECTABLE
com	UNDERGROUND TELECOMMUNICATION
ue	UNDERGROUND ELECTRIC
fiber	FIBER OPTIC
cty	CABLE TELEVISION
g	NATURAL GAS
oh	OVERHEAD UTILITY
s	SANITARY SEWER
r	STORM SEWER
w	WATER MAIN
	SECTION LINE
	PROPERTY LINE
	PLATTED LOT LINE
	RIGHT-OF-WAY (ROW) LINE
	CENTERLINE OF RIGHT-OF-WAY
	EASEMENT
	MATCHLINE
	TOPOGRAPHIC CONTOUR
	BRUSHLINE/WOODED LIMITS
	FLAGPOLE

SURVEY SHEETS

V.0.1	SURVEY COVER SHEET
V.0.2	BOUNDARY SURVEY
V.1.1	TOPOGRAPHIC SURVEY
V.1.2	TOPOGRAPHIC SURVEY
V.1.3	TOPOGRAPHIC SURVEY
V.1.4	TOPOGRAPHIC SURVEY
V.1.5	TOPOGRAPHIC SURVEY
V.1.6	TOPOGRAPHIC SURVEY
V.1.7	TOPOGRAPHIC SURVEY
V.1.8	TOPOGRAPHIC SURVEY
V.1.9	TOPOGRAPHIC SURVEY & STRUCTURE TABLE

NOTES

1. HORIZONTAL DATUM IS ACCORDING TO MICHIGAN STATE PLANE GRID COORDINATES, SOUTH ZONE (2113), GEOID 2018, INTERNATIONAL FEET AS LINEAR UNIT OF MEASURE.
2. VERTICAL DATUM IS ACCORDING TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). MTH BENCHMARKS LISTED HEREON. SOURCE BENCHMARK: NGS BM 47101 (PID) AE1652, DISC/MON. AT N. END DORR ROAD BRIDGE OVER I-94. ELEVATION = 1081.24 FEET (NAVD88).
3. SMITHGROUP UTILIZED DATA COLLECTED WITH GLOBAL POSITIONING (GPS) RECEIVERS REFERENCING THE MICHIGAN CONTINUOUSLY OPERATING REFERENCE NETWORK (CORS) FOR SITE CONTROL. SUBCONSULTANT DRONEVIEW TECHNOLOGIES PERFORMED AERIAL PHOTOGRAMMETRY WITH LIDAR TECHNOLOGY FOR OVERALL SITE MAPPING. THE LIDAR MAPPING WAS VERIFIED AND SUPPLEMENTED IN THE AREA OF IMPROVED MAPPING SHOWN HEREON. SMITHGROUP ALSO USED ELECTRONIC TOTAL STATIONS & DIGITAL LEVELS TO COMPLETE THIS TOPOGRAPHIC SURVEY.
4. MISS-DIG DESIGN TICKET B012801779 WAS ISSUED FOR THIS PROJECT. THE FOLLOWING UTILITY OWNERS PROVIDED MAPS: AT&T (TELECOM), CITY OF BRIGHTON (WATER & SEWER), COMCAST (TELECOM), CONSUMERS ENERGY (NATURAL GAS), DTE (ELECTRIC), LIVINGSTON COUNTY DRAIN COMMISSION (STORMWATER), GENOA TOWNSHIP (SEWER, WATER & STORM). NOTE: AS OF THE DATE OF THIS SURVEY, UTILITY RECORDS FROM MICHIGAN DEPARTMENT OF TRANSPORTATION (MDOT) HAVE NOT BEEN RECEIVED.
5. UNDERGROUND UTILITY LOCATIONS WERE DERIVED FROM ACTUAL MEASUREMENTS ON VISIBLE UTILITIES, MISS DIG FLAGS/MARKINGS, AND/OR AVAILABLE RECORDS. THEY SHOULD NOT BE INTERPRETED TO BE EXACT LOCATIONS, NOR SHOULD THEY IT BE ASSUMED THAT THEY ARE THE ONLY UNDERGROUND UTILITIES IN THE AREA. UTILITY INVERTS WERE ONLY COLLECTED ON SPECIFIC STRUCTURES PER ENGINEER'S INSTRUCTIONS AND WERE NOT INCLUSIVE OF ALL UTILITY STRUCTURES WITHIN THE PROJECT LIMITS OR THE AREA OF IMPROVED MAPPING.
6. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED AND ARE NOT CONSIDERED A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE AND OR DEVELOPMENT OF THIS SITE.
7. ADDITIONAL SPOT ELEVATIONS MAY BE CONTAINED IN THE PROJECT DATABASE, AND ALTHOUGH NOT APPEARING ON THE RECORD PLAN DOCUMENT DUE TO SCALE AND VISIBILITY, WERE UTILIZED IN THE DIGITAL TERRAIN MODEL FOR CREATION OF THE ONE-FOOT CONTOURS. THE ADDITIONAL SPOT ELEVATION DATA IS AVAILABLE FOR FUTURE DESIGN ANALYSIS, BEING LOCATED ON A FROZEN LAYER WITHIN THE PROJECT DATABASE.

FLOODPLAIN NOTE

PORTIONS OF THIS SITE, AS SHOWN ON THIS LIMITED TOPOGRAPHIC SURVEY LIE, IN SPECIAL FLOOD HAZARD AREA "ZONE A", ACCORDING TO FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) FLOOD INSURANCE RATE MAP (FIRM) NO. 26093C, PANEL 0335D, FOR LIVINGSTON COUNTY, MICHIGAN, EFFECTIVE DATE SEPTEMBER 17, 2008. ACCORDING TO SAID PANEL, ZONE A IS DEFINED AS AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD - NO BASE FLOOD ELEVATIONS DETERMINED.

LINES ON THIS SURVEY DEPICTING ZONE A WERE PLOTTED VIA GIS DATA DOWNLOADED FROM FEMA ONLINE MAP SERVICE. ZONE A ON THIS SITE SURROUNDS GOLFVIEW POND IN THE NORTHWESTERN PORTION OF SUBJECT PROPERTY.

THE BALANCE OF AREA SURVEYED LIES IN (OTHER) AREA "ZONE X" (UNSHADED), DEFINED AS AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

CERTIFICATE

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH LOCAL AND STATE JURISDICTIONAL REQUIREMENTS REGULATING MAPPING STANDARDS. THE UNDERSIGNED STATES THAT PROPER FIELD PROCEDURES, INSTRUMENTATION AND ADEQUATE STAFF WERE EMPLOYED TO ACHIEVE THE RESULTS INDICATED HEREIN.

SMITHGROUP, INC.

CHARLES A. LANGOLF, PS 56210
PROFESSIONAL SURVEYOR
STATE OF MICHIGAN
charles.langolf@smithgroup.com

STATE OF MICHIGAN CHARLES ANDREW LANGOLF PROFESSIONAL SURVEYOR License No. 56210 LICENSED PROFESSIONAL SURVEYOR

12/24/21
DATE

SAINT JOSEPH MERCY HEALTH SYSTEM

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

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DRONEVIEW TECHNOLOGIES
AERIAL PHOTOGRAMMETRY/LIDAR
2065 Franklin Road
Bloomfield Township, MI 48302
866.235.9490

ISSUED FOR	REV.	DATE
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

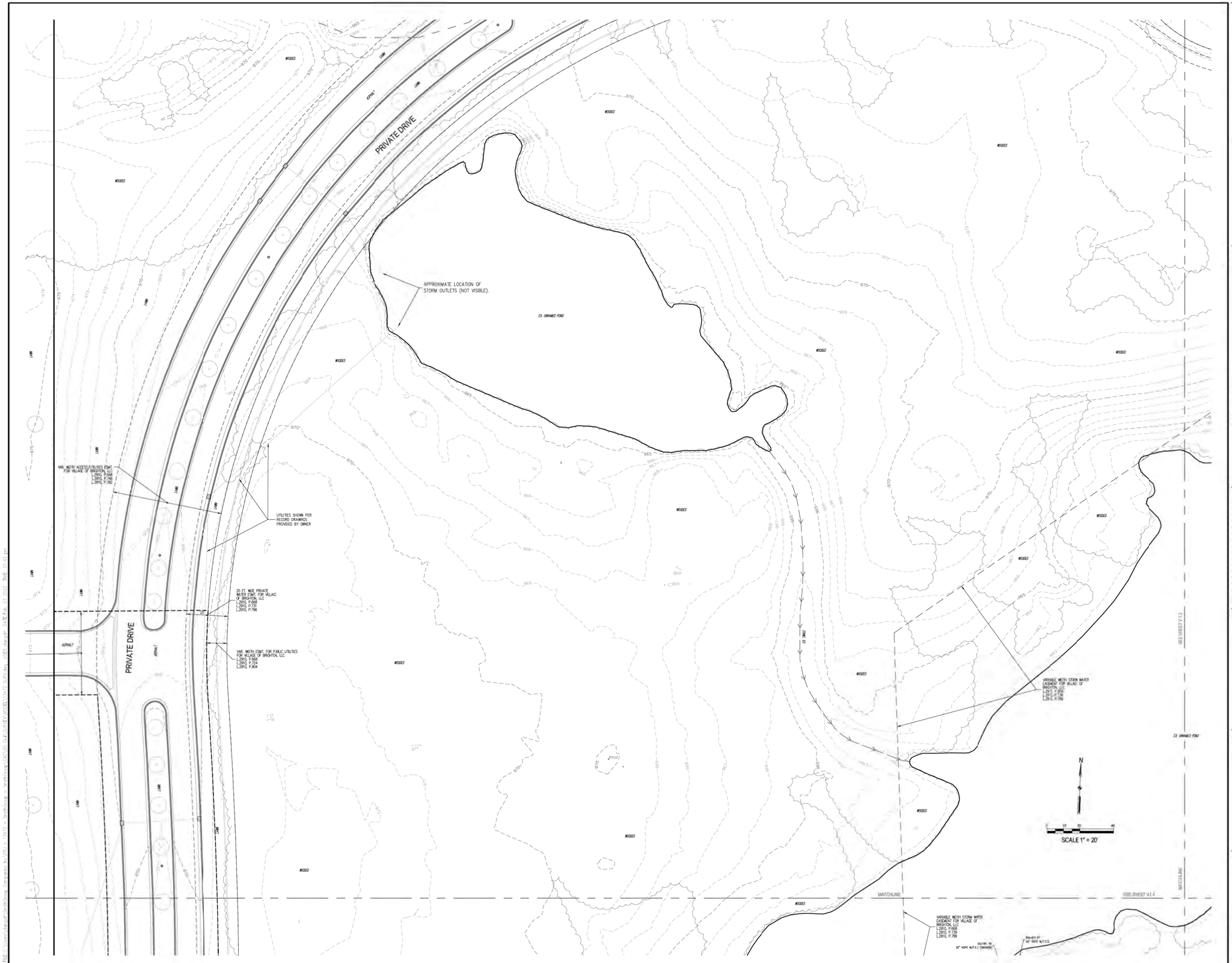
KEY PLAN

DRAWING TITLE
SURVEY COVER SHEET

SCALE 1" = 150'

PROJECT NUMBER 13472

DRAWING NUMBER V.0.1



SAINT JOSEPH MERCY HEALTH SYSTEM

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ISSUED FOR	REV.	DATE
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE

TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.1

SAINT JOSEPH MERCY HEALTH SYSTEM

ST. JOSEPH MERCY
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SEALS AND SIGNATURES

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KEY PLAN

DRAWING TITLE
TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.2

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SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

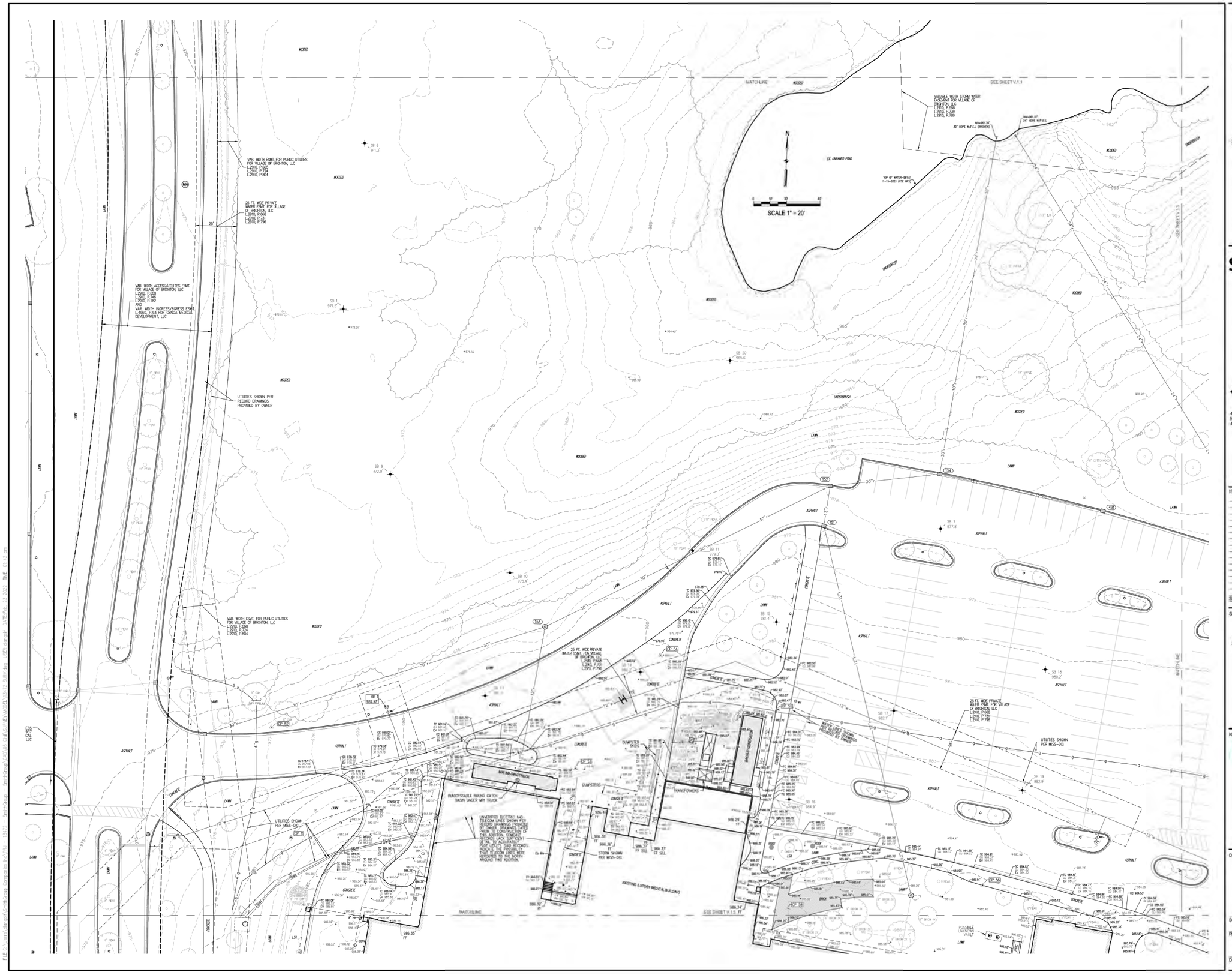
KEY PLAN

DRAWING TITLE
TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.5



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SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

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KEY PLAN

DRAWING TITLE

TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.4

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ISSUED FOR	REV.	DATE
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

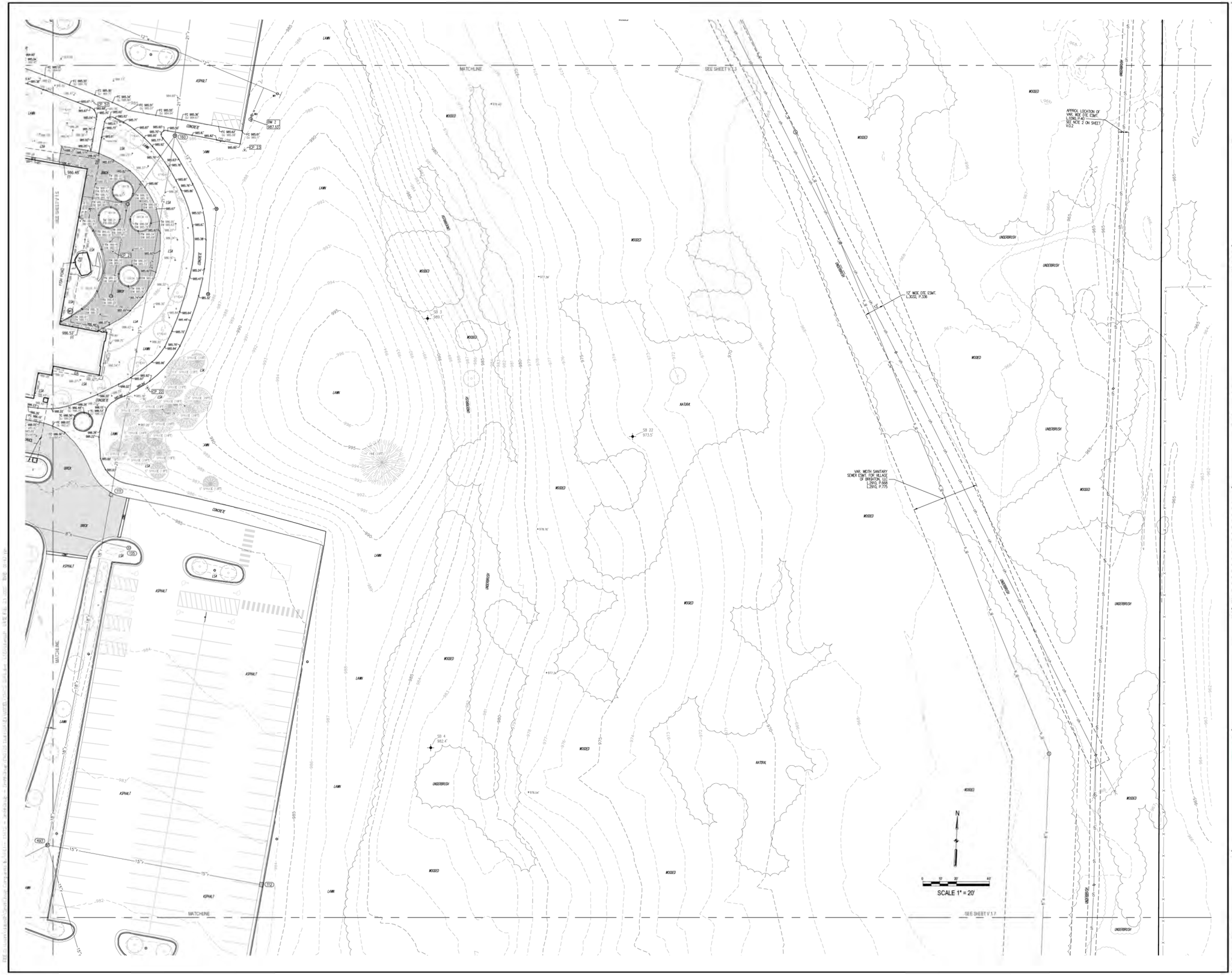
DRAWING TITLE

TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.3



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SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

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KEY PLAN

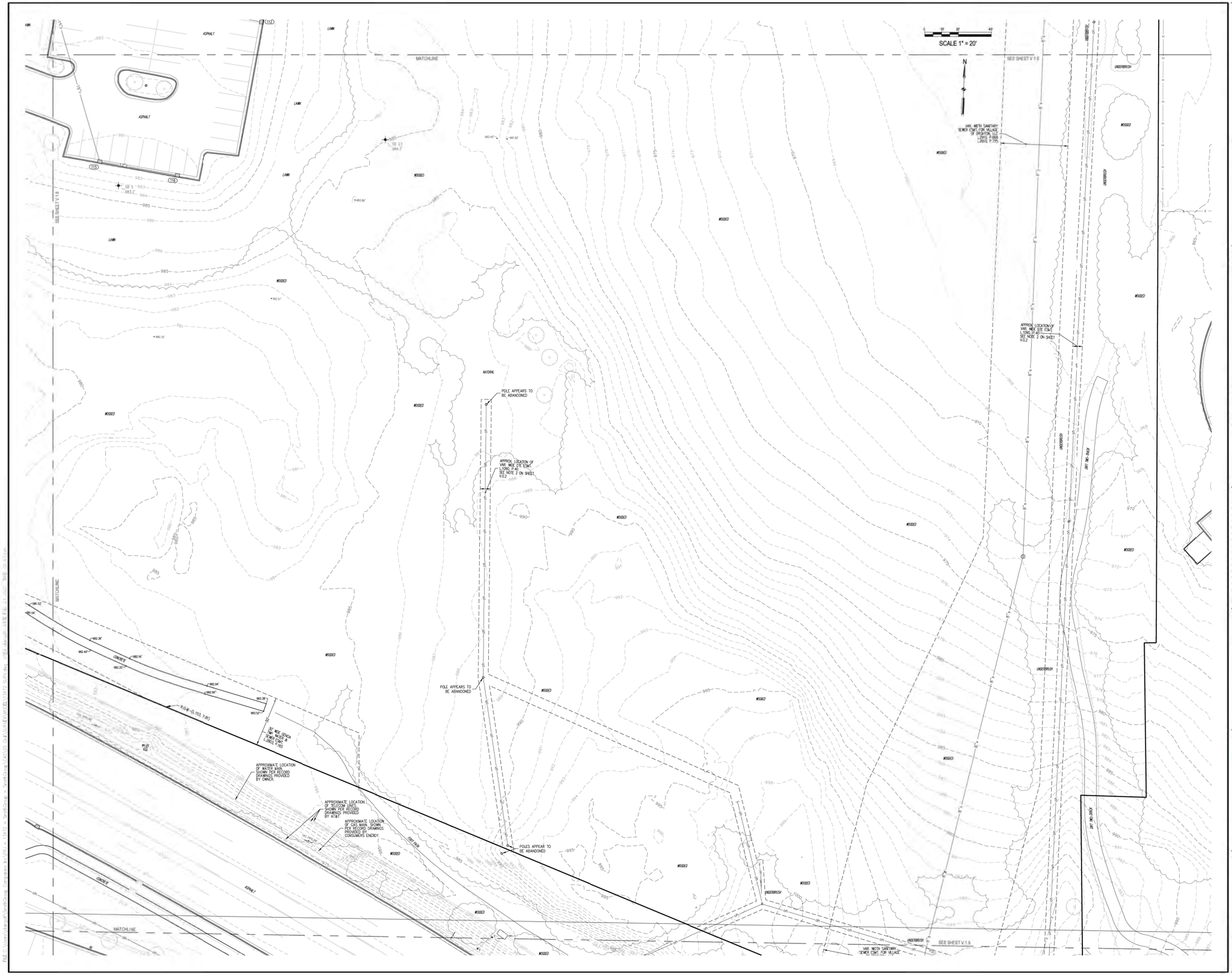
DRAWING TITLE

TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.6



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ISSUED FOR	REV.	DATE
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

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KEY PLAN

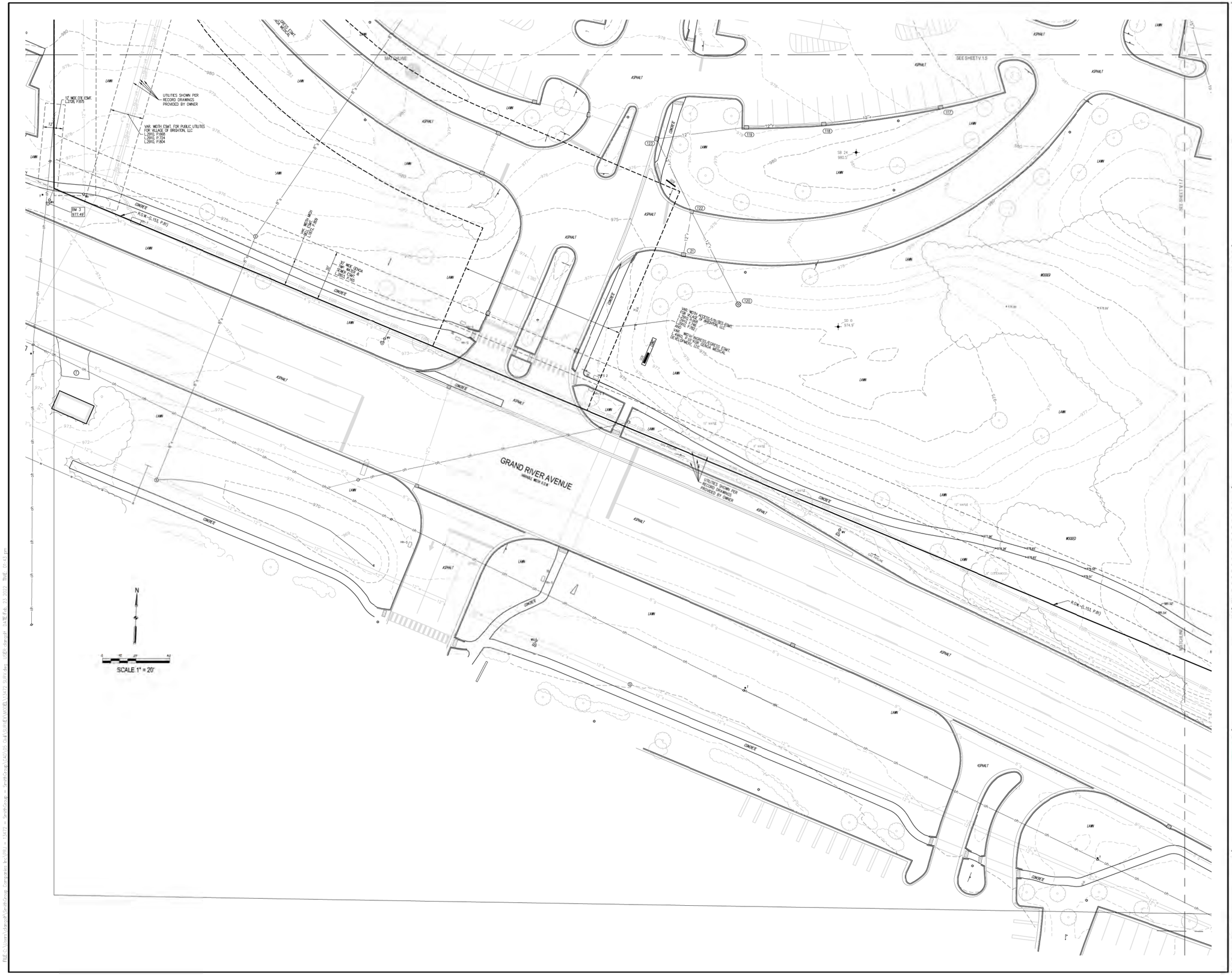
DRAWING TITLE

TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.7



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SEALS AND SIGNATURES

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KEY PLAN

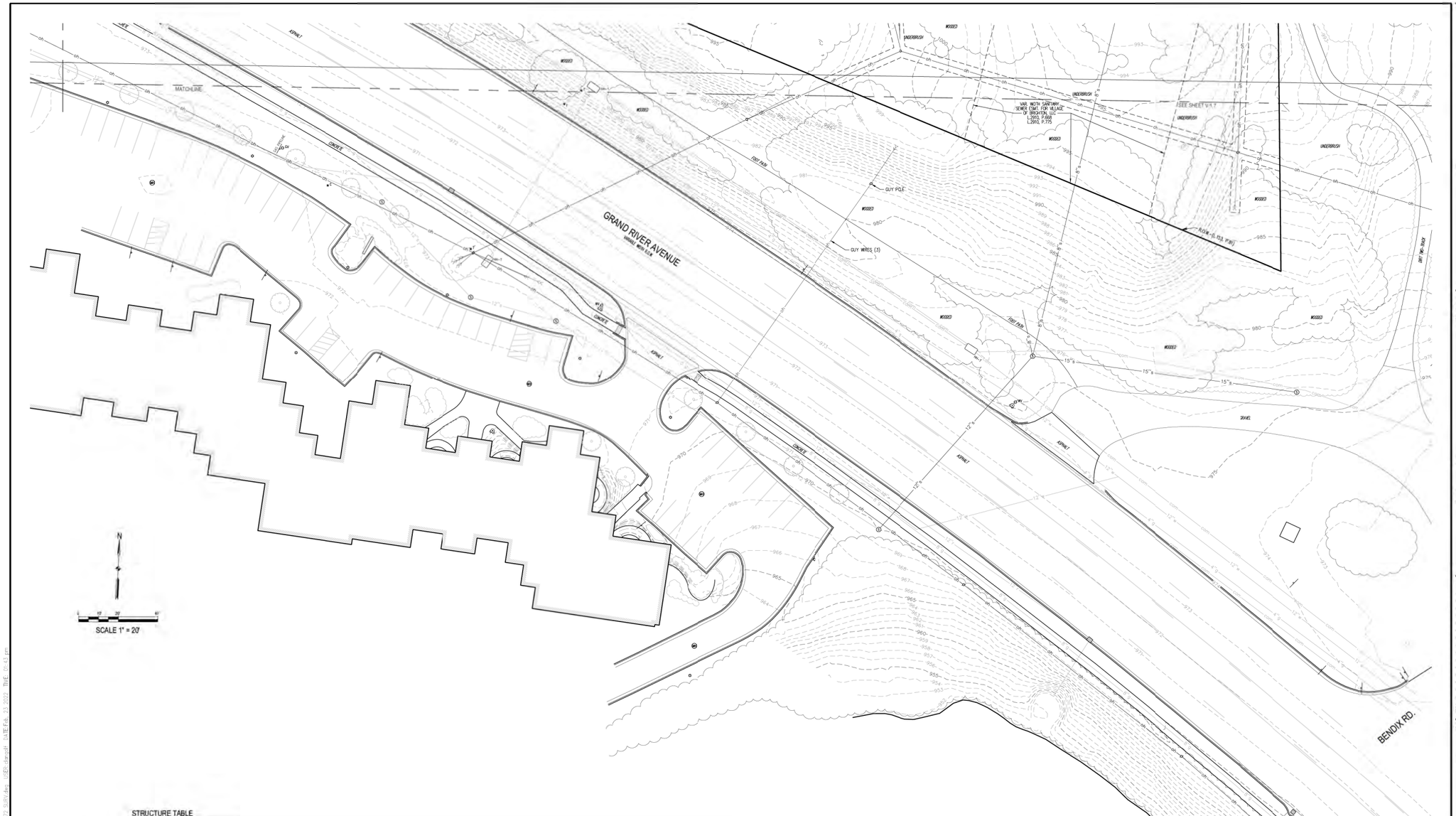
DRAWING TITLE

TOPOGRAPHIC SURVEY

SCALE 1" = 20'

PROJECT NUMBER 13472

DRAWING NUMBER V.1.6



STRUCTURE TABLE

SANITARY MANHOLE	104	RIM = 986.35			SUMP = N/A		COMMENTS
STRUCTURE DIA. = 60"	8"	PVC	ESE		INV = 976.44		
N:399930.113 E:1327520.50	NOTES:	8"	PVC	WNW	INV = 976.23		
SANITARY MANHOLE	105	RIM = 986.54			SUMP = N/A		COMMENTS
STRUCTURE DIA. = 60"	8"	PVC	WNW		INV = 977.44		
N:399930.614 E:1327554.61	NOTES:						
CATCH BASIN, SQUARE	111	RIM = 984.63			SUMP = 972.88		COMMENTS
STRUCTURE DIA. = 72"	24"	HDPE	SSW		INV = 974.42		
N:399526.667 E:1327554.18	NOTES:	21"	RCP	NNE	INV = 974.50		
CATCH BASIN, SQUARE	112	RIM = 982.52			SUMP = 975.47		COMMENTS
STRUCTURE DIA. = 48"	42"	HDPE	W		INV = 975.77		
N:399310.017 E:1327542.25	NOTES:						
CATCH BASIN, SQUARE	113	RIM = 981.35			SUMP = 975.88		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	WNW		INV = 976.19		
N:399312.920 E:1327544.91	NOTES:	12"	HDPE	E	INV = 976.13		
CATCH BASIN, SQUARE	114	RIM = 981.55			SUMP = 975.87		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	ESE		INV = 976.24		
N:399319.858 E:1327548.01	NOTES:						
CATCH BASIN, SQUARE	115	RIM = 980.49			SUMP = 974.29		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	NW		INV = 975.02		
N:399303.116 E:1327544.90	NOTES:	12"	HDPE	ESE	INV = 975.84		
CATCH BASIN, SQUARE	116	RIM = 980.45			SUMP = 974.98		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	WNW		INV = 975.91		
N:399317.054 E:1327556.20	NOTES:						
CATCH BASIN, SQUARE	117	RIM = 979.43			SUMP = 972.99		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	E		INV = 974.80	END OF PIPE UNKNOWN	
N:399247.826 E:1327570.74	NOTES:	12"	HDPE	W	INV = 974.82		
CATCH BASIN, SQUARE	118	RIM = 977.95			SUMP = 972.03		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE			INV = 974.25		
N:399234.468 E:1327530.76	NOTES:	12"	HDPE	W	INV = 975.88		
CATCH BASIN, SQUARE	119	RIM = 976.91			SUMP = 971.91		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	E		INV = 973.11		
N:399100.548 E:1327538.43	NOTES:	12"	HDPE	WSW	INV = 972.71		
CATCH BASIN, ROUND	120	RIM = 973.73			SUMP = 972.90		COMMENTS
STRUCTURE DIA. = 24"	12"	RCP	NW		INV = 973.10	AUDIBLE CONNECTION TO CB 122, NOT CB 121	
N:399134.421 E:1327539.54	NOTES:						
CATCH BASIN, SQUARE	121	RIM = 973.59			SUMP = 972.49		COMMENTS
STRUCTURE DIA. = 24"	12"	RCP	NNE		INV = 972.58		
N:399132.709 E:1327532.31	NOTES:						
CATCH BASIN, SQUARE	122	RIM = 975.63			SUMP = 972.40		COMMENTS
STRUCTURE DIA. = 36"	12"	RCP	SE		INV = 972.54		
N:399118.101 E:1327528.27	NOTES:	12"	RCP	SSW	INV = 972.52		
		12"	HDPE	NW	INV = 972.48		

CATCH BASIN, SQUARE	123	RIM = 976.33			SUMP = 970.05		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	SE		INV = 972.31		
N:399220.974 E:1327520.21	NOTES:	12"	HDPE	E	INV = 972.09		
				WNW	INV = 971.45	OUTLET PIPE NOT VISIBLE, ASSUMED TOP OF WATER	
				TWATER=	971.45	TOP OF WATER	
CATCH BASIN, SQUARE	151	RIM = 977.89			SUMP = 971.81		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	N		INV = 973.29		
N:390018.766 E:1327527.2	NOTES:		CE			PIPE TO SOUTHEAST (PER PLANS) NOT VISIBLE	
CATCH BASIN, SQUARE	152	RIM = 977.91			SUMP = 964.41		COMMENTS
STRUCTURE DIA. = 72"	12"	HDPE	S		INV = 972.75		
N:390042.849 E:1327527.92	NOTES:	20"	HDPE	SW	INV = 960.29		
		20"	HDPE	E	INV = 960.96		
CATCH BASIN, ROUND	153	RIM = 978.05			SUMP = 960.01		COMMENTS
STRUCTURE DIA. = 72"	20"	HDPE	SW		INV = 960.99		
N:389956.615 E:1327510.8	NOTES:	20"	HDPE	NE	INV = 960.39		
			S		INV = 970.00	PIPE TO SOUTH (PER PLANS) NOT VISIBLE	
CATCH BASIN, SQUARE	154	RIM = 970.87			SUMP = 960.07		COMMENTS
STRUCTURE DIA. = 72"	12"	HDPE	ESE		INV = 972.87		
N:390002.947 E:1327539.22	NOTES:	20"	HDPE	WSW	INV = 960.37		
		20"	HDPE	NNE	INV = 960.37		
CATCH BASIN, SQUARE	157	RIM = 977.47			SUMP = 961.85		COMMENTS
STRUCTURE DIA. = 48"	21"	HDPE	ESE		INV = 966.71		
N:390000.622 E:1327564.63	NOTES:	21"	HDPE	SSE	INV = 966.47		
		24"	HDPE	NW	INV = 965.67		
CATCH BASIN, SQUARE	158	RIM = 977.34			SUMP = 967.74		COMMENTS
STRUCTURE DIA. = 72"	21"	HDPE	WNW		INV = 969.09		
N:389991.507 E:1327563.86	NOTES:						
STORM MANHOLE	159	RIM = 992.49			SUMP = N/A		COMMENTS
STRUCTURE DIA. = 60"	21"	HDPE	S		INV = 970.88		
N:399954.879 E:1327519.6	NOTES:	21"	HDPE	NNW	INV = 970.74		
CATCH BASIN, ROUND	160	RIM = 995.41			SUMP = 970.49		COMMENTS
STRUCTURE DIA. = 60"	21"	HDPE	N		INV = 972.05		
N:399796.485 E:1327519.32	NOTES:	12"	HDPE	SE	INV = 972.56		
		21"	RCP	S	INV = 972.55		
		8"	PVC	SW	INV = 972.60		
CATCH BASIN, SQUARE	491	RIM = 977.30			SUMP = 971.94		COMMENTS
STRUCTURE DIA. = 48"	12"	HDPE	WNW		INV = 973.78		
N:390005.531 E:1327543.17	NOTES:						
STORM MANHOLE	493	RIM = 990.44			SUMP = N/A		COMMENTS
STRUCTURE DIA. = 60"	18"	HDPE	E		INV = 975.84		
N:389928.77 E:1327513.40	NOTES:	10"	HDPE	SE	INV = 975.94		
MH BURIED APPROX 8' BELOW GRADE		12"	HDPE	W	INV = 975.94		
		18"	HDPE	N	INV = 975.49		

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ISSUED FOR:	REV.	DATE
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

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KEY PLAN

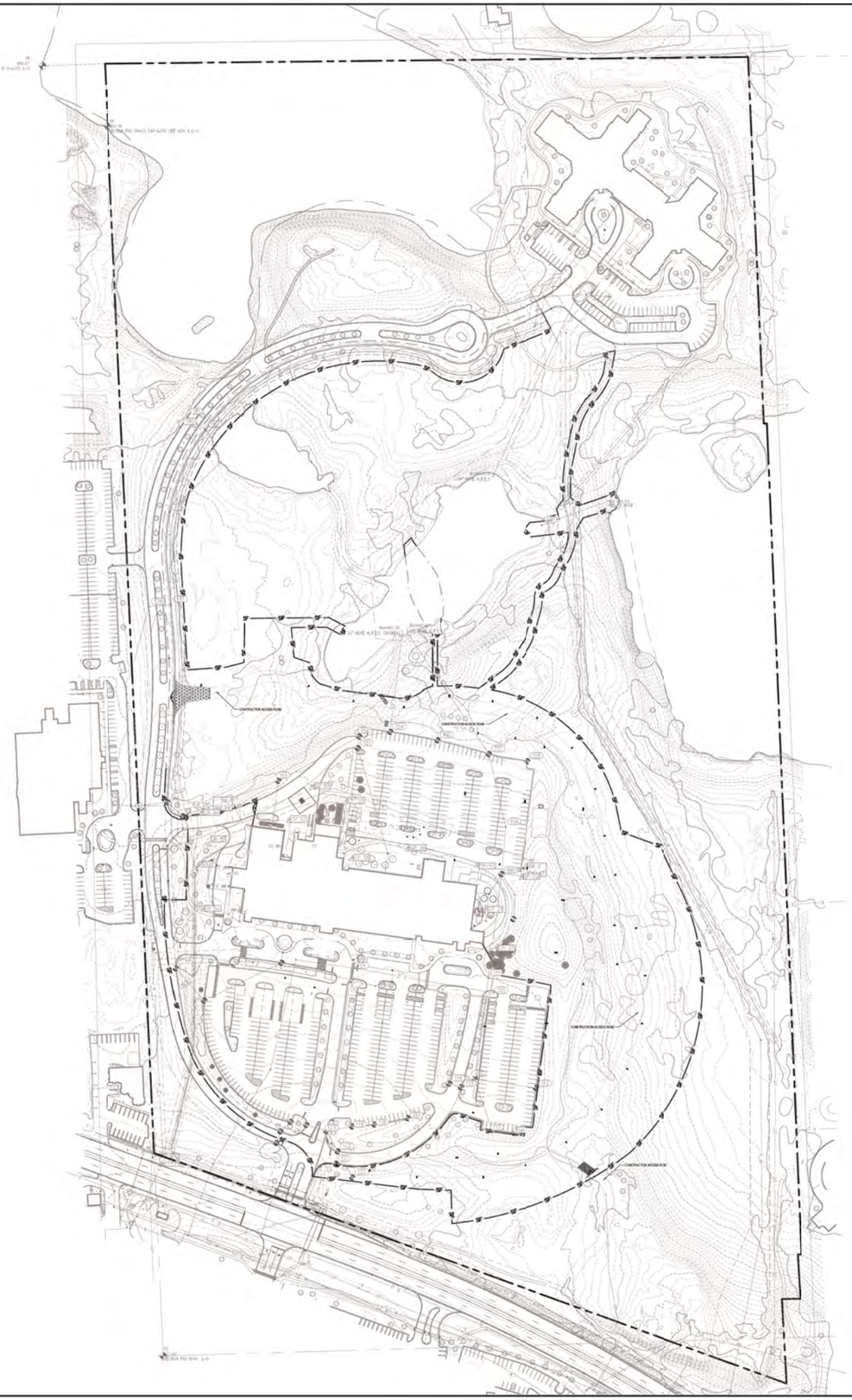
DRAWING TITLE

TOPOGRAPHIC SURVEY
& STRUCTURE TABLE

SCALE: 1" = 20'

PROJECT NUMBER: 13472

DRAWING NUMBER: V.1.9



SHEET NOTES

1. EROSION AND SEDIMENT CONTROL WORK SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF LIVINGSTON COUNTY
2. EROSION AND SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED ON THE SITE AND NOT ALLOWED TO COLLECT ON OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN-MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES AND PONDS.
3. CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. MEASURES SHOULD BE INSTALLED PRIOR TO OR UPON COMMENCEMENT OF THE EARTH CHANGE. REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.
4. STAGING THE WORK SHALL BE DONE BY THE CONTRACTOR AS REQUIRED TO ENSURE PROGRESSIVE STABILIZATION OF DISTURBED EARTH.
5. SOIL EROSION CONTROL PRACTICES SHALL BE ESTABLISHED BEFORE CONSTRUCTION BEGINS BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES SHALL BE APPLIED AS A PERIMETER DEFENSE AGAINST TRANSPORTING OF SILT OFF THE SITE.
6. SOIL TYPES ON SITE CONSIST OF BlA, BlB, BlC, BlD, BlF (Boyer-Oshtemo Loamy Sands), BwA (Brookston Loamy Sands), CC (Carlisle Muck), FoA (Fox Sandy Loam), FrB, FrC, FrD, FrE (Fox-Boyer complex) and WA (Washtenaw Silt Loam)

SOIL EROSION MAINTENANCE SCHEDULE AND NOTES:

1. THE CONTRACTOR SHALL INSPECT THE SOIL EROSION AND SEDIMENTATION CONTROL DEVICES ONCE EACH WEEK AND/OR WITHIN 24 HOURS OF A RAINFALL EVENT WHICH RESULTS IN A STORM WATER DISCHARGE FROM THE SITE. THE FOLLOWING STEPS SHALL BE IMPLEMENTED IF ANY DAMAGE HAS OCCURRED.
2. DEBRIS OR DIRT ON PAVED AREA RESULTING FROM CONSTRUCTION TRAFFIC SHALL BE CLEANED IN A PROMPT MANNER BY THE CONTRACTOR. THE CONSTRUCTION DRIVE SHALL BE CLEANED AT THE END OF EACH DAY.
3. DIRT AND MUD TRACKED ONTO PAVED AREAS SHALL BE REMOVED DAILY BY SCRAPING. STREET SWEEPING IS REQUIRED WEEKLY.
4. SILT FENCE MAINTENANCE SHALL INCLUDE THE REMOVAL OF BUILT UP SEDIMENT WHEN THE SEDIMENT HEIGHT ACCUMULATES TO 1/3 TO 1/2 OF THE HEIGHT OF THE FENCE. THE CONTRACTOR IS RESPONSIBLE TO REMOVE, REPLACE, RETRENCH OR REBACKFILL THE SILT FENCE SHOULD IT FALL OR BE DAMAGED DURING CONSTRUCTION.
5. INLET FILTER MAINTENANCE SHALL INCLUDE THE REMOVAL OF ACCUMULATED SILT OR OTHER DEBRIS. THE REMOVAL OF SILT SHOULD BE WITH THE USE OF A STIFF BRISTLE BROOM OR SQUARE POINT SHOVEL. IF INLET FILTERS CAN NOT BE CLEANED OR ARE DAMAGED, THEN THE FABRIC MUST BE REPLACED.

LEGEND

- SILT FENCE — 1 / CE-500
- STABILIZED CONSTRUCTION EXIT — 2 / CE-500
- INLET PROTECTION — 3-4 / CE-500
- SEDIMENT CONTROL TUBE
- PHASING PLAN ORDER — 1
- GATE

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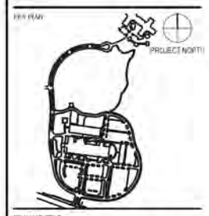
ISSUED FOR:	REV.	DATE
SITE PLAN RESUBMITTAL R4	L	16SEP2022
LCDC RESUBMITTAL R4	K	13SEP2022
BP1 BULLETIN 1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	26JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
SOIL EROSION AND
SEDIMENT CONTROL PLAN

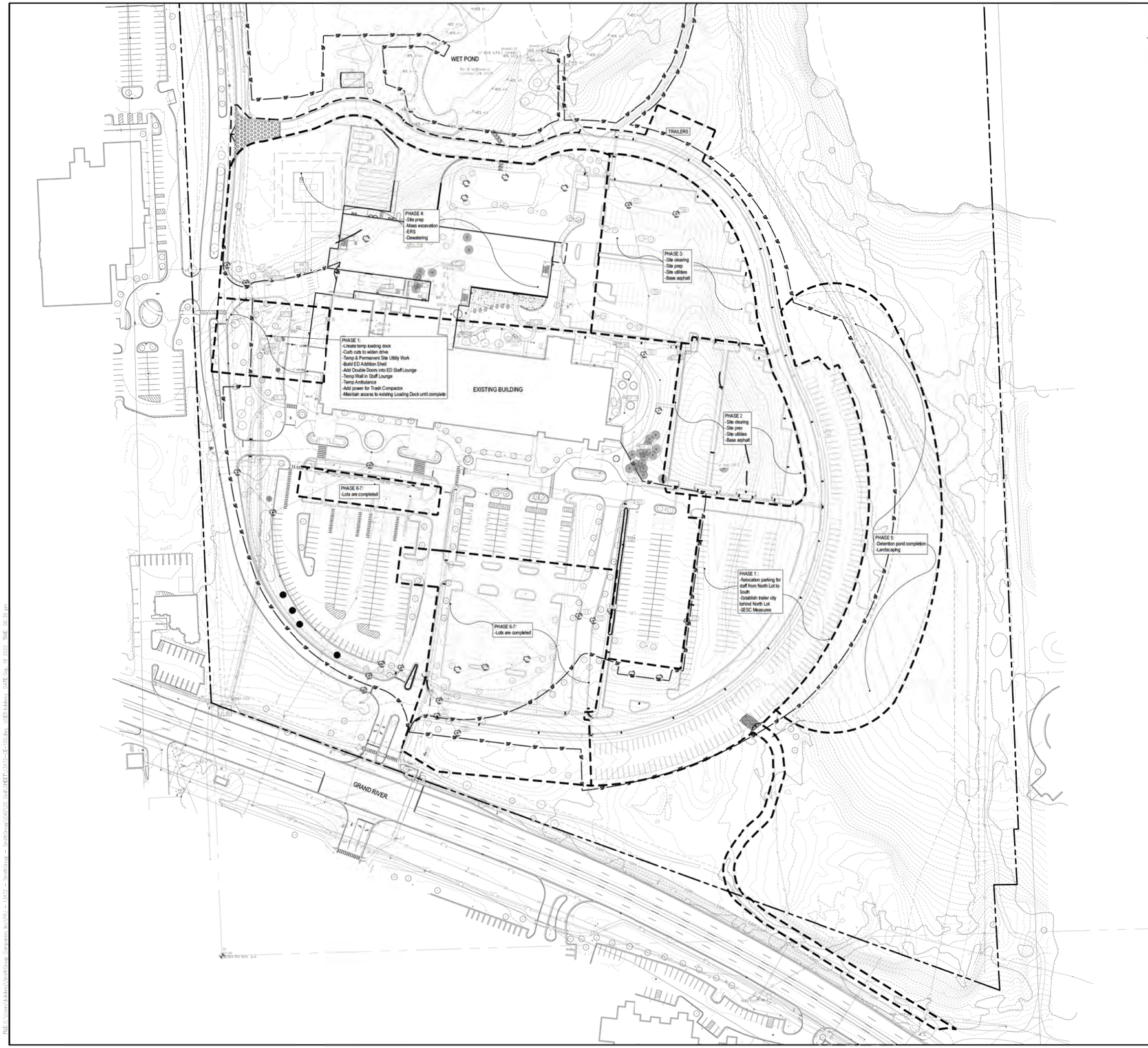
SCALE: 1" = 60'

SCALE: 13472.00

PROJECT NUMBER:

CE-100

DRAWING NUMBER:



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3. CONTRACTOR SHALL APPLY TIMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES WHEN REQUIRED AND AS DIRECTED ON THESE PLANS. MEASURES SHOULD BE INSTALLED PRIOR TO OR UPON COMMENCEMENT OF THE EARTH CHANGE. REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER EARTH CHANGES HAVE BEEN ACCOMPLISHED.
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LEGEND

SILT FENCE	1 / CE-500
STABILIZED CONSTRUCTION EXIT	2 / CE-500
INLET PROTECTION	3 - 4 / CE-500
SEDIMENT CONTROL TUBE	
1 PHASING PLAN ORDER	
GATE	

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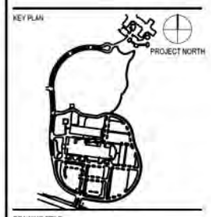
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	L	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
PHASING PLAN

SCALE:1" = 60'

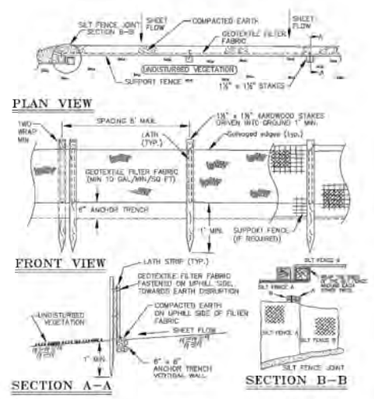
SCALE 13472.00

PROJECT NUMBER

CE-200

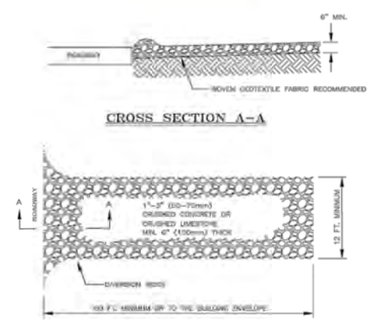
DRAWING NUMBER

36" SILT FENCE
STANDARD CONTROL



1 SILT FENCE
SCALE: 1" = 1'

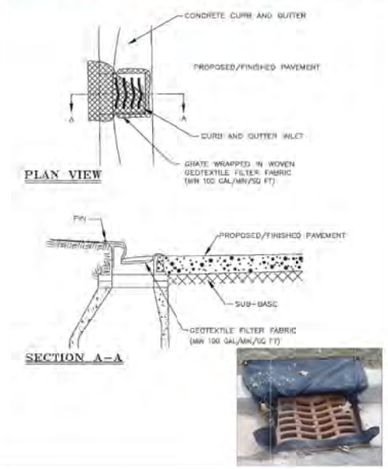
TRACKING MAT
STANDARD CONTROL



2 TRACKING MAT
SCALE: 1" = 1'

GEOTEXTILE FABRIC CURB AND GUTTER INLET FILTER
STANDARD NON-WINTER USE

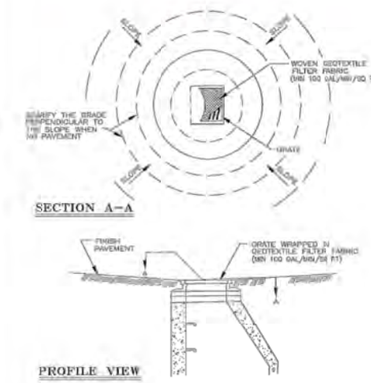
NOT FOR USE IN WINTER MONTHS OR IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING



3 CURB AND GUTTER INLET FILTER
SCALE: 1" = 1'

GEOTEXTILE FABRIC LOW POINT/YARD INLET FILTER
STANDARD CONTROL NON-WINTER USE

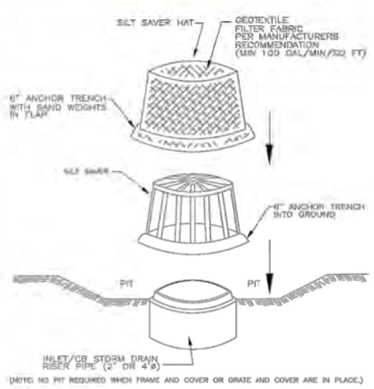
NOT FOR USE IN WINTER MONTHS OR IN AREAS THAT MAY BECOME A SAFETY HAZARD DUE TO FLOODING OR FREEZING



4 YARD INLET FILTER
SCALE: 1" = 1'

SILT SAVER OR APPROVED EQUAL YARD CATCH BASIN INLET FILTER
ALTERNATIVE CONTROL

(ALL ALTERNATIVES MUST BE PRE-APPROVED BY THE INSPECTOR ON A CASE BY CASE BASIS)

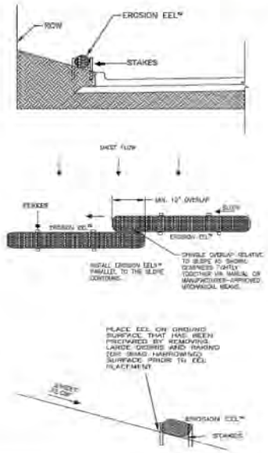


5 YARD CATCH BASIN INLET FILTER
SCALE: 1" = 1'

EROSION EEL OR APPROVED EQUAL
ALTERNATIVE CONTROL

1% GRADE MAXIMUM SLOPE AS AN ALTERNATIVE FOR 24" SILT FENCE

(ALL ALTERNATIVES MUST BE PRE-APPROVED BY THE INSPECTOR ON A CASE BY CASE BASIS)



6 EROSION EEL
SCALE: 1" = 1'

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SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

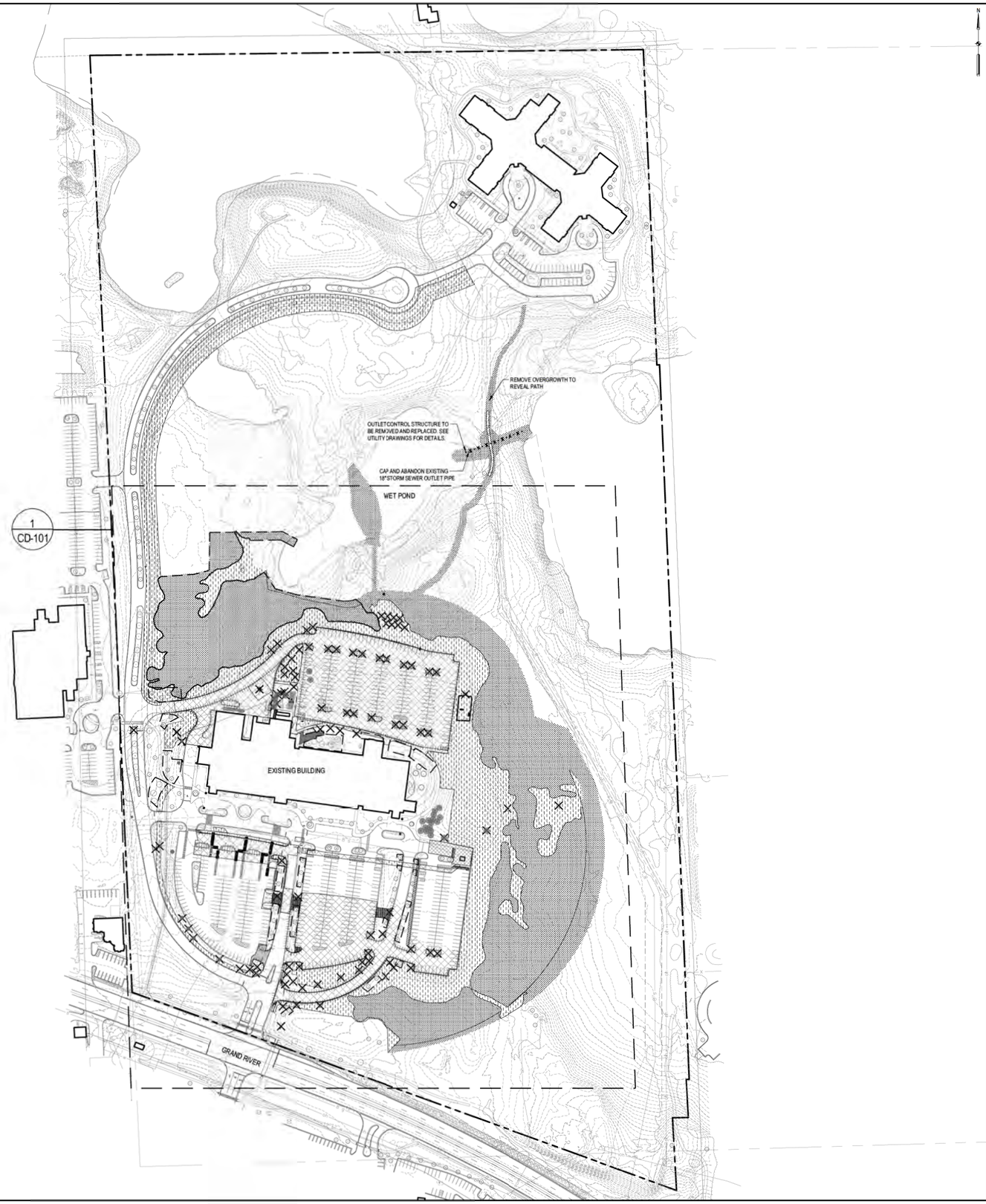
KEY PLAN

DRAWING TITLE
SOIL EROSION AND SEDIMENT CONTROL DETAILS

SCALE

PROJECT NUMBER
13472.00

DRAWING NUMBER
CE-500



SHEET NOTES

1. NOTIFY THE ENGINEER IN WRITING OF ANY IDENTIFIED DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS PRIOR TO THE START OF WORK. DURING PERFORMANCE OF THE WORK, VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND CROSS-CHECK DETAILS AND DIMENSION SHOWN ON THE DRAWINGS WITH RELATED REQUIREMENTS ON THE ENGINEERURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS PRIOR TO STARTING WORK. IN ALL CASES WHERE A CONFLICT MAY OCCUR, THE ENGINEER SHALL BE NOTIFIED AND WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.
2. PRIOR TO THE COMMENCEMENT OF WORK, VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION AND TAKE RESPONSIBILITY FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF CONSTRUCTION.
3. TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION, INCLUDING DAMAGES TO UTILITIES, WALKS, WALLS, DRIVES, CURBS, ETC.
4. ALL MATERIAL TO BE REMOVED WHETHER SPECIFICALLY NOTED IN THE PLANS OR NOT, SHALL BE REMOVED BY THE CONTRACTOR AND TRANSPORTED OFF SITE. MATERIAL TO BE DISPOSED OF OFFSITE AND IN A LEGAL MANNER. NO BURY OR BURN PITS SHALL BE ALLOWED. PROVIDE RECEIPTS AND LETTERS FROM DISPOSAL SITES TO OWNER AS REQUIRED BY THE OWNER.
5. SECURE ALL NECESSARY PERMITS AND NOTIFY ALL UTILITY COMPANIES WITH UTILITIES ON THE SITE PRIOR TO THE CONSTRUCTION OF THE PROJECT. ADHERE TO ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS OR REGULATIONS PERTAINING TO THE PROJECT.
6. SPECIFIC DEMOLITION ITEMS HAVE BEEN INDICATED ON THE PLANS AS A GUIDE TO THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT THAT THESE ITEMS SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR ABOVE AND BELOW GROUND, UNLESS SPECIFICALLY NOTED OTHERWISE, AND THAT DEMOLITION WILL INCLUDE BUT WILL NOT NECESSARILY BE LIMITED TO THESE ITEMS. CONTRACTOR SHALL VISIT SITE TO VERIFY EXISTING CONDITIONS AND EXTENTS OF THE DEMOLITION THAT WILL BE REQUIRED PRIOR TO SUBMITTING A BID.
7. THE CONTRACTOR SHALL, AT A MINIMUM, PROVIDE TREE PROTECTION FENCING AROUND EXISTING TREES TO BE SAVED THAT ARE WITHIN 5' OF CONSTRUCTION ACTIVITIES AND AS INDICATED IN THE PLANS OR PER LOCAL AGENCY REQUIREMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP, NOISE, DUST CONTROL, STREET SWEEPING AND HOURS OF OPERATION IN ACCORDANCE WITH THE LOCAL CODES.
9. THE CONTRACTOR SHALL PROVIDE NECESSARY BARRICADES, SIGNAGE, MARKINGS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES TO PROTECT THE WORK ZONE AND SAFELY MAINTAIN TRAFFIC PER MUTCD REQUIREMENTS.
10. COORDINATE REMOVALS WITH SITE LAYOUT AND MATERIALS PLANS NOTIFY ENGINEER OF ANY DISCREPANCIES.
11. PREPARE ALL SUBGRADES IN ACCORDANCE WITH RECOMMENDATIONS OF GEOTECHNICAL ENGINEER. PROVIDE PROOF OF ALL REQUIRED SOIL COMPACTION TO THE OWNER.
12. CALL MISS DIG 811 A MINIMUM OF 48 HOURS TO BEGINNING ANY EXCAVATION ACTIVITIES.
13. IF CONTRACTOR DISTURBS AREA OUTSIDE LIMITS OF DISTURBANCE, CONTRACTOR TO REPLACE MATERIAL AT NO COST OF OWNER.
14. ALL TREES WITHIN HELICOPTER FINAL APPROACH AND TAKEOFF (FATO) ZONES ARE TO BE MAINTAINED SO THEY DO NOT EXCEED HEIGHTS ABOVE THE HELISTOP PAD CALCULATED BY A RATIO OF 8:1 (HORIZONTAL:VERTICAL). FOR EXAMPLE, A TREE WITIN THE FATO ZONE AND 100 AWAY FROM THE HELIPAD CANNOT BE TALLER THAN 12.5 FEET ABOVE THE ELEVATION OF THE HELISTOP PAD.

KEYED NOTES

- (A) PROTECT EXISTING PAVEMENT TO REMAIN
- (B) REMOVE CONCRETE CURB AND GUTTER TO THE EXTENTS SHOWN
- (C) SAWCUT FULL DEPTH AND RMOVE PAVEMENT. REMOVE TO THE NEAREST JOINT IF PAVEMENT IS CONCRETE.
- (D) REMOVE EXISTING STORM STRUCTURE. REFER TO UTILITY PLANS FOR PROPOSED STORM STRUCTURE LOCATIONS.
- (E) PROTECT EXISTING LIGHT POLE
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- (J) SMALL GARDEN SHED REMOVAL
- (K) PARKING PAINT REMOVAL

LEGEND

- PROPERTY LINE
- EASEMENT
- LIMITS OF CONSTRUCTION
- CURB REMOVAL
- PAVEMENT REMOVAL
- CONCRETE REMOVAL
- VEGETATION REMOVAL AND PREP EARTHWORK
- TREE REMOVAL
- TREE PROTECTION FENCE (1 / LP-500)
- PROTECT
- RELOCATE
- REMOVE
- SHRUB MASSING REMOVAL AND PREP EARTHWORK

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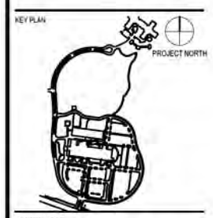
KEY PLAN



DRAWING TITLE
SITE DEMOLITION PLAN

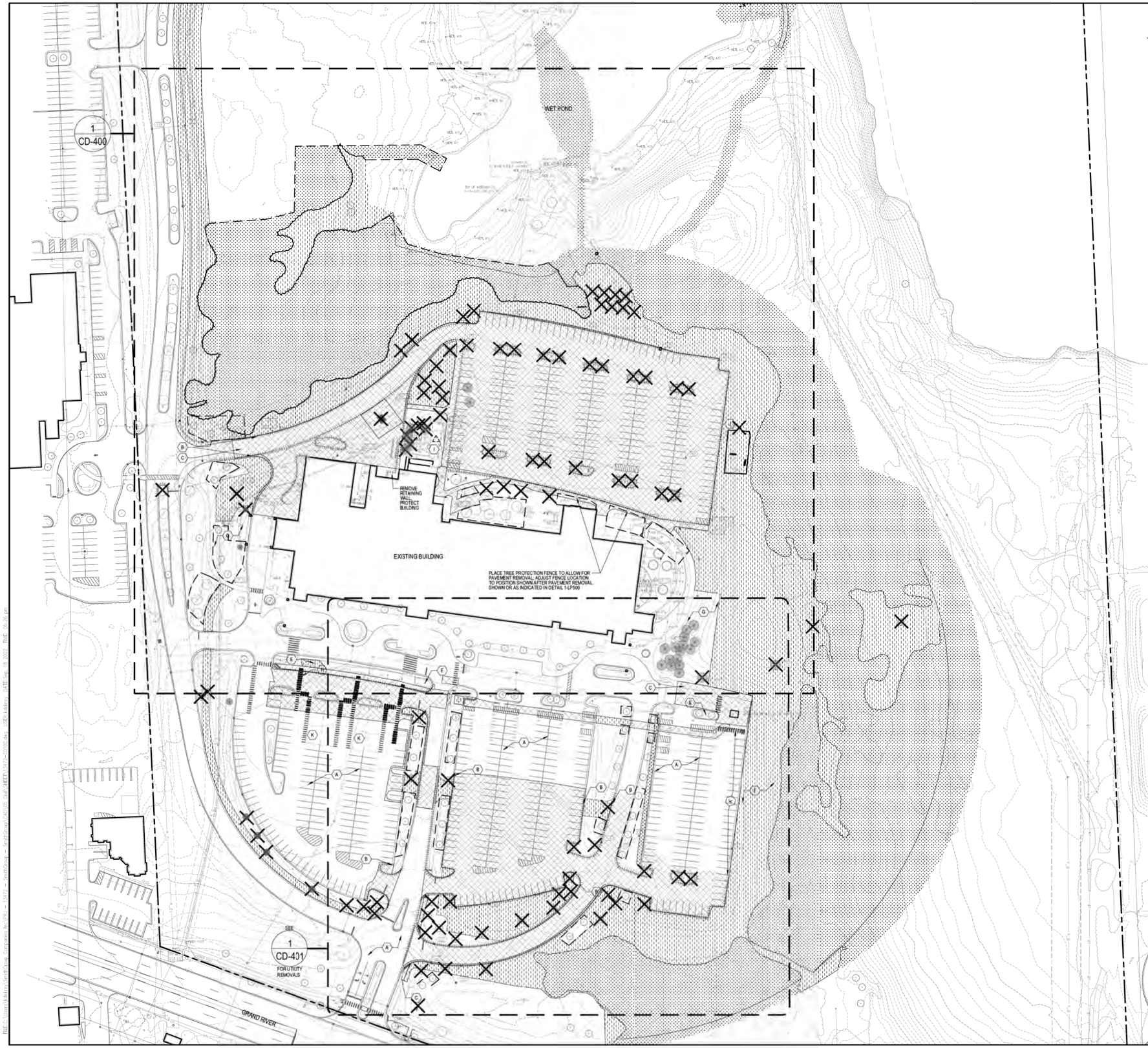
SCALE:1" = 100'

SCALE 13472.00

PROJECT NUMBER

CD-100

DRAWING NUMBER



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LEGEND

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SEALS AND SIGNATURES

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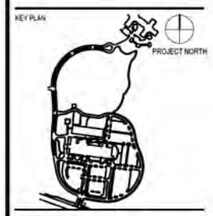
KEY PLAN

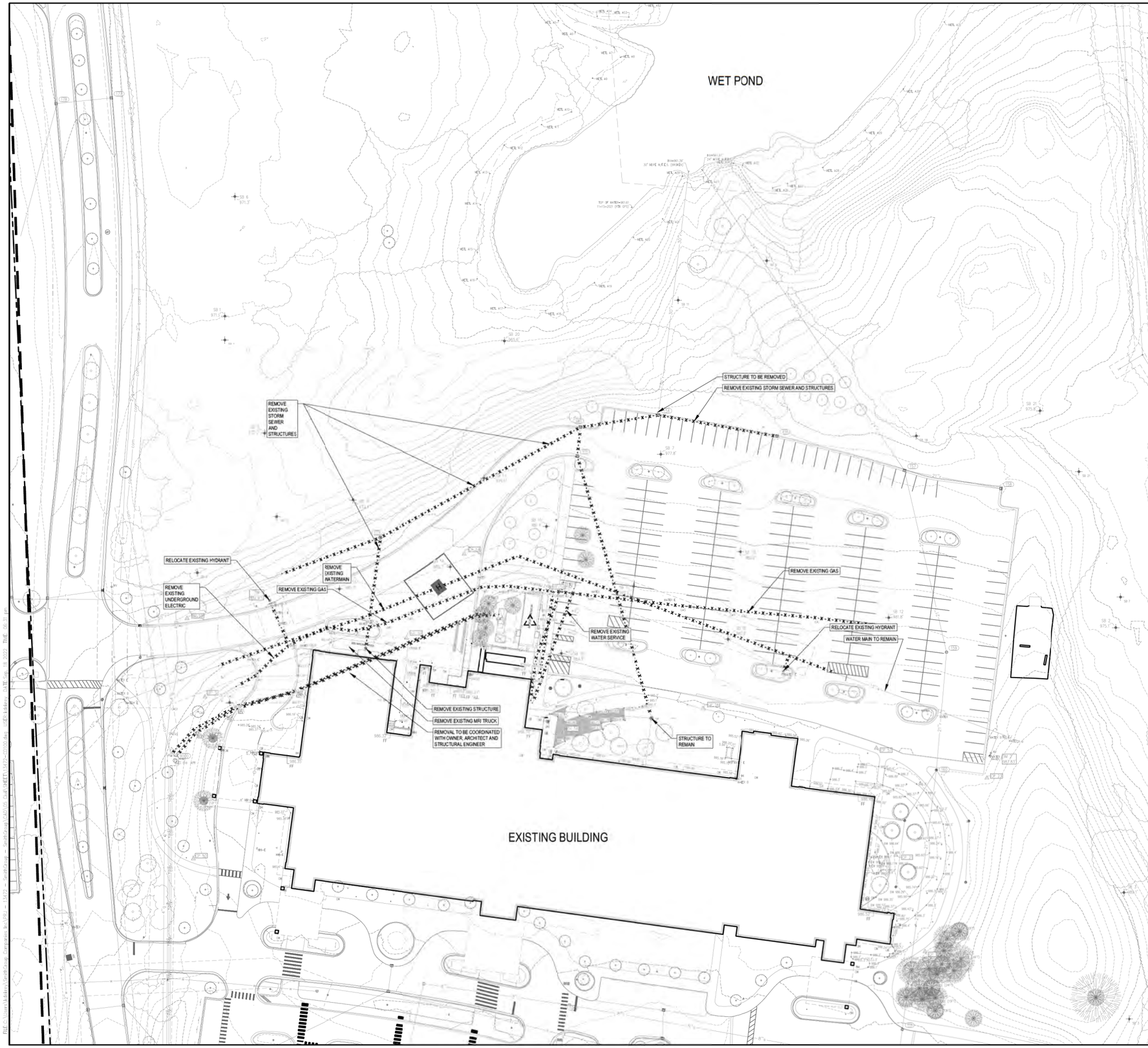


DRAWING TITLE
SITE DEMOLITION PLAN

SCALE:1" = 50'

SCALE
13472.00
PROJECT NUMBER

CD-101
DRAWING NUMBER



SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY TO PERFORM THE WORK. CONTRACTOR SHALL PAY ALL PERMIT, PERMIT REVIEW AND PERMIT INSPECTION FEES.
2. CONTRACTOR SHALL COORDINATE USE OF THE SITE AND HOURS OF CONSTRUCTION WITH THE OWNER, MHOG, LIVINGSTON COUNTY DRAIN COMMISSION, AND/OR GENOA TOWNSHIP AS APPLICABLE.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. COORDINATE LOCATION OF PUBLIC UTILITIES WITH GENOA TOWNSHIP, MHOG, LIVINGSTON COUNTY DRAIN COMMISSION, AND BY CALLING 811 AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. COORDINATE LOCATING OWNER OWNED UTILITIES WITH THE OWNER. ANY VARIATIONS FROM THESE PLANS SHALL BE BROUGHT TO ATTENTION UPON DISCOVERY TO DETERMINE IF DESIGN CHANGES ARE NECESSARY.
4. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE UTILITY OWNER AT NO COST TO THE UTILITY OWNER.
5. ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWNSHIP, FEDERAL, STATE AND LOCAL ORDINANCES. UNLESS DESIGNATED AS SALVAGE TO OWNER OR REQUESTED BY OWNER.
6. COORDINATE WORK ON THIS DRAWING WITH SOIL EROSION AND SEDIMENTATION CONTROL, LAYOUT AND MATERIALS, AND RADING AND UTILITY PLANS INCLUDING TEMPORARY UTILITY RELOCATIONS SHOWN ON SHEETS CG-100 AND CU-100.
7. THIS SITE EARTHWORK WILL NOT BALANCE. CONTRACTOR SHALL DISPOSE OF EXCESS EXCAVATED MATERIAL AND IMPORT ADDITIONAL MATERIAL AS NECESSARY. EXCAVATED MATERIALS SHALL ONLY BE USED FOR SITE FILL IF APPROVED AND ACCEPTED BY THE SOILS/GEOTECHNICAL TESTING AGENT.
8. LOCATION OF TEMPORARY CONSTRUCTION FENCING AND GATES IS APPROXIMATE. ACTUAL LOCATION TO BE DETERMINED BY CONSTRUCTION MANAGER AS COORDINATED WITH OWNER TO MEET CONSTRUCTION ACTIVITIES AND PHASING.
9. COMPLETELY REMOVE ALL UTLITIES WITHIN FOOTPRINT OF PROPOSED BUILDING UNLESS SPECIFICALLY INDICATED OTHERWISE. STORM AND SANITARY SEWERS TO BE REMOVED THAT ARE OUTSIDE OF BUILDING FOOTPRINT MAY BE BULKHEADED, FILLED WITH CLSM AND ABANDONED IN PLACE AS COORDINATED WITH THE ENGINEER.
10. CONFIRM STATUS OF UTILITY LINE AS INACTIVE. IF UTILITY IS CONFIRMED TO BE INACTIVE REMOVE TO LIMITS SHOWN. PLUG/BULKHEAD UTILITY AND ABANDON IN PLACE. IF UTILITY IS FOUND TO BE ACTIVE NOTIFY ENGINEER IMMEDIATELY.
11. COORDINATE THIS PLAN WITH ARCHITECTURAL SELECTIVE DEMOLITION AND ELECTRICAL SITE PLANS.
12. ALL UTILITY REMOVALS TO THE APPROXIMATE LIMITS SHOWN. REMOVALS SHALL BE TO THE NEXT NEAREST JOINT FROM THE APPROXIMATE REMOVAL LIMIT. NO PIPE CUTTING SHALL BE PERFORMED. COORDINATE REMOVALS WITH UTILITY AND ELECTRICAL PLANS.
13. UPON COMPLETION OF BUILDING FOUNDATION CONSTRUCTION SANITARY AND STORM SEWERS TO REMAIN ARE TO BE THOROUGHLY CLEANED BY JETTING AND VIDEO INSPECTED. SEWERS ARE THEN TO BE DRIED AND RELINED, IF NECESSARY, USING A SPRAY APPLIED EPOXY COATING LINING.RE-INSPECT SEWERS FOR ACCEPTANCE UPON COMPLETION OF RELINING PROCEDURE.

LEGEND

- x - x - x - x - UTILITY REMOVAL

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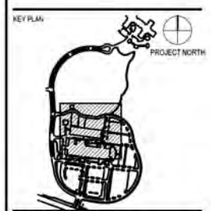
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
UTILITY DEMOLITION PLAN

SCALE: 1" = 30'

SCALE
13472.00

PROJECT NUMBER

CD-400

DRAWING NUMBER

SHEET NOTES

1. CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS NECESSARY TO PERFORM THE WORK. CONTRACTOR SHALL PAY ALL PERMIT, PERMIT REVIEW AND PERMIT INSPECTION FEES.
2. CONTRACTOR SHALL COORDINATE USE OF THE SITE AND HOURS OF CONSTRUCTION WITH THE OWNER, MHOG, LIVINGSTON COUNTY DRAIN COMMISSION, AND/OR GENOA TOWNSHIP AS APPLICABLE.
3. CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING UTILITIES PRIOR TO THE START OF CONSTRUCTION. COORDINATE LOCATION OF PUBLIC UTILITIES WITH GENOA TOWNSHIP, MHOG, LIVINGSTON COUNTY DRAIN COMMISSION, AND BY CALLING 811 AT LEAST 72 HOURS PRIOR TO THE START OF CONSTRUCTION. COORDINATE LOCATING OWNER OWNED UTILITIES WITH THE OWNER. ANY VARIATIONS FROM THESE PLANS SHALL BE BROUGHT TO ATTENTION UPON DISCOVERY TO DETERMINE IF DESIGN CHANGES ARE NECESSARY.
4. ALL EXISTING UTILITIES SHALL BE PROTECTED FROM DAMAGE DURING CONSTRUCTION ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE UTILITY OWNER AT NO COST TO THE UTILITY OWNER.
5. ALL DEMOLISHED MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH ALL TOWNSHIP, FEDERAL, STATE AND LOCAL ORDINANCES. UNLESS DESIGNATED AS SALVAGE TO OWNER OR REQUESTED BY OWNER.
6. COORDINATE WORK ON THIS DRAWING WITH SOIL EROSION AND SEDIMENTATION CONTROL, LAYOUT AND MATERIALS, AND RADING AND UTILITY PLANS INCLUDING TEMPORARY UTILITY RELOCATIONS SHOWN ON SHEETS CG-100 AND CU-100.
7. THIS SITE EARTHWORK WILL NOT BALANCE. CONTRACTOR SHALL DISPOSE OF EXCESS EXCAVATED MATERIAL AND IMPORT ADDITIONAL MATERIAL AS NECESSARY. EXCAVATED MATERIALS SHALL ONLY BE USED FOR SITE FILL IF APPROVED AND ACCEPTED BY THE SOILS/GEOTECHNICAL TESTING AGENT.
8. LOCATION OF TEMPORARY CONSTRUCTION FENCING AND GATES IS APPROXIMATE. ACTUAL LOCATION TO BE DETERMINED BY CONSTRUCTION MANAGER AS COORDINATED WITH OWNER TO MEET CONSTRUCTION ACTIVITIES AND PHASING.
9. COMPLETELY REMOVE ALL UTLITIES WITHIN FOOTPRINT OF PROPOSED BUILDING UNLESS SPECIFICALLY INDICATED OTHERWISE. STORM AND SANITARY SEWERS TO BE REMOVED THAT ARE OUTSIDE OF BUILDING FOOTPRINT MAY BE BULKHEADED, FILLED WITH CLSM AND ABANDONED IN PLACE AS COORDINATED WITH THE ENGINEER.
10. CONFIRM STATUS OF UTILITY LINE AS INACTIVE. IF UTILITY IS CONFIRMED TO BE INACTIVE REMOVE TO LIMITS SHOWN. PLUG/BULKHEAD UTILITY AND ABANDON IN PLACE. IF UTILITY IS FOUND TO BE ACTIVE NOTIFY ENGINEER IMMEDIATELY.
11. COORDINATE THIS PLAN WITH ARCHITECTURAL SELECTIVE DEMOLITION AND ELECTRICAL SITE PLANS.
12. ALL UTILITY REMOVALS TO THE APPROXIMATE LIMITS SHOWN. REMOVALS SHALL BE TO THE NEXT NEAREST JOINT FROM THE APPROXIMATE REMOVAL LIMIT. NO PIPE CUTTING SHALL BE PERFORMED. COORDINATE REMOVALS WITH UTILITY AND ELECTRICAL PLANS.
13. UPON COMPLETION OF BUILDING FOUNDATION CONSTRUCTION SANITARY AND STORM SEWERS TO REMAIN ARE TO BE THOROUGHLY CLEANED BY JETTING AND VIDEO INSPECTED. SEWERS ARE THEN TO BE DRIED AND RELINED, IF NECESSARY, USING A SPRAY APPLIED EPOXY COATING LINING.RE-INSPECT SEWERS FOR ACCEPTANCE UPON COMPLETION OF RELINING PROCEDURE.

LEGEND

- x - x - x - x - UTILITY REMOVAL

Trinity Health

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SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

PROJECT NORTH

DRAWING TITLE
UTILITY DEMOLITION PLAN

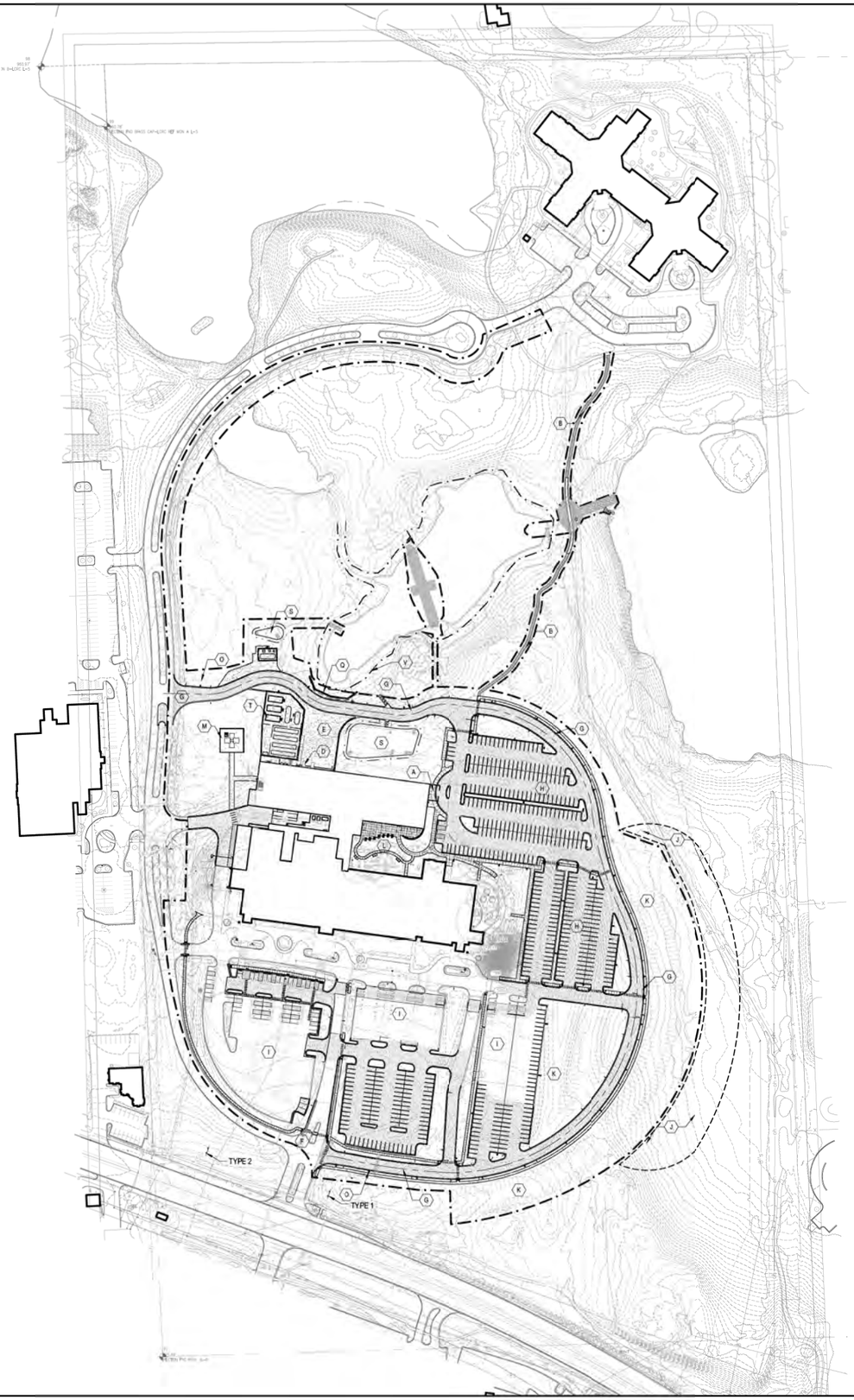
SCALE: 1" = 20'

SCALE 13472.00

PROJECT NUMBER

CD-401

DRAWING NUMBER



PUD PARKING CRITERIA FORMULA	
Number of Parking Spaces =	
1 space per 275 square feet of 80% of Building Gross Square Footage	

BUILDING SQ FT	
Total existing building sq ft	148,393
Total new sq ft new hospital	178,893
Total sq ft	**327,286**
PUD CALCULATIONS	
Total sq ft x 80%	261,829
Total ÷ 275	952
Total spaces per PUD	**952**
TOTAL PARKING SPACES	
New parking spaces	620
Parking spaces to remain	226
Banked parking spaces	218
Total buildout parking	**1064**

FOR REFFRENCE	
TRINITY PARKING STUDY CALCULATIONS	
Existing Brighton facility visitor	*428*
Existing Brighton facility employee	*223*
Existing Brighton facility parking totals	*651*
Brighton max utilization study	
Brighton max visitor	*177*
Brighton max employee	*202*
Total Brighton utilization	*379*
Howell max utilization	
Howell max visitor	*114*
Howell max employee	*125*
Existing Howell facility parking totals	*239*
Anticipated parking needs	*618*
ORDINANCE HOSPITAL PARKING	
2 spaces inpatient beds (72 proposed)	144
1 space/200sf office or outpatient ares	1368
Total parking per ordinance	1512

SHEET NOTES

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3. PRIOR TO THE COMMENCEMEST OF WORK, VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION AND TAKE RESPONSIBILITY FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF CONSTRUCTION.
4. CALL MISS DIG 811 A MINIMUMOF 48 HOURS TO BEGINNING ANY EXCAVATION ACTIVITIES.
5. LIMITS OF SEED ARE APPROXIMATE BASED ON GRADING PLAN. CONTRACTOR TO SEED ALL DISTURBED AREAS FROM CONSTRUCTION RELATED ACTIVITIES. IF CONTRACTOR DISTURBS AREA OUTSIDE LIMITS OF DISTURBANCE, CONTRACTOR TO REPLACE MATERIAL AT NO COST OF OWNER.
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KEY NOTES

- (A) PATIENT DISCHARGE AND STAFF ENTRY
- (B) EXISTING PATH TO MULCH
- (C) LANDSCAPE, SEE LANDSCAPE PLANS
- (D) REFUSE AREA WITH ARCHITECTURAL COVERING
- (E) LOADING DOCK
- (F) MAIN ENTRANCE
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- (L) COURTYARD
- (M) HELISTOP, SEE CONSULTANT PLANS
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- (O) LIGHTING, SEE LIGHTING PLANS
- (P) BUILDING, SEE ARCHITECTURE PLANS
- (Q) RETAINING WALL
- (R) DECORATIVE CMU WALL OR FENCE
- (S) BIORETENTION POND SEE LANDSCAPE PLANS
- (T) UTILITY YARD
- (U) WALL FOOTINGS
- (V) WETPOND BOUNDARY (MAPPED AND SURVEYED)
- (W) BARRIER FREE PARKING
- (X) HAND RAILS, REF. ARCH
- (Y) CONCRETE RAMP

LEGEND

- LIMITS OF CONSTRUCTION
- ASPHALT PAVEMENT — 2-3 CS-505
- HEAVY DUTY CONCRETE PAVEMENT — 1 CS-501
- CONCRETE PAVEMENT — 4 CS-505
- COLOR CONCRETE PAVEMENT — 4 CS-501
- CURB & GUTTER — 7 CS-505
- CURB RAMP — 13 CS-501
- FLUSH CURB — 8 CS-505
- SPILLOUT CURB & GUTTER — 8 CS-501
- CONTROL JOINT — 5 CS-505
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- STOP BAR PAVEMENT MARKING
- CROSSWALK PAVEMENT MARKING — 10 CS-501
- ASSESSABLE PAVEMENT MARKING — 11 CS-505
- BOLLARD — 5 CS-501
- TRASH & RECYCLING CONTAINERS — 2 CS-505
- DETECTABLE WARNING STRIP — 14 CS-501
- CMU AND CONCRETE RETAINING WALLS — 1-4 CS-503, 1-4 CS-502, 1-4 CS-504
- CONCRETE RETAINING WALL WITH & WITHOUT HANDRAIL OR GUARDRAIL — 3-4 CS-504, 1-2 CS-505
- SEAT WALL — 3-4 CS-505
- SIGNAGE — 3-4 CS-501
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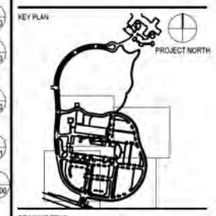


DRAWING TITLE

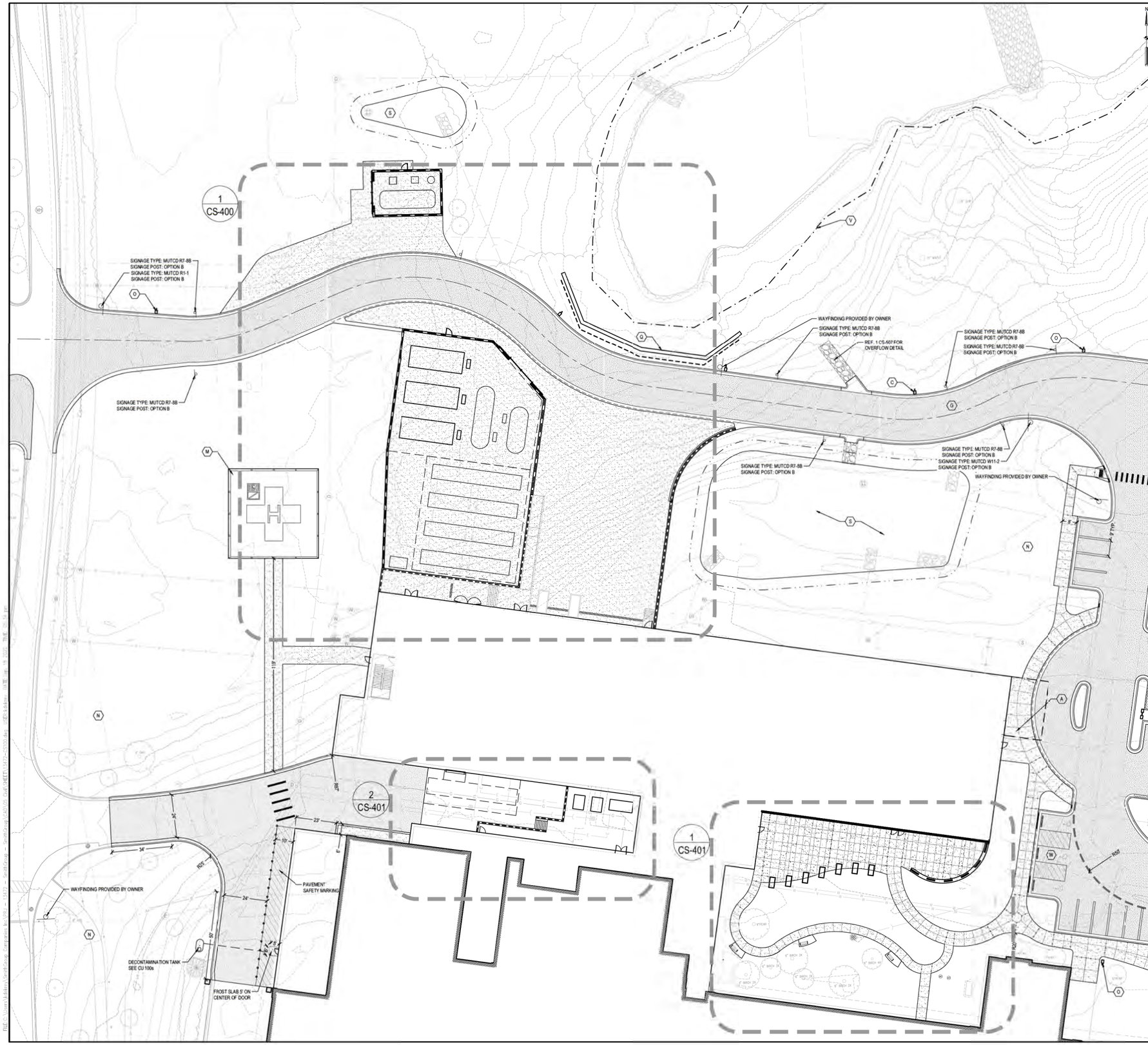
SITE PLAN

SCALE:1' = 100'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CS-100



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LEGEND

- LIMITS OF CONSTRUCTION
- ASPHALT PAVEMENT — 2-3 / CS-500
- HEAVY DUTY CONCRETE PAVEMENT — 1 / CS-500
- CONCRETE PAVEMENT — 4 / CS-500
- COLOR CONCRETE PAVEMENT — 4 / CS-500
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- CROSSWALK PAVEMENT MARKING — 10 / CS-500
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- BOLLARD — 5 / CS-501
- TRASH & RECYCLING CONTAINERS — 2 / CS-509
- DETECTABLE WARNING STRIP — 14 / CS-500
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- SIGNAGE — 3-4 / CS-501
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- BENCH — 3 / CS-505
- PLANTERS — 4 / CS-505
- UTILITY GATE — 1 / CS-509
- WHEEL STOPS — 12 / CS-500

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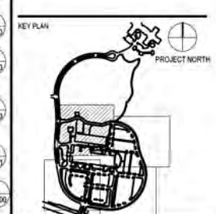

DRAWING TITLE

SITE PLAN

SCALE: 1" = 20'

SCALE

13472.00

PROJECT NUMBER

CS-101

DRAWING NUMBER

SHEET NOTES

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LEGEND

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- CURB RAMP — 8 CS-500
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- DETECTABLE WARNING STRIP — 1-4 CS-503 / 1-4 CS-502 / 1-4 CS-504
- CMU AND CONCRETE RETAINING WALLS — 3-4 CS-504 / 1-2 CS-501
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- SEAT WALL — 3-4 CS-501
- SIGNAGE — 1-2 CS-501
- MONUMENT SIGNAGE — 3 CS-500
- BENCH — 4 CS-505
- PLANTERS — 1 CS-506
- UTILITY GATE — 12 CS-500
- WHEEL STOPS

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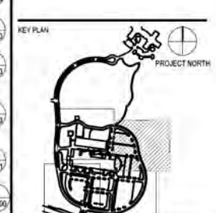
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	J	16SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE

SITE PLAN

SCALE:1" = 20'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CS-102

SHEET NOTES

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2. NOTIFY THE ENGINEER IN WRITING OF ANY IDENTIFIED DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS PRIOR TO THE START OF WORK. DURING PERFORMANCE OF THE WORK, VERIFY ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE AND CROSS-CHECK DETAILS AND DIMENSION SHOWN ON THE DRAWINGS WITH RELATED REQUIREMENTS ON THE ENGINEERURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS PRIOR TO STARTING WORK. IN ALL CASES WHERE A CONFLICT MAY OCCUR, THE ENGINEER SHALL BE NOTIFIED AND WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.
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4. CALL MISS DIG 811 A MINIMUM OF 48 HOURS TO BEGINNING ANY EXCAVATION ACTIVITIES.
5. LIMITS OF SEED ARE APPROXIMATE BASED ON GRADING PLAN. CONTRACTOR TO SEED ALL DISTURBED AREAS FROM CONSTRUCTION RELATED ACTIVITIES. IF CONTRACTOR DISTURBS AREA OUTSIDE LIMITS OF DISTURBANCE, CONTRACTOR TO REPLACE MATERIAL AT NO COST OF OWNER.
6. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS.
7. DETAILS NOTED AS TYPICAL SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. WHERE NO SPECIFIC DETAIL IS SHOWN, THE CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT.
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9. SIGNS AND PAVEMENT MARKINGS TO BE INSTALLED PER MUTCD STANDARDS.
10. COORDINATE CONSTRUCTION OF PENETRATIONS, SLEEVES, VARIATIONS IN THE SLAB ELEVATIONS, DEPRESSED AREAS AND ALL OTHER ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

KEY NOTES

- (A) PATIENT DISCHARGE AND STAFF ENTRY
- (B) EXISTING PATH TO MULCH
- (C) LANDSCAPE, SEE LANDSCAPE PLANS
- (D) REFUSE AREA WITH ARCHITECTURAL COVERING
- (E) LOADING DOCK
- (F) MAIN ENTRANCE
- (G) FIRE SAFETY LOOP
- (H) PROPOSED PARKING
- (I) EXISTING PARKING
- (J) FUTURE COMMUNITY FARM AREA
- (K) BANKED PARKING
- (L) COURTYARD
- (M) HELISTOP, SEE CONSULTANT PLANS
- (N) LAWN AREA, SEE LANDSCAPE PLANS
- (O) LIGHTING, SEE LIGHTING PLANS
- (P) BUILDING, SEE ARCHITECTURE PLANS
- (Q) RETAINING WALL
- (R) DECORATIVE CMU WALL OR FENCE
- (S) BIORETENTION POND SEE LANDSCAPE PLANS
- (T) UTILITY YARD
- (U) WALL FOOTINGS
- (V) WETPOND BOUNDARY (MAPPED AND SURVEYED)
- (W) BARRIER FREE PARKING
- (X) HAND RAILS, REF. ARCH
- (Y) CONCRETE RAMP

LEGEND

LIMITS OF CONSTRUCTION	
ASPHALT PAVEMENT	2-3 CS-500
HEAVY DUTY CONCRETE PAVEMENT	1 CS-500
CONCRETE PAVEMENT	4 CS-500
COLOR CONCRETE PAVEMENT	4 CS-500
CURB & GUTTER	7 CS-500
CURB RAMP	13 CS-500
FLUSH CURB	8 CS-500
SPILLOUT CURB & GUTTER	9 CS-500
CONTROL JOINT	5 CS-500
ISOLATION (EXPANSION) JOINT	6 CS-501
STOP BAR PAVEMENT MARKING	
CROSSWALK PAVEMENT MARKING	10 CS-500
ASSESSABLE PAVEMENT MARKING	11 CS-500
BOLLARD	5 CS-501
TRASH & RECYCLING CONTAINERS	2 CS-509
DETECTABLE WARNING STRIP	14 CS-500
CMU AND CONCRETE RETAINING WALLS	1-4 CS-501, 1-4 CS-502, 1-4 CS-504
CONCRETE RETAINING WALL WITH & WITHOUT HANDRAIL OR GUARDRAIL	3-4 CS-504, 1-2 CS-505
SEAT WALL	3-4 CS-505
SIGNAGE	3-4 CS-501
MONUMENT SIGNAGE	1-2 CS-501
BENCH	3 CS-505
PLANTERS	4 CS-505
UTILITY GATE	1 CS-509
WHEEL STOPS	12 CS-500

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SEALS AND SIGNATURES

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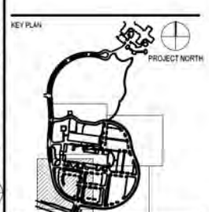

DRAWING TITLE

SITE PLAN

SCALE: 1" = 20'

SCALE 13472.00

PROJECT NUMBER

DRAWING NUMBER CS-103

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KEY NOTES

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- (D) REFUSE AREA WITH ARCHITECTURAL COVERING
- (E) LOADING DOCK
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- (I) EXISTING PARKING
- (J) FUTURE COMMUNITY FARM AREA
- (K) BANKED PARKING
- (L) COURTYARD
- (M) HELISTOP, SEE CONSULTANT PLANS
- (N) LAWN AREA, SEE LANDSCAPE PLANS
- (O) LIGHTING, SEE LIGHTING PLANS
- (P) BUILDING, SEE ARCHITECTURE PLANS
- (Q) RETAINING WALL
- (R) DECORATIVE CMU WALL OR FENCE
- (S) BIORETENTION POND SEE LANDSCAPE PLANS
- (T) UTILITY YARD
- (U) WALL FOOTINGS
- (V) WETPOND BOUNDARY (MAPPED AND SURVEYED)
- (W) BARRIER FREE PARKING
- (X) HAND RAILS, REF. ARCH
- (Y) CONCRETE RAMP

LEGEND

- LIMITS OF CONSTRUCTION
- ASPHALT PAVEMENT — 2-3 CS-500
- HEAVY DUTY CONCRETE PAVEMENT — 1 CS-501
- CONCRETE PAVEMENT — 4 CS-500
- COLOR CONCRETE PAVEMENT — 4 CS-501
- CURB & GUTTER — 7 CS-500
- CURB RAMP — 13 CS-501
- FLUSH CURB — 8 CS-500
- SPILLOUT CURB & GUTTER — 8 CS-501
- CONTROL JOINT — 5 CS-500
- ISOLATION (EXPANSION) JOINT — 6 CS-501
- STOP BAR PAVEMENT MARKING
- CROSSWALK PAVEMENT MARKING — 10 CS-501
- ASSESSABLE PAVEMENT MARKING — 11 CS-501
- BOLLARD — 5 CS-501
- TRASH & RECYCLING CONTAINERS — 2 CS-505
- DETECTABLE WARNING STRIP — 14 CS-501
- CMU AND CONCRETE RETAINING WALLS — 1-4 CS-503, 1-4 CS-502, 1-4 CS-504
- CONCRETE RETAINING WALL WITH & WITHOUT HANDRAIL OR GUARDRAIL — 3-4 CS-504, 1-2 CS-505
- SEAT WALL — 3-4 CS-505
- SIGNAGE — 3-4 CS-501
- MONUMENT SIGNAGE — 1-2 CS-501
- BENCH — 3 CS-505
- PLANTERS — 4 CS-505
- UTILITY GATE — 1 CS-506
- WHEEL STOPS — 12 CS-505

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LCDC RESUBMITTAL R2	H	26AUG2022
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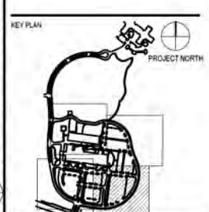
SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE

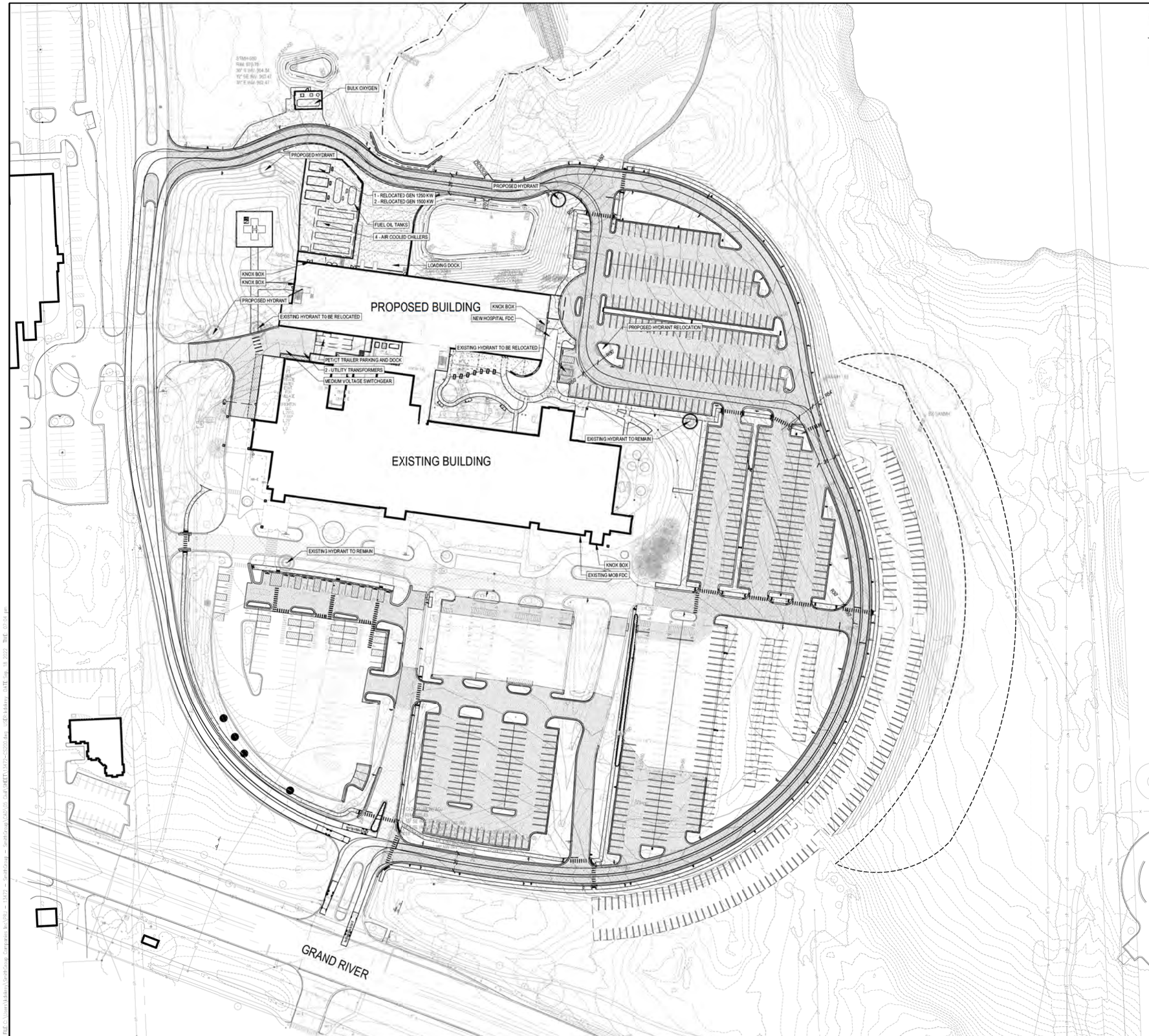
SITE PLAN

SCALE:1" = 20'

SCALE 13472.00

PROJECT NUMBER

DRAWING NUMBER CS-104



SHEET NOTES

ACCESS ROADS TO THE SITE SHALL BE PROVIDED AND MAINTAINED DURING CONSTRUCTION. ACCESS ROADS SHALL BE CONSTRUCTED TO BE CAPABLE OF SUPPORTING THE IMPOSED LOAD OF FIRE APPARATUS WEIGHING AT LEAST 84,000 POUNDS.

LEGEND

FIRE ACCESS LANE

NO PARKING FIRE LANE SIGNAGE

CONTACTS

OWNER:	TRINITY HEALTH
OWNER'S REPRESENTATIVE:	TOM TOXCO 1600 SOUTH CANTON CENTER ROAD CANTON, MI 48155
PHONE:	734-712-1192 (DIRECT) 734-648-1730 (CELL)
EMAIL:	TOM.TOXCO@STJOESHEALTH.ORG
ARCHITECT:	SMITHGROUP, INC. 500 GRISWOLD STREET, SUITE 1700 DETROIT, MI 48226
PROJECT MANAGER:	CINDY PIZZOLO
PHONE:	313-442-8022 (OFFICE) 313-402-8153 (CELL)
EMAIL:	CINDY.PIZZOLO@SMITHGROUP.COM
CONTRACTOR:	GRANGER CONSTRUCTION COMPANY 39475 W 13 MILE ROAD, SUITE 100 NOVI, MI48377
ON-SITE SUPERVISOR:	RYAN SNELLENBERGER
PHONE:	517-535-806
EMAIL:	RSNELLENBERGER@GRANGERCONSTRUCTION.COM

SIGNAGE DETAIL

N.T.S

Trinity Health

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SEALS AND SIGNATURES

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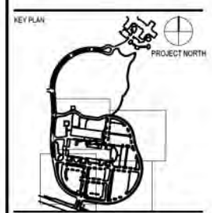
KEY PLAN



DRAWING TITLE

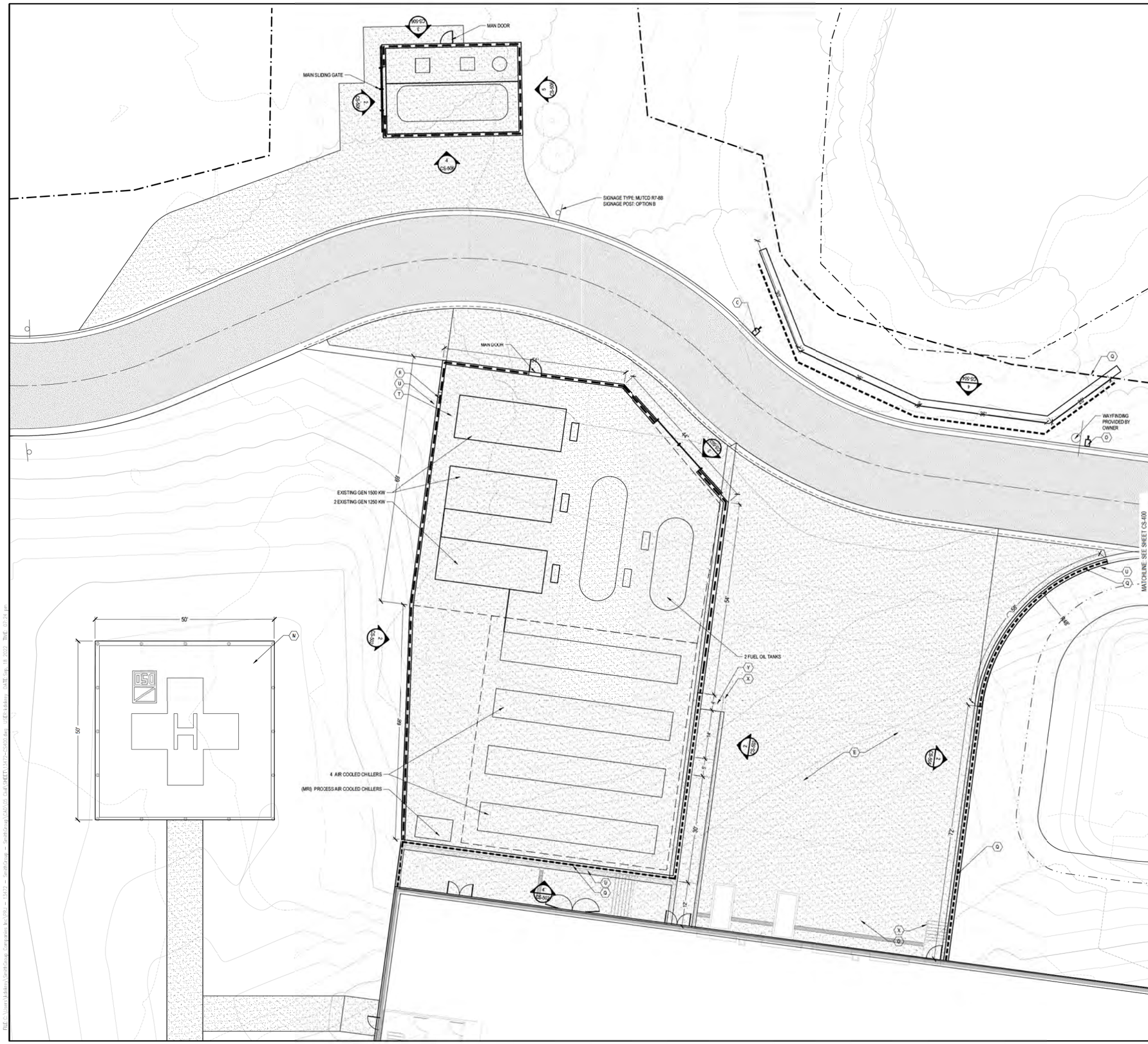
FIRE DEPARTMENT ACCESS PLAN

SCALE:1" = 50'

SCALE 13472.00

PROJECT NUMBER

DRAWING NUMBER CS-200



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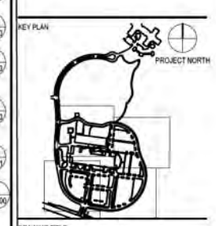


DRAWING TITLE
SITE ENLARGEMENTS

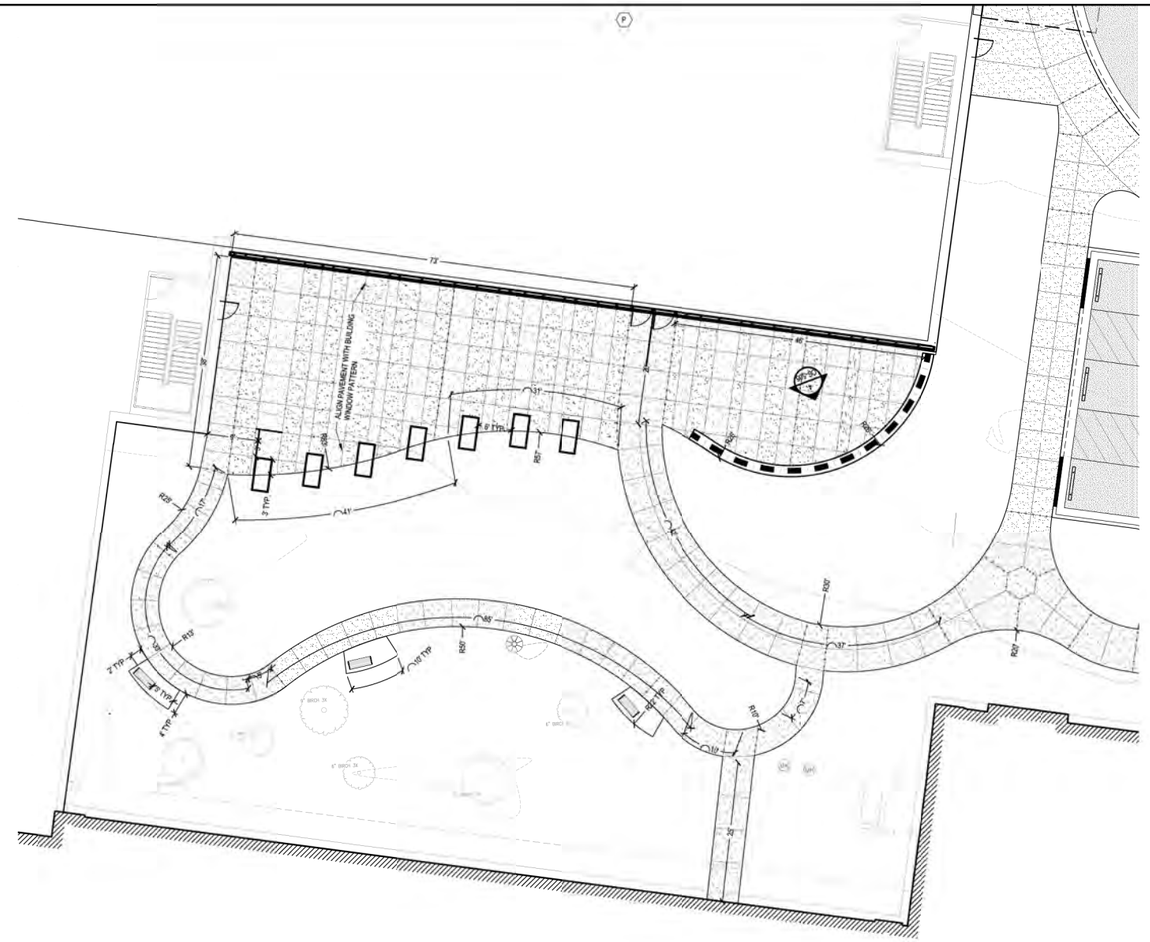
0 5 10 20
SCALE:1" = 10'

SCALE

PROJECT NUMBER 13472.00

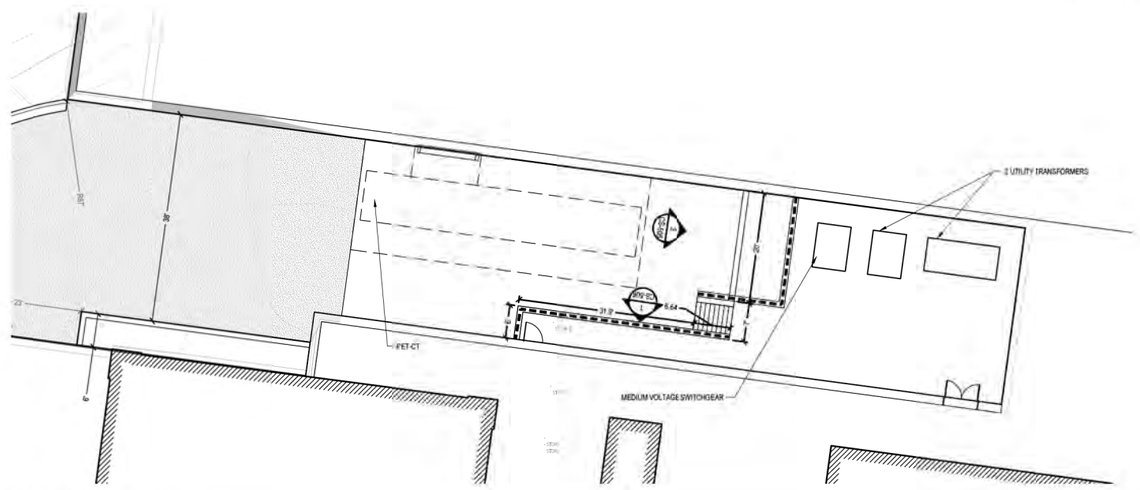
DRAWING NUMBER CS-400

FILE C:\Users\Admin\SmithGroup Companies Inc\PW - 13472 - SmithGroup V:\01\05_Civil\NEW\13472-CS400.dwg USER:Admin DATE:Sep 18, 2022 TIME: 03:24 pm



1 PLAZA ENLARGEMENT

SCALE: 1"=10'



2 SITE PLAN ENLARGEMENT

SCALE: 1"=10'

SHEET NOTES

1. ENGINEER WILL PROVIDE TO THE CONTRACTOR AUTOCAD 2022 DWG FILES FOR LAYOUT AND GRADING USE. IF THERE ARE DISCREPANCIES BETWEEN THIS SET OF PLANS AND THE ELECTRONIC FILES, THE PLAN DRAWINGS SHALL CONTROL. NOTIFY ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.
2. NOTIFY THE ENGINEER IN WRITING OF ANY IDENTIFIED DISCREPANCIES WITHIN THE CONSTRUCTION DOCUMENTS PRIOR TO THE START OF WORK. DURING PERFORMANCE OF THE WORK, VERIFY ALL DIMENSIONS AND CONDITONS AT THE JOB SITE AND CROSS-CHECK DETAILS AND DIMENSION SHOWN ON THE DRAWINGS WITH RELATED REQUIREMENTS ON THE ENGINEERURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS. CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS PRIOR TO STARTING WORK. IN ALL CASES WHERE A CONFLICT MAY OCCUR, THE ENGINEER SHALL BE NOTIFIED AND WILL INTERPRET THE INTENT OF THE CONTRACT DOCUMENTS.
3. PRIOR TO THE COMMENCEMENT OF WORK, VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION AND TAKE RESPONSIBILITY FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF CONSTRUCTION.
4. CALL MISS DIG 811 A MINIMUM OF 48 HOURS TO BEGINNING ANY EXCAVATION ACTIVITIES.
5. LIMITS OF SEED ARE APPROXIMATE BASED ON GRADING PLAN. CONTRACTOR TO SEED ALL DISTURBED AREAS FROM CONSTRUCTION RELATED ACTIVITIES. IF CONTRACTOR DISTURBS AREA OUTSIDE LIMITS OF DISTURBANCE, CONTRACTOR TO REPLACE MATERIAL AT NO COST OF OWNER.
6. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS.
7. DETAILS NOTED AS TYPICAL SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. WHERE NO SPECIFIC DETAIL IS SHOWN, THE CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT.
8. PROTECT TREES AND LANDSCAPE. CONTRACTOR RESPONSIBLE IF DAMAGE OCCURS DURING PROJECT DURATION. CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF TREE PROTECTION FENCE DURING PROJECT DURATION.
9. SIGNS AND PAVEMENT MARKINGS TO BE INSTALLED PER MUTCD STANDARDS.
10. COORDINATE CONSTRUCTIONOF PENETRATIONS, SLEEVES, VARIATIONS IN THE SLAB ELEVATIONS, DEPRESSED AREAS AND ALL OTHER ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING REQUIREMENTS.

KEY NOTES

- (A) PATIENT DISCHARGE AND STAFF ENTRY
- (B) EXISTING PATH TO MULCH
- (C) LANDSCAPE, SEE LANDSCAPE PLANS
- (D) REFUSE AREA WITH ARCHITECTURAL COVERING
- (E) LOADING DOCK
- (F) MAIN ENTRANCE
- (G) FIRE SAFETY LOOP
- (H) PROPOSED PARKING
- (I) EXISTING PARKING
- (J) FUTURE COMMUNITY FARM AREA
- (K) BANKED PARKING
- (L) COURTYARD
- (M) HELISTOP, SEE CONSULTANT PLANS
- (N) LAWN AREA, SEE LANDSCAPE PLANS
- (O) LIGHTING, SEE LIGHTING PLANS
- (P) BUILDING, SEE ARCHITECTURE PLANS
- (Q) RETAINING WALL
- (R) DECORATIVE CMU WALL OR FENCE
- (S) BIORETENTION POND SEE LANDSCAPE PLANS
- (T) UTILITY YARD
- (U) WALL FOOTINGS
- (V) WETPOND BOUNDARY (MAPPED AND SURVEYED)
- (W) BARRIER FREE PARKING
- (X) HAND RAILS, REF. ARCH
- (Y) CONCRETE RAMP

LEGEND

LIMITS OF CONSTRUCTION	
ASPHALT PAVEMENT	2-3 / CS-500
HEAVY DUTY CONCRETE PAVEMENT	1 / CS-500
CONCRETE PAVEMENT	4 / CS-500
COLOR CONCRETE PAVEMENT	4 / CS-500
CURB & GUTTER	7 / CS-500
CURB RAMP	13 / CS-500
FLUSH CURB	8 / CS-500
SPILLOUT CURB & GUTTER	9 / CS-500
CONTROL JOINT	5 / CS-500
ISOLATION (EXPANSION) JOINT	6 / CS-500
STOP BAR PAVEMENT MARKING	
CROSSWALK PAVEMENT MARKING	10 / CS-500
ASSESSABLE PAVEMENT MARKING	11 / CS-500
BOLLARD	5 / CS-501
TRASH & RECYCLING CONTAINERS	2 / CS-509
DETECTABLE WARNING STRIP	14 / CS-500
CMU AND CONCRETE RETAINING WALLS	1-4 / CS-503, 1-4 / CS-502, 1-4 / CS-504
CONCRETE RETAINING WALL WITH & WITHOUT HANDRAIL OR GUARDRAIL	3-4 / CS-504, 1-2 / CS-505
SEAT WALL	3-4 / CS-505
SIGNAGE	3-4 / CS-501
MONUMENT SIGNAGE	1-2 / CS-501
BENCH	3 / CS-506
PLANTERS	4 / CS-506
UTILITY GATE	1 / CS-508
WHEEL STOPS	12 / CS-500

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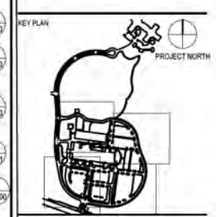
33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	J	16SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



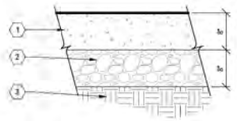
DRAWING TITLE
SITE ENLARGEMENTS

0' 5' 10' 20'
SCALE:1" = 5'

SCALE 13472.00

PROJECT NUMBER

DRAWING NUMBER CS-401

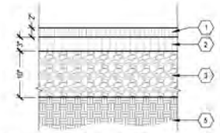


KEYED NOTES

1. CONCRETE PAVEMENT (MDOT GRADE 3500)
2. AGGREGATE BASE (MDOT 21AA CRUSHED LIMESTONE)
3. PREPARED SUBGRADE

1 HEAVY DUTY CONCRETE PAVEMENT - LOADING DOCK

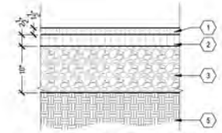
SCALE: 1" = 1'



1. BITUMINOUS WEARING COURSE (MDOT 5E1)
2. BITUMINOUS LEVELING COURSE (MDOT 4E1)
3. AGGREGATE BASE (MDOT 21AA CRUSHED LIMESTONE)
5. PREPARED SUBGRADE

2 ASPHALT PAVEMENT - ROAD

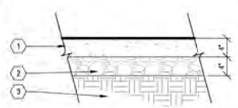
SCALE: 1" = 1'



1. BITUMINOUS WEARING COURSE (MDOT 5E1)
2. BITUMINOUS LEVELING COURSE (MDOT 4E1)
3. AGGREGATE BASE (MDOT 21AA CRUSHED LIMESTONE)
5. PREPARED SUBGRADE

3 ASPHALT PAVEMENT - PARKING LOT

SCALE: 1" = 1'



KEYED NOTES

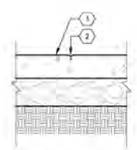
1. CONCRETE PAVEMENT (MDOT GRADE 3500)
2. AGGREGATE BASE (MDOT 21AA CRUSHED LIMESTONE)
3. PREPARED SUBGRADE

NOTE:

1. ALL CONCRETE TO HAVE A LIGHT BROOM FINISH PERPENDICULAR TO LINE OF TRAVEL.
2. REFER TO PLAN FOR LOCATIONS OF COLORED CONCRETE.

4 CONCRETE PAVEMENT - SIDEWALK

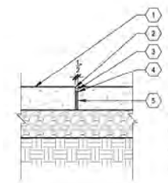
SCALE: 1" = 1'



1. CONCRETE PAVEMENT (4 / CS-502)
2. TOOLED OR SAWCUT JOINT TO ¼ DEPTH OF PAVEMENT. (T= CONCRETE PAVEMENT THICKNESS)

5 CONTROL JOINT

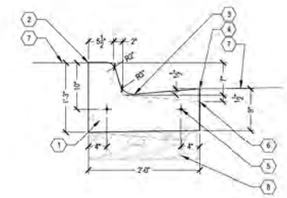
SCALE: 1" = 1'



1. CONCRETE PAVEMENT (4 / CS-502)
2. CONCRETE EDGE, ½" RADIUS
3. JOINT SEALANT
4. BACKER ROD
5. EXPANSION JOINT MATERIAL TO FULL DEPTH

6 EXPANSION JOINT

SCALE: 1" = 1'



KEYED NOTES

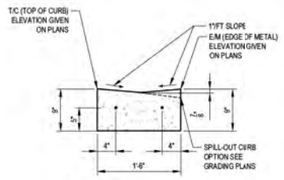
1. CAST-IN-PLACE CONCRETE
2. T/C (TOP OF CURB ELEVATION)
3. G/C (GUTTER O' CURB ELEVATION)
4. E/M (EDGE OF METAL/EDGE OF GUTTER ELEVATION)
5. REBAR
6. GUTTER TO SLOPE TOWARD OR AWAY ("SPILL-OUT") FROM CURB AS SHOWN ON PLANS
7. ADJACENT PAVEMENT/PLANTING AREA-VARIES, SEE PLANS
8. AGGREGATE BASE

DETAIL NOTES

1. CONSTRUCTION JOINTS SHOULD CONTAIN TIE BARS OR BE TONGUE AND GROOVED PER SPECIFICATIONS.
2. "SPILL OUT" CURB SHALL HAVE A SLOPE OF ½" PER FOOT.

7 CURB AND GUTTER

SCALE: 1" = 1'

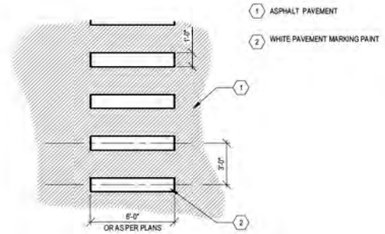


NOTES:

1. AT 90° ANGLE POINTS IN THE CURB LINE, PLACE EXPANSION JOINTS IN THE "LONG LET" 18" FROM THE BACK OF CURB OF THE "SHORT LEG"
2. ALL REINFORCING #4 REBAR, CONTINUOUS BETWEEN EXPANSION JOINTS

8 SPILLOUT CURB AND GUTTER

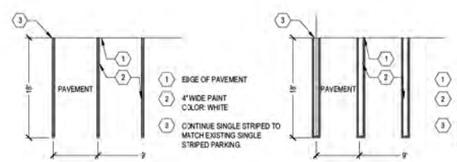
SCALE: 1" = 1'



1. ASPHALT PAVEMENT
2. WHITE PAVEMENT MARKING PAINT

9 CROSSWALK PAVEMENT MARKINGS

SCALE: 1/4" = 1'



1. EDGE OF PAVEMENT
2. 4" WIDE PAINT COLOR: WHITE
3. CONTINUE SINGLE STRIPED TO MATCH EXISTING SINGLE STRIPED PARKING.

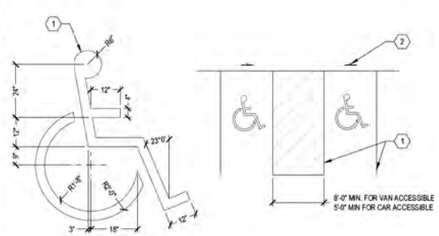
1. EDGE OF PAVEMENT
2. 4" WIDE PAINT COLOR: WHITE
3. LOOPED STRIPING FOR NEW PARKING AREAS WITHOUT EXISTING STRIPING.

10 PARKING STRIPING

SCALE: 1" = 10'

GENERAL NOTES:

1. RAMP RUNS SHALL BE 8.3% (1:12) OR LESS. LANDINGS AT THE TOP OF A RAMP MUST BE LEVEL (2% OR LESS IN ALL DIRECTIONS) AND MATCH WIDTH OF RAMP.
2. DETECTABLE WARNING SURFACE:
   - 2.1. DETECTABLE WARNING PLATE SHALL BE NENEAH FOUNDRY TYPE R-4984 OR EQUIVALENT.
   - 2.2. DETECTABLE WARNING PLATE SHALL BE CAST IRON WITHOUT ANY COLORING
   - 2.3. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A BASE DIAMETER OF 0.9" MIN. TO 1.4" MAX., A TOP DIAMETER OF 50% OF THE BASE DIAMETER MIN. TO 65% OF THE BASE DIAMETER MAX. AND A HEIGHT OF 1.2".
   - 2.4. TRUNCATED DOMES IN A DETECTABLE WARNING SURFACE SHALL HAVE A CENTER-TO-CENTER SPACING OF 1.6" MIN. AND 2.4" MAX., AND A BASE-TO-BASE SPACING OF 0.65" MIN., MEASURED BETWEEN THE MOST ADJACENT DOMES ON A SQUARE GRID.
   - 2.5. THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6" MIN. AND 8" MAX. FROM THE CURB LINE.
   - 2.6. DETECTABLE WARNING PLATE SHALL BE 6" FROM CONCRETE JOINTS.
   - 2.7. COMPLY WITH MANUFACTURER'S INSTALLATION GUIDELINES.
3. SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.
4. COUNTER SLOPES OF ADJOINING GUTTERS AND ROAD SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 5% (1:20). THE ADJACENT SURFACES AT TRANSITIONS AT CURB RAMPS TO WALKS, GUTTERS AND STREETS SHALL BE AT THE SAME LEVEL.

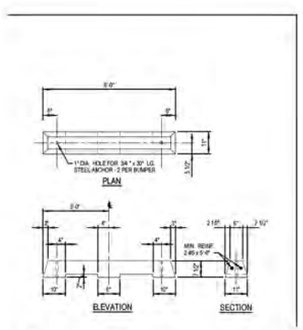


NOTE: SYMBOL TO BE PAINTED IN ALL ACCESSIBLE PARKING SPACES

1. BLUE REFLECTIVE PAINT
2. ACCESSIBLE SIGNAGE, LOCATE POST 1'-0" FROM BACK OF CURB/EDGE OF PAVEMENT

11 ASSESSABLE PAVEMENT MARKINGS

SCALE: 1/2" = 1'



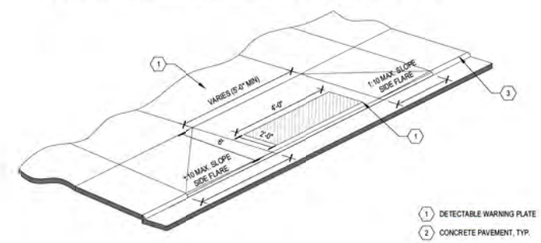
PLAN

ELEVATION

SECTION

12 WHEEL STOPS

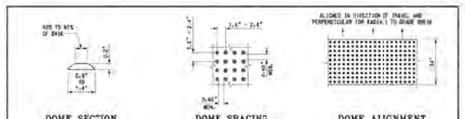
SCALE: 1" = 1'



1. DETECTABLE WARNING PLATE
2. CONCRETE PAVEMENT, TYP.
3. CONCRETE CURB, TYP.

13 CURB RAMP

SCALE: 1" = 1'



DOME SECTION

DOME SPACING

DOME ALIGNMENT

DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE FINAL DRAINED BY A COARSE BROOMING TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DEPRESSED CURB IS EXTENDED ACROSS THE RAMP.

RAMP SHALL BE TAPER TO ASSURE A UNIFORM GRADE ON THE RAMP. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE IN ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

WHEN 4' MINIMUM WIDTHS ARE NOT PRACTICABLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND LANDINGS TO NOT LESS THAN 4' x 4'.

DETECTABLE WARNING SURFACE COVERAGE IS 24" MINIMUM IN THE DIRECTION OF RAMP PATH TRAVEL AND THE FULL WIDTH OF THE RAMP PATH OPENING EXCLUDING CURVED OR FLARED CURB TRANSITION AREAS. A DEPTH OFFSET NOT GREATER THAN 2" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY SURFACE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.3% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. THE LOCATION OF THE RAMP SHOULD TAKE PRECEDENCE OVER THE LOCATION OF THE DRAINAGE STRUCTURE. WHERE EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A MANUFACTURER'S ADA COMPLIANT GRATE. OPENINGS SHALL NOT BE GREATER THAN ½". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO STOP TRAFFIC SHORT OF RAMP CROSSINGS. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE GIVEN IN THE "MICHIGAN MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".

FLARED SIDES WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE CURB LINE, SHOULD BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS SURROUNDED BY LANDSCAPING, UNPAVED SURFACE OR PERMANENT FIXED OBJECTS. WHERE THEY ARE NOT REQUIRED, FLARED SIDES CAN BE CONSIDERED IN ORDER TO AVOID SHARP CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF DEVELOPMENT STANDARD PLAN R-28-J

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

F.H.W.A. APPROVAL	3-31-2017 PLAN DATE	R-28-J	SHEET 1 OF 1

14 DETECTABLE WARNING STRIP

SCALE: 1" = 1'

Trinity Health

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DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE
13472.00

PROJECT NUMBER

DRAWING NUMBER
CS-500

SHOWN FOR REFERENCE, INSTALLATION BY OTHERS.
COORDINATE POWER SUPPLY TO SIGN LOCATIONS

RECOMMENDATION BOOK

Site: SJLN-BC 7575 Grand River Ave. Brighton , MI 48114

E-01

Context
Location: Main Entrance

Recommendation Notes

Existing
Type: Monument
Quantity: 1
Illumination: Internal LED
Attachment: Ground Footing
Overall Height:
Overall Width:

Height:
Width:
Sign Depth:
Mounting Height:
Existing Notes:
147 " X 104" OVERALL

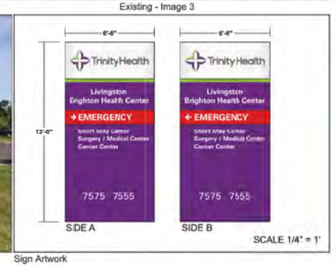
Recommended Action
NEW PYLON SIGN

Existing - Image 1

Existing - Image 2

Existing - Image 3

Concept Rendering



Sign Artwork

1 MONUMENT SIGNAGE- MAIN ENTRANCE TYPE 1

SCALE: NTS

SHOWN FOR REFERENCE, INSTALLATION BY OTHERS.
COORDINATE POWER SUPPLY TO SIGN LOCATIONS

Survey Book

Site: THSC-19RC 7533 Grand River, Brighton, MI 48114

1

Context
Location: Main Entrance

Recommendation Notes

Existing
Attachment: Footing
Overall Height: -
Overall Width:
Height:
Width:
Sign Depth:
Mounting Height: Ground level
Existing Notes: -

Existing - Image 1

Recommended Action:
Action: REPLACE EXISTING WOOD SIGN W/ NEW D/F ILLUMINATED MONUMENT SIGN

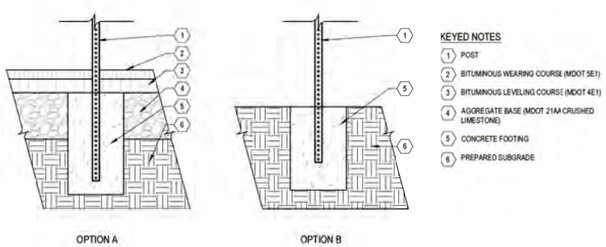
Sign Artwork

PMS 367C
COOL GRAY 11C
PMS 2603

New
Type: MONUMENT SIGN
Quantity: 1
Illumination: YES
Attachment: POLE IN CONCRETE FOUDATION
Height: 72"
Width: 72"
Notes: 24 SQ. FT.

2 MONUMENT SIGNAGE- MAIN ENTRANCE TYPE 2

SCALE: NTS



KEYED NOTES
1. POST
2. BITUMINOUS WEARING COURSE (MDOT 5E1)
3. BITUMINOUS LEVELING COURSE (MDOT 4E1)
4. AGGREGATE BASE (MDOT 21AA CRUSHED LIMESTONE)
5. CONCRETE FOOTING
6. PREPARED SUBGRADE

3 SIGNAGE - POST

1"=1'

MUTCD SIGN# R7-8B
SPACED 50' O.C. FIRE FIRE MARSHAL REQUIREMENT

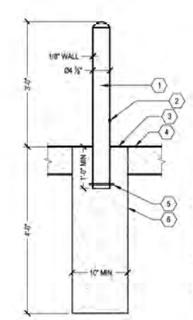
MUTCD SIGN# R1-1

MUTCD SIGN# R7-8E

MUTCD SIGN# W11-2

4 SIGNAGE - TYPE

SCALE: NTS



1. FIXED BODY BOLLARD
2. POLYETHYLENE PLUG
3. FINISHED GRADE
4. CONCRETE PAVEMENT - HEAVY DUTY
5. STEEL REBAR 10MM X 7' (STEEL EPOXY COATED)
6. CONCRETE FOUNDATION

5 BOLLARD

SCALE: 3/4"=1'

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SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	J	16SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

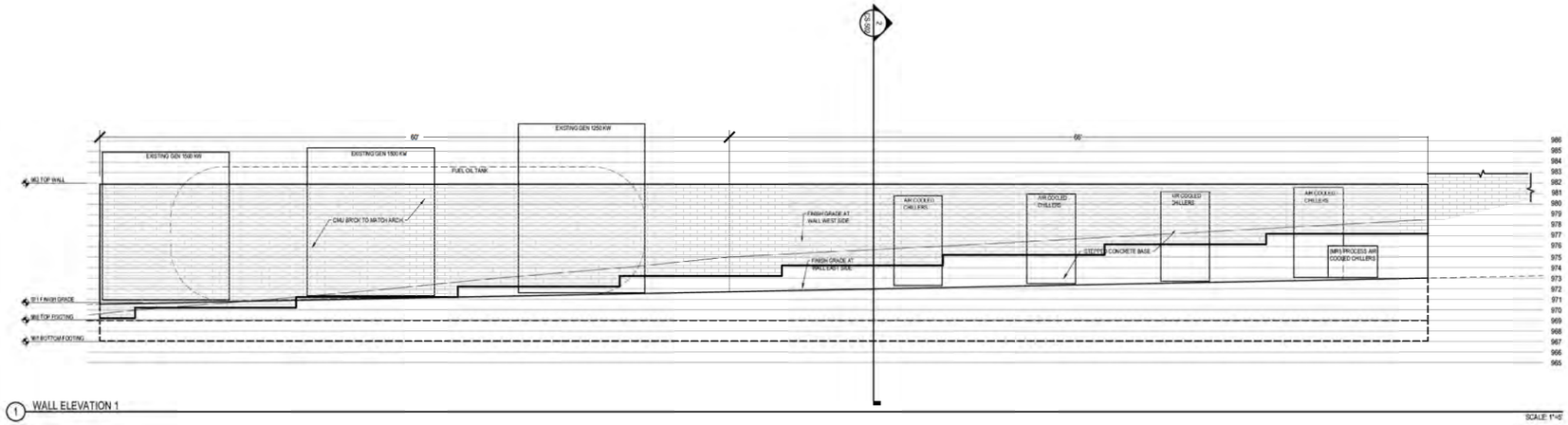
KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE

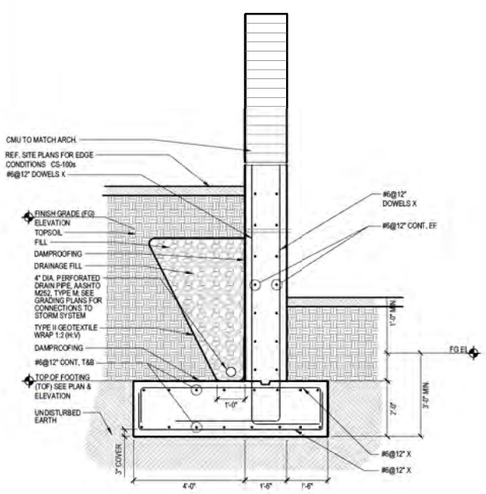
PROJECT NUMBER
13472.00

DRAWING NUMBER
CS-501



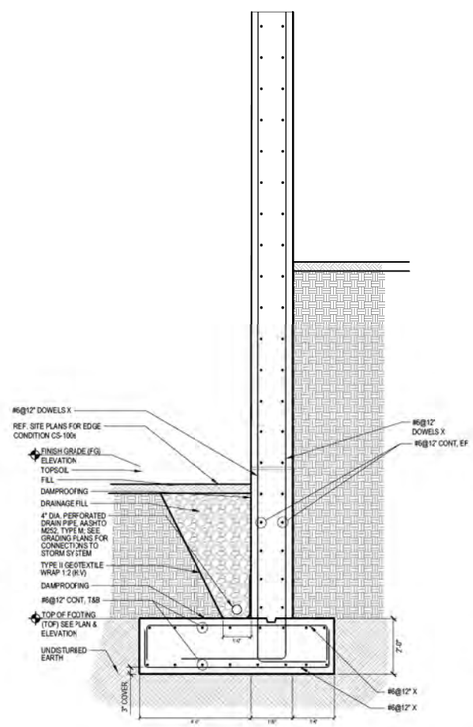
1 WALL ELEVATION 1

SCALE: 1"=6'



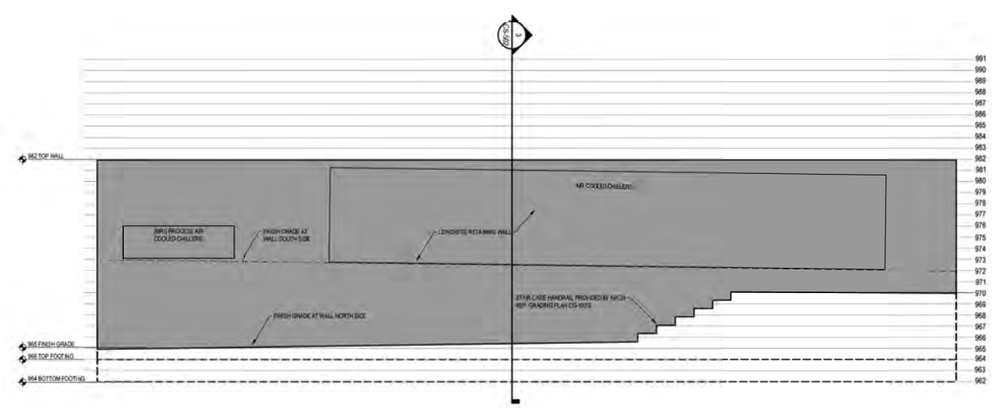
2 WALL SECTION 2

SCALE: 1/2"=1'



3 WALL SECTION 2

SCALE: 1/2"=1'



4 WALL ELEVATION 2

SCALE: 1"=5'

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	J	16SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

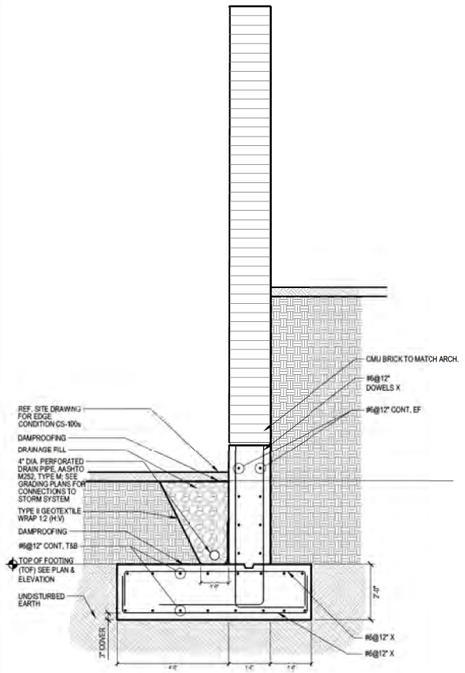
KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE

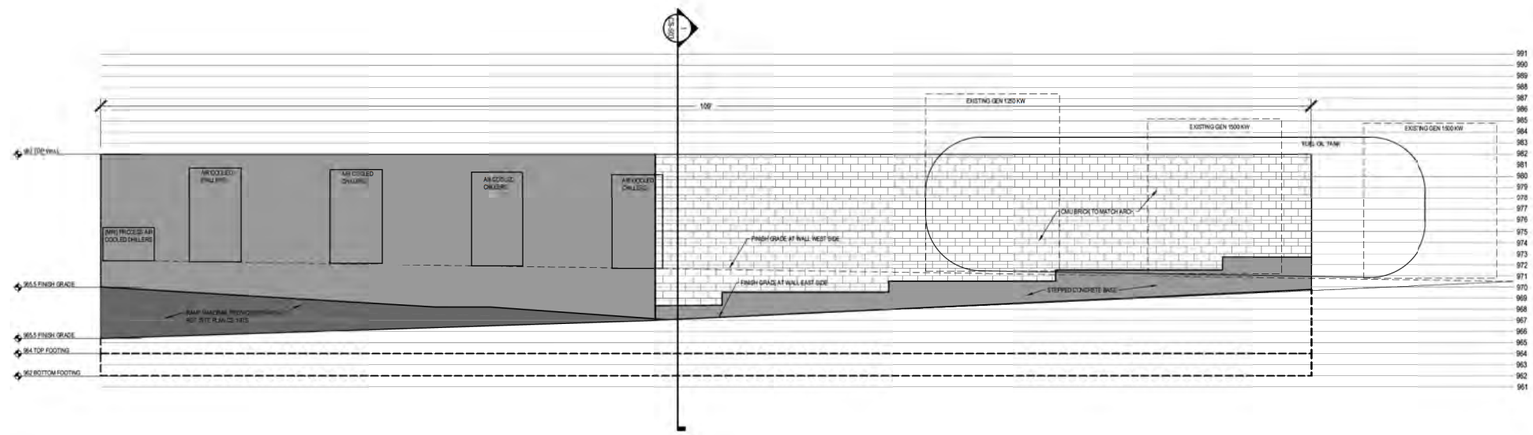
PROJECT NUMBER 13472.00

DRAWING NUMBER CS-502



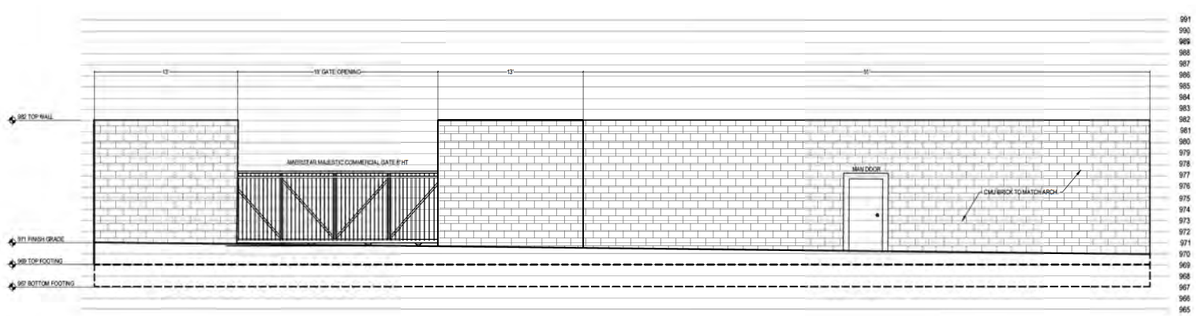
1 WALL SECTION 3

1/2"=1'



2 WALL ELEVATION 3

SCALE: 1"=5'



3 WALL ELEVATION 4

SCALE: 1"=5'

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ISSUED FOR	REV	DATE
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LCDC RESUBMITTAL R2	H	26AUG2022
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SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

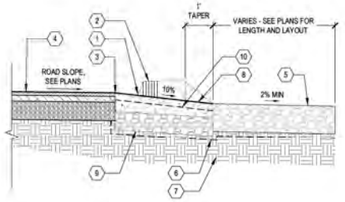
KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE

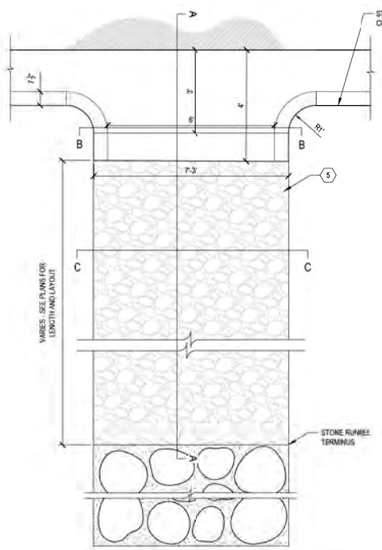
PROJECT NUMBER
13472.00

DRAWING NUMBER
CS-503



1. CURB AND GUTTER (7 / CS-500)
2. TOP OF CURB, T/C
3. E/M (EDGE OF METAL/EDGE OF GUTTER ELEVATION)
4. ASPHALT PAVEMENT - ROAD (2 / CU-500)
5. STONE RUNNEL, 4" - 6" DIA DRAINAGE STONE (ROUNDED NATURAL STONE) SET ON GEOTEXTILE FABRIC
6. GEOTEXTILE FABRIC
7. SUBGRADE
8. CONCRETE SPILLWAY
9. AGGREGATE BASE COURSE, MDOT 21AA
10. AGGREGATE W2.9 (NOMINAL DIAMETER 0.192") WIRE MESH 5'-6" WIDE, 4" CENTER TO CENTER LONGITUDINAL AND TRANSVERSE WIRE SPACING

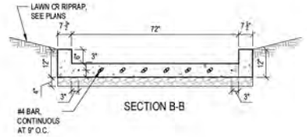
SECTION A-A



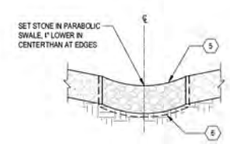
NOTE: PAVED SPILLWAY OPENING TO BE 3' WHERE EXISTING STRUCTURE IS PRESENT, SEE PLANS.

1 GUTTER SPILLWAY

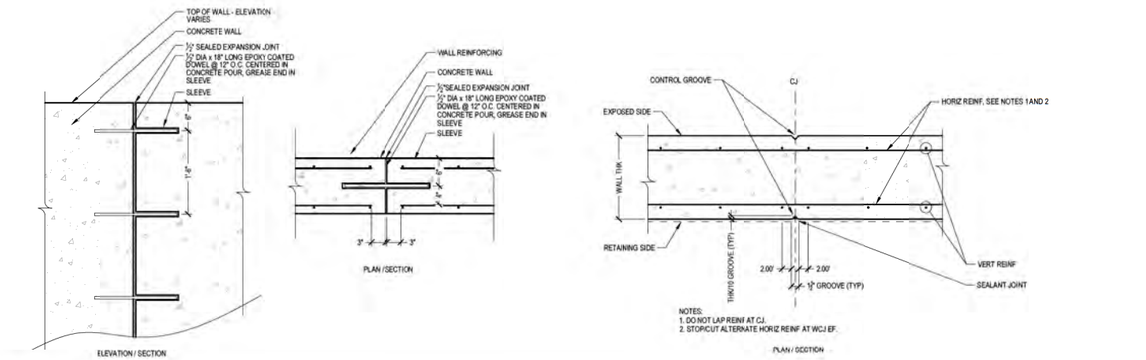
SCALE: 1"=2'



SECTION B-B

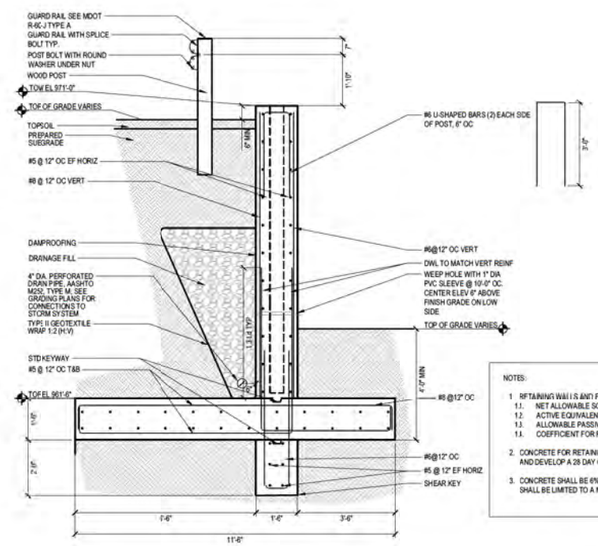


SECTION C-C



2 DOWELLED EXPANSION JOINT

SCALE: 1"=1'

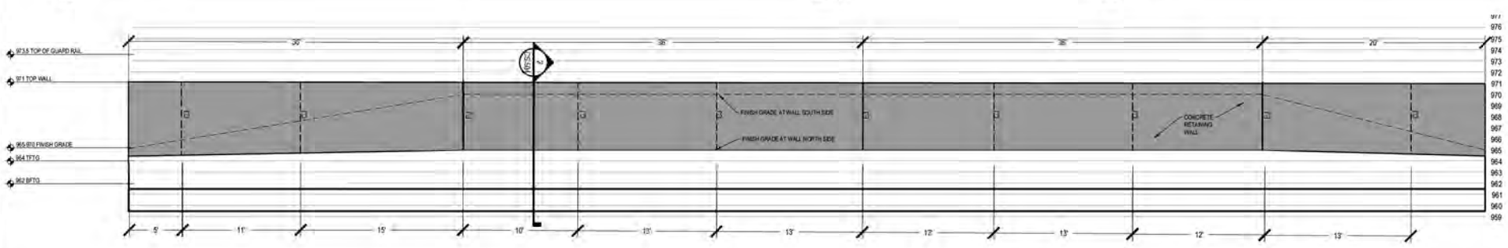


NOTES:

1. RETAINING WALLS AND FOOTINGS ARE DESIGNED BASED ON THE FOLLOWING
   1.1. NET ALLOWABLE SOIL BEARING CAPACITY: 2000 PSF
   1.2. ACTIVE EQUIVALENT FLUID PRESSURE: 40PCF
   1.3. ALLOWABLE PASSIVE EQUIVALENT FLUID PRESSURE: 100PCF
   1.4. COEFFICIENT FOR FRICTION: 0.35
2. CONCRETE FOR RETAINING WALLS AND FOOTINGS SHALL BE NORMAL WEIGHT AND DEVELOP A 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI
3. CONCRETE SHALL BE 6% AIR ENTRAINED AND THE WATER/CEMENT RATIO SHALL BE LIMITED TO A MAXIMUM OF 1.45

2 WALL SECTION 7

SCALE: 1/2"=1'



2 WALL ELEVATION 7

SCALE: 1"=5'

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
BP1 BULLETIN 1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	25JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
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SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

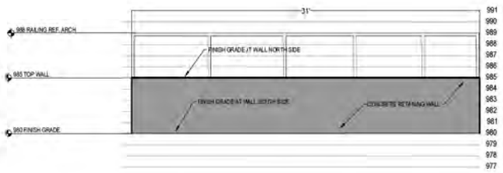
KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE

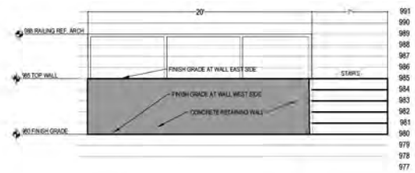
PROJECT NUMBER
13472.00

DRAWING NUMBER
CS-504



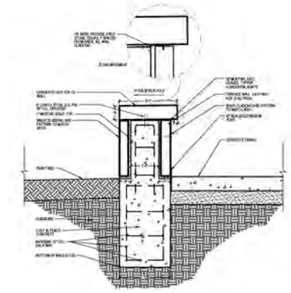
1 WALL ELEVATION 8

SCALE: NTS



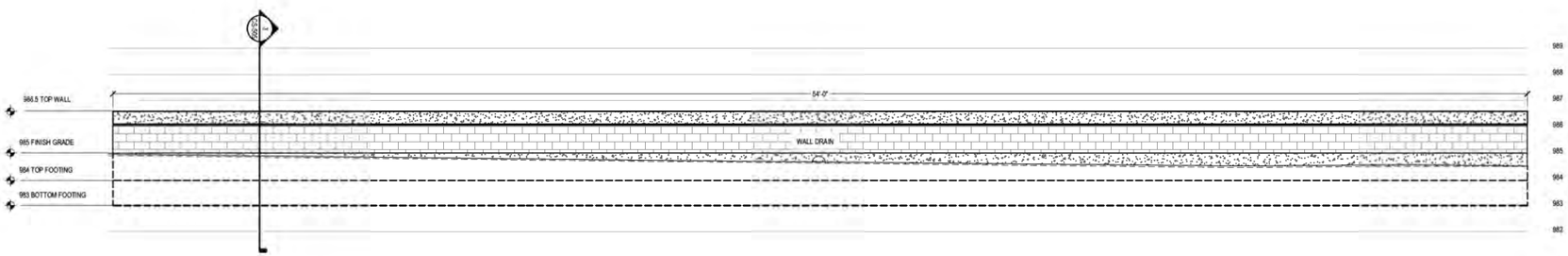
2 WALL ELEVATION 9

SCALE: 1/4"=1'



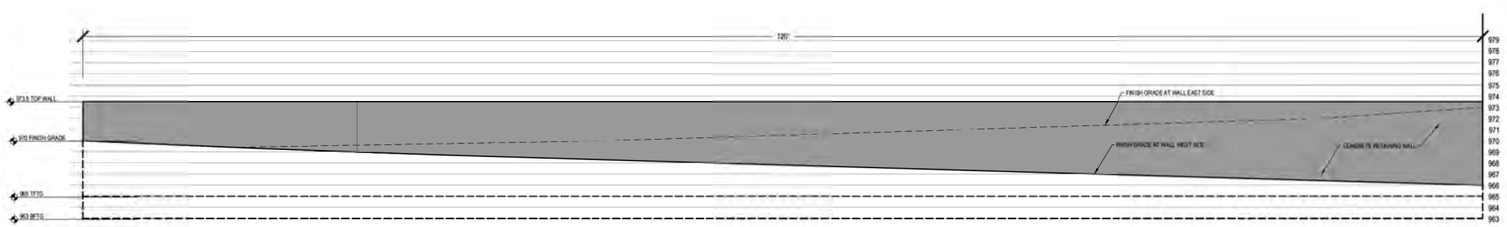
3 SEAT WALL SECTION

SCALE: 1/2"=1'



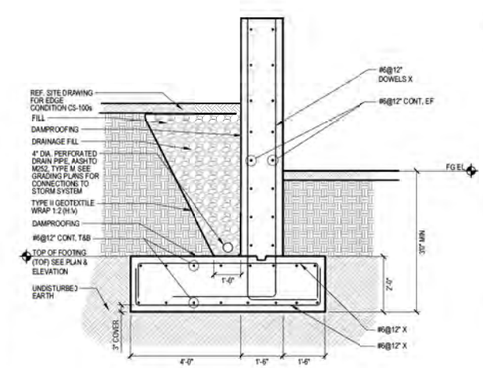
4 SEAT WALL

SCALE: 1/4"=1'



5 SEAT WALL

SCALE: 1/4"=1'



6 WALL SECTION 6

1/2"=1'

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LCDC RESUBMITTAL R2	H	26AUG2022
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SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

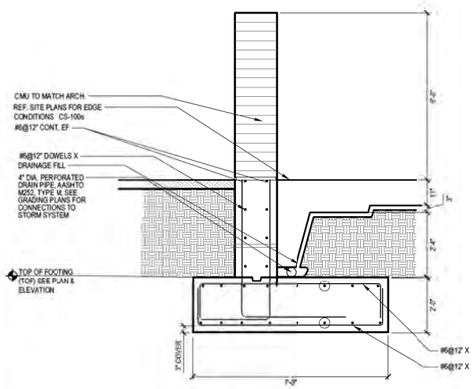
KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE

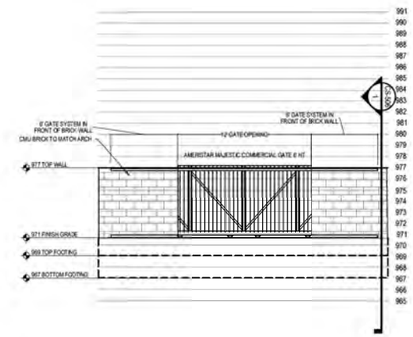
PROJECT NUMBER
13472.00

DRAWING NUMBER
CS-505



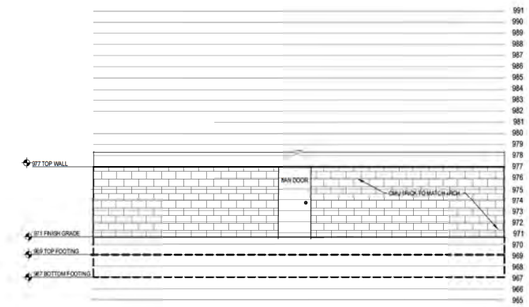
1 OXYGEN WALL SECTION

1/2"=1'



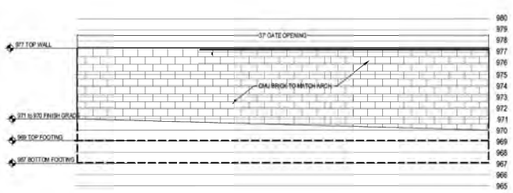
2 OXYGEN WALL ELEVATION

SCALE: 1"=5'



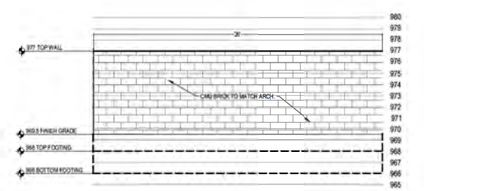
3 OXYGEN WALL ELEVATION

SCALE: 1"=5'



4 OXYGEN WALL ELEVATION

SCALE: 1"=5'



5 OXYGEN WALL ELEVATION

SCALE: 1"=5'

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KEY PLAN

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SITE DETAILS

SCALE

PROJECT NUMBER
13472.00

DRAWING NUMBER
CS-506

ALED3T78N/480

SJMH BRIGHTON TWIN SITE ASSEMBLY
(2) ALED3T78N/480/
(1) ULS SSA-5183-15'-AB-MODHEIGHT-MODBASE-D2-DB-LABT

RAB

Color: Bronze

Weight: 37.0 LB

Project:	Type:
Prepared By:	Date:

Driver Info

Type	LEDMAX Current
120V	N/A
208V	N/A
240V	N/A
277V	N/A
Input Watts	78.3W

LED Info

Watts	78W
Color Temp	4000K (Neutral)
Color Accuracy	72 CRI
L70 Lifespan	100,000 Hours
Lumens	9,234
Efficacy	117.9 mW/

Technical Specifications

Compliance

UL Listed:
Suitable for wet locations as a luminaire.

DLC Listed:
This product is listed by Design Lights Consortium (DLC) as an ultra-efficient premium product that qualifies for the highest tier of rebates from DLC Member Utilities. DLC Product Code: PM0H8B4N

IESNA LM-79 & IESNA LM-80 Testing:
RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80.

Dark Sky Conformance:
Conforms to Lamps for conformance to the IDA's fully shielded requirement, emitting no light above 90 degree (with the exclusion of decorative light reflecting fixtures having uplight and downlight).

Electrical

Driver:
Constant Current, Class 2, 2000mA, 48V, 50-60Hz, 0.172A, Power Factor 98.3%

THD:
12% at 480V

Power Factor:
96.1% at 480V

Photocell:
120V Photocell included. Photocell is easy formatable with 120V

Ballast Volts:
480V

Surge Protection:
4kV

Performance

Lifespan:
100,000 Hour LED lifespan Based on IES LM-80 results and TM-21 calculations

Construction

IE3 Classification:
The Type III distribution is ideal for roadway, general parking, and other area lighting applications where a larger spot of lighting is required. It is intended to be located over the side of the area, allowing the light to project outward and fill the area.

Ambient Temperature:
Suitable for use in up to 40°C (104°F)

Cold Weather Starting:
Minimum starting temperature is -40°C (-40°F)

Need help? Tech help line: **(888) 722-1000** Email: **custserv@rablighting.com** Website: **www.rablighting.com**
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ALED3T78N/480

RAB

Technical Specifications (continued)

Construction

Thermal Management:
Superior heat sinking with thermal Air Flow fins

Effective Projected Area:
0.96 ft^2/0.25

Lens:
Tempered glass lens

Housing:
Die-cast aluminum housing, bird friend and mounting arm.

IP Rating:
Ingress Protection rating of IP66 for dust and water

Mounting:
Universal mounting arm compatible for side drilling patterns from 1" to 1 1/2" pipes to pedestal. Tenon Fine Adjuster plate included as a standard. Easy slide and locking mount fixture with easy, flexible pole diameter fixed for 3-4" to mount fixtures at 90° orientation.

Reflector:
Specular anodized aluminum

Gaskets:
High temperature silicone gaskets

Finish:
Formulated for high durability and long-lasting color.

Green Technology:
Mercury and UV free. RoHS-compliant components.

LED Characteristics

LEDs:
Six (6) 3W HB-LEDs, 13W, high-output, long-life LEDs

Color Consistency:
3-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color

Color Stability:
LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period.

Color Uniformity:
RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Other

Patents:
The ALED design is protected by patents in the U.S. Pat. 668,370, Canada Pat. 144956, China ZL201230100134.X, and Mexico Pat. 38423. Pending patents in Taiwan.

Warranty:
RAB warrants that our LED products will be free from defects in materials and workmanship for a period of five (5) years from the date of delivery to the end user, including coverage of light output, color stability, driver performance and fixture finish. RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.

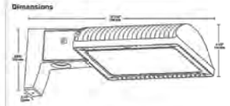
Equivalency:
Equivalent to 250W Metal Halide

Buy American Act Compliance:
RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant.

Optical

BUG Rating:
B1 U0 G2

Dimensions



Features

- 66% energy cost savings vs. HID
- 100,000-hour LED lifespan
- 5-Year, No-Compromise Warranty

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ALED3T78N/480

RAB

Ordering Matrix

Family	Optics	Wattage	Mounting	Color Temp	Finish	Driver Options	Options	Other Options
ALED	3T	78		N		/480		
	4T = Type 4	50 = 50W	Blank = Pole Mount	Blank = 5000K (Cool)	Blank = Bronze	Blank = 120-277V (480 = 480V)	Blank = No Options	Blank = Standard
	3T = Type 3	78 = 78W	SF = Shoe/Box	N = 4000K (Neutral)	RG = Roadway Gray	/HC = HIGH/LOW	/LC = Lightcloud® Controller	USA = BAA Compliant
	2T = Type 2	120 = 120W		W = 3000K (Warm)	W = White	/010 = 0-10V Dimming	/PC3 = 120V Swivel Photocell	
		125 = 125W			K = Black	/4DMD10 = 480V, 0-10V Dimming	/PC32 = 277V Swivel Photocell	
		150 = 150W					/PCT = 120-277V Twistlock Photocell	
							/PC34 = 480V Swivel Photocell	
							/PCT4 = 480V Twistlock Photocell	
							/WS2 = Multi-Level Motion Sensor 20 ft.	
							/WS4 = Multi-Level Motion Sensor 40 ft.	

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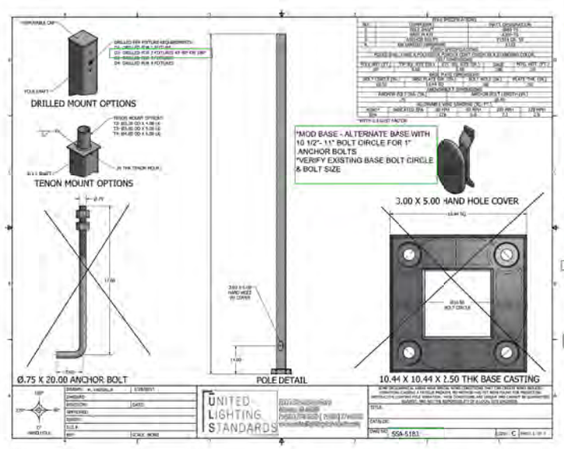
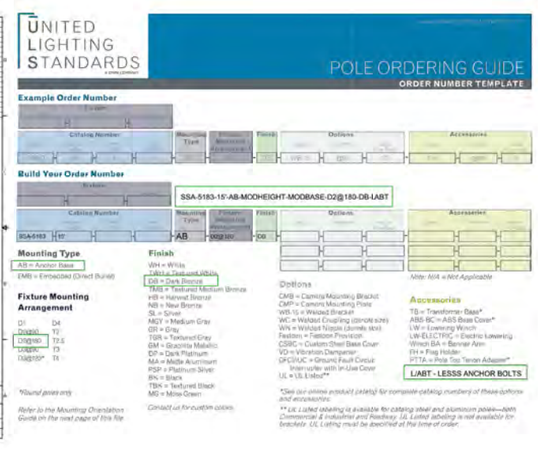
1 PARKING LIGHTING FIXTURE

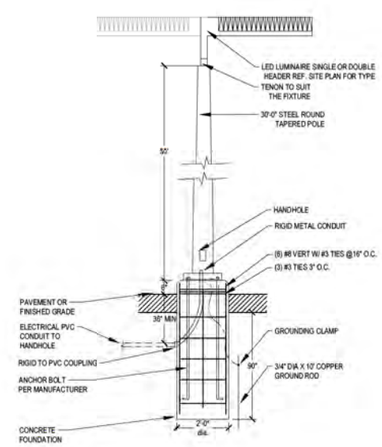
SCALE: NTS





2 PARKING POLE FIXTURE

PARKING POLE FIXTURE



3 POLE FOUNDATION DETAIL

SCALE: NTS

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

7575 GRAND RIVER AVE., BRIGHTON, MI 48114
7555 GRAND RIVER AVE., BRIGHTON, MI 48114

SMITHGROUP

201 DEPOT STREET
SECOND FLOOR
ANN ARBOR, MI 48104
734.662.4457
www.smithgroup.com

IMEG
The NEXT 100 beside www.imegcorp.com
33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	J	16SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
SITE DETAILS

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CS-507

STM-100		
STRUCTURE	DETAILS	NORTHING/EASTING
CB-111 (48 IN) MDOT COVER D (R-9-D) RIM: 974.64	HDPE Pipe 12" NE INV: 970.23 HDPE Pipe 18" S INV: 970.13	N: 389993.22 E: 13275700.44
CI-108 (EXIST) MDOT COVER D (R-9-D) ADJ RIM: 980.41	HDPE Pipe 18" E INV: 968.71 HDPE Pipe 18" S INV: 968.47 HDPE Pipe 24" NW INV: 963.57	N: 390006.62 E: 13275543.63
CI-109 (EXIST) MDOT COVER D (R-9-D) ADJ RIM: 977.14	HDPE Pipe 18" W INV: 969.09	N: 389991.51 E: 13275623.88
CI-110 (48 IN) MDOT COVER K (R-15-G) RIM: 975.11	HDPE Pipe 24" S INV: 969.51 HDPE Pipe 18" N INV: 970.04 HDPE Pipe 30" W INV: 969.41	N: 389960.23 E: 13275711.67
CI-112 (48 IN) MDOT COVER K (R-15-G) RIM: 974.32	HDPE Pipe 12" SW INV: 970.33	N: 390009.74 E: 13275722.53
CI-115 (48 IN) MDOT COVER K (R-15-G) RIM: 976.28	HDPE Pipe 24" S INV: 969.84 HDPE Pipe 12" W INV: 973.32 HDPE Pipe 24" N INV: 969.74	N: 389886.80 E: 13275738.12
CI-120 (48 IN) MDOT COVER K (R-15-G) RIM: 979.67	HDPE Pipe 24" E INV: 970.27 HDPE Pipe 12" S INV: 975.00 HDPE Pipe 12" W INV: 975.50 HDPE Pipe 24" N INV: 970.17	N: 389761.25 E: 13275702.91
CI-121 (48 IN) MDOT COVER K (R-15-G) RIM: 981.77	HDPE Pipe 12" S INV: 976.21 HDPE Pipe 12" N INV: 976.11	N: 389651.04 E: 13275688.28
CI-122 (48 IN) MDOT COVER K (R-15-G) RIM: 983.31	HDPE Pipe 12" N INV: 977.32	N: 389540.84 E: 13275673.62
CI-125 (48 IN) MDOT COVER K (R-15-G) RIM: 977.09	HDPE Pipe 18" S INV: 970.55 HDPE Pipe 24" W INV: 970.45	N: 389743.13 E: 13275771.12
CI-130 (48 IN) MDOT COVER K (R-15-G) RIM: 976.17	HDPE Pipe 18" S INV: 972.80 HDPE Pipe 18" E INV: 971.27 HDPE Pipe 18" N INV: 971.17	N: 389628.18 E: 13275816.38
CI-131 (48 IN) MDOT COVER K (R-15-G) RIM: 975.62	HDPE Pipe 12" E INV: 971.51 HDPE Pipe 18" W INV: 971.30	N: 389630.28 E: 13275823.87
CI-132 (48 IN) MDOT COVER K (R-15-G) RIM: 975.62	HDPE Pipe 12" W INV: 971.62	N: 389638.25 E: 13275849.67
CI-140 (48 IN) MDOT COVER K (R-15-G) RIM: 978.16	HDPE Pipe 12" E INV: 973.86 HDPE Pipe 18" N INV: 973.76	N: 389436.35 E: 13275830.68
CI-141 (48 IN) MDOT COVER K (R-15-G) RIM: 978.00	HDPE Pipe 12" W INV: 974.00	N: 389430.20 E: 13275857.02
CI-220 (48 IN) MDOT COVER K (R-15-G) RIM: 980.25	HDPE Pipe 12" E INV: 976.13	N: 389776.49 E: 13275641.56
CI-800 (48 IN) MDOT COVER K (R-15-G) RIM: 983.54	HDPE Pipe 18" W INV: 978.62 HDPE Pipe 18" NE INV: 978.72	N: 389825.87 E: 13275430.27
CI-801 (48 IN) MDOT COVER K (R-15-G) RIM: 983.89	HDPE Pipe 18" SW INV: 978.43 HDPE Pipe 18" N INV: 978.53	N: 389877.55 E: 13275455.37
CI-802 (48 IN) MDOT COVER K (R-15-G) RIM: 982.82	HDPE Pipe 18" S INV: 978.04 HDPE Pipe 18" NW INV: 978.14	N: 389974.46 E: 13275466.69
CI-805 (48 IN) MDOT COVER K (R-15-G) RIM: 981.28	HDPE Pipe 12" S INV: 977.28	N: 390033.81 E: 13275461.05

STM-100		
STRUCTURE	DETAILS	NORTHING/EASTING
CI-806 (48 IN) MDOT COVER K (R-15-G) RIM: 979.22	HDPE Pipe 12" E INV: 973.94	N: 389903.99 E: 13275616.32
EX-850 (EXIST) MDOT COVER G (R-12-E) RIM: 983.21	HDPE Pipe 18" E INV: 979.38	N: 389799.72 E: 13275332.55
FES-100 RIM: 971.22	HDPE Pipe 30" E INV: 968.50	N: 390008.20 E: 13275384.61
STMH-804 (48 IN) CONCRETE MH MDOT COVER B (R-7-F) RIM: 982.35	HDPE Pipe 12" N INV: 976.92 HDPE Pipe 18" SE INV: 978.00 HDPE Pipe 30" E INV: 968.76 HDPE Pipe 30" W INV: 968.66	N: 389998.02 E: 13275455.63

STM-200		
STRUCTURE	DETAILS	NORTHING/EASTING
FES-200 RIM: 970.05	HDPE Pipe 12" S INV: 968.50	N: 390003.92 E: 13275341.28

STM-300		
STRUCTURE	DETAILS	NORTHING/EASTING
FES-300 RIM: 969.60	HDPE Pipe 12" S INV: 968.50	N: 390005.44 E: 13275249.76
STRC - (103) Null Structure RIM: 970.02	HDPE Pipe 12" N INV: 968.91	N: 389969.72 E: 13275235.88

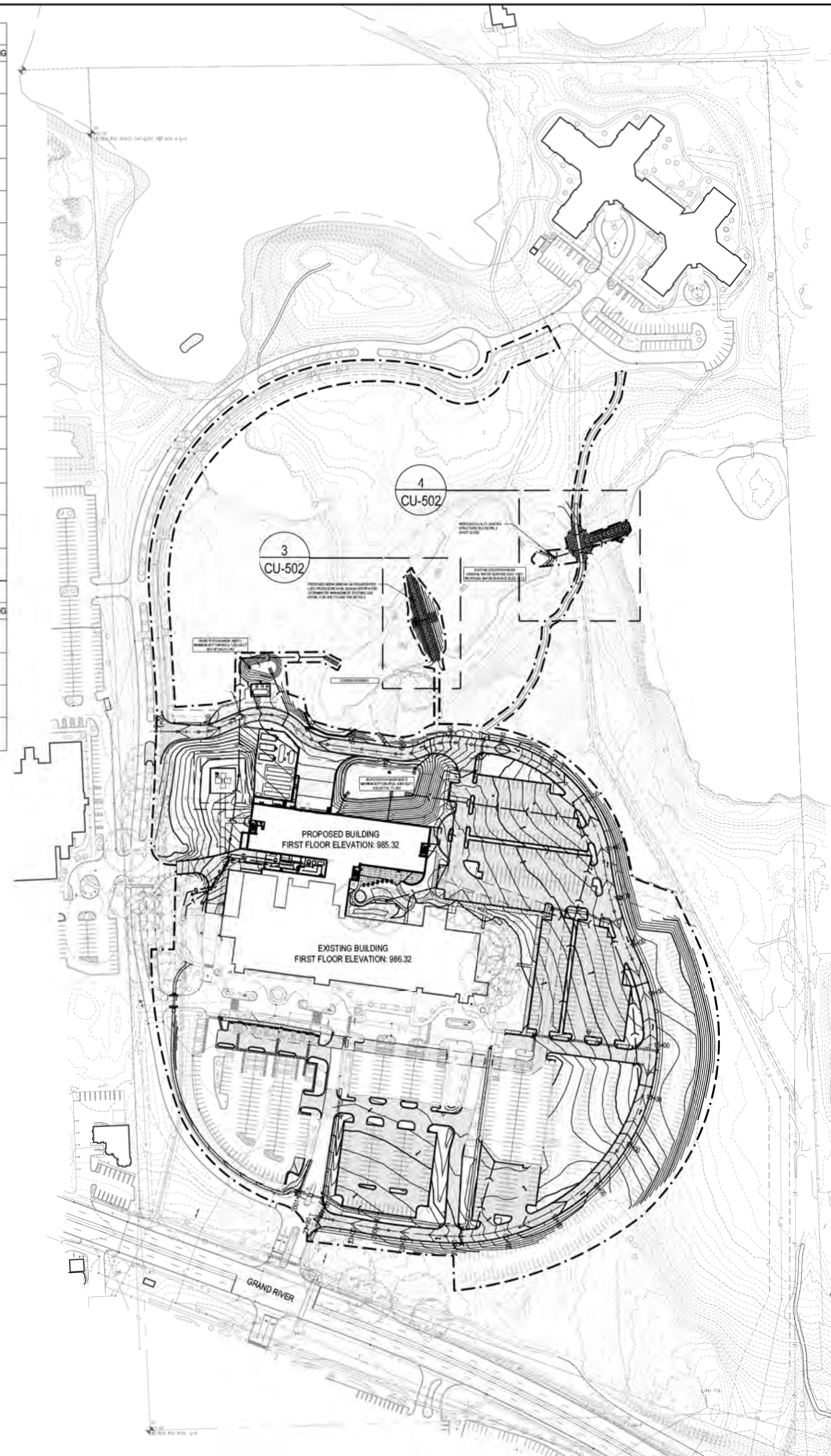
STM-400		
STRUCTURE	DETAILS	NORTHING/EASTING
CI-405 (48 IN) MDOT COVER K (R-15-G) RIM: 973.09	HDPE Pipe 12" N INV: 968.72 HDPE Pipe 12" SW INV: 968.72	N: 390089.27 E: 13275422.19
CI-410 (48 IN) MDOT COVER K (R-15-G) RIM: 972.47	HDPE Pipe 12" S INV: 968.87	N: 390118.69 E: 13275417.61
FES-400 RIM: 969.60	HDPE Pipe 12" NE INV: 968.50	N: 390060.94 E: 13275389.19

STM-500		
STRUCTURE	DETAILS	NORTHING/EASTING
OC-500 (30 IN) NYLOPLAST, DOME GRATE RIM: 969.50	HDPE Pipe 30" N INV: 963.10	N: 390052.95 E: 13275338.22

STM-2000		
STRUCTURE	DETAILS	NORTHING/EASTING
CI-2000 (48 IN) ADJ MDOT COVER K (R-15-G) ADJ RIM: 976.43	HDPE Pipe 18" SE INV: 971.80 HDPE Pipe 12" SE INV: 972.31 HDPE Pipe 18" W INV: 971.45	N: 389220.97 E: 13275205.23
CI-2001 (48 IN) MDOT COVER K (R-15-G) RIM: 976.47	HDPE Pipe 12" E INV: 972.78 HDPE Pipe 18" NW INV: 972.28	N: 389194.86 E: 13275246.09
CI-2002 (48 IN) MDOT COVER K (R-15-G) RIM: 977.27	HDPE Pipe 12" W INV: 973.25	N: 389181.41 E: 13275316.59

STM-700		
STRUCTURE	DETAILS	NORTHING/EASTING
CB-604 (EXIST) MDOT COVER D (R-9-D) ADJ RIM: 980.44	HDPE Pipe 12" E INV: 975.88 HDPE Pipe 18" W INV: 975.78	N: 389874.67 E: 13275095.81
CB-605 (48 IN) MDOT COVER D (R-9-D) RIM: 980.43	HDPE Pipe 12" E INV: 976.09 HDPE Pipe 12" W INV: 975.99	N: 389872.48 E: 13275118.78
CB-606 (48 IN) MDOT COVER D (R-9-D) RIM: 985.17	HDPE Pipe 12" W INV: 976.43	N: 389865.97 E: 13275187.03
CI-706 (48 IN) MDOT COVER K (R-15-G) RIM: 968.97	HDPE Pipe 12" NE INV: 965.11	N: 390144.65 E: 13275126.56
CI-707 (48 IN) MDOT COVER K (R-15-G) RIM: 968.97	HDPE Pipe 12" SW INV: 965.02 HDPE Pipe 12" N INV: 965.02	N: 390168.35 E: 13275139.48
FES-600 RIM: 965.39	HDPE Pipe 36" W INV: 962.14	N: 390280.88 E: 13275209.01
FES-700 RIM: 965.85	HDPE Pipe 12" S INV: 964.75	N: 390247.16 E: 13275106.95
FES-1000 RIM: 956.65	HDPE Pipe 18" W INV: 955.00	N: 390515.40 E: 13275785.50
OC-701 (30 IN) NYLOPLAST, DOME GRATE RIM: 965.75	HDPE Pipe 12" NW INV: 962.56	N: 390260.44 E: 13275061.72
OC-1000 (36 IN) CONCRETE MH, TRASH RACK RIM: 964.50	HDPE Pipe 18" E INV: 957.55	N: 390477.36 E: 13275663.65
OC-1001 (36 IN) CONCRETE MH, TRASH RACK RIM: 961.90	HDPE Pipe 18" E INV: 959.50	N: 390349.18 E: 13275391.13
OUTLET-1001 Null Structure RIM: 960.64	HDPE Pipe 18" W INV: 959.00	N: 390357.78 E: 13275418.57
STMH-600 MDOT COVER B (R-7-F) RIM: 970.70	HDPE Pipe 30" S INV: 964.84 HDPE Pipe 12" SE INV: 962.47 HDPE Pipe 36" E INV: 962.47	N: 390279.12 E: 13275043.63
STMH-601 MDOT COVER B (R-7-F) RIM: 981.23	HDPE Pipe 30" S INV: 967.11 HDPE Pipe 30" N INV: 966.01	N: 390045.77 E: 13275039.84
STMH-602 MDOT COVER B (R-7-F) RIM: 982.39	HDPE Pipe 18" S INV: 975.11 HDPE Pipe 30" W INV: 967.84 HDPE Pipe 30" N INV: 967.74	N: 389920.44 E: 13275023.36
STMH-603 MDOT COVER B (R-7-F) RIM: 981.12	HDPE Pipe 18" E INV: 975.39 HDPE Pipe 18" N INV: 975.29	N: 389885.03 E: 13275018.71

STM-900		
STRUCTURE	DETAILS	NORTHING/EASTING
CB-901 (48 IN) MDOT COVER D (R-9-D) RIM: 981.76	HDPE Pipe 12" E INV: 977.61 HDPE Pipe 12" S INV: 976.93 HDPE Pipe 12" NW INV: 976.83	N: 389283.42 E: 13275546.35
CB-903 (48 IN) MDOT COVER D (R-9-D) RIM: 981.88	HDPE Pipe 12" W INV: 977.89	N: 389276.02 E: 13275602.18
CI-902 (48 IN) MDOT COVER K (R-15-G) RIM: 981.67	HDPE Pipe 12" N INV: 977.62	N: 389151.34 E: 13275508.48
STMH-900 (EXIST) RIM: 983.98	HDPE Pipe 12" SE INV: 976.27 HDPE Pipe 12" SW INV: 975.84 HDPE Pipe 18" N INV: 975.49	N: 389328.77 E: 13275513.63



SHEET NOTES

1. PRIOR TO THE COMMENCEMENT OF WORK, VERIFY LOCATIONS AND DEPTHS OF ALL UNDERGROUND UTILITIES THAT MAY BE AFFECTED BY CONSTRUCTION AND TAKE RESPONSIBILITY FOR DAMAGES TO SUCH UTILITIES CAUSED AS A RESULT OF CONSTRUCTION.
2. TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT THE PUBLIC AND ADJACENT PROPERTIES FROM DAMAGE THROUGHOUT CONSTRUCTION, INCLUDING DAMAGES TO UTILITIES, WALKS, WALLS, DRIVES, CURBS, ETC.
3. REFER TO THE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS NOT SHOWN ON DRAWINGS.
4. TAKE NOTE OF ALL GRADING AND DRAINAGE WAYS AND MAINTAIN THESE DRAIN WAYS FLOWING FREE OF OBSTRUCTIONS.
5. DISPOSE ALL ELEMENTS DESIGNATED FOR REMOVAL IN A LEGAL MANNER. PROVIDE RECEIPTS AND LETTERS FROM DISPOSAL SITES TO OWNER AS REQUIRED BY THE OWNER.
6. PREPARE ALL SUBGRADES IN ACCORDANCE WITH RECOMMENDATIONS OF GEOTECHNICAL ENGINEER. PROVIDE PROOF OF ALL REQUIRED SOIL COMPACTION TO THE OWNER.
7. COORDINATE WORK OF SUBCONTRACTORS AND ALL OTHER CONTRACTORS TO ENSURE ORDERLY AND EFFICIENT COMPLETIONS OF ALL WORK.
8. GRADE ALL SURFACES TO DRAIN. NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES BETWEEN SURVEY GRADES AND ACTUAL SITE ELEVATIONS. ANY AREAS OF POOR DRAINAGE OR INADEQUATE DRAINAGE FROM PROPOSED IMPROVEMENTS SHALL BE BROUGHT TO THE ATTENTION OF A/E IMMEDIATELY AND SHALL BE MODIFIED AS REQUIRED AND APPROVED.
9. PROVIDE DRAINAGE AWAY FROM ALL PAVED SURFACES AS SHOWN ON THE DRAWINGS. ENSURE ALL AREAS WILL PROPERLY DRAIN TO NEAREST INLET, SPILLWAY, AND/OR SWALE WITHOUT STANDING OR PONDING WATER.
10. FINISH GRADES IN BARRIER FREE PARKING AREAS AND RAMP LANDINGS SHALL NOT EXCEED 2% IN ANY DIRECTION (INCLUSIVE OF ALL SPECIFIED TOLERANCES). CROSS SLOPES ON ALL PAVED SURFACES SHALL NOT EXCEED 2% WHEN MEASURED PERPENDICULAR TO THE PEDESTRIAN LINE OF TRAVEL (INCLUSIVE OF SPECIFIED TOLERANCES) UNLESS OTHERWISE NOTED ON PLANS. NOTIFY OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION OF ANY PAVED SURFACES WITH A CROSS SLOPE THAT EXCEEDS 2%.
11. LONGITUDINAL SLOPES ON ALL PAVED SURFACES SHALL NOT EXCEED 5% WHEN MEASURED PARALLEL TO THE PEDESTRIAN LINE OF TRAVEL (INCLUSIVE OF SPECIFIED TOLERANCES) UNLESS OTHERWISE INDICATED ON PLANS OR WITHIN RAMPS.
12. GRADE ALL PAVEMENT SURFACES UNIFORMLY BETWEEN SPOT ELEVATIONS NOTED ON THE PLANS (EXCEPT WHERE NOTED OTHERWISE).
13. CURB TRANSITIONS SHALL BE MADE UNIFORMLY WITHOUT ABRUPT CHANGES OR IRREGULARITIES. ENSURE THAT THE TOP OF CURB ELEVATION IS THE SAME AT INTERSECTIONS WITH ADJACENT AND/OR DIFFERENT CURB TYPES AND EXISTING GRADE TRANSITIONS SHALL BE A MINIMUM OF 5 LINEAL FEET UNLESS OTHERWISE NOTED.
14. CONTRACTOR TO VERIFY ALL EXISTING SPOT ELEVATIONS ALONG LIMITS OF THE EXISTING AND NEW PAVEMENT WHERE THE GRADING PLANS MEET EXISTING (ME). NOTIFY THE A/E OF ANY INCONSISTENCIES, DRAINAGE ISSUES, OR SLOPE DISCREPANCIES.
15. DO NOT GRADE WITHIN THE DRIP LINE OF ANY EXISTING TREE DESIGNATED TO REMAIN.
16. LEVEL LANDINGS' SHALL BE PROVIDED AT ALL CURB RAMP LOCATIONS. PAVEMENT SLOPES WITHIN LEVEL LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION (INCLUSIVE OF TOLERANCES). ADA SIDEWALK RAMPS SHALL BE IN ACCORDANCE WITH CURRENT MDOT SIDEWALK RAMP AND DETECTABLE WARNING DETAILS R-28-J.
17. ADJUST ALL UTILITY STRUCTURES NOT SHOWN IN UTILITY PLAN TO FINISHED GRADE.
18. COORDINATE WORK OUTSIDE OF THE PROPERTY WITH OWNER, MHOG, GENOA TOWNSHIP, AND ADJACENT PROPERTIES.
19. DIGITAL FILES OF THE CIVIL 3D DATA TO BE MADE AVAILABLE TO THE CONTRACTOR AND CONSTRUCTION STAKING SURVEYOR FOR CONSTRUCTION LAYOUT AND STAKING OF THE PROPOSED ELEVATIONS AND IMPROVEMENT.
20. THE EXISTING AND PROPOSED ONSITE DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MAINTAINED BY THE PROPERTY OWNER.
21. ALL MANHOLES, CATCH BASINS, AND INLETS TO BE PER MDOT DRAINAGE STRUCTURES R-1-G.

LEGEND

E.G. 861.50	EXISTING SPOT ELEVATION
F.G XXX.XX	PROPOSED SPOT ELEVATION
T/C XXX.XX	TOP OF CURB ELEVATION
T/W XXX.XX	TOP OF WALL ELEVATION
B/W XXX.XX	BOTTOM OF WALL ELEVATION
F.F. XXX.XX	FINISHED FLOOR ELEVATION
T.P. XXX.XX	TOP OF POND ELEVATION
865	EXISTING MAJOR CONTOURS
864	EXISTING MINOR CONTOURS
865	PROPOSED MAJOR CONTOURS
864	PROPOSED MINOR CONTOURS
	STORM SEWER
D	STORM STRUCTURE (STMH)
	CATCH BASIN (CB)
	OUTLET CONTROL STRUCTURE (OC)
	CURB INLET (CI)
	FLARED END SECTION (FES)
	RIP RAP
	FLOW ARROWS

Trinity Health

ST. JOSEPH MERCY BRIGHTON EXPANSION AND RENOVATION

7575 GRAND RIVER AVE., BRIGHTON, MI 48114
7555 GRAND RIVER AVE., BRIGHTON, MI 48114

SMITHGROUP
201 DEPOT STREET
SECOND FLOOR
ANN ARBOR, MI 48104
734.662.4457
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IMEG
The future. Built Smarter. www.imegcorp.com
33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	N	16SEP2022
EGLE PERMIT R2	M	14SEP2022
LCDC RESUBMITTAL R4	L	13SEP2022
BP1 BULLETIN 1	K	06SEP2022
EGLE PERMIT R1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE

OVERALL GRADING AND STORM PLAN

SCALE: 1" = 100'

SCALE

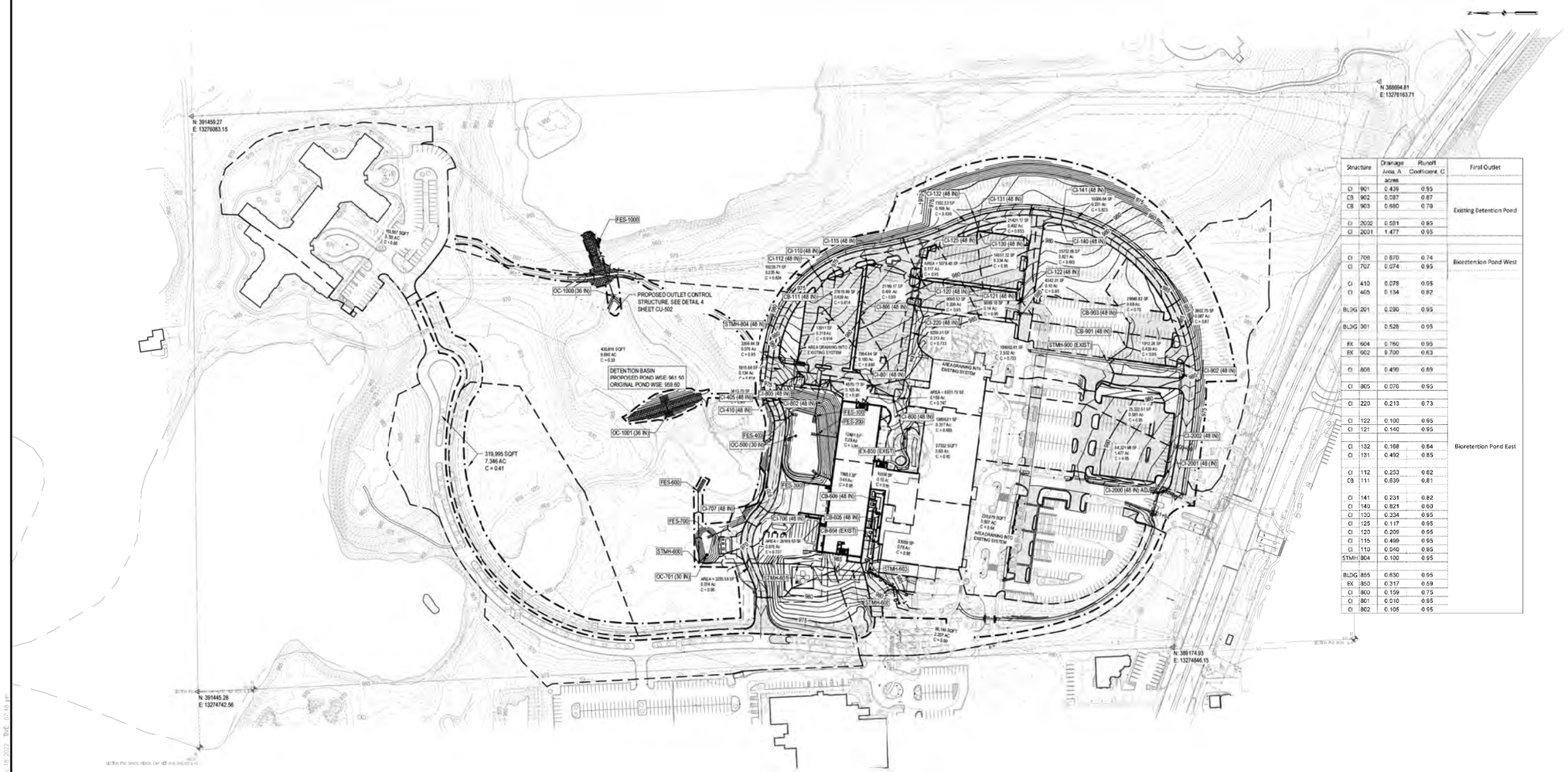
13472.00

PROJECT NUMBER

CG-100 180

DRAWING NUMBER

FILE: C:\Users\kdekrey\SmithGroup Companies Inc\PRJ - 13472 - SmithGroup - SmithGroup\CAD\05 Civil\SHEET\13472-CG100.dwg USER: kdek



Structure		Drainage Area, A	Runoff Coefficient, C	First Outlet
		acres		
CI	901	0.439	0.95	Existing Detention Pond
CB	902	0.087	0.87	
CB	903	0.680	0.79	
CI	2002	0.581	0.95	
CI	2001	1.477	0.95	
CI	706	0.670	0.74	Bioretention Pond West
CI	707	0.074	0.95	
CI	410	0.078	0.95	Bioretention Pond East
CI	405	0.134	0.82	
BLDG	201	0.290	0.95	
BLDG	301	0.528	0.95	
EX	604	0.760	0.95	
EX	602	9.700	0.63	
CI	806	0.499	0.89	
CI	805	0.076	0.95	
CI	220	0.213	0.73	
CI	122	0.100	0.95	
CI	121	0.140	0.95	
CI	132	0.168	0.84	
CI	131	0.492	0.85	
CI	112	0.253	0.82	
CB	111	0.639	0.81	
CI	141	0.231	0.82	
CI	140	0.821	0.60	
CI	130	0.334	0.95	
CI	125	0.117	0.95	
CI	120	0.206	0.95	
CI	115	0.499	0.95	
CI	110	0.040	0.95	
STMH	804	0.100	0.95	
BLDG	855	0.630	0.95	
EX	850	0.317	0.59	
CI	800	0.159	0.75	
CI	801	0.010	0.95	
CI	802	0.105	0.95	

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SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
DRAINAGE AREA PLAN

SCALE:1" = 100'

SCALE
13472.00

PROJECT NUMBER

CG-101

DRAWING NUMBER

Job Name : St Joe Medical Center - Brighton
Job Number :
Analysis Description : Storm Sewer Analysis - East Line

Min. Time of Concentration, t_c : 15 Minutes
a : 175
b : 25 $i = a/(t_c + b)$

Pipe Material : HDPE
Manning n : 0.011

Minimum Velocity : 2.5 ft/sec
Maximum Velocity : 10.0 ft/sec

Upstream Structure No.	Downstream Structure No.	Watershed Characteristics: Drainage Area, A acres	Runoff Coefficient, C	Equivalent Area, (AxC) acres	Cumulative Equiv. Area acres	Time of Concentration Tc, min	Design Rainfall Intensity, i in/hr	Runoff Rate, Q cfs	Pipe Characteristics: Pipe Diameter, D inches	Pipe Length, L ft	Pipe Slope, S %	Pipe Flow Capacity,* Qfull, cfs	Pipe Flow Velocity, Vfull, fps	Actual Pipe Flow Velocity: Q/Qfull	d/D	Aact	Pact	Qact cfs	Vact fps	Velocity Time to Next Structure, Tt min	Flow Height Above Invert
INL 806	INL 115	0.499	0.89	**0.442**	**0.442**	15.00	**4.38**	**1.93**	12	164	0.50	**2.98**	**3.79**	**0.65**	0.59	**0.48**	**1.75**	**1.93**	**4.04**	**15.68**	**0.59**
INL 805	INL 804	0.076	0.95	**0.072**	**0.072**	15.00	**4.38**	**0.32**	12	36	1.00	**4.21**	**5.36**	**0.09**	0.19	**0.10**	**0.89**	**0.32**	**3.15**	**15.19**	**0.19**
EX 856	INL 850	0.150	0.95	**0.143**	**0.143**	15.00	**4.38**	**0.62**	12	103	1.00	**4.21**	**5.36**	**0.15**	0.28	**0.16**	**1.07**	**0.62**	**3.84**	**15.45**	**0.26**
INL 220	INL 120	0.213	0.73	**0.156**	**0.156**	15.00	**4.38**	**0.68**	12	63	1.00	**4.21**	**5.36**	**0.16**	0.27	**0.17**	**1.10**	**0.68**	**3.94**	**15.27**	**0.27**
INL 122	INL 121	0.100	0.95	**0.095**	**0.095**	15.00	**4.38**	**0.42**	12	111	1.00	**4.21**	**5.36**	**0.10**	0.21	**0.12**	**0.98**	**0.42**	**3.42**	**15.54**	**0.21**
INL 121	INL 120	0.140	0.95	**0.133**	**0.228**	15.54	**4.32**	**0.98**	12	111	1.00	**4.21**	**5.36**	**0.23**	0.33	**0.22**	**1.22**	**0.98**	**4.37**	**15.96**	**0.33**
INL 132	INL 131	0.168	0.84	**0.140**	**0.140**	15.00	**4.38**	**0.61**	12	27	0.40	**2.66**	**3.39**	**0.23**	0.33	**0.22**	**1.22**	**0.61**	**2.76**	**15.16**	**0.33**
INL 131	INL 130	0.492	0.85	**0.420**	**0.560**	15.16	**4.36**	**2.44**	18	8	0.40	**7.85**	**4.44**	**0.31**	0.38	**0.62**	**2.00**	**2.44**	**3.92**	**15.20**	**0.57**
INL 112	INL 111	0.253	0.82	**0.208**	**0.208**	15.00	**4.38**	**0.91**	12	111	0.35	**2.49**	**3.17**	**0.37**	0.42	**0.31**	**1.41**	**0.91**	**2.93**	**15.63**	**0.42**
INL 111	INL 110	0.639	0.81	**0.520**	**0.729**	15.63	**4.31**	**3.14**	18	35	0.25	**6.20**	**3.51**	**0.51**	0.50	**0.89**	**2.37**	**3.14**	**3.52**	**15.80**	**0.75**
INL 141	INL 140	0.231	0.82	**0.190**	**0.190**	15.00	**4.38**	**0.83**	12	27	0.50	**2.98**	**3.79**	**0.28**	0.36	**0.26**	**1.29**	**0.83**	**3.25**	**15.14**	**0.36**
INL 140	INL 130	0.821	0.60	**0.495**	**0.685**	15.14	**4.36**	**2.99**	18	192	0.50	**8.78**	**4.97**	**0.34**	0.40	**0.66**	**2.06**	**2.99**	**4.49**	**15.85**	**0.60**
INL 130	INL 125	0.334	0.95	**0.317**	**1.563**	15.85	**4.28**	**6.69**	18	124	0.50	**8.78**	**4.97**	**0.76**	0.65	**1.22**	**2.82**	**6.69**	**5.47**	**16.23**	**0.98**
INL 125	INL 120	0.117	0.95	**0.111**	**1.674**	16.23	**4.24**	**7.10**	24	71	0.25	**13.36**	**4.25**	**0.53**	0.52	**1.64**	**3.22**	**7.10**	**4.32**	**16.50**	**1.04**
INL 120	INL 115	0.209	0.95	**0.199**	**2.256**	16.50	**4.22**	**9.51**	24	130	0.25	**13.36**	**4.25**	**0.71**	0.62	**2.06**	**3.64**	**9.51**	**4.62**	**16.97**	**1.25**
INL 115	INL 110	0.499	0.95	**0.474**	**3.173**	16.97	**4.17**	**13.23**	24	78	0.30	**14.64**	**4.66**	**0.90**	0.74	**2.51**	**4.16**	**13.23**	**5.28**	**17.22**	**1.49**
INL 110	INL 804	0.040	0.95	**0.038**	**3.938**	17.22	**4.15**	**16.33**	30	261	0.25	**24.23**	**4.94**	**0.67**	0.60	**3.08**	**4.44**	**16.33**	**5.30**	**18.04**	**1.50**
INL 804	ES 100	0.100	0.95	**0.095**	**5.263**	18.04	**4.07**	**21.40**	30	65	0.25	**24.23**	**4.94**	**0.88**	0.73	**3.84**	**5.12**	**21.40**	**5.57**	**18.23**	**1.83**
EX 855	INL 850	0.630	0.95	**0.599**	**0.599**	15.00	**4.38**	**2.62**	12	42	1.00	**4.21**	**5.36**	**0.62**	0.57	**0.46**	**1.71**	**2.62**	**5.65**	**15.12**	**0.57**
INL 850	INL 800	0.317	0.59	**0.188**	**0.929**	15.45	**4.33**	**4.02**	18	101	0.75	**10.75**	**6.08**	**0.37**	0.42	**0.71**	**2.13**	**4.02**	**5.64**	**15.75**	**0.64**
INL 800	INL 801	0.159	0.75	**0.119**	**1.048**	15.75	**4.29**	**4.50**	18	58	0.50	**8.78**	**4.97**	**0.51**	0.51	**0.90**	**2.38**	**4.50**	**5.00**	**15.94**	**0.76**
INL 801	INL 802	0.010	0.95	**0.010**	**1.057**	15.94	**4.27**	**4.52**	18	97	0.50	**8.78**	**4.97**	**0.52**	0.51	**0.90**	**2.38**	**4.52**	**5.00**	**16.26**	**0.76**
INL 802	INL 804	0.105	0.95	**0.100**	**1.157**	16.26	**4.24**	**4.91**	18	28	0.50	**8.78**	**4.97**	**0.56**	0.53	**0.96**	**2.46**	**4.91**	**5.11**	**16.35**	**0.80**

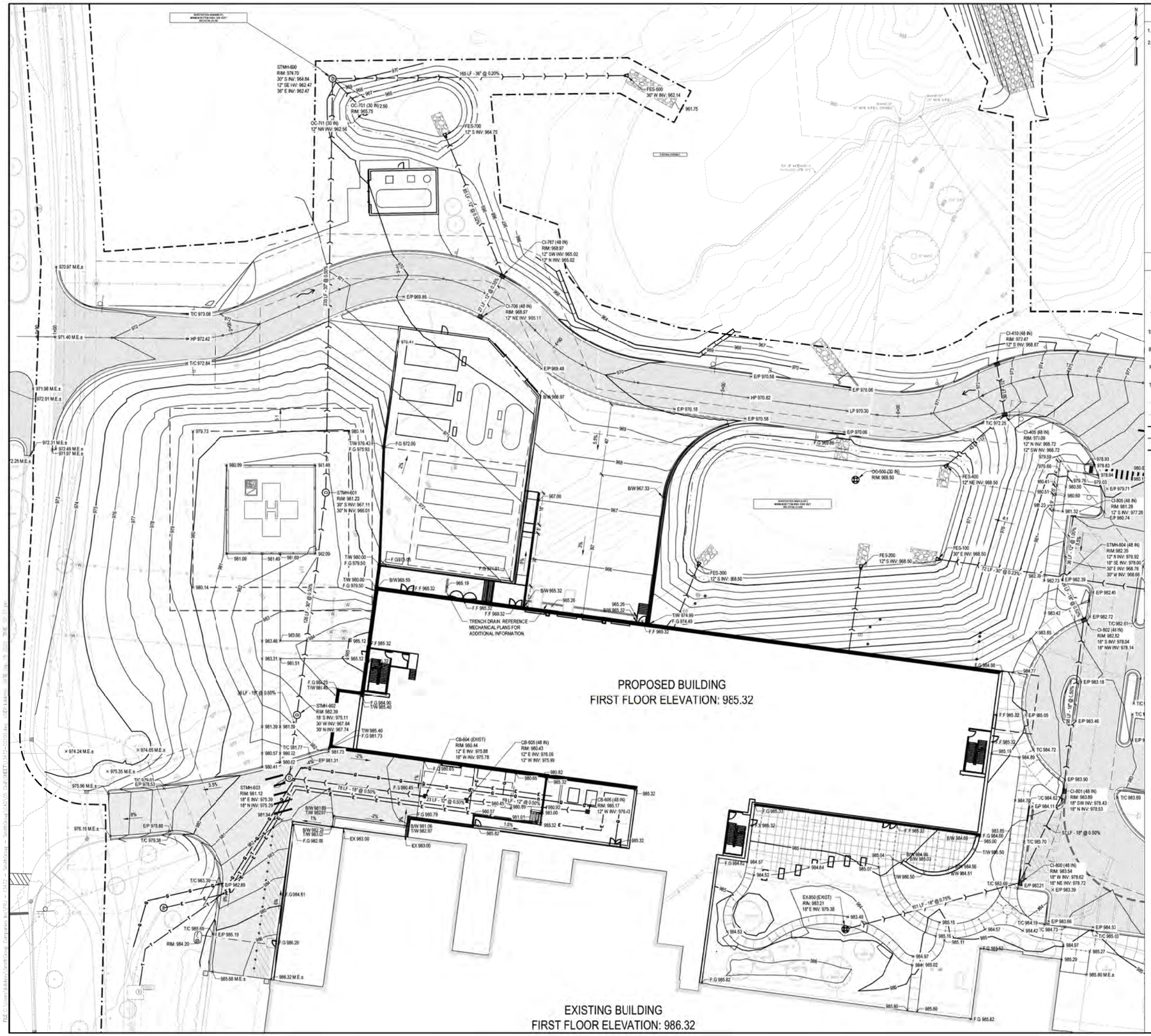
Job Name : St Joe Medical Center - Brighton
Job Number :
Analysis Description : Storm Sewer Analysis - Miscellaneous Lines

Min. Time of Concentration, t_c : 15 Minutes
a : 175
b : 25 $i = a/(t_c + b)$

Pipe Material : HDPE
Manning n : 0.011

Minimum Velocity : 2.5 ft/sec
Maximum Velocity : 10.0 ft/sec

Upstream Structure No.	Downstream Structure No.	Watershed Characteristics: Drainage Area, A acres	Runoff Coefficient, C	Equivalent Area, (AxC) acres	Cumulative Equiv. Area acres	Time of Concentration Tc, min	Design Rainfall Intensity, i in/hr	Runoff Rate, Q cfs	Pipe Characteristics: Pipe Diameter, D inches	Pipe Length, L ft	Pipe Slope, S %	Pipe Flow Capacity,* Qfull, cfs	Pipe Flow Velocity, Vfull, fps	Actual Pipe Flow Velocity: Q/Qfull	d/D	Aact	Pact	Qact cfs	Vact fps	Velocit Time to Next Structure, Tt min	Flow Height Above Invert
INL 410	INL 405	0.078	0.95	**0.074**	**0.074**	15.00	**4.38**	**0.32**	12	27	0.50	**2.98**	**3.79**	**0.11**	0.22	**0.13**	**0.98**	**0.32**	**2.49**	**15.18**	**0.22**
INL 405	FES 400	0.134	0.82	**0.110**	**0.185**	15.18	**4.36**	**0.80**	12	19	0.50	**2.98**	**3.79**	**0.27**	0.35	**0.25**	**1.28**	**0.80**	**3.22**	**15.28**	**0.35**
INL 706	INL 707	0.670	0.74	**0.494**	**0.494**	15.00	**4.38**	**2.16**	12	27	0.50	**2.98**	**3.79**	**0.73**	0.63	**0.52**	**1.84**	**2.16**	**4.13**	**15.11**	**0.63**
INL 707	FES 700	0.074	0.95	**0.070**	**0.564**	15.11	**4.36**	**2.46**	12	76	0.50	**2.98**	**3.79**	**0.83**	0.69	**0.58**	**1.97**	**2.46**	**4.24**	**15.41**	**0.69**
INL 201	FES 200	0.290	0.95	**0.276**	**0.276**	15.00	**4.38**	**1.21**	12	45	0.54	**3.09**	**3.94**	**0.39**	0.43	**0.33**	**1.44**	**1.21**	**3.69**	**15.20**	**0.43**
INL 302	INL 301	0.528	0.95	**0.502**	**0.502**	15.00	**4.38**	**2.19**	12	28	1.76	**5.58**	**7.11**	**0.39**	0.44	**0.33**	**1.44**	**2.19**	**6.68**	**15.07**	**0.44**
INL 301	FES 300	0.000	0.82	**0.000**	**0.502**	15.07	**4.37**	**2.19**	12	33	0.50	**2.98**	**3.79**	**0.74**	0.64	**0.53**	**1.85**	**2.19**	**4.15**	**15.20**	**0.64**
INL 903	INL 901	0.680	0.70	**0.476**	**0.476**	15.00	**4.38**	**2.08**	12	56	0.50	**2.98**	**3.79**	**0.70**	0.62	**0.51**	**1.81**	**2.08**	**4.10**	**15.23**	**0.62**
INL 902	INL 901	0.087	0.87	**0.076**	**0.076**	15.00	**4.38**	**0.33**	12	137	0.50	**2.98**	**3.79**	**0.11**	0.23	**0.13**	**0.99**	**0.33**	**2.50**	**15.91**	**0.23**
INL 901	EX 900	0.439	0.95	**0.417**	**0.969**	15.91	**4.28**	**4.14**	12	56	1.00	**4.21**	**5.36**	**0.98**	0.81	**0.68**	**2.23**	**4.14**	**6.11**	**16.07**	**0.81**
INL 604	INL 602	0.760	0.95	**0.722**	**0.722**	15.00	**4.38**	**3.16**	18	114	0.50	**8.78**	**4.97**	**0.36**	0.41	**0.69**	**2.10**	**3.16**	**4.56**	**15.42**	**0.62**
INL 602	INL 601	9.700	0.63	**6.111**	**6.833**	15.42	**4.33**	**29.59**	30	126	0.50	**34.26**	**6.98**	**0.86**	0.72	**3.77**	**5.05**	**29.59**	**7.86**	**15.68**	**1.79**
INL 601	INL 610	0.000	0.00	**0.000**	**6.833**	15.68	**4.30**	**29.59**	30	233	0.50	**34.26**	**6.98**	**0.86**	0.72	**3.77**	**5.05**	**29.59**	**7.86**	**16.18**	**1.79**
INL 610	FES 600	0.000	0.00	**0.000**	**6.833**	16.18	**4.25**	**29.59**	36	165	0.20	**35.24**	**4.99**	**0.84**	0.70	**5.30**	**5.96**	**29.59**	**5.59**	**16.67**	**2.10**
INL 2002	INL 2001	0.581	0.95	**0.552**	**0.552**	15.00	**4.38**	**2.41**	12	72	0.50	**2.98**	**3.79**	**0.81**	0.54	**0.44**	**1.66**	**1.71**	**3.92**	**15.31**	**0.54**
INL 2001	EX 2000	1.477	0.95	**1.403**	**1.955**	15.22	**4.35**	**8.51**	18	49	1.00	**12.41**	**7.02**	**0.69**	0.56	**1.02**	**2.53**	**7.46**	**7.35**	**15.33**	**0.84**



SHEET NOTES

1. REFER TO SHEET CG100 FOR GRADING AND STORM SEWER NOTES.
2. THE EXISTING AND PROPOSED ONSITE DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MINTAINED BY THE PROPERTY OWNER

LEGEND

E.G. 861.50	EXISTING SPOT ELEVATION
F.G.XXX.XX	PROPOSED SPOT ELEVATION
T/C XXX.XX	TOP OF CURB ELEVATION
T/W XXX.XX	TOP OF WALL ELEVATION
B/W XXX.XX	BOTTOM OF WALL ELEVATION
F.F. XXX.XX	FINISHED FLOOR ELEVATION
T.P. XXX.XX	TOP OF POND ELEVATION
865	EXISTING MAJOR CONTOURS
864	EXISTING MINOR CONTOURS
865	PROPOSED MAJOR CONTOURS
864	PROPOSED MINOR CONTOURS
	STORM SEWER
	STORM STRUCTURE (STMH)
	CATCH BASIN (CB)
	OUTLET CONTROL STRUCTURE (OC)
	CURB INLET (CI)
	FLARED END SECTION (FES)
	RIP RAP
	FLOW ARROWS

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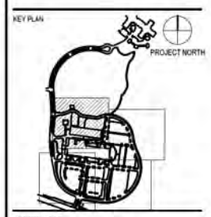

DRAWING TITLE
GRADING AND STORM PLAN

SCALE: 1" = 20'

SCALE

13472.00

PROJECT NUMBER

CG-102

DRAWING NUMBER

SHEET NOTES

1. REFER TO SHEET CG100 FOR GRADING AND STORMWATER SEWER NOTES.
2. THE EXISTING AND PROPOSED ONSITE DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MAINTAINED BY THE PROPERTY OWNER

KEYED NOTES

LEGEND

E.G. 861.50	EXISTING SPOT ELEVATION
F.G.XXX.XX	PROPOSED SPOT ELEVATION
T/C XXX.XX	TOP OF CURB ELEVATION
T/W XXX.XX	TOP OF WALL ELEVATION
B/W XXX.XX	BOTTOM OF WALL ELEVATION
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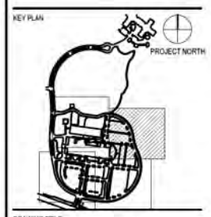
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
GRADING AND STORM PLAN

SCALE: 1" = 20'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CG-103

SHEET NOTES

1. REFER TO SHEET CG100 FOR GRADING AND STORMWATER SEWER NOTES.
2. THE EXISTING AND PROPOSED ONSITE DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MAINTAINED BY THE PROPERTY OWNER

LEGEND

E.G. 861.50	EXISTING SPOTELEVATION
F.G.XXX.XX	PROPOSED SPOT ELEVATION
T/C XXX.XX	TOP OF CURB ELEVATION
T/W XXX.XX	TOP OF WALL ELEVATION
B/W XXX.XX	BOTTOM OF WALL ELEVATION
F.F. XXX.XX	FINISHED FLOOR ELEVATION
T.P. XXX.XX	TOP OF POND ELEVATION
865	EXISTING MAJOR CONTOURS
864	EXISTING MINOR CONTOURS
865	PROPOSED MAJOR CONTOURS
864	PROPOSED MINOR CONTOURS
	STORM SEWER
	STORM STRUCTURE (STMH)
	CATCH BASIN (CB)
	OUTLET CONTROL STRUCTURE (OC)
	CURB INLET (CI)
	FLARED END SECTION (FES)
	RIP RAP
	FLOW ARROWS

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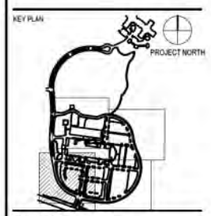
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



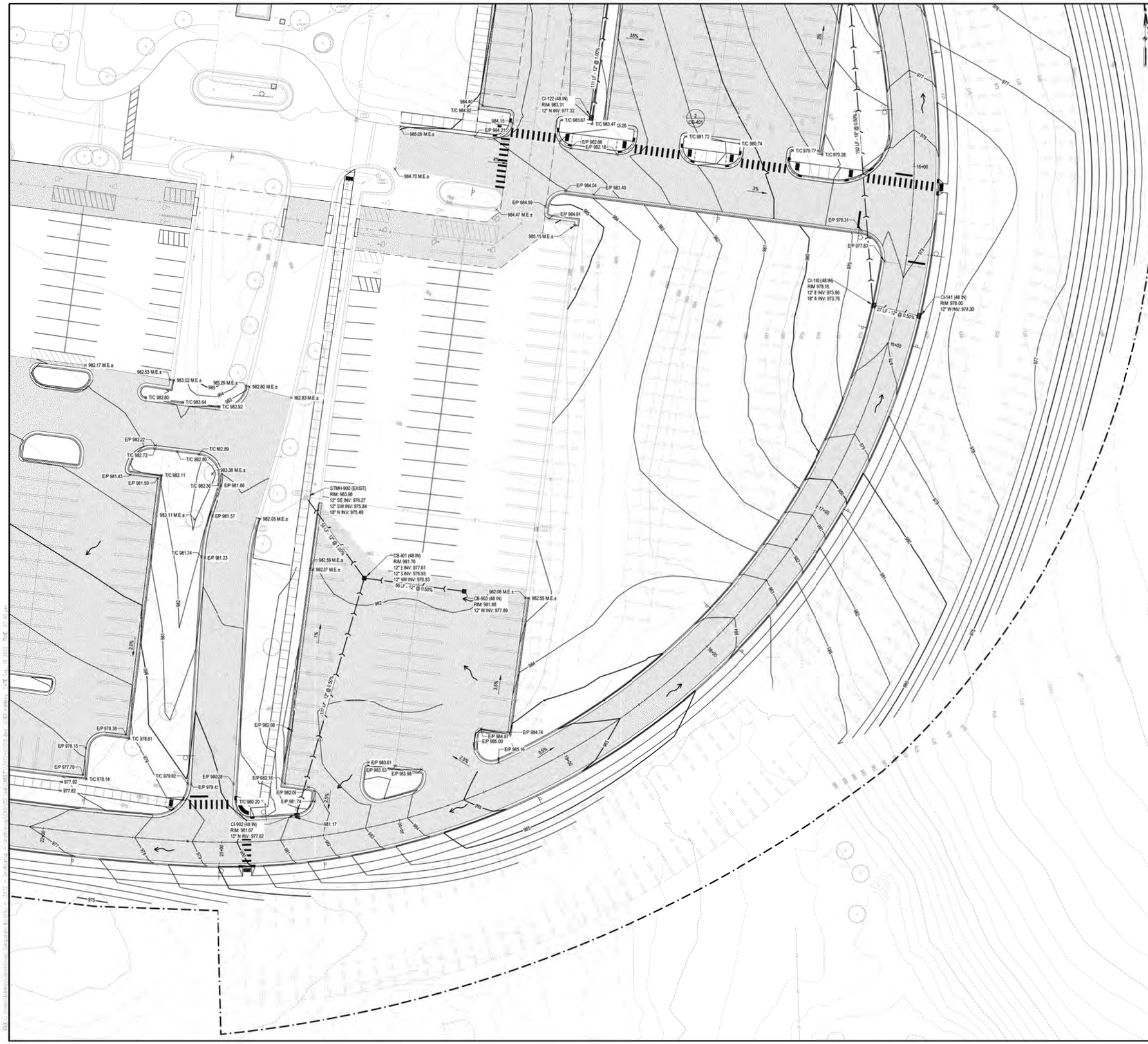
DRAWING TITLE
GRADING AND STORM PLAN

SCALE: 1" = 20'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CG-104



SHEET NOTES

1. REFER TO SHEET CG100 FOR GRADING AND STORMWATER SEWER NOTES.
2. THE EXISTING AND PROPOSED ONSITE DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MAINTAINED BY THE PROPERTY OWNER

LEGEND

E.G. 861.50	EXISTING SPOTELEVATION
F.G.XXX.XX	PROPOSED SPOT ELEVATION
T/C XXX.XX	TOP OF CURB ELEVATION
T/W XXX.XX	TOP OF WALL ELEVATION
B/W XXX.XX	BOTTOM OF WALL ELEVATION
F.F. XXX.XX	FINISHED FLOOR ELEVATION
T.P. XXX.XX	TOP OF POND ELEVATION
865	EXISTING MAJOR CONTOURS
864	EXISTING MINOR CONTOURS
865	PROPOSED MAJOR CONTOURS
864	PROPOSED MINOR CONTOURS
	STORM SEWER
	STORM STRUCTURE (STMH)
	CATCH BASIN (CB)
	OUTLET CONTROL STRUCTURE (OC)
	CURB INLET (CI)
	FLARED END SECTION (FES)
	RIP RAP
	FLOW ARROWS

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FARMINGTON HILLS, MI 48331
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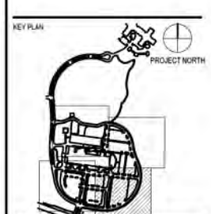
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

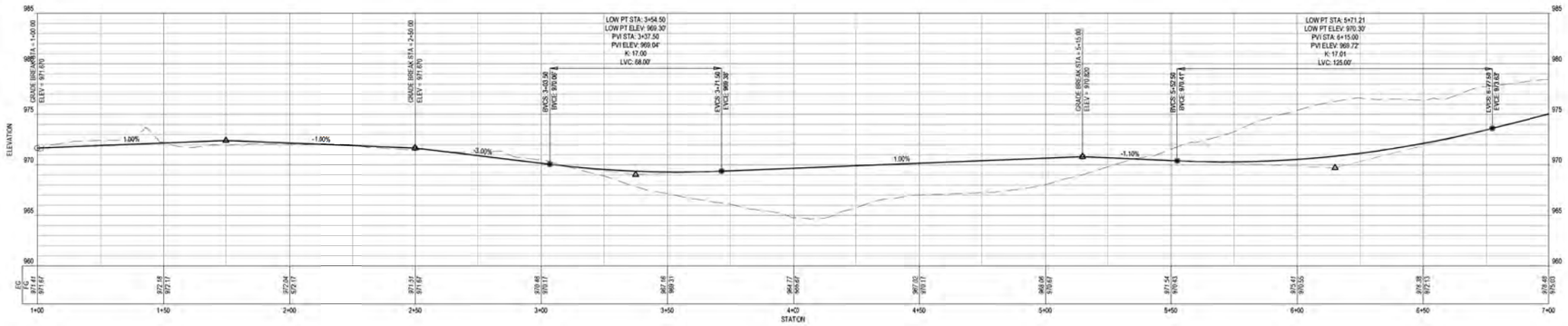


DRAWING TITLE
GRADING AND STORM PLAN

SCALE: 1" = 20'

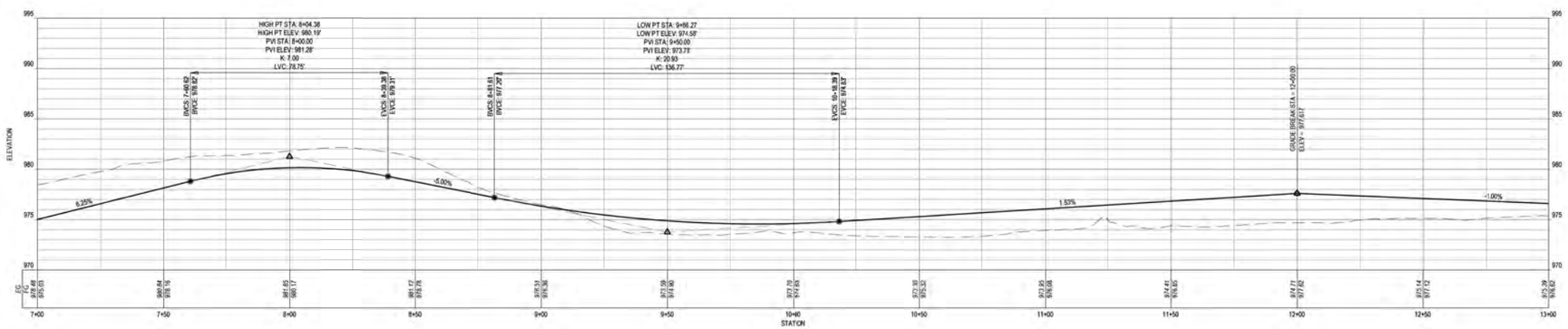
SCALE
13472.00
PROJECT NUMBER

CG-105
DRAWING NUMBER



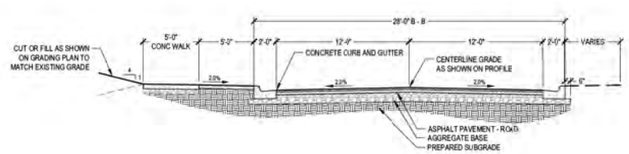
1 LOOP ROAD (STA 1+00 - 7+00)

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'



2 LOOP ROAD (STA 7+00 - 13+00)

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'



3 TYPICAL ROAD SECTION (LOOP ROAD)

SCALE: 1" = 5'

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

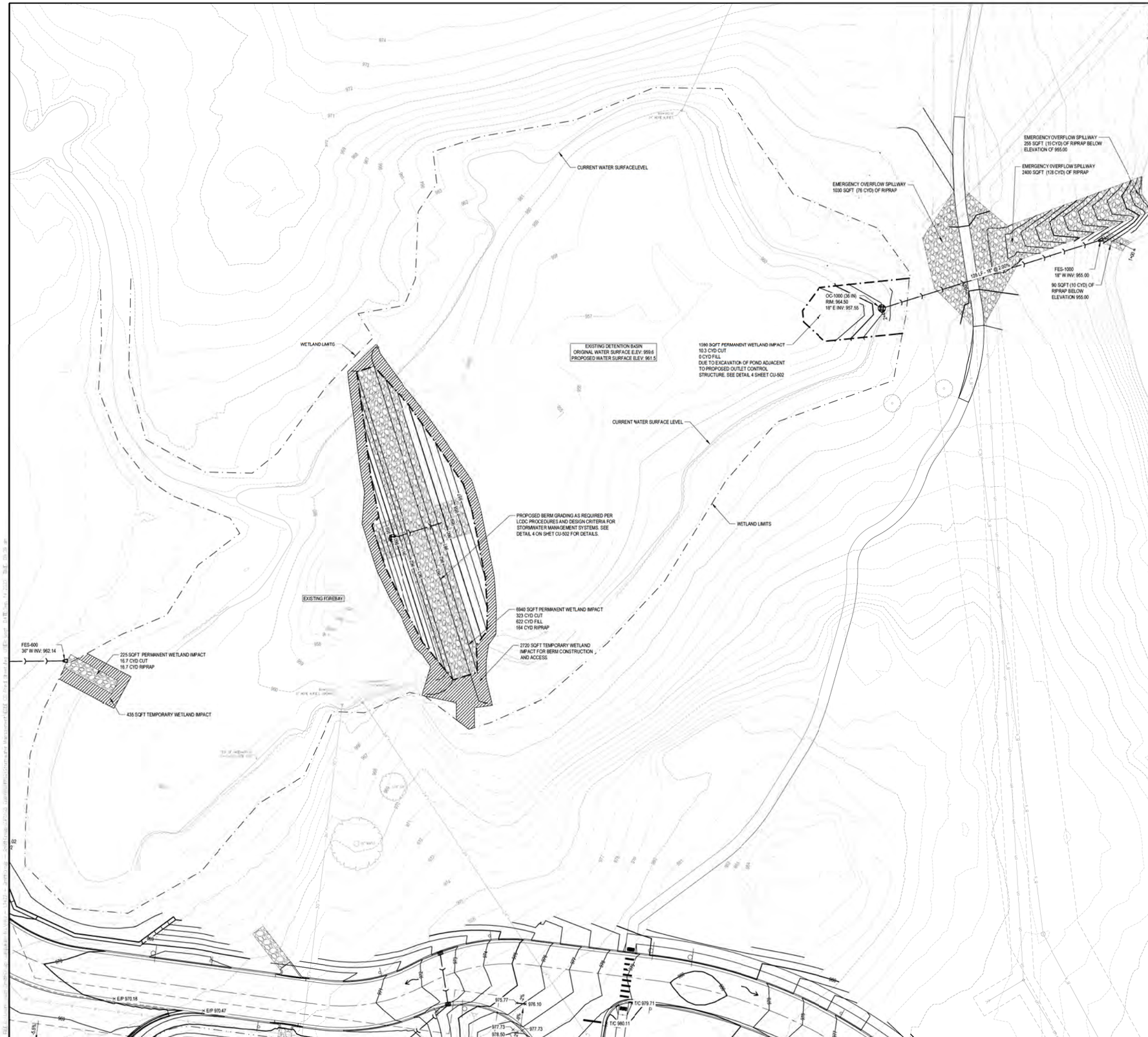
KEY PLAN

DRAWING TITLE
ROAD PROFILES

SCALE

PROJECT NUMBER
13472.00

DRAWING NUMBER
CG-200



SHEET NOTES

1. REFER TO SHEET CG100 FOR GRADING AND STORM SEWER NOTES.
2. THE EXISTING AND PROPOSED ONSITE DRAINAGE SYSTEMS ARE TO BE OWNED AND PROPERLY MINTAINED BY THE PROPERTY OWNER

LEGEND

E.G. 861.50	EXISTING SPOT ELEVATION
F.G.XXX.XX	PROPOSED SPOT ELEVATION
T/C XXX.XX	TOP OF CURB ELEVATION
T/W XXX.XX	TOP OF WALL ELEVATION
B/W XXX.XX	BOTTOM OF WALL ELEVATION
F.F. XXX.XX	FINISHED FLOOR ELEVATION
T.P. XXX.XX	TOP OF POND ELEVATION
865	EXISTING MAJOR CONTOURS
864	EXISTING MINOR CONTOURS
865	PROPOSED MAJOR CONTOURS
864	PROPOSED MINOR CONTOURS
	STORM SEWER
	STORM STRUCTURE
	AREA INLET
	OUTLET CONTROL STRUCTURE
	CURB INLET
	FLARED END SECTION
	RIP RAP
	FLOW ARROWS
	TEMPORARY WETLAND IMPACT AREA

THIS EXHIBIT DRAWING WAS CREATED FOR THE THE EGLE PERMIT AND IS FOR REFERENCE ONLY.

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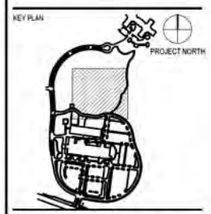
ISSUED FOR	REV.	DATE
EGLE PERMIT R2	D	14SEP2022
BP1 BULLETIN 1	C	06SEP2022
EGLE PERMIT R1	B	06SEP2022
EGLE PERMIT	A	15JUN2022

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



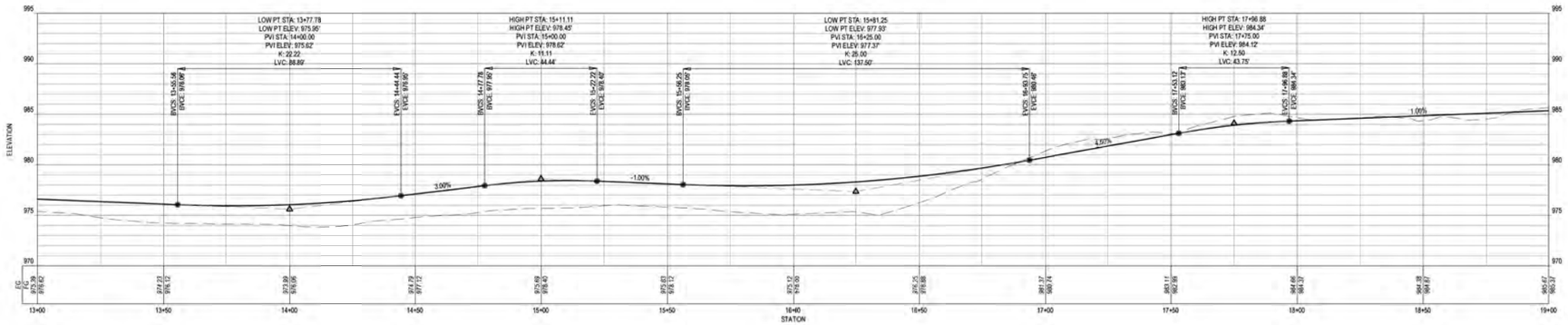
DRAWING TITLE
DETENTION POND PLAN

SCALE: 1" = 20'

SCALE

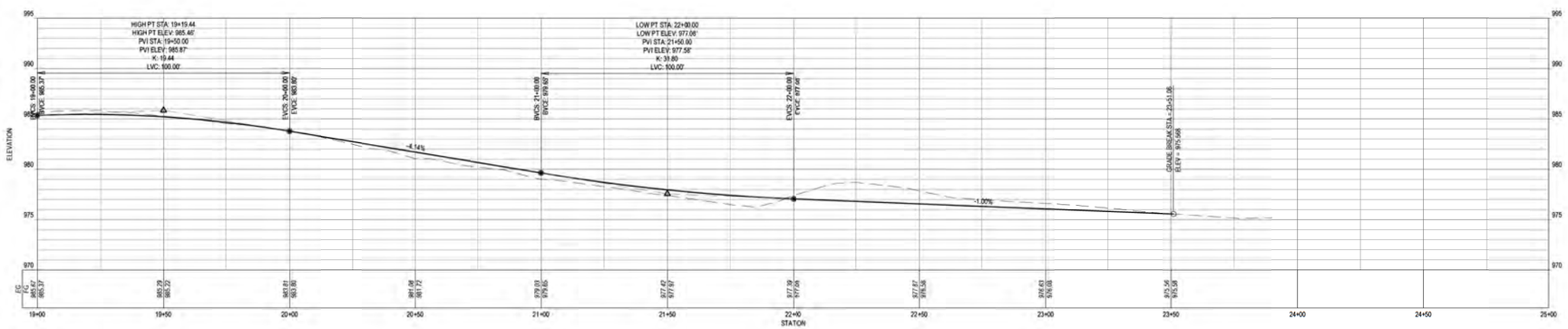
PROJECT NUMBER 13472.00

DRAWING NUMBER CG-200



1 LOOP ROAD (STA 13+00 - 19+00)

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'



2 LOOP ROAD (STA 19+00 - 24+00)

HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

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P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	L	16SEP2022
LCDC RESUBMITTAL R4	K	13SEP2022
EGLE PERMIT R1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

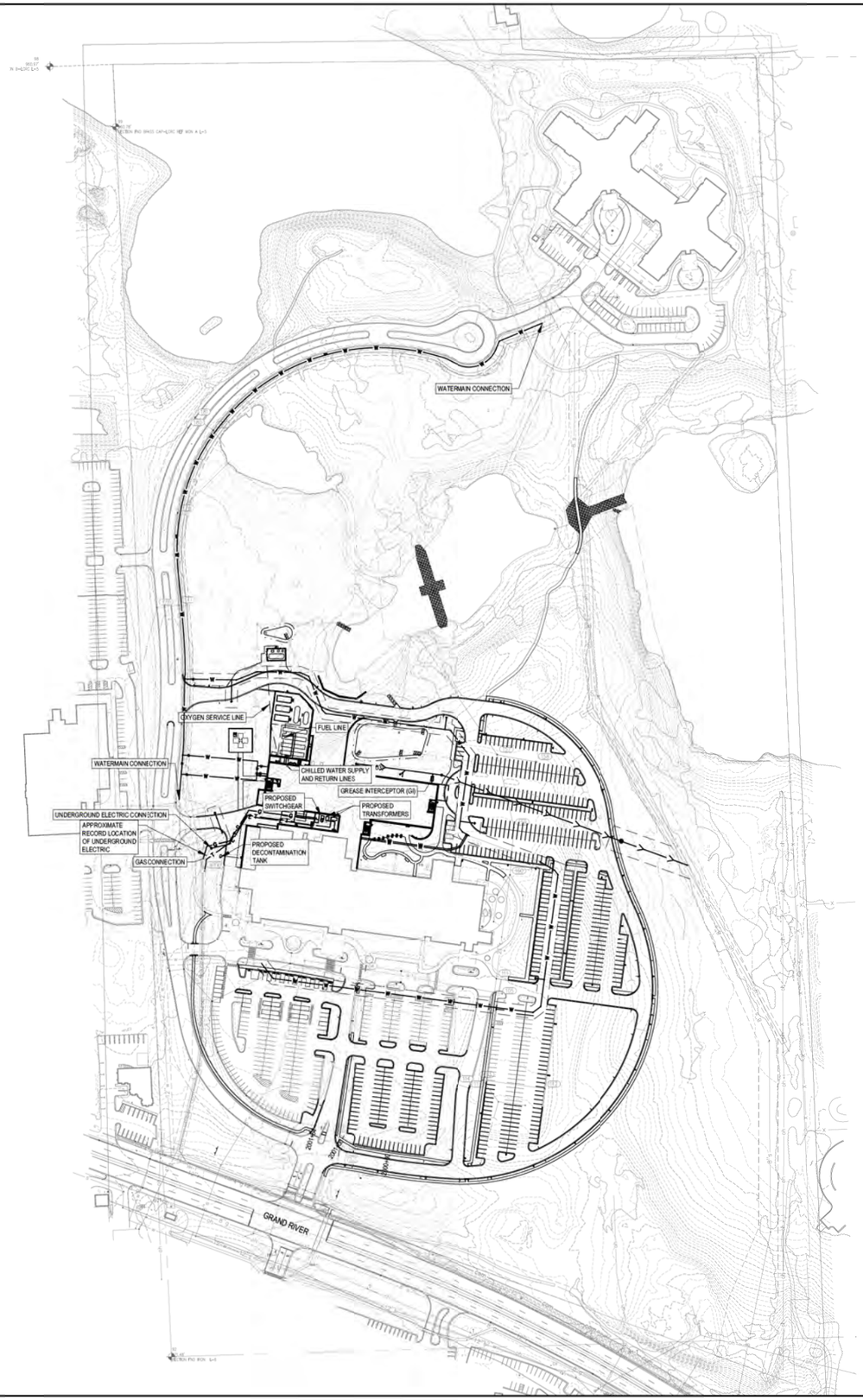
DRAWING TITLE
ROAD PROFILES

SCALE

PROJECT NUMBER
13472.00

DRAWING NUMBER
CG-201

FILE C:\Users\McAllen\SmithGroup Companies Inc\SG - 13472 - SmithGroup - CAD\05 Cad\SHEET\13472-CG200.dwg - USER McAllen - DATE Sep 19 2022 - TIME 08:03 pm



SHEET NOTES

1. REFER TO CG-100 TO CG104 FOR GRADING AND STORM PLANS.
2. REFER TO PLUMBING PLANS FOR WATER, SANITARY, AND STORM CONNECTIONS WITHIN 5 FEET OF BUILDING.
3. REFER TO SPECIFICATIONS FOR UTILITY PRODUCT AND MATERIAL INFORMATION.
4. VERIFY ALL LOCATIONS OF EXISTING UTILITIES, ROADS, PAVING, PROPERTY LINES, SETBACKS, DIMENSIONS, ETC., PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
5. ALL MANHOLES SHALL BE PRECAST STRUCTURES WITH APPROVED FRAMES, COVERS, AND LADDERS. REFER MHOG STANDARD DETAILS FOR SIZES.

KEYED NOTES

- (A) 12" CONNECTION TO EXISTING STUB-OUT
- (B) 12"X12"X8" TEE
- (C) 11-1/4" BEND
- (D) 22-1/2" BEND
- (E) 45° BEND
- (F) 8" D.I. WATERMAIN
- (G) 12" D.I WATERMAIN
- (H) 8" SANITARY SEWER, PVC SDR 26
- (I) CONNECTION TO EXISTING SANITARY MANHOLE
- (J) PROPOSED AMENDED EASEMENT
- (K) PROPOSED 25' WATERMAIN EASEMENT
- (L) PROPOSED 50' SANITARY SEWER EASEMENT
- (M) 8" CONNECTION TO EXISTING STUB-OUT
- (N) PROPOSED FIRE HYDRANT
- (O) 8" PRIVATE WATERMAIN
- (P) 8" FIRE SUPPRESSION WATER LINE
- (Q) 4" DOMESTIC SERVICE WATER LINE

LEGEND

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- NATURAL GAS LINE
- ELECTRICAL LINE UNDERGROUND
- TELECOM LINE OVERHEAD
- TELECOM LINE UNDERGROUND
- CHILLED WATER SUPPLY PIPE
- CHILLED WATER RETURN PIPE
- FIRE WATER LINE
- FUEL LINE
- GATE VALVE VAULT
- FIRE HYDRANT ASSEMBLY
- 48" SANITARY #ANHOLE
- CLEANOUT
- STORM STRUCTURE (STMH)
- CATCH BASIN #CB)
- OUTLET CONTROL STRUCTURE (OC)
- CURB INLET (CI)
- FLARED END SECTION (FES)
- RIP RAP
- UTILITY CROSSING CALLOUT

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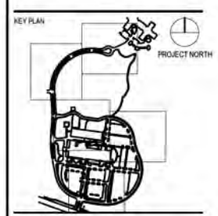
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
OVERALL WATER AND SANITARY PLAN

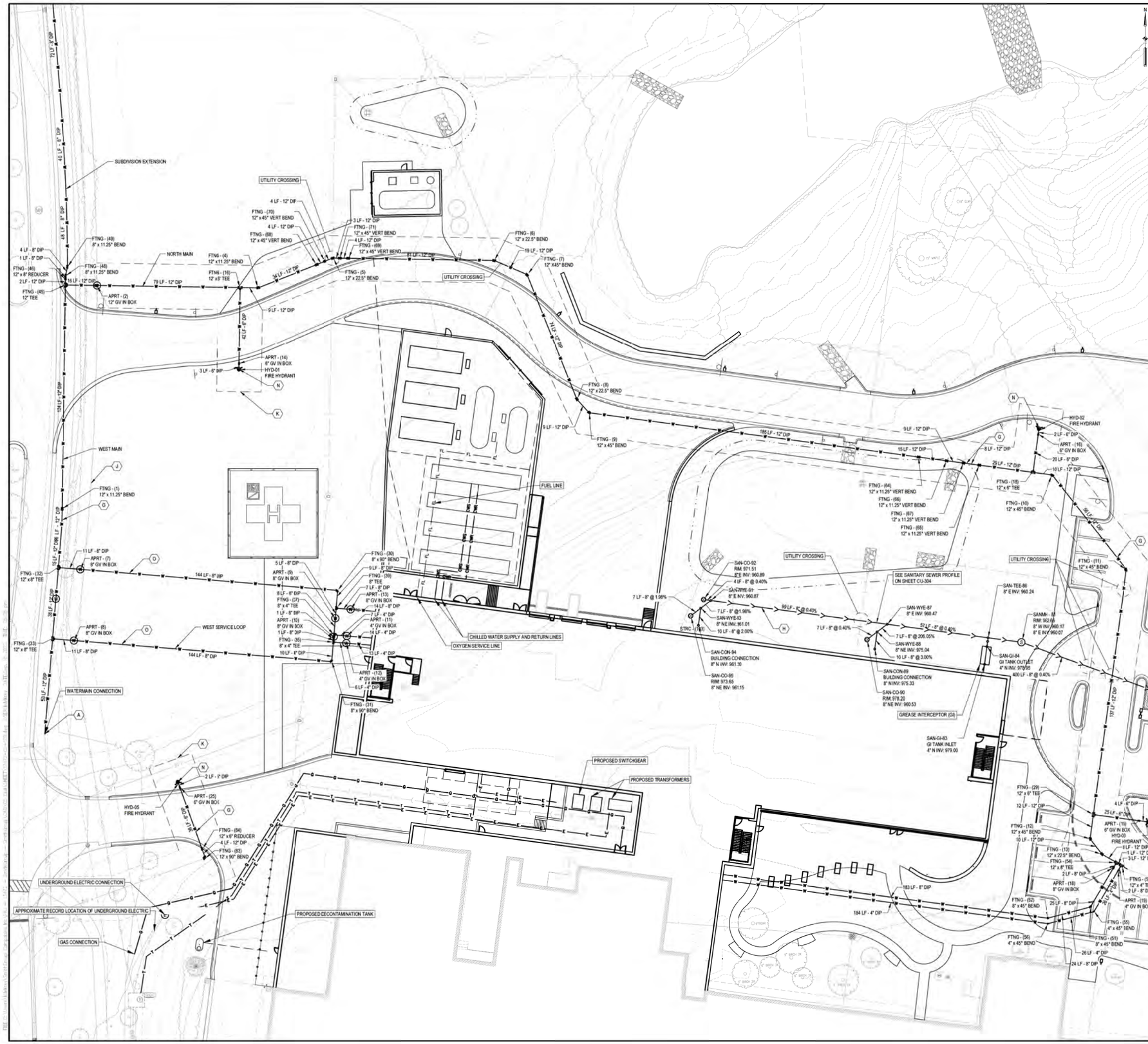
0 50 100 200
SCALE: 1" = 100'

SCALE
13472.00

PROJECT NUMBER

CU-100

DRAWING NUMBER



SHEET NOTES

1. REFER TO CG-100 TO CG104 FOR GRADING AND STORM PLANS.
2. REFER TO PLUMBING PLANS FOR WATER, SANITARY, AND STORM CONNECTIONS WITHIN 5 FEET OF BUILDING.
3. REFER TO SPECIFICATIONS FOR UTILITY PRODUCT AND MATERIAL INFORMATION.
4. VERIFY ALL LOCATIONS OF EXISTING UTILITIES, ROADS, PAVING, PROPERTY LINES, SETBACKS, DIMENSIONS, ETC., PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
5. ALL MANHOLES SHALL BE PRECAST STRUCTURES WITH APPROVED FRAMES, COVERS, AND LADDERS. REFER MHOG STANDARD DETAILS FOR SIZES.

KEYED NOTES

- (A) 12" CONNECTION TO EXISTING STUB-OUT
- (B) 12"X12"X8" TEE
- (C) 11-1/4" BEND
- (D) 22-1/2" BEND
- (E) 45° BEND
- (F) 8" D.I. WATERMAIN
- (G) 12" D.I WATERMAIN
- (H) 8" SANITARY SEWER, PVC SDR 26
- (I) CONNECTION TO EXISTING SANITARY MANHOLE
- (J) PROPOSED AMENDED EASEMENT
- (K) PROPOSED 25' WATERMAIN EASEMENT
- (L) PROPOSED 50' SANITARY SEWER EASEMENT
- (M) 8" CONNECTION TO EXISTING STUB-OUT
- (N) PROPOSED FIRE HYDRANT
- (O) 8" PRIVATE WATERMAIN
- (P) 8" FIRE SUPPRESSION WATER LINE
- (Q) 4" DOMESTIC SERVICE WATER LINE

LEGEND

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- NATURAL GAS LINE
- ELECTRICAL LINE UNDERGROUND
- TELECOM LINE OVERHEAD
- TELECOM LINE UNDERGROUND
- CHILLED WATER SUPPLY PIPE
- CHILLED WATER RETURN PIPE
- FIRE WATER LINE
- FUEL LINE
- GATE VALVE VAULT
- FIRE HYDRANT ASSEMBLY
- 48" SANITARY #ANHOLE
- CLEANOUT
- STORM STRUCTURE (STMH)
- CATCH BASIN (CB)
- OUTLET CONTROL STRUCTURE (OC)
- CURB INLET (CI)
- FLARED END SECTION (FES)
- RIP RAP
- UTILITY CROSSING CALLOUT

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
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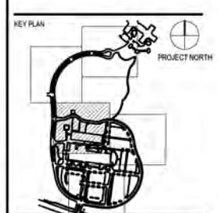
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



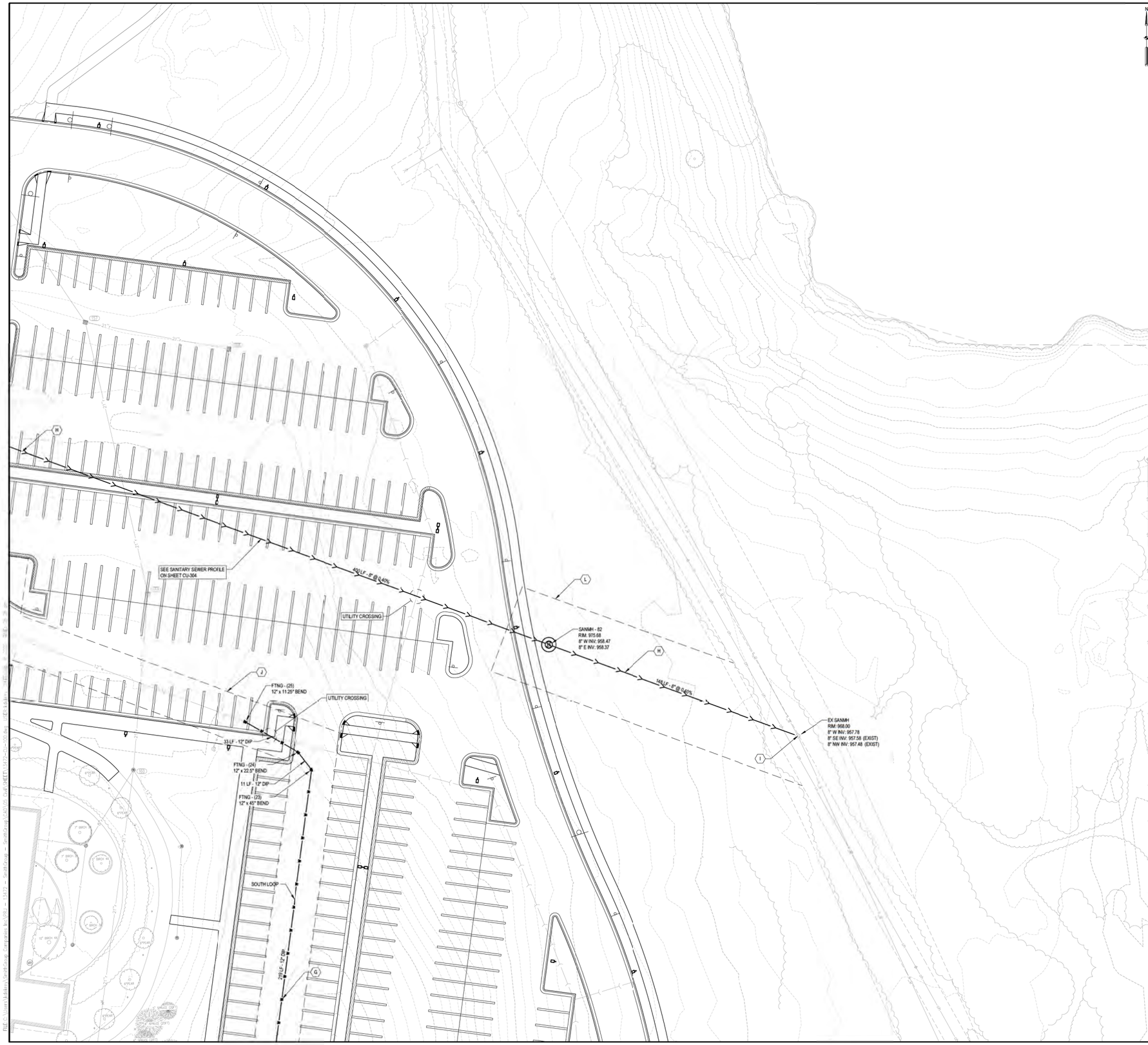
DRAWING TITLE
WATER AND SANITARY PLAN

SCALE: 1" = 20'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CU-101



SHEET NOTES

1. REFER TO CG-100 TO CG104 FOR GRADING AND STORM PLANS.
2. REFER TO PLUMBING PLANS FOR WATER, SANITARY, AND STORM CONNECTIONS WITHIN 5 FEET OF BUILDING.
3. REFER TO SPECIFICATIONS FOR UTILITY PRODUCT AND MATERIAL INFORMATION.
4. VERIFY ALL LOCATIONS OF EXISTING UTILITIES, ROADS, PAVING, PROPERTY LINES, SETBACKS, DIMENSIONS, ETC., PRIOR TO BEGINNING CONSTRUCTION OPERATIONS.
5. ALL MANHOLES SHALL BE PRECAST STRUCTURES WITH APPROVED FRAMES, COVERS, AND LADDERS. REFER MHOG STANDARD DETAILS FOR SIZES.

KEYED NOTES

- (A) 12" CONNECTION TO EXISTING STUB-OUT
- (B) 12"X12"X8" TEE
- (C) 11-1/4" BEND
- (D) 22-1/2" BEND
- (E) 45° BEND
- (F) 8" D.I. WATERMAIN
- (G) 12" D.I WATERMAIN
- (H) 8" SANITARY SEWER, PVC SDR 26
- (I) CONNECTION TO EXISTING SANITARY MANHOLE
- (J) PROPOSED AMENDED EASEMENT
- (K) PROPOSED 25' WATERMAIN EASEMENT
- (L) PROPOSED 50' SANITARY SEWER EASEMENT
- (M) 8" CONNECTION TO EXISTING STUB-OUT
- (N) PROPOSED FIRE HYDRANT
- (O) 8" PRIVATE WATERMAIN
- (P) 8" FIRE SUPPRESSION WATER LINE
- (Q) 4" DOMESTIC SERVICE WATER LINE

LEGEND

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- NATURAL GAS LINE
- ELECTRICAL LINE UNDERGROUND
- TELECOM LINE OVERHEAD
- TELECOM LINE UNDERGROUND
- CHILLED WATER SUPPLY PIPE
- CHILLED WATER RETURN PIPE
- FIRE WATER LINE
- FUEL LINE
- GATE VALVE VAULT
- FIRE HYDRANT ASSEMBLY
- 48" SANITARY MANHOLE
- CLEANOUT
- STORM STRUCTURE (STMH)
- CATCH BASIN (CB)
- OUTLET CONTROL STRUCTURE (OC)
- CURB INLET (CI)
- FLARED END SECTION (FES)
- RIP RAP
- UTILITY CROSSING CALLOUT

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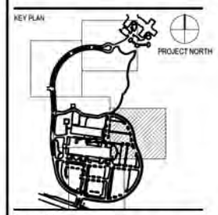
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29AUG2022
SITE PLAN RESUBMITTAL REV 3	F	20JULJ2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
WATER AND SANITARY PLAN

SCALE:1" = 20'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CU-102

SHEET NOTES

1. REFER TO CG-100 TO CG104 FOR GRADING AND STORM PLANS.
2. REFER TO PLUMBING PLANS FOR WATER, SANITARY, AND STORM CONNECTIONS WITHIN 5 FEET OF BUILDING.
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KEYED NOTES

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- (B) 12"X12"X8" TEE
- (C) 11-1/4" BEND
- (D) 22-1/2" BEND
- (E) 45° BEND
- (F) 8" D.I. WATERMAIN
- (G) 12" D.I WATERMAIN
- (H) 8" SANITARY SEWER, PVC SCR 26
- (I) CONNECTION TO EXISTING SANITARY MANHOLE
- (J) PROPOSED AMENDED EASEMENT
- (K) PROPOSED 25' WATERMAIN EASEMENT
- (L) PROPOSED 50' SANITARY SEWER EASEMENT
- (M) 8" CONNECTION TO EXISTING STUB-OUT
- (N) PROPOSED FIRE HYDRANT
- (O) 8" PRIVATE WATERMAIN
- (P) 8" FIRE SUPPRESSION WATER LINE
- (Q) 4" DOMESTIC SERVICE WATER LINE

LEGEND

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- G — NATURAL GAS LINE
- E — ELECTRICAL LINE UNDERGROUND
- T(OH) — TELECOM LINE OVERHEAD
- T — TELECOM LINE UNDERGROUND
- CWS — CHILLED WATER SUPPLY PIPE
- CWR — CHILLED WATER RETURN PIPE
- FIRE — FIRE WATER LINE
- FL — FUEL LINE
- GATE VALVE VAULT
- FIRE HYDRANT ASSEMBLY
- 48" SANITARY MANHOLE
- CLEANOUT
- STORM STRUCTURE (STMH)
- CATCH BASIN (CB)
- OUTLET CONTROL STRUCTURE (OC)
- CURB INLET (CI)
- FLARED END SECTION (FES)
- RIP RAP
- UTILITY CROSSING CALLOUT

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P: 248.344.2800 F: 248.344.1650

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LCDC RESUBMITTAL R4	J	13SEP2022
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LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
WATER AND SANITARY PLAN

SCALE:1" = 20'

SCALE 13472.00

PROJECT NUMBER

CU-103

DRAWING NUMBER

SHEET NOTES

1. REFER TO CG-100 TO CG104 FOR GRADING AND STORM PLANS.
2. REFER TO PLUMBING PLANS FOR WATER, SANITARY, AND STORM CONNECTIONS WITHIN 5 FEET OF BUILDING.
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KEYED NOTES

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- (E) 45° BEND
- (F) 8" D.I. WATERMAIN
- (G) 12" D.I WATERMAIN
- (H) 8" SANITARY SEWER, PVC SDR 26
- (I) CONNECTION TO EXISTING SANITARY MANHOLE
- (J) PROPOSED AMENDED EASEMENT
- (K) PROPOSED 25' WATERMAIN EASEMENT
- (L) PROPOSED 50' SANITARY SEWER EASEMENT
- (M) 8" CONNECTION TO EXISTING STUB-OUT
- (N) PROPOSED FIRE HYDRANT
- (O) 8" PRIVATE WATERMAIN
- (P) 8" FIRE SUPPRESSION WATER LINE
- (Q) 4" DOMESTIC SERVICE WATER LINE

LEGEND

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- NATURAL GAS LINE
- ELECTRICAL LINE UNDERGROUND
- TELECOM LINE OVERHEAD
- TELECOM LINE UNDERGROUND
- CHILLED WATER SUPPLY PIPE
- CHILLED WATER RETURN PIPE
- FIRE — FIRE WATER LINE
- FUEL LINE
- GATE VALVE VAULT
- FIRE HYDRANT ASSEMBLY
- 48" SANITARY #ANHOLE
- CLEANOUT
- STORM STRUCTURE (STMH)
- CATCH BASIN (CB)
- OUTLET CONTROL STRUCTURE (OC)
- CURB INLET (CI)
- FLARED END SECTION (FES)
- RIP RAP
- UTILITY CROSSING CALLOUT

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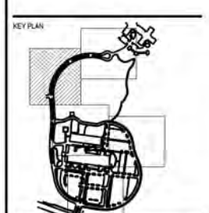
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE
WATER AND SANITARY PLAN

SCALE:1" = 20'

SCALE 13472.00

PROJECT NUMBER

DRAWING NUMBER CU-104

SHEET NOTES

1. REFER TO CG-100 TO CG104 FOR GRADING AND STORM PLANS.
2. REFER TO PLUMBING PLANS FOR WATER, SANITARY, AND STORM CONNECTIONS WITHIN 5 FEET OF BUILDING.
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KEYED NOTES

- (A) 12" CONNECTION TO EXISTING STUB-OUT
- (B) 12"X12"X8" TEE
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- (D) 22-1/2" BEND
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- (F) 8" D.I. WATERMAIN
- (G) 12" D.I WATERMAIN
- (H) 8" SANITARY SEWER, PVC SDR 26
- (I) CONNECTION TO EXISTING SANITARY MANHOLE
- (J) PROPOSED AMENDED EASEMENT
- (K) PROPOSED 25' WATERMAIN EASEMENT
- (L) PROPOSED 50' SANITARY SEWER EASEMENT
- (M) 8" CONNECTION TO EXISTING STUB-OUT
- (N) PROPOSED FIRE HYDRANT
- (O) 8" PRIVATE WATERMAIN
- (P) 8" FIRE SUPPRESSION WATER LINE
- (Q) 4" DOMESTIC SERVICE WATER LINE

LEGEND

- WATER MAIN
- SANITARY SEWER
- STORM SEWER
- NATURAL GAS LINE
- ELECTRICAL LINE UNDERGROUND
- TELECOM LINE OVERHEAD
- TELECOM LINE UNDERGROUND
- CHILLED WATER SUPPLY PIPE
- CHILLED WATER RETURN PIPE
- FIRE WATER LINE
- FUEL LINE
- GATE VALVE VAULT
- FIRE HYDRANT ASSEMBLY
- 48" SANITARY #ANHOLE
- CLEANOUT
- STORM STRUCTURE (STMH)
- CATCH BASIN (CB)
- OUTLET CONTROL STRUCTURE (OC)
- CURB INLET (CI)
- FLARED END SECTION (FES)
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- UTILITY CROSSING CALLOUT

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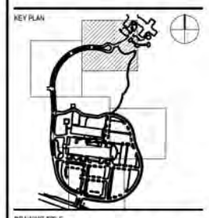
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



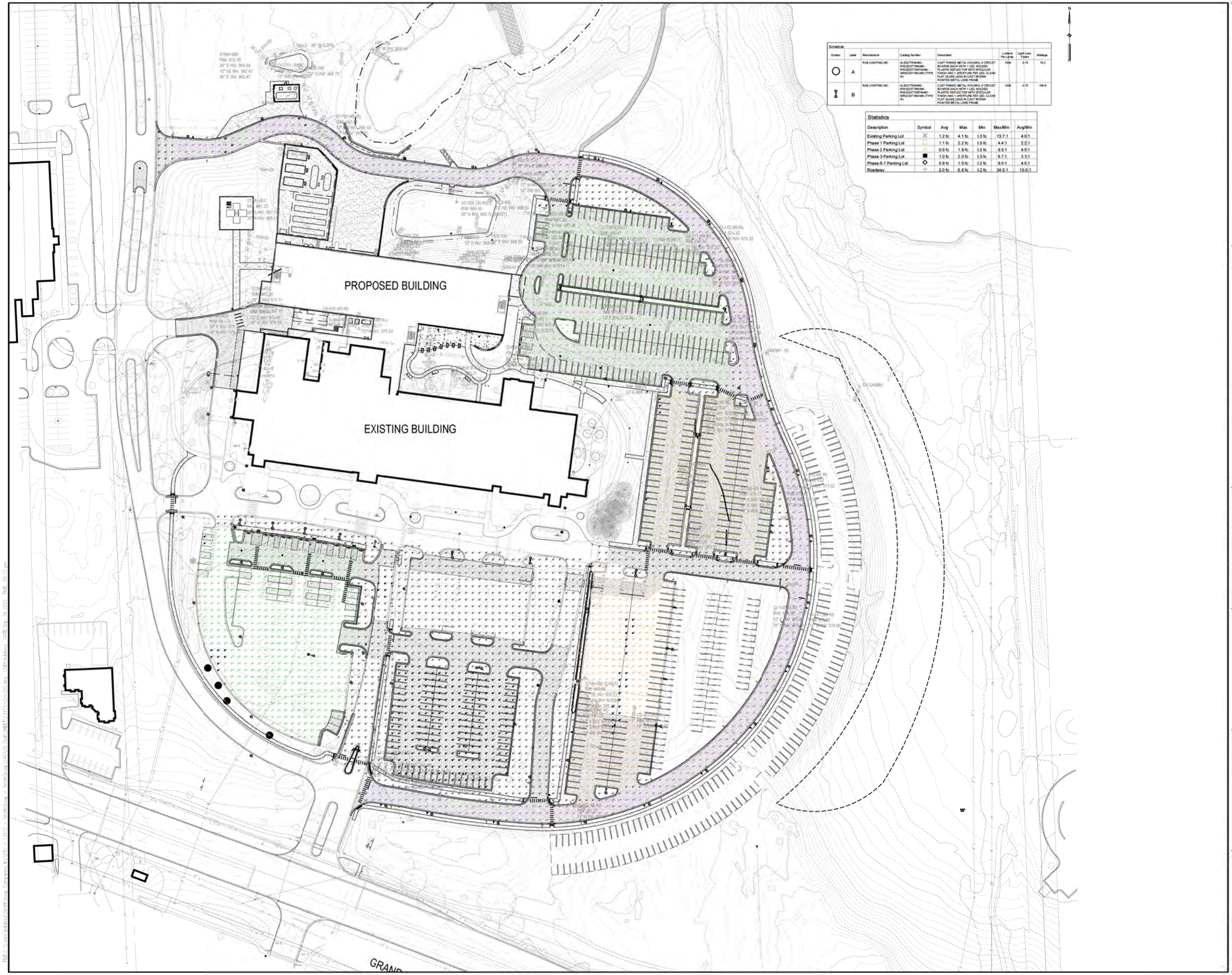
DRAWING TITLE
WATER AND SANITARY PLAN

SCALE:1" = 20'

SCALE

PROJECT NUMBER
13472.00

DRAWING NUMBER
CU-105



Schedule

Symbol	Label	Manufacturer	Catalog Number	Description	Lumens Per Lamp	Light Loss Factor	Wattage
	A	RAB LIGHTING INC	ALEDSTRN4NW - RWLEDSTR5PN4NW - RWLEDSTR6PN4NW - WPLEDSTRN4NW (TYPE III)	CAST FINISED METAL HOUSING, 4 CIRCUIT BOARDS EACH WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH BIGULAR FINISH AND 1 APERTURE PER LED, CLEAR FLAT GLASS LENS IN CAST BRONN PAINTED METAL LENS FRAME.	1539	0.75	78.3
	B	RAB LIGHTING INC	ALEDSTRN4NW - RWLEDSTR8NW4NW - RWLEDSTR5PN4NW - WPLEDSTRN4NW (TYPE III)	CAST FINISED METAL HOUSING, 8 CIRCUIT BOARDS EACH WITH 1 LED, MOLDED PLASTIC REFLECTOR WITH BIGULAR FINISH AND 1 APERTURE PER LED, CLEAR FLAT GLASS LENS IN CAST BRONN PAINTED METAL LENS FRAME.	1539	0.75	156.6

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Existing Parking Lot		1.2 fc	4.1 fc	0.3 fc	13.7:1	4.0:1
Phase 1 Parking Lot		1.1 fc	2.2 fc	0.5 fc	4.4:1	2.2:1
Phase 2 Parking Lot		0.9 fc	1.9 fc	0.2 fc	9.5:1	4.5:1
Phase 3 Parking Lot		1.0 fc	2.0 fc	0.3 fc	6.7:1	3.3:1
Phase 6-7 Parking Lot		0.9 fc	1.9 fc	0.2 fc	9.5:1	4.5:1
Roadway		2.0 fc	6.8 fc	0.2 fc	34.0:1	10.0:1

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SEALS AND SIGNATURES

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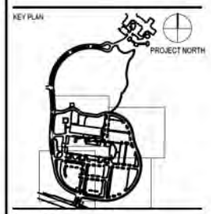
KEY PLAN



DRAWING TITLE

LIGHTING AND
PHOTOMETRIC PLAN

SCALE:1" = 50'

SCALE

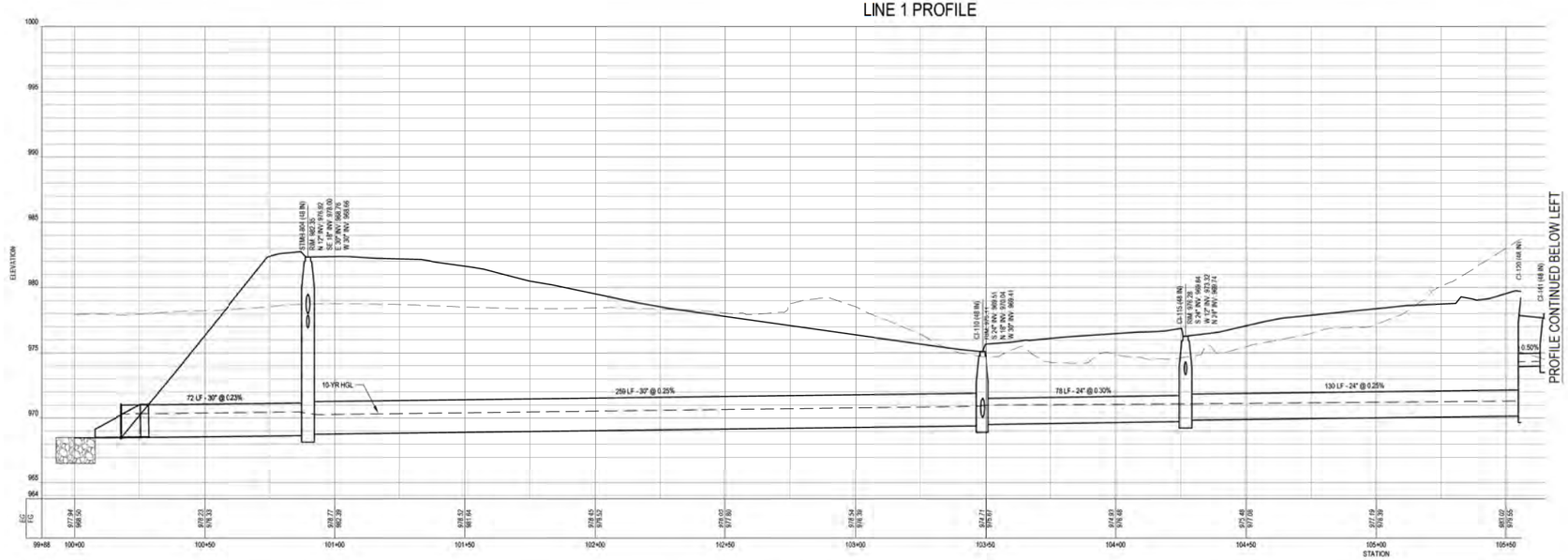
13472.00

PROJECT NUMBER

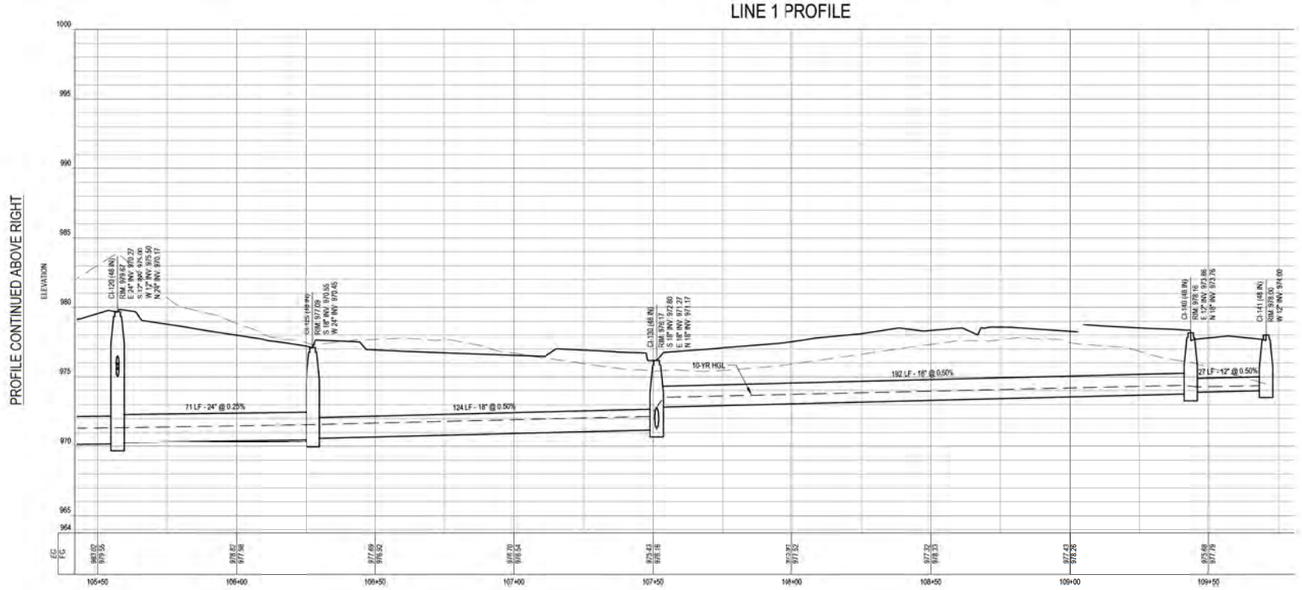
CU-200

DRAWING NUMBER

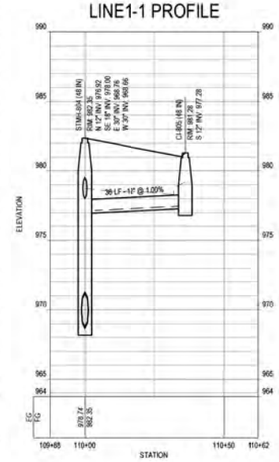
LINE 1 PROFILE



LINE 1 PROFILE



LINE1-1 PROFILE



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SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
STORM SEWER PROFILES

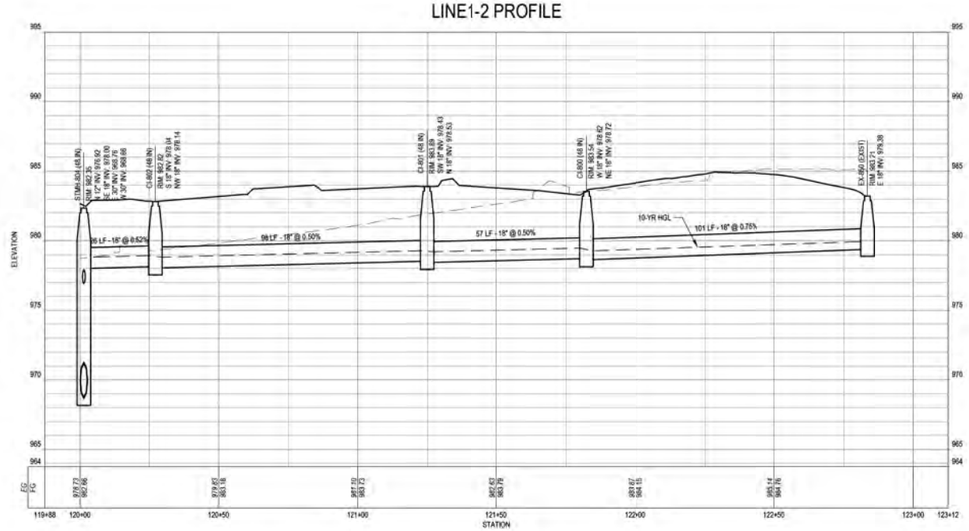
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

SCALE

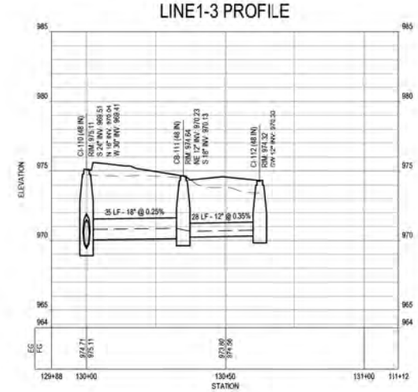
PROJECT NUMBER 13472.00

DRAWING NUMBER CU-300

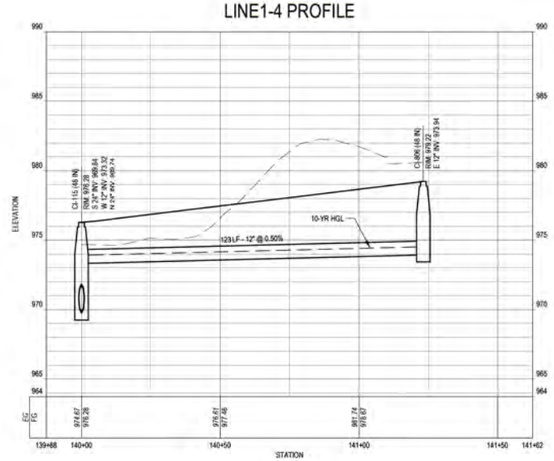
LINE1-2 PROFILE



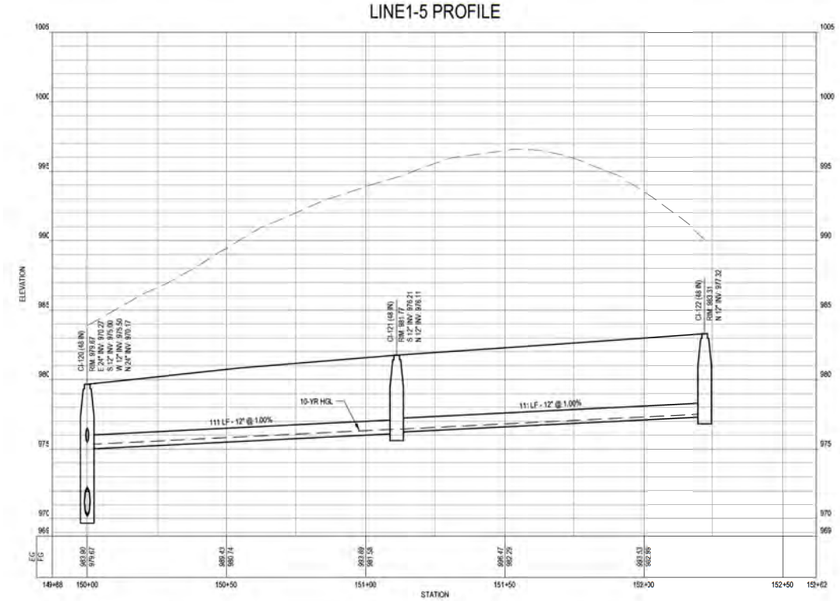
LINE1-3 PROFILE



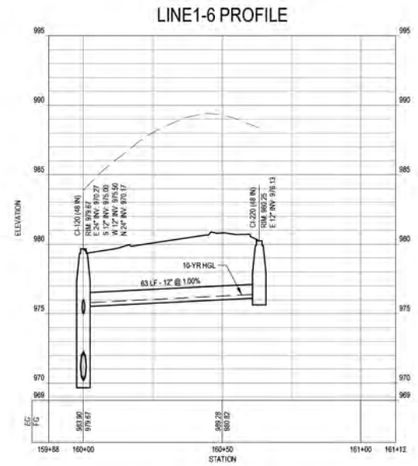
LINE1-4 PROFILE



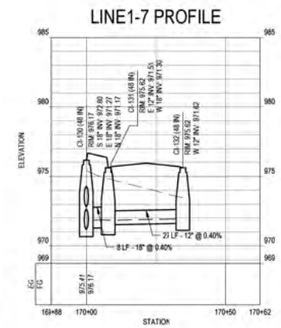
LINE1-5 PROFILE



LINE1-6 PROFILE



LINE1-7 PROFILE



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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
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SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
STORM SEWER PROFILES

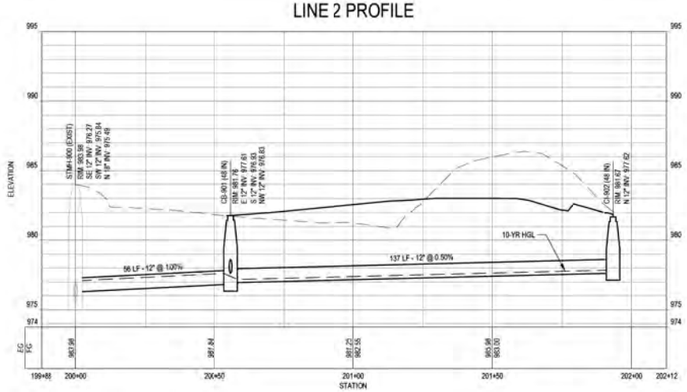
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CU-301

LINE 2 PROFILE



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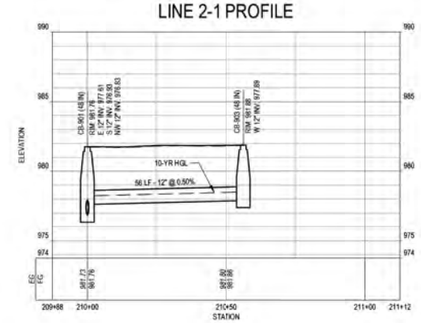

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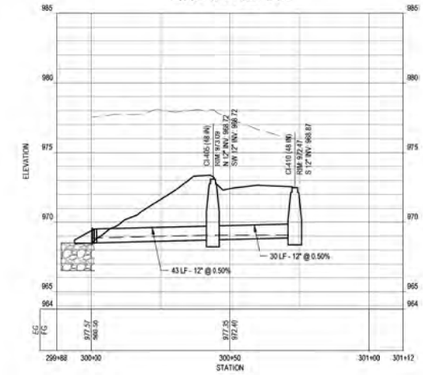

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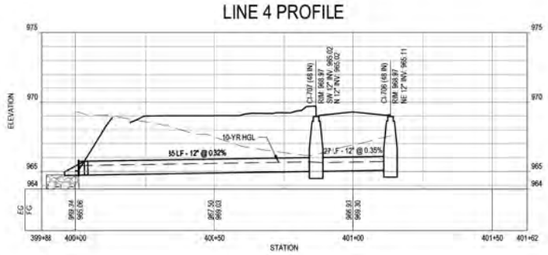

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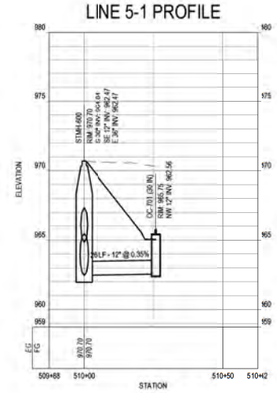

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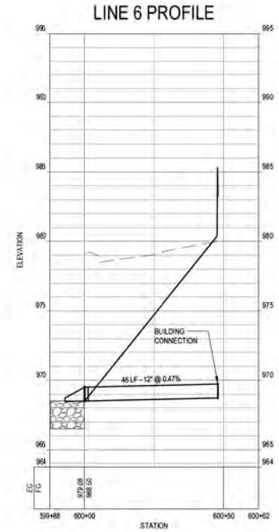

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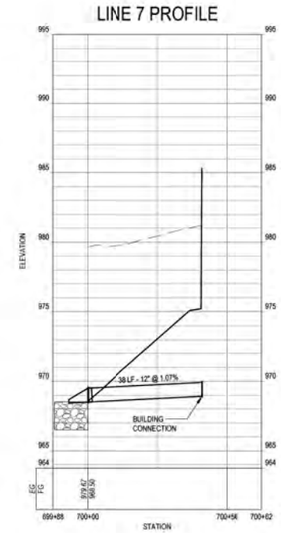

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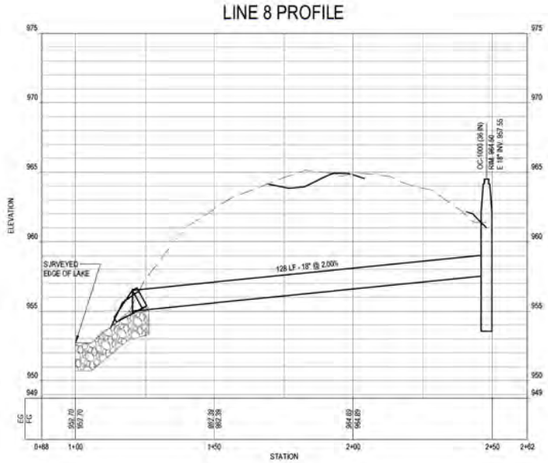

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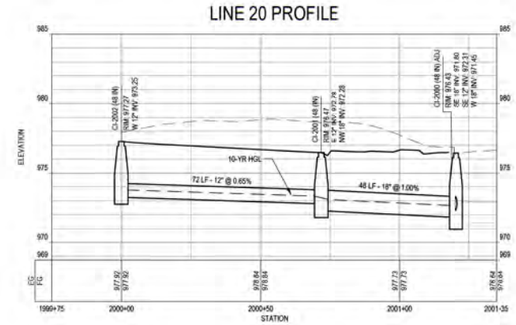

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	N	16SEP2022
EGLE PERMIT R2	M	14SEP2022
LCDC RESUBMITTAL R4	L	13SEP2022
EGLE PERMIT R1	K	06SEP2022
BP1 BULLETIN 1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	25AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
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SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
STORM SEWER PROFILES

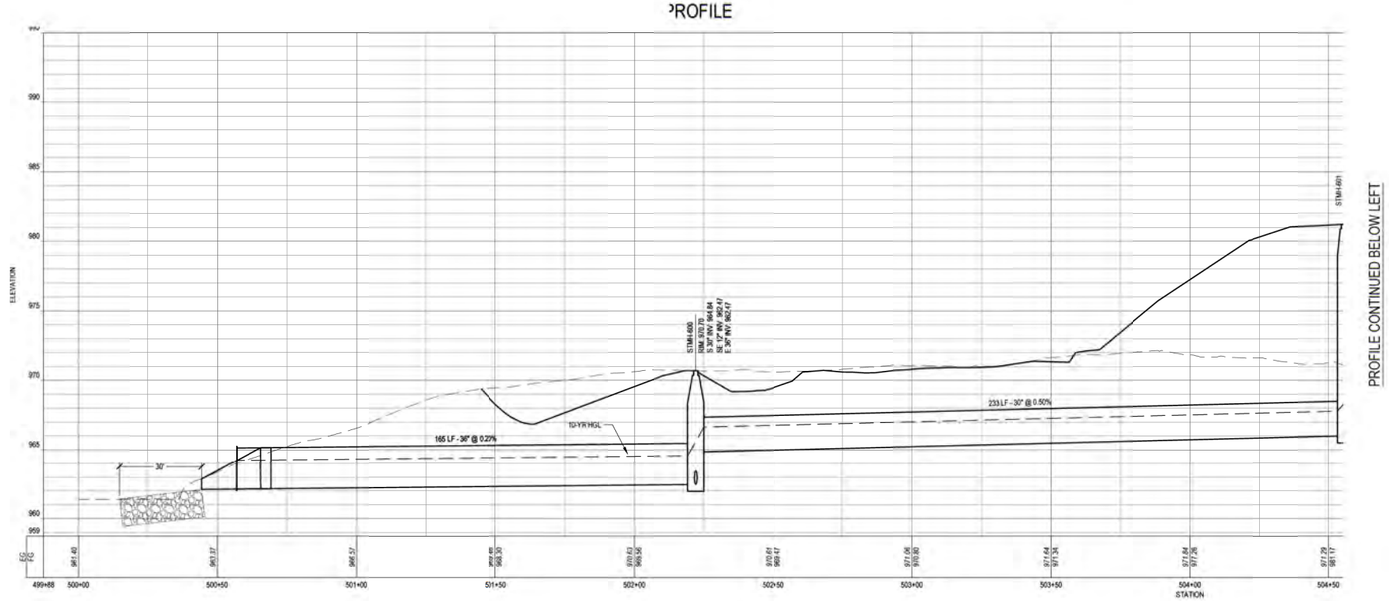
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

SCALE

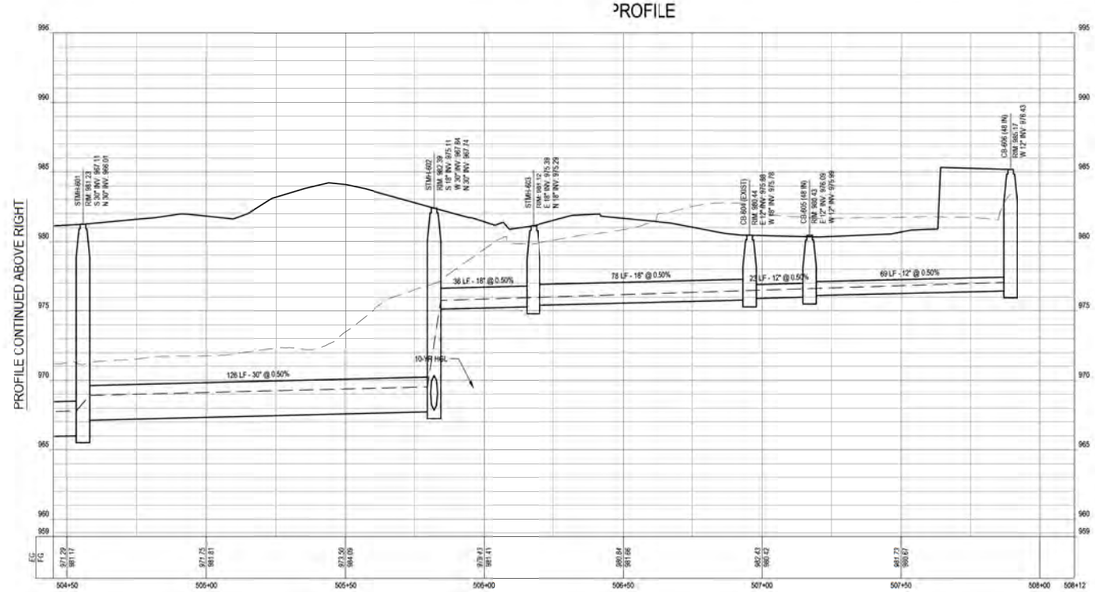
PROJECT NUMBER 13472.00

DRAWING NUMBER CU-302

PROFILE



PROFILE



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ISSUED FOR	REV	DATE
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LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
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NOT FOR CONSTRUCTION

KEY PLAN

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STORM SEWER PROFILES

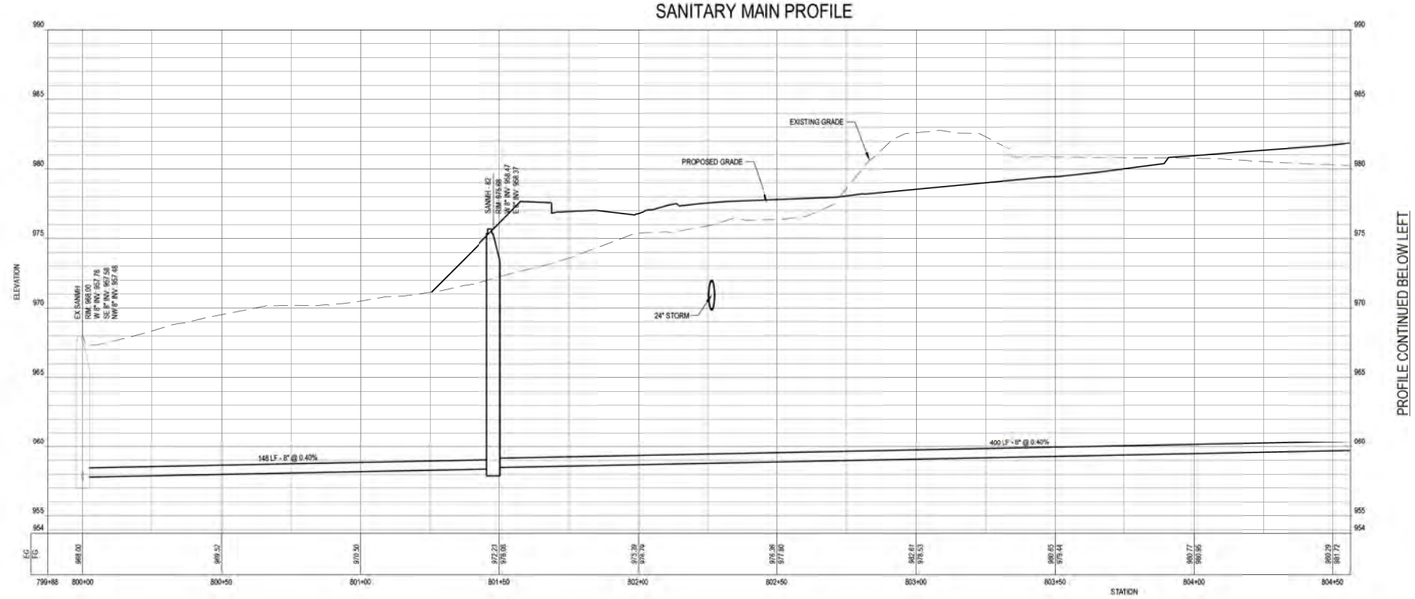
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

SCALE

PROJECT NUMBER 13472.00

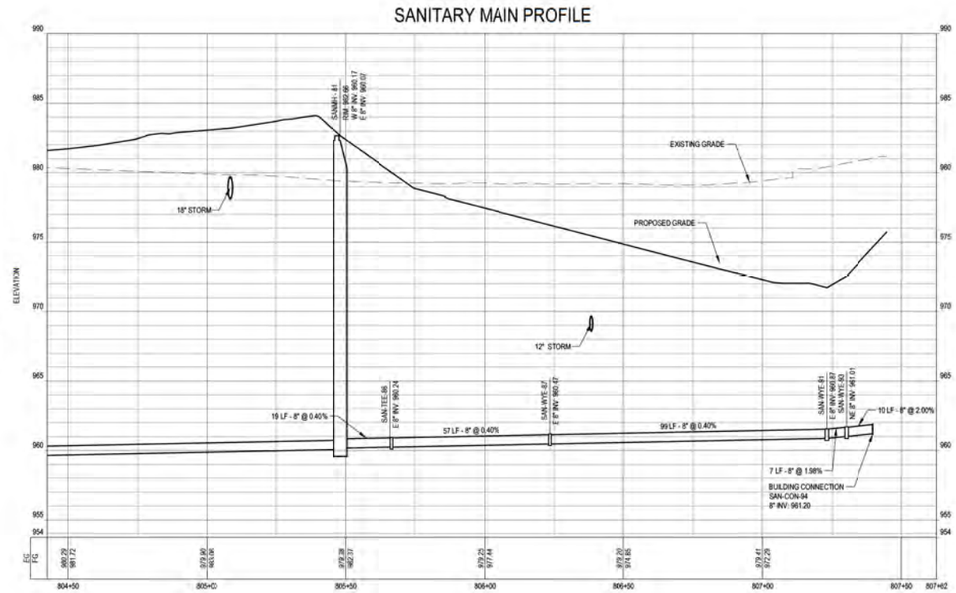
DRAWING NUMBER CU-303

SANITARY MAIN PROFILE



PROFILE CONTINUED BELOW LEFT

SANITARY MAIN PROFILE



PROFILE CONTINUED ABOVE RIGHT

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
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KEY PLAN

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SANITARY SEWER PROFILE

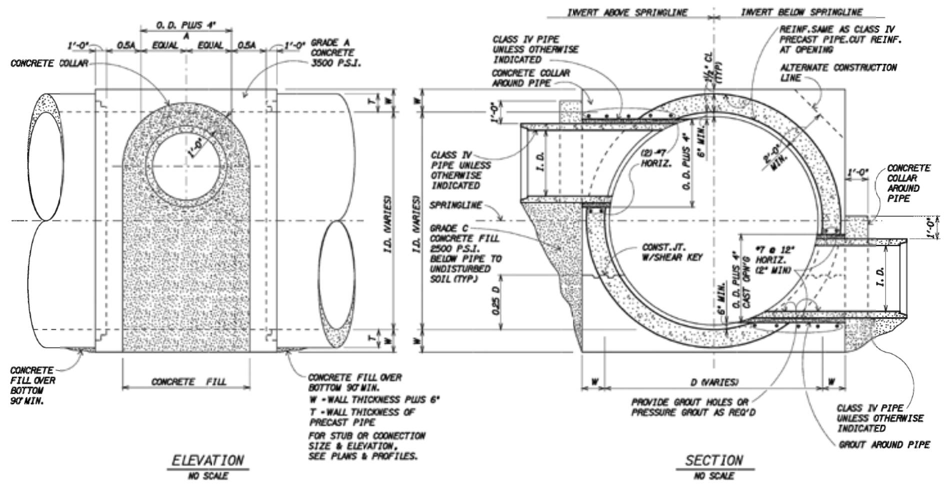
HORIZ SCALE: 1" = 20'
VERT SCALE: 1" = 5'

SCALE

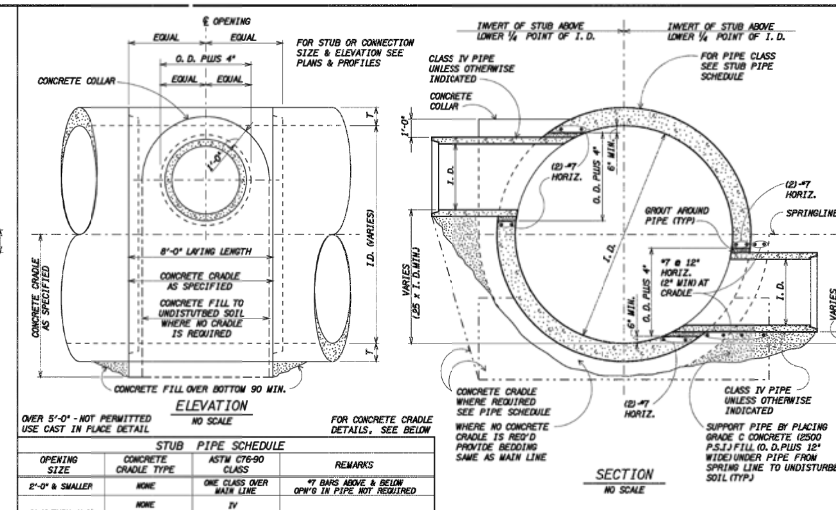
PROJECT NUMBER 13472.00

DRAWING NUMBER CU-304

STANDARD STUBS & CONECTIONS TO SEWERS



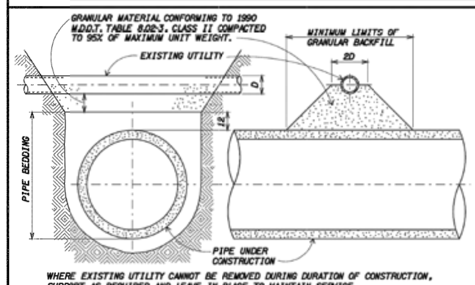
CAST IN PLACE CONNECTION



STUB PIPE SCHEDULE			
OPENING SIZE	CONCRETE CRADLE TYPE	ASTM C76-90 CLASS	REMARKS
2'-0" & SMALLER	NONE	ONE CLASS OVER MAIN LINE	#7 BARS ABOVE & BELOW OPN'G IN PIPE NOT REQUIRED
2'-1" THRU 4'-0"	NONE	IV	
	B	SAME AS MAIN LINE	USE CLASS V & CLASS IV MAIN LINE
4'-1" THRU 5'-0"	B	IV	USE CLASS V & CLASS IV MAIN LINE

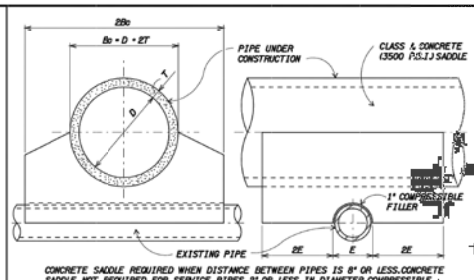
PRECAST CONNECTION

METHOD OF CROSSING EXISTING UTILITIES WITH NEW CONSTRUCTION



WHERE EXISTING UTILITY CANNOT BE REMOVED DURING DURATION OF CONSTRUCTION, SUPPORT AS REQUIRED AND LEAVE IN PLACE TO MAINTAIN SERVICE.

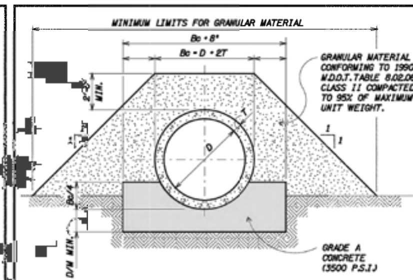
CONSTRUCTION UNDER EXISTING UTILITIES



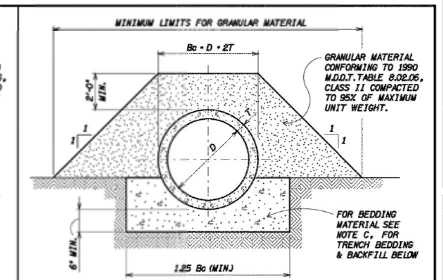
CONCRETE SADDLE REQUIRED WHEN DISTANCE BETWEEN PIPES IS 8" OR LESS. CONCRETE SADDLE NOT REQUIRED FOR SERVICE PIPES 2" OR LESS IN DIAMETER. COMPRESSIBLE FILLER SHALL BE NEOPRENE CONFORMING TO A.S.T.M. D1056-85, CLASS SBO-11 AND [illegible]

CONSTRUCTION OVER EXISTING UTILITIES

EMBANKMENT BEDDING & FILL



CONCRETE CRADLE
CIRCULAR PIPE



GRANULAR BEDDING
CIRCULAR PIPE

TRENCH BEDDING & BACKFILL

TRENCH	TRENCH BACKFILL
TRENCH "A" (SPECIAL)	BANK RUN SAND MEETING THE REQUIREMENTS OF 1990 M.D.O.T. 8.02.06 "GRANULAR MATERIALS FOR FILL & SUBBASE". CLASS II MATERIALS SHALL BE PLACED IN ACCORDANCE WITH 1990 M.D.O.T. 2.08.10-d-1 "CONTROLLED DENSITY METHOD" WITH EACH LAYER COMPACTED TO 95 PERCENT OF MAXIMUM UNIT WEIGHT.
TRENCH "B" (STANDARD)	SUITABLE EXCAVATED MATERIAL (EXCLUDING BLUE CLAY) PLACED IN ONE FOOT LAYERS WITH EACH LAYER COMPACTED BY APPROVED MECHANICAL METHODS TO A DENSITY EQUIVALENT TO THE UNDISTURBED ADJACENT SOIL.

TRENCH BACKFILL NOTES:

SPECIAL BACKFILL FOR TRENCHES (TRENCH "A") SHALL BE USED AT ALL LOCATIONS CALLED FOR ON THE PLANS & REQUIRED IN THE SPECIFICATIONS

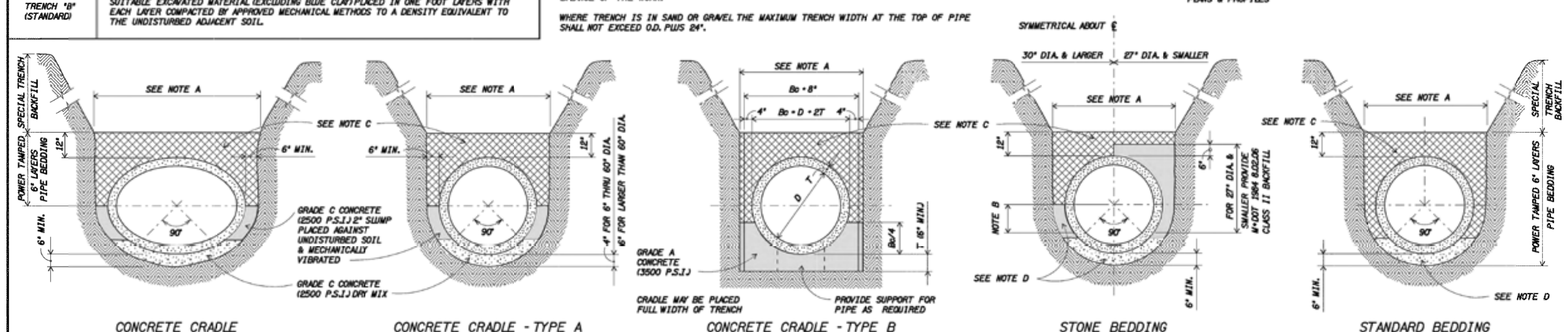
WHERE NOTED ON THE PLANS OR PROFILES THUS : |TRENCH "A"| TRENCH "A" SHALL BE USED AT LOCATIONS REQUIRED BY THE SPECIFICATIONS. TRENCH "B" SHALL BE USED FOR THE BALANCE OF THE WORK.

WHERE TRENCH IS IN SAND OR GRAVEL THE MAXIMUM TRENCH WIDTH AT THE TOP OF PIPE SHALL NOT EXCEED O.D. PLUS 24".

TYPES OF BEDDING

STANDARD PIPE BEDDING SHALL BE USED EXCEPT WHERE THE OTHER TYPES OF PIPE BEDDING ARE CALLED FOR ON THE PLANS & PROFILES

MAXIMUM TRENCH WIDTH TABLE (IN.)	
PIPE I.D.	TRENCH WIDTH
4 -12	32
15	36
18	39
21	43
24	46
27	50
30	53
36	68
42	75
48	82
54	89
60	96
66	103
72	110
78	117
84	124
90	136
96	143
102	149
108	156
114	163
120	170
132	184
144	198
156	212
168 & LARGER	O.D. PLUS 30



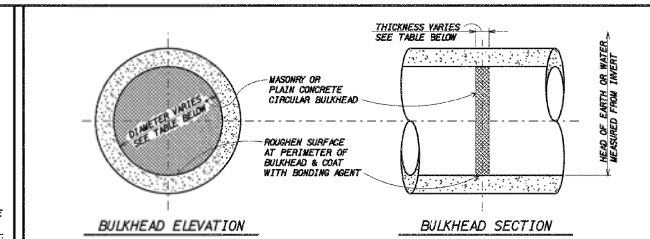
NOTE A: BELOW A POINT 12" ABOVE THE TOP OF THE PIPE, THE TRENCH WIDTH SHALL PROVIDE A CLEARANCE OF NOT LESS THAN 6" BETWEEN PIPE & TRENCH. TRENCH WIDTH SHALL NOT EXCEED THAT SHOWN IN THE MAXIMUM TRENCH WIDTH TABLE.

NOTE B: FOR 30" DIA. AND LARGER PIPE, MATERIAL SHOWN THUS [ ] SHALL BE PEASTONE.

NOTE C: PIPE BEDDING MATERIALS SHOWN THUS [ ] SHALL BE SELECTED EXCAVATED MATERIAL (EXCEPT BLUE CLAY). WHERE TRENCH "A" IS SPECIFIED, SPECIAL TRENCH "A" BACKFILL MATERIAL SHALL BE USED FOR PIPE BEDDING BACKFILL.

NOTE D: PIPE BEDDING CUSHION MATERIALS SHOWN THUS [ ] SHALL CONSIST OF MEETING THE GRADING REQUIREMENTS OF 1990 M DOT, TABLE 8.02-1, COARSE AGGREGATE 6A, BLAST FURNACE SLAG OR CRUSHED STONE CONTAINING SUFFICIENT SMALLER SIZED AGGREGATE TO PREVENT MIGRATION OF EARTH OR BACKFILL MATERIAL INTO BEDDING MATERIAL & CAREFULLY PREPARED SO THAT THE ENTIRE BOTTOM ¼ OF THE PIPE WILL BEAR AGAINST THE CUSHION. THE TYPE & THICKNESS OF THE BEDDING SHALL BE AS REQUIRED TO MAINTAIN CORRECT ALIGNMENT & GRADE & SHALL NOT BE LESS THAN 6". (THIS BEDDING CUSHION SUPERCEDES CUSHION REQUIRED BY THE SPECIFICATIONS.)

STANDARD MASONRY & PLAIN CONCRETE BULKHEADS



MASONRY BULKHEAD SHALL BE BRICK OR SOLID CONCRETE BLOCK WITH MORTAR CONSISTING OF ONE PART PORTLAND CEMENT, ¼ PART LIME & 3½ PARTS SAND.

PLAIN CONCRETE BULKHEAD SHALL BE CLASS A (3500 P.S.I.) CONCRETE.

BONDING AGENT SHALL BE GRACE PRODUCTS "DARAWELD", LARSON PRODUCTS "WELDCRETE", OR EQUAL.

CIRCULAR SECTION DIAMETER (INCHES)	ALLOWABLE HEAD OF WATER ABOVE INVERT * (FEET)															
	MASONRY BULHEAD THICKNESS (INCHES)					PLAIN CONCRETE BULKHEAD THICKNESS (INCHES)										
	8"	12"	16"	20"	24"	4"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
36" & SMALLER	16	35	61	95		10	22	38	58	83	113	—	—	—	—	—
42"	12	26	45	70	100	8	16	28	43	61	83	108	—	—	—	—
48"	10	20	35	54	77	7	13	22	33	48	64	83	105	—	—	—
54"	8	16	28	43	62	6	11	18	27	38	51	66	83	103	—	—
60"	7	14	23	36	50	—	9	15	22	31	42	54	68	84	101	—
66"	—	12	20	30	42	—	8	13	19	26	35	45	57	70	84	100
72"	—	11	17	26	36	—	—	11	16	23	30	39	48	59	71	84
78"	—	10	15	22	31	—	—	9	14	20	26	33	42	51	61	72
84"	—	9	14	20	27	—	—	—	13	18	23	29	36	44	53	63
90"	—	—	12	18	24	—	—	—	12	16	21	26	32	39	47	55
96"	—	—	11	16	22	—	—	—	11	14	19	23	29	35	42	49
102"	—	—	10	15	20	—	—	—	10	13	17	21	26	31	37	44
108"	—	—	—	14	18	—	—	—	—	12	16	20	24	29	34	40
114"	—	—	—	13	17	—	—	—	—	11	15	18	22	26	31	36
120"	—	—	—	12	16	—	—	—	—	—	14	17	20	24	29	33
126"	—	—	—	—	15	—	—	—	—	—	13	16	19	23	26	31
132"	—	—	—	—	14	—	—	—	—	—	—	15	18	21	25	29
144"	—	—	—	—	—	—	—	—	—	—	—	—	14	16	22	25

* CONDITIONS BEYOND TABLE VALUES REQUIRE SPECIAL BULKHEADS AS SHOWN ON PLANS

GENERAL CONCRETE NOTES

1. THE CONTRACTOR SHALL VERIFY ALL CONDITIONS & MEASUREMENTS AT THE SITE & SHALL REPORT ANY DISCREPANCIES TO THE ENGINEER PROCEEDING WITH THE WORK.
2. CONCRETE SHALL BE GRADE A WITH A MINIMUM COMPRESSION STRENGTH OF 3500 P.S.I. AT 28 DAYS UNLESS OTHERWISE NOTED.
3. REINFORCEMENT STEEL SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615-90, GRADE 60, INCLUDING SUPPLEMENTARY REQM'TS S1, REINF. FOR TIES & STIRRUPS MAY BE NEW BILLET STEEL CONFORMING TO ASTM A615-90, GRADE 40.
4. REINFORCEMENT BAR DETAILING & PLACING SHALL CONFORM TO ACI 318-89 "BUILDING CODE", & TO DETAILS & DETAILING OF CONCRETE REINFORCEMENT ACI 315-80, & MANUAL OF ENGINEERING & PLACING DRAWINGS FOR REINFORCED CONC. STRUCT. ACI 315R-SP-66 (88) PLACE (2) #5 BARS, 4'-0" LONGER THAN OPENING, EACH FACE AROUND ALL OPENINGS IN WALLS & SLABS.
5. PROVIDE (1) #5 DIAGONAL x 3'-0" LONG, TOP & BOTTOM, EACH CORNER OF OPENING.
6. WALLS SHALL BE ADEQUATELY BRACED UNTIL SUPPORTING SLABS HAVE REACHED THEIR DESIGN STRENGTH.
7. PROVIDE CORNER BARS SAME SIZE & SPACING AS HORIZONTAL REINFORCEMENT ON OUTSIDE FACE OF ALL CORNERS.
8. MINIMUM COVER TO REINFORCEMENT SHALL BE AS FOLLOWS: A) 3" FOR CONCRETE POURED AGAINTS GROUND: B) WHERE FORMS ARE USED, MINIMUM COVER SHALL BE 2" FOR BARS LARGER THAN #5 & 1½" FOR BARS #5 & SMALLER.
9. MINIMUM LAP OF REINFORCEMENT SHALL BE CLASS C, AS CALLED FOR IN TABLE 20.2 OF SP-17A (78).
10. KEYWAYS SHALL BE 2"x4", UNLESS OTHERWISE NOTED.
11. PROVIDE ¾"x 45° CHAMFER AT EXPOSED EDGES UNLESS OTHERWISE NOTED.

TYPES OF PIPES & JOINTS

PIPE					JOINT	
MATERIAL	SIZE (ROUND)	SPEC.	CLASS	REMARKS	DESCRIPTION	SPEC.
PLAIN CONCRETE	4" - 26"	A.S.T.M. C14 - 90	1, 2 & 3			
REINFORCED CONCRETE	12" - 144"	A.S.T.M. C76 - 90	I - V		MODIFIED GROOVE TONGUE WITH RUBBER GASKET. INSIDE CEMENT POINTING FOR 42" ø & LARGER PIPE.	A.S.T.M. C443 - 85A *
	12" - 144"	1990 M.D.O.T. 8.08.03	I - V	SPECIAL DESIGNS SUPPLEMENT A.S.T.M. C-76		
	156" - 204"	A.S.T.M. C76 - 90	I - V	SPECIAL DESIGN		
	EQUIVALENT ROUND 18" - 144"	A.S.T.M. C507 - 90	HE - I THRU HE - IV	ELLIPTICAL PIPE	TONGUE & GROOVE BITUMINOUS JOINT WITH INSIDE CEMENT POINTING.	
	18" - 144"	A.W.W.A. C305 - 74	C76 - 83 EQUIVALENT I - V	PRESSURE PIPE, NON-CYLINDER TYPE	STEEL RINGS & RUBBER JOINTS	A.W.W.A. C302 - 74
VITRIFIED CLAY	4" - 26"	N.C.P.I. ER4 - 67	EXTRA STRENGTH		"AMVIT" "AMVIT-A-RING" "DEFLEC/TITE" "LOXON" "NOBEL" "O-RING" "STRE-TITE" "TYLOX" "UNILOC" "WEDGELOCK"	A.S.T.M. C - 425 - 90a *

* EXCEPT AS SUCH SPECIFICATIONS RELATE TO INFILTRATION LIMITATION.

STANDARD SEWER DETAILS

BRIAN JONCKHEERE
LIVINGSTON COUNTY
DRAIN COMMISSIONER

LIVINGSTON COUNTY — MICHIGAN

DATE	ADDITIONS AND/OR REVISIONS			
2-24-97	ISSUED FOR BIDS			
DRAWER	SCALE	DR. K.G.B.	CK. E.P.D.	APP. W.H.A.

JOB NO. 970785 — DATE
HUBBELL, ROTH & CLARK, INC.
CONSULTING ENGINEERS
555 HULET DRIVE, BLOOMFIELD HILLS, MICH. — P.O. BOX 824, 48303-0824
SHEET NO. SD-2 OF

STROKE TIME = 25-MAY-2005 13:00
PLOT NAME = N/A
DESIGN FILE = F:\1997\199707\1997078S\cadd\civil\sd2.dgn
USER NAME = rcase
FILE: C:\Users\kdekrey\SmithGroup\SmithGroup Companies Inc\PRJ - 13472 - SmithGroup - SmithGroup\CAD\05 Civil\SHEET\13472-CU-500.dwg USER: kdekrey DATE: Sep. 18 2022 TIME: 08:34 pm

Trinity Health

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BRIGHTON
EXPANSION AND RENOVATION
7575 GRAND RIVER AVE., BRIGHTON, MI 48114
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ISSUED FOR	REV	DATE
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LCDC RESUBMITTAL R4	L	13SEP2022
EGLE PERMIT R2	K	14SEP2022
EGLE PERMIT R1	J	06SEP2022
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DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

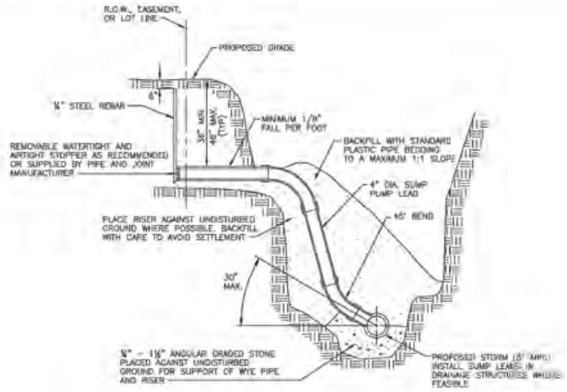
KEY PLAN

DRAWING TITLE
UTILITY DETAILS

SCALE

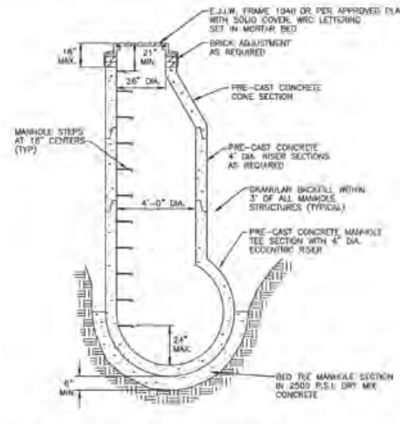
PROJECT NUMBER
13472.00

DRAWING NUMBER
CU-500



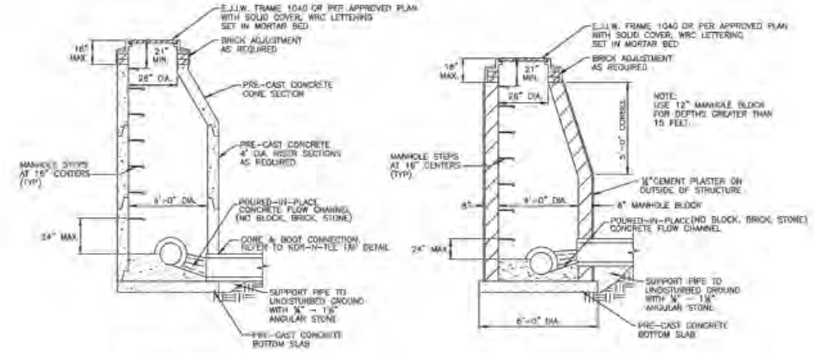
HOUSE LEAD DETAIL FOR 4" DIA. PLASTIC SUMP PUMP LEADS

NO SCALE



PRE-CAST TEE MANHOLE DETAIL

NO SCALE

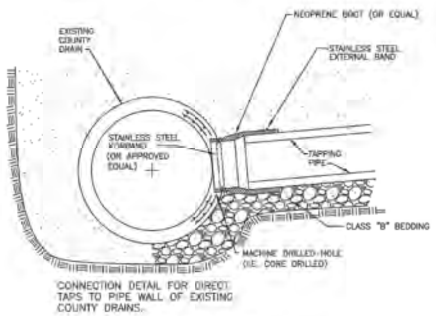


PRE-CAST MANHOLE

BLOCK MANHOLE (PRIOR APPROVAL ONLY)

STANDARD MANHOLE DETAILS

NO SCALE

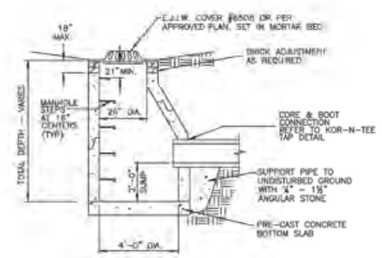


CONNECTION DETAIL FOR DIRECT TAPS TO PIPE WALL OF EXISTING COUNTY DRAINS.

KOR-N-TEE TAP (OR APPROVED EQUAL)

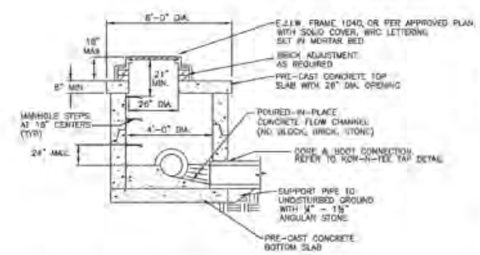
NO SCALE

* For non-concrete to concrete taps.
* Use link-seal, A-lock or approved equal for concrete to concrete taps.



PRE-CAST CATCH BASIN DETAIL

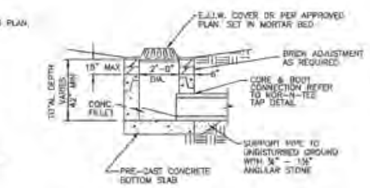
NO SCALE



PRE-CAST LOW HEAD MANHOLE DETAIL

NO SCALE

(PRIOR APPROVAL ONLY)



PRE-CAST INLET DETAIL

NO SCALE

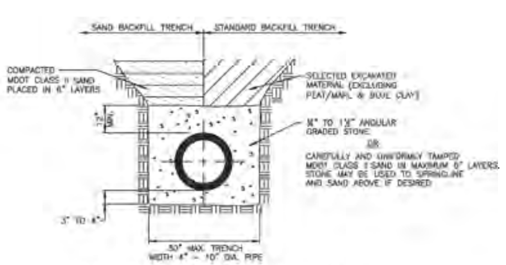
GENERAL NOTES

1. Type and class of pipe shall be as specified on plans.
2. Class "B" Bedding shall be used throughout, unless otherwise specified on the plan.
3. All end sections 18" and larger shall be provided with a bar screen unless otherwise approved.
4. Standard rip-rap shall be 8"-15" fragmented rock, heavy rip-rap shall be 16"-24" fragmented rock. (No Broken Concrete)
5. MANHOLE REQUIREMENTS:
   - All new catch basins, inlets, and manholes are to be manufactured to ASTM C-478 specifications
   - All new catch basins, inlets, and manholes shall have WRC approved flexible, watertight seals where pipes pass through walls. Manholes shall be of precast sections with modified groove tongue and rubber gasket type joints. Pre cast manhole cone sections shall be WRC approved modified eccentric cone type.
   - Taps through manhole joints or cone sections are prohibited unless otherwise approved.
   - Manhole steps to be plastic coated steel meeting the requirements in ASTM D 2146, Type II, Grade 49108, MA. Industries P.S.I. Polypropylene, (or approved equal). Steps to be installed during manhole manufacture. Place at 16" centers 45° from centerline of sewer.
   - Cone section with modified groove tongue joints and with stud inserts cast in place. Top to have flush surface.
   - ASTM C-478 riser section with modified groove tongue joints.
   - Res-seal, ink-seal, press wedge II, or kor-n-seal boot (with stainless steel korband) flexible rubber manhole joints. (or approved equal).
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
6. CONCRETE PIPE REQUIREMENTS:
   - Concrete pipe to be per ASTM C76 standards.
   - It will be required to TV all pipe 30 days after installation
   - The contractor shall provide reinforced concrete pipe as specified on the plans.
   - All reinforced concrete pipe shall have modified grooved tongue joints with o-ring type rubber gasket, per A.S.T.M. specifications C443.
   - The inside joints of manholes, catch basins, and pipe sizes over 42" and larger in diameter shall be pointed up with mortar upon completion of backfilling.
7. SUMP PUMP LEAD REQUIREMENTS:
   - All sump pump leads connected to a County Drain pipe shall be pre-manufactured.
   - Sump pump leads connected to a manhole shall be cored and booted. Refer to Kor-N-Tee Tap Detail.
   - Sump pump mains and leads shall be ABS (truss and solid wall), PVC (truss, solid wall , A2000), ADS N-12 WT with premium joints.
   - Ends of all 4" sump pump leads shall be temporarily capped and their location staked, witnessed and recorded.
   - All sump pump leads to be taken to the property line, easement line or as indicated on the plan.
   - Sump pump mains must have a cleanout with a minimum inside diameter of 24" and be constructed at changes of alignment, ends of sump pump mains or as indicated on the plan.
8. RESTORATION REQUIREMENTS:

   All disturbed area within the County Drain right-of-way shall be restored as follows:
   - Under roads, sidewalks, driveways and parking areas, backfill material shall be placed loosely into trenches in six (6) inch layers with each layer compacted to not less than 95% of maximum dry density as determined by the ASTM D 1557 Compaction Standard (modified proctor compaction test). All other areas shall have each layer compacted to not less than 90% of maximum dry density.
   - Finish subgrade
   - Place 3" thickness clean topsoil acceptable to the engineer to attain finished grade. Topsoil must not be contaminated and may not be a mixture of natural underlying soils, subbase materials, or other materials It must consist of natural loam, sandy loam, silty loam or clay loam humus-bearing soil adapted to the sustenance of plant life. Topsoil must be neither excessively acidic nor excessively alkaline. It must be of mineral origin, exclusive of any peat or muck.
   - Apply seed and fertilizer as follows:*

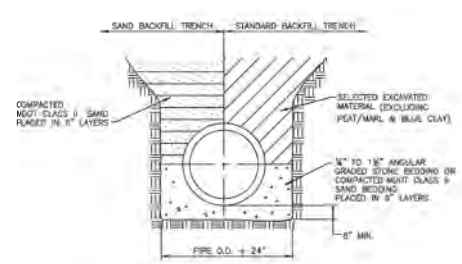
Location	Seeding Requirements	Fertilizer Requirement
Slopes and Ditch, Banks, Etc.	M.D.O.T. "Roadside Mix" Turf Seed Mixture TGM (10% Kentucky Blue, 20% Perennial Rye, 30% Hard Fescue, 40% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A
Other Areas	M.D.O.T. "Roadside Mix" Turf Seed Mixture THM (30% Kentucky Blue, 20% Perennial Rye, 50% Creeping Red Fescue) applied at 220 lb/acre	M.D.O.T. Seeding and Sodding Fertilizers, Class A

* Sod is required in maintained lawn areas. Refer to WRC General Specifications for additional requirements and information.
- apply straw or marsh hay mulch in an air-dry condition to all seeded areas over the surface to a uniform thickness of 2 tons/acre.
- mulch shall be anchored in place with biodegradable netting, not larger than 1½" by 2" nor smaller than ½" by ½".
- The contractor shall be responsible to insure the growth of all seeded areas, and shall re-seed as necessary to accomplish this.



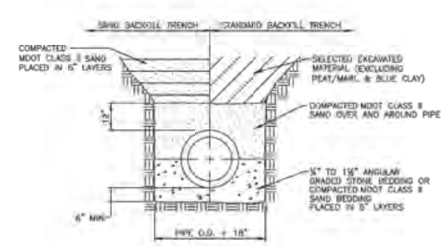
ABS (TRUSS AND SOLID WALL), PVC (TRUSS, SOLID WALL, A2000), ADS N-12 WT PIPE BEDDING DETAIL

NO SCALE



CLASS "B" BEDDING TRENCH DETAIL FOR 27" DIAMETER AND LARGER CONCRETE PIPE

NO SCALE



CLASS "B" BEDDING TRENCH DETAIL FOR 24" DIAMETER AND SMALLER CONCRETE PIPE

NO SCALE

PRECAST CONCRETE TOP SLAB DETAIL

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SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

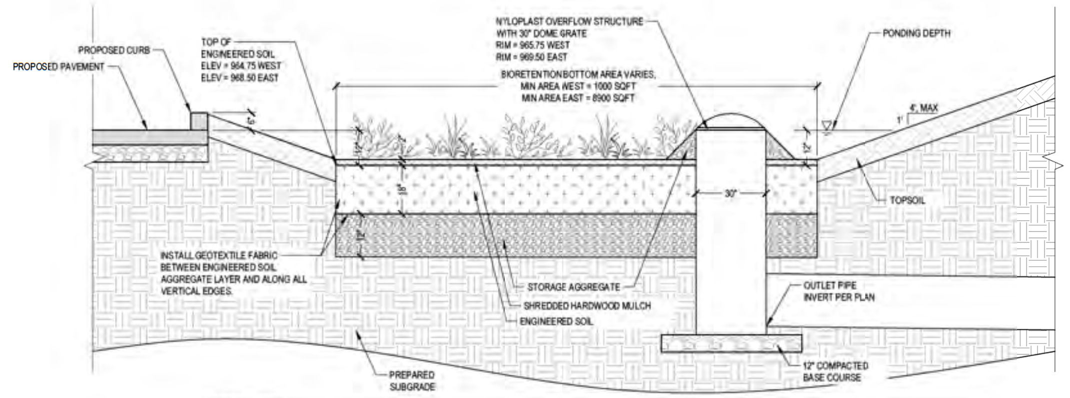
DRAWING TITLE

UTILITY DETAILS

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CU-501



Infiltration Sizing

West Bioretention
Design Calculatioons For Infiltration of Channel Protection Volume
Soils with a 0.72"/hr in-Situ Infiltration Rate
Infiltration Rate 0.72 in/hr

New Impervious to West
Required Channel Protection Volume
Imp Area draining to bioretention 0.432 ac

Vcp = 1.3"/12"(43560)*C*A
New Imp Area to bioretention 0.432 ac
Required Vcp,west = 1937 cf

	Depth
Max Surface Water Storage Depth	13 in
Infiltration Depth During Storm Dinf = 0.7 in/hr x 6 hr =	4.32 in
Potential Soil Storage Depth EQV Dsoil,eqv = 30in*0.25 porosity =	7.5 in
Infiltration Area Required = Vcp,west/(Dsw+Dinf+Dsoil,eqv) =	976 sf
Infiltration Area Provided =	1780 sf
Vcp, west Provided =	2551 cf

East Bioretention
Design Calculatioons For Infiltration of Channel Protection Volume
Soils with a 1.46"/hr in-Situ Infiltration Rate
Infiltration Rate 1.46 in/hr

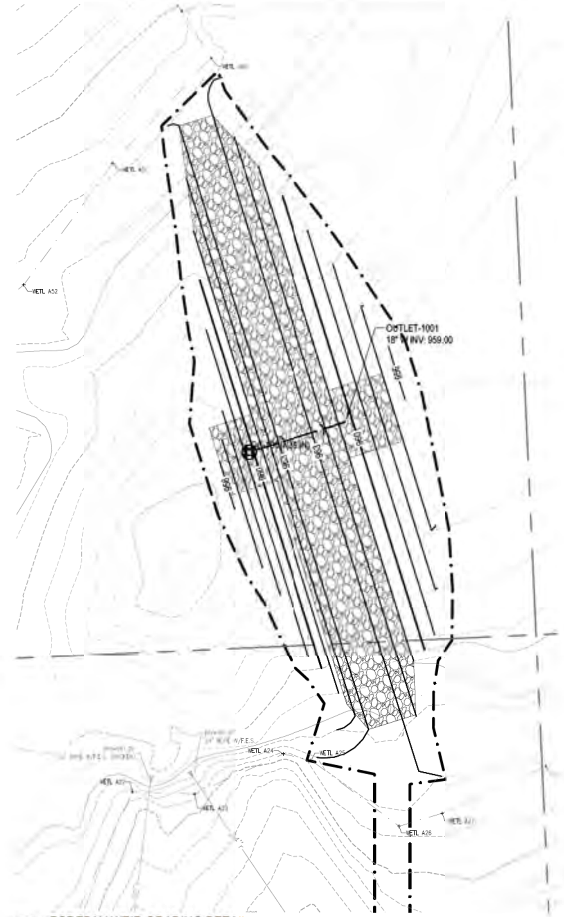
New Impervious to East
Required Channel Protection Volume
Imp Area draining to bioretention 5.509 ac

Vcp = 1.3"/12"(43560)*C*A
New Imp Area to bioretention 4.363 ac
Required Vcp,west = 19558 cf

	Depth
Max Surface Water Storage Depth	12 in
Infiltration Depth During Storm Dinf = 1.46 in/hr x 6 hr =	8.76 in
Potential Soil Storage Depth EQV Dsoil,eqv = 30in*0.25 porosity =	7.5 in
Infiltration Area Required = Vcp,east/(Dsw+Dinf+Dsoil,eqv) =	8305 sf
Infiltration Area Provided =	8950 sf
Vcp, east Provided =	21077 cf

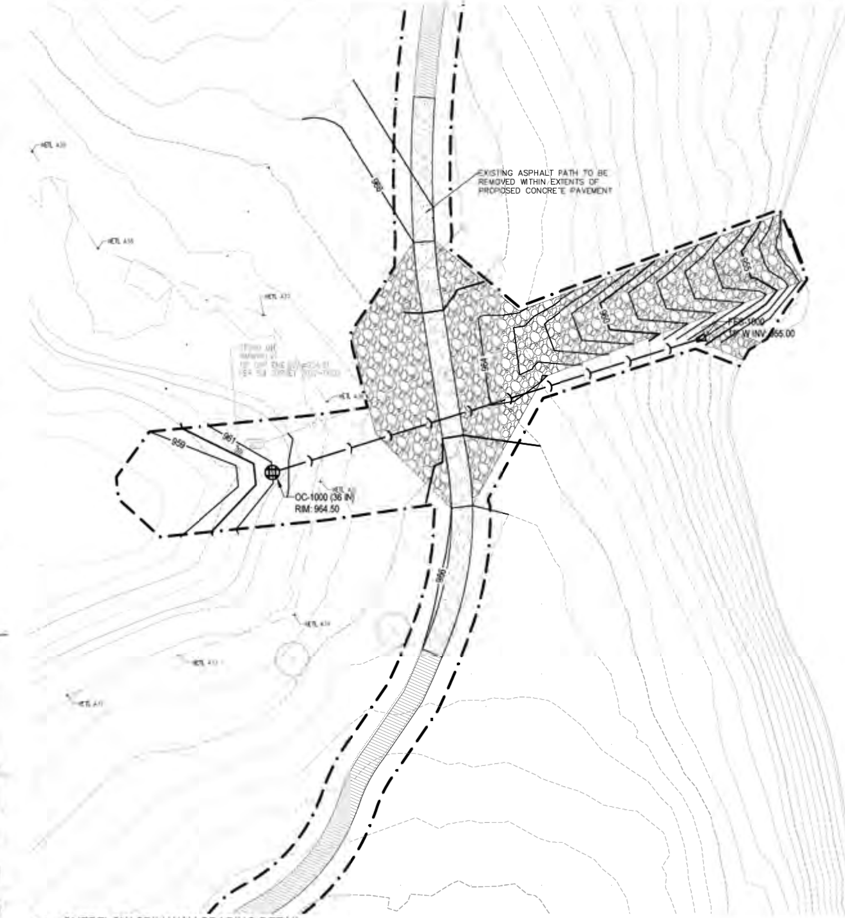
(1) BIORETENTION BASIN

SCALE: NTS



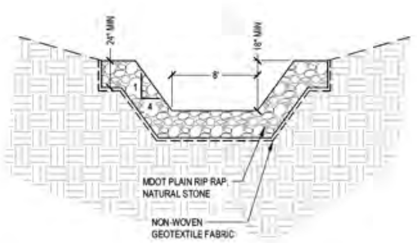
(3) FOREBAY WEIR GRADING DETAIL

SCALE: 1"=20'



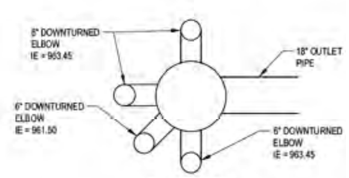
(4) OVERFLOW SPILLWAY GRADING DETAIL

SCALE: 1"=20'

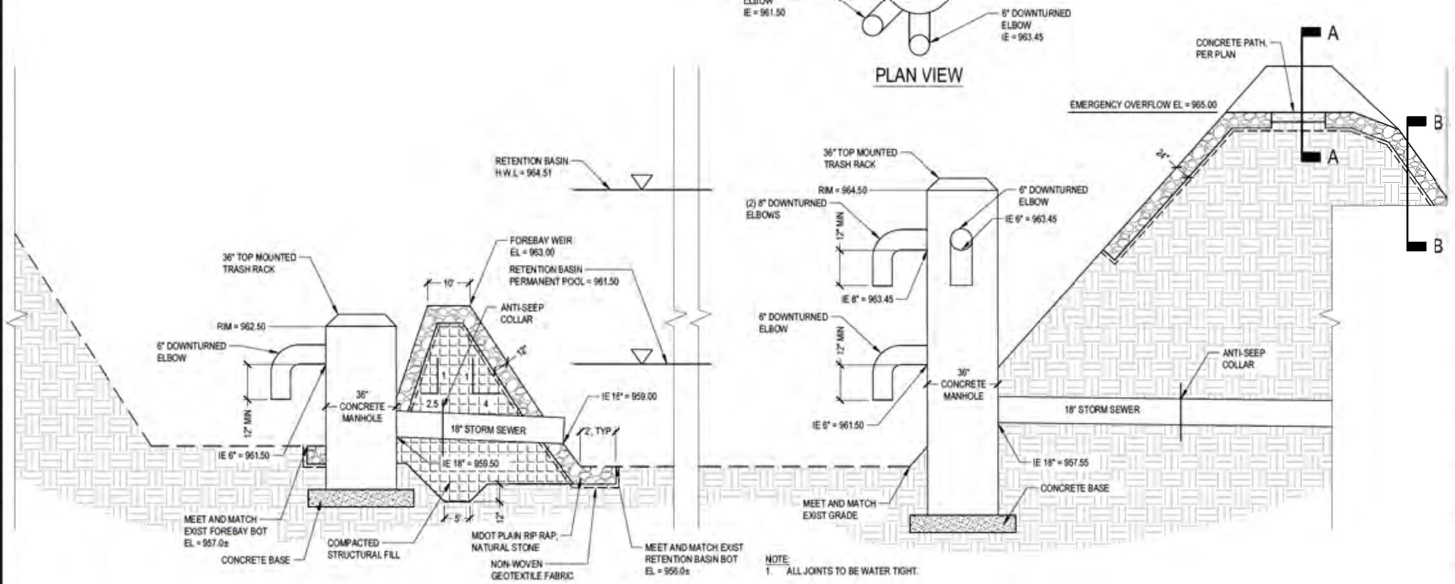


SECTION B-B

SECTION A-A



PLAN VIEW



NOTE:
1. ALL JOINTS TO BE WATER TIGHT.

(2) DETENTION BASIN AND OUTLET CONTROL STRUCTURE

SCALE: NTS

Areas

To West Pond	Roof sf	Roof acre	Impervious sf	Impervious acre	Open Water sf	Open Water acre	Pervious sf	Pervious acre	Total sf	Total acre
	0	0.000	65865	1.513	24120	0.554	229981	5.280	319995	7.346

To East Pond	Roof sf	Roof acre	Impervious sf	Impervious acre	Open Water sf	Open Water acre	Pervious sf	Pervious acre	Total sf	Total acre
Woodland Village Retirement	40108	0.921	57043	1.310	0		66406	1.524	163557	3.755
Western Driveway	0		51156	1.174	0		44990	1.033	96146	2.207
South Parking	0		192260	4.414	0		137309	3.152	329569	7.566
East/North Parking	0		263805	6.056	0		143274	3.289	407079	9.345
Building	136690	3.138	0		0		0		136690	3.138
East Pond	0		0		72600	1.667	358217	8.224	430818	9.890
East Pond Total	176798	4.059	564264	12.954	72600	1.667	750196	17.222	1563859	35.901

Runoff Coefficient (C) Calculations

Total Area (New plus Existing)

Land Use Type	Runoff Coef	Area (acres)	Product
Open Space, Fair	0.20	22.50	4.500
Impervious (Parking, Roofs)	0.95	18.52	17.599
Open Water	1.00	2.22	2.221
Total		43.25	24.320

Weighted C (C_w)= 0.56

New Imperviousness for Infiltration

Land Use Type	Runoff Coef	Area (acres)	Product
Impervious (Parking, Roofs)	0.95	4.79	4.56

Weighted C (C_w)= 0.95

Existing Wet Pond
Area 43.25 acre
C 0.56
Tc 20 min

Required Water Quality Volume
Vwq = 1"/12"(43560)*C*A
Vwq = 88280 cf

Vcp = 1.3"/12"(43560)*C*A

Required Channel Protection Volume
Vcp = 1.3"/12"(43560)*C*A
Vcp = 21495 cf — Calculated using new impervious area only

Required Forebay Volume
Vfb = Vwq when downstream infiltration
OR Vfb = 0.15*Vwq when upstream infiltration
Vfb = 13242 cf — Upstream Infiltration

Required Extended Detention Volume
Ved = 1.0"/12"(43560)*C*A
Ved = 167733 cf

Required Extended Detention Volume Discharge Rate
Qed = Ved/[(48hr)(60min)(60sec)]
Qed = 0.97 cfs

Post Developed 100-yr Peak Inflow Rate
Q100in = C(I100)A
I100 = (30.2033x100^0.2203)/(Tc+9.1747)^0.8069
I100 = 5.48 in/hr
Q100in = 133.20 cfs

Allowable Release Rate per Acre
Qvrr = 1.1055-0.206ln(A)
Qvrr = 0.330 cfs/acre — Calculated
Qvrr = 0.150 cfs/acre — Required due to downstream limitations

Allowable 100-yr Post Developed Peak Flow
Q100all = Qvrr(A)
Q100all = 6.487 cfs

Storage Curve Factor for 100-yr Detention Volume
R = 0.206-(0.15)(LN(Q100p/Q100in))
R = 0.659

Post Developed 100-yr Runoff Volume In
V100in = 18985(C)A
V100in = 461709 cf

Required 100-yr Storage Volume Above Outlet
V100det = (V100in*R)-Vcp
V100det = 282911 — Use Max of V100det and Ved
Ved = 167733

Forebay Stage-Storage

Elevation (ft)	Area (ft^2)	Volume (ft^3)	Cum. Vol. (ft^3)	
955	732			
956	1495	1,114	1,114	
957	2364	1,930	3,043	
958	3486	2,925	5,968	
959	5014	4,250	10,218	
960	7534	6,274	16,492	
961	13556	10,545	27,037	
961.5	18311	7,967	35,004	Water Level
962	24307	10,655	45,658	
962.5	28559	13,217	58,875	
963	33139	15,425	74,299	Top of Berm

Vfb = 13242 cf, required
Volume Provided = 39,296 cf

Wet Pond Stage-Storage

Elevation (ft)	Area (ft^2)	Volume (ft^3)	Cum. Vol. (ft^3)
961.5	64698		
962	75118	34,954	34,954
962.5	86471	40,397	75,351
963	95519	45,498	120,849
964	114244	104,882	225,730
965	114244	114,244	339,974
966	114244	114,244	454,218
967	114244	114,244	568,462

Ved = 167733 cf, required
Ved Elev 963.45 ft
V100det = 282911 cf, required
100yr Elev 964.50 ft

Orifice Sizing

Using Orifice Restrictor Plates
$Q = 0.62A(2gh)^{1/2}$
Hed=Ved/4800h^.5
Qed Orifice 6 " B Orifice = 0.1963 ft2
100yr Orifice 6 " C Orifice = 0.1963 ft2
100yr Orifice 8 " D Orifice = 0.3489 ft2
h=0.4 total head

Elev	# B Orifice	# C Orifice	# D Orifice	ED head	ED Flow	100 yr head	100 yr Flow
961.50	1	0	0	0.78	0.862	3.00	1.6914
962.00	0	0	0	0.58	0.000	2.50	0.0000
962.33	0	0	0	0.45	0.000	2.17	0.0000
962.67	0	0	0	0.31	0.000	1.83	0.0000
963.45	0	1	2	0.00	0.000	1.05	4.5527
963.80	0	0	0	0.00	0.000	0.70	0.0000
964.10	0	0	0	0.00	0.000	0.40	0.0000
			Total Flow		0.86		6.24

Qed = 0.97 cfs, required
Q100all = 6.49 cfs, required

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SITE PLAN REVIEW	C	30MAR22
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SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
UTILITY DETAILS

SCALE

PROJECT NUMBER
13472.00

DRAWING NUMBER
CU-502

PIPE RESTRAINT SCHEDULE

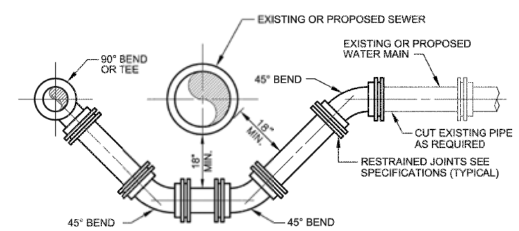
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTIION)*
4	13	5	3	1	40	--	--
6	19	8	4	2	58	31	--
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	85	168
36	84	35	17	8	281	84	168

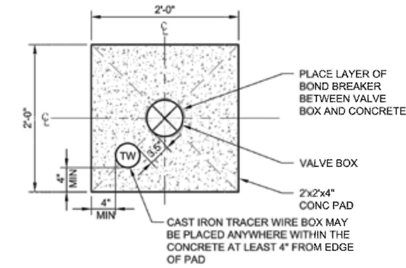
1. LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
2. IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
3. THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER. FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED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

* SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.

BASED UPON: INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2

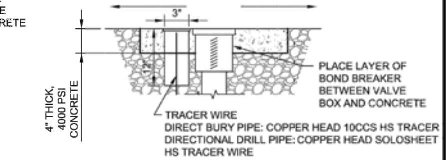


WATER MAIN UTILITY OFFSET



NOTE: ALL BOXES & ADJOINING TW BOXES SHALL BE ENCASED IN A CONC. PAD UNLESS OTHERWISE DETERMINED BY MHOG.

PLAN

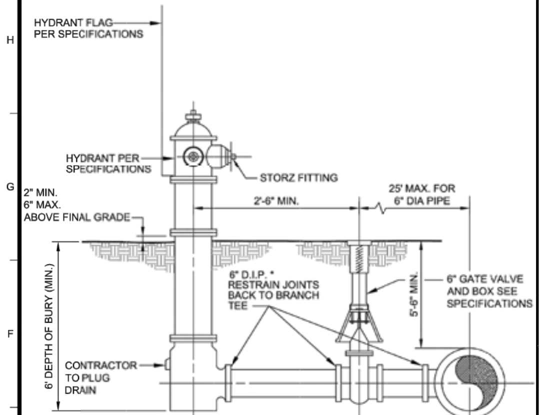


NOTE:
1. TRACER WIRE BOXES LOCATED WITHOUT A VALVE BOX ONLY REQUIRE AN 18" X 18" CONCRETE PAD.
2. TRACER WIRE BOX SHALL HAVE A LOCKING LID W/STANDARD AWWA PENTAGON KEY.
3. TRACER WIRE BOX SHALL BE COPPERHEAD RB14*TP IN ASPHALT INSTALLATIONS AND CD14*TP FOR ALL OTHER INSTALLATIONS.

SECTION

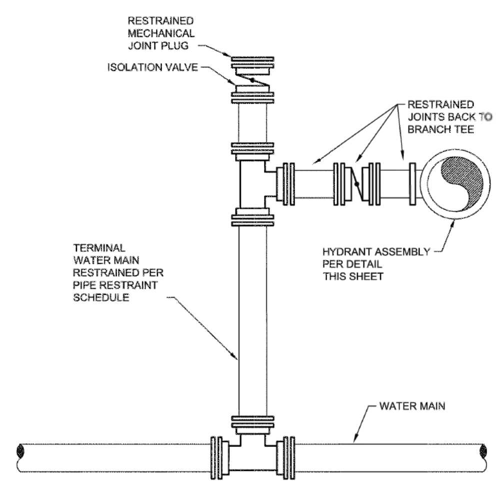
VALVE/TRACER WIRE BOX IN CONCRETE DETAIL

NO SCALE

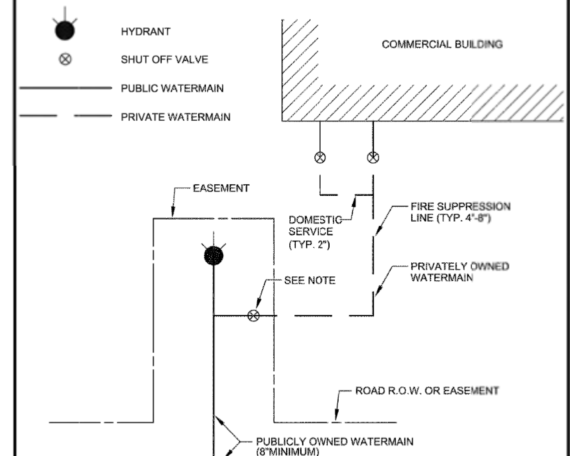


* THE LENGTH OF 6" PIPE FROM THE MAIN TO THE HYDRANT ASSEMBLY CANNOT EXCEED 25'. ANY PIPE OVER 25 FEET SHALL BE 8" DIAMETER MINIMUM AND DESIGNED PER MHOG SPECIFICATIONS.

FIRE HYDRANT ASSEMBLY

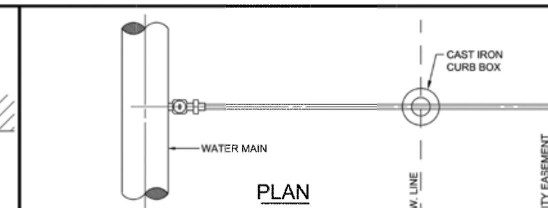


TERMINAL HYDRANT DETAIL



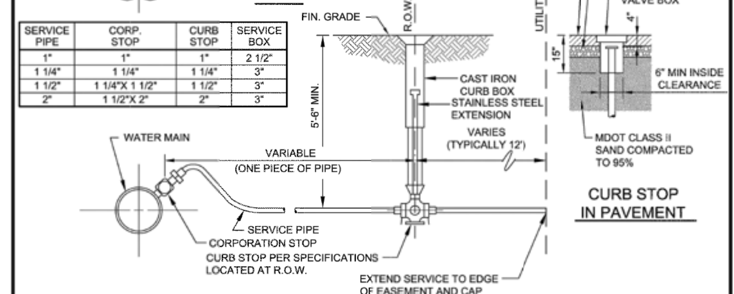
NOTE: PUBLICLY OWNED SHUT OFF VALVE TO BE LOCATED IN EASEMENT.

COMMERCIAL BUILDING WATER SERVICE LAYOUT



PLAN

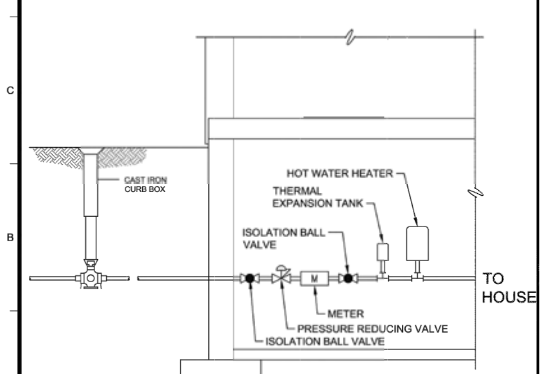
SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4"X 1 1/2"	1 1/2"	3"
2"	1 1/2"X 2"	2"	3"



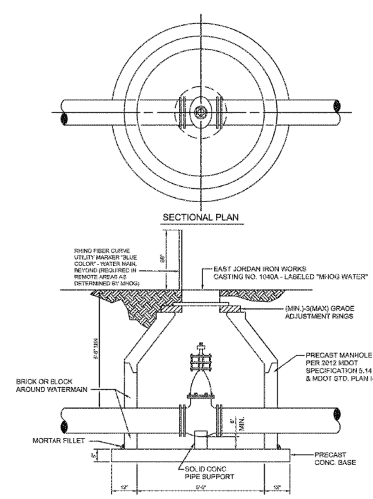
CURB STOP IN PAVEMENT

SECTION

WATER SERVICE LATERAL

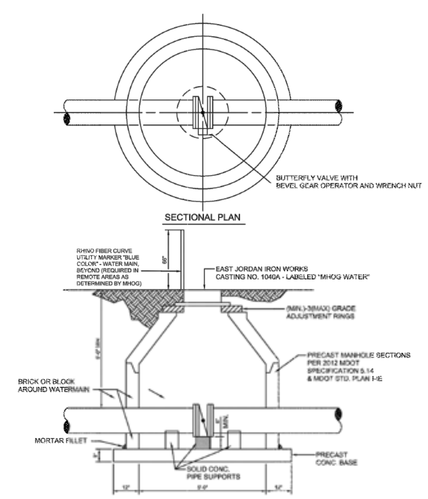


PRIVATE RESIDENCE PRESSURE REDUCING VALVE (PRV)



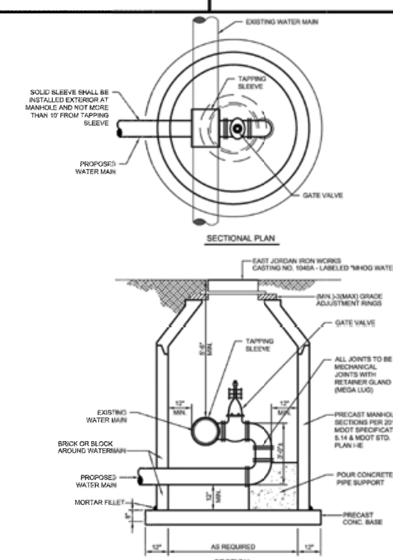
NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

VALVE AND GATE WELL



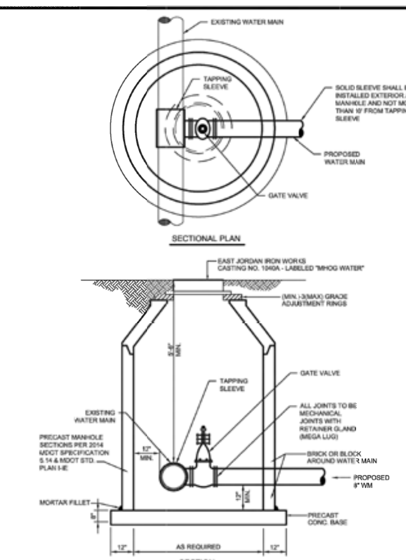
NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

BUTTERFLY VALVE AND WELL



NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

REVERSE TAP GATE WELL



NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

REGULAR TAP GATE WELL

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority

STANDARD DETAILS

Scale: NONE
Issued Date JANUARY - 2014
UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

Trinity Health

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SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1650

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	K	16SEP2022
LCDC RESUBMITTAL R4	J	13SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

DRAWING TITLE
UTILITY DETAILS

SCALE

PROJECT NUMBER 13472.00

DRAWING NUMBER CU-503

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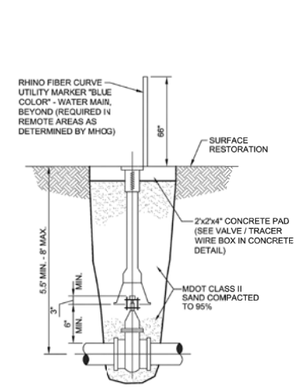
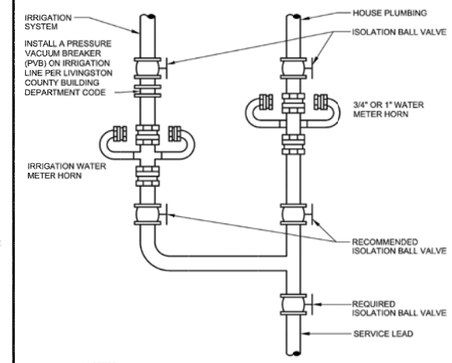


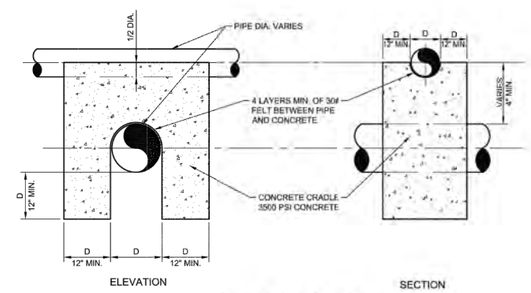
NOTES:
1. VALVE BOX SHALL NOT REST ON VALVE OR MAIN LINE PIPE.
2. A VALVE STEM EXTENSION WITH CENTERING RING IS REQUIRED FOR VALVES BURIED DEEPER THAN 6'.

GATE VALVE AND BOX



NOTES:
1. ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).
2. PROPERTIES DESIGNATED "HIGH HAZARD" PER THE MHOG CROSS CONNECTION RULES MANUAL WILL REQUIRE THE INSTALLATION OF A REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTION DEVICE.

TYPICAL METER HORN INSTALLATION



CONCRETE CRADLE DETAIL

SCALE: NONE

MHOG CASTING DETAIL

NO SCALE

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority

STANDARD DETAILS

Scale: NONE
Issued Date JANUARY - 2014

UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

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SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

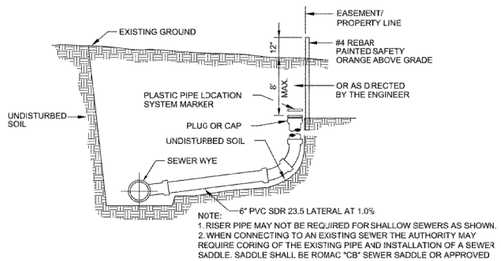
KEY PLAN

DRAWING TITLE
UTILITY DETAILS

SCALE

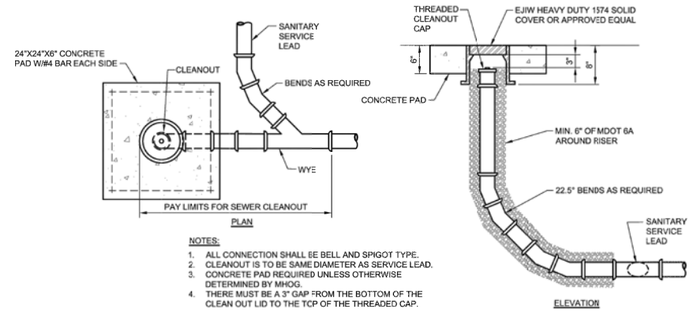
PROJECT NUMBER
13472.00

DRAWING NUMBER
CU-504



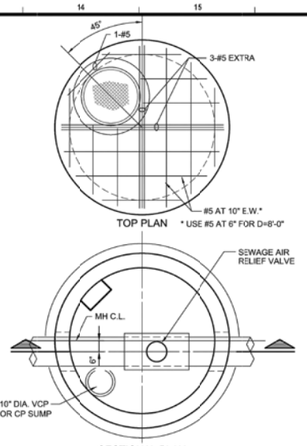
NOTE:
1. RISER PIPE MAY NOT BE REQUIRED FOR SHALLOW SEWERS AS SHOWN.
2. WHEN CONNECTING TO AN EXISTING SEWER THE AUTHORITY MAY REQUIRE CORING OF THE EXISTING PIPE AND INSTALLATION OF A SEWER SADDLE. SADDLE SHALL BE ROMAC "CB" SEWER SADDLE OR APPROVED EQUAL.

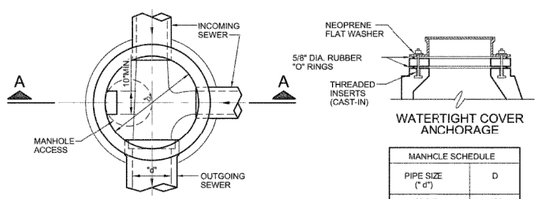
SANITARY SEWER LATERAL



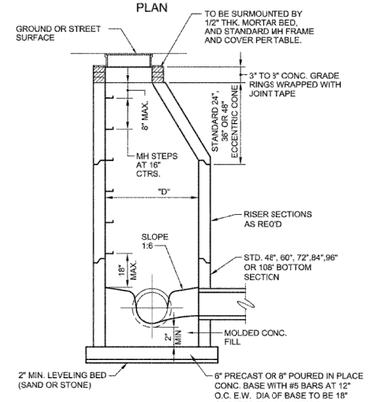
NOTES:
1. ALL CONNECTION SHALL BE BELL AND SPIGOT TYPE.
2. CLEANOUT IS TO BE SAME DIAMETER AS SERVICE LEAD.
3. CONCRETE PAD REQUIRED UNLESS OTHERWISE DETERMINED BY MHOG.
4. THERE MUST BE A 3" GAP FROM THE BOTTOM OF THE CLEAN OUT LID TO THE TOP OF THE THREADED CAP.

SEWER CLEANOUT DETAIL





MANHOLE SCHEDULE	
PIPE SIZE ("d")	D
8"-24"	48"
27"-36"	60"
42"-48"	72"
54"	84"

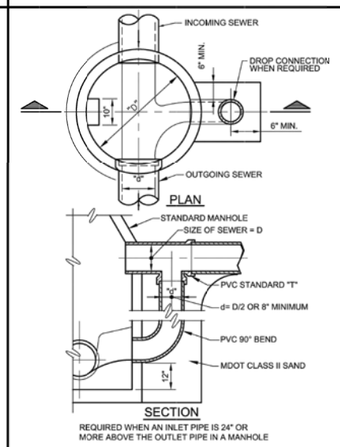


SECTION A-A

NOTES:
1. ALL SANITARY MANHOLES TO BE PRECAST REINFORCED CONCRETE WITH PREMIUM JOINTS. SEE SPECIFICATIONS FOR BASE SLAB AND PIPE OPENINGS AND CONNECTIONS.
2. MANHOLE CONES SHALL BE THE ECCENTRIC TYPE.
3. PROVIDE 6" OF COMPACTED GRANULAR MATERIAL UNDER ALL PRECAST CONCRETE BASE SLPVC.
4. FORCE MAINS CONNECT DIRECTLY TO A MANHOLE SHALL BE INSTALLED SO THAT THE ELEVATION OF THE PIPE CROWNS MATCH. THE FORCE MAIN SHALL BE DIRECTED DOWNWARD INTO THE FLOW CHANNEL.
5. FOR SANITARY SEWERS ALL PIPES SHALL ENTER MANHOLE THROUGH RUBBER BOOTED CONNECTION.

FRAME & COVER FOR SANITARY SEWER MANHOLES			
		MANUFACTURER OR EQUAL	
TYPE	TYPE OF COVER	EAST JORDAN	NEENAH
MH	SANITARY - SOLID SELF-SEALING	1040.0000	R-1642
MH	SANITARY - SOLID WATERTIGHT	1040-APT	R-1916-F
CO	SOLID	1574A	R-1973-A

STANDARD MANHOLE



REQUIRED WHEN AN INLET PIPE IS 24" OR MORE ABOVE THE OUTLET PIPE IN A MANHOLE

DROP CONNECTION

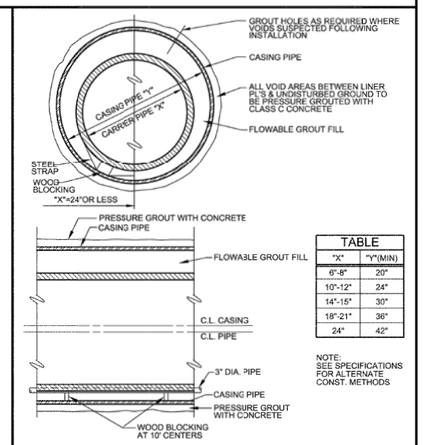
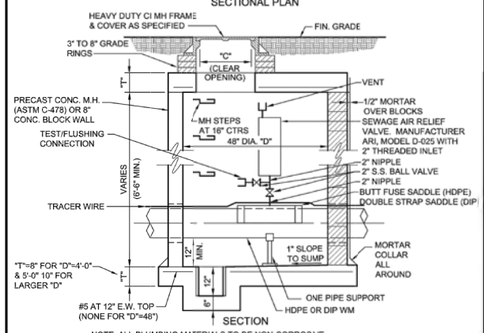


TABLE	
"X"	"Y"(MIN)
6"-8"	20"
10"-12"	24"
14"-15"	30"
18"-21"	36"
24"	42"

NOTE: SEE SPECIFICATIONS FOR ALTERNATE CONST. METHODS

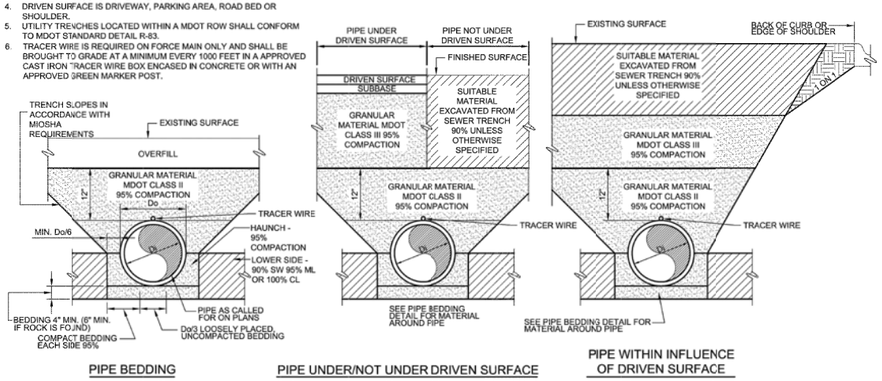
CASING PIPE



NOTE: ALL PLUMBING MATERIALS TO BE NON-CORROSIVE, ALL FITTINGS SHALL BE STAINLESS STEEL.

AIR RELIEF STRUCTURE

NOTES:
1. COMPACTION PRESENTED AS MINIMUM STANDARD PROCTOR VALUES.
2. MATERIALS AROUND THERMOPLASTIC PIPE WITH DIAMETER < 6 INCHES SHALL PASS 0.5 INCH SIEVE, MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.
3. MATERIALS AROUND HDPE PIPE TO BE MDOT 6A OR 21AA.
4. DRIVEN SURFACE IS DRIVEWAY, PARKING AREA, ROAD BED OR SHOULDER.
5. UTILITY TRENCHES LOCATED WITHIN A MDOT ROW SHALL CONFORM TO MDOT STANDARD DETAIL R-83.
6. TRACER WIRE IS REQUIRED ON FORCE MAIN ONLY AND SHALL BE BROUGHT TO GRADE AT A MINIMUM EVERY 1000 FEET IN A APPROVED CAST IRON "RACER WIRE BOX ENCASED IN CONCRETE OR WITH AN APPROVED GREEN MARKER POST.

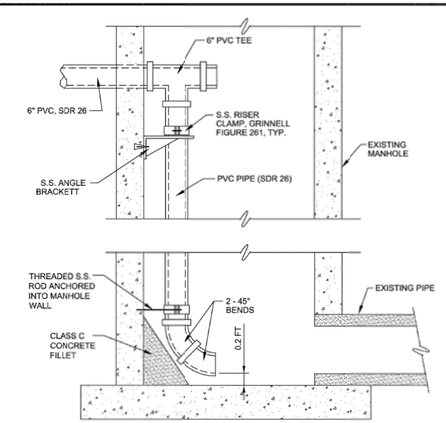


PIPE BEDDING

PIPE UNDER/NOT UNDER DRIVEN SURFACE

PIPE WITHIN INFLUENCE OF DRIVEN SURFACE

TRENCH EXCAVATION & PIPE BEDDING



INTERIOR SEWER LATERAL DROP CONNECTION

Friday, February 9, 2018 9:07:00 AM DRAWING: P:\ER\12719\200-12719-00-000\CAD\SheetFiles\Mhog-std.DWG

Trinity Health

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SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority

STANDARD DETAILS

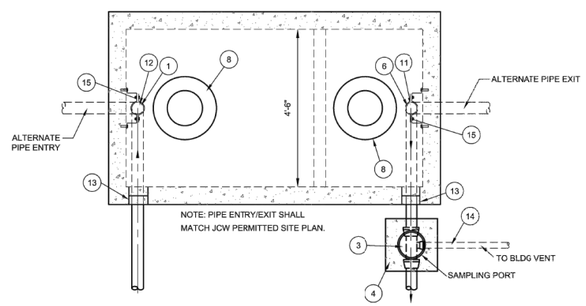
Scale: NONE
Issued Date JANUARY - 2014

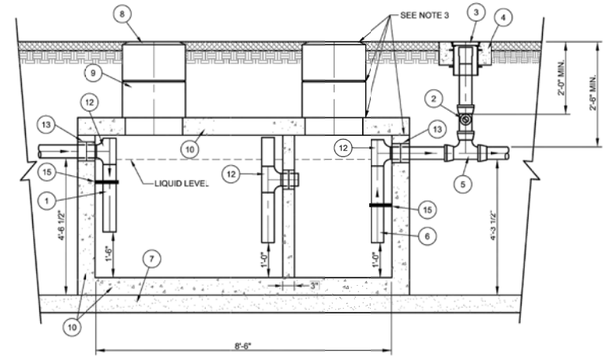
UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

DRAWING TITLE
UTILITY DETAILS

SCALE
13472.00
PROJECT NUMBER

CU-505
DRAWING NUMBER





ITEM	DESCRIPTION
1	4" PVC INLET PIPE*
2	4"x4"x2" TEE WITH 2" PIPE TO BUILDING VENT*
3	THREADED C/O CAP JOSAM 58880 OR APP EQUAL**
4	CONCRETE PAD
5	4"x4"x4" TWO-WAY CLEANOUT TEE*
6	4" PVC OUTLET*
7	4' - 6" GRAVEL BEDDING
8	HEAVY-DUTY CAST IRON FRAME AND COVER ***
9	CONCRETE ADJUSTMENT RINGS
10	REINFORCE AS REQUIRED FOR SERVICE CONDITIONS
11	4" PVC 90° ELBOW*
12	4" PVC TEE*
13	A-LOK OR PRESS SEAL PSX PIPE/WALL CONNECTOR
14	2" VENT PIPE (IDENTIFY PIPE TYPE, CLASS & JOINT AS REQUIRED FOR PROJECT)
15	STAINLESS STEEL PIPE SUPPORT CLAMP ****

* 6" PIPE MAY BE SUBSTITUDED TO MATCH UPSTREAM PIPE DIAMETER.
** REFER TO CLEAN OUT DETAIL(S) ON STANDARD DETAIL SHEET.
*** CLAY & BAILEY 2008 BV OR EQUAL FROST PROOF COVERS OPTIONAL)
****FM STAINLESS FASTNERS #63 OR EQUAL. 1/2"x2-1/2" SS BRACKET W/ 1/2"x1-1/2" FULLY THREADED SS HEX BOLT WITH 1/2" SS WASHER AND 1/2"X1-3/4" SS ANCHORS. CLAMP TO BE FACTORY INSTALLED.

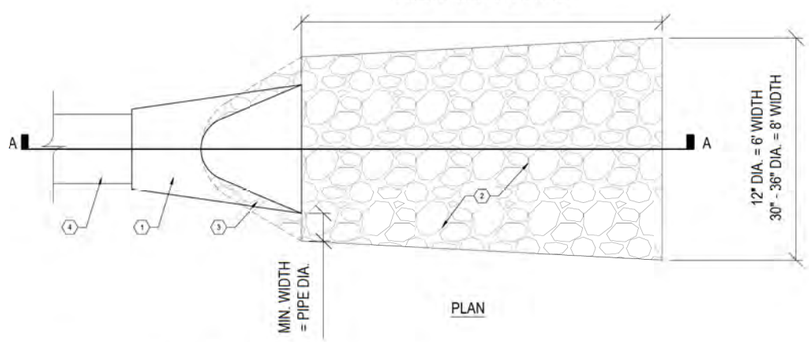
NOTES:
1. THREE COVERS AND RISERS SHOWN. TWO COVERS AND RISERS CENTERED OVER UPPER TWO BAFFLES ARE OPTIONAL.
2. INTERCEPTOR SIZE - 1000 GAL MINIMUM (REVISE THE SIZE DIMENSIONS, AS NEEDED, FOR LARGER CAPACITY INTERCEPTORS)
3. ALL JOINTS AT THE FRAME & COVER*, CONCRETE ADJUSTMENT RINGS AND THE LID OF THE INTERCEPTOR SHALL BE SEALED WITH A MINIMUM OF TWO (2) ROWS OF 3/4 TO 1 INCH PREFORMED BUTYL JOINT SEALER AND A 6" BUTYL JOINT WRAP AROUND SLEEVE (EZ WRAP). THE ENDS OF THE 6" EZ WRAP SHALL OVERLAP BY 12".
4. PIPING ON THE INTERIOR OF THE INTERCEPTOR SHALL BE PVC WITH SOLVENT-CEMENTED JOINTS.
5. GREASE INTERCEPTOR INCLUDING ADJUSTMENT RINGS AND CASTINGS SHALL BE WATER TESTED FOR WATER TIGHTNESS AFTER THE BACKFILL OPERATIONS HAVE BEEN COMPLETED. WATER TESTING SHALL CONSIST OF THE FOLLOWING: 1. SEAL THE TANK, 2. FILL WITH WATER, 3. LET STAND FOR 24 HOURS, 4. REFILL TANK, 5. TANK IS APPROVED IS WATER LEVEL IS HELD FOR 1 HOUR.
6. ONLY KITCHEN WASTE SHALL BE DIVERTED TO THE GREASE TRAP.

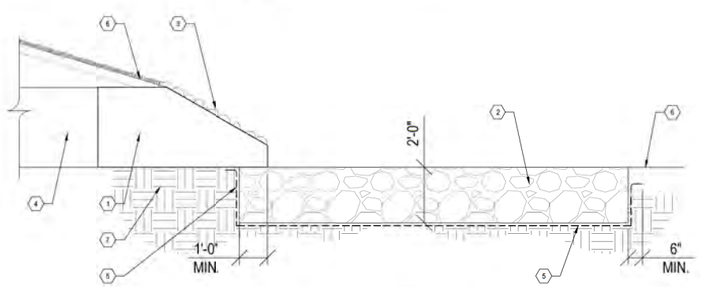
GREASE INTERCEPTOR 1000 GALLON
NO SCALE

1. METAL FLARED END SECTION
2. 12"-24" PIPE DIA, MDOT PLAIN RIP RAP, 8" - 16", NATURAL STONE
   30"-36" PIPE DIA, MDOT HEAVY RIP RAP, 16" MINIMUM, NATURAL STONE, WITH IN-PLACE THICKNESS OF 36".
   RIPRAP MINIMUM VOLUME SHALL BE 10 CUYD PER LOCATION.
3. PLACE DRAINAGE STONE ON SIDE SLOPE OF OUTLET
4. PIPE (REFER TO STORM PLAN FOR SIZE)
5. NON-WOVEN GEOTEXTILE FABRIC
6. PLANTINGS, REFER TO PLANTING PLAN
7. PREPARED SUBGRADE

NOTES:
NO LESS THAN 10 SQUARE YARDS OF RIPRAP TO BE USED FOR EACH APRON PER LCDC REQUIREMENTS.

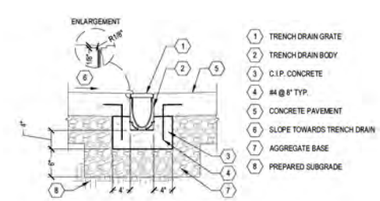
12' PIPE DIA. = 12' LENGTH
30"-36" PIPE DIA. = 15' LENGTH
UNLESS NOTED OTHERWISE





SECTION A-A

1 END SECTION
SCALE: 1/2" = 1'



2 LOADING DOCK TRENCH DRAIN
SCALE: 1" = 1'

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority
STANDARD DETAILS

Scale: NONE
Issued Date: JANUARY - 2014
UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	N	19SEP2022
LCDC RESUBMITTAL R4	M	13SEP2022
EGLE PERMIT R2	L	14SEP2022
EGLE PERMIT R1	K	06SEP2022
BP1 BULLETIN 1	J	06SEP2022
LCDC RESUBMITTAL R3	I	06SEP2022
LCDC RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

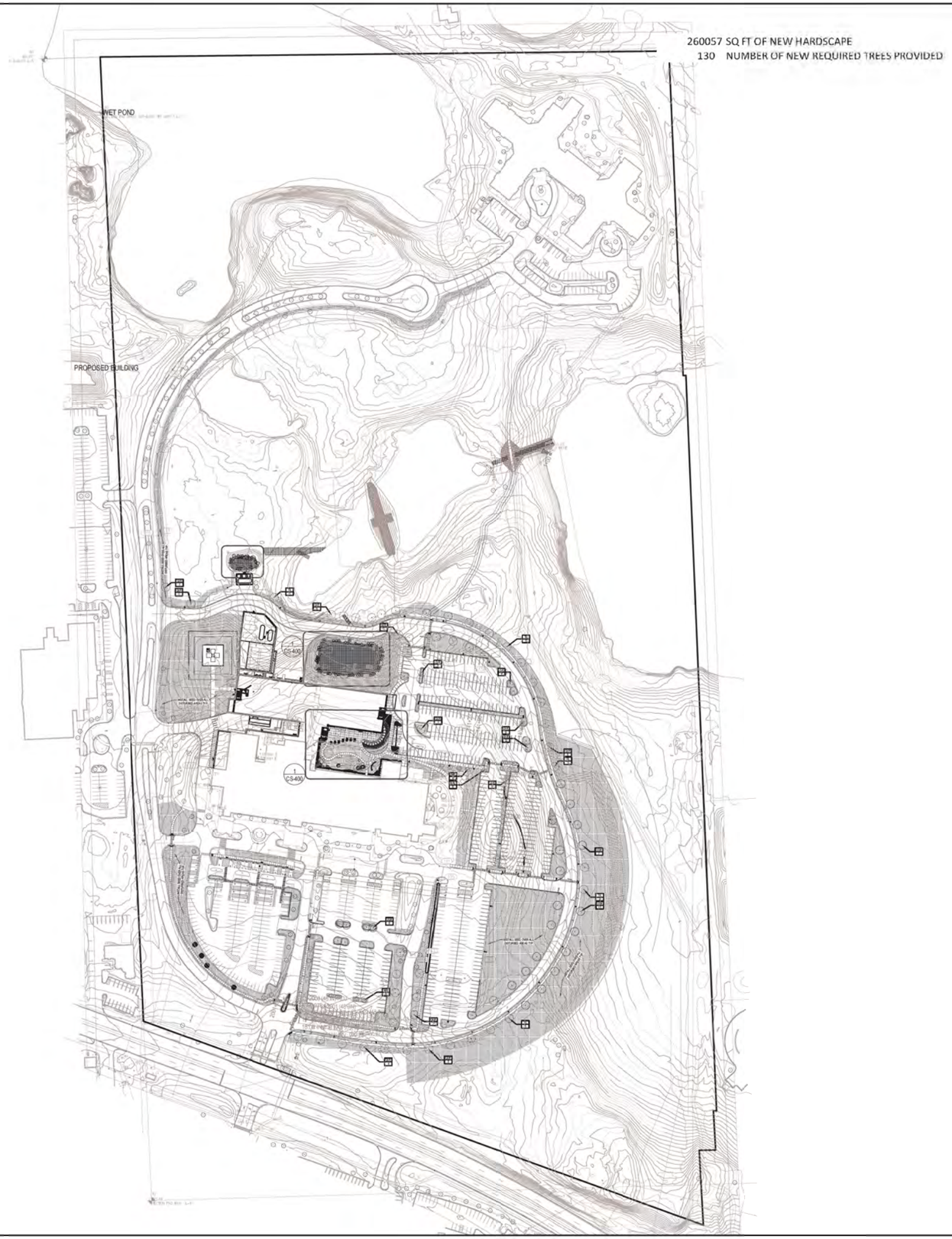
KEY PLAN

DRAWING TITLE
UTILITY DETAILS

SCALE
PROJECT NUMBER 13472.00

DRAWING NUMBER CU-506

Friday, February 8, 2019 9:08:37 AM DRAWING: P:\PER\12719\200-12719-000\CAD\SheetFiles\Mhog-std.DWG



SHEET NOTES

1. SEE SHEET LP-500 FOR PLANTLIST WITH PLANT CODES AND DETAILS.
2. REFER TO GENERAL NOTES ON SHEET LP-000.
3. INDEPENDENT OF NUMERIC QUANTITIES ON DRAWINGS OR IN THE PLANT SCHEDULE, DETERMINE THE PLANT MATERIAL QUANTITIES REQUIRED BY THE PLANS. SPACE PLANT MATERIALS AS SHOWN ON PLANS AND INDICATED IN PLANT SCHEDULE. PLANT MATERIALS SHALL CONFORM TO PLANT SCHEDULES AND SIZES SHALL BE THE MINIMUM INDICATED ON THE PLANT SCHEDULE OR LARGER. INSTALLATION OF LARGER PLANTS AT NO ADDITIONAL COST TO OWNER. ALL MEASUREMENTS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ANLA "STANDARDS FOR NURSERY STOCK" (ANSI Z60.1).
4. PRIOR TO INSTALLATION, DEMARCATE LAYOUT OF ALL PLANTING BEDS, SEED AREAS AND INDIVIDUAL TREES FOR REVIEW AND APPROVAL BY FIELD APPROVER. INCLUDE PERENNIAL GROUPINGS BY SPECIES FOR INTERNAL BED LAYOUTS. FLAGGING, STAKES OR PAINT MAY BE USED TO DELINEATE LOCATIONS AS SCALED FROM THE PLANS. THE FIELD APPROVER WILL REVIEW THESE LOCATIONS WITH THE CONTRACTOR AND MAY MAKE MINOR ADJUSTMENTS AS NECESSARY. SUCH ADJUSTMENTS WILL BE AT NO ADDITIONAL COST TO THE OWNER.
5. SEEDING APPLIES TO ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES EVENT IF ACTIVITIES EXTEND BEYOND THE APPROXIMATED SEEDING LIMITS INDICATED ON THE DRAWINGS. REPAIR ANY DISTURBED AREAS TO THE SAME CONDITION AS ORIGINALLY FOUND AND TO THE OWNER'S SATISFACTION. IN AREAS WHERE LAWN IN DISTURBED BEYOND THE LIMITS OF CONSTRUCTION, REPLACE LAWN WITH NEW LAWN SEED (INCLUDING TOPSOIL AND SEED) AT NO ADDITIONAL COST TO THE OWNER.
6. UTILIZE HORTICULTURAL TREE WATERING BAGS FOR ALL TREES PLANTED OUTSIDE OF IRRIGATED LANDSCAPE ZONES THROUGHOUT THE WARRANTY PERIOD. REPENISH TREE WATERING BAGS REGULARLY SO THAT TREES REGULARLY RECEIVE 1" OF WATER PER WEEK.
7. MINIMIZE CULTIVATION WITHIN THE DRIPLINES OF EXISTING TREES. A MORE DETAILED SURVEY WILL NEED TO BE PROVIDED TO IDENTIFY THE APPROXIMATE LOCATION OF EXISTING TREES AND PLANTINGS. PREPARE SOIL FOR SEEDING (UNLESS OTHERWISE NOTED) BY MINIMIZING DISTURBANCE TO 1 INCH DEPTH UNDER EXISTING TREES. HAND CULTIVATE WHEN ENCOUNTERING ROOTS. NO HEAVY EQUIPMENT ALLOWED WITHIN DRIPLINE OF EXISTING TREES.
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10. MULCH PLANTING BEDS AS SPECIFIED TO 2" DEPTH - KEEP 4 INCHES FROM TREE TRUNKS AND SHRUB CROWNS.
11. CALL "MISS DIG" (800-482-7171), AND STAKE OUT EXISTING UTILITIES AT LEAST 72 HOURS BEFORE STARTING THE WORK AND BEFORE EXCAVATING, AND INSTALLATION OF PLANT MATERIAL AND IRRIGATION SYSTEM. PROTECT EXISTING UTILITY TO REMAINS. A MORE DETAILED SURVEY WILL NEED TO PROVIDED TO IDENTIFY THE APPROXIMATE LOCATION OF EXISTING UTILITIES - BOTH OVERHEAD AND SUBSURFACE.
12. LEGALLY DISPOSE OF DEBRIS ASSOCIATED WITH PLANTING OFF-SITE.
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LEGEND

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	QUE	Quercus bicolor / Swamp White Oak
	QUR	Quercus rubra / Red Oak
	TIL	Tilia americana / American Linden
	ULM	Ulmus wilsoniana 'Prospector' / Prospector Elm
CONIFEROUS TREES	CODE	BOTANICAL / COMMON NAME
	PIA	Picea abies / Norway Spruce
FLOWERING TREES	CODE	BOTANICAL / COMMON NAME
	AME	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry
	MAL	Malus x 'Hargozam' TM / Harvest Gold Crab Apple
SHRUBS	CODE	BOTANICAL / COMMON NAME
	ARO	Aronia melanocarpa 'Autumn Magic' / Autumn Magic Black Chokeberry
	CORI	Cornus sericea 'Allemani's Compact' / Dwarf Red Twig Dogwood
	COK	Cornus sericea 'Kelseyi' / Kelsey's Dwarf Red Twig Dogwood
	JUN	Juniperus chinensis 'Sea Green' / Sea Green Juniper
	RHU	Rhus copallina latifolioria 'Prairie Flame' TM / Dwarf Sumac
	TAX	Taxus x media 'Wardii' / Ward Anglo-Japanese Yew
GRASSES	CODE	BOTANICAL / COMMON NAME
	CAL	calamagrostis x acutiflora / Feather Reed Grass
	CHA	Chasmanthium latifolium / Northern Sea Oats
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	ECH	Echinacea purpurea 'White Swan' / White Swan Coneflower
	RUD	Rudbeckia hirta hybrid 'Little Goldstar' / Little Goldstar Coneflower
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GROUND COVERS	CODE	BOTANICAL / COMMON NAME
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	TUR	Turf Sod / Drought Tolerant Fescue Blend

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ISSUED FOR:	REV	DATE:
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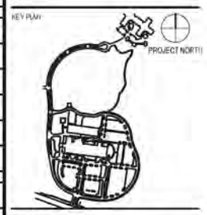
SCHEMATIC DESIGN	B	04MAR22
50 PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



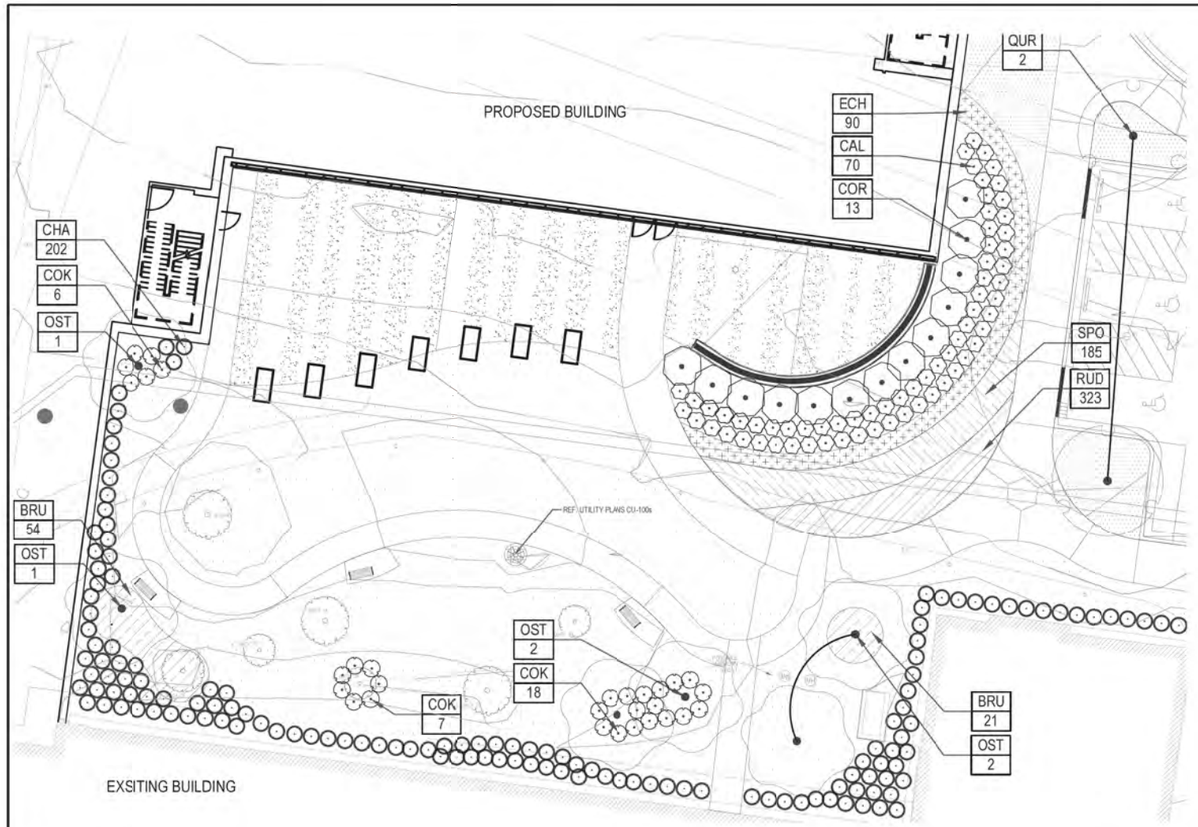
DRAWING TITLE
LANDSCAPE PLAN

SCALE: 1" = 50'

SCALE
13472.00

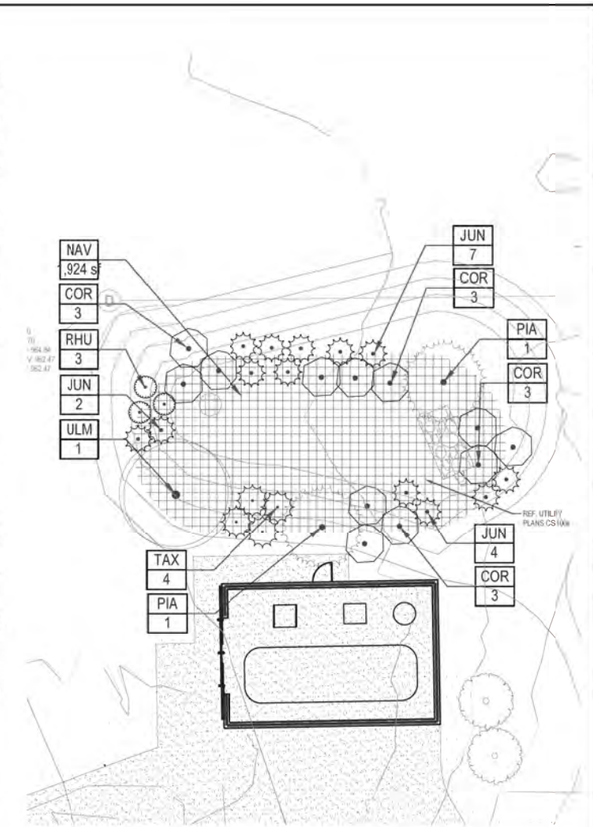
PROJECT NUMBER

DRAWING NUMBER
LP-100



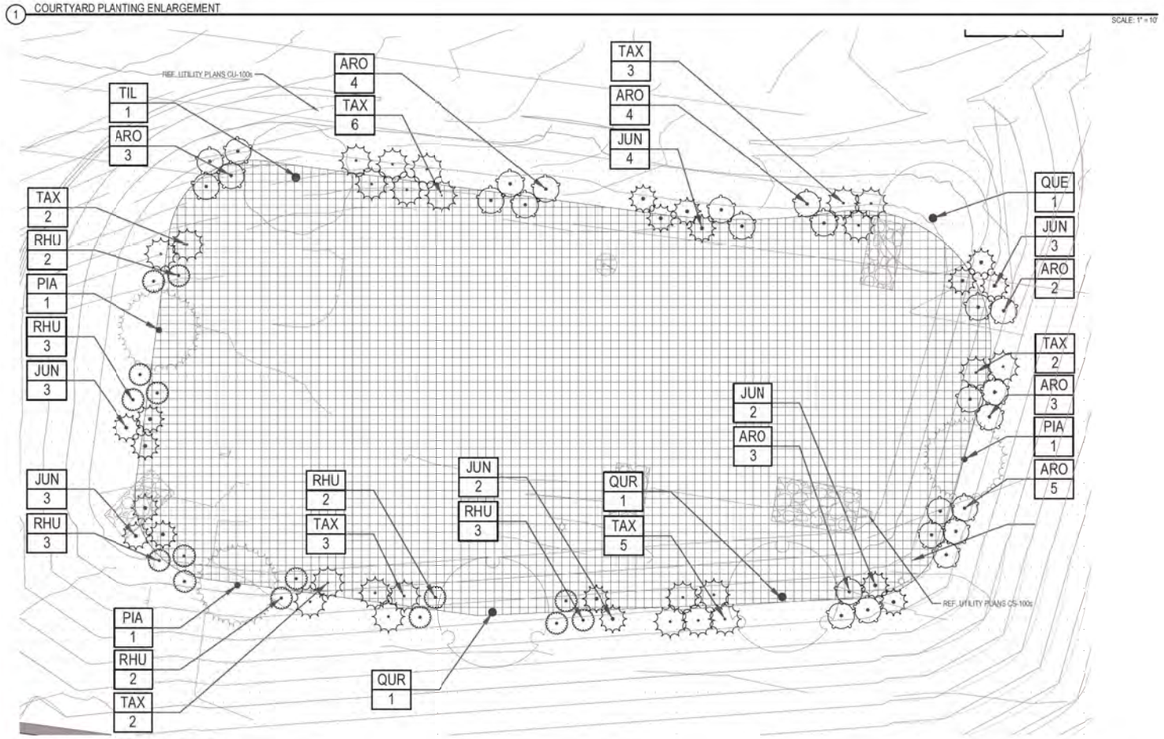
1 COURTYARD PLANTING ENLARGEMENT

SCALE: 1" = 10'



2 DETENTION PLANTING B ENLARGEMENT

SCALE: 1" = 10'



3 DETENTION PLANTING A ENLARGEMENT

SCALE: 1" = 10'

SHEET NOTES

1. SEE SHEET LP-600 FOR PLANT LIST WITH PLANT CODES AND DETAILS.
2. REFER TO GENERAL NOTES ON SHEET LP-500.
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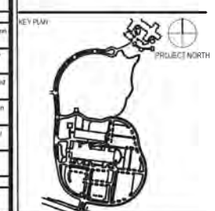
SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE

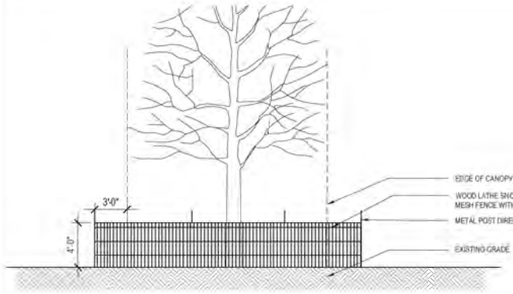
LANDSCAPE
ENLARGEMENTS

SCALE: 1" = 10'

SCALE 13472.00

PROJECT NUMBER

DRAWING NUMBER LP-400

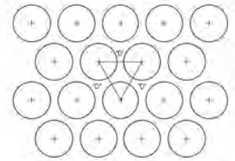


Notes:

1. SEE PLAN FOR LOCATION OF TREES TO BE PROTECTED - (LOCATION OF FENCE DETERMINED BY THIS GRAPHIC)

1 TREE FENCE PROTECTION

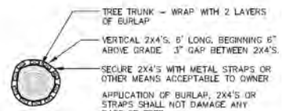
NTS



D=DIMENSION OF PLANT SPACING (SHRUB, GROUNDCOVER OR PERENNIAL) IN BED PLANTINGS

3 TYPICAL PLANT SPACING

NTS

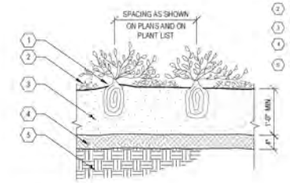


2 TREE TRUNK PROTECTION

NTS

NOTE:
CONTAINER PLANTS: REMOVE POTS AND SEPERATE POT BOUND ROOTS AS SPECIFIED.

1. SET ROOT FLARE (COLLAR) AT FINISHED GRADE
2. 1" DEEP MULCH. DO NOT COVER ROOT FLARE
3. PLANT BED MIX
4. SCARIFY TO 4" DEPTH AND RECOMPACT
5. SUBGRADE



NOTE TO SPECIFIER:

- DEPTH OF PLANTING BACKFILL MUST BE CONFIRMED AND LIMITS OF BED SHOWN ON THE PLANS AND LABELED ACCORDINGLY. USE SAME DEPTH THROUGHOUT PROJECT AND MATCH WITH SHRUB PLANTING - BED.
- VERIFY QUALITY OF SUBSOIL IF CLAY - BED UNDER DRAIN MUST BE CONSIDERED TO PREVENT ROOT ROT.

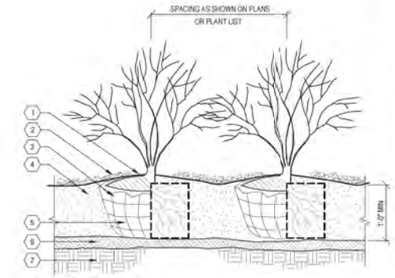
4 PERENNIAL AND ORNAMENTAL GRASS PLANTING

NTS

NOTES:

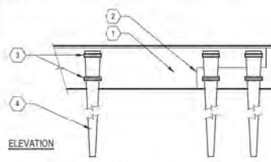
- REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL, OR, WITH CONTAINER PLANTS, REMOVE POTS AND SEPARATE POT BOUND ROOTS AS SPECIFIED.
- DO NOT PRUNE SHRUBS EXCEPT TO REMOVE DEAD OR BROKEN BRANCHES

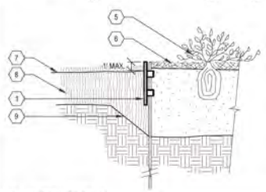
1. SET ROOT FLARE CROWN OF BALL AT FINISHED GRADE
2. 2" DEEP MULCH. DO NOT COVER ROOT FLARE
3. BALLED AND BURLAPPED SHRUB
4. PLANT BED MIX
5. BARE ROOT OR CONTAINER SHRUB
6. SCARIFY TO 4" DEPTH AND RECOMPACT
7. SUBGRADE - SLOPE TO FOLLOW FINISH GRADES TO MAINTAIN UNIFORM PLANT BED MIX DEPTH



5 SHRUB PLANTING

NTS

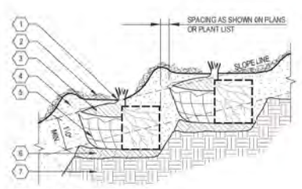




1. METAL EDGING AS SPECIFIED
2. FLUSH OVERLAP JOINT ASSEMBLY
3. PUNCHED SLOTS
4. METAL STAKES - SET ON INSIDE EDGE OF PLANT BED
5. PLANT BED
6. 2" DEEP MULCH TO BE FLUSH WITH TOP OF EDGING
7. FINISHED GRADE FOR LAWN, FLUSH FOR STONE
8. LAWN OR STONE MAINTENANCE EDGE
9. SUBGRADE TRANSITION SHALL OCCUR OUTSIDE OF EDGE OF PLANT BED

6 METAL EDGING

NTS



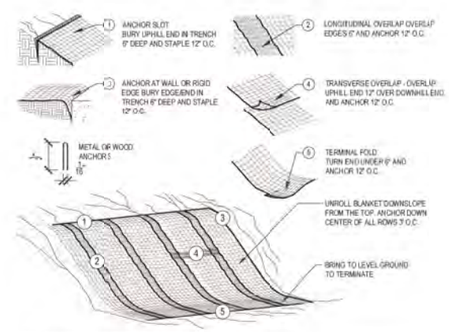
NOTES:

- REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL, OR, WITH CONTAINER PLANTS, REMOVE POTS AND SEPARATE POT BOUND ROOTS AS SPECIFIED.
- DO NOT PRUNE SHRUBS EXCEPT TO REMOVE DEAD OR BROKEN BRANCHES

1. SET ROOT FLARE COLLAR OF BALL AT SLOPE LINE
2. 2" DEEP MULCH. DO NOT COVER ROOT FLARE
3. BALLED AND BURLAPPED SHRUB
4. PLANT BED MIX
5. BARE ROOT OR CONTAINER SHRUB
6. SCARIFY TO 4" DEPTH AND RECOMPACT.
7. SUBGRADE - SLOPE TO FOLLOW FINISH GRADES TO MAINTAIN UNIFORM PLANT BED MIX DEPTH

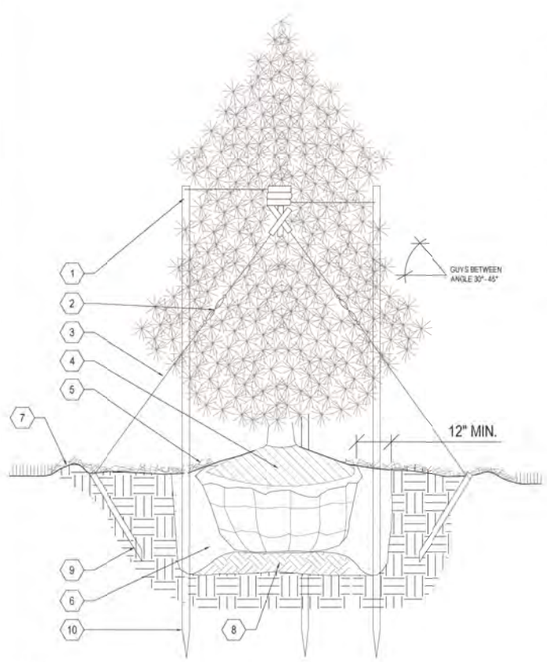
7 SHRUB PLANTING ON SLOPE

NTS



8 EROSION CONTROL BLANKET

NTS



1. TOP OF STAKES AND GUYS TO BE SET 1/2 TO 2/3 UP TREE. SET STAKES VERTICAL AND AT SAME HEIGHT
2. GUYING CABLE 3 GUYS PER TREE
3. TURNBUCKLE
4. REMOVE BURLAP FROM TOP 1/3 OF ROOT BALL
5. 2" DEEP MULCH. DO NOT COVER ROOT FLARE
6. PLANTING BACKFILL
7. MOUND TO FORM SAUCER
8. COMPACTED PLANTING BACKFILL
9. 2 x 4 HARDWOOD OR ROLF METAL FENCE POST. ANCHOR STAKE, TO BE DRIVEN BELOW FINISH GRADE. MIN. LENGTH TO BE 24"
10. STAKES TO EXTEND 12" BELOW TREE PIT IN UNDISTURBED GROUND

9 TREE PLANTING

NTS

SHADE TREES	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	OST	Ostrya virginiana / American Hophornbeam	6	3" Cal.	B&B	As Shown on Plan	Well-branched, single central leader
	QUE	Quercus bicolor / Swamp White Oak	23	3" Cal.	B&B	As Shown on Plan	Full, well-branched, single central leader
	QUR	Quercus rubra / Red Oak	24	3" Cal.	B&B	As Shown on Plan	Full, well branched, single central leader
	TIL	Tilia americana / American Linden	22	3" Cal.	Pot	As Shown on Plan	Full, well-branch, single leader
	ULM	Ulmus wilsoniana 'Prospector' / Prospector Elm	24	3" Cal.	B&B	As Shown on Plan	Full, well-branched, single central leader
CONIFEROUS TREES	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	PIA	Picea abies / Norway Spruce	5	6' Ht.	B&B	As Shown on Plan	Full to ground. Unsheared
FLOWERING TREES	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	AME	Amelanchier x grandiflora 'Autumn Brilliance' / Autumn Brilliance Apple Serviceberry	4	10 FT	B&B	As Shown on Plan	Well-branched, multi-stem, Min. 3 stems
	MAL	Malus x 'Hargozam' TM / Harvest Gold Crab Apple	10	10 FT	B&B	As Shown on Plan	Well-branched, single central leader
SHRUBS	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	ARO	Aronia melanocarpa 'Autumn Magic' / Autumn Magic Black Chokeberry	25	#5	Pot	36" o.c.	Well-branched, min. 4 canes, 5' O.C.
	COR	Cornus sericea 'Allemam's Compact' / Dwarf Red Twig Dogwood	25	#5	Pot	84" o.c.	Well-branched, min. 4 canes, 7 O.C.
	COK	Cornus sericea 'Kelseyi' / Kelsey's Dwarf Red Twig Dogwood	31	#1	Pot	30" o.c.	Full, unsheared, 2' O.C.
	JUN	Juniperus chinensis 'Sea Green' / Sea Green Juniper	30	#5	Pot	96" o.c.	Full, unsheared, 4' O.C.
	RHU	Rhus copallina latifolium 'Prairie Flame' TM / Dwarf Sumac	18	#5	Pot	48" o.c.	Well-branched, min. 4 canes, 4' O.C.
	TAX	Taxus x media 'Wardii' / Ward Anglo-Japanese Yew	27	#5	Pot	72" o.c.	Full, unsheared, 4' O.C.
GRASSES	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	CAL	calamagrostis x acutiflora / Feather Reed Grass	70	#1	Pot	36" o.c.	Well-rooted, 24" O.C.
	CHA	Chasmanthium latifolium / Northern Sea Oats	202	#1	Pot	36" o.c.	Well-rooted 24" O.C.
SHRUB AREAS	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	BRU	Brunnera macrophylla / Siberian Bugloss	75	#1	Pot	24" o.c.	Well-rooted, 24" O.C.
	ECH	Echinacea pupurea 'White Swan' / White Swan Coneflower	90	#1	Pot	24" o.c.	Well-rooted, 24" O.C.
	RUD	Rudbeckia hirpida sullivantii 'Little Goldstar' / Little Goldstar Coneflower	323	#1	Pot	12" o.c.	Well-rooted, 12" O.C.
	SPO	Sporobolus heterolepis / Prairie Dropseed	188	#1	Pot	18" o.c.	Well-rooted, 18" O.C.
GROUND COVERS	CODE	BOTANICAL / COMMON NAME	QTY	SIZE	FORM	SPACING	REMARKS
	NAV	Rhino Seed Wetland Mix	12,473 sf		seed		See Manufacturers Specification's
	TUR	Turf Sod / Drought Tolerant Fescue Blend	248,00 0 sf		sod		See Manufacturers Specification's

11 PLANTING SCHEDULE

NTS

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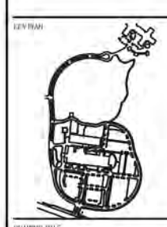
ISSUED FOR	REV	DATE
SITE PLAN-RESUBMITTAL R4	J	16SEP2022
LCDVE RESUBMITTAL R3	I	06SEP2022
LCDVE RESUBMITTAL R2	H	26AUG2022
BID PACK 1	G	29JUL2022
SITE PLAN-RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN-RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN-REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
ID PROGRESS	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEY PLAN



DRAWING TITLE

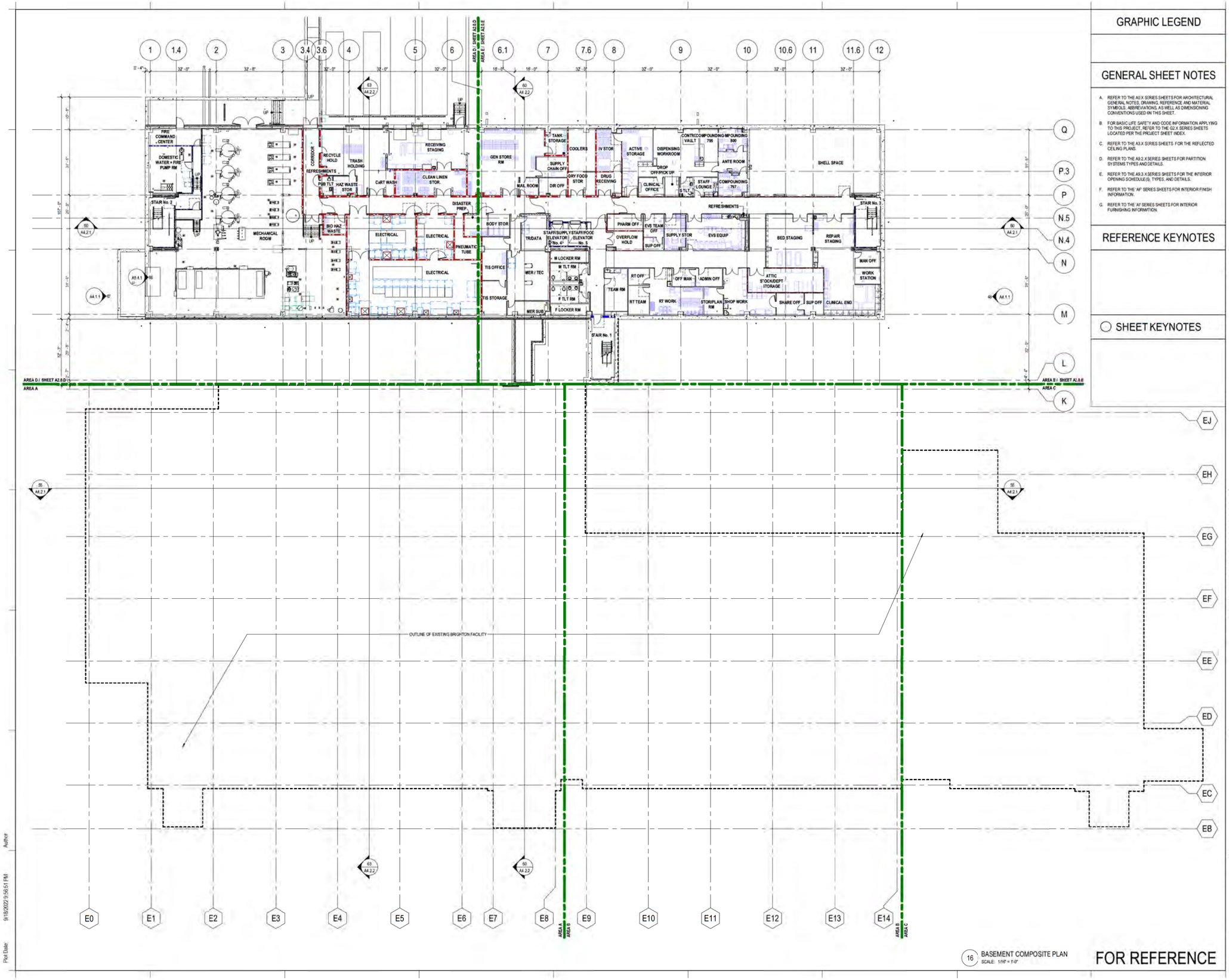
LANDSCAPE DETAILS

SCALE: AS NOTED

SCALE

PROJECT NUMBER 13472

DRAWING NUMBER LP-500



16 BASEMENT COMPOSITE PLAN
SCALE: 1/16" = 1'-0"

FOR REFERENCE

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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D. REFER TO THE A9.2.X SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

REFERENCE KEYNOTES

SHEET KEYNOTES

Trinity Health

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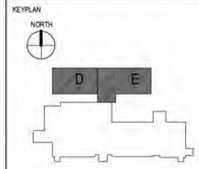
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
BASEMENT COMPOSITE PLAN

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

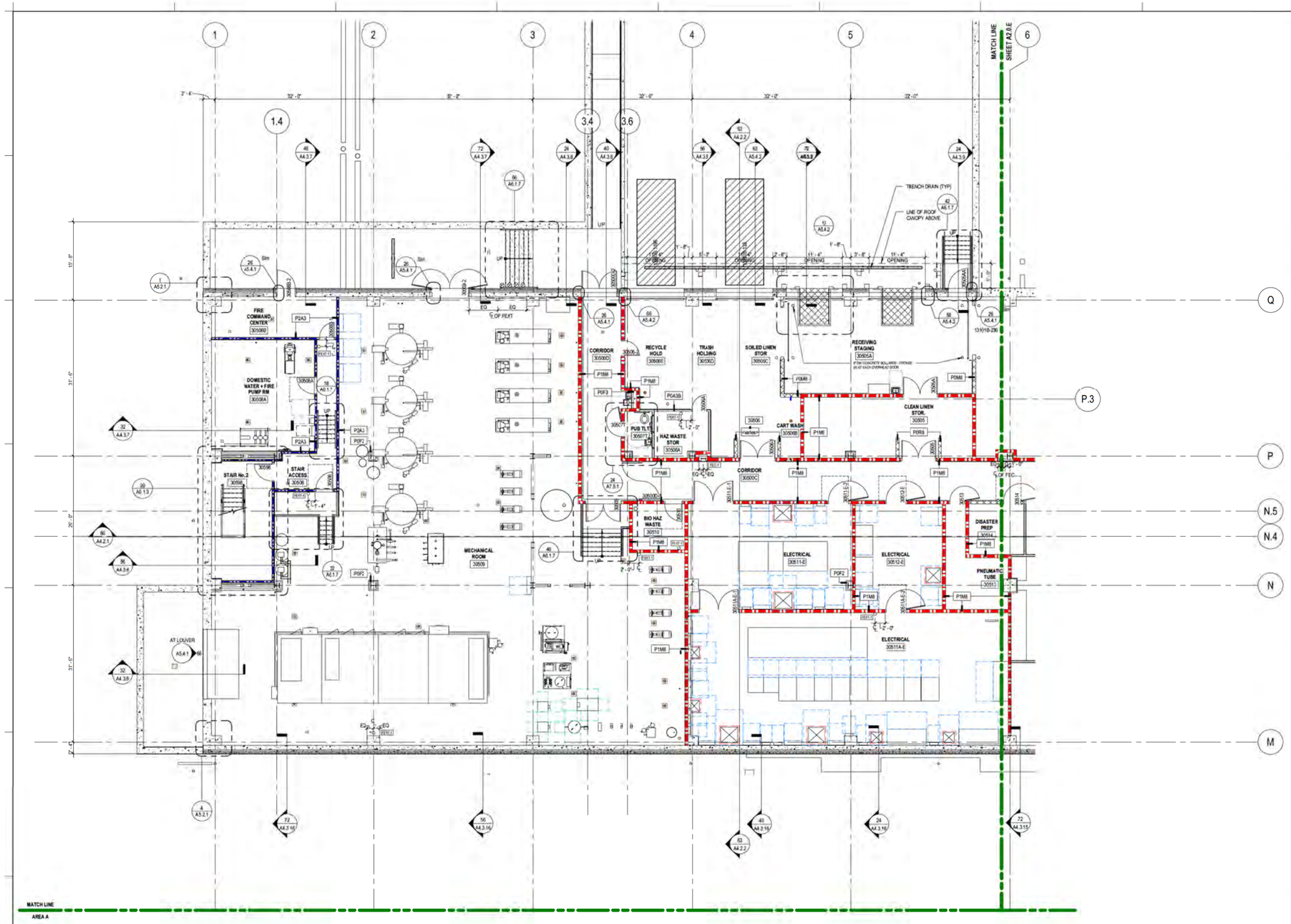
SHEET NUMBER
A2.1.0

Plot Date: 9/19/2022 9:56:51 PM

Author

9/19/2022 9:56:51 PM

Plot Date:



24 BASEMENT PLAN - AREA D
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	7
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	9
FEXT-2	CARBON DIOXIDE TYPE	1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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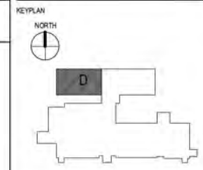
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
BASEMENT FLOOR PLAN - AREA D

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

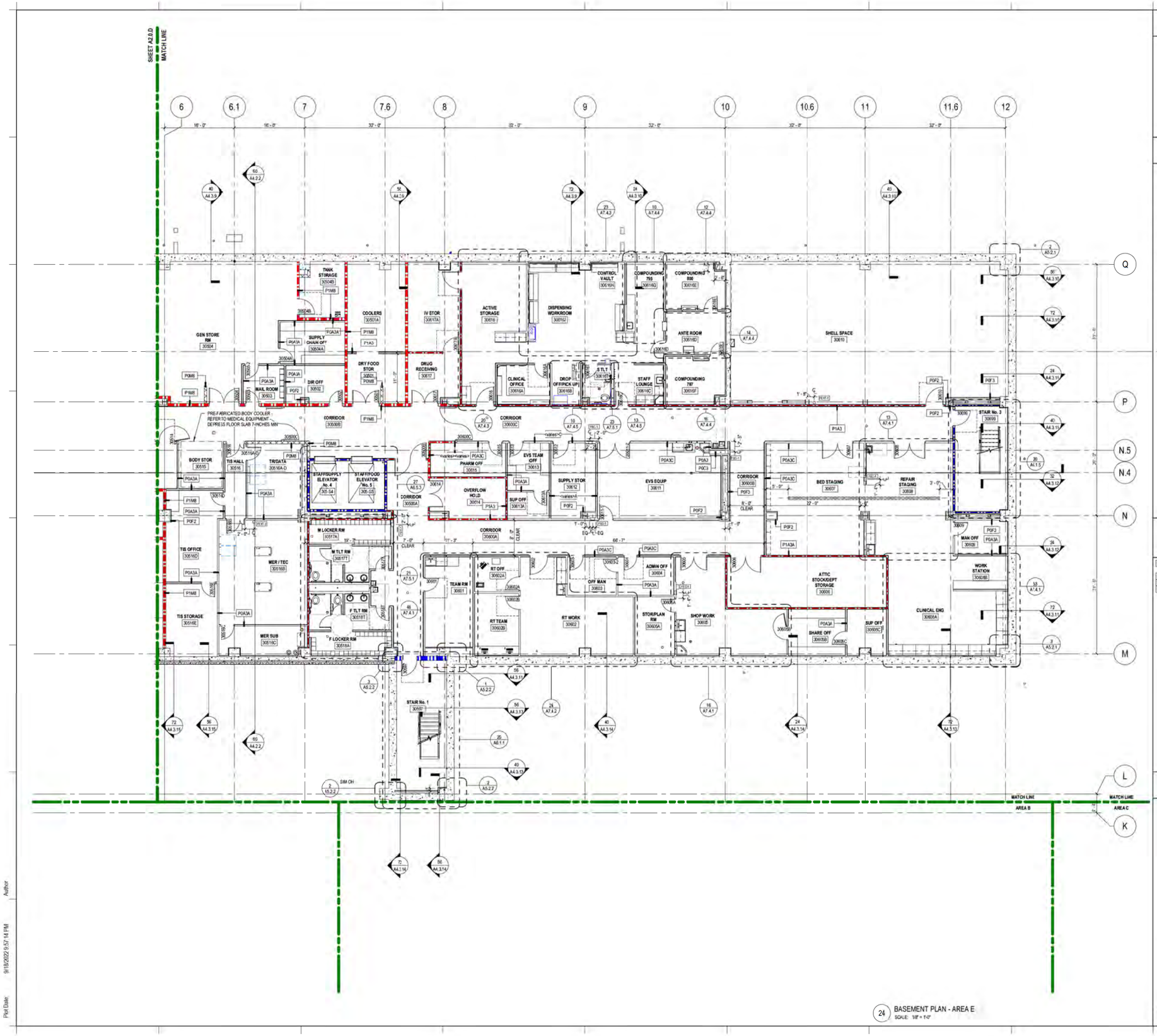
PROJECT NUMBER

SHEET NUMBER A2.0.D

Plot Date: 9/18/2022 9:57:02 PM

Author

Plot Date: 9/18/2022 9:57:02 PM



24 BASEMENT PLAN - AREA E
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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C. REFER TO THE A3.X SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE A9.2.X SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

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G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	7
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	9
FEXT-2	CARBON DIOXIDE TYPE	1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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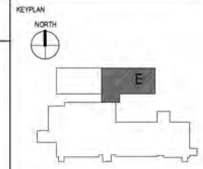
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
BASEMENT FLOOR PLAN - AREA E

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

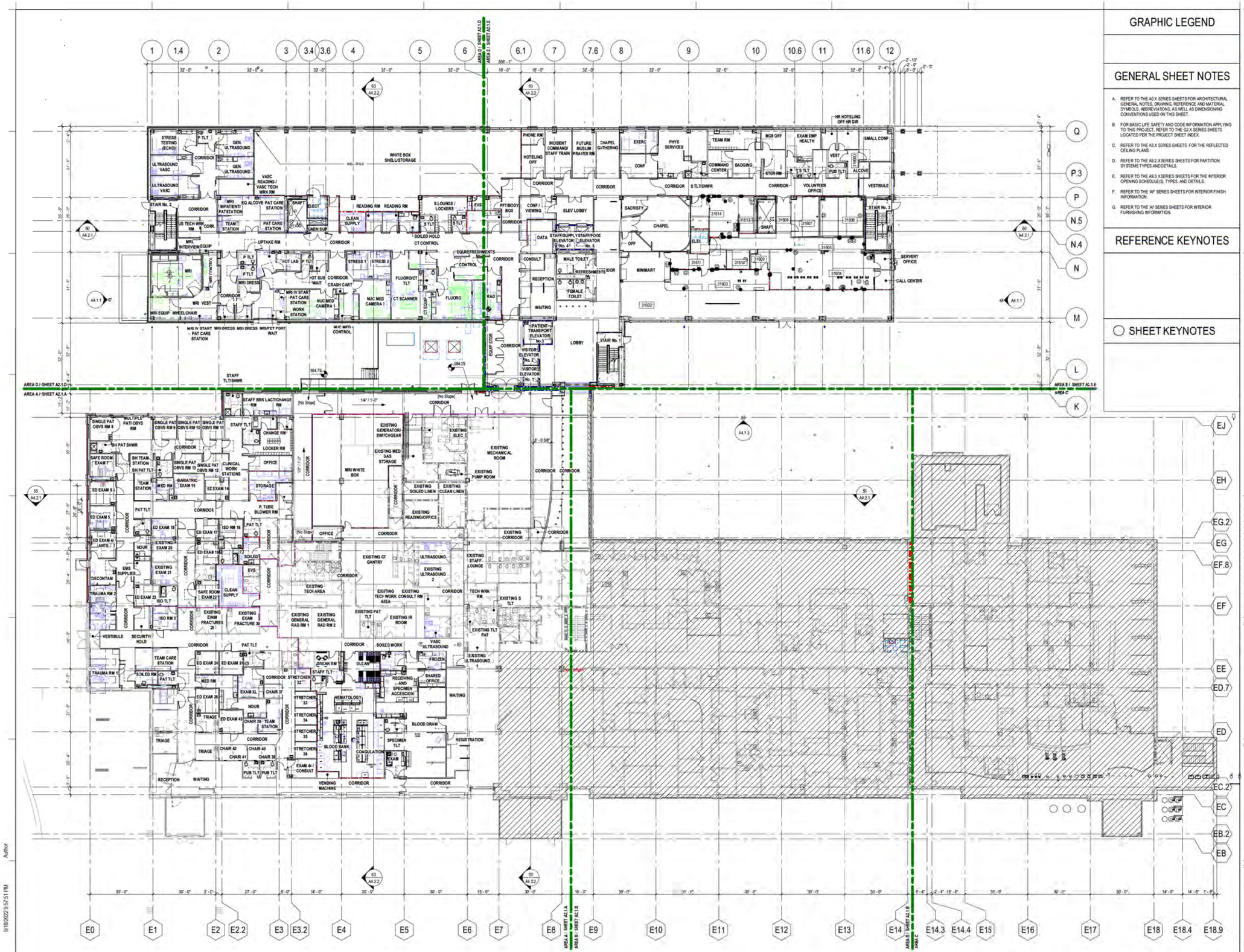
PROJECT NUMBER

SHEET NUMBER
A2.0.E

Plot Date: 9/18/2022 9:57:14 PM

Author

Plot Date: 9/18/2022 9:57:14 PM



16 FIRST FLOOR COMPOSITE PLAN
SCALE 3/16" = 1'-0"

FOR REFERENCE

GRAPHIC LEGEND

GENERAL SHEET NOTES

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REFERENCE KEYNOTES

SHEET KEYNOTES

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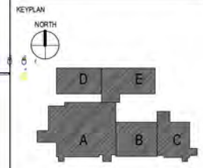
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN REUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
FIRST FLOOR COMPOSITE PLAN

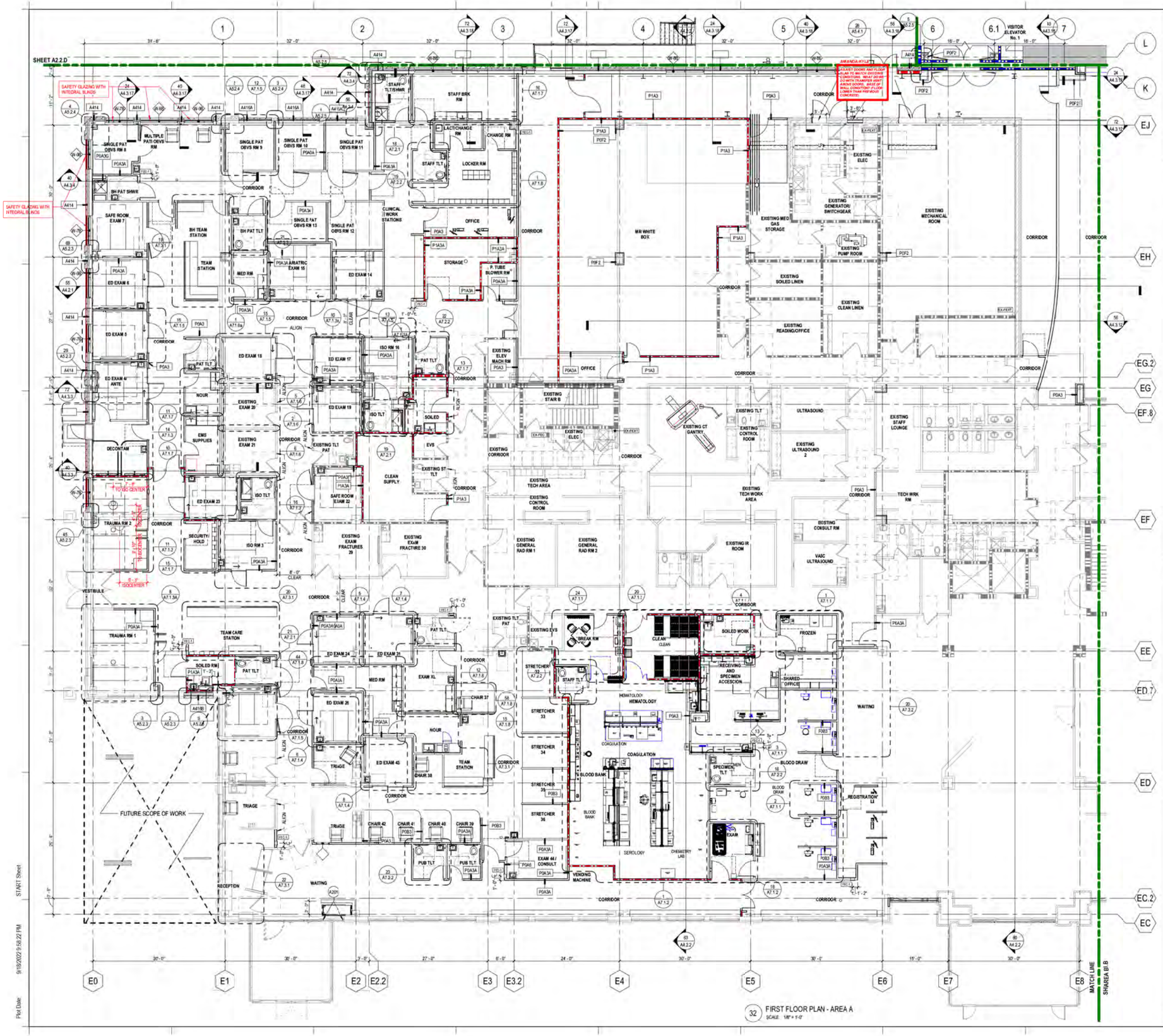
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.1

Plot Date: 9/18/2022 9:57:51 PM

Author



32 FIRST FLOOR PLAN - AREA A
SCALE 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	22
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	4

SHEET KEYNOTES

A201 INTERIOR WINDOW FILM FROM LOWER MULLION TO FLOOR MULLION ON EXISTING CURTAINWALL SYSTEM. COORDINATE WORK WITH OWNERS VENDOR (OFCI).

FOR REFERENCE

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
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SUITE 200
FARMINGTON HILLS, MI 48331
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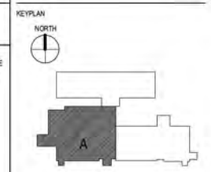
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



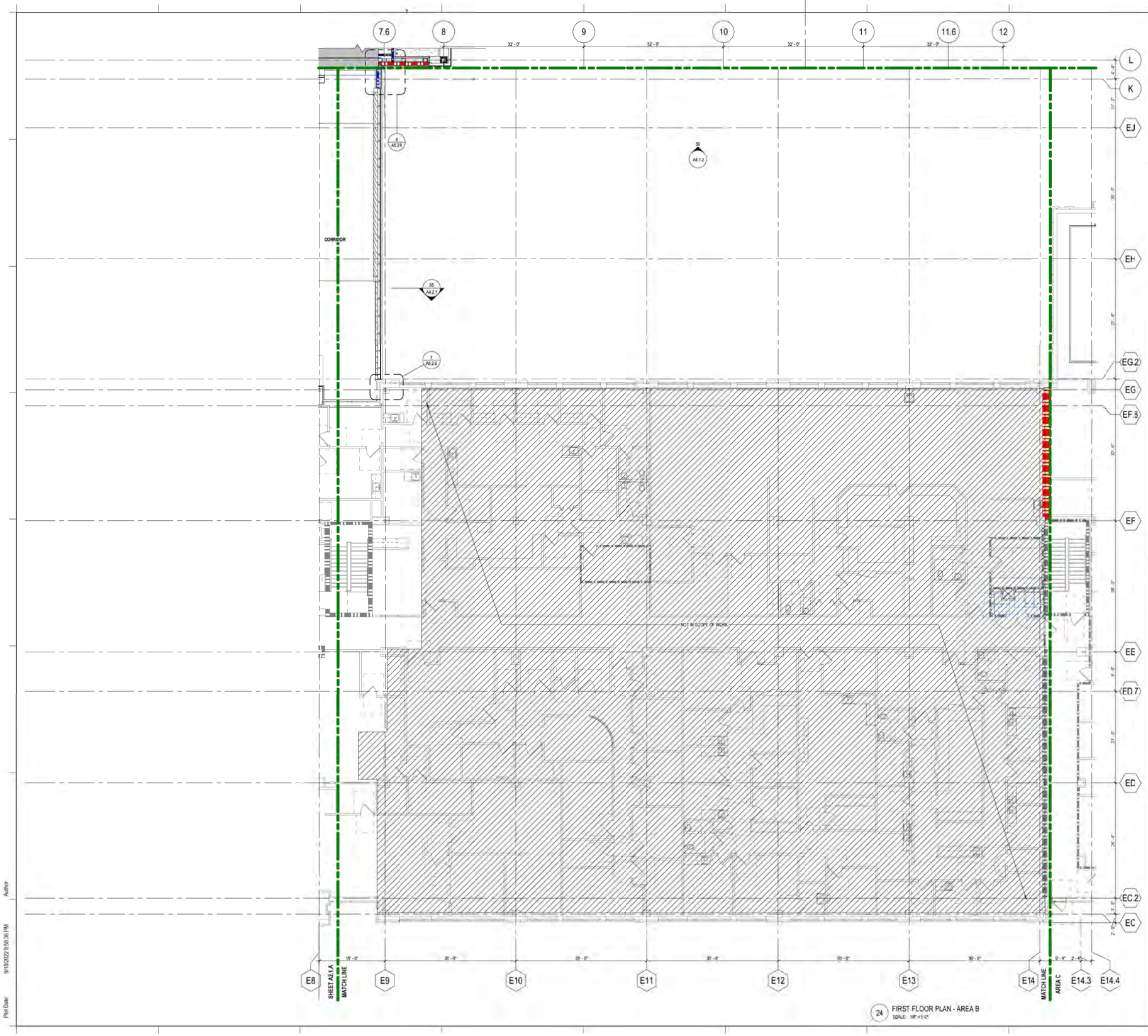
SHEET TITLE
FIRST FLOOR PLAN - AREA A

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.1A

Plot Date: 9/19/2022 9:58:22 PM



24 FIRST FLOOR PLAN - AREA B
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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F. REFER TO THE 'AP' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	22
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	4

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

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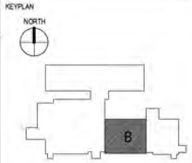
P: 248.344.2800 F: 248.344.1550

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
FIRST FLOOR PLAN - AREA B

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

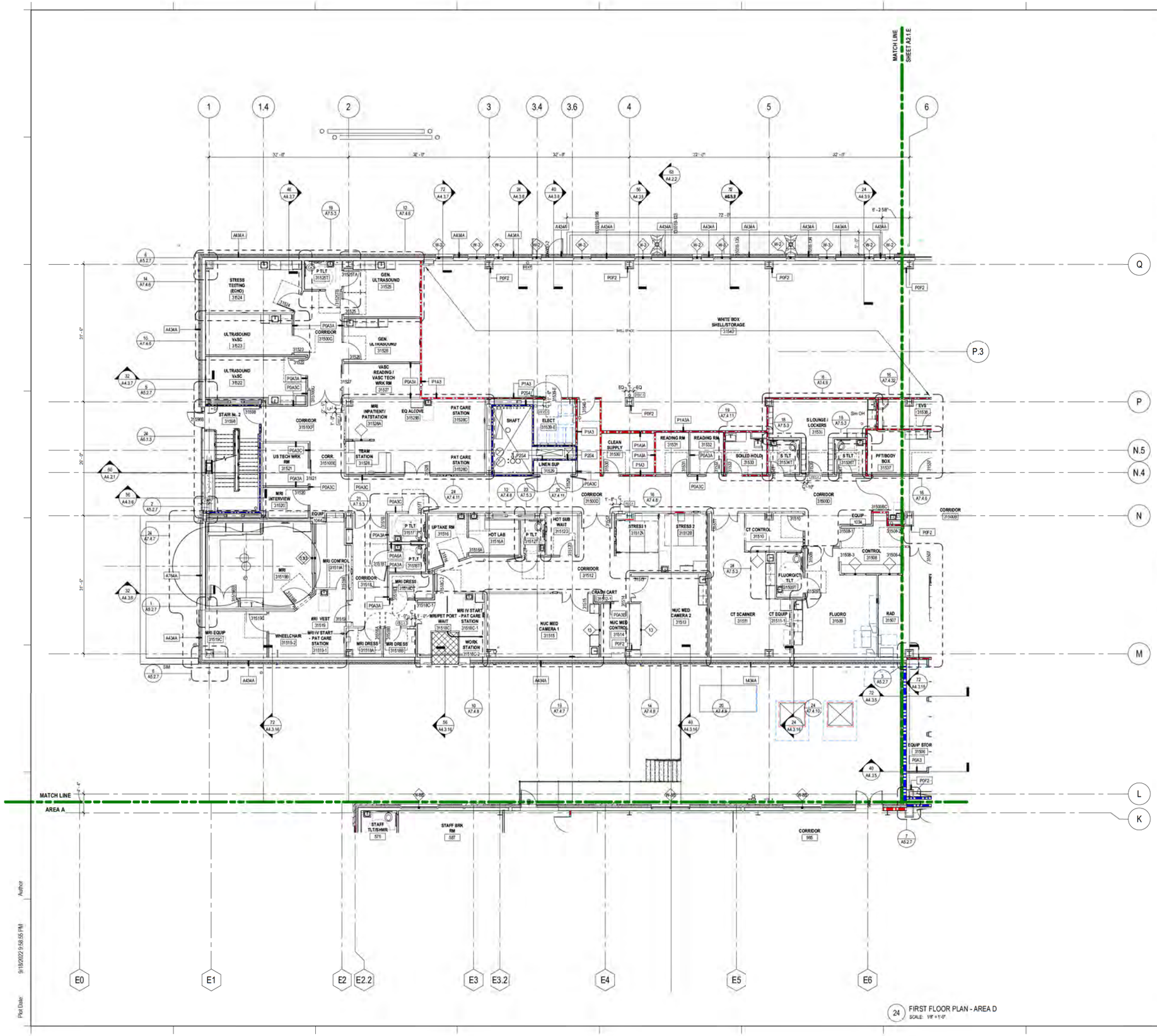
PROJECT NUMBER

SHEET NUMBER
A2.1B

Plot Date: 9/18/2022 9:58:36 PM

Author

Plot Date: 9/18/2022 9:58:36 PM



24 FIRST FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	22
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	4

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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EXPANSION AND RENOVATION

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
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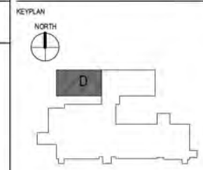
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



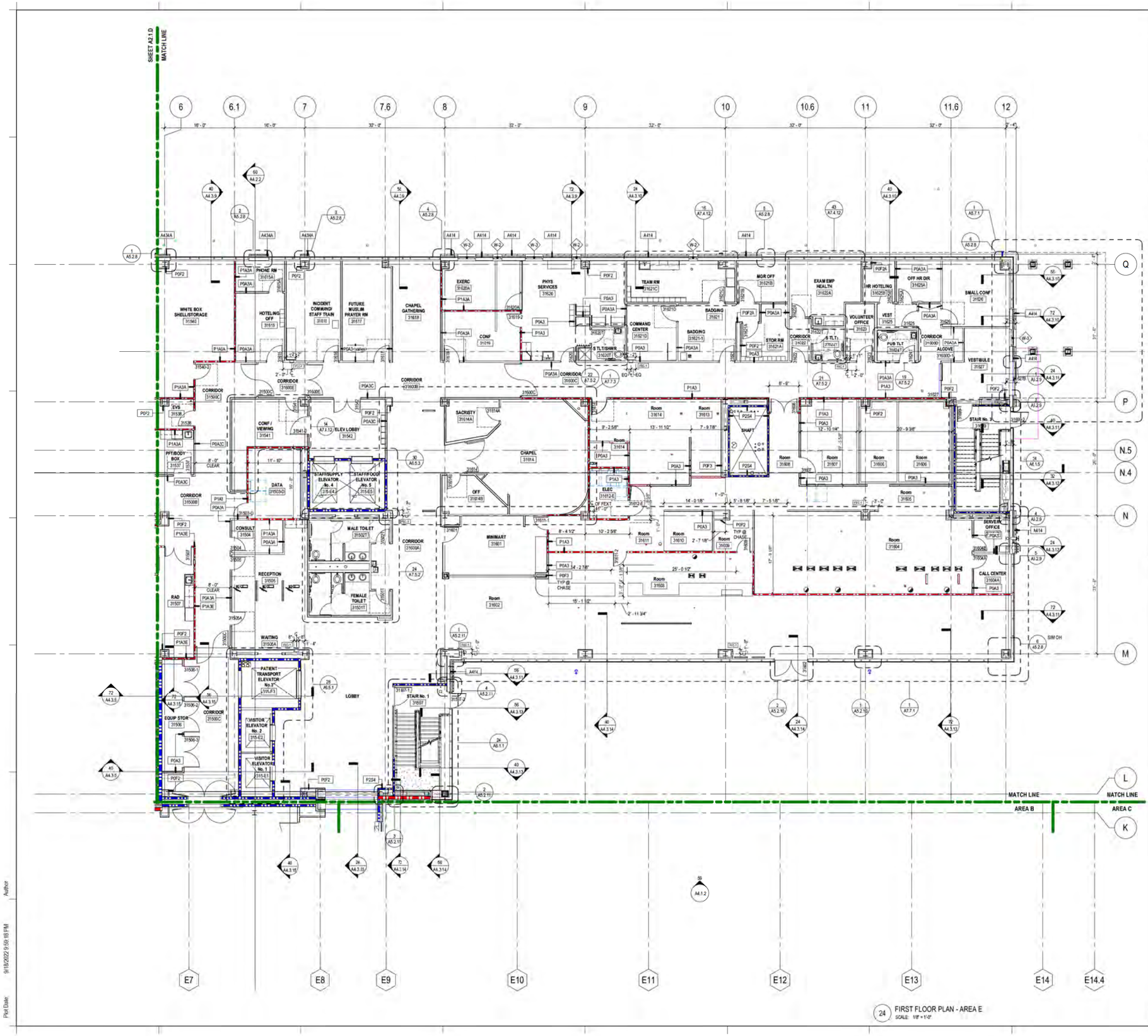
SHEET TITLE
FIRST FLOOR PLAN - AREA D

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.1½D

Plot Date: 9/19/2022 9:58:55 PM



24 FIRST FLOOR PLAN - AREA E
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	22
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	4

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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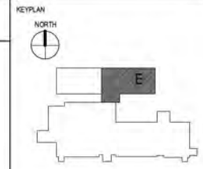
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



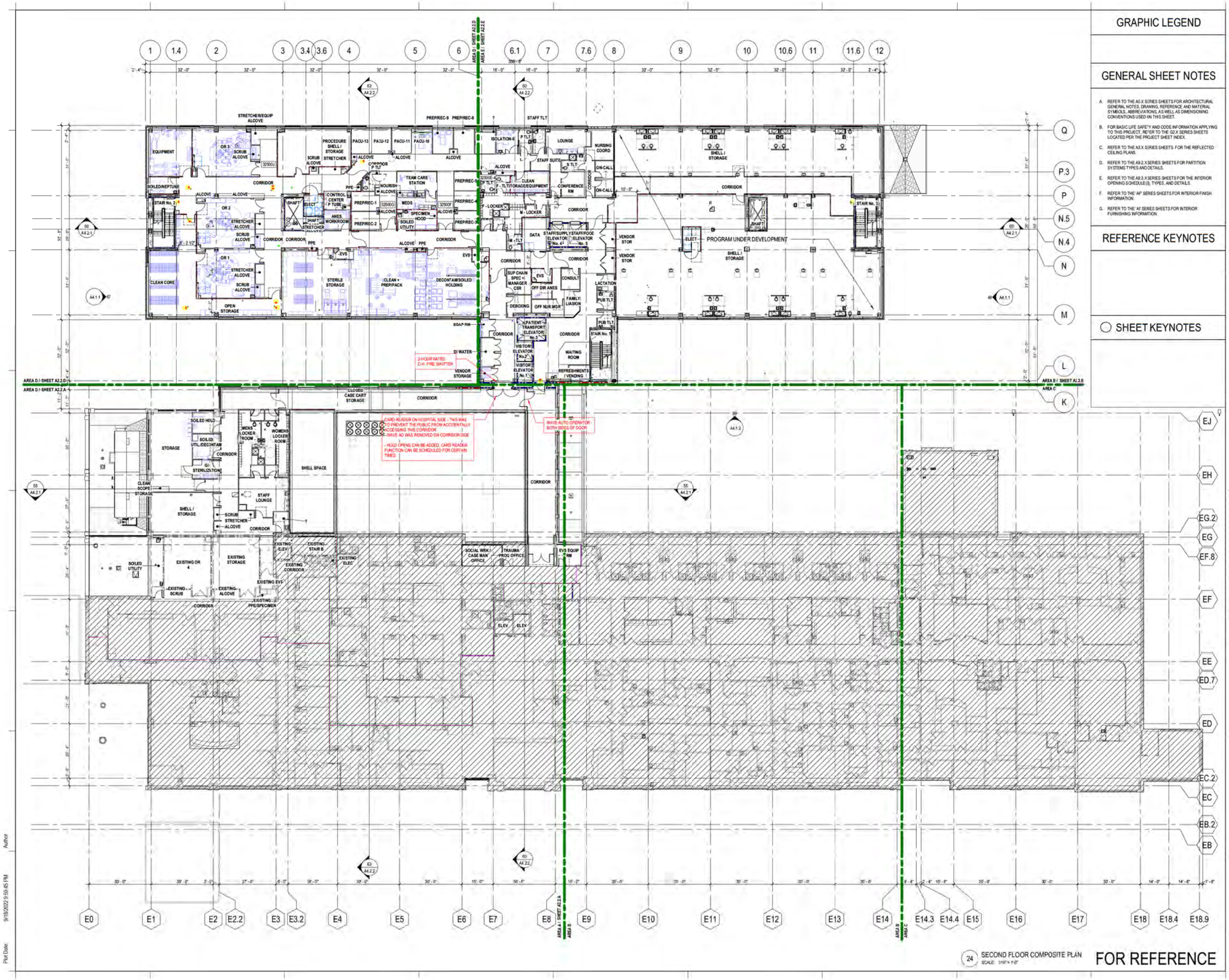
SHEET TITLE
FIRST FLOOR PLAN - AREA E

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.1.E

Plot Date: 9/19/2022 9:59:18 PM



24 SECOND FLOOR COMPOSITE PLAN
SCALE: 1/16" = 1'-0"

FOR REFERENCE

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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D. REFER TO THE A9.2.X SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

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F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

REFERENCE KEYNOTES

SHEET KEYNOTES

Trinity Health

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
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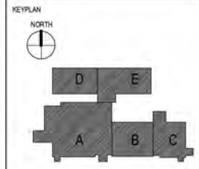
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE

SECOND FLOOR
COMPOSITE PLAN

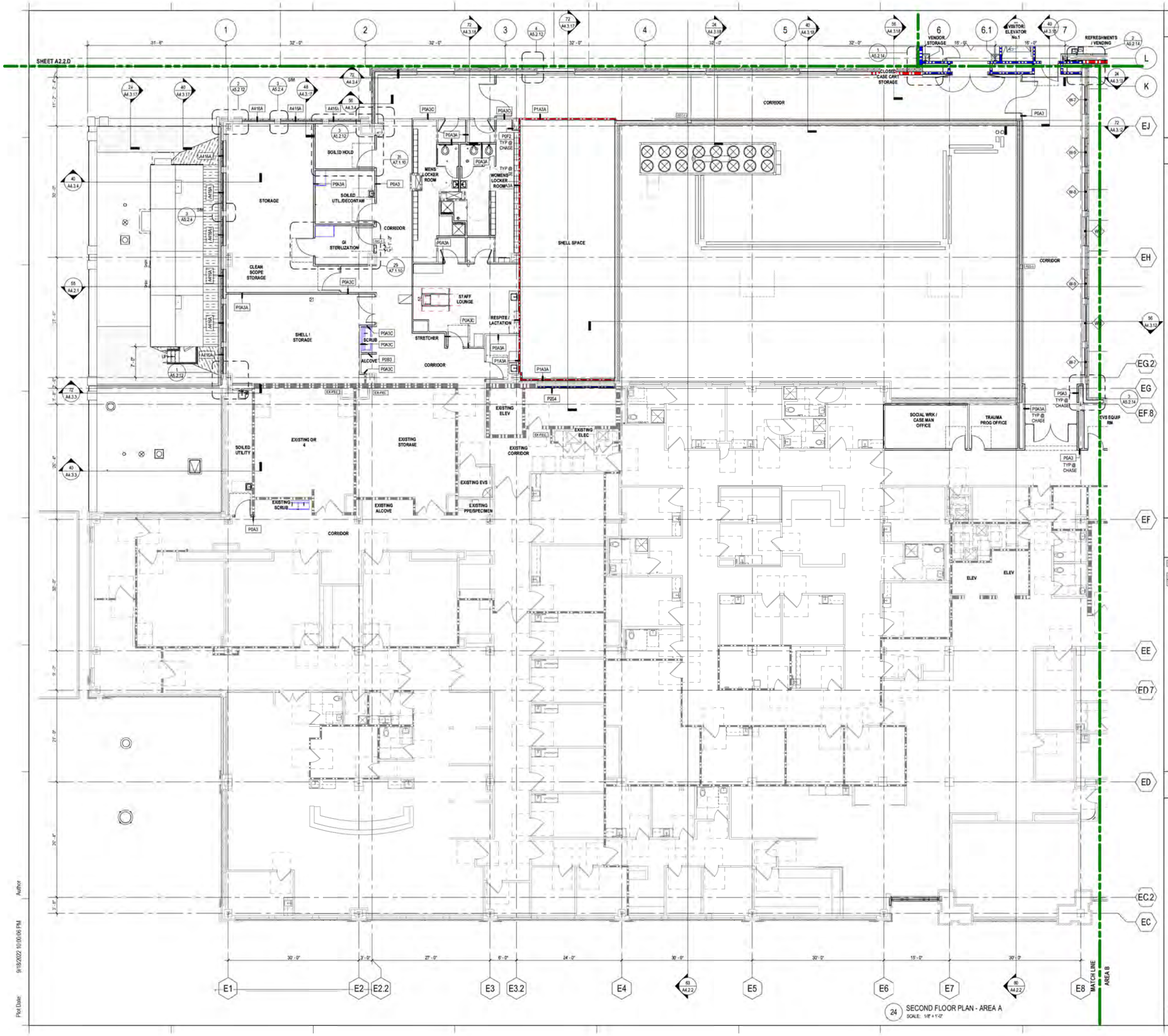
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.12

Plot Date: 9/19/2022 9:59:45 PM

Author



24 SECOND FLOOR PLAN - AREA A
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

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D. REFER TO THE A9.2.X SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

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F. REFER TO THE 'AP' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	14
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	6

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
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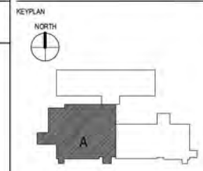
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
SECOND FLOOR PLAN - AREA A

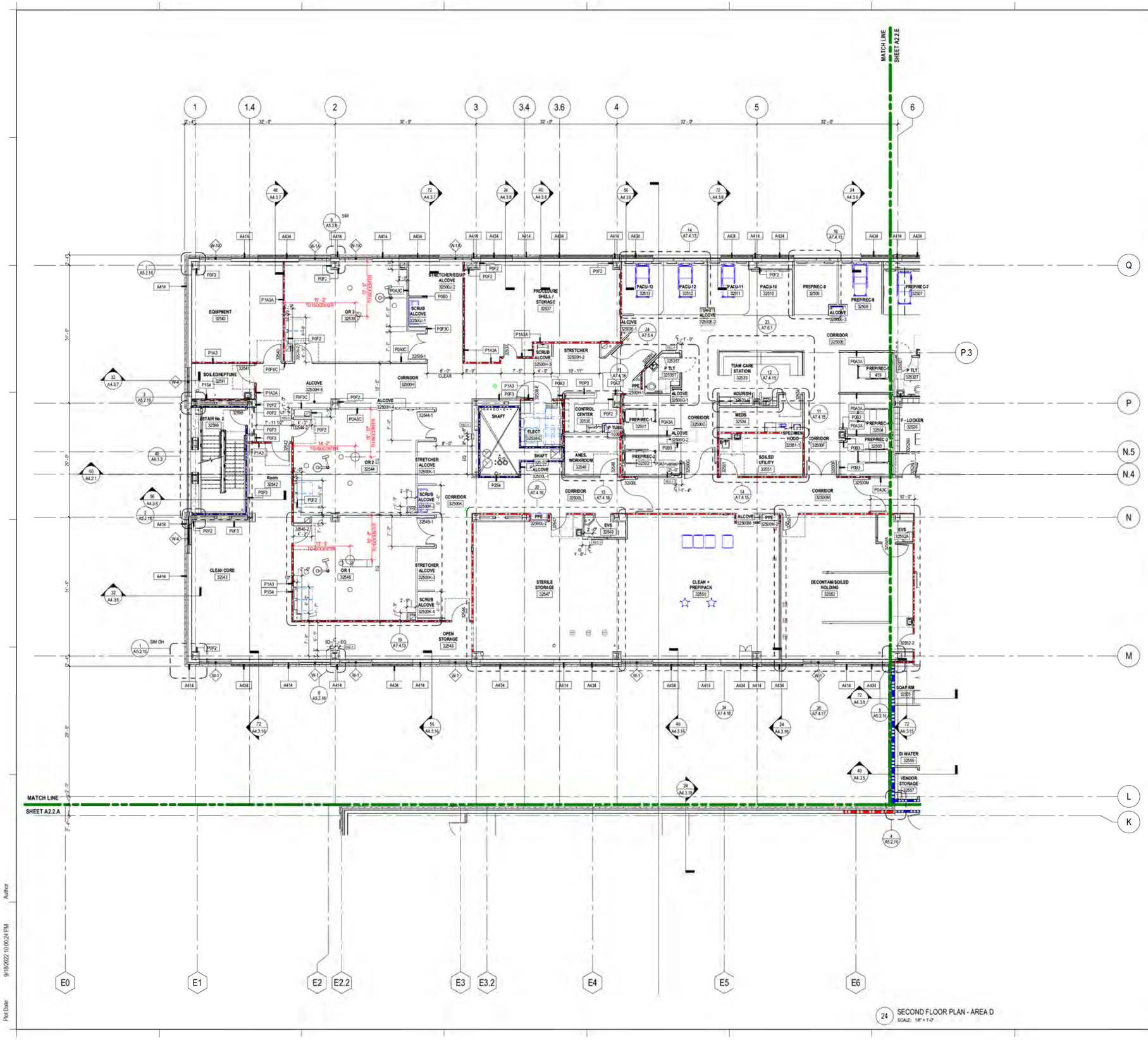
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.2.A

Plot Date: 9/18/2022 10:00:06 PM

Author



24 SECOND FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	14
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	6

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
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SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN

NORTH

D

SHEET TITLE

SECOND FLOOR PLAN - AREA D

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

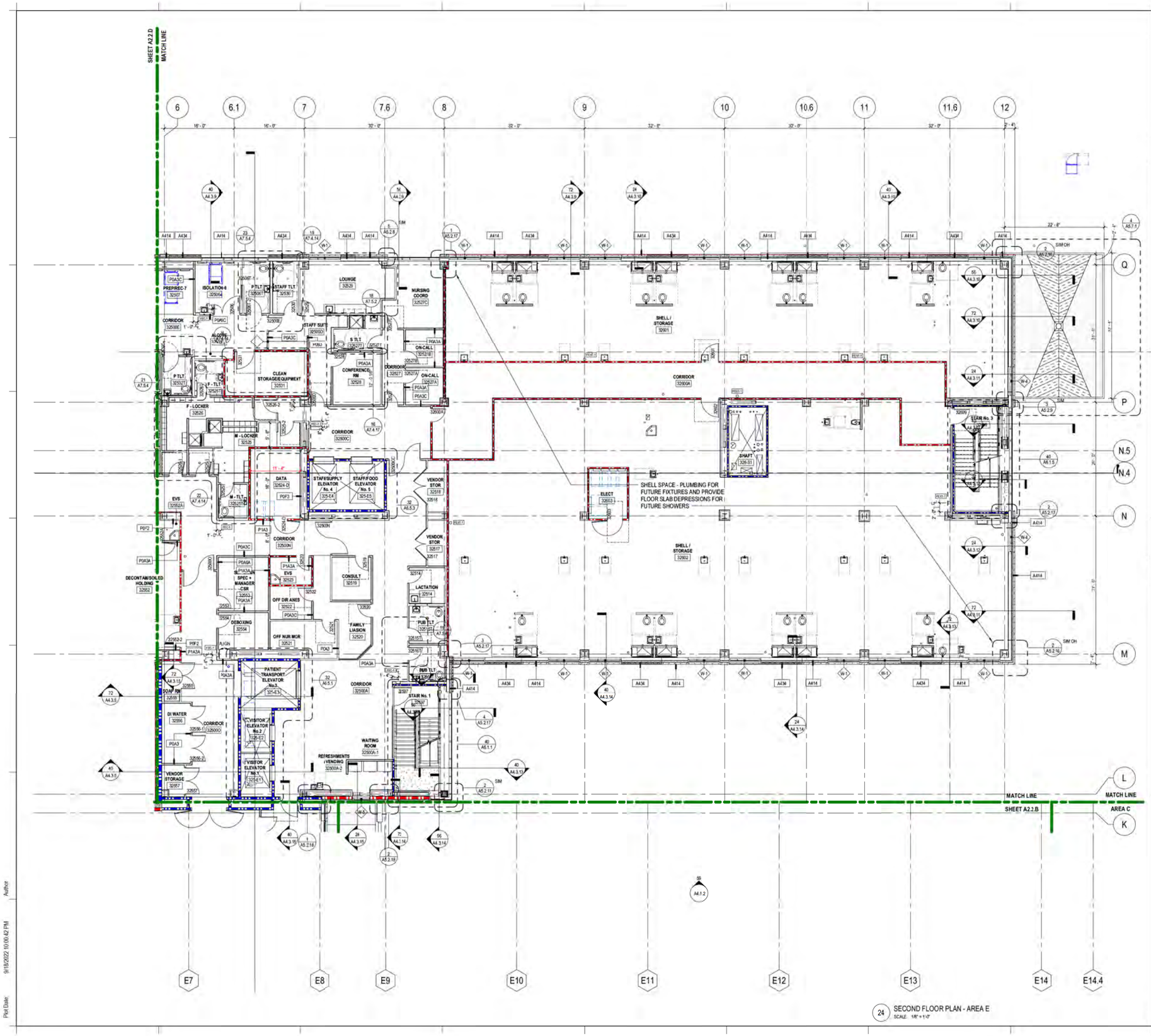
PROJECT NUMBER

SHEET NUMBER A2.2D

Plot Date: 9/18/2022 10:00:24 PM

Author

Plot Date: 9/18/2022 10:00:24 PM



24 SECOND FLOOR PLAN - AREA E
SCALE 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

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G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	14
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	6

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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BRIGHTON
EXPANSION AND RENOVATION

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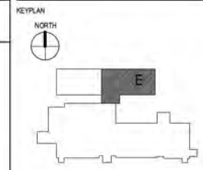
33533 W. TWELVE MILE
SUITE 200
FARMINGTON HILLS, MI 48331
P: 248.344.2800 F: 248.344.1550

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	08MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
SECOND FLOOR PLAN - AREA E

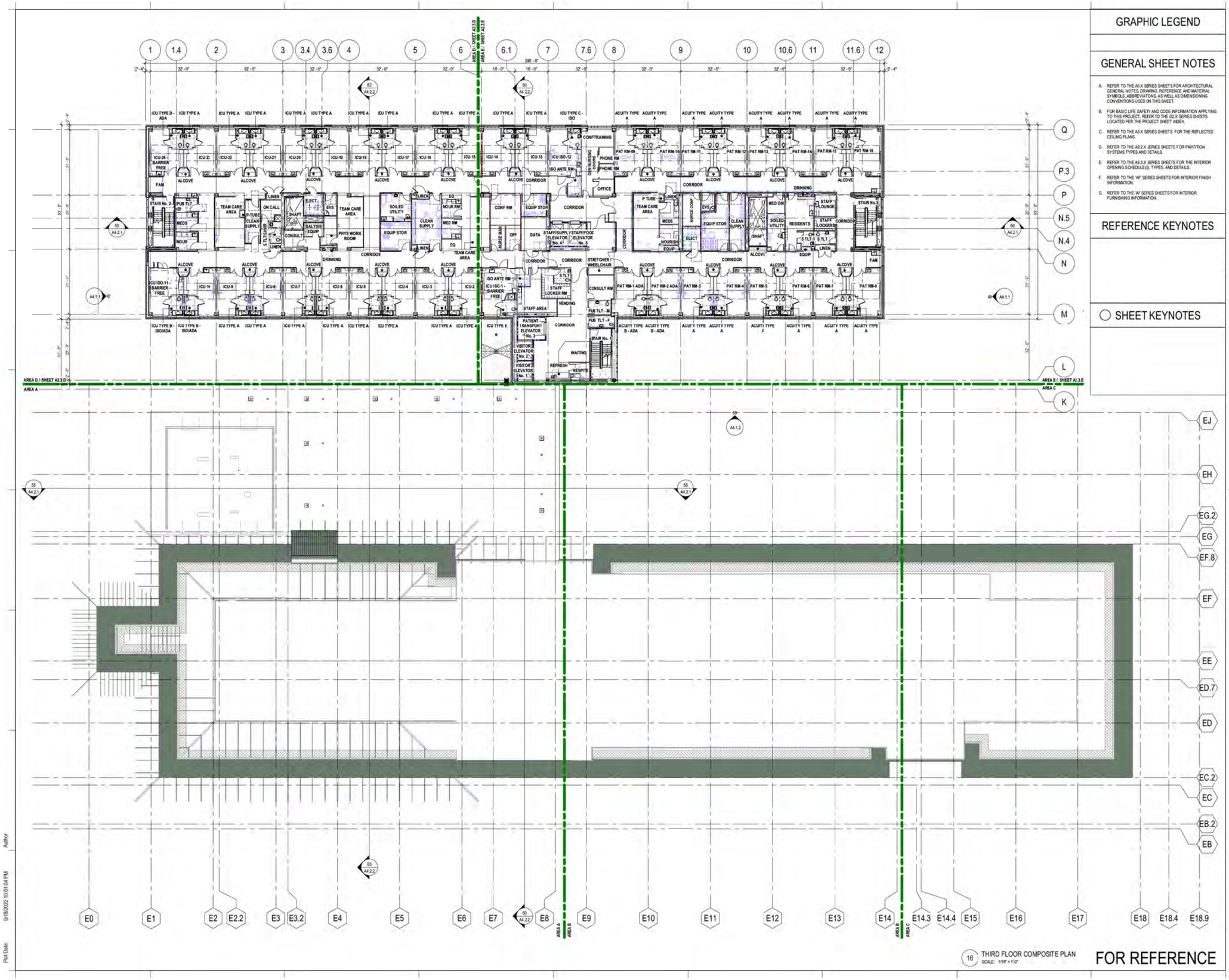
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.2.E

Plot Date: 9/18/2022 10:00:42 PM

Author



16 THIRD FLOOR COMPOSITE PLAN
SCALE: 1/16" = 1'-0"

FOR REFERENCE

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE G0.X SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE A3.X SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE A9.2.X SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE "AF" SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE "AI" SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

REFERENCE KEYNOTES

SHEET KEYNOTES

Trinity Health

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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN

NORTH

D E A B C

SHEET TITLE
THIRD FLOOR COMPOSITE PLAN

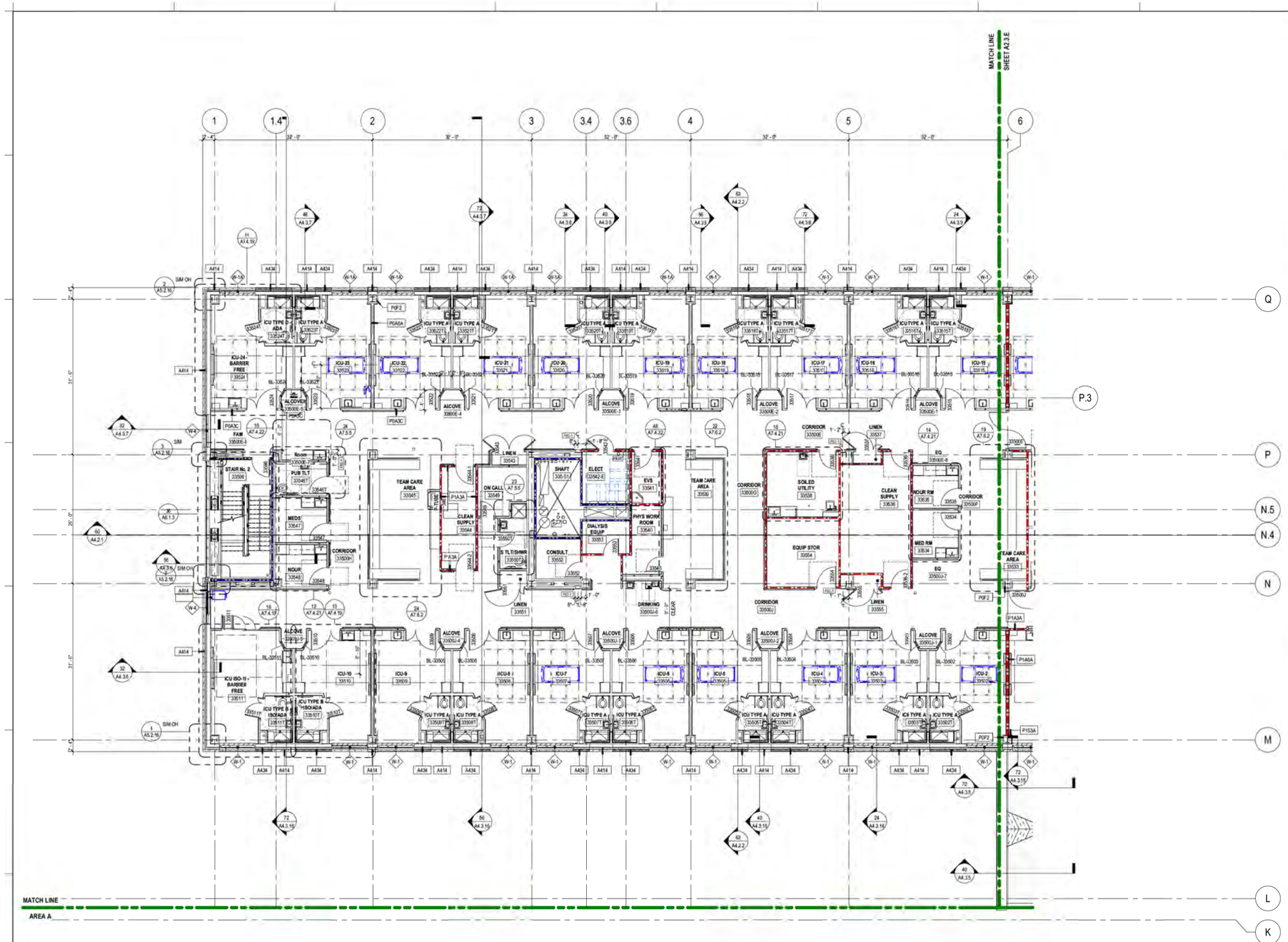
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.3

Plot Date: 9/19/2022 10:01:04 PM

Author



24 THIRD FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	12
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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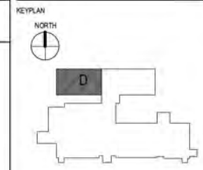
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
THIRD FLOOR PLAN - AREA D

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

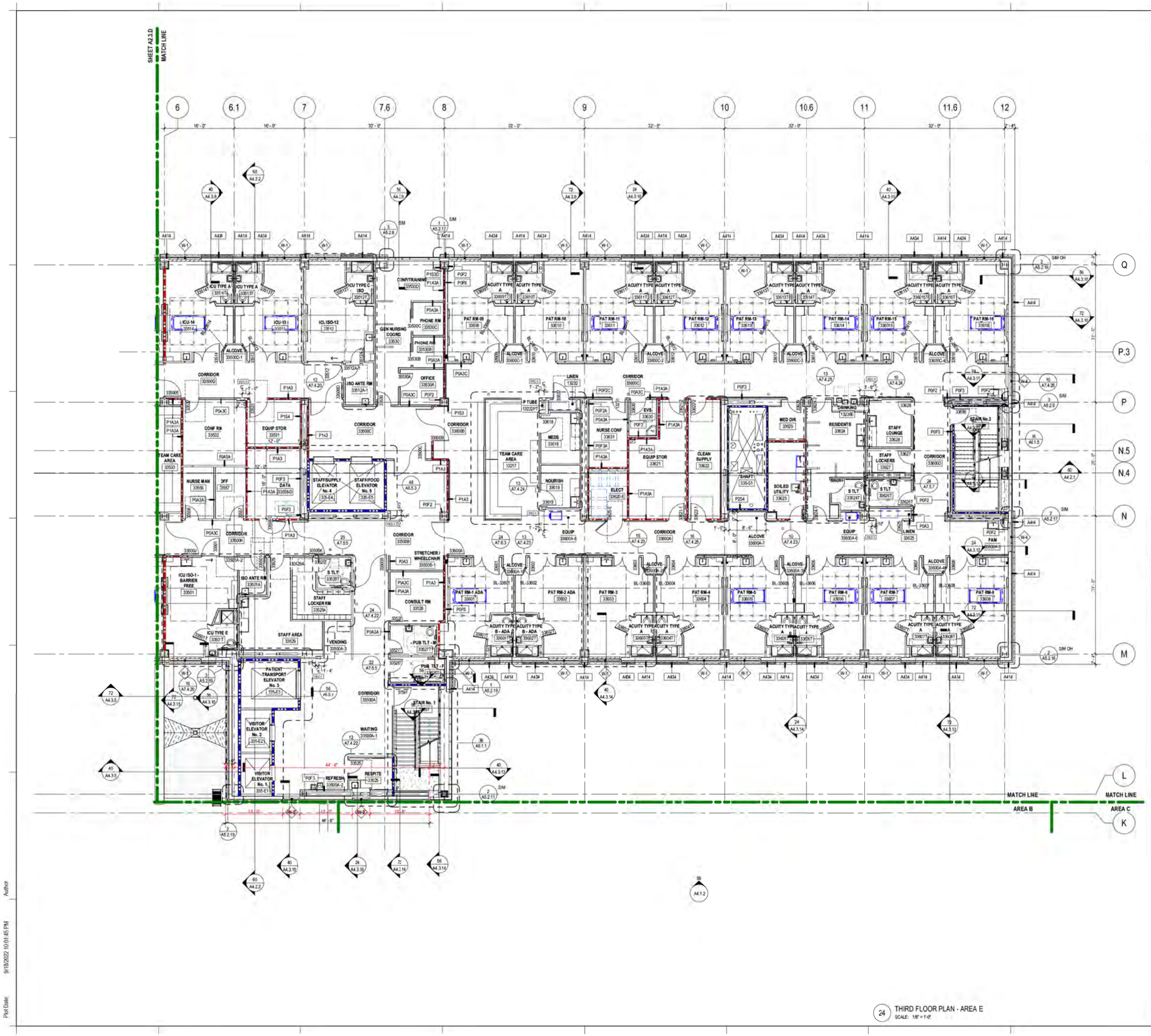
PROJECT NUMBER

SHEET NUMBER
A2.3.D

Plot Date: 9/18/2022 10:01:24 PM

Author

Plot Date: 9/18/2022 10:01:24 PM



24 THIRD FLOOR PLAN - AREA E
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	12
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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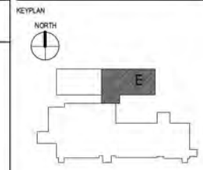
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
THIRD FLOOR PLAN - AREA E

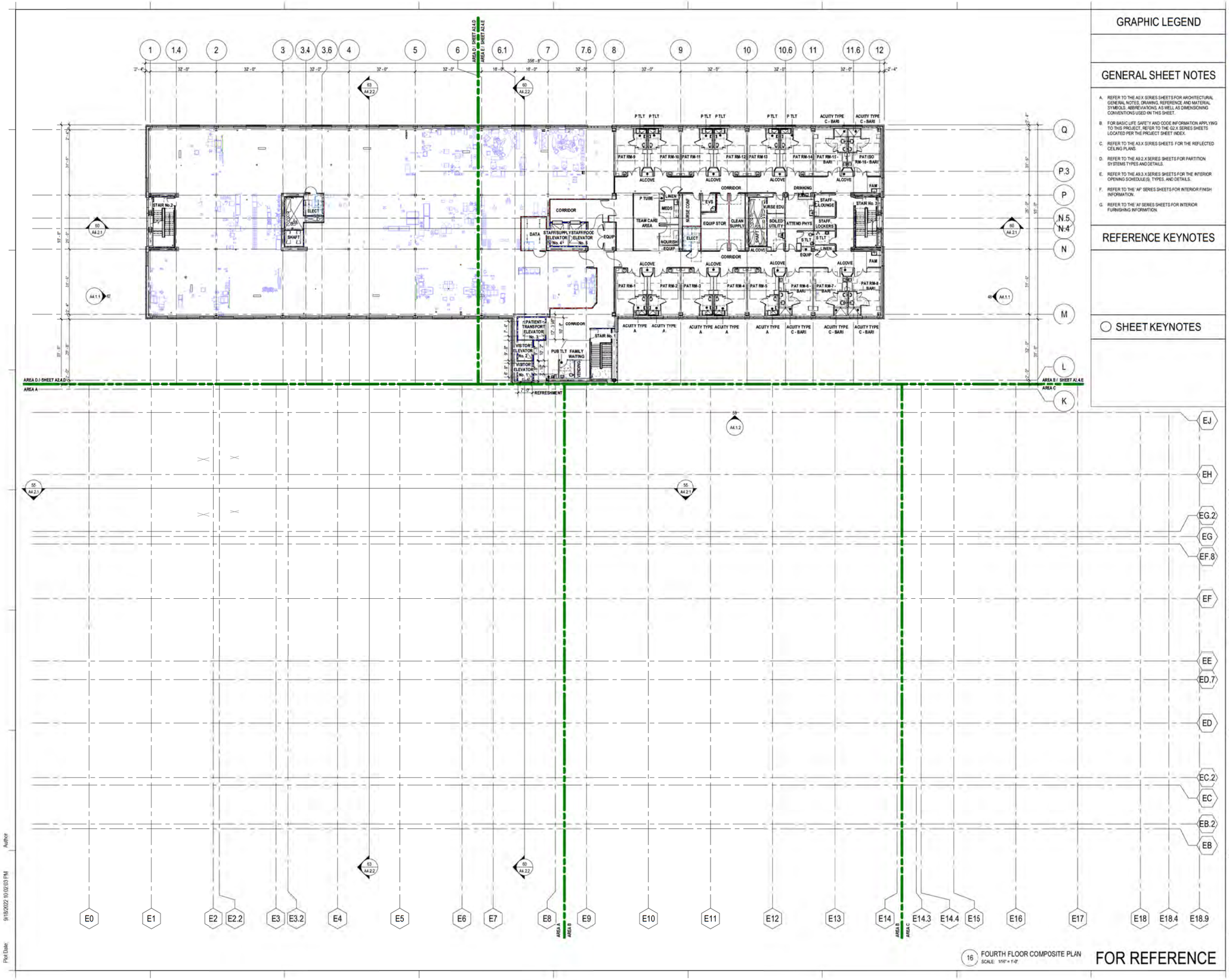
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.3.E

Plot Date: 9/18/2022 10:01:45 PM

Author



16 FOURTH FLOOR COMPOSITE PLAN
SCALE: 1/16" = 1'-0"

FOR REFERENCE

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

REFERENCE KEYNOTES

SHEET KEYNOTES

Trinity Health

ST. JOSEPH MERCY
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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN

NORTH

D E A B C

SHEET TITLE

FOURTH FLOOR
COMPOSITE PLAN

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

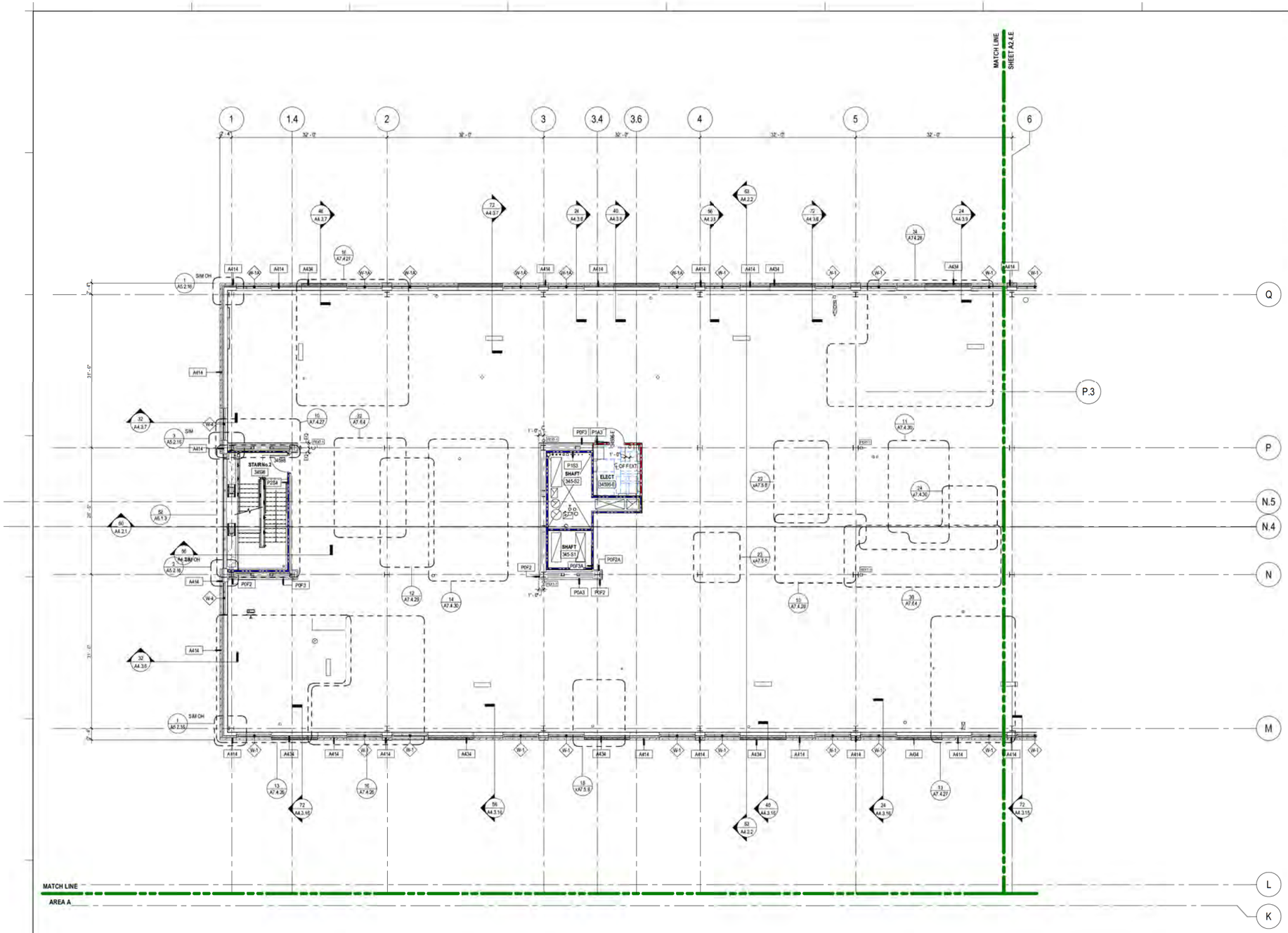
PROJECT NUMBER

SHEET NUMBER

A2.4

Plot Date: 9/19/2022 10:02:03 PM

Author



24 FOURTH FLOOR PLAN - AREA D
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

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F. REFER TO THE 'AP' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	7
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	9
FEXT-2	CARBON DIOXIDE TYPE	1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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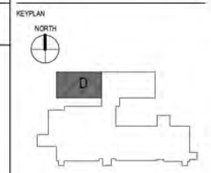
P: 248.344.2800 F: 248.344.1550

ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	G	16SEP2022
PROGRESS PRINT	F	16SEP2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
FOURTH FLOOR PLAN - AREA D

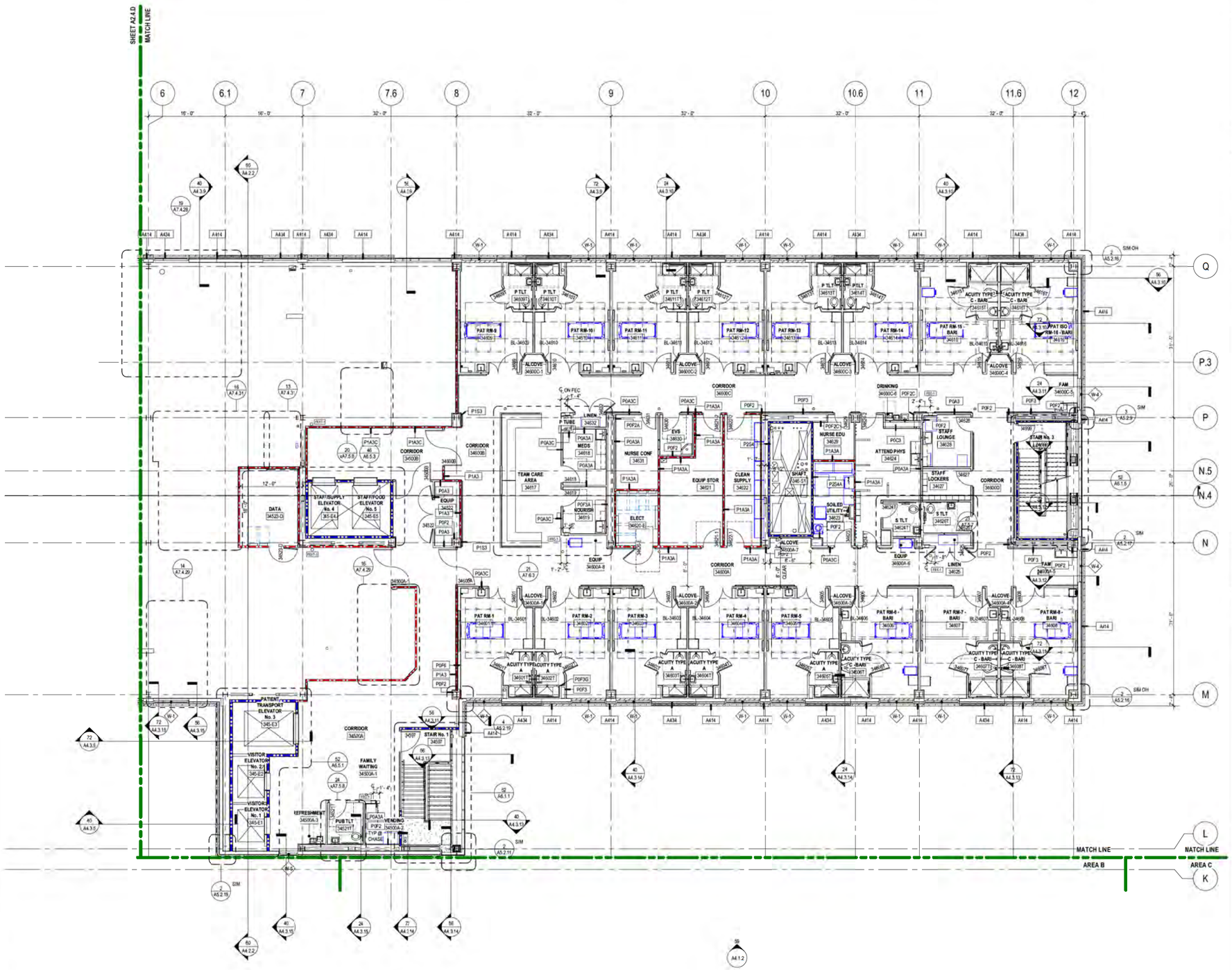
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.4.D

Plot Date: 9/18/2022 10:02:17 PM

Author



24 FOURTH FLOOR PLAN - AREA E
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

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F. REFER TO THE 'AF' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

FIRE EXTINGUISHER SCHEDULE

TYPE MARK	FIRE EXTINGUISHER AGENT	FLOOR TOTAL
FEC-1	MULTIPURPOSE DRY-CHEMICAL	7
FEXT-1	MULTIPURPOSE DRY-CHEMICAL	9
FEXT-2	CARBON DIOXIDE TYPE	1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

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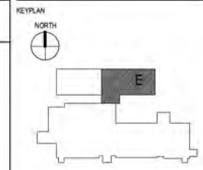
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
FOURTH FLOOR PLAN - AREA E

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

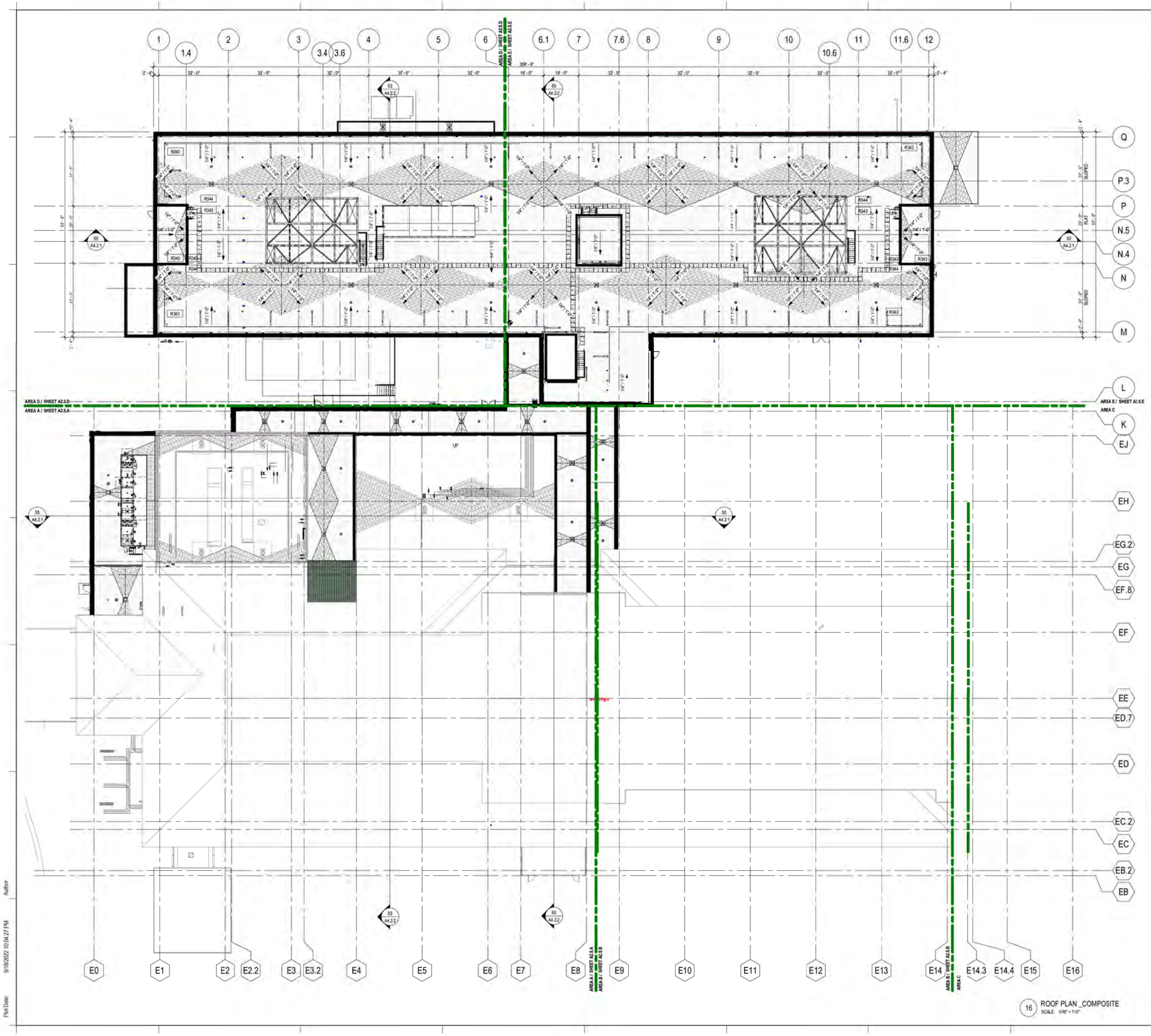
PROJECT NUMBER

SHEET NUMBER
A2.4.E

Plot Date: 9/18/2022 10:02:37 PM

Author

Plot Date: 9/18/2022 10:02:37 PM



16 ROOF PLAN _COMPOSITE
SCALE: 1/16" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

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SHEET KEYNOTES

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ISSUED FOR	REV	DATE
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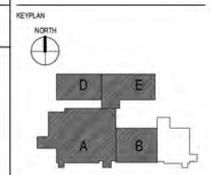
DESIGN DEVELOPMENT	C	21JUN22
SITE PLAN REVIEW	B	30MAR22
SCHEMATIC DESIGN	A	08MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
ROOF PLAN - COMPOSITE PLAN

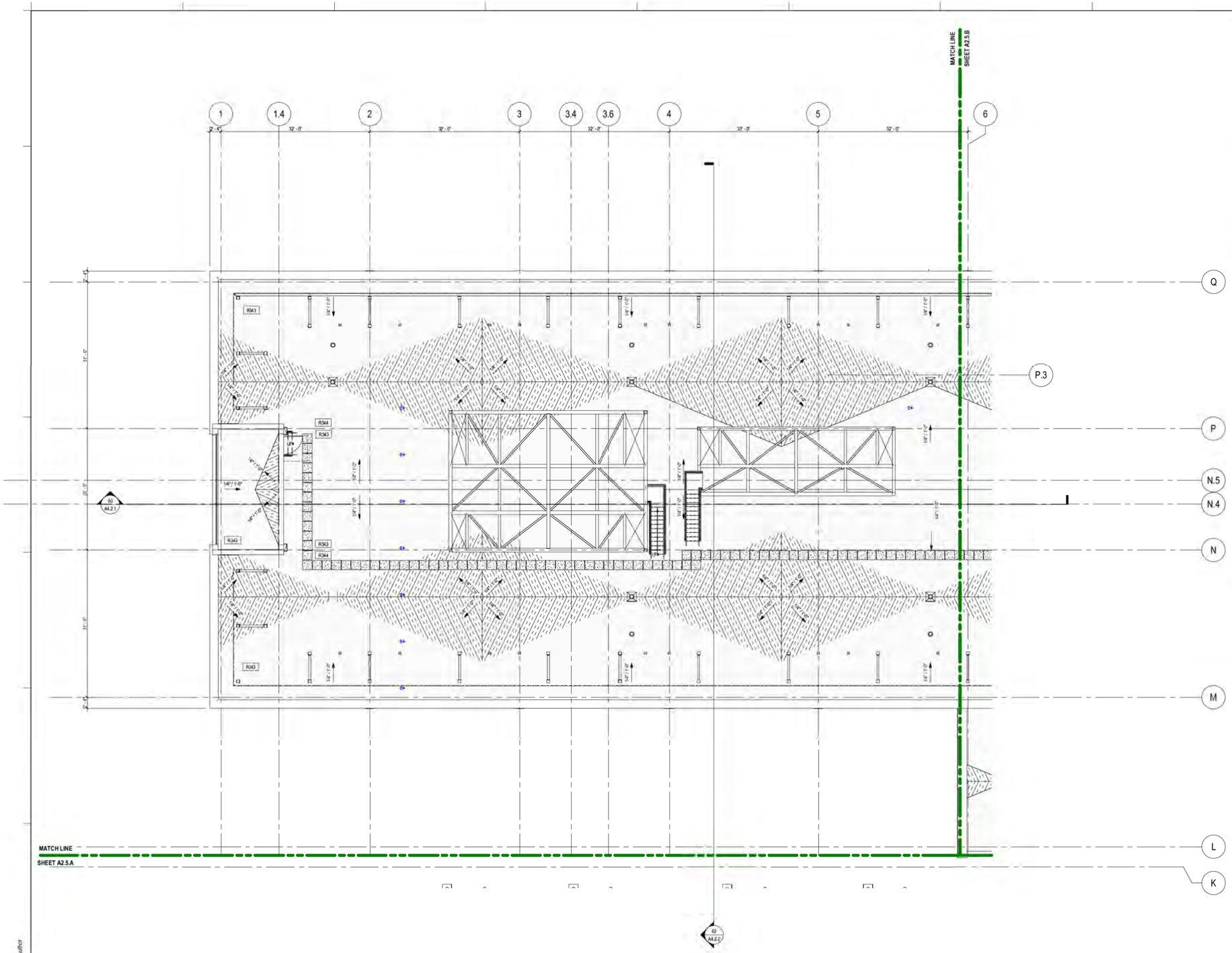
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.5

Plot Date: 9/19/2022 10:04:27 PM

Author



24 ROOF PLAN - AREA D
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

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SHEET KEYNOTES

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Trinity Health

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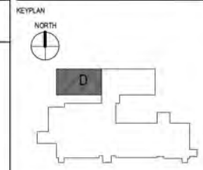
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	F	16SEP2022
PROGRESS PRINT	E	16SEP2022
SITE PLAN RESUBMITTAL	D	22JUN22
DESIGN DEVELOPMENT	C	21JUN22
SITE PLAN REVIEW	B	30MAR22
SCHEMATIC DESIGN	A	08MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
ROOF PLAN - AREA D

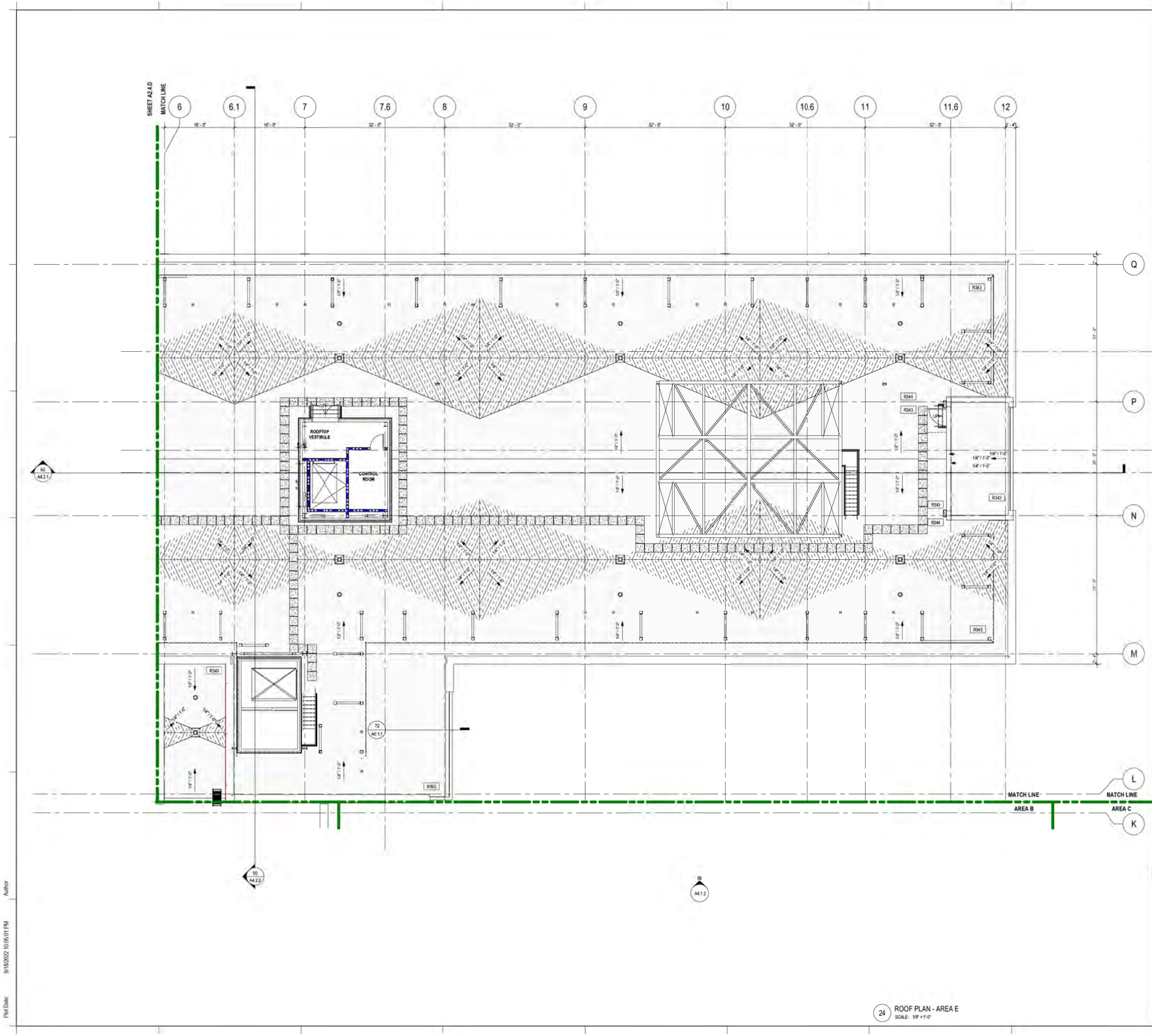
SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A2.5.0

Plot Date: 9/18/2022 10:04:42 PM

Author



24 ROOF PLAN - AREA E
SCALE: 1/8" = 1'-0"

GRAPHIC LEGEND

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. FOR BASIC LIFE SAFETY AND CODE INFORMATION APPLYING TO THIS PROJECT, REFER TO THE G2.X SERIES SHEETS LOCATED PER THE PROJECT SHEET INDEX.

C. REFER TO THE A3.X SERIES SHEETS FOR THE REFLECTED CEILING PLANS.

D. REFER TO THE A9.2.X SERIES SHEETS FOR PARTITION SYSTEMS TYPES AND DETAILS.

E. REFER TO THE A9.3.X SERIES SHEETS FOR THE INTERIOR OPENING SCHEDULE(S), TYPES, AND DETAILS.

F. REFER TO THE 'AP' SERIES SHEETS FOR INTERIOR FINISH INFORMATION.

G. REFER TO THE 'AI' SERIES SHEETS FOR INTERIOR FURNISHING INFORMATION.

REFERENCE KEYNOTES

48 A4.1.1

SHEET KEYNOTES

FOR REFERENCE

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

7575 GRAND RIVER AVE., BRIGHTON, MI 48114
7555 GRAND RIVER AVE., BRIGHTON, MI 48114

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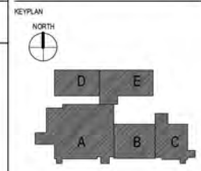
ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	F	16SEP2022
PROGRESS PRINT	E	16SEP2022
SITE PLAN RESUBMITTAL	D	22JUN22
DESIGN DEVELOPMENT	C	21JUN22
SITE PLAN REVIEW	B	30MAR22
SCHEMATIC DESIGN	A	04MAR22

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
ROOF PLAN - AREA E

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

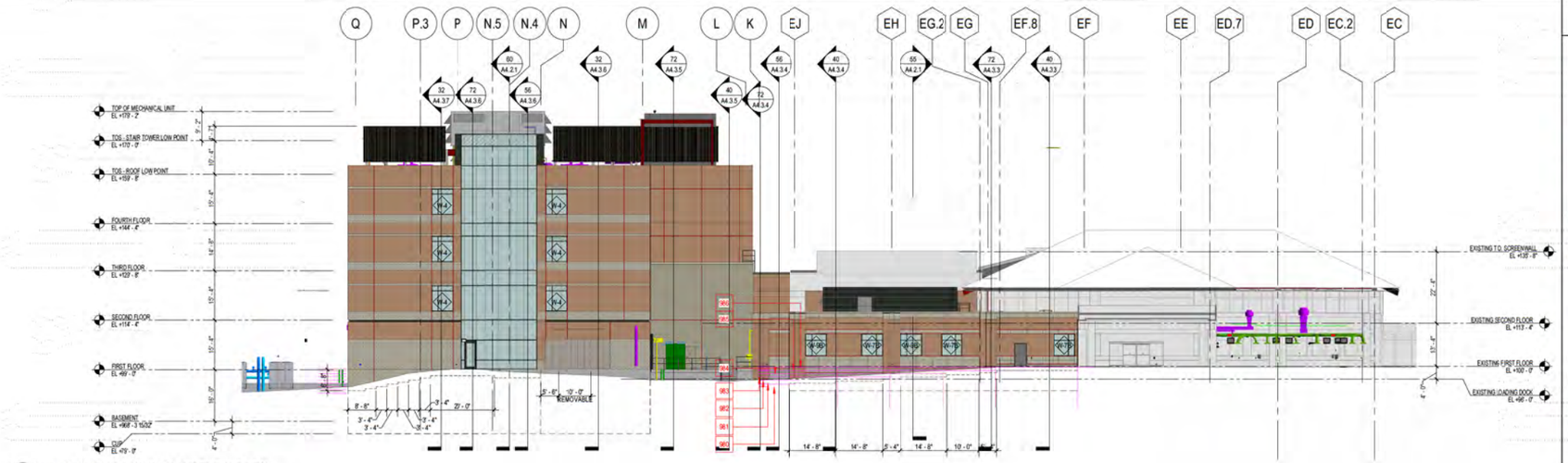
PROJECT NUMBER

SHEET NUMBER
A2.5.E

Plot Date: 9/18/2022 10:05:01 PM

Author

Plot Date: 9/18/2022 10:05:01 PM

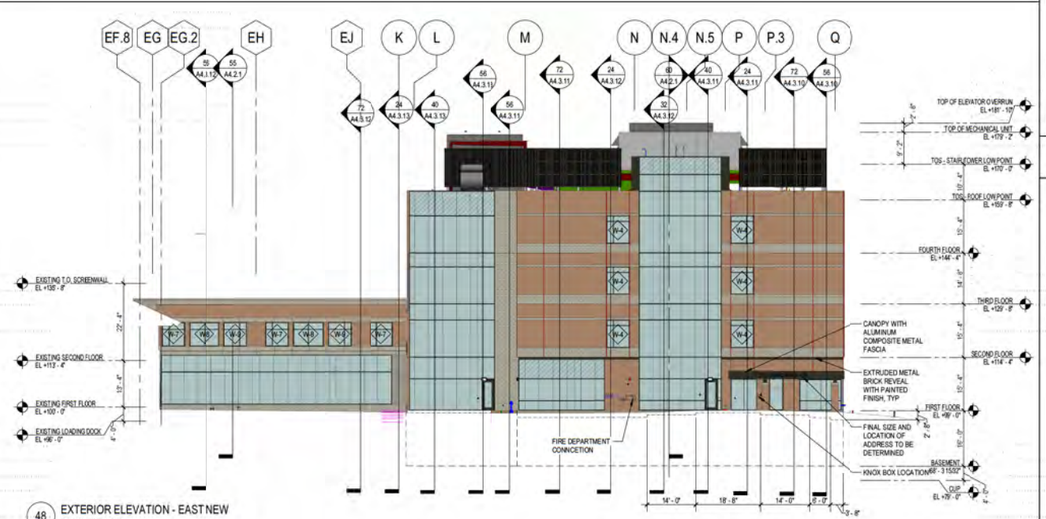


67 EXTERIOR ELEVATION - WEST EXISTING AND NEW
SCALE: 1/16" = 1'-0"

62 EXTERIOR ELEVATION - NORTH NEW
SCALE: 1/16" = 1'-0"

EXTERIOR MATERIAL SCHEDULE

SPEC	TAG	MANUFACTURER / SUPPLIER	SERIES/NAME	COLOR	SIZE	INSTALLATION	NOTES
EIFS							
072413.A00	EIFS-01	STO CORP.	STOTHERM C1	81524/500 STOLITE X FINE: 16005	SEE RCP	SOFFIT	---
GLAZING							
088000.A00	GL-I1	VITRO	SOLARBAN 90	STARPHIRE + STARFIRE	1" IGU	VISION	
088000.A00	GL-I2	VITRO	SOLARBAN 90		1-1/8" IGU	VISION	
088000.A00	GL-S1	VITRO	SOLARBAN 90		1" IGU	SPANDREL	
088000.A00	GL-S2	VITRO	SOLARBAN 90		1-1/8" IGU	SPANDREL	
MASONRY							
042000.001	MORTAR	SOLOMON COLORS, INC.	SGS CONCENTRATED X SERIES	10X L", BUFF	---	FOR ALL MASONRY	---
042000.A18	BRK-01	BRICK TECH ARCHITECTURAL	GLEN-GERY: MARYSVILLE	MARYSVILLE RED BLEND	MODULAR: 3-5/8" x 2-1/4" x 7-5/8"	RUNNING BOND	MATCH EXISTING
042000.A10	DCM-01	ECHELON MASONRY	TRENDSTONE PLUS MASONRY VENEER	FOUR COLOR MIX: LINCOLN - MIDWEST	STRETCHER 4RE: 3-5/8" x 7-5/8" x 15 5/8"	RUNNING BOND	---
042000.A10	DCM-02	ECHELON MASONRY	TRENDSTONE MASONRY VENEER	FOUR COLOR MIX: GOLDSTONE - MIDWEST	STRETCHER 4RE: 3-5/8" x 7-5/8" x 15 5/8"	RUNNING BOND	---
047200.A00	PRC-01	ROYAL STONE LLC	CAST STONE VENEER	LIMESTONE	5'-0" WIDTH (TYP)	---	MATCH EXISTING
METAL							
074213.13.A00	FMP-01	CENTRIA	CONCEPT SERIES: CS-210/CS-220/CS-260	DARK BRONZE	1'-0" WIDTH	VERTICAL	---
074213.13.A00	FMP-02	CENTRIA	CONCEPT SERIES: CS-260	HEMLOCK GREEN (CUSTOM MATCH)	1'-0" HEIGHT	HORIZONTAL	MATCH EXISTING
074213.23.A02	MCM-01	ALUCOBOND	ALUCOBOND PLUS	EPERNAY CHAMPAGNE METALLIC		VERTICAL	---
074213.23.A02	MCM-02	ALUCOBOND	ALUCOBOND PLUS	NEW-AGE DARK BRONZE MICA		VERTICAL	---
ROOFING							
075323.A00	EPDM-01	REFER TO SPEC	REFER TO SPEC		---	---	---



48 EXTERIOR ELEVATION - EAST NEW
SCALE: 1/16" = 1'-0"

GRAPHIC LEGEND

- GL-I1
- GL-S1
- GL-I2
- GL-S2 — DEDUCT ALTERNATE: PROVIDE GL-I1/GL-S1 IN PLACE OF GL-I2/GL-S2
- BRK-01
- DCM-01
- DCM-02
- PRC-01
- FMP-01
- FMP-02
- MCM-01
- MCM-02
- MOVEMENT CONTROL JOINT (CONTROL / EXPANSION / ISOLATION)

GENERAL SHEET NOTES

A. REFER TO THE A0.X SERIES SHEETS FOR ARCHITECTURAL GENERAL NOTES, DRAWING, REFERENCE AND MATERIAL SYMBOLS, ABBREVIATIONS, AS WELL AS DIMENSIONING CONVENTIONS USED ON THIS SHEET.

B. REFER TO AND COORDINATE WITH STRUCTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL FOR ADDITIONAL INFORMATION NOT SHOWN ON THIS SHEET.

C. REFER TO AND COORDINATE WITH CIVIL DRAWINGS FOR ALL FINISH GRADES.

D. REFER TO THE A4.4.X SERIES SHEETS FOR ENLARGED EXTERIOR ELEVATIONS.

E. REFER TO THE A5.0.X SERIES SHEETS FOR EXTERIOR WINDOW ELEVATIONS

REFERENCE KEYNOTES

SHEET KEYNOTES

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

7575 GRAND RIVER AVE., BRIGHTON, MI 48114
7555 GRAND RIVER AVE., BRIGHTON, MI 48114

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FARMINGTON HILLS, MI 48331
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ISSUED FOR	REV	DATE
SITE PLAN RESUBMITTAL R4	H	16SEP2022
PROGRESS PRINT	G	16SEP2022
SITE PLAN RESUBMITTAL REV 3	F	20JUL2022
SITE PLAN RESUBMITTAL	E	22JUN22
DESIGN DEVELOPMENT	D	21JUN22
SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

SHEET TITLE
EXTERIOR BUILDING ELEVATIONS & EXTERIOR FINISH SCHEDULE

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

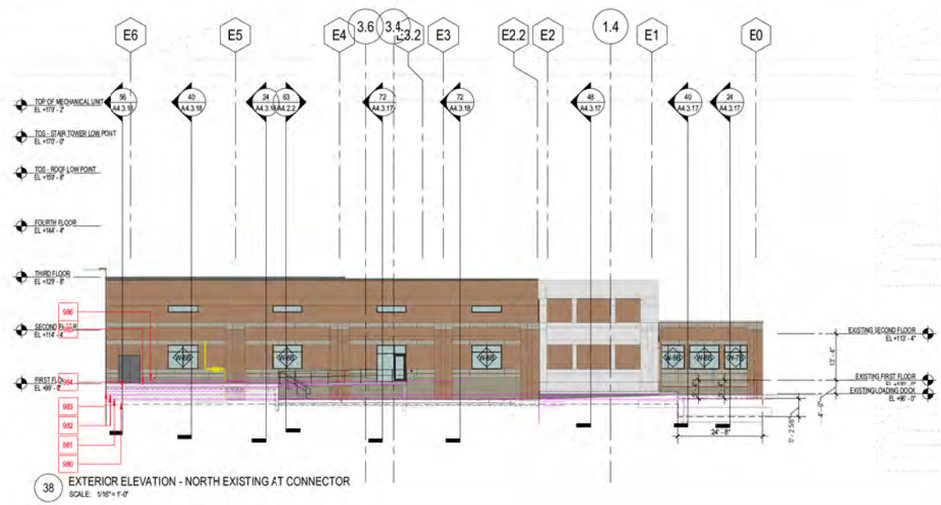
SHEET NUMBER
A4.1.1

Plot Date: 9/18/2022 10:07:32 PM

START Sheet

Plot Date: 9/18/2022 10:07:32 PM

59 EXTERIOR ELEVATION - SOUTH AT ADDITION
SCALE: 1/16" = 1'-0"



38 EXTERIOR ELEVATION - NORTH EXISTING AT CONNECTOR
SCALE: 1/16" = 1'-0"

GRAPHIC LEGEND

- GL-I1
- GL-S1
- GL-I2
- GL-S2
- BRK-01
- DCM-01
- DCM-02
- PRC-01
- FMP-01
- FMP-02
- MCM-01
- MCM-02

DEDUCT ALTERNATE
PROVIDE GL-I1/GL-S1 IN PLACE OF GL-I2/GL-S2

MOVEMENT CONTROL JOINT (CONTROL / EXPANSION / ISOLATION)

GENERAL SHEET NOTES

REFERENCE KEYNOTES

SHEET KEYNOTES

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

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SITE PLAN REVIEW	C	30MAR22
SCHEMATIC DESIGN	B	04MAR22
SD PROGRESS	A	22DEC21

SEALS AND SIGNATURES:

NOT FOR CONSTRUCTION

SHEET TITLE
EXTERIOR BUILDING ELEVATIONS

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
A4.1.2

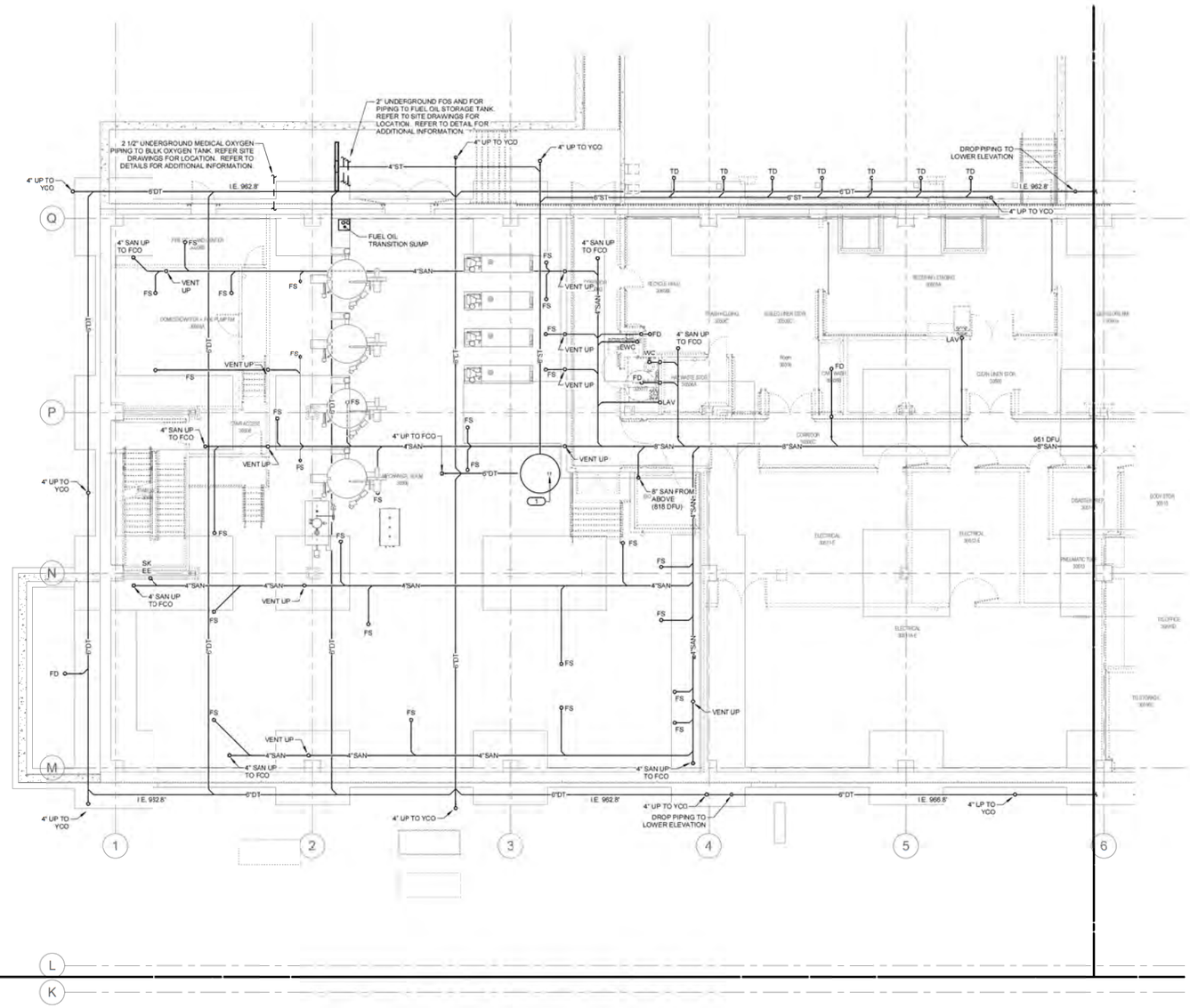
Plot Date: 9/18/2022 10:08:22 PM

Author

Plot Date: 9/18/2022 10:08:22 PM

KEYNOTES: #

1. 4" PUMPED DISCHARGE UP. REFER TO BASEMENT FLOOR PLAN.



1 UNDERFLOOR - PLUMBING - AREA D
1/8" = 1'-0"

FOR REFERENCE

Trinity Health

ST. JOSEPH MERCY
BRIGHTON
EXPANSION AND RENOVATION

7575 GRAND RIVER AVE., BRIGHTON, MI 48114
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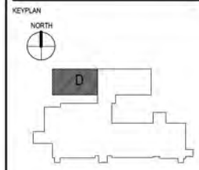
ISSUED FOR	REV	DATE
LCDC RESUBMITTAL R4		16SEP2022
LCDC RESUBMITTAL R3		06SEP2022
LCDC RESUBMITTAL R2		26AUG2022

SEALS AND SIGNATURES

NOT FOR CONSTRUCTION

KEYPLAN



SHEET TITLE
UNDERFLOOR - PLUMBING - AREA D

SG PROJECT #: 13472.000
IMEG PROJECT #: 21006742.00

PROJECT NUMBER

SHEET NUMBER
PU2.0-D

Plot Date: 9/15/2022 12:01:58 PM

Author

Plot Date: 9/15/2022 12:01:58 PM

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

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Township Manager

DATE: October 12, 2022

RE: Grand River Storage Site Plan Amendment

Attached please find the project case file seeking an amendment to the approved site plan and revisions to the conditions of approval for the Grand River Climate Controlled Self-Storage project located at 2630 Grand River in Howell. This project was initially approved by the Board in March of this year. Since the applicant seeks to remove a condition asserted by the Township Board, the amended site plan must follow the same review process. As such, the Planning Commission is to review the request and put forth a recommendation to the Township Board on the amended site plan review. The Board has final approval authority.

The applicant is seeking minor deviations to the parking lot layout in front of the building and is asking for relief from the requirement that the front parking lot be re-paved. At their September 12, 2022 meeting the Planning Commission was not in support of leaving the front parking lot in poor condition for an unknown period of time and they recommended approval of an amended plan that fully replaced the entrance driveway to the facility but required the additional paved surface in the front of the building to be removed and restored to lawn area. They also allowed the applicant to decrease the replacement of the rear parking lot to 50 percent.

Since the Planning Commission meeting, the applicant has resubmitted plans and is requesting Board consideration of a request to leave the existing asphalt in the front future outlot for up to 18 months while they seek development opportunities. If they do not have an approved site plan for development of this area after 18 months they will remove the pavement and restore the area to grass. They are also proposing to reconfigure the parking in front of the building to eliminate conflicts with development of the future outlot and are requesting to reduce the resurfacing of the back-parking lot to 50%.

If the Board desires to allow the applicant additional time for the repair or removal of the front parking lot, I recommend that legally enforceable assurances be put in place to ensure faithful completion of the improvements. Typically, the Township would require

SUPERVISOR
Bill Rogers
CLERK
Paulette A. Skolarus
TREASURER
Robin L. Hunt
TRUSTEES
Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe
MANAGER
Kelly VanMarter

a performance guarantee as provided by Section 21.03 of the ordinance. I would also suggest consideration of a 12-month time frame rather than 18 months. These items are included as option 2 in the proposed motion below for your consideration:

Amendment to the Approved Site Plan

Moved by _____, Supported by _____ to APPROVE the amendments to the approved Site Plan dated October 4, 2022 with the following conditions:

> **Option 1 – As recommended by the Planning Commission, the applicant shall remove the un-improved paving and curbing within the future outlot area and restore that area to a vegetated lawn surface.**
>
> **Option 2 – The applicant shall be permitted to delay removal of the pavement in the un-improved future outlot area for a period not to exceed 12 months. Within 12 months of this approval the applicant must have obtained site plan approval for construction of a principal building in the area of the future lot. To ensure adherence to this condition, the applicant shall work with staff and the Township attorney to determine the best legal mechanism to ensure the faithful completion of the removal. This may include provisions for a performance guarantee in accordance with Section 21.03 of the Zoning Ordinance.**

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

Sincerely,

Kelly VanMarter

Schafer
CONSTRUCTION, INC.

150 N. First Street
Suite 100
Brighton, MI 48116
(810) 220-0296

October 6, 2022

Kelly VanMarter
Community Development Director
Genoa Township
2911 Dorr Road
Brighton MI 48116

Kelly,

We have made the following changes to the drawings submitted on 8/23/2022:

1. Reduce the resurfacing of the back lot to 50%.
2. Reduce the resurfacing of the front to not include the future out lot.
3. Reconfigured the parking to eliminate any conflicts with the development of the future out lot.
4. Replace sidewalks in front of the building.
5. Created a new island around the fire hydrant that was added and install additional landscaping.

We asking that the board consider allowing the out lot to remain as existing asphalt for up to 12-18 months while the owners pursue a development for the property in lieu of returning is to grass. In the event the development is not approved they will remove the asphalt and restore the area to grass as approved by the planning commission.

Thank you for your consideration,

Stan Schafer

Stan Schafer
Schafer Construction.

AJCSV, LLC
8816 Mendocino Drive
Austin, TX 78735

October 6, 2022

To Whom It May Concern,

On behalf of AJCSV, LLC, please accept this letter as written verification of our intentions for the outlot parcel with frontage along E. Grand River Ave.

We are currently in the process of evaluating different options for how best to develop this parcel and are making progress towards a definitive plan. It is our goal to start construction on the outlot parcel within the next 12-18 months. In the event a development has not been approved for this outlot parcel within the next 18 months, we will remove the asphalt and the area will be restored with grass. In the meantime, it would be greatly appreciated if the asphalt on the outlot parcel could remain in place.

Thank you for your consideration in this matter.

Jonathan Branoff
AJCSV, LLC

GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: Stan Schafer 150 N. First Street, Suite 100 Brighton MI 48116
If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: Overtime Enterprises LLC 2424 E Coon Lake Trail Howell, MI 48843

SITE ADDRESS: 2630 E Grand River Ave PARCEL #(s): 4711-06-200-061

APPLICANT PHONE: (517) 304-1124 OWNER PHONE: (517) 540-0400

OWNER EMAIL: blythepatterson@asichuck.com

LOCATION AND BRIEF DESCRIPTION OF SITE:

Existing vacant building site - formerly "Great Escape"

BRIEF STATEMENT OF PROPOSED USE:

Indoor climate controlled Storage

THE FOLLOWING BUILDINGS ARE PROPOSED:

Existing Building to be renovated to fit new use.

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: Stan Schafer, Schafer Construction

ADDRESS: 150 N. First Street, Suite 100 Brighton MI 48116

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

1.) Stan Schafer of Schafer Construction at Stan@schaferconstruction.net
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: Stan Schafer DATE: 8/24/2022

PRINT NAME: Stan Schafer PHONE: 517-304-1124

ADDRESS: 150 N. First Street, Suite 100, Brighton MI 48116

4. If the exhaust duct penetrates a combustible shelter roof or the back wall of the surround it shall be done so in accordance with the manufacturer's instructions and NFPA 96.

The call to the public was opened at 8:38 pm with no response.

Moved by Commissioner Lowe, seconded by Commissioner Rauch, to approve the sketch plan dated August 22, 2022 for an outdoor commercial smoker for use as part of the Log Cabin Restaurant located at 5393 Grand River Avenue, north side of Grand River, Between Eckles Drive and Westwood Drive for requested by Chris Stone, conditioned upon the following:

- Any variances required shall be approved by the Zoning Board of Appeals.
- All requirements of the planner's letter dated August 31, 2022 shall be met.
- All requirements of the Brighton Area Fire Authority Fire Marshal's letter dated September 7, 2022 shall be met.
- A six-foot fence shall be installed along the rear property line and approved by Township Staff.

OPEN PUBLIC HEARING #4…Consideration of an amendment to a previously approved site plan for a climate-controlled indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road. The request is petitioned by Schafer Construction, Inc.

A. Recommendation of Site Plan Amendment (8-22-22)

Mr. Stan Schafer of Schafer Construction and Mr. Dan LeClair of Greentech Engineering were present. They are proposing to decrease the amount of the parking lot that was approved to be pulverized and repaved. The owners are preparing to develop the front portion of the site and the other area of the lot is in good condition. They are proposing to repair and seal coat these areas instead.

Mr. Borden reviewed his letter dated September 6, 2022.

1. The applicant seeks authorization to not improve the front parking lot, which was a condition of site plan approval.
2. In order to remove a condition of approval, the request must follow the same review process, which is a Planning Commission recommendation to the Township Board.
3. There is no indication of the anticipated timeline to create/develop the frontage site.
4. If the request is granted, the front parking lot could remain in poor condition until the frontage site is developed.
5. As an alternative to leaving the front parking lot as-is, the applicant should consider having it removed and sodded with grass/landscaping until a future development occurs.

DRAFT

Commissioner Rauch requested to have the driveway area that is next to the proposed outlot pulverized and repaved and suggested leaving some of the rear parking lot in its current condition to save costs. He agrees with Mr. Borden's suggestion of turning the outlot area into grass or landscaping. Commissioner Dhaenens agrees.

The call to the public was opened at 8:52 pm with no response.

Mr. Gary Markstrom's letter dated August 30, 2022 states there are no engineering concerns for this proposal.

Fire Marshal Rick Boisvert's letter dated September 7, 2022 stated he has no opposition to elimination of the parking lot surface improvement at the front of the building.

Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of site plan amendment dated August 22, 2022 for a climate-controlled indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road by Schafer Construction, Inc., with the following conditions:

- The petitioner shall update the plan to show pulverizing and repaving the driveway area, from the northeast corner of the property to the proposed new pavement near the building.
- The petitioner shall remove the gravel and reestablish with vegetation the area within the future outlot lines.
- The petitioner can choose to not repave up to 50 percent of the rear parking area.

The motion carried unanimously.

ADMINISTRATIVE BUSINESS:

Staff Report

Ms. VanMarter stated the next meeting will be **Tuesday**, October 11 due to Monday being Columbus Day. The only item on the agenda is the public hearing for the Master Plan Update.

Approval of the August 8, 2022 Planning Commission meeting minutes

Moved by Commissioner Lowe, seconded by Commissioner Dhaenens, to approve the minutes of the August 8, 2022 Planning Commission Meeting as presented. **The motion carried unanimously.**

Member Discussion

The members expressed concerns over comments made during the call to the public for the apartment complex. The Commissioners agreed that this is a diverse community and inappropriate and racist comments should not be tolerated.

DRAFT

2027-2032 at $40,550.00 and a high-speed automatic envelope opener at $2,920.00 with FORMAX using federal and state grant funding under ARPA at the recommendation of County Clerk Elizabeth Hundley and Township Clerk Polly Skolarus.

Moved by Lowe and supported by Skolarus to table the request until clarity of the maintenance agreement and the additional cost can be taken into consideration. The motion carried unanimously.

5. Public Hearing for the Homestead Drive Road Improvement Special Assessment Project (Summer 2022).

A. A Call to the Property Owners was made with no response.

B. A Call to the Public was made with no response.

6. Request for approval of Resolution #3 [approving the project cost estimates, special assessment district and causing the special assessment roll to be prepared] for the Homestead Drive Road Improvement Special Assessment Project. (Summer 2022).

Skolarus asked to consider the $2,000.00 fee when the publications and mailing may cost less. Archinal – There is also my staff time to consider.

Moved by Mortensen and supported by Croft to approve Resolution #3 as requested for Homestead Drive road improvement project. The motion carried by roll call vote as follows: Ayes – Ledford, Croft, Lowe, Mortensen, Skolarus and Rogers. Nays – None. Absent – Hunt.

7. Request for approval of Resolution #4 [acknowledging the filing of the special assessment roll, scheduling the second hearing, and directing the issuance of statutory notices for the Homestead Drive Road Improvement Special Assessment Project (Summer 2022).

Moved by Skolarus and supported by Lowe to approve Resolution #4 as requested for Homestead Drive road improvement project. The motion carried by roll call vote as follows: Ayes – Ledford, Croft, Lowe, Mortensen, Skolarus and Rogers. Nays – None. Absent – Hunt.

8. Consideration of a recommendation for approval of a special use application, environmental impact assessment and site plan for a proposed climate-controlled indoor commercial storage business located at 2630 E.

Grand River Avenue, south side of Grand River, east of Chilson Road. The request is petitioned by Schafer Construction, Inc.

Skolarus – That is a large parking area for your development. Do you own the parking lot in the picture? Matt Veter – Yes. Skolarus – Will you be asking for additional development on this property? Veter – Maybe.

- **Disposition of Special Use Application**

Moved by Lowe and supported by Croft to approve the Special Use Application approve the Special Land Use permit because it has been found that the requested use meets the requirements of Sections 19.03 and 7.02.02(z) of the Township Ordinance. The motion carried unanimously.

- **Disposition of Environmental Impact Assessment (2-24-22)**

Moved by Ledford and supported by Croft to approve the Environmental Impact Assessment dated February 24, 2022 as submitted. The motion carried unanimously.

- **Disposition of Site Plan (2-24-22)**

Moved by Skolarus and supported by Lowe to approve the sketch plan dated February 24, 2022 with the following conditions:

- All requirements of the Fire Marshall's letter dated March 9, 2022 including the need for a hydrant, shall be met.
- All requirements in the Township Engineer's letter dated March 7, 2022 shall be met.
- In lieu of installing the required sidewalk, a performance guarantee in compliance with Section 21.03 shall be provided and a sidewalk easement shall be granted to the Township if necessary for Township installation of a sidewalk.
- As indicated by the applicant at the Planning Commission meeting, the parking lot will be pulverized/repaved with replacement of the parking lot island landscaping and additional potted landscaping will be added near the entrance area. A revised landscape plan shall be provided for Township staff approval prior to issuance of a land use permit.
- The site lighting standards shall be met, which includes reducing the height of the poles to 20 feet or less in the east lot and 30 feet or less in the north lot.

- The existing outside well will be abandoned per Livingston County Health Department standards.
- Copies of the cross-access agreements with the adjacent properties shall be provided to Township Staff and any change to the cross-access agreement with the adjacent properties must be reviewed and approved by the Township.
- The site shall be signed to advise that no overnight parking is permitted.
- A hard copy of the rendering and the proposed paint colors shall be provided to Township Staff prior to issuance of the land use permit.

The motion carried unanimously.

9. Request for approval of a general appropriations act for funds 101, 202, 208, 212, 249, 401, 464, 532, and 860 for FY 2022-2023 starting April 1, 2022 and ending March 31, 2023.

A. A call to the public was made with no response.

Moved by Mortensen and supported by Skolarus to approve Resolution No. 220321 with regard to all general appropriations referencing the Clerk's attachment as previously provided relative the election budget and salaries for the next fiscal year. The motion carried by roll call vote as follows: Ayes – Ledford, Croft, Lowe, Mortensen, Skolarus and Rogers. Nays – None. Absent - Hunt.

10. Request for approval of a contract with the Livingston County Road Commission for limestone resurfacing on King Road from the end of the pavement to Richardson Road at a cost of $140,000.00.

Moved by Ledford and supported by Croft to approve the Contract with Livingston County Road Commission for King Road in the amount of $140,000.00 as requested. The motion carried unanimously.

11. Request to approve the proposal from Omni Tech Spaces for the purchase of a new Board Room visual display system for $62,283.00.

Moved by Skolarus and supported by Croft to approve the proposal with Omni Tech Spaces as requested. The motion carried unanimously.

Correspondence:

A letter from the Livingston County Drain Commissioner related to the Marion Drain No. 3 was received.

Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Site Plan dated February 23, 2023 for a proposed 3,750 sq. ft. office building with outdoor storage located at 1247 Fendt Drive, north of Grand Oaks Drive, based on the following conditions:

- No berm is necessary along the south property boundary because the exciting berm and vegetation is satisfactory.
- The building materials are satisfactory.
- The greenbelt berm and plantings shall be extended to the south due to the elimination of the curb cut.
- Gravel is an allowable surface for the truck storage area and the storage area shall not exceed into the front yard past the front building line.
- The applicant shall comply with the conditions of the Township Engineer's letter dated March 8, 2022.
- The applicant shall comply with the conditions of the Brighton Area Fire Authority Fire Marshal's letter dated March 9, 2022.

The motion carried unanimously.

OPEN PUBLIC HEARING #3…Consideration of a special use application, environmental impact assessment and site plan for a proposed climate-controlled indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road. The request is petitioned by Schafer Construction, Inc.

A. Recommendation of Special Use Application
B. Recommendation of Environmental Impact Assessment (2-24-22)
C. Recommendation of Site Plan (2-24-22)

Mr. Dan LeClair of Greentech Engineering and Mr. Matt Vetter of Schafer Construction were present. Mr. LeClair provided a review of the project. They are proposing 325 self-storage units. They had originally proposed outdoor storage on the eastern side of the building; however, that plan has been removed. One of the landscape plans in the packet incorrectly shows that plan, so he asked the Commissioners to disregard it.

In response to comments in the planner's letter, they are proposing to refinish the existing building facade. They would like to keep the materials, but change the colors of the block and wood and replace the glass. It is currently 76 percent block, 6 percent glass, and 17 percent wood with some vertical siding. Mr. Vetter showed proposed colored renderings.

Chairman Grajek questioned if the facade could be changed to appear to be more of different storefronts similar to the other portion of this property.

They are proposing some site improvements; specifically, fencing in the parking lot that is to the east side of the building, replacing the parking lot light fixtures with LED lights, and building a fence around the parking lot to the rear. They are seeking a waiver for the installation of the eight-foot wide sidewalk. They would like to provide a performance guarantee to install the

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sidewalk so that it can be installed when sidewalks are installed on either side of them. They would also like to maintain the existing parking lot and not remove any parking spaces. They are not proposing to provide any additional plantings to the rear of the site due to the area being already heavily wooded. They are also asking for a reduction of the side yard and building setback requirements on the west property line.

They will comply with all requirements of the Township Engineer and the Brighton Area Fire Authority fire marshal's requirements.

Mr. Borden reviewed his letter dated March 8, 2022:

1. Section 19.03 General Special Land Use Standards:
   a. In order to make favorable findings related to compatibility and impacts, the use conditions of Section 7.02.02(z) need to be met to the Commission's satisfaction.
   b. The applicant must address any comments provided by the Township Engineer or Brighton Area Fire Authority regarding public facilities and services.
2. Section 7.02.02(z) Use Conditions:
   a. The existing building does not meet the material requirements of Section 12.01; however, Planning Commission may modify these requirements in accordance with Section 12.01.04.
   b. The applicant should be prepared to present material and color samples and/or a color rendering to the Commission as part of their review.
3. Site Plan Review:
   a. An 8-foot wide bike path is required along Grand River. The applicant requests to provide a performance guarantee in lieu of pathway construction at this time. This is allowed per the zoning ordinance. Commissioner Mortensen would like the sidewalks to be installed at this time. Chairman Grajek agrees. Commissioner Rauch would like the sidewalks to be put in at the same time as the adjacent property owners, so the money should be held until the adjacent properties are redeveloped.
   b. Given the amount of parking provided versus that proposed, Planning Commission approval is necessary, per Section 14.02.06. This use only requires approximately 30 parking spaces and there are almost 300 on this site. He agrees to have the Planning Commission allow this as excess parking instead of having the applicant remove it.
   c. Maximum light pole height is 20 feet, while the plan notes 40 feet. Mr. Vetter agrees to change the light poles to meet the ordinance.
   d. The landscape plan is deficient in greenbelt and buffer zone plantings; however, existing conditions restrict opportunities for full compliance, and the rear of the site contains an existing wooded area, which is noted by the applicant. The Planning Commission has the authority to modify landscaping requirements.
   f. The landscape plan depicting mini-storage buildings must be removed from the submittal. The applicant referred to this in their presentation. Commissioner McCreary asked where the carts that customers will use will be stored. Mr. Vetter stated they will be stored in the covered area outside of the building. She asked if the Planning

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Commission has a concern with long-term parking of moving vehicles, such as U-Hauls, etc. There was a discussion regarding allowing overnight parking in the proposed gated area to the east of the building. Ms. VanMarter noted that any vehicle parking after 72 hours would be considered outdoor storage, so a time limit would need to be put in place with either signage or in the rental contract.

Ms. Byrne reviewed her letter dated March 7, 2022:

1. Approval should be obtained by the Brighton Area Fire Authority prior to site plan approval. As indicated in their review letter dated February 16, 2022, the existing building may not have adequate hydrant coverage. Drawings that show the existing water main layout are attached for reference. The closest hydrant is in front of 2650 East Grand River Avenue. If an additional fire hydrant is required by the Fire Marshal, water main construction plans will need to be submitted to her office and MHOG Sewer and Water Authority for review and permitting after site plan approval has been obtained from the Township.
2. The proposed access to the existing southeast parking area is over a cross access easement on the adjacent property. This area is proposed to be fenced, thereby eliminating the cross access to the adjacent parcel. A new easement must be obtained consenting to the elimination of the cross access and for the construction of the drive, fencing, and curbing on the adjacent parcel.
3. The Livingston County Health Department has indicated that the existing well on site should be properly abandoned by a registered water well driller. This should be shown on the site plan.
4. Details for the proposed curb and gutter and the proposed asphalt section should be shown on the site plan and should match the details provided in the Genoa Township Engineering Standards.

The Brighton Area Fire Authority Fire Marshal's letter dated March 9, 2022 stated the following:

1. Two-way emergency vehicle access roads shall be a minimum of 26-feet wide. With a width of 26-feet. The perimeter drive around the outside self-storage units shall be a minimum of 26-feet wide. The drive width from the front parking to the side storage lot is not indicated at 26-feet as required. Fire lane signage shall be provided along the building front. Provide a detail of the fire lane sign in the submittal. Access roads to the site shall be provided and maintained during construction. Access roads shall be constructed to be capable of supporting the imposed load of fire apparatus weighing at least 84,000 pounds. (The 26-feet width is the minimum required for two-way access. The access drive width to the storage yard can be accommodated by modification to the existing canopy on the Northeast corner of the building.)
2. Access around the building and storage unit yard shall provide emergency vehicles with a turning radius of 50-feet outside and 30-feet inside. Vehicle circulation shall account for non-emergency traffic and maintain the vehicle within the boundary of lanes of travel. (Provide an emergency vehicle turning template for the storage yard and the front entry parking lot and drives utilizing the apparatus and details at the end of this letter. Entrance drive to the storage area does not meet width and radius

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requirements.).

3. The location of a Knox Box shall be indicated on future submittals. The Knox box shall be located adjacent to the main entrance of the structure, in a location coordinated with the fire authority. The gate to the rear storage yard shall be provided with a Knox Key Switch for control and bypass of the access control of the gate. (The Knox box is reflected on the main building above the FDC, however no detail or acknowledgement is provided for the storage yard access gate as required).
4. During the construction process, the building will be evaluated for emergency responder radio signal strength. If coverage is found to be questionable or inadequate; the contractor or the building owner shall hire an approved contractor to conduct a grid test of the facility. If the signal strength coverage is found to be non-compliant, an approved emergency responder radio coverage system shall be provided in the building.
5. Provide names, addresses, phone numbers, emails of owner or owner's agent, contractor, architect, on-site project supervisor.

Board Member McCreary asked if there will be a sign installed. Mr. Vetter stated they will be installing a sign and will receive the appropriate approvals.

The Planning Commission discussed the proposed facade design and colors. Commissioner Rauch believes this is a substantial improvement to what was there previously, noting that this building has been vacant for approximately seven years.

The call to the public was made at 8:10 p.m. with no response.

Commissioner McBain asked what they are doing with the parking lot and if some additional potted landscaping could be added to the entrance area since the asphalt abuts the cement near the door. Mr. Vetter agreed to add some landscaping near the doorway. They will also be removing and replacing the existing landscape island plantings and pulverizing/re-paving the parking lot.

Moved by Commissioner Rauch, seconded by Commissioner Mortensen, to recommend to the Township Board approval of the Special Use Application for indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road being that the Planning Commission finds the conditions set forth in Section 19.03 are generally met and favorable findings of Section 7.02.02(z) of the Zoning Ordinance. **The motion carried unanimously.**

Moved by Commissioner Rauch, seconded by Commissioner McCreary, to recommend to the Township Board approval of the Environmental Impact Assessment dated February 24, 2022 for indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road. **The motion carried unanimously.**

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Moved by Commissioner Rauch, seconded by Commissioner Dhaenens, to recommend to the Township Board approval of the Site Plan dated February 24, 2022 for indoor commercial storage business located at 2630 E. Grand River Avenue, south side of Grand River, east of Chilson Road, with the following conditions:

- All requirements of the Fire Marshal's letter dated March 9, including the need for a hydrant, shall be met.
- All requirements in the Township Engineer's letter dated March 7, 2022 shall be met.
- While not compliant with Section 12.01 of the Zoning Ordinance, the Planning Commission finds the architectural renderings provided this evening to be an acceptable upgrade to what is currently there
- A performance guarantee in an amount to be determined by staff shall be provided prior to land use permit issuance. If the Township is required to install the sidewalk, the applicant shall provide the Township with an easement for its installation.
- The excess parking is found acceptable and the application acknowledges it will be repaved.
- The site lighting standards shall be met, which includes reducing the height of the poles to 20 feet or less.
- The existing outside well will be abandoned per Livingston County Health Department standards.
- The front and side yard buffers are acceptable as is.
- Any change to the cross-access agreement with the adjacent properties must be reviewed and approved by Township staff.
- The site shall be signed to advise that no overnight parking is permitted to exceed the township standards of 72 hours.
- A copy of the rendering presented this evening and the proposed paint colors shall be provided to Township Staff.

The motion carried unanimously.

OPEN PUBLIC HEARING # 5…Consideration of a request for approval of the 2022-2027 Capital Improvement Program as submitted by the Township Manager.

Ms. VanMarter stated the Planning Commission is required to approve the Capital Improvement Program. She reviewed the specific projects, which include road, parks and recreation, pedestrian movement, and facilities and grounds improvements.

Commissioner McBain suggested that improvements be made at the intersection of Latson and Golf Club. She suggested that this should be done before paving Golf Club Road because paving Golf Club Road to Hacker Road will just add more congestion to the dangerous intersection. Commissioner Rauch is pleased to see that the Bauer and Challis Road intersection is a priority. He also suggested improvements to the Bauer and Brighton Road intersection that could add more stacking to help with congestion related to the schools.

APPROVED

September 6, 2022

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
Subject:	Grand River Self Storage – Amendment to an Approved Site Plan (Review #1)
Location:	2630 East Grand River Avenue – south side of Grand River, east of Chilson Road
Zoning:	GCD General Commercial District

Dear Commissioners:

At the Township's request, we have reviewed the request to amend an approved site plan for a climate-controlled indoor commercial storage business at 2630 East Grand River Avenue (site plan dated 8/22/22).

A. Summary

1. The applicant seeks authorization to not improve the front parking lot, which was a condition of site plan approval.
2. In order to remove a condition of approval, the request must follow the same review process – Planning Commission recommendation to the Township Board.
3. The "potential future lot lines" depicted on the plan do not constitute a compliant GCD lot, so the method of creating a future development site is unclear.
4. There is no indication of the anticipated time-line to create/develop the frontage site.
5. If the request is granted, the front parking lot could remain in poor condition until the frontage site is developed.
6. As an alternative to leaving the front parking lot as-is, the applicant should consider having it removed and sodded with grass/landscaping until a future development occurs.

B. Proposal/Process

In March of 2022, the Planning Commission put forth favorable recommendations to the Township Board on a special land use and site plan to convert the existing building into a climate-controlled indoor commercial storage business.

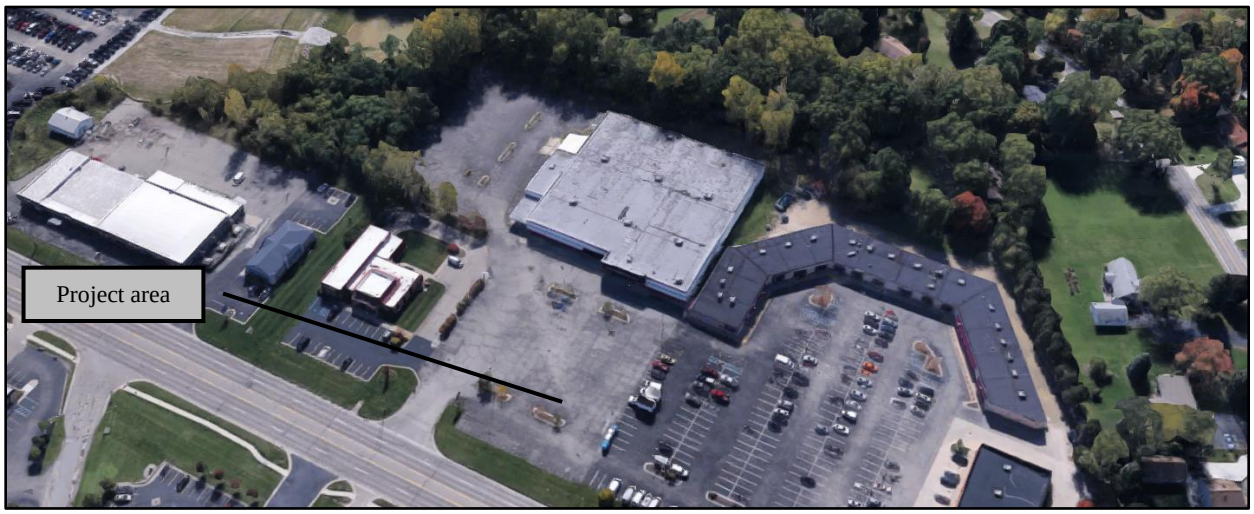
The recommendation on the site plan was conditional, and one of the conditions was that the parking lot was to be pulverized and repaved.

Later that month, the Township Board granted special land use and site plan approval with the conditions set forth by the Commission.

At this time, the applicant seeks to amend the project by not repaving the front parking lot. It is our understanding that the applicant's rationale is that they are looking to create and develop a future lot along Grand River Avenue.

Since the applicant seeks to remove a condition asserted by the Township Board, the amended site plan must follow the same review process. As such, the Commission is to review the request and put forth a recommendation to the Township Board on the amended site plan review.

The Board has final approval authority.



Aerial view of site and surroundings (looking south)

C. Amended Site Plan Review

As noted above, the applicant seeks to remove the condition that the entire parking lot be pulverized and repaved so they may pursue a future lot/development along the Grand River frontage.

The remainder of the parking lot tied to the climate-controlled indoor storage business is to be pulverized and repaved.

Our concern with the request is twofold: the "potential future lot lines" depicted on the amended site plan do not constitute a compliant GCD lot and there is no indication of the timing to create/develop this site.

The intent behind the original proposal was to clean up a site that had lapsed into relatively poor condition, including the parking lots. Pulverizing and repaving all of the parking areas was needed to improve the overall site conditions.

If the applicant wishes to avoid the added cost of re-doing the front parking lot, they should provide the Commission with a project timeline to develop this portion of the site. Theoretically, the site's frontage could remain in poor condition unless/until a development is approved.

Additionally, the manner in which the site's frontage is redeveloped is an important consideration. If the applicant wishes to pursue a land division, then a newly created lot must provide a minimum width of 150 feet with a minimum area of 1 acre. What is depicted is well short of a compliant lot.

As an alternative to leaving the front of the site as-is, we suggest the applicant consider removing the pavement and replacing it with sod/landscaping.

If the Township is amenable to this approach, it would clean the site up while also saving the applicant the cost of repaving/replacing a parking lot that may not be used for a period of time.

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

Respectfully,
SAFEBUILT

Brian V. Borden, AICP
Michigan Planning Manager

TETRA TECH

August 30, 2022

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

Re: Grand River Self Storage
Site Plan Review No. 3

Dear Ms. Van Marter:

Tetra Tech conducted a third review of the proposed Grand River Self Storage site plan last dated August 22, 2022. The plans were prepared by Greentech Engineering, Inc. on behalf of Schafer Construction. The site is located on the south side of Grand River Avenue, east of Chilson Road. The Petitioner is proposing to improve an existing building (formerly "Great Escape") to be used as indoor storage. The proposed improvements include updates to the existing building and minimal improvement to the existing parking lot and access drives. We offer the following comments:

GENERAL

1. Approval should be obtained by the Brighton Area Fire Authority prior to site plan approval. The proposed plan shows an additional hydrant being installed on the northwest side of the building. It is our understanding that this will satisfy the fire department for hydrant coverage.
2. The proposed access to the existing southeast parking area has been revised to not infringe on the adjacent parcel. Additional paving and curbing is proposed on the petitioner parcel to create the access drive.
3. The Livingston County Health Department has indicated that the existing well on site should be properly abandoned by a registered water well driller. A note stating the well abandonment has been added to the site plan.

DRAINAGE AND GRADING

1. The proposed improvements slightly decrease the impervious surface of the site, and no additional detention should need to be provided as part of the improvements.

It appears the site plan has been revised to address our comments from our previous letters. Therefore we have no engineering related objections to the plan approval.

Sincerely,

Gary J. Markstrom, P.E.
Vice President

Tetra Tech
3497 Coolidge Road, East Lansing, MI 48823
Tel 517.316.3930 Fax 517.484.8140 www.tetratech.com

BRIGHTON AREA FIRE AUTHORITY

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

September 7, 2022

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Grand River Self Storage
2630 E. Grand River
Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above-mentioned site plan. The plans were received for review on August 29, 2022 and the drawings are dated August 22, 2022. The previously approved site plan has been revised to remove the pulverize and pave from the front parking lot. The plan review is based on the requirements of the International Fire Code (IFC) 2021 edition.

The fire authority has no opposition to the proposed elimination of the parking lot surface improvement at the front of the building.

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,

Rick Boisvert, CFPS
Fire Marshal

cc:Amy Ruthig amy@genoa.org

CONSTRUCTION PLANS

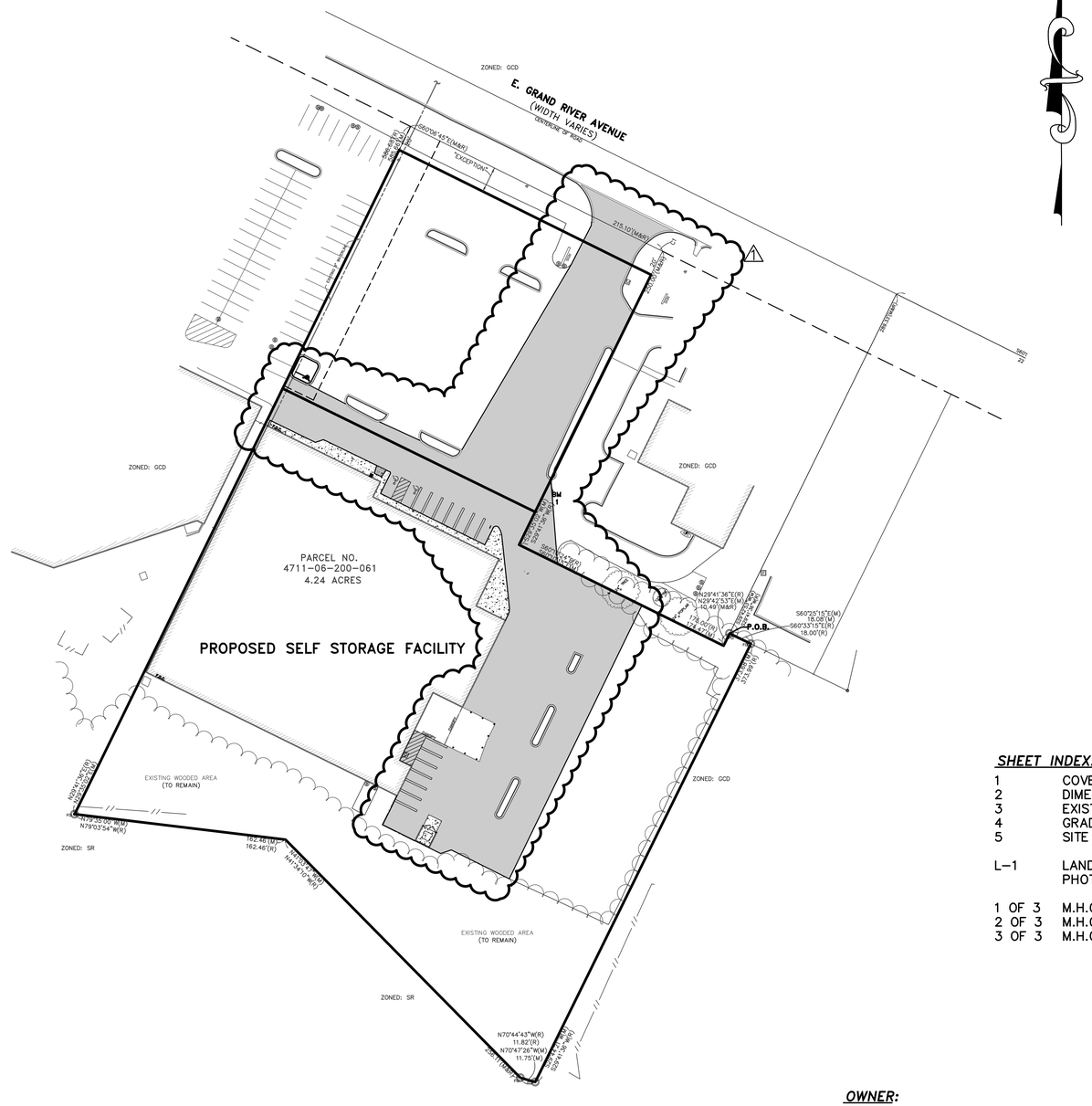
for

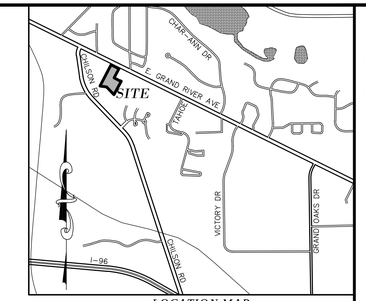
GRAND RIVER SELF STORAGE

2630 GRAND RIVER AVENUE
GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN

BENCHMARKS:

SITE BM #1
RAILROAD SPIKE, SOUTH FACE OF UTILITY POLE ALONG THE EAST PROPERTY LINE OF #2630 E. GRAND RIVER AVENUE, 192'± SOUTHWEST OF THE NORTHEAST PROPERTY CORNER.
ELEVATION: 963.72 N.A.V.D.88





LOCATION MAP
SCALE: 1"=1700'

GENERAL NOTES:

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF GENOA TOWNSHIP.
2. 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.
3. CONTRACTOR TO OBTAIN ALL REQUIRED APPROVALS AND PERMITS PRIOR TO THE START OF CONSTRUCTION.

DESCRIPTION: PARCEL #4711-06-200-061
(BY OTHERS)

PART OF THE NORTHEAST 1/4 OF SECTION 6, T2N-R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 6; THENCE N02°17'07"E 594.63 FEET TO THE CENTERLINE OF GRAND RIVER AVENUE THENCE N60°39'00"W ALONG SAID CENTERLINE 2381.67 FEET; THENCE CONTINUING ALONG SAID CENTERLINE N60°06'45"W 224.71 FEET; THENCE S29°41'36"W 289.33 FEET TO THE POINT OF BEGINNING; THENCE S60°33'15"E 18.00 FEET; THENCE S29°41'36"W 373.99 FEET; THENCE N70°44'43"W 11.82 FEET; THENCE N41°34'10"W 256.11 FEET; THENCE N79°03'54"W 162.46 FEET; THENCE N29°41'36"E 586.68 FEET TO THE SOUTHERLY RIGHT-OF-WAY OF GRAND RIVER AVENUE; THENCE ALONG SAID RIGHT-OF-WAY S60°06'45"E 211.40 FEET; THENCE CONTINUING ALONG RIGHT-OF-WAY ALONG THE ARC OF A CURVE LEFT CHORD BEARING S60°06'50"E 3.60 FEET; THENCE S29°41'36"W 250.00 FEET; THENCE S60°10'24"E 175.00 FEET; THENCE N29°41'36"E 10.49 FEET TO THE POINT OF BEGINNING, CONTAINING 4.24 ACRES, MORE OR LESS, AND SUBJECT TO ANY EASEMENTS OR RESTRICTIONS OF RECORD. SPLIT FROM 019 EXCEPTING THE NORTHEASTERLY 20 FEET AND PARALLEL TO GRAND RIVER, AS DEEDED TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION CORR 3/2014.

NOTICE:

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

NOTE:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

811
Know what's below
Call before you dig.

SHEET INDEX:

1	COVER SHEET
2	DIMENSION & PAVING PLAN
3	EXISTING CONDITIONS & DEMOLITION PLAN
4	GRADING & SESC PLAN
5	SITE DETAILS
L-1	LANDSCAPE PLAN
	PHOTOMETRIC PLAN
1 OF 3	M.H.O.G. SEWER AND WATER AUTHORITY STANDARD DETAILS
2 OF 3	M.H.O.G. SEWER AND WATER AUTHORITY STANDARD DETAILS
3 OF 3	M.H.O.G. SEWER AND WATER AUTHORITY STANDARD DETAILS

OWNER:
AARON AMUCHASTEGUIAJCSV, LLC
8616 MENDOCINO DRIVE
AUSTIN, TX 78735
PHONE: (805)-904-8369

APPLICANT:
SCHAFER CONSTRUCTION
150 N. FIRST STREET, SUITE 100
BRIGHTON, MI 48393
CONTACT: MATT VETTER
PHONE: (810) 220-0296

ENGINEER/SURVEYOR:
GREENTECH ENGINEERING, INC.
51147 PONTIAC TRAIL
WIXOM, MI 48393
CONTACT: DAN LECLAIR, P.E.
(248) 668-0700

L.C.D.C. JOB NO. PSCREV2002-00041

GREENTECH
ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS
51147 Pontiac Trail, Wixom, MI 48393
Phone: (248) 668-0700 Fax: (248) 668-0701

RESIDENTIAL
Subdivisions
Site Condominium
Multi-Family
Plot Plans
COMMERCIAL
Site Plans
Site Engineering
Industrial & Multi-Unit
Land Surveying
SURVEYING
ALTA Surveys
Land Surveys
Topographic Surveys
Boundary Surveys
Construction Staking

CLIENT: SCHAFER CONSTRUCTION

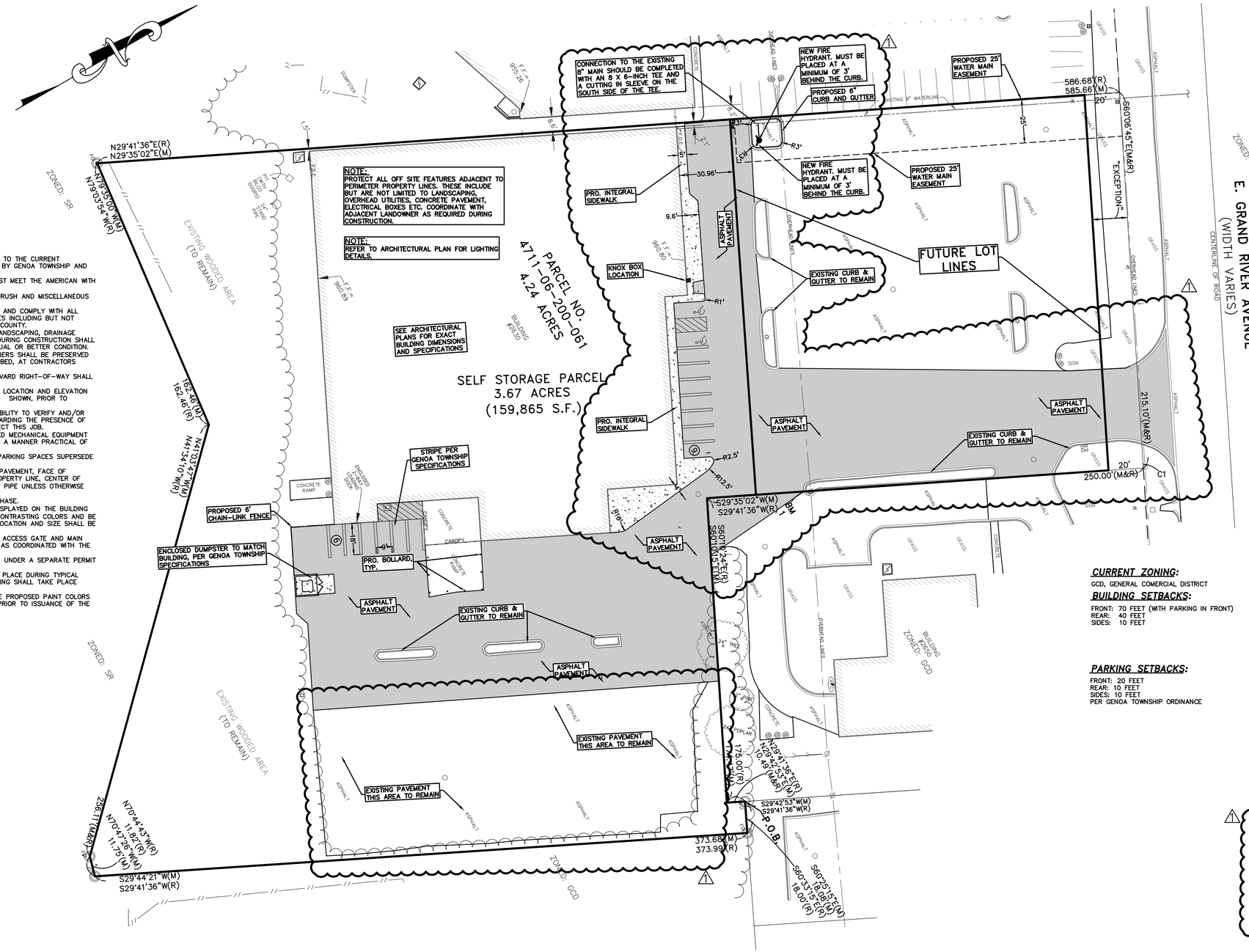
COVER SHEET

2630 GRAND RIVER AVE – PARCEL NO 4711-06-200-061
TOWNSHIP: 2 N.
SECTION: 6
RANGE: 5 E.
CHARTER TOWNSHIP OF GENOA
LIVINGSTON COUNTY
MICHIGAN

REVISED:
2022-10-4 PLAN UPDATE

SEAL
STATE OF MICHIGAN
DANIEL J. LeCLAIR
ENGINEER
No. 47036
LICENSED PROFESSIONAL ENGINEER

DATE: 8-22-2022
DRAWN BY: RMS
CHECKED BY: DJL
0 25 50
FBK: --
CHF: MM
SCALE HOR 1"= 50 FT.
VER 1"= -- FT.
1
21-315



GENERAL NOTES:

1) ALL CONSTRUCTION SHALL BE CONFORMING TO THE CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY GENOA TOWNSHIP AND LIVINGSTON COUNTY.
2) ALL SIDEWALK, RAMPS, AND LANDINGS, MUST MEET THE AMERICAN WITH DISABILITES ACT (ADA) REQUIREMENTS.
3) DISPOSE OF ALL TREES TO BE REMOVED, BRUSH AND MISCELLANEOUS DEBRIS LEGALLY OFF SITE.
4) THE CONTRACTOR SHALL PAY FOR, OBTAIN AND COMPLY WITH ALL PERMITS NECESSARY FROM PUBLIC AGENCIES INCLUDING BUT NOT LIMITED TO GENOA TOWNSHIP., LIVINGSTON COUNTY.
5) ALL PAVEMENT, DRIVEWAYS, SHOULDERS, LANDSCAPING, DRAINAGE PIPES, MAILBOXES, SIGNS, ETC. DAMAGED DURING CONSTRUCTION SHALL BE RESTORED BY THE CONTRACTOR TO EQUAL OR BETTER CONDITION.
6) EXISTING MONUMENTS AND PROPERTY CORNERS SHALL BE PRESERVED AND PROTECTED, AND RESTORED IF DISTURBED, AT CONTRACTORS EXPENSE.
7) NO WORK WITHIN THE GRAND RIVER BOULDVARD RIGHT-OF-WAY SHALL TAKE PLACE.
8) THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN, PRIOR TO CONSTRUCTION.
9) 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.
10) ALL GROUND, BUILDING, AND ROOF MOUNTED MECHANICAL EQUIPMENT SHALL BE SCREENED FROM PUBLIC VIEW IN A MANNER PRACTICAL OF THE SITE.
11) STATE REQUIREMENTS FOR BARRIER FREE PARKING SPACES SUPERSEDE ANY TOWNSHIP REQUIREMENTS.
12) ALL DIMENSIONS SHOWN ARE TO EDGE OF PAVEMENT, FACE OF SIDEWALK, OUTSIDE FACE OF BUILDING, PROPERTY LINE, CENTER OF MANHOLE/CATCH BASIN OR CENTERLINE OF PIPE UNLESS OTHERWISE NOTED.
13) ALL WORK SHALL BE COMPLETED IN ONE PHASE.
14) THE ADDRESS OF THE BUILDING WILL BE DISPLAYED ON THE BUILDING AND 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.
15) A KNOX BOX SHALL BE INSTALLED AT THE ACCESS GATE AND MAIN ENTRY DOOR OR AT OTHER ENTRY POINTS AS COORDINATED WITH THE BRIGHTON AREA FIRE AUTHORITY.
16) THE MONUMENT SIGN MAY BE APPLIED FOR UNDER A SEPARATE PERMIT FROM THIS PLAN SUBMITTAL.
17) ALL LOADING AND UNLOADING SHALL TAKE PLACE DURING TYPICAL BUSINESS HOURS. NO LOADING OR UNLOADING SHALL TAKE PLACE OUTSIDE OF THE GATED AREAS.
18) A HARD COPY OF THE RENDERING AND THE PROPOSED PAINT COLORS SHALL BE PROVIDED TO TOWNSHIP STAFF PRIOR TO ISSUANCE OF THE LAND USE PERMIT

FLOOD HAZARD STATEMENT:

THIS PROPERTY IS LOCATED WITHIN A FEMA DESIGNATED ZONE X FLOOD HAZARD AREA AS SHOWN ON NATIONAL FLOOD INSURANCE PROGRAM (NFIP) FOR MICHIGAN FLOOD INSURANCE RATE MAP (FIRM) #26093C0307D (COMMUNITY ID NO. 260843 – TOWNSHIP OF GENOA, MI) WITH AN EFFECTIVE DATE OF SEPTEMBER 17, 2008. THIS STATEMENT IS BASED ON THE RESULTS OF GRAPHIC PLOTTING ONTO THE ABOVE NAMED MAP AND PANEL, WHICH IS THE CURRENT MAP FOR THE COMMUNITY IN WHICH THE PROPERTY IS LOCATED. ZONE "X" INDICATES AREAS DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN.

NOTE:

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

HATCH LEGEND

- ASPHALT
- CONCRETE
- PROPOSED BUILDING
- EXISTING BUILDING

UTILITY NOTE

NO CHANGES TO THE EXISTING SANITARY SEWER, STORM SEWER OR WATER MAIN INFRASTRUCTURE ARE ANTICIPATED AS PART OF THE PROPOSED DEVELOPMENT.

SIGNAGE NOTE

MONUMENT SIGN AND BUILDING SIGNAGE WILL BE REQUESTED VIA A SEPARATE SIGNAGE APPLICATION AND PER THE GENOA TOWNSHIP SIGN ORDINANCE.

WELL NOTE

CONTRACTOR TO COORDINATE, LOCATE & ABANDON THE EXISTING WELL PER THE LIVINGSTON COUNTY HEALTH DEPARTMENT REQUIREMENTS

GRADING LIMITS NOTE

THE LIMITS OF GRADING ARE THE SHADED AREA

KNOX BOX NOTE

KNOX BOX LOCATION TO BE COORDINATED WITH THE BRIGHTON AREA FIRE AUTHORITY. THE KNOX BOX FOR THE REAR ACCESS GATE SHALL INCLUDE A KEY SWITCH FOR CONTROL & BYPASS OF THE ACCESS CONTROL OF THE GATE.

NOTE

THE PROJECT SPONSOR ELECTED TO ESCROW MONEY WITH THE TOWNSHIP FOR CONSTRUCTION OF AN 8' WIDE BIKE PATH IN LEIU OF CONSTRUCTION OF THE BIKE PATH ALONG THE GRAND RIVER FRONTAGE.

WATER MAIN NOTES

WATER IMPROVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CURRENT MARION, HOWELL, OCEOLA AND GENOA (MHOG) DESIGN STANDARDS AND SPECIFICATIONS.

THE EXISTING 8-INCH FIRE SUPPRESSION LINE WILL NEED TO BE PRESSURE TESTED, FLUSHED, AND BAC-T TESTED PRIOR TO THE HYDRANT BEING PLACED IN SERVICE.

CURRENT ZONING:

GCD, GENERAL COMERCIAL DISTRICT

BUILDING SETBACKS:

FRONT: 70 FEET (WITH PARKING IN FRONT)
REAR: 40 FEET
SIDES: 10 FEET

PARKING SETBACKS:

FRONT: 20 FEET
REAR: 10 FEET
SIDES: 10 FEET
PER GENOA TOWNSHIP ORDINANCE

1 PROPOSED OUTLOT NOTE

THE PROJECT SPONSOR INTENDS TO SUBMIT A SITE PLAN FOR THE PROPOSED OUTLOT TO GENOA TOWNSHIP WITHIN EIGHTEEN MONTHS OF FINAL SITE PLAN APPROVAL FOR THE PROPOSED USE. THE EXISTING ASPHALT PARKING LOT WITHIN THE PROPOSED OUTLOT SHALL REMAIN UNTIL A DEVELOPMENT PLAN FOR THE OUTLOT IS APPROVED BY GENOA TOWNSHIP AND CONSTRUCTION COMMENCES. SHOULD THE PROJECT SPONSOR NOT SUBMIT A DEVELOPMENT PLAN FOR THE OUTLOT WITHIN SAID EIGHTEEN MONTH PERIOR, THEN THE PROJECT SPONSOR WILL REMOVE THE EXISTING ASPHALT PARKING LOT AND RESTORE THE OUTLOT WITH GRASS SEED UNTIL SUCH TIME THAT A DEVELOPMENT PLAN IS PRESENTED AND APPROVED BY GENOA TOWNSHIP.

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RESIDENTIAL: Subdivisions, Site Condominium, Multi-Family, Plot Plans
COMMERCIAL: Site Plans, Site Condominium, Industrial Buildings
SURVEYING: ALTA Surveys, Boundary Surveys, Topographic Surveys, Construction Staking

811 Know what's below Call before you dig.

CLIENT: SCHAFER CONSTRUCTION

DIMENSION & PAVING PLAN

2630 GRAND RIVER AVE – PARCEL NO 4711-06-200-061
SECTION: 6 TOWNSHIP 2 N. RANGE: 5 E.
CHARTER TOWNSHIP OF GENOA
LIVINGSTON COUNTY
MICHIGAN

REVISION	
1	2022-10-4 PLAN UPDATE

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SCALE HOR 1"= 30 FT.
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21-315

BENCHMARKS:

SITE BM #1
RAILROAD SPIKE, SOUTH FACE OF UTILITY POLE ALONG THE EAST PROPERTY LINE OF #2630 E. GRAND RIVER AVENUE, 192'± SOUTHWEST OF THE NORTHEAST PROPERTY CORNER.
ELEVATION: 963.72 N.A.V.D.88

SURVEY LEGEND

- EX. SECTION CORNER FIB/FCI/FIP/MON
- EX. MAILBOX
- EX. SOIL BORE
- EX. SIGN
- EX. FIBER MARKER
- EX. SANITARY MANHOLE
- EX. CATCH BASIN
- EX. STORM MANHOLE
- EX. HYDRANT
- EX. GATE VALVE & WELL
- EX. WATER SHUT-OFF
- EX. LIGHT POLE
- EX. UTILITY POLE
- EX. PEDISTAL
- EX. HAND HOLE
- EX. UTILITY FLAG
- EX. COMMUNICATIONS
- EX. SANITARY SEWER
- EX. GAS LINE
- EX. WATER MAIN
- EX. OVERHEAD UTILITIES
- EX. FENCE
- EX. SWALE
- WETLAND BOUNDARY
- 590 CONTOUR MAJOR
- 591 CONTOUR MINOR
- EX. ZONING
- EX. TREELINE
- EX. CONIFEROUS
- EX. DECIDUOUS

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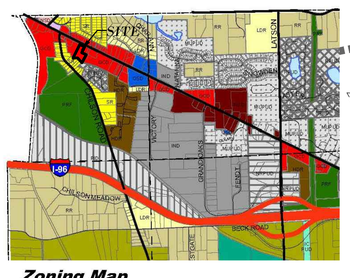
DEMOLITION LEGEND:

- CURB REMOVAL
- ASPHALT REMOVAL
- CONCRETE PAVEMENT AND SIDEWALK\BRICK REMOVAL



Zoning Map
Genoa Charter Township
Livingston County, Michigan

Legend

AG	GC
CE	NS
RR	OS
LDR	NRPUD
SR	IND
LRR	PID
UR	PRF
MDR	MUPUD
HDR	RDPUD
RPUD	Town Center
MHP	CAPUD
RC	ICPUD

NOTE:

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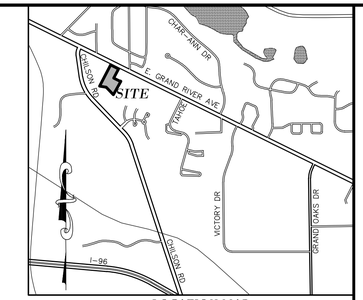


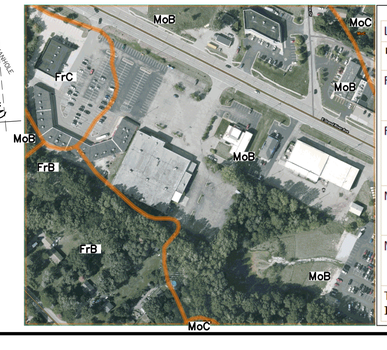
LOCATION MAP
SCALE:1"=1700'

DEMOLITION NOTES:

THESE NOTES APPLY TO ALL CONSTRUCTION ACTIVITIES ON THIS PROJECT:

1. ALL MATERIAL TO BE REMOVED, WHETHER SPECIFICALLY NOTED IN THE PLANS OR NOT, SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR AND DISPOSED OF OFF-SITE IN A LEGAL MANNER. NO ON-SITE BURY OR BURN PITS SHALL BE ALLOWED.
2. ALL DEMOLITION WORK SHALL CONFORM TO ALL LOCAL CODES AND ORDINANCES.
3. STAGING/PHASING OF DEMOLITION AND CONSTRUCTION IS TO BE COORDINATED WITH THE OWNER AND THE CONTRACTOR PRIOR TO CONSTRUCTION.
4. SPECIFIC DEMOLITION ITEMS HAVE BEEN INDICATED ON THE PLANS AS A GUIDE TO THE GENERAL SCOPE OF THE WORK. IT IS THE INTENT THAT THESE ITEMS SHALL BE COMPLETELY REMOVED BY THE CONTRACTOR ABOVE AND BELOW GROUND, UNLESS SPECIFICALLY NOTED OTHERWISE, AND THAT DEMOLITION WILL INCLUDE BUT WILL NOT NECESSARILY BE LIMITED TO THESE ITEMS. CONTRACTOR SHALL VISIT SITE TO VERIFY EXISTING CONDITIONS AND EXTENTS OF THE DEMOLITION THAT WILL BE REQUIRED PRIOR TO SUBMITTING A BID.
5. REMOVE ALL STRUCTURES DESIGNATED FOR REMOVAL ACCORDING TO THE DEMOLITION PLAN. THIS INCLUDES FOUNDATIONS, FOOTINGS, FOUNDATION WALLS, FLOOR SLABS, UNDERGROUND UTILITIES, CONCRETE, ASPHALT, TREES, ETC.
6. REFER TO LANDSCAPE PLANS FOR TREE PROTECTION DETAILS.
7. THE CONTRACTOR SHALL, AS A MINIMUM, PROVIDE TREE PROTECTION FENCING AROUND EXISTING TREES TO BE SAVED THAT ARE WITHIN 15' OF CONSTRUCTION ACTIVITIES AND AS INDICATED IN THE PLANS OR PER LOCAL AGENCY REQUIREMENTS.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP, NOISE, DUST CONTROL, STREET SWEEPING AND HOURS OF OPERATION IN ACCORDANCE WITH THE LOCAL CODES.
9. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, SIGNAGE, MARKINGS, LIGHTS AND OTHER TRAFFIC CONTROL DEVICES TO PROTECT THE WORK ZONE AND SAFELY MAINTAIN TRAFFIC PER AGENCY REQUIREMENTS AND IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MMUTCD) LATEST EDITION.
10. THE CONTRACTOR SHALL CONTACT THE APPROPRIATE UTILITY COMPANIES TO CONFIRM THAT UTILITY LEADS HAVE BEEN TAKEN OUT OF SERVICE PRIOR TO DEMOLITION, AS APPLICABLE.
11. THE CONTRACTOR SHALL NOTIFY MISS DIG, GENOA TOWNSHIP ENGINEER AND/OR THE AUTHORITY HAVING JURISDICTION 3 BUSINESS DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

TRIBUTARY MAP



Livingston County, Michigan (MI093)
Livingston County, Michigan (MI093)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
FrB	Fox-Boyer complex, 2 to 6 percent slopes	5.7	19.4%
FrC	Fox-Boyer complex, 6 to 12 percent slopes	2.6	8.9%
MoB	Wawasee loam, 2 to 6 percent slopes	20.6	70.0%
MoC	Wawasee loam, 6 to 12 percent slopes	0.5	1.8%
Totals for Area of Interest		**29.5**	**100.0%**

DESCRIPTION: PARCEL #4711-06-200-061
(BY OTHERS)

PART OF THE NORTHEAST 1/4 OF SECTION 6, T2N-R5E, GENOA TOWNSHIP, LIVINGSTON COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE EAST 1/4 CORNER OF SAID SECTION 6; THENCE N02°17'07"E 594.63 FEET TO THE CENTERLINE OF GRAND RIVER AVENUE THENCE N60°39'00"W ALONG SAID CENTERLINE 2381.67 FEET; THENCE CONTINUING ALONG SAID CENTERLINE N60°06'45"W 224.71 FEET; THENCE S29°41'36"W 289.33 FEET TO THE POINT OF BEGINNING; THENCE S60°33'15"E 18.00 FEET; THENCE S29°41'36"W 373.99 FEET; THENCE N70°44'43"W 11.82 FEET; THENCE N41°34'10"W 256.11 FEET; THENCE N79°03'54"W 162.46 FEET; THENCE N29°41'36"E 586.68 FEET TO THE SOUTHERLY RIGHT-OF-WAY OF GRAND RIVER AVENUE; THENCE ALONG SAID RIGHT-OF-WAY S60°06'45"E 211.40 FEET; THENCE CONTINUING ALONG RIGHT-OF-WAY ALONG THE ARC OF A CURVE LEFT CHORD BEARING S60°06'50"E 3.60 FEET; THENCE S29°41'36"W 250.00 FEET; THENCE S60°10'24"E 175.00 FEET; THENCE N29°41'36"E 10.49 FEET TO THE POINT OF BEGINNING, CONTAINING 4.24 ACRES, MORE OR LESS, AND SUBJECT TO ANY EASEMENTS OR RESTRICTIONS OF RECORD. SPLIT FROM 019 EXCEPTING THE NORTHEASTERLY 20 FEET AND PARALLEL TO GRAND RIVER, AS DEEDED TO THE MICHIGAN DEPARTMENT OF TRANSPORTATION CORR 3/2014.

CURVE TABLE

CURVE	LENGTH	RADIUS	DELTA	CHORD
C1	3.60'	85,993.70'	00°00'09"	S60°06'50"E 3.60'

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EXISTING CONDITIONS & DEMOLITION PLAN

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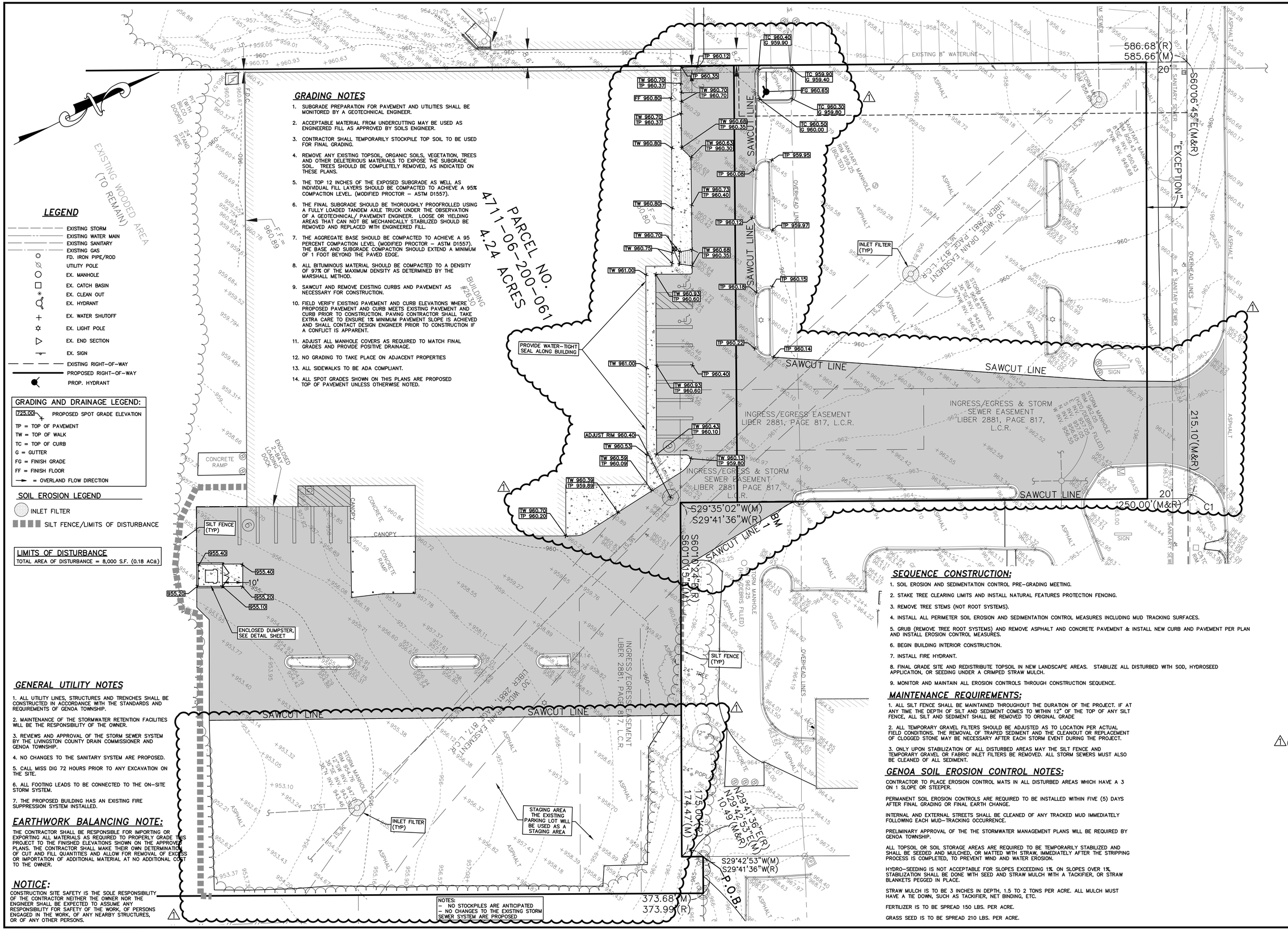

GRADING NOTES

1. SUBGRADE PREPARATION FOR PAVEMENT AND UTILITIES SHALL BE MONITORED BY A GEOTECHNICAL ENGINEER.
2. ACCEPTABLE MATERIAL FROM UNDERCUTTING MAY BE USED AS ENGINEERED FILL AS APPROVED BY SOILS ENGINEER.
3. CONTRACTOR SHALL TEMPORARILY STOCKPILE TOP SOIL TO BE USED FOR FINAL GRADING.
4. REMOVE ANY EXISTING TOPSOIL, ORGANIC SOILS, VEGETATION, TREES AND OTHER DELETERIOUS MATERIALS TO EXPOSE THE SUBGRADE SOIL. TREES SHOULD BE COMPLETELY REMOVED, AS INDICATED ON THESE PLANS.
5. THE TOP 12 INCHES OF THE EXPOSED SUBGRADE AS WELL AS INDIVIDUAL FILL LAYERS SHOULD BE COMPACTED TO ACHIEVE A 95% COMPACTION LEVEL. (MODIFIED PROCTOR – ASTM D1557).
6. THE FINAL SUBGRADE SHOULD BE THOROUGHLY PROOFROLLED USING A FULLY LOADED TANDEM AXLE TRUCK UNDER THE OBSERVATION OF A GEOTECHNICAL/ PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CAN NOT BE MECHANICALLY STABILIZED SHOULD BE REMOVED AND REPLACED WITH ENGINEERED FILL.
7. THE AGGREGATE BASE SHOULD BE COMPACTED TO ACHIEVE A 95 PERCENT COMPACTION LEVEL (MODIFIED PROCTOR – ASTM D1557). THE BASE AND SUBGRADE COMPACTION SHOULD EXTEND A MINIMUM OF 1 FOOT BEYOND THE PAVED EDGE.
8. ALL BITUMINOUS MATERIAL SHOULD BE COMPACTED TO A DENSITY OF 97% OF THE MAXIMUM DENSITY AS DETERMINED BY THE MARSHALL METHOD.
9. SAWCUT AND REMOVE EXISTING CURBS AND PAVEMENT AS NECESSARY FOR CONSTRUCTION.
10. FIELD VERIFY EXISTING PAVEMENT AND CURB ELEVATIONS WHERE PROPOSED PAVEMENT AND CURB MEETS EXISTING PAVEMENT AND CURB PRIOR TO CONSTRUCTION. PAVING CONTRACTOR SHALL TAKE EXTRA CARE TO ENSURE 1% MINIMUM PAVEMENT SLOPE IS ACHIEVED AND SHALL CONTACT DESIGN ENGINEER PRIOR TO CONSTRUCTION IF A CONFLICT IS APPARENT.
11. ADJUST ALL MANHOLE COVERS AS REQUIRED TO MATCH FINAL GRADES AND PROVIDE POSITIVE DRAINAGE.
12. NO GRADING TO TAKE PLACE ON ADJACENT PROPERTIES
13. ALL SIDEWALKS TO BE ADA COMPLIANT.
14. ALL SPOT GRADES SHOWN ON THIS PLANS ARE PROPOSED TOP OF PAVEMENT UNLESS OTHERWISE NOTED.

LEGEND

- EXISTING STORM
- EXISTING WATER MAIN
- EXISTING SANITARY
- EXISTING GAS
- FD. IRON PIPE/ROD
- UTILITY POLE
- EX. MANHOLE
- EX. CATCH BASIN
- EX. CLEAN OUT
- EX. HYDRANT
- EX. WATER SHUTOFF
- EX. LIGHT POLE
- EX. END SECTION
- EX. SIGN
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- PROP. HYDRANT

GRADING AND DRAINAGE LEGEND:

- 725.00 PROPOSED SPOT GRADE ELEVATION
- TP = TOP OF PAVEMENT
- TW = TOP OF WALK
- TC = TOP OF CURB
- G = GUTTER
- FG = FINISH GRADE
- FF = FINISH FLOOR
- = OVERLAND FLOW DIRECTION

SOIL EROSION LEGEND

- INLET FILTER
- SILT FENCE/LIMITS OF DISTURBANCE

LIMITS OF DISTURBANCE

TOTAL AREA OF DISTURBANCE = 8,000 S.F. (0.18 AC±)

GENERAL UTILITY NOTES

1. ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARDS AND REQUIREMENTS OF GENOA TOWNSHIP.
2. MAINTENANCE OF THE STORMWATER RETENTION FACILITIES WILL BE THE RESPONSIBILITY OF THE OWNER.
3. REVIEWS AND APPROVAL OF THE STORM SEWER SYSTEM BY THE LIVINGSTON COUNTY DRAIN COMMISSIONER AND GENOA TOWNSHIP.
4. NO CHANGES TO THE SANITARY SYSTEM ARE PROPOSED.
5. CALL MISS DIG 72 HOURS PRIOR TO ANY EXCAVATION ON THE SITE.
6. ALL FOOTING LEADS TO BE CONNECTED TO THE ON-SITE STORM SYSTEM.
7. THE PROPOSED BUILDING HAS AN EXISTING FIRE SUPPRESSION SYSTEM INSTALLED.

EARTHWORK BALANCING NOTE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPORTING OR EXPORTING ALL MATERIALS AS REQUIRED TO PROPERLY GRADE THIS PROJECT TO THE FINISHED ELEVATIONS SHOWN ON THE APPROVED PLANS. THE CONTRACTOR SHALL MAKE THEIR OWN DETERMINATION OF CUT AND FILL QUANTITIES AND ALLOW FOR REMOVAL OF EXCESS OR IMPORTATION OF ADDITIONAL MATERIAL AT NO ADDITIONAL COST TO THE OWNER.

NOTICE:

CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

NOTES:
– NO STOCKPILES ARE ANTICIPATED
– NO CHANGES TO THE EXISTING STORM SEWER SYSTEM ARE PROPOSED

SEQUENCE CONSTRUCTION:

1. SOIL EROSION AND SEDIMENTATION CONTROL PRE-GRADING MEETING.
2. STAKE TREE CLEARING LIMITS AND INSTALL NATURAL FEATURES PROTECTION FENCING.
3. REMOVE TREE STEMS (NOT ROOT SYSTEMS).
4. INSTALL ALL PERIMETER SOIL EROSION AND SEDIMENTATION CONTROL MEASURES INCLUDING MUD TRACKING SURFACES.
5. GRUB (REMOVE TREE ROOT SYSTEMS) AND REMOVE ASPHALT AND CONCRETE PAVEMENT & INSTALL NEW CURB AND PAVEMENT PER PLAN AND INSTALL EROSION CONTROL MEASURES.
6. BEGIN BUILDING INTERIOR CONSTRUCTION.
7. INSTALL FIRE HYDRANT.
8. FINAL GRADE SITE AND REDISTRIBUTE TOPSOIL IN NEW LANDSCAPE AREAS. STABILIZE ALL DISTURBED WITH SOD, HYDROSEED APPLICATION, OR SEEDING UNDER A CRIMPED STRAW MULCH.
9. MONITOR AND MAINTAIN ALL EROSION CONTROLS THROUGH CONSTRUCTION SEQUENCE.

MAINTENANCE REQUIREMENTS:

1. ALL SILT FENCE SHALL BE MAINTAINED THROUGHOUT THE DURATION OF THE PROJECT. IF AT ANY TIME THE DEPTH OF SILT AND SEDIMENT COMES TO WITHIN 12" OF THE TOP OF ANY SILT FENCE, ALL SILT AND SEDIMENT SHALL BE REMOVED TO ORIGINAL GRADE
2. ALL TEMPORARY GRAVEL FILTERS SHOULD BE ADJUSTED AS TO LOCATION PER ACTUAL FIELD CANDITIONS. THE REMOVAL OF TRAPED SEDIMENT AND THE CLEANOUT OR REPLACEMENT OF CLOGGED STONE MAY BE NECESSARY AFTER EACH STORM EVENT DURING THE PROJECT.
3. ONLY UPON STABILIZATION OF ALL DISTURBED AREAS MAY THE SILT FENCE AND TEMPORARY GRAVEL OR FABRIC INLET FILTERS BE REMOVED. ALL STORM SEWERS MUST ALSO BE CLEANED OF ALL SEDIMENT.

GENOA SOIL EROSION CONTROL NOTES:

CONTRACTOR TO PLACE EROSION CONTROL MATS IN ALL DISTURBED AREAS WHICH HAVE A 3 ON 1 SLOPE OR STEEPER.

PERMANENT SOIL EROSION CONTROLS ARE REQUIRED TO BE INSTALLED WITHIN FIVE (5) DAYS AFTER FINAL GRADING OR FINAL EARTH CHANGE.

INTERNAL AND EXTERNAL STREETS SHALL BE CLEANED OF ANY TRACKED MUD IMMEDIATELY FOLLOWING EACH MUD-TRACKING OCCURRENCE.

PRELIMINARY APPROVAL OF THE THE STORMWATER MANAGEMENT PLANS WILL BE REQUIRED BY GENOA TOWNSHIP.

ALL TOPSOIL OR SOIL STORAGE AREAS ARE REQUIRED TO BE TEMPORARILY STABILIZED AND SHALL BE SEEDED AND MULCHED, OR MATTED WITH STRAW. IMMEDIATELY AFTER THE STRIPPING PROCESS IS COMPLETED, TO PREVENT WIND AND WATER EROSION.

HYDRO-SEEDING IS NOT ACCEPTABLE FOR SLOPES EXCEEDING 1% ON SLOPES OVER 1%, STABILIZATION SHALL BE DONE WITH SEED AND STRAW MULCH WITH A TACKIFIER, OR STRAW BLANKETS PEGGED IN PLACE.

STRAW MULCH IS TO BE 3 INCHES IN DEPTH, 1.5 TO 2 TONS PER ACRE. ALL MULCH MUST HAVE A TIE DOWN, SUCH AS TACKIFIER, NET BINDING, ETC.

FERTILIZER IS TO BE SPREAD 150 LBS. PER ACRE.

GRASS SEED IS TO BE SPREAD 210 LBS. PER ACRE.

GREENTECH ENGINEERING, INC.
CIVIL ENGINEERS & LAND SURVEYORS
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COMMERCIAL: Site Plans, Site Condominium, Industrial, Multi-Unit
SURVEYING: ALTA Surveys, Boundary Surveys, Topographic Surveys, Construction Staking

Know what's below Call before you dig.

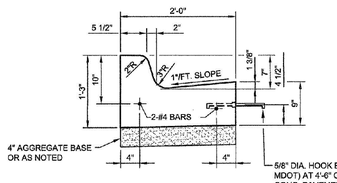
CLIENT: SCHAFER CONSTRUCTION

GRADING & SESC PLAN

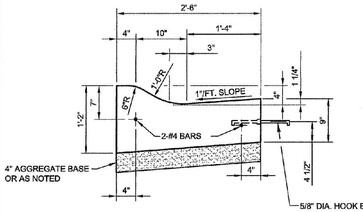
2630 GRAND RIVER AVE – PARCEL NO 4711-06-200-061
SECTION: 6 TOWNSHIP 2 N. RANGE: 5 E.
CHARTER TOWNSHIP OF GENOA
LIVINGSTON COUNTY
MICHIGAN

REVISIONS
1 2022-10-4 PLAN UPDATE

DATE: 8-22-2022
DRAWN BY: RMS
CHECKED BY: DJL
0 10 20
FBK: --
CHF: MM
SCALE HOR 1"= 20 FT. VER 1"= FT.
4
21-315



TYPE A
MDOT DETAIL R-30-E - TYPE C



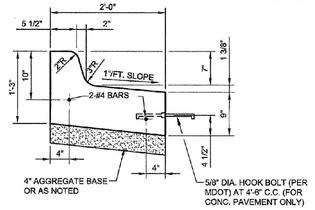
TYPE B
MDOT DETAIL R-30-E - TYPE D

Genoa Charter Township

CONCRETE CURB & GUTTER

Date: APRIL 2010

G-1



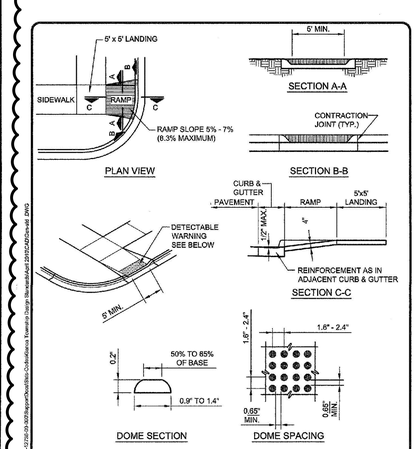
TYPE A1
MDOT DETAIL R-30-E - TYPE C - MODIFIED

Genoa Charter Township

CONCRETE CURB SPILLOUT

Date: APRIL 2010

G-2



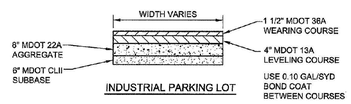
NOTE: SEE MDOT R-28-F SIDEWALK RAMP AND DETECTABLE WARNING DETAILS FOR ADDITIONAL INFORMATION.

Genoa Charter Township

SIDEWALK RAMP

Date: APRIL 2010

G-3



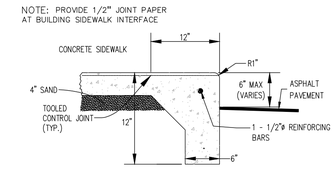
INDUSTRIAL PARKING LOT

Genoa Charter Township

PARKING LOT CROSS SECTIONS

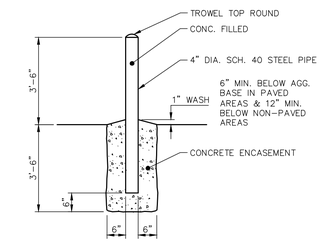
Date: APRIL 2010

G-6

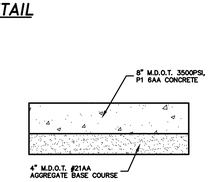


INTEGRAL SIDEWALK AND CURB
TO BE USED ALONG THE FRONT OF PROPOSED BUILDING
NOT TO SCALE

NOTE: SIDEWALK AT RAMP AND OVERHEAD DOOR TO BE THICKENED TO 6"



BOLLARD DETAIL
NO SCALE



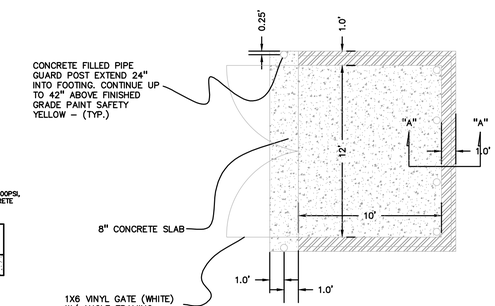
DUMPSTER PAD DETAIL
NOT TO SCALE

12" x 18"
RED ON WHITE REFLECTORIZED
7'-0" MOUNTING HEIGHT
(R7-22)

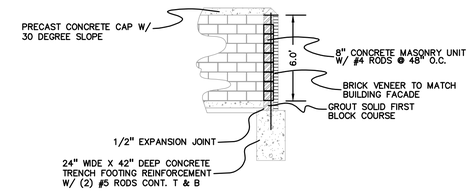
NO PARKING SIGN DETAIL
NOT TO SCALE

12" x 18" (R7-8)
GREEN BORDER AND LEGEND
WHITE SYMBOL, BLUE BACKGROUND.
REFLECTORIZED

BARRIER FREE PARKING SIGN DETAIL
NOT TO SCALE

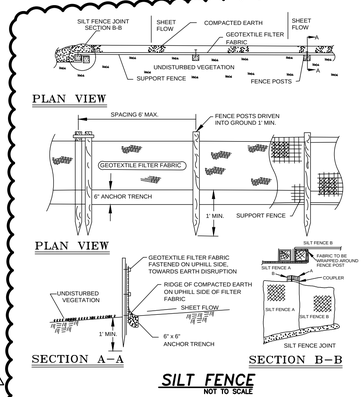


PLAN OF DUMPSTER ENCLOSURE
NO SCALE

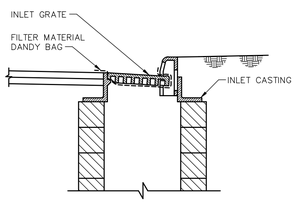


SECTION THRU DUMPSTER ENCLOSURE
NO SCALE

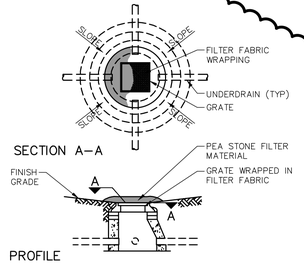
TRASH ENCLOSURE DETAILS



SILT FENCE
NOT TO SCALE

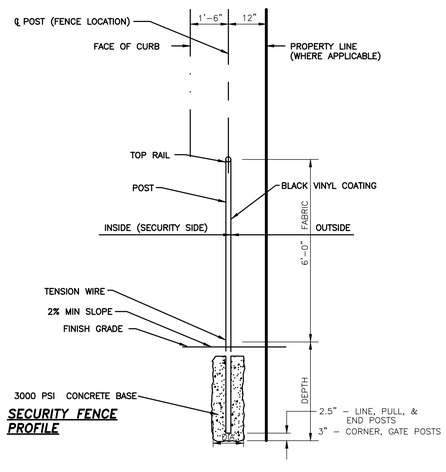


INLET FILTER AT CURB
NO SCALE

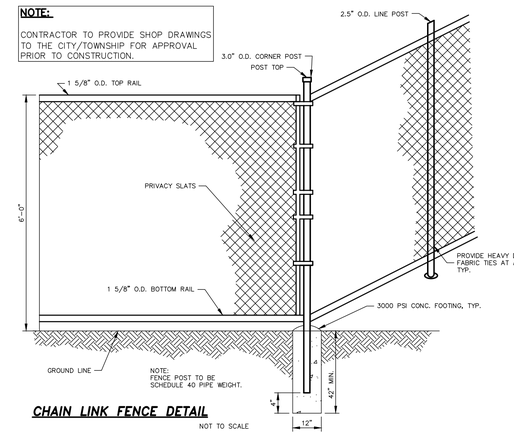


NOTE:
AT DRAINAGE STRUCTURES LOCATED IN PAVED/CURBED AREAS 'SILTSACK' FILTER BASKET OR APPROVED EQUAL MAY BE INSTALLED IN LIEU OF STONE INLET FILTER AFTER PAVEMENT INSTALLATION.

LOW POINT INLET FILTER
NO SCALE



SECURITY FENCE PROFILE



CHAIN LINK FENCE DETAIL
NOT TO SCALE

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CLIENT: SCHAFER CONSTRUCTION

SITE DETAILS

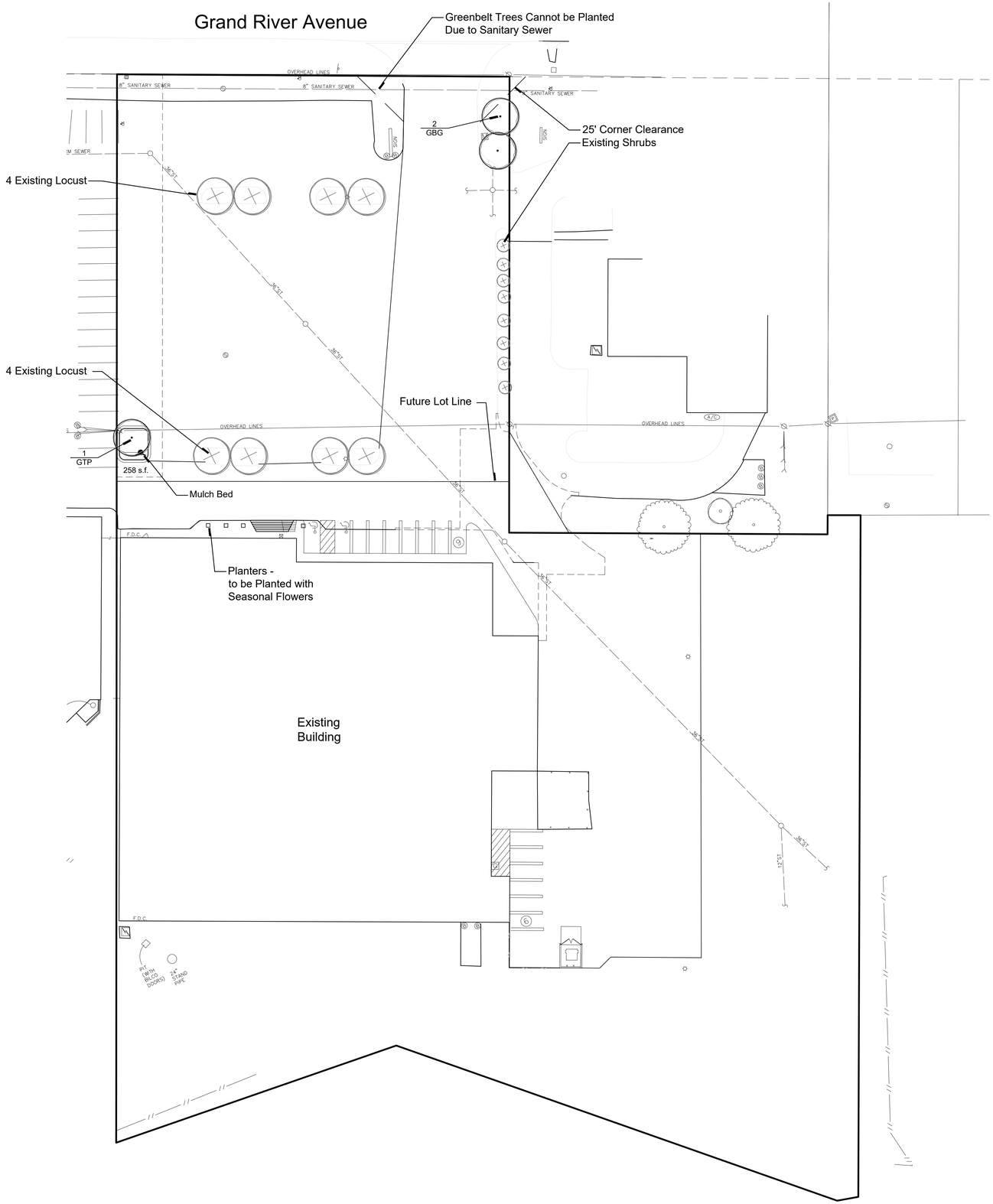
2630 GRAND RIVER AVE – PARCEL NO 4711-06-200-061
SECTION: 6 TOWNSHIP: 2 N. RANGE: 5 E.
CHARTER TOWNSHIP OF GENOA
LIVINGSTON COUNTY
MICHIGAN

REVISED:
2022-10-4 PLAN UPDATE

DATE: 8-22-2022
DRAWN BY: RMS
CHECKED BY: DJL

FBK: --
CHF: MM
SCALE HOR 1"= FT.
VER 1"= FT.

5
21-315



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Landscape Summary

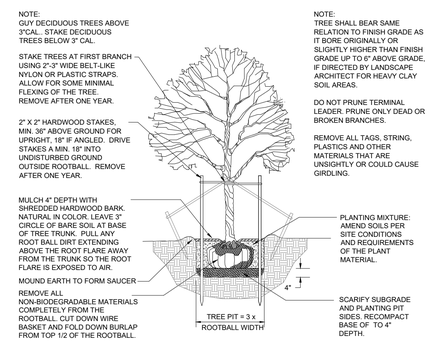
Greenbelt	
Greenbelt Length	70'
Trees Required	1.75 Trees (70' / 40')
Trees Provided	2 Trees
Parking Lot Landscaping	
Total Proposed Spaces	15 Spaces
Landscape Area Required	150 s.f. (15 / 10) x 100
Landscape Area Proposed	258 s.f.
Trees Required	1.5 Trees (15 / 10)
Trees Provided	9 Trees (8 Existing)

Plant List

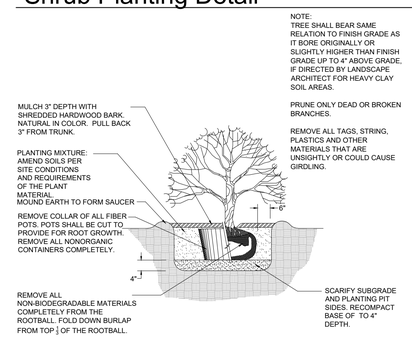
sym.	qty.	botanical name	common name	caliper	spacing	root	height
Greenbelt Trees							
GBG	2	Ginko biloba 'Fastigiata'	Upright Ginko	2.5"	as shown	B&B	
Parking Lot Trees							
GTP	1	Acer x freemanii 'Armstrong'	Armstrong Maple	2.5"	as shown	B&B	

Note:
All Landscaped Areas Shall be Provided with an Automatic Underground Irrigation System

Deciduous Tree Planting Detail



Shrub Planting Detail



Planter

Model:	Mainville VRDK 1013
Color:	Black
Size:	28" x 27" x 27"

Know what's below. Call before you dig.

ALLENDESIGN
LAND PLANNING / LANDSCAPE ARCHITECTURE
557 Carpenter
Northville, Michigan 48167
e. jca@wideopenwest.com
t. 248.467.4668

Seal:

Title:

Landscape Plan

Project:

Grand River Storage
Genoa Township, Michigan

Prepared for:

Greentech Enginerring
51147 Pontiac Trail
Wixom, Michigan 48393
248.668.0700

Revision:	Issued:
Submission	January 25, 2022
Revised	April 19, 2022
Revised	May 2, 2022
Revised	June 1, 2022
Revised	August 24, 2022
Revised	October 6, 2022

Job Number:

22-008

Drawn By:	Checked By:
jca	jca

0' 15' 30'
NORTH
1"=30'

Sheet No.

L-1

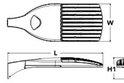
D-Series Size 1

LED Area Luminaire

Buy American

Specifications

EPA: 1.01 ft² (0.09 m²)
Length: 33" (838 mm)
Width: 13" (330 mm)
Height H1: 7-1/2" (190 mm)
Height H2: 3-1/2"
Weight (max): 27 lbs (12.2 kg)



Ordering number
Notes
Type

*For IES files go to the product page for our photometric references.

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 750W metal halide in pedestrian and area lighting applications with typical energy savings of 65% and expected service life of over 100,000 hours.

Ordering Information

EXAMPLE: DSX1 LED P7 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX1 LED

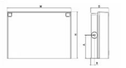
Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX1 LED	**Forward optics** P1 P4[1] P7[1] P2 P5[1] P8 P3 P6[1] P9[1] **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000K 40K 4000K 50K 5000K	T1S Type I short (Automotive) T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium	T5VS Type V very short[1] T5S Type V short[1] T5M Type V medium[1] T5W Type V wide[1] BLC Backlight control[1] LCCO Left cutoff[1] RCCO Right cutoff[1]	MVOLT[1] **2VOLT** 277V-480V[1,2,3] 120[1] 208[1] 240[1] 277[1] 347[1] 480[1]	**Shipped included** SPA Square pole mounting RPA Round pole mounting[1] WBA Wall bracket[1] SPUMBA Square pole universal mounting adapter[1] RPUMBA Round pole universal mounting adapter[1] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adapter (specify finish)[1]

Control options		Other options	Finish (required)
Shipped installed NLTAIR2 nLight AIR generation 2 enabled[1] PIRHN Network, high/low motion/ambient sensor[1] PER NEMA twist-lock receptacle only (controls ordered separately)[1] PER5 Five-pin receptacle only (controls ordered separately)[1,4] PER7 Seven-pin receptacle only (controls ordered separately)[1,4] DMG 0-10v dimming wires pulled outside fixture (for use with an external control, ordered separately)[1] DS Dual switching[1,5,6,7]	PIR High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 30.[1] PIRHN High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 30.[1] PIRHCSX High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 30.[1,8] PIRHTSCSX Bi-level, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 30.[1,8,9] FAO Field adjustable output[10,11]	**Shipped installed** HS House-side shield[11] SF Single face (120, 277, 347V)[1] DF Double face (208, 240, 480V)[1] LWR Left wasted optics[1] RWR Right wasted optics[1] HA 50°C ambient operations[1] BAA Buy American, Act Compliant **Shipped separately** BS Bird spikes[12] EGS External glare shield	DDBXD Dark bronze DBLXD Black DNAXD Natural aluminum DWHXD White DDBTXD Textured dark bronze DBLBXD Textured black DNATXD Textured natural aluminum DWHGXD Textured white

WPX LED

Wall Packs

Specifications



Luminaire	Height (H)	Width (W)	Depth (D)	Side Conduit Location (J)	Weight
WPX1	8.1" (20.6 cm)	11.7" (28.5 cm)	3.2" (8.1 cm)	4.0" (10.3 cm)	6.1" (15.4 cm)	6 lbs (2.7kg)
WPX2	9.1" (23.1 cm)	12.3" (31.1 cm)	4.2" (10.5 cm)	4.5" (11.5 cm)	8.7" (5.7 cm)	8.2 lbs (3.7kg)
WPX3	9.5" (24.1 cm)	13.0" (33.0 cm)	5.5" (13.5 cm)	4.7" (12.0 cm)	8.7" (5.7 cm)	11.0 lbs (5.0kg)

Ordering number
Notes
Type

*For IES files go to the product page for our photometric references.

Introduction

The WPX LED wall packs are energy-efficient, cost-effective, and aesthetically appealing solutions for both HID wall pack replacement and new construction opportunities. Available in three sizes, the WPX family delivers 1,550 to 9,200 lumens with a wide, uniform distribution.

The WPX full cut-off solutions fully cover the footprint of the HID glass wall packs that they replace, providing a neat installation and an upgraded appearance. Reliable IP66 construction and excellent LED lumen maintenance ensure a long service life. Photocell and emergency egress battery options make WPX ideal for every wall mounted lighting application.

Ordering Information

EXAMPLE: WPX2 LED 40K MVOLT DDBXD

Series	Color Temperature	Voltage	Options	Finish
WPX1 LED P1 1,550 Lumens, 11W[1] **WPX1 LED P2** 2,900 Lumens, 24W **WPX2 LED** 6,000 Lumens, 47W **WPX3 LED** 9,200 Lumens, 69W	**30K** 3000K **40K** 4000K **50K** 5000K	**MVOLT** 120V - 277V **347** 347V[1]	**(blank)** None **E4WR** Emergency battery backup, CEC compliant (4W, 0°C min)[2] **E14WC** Emergency battery backup, CEC compliant (14W, 25°C min)[2] **PE** Photocell[3]	**DDBXD** Dark bronze **DWHXD** White **DBLXD** Black **Note:** For other options, consult factory.

Note: The lumen output and input power shown in the ordering tree are average representations of all configuration options. Specific values are available on request.

NOTES
1. All WPX wall packs come with 6kV surge protection standard, except WPX1 LED P1 package which comes with 2.5kV surge protection standard. Add SPD6KV option to get WPX1 LED P1 with 6kV surge protection.
   Sample nomenclature: WPX1 LED P1 40K MVOLT SPD6KV DDBXD
2. Battery pack options only available on WPX1 and WPX2.
3. Battery pack options not available with 347V and PE options.

FEATURES & SPECIFICATIONS

INTENDED USE
The WPX LED wall packs are designed to provide a cost-effective, energy-efficient solution for the one-for-one replacement of existing HID wall packs. The WPX1, WPX2 and WPX3 are ideal for replacing up to 150W, 250W, and 400W HID luminaires respectively. WPX luminaires deliver a uniform, wide distribution. WPX is rated for -40°C to 40°C.

CONSTRUCTION
WPX features a die-cast aluminum main body with optimal thermal management that both enhances LED efficacy and extends component life. The luminaires are IP66 rated, and sealed against moisture or environmental contaminants.

ELECTRICAL
WPX luminaire configurations consist of high efficacy LEDs and LED lumen maintenance of L80>50,000 hours. Color temperature (CCT) options of 3000K, 4000K and 5000K with minimum CRI of 70. Electronic drivers ensure system power factor >90% and THD <20%. All luminaires have 6kV surge protection (Note: WPX1 LED P1 package comes with a standard surge protection rating of 2.5kV, it can be ordered with an optional 6kV surge protection).
All photocell (PE) operate on MVOLT (120V - 277V) input.

Note: The standard WPX LED wall pack luminaires come with field-adjustable drive current feature. This feature allows tuning the output current of the LED drivers to adjust the lumen output (to dim the luminaire).

INSTALLATION
The WPX LED is surface mounted directly over a standard electrical junction box. Three 1/2 inch conduit ports on three sides allow for surface conduit wiring. A port on the back surface allows pipe through conduit wiring on surfaces that don't have an electrical junction box. Wiring can be made in the integral wiring compartment in all cases. WPX is only recommended for installations with LEDs facing downwards.

LISTINGS
CSA Certified to meet U.S. and Canadian standards. Suitable for wet locations. IP66 Rated. Dark Sky Compliant (3000K CCT and 4000K CCT options). Meets California Title 24 when CEC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY
5-year limited warranty. Complete warranty terms located at:
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.

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min	Avg/Max
Grade @ 0'	+	0.5 fc	6.2 fc	0.0 fc	N/A	N/A	0.1:1
Parking	✳	1.6 fc	4.8 fc	0.2 fc	24.0:1	8.0:1	0.3:1
Property Line	+	0.2 fc	0.7 fc	0.0 fc	N/A	N/A	0.3:1
EAST PARKING LOT	✳	1.0 fc	4.4 fc	0.1 fc	44.0:1	10.0:1	0.2:1

Schedule

Symbol	Label	Quantity	Manufacturer	Catalog Number	Lamp	Light Loss Factor
	P1	5	Lithonia Lighting	DSX1 LED 40K MVOLT	LED	0.9
	P2	2	Lithonia Lighting	DSX1 LED 40K MVOLT	LED	0.9
	W2	3	Lithonia Lighting	WPX2 LED 40K Mvolt	LED	0.9

General Note
1. SEE DRAWING FOR LUMINAIRE MOUNTING HEIGHT.
2. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT: 0' - 0"
3. LIGHTING ALTERNATES REQUIRE NEW PHOTOMETRIC CALCULATION AND RESUBMISSION TO CITY FOR APPROVAL.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.

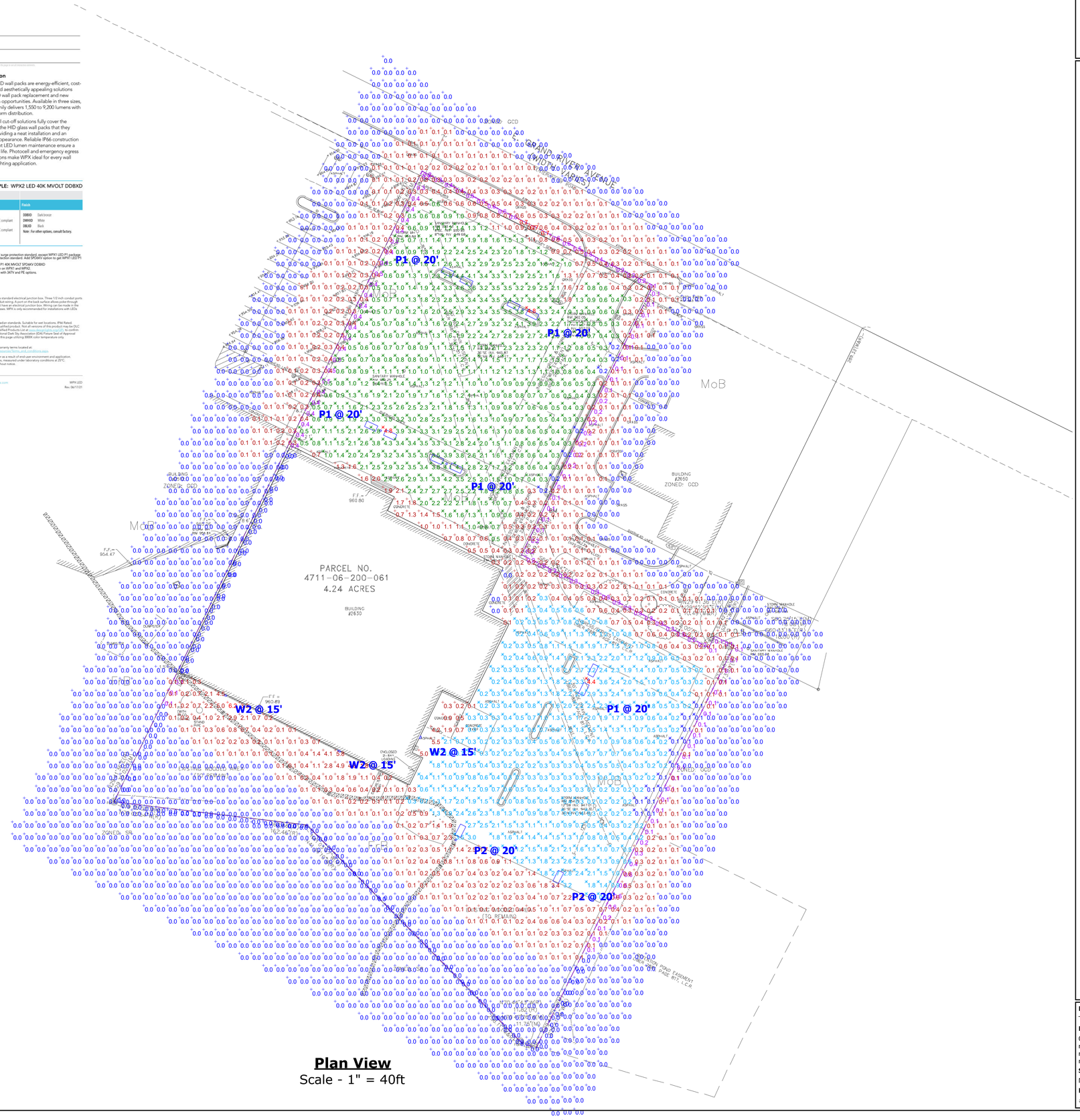
THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE AND LIGHTING QUALITY COMPLIANCE.

UNLESS EXEMPT, PROJECT MUST COMPLY WITH LIGHTING CONTROLS REQUIRMENTS DEFINED IN ASHRAE 90.1 2013. FOR SPECIFIC INFORMATION CONTACT GBA CONTROLS GROUP AT ASG@GASSERBUSH.COM OR 734-266-6705.

FOR ORDERING INQUIRIES CONTACT GASSER BUSH AT QUOTES@GASSERBUSH.COM OR 734-266-6705.

THIS DRAWING WAS GENERATED FROM AN ELECTRONIC IMAGE FOR ESTIMATION PURPOSE ONLY. LAYOUT TO BE VERIFIED IN FIELD BY OTHERS.

MOUNTING HEIGHT IS MEASURED FROM GRADE TO FACE OF FIXTURE. POLE HEIGHT SHOULD BE CALCULATED AS THE MOUNTING HEIGHT LESS BASE HEIGHT.



Plan View

Scale - 1" = 40ft

2630 GRAND RIVER AVE
PHOTOMETRIC PLAN
PREPARED FOR: GREENTECH
GASSER BUSH ASSOCIATES
WWW.GASSERBUSH.COM

Designer
TV/DS/KB

Date
01/27/2022
rev. 2/24/2022
rev. 5/4/2022
rev. 08/24/2022

Scale
Not to Scale

Drawing No.
#22-71398 V4

PIPE RESTRAINT SCHEDULE

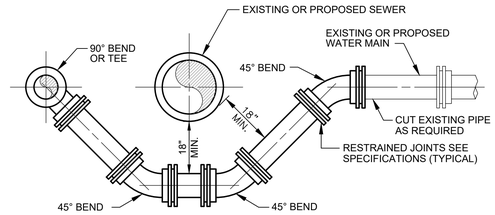
GROUND BURIED PRESSURE PIPE - POLYETHYLENE ENCASED DUCTILE IRON PIPE

PIPE DIAMETER	TEES, 90° BENDS	45° BENDS	22-1/2° BENDS	11-1/4° BENDS	DEAD ENDS	REDUCERS (ONE SIZE REDUCTION)*	REDUCERS (TWO SIZE REDUCTIION)*
4	13	5	3	1	40	--	--
6	19	8	4	2	58	31	--
8	24	10	5	2	75	30	70
12	34	14	7	3	107	57	116
16	43	18	9	4	139	59	137
20	52	22	10	5	169	59	134
24	61	25	12	6	199	60	132
30	73	30	15	7	242	85	168
36	84	35	17	8	281	84	168

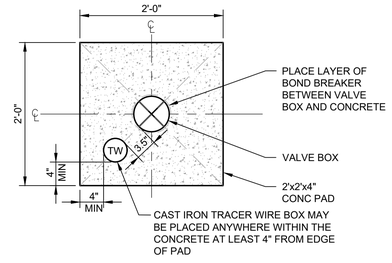
1. LENGTHS OF PIPE RESTRAINT ARE GIVEN IN FEET.
2. IF REQUIRED PIPE DIAMETER IS NOT LISTED IN THIS TABLE, THE NEXT LARGEST PIPE DIAMETER SHALL BE USED.
3. THIS TABLE IS BASED ON A TEST PRESSURE OF 180 PSI (OPERATING PRESSURE PLUS WATER HAMMER. FOR OTHER TEST PRESSURES, ALL VALUES TO BE INCREASED OR DECREASED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

* SIZE REDUCTION IS BASED UPON THE PIPE DIAMETER SHOWN IN THIS TABLE.

BASED UPON:
INTERNAL PRESSURE: 180
PIPE DEPTH: 5
BEDDING CLASS: TYPE 4
SOIL TYPE: GOOD SAND
SAFETY FACTOR: 2

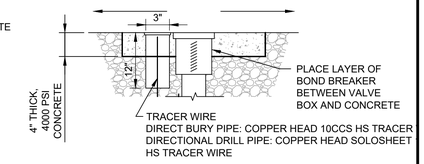


WATER MAIN UTILITY OFFSET



NOTE: ALL BOXES & ADJOINING TW BOXES SHALL BE ENCASED IN A CONC. PAD UNLESS OTHERWISE DETERMINED BY MHOG.

PLAN

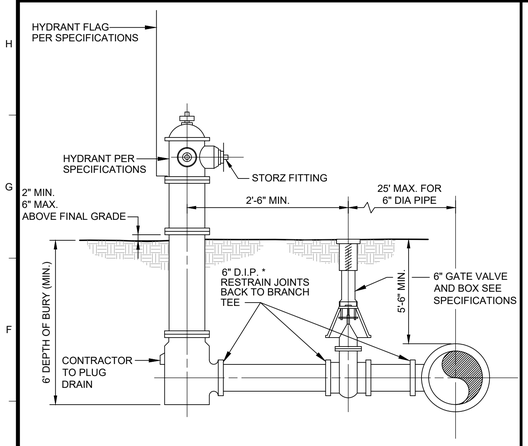


NOTE:
1. TRACER WIRE BOXES LOCATED WITHOUT A VALVE BOX ONLY REQUIRE AN 18" X 18" CONCRETE PAD.
2. TRACER WIRE BOX SHALL HAVE A LOCKING LID W/STANDARD AWWA PENTAGON KEY.
3. TRACER WIRE BOX SHALL BE COPPERHEAD RB14*TP IN ASPHALT INSTALLATIONS AND CD14*TP FOR ALL OTHER INSTALLATIONS.

SECTION

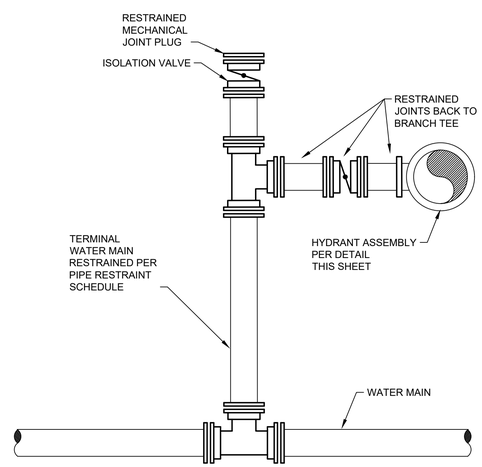
VALVE/TRACER WIRE BOX IN CONCRETE DETAIL

NO SCALE

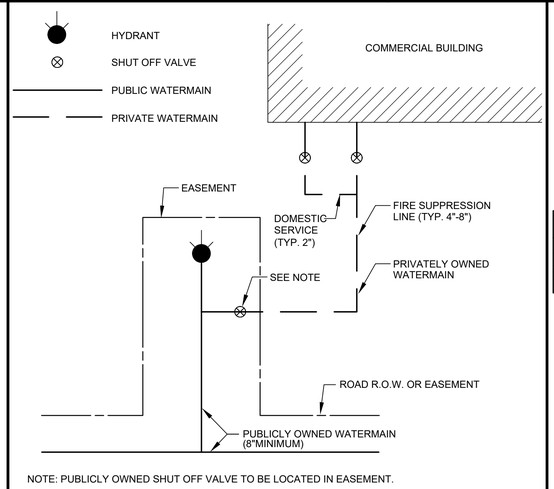


* THE LENGTH OF 6" PIPE FROM THE MAIN TO THE HYDRANT ASSEMBLY CANNOT EXCEED 25'. ANY PIPE OVER 25 FEET SHALL BE 8" DIAMETER MINIMUM AND DESIGNED PER MHOG SPECIFICATIONS.

FIRE HYDRANT ASSEMBLY

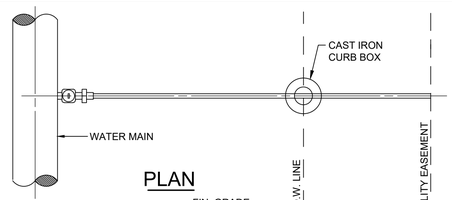


TERMINAL HYDRANT DETAIL



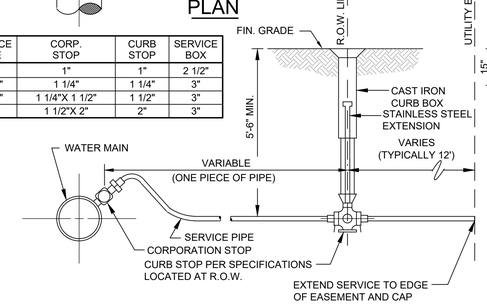
NOTE: PUBLICLY OWNED SHUT OFF VALVE TO BE LOCATED IN EASEMENT.

COMMERCIAL BUILDING WATER SERVICE LAYOUT

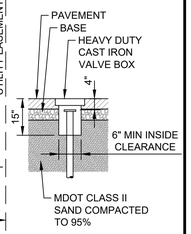


PLAN

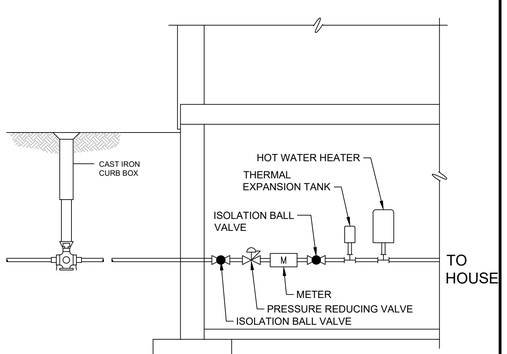
SERVICE PIPE	CORP. STOP	CURB STOP	SERVICE BOX
1"	1"	1"	2 1/2"
1 1/4"	1 1/4"	1 1/4"	3"
1 1/2"	1 1/4"X 1 1/2"	1 1/2"	3"
2"	1 1/2"X 2"	2"	3"



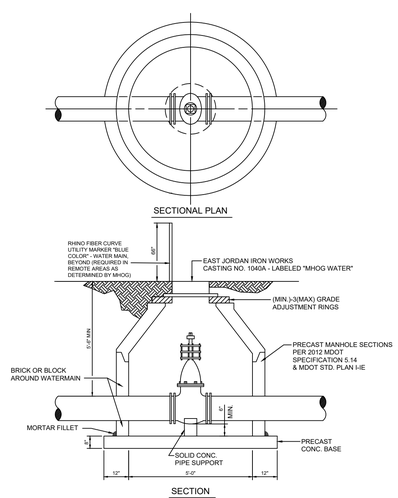
SECTION
WATER SERVICE LATERAL



CURB STOP IN PAVEMENT

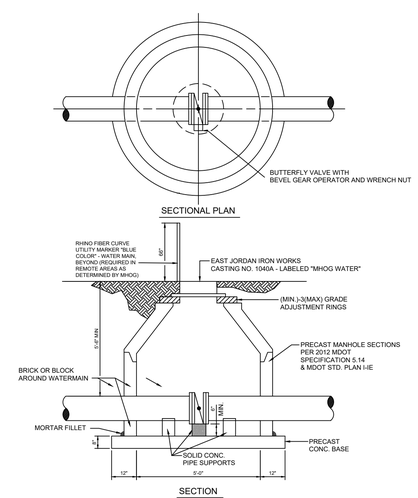


PRIVATE RESIDENCE
PRESSURE REDUCING VALVE (PRV)



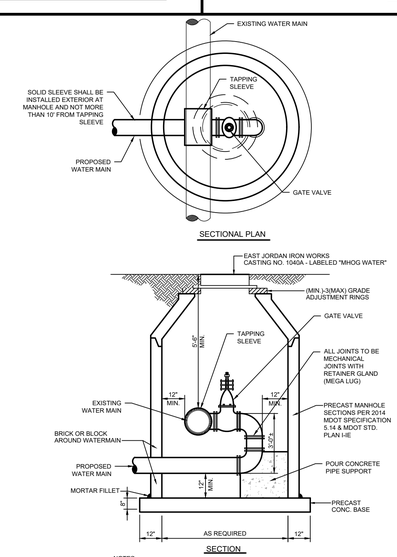
NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

VALVE AND GATE WELL



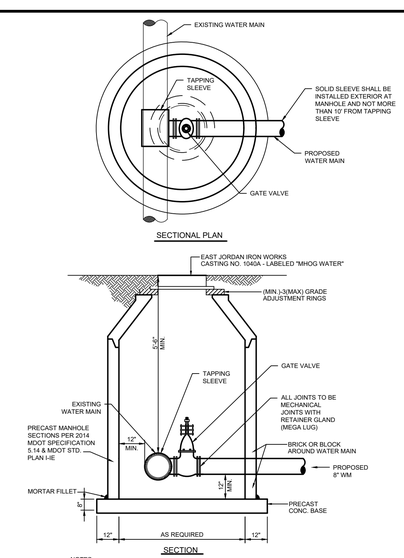
NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

BUTTERFLY VALVE AND WELL



NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

REVERSE TAP GATE WELL



NOTES:
1. ALL LIFT HOLES AND JOINTS SHALL BE MORTARED BOTH INSIDE AND OUTSIDE.
2. BLOCK MANHOLES TO BE USED ONLY WITH ENGINEERS PERMISSION.
3. NO STEPS PERMITTED.

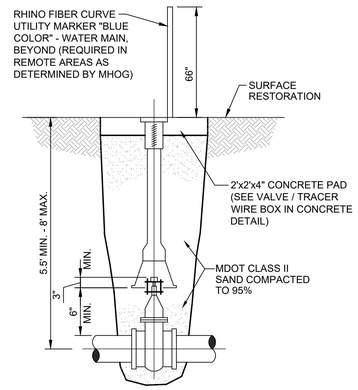
REGULAR TAP GATE WELL

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority

STANDARD DETAILS

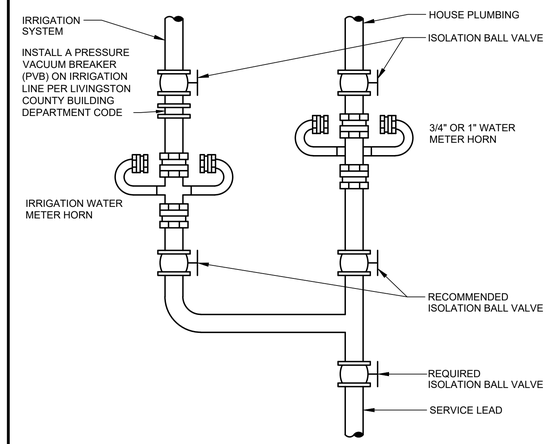
Scale: NONE
Issued Date JANUARY - 2014
UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

Tuesday, February 26, 2019 4:02:14 PM DRAWING: P:\IER\12719\200-12719-00-000\CAD\SheetFiles\Mhog-std.DWG



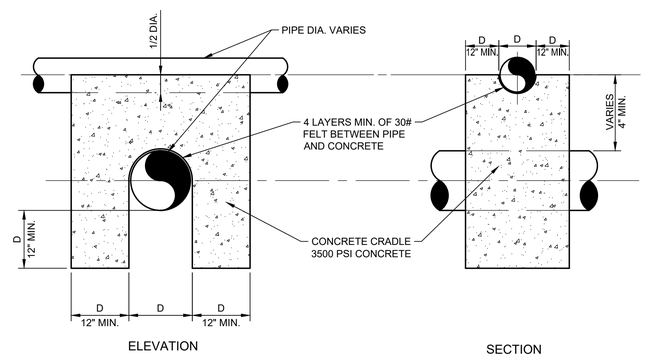
NOTES:
1. VALVE BOX SHALL NOT REST ON VALVE OR MAIN LINE PIPE.
2. A VALVE STEM EXTENSION WITH CENTERING RING IS REQUIRED FOR VALVES BURIED DEEPER THAN 6'.

GATE VALVE AND BOX



NOTES:
1. ALL METERS ARE TO BE INSTALLED HORIZONTALLY IN A DRY, CLEAN, SANITARY LOCATION THAT IS READILY ACCESSIBLE. THIS DRAWING IS NOT TO SCALE & IS ONLY A REPRESENTATION OF HOW THE METERS SHOULD BE INSTALLED. THE SECOND METER IS OPTIONAL FOR IRRIGATION USAGE. METERS SHOULD NOT BE INSTALLED IN LINE (ONE RIGHT AFTER THE OTHER).
2. PROPERTIES DESIGNATED "HIGH HAZARD" PER THE MHOG CROSS CONNECTION RULES MANUAL WILL REQUIRE THE INSTALLATION OF A REDUCED PRESSURE ZONE (RPZ) BACK FLOW PREVENTION DEVICE.

TYPICAL METER HORN INSTALLATION



CONCRETE CRADLE DETAIL

SCALE: NONE

MHOG CASTING DETAIL

NO SCALE

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority

STANDARD DETAILS

Scale: NONE
Issued Date JANUARY - 2014

UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

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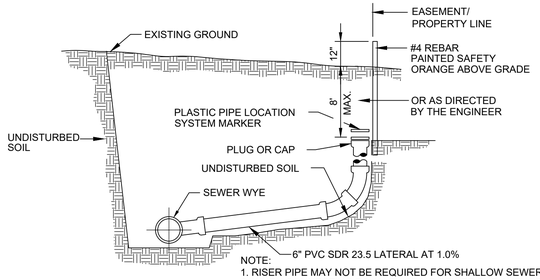
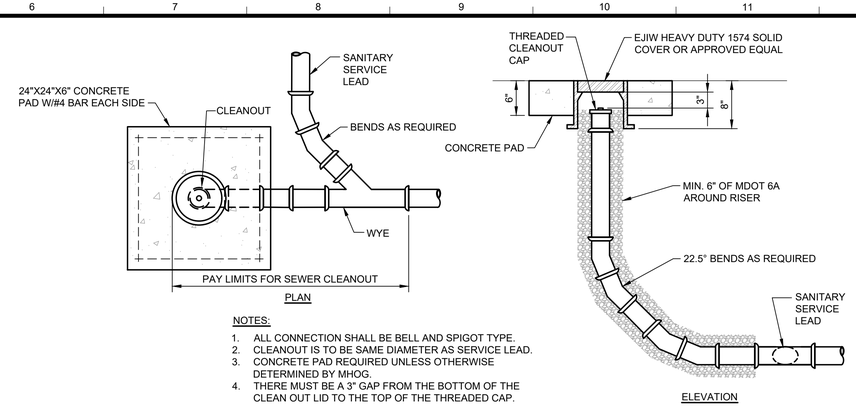


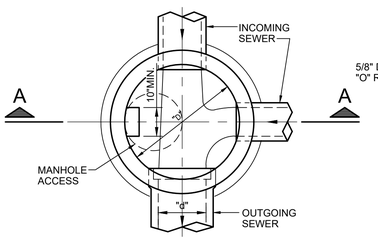
NOTE:
1. RISER PIPE MAY NOT BE REQUIRED FOR SHALLOW SEWERS AS SHOWN.
2. WHEN CONNECTING TO AN EXISTING SEWER THE AUTHORITY MAY REQUIRE CORING OF THE EXISTING PIPE AND INSTALLATION OF A SEWER SADDLE. SADDLE SHALL BE ROMAC "CB" SEWER SADDLE OR APPROVED EQUAL.

SANITARY SEWER LATERAL

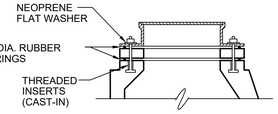


NOTES:
1. ALL CONNECTION SHALL BE BELL AND SPIGOT TYPE.
2. CLEANOUT IS TO BE SAME DIAMETER AS SERVICE LEAD.
3. CONCRETE PAD REQUIRED UNLESS OTHERWISE DETERMINED BY MHOG.
4. THERE MUST BE A 3" GAP FROM THE BOTTOM OF THE CLEAN OUT LID TO THE TOP OF THE THREADED CAP.

SEWER CLEANOUT DETAIL

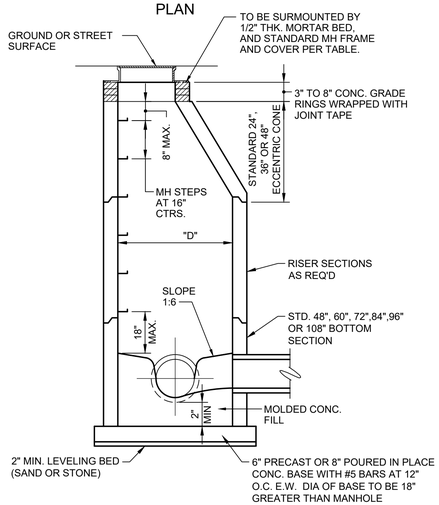


PLAN



WATERTIGHT COVER ANCHORAGE

MANHOLE SCHEDULE	
PIPE SIZE (" d")	D
8"-24"	48"
27"-36"	60"
42"-48"	72"
54"	84"

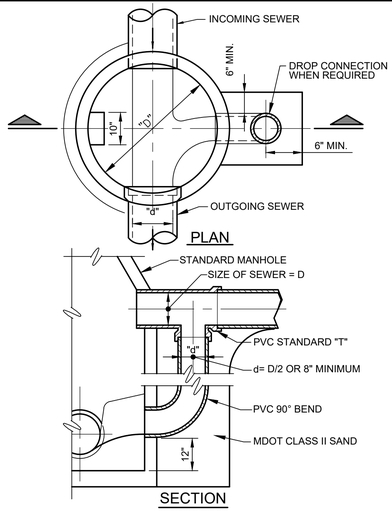


SECTION A-A

NOTES:
1. ALL SANITARY MANHOLES TO BE PRECAST REINFORCED CONCRETE WITH PREMIUM JOINTS. SEE SPECIFICATIONS FOR BASE SLAB AND PIPE OPENINGS AND CONNECTIONS.
2. MANHOLE CONES SHALL BE THE ECCENTRIC TYPE.
3. PROVIDE 6" OF COMPACTED GRANULAR MATERIAL UNDER ALL PRECAST CONCRETE BASE SLPVC.
4. FORCE MAINS CONNECT DIRECTLY TO A MANHOLE SHALL BE INSTALLED SO THAT THE ELEVATION OF THE PIPE CROWNS MATCH. THE FORCE MAIN SHALL BE DIRECTED DOWNWARD INTO THE FLOW CHANNEL.
5. FOR SANITARY SEWERS ALL PIPES SHALL ENTER MANHOLE THROUGH RUBBER BOOTED CONNECTION.

FRAME & COVER FOR SANITARY SEWER MANHOLES			
		MANUFACTURER OR EQUAL	
TYPE	TYPE OF COVER	EAST JORDAN	NEENAH
MH	SANITARY - SOLID SELF-SEALING	1040.0000	R-1642
MH	SANITARY - SOLID WATERTIGHT	1040-APT	R-1916-F
CO	SOLID	1574A	R-1973-A

STANDARD MANHOLE



REQUIRED WHEN AN INLET PIPE IS 24" OR MORE ABOVE THE OUTLET PIPE IN A MANHOLE

DROP CONNECTION

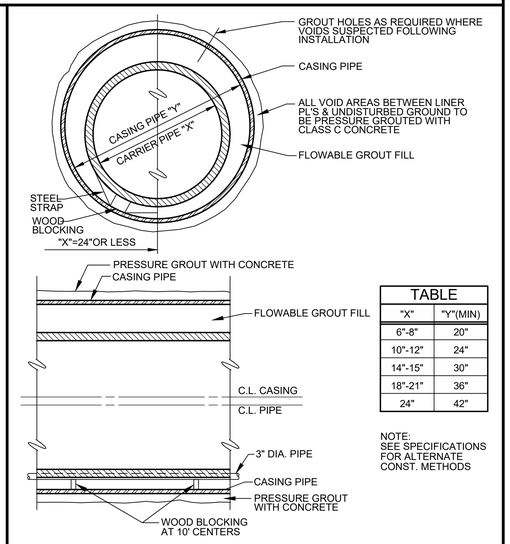
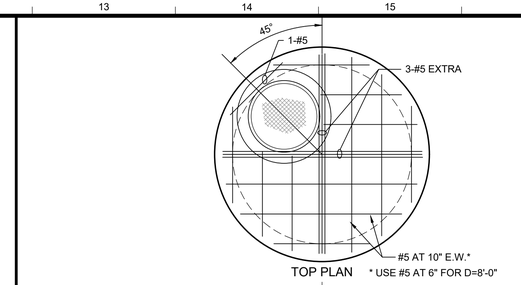


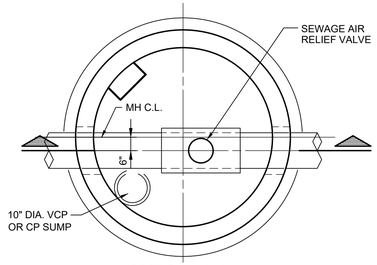
TABLE	
"X"	"Y"(MIN)
6"-8"	20"
10"-12"	24"
14"-15"	30"
18"-21"	36"
24"	42"

NOTE:
SEE SPECIFICATIONS FOR ALTERNATE CONST. METHODS

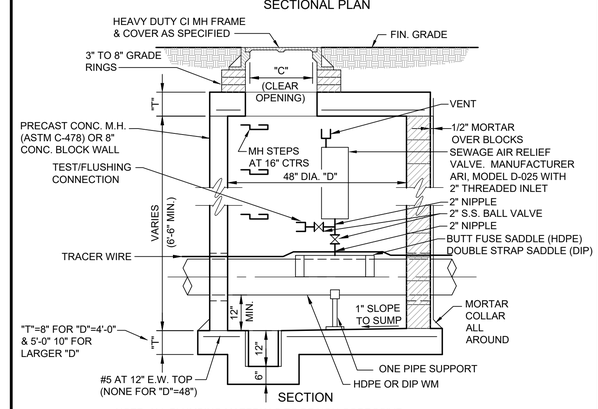
CASING PIPE



TOP PLAN * USE #5 AT 6" FOR D=8'-0"



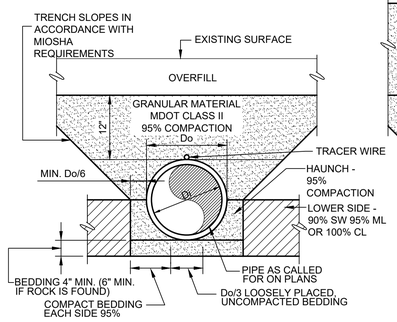
SECTIONAL PLAN



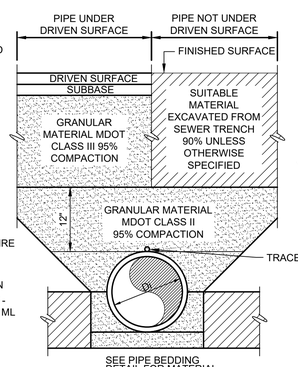
NOTE: ALL PLUMBING MATERIALS TO BE NON-CORROSIVE, ALL FITTINGS SHALL BE STAINLESS STEEL.

AIR RELIEF STRUCTURE

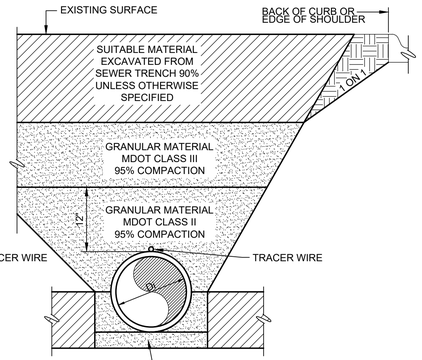
NOTES:
1. COMPACTION PRESENTED AS MINIMUM STANDARD PROCTOR VALUES.
2. MATERIALS AROUND THERMOPLASTIC PIPE WITH DIAMETER < 6 INCHES SHALL PASS 0.5 INCH SIEVE, MATERIALS AROUND OTHER PIPES SHALL PASS 1.5 INCH SIEVE.
3. MATERIALS AROUND HDPE PIPE TO BE MDOT 6A OR 21AA.
4. DRIVEN SURFACE IS DRIVEWAY, PARKING AREA, ROAD BED OR SHOULDER.
5. UTILITY TRENCHES LOCATED WITHIN A MDOT ROW SHALL CONFORM TO MDOT STANDARD DETAIL R-83.
6. TRACER WIRE IS REQUIRED ON FORCE MAIN ONLY AND SHALL BE BROUGHT TO GRADE AT A MINIMUM EVERY 1000 FEET IN A APPROVED CAST IRON TRACER WIRE BOX ENCASED IN CONCRETE OR WITH AN APPROVED GREEN MARKER POST.



PIPE BEDDING

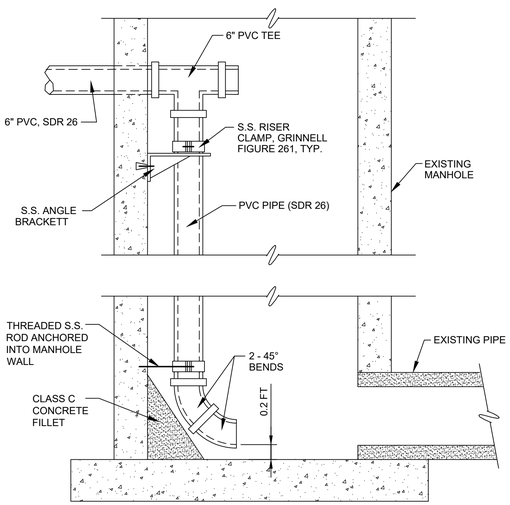


PIPE UNDER/NOT UNDER DRIVEN SURFACE



PIPE WITHIN INFLUENCE OF DRIVEN SURFACE

TRENCH EXCAVATION & PIPE BEDDING



INTERIOR SEWER LATERAL DROP CONNECTION

MARION HOWELL OCEOLA GENOA
Sewer and Water Authority

STANDARD DETAILS

Scale: NONE
Issued Date JANUARY - 2014

UPDATED: MAY 2015
UPDATED: FEBRUARY 2016
UPDATED: APRIL 2016
UPDATED: OCTOBER 2017
UPDATED: FEBRUARY 2019

Friday, February 8, 2019 9:07:00 AM DRAWING: P:\IER\12719\200-12719-00-000\CAD\SheetFiles\Mhog-std.DWG

Oct. 6, 2022

To: Genoa Charter Township Board

From: Polly Skolarus, Clerk

Subject: Transfer of a liquor license

Following is a request from Carlin Edwards Brown PLLC for consideration of the transfer of a Liquor License. This application would allow the existing Cracker Barrel Restaurant located at 7925 Conference Center Drive, Brighton to receive a Class C Liquor License that would allow the serving of beer, wine and spirits at the Genoa location.

Motion: Move to allow the transfer of a Class C liquor license from NPZ Group LLC7749 E. M-36 Hamburg Twp. to CBOCS Properties, Inc. 7925 Conference Center Drive Genoa Twp.

Carlin Edwards Brown PLLC

Attorneys & Counselors at Law
2055 Orchard Lake Rd.
Sylvan Lake, Michigan 48320
P. (248) 816-5000
F. (248) 816-5115
www.cebhlaw.com

John B. Carlin, Jr. (1939-2018)
Scott D. Edwards (Of Counsel)
Michael J. Brown
Steven J. Grobbel
James V. Bellanca, III

Lansing Office
6017 West St. Joe Hwy., Suite 202
Lansing, Michigan 48917
P. (517) 321-4617
F. (517) 321-4642

Northern Michigan Office
145 North Otsego Ave.
Gaylord, Michigan 49735
P. (989) 251-1041
F. (989) 688-5901

September 27, 2022

Ms. Paulette Skolarus
Genoa Charter Township Clerk
2911 Dorr Road
Brighton, MI 48116

Re: CBOCS Properties, Inc.
Location: 7925 Conference Center Drive, Brighton, MI 48114
Liquor License Transfer

Dear Ms. Skolarus:

In our recent telephone conversation, I indicated that I was the liquor license attorney for CBOCS Properties, Inc. regarding the transfer of a Class C liquor license to the existing Cracker Barrel restaurant located at: 7925 Conference Center Drive, Brighton, MI 48114. Recently, CBOCS Properties, Inc. filed its application packet with the Michigan Liquor Control Commission ("MLCC") for transfer of this Class C license. Per your request, I am enclosing a copy of the Application (LCC-100a) that was filed with the MLCC.

Cracker Barrel is in the process of adding liquor licenses to its restaurants around the country. CBOCS Properties, Inc. is transferring a Class C liquor license that will allow it to serve beer, wine, and spirits at the Brighton Cracker Barrel location. There will not be any changes or renovations to the restaurant to accommodate this license. Cracker Barrel intends to have a limited alcohol menu.

Should you have any questions, you may reach me at the contact information below. Otherwise, my contact at CBOCS Properties, Inc. (Cracker Barrel) is Josh Mayo. He can be reached at the following address:

307 Hartmann Dr., Lebanon, TN 37088
josh.mayo@crackerbarrel.com
(615) 443-9448

Based on our conversation, I understand that there is no fee in connection with local approval of this transfer. We would ask that it be placed on the Township Board Agenda for review and approval. You have indicated that our attendance at the Township Board meeting will not be required. However, should that change, or you need any additional information, please feel free to contact me.

Thank you very much for your assistance.

Very truly yours,

Carlin Edwards Brown PLLC

Steven J. Grobbel
Direct Dial: (248) 816-5000 (ext. 2)
E-Mail: sgrobbel@cebhlaw.com

Enclosures
cc: Josh Mayo (w/o encl.)

Michigan Department of Licensing and Regulatory Affairs
Liquor Control Commission (MLCC)
Toll-Free: 866-813-0011 - www.michigan.gov/lcc

Business ID: _____
Request ID: _____
(For MLCC Use Only)

On-Premises Retailer License & Permit Application (LCC-100a)

Part 1 - Applicant Information

Individuals, please state your legal name. Corporations or Limited Liability Companies, please state your name as it is filed with the State of Michigan Corporation Division.

Applicant name(s): CBOCS Properties, Inc.	
Address to be licensed: 7925 Conference Center Drive	
City: Brighton	Zip Code: 48114
City/township/village where license will be issued: Genoa Twp.	County: Livingston
Federal Employer Identification Number (FEIN):	

Leave Blank - MLCC Use Only

1. Are you requesting a new license? ○ Yes ◉ No
2. Are you applying ONLY for a new permit or permission? ○ Yes ◉ No
3. Are you buying an existing license? ◉ Yes ○ No
4. Are you transferring the classification of an existing on premises license? ○ Yes ◉ No
5. Are you modifying the size of the licensed premises? ○ Yes ◉ No
   If Yes, specify: ☐ Adding Space ☐ Dropping Space ☐ Redefining Licensed Premises
6. Are you transferring the location of an existing license? ◉ Yes ○ No
7. Is this license being transferred as the result of a default or court action? ○ Yes ◉ No
8. Do you intend to use this license actively? ◉ Yes ○ No

Part 2 - License Transfer Information (If Applicable)

If transferring ownership of a license ONLY and not transferring the location of a license, fill out only the name of the current licensee(s)

Current licensee(s): NPZ Group L.L.C.	
Current licensed address: 7749 E. M-36	
City: Hamburg	Zip Code: 48139
City/township/village where license is issued: Hamburg Twp.	County: Livingston

Part 3 - Licenses, Permits, and Permissions

Applicants for on premises licenses, permits, and permissions (e.g. restaurants, hotels, bars, etc.) must complete the attached Schedule A and return it with this application. Transfer the fee calculations from the Schedule A to Part 4 below.

Part 4 - Inspection, License, and Permit Fees - Make checks payable to **State of Michigan**

Inspection Fees - Pursuant to MCL 436.1529(4) a nonrefundable inspection fee of $70.00 shall be paid to the Commission by an applicant or licensee at the time of filing of a request for a new license or permit, a request to transfer ownership or location of a license, a request to increase or decrease the size of the licensed premises, or a request to add a bar. Requests for a new permit in conjunction with a request for a new license or transfer of an existing license do not require an additional inspection fee.

License and Permit Fees - Pursuant to MCL 436.1525(1), license and permit fees shall be paid to the Commission for a request for a new license or permit or to transfer ownership or location of an existing license.

Inspection Fees:	$140.00	License & Permit Fees:	$965.00	**TOTAL FEES:**	$1,105.00

LARA is an equal opportunity employer/program. Auxiliary aids, services and other reasonable accommodations are available upon request to individuals with disabilities.

Schedule A - Licenses, Permits, & Permissions

Applicant name: CBOCS Properties, Inc.

On-Premises License Type: New Transfer		Base Fee:	Fee Code MLCC Use Only
☐	☐ B-Hotel License	$600.00	
	Number of guest rooms: _____		
☐	☐ A-Hotel License	$250.00	
	Number of guest rooms: _____		
☐	☒ Class C License	$600.00	4034
☐	☐ Tavern License	$250.00	
☐	☐ Resort License	Upon Licensure	
☐	☐ DDA/Redevelopment License	Upon Licensure	
☐	☐ Brewpub License	$100.00	
☐	☐ G-1 License	$1,000.00	
☐	☐ G-2 License	$500.00	
☐	☐ Aircraft License	$600.00	
☐	☐ Watercraft License	$100.00	
☐	☐ Train License	$100.00	
☐	☐ Continuing Care Retirement Center License	$600.00	
	☐ MCL 436.1545(1)(b)(i) ☐ MCL 436.1545(1)(b)(ii)		
	B-Hotel or Class C Licenses Only:		
☐	☐ Additional Bar(s)		
	Number of Additional Bars: _____		

B-Hotel or Class C licenses allow licensees to have one (1) bar within the licensed premises. A $350.00 licensing fee is required for each additional bar over the one (1) bar initially issued with the license.

Licenses, permits, and permissions selected on this form will be investigated as part of your request. Please verify your information prior to submitting your application, as some licenses, permits, or permissions cannot be added to your request once the application has been sent out for investigation by the Enforcement Division.

Inspection, License, Permit, & Permission Fee Calculation

Number of Licenses: 2 x $70.00 Inspection Fee

Total Inspection Fee(s): Fee Code: 4036 $140.00

Total License Fee(s): $700.00

Total Permit Fee(s): $265.00

TOTAL FEES DUE: $1,105.00

Please note that requests to transfer SDD licenses will require the payment of additional fees based on the seller's previous calendar year's sales. These fees will be determined prior to issuance of the license to the applicant.

Make checks payable to **State of Michigan**

On-Premises Permits:		Base Fee:	Fee Code MLCC Use Only
☒	Sunday Sales Permit (AM)*	$160.00	4033
☒	Sunday Sales Permit (PM)**	$90.00	4032
☐	Catering Permit	$100.00	
☐	Social District Permit	$250.00	
☐	Banquet Facility Permit - Complete Form LCC-200		

A Banquet Facility Permit is an extension of the license at a different location. It may have its own permits and permissions.

☐	Outdoor Service	No charge
☐	Dance Permit	No charge
☐	Entertainment Permit	No charge
☐	Extended Hours Permit:	No charge
	◯ Dance ◯ Entertainment Days/Hours: _____	
☐	Specific Purpose Permit:	No charge
	Activity requested: _____	
	Days/Hours requested: _____	
☐	Living Quarters Permit	No charge
☐	Topless Activity Permit	No charge
☐	Off-Premises Storage	No charge
☐	Direct Connection(s)	No charge
☐	On-Premises Public Swimming Pool Permit - Complete Form LCC-209	

Pursuant to MCL 436.1533, on-premises retailers may be issued a Specially Designated Merchant (SDM) license or a Specially Designated Distributor (SDD) license at the same location in conjunction with the on-premises license under certain circumstances.

Off-Premises License Type: New Transfer		Base Fee:	Fee Code MLCC Use Only
☒	☐ SDM License	$100.00	4012
☐	☐ SDD License	$150.00	

Off Premises Permits:		Base Fee:	
☐	SDD Sunday Sales Permit (PM)** *For Spirit Products*	$22.50	
☒	SDM Sunday Sales Permit (PM)** *For Mixed Spirit Drink Products*	$15.00	4032
☐	Motor Vehicle Fuel Pumps	No charge	

*Sunday Sales Permit (AM) allows the sale of spirits, mixed spirit drink, beer, and wine on Sunday mornings between 7:00am and 12:00 noon, if allowed by the local unit of government.

**Sunday Sales Permit (PM) allows the sale of spirits and mixed spirit drink on Sunday afternoons and evenings between 12:00 noon and 2:00am (Monday morning), if allowed by the local unit of government. No Sunday Sales Permit (PM) is required for the sale of beer and wine on Sunday after 12:00 noon. The Sunday Sales Permit (PM) fee is 15% of the fee for the license that allows the sale of spirits or mixed spirit drink. Additional bar fees and hotel room fees are also calculated as part of the permit fee. A separate Sunday Sales Permit (PM) is required for each license that will sell spirits or mixed spirit drink on Sunday after 12:00 noon.

Part 5a - Information on Individual Applicant, Stockholder, Member, or Limited Partner

Each individual, stockholder, member, or partner must complete Part 5a, 5b, and 5c. If a stockholder or member of an applicant company is a corporation or limited liability company, complete Part 5a and 5c and submit a completed Form LCC-301.

For applications with multiple individuals, stockholders, members, or partners - each person or entity must complete a separate copy of this page.

Name: CBOCS West, Inc.		
Home address: 305 S. Hartmann Drive		
City: Lebanon	State: TN	Zip Code: 37087
Business Phone: (615) 443-9448	Cell Phone:	Email: Josh.Mayo@crackerbarrel.com

Have you ever been licensed by the Michigan Liquor Control Commission (MLCC) or do you currently hold an interest in any other licenses issued by the MLCC? If **Yes**, please list business ID numbers below. If you hold interest in 2 or more locations under the same name, please also write "chain" below. *Pursuant to MCL 436.1603, a retailer licensee may not hold interest in a manufacturer or wholesaler licensee.* ○ Yes ◉ No

Do you hold 10% or more interest in the applicant entity? ◉ Yes ○ No

If you answered "no" to the first question and "yes" to the second question, you must submit fingerprints and undergo an investigation by the MLCC. Please see the attached instructions for submitting fingerprints to the MLCC. You must submit a copy of the completed and endorsed Livescan Fingerprint Background Request (LCC-105) with your application.

Part 5b - Personal Information (Individuals) - *Must be at least 21 years of age, pursuant to administrative rule R 436.1105(1)(a).*

Date of Birth:	Social Security Number:	Driver's License Number:

Are you a citizen of the United States of America? ○ Yes ○ No

Have you ever legally changed your name? ○ Yes ○ No

If you answered "yes", please list your prior name(s) (including maiden):

Spouse's full name (if currently married):

Spouse's date of birth: | Is your spouse a citizen of the United States of America? ○ Yes ○ No

Do you or your spouse hold any position, either by appointment or election, which involves the duty to enforce any penal law of the United States of America, or the penal laws of the State of Michigan, or any penal ordinance or resolution of any municipal subdivisions of the State of Michigan? ○ Yes ○ No

Does your spouse hold a retail, manufacturer, or wholesaler license issued by the MLCC? ○ Yes ○ No

Have you ever been found guilty, pled guilty, or pled no contest to a criminal charge or any local ordinance violations? If **Yes**, list below (attach additional pages if necessary): ○ Yes ○ No

Date	City/State	Charge	Disposition

Has your spouse ever been found guilty, pled guilty, or pled no contest to a criminal charge or any local ordinance violations? If **Yes**, list below (attach additional pages if necessary): ○ Yes ○ No

Date	City/State	Charge	Disposition

Part 5c - Signature

I certify that the information contained in this form is true and accurate to the best of my knowledge and belief. I agree to comply with all requirements of the Michigan Liquor Control Code and Administrative Rules. I also understand that providing **false** or **fraudulent** information is a violation of the Liquor Control Code pursuant to MCL 436.2003. (This form must be signed by the person whose information it contains).

Richard Wolfson	DocuSigned by: 821D5E844F4E48B...	9/8/2022
Print Name	Signature	Date

Part 6 - Contact Information

Provide information on the contact person for this application. Please note that corporations and limited liability companies must provide documentation (e.g. meeting minutes, corporate resolution) authorizing anyone other than the applicant or an attorney of record to be the contact person. If an authorization is not provided, your contact person will not be acknowledged if they are anyone other than the applicant or attorney.

What is your preferred method of contact?		○ Phone ○ Mail ◉ Email ○ Fax
What is your preferred method for receiving a Commission Order?		○ Mail ◉ Email ○ Fax
Contact name: Steven Grobbel	Relationship: Attorney	
Mailing address: 2055 Orchard Lake Road		
City: Sylvan Lake	State: MI	Zip Code: 48320
Phone: (248) 816-5000 x2	Fax number: (248) 816-5115	Email: sgrobbel@cebhlaw.com

Part 7 - Attorney Information (If You Have An Attorney Representing You For This Application)

Attorney name: Steven Grobbel		Member Number: P- 42818
Attorney address: 2055 Orchard Lake Road, Sylvan Lake, MI 48320		
Phone: (248) 816-5000 x2	Fax number: (248) 816-5115	Email: sgrobbel@cebhlaw.com
Would you prefer that we contact your attorney for all licensing matters related to this application?		◉ Yes ○ No
Would you prefer any notices or closing packages be sent directly to your attorney?		◉ Yes ○ No

Part 8 - Signature of Applicant

Be advised that the information contained in this application will only be used for this request. This section will need to be completed for each subsequent request you make with this office.

Notice: When purchasing a license, a buyer can be held liable for tax debts incurred by the previous owner. Prior to committing to the purchase of any license or establishment, the buyer should request a tax clearance certificate from the seller that indicates that all taxes have been paid up to the date of issuance. Obtaining sound professional assistance from an attorney or accountant can be helpful to identify and avoid any pitfalls and hidden liabilities when buying even a portion of a business. Sellers can make a request for the tax clearance certificate through the Michigan Department of Treasury.

Under administrative rule R 436.1003, the licensee shall comply with all state and local building, plumbing, zoning, sanitation, and health laws, rules, and ordinances as determined by the state and local law enforcements officials who have jurisdiction over the licensee. Approval of this application by the Michigan Liquor Control Commission does not waive any of these requirements. The licensee must obtain all other required state and local licenses, permits, and approvals for this business before using this license for the sale of alcoholic liquor on the licensed premises.

I certify that the information contained in this form is true and accurate to the best of my knowledge and belief. I agree to comply with all requirements of the Michigan Liquor Control Code and Administrative Rules. I also understand that providing **false** or **fraudulent** information is a violation of the Liquor Control Code pursuant to MCL 436.2003.

The person signing this form has demonstrated that they have authorization to do so and have attached appropriate documentation as proof.

Richard Wolfson, Director	DocuSigned by: 821D5E844F4E488...	9/8/2022
Print Name of Applicant & Title	Signature of Applicant	Date

Please return this completed form along with corresponding documents and fees to:
Michigan Liquor Control Commission
Mailing address: P.O. Box 30005, Lansing, MI 48909
Overnight deliveries: 2407 N. Grand River Avenue, Lansing, MI 48906
Fax to: 517-284-8557

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

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Township Manager

DATE: October 12, 2022

RE: Fund 101 Budget Adjustments

The resignation of the Township Manager and the internal promotion of Kelly VanMarter and Amy Ruthig require amendments to the General Fund Budget related to wages and retirement. These amendments are depicted on the attached spreadsheet. Please keep in mind that these budget adjustments do not reflect amounts associated will filling the position vacated by the promotions. To accurately reflect the current changes in the budget, the tables below and a corresponding motion is presented for your consideration:

Item A – Manager Salary

BUDGET IMPACT - Fund 101, Dept. 172 – Township Manager					
Fund Type	**Fund Number**	**Description**	**Existing Budget**	**Change**	**New Budget**
Appropriation	101-172-702-014	TWP MANAGER SALARY	$139,513	+$26,922.08	$166,435.08

Moved by _____, Supported by _____ to amend the Fiscal Year 2022/2023 Budget for Fund 101, Department 172 - Township Manager, "Salary" Line Item 101-172-702-014 from $139,513 to $166,435.08.

Item B –Retirement

BUDGET IMPACT - Fund 101, Dept. 261 – Unallocated					
Fund Type	**Fund Number**	**Description**	**Existing Budget**	**Change**	**New Budget**
Appropriation	101-261-718-001	RETIREMENT	$121,000	-$1,495	$119,505

Moved by _____, Supported by _____ to amend the Fiscal Year 2022/2023 Budget for Fund 101, Department 261 – Unallocated, "Retirement" Line Item 101-261-718-001 from $121,000 to $119,505.

SUPERVISOR
Bill Rogers
CLERK
Paulette A. Skolarus
TREASURER
Robin L. Hunt
TRUSTEES
Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe
MANAGER
Kelly VanMarter

Item C - Planning and Zoning Wages and Salaries

BUDGET IMPACT - Fund 101, Dept. 701 – Planning and Zoning					
Fund Type	**Fund Number**	**Description**	**Existing Budget**	**Change**	**New Budget**
Appropriation	101-701-703-000	PLANNING & ZONING WAGES AND SALARIES	$218,760	-$41,870.88	$176,889.12

Moved by _____, Supported by _____ to amend the Fiscal Year 2022/2023 Budget for Fund 101, Department 701 – Planning and Zoning, "Wages and Salary" Line Item 101-701-703-000 from $218,760 to $176,889.12.

Please let me know if you have any questions or comments.

Sincerely,

Kelly VanMarter

09/27/2022 BUDGET REPORT FOR GENOA TOWNSHIP

9/28/2022

GL NUMBER	DESCRIPTION	2022-23 APPROVED BUDGET	2022-23 AMENDED BUDGET	NEW REQUESTED AMOUNT	DIFFERENCE	
Fund 101 - GENERAL FUND						
TOTAL ESTIMATED REVENUES		5,720,092	5,720,092			
APPROPRIATIONS						
						Kelly's Salary 10/17 to 3/31/23
Dept 172 - TOWNSHIP MANAGER						61,846.20
101-172-702-014	TWP MANAGER SALARY	139,513	139,513	166,435.08	(26,922.08)	Mike's Salary 1/01/23 to 3/31/23
Totals for dept 172 - TOWNSHIP MANAGER		139,513	187,153			(34,924.12)
						Kelly's Add Retire 10/17 to 3/31/23
Dept 261 - UNALLOCATED						1555.46
101-261-718-001	RETIREMENT	121,000	121,000	119,505	1,495	Amy's Add Retire 10/17 to 3/31/23
Totals for dept 261 - UNALLOCATED		791,375	791,375			442.07
						Mike's Retirement 1/01/23 to 3/31/23
						(3492.41)
Dept 701 - PLANNING & ZONING						
101-701-703-000	PLANNING & ZONING WAGES & SALARIES	218,760	218,760	176,889.12	41,870.88	Kelly's Prior Salary 10/17 to 3/31/23
TOTAL APPROPRIATIONS		6,413,566	6,421,178	6,437,621.68	16,443.68	(46,291.56)
						Amy's Prior Salary 10/17 to 3/31/23
						(29,271.60)
NET OF REVENUES/APPROPRIATIONS - FUND 101		(693,474)	(701,086)	(717,529.68)		Amy's New Salary 10/17 to 3/31/23
BEGINNING FUND BALANCE		3,474,244	3,474,244	3,474,244		33,692.28
ENDING FUND BALANCE		2,780,770	2,773,158	2,756,714.32		

Please note these figures do not include a new hire to fill Amy's previous position.

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

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Township Manager

DATE: October 12, 2022

RE: Fund 208 Park/Recreation Budget Adjustments

This memo will cover 4 proposed changes to the Parks and Recreation Fund 208 Budget. These 4 changes represent a $16,950 reduction in expenditures from this fund.

Item A – Park Master Plan

The first change is an increase in cost for the "Park Master Plan" line item number 208-751-934-006. Township staff has been working with Lindhout Associates Architects regarding park planning in anticipation of the MDNR Trust Fund grant award. We have determined that the appropriate first step in park development planning is to obtain survey work and wetland delineation for the parcels. The survey work would include the 25-acre parcel that the Township currently owns at the end of Crooked Lake Road. The estimated cost for the survey work including a wetland delineation is $20,850. A copy of the estimate is attached. The current budget for park master planning is $10,000 therefore we are requesting an increase of $10,850. The following table represents the impact on the budget.

BUDGET IMPACT - Fund 208, Dept. 751 - Parks and Recreation					
Fund Type	**Fund Number**	**Description**	**Existing Budget**	**Change**	**New Budget**
Appropriation	208-751-934-006	Park Master Plan	$10,000	+ $10,850	$20,850

In response the cost increases discussed above the following motion is presented for your consideration:

a) **Moved by _____, Supported by _____ to amend the Fiscal Year 2022/2023 Budget for Fund 208 Parks and Recreation, Line Item 208-751-934-006 to increase the budget amount from $10,000 to $20,850 to cover the cost of survey work and wetland delineation for the Township park acquisition parcels.**

Item B & C – Remove Projects

During discussions with representatives of the Michigan Department of Transportation (MDOT), the former Township Manager determined that MDOT was working to obtain funding to install pedestrian crossings at Golf Club and the Meijer/Wal-Mart signal. With MDOT funding these improvements, the following Township projects are no longer necessary and can be zeroed in the budget as follows:

SUPERVISOR
Bill Rogers
CLERK
Paulette A. Skolarus
TREASURER
Robin L. Hunt
TRUSTEES
Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe
MANAGER
Kelly VanMarter

BUDGET IMPACT - Fund 208, Dept. 751 - Parks and Recreation					
Fund Type	**Fund Number**	**Description**	**Existing Budget**	**Change**	**New Budget**
Appropriation	208-751-934-003	Pedestrian Xing GR & Speedway	$55,000	-$55,000	$0
Appropriation	208-751-934-009	Pedestrian Xing GR @ Golf Club	$55,000	-$55,000	$0

b) **Moved by _____, Supported by _____ to decrease to zero Dept. 751 – Parks & Recreation, Line Item 208-751-934-003 for the Pedestrian Crossing at Grand River and Speedway due to MDOT consideration for the project.**

c) **Moved by _____, Supported by _____to decrease to zero Dept. 751 – Parks & Recreation, Line Item 208-751-934-009 for the Pedestrian Crossing at Grand River and Golf Club due to MDOT consideration for the project.**

Item D – Create New "Grand River Sidewalk Infill Project"

With the elimination of the pedestrian crossing projects, the former Township Manager authorized Tetra Tech to analyze locations along Grand River that would benefit from infill sidewalks to connect existing walks and create opportunities for contiguous connections. This analysis identified opportunities along Grand River east and west of Hubert Road and west of Grand Oaks Drive. Estimated costs for design and permitting is $30,000 with $25,000 estimated for easement acquisition for 8 properties. The table below and the following recommended motion is presented for your consideration:

BUDGET IMPACT - Fund 208, Dept. 751 - Parks and Recreation			
Fund Type	**Add New Fund Number**	**Description**	**Budget**
Appropriation	208-751-934-012	Grand River Sidewalk Infill Design & Easement	$55,000

Moved by _____, Supported by _____ to amend the Fiscal Year 2022/2023 Budget for Fund 208 Parks and Recreation, to add a new line item with fund number 208-751-934-012 for the Grand River Sidewalk Infill Design & Easement with a budget amount of $55,000.

Please let me know if you have any questions or comments.

Sincerely,

Kelly VanMarter

Monument Engineering Group Associates, Inc.
Developing Lifelong Relationships
monumentengineering.com
298 Veterans Drive, Fowlerville, MI 48836 (HQ)
(517) 223-3512

Proposal

September 30, 2022, 2022
MEGA Proposal No: PR-22-0449_V4

Mike O'Leary
Lindhout Associate Architects
10465 Citation Dr.
Brighton, MI 48116

RE: Surveying Services
Genoa Township
6429 Crooked Lake Road
Brighton, MI 48116
TAX ID: 11-14-300-018, 11-23-100-001, 11-14-400-006, 11-23-200-004

Dear Mike,

Monument Engineering Group Associates, Inc., (MEGA) is pleased to present this proposal to you (Client) for surveying services for the location noted above. Enclosed is our survey scope and fee proposal.

SURVEY SCOPE & FEE SCHEDULE
MEGA is proposing the following fee as a lump sum based on the Survey RFP dated May 25, 2022, and as revised via email dated June 22, 2022, and further revised September 30, 2022 per Twp. comments.

Survey	$10,650

MEGA will provide a survey of the Red outlined parcels indicted in this proposal. The survey is intended to be used for schematic design purposes. MEGA will:

- ✓ Monument and depict the boundary of the 4 parcels identified & prepare a certified boundary map of the parcels in recordable format per Act 132 standards
- ✓ Prepare legals descriptions as needed based on the results of the field survey
- ✓ Map the perimeter of woodlots
- ✓ Locate stand alone specimen trees as identified by in-house certified arborist

Wetland Delineation	$10,200

MEGA will engage a wetland consultant to delineate wetlands on the ground within the Red outlined area indicated in this proposal. MEGA will survey they delineated wetlands and include on the final survey deliverable.

PARCEL IMAGE / SCOPE AREA

SCHEDULE
MEGA will commence work upon authorization. Below is our anticipated schedule:

Week 1-5 Prepare Act 132 Survey & final 24x36 deliverable with tree/woodland & wetland features.

FURTHER CLARIFICATIONS, ASSUMPTIONS AND EXCLUSIONS

1. If a boundary issue is identified during the project MEGA will stop work, contact the client and explain the situation. It may be necessary at that point to re-negotiate the scope of the project and fee before proceeding.
2. Items not listed in the scope of services will be charged for on an hourly basis.
3. It is expressly agreed that the Client's maximum recovery against MEGA relating to the professional services performed hereunder, whether in contract, tort, or otherwise, is the amount of MEGA's fee (for the task in question) and that an award of damages, not to exceed such fee, is Client's sole and exclusive remedy against MEGA. Under no circumstance shall MEGA be liable for client's loss of profit, delay damages, or for any special, incidental, or consequential loss or damage of any nature arising at any time or from any cause whatsoever. Where MEGA's fee exceeds $25,000, Client's maximum recovery against MEGA will not exceed $25,000.
4. This proposal is valid for a period of 30 calendar days from the date of this proposal, as notated on page one.
5. Electronic AutoCAD and other electronic files are considered intellectual property of MEGA and are not guaranteed to be distributed at a future date regardless of payment status.

PAYMENT

Payment shall not be contingent upon sale, any transactions, or third parties concerning the property. Over-due invoices are subject to interest at the rate of 1-1/2% per month from said thirtieth day, and in addition, the surveyor may, after giving seven days written notice to the client, suspend services under this agreement until the surveyor has been paid in full.

AUTHORIZATION

If the above scope of work is representative of your expectations, please sign and return a copy of this proposal to us for our records. MEGA appreciates the opportunity to provide professional services for the above-mentioned project. We look forward to working with you.

Monument Engineering Group & Associates	Client Acceptance:
Signature	Signature
Matthew Albright *Survey Manager*	
Signed by	Signed by & Date

7) Consideration of amendments to the Fiscal Year 2022/2023 Budget for the General Fund, Fund 101 to reflect the impact of the resignation of the Township Manager and the internal promotions to fill the Manager and Planning Director positions as follows:
   a) Increase Dept. 172 - Township Manager, “Salary” Line Item 101-172-702-014 from $139,513 to $166,435.08.
   b) Decrease Dept. 261 - Unallocated, “Retirement” Line Item 101-261-718-001 from $121,000 to $119,505.
   c) Decrease Dept. 701 - Planning and Zoning, “Planning and Zoning Wages and Salaries” Line Item 101-701-703-000 from $218,760 to $176,889.12.

8) Consideration of amendments to the Fiscal Year 2022/2023 Budget for the Parks and Recreation Fund, Fund 208 as follows:
   a) Increase Dept. 751 – Parks & Recreation, “Park Master Plan” Line Item 208-751-934-006 to cover the cost of survey work and wetland delineation for the Township park acquisition parcels from $10,000 to $20,850.
   b) Decrease to zero Dept. 751 – Parks & Recreation, Line Item 208-751-934-003 for the Pedestrian Crossing at Grand River and Speedway due to MDOT consideration for the project.
   c) Decrease to zero Dept. 751 – Parks & Recreation, Line Item 208-751-934-009 for the Pedestrian Crossing at Grand River and Golf Club due to MDOT consideration for the project.
   d) Create new Dept. 751 – Parks & Recreation, line item number 208-751-934-012 for the “Grand River Sidewalk Infill design/easement” project with a budget amount of $55,000.

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.

Board Correspondence

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

MEMORANDUM

TO: Honorable Board of Trustees

FROM: Kelly VanMarter, Township Manager

DATE: October 12, 2022

RE: Correspondence – Solar Charging Table Update

At the September 9, 2022 Board meeting, the Board had questions regarding the durability and security of the solar charging table proposed near the basketball courts. Since that meeting I have worked with the architect to obtain additional details which I believe should alleviate any concerns. The salient points are as follows:

1. The solar umbrella is rated for 150 mph wind.
2. See image below of the umbrella base. There are 4 holes in the base that are anchored into the concrete with 3/8" expansion bolts. The umbrella is then connected to the base with double 5/16" thru-bolts.

3. They have not been rated for snow load, but they said they have an installation in Ironwood, Michigan for the past 2 winters without issue.

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

Sincerely,

Kelly VanMarter

SUPERVISOR
Bill Rogers

CLERK
Paulette A. Skolarus

TREASURER
Robin L. Hunt

TRUSTEES
Jean W. Ledford
H. James Mortensen
Terry Croft
Diana Lowe

MANAGER
Kelly VanMarter

Kelly VanMarter

From: noreply-migrants@michigan.gov
Sent: Friday, October 7, 2022 10:11 AM
To: Kelly VanMarter
Subject: TF21-0040 Project Agreement Executed by DNR

Genoa Charter Township, Livingston County
TF21-0040
Genoa Township Park Expansion

The project agreement for the grant referenced above has been fully executed and can be viewed in MiGrants. Detailed guidance on the steps to complete the project are provided for in the "**Acquisition Project Procedures**" booklet. Some final reminders regarding the project:

- Do not begin the appraisal until due diligence and a title search on the property have been completed and approved by the DNR.
- Please do not make a written offer to purchase or undertake the acquisition until you have written Department of Natural Resources (DNR) approval of your appraisal(s).
- Guidance on the steps you must take in completing your project is provided for in the "**Acquisition Project Procedures**" including the "**Appraisal Report Standards**" that your appraiser must follow.
- Your Agreement commits you to complete your land acquisition project in two years.
- Any changes to your project, including reducing or adding to the area to be acquired from that described in the Agreement, requires prior written approval from the DNR.

Please contact your grant coordinator if you have additional questions.