DDS- Planning & Zoning: Plan Review Application



Submission date: 14 March 2022, 4:05PM

Receipt number: 665

Related form version: 2

Application Type

Check all that apply: Site Plan Review

Variance

Property Information

Property Address: 80 coventry street, hartford ct Map

(41.6426591, -72.6793959)

Zoning District: MX-2

Parcel ID: 193056071

Property Owner: City of Hartford Health Dept

Address of Property Owner: 550 Main Street

Email:

Applicant

Name of Applicant: InterCommunity Health Care

File Date: 03/15/2022

Address: 40 Coventry Street, Hartford, CT 06103 No

coordinates found

Phone:	(860)569-5900
Email:	tylerbooth@intercommunityct.org

Primary Point of Contact

Name:	Fraser Walsh
Phone:	8608991916
Email	fraser.walsh@zuvic.com

Project Narrative

Please describe your application action(s) and provide as much detail as possible. Attach additional pages if necessary:

InterCommunity Health Care, located at 40 Coventry Street, intends to construct an addition to their existing outpatient facility to improve the integration of caregivers and clients which is essential to the high level of support that the staff at Intercommunity Heath provide. This parcel is 22.99Ac. The site is zoned MX-2 Multi Use District. Two of the neighboring properties are also zoned MX-2 and one is zoned OS. The project site is defined as the area around Building 16 at 40 Coventry Street bound by asphalt curbing. The project site is 13,500 square feet, or approximately 0.3 acres. The proposed site development includes the construction of a single-story 4,000 square foot (approximate) addition and associated sidewalk improvements within the curbing that surrounds the existing building. The proposed 4,000 square foot addition (approximate) will increase the footprint of **Building 16, 40 Coventry Street by approximately** 60%. The proposed impervious area of the site will be 65% (approximate). In addition, proposed construction activities associated with this application include the installation of a fire service line and new bituminous concrete curbing around the west, south and east of the building. Site access will continue

from the existing access drives and parking areas. No changes to the existing parking lot layout, site lighting or landscaping are proposed. All existing utilities to the current building will be maintained or improved. Two infiltration basins are proposed to treat the first flush from minor storm events. The increase in impervious area on the site will generate additional stormwater runoff. The proposed design assumes that the infiltration basins will attenuate to historic rates stormwater runoff from the minor storm events. The site is not located within an upland review area and there are no direct impacts to any nearby wetlands from the proposed improvements. Proposed erosion control systems will be installed as shown on the plans. The contractor will maintain the erosion and sediment control systems throughout construction.

Zoning Map Change Application

Proposed Zone:

Describe the existing use of land and buildings in the zone change area:

Reason for this request:

Zoning Appeal Application

Are you an aggrieved party?

Permit or Violation Number:

State your reason for appealing the decision of the administrator or enforcement officer:

Variance Application

Please state the paticular hardship* or unnecessary

We are writing to express to the board the hardships

difficulty that prompts this application and the site the section of the zoning regulations that you are seeking relief from:

in complying with the current zoning code identified during the development of the design of the building addition. Intercommunity Healthcare intends to construct a single story 4,000 sf addition on Building 16, 40 Coventry Street. The existing single-story structure is located within Campus Zoning, with an MX-2 underlay. The zoning code requires proposed buildings to comply with either General or Civic building types. The General building type requires a structure of a minimum of two stories, which is not consistent with the existing building or the proposed design/use. The Civic building type allows for a onestory building (with a minimum first floor height of 10ft), however the existing building does not readily fall into this category (Architecturally). Please note that the building is located within the middle of a large campus, so the proposed addition will not significantly alter existing street/property sight lines. The proposed addition is intended to complement an existing, well-detailed structure that was in-turn inspired by the original historical use of the core structure. This core structure was a station stop for the train that toured the original zoo that was on the site. The use of architectural features in the previous addition to the original core building referenced this history and included covered train-platform style porches on its north and south sides. The design for the proposed addition respects the scale and architectural motif details brought down to us in the previous addition from the original core building. The internal functionality of the existing building is carried forward into the proposed addition by extending the simplified corridor circulation system and eliminating the inherent program-space isolation that would occur in a two-story structure. This close integration of caregivers and clients is essential to the high level of support that the staff at Intercommunity Heath provide. The human scale of the existing building and the proposed addition are intended to provide a

welcoming alternative to the institutional paradigm of most clinics that serve this client base. The use of residential-level materials and motifs is intended to enhance the sense of welcome for the clients and staff alike.

Subdivision Application

Number of lots to be created:

Area of each lot in square feet:

Street frontage of each of the new lots in feet:

Lot Combination Application

Addresses of lots to be combined

Map/Block/Lot for each property to be combined:

Liquor Permit Application

Please upload a copy of your State of CT Liquor Permit below.

Sign Permit Application

1. Is this sign proposed outside of the building line?

Maximum extention from building line:

2. Is this sign proposed outside of the street line?

Maximum extension from the Street line

- 3. Is the sign luminated?
- 4. Engineer Name (if any):

Phone:

Address:

- 5. Minimum distance from lowest point to the sidewalk:
- 6. Maximum height of sign from lowest point of established grade:
- 7. Distance from the nearest outdoor sign:
- 8. Square feet of surface for one face of the sign:
- 9. Wording of the sign (include all words):

Description of work (upload additional files if necessary)

Upload any supporting materials below. 20220311_ARCH NARRATIVE.pdf

20220314_SITE PLAN APP NARRATIVE.pdf

21060 - Drainage Report.pdf 21060 - 40 Coventry Street.pdf

Signatures

Signature of Applicant	7
	Link to signature
Printed Name of Applicant:	Fraser Walsh
Date:	03/14/2022
	If you are not the property owner, you must attach a Letter of Authorization from the property owner to apply.
Letter of Authorization from Property Owner	
Date:	03/14/2022



CITY OF HARTFORD

DEPARTMENT OF DEVELOPMENT SERVICES

Division of Planning and Economic Development 260 Constitution Plaza, 1st Floor Hartford, Connecticut 06103

> Telephone: (860) 757-9040 Fax: (860) 722-6402 www.hartford.gov



I. CHARLES MATHEWS
DIRECTOR

RANDAL DAVIS
DEPUTY DIRECTOR

LUKE A. BRONIN MAYOR

April 14, 2022

Kimberly L. Beauregard, LCSW President and CEO (She/Her/Hers) InterCommunity, Inc. Office: (860) 569-5900

RE: Letter of General Support for InterCommunity, Inc.

To Whom it May Concern:

In coordination with the City of Hartford, InterCommunity Inc. is currently exploring the possibility of building an addition on to the City owned building at 40 Coventry Street which it currently leases.

At this time, InterCommunity has shared its proposed site improvements with the City. Although InterCommunity proposes being financially responsible for these improvements, as the property owners, any improvements must be made within the context of a formal agreement with the City of Hartford. The terms of such an agreement will be negotiated at the appropriate time.

Please accept this letter as notice that the City of Hartford is in general support of InterCommunity's goal of providing more services within the City of Hartford through possible expansion of the existing facility at 40 Coventry Street.

on behalf of I Charles Mathews

Sincerely,

I.Charles Mathews

Director of Development Services

Evelyne St-Louis

From: Evelyne St-Louis

Sent: Thursday, May 5, 2022 5:55 PM

To: Fraser Walsh; Alrun Hylwa; sams@lazarusandsargeant.com

Cc: Hartford Planning Division

Subject: 40 Coventry application - update

Hi Fraser,

After reviewing your application more closely, we recommend that this request be pursued via a **special permit** rather than a variance. We determined that the building at 40 Coventry can reasonably be classified as a Civic Building type (see more detail below) and therefore the proposed expansion does not require a variance. Instead, it can be reviewed as a concurrent special permit and site plan review, per Section 5.1.2.C of Hartford's Zoning Regulations.

For context, special permit applications require a public hearing and are reviewed by the Planning & Zoning Commission (PZC). Special permits are reviewed for consistency with Hartford's Plan of Conservation and Development and other criteria listed in Section 1.3.4. In contrast to a variance, a special permit does not require a "hardship", which is very narrowly defined by state statutes. Another advantage of this path is that the PZC will do a concurrent special permit and site plan review. With a variance, it would have been a two-step process (ZBA reviews first; then, only if the variance is granted, the site plan is reviewed administratively.)

Below is a summary of next steps:

- **PZC meeting date**: Your application will likely be scheduled for the June 14th or June 28th PZC meeting, but I will confirm next week once Paige Berschet is back in the office.
- **Public noticing requirements:** Once the PZC date is confirmed, I will share instructions on how to fulfill the public noticing requirements ahead of the public hearing.
- **Staff comments on the site plan:** Staff will do a more thorough review of the site plan and stormwater management report. We will aim to provide comments by the end of next week.

Finally, note that I don't have access to my regular work phone through the end of this week, but I'd be happy to touch base via Teams, or by phone next week.

Thank you, Evelyne St-Louis

Existing structure at 40 Coventry to be classified as a Civic Building Type per Section 4.10:

- Civic building type is permitted in the MX-2 district with the Campus Overlay.
- The site's primary use is considered Civic & Institutional (Government/Higher Education/Hospital Facilities); Medical Office is a permitted as an accessory use to the Hospital use.
- The Civic Building minimum floor requirement is met (1 story). Although the existing floor height (9' 2 ½") does not meet the 10-foot minimum, we can accept this as a minor deviation.
- The building is/will be subject to the Civic Building requirements and the Campus Overlay building conditions of Section 5.1.3.C, which provide added flexibility.

Evelyne St-Louis

Senior Planner
Planning & Zoning Division, Department of Development Services, City of Hartford She/Her/Hers

Phone: 860-757-9083

Email: evelyne.st-louis@hartford.gov

From: Berschet, Paige <Paige.Berschet@hartford.gov>

Sent: Monday, April 18, 2022 5:00 PM **To:** Fraser Walsh fraser.walsh@zuvic.com

Cc: Alrun Hylwa <ahylwa@orlconstruction.com>; sams@lazarusandsargeant.com; Evelyne St-Louis <Evelyne.St-

Louis@hartford.gov>

Subject: RE: 40 Coventry - Variance Application

Hello Fraser,

Thanks again for submitting your Variance application for 40 Coventry. The application review has been assigned to Paul Ashworth (cc'd) who will be in touch with any questions as he completes the staff report and the applicant public noticing requirements that must be completed prior to the public hearing. The public hearing is scheduled for the June 7, 2022 Zoning Board of Appeals Meeting and the meeting login information and documents will be posted here: https://www.meetinginfo.org/meetings/1715

We ask that all Commission level applicants reach out to their respective NRZ for a letter of support for their application. 40 Coventry St is located within the Northeast NRZ and their contact info is as follows:

Northeast Revitalization Association (NERA) Meetings: 3rd Monday, at 6:00 PM

At Parker Memorial Community Center 2621 Main Street

Contact: Darlene Robertson-Childs darlenechilds2003@gmail.com

The application fees are \$350 per variance requested. Once we have reviewed the application we will be in touch with the full application fee.

Let us know if you have any questions.

Best,

Paige Berschet

Administrative Assistant
City of Hartford - Department of Development Services
Planning & Zoning Division
she/her/hers
260 Constitution Plaza, 1st Floor
oneplan@hartford.gov

Desk: 860-757-9029

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Please be advised that unless it is expressly stated, this correspondence does not constitute a zoning permit, certificate of zoning compliance, certification of a legal nonconforming use, or other approval within the Division's jurisdiction. If a permit or approval is desired, an application, application fee, and all required supporting documentation must be submitted to the Zoning Administrator in accordance with the Hartford Zoning Regulations. Please visit www.hartfordct.gov/dds and click on "Our Services" to begin the application process.

From: Hartford Planning Division

Sent: Monday, April 18, 2022 2:06 PM

To: Fraser Walsh <fraser.walsh@zuvic.com>

Cc: Alrun Hylwa <ahylwa@orlconstruction.com>; sams@lazarusandsargeant.com; Evelyne St-Louis <Evelyne.St-

Louis@hartford.gov>

Subject: RE: 40 Coventry

Hello Fraser,

Thank you for sharing the letter of owner authorization, we can now consider the application complete for review. The application will be added as an "application received" on the May 3rd Zoning Board of Appeals Meeting, and will be scheduled for a Public Hearing on the June 7th Zoning Board of Appeals Meeting.

Best,

Paige Berschet

Administrative Assistant
City of Hartford - Department of Development Services
Planning & Zoning Division
she/her/hers
260 Constitution Plaza, 1st Floor
oneplan@hartford.gov

Desk: 860-757-9029

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From: Fraser Walsh < fraser.walsh@zuvic.com>

Sent: Monday, April 18, 2022 10:51 AM

To: Berschet, Paige <Paige.Berschet@hartford.gov>

Cc: Alrun Hylwa <ahylwa@orlconstruction.com>; sams@lazarusandsargeant.com; Hartford Planning Division

<oneplan@hartford.gov>; Chambers, Aimee < Aimee.Chambers@hartford.gov>

Subject: RE: 40 Coventry

Paige,

I hope you had a great weekend.

Attached is a letter from I. Charles indicating support of the proposed site plan improvement project planned for Building 16, 40 Coventry Street. Please let us know if you need anything else from us.

Also – can you please confirm that this project will be heard at the May ZBA hearing (as discussed in March)?

Thank you

Fraser

Fraser Walsh, P.E. • Director of Civil Engineering Services 860.899.1916 (direct) • 860.436.4901 (main) • 860.331.0048 (cell)

40 Cold Spring Road, Suite 1, Rocky Hill, Connecticut 06067

WWW.ZUVIC.COM

From: Berschet, Paige <Paige.Berschet@hartford.gov>

Sent: Monday, March 28, 2022 4:24 PM **To:** Fraser Walsh fraser.walsh@zuvic.com

Cc: Alrun Hylwa ; sams@lazarusandsargeant.com; Hartford Planning Division

<oneplan@hartford.gov>
Subject: RE: 40 Coventry

Hello Fraser,

Thank you for submitting your application for 40 Coventry, unfortunately we cannot accept the application without proper owner authorization which was not included with the application. You can reapply when you have obtained owner authorization.

Best,

Paige Berschet

Administrative Assistant
City of Hartford - Department of Development Services
Planning & Zoning Division
she/her/hers
260 Constitution Plaza, 1st Floor
oneplan@hartford.gov

Desk: 860-757-9029

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From: Hartford Planning Division

Sent: Wednesday, March 16, 2022 11:41 AM **To:** 'Fraser Walsh' < fraser.walsh@zuvic.com>

Cc: Chambers, Aimee < <u>Aimee.Chambers@hartford.gov</u>>; Alrun Hylwa < <u>ahylwa@orlconstruction.com</u>>;

sams@lazarusandsargeant.com

Subject: RE: 40 Coventry

Hello Fraser,

Received, thank you.

Best,

Paige Berschet

Administrative Assistant
City of Hartford - Department of Development Services
Planning & Zoning Division
she/her/hers
260 Constitution Plaza, 1st Floor
oneplan@hartford.gov

Desk: 860-757-9029

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From: Fraser Walsh < fraser.walsh@zuvic.com>

Sent: Tuesday, March 15, 2022 2:47 PM

To: Hartford Planning Division < oneplan@hartford.gov>

Cc: Chambers, Aimee < <u>Aimee.Chambers@hartford.gov</u>>; Alrun Hylwa < <u>ahylwa@orlconstruction.com</u>>;

sams@lazarusandsargeant.com

Subject: Re: 40 Coventry

Paige

Thanks again for the help.

I left hard copies of the plans, narratives (hardship and site development), drainage report and check on the counter for your review.

Please let me know if there is anything else we need to provide.

Fraser Walsh (860)331-0048

Sent from my iPhone

On Mar 14, 2022, at 4:53 PM, Hartford Planning Division <oneplan@hartford.gov> wrote:

Hello Fraser,

The April Zoning Board of Appeals meeting is indeed canceled. The next Zoning Board of Appeals Meeting is on May 3rd. I would recommend submitting your Variance application and once it is assigned to staff, we can take a look to officially determine if a Variance is in fact needed.

You can apply online here through our Plan Review Application: https://www.hartfordct.gov/Government/Departments/DDS/DDS-Services/Submit-a-Plan-Review-Request

Let me know if you have any questions.

Best,

Paige Berschet

Administrative Assistant
City of Hartford - Department of Development Services
Planning & Zoning Division
she/her/hers
260 Constitution Plaza, 1st Floor
oneplan@hartford.gov

oneplan@hartford.gov Desk: 860-757-9029

Follow us! @DDSHartford

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From: Fraser Walsh < fraser.walsh@zuvic.com>
Sent: Monday, March 14, 2022 1:31 PM

To: Berschet, Paige <Paige.Berschet@hartford.gov>

Cc: Chambers, Aimee <Aimee.Chambers@hartford.gov>; Alrun Hylwa <ahylwa@orlconstruction.com>;

sams@lazarusandsargeant.com; Tyler Napper <Tyler.Napper@hartford.gov>

Subject: 40 Coventry

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe. Please contact the helpdesk at 860-757-9411 if you have any questions.

Paige,

I hope you are having a great day. Thanks again for the conversation just now.

Our proposed 4,000sf addition does not meet the requirement of the Zoning Code due to the nature of the existing structure, so our intent is to submit for a ZBA review of the project. (See attached narrative). To confirm, the ZBA hearing in April has been pushed to May? The website doesn't show that decision yet.

https://www.meetinginfo.org/groups/28?meeting_filter=Upcoming

We reviewed this project with Aimee a month ago (approximately). Her intent was to review the code to determine if a hearing by ZBA is required, so we're proceeding with that direction. We'd love to hear that the ZBA process isn't required.

Thanks

Fraser

Fraser Walsh, P.E. • Director of Civil Engineering Services 860.899.1916 (direct) • 860.436.4901 (main) • 860.331.0048 (cell)

40 Cold Spring Road, Suite 1, Rocky Hill, Connecticut 06067 **WWW.ZUVIC.COM**



SITE PLAN APPLCIATION – PROJECT NARRATIVE 4,000 S.F. ADDITION - BUILDING 16, 40 COVENTRY STREET, HARTFORD, CT 06112

InterCommunity Health Care, located at 40 Coventry Street, intends to construct an addition to their existing outpatient facility to improve the integration of caregivers and clients which is essential to the high level of support that the staff at Intercommunity Heath provide.

This parcel is 22.99Ac. The site is zoned MX-2 Multi Use District. Two of the neighboring properties are also zoned MX-2 and one is zoned OS. The project site is defined as the area around Building 16 at 40 Coventry Street bound by asphalt curbing. The project site is 13,500 square feet, or approximately 0.3 acres. The proposed site development includes the construction of a single-story 4,000 square foot (approximate) addition and associated sidewalk improvements within the curbing that surrounds



the existing building. The proposed 4,000 square foot addition (approximate) will increase the footprint of Building 16, 40 Coventry Street by approximately 60%. The proposed impervious area of the site will be 65% (approximate). In addition, proposed construction activities associated with this application include the installation of a fire service line and new bituminous concrete curbing around the west, south and east of the building. Site access will continue from the existing access drives and parking areas.



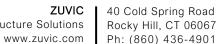
No changes to the existing parking lot layout, site lighting or landscaping are proposed. All existing utilities to the current building will be maintained or improved. Two infiltration basins are proposed to treat the first flush from minor storm events. The increase in impervious area on the site will generate additional stormwater runoff. The proposed design assumes that the infiltration basins will attenuate to historic rates stormwater runoff from the minor storm events.



ZUVIC | 40 Cold Spring Road www.zuvic.com Ph: (860) 436-4901



The site is not located within an upland review area and there are no direct impacts to any nearby wetlands from the proposed improvements. Proposed erosion control systems will be installed as shown on the plans. The contractor will maintain the erosion and sediment control systems throughout construction.





SITE PLAN APPLCIATION – ARCHITECTUAL NARRATIVE **BUILDING 16 ADDITION, 40 COVENTRY SREET – 4,000 S.F. ADDITION 40 COVENTRY STREET, HARTFORD, CT 06112**

We are writing to express to the board the hardships in complying with the current zoning code identified during the development of the design of the building addition. Intercommunity Healthcare intends to construct a single story 4,000 sf addition on Building 16, 40 Coventry Street. The existing single-story structure is located within Campus Zoning, with an MX-2 underlay. The zoning code requires proposed buildings to comply with either General or Civic building types. The General building type requires a structure of a minimum of two stories, which is not consistent with the existing building or the proposed design/use. The Civic building type allows for a one-story building (with a minimum first floor height of 10ft), however the existing building does not readily fall into this category (Architecturally). Please note that the building is located within the middle of a large campus, so the proposed addition will not significantly alter existing street/property sight lines.

The proposed addition is intended to complement an existing, well-detailed structure that was in-turn inspired by the original historical use of the core structure. This core structure was a station stop for the train that toured the original zoo that was on the site. The use of architectural features in the previous addition to the original core building referenced this history and included covered train-platform style porches on its north and south sides. The design for the proposed addition respects the scale and architectural motif details brought down to us in the previous addition from the original core building.

The internal functionality of the existing building is carried forward into the proposed addition by extending the simplified corridor circulation system and eliminating the inherent programspace isolation that would occur in a two-story structure. This close integration of caregivers and clients is essential to the high level of support that the staff at Intercommunity Heath provide.

The human scale of the existing building and the proposed addition are intended to provide a welcoming alternative to the institutional paradigm of most clinics that serve this client base. The use of residential-level materials and motifs is intended to enhance the sense of welcome for the clients and staff alike.

SCALE 1"= 400'

PROJECT SITE					
NO. PARCEL ID PROPERTY ADDRESS					
4	193056071	40 COVENTRY STREET			

NAMES & ADDRESSES OF ABUTTING PROPERTY OWNERS

NC	. PARCEL-ID	PROPERTY ADDRESS	OWNER NAME	OWNER'S ADDRESS
1	216056001	100 COVENTRY STREET	IDA B WELLS INC	54 S. PROSPECT ST, HARTFORD CT 06106
2	195101001	337 VINE STREET	CITY OF HARTFORD PARK DEPT	550 MAIN STREET, HARTFORD CT 06103
3	193056001	500 VINE STREET	STATE OF CONN MENTAL HEALTH	2 HOLCOMB ST, HARTFORD CT 06112

BUILDING #16 ADDITION

40 COVENTRY STREET, HARTFORD, CONNECTICUT MARCH 2022

NOT FOR CONSTRUCTION

	LIST OF DRAWINGS
	COVER SHEET
GN-1	GENERAL AND EROSION CONTROL NOTES AND LEGENDS
1	BOUNDARY AND TOPOGRAPHIC SURVEY
2	BOUNDARY AND TOPOGRAPHIC SURVEY
DP-1	DEMOLITION AND EROSION CONTROL PLAN
SP-1	SITE LAYOUT AND RESTORATION PLAN
GUP-1	GRADING AND UTILITY PLAN
CD-1	CIVIL DETAILS
CD-2	CIVIL DETAILS
D1.1	DEMOLITION PLAN
A-1.1	FLOOR PLAN
A-2.1	BUILDING ELEVATIONS

SITE PLAN

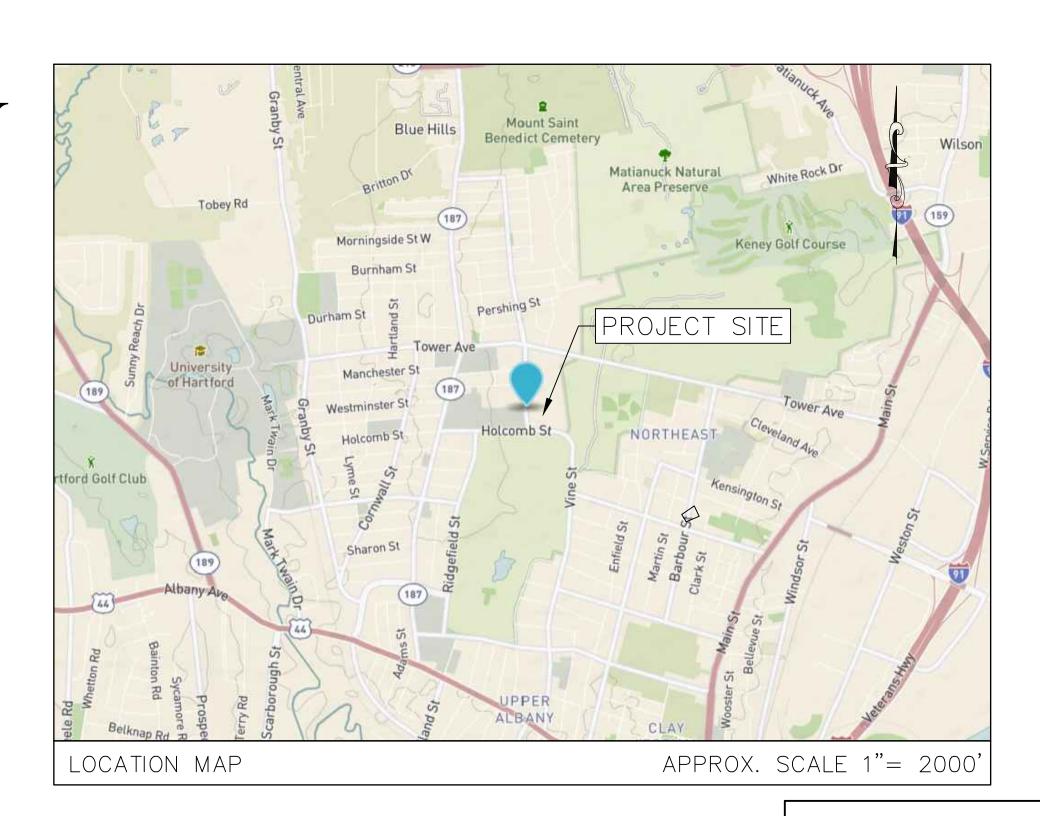
EROSION AND SEDIMENT CONTROL PLAN

PREPARED FOR

INTERCOMMUNITY HEALTH CARE

PREPARED BY





RESPECTIVE UTILITY COMPANIES AND THE CITY OF HARTFORD FOR SERVICE INSTALLATIONS AND

3. THE CONTRACTOR SHALL MAINTAIN ONE SET OF CONTRACT DOCUMENTS ON THE PREMISES IN GOOD CONDITION AT ALL TIMES. THE SET SHALL INCLUDE ALL ADDENDA AND CHANGE ORDERS.

CONNECTIONS.

- 4. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE CONSTRUCTION MANAGER OR OWNER'S REPRESENTATIVE IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONTRACT DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING. ANY CONFLICT BETWEEN THE DRAWINGS AND THE SPECIFICATIONS SHALL BE CONFIRMED WITH THE CONSTRUCTION MANAGER OR THE OWNER'S REPRESENTATIVE PRIOR TO BIDDING.
- 5. STATED DIMENSIONS TAKE PRECEDENCE OVER GRAPHICS. DO NOT SCALE DRAWINGS TO DETERMINE LOCATION AND/OR DIMENSIONS.
- 6. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE OWNER, THE ENGINEER, AND THE APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL UTILITIES, STRUCTURES AND OTHER SITE FEATURES NOT BEING REMOVED AND/OR ALTERED DURING CONSTRUCTION. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED BY OPERATIONS IN CONJUNCTION WITH EXECUTION OF THE WORK.
- 8. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL REQUIRED SUBMITTALS TO THE OWNER, CONSTRUCTION MANAGER AND SITE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 15 WORKING DAYS FOR
- 9. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UTILITIES) TO THE OWNER AT THE END OF CONSTRUCTION.
- 10. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN MAINTENANCE OF TRAFFIC DEVICES FOR PROTECTION OF VEHICLES AND PEDESTRIANS CONSISTING OF DRUMS, BARRIERS, SIGNS, LIGHTS, FENCES AND UNIFORMED TRAFFIC MEN AS REQUIRED OR ORDERED BY THE CONSTRUCTION MANAGER, OWNER'S REPRESENTATIVE OR AS REQUIRED BY THE LOCAL GOVERNING AUTHORITIES. THE CONTRACTOR SHALL MAINTAIN ALL TRAFFIC LANES AND PEDESTRIAN WALKWAYS AT ALL TIMES UNLESS APPROVED OTHERWISE IN WRITING BY THE GOVERNING JURISDICTION.
- 11. INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY COMPANY AND MUNICIPAL RECORD MAPS AND FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. THE LOCATIONS ARE APPROXIMATED. ALL UTILITIES MAY NOT BE SHOWN. PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455.
- 12. THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS OF SUPPORT FOR PROTECTION OF PERSONNEL DURING ALL EXCAVATION AND BACKFILLING OPERATIONS.
- 13. THE CONTRACTOR SHALL FIELD VERIFY ALL CONDITIONS AND DIMENSIONS PRIOR TO ANY WORK AND SHALL BE RESPONSIBLE FOR ALL WORK AND MATERIALS INCLUDING THOSE FURNISHED BY THE SUBCONTRACTORS.
- 14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE CONSTRUCTION AREA UNTIL THE PROJECT IS COMPLETED AND ACCEPTED BY THE OWNER.
- 15. SHOULD ANY UNCHARTED OR INCORRECTLY CHARTED EXISTING PIPE OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE ENGINEER AND RESPECTIVE UTILITY COMPANY IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH THE WORK IN THIS AREA.
- 16. DO NOT INTERRUPT EXISTING UTILITIES SERVICING ADJACENT PROPERTIES EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE OWNER AND THE TOWN.
- 17. OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN FEN (10) FEET OF ANY ELECTRIC LINE UNDER 50 KV. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS.
- 18. ALL NEW UTILITIES SHALL BE UNDERGROUND, AS PER CITY SPECIFICATIONS UNLESS OTHERWISE
- 19. NO DEMOLITION OR CONSTRUCTION ACTIVITIES SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS IS GRANTED BY ALL LOCAL AND STATE GOVERNING AND REGULATORY AGENCIES.
- 20. ALL DEBRIS SHALL BE PROMPTLY REMOVED FROM THE PREMISES AND SHALL BE PROPERLY DISPOSED OF OFF-SITE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS. ALL AREAS SHALL BE KEPT IN A NEAT AND ORDERLY MANNER AT ALL TIMES.
- 21. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO ENSURE THE SAFETY OF THE OCCUPANTS AND WORKERS AT ALL TIMES.
- 22. CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED.
- 23. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION.
- OTHERWISE NOTED TO REMAIN OR TO BE SALVAGED, SHALL BE REMOVED & DISPOSED OF OFF-SITE.

24. ALL EXISTING STRUCTURES AND UTILITIES WITHIN THE LIMITS OF CONSTRUCTION, UNLESS

- 25. UTILITY CONNECTION LOCATIONS AS DEPICTED ON THESE DRAWINGS MAY CHANGE SUBJECT TO REVIEW BY THE APPLICABLE UTILITY COMPANY.
- APPLICABLE UTILITY COMPANY AS SPECIFIED ON THE DRAWINGS. 27. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION PRIOR TO BACKFILLING IN ACCORDANCE WITH THE APPLICABLE UTILITY COMPANY AND/OR THE REQUIREMENTS OF THE CITY OF

26. ALL UTILITIES SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWN OF FARMINGTON AND THE

28. ALL DISTURBANCE INCURRED WITHIN THE CITY OF HARTFORD'S RIGHT-OF-WAY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE PUBLIC WORKS REPRESENTATIVE.

HARTFORD..

29. THE CONTRACTOR SHALL VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES PRIOR TO BEGINNING ANY EXCAVATION. THE CONTRACTOR SHALL CONTACT THE CONSTRUCTION MANAGER OR OWNER'S REPRESENTATIVE IN THE EVENT OF ANY UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED UTILITIES SO THAT APPROPRIATE MODIFICATIONS MAY BE MADE

- 30. THE SITE CONTRACTOR SHALL COORDINATE INSTALLATION OF CONDUIT AND CABLES FOR SITE LIGHTING WITH THE BUILDING ELECTRICIAN.
- 31. PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR WETLAND IN ACCORDANCE WITH THE REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDELINES FOR SOIL EROSION AND SEDIMENT POLLUTION CONTROL. IN ADDITION, THE CONTRACTOR SHALL STRICTLY ADHERE TO THE "EROSION CONTROL PLAN" CONTAINED HEREIN.
- 32. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHODS.
- 33. RELOCATION OF UTILITY COMPANY FACILITIES SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY OWNER.
- 34. THE CONTRACTOR SHALL COMPACT FILL IN 10" MAXIMUM LIFTS UNDER ALL PARKING AND DRIVE AREAS OR AS DIRECTED.
- 35. THE CONTRACTOR SHALL COMPACT THE PIPE BACKFILL IN LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. THE TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS.
- 36. ALL UTILITIES AND PIPES SCHEDULED FOR DEMOLITION SHALL BE REMOVED UNLESS NOTED
- 37. CONTRACTOR SHALL BE PREPARED AT ALL TIMES TO SWEEP THE SURROUNDING ROADWAYS AS REQUIRED BY THE CITY AND/OR THE OWNER'S REPRESENTATIVE.
- 38. ANY MODIFICATIONS OR DEVIATIONS TO THE PLANS APPROVED BY THE CITY OF HARTFORD'S INLAND WETLANDS COMMISSION AND PLAN AND ZONING COMMISSION ARE SUBJECT TO REVIEW AND APPROVAL BY THE COMMISSIONS.
- 39. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL PERMITS PRIOR TO THE START OF CONSTRUCTION.
- 40. ANY WORK WITHIN THE STATE DOT RIGHT OF WAY WILL REQUIRE A CURB CUT PERMIT FROM THE CT DOT.

ABBREVIATIONS

(NOT ALL ABBREVIATIONS MAY BE USED)

IRON PIN APPROX. APPROXIMATE BCLC BITUMINOUS CONCRETE LIP CURB INV. INVERT LOW POINT BOTTOM **BITUMINOUS**

BH.	BLIOWINOO2	LSA	LANDSCAPED AREA
Q.	CENTER LINE	MB	MAILBOX
СВ	CATCH BASIN	MDPE	MEDIUM DENSITY POLYETHYLENE
C-CB	CURBED CATCH BASIN	MH	MANHOLE
CL-CB	CURBLESS CATCH BASIN	MON	MONUMENT
C.I.P.	CAST IRON PIPE	NTS	NOT TO SCALE
C.L.F.	CHAIN LINK FENCE	O.C.	ON CENTER
C.O.	CLEAN OUT	O.D.	OUTSIDE DIAMETER
CONC.	CONCRETE	OE	OVERHEAD ELECTRIC
COMM.	COMMUNICATIONS	PE	POLYETHYLENE
D.I.	DUCTILE IRON	PL	PLATE
D.I.P.	DUCTILE IRON PIPE	PVMT	PAVEMENT
DMH	DRAINAGE MANHOLE	PVC	POLYVINYL CHLORIDE
ELEC.	ELECTRICAL	R	RADIUS
EL.	ELEVATION	RCP	REINFORCED CONCRETE PIPE
EMH	ELECTRICAL MANHOLE	S	SANITARY
EOP	EDGE OF PAVEMENT	SAN	SANITARY
EX.	EXISTING	SMH	SANITARY MANHOLE
F.F.	FINISHED FLOOR	SSWR	SANITARY SEWER
FFE	FINISHED FLOOR ELEVATION	STM	STORM
F.L	FLOW LINE	SW	SANITARY MANHOLE
G	GAS	TEMP.	TEMPORARY
GM	GAS METER	TEL.	TELEPHONE
GRAN	GRANITE	T.F.	TOP OF FRAME
GTD	GRADE TO DRAIN	T.P.	TOP OF PIPE
GV	GAS VALVE	TYP.	TYPICAL
HH	HANDHOLE	UKWN	UNKNOWN
HDPE	HIGH DENSITY POLYETHYLENE	VIF	VERIFY IN FIELD
HP	HIGH POINT	W	WATER

LEGEND (NOT ALL SYMBOLS MAY BE USED)

INSIDE DIAMETER

CONTROL

POST

FLUSH CONDITION

WATER MANHOLE

WATER VALVE

YARD DRAIN

	PROPERTY LINE	۵	CONTROL POINT
	EASEMENT LINE	⊡	MONUMENT
	CURB	O IP	IRON PIPE
	EDGE OF PAVEMENT (EOP)	O IPIN	IRON PIN
	STOCKADE FENCE		TYPE 'C' CATCH BASIN
x	CHAIN LINK FENCE		TYPE 'CL' CATCH BASIN
	TREE/VEGETATION LINE	(STORM DRAINAGE MANHOLE
35	MAJOR CONTOUR	S	SANITARY SEWER MANHOLE
31	MINOR CONTOUR	W	WATER MANHOLE
× <u>31.25</u>	SPOT ELEVATION	ĕV	GAS VALVE
XTC=31.25 BC=30.75	TOP/BOTTOM OF CURB EL.	₩V	WATER VALVE
<u> 12" RCP</u>	PIPES ≥ 12"ø (SIZE, MATERIAL, AND FLOW DIRECTION)	-φ-	HYDRANT
G	GAS	Ē	ELECTRICAL BOX
D	STORM DRAINAGE	0	HANDHOLE
——Е——	UNDERGROUND ELECTRIC	$ \varnothing \!$	UTILITY POLE W/ GUY WIRE
——ОЕ——	OVERHEAD ELECTRIC	ф	LUMINAIRE
S	SANITARY SEWER	\square	LUMINAIRE ON STANDARD
т_	TELECOMMUNICATIONS	 	SIGNS
	WATER		MONITORING WELL
//	TEMPORARY SEDIMENTATION	\bigcirc B	BOLLARD

SOIL EROSION AND SEDIMENT CONTROL NOTES

THE SUBJECT SITE IS DEFINED AS THE AREA AROUND BUILDING 16 AT 40 COVENTRY STREET. THE SITE PRESENTLY CONTAINS AN OUTPATIENT BUILDING WITH ASSOCIATED PARKING AND LOADING AREAS. THE PROJECT SITE IS 13,500 SQUARE FEET, OR APPROXIMATELY 0.3 ACRES. THE PROJECT SITE IS CURRENTLY DEVELOPED. THE LAND COVERAGE CONSISTS MOSTLY OF PAVED SURFACES AND ROOF AREAS.

THE PROPOSED SITE DEVELOPMENT INCLUDES THE CONSTRUCTION OF A SINGLE-STORY 4,000 SQUARE FOOT (APPROXIMATE) ADDITION AND ASSOCIATED SIDEWALK IMPROVEMENTS WITHIN THE CURBING THAT SURROUNDS THE EXISTING BUILDING. IN ADDITION. PROPOSED CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS APPLICATION INCLUDE THE INSTALLATION OF A FIRE SERVICE LINE AND NEW BITUMINOUS CONCRETE CURBING AROUND THE WEST, SOUTH AND EAST OF THE BUILDING.

THE ESTIMATED TOTAL AREA OF THE SITE THAT IS EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES IS APPROXIMATELY 0.16 ACRES (7,000 SF)

CONSTRUCTION SCHEDULE

NARRATIVE

CONSTRUCTION START DATE IS SUMMER 2022. CONSTRUCTION COMPLETION DATE IS FALL 2022 OR SPRING 2023. THE CONSTRUCTION SCHEDULE IS DEPENDENT UPON THE AVAILABILITY OF CONSTRUCTION MATERIALS. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN ALL CONTROLS DURING CONSTRUCTION.

RESPONSIBLE CONTACT

THE RESPONSIBLE CONTACT PERSON FOR ASSURING THAT ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES ARE PROPERLY INSTALLED AND MAINTAINED WILL BE THE SITE CONTRACTOR. SITE OWNER WILL BE RESPONSIBLE FOR MAINTAINING THE PERMANENT MEASURES WHEN THE PROJECT IS COMPLETED.

GENERAL CONSTRUCTION SEQUENCE

- 1. PRECONSTRUCTION MEETING TO BE HELD WITH THE CITY OF HARTFORD STAFF, GENERAL CONTRACTOR, SITE CONTRACTOR, OWNER, AND ENGINEER.
- 2. INSTALL SOIL AND EROSION CONTROL MEASURES INCLUDING BUT NOT LIMITED TO: SILT FENCE. HAY BALES, AND SILT SACKS IN ACCORDANCE WITH THE APPROVED PLAN AND 2002 CT E&S GUIDELINES.
- 3. COMMENCE DEMOLITION OF BITUMINOUS PAVEMENT, CURBING, WALKS, DRIVES, ETC.
- 4. COMMENCE INSTALLATION OF SITE UTILITIES.
- 5. PERFORM EARTHWORK IN EXPEDITIOUS MANNER, AND STABILIZE. EXCESS MATERIAL SHALL BE TAKEN DIRECTLY OFF-SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR. INSTALL ADDITIONAL EROSION CONTROLS AS DIRECTED BY THE OWNER'S REPRESENTATIVE AND/OR THE CITY OF HARTFORD.
- 6. COMMENCE CONSTRUCTION OF BUILDING FOUNDATION.
- 7. COMPLETE INSTALLATION OF STORMWATER COLLECTION SYSTEM AND SITE UTILITIES.
- 8. COMPLETE CONSTRUCTION OF BUILDING, PAVEMENT, AND CONCRETE WALKS. INSTALL STRIPING, AND CURBING.
- 9. PREPARE LANDSCAPE AREA. PLACE 6" TOPSOIL WITHIN LANDSCAPED. FERTILIZE, SEED AND MULCH WHERE SHOWN. INSTALL LANDSCAPE PLANTINGS.
- 10. REMOVE EROSION CONTROLS AFTER AREAS ARE STABILIZED.

SEQUENCE OF OPERATIONS — EARTHWORK OPERATIONS

PHASE 1 - INSTALLATION OF SOIL EROSION AND SEDIMENT CONTROL MEASURES

- 1. ALL SEDIMENTATION AND EROSION CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO SILT FENCE, HAYBALES, FIBER ROLLS, AND FILTER BAGS SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION.
- 2. THE CONTRACTOR SHALL NOT PROCEED WITH CONSTRUCTION ACTIVITIES UNTIL THE ENGINEER HAS INSPECTED AND APPROVED THE INSTALLATION OF ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES.
- 3. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB SEDIMENTATION AND EROSION CONTROL STRUCTURES.
- 4. ALL DISTURBED AREAS SHALL BE STABILIZED AS SOON AS PRACTICAL.

<u>PHASE II - DEMOLITION</u>

- 1. PERFORM SITE DEMOLITION FOR REMAINING WORK AREA.
- 2. ESTABLISH THE SUBGRADE FOR AREAS TO BE PAVED AND SEEDED.

PHASE III - FINAL GRADING

- 1. PAVEMENT BASE COURSES SHALL BE INSTALLED OVER AREAS TO BE PAVED AS SOON AS FINAL SUB-GRADES ARE ESTABLISHED AND UNDERGROUND UTILITIES HAVE BEEN INSTALLED. INSPECT THE DRAINAGE SYSTEM AND CLEAN AS NEEDED.
- 2. CONSTRUCT PAVEMENT, SIDEWALKS, AND CURBS. PLACE TOPSOIL, FINAL SEED AND MULCH.
- . REMOVE ALL TEMPORARY EROSION CONTROL DEVICES ONLY AFTER ALL AREAS HAVE BEEN PAVED AND/OR GRASS HAS BEEN WELL ESTABLISHED AND THE SITE HAS BEEN INSPECTED AND APPROVED BY THE CITY.

EROSION AND SEDIMENT CONTROL PLAN

- 1. SILT FENCE/FIBER ROLLS SHALL BE INSTALLED ALONG THE BASE OF THE SLOPE AS SHOWN OR AS REQUIRED BY THE ENGINEER.
- 2. FILTER BAGS AND/OR HAYBALES SHALL BE INSTALLED AT ALL CATCH BASINS AS SHOWN ON
- CONTRACTOR SHALL PERFORM PERIODIC SWEEPING OF PAVEMENT IN CONSTRUCTION WORK AREA AS A DUST CONTROL MEASURE.

4. SOIL EROSION AND SEDIMENT CONTROLS SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT THE CONSTRUCTION PERIOD AND UNTIL ALL DISTURBED AREAS ARE THOROUGHLY STABILIZED.

- 5. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT
- 6. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO CONSTRUCTION UNLESS SPECIFICALLY SHOWN OTHERWISE ON APPROVED E&S PLANS.
- 7. ADDITIONAL CONTROL MEASURES SHALL BE INSTALLED DURING THE CONSTRUCTION PERIOD AS NECESSARY OR REQUIRED.
- 8. SEDIMENT REMOVED FROM CONTROL STRUCTURES SHALL BE DISPOSED OF IN A MANNER WHICH IS CONSISTENT WITH THE INTENT OF THE PLAN.

INSTALLATION OF SEDIMENTATION AND EROSION CONTROL MEASURES

SILT FENCE

CONTROL HANDBOOK.

- A. DIG A SIX INCH TRENCH ON THE UPHILL SIDE OF THE DESIGNATED FENCELINE LOCATION.
- B. POSITION THE POST AT THE BACK OF THE TRENCH (DOWNHILL SIDE), AND HAMMER THE POST AT LEAST 1.5 FEET INTO THE GROUND.
- C. LAY THE BOTTOM SIX INCHES OF THE FABRIC INTO THE TRENCH TO PREVENT UNDERMINING BY STORM WATER RUN-OFF.
- D. BACKFILL THE TRENCH AND COMPACT.

- A. HAYBALES SHALL BE PLACED AROUND ALL CATCH BASINS IN GRASSED AREAS.
- B. SIDES OF ADJACENT BALES SHALL TIGHTLY ABUT ONE ANOTHER.
- C. BALES SHALL BE ENTRENCHED AND BACKFILLED. A TRENCH SHALL BE EXCAVATED THE WIDTH OF A BALE AND THE LENGTH OF THE PROPOSED BARRIER TO A MINIMUM DEPTH OF FOUR INCHES, AFTER THE BALES ARE STAKED, THE EXCAVATED SOIL SHALL BE BACKFILLED AGAINST THE BARRIER.
- D. EACH BALE SHALL BE SECURELY ANCHORED BY AT LEAST TWO (2) STAKES.
- E. THE GAPS BETWEEN BALES SHALL BE WEDGED WITH STRAW TO PREVENT WATER LEAKAGE.

FILTER BAGS

A. PROVIDE FILTER BAGS IN ALL CATCH BASINS IN PAVED AREAS AS SHOWN ON PLANS

CONSTRUCTION ENTRANCE

A. CONSTRUCTION ENTRANCE PAD SHALL BE CONSTRUCTED WHERE SHOWN ON THE PLANS IN ACCORDANCE WITH THE DESIGN DETAIL

FIBER ROLLS

A. INSTALL & MAINTAIN IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS AND PER DETAIL ON SHEET CD-1.

OPERATION AND MAINTENANCE OF TEMPORARY SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

INSPECTIONS OF THE E&S CONTROL MEASURES SHALL BE COMPLETED EVERY 2 WEEKS AND AFTER STORMS EVENTS EXCEEDING "". REPORTS SHALL BE PROVIDED TO THE CITY AND CONTRACTOR WITHIN 24 HOURS. REQUIRED REPAIRS SHALL BE COMPLETED WITHIN 24 HOURS AFTER REPORTS ARE DELIVERED.

CONTRACTOR SHALL MAINTAIN EROSION CONTROL SYSTEMS THROUGHOUT CONSTRUCTION, AT NO ADDITIONAL COST TO OWNER. PRIOR TO DEMOBILIZATION, CONTRACTOR SHALL REMOVE DEBRIS AND SEDIMENT, CLEAN AND INSPECT ALL DRAINAGE SYSTEMS (INCLUDING THE DETENTION POND).

SILT FENCE

- A. ALL SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL. ALL DETERIORATED FABRIC AND DAMAGED POSTS SHALL BE REPLACED AND PROPERLY REPOSITIONED IN ACCORDANCE WITH THIS PLAN.
- B. SEDIMENT DEPOSITS SHALL BE REMOVED FROM BEHIND THE FENCE WHEN THEY EXCEED A HEIGHT OF ONE FOOT.

HAYBALES

- A. ALL HAYBALES SHALL BE INSPECTED FOLLOWING EACH RAINFALL, REPAIR OR REPLACEMENT SHALL BE PROMPTLY MADE AS NEEDED.
- B. DEPOSITS SHALL BE REMOVED AND CLEANED-OUT WHEN ONE HALF OF THE ORIGINAL HEIGHT OF THE BALES BECOMES FILLED WITH SEDIMENT.

FILTER BAGS

A. CLEAN/REPLACE FILTER BAGS AFTER EACH RAINFALL OR AS REQUIRED.

CONSTRUCTION ENTRANCE

CLEAN PAD OF ACCUMULATED SOIL MATERIALS AND ADD ADDITIONAL STONE AS REQUIRED.

OPERATIONS AND MAINTENANCE POST CONSTRUCTION

THE FOLLOWING OPERATION AND MAINTENANCE SCHEDULE IS REQUIRED TO ENSURE THE PROPER AND EFFICIENT OPERATION OF THE STORMWATER MANAGEMENT SYSTEM POST CONSTRUCTION. THE SCHEDULE IS INTENDED TO BE A MINIMUM GUIDE. EVENTS THAT COULD CAUSE DEPOSITION OF EXCESS DEBRIS IN THE SYSTEM, SUCH AS A LARGE STORM EVENT, MAY REQUIRE ADDITIONAL INSPECTIONS AND MAINTENANCE MEASURES.

CATCH BASINS: THE CATCH BASINS SHALL BE INSPECTED ANNUALLY. THE SUMPS SHALL BE CLEANED WHEN THE DEPTH OF MATERIAL WITHIN THE SUMPS REACHES ONE FOOT.

PAVEMENT SWEEPING: THE PAVEMENT AREAS SHALL BE SWEPT AT A MINIMUM OF TWICE PER YEAR - ONCE IN SPRING SHORTLY AFTER THE END OF THE SNOW SEASON AND ONCE IN THE FALL AFTER THE LEAVES HAVE FALLEN.

MAINTENANCE REPORTS SHALL BE PROVIDED TO THE CITY OF HARTFORD PLANNING STAFF BY JANUARY 31ST OF EACH YEAR, DOCUMENTING THE PRIOR YEARS EFFORTS.

CONTINGENCY EROSION PLAN

SHOULD UNFORESEEN EROSION OR SEDIMENTATION PROBLEMS ARISE, THE DESIGN ENGINEER OF RECORD (ZUVIC, INC.) AND LOCAL ENFORCEMENT AGENT SHALL BE NOTIFIED IMMEDIATELY. AN INSPECTION OF THE AFFECTED AREA(S) SHALL BE PROMPTLY PERFORMED. A REMEDIAL ACTION PLAN SHALL BE FORMULATED WITH THE LOCAL ENFORCEMENT AGENT'S APPROVAL. THE SITE CONTRACTOR SHALL THEN IMPLEMENT THE RECOMMENDED COURSE OF ACTION WHICH HAS BEEN DETERMINED BY BOTH THE ENGINEER AND LOCAL ENFORCEMENT AGENT.

NOT FOR CONSTRUCTION

DESIGNED BY: DRAWN BY: SHEET CHK'D BY: ____ APPROVED BY: _____ DATE REMARKS

INTERCOMMUNITY HEALTH CARE

PREPARED FOR:

TREES/SHRUBS

800 CONNECTICUT BOULEVARD, 4TH FLOOR EAST HARTFORD, CONNECTICUT 06108

40 Cold Spring Road, Suite 1, Rocky Hill, CT 06067 ■ (860)436-4901 ■ WWW.ZUVIC.COM

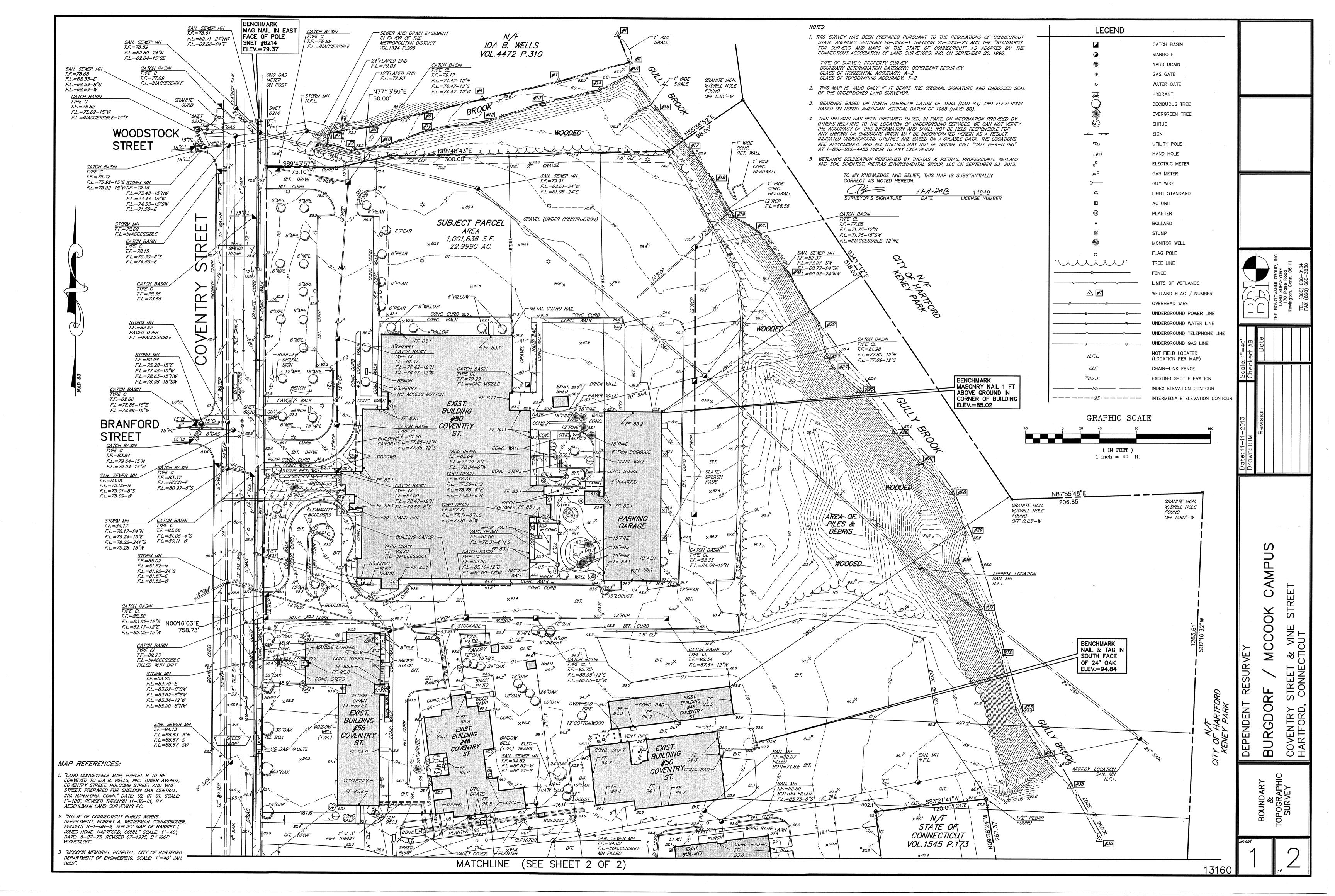
PREPARED BY:

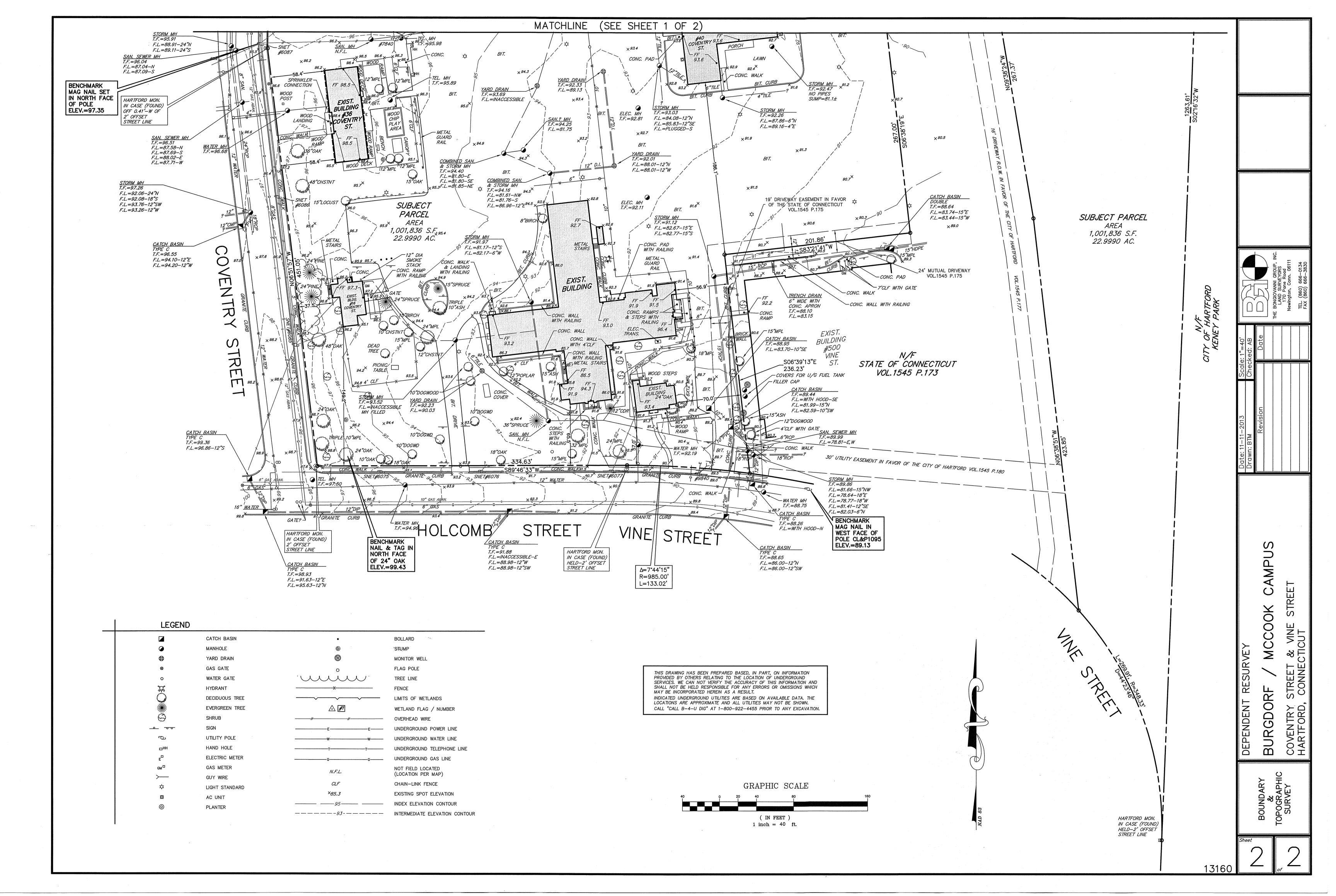
BUILDING #16 ADDITION

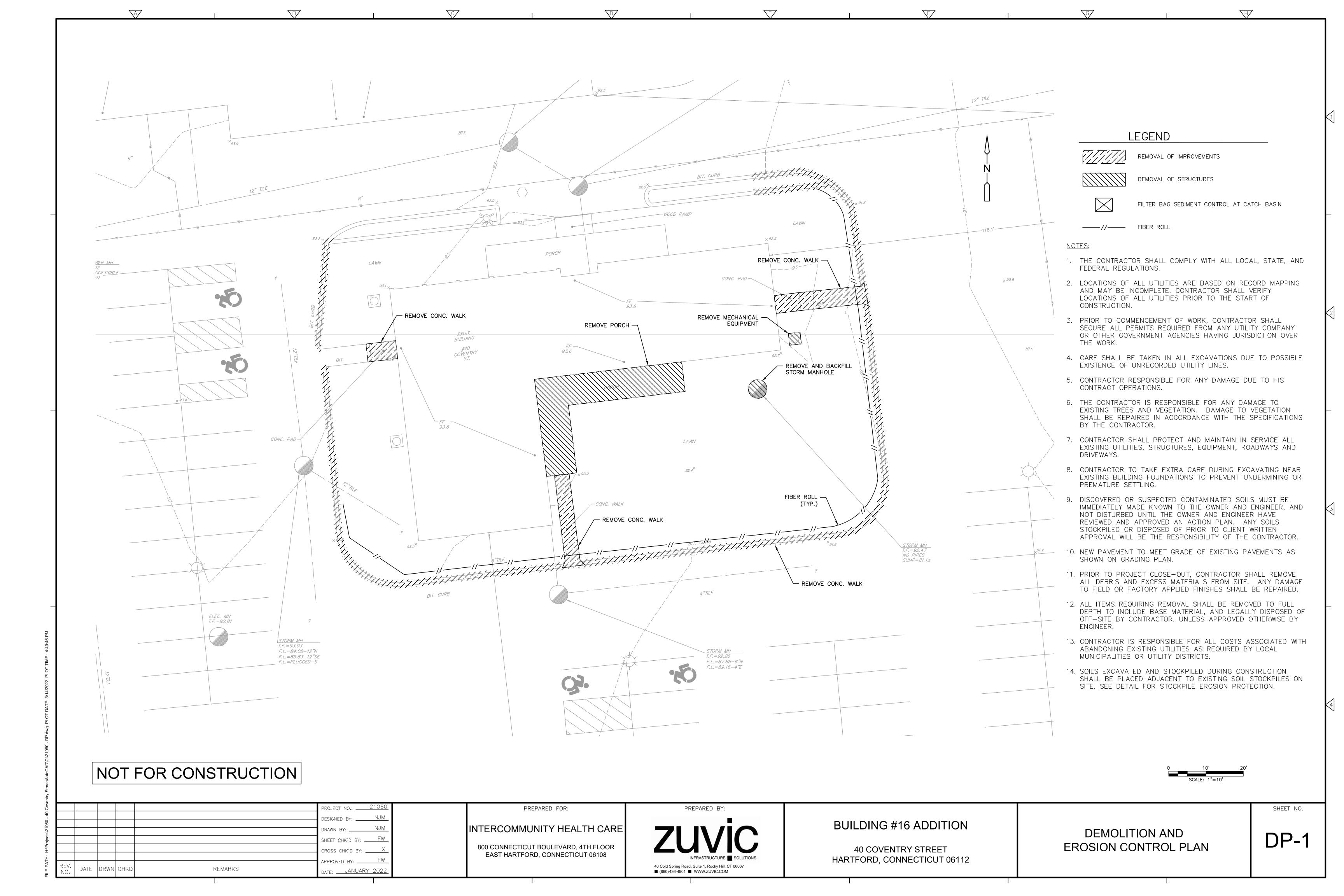
40 COVENTRY STREET HARTFORD, CONNECTICUT 06112 **GENERAL NOTES**

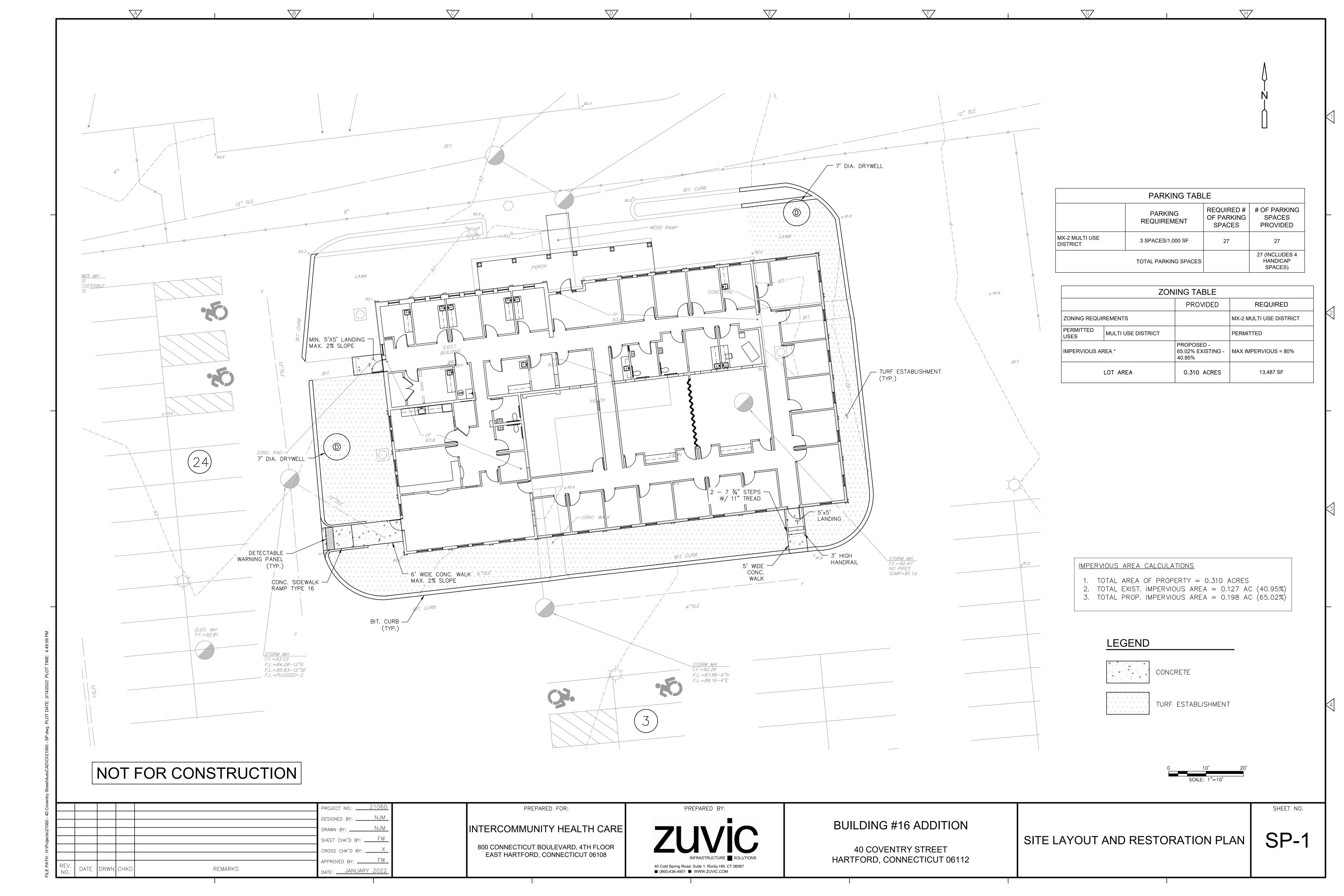
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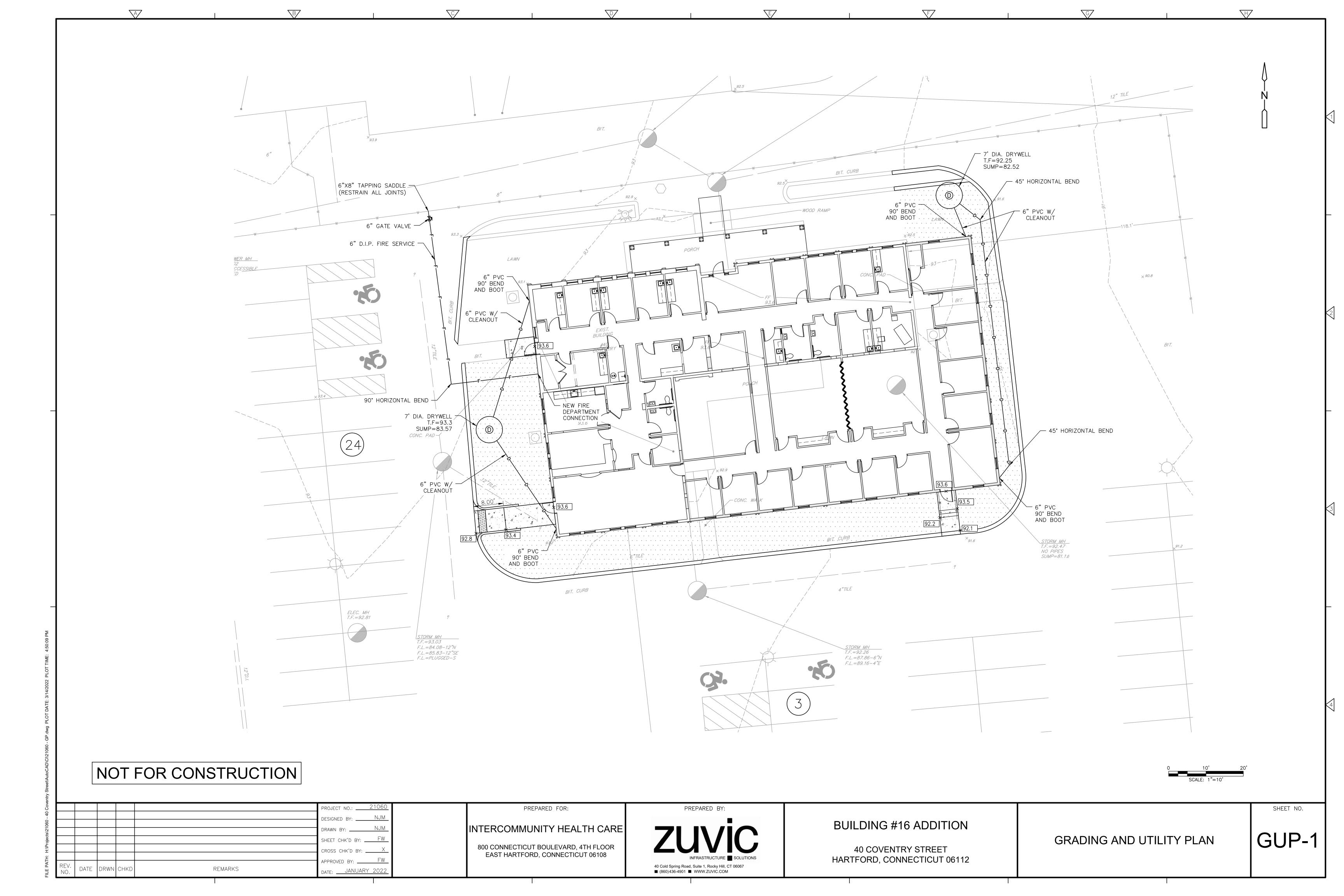
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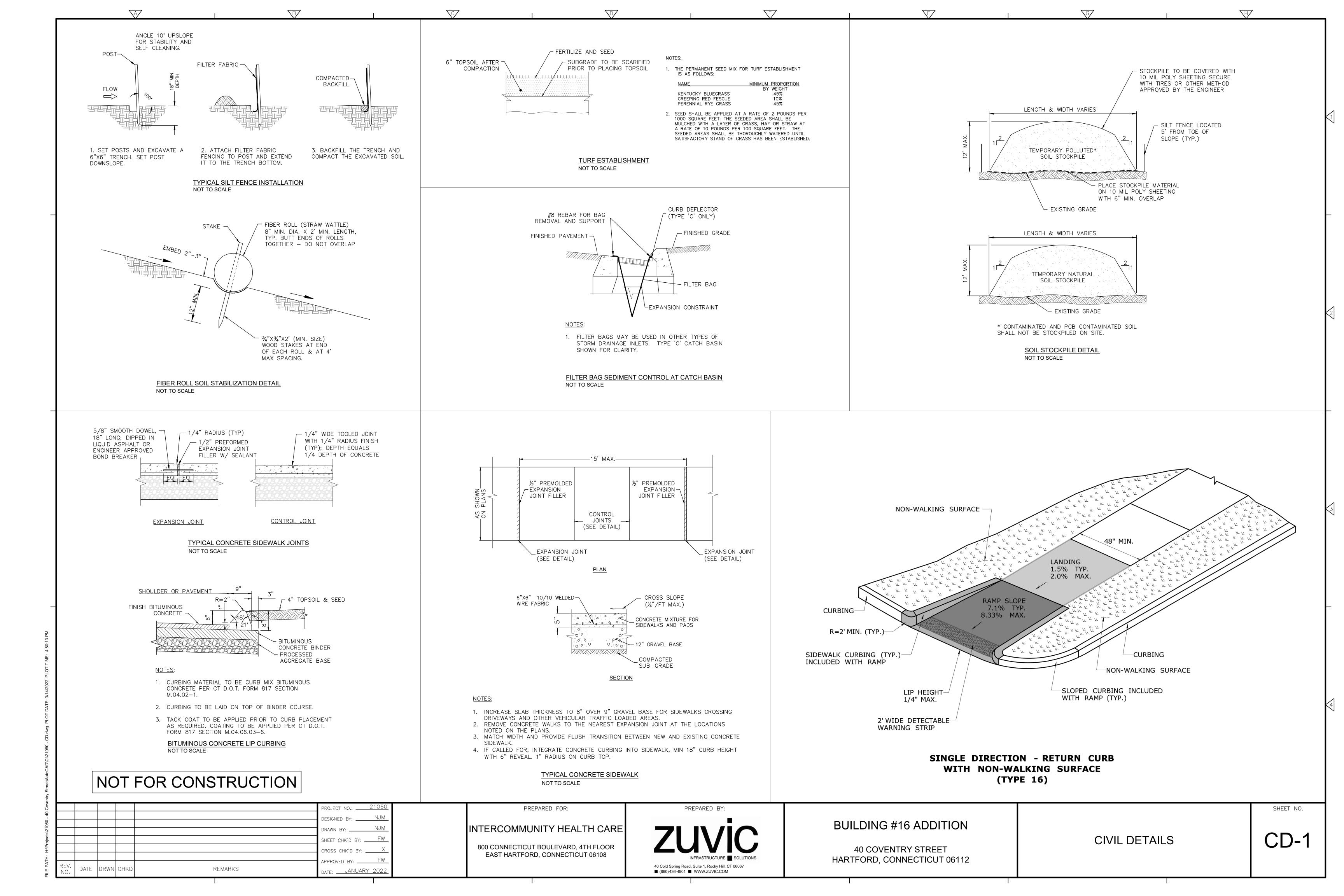


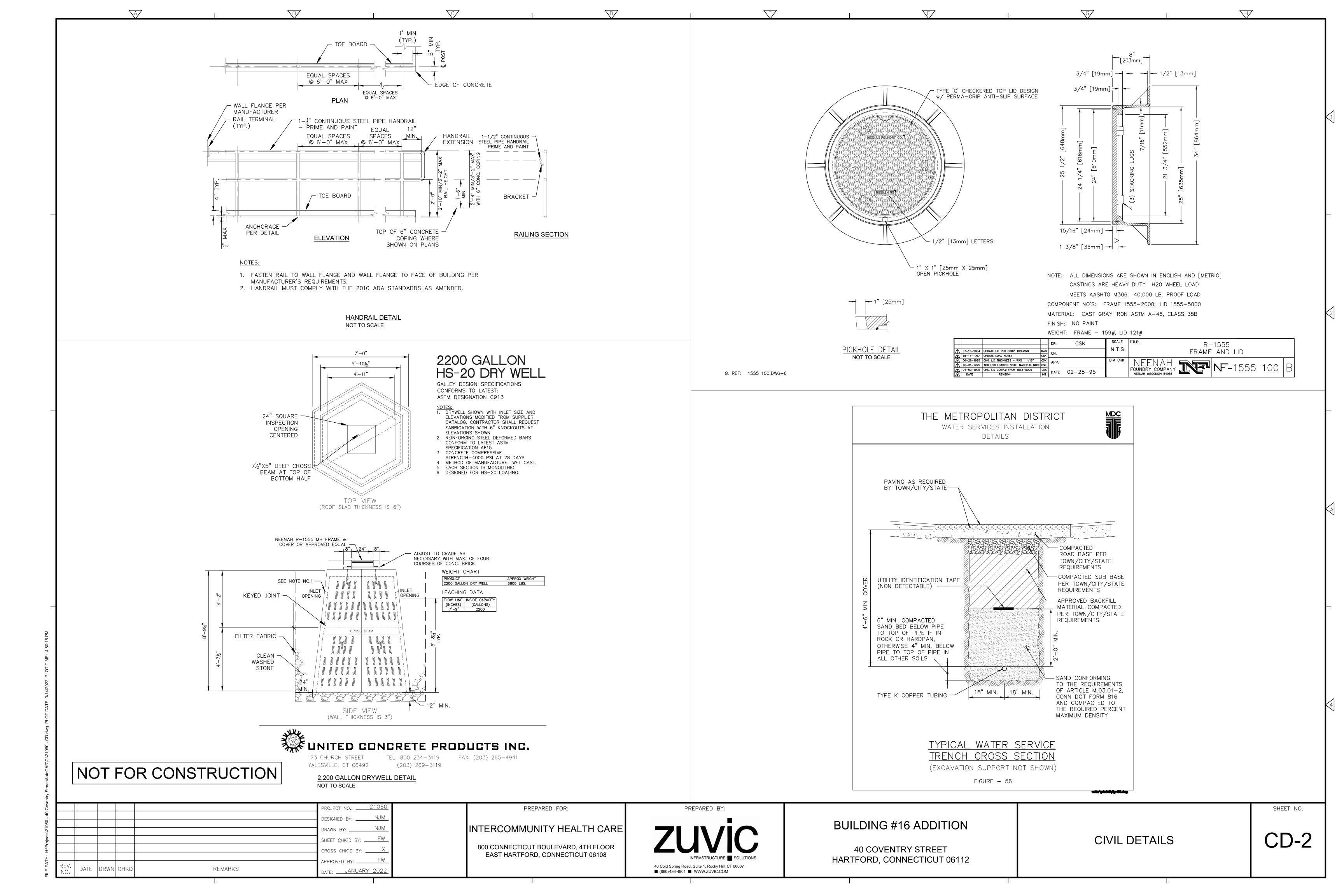


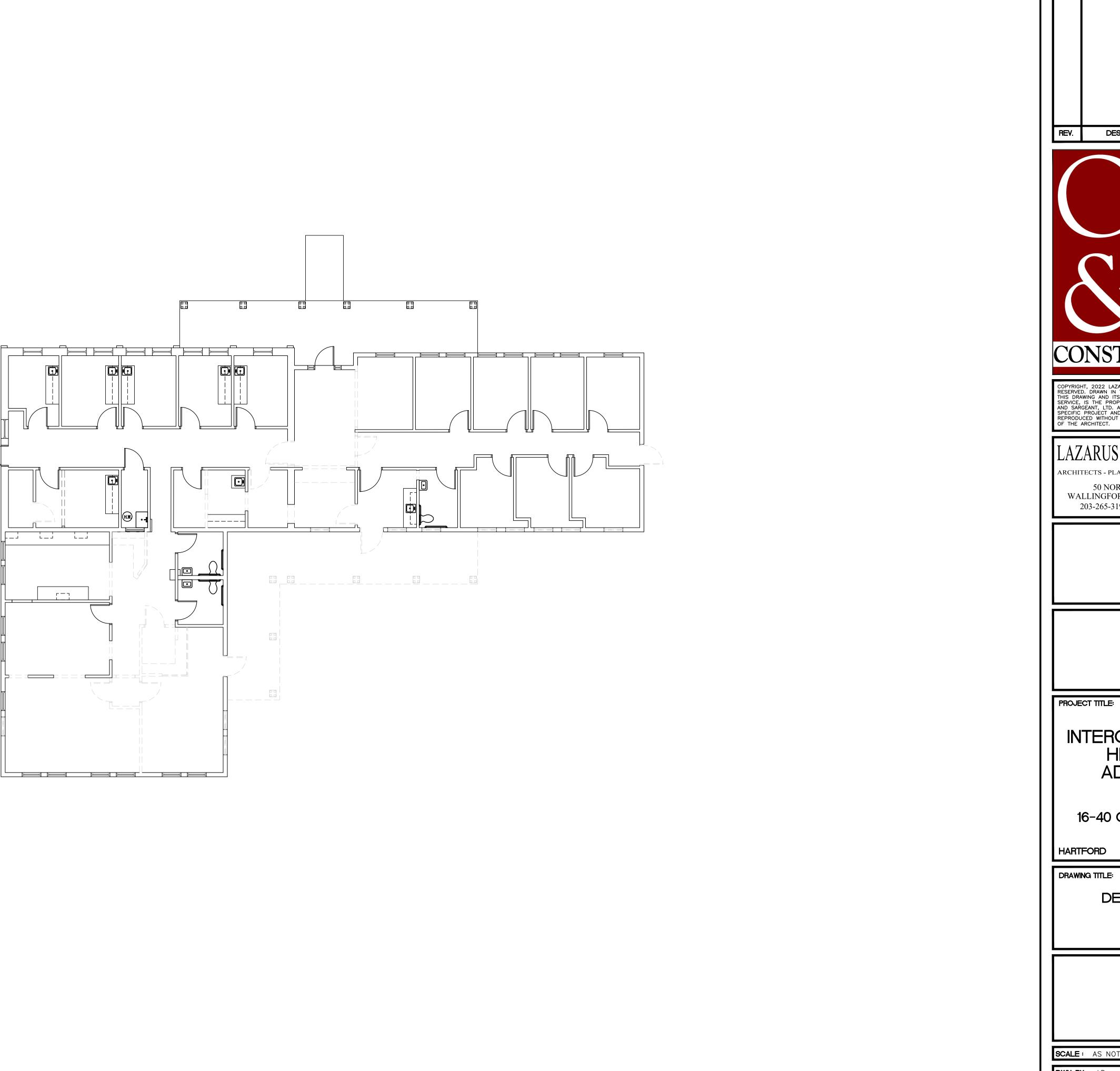


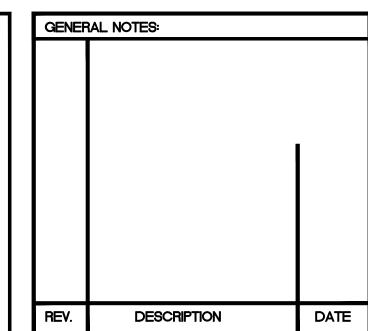


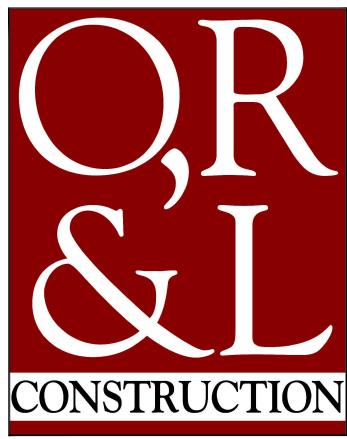












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ARCHITECTS - PLANNERS - INTERIOR DESIGNERS

50 NORTH MAIN STREET WALLINGFORD, CONNECTICUT 06492 203-265-3194 203-294-1610 F

INTERCOMMUNITY HEALTH ADDITION

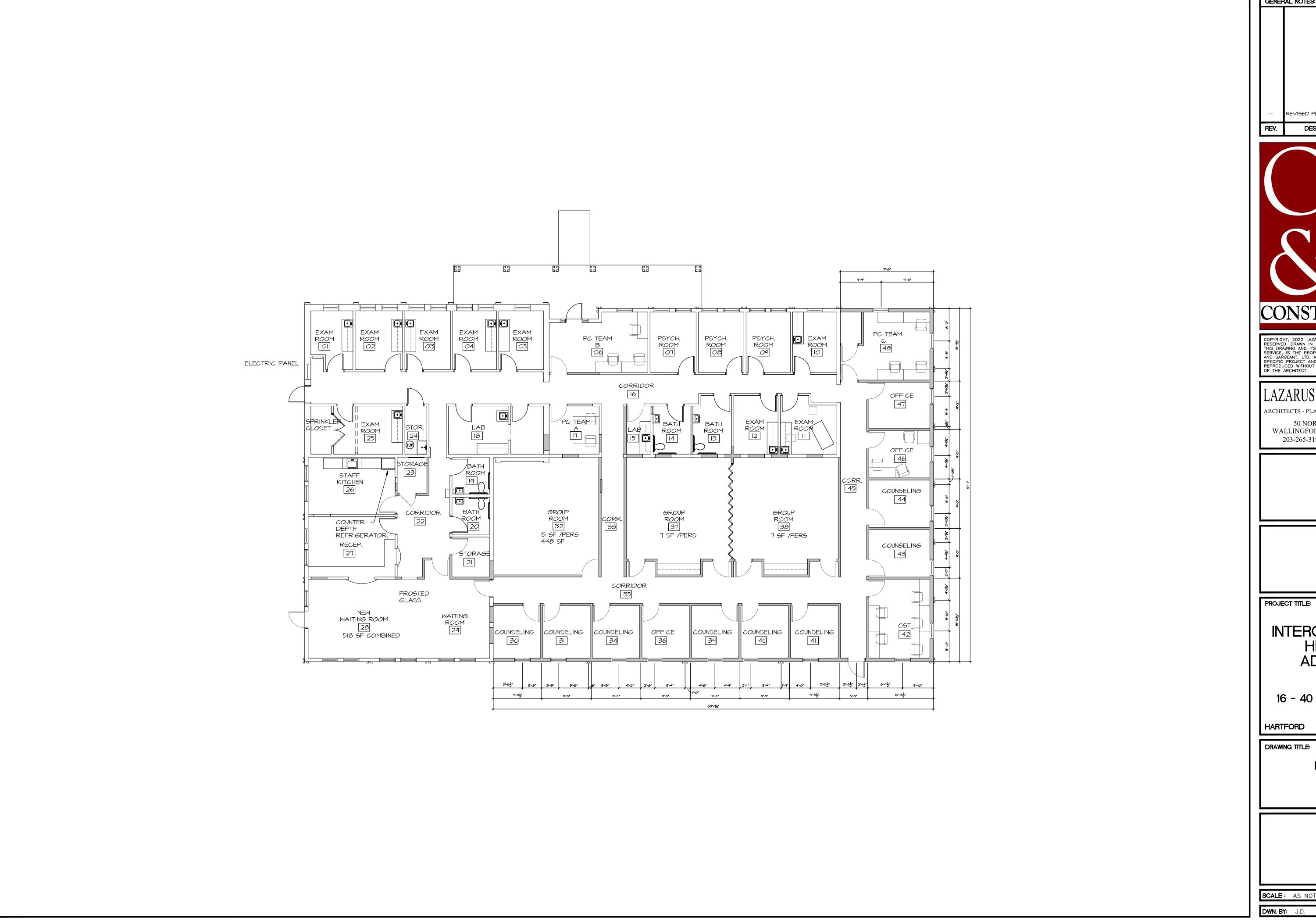
16-40 COVENTRY ST

DRAWING No.

DEMOLITION PLAN

SCALE: AS NOTED

DWN. BY: J.D. CHECKED: S.S. **DATE**: 12/16/21



FLOOR PLAN 3/16" = 1'0"

GENERAL NOTES: -- REVISED PLAN 02-02-22 DATE DESCRIPTION



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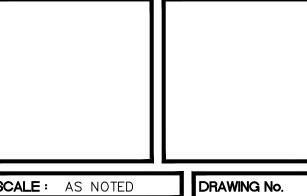
ARCHITECTS - PLANNERS - INTERIOR DESIGNERS

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INTERCOMMUNITY HEALTH ADDITION

16 - 40 COVENTRY ST

FLOOR PLAN



SCALE: AS NOTED

CHECKED: S.S.

DATE: 12/16/21

A-1.1



DRAINAGE REPORT

ADDITION AT 40 COVENTRY STREET HARTFORD, CT

March 2022



Prepared for: INTERCOMMUNITY HEALTH CARE

Prepared by:



Zuvic Project No. 21060

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ZUVIC Project 21060 March 2022

INTRODUCTION

This drainage report has been prepared in support of a proposed site plan application for an addition to an existing outpatient facility described as Building 16, located at 40

Coventry Street in the city of Hartford, Connecticut. The project will be located on City of Hartford Parcel ID number 193056071, addressed as 80 Coventry Street. This parcel is 22.99Ac. For the purposes of this report, the project site (site) is defined as the area around Building 16 at 40 Coventry Street bound by asphalt curbing. The project site is 13,500 square feet, or approximately 0.3Ac. The proposed 4,000 square foot addition (approximate) will increase the



footprint of Building 16, 40 Coventry Street by approximately 60%. The project proposes a single level outpatient facility, modifications to the existing surface (adding new sidewalks and curbing around the landscaped areas), and site infrastructure supporting the proposed development. The project site is currently developed. The land coverage consists mostly of paved surfaces and roof areas.

Table 1 – Stormwater Data

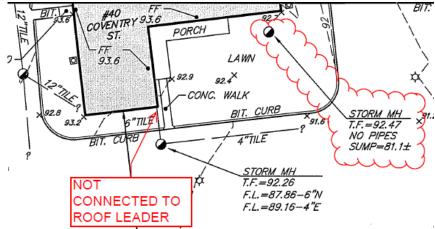
Parcel Size (40 Coventry Street)	13,500 Square feet	
Existing on-site Impervious Area	40.95%	
Proposed on-site Impervious Area	65.02%	
Soil Types (Hydrologic Soil Groups)	B/D	
Existing Land Use	MX-2, North District	
Proposed Land Use	MX-2, North District	
Design Criteria for Stormwater Management	No net increase in runoff	
Water Quality Measures	WQV storage	
Design Storm for Storm Drainage System Improvements	first flush, 2yr, 10yr	
Federal Emergency Management Agency Special Flood	Not applicable	
Hazard Areas		
Connecticut Department of Energy & Environmental	Not applicable	
Protection defined Aquifer Protection Area		

EXISTING CONDITIONS

The site presently discharges stormwater to the east into the existing parking lot via overland flow. Stormwater runoff from the roof is discharged at grade onto grassed or

gravel areas.

An 11 foot deep (approximate) storm sewer manhole with no existing storm sewers leading into or out of it is located in the eastern central portion of the site. The storm sewer manhole



may act as an infiltration basin, capturing a small portion of the stormwater runoff from portions of the roof of the existing building and surrounding gravel covered area. No other stormwater management system currently serves the site. The site ultimately discharges to Gully Brook, Park River and the Connecticut River. As depicted in the Existing Drainage Basin exhibit (DB-1), stormwater runoff from basins E-1 through E-4 flows overland through the site to the east.

The site as presently developed has a total impervous coverage of approximately 5,500 SF (41%). A drainage report describing the existing stormwater management design was not found.

PROPOSED IMPROVEMENTS

The proposed site development includes the construction of a single-story 4,000 square foot (approximate) addition and associated sidewalk improvements within the curbing that surrounds the existing building. In addition, proposed construction activities associated with this application include the installation of a fire service line and new bituminous concrete curbing around the west, south and east of the building.

STORMWATER MANAGEMENT APPROACH

The stormwater management system for this site has been designed utilizing Best Management Practices (BMPs) to provide water quality treatment of the first flush event from the new addition. The design goal is to provide water quality treatment in

accordance with the City of Hartford and Connecticut Department of Energy & Environmental Protection (CTDEEP) requirements for Water Quality Volume (WQV) and to retain as much of the increase in peak flow from the site during the design storm events as possible. Existing drainage patterns will be maintained to the maximum extent practicable. The proposed addition will not noticeably change the peak runoff rates of the campus. There is no existing storm sewer serving the site, and, due to the size of the site, there is minimal room for underground storage/attenuation of the major design storm events.

The proposed site plan will not change the existing drainage patterns for stormwater runoff from Building 16, 40 Coventry Street. Stormwater runoff from this portion of the site will sheet flow through the site to the east. Two infiltration basins are to be constructed in the northeast and southeast corners of the site. The proposed dry wells will capture runoff from portions of the roof during the calculated peak discharge of the storm, thereby maintaining the historic peak flow rates during the minor design storm events (2yr and 10yr). The capacity of the dry wells will be exceeded during the peak of the major storm events (25yr, 50yr and 100yr storms) so will not maintain historic discharge rates from the site. Hand calculations were prepared to support the design of the proposed water quality and storm water collection system. The contributing watershed to each individual catch basin inlet was delineated to determine drainage area and land coverage. These values were used to determine the stormwater runoff to each infiltration basin using the Rational Method. The rainfall intensities for the site were obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 10, Precipitation Frequency Data Server (PFDS).

WATER QUALITY MANAGEMENT

The CTDEEP 2004 Stormwater Quality Manual (Chapter 7) recommends methods for sizing stormwater treatment measures using the following equation: WQV (AC-FT) = (1")(R)(A)/12. The intent is to treat the initial stormwater runoff, also commonly referred to as the "first flush" runoff or WQV. As described by the CT DEEP, the WQV of an existing site that is being redeveloped is calculated as 50% of the volume generated during the first 1" flush.

50% of the WQV of the site, using a weighted runoff coefficient of 0.69, is 357cf. The WQV will be retained and allowed to infiltrate in the previously described two proposed 7-foot

diameter drywells, which will be approximately 9.75 feet deep and hold 2,200 gallons (290cf) of stormwater runoff each. Stormwater runoff from the roof of the existing and proposed building will be collected by these infiltration basins. The drywells will be located on the northeast and southwestern corners of the site. Soil borings advanced in February 2022 encountered groundwater at a depth of approximately 13 feet.

DESIGN METHODOLGY

The proposed development will be constructed in compliance with the City of Hartford Subdivision Regulations, and in accordance with applicable state regulations, including the General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4). These regulations call for the pretreatment of the stormwater and for providing infiltration of the 1/2" storm event for redeveloped sites.

As previously indicated, the proposed stormwater treatment and collection system will be comprised of dry wells/infiltration basins.

A hydrologic analysis has been conducted to analyze the pre-development and post-development peak-flow rates from the site. The Rational method was utilized to predict the surface water runoff rates. Hand calculations were used to develop the storage volumes needed to maintain existing stormwater runoff rates.

The input data includes information on land use, hydrologic soil type, vegetation, contributing watershed area, time of concentration, rainfall data, storage volumes, and the hydraulic capacity of structures. The computer model predicts the amount of runoff as a function of time, with the ability to include the attenuation effect due to dams, lakes, large wetlands, floodplains, and stormwater management basins. The input data for rainfalls with statistical recurrence frequencies of 2, 10, 25, 50, and 100 years was obtained from the NOAA Atlas 14, Volume 10 database. The corresponding 24-hr rainfall totals are listed below.

Storm Frequency	Rainfall (inches)
2-year	3.13
10-year	4.98
25-year	6.14
50-year	6.99
100-year	7.93

Land use for the site under existing and proposed conditions was determined from field survey, town-provided geographic information system (GIS), and aerial photogrammetry. Land use types used in the analysis included grassed or open space; building; and impervious (paved) cover. Soil types in the watershed were determined from the CTDEEP GIS database of the USDA-NRCS soil survey for Hartford County, Connecticut. The different land uses and soil types were utilized to determine composite runoff C values for each subwatershed. The time of concentration (Tc) was estimated for each subwatershed using the Rational method, which was computed by summing all travel times through the watershed as sheet flow, shallow concentrated flow, and channel flow.

The existing conditions were modeled to determine the peak-flow rates for the various storm events at each analysis point. A revised model was developed incorporating the proposed site conditions and the stormwater management basins. The flows obtained with the revised model were then compared to the results from the existing conditions model. The proposed un-restricted discharge rates are higher than the existing condition.

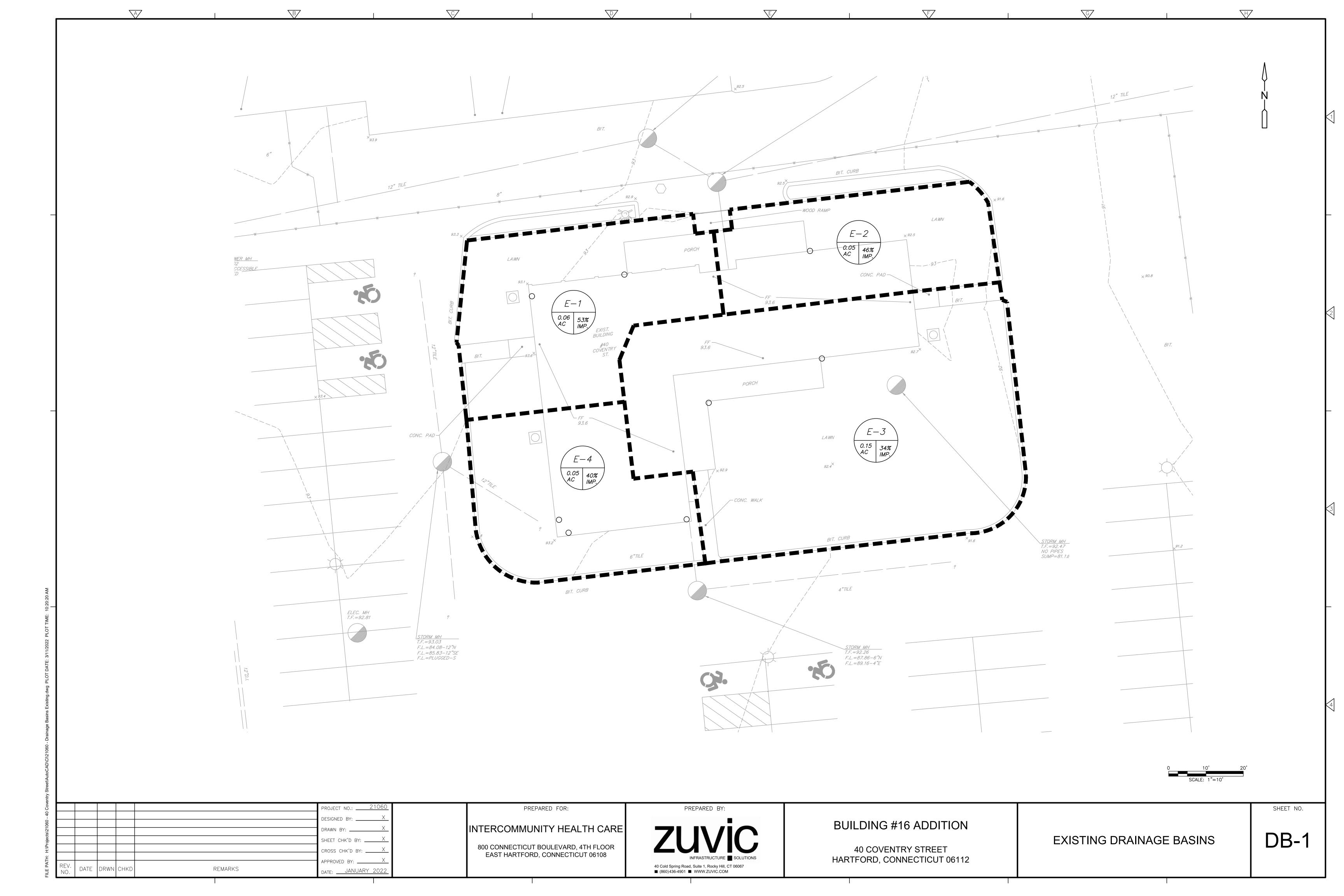
Stormwater runoff will continue to discharge from the site in a similar manner, via sheet flow to the east. As previously described, approximately 580cf of runoff will be captured in the proposed dry wells reducing the peak discharge rates at the start of the storm (when the discharge rates exceed historic levels). Please refer to the WQV outlet calculation worksheet found in the Appendix.

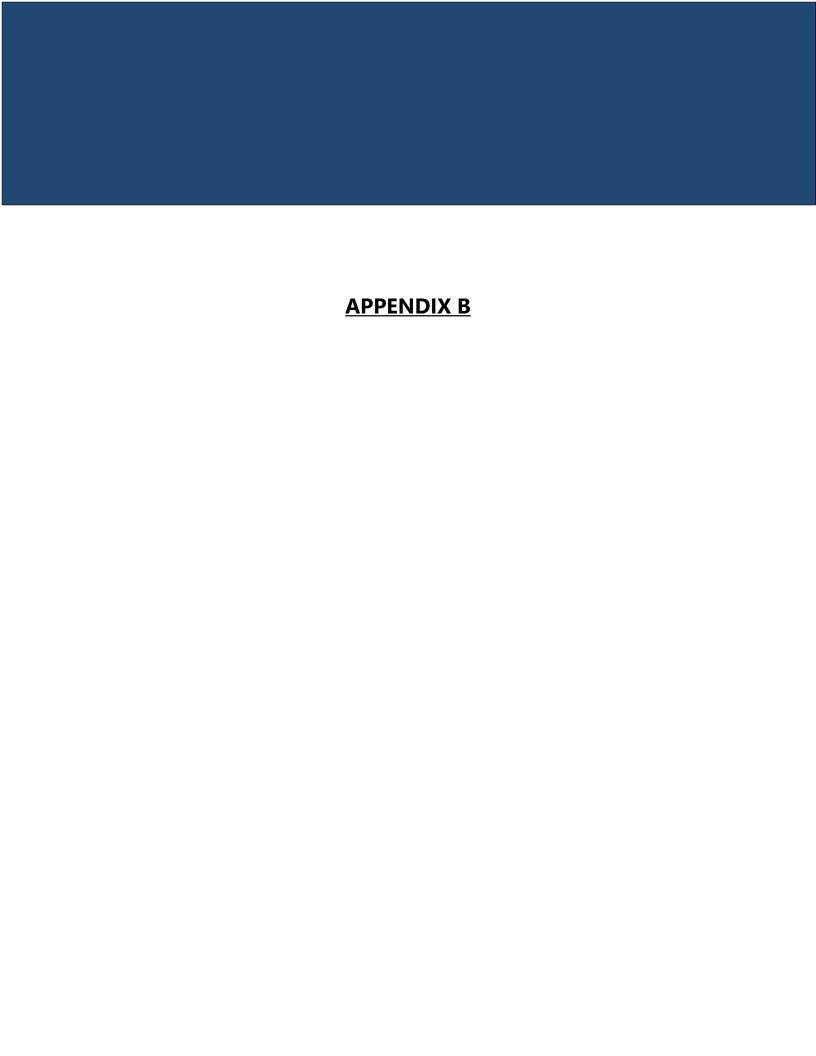
Site Attenuated Flow at assumed East Discharge Point						
	Peak Runoff Rate (cubic feet per second)					
Storm Frequency (years)	2 10 25 50 100					
Existing Conditions	0.8	1.3	1.7	2.1	2.4	
Proposed Conditions	1.0	1.6	2.1	2.6	3.0	
Dry Well Retention Control	0.8 1.3 2.1 2.6 3.0					

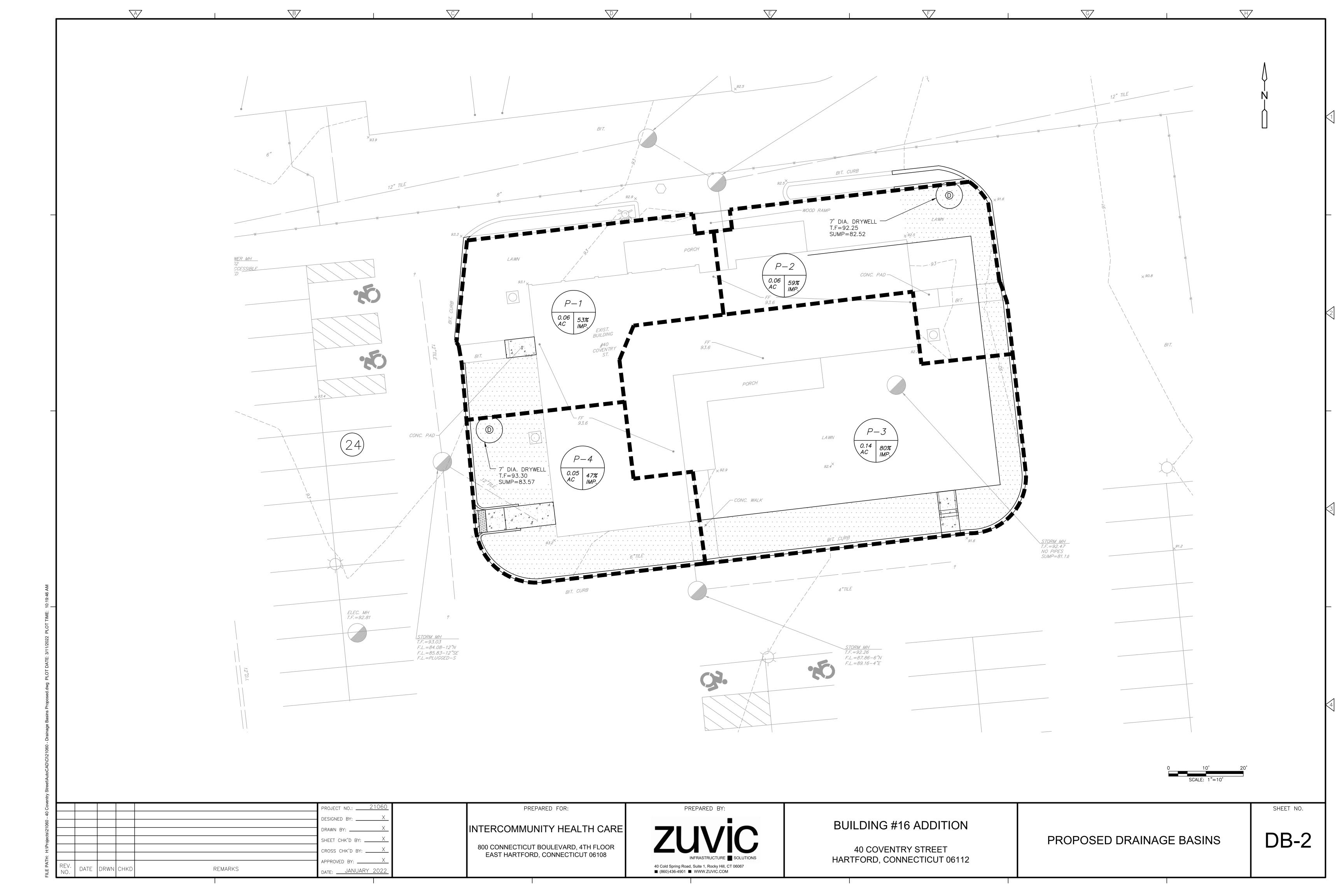
SUMMARY

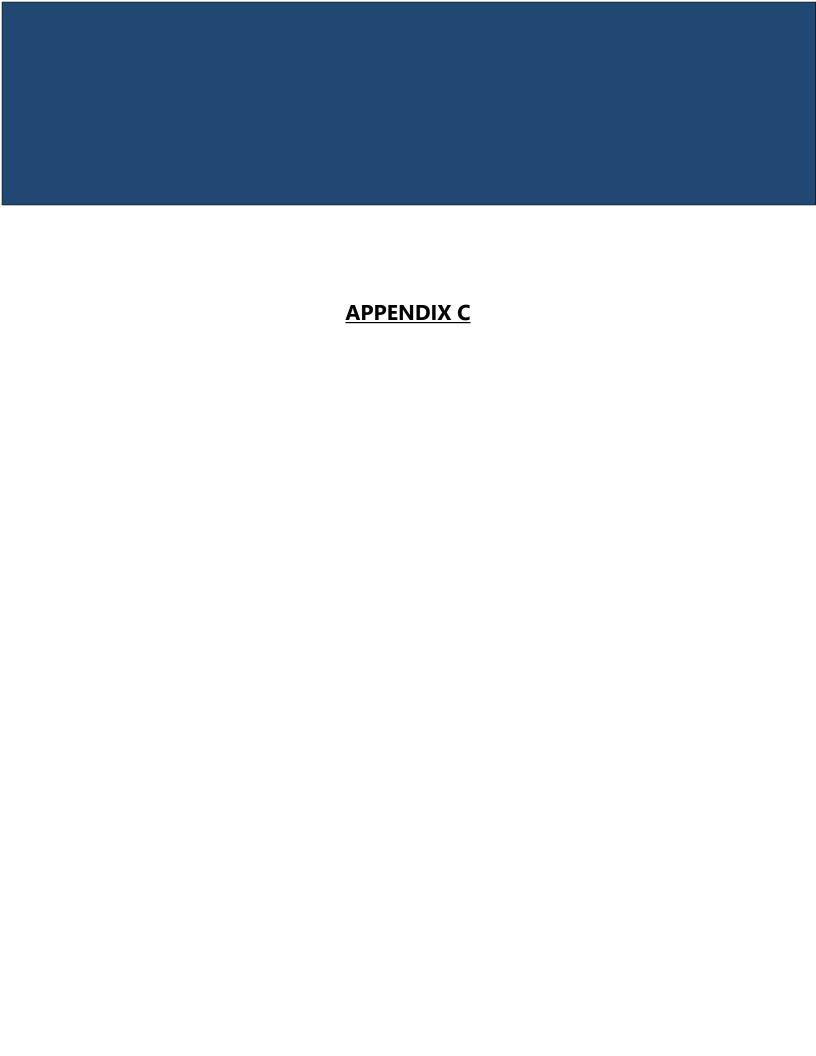
The storm drainage system has been designed to capture and treat half of the runoff from the first flush and, during the minor storm events, maintain historic discharge rates. During major storm events, the capacity of the proposed dry wells will be exceeded, so historic discharge rates will be exceeded.















PROJECT: BUILDING ADDITION 40 COVENTRY STREET PROJECT NO. 21060

COMPUTED BY

COMPUTED BY DATE 10/20/2021 LOCATION: 40 Coventry Street, Hartford, CT CHECKED BY DATE

Existing Drainage Calculations - See ED-1

			Weighted C		l ₂	I ₁₀	I ₂₅	I ₅₀	I ₁₀₀					
		Α	(Rational runoff	Tc	(Rainfall	(Rainfall	(Rainfall	(Rainfall	(Rainfall	Q ₂	Q ₁₀	Q ₂₅	Q ₅₀	Q ₁₀₀
Basin	Total Area (SF)	Total Area (Ac)	coefficient)	(min)	Intensity)	Intensity)	Intensity)	Intensity)	Intensity)	(CFS)	(CFS)	(CFS)	(CFS)	(CFS)
E-1	2761	0.06	0.62	5.00	4.90	7.43	9.00	10.20	11.40	0.2	0.3	0.4	0.5	0.6
E-2	2008	0.05	0.58	5.00	4.90	7.43	9.00	10.20	11.40	0.1	0.2	0.3	0.3	0.4
E-3	6405	0.15	0.51	5.00	4.90	7.43	9.00	10.20	11.40	0.4	0.6	0.7	0.9	1.1
E-4	2313	0.05	0.54	5.00	4.90	7.43	9.00	10.20	11.40	0.1	0.2	0.3	0.4	0.4
Total	13,487.00	0.31	0.55							0.8	1.3	1.7	2.1	2.4

Proposed Drainage Calculations - See PD-1

			Weighted C		l ₂	I ₁₀	l ₂₅	I ₅₀	I ₁₀₀					
		Α	(Rational runoff	Tc	(Rainfall	(Rainfall	(Rainfall	(Rainfall	(Rainfall	Q ₂	Q ₁₀	Q ₂₅	Q50	Q ₁₀₀
Basin	Total Area (SF)	Total Area (Ac)	coefficient)	(min)	Intensity)	Intensity)	Intensity)	Intensity)	Intensity)	(CFS)	(CFS)	(CFS)	(CFS)	(CFS)
P-1	2761	0.06	0.62	5.00	4.90	7.43	9.000	10.200	11.400	0.2	0.3	0.4	0.5	0.6
P-2	2475	0.06	0.65	5.00	4.90	7.43	9.000	10.200	11.400	0.2	0.3	0.4	0.5	0.5
P-3	5934	0.14	0.78	5.00	4.90	7.43	9.000	10.200	11.400	0.5	0.8	1.1	1.3	1.5
P-4	2313	0.05	0.58	5.00	4.90	7.43	9.000	10.200	11.400	0.2	0.2	0.3	0.4	0.4
Total	13,483.00	0.31	0.69							1.0	1.6	2.1	2.6	3.0

Note:

Cf has been applied to less frequent storms as follows:

Reoccurance Interval	Cf
25yr	1.1
50yr	1.2
100yr	1.25



PROJECT		
	DATE	
LOCATION	DATE	

Proposed 1/2" WQV

		Ai	Weighted C			I= (Total			
	Α	Total Impervious	(Rational runoff	1		Impervious/total		WQV (AC-FT) =	
Basin	Total Area (Ac)	Area (Ac)	coefficient)	(Rainfall Intensity)	Q (CFS) = CIA	Area)X 100	R= 0.05+0.009*I	(1/2")(R)(A) / 12	1/2" WQV (CFT)
P-1 THROUGH P-4	0.31	0.20	0.68	4.900	1.031	65.02	0.64	0.01	357
Total	0.31						·		



PROJECT		
	DATE	
LOCATION	DATE	

Storage Volume Calculator

 Drainage Area (Ac)
 0.31
 I

 Runoff Coeff
 0.69
 J

 Max Release Rate (CFS)
 0.83
 Historic Q

А	В	С	D	E	F	G	Н
		2-yr	2yr	Proposed 2yr-24hr			
Duration	Duration	24-hour	24-hour	Avg Runoff Flowrate	Proposed 2yr-24hr Avg	Max Discharge Rate	Required 2yr-24hr
(minutes)	(Hours)	Total Rainfall (in)	Rainfall Intensity (in/hr)	(CFS)	Runoff Volume (CF)	(CFS)	Storage Volume (CF)
5	0.08	0.41	4.90	1.05	316	0.83	192
10	0.17	0.58	3.47	0.75	448	0.83	200
15	0.25	0.68	2.72	0.59	527	0.83	154
30	0.50	0.91	1.83	0.39	709	0.83	(36)
60	1.00	1.15	1.15	0.25	892	0.83	(598)
120	2.00	1.48	0.74	0.16	1,148	0.83	(1,833)
180	3.00	1.71	0.57	0.12	1,326	0.83	(3,145)
360	6.00	2.15	0.36	0.08	1,667	0.83	(7,274)
720	12.00	2.64	0.22	0.05	2,047	0.83	(15,836)
1440	24.00	3.13	0.13	0.03	2,427	0.83	(33,338)
2880	48.00	3.58	0.07	0.02	2,776	0.83	(68,755)

Required 2yr-24hr Detention Storage (CF) 200

- A Duration of the storm event in minutes.
- B Duration of the storm event in hours.
 - Total amount of rainfall during a 100-year recurrence storm event for the given duration in Column A & B (NOAA ATLAS 14 -
- C https://hdsc.nws.noaa.gov/hdsc/pfds/pfds map cont.html).
- D Average rainfall intensity during the 100-year recurrence storm event. Calculated by dividing Column C by Column B
 - The unrestricted 100-year recurrence average discharge flowrate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D), Runoff Coefficient (M) and Drainage Area (L).
- The unrestricted 100-year recurrence discharge volume from the proposed site for the given duration. Calculated by multiplying the Proposed Runoff Flowrate (E) by the Storm
- F Duration (A) and by 60 seconds/minute
- G The maximum allowable discharge from the site is determined from the historic release rate (0).

The required detention storage is determined by multiplying the flowrate differential (Inflow (E) - 0.5*Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The calculated maximum release rate only occurs when the pond is full As the pond dewaters the actual release rate from the pond will decrease from the maximum allowed release rate to 0. Therefore, an average release rate equal to 50% of the maximum rate is used in calculating the required storage volume. Calculated storage volumes will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage

H volume

Ε

- I Area contributing to the proposed detention/ retention facility
- J Weighted Runoff Coefficient based on proposed development conditions



PROJECT DATE

LOCATION DATE

Storage Volume Calculator

 Drainage Area (Ac)
 0.31
 I

 Runoff Coeff
 0.69
 J

 Max Release Rate (CFS)
 1.26
 Historic Q

А	В	С	D	E	F	G	Н
		10-yr	10-yr				
Duration	Duration	24-hour	24-hour	Proposed 10yr-24hr Avg	Proposed 10yr-24hr Avg	Max Discharge Rate	Required 10yr-24hr
(minutes)	(Hours)	Total Rainfall (in)	Rainfall Intensity (in/hr)	Runoff Flowrate (CFS)	Runoff Volume (CF)	(CFS)	Storage Volume (CF)
5	0.08	0.62	7.43	1.60	480	1.26	292
10	0.17	0.88	5.26	1.13	679	1.26	303
15	0.25	1.03	4.12	0.89	799	1.26	234
30	0.50	1.39	2.78	0.60	1,078	1.26	(52)
60	1.00	1.76	1.76	0.38	1,365	1.26	(895)
120	2.00	2.25	1.13	0.24	1,745	1.26	(2,775)
180	3.00	2.59	0.86	0.19	2,008	1.26	(4,771)
360	6.00	3.28	0.55	0.12	2,543	1.26	(11,015)
720	12.00	4.10	0.34	0.07	3,179	1.26	(23,937)
1440	24.00	4.98	0.21	0.04	3,862	1.26	(50,371)
2880	48.00	5.86	0.12	0.03	4,544	1.26	(103,920)

Required 10yr-24hr Detention Storage (CF)

- A Duration of the storm event in minutes.
- B Duration of the storm event in hours.
 - Total amount of rainfall during a 100-year recurrence storm event for the given duration in Column A & B (NOAA ATLAS 14 -
- C https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).
- D Average rainfall intensity during the 100-year recurrence storm event. Calculated by dividing Column C by Column B
 - The unrestricted 100-year recurrence average discharge flowrate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D), Runoff Coefficient (M) and Drainage Area (L).
- E (M) and Drainage Area (L).
- The unrestricted 100-year recurrence discharge volume from the proposed site for the given duration. Calculated by multiplying the Proposed Runoff Flowrate (E) by the Storm
- F Duration (A) and by 60 seconds/minute
- G The maximum allowable discharge from the site is determined from the historic release rate (0).

The required detention storage is determined by multiplying the flowrate differential (Inflow (E) - 0.5 Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The calculated maximum release rate only occurs when the pond is full As the pond dewaters the actual release rate from the pond will decrease from the maximum allowed release rate to 0. Therefore, an average release rate equal to 50% of the maximum rate is used in calculating the required storage volume. Calculated storage volumes will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage

- H volume
- I Area contributing to the proposed detention/ retention facility
- J Weighted Runoff Coefficient based on proposed development conditions

303



PROJECT DATE

LOCATION DATE

Storage Volume Calculator

Drainage Area (Ac) 0.31 Runoff Coeff 0.69 Max Release Rate (CFS) 1.67 Historic Q

A	В	С	D	E	F	G	Н
		25-yr	25-yr				
Duration	Duration	24-hour	24-hour	Proposed 25yr-24hr Avg	Proposed 25yr-24hr Avg	Max Discharge Rate	Required 25yr-24hr
(minutes)	(Hours)	Total Rainfall (in)	Rainfall Intensity (in/hr)	Runoff Flowrate (CFS)	Runoff Volume (CF)	(CFS)	Storage Volume (CF)
5	0.08	0.75	9.00	1.94	582	1.67	331
10	0.17	1.06	6.36	1.37	822	1.67	320
15	0.25	1.25	5.00	1.08	969	1.67	217
30	0.50	1.69	3.38	0.73	1,310	1.67	(195)
60	1.00	2.14	2.14	0.46	1,659	1.67	(1,351)
120	2.00	2.73	1.37	0.29	2,117	1.67	(3,905)
180	3.00	3.14	1.05	0.23	2,435	1.67	(6,598)
360	6.00	3.98	0.66	0.14	3,086	1.67	(14,979)
720	12.00	5.01	0.42	0.09	3,885	1.67	(32,246)
1440	24.00	6.14	0.26	0.06	4,761	1.67	(67,500)
2880	48.00	7.29	0.15	0.03	5,653	1.67	(138,869)

Required 25yr-24hr Detention Storage (CF)

- Α Duration of the storm event in minutes.
- В Duration of the storm event in hours.
 - Total amount of rainfall during a 100-year recurrence storm event for the given duration in Column A & B (NOAA ATLAS 14 -
- С https://hdsc.nws.noaa.gov/hdsc/pfds/pfds map cont.html).
- D Average rainfall intensity during the 100-year recurrence storm event. Calculated by dividing Column C by Column B
 - The unrestricted 100-year recurrence average discharge flowrate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D), Runoff Coefficient (M) and Drainage Area (L).
- The unrestricted 100-year recurrence discharge volume from the proposed site for the given duration. Calculated by multiplying the Proposed Runoff Flowrate (E) by the Storm
- Duration (A) and by 60 seconds/minute
- The maximum allowable discharge from the site is determined from the historic release rate (O).

The required detention storage is determined by multiplying the flowrate differential (Inflow (E) - 0.5*Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The calculated maximum release rate only occurs when the pond is full As the pond dewaters the actual release rate from the pond will decrease from the maximum allowed release rate to 0. Therefore ,an average release rate equal to 50% of the maximum rate is used in calculating the required storage volume. Calculated storage volumes will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage

н

Ε

- Area contributing to the proposed detention/ retention facility
- Weighted Runoff Coefficient based on proposed development conditions

331



PROJECT DATE

LOCATION DATE

Storage Volume Calculator

Drainage Area (Ac) 0.31 Runoff Coeff 0.69 Max Release Rate (CFS) 2.07 Historic Q

Α	В	С	D	E	F	G	Н
		50-yr	50-yr				
Duration	Duration	24-hour	24-hour	Proposed 50yr-24hr Avg	Proposed 50yr-24hr Avg	Max Discharge Rate	Required 50yr-24hr
(minutes)	(Hours)	Total Rainfall (in)	Rainfall Intensity (in/hr)	Runoff Flowrate (CFS)	Runoff Volume (CF)	(CFS)	Storage Volume (CF)
5	0.08	0.85	10.19	2.19	658	2.07	348
10	0.17	1.20	7.20	1.55	931	2.07	310
15	0.25	1.42	5.68	1.22	1,101	2.07	170
30	0.50	1.92	3.84	0.83	1,489	2.07	(372)
60	1.00	2.42	2.42	0.52	1,877	2.07	(1,846)
120	2.00	3.09	1.55	0.33	2,396	2.07	(5,049)
180	3.00	3.55	1.18	0.25	2,753	2.07	(8,415)
360	6.00	4.51	0.75	0.16	3,497	2.07	(18,838)
720	12.00	5.69	0.47	0.10	4,412	2.07	(40,258)
1440	24.00	6.99	0.29	0.06	5,420	2.07	(83,920)
2880	48.00	8.32	0.17	0.04	6,452	2.07	(172,230)

Required 50yr-24hr Detention Storage (CF)

348

- Α Duration of the storm event in minutes.
- Duration of the storm event in hours.
 - Total amount of rainfall during a 100-year recurrence storm event for the given duration in Column A & B (NOAA ATLAS 14 -
- С https://hdsc.nws.noaa.gov/hdsc/pfds/pfds map cont.html).
- D Average rainfall intensity during the 100-year recurrence storm event. Calculated by dividing Column C by Column B
 - The unrestricted 100-year recurrence average discharge flowrate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D), Runoff Coefficient (M) and Drainage Area (L).
- Ε
- The unrestricted 100-year recurrence discharge volume from the proposed site for the given duration. Calculated by multiplying the Proposed Runoff Flowrate (E) by the Storm
- Duration (A) and by 60 seconds/minute
- The maximum allowable discharge from the site is determined from the historic release rate (O).

The required detention storage is determined by multiplying the flowrate differential (Inflow (E) - 0.5*Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The calculated maximum release rate only occurs when the pond is full As the pond dewaters the actual release rate from the pond will decrease from the maximum allowed release rate to 0. Therefore ,an average release rate equal to 50% of the maximum rate is used in calculating the required storage volume. Calculated storage volumes will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage

- н
- Area contributing to the proposed detention/ retention facility
- Weighted Runoff Coefficient based on proposed development conditions



PROJECT		
	DATE	
LOCATION	DATE	

Storage Volume Calculator

 Drainage Area (Ac)
 0.31
 I

 Runoff Coeff
 0.69
 J

 Max Release Rate (CFS)
 2.41
 Historic Q

A	В	С	D	E	F	G	Н
		100-yr	100-yr	Proposed 100yr-24hr			
Duration	Duration	24-hour	24-hour	Avg Runoff Flowrate	Proposed 100yr-24hr	Max Discharge Rate	Required 100yr-24hr
(minutes)	(Hours)	Total Rainfall (in)	Rainfall Intensity (in/hr)	(CFS)	Avg Runoff Volume (CF)	(CFS)	Storage Volume (CF)
5	0.08	0.953	11.5	2.48	743	2.41	382
10	0.17	1.35	8.16	1.76	1,055	2.41	332
15	0.25	1.59	6.4	1.38	1,241	2.41	157
30	0.50	2.16	4.34	0.93	1,683	2.41	(484)
60	1.00	2.72	2.74	0.59	2,125	2.41	(2,209)
120	2.00	3.47	1.74	0.37	2,698	2.41	(5,969)
180	3.00	3.99	1.34	0.29	3,117	2.41	(9,884)
360	6.00	5.07	0.88	0.19	4,094	2.41	(21,909)
720	12.00	6.42	0.572	0.12	5,323	2.41	(46,683)
1440	24.00	7.93	0.362	0.08	6,737	2.41	(97,275)
2880	48.00	9.48	0.216	0.05	8,040	2.41	(199,984)

Required 100yr-24hr Detention Storage (CF)

382

- A Duration of the storm event in minutes.
- B Duration of the storm event in hours.
 - Total amount of rainfall during a 100-year recurrence storm event for the given duration in Column A & B (NOAA ATLAS 14 -
- C https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html).
- D Average rainfall intensity during the 100-year recurrence storm event. Calculated by dividing Column C by Column B
 - The unrestricted 100-year recurrence average discharge flowrate from the proposed site under fully developed conditions. Calculated by multiplying Intensity (D), Runoff Coefficient (M) and Drainage Area (L).
- E (M) and Drainage Area (L).
- The unrestricted 100-year recurrence discharge volume from the proposed site for the given duration. Calculated by multiplying the Proposed Runoff Flowrate (E) by the Storm
- F Duration (A) and by 60 seconds/minute
- G The maximum allowable discharge from the site is determined from the historic release rate (0) .

The required detention storage is determined by multiplying the flowrate differential (Inflow (E) - 0.5*Outflow (G), by the corresponding duration (A) and by 60 seconds/minute. The calculated maximum release rate only occurs when the pond is full As the pond dewaters the actual release rate from the pond will decrease from the maximum allowed release rate to 0. Therefore, an average release rate equal to 50% of the maximum rate is used in calculating the required storage volume. Calculated storage volumes will vary based on rainfall intensity, the size of the drainage area, and the allowable discharge. The maximum volume of storage for the various storm durations will be the required detention storage

- H volume
- I Area contributing to the proposed detention/ retention facility
- J Weighted Runoff Coefficient based on proposed development conditions