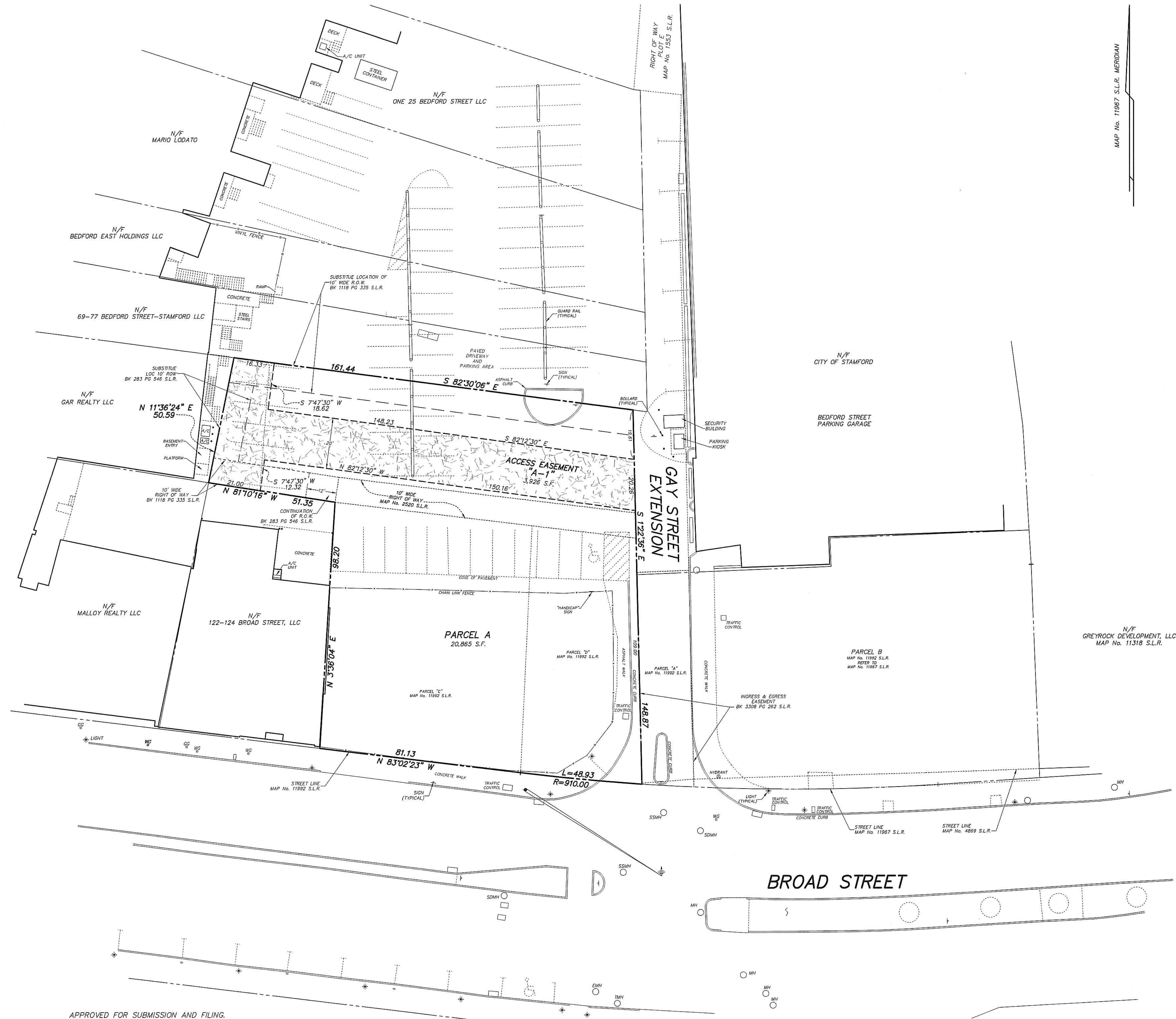


LOCATION MAP - 1" = 600'±



REFER TO A MAP ENTITLED "PROPERTY SURVEY PREPARED FOR BROADGAY L.L.C. STAMFORD, CT." PREPARED BY REDNISS & MEAD AND DATED FEBRUARY 24, 1995.

THIS MAP IS AN EASEMENT MAP INTENDED TO DESCRIBE ACCESS EASEMENT "A-1" AS DEPICTED HEREON. BOUNDARY INFORMATION IS BASED ON A RESURVEY CONDUCTED IN ACCORDANCE WITH HORIZONTAL ACCURACY CLASS "1-2" AS DEFINED IN THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20.

NEW MONUMENTATION HAS NOT BEEN SET AS A RESULT OF THIS SURVEY.

ONLY COPIES OF THIS MAP, BEARING AN ORIGINAL IMPRINT OF THE SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.

REFER TO VOLUME 13022 PAGE 140 AND MAPS No. 11192 & 11967 S.L.R. LAND LIES IN "C-G" ZONING DISTRICT

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

D'ANDREA SURVEYING & ENGINEERING, P.C.

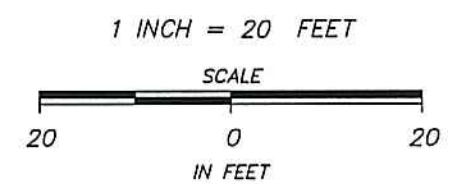
ROBERT L. LIDDEL JR., CT LS No. 15775 SURVEYOR RIVERSIDE, CONNECTICUT OCTOBER 28, 2022

APPROVED FOR SUBMISSION AND FILING.

ON _____ BY _____ OWNER OR AGENT

APPROVED BY THE STAMFORD PLANNING BOARD, FOR FILING PURPOSES. (NOT A SUBDIVISION PURSUANT TO CGS 8-18)

ON _____ BY _____ CHAIR OR SECRETARY



EASEMENT MAP
DEPICTING
ACCESS EASEMENT
LOCATED AT
BROAD STREET
AND
GAY STREET EXTENSION
IN
STAMFORD, CONNECTICUT
PREPARED FOR
TR BROAD II LLC

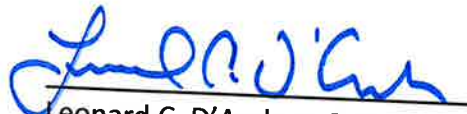
STORMWATER MANAGEMENT REPORT

For

Mixed Use Development
128 Broad Street
Stamford, Connecticut

Prepared For
TR Broad II, LLC

October 28, 2022



Leonard C. D'Andrea, P.E.

CT License No. 14869

21UT_DSR_01

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| Summary of Compliance with Standards 2, 3, and 4 | 6 |
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Exhibits

| | |
|-------------------------------------|-----------|
| Watershed Map – Existing Conditions | Exhibit A |
| Watershed Map – Proposed Conditions | Exhibit B |
| USDA Soil Delineation Map | Exhibit C |
| Site Vicinity Map | Exhibit D |
| FEMA FIRM Map | Exhibit E |
| NOAA Atlas 14 Precipitation Tables | Exhibit F |

Appendices

| | |
|---|------------|
| 1970 Aerial Photo | Appendix A |
| 1985 Aerial Photo | Appendix B |
| City of Stamford Storm Sewer Maps | Appendix C |
| WQV & Drawdown Calculations | Appendix D |
| DCIA Tracking Worksheet | Appendix E |
| Boring and Test Pit Data | Appendix F |
| Existing Storm Drain Conveyance System Capacity | Appendix G |
| Conveyance Computations | Appendix H |
| Stage Area Storage Tables | Appendix I |
| HydroCAD Summary – Peak Flows and Volumes | Appendix J |
| HydroCAD Analysis – Existing Conditions | Appendix K |
| HydroCAD Analysis – Proposed Conditions | Appendix L |

Project Summary

TR Broad II LLC, owners of property at #128 & #136 Broad Street in Stamford, Connecticut, are proposing to construct a thirteen-story mixed use building on the subject parcels. The parcels are located on the north side of Broad Street, approximately 350 feet east of the intersection with Bedford Street. The total combined area of the parcels is approximately 35,659 square feet, located in the C-G Zoning District. According to FEMA FIRM Map No. 09001C0516G, (revised July 8, 2013), the parcels do not lie within any Flood Hazard Zones. Refer to Exhibit "E" for a copy of the FEMA FIRM Map.

Parcel A (128 Broad Street) encompasses 20,865 square feet and is located to the west of Gay Street Extension. Currently, the southern portion of the parcel supports a lawn with an asphalt sidewalk along the eastern property line. The northern portion of the parcel supports a portion of the municipal parking lot between the Bedford Street Parking Garage and the buildings fronting Bedford Street. Under existing conditions, the total impervious coverage on Parcel A is approximately 13,000 square feet or 62% of the lot area. Historically, the parcel supported a commercial building with asphalt parking lot. The commercial building and a portion of the parking lot was previously removed circa 1996. Refer to Appendix "B" for an aerial photo of the subject parcel from 1985 depicting the previously removed commercial building.

Parcel B (136 Broad Street) encompasses 14,794 square feet and is located to the south of the Bedford Street Parking Garage. Currently, the parcel supports Gay Street Extension and a concrete sidewalk along the western property line. The remainder of the site supports a manicured lawn with ornamental trees. The total impervious coverage on Parcel B is approximately 2,800 square feet or 19% of the lot area. Historically, the parcel supported a parking lot prior to the construction of the Bedford Street Parking Garage. Refer to Appendix "A" for an aerial photo of the subject parcel from 1970 depicting the parking lot.

The proposed development will include the construction of a thirteen-story mixed use building, spanning over Gay Street Extension, which contains 196 residential units and approximately 4,284 square feet of retail space along the Broad Street frontage. An elevated garage structure will be constructed above both parcels, providing 156 parking spaces. An additional 17 parking spaces will be provided within the surface lot behind the first floor of the proposed building. Other improvements will include the construction of new concrete sidewalks and curbing along Broad Street and Gay Street Extension, installation of new storm drain conveyance systems and various underground utilities.

For a depiction of existing conditions and the proposed development, refer to a plan set prepared by D'Andrea Surveying & Engineering, PC entitled "Final Site Plan Review Set, Location 128 Broad Street Stamford, Connecticut, Prepared for TR Broad II, LLC", Sheets 1 through 6 of 6.

This report will summarize the effect of the proposed development on the surrounding watershed and downstream locations, and outline the proposed stormwater management plan designed to facilitate the proposed improvements.

Watershed Analysis

Drainage patterns for the site were analyzed using HydroCAD version 10, with runoff data generated for the 1, 2, 5, 10, 25, 50 and 100-year storm events.

In this analysis, three (3) "Points of Concern" were identified. Referring to the watershed maps in Exhibits A & B, the points of concern (POC) are designated as various drainage structures within Broad Street and Gay Street Extension.

According to the USDA soil delineation map presented in Exhibit C, the parcel lies within mapped area of Urban Land (HSG-D).

Existing Conditions

The subject parcels are part of a larger watershed, encompassing approximately 4.4 acres, tributary to the storm drainage systems within Broad Street. The watershed extends from Broad Street, north to Forest Street, and from Bedford Street, east to the Bedford Street Parking Garage (refer to Exhibit A). The above-mentioned watershed was delineated into four drainage basins under existing conditions.

Drainage Basin Ex. Area #2 encompasses the northern portion of Parcel A and Gay Street Extension, the municipal parking lot to the north of Parcel A and most buildings fronting Bedford Street from Broad Street to Forest Street. This drainage basin was delineated based on field observations, as the roof downspouts from the buildings fronting Bedford Street were observed discharging stormwater runoff at grade onto the municipal lot to the north of Parcel A. Stormwater runoff from the municipal lot to the north of Parcel A is collected by a series of catch basins and trench drains, directing all flow into an existing manhole (Ex. SDMH#1) at the southwest corner of the Bedford Street Parking Garage (POC A). Existing SDMH#1 also accepts flow from drains within the Bedford Street Parking Garage (Drainage Basin Ex. Area #3). Flows exiting SDMH#1 are routed through a 24-inch RCP sloped at 0.49% to the existing storm drain manhole at the intersection of Gay Street and Broad Street (Ex SDMH #2). Based on our analysis, the 24-inch RCP has adequate capacity to convey tributary flows up to the 5-year storm event.

Drainage basin Ex. Area #1 encompasses the southern portion of Parcel A and Gay Street Extension. Runoff from this drainage basin sheet flows to the south into the northern

gutter line of Broad Street, is collected by two existing catch basins and piped to a manhole located at the intersection of Broad Street and Gay Street Extension (Ex. SDMH#2). Flows exiting SDMH#2 are routed through a 18-inch RCP sloped at 3.9% to the existing 24" RCP storm drain within the center of Broad Street (POC B). Based on our analysis, the 18-inch RCP has adequate capacity to convey tributary flows up to the 10-year storm event.

Ultimately, all runoff from Ex. Area#1, Ex. Area #2 and Ex. Area #3 is tributary to the existing 24" RCP storm drain within Broad Street (POC B). The 24" RCP directs flows east within Broad Street and south on Greyrock Place. Based on City of Stamford Engineering Bureau records, the storm drain conveyance system within Broad Street, including the 24-inch RCP, was constructed in 1972 (Refer to Appendix "C"). Based on the records, this 24-inch RCP has a slope of 0.84% and an approximate capacity of 20.8 CFS. Based on our analysis, the 24-inch RCP does not have adequate capacity to convey tributary flows under existing conditions.

Runoff from Ex. Area #4, which encompasses the manicured lawn on Parcel B, sheet flows to the northeast and is collected by a catch basin in the northeast corner of Parcel B. Runoff entering the catch basin is piped to the south to a manhole located at the southeast corner of Parcel B (POC C). Ultimately, all runoff to POC C is tributary to an 18-inch RCP within the northern sidewalk of Broad Street, which directs flows east within Broad Street and north on Greyrock Place. Based on City of Stamford Engineering Bureau records, the 18-inch RCP was constructed in 1960 (Refer to Appendix "C") and later modified in 1972 during the above-mentioned storm drain improvements. The 18-inch RCP has a slope of 0.4% and an approximate capacity of 6.7 CFS.

Base on our analysis, the existing storm drains conveying flows from POC A to POC B are undersized. Therefore, the municipal parking lot behind Parcel A will pond during large storm events. The extend of the ponding has been modeled in the HydroCAD analysis. During extreme rainfall events (50 or 100 year storms), the water surface elevation may overtop the concrete curb on the western face of the Bedford Street Parking Garage, resulting in stormwater flooding the lower level of the garage.

Refer to the Exhibit "A" for a depiction of existing conditions. Refer to Appendix "J" for a summary of existing conditions peaks flows to each Point of Concern. Refer to Appendix "K" for the existing conditions HydroCAD watershed analysis model.

Proposed Conditions

The proposed development will increase the total onsite impervious coverage, resulting in each parcel having almost 100% of each lot area covered by the proposed building or hardscape. The increase in impervious coverage thereby increases the volume and peak rate of runoff generated during a storm event as compared to existing conditions. However, since Parcel A and Parcel B were historically developed with 100% impervious coverage as previously discussed, the proposed development will result in a net zero increase in volume and peak rates

of runoff as compared to historical conditions. This report compares volume and peak rates of runoff from existing conditions to the proposed development.

Five drainage basins were delineated under proposed conditions. The drainage management plan developed for the proposed development involves the construction of a storm drain conveyance system to collect and route runoff to the existing storm drainage system within Broad Street. Refer to Exhibit "B" and Sheet 2 of 6 in the site plan set for a depiction of proposed conditions.

Stormwater runoff from drainage basin Pr. Area #1, which encompass hardscapes to the south of the proposed building, will be collected by the existing catch basins within Broad Street and piped to POC B. Stormwater runoff from drainage basins Pr. Area #2 and Pr. Area #3, which encompasses offsite properties to the north of the subject property and the Bedford Street Parking Garage, will be collected and piped to a manhole at the southwest corner of the Bedford Street Parking Garage. Flows exiting the manhole will be piped south through Gay Street Extension, into the existing 24" RCP within Broad Street (POC B).

Stormwater runoff from drainage basin Pr. Area #4, which encompasses the new building, will be collected and piped to Retention System #1. Retention System #1 was sized to retain and infiltrate the Water Quality Volume for the parcel. Should the system reach capacity, additional flows will be piped to the proposed twin 18" PVC storm drain within Gay Street Extension. Stormwater runoff from drainage basin Pr. Area #5, which encompasses areas to the northeast and east of the proposed building, will be collected and piped to POC C.

Refer to the Exhibit "B" for a depiction of proposed conditions. Refer to Appendix "J" for a summary of proposed conditions peaks flows to each Point of Concern. Refer to Appendix "L" for the proposed conditions HydroCAD watershed analysis model.

During the construction phase of the project, pretreatment of stormwater runoff will be provided by the use of temporary soil and erosion controls as outlined on the "Sediment and Erosion Control Plan," prepared by D'Andrea Surveying & Engineering, PC. This includes the installation of silt fence, sit sacks and periodic on-site inspections to ensure that the development of the site remains "tight" and stable throughout the construction phase.

Summary of Compliance with Standard 1

The proposed retention system has been sized to retain and infiltrate the Water Quality Volume of the parcel.

Summary of Compliance with Standards 2, 3, and 4

All standards have been achieved to the maximum extend allowable based on onsite soil conditions and limitations of the proposed development and existing infrastructure.

Conclusion

Based on our analysis of the aforementioned watershed, the proposed development will result in a decrease in peak flows to POC B for the 1, 2, 5-, 10-, 25- and 50-year design storms. The proposed development will also result in a decrease in peak flows to POC C for the 1- and 2-year design storms. There will be an increase in peak flows to POC C during the 5, 10, 25, 50 and 100-year design storm due to the proposed 8" PVC that will convey flows from Pr. SDMH #1 to JB #3. The 8" PVC is intended to redirect flow tributary the 24" RCP system within Broad Street, helping to decrease the hydraulic grade line within the proposed twin 18" PVC pipes within Gay Street and the ponding level in the municipal parking lot behind the proposed development.

The increase in peak flows to POC C was directed to the existing 18-inch RCP within Broad Street. The 18-inch RCP conveys flows 250 feet east on Broad Street and 525 feet north on Greyrock Place. The 18-inch RCP within Greyrock Place ultimately discharges into a 60" RCP within Forest Street.

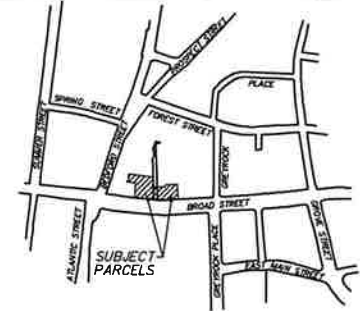
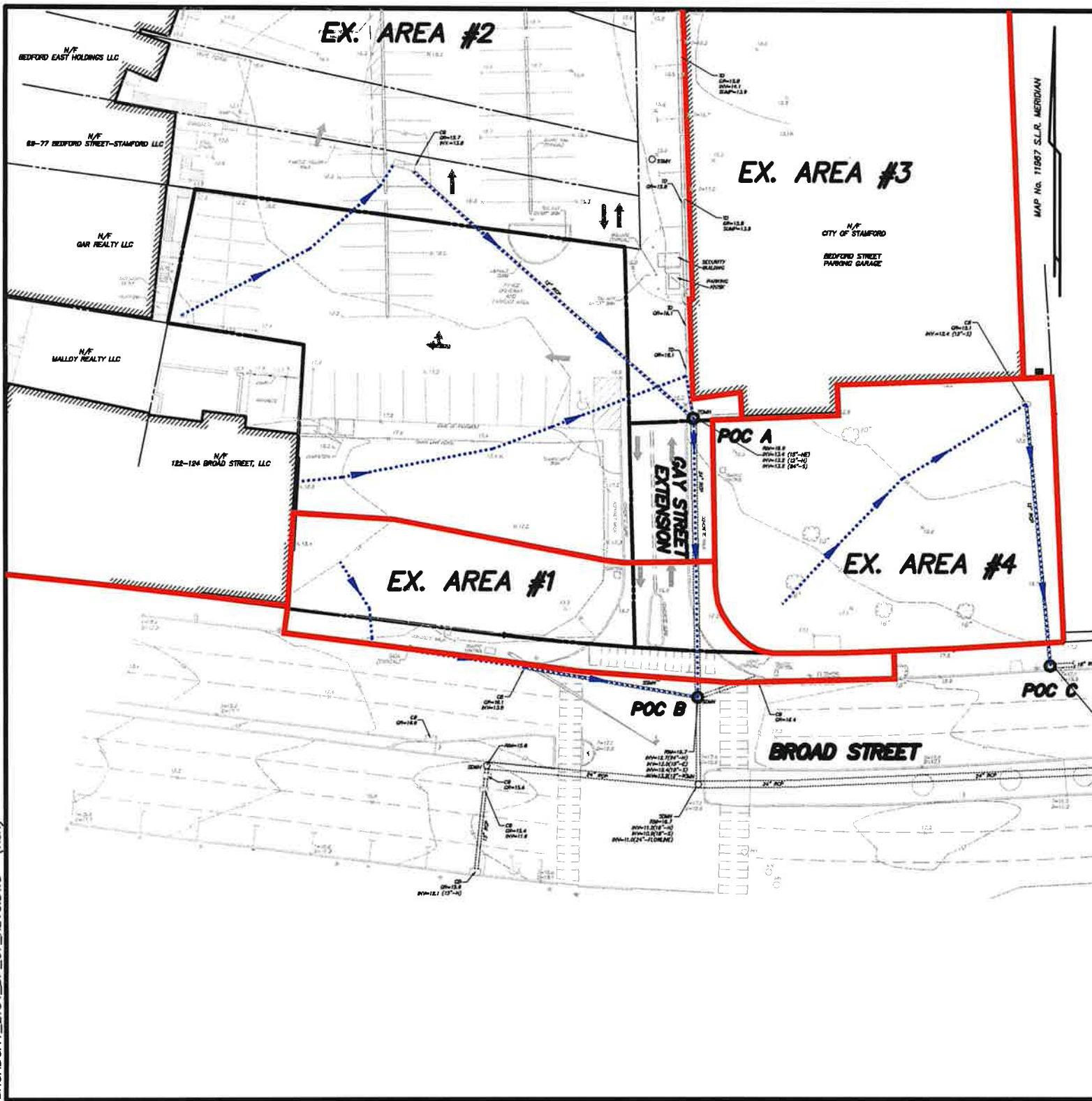
The alternative would be to direct the increase in peak flows into the existing 24-inch RCP within Broad Street, which is currently undersized. The 24" RCP conveys flows 380 feet east on Broad Street and 1,375 feet south on Greyrock Place, where it discharges into a 84" RCP in the intersection of Tresser Boulevard and Greyrock Place.

The proposed design will maintain or reduce the water surface elevation of the ponded water in the municipal parking lot behind the proposed development for all storms excluding the 100-year storm event. The proposed design will also reduce the volume of water tributary to the Bedford Street Parking Garage for the 25- and 50-year design storms.

Based on the above information, the proposed improvements are designed in accordance with the City of Stamford Stormwater Drainage Manual and will not adversely impact adjacent or downstream properties or City-owned drainage facilities.

**Exhibit A:
Existing Conditions
Watershed Map**

BROADGAY_21UT_DP_07_REVO.DWG (R.UN)



LOCATION MAP

NOTES:

1. Refer to a plan entitled "Mixed Use Development, TR Broad II LLC, 128 Broad Street Stamford, Connecticut, Grading Plan, Sheet 1 of 6," as prepared by D'Andrea Surveying & Engineering, PC.
2. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD 88).

EXISTING WATERSHED MAP

PREPARED FOR

TR BROAD II, LLC

LOCATION

**128-136 BROAD STREET
STAMFORD, CONNECTICUT**

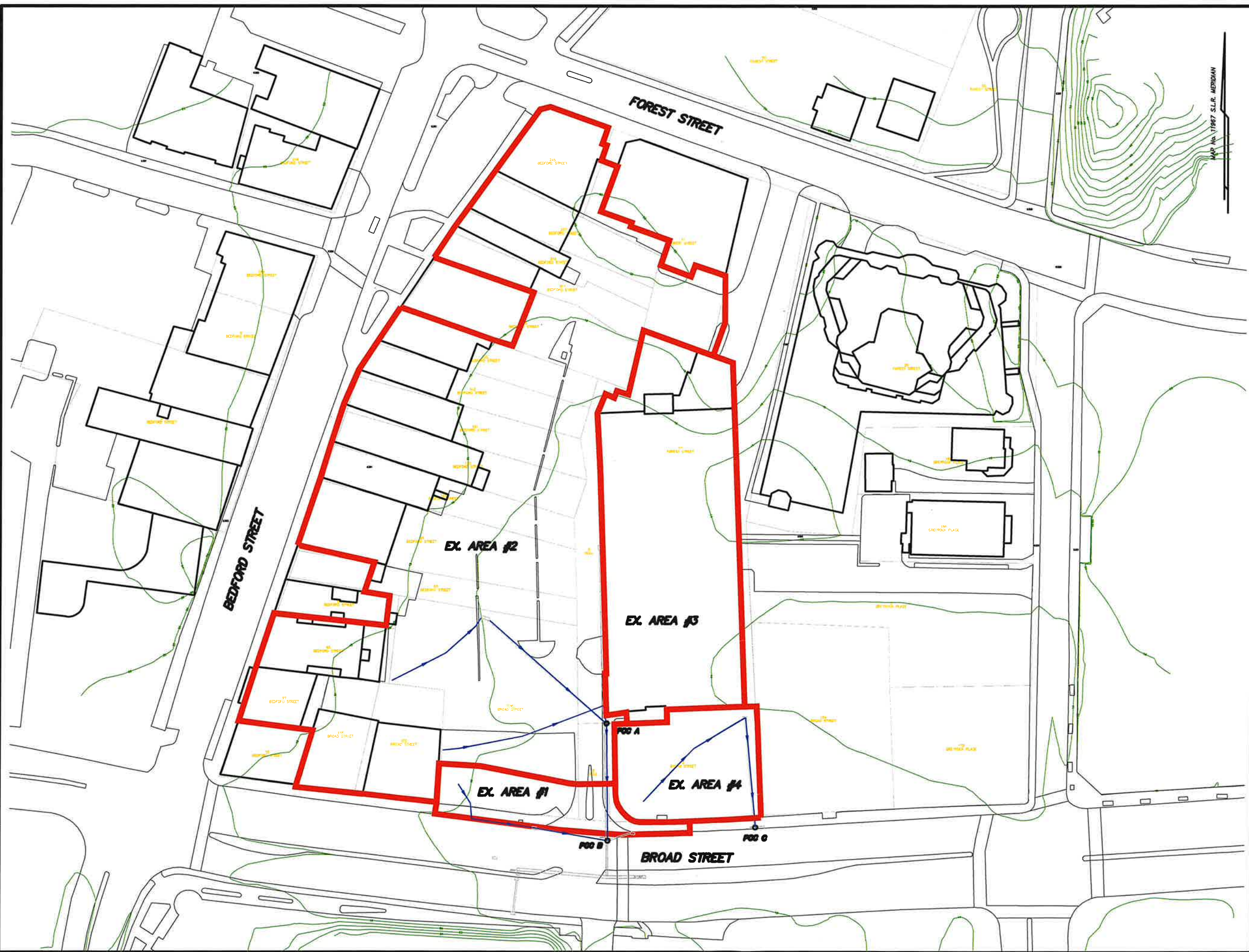
D'ANDREA SURVEYING & ENGINEERING, PC

DATE:
10-3-22

SHEET No.
EXH-A

SCALE:
1"=50'

BROADGAY_21UT_DSR.DWG (RAN)



MAP No. 17967 S.L.R. MERIDIAN



LOCATION MAP

NOTES:

1. Refer to a plan entitled "Mixed Use Development, TR Broad II LLC, 128 Broad Street Stamford, Connecticut, Grading Plan, Sheet 1 of 6," as prepared by D'Andrea Surveying & Engineering, PC.
2. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD 88).

EXISTING WATERSHED MAP

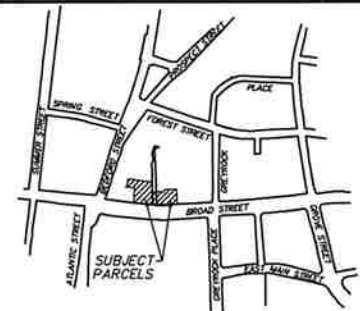
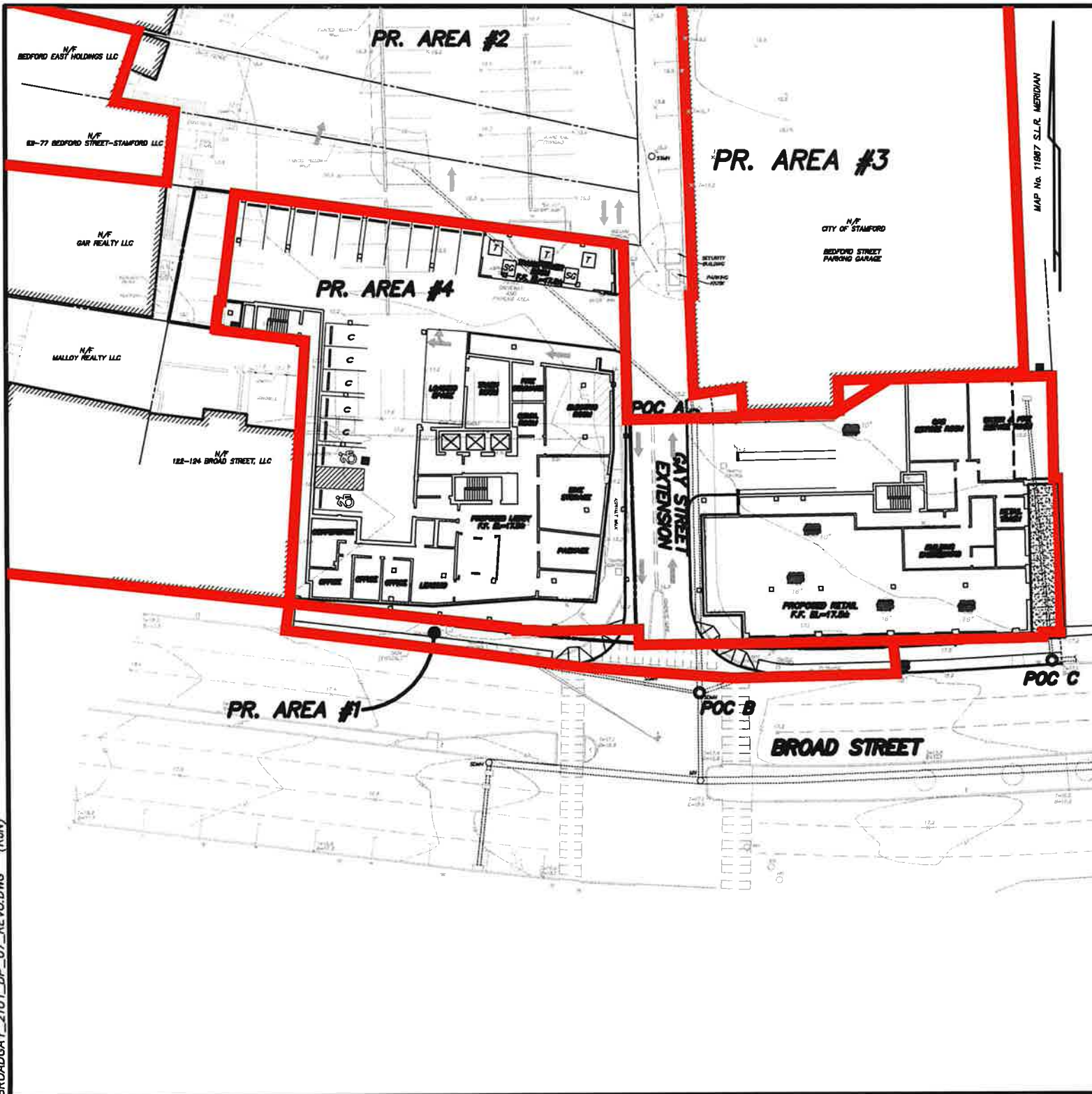
PREPARED FOR
TR BROAD II, LLC

LOCATION
**128-136 BROAD STREET
STAMFORD, CONNECTICUT**

D'ANDREA SURVEYING & ENGINEERING, PC

| | |
|------------------|---------------------------|
| DATE: 10-3-22 | SHEET No. EXH-A |
| SCALE: 1"=80' | |

**Exhibit B:
Proposed Conditions
Watershed Map**



LOCATION MAP

NOTES:

1. Refer to a plan entitled "Mixed Use Development, TR Broad II LLC, 128 Broad Street Stamford, Connecticut, Grading Plan, Sheet 1 of 6," as prepared by D'Andrea Surveying & Engineering, PC.
2. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD 88).

PROPOSED WATERSHED MAP

PREPARED FOR

TR BROAD II, LLC

LOCATION

128-136 BROAD STREET STAMFORD, CONNECTICUT

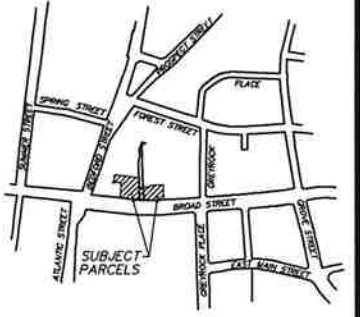
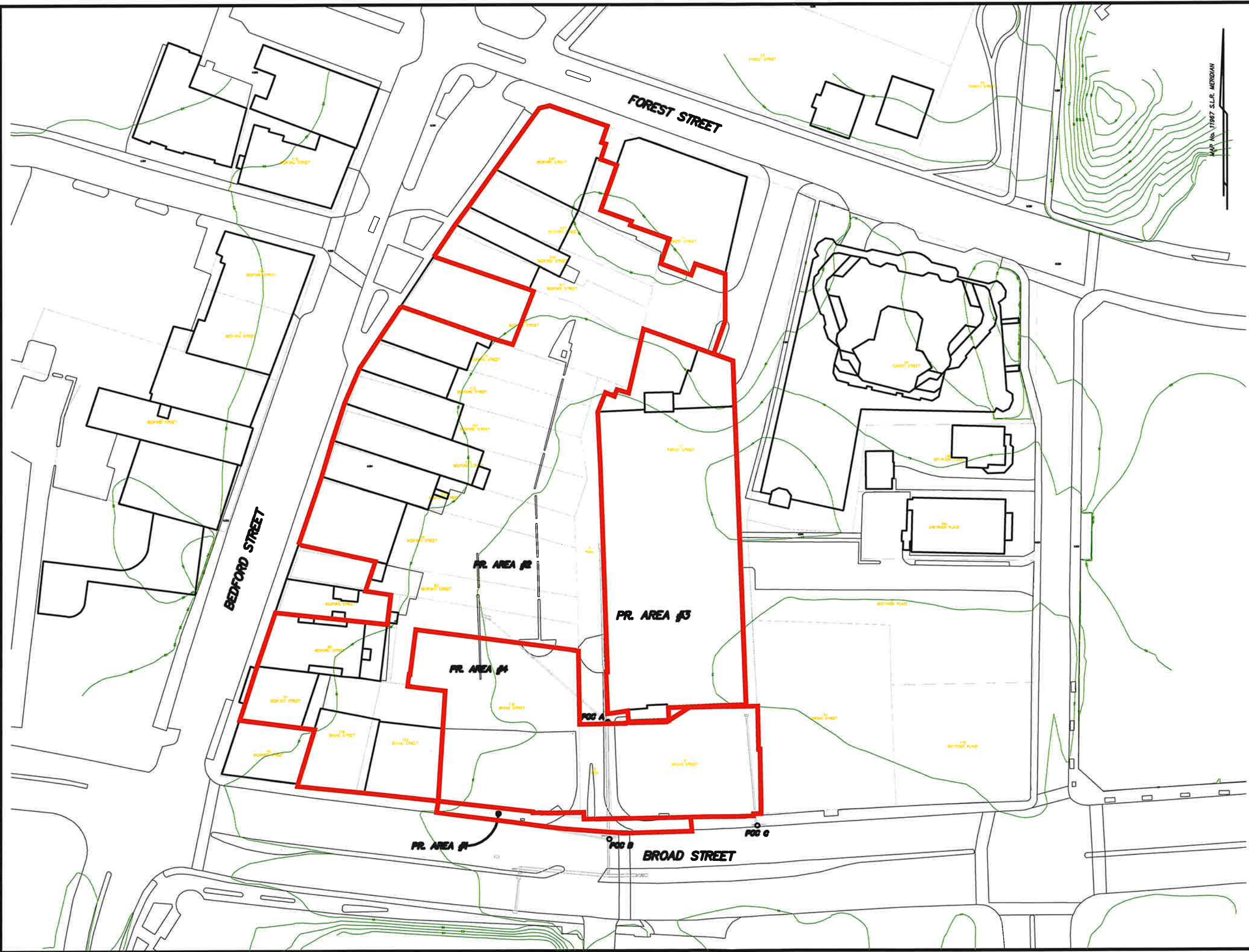
D'ANDREA SURVEYING & ENGINEERING, PC

DATE:
10-3-22

SHEET No.
EXH-B

SCALE:
1"=50'

BROADGAY_21UT_DSR.DWG (R.M)



LOCATION MAP

NOTES:

1. Refer to a plan entitled "Mixed Use Development, TR Broad II LLC, 128 Broad Street Stamford, Connecticut, Grading Plan, Sheet 1 of 6," as prepared by D'Andrea Surveying & Engineering, PC.
2. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD 88).

PROPOSED WATERSHED MAP

PREPARED FOR
TR BROAD II, LLC

LOCATION
**128-136 BROAD STREET
STAMFORD, CONNECTICUT**

D'ANDREA SURVEYING & ENGINEERING, PC

DATE:
10-3-22
SCALE:
1"=80'

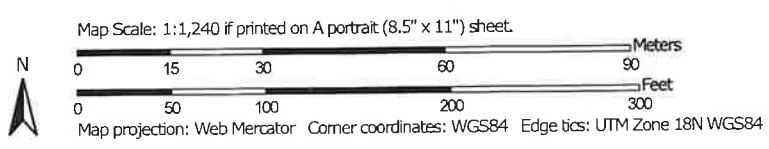
SHEET No.
EXH-B

**Exhibit C:
USDA Soil Delineation Map**

Hydrologic Soil Group—State of Connecticut
(128-136 Broad Street)




Soil Map may not be valid at this scale.











MAP LEGEND

Area of Interest (AOI)







 Area of Interest (AOI)

Soils

Soil Rating Polygons





 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Lines

 A
 A/D
 B
 B/D
 C
 C/D
 D
 Not rated or not available

Soil Rating Points

 A
 A/D
 B
 B/D

 C
 C/D
 D
 Not rated or not available

Water Features

 Streams and Canals

Transportation

 Rails
 Interstate Highways
 US Routes
 Major Roads
 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

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

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

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

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: State of Connecticut
 Survey Area Data: Version 15, Sep 28, 2016

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

Date(s) aerial images were photographed: Jul 21, 2014—Aug 27, 2014

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

Hydrologic Soil Group

| Hydrologic Soil Group— Summary by Map Unit — State of Connecticut (CT600) | | | | |
|---|---------------|--------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 307 | Urban land | D | 5.1 | 100.0% |
| Totals for Area of Interest | | | 5.1 | 100.0% |

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

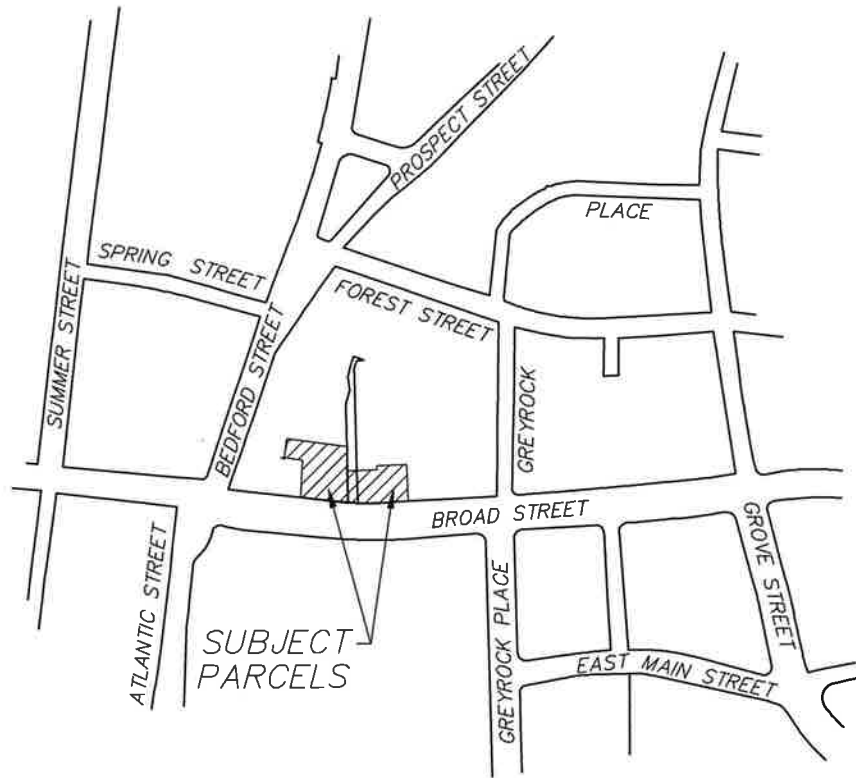
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

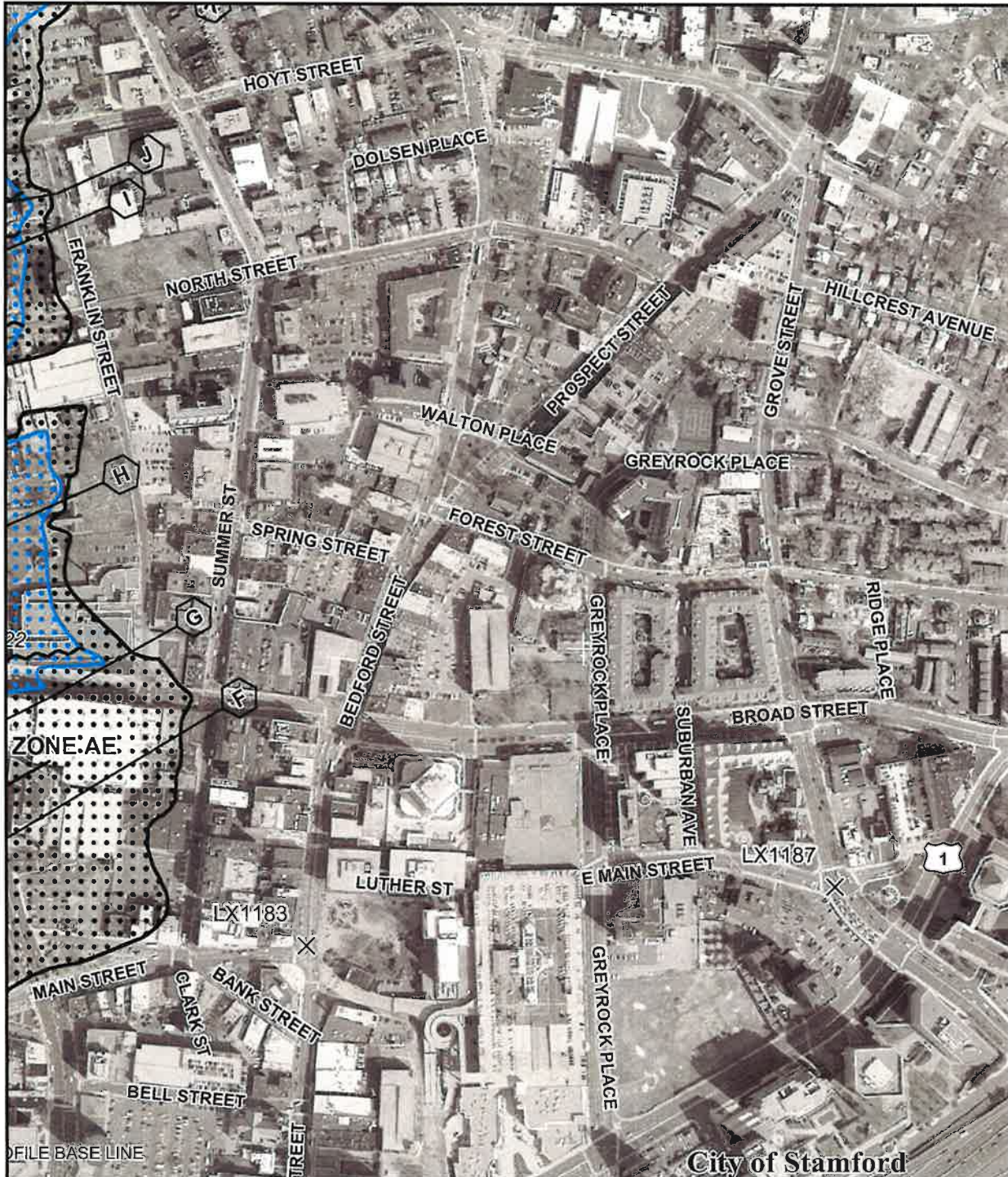
Tie-break Rule: Higher

**Exhibit D:
Site Vicinity Map**

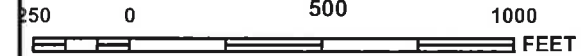


LOCATION MAP

**Exhibit E:
FEMA Firm Map**



MAP SCALE 1" = 500'



PANEL 0516G

FIRM

FLOOD INSURANCE RATE MAP
 FAIRFIELD COUNTY,
 CONNECTICUT
 (ALL JURISDICTIONS)

PANEL 516 OF 626
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

| COMMUNITY | NUMBER | PANEL | SUFFIX |
|--------------------|--------|-------|--------|
| GREENWICH, TOWN OF | 090008 | 0516 | G |
| STAMFORD, CITY OF | 090015 | 0516 | G |

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



MAP NUMBER
 09001C0516G

MAP REVISED
 JULY 8, 2013

Federal Emergency Management Agency

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

**Exhibit F:
NOAA Atlas 14 Precipitation Tables**



NOAA Atlas 14, Volume 10, Version 3
Location name: Stamford, Connecticut, USA*
Latitude: 41.0554°, Longitude: -73.5376°
Elevation: 15.78 ft**
 * source: ESRI Maps
 ** source: USGS



POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sandra Pavlovic, Michael St. Laurent, Carl Trypaluk, Dale Unruh, Orlan Wilhite

NOAA, National Weather Service, Silver Spring, Maryland

[PF_tabular](#) | [PF_graphical](#) | [Maps & aerals](#)

PF tabular

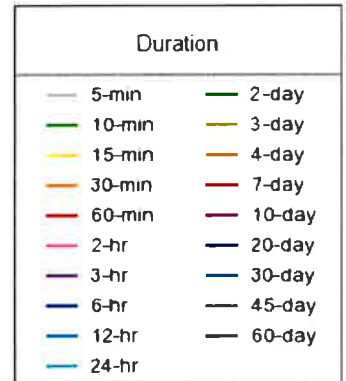
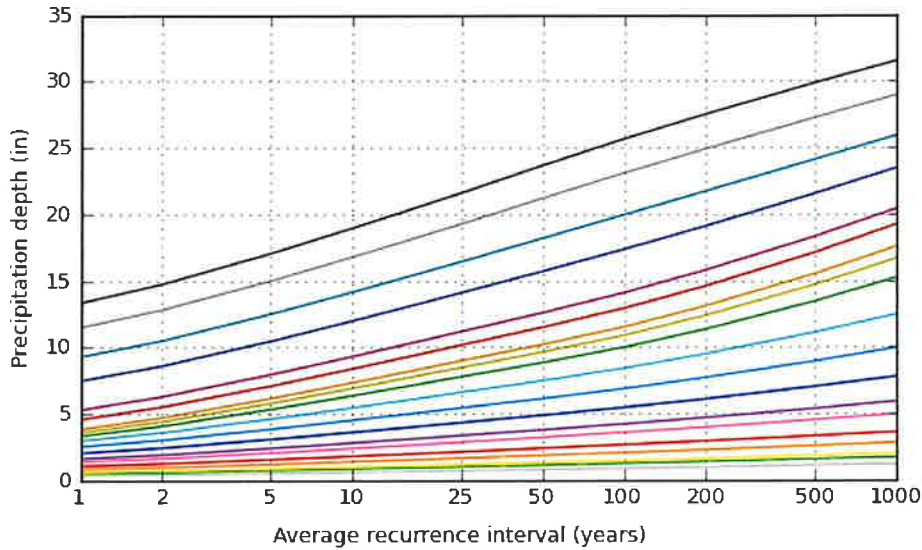
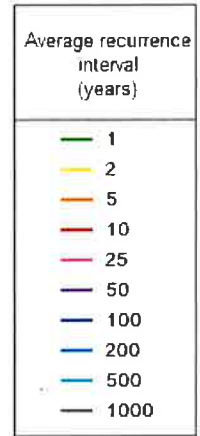
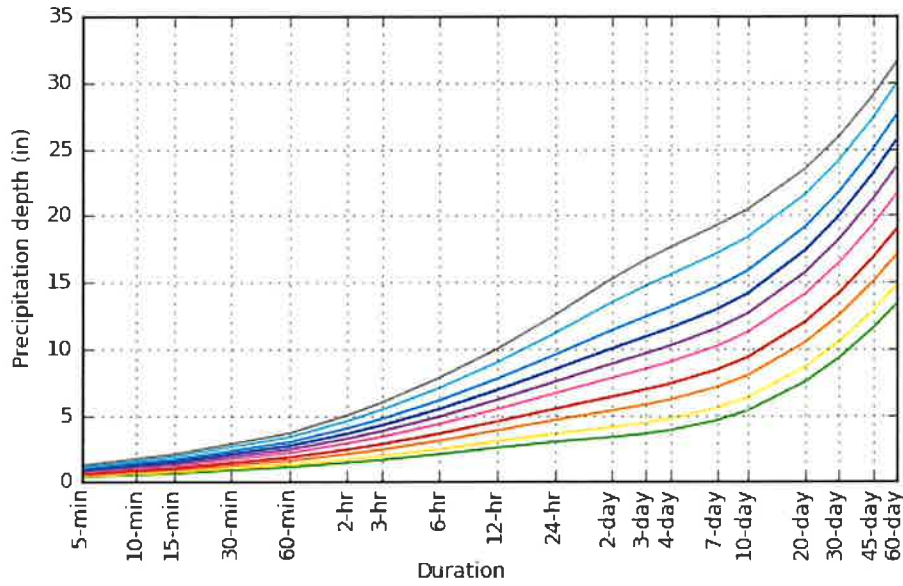
| PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)¹ | | | | | | | | | | |
|--|-------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|------------------------------|------------------------------|------------------------------|-----------------------------|-----------------------------|
| Duration | Average recurrence interval (years) | | | | | | | | | |
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | 0.365 (0.281-0.465) | 0.425 (0.327-0.542) | 0.523 (0.401-0.669) | 0.605 (0.461-0.777) | 0.717 (0.530-0.952) | 0.802 (0.581-1.08) | 0.889 (0.626-1.24) | 0.984 (0.661-1.40) | 1.12 (0.724-1.64) | 1.23 (0.775-1.82) |
| 10-min | 0.517 (0.398-0.659) | 0.602 (0.463-0.768) | 0.741 (0.568-0.948) | 0.856 (0.653-1.10) | 1.01 (0.751-1.35) | 1.14 (0.823-1.54) | 1.26 (0.887-1.75) | 1.40 (0.937-1.98) | 1.58 (1.03-2.32) | 1.74 (1.10-2.58) |
| 15-min | 0.609 (0.469-0.775) | 0.709 (0.545-0.904) | 0.872 (0.668-1.12) | 1.01 (0.768-1.29) | 1.19 (0.883-1.59) | 1.34 (0.968-1.81) | 1.48 (1.04-2.06) | 1.64 (1.10-2.33) | 1.86 (1.21-2.73) | 2.04 (1.29-3.04) |
| 30-min | 0.851 (0.655-1.08) | 0.992 (0.763-1.26) | 1.22 (0.937-1.56) | 1.41 (1.08-1.82) | 1.68 (1.24-2.23) | 1.88 (1.36-2.53) | 2.08 (1.46-2.89) | 2.30 (1.55-3.27) | 2.60 (1.68-3.80) | 2.84 (1.80-4.22) |
| 60-min | 1.09 (0.842-1.39) | 1.27 (0.981-1.63) | 1.57 (1.21-2.01) | 1.82 (1.39-2.34) | 2.16 (1.59-2.86) | 2.42 (1.75-3.26) | 2.68 (1.88-3.72) | 2.96 (1.99-4.20) | 3.34 (2.16-4.88) | 3.63 (2.30-5.40) |
| 2-hr | 1.42 (1.10-1.79) | 1.67 (1.29-2.11) | 2.07 (1.60-2.63) | 2.41 (1.85-3.08) | 2.88 (2.14-3.80) | 3.23 (2.35-4.34) | 3.60 (2.54-4.97) | 3.99 (2.69-5.64) | 4.55 (2.95-6.61) | 4.99 (3.17-7.38) |
| 3-hr | 1.63 (1.27-2.06) | 1.93 (1.50-2.44) | 2.42 (1.87-3.06) | 2.82 (2.17-3.58) | 3.37 (2.52-4.44) | 3.79 (2.77-5.08) | 4.23 (3.00-5.84) | 4.71 (3.18-6.62) | 5.39 (3.51-7.80) | 5.94 (3.78-8.74) |
| 6-hr | 2.06 (1.61-2.58) | 2.45 (1.91-3.07) | 3.08 (2.40-3.88) | 3.61 (2.80-4.56) | 4.34 (3.26-5.68) | 4.89 (3.60-6.51) | 5.46 (3.91-7.51) | 6.11 (4.14-8.54) | 7.04 (4.60-10.1) | 7.80 (4.98-11.4) |
| 12-hr | 2.54 (2.00-3.16) | 3.03 (2.39-3.78) | 3.85 (3.02-4.80) | 4.52 (3.52-5.67) | 5.44 (4.12-7.09) | 6.14 (4.55-8.14) | 6.87 (4.95-9.42) | 7.72 (5.25-10.7) | 8.94 (5.86-12.8) | 9.96 (6.37-14.5) |
| 24-hr | 2.97 (2.36-3.67) | 3.59 (2.85-4.45) | 4.61 (3.64-5.72) | 5.45 (4.28-6.80) | 6.62 (5.03-8.58) | 7.48 (5.58-9.89) | 8.41 (6.11-11.5) | 9.49 (6.49-13.1) | 11.1 (7.30-15.8) | 12.5 (8.01-18.0) |
| 2-day | 3.32 (2.65-4.08) | 4.08 (3.26-5.02) | 5.33 (4.23-6.57) | 6.36 (5.03-7.88) | 7.79 (5.97-10.1) | 8.84 (6.65-11.6) | 9.98 (7.31-13.6) | 11.4 (7.78-15.6) | 13.4 (8.86-19.0) | 15.2 (9.81-21.8) |
| 3-day | 3.59 (2.88-4.39) | 4.42 (3.54-5.42) | 5.79 (4.62-7.11) | 6.92 (5.49-8.53) | 8.48 (6.52-10.9) | 9.63 (7.26-12.6) | 10.9 (8.00-14.8) | 12.4 (8.51-16.9) | 14.7 (9.70-20.7) | 16.7 (10.8-23.8) |
| 4-day | 3.84 (3.09-4.69) | 4.72 (3.79-5.77) | 6.16 (4.93-7.54) | 7.35 (5.85-9.04) | 8.99 (6.93-11.5) | 10.2 (7.72-13.4) | 11.5 (8.48-15.6) | 13.1 (9.02-17.9) | 15.5 (10.3-21.8) | 17.6 (11.4-25.0) |
| 7-day | 4.58 (3.70-5.56) | 5.54 (4.47-6.73) | 7.10 (5.71-8.65) | 8.39 (6.71-10.3) | 10.2 (7.87-13.0) | 11.5 (8.72-14.9) | 12.9 (9.52-17.4) | 14.6 (10.1-19.8) | 17.1 (11.4-23.9) | 19.3 (12.5-27.3) |
| 10-day | 5.31 (4.30-6.42) | 6.31 (5.11-7.64) | 7.96 (6.42-9.65) | 9.32 (7.47-11.4) | 11.2 (8.68-14.2) | 12.6 (9.56-16.2) | 14.1 (10.4-18.8) | 15.8 (11.0-21.3) | 18.3 (12.2-25.4) | 20.4 (13.2-28.8) |
| 20-day | 7.48 (6.11-8.99) | 8.61 (7.02-10.4) | 10.5 (8.49-12.6) | 12.0 (9.68-14.5) | 14.1 (11.0-17.6) | 15.7 (11.9-20.0) | 17.4 (12.7-22.7) | 19.1 (13.3-25.6) | 21.6 (14.4-29.7) | 23.5 (15.3-32.9) |
| 30-day | 9.28 (7.61-11.1) | 10.5 (8.59-12.6) | 12.5 (10.2-15.0) | 14.2 (11.5-17.1) | 16.4 (12.8-20.4) | 18.2 (13.8-22.9) | 19.9 (14.6-25.8) | 21.7 (15.2-28.9) | 24.1 (16.2-33.1) | 25.9 (16.9-36.2) |
| 45-day | 11.5 (9.46-13.7) | 12.8 (10.5-15.3) | 15.0 (12.3-17.9) | 16.8 (13.7-20.2) | 19.3 (15.1-23.8) | 21.2 (16.2-26.6) | 23.1 (16.9-29.6) | 24.9 (17.5-33.0) | 27.3 (18.3-37.2) | 29.0 (18.9-40.3) |
| 60-day | 13.3 (11.0-15.8) | 14.7 (12.2-17.5) | 17.0 (14.0-20.3) | 19.0 (15.5-22.7) | 21.6 (16.9-26.6) | 23.7 (18.1-29.5) | 25.6 (18.8-32.7) | 27.5 (19.4-36.4) | 29.9 (20.1-40.6) | 31.5 (20.6-43.7) |

¹ Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration and average recurrence interval) will be greater than the upper bound (or less than the lower bound) is 5%. Estimates at upper bounds are not checked against probable maximum precipitation (PMP) estimates and may be higher than currently valid PMP values. Please refer to NOAA Atlas 14 document for more information.

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PF graphical

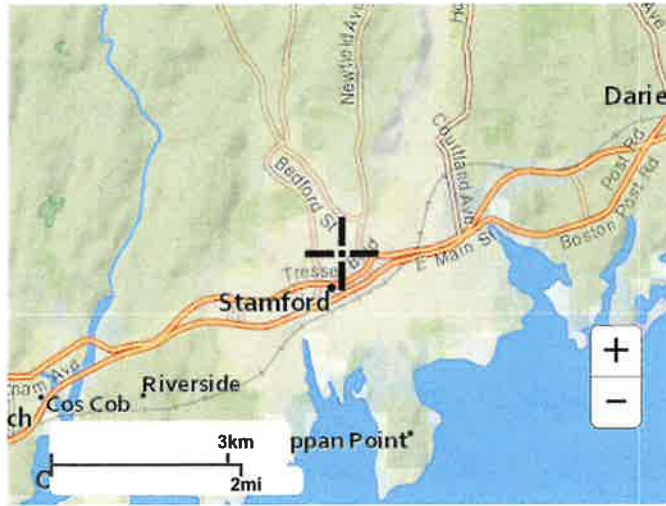
PDS-based depth-duration-frequency (DDF) curves
 Latitude: 41.0554°, Longitude: -73.5376°



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Maps & aerials

Small scale terrain



Large scale terrain



Large scale map



Large scale aerial

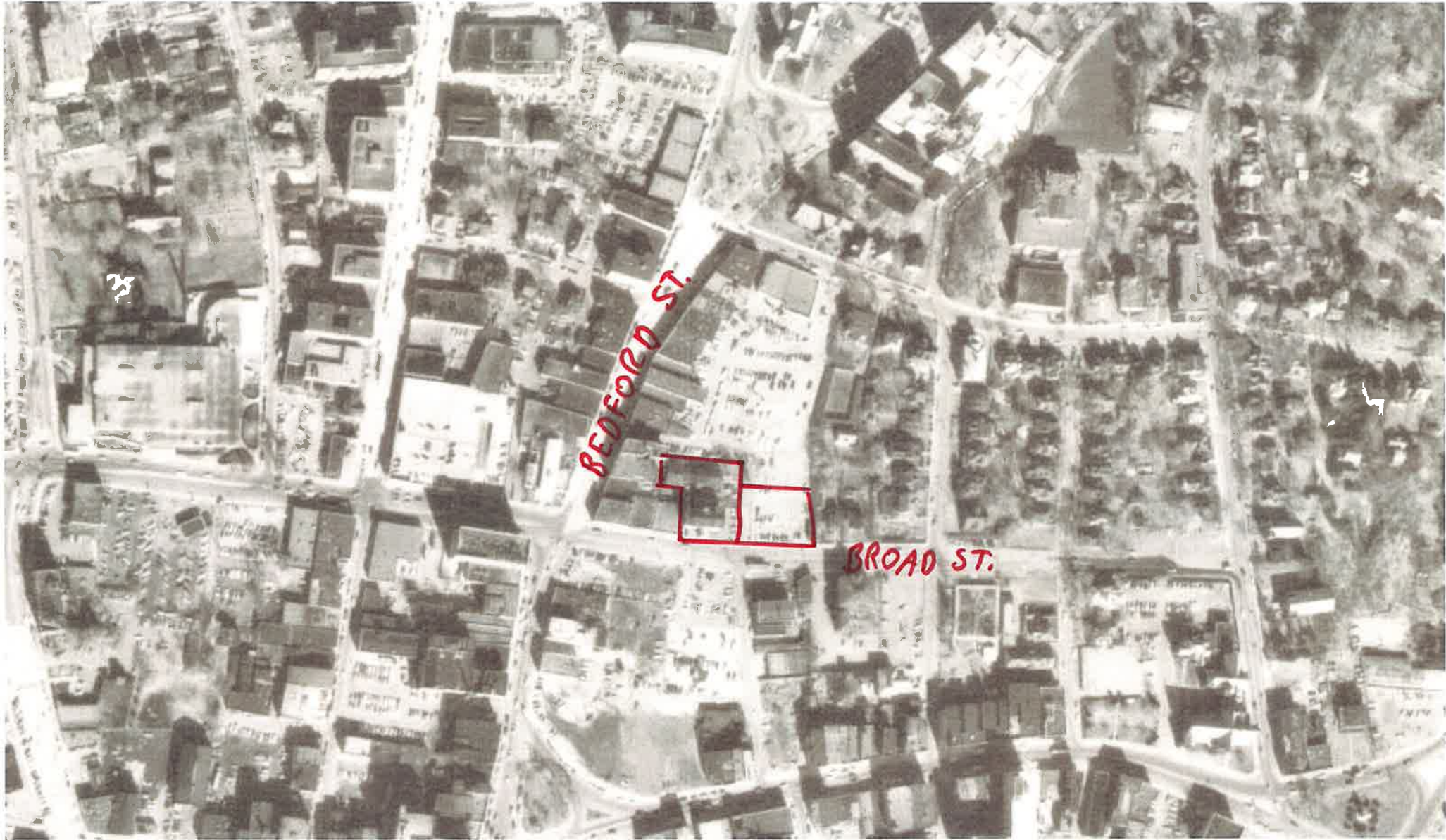


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[National Weather Service](#)
[National Water Center](#)
1325 East West Highway
Silver Spring, MD 20910
Questions?: HDSC.Questions@noaa.gov

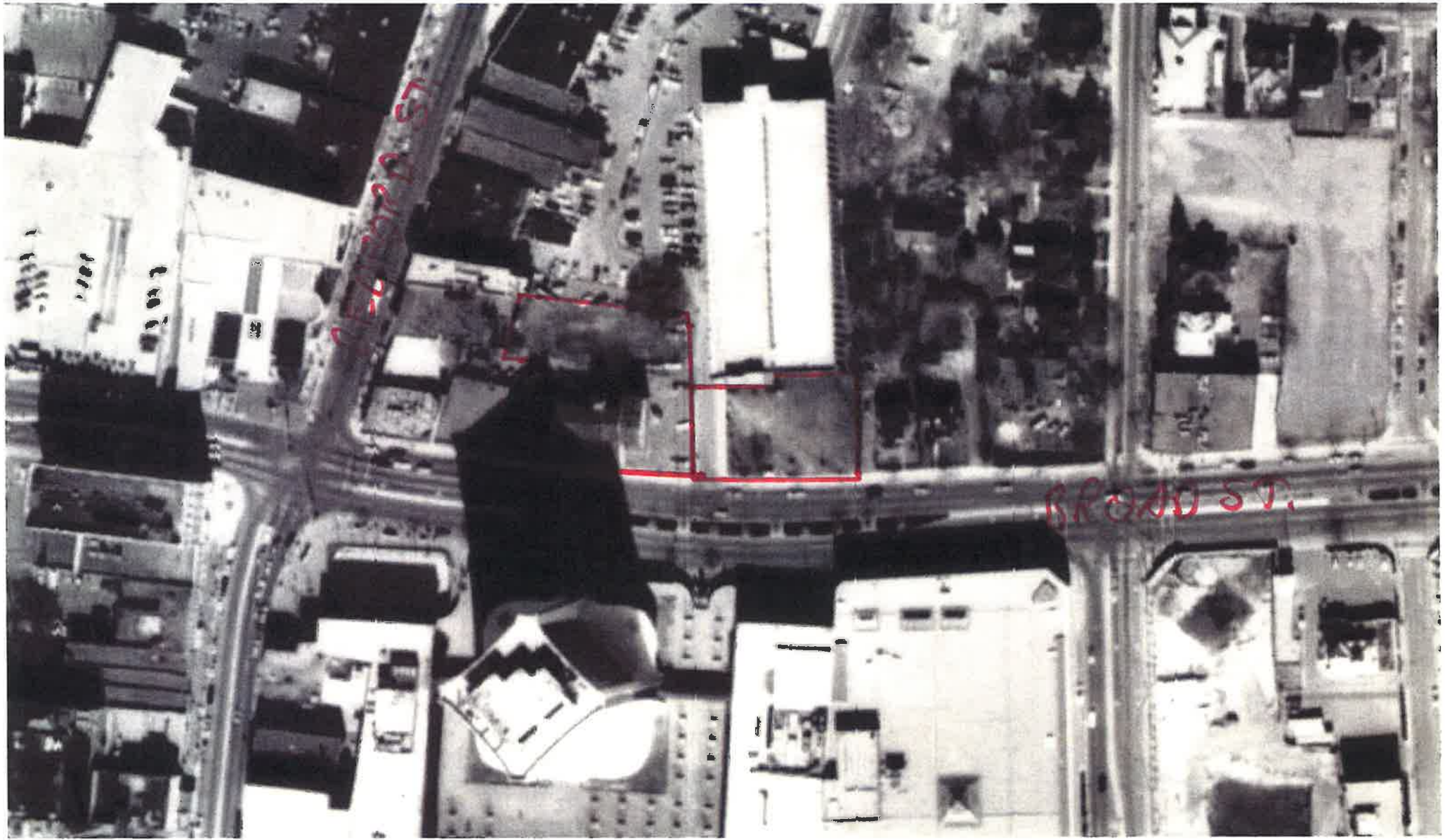
[Disclaimer](#)

**Appendix A:
1970 Aerial Photo**

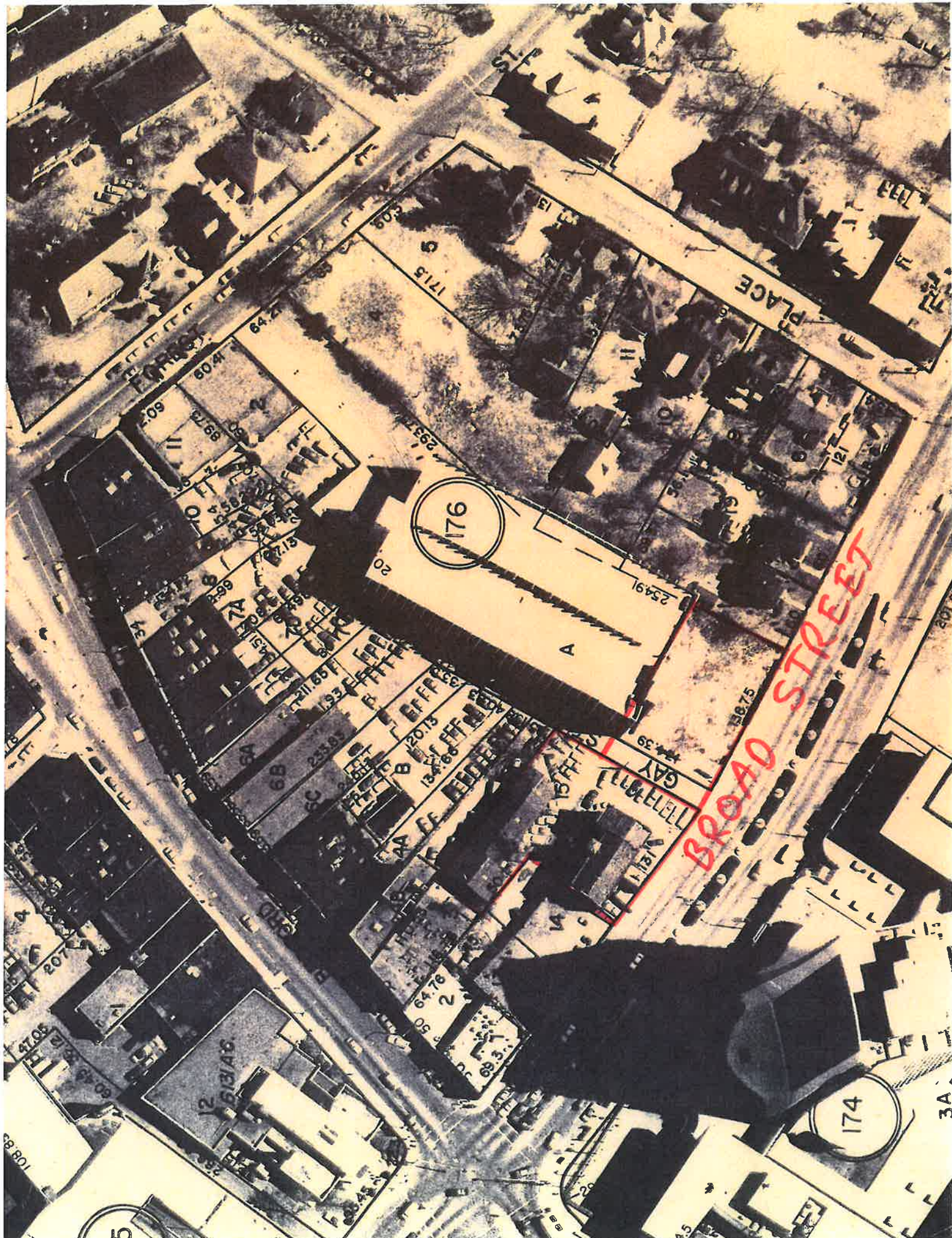


1970

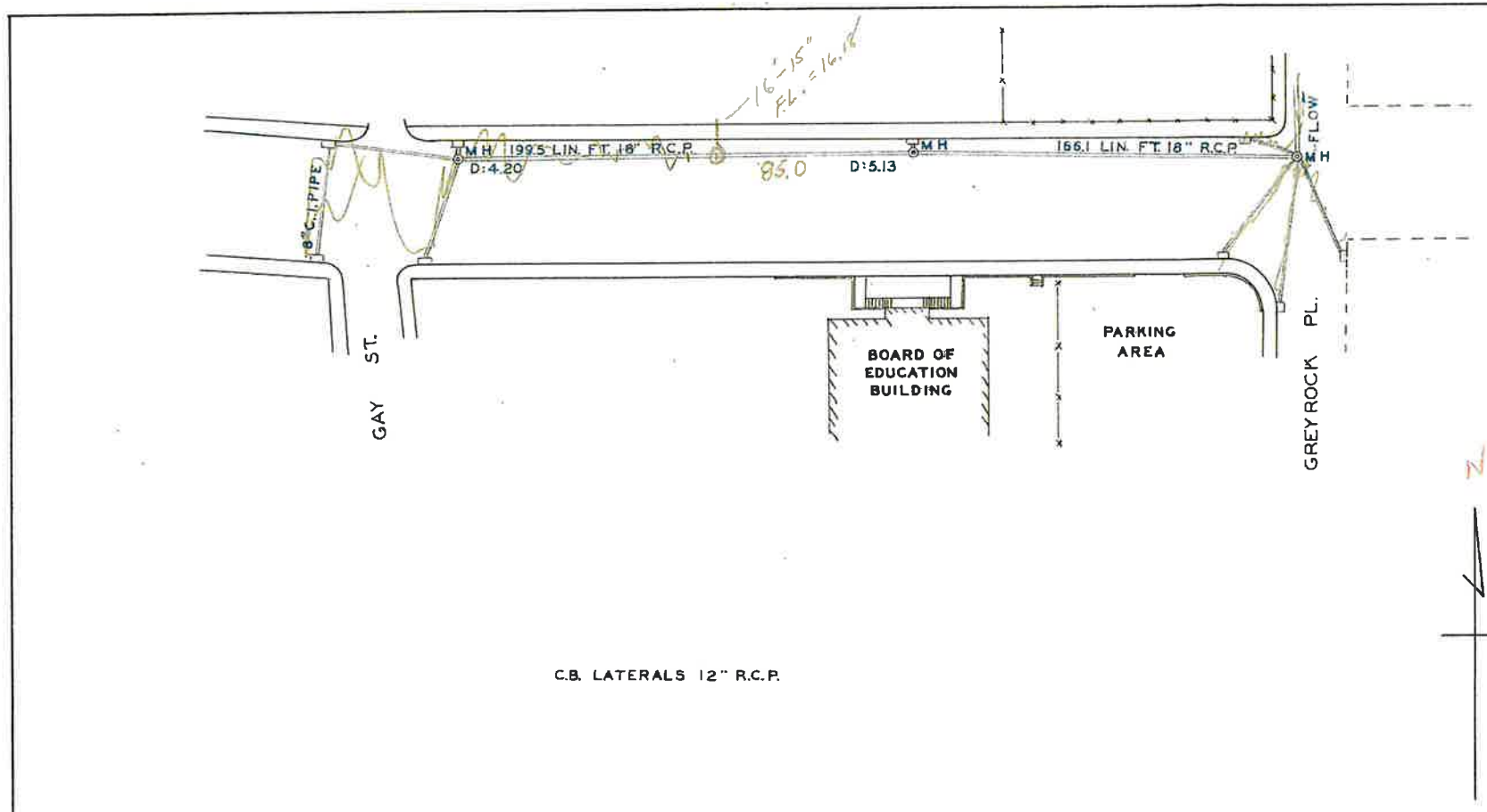
**Appendix B:
1985 Aerial Photo**



1985



**Appendix C:
City of Stamford
Storm Sewer Maps**

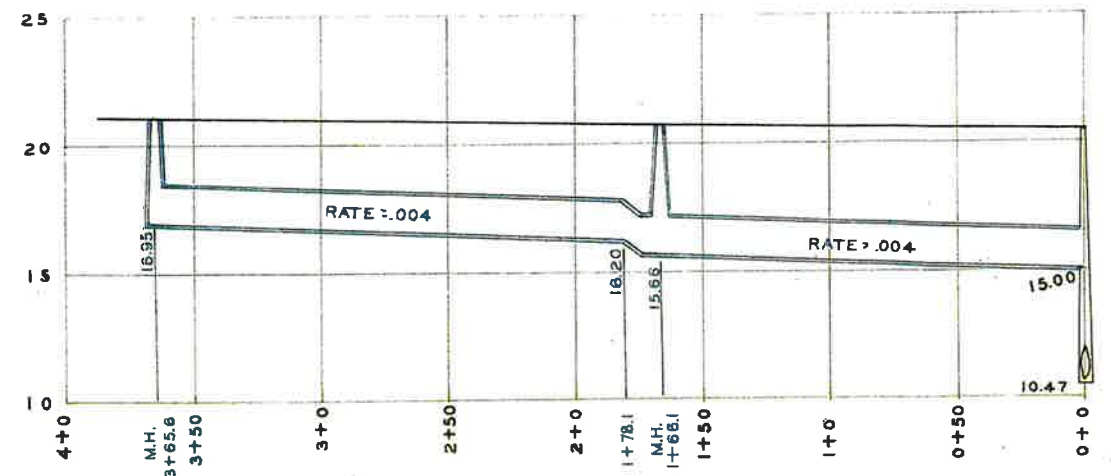


See New Broad St map

BROAD ST. STORM WATER SEWER

SCALE : HORZ. 1" = 50'
VERT. 1" = 5'
GOV'T DATUM CONSTRUCTED 1960
BOOK 714 PAGE 112

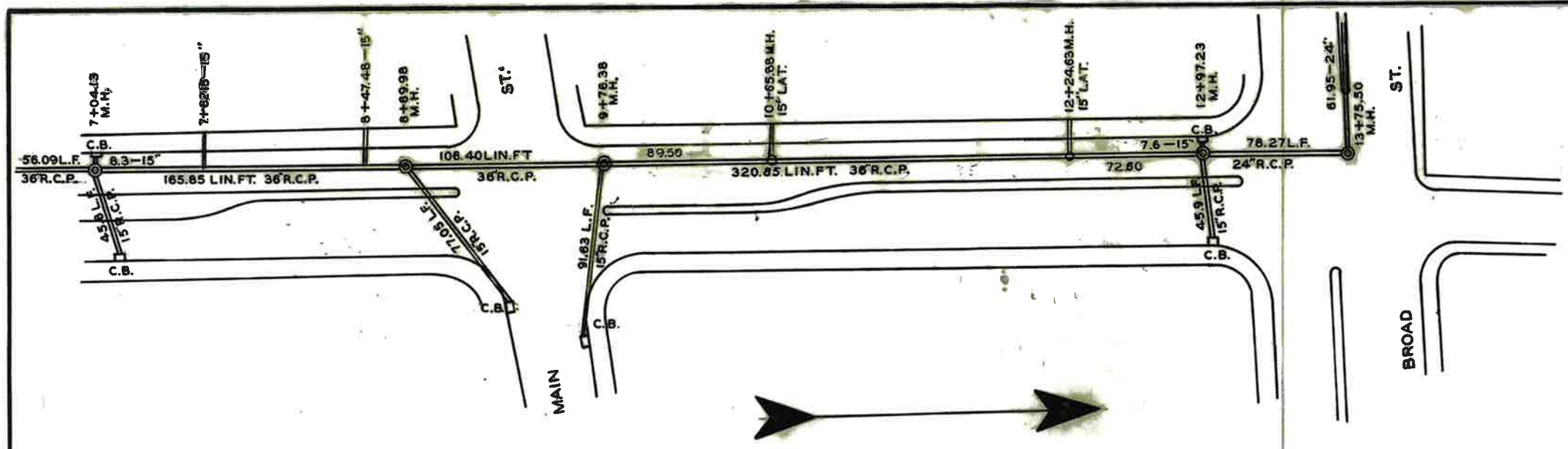
C.B. LATERALS 12" R.C.P.



V.P.P.

020127

675 D.



**GREYROCK PL.
STORM WATER SEWER**
 GOV'T DATUM CONSTRUCTED 1973
 SCALE HORZ. 1"=50'
 VERT. 1"=5'
 BOOK 923 PAGE 58

020456

**Appendix D:
Design Calculations**

Client: TR Broad II, LLC
 Address: 128 Broad Street
 Date: October 3, 2022

□ **Water Quality Volume**

| | | |
|-----------------------|---|---------------|
| Watershed Data | = | |
| Watershed Area | = | 33,888 ft^2 |
| Impervious Cover | = | 33,888 ft^2 |
| % Impervious Coverage | = | 100 % |

$$WQV = \frac{1in}{12\frac{in}{ft}} RA$$

$$R = 0.05 + 0.9I$$

Where:

| | | | | |
|-----|---|-------------------------------|---|---------------|
| WQV | = | Water quality volume | = | |
| R | = | Site cover runoff coefficient | = | 0.95 |
| A | = | Watershed area | = | 33,888 ft^2 |
| I | = | % Impervious Coverage | = | 100 % |

$$R = 0.05 + 0.9(1) = 0.95$$

$$WQV = \frac{1}{12}(0.95)(33,888) = 2,683 ft^3$$

$$\text{Water Quality Volume (WQV)} = 2,683 ft^3$$

$$\text{Storage Volume in RS \#1} = 5,926 ft^3 \text{ (WQV provided)}$$

□ **BMP Drawdown Calculations: RS #1**

$$t_{drawdown} = \frac{DV}{kA}$$

Where:

| | | | | |
|----|---|----------------------------|---|-------------------------|
| DV | = | Design Volume | = | 5,926 ft^3 |
| k | = | Infiltration (Rawl's) Rate | = | 1.02 in/hr (Sandy Loam) |
| A | = | Infiltration (bottom) Area | = | 1,940 ft^2 |

$$t_{drawdown} = \frac{5,926}{(1.02)(\frac{1}{12})(1,940)} = 3.6$$

Drawdown time is 3.6 hours. (Standard Met)

**Appendix E:
DCIA Tracking Worksheet**

Directly Connected Impervious Area Tracking Worksheet
City of Stamford Drainage Manual



Note to user: complete all cells of this color only, as indicated by section headings

| Part 1: General Information (All Projects) | |
|---|-----------------------|
| Project Name | Mixed Use Development |
| Project Address | 128 Broad Street |
| Project Applicant | TR Broad II, LLC |
| Title of Plan | Site Plan Review Set |
| Revision Date of Plan | October 3, 2022 |
| Tax Account Number | 001-2688, 004-0515 |

| Part 2: Project Details (All Projects) | |
|---|------------------------|
| 1. What type of development is this? (choose from dropdown) | Redevelopment |
| 2. What is the total area of the project site? | 35,659 ft ² |
| 3. What is the total area of land disturbance for this project? | 35,659 ft ² |
| 4. Does project site drain to High Quality Waters, a Direct Waterfront, or within 500 ft. of Tidal Wetlands? (Yes/No) | No |
| Does Standard 1 apply based on information above? | Yes |

| Part 3: Water Quality Target Total (Only for Standard 1 Projects) | |
|---|-------------------------|
| 5. What is the <u>current (pre-development) DCIA</u> for the site? | 14,965 ft ² |
| 6. Will the proposed development increase DCIA (without consideration of proposed stormwater management)? (Yes/No) | Yes |
| 7. What is the <u>proposed-development total impervious area</u> for the site? | 35,659 ft ² |
| Water Quality Volume (WQV) | 2823.0 ft ³ |
| Standard 1 requirement | Retain 1/2 WQV on-site |
| Required retention volume | 1411.5 ft ³ |
| Provided retention volume for proposed development | 5,926.0 ft ³ |

| Part 4: Proposed DCIA Tracking (Only for Standard 1 Projects) | |
|--|-------------------------|
| Pre-development total impervious area | 14,965 ft ² |
| Current DCIA | 14,965 ft ² |
| Proposed-development total impervious area | 35,659 ft ² |
| Proposed-development DCIA (after stormwater management) | 1,771 ft ² |
| Net change in DCIA from <u>current</u> to <u>proposed-development</u> | -13,194 ft ² |

| Part 5: Post-Development (As-Built Certified) DCIA Tracking (Only for Standard 1 Projects) | |
|---|-----------------|
| Post-development (per as-built) total impervious area | ft ² |
| Post-development (per as-built) DCIA (after stormwater management) | ft ² |
| Net change in DCIA from <u>current</u> to <u>post-development</u> | ft ² |

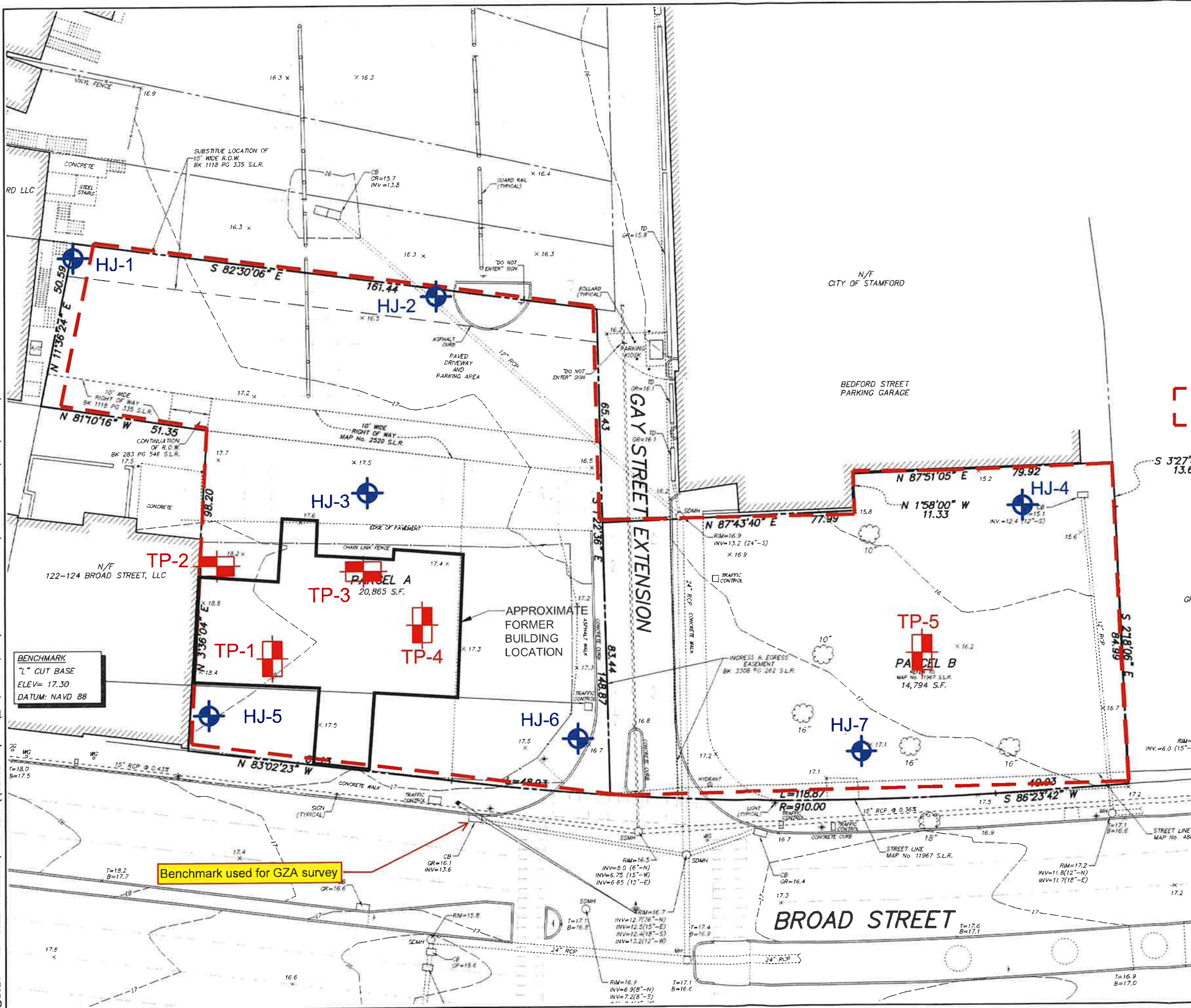
Certification Statement

I hereby certify that the information contained in this worksheet is true and correct.

Engineer's Signature _____ Date _____ Engineer's Seal _____

**Appendix F:
Boring and Test Pit Data**

© 2021 - GZA GeoEnvironmental, Inc. GZA \\GZAGLAST\JOBS\46.500-46.999\46879.H79 FD RICH\46879-01.DMB\CAD\FIGURES\EXPLORATION LOCATION PLAN-MSH.DWG LAYOUT1 NOVEMBER 23, 2021 MARTHA HARRIS



- GENERAL NOTES**
1. BASE MAP DEVELOPED FROM ELECTRONIC COPY OF TOPOGRAPHIC SURVEY, ORIGINAL SCALE: 1" = 20', PREPARED BY D'ANDREA SURVEYING & ENGINEERING, PC, DATED JULY 8, 2014.
 2. THE TEST BORINGS LOCATIONS WERE OBTAINED FROM FIGURE 1: BORING LOCATION PLAN FROM GEOTECHNICAL ENGINEERING REPORT PREPARED BY HELLER AND JOHNSEN, DATED SEPTEMBER, 2014.
 3. TEST PITS LOCATED IN THE FIELD BY GZA BY TAPING FROM EXISTING SITE FEATURES. LOCATIONS SHOULD BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND

- APPROXIMATE LOCATION OF TEST BORINGS BY HELLER AND JOHNSEN
- HJ-1**
- APPROXIMATE LOCATION OF TEST PITS PERFORMED BY CONTE COMPANY ON 11/19/2021 AND OBSERVED BY GZA PERSONNEL
- TP-1**
- APPROXIMATE FOOTPRINT OF PROPOSED BUILDING.

SCALE IN FEET 1" = 30'

0 15' 30' 60'

| NO. | ISSUE/DESCRIPTION | BY | DATE |
|-----|-------------------|----|------|
| | | | |

128-132 BROAD STREET
STAMFORD, CONNECTICUT

EXPLORATION LOCATION PLAN

| | |
|--|---|
| PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com | PREPARED FOR: F. D. RICH COMPANY |
| PROJ MGR: JFD DESIGNED BY: MSH DATE: NOVEMBER, 2021 | REVIEWED BY: JFD DRAWN BY: MSH PROJECT NO.: 05.0046879.01 |
| CHECKED BY: DMB SCALE: 1"=30' REVISION NO.: | FIG OR DWG 2 SHEET NO 1 OF 1 |

| HELLER AND JOHNSEN FOOT OF BROAD STREET STRATFORD, CONNECTICUT 06615 | | | | TEST BORING REPORT | | | BORING NO. HJ-2 | | |
|--|------------------------------|---------------------------------|---------------------------------|-------------------------|---|--------------|--------------------------------|---|------------------------------------|
| PROJECT <u>128-136 Broad Street</u> | | | | GROUND WATER READINGS | | | FILE NO. <u>30202</u> | | |
| LOCATION <u>Stamford, Connecticut</u> | | | | DATE | TIME | DEPTH | SHEET NO. <u>1</u> OF <u>2</u> | | |
| CLIENT <u>Bildner Capital Corp.</u> | | | | <u>6/30/04</u> | <u>1130</u> | <u>21.0'</u> | LOCATION <u>See Plan</u> | | |
| CONTRACTOR <u>Hardiman Company & Associates, Inc.</u> | | | | | | | ELEVATION <u>16.8'</u> | | |
| ITEM | | CASING | DRIVE SAMPLER | CORE BARREL | DRILLING EQUIPMENT & PROCEDURES | | | DATUM <u>NGVD-29</u> | |
| TYPE | | HSA | SS | | RIG TYPE: <u>Mobile Drilling B-50</u> | | | DATE <u>06/30/04</u> TO <u>06/30/04</u> | |
| INSIDE DIAMETER (IN) | | 2-1/4 | 1-3/8 | | BIT TYPE: | | | START <u>0945</u> FINISH <u>1245</u> | |
| HAMMER WEIGHT (LB) | | -- | 140 | | DRILL MUD: | | | DRILLER <u>Anthony Scaife</u> | |
| HAMMER FALL (IN) | | -- | 30 | | HAMMER TYPE: <u>Safety hammer via Cathead and rope</u> | | | H & J REP <u>Ryan M. Laird</u> | |
| D E P T H | CASING BLOWS PER FT | SAMPLER BLOWS PER 6 IN | SAMPLE TYPE NO. & REC. | SAMPLE DEPTH (FT) | VISUAL DESCRIPTION AND REMARKS | | | ELEV./ DEPTH (FT) | STRATUM DESCRIPTION |
| 0 | | 3 | SS1 | 0 | Top 6": Cedar Chips and Topsoil. Bottom 10": Olive brown, SILT and Sand, trace Roots, trace fine Gravel. | | | | CEDAR CHIPS |
| | | 6 | 16" | 1.6 | | | | 0.5' | FILL |
| | | 7 | | | | | | 1.5' | SAND, GRAVEL AND COBBLES (FILL) |
| | | 50/1" | | | | | | | |
| 5 | | 10 | SS2 | 3.0 | Very dense, black, white and orange GRAVEL (Cobbles) | | | 7.0' | GRAVELLY SAND |
| | | 70 | 12" | 5.0 | | | | | |
| | | 31 | | | | | | | |
| | | 15 | | | | | | | |
| 10 | | 50 | SS3 | 5.0 | Top 6": Black, white GRAVEL. Bottom 6": Grey, GRAVEL, little Silt, little Sand, trace Roots. | | | 7.0' | GRAVELLY SAND |
| | | 37 | 12" | 7.0 | | | | | |
| | | 21 | | | | | | | |
| | | 19 | | | | | | | |
| 15 | | 20 | SS4 | 7.0 | Dense, light grey, orange, fine to coarse SAND, some Silt, little Gravel. | | | 7.0' | GRAVELLY SAND |
| | | 23 | 16" | 9.0 | | | | | |
| | | 14 | | | | | | | |
| | | 14 | | | | | | | |
| 20 | | 27 | SS5 | 10.0 | Very dense, light grey, fine to coarse SAND, some Gravel, little Silt. | | | 7.0' | GRAVELLY SAND |
| | | 41 | 14" | 12.0 | | | | | |
| | | 47 | | | | | | | |
| | | 41 | | | | | | | |
| 25 | | 14 | SS6 | 15.0 | Top 6": Grey, fine to medium SAND, little Gravel, little Silt. Bottom 10": Grey, orange, fine to coarse SAND, some Gravel, trace Silt. | | | 7.0' | GRAVELLY SAND |
| | | 28 | 18" | 17.0 | | | | | |
| | | 18 | | | | | | | |
| | | 20 | | | | | | | |
| 30 | | 7 | SS7 | 20.0 | Medium dense, grey, orange, fine to coarse GRAVEL, some fine to coarse Sand, trace Silt (Wet). | | | 7.0' | GRAVELLY SAND |
| | | 5 | 6" | 22.0 | | | | | |
| | | 15 | | | | | | | |
| | | 11 | | | | | | | |
| 35 | | 5 | SS8 | 25.0 | Medium dense, grey, fine to coarse SAND, trace Gravel, trace Silt (Wet). | | | 7.0' | GRAVELLY SAND |
| | | 5 | 14" | 27.0 | | | | | |
| | | 5 | | | | | | | |
| | | 5 | | | | | | | |
| | | | | | NOTES: Encountered cobbles while augering from 1.5' to 7.0'. | | | | |

**HELLER AND JOHNSEN
FOOT OF BROAD STREET
STRATFORD, CONNECTICUT 06615**

TEST BORING REPORT

BORING NO. HJ-2

PROJECT 128-136 Broad Street
 LOCATION Stamford, Connecticut
 CLIENT Bildner Capital Corp.
 CONTRACTOR Hardiman Company & Associates, Inc.

| GROUND WATER READINGS | | |
|-----------------------|------|-------|
| DATE | TIME | DEPTH |
| 6/30/04 | 1130 | 21.0' |

FILE NO. 30202
 SHEET NO. 2 OF 2
 LOCATION See Plan
 ELEVATION 16.8'
 DATUM NGVD-29
 DATE 06/30/04 TO 06/30/04
 START 0945 FINISH 1245
 DRILLER Anthony Scaife
 H & J REP Ryan M. Laird

| ITEM | CASING | DRIVE SAMPLER | CORE BARREL | DRILLING EQUIPMENT & PROCEDURES |
|----------------------|--------|---------------|-------------|---|
| TYPE | HSA | SS | | RIG TYPE: Mobile Drilling B-50 |
| INSIDE DIAMETER (IN) | 2-1/4 | 1-3/8 | | BIT TYPE: |
| HAMMER WEIGHT (LB) | -- | 140 | | DRILL MUD: |
| HAMMER FALL (IN) | -- | 30 | | HAMMER TYPE: Safety hammer via Cathead and rope |

| DEPTH (FT) | CASING BLOWS PER FT | SAMPLER BLOWS PER 6 IN | SAMPLE TYPE NO. & REC. | SAMPLE DEPTH (FT) | VISUAL DESCRIPTION AND REMARKS | ELEV./DEPTH (FT) | STRATUM DESCRIPTION |
|------------|---------------------|------------------------|------------------------|-------------------|--|------------------|-------------------------|
| | | | | | | | |
| 30 | | 38 | SS9 | 30.0 | Top 8": Olive brown, fine to coarse SAND, little Gravel. Bottom 4": Highly Weathered, black, white ROCK (gneiss). | | GRAVELLY SAND |
| | | 58 | 12" | 32.0 | | | |
| | | 17 | | | | | |
| | | 24 | | | | | |
| 35 | | 35 | SS10 | 35.0 | Medium dense, grey, fine to coarse SAND, some fine to coarse Gravel. | | |
| | | 15 | 10" | 37.0 | | | |
| | | 12 | | | | | |
| | | 12 | | | | | |
| 40 | | 15 | SS11 | 40.0 | Dense, grey, fine to coarse Sand and Gravel, some Silt (Highly weathered mica gneiss). | 38.0' | GLACIAL TILL |
| | | 17 | 12" | 42.0 | | | |
| | | 19 | | | | | |
| | | 20 | | | | | |
| 45 | | 50/0" | | | Fractured rock in tip, black, white, orange Gneiss. | 45.0' | E.O.B. Auger Refusal |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 50 | | | | | | | |
| 55 | | | | | | | |

NOTES:
 1) Cobbles encountered at 38' while augering.
 2) Auger refusal at 45.0'.

| HELLER AND JOHNSEN FOOT OF BROAD STREET STRATFORD, CONNECTICUT 06615 | | | | TEST BORING REPORT | | | BORING NO. HJ-3 | |
|--|------------------------------|---------------------------------|---------------------------------|-------------------------|--|--------------------|--------------------------------|---|
| PROJECT <u>128-136 Broad Street</u> | | | | GROUND WATER READINGS | | | FILE NO. <u>30202</u> | |
| LOCATION <u>Stamford, Connecticut</u> | | | | DATE <u>6/30/04</u> | TIME <u>0810</u> | DEPTH <u>20.5'</u> | SHEET NO. <u>2</u> OF <u>2</u> | |
| CLIENT <u>Bildner Capital Corp.</u> | | | | | | | LOCATION <u>See Plan</u> | |
| CONTRACTOR <u>Hardiman Company & Associates, Inc.</u> | | | | | | | ELEVATION <u>17.6'</u> | |
| ITEM | | CASING | DRIVE SAMPLER | CORE BARREL | DRILLING EQUIPMENT & PROCEDURES | | | DATUM <u>NGVD-29</u> |
| TYPE | | HSA | SS | | RIG TYPE: <u>Mobile Drilling B-50</u> | | | DATE <u>06/30/04</u> TO <u>06/30/04</u> |
| INSIDE DIAMETER (IN) | | 2-1/4 | 1-3/8 | | BIT TYPE: | | | START <u>0700</u> FINISH <u>0900</u> |
| HAMMER WEIGHT (LB) | | -- | 140 | | DRILL MUD: | | | DRILLER <u>Anthony Scaife</u> |
| HAMMER FALL (IN) | | -- | 30 | | HAMMER TYPE: <u>Safety hammer via Cathead and rope</u> | | | H & J REP <u>Ryan M. Laird</u> |
| D E P T H | CASING BLOWS PER FT | SAMPLER BLOWS PER 6 IN | SAMPLE TYPE NO. & REC. | SAMPLE DEPTH (FT) | VISUAL DESCRIPTION AND REMARKS | | ELEV./ DEPTH (FT) | STRATUM DESCRIPTION |
| 30 | | 7 | SS8 | 30.0 | Medium dense, grey, fine to coarse SAND, little fine to coarse Gravel, trace Silt (Wet). | | | SAND AND GRAVEL |
| | | 10' | 18" | 32.0 | | | | |
| | | 10 | | | | | | |
| | | 22 | | | | | | |
| 35 | | 15 | SS9 | 35.0 | Top 6": Grey, Varved, fine to medium SAND and Silt. Bottom 6": Reddish grey, fine to coarse SAND, little Gravel, little Silt, trace Weathered Rock (at bottom). | | 35.0' | SILTY SAND |
| | | 10 | 12" | 37.0 | | | | |
| | | 14 | | | | | | |
| | | 19 | | | | | | |
| 40 | | | | | | | 38.0' | WEATHERED ROCK |
| | | | | | | | | |
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| 45 | | | | | | | 39.0' | E.O.B. Auger Refusal |
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NOTES:
Auger refusal at 39.0'.

TEST PIT LOG

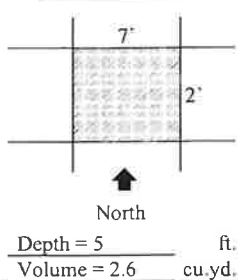
| | | |
|---|---|--|
| GZA GeoEnvironmental, Inc. Engineers and Scientists | PROJECT 128-132 Broad Street Stamford, CT | Test Pit No. <u>TP-2</u> File No. <u>05.0046879.01</u> Reviewed by <u>J. Davis</u> |
| GZA Engineer <u>M. Harris</u> Weather <u>Sunny, 40°F</u> | EXCAVATION EQUIPMENT Contractor <u>Conte Company, LLC</u> Operator <u>Tim Sargent</u> Make <u>CAT</u> Model <u>303 E</u> Capacity <u>0.5</u> cu.yd. Reach <u>8</u> ft. | Date <u>11/19/21</u> Ground Elevation <u>18.3</u> Time Started <u>0830</u> Time Completed <u>0900</u> |

| Depth (ft) | SUBSURFACE SKETCH (NOT TO SCALE) | Excav. Effort | Boulder Count Qty. Class | Remark No. |
|------------|---|---------------|--------------------------|------------|
| 1 | 0.5' Dark brown, fine to coarse SAND, some Gravel, some Silt, trace Roots, trace Glass, trace Brick, Dry (TOPSOIL/FILL) | E | | |
| 2 | 2' Brown, fine to coarse SAND and GRAVEL, little Silt, trace Roots, trace Bricks, trace Metal, Dry (FILL) | E | | |
| 3 | Brown, fine to coarse SAND and GRAVEL, some Bricks, some Concrete, little Silt (FILL) | E | | |
| 4 | | E | 2A | 1, 2, 3 |
| 5 | 5' Bottom of exploration 5.0 feet below grade. | E | 2A, 5B | 4, 5 |
| 6 | | | | |
| 7 | | | | |
| 8 | | | | |
| 9 | | | | |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |

REMARKS:

1. Stacked bricks and boulders observed from 0.5 to at least 5 feet on the west test pit wall adjacent to the neighboring, existing building. Bricks and boulders could be foundation remnants of former building onsite. Adjacent building foundations were not evident due to cobbles and boulders. Exploration was terminated at 5 feet due to proximity to the adjacent building.
2. Test pit walls were screened with a 10.6 eV MiniRAE photoionization detector (PID). PID values represent meter response in parts per million (ppm) relative to benzene in air and above background readings. At 4 ft depth: North = 0.6 ppm, East = 0.9 ppm, South = 0.9 ppm. Environmental sample collected from east test pit wall at 4 feet below ground surface
3. Boulders observed at approximate 4.5 feet below ground surface, possibly foundation remnants.
4. The test pit was backfilled with approximately five, 12-inch lifts of excavated material and compacted with excavator bucket and observed to be firm and stable.

TEST PIT PLAN




LEGEND

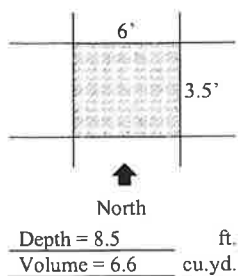






| BOULDER COUNT | PROPORTIONS USED | ABBREVIATIONS | EXCAVATION EFFORT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--------------------|------------------------------|-------------------|---|-----------|---|----------------|---|---|------------|-------|------------|--------|-----------|--------|-----|--------|--|----------|------------|------------|----------------------|----------------------|----------|-----------|------------|--------------|--|----------|--------------|---------------|--------------------|--|--|-------------------------|--|------------------------------|
| <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Size Range</td> <td style="text-align: center;">Letter Designation</td> </tr> <tr> <td style="text-align: center;">6" - 18"</td> <td style="text-align: center;">A</td> </tr> <tr> <td style="text-align: center;">18" - 36"</td> <td style="text-align: center;">B</td> </tr> <tr> <td style="text-align: center;">36" and Larger</td> <td style="text-align: center;">C</td> </tr> </table> | Size Range | Letter Designation | 6" - 18" | A | 18" - 36" | B | 36" and Larger | C | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">TRACE (TR)</td> <td style="text-align: center;">0-10%</td> </tr> <tr> <td style="text-align: center;">LITTLE (L)</td> <td style="text-align: center;">10-20%</td> </tr> <tr> <td style="text-align: center;">SOME (SO)</td> <td style="text-align: center;">20-35%</td> </tr> <tr> <td style="text-align: center;">AND</td> <td style="text-align: center;">35-50%</td> </tr> </table> | TRACE (TR) | 0-10% | LITTLE (L) | 10-20% | SOME (SO) | 20-35% | AND | 35-50% | <table style="width: 100%; border-collapse: collapse;"> <tr><td>F - Fine</td></tr> <tr><td>M - Medium</td></tr> <tr><td>C - Coarse</td></tr> <tr><td>F/M - Fine to Medium</td></tr> <tr><td>F/C - Fine to Coarse</td></tr> <tr><td>V - Very</td></tr> <tr><td>GR - Gray</td></tr> <tr><td>BN - Brown</td></tr> <tr><td>YEL - Yellow</td></tr> </table> | F - Fine | M - Medium | C - Coarse | F/M - Fine to Medium | F/C - Fine to Coarse | V - Very | GR - Gray | BN - Brown | YEL - Yellow | <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">E - Easy</td> <td style="text-align: center;">M - Moderate</td> <td style="text-align: center;">D - Difficult</td> </tr> <tr> <td colspan="3" style="text-align: center;">GROUNDWATER</td> </tr> <tr> <td style="text-align: center;">Elapsed Time 15 mins</td> <td style="text-align: center;"></td> <td style="text-align: center;">G.W.L. Not Encountered</td> </tr> </table> | E - Easy | M - Moderate | D - Difficult | GROUNDWATER | | | Elapsed Time 15 mins | | G.W.L. Not Encountered |
| Size Range | Letter Designation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6" - 18" | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18" - 36" | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36" and Larger | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRACE (TR) | 0-10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LITTLE (L) | 10-20% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOME (SO) | 20-35% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AND | 35-50% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F - Fine | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M - Medium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C - Coarse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F/M - Fine to Medium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F/C - Fine to Coarse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V - Very | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GR - Gray | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BN - Brown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| YEL - Yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E - Easy | M - Moderate | D - Difficult | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GROUNDWATER | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elapsed Time 15 mins | | G.W.L. Not Encountered | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

TEST PIT LOG

| | | |
|---|--|--|
| GZA GeoEnvironmental, Inc. Engineers and Scientists | PROJECT 128-132 Broad Street Stamford, CT | Test Pit No. <u>TP-3</u> File No. <u>05.0046879.01</u> Reviewed by <u>J. Davis</u> |
| GZA Engineer <u>M. Harris</u> Weather <u>Sunny, 40°F</u> | EXCAVATION EQUIPMENT Contractor <u>Conte Company, LLC</u> Operator <u>Tim Sargent</u> Make <u>CAT</u> Model <u>303 E</u> Capacity <u>0.5</u> cu.yd. Reach <u>8</u> ft.. | Date <u>11/19/21</u> Ground Elevation <u>17.8</u> Time Started <u>0915</u> Time Completed <u>1000</u> |

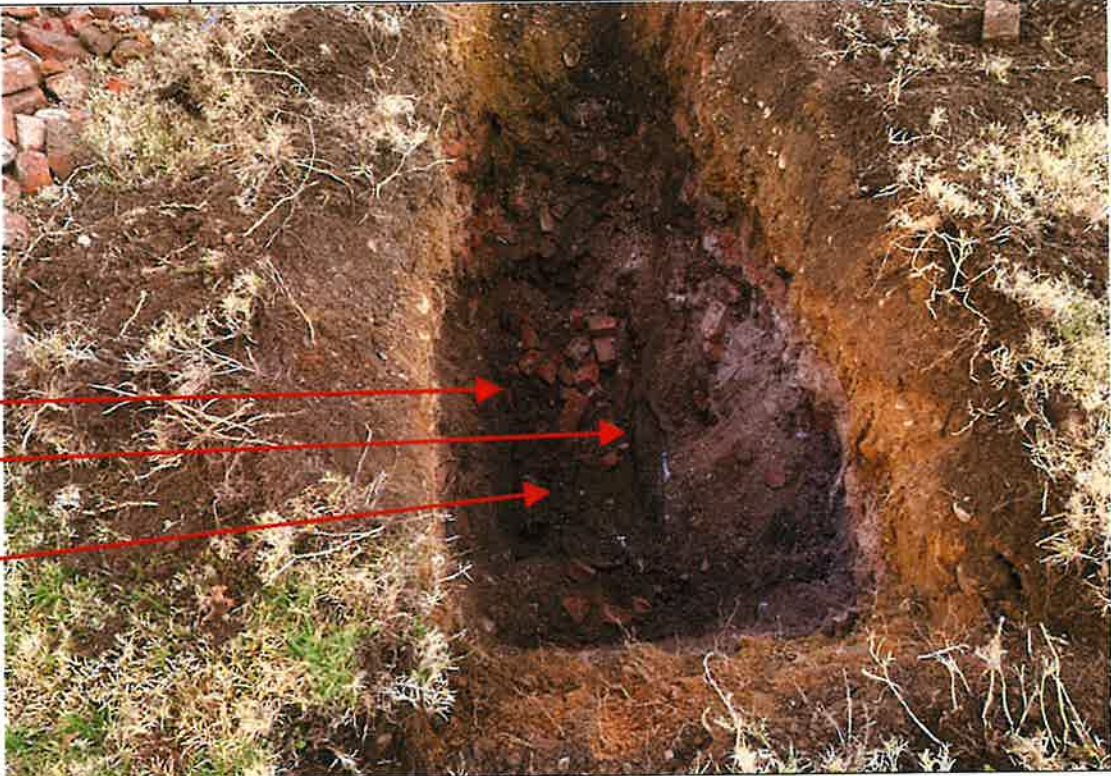
| Depth (ft) | SUBSURFACE SKETCH (NOT TO SCALE) | Excav. Effort | Boulder Count Qty. Class | Remark No. |
|------------|--|---------------|--------------------------|------------|
| 1 | <div style="display: flex; align-items: flex-start;"> <div style="width: 15%; border-right: 1px dashed black; margin-right: 5px;"> <div style="border-bottom: 1px dashed black; height: 0.5em; margin-bottom: 5px;">0.5'</div> <div style="border-bottom: 1px dashed black; height: 1.5em; margin-bottom: 5px;">2'</div> <div style="border-bottom: 1px dashed black; height: 1.5em; margin-bottom: 5px;">6'</div> <div style="border-bottom: 1px dashed black; height: 1.5em; margin-bottom: 5px;">8.5'</div> </div> <div style="width: 85%;"> <p>Dark brown, fine to coarse SAND and fine GRAVEL, some Silt, trace Roots, Dry (TOPSOIL)</p> <p>Light brown, fine to coarse SAND and GRAVEL, little Silt (FILL)</p> <p>Brown/dark brown, fine to coarse SAND and GRAVEL, little Silt, little Bricks, little Concrete, trace Metal, trace Plastic, Dry (FILL)</p> <p>Brown, fine to coarse SAND and GRAVEL, some bricks, little Silt, little Fly Ash, trace Plastic, trace Metal, trace Wood, trace Glass (FILL)</p> <p>(CONCRETE SLAB)</p> <p>Bottom of exploration 8.5 feet below grade.</p> </div> </div> | E | | |
| 2 | | E | | |
| 3 | | E | | |
| 4 |  | M | 2A | |
| 5 | | E | 2A, 5B | 1 |
| 6 | | E | | 2 |
| 7 | | M | | |
| 8 | | M | | |
| 9 | | D | | 3 |
| 10 | | | | |
| 11 | | | | |
| 12 | | | | |

- REMARKS:**
- Concrete foundations encountered along north and east test pit walls extending from about 4 to 8.5 feet below grade. Horizontal limits of foundations outside of the test pit were not determined.
 - Test pit walls were screened with a 10.6 eV MiniRAE photoionization detector (PID). PID values represent meter response in parts per million (ppm) relative to benzene in air and above background readings. At 5.5 ft depth: West = 1.8 ppm, South = 1.7 ppm. Environmental samples were taken from west test pit wall from 5.5 feet below ground surface.
 - Exploration was terminated at 8.5 feet below ground surface due to bucket refusal on suspected concrete slab. The test pit was backfilled with approximately eight, 12-inch lifts of excavated material compacted with the excavator bucket and observed to be firm and stable.

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----------------------|---|----------------------|---|--|----------------|--------------------|---|------------|-----------|------------|----------------|-----------|---|------------|--------|--|----------|------------|------------|----------------------|----------------------|--|-----------|------------|--------------|--|----------------------|--------------|---------------|------------|--------------|--|----------|--------------|---------------|--|--|--|---|--------------|---|--------|---------|--|-----------------|
| <p>TEST PIT PLAN</p>  | <p style="text-align: center;">LEGEND</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%;">BOULDER COUNT</td> <td style="width: 25%;">PROPORTIONS USED</td> <td style="width: 25%;">ABBREVIATIONS</td> <td style="width: 25%;">EXCAVATION EFFORT</td> </tr> <tr> <td> <table border="0" style="width: 100%;"> <tr> <td>Size Range</td> <td>Letter Designation</td> </tr> <tr> <td>6" - 18"</td> <td>A</td> </tr> <tr> <td>18" - 36"</td> <td>B</td> </tr> <tr> <td>36" and Larger</td> <td>C</td> </tr> </table> </td> <td> <table border="0" style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (L)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table> </td> <td> <table border="0" style="width: 100%;"> <tr> <td>F - Fine</td> </tr> <tr> <td>M - Medium</td> </tr> <tr> <td>C - Coarse</td> </tr> <tr> <td>F/M - Fine to Medium</td> </tr> <tr> <td>F/C - Fine to Coarse</td> </tr> <tr> <td>V - Very</td> </tr> <tr> <td>GR - Gray</td> </tr> <tr> <td>BN - Brown</td> </tr> <tr> <td>YEL - Yellow</td> </tr> </table> </td> <td> <table border="0" style="width: 100%;"> <tr> <td>E - Easy</td> </tr> <tr> <td>M - Moderate</td> </tr> <tr> <td>D - Difficult</td> </tr> </table> </td> </tr> <tr> <td colspan="3"></td> <td style="text-align: center;"> <p>GROUNDWATER</p> <table border="0" style="width: 100%;"> <tr> <td>Elapsed Time</td> <td style="text-align: center;"></td> <td>G.W.L.</td> </tr> <tr> <td>15 mins</td> <td></td> <td>Not Encountered</td> </tr> </table> </td> </tr> </table> | BOULDER COUNT | PROPORTIONS USED | ABBREVIATIONS | EXCAVATION EFFORT | <table border="0" style="width: 100%;"> <tr> <td>Size Range</td> <td>Letter Designation</td> </tr> <tr> <td>6" - 18"</td> <td>A</td> </tr> <tr> <td>18" - 36"</td> <td>B</td> </tr> <tr> <td>36" and Larger</td> <td>C</td> </tr> </table> | Size Range | Letter Designation | 6" - 18" | A | 18" - 36" | B | 36" and Larger | C | <table border="0" style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (L)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table> | TRACE (TR) | 0-10% | LITTLE (L) | 10-20% | SOME (SO) | 20-35% | AND | 35-50% | <table border="0" style="width: 100%;"> <tr> <td>F - Fine</td> </tr> <tr> <td>M - Medium</td> </tr> <tr> <td>C - Coarse</td> </tr> <tr> <td>F/M - Fine to Medium</td> </tr> <tr> <td>F/C - Fine to Coarse</td> </tr> <tr> <td>V - Very</td> </tr> <tr> <td>GR - Gray</td> </tr> <tr> <td>BN - Brown</td> </tr> <tr> <td>YEL - Yellow</td> </tr> </table> | F - Fine | M - Medium | C - Coarse | F/M - Fine to Medium | F/C - Fine to Coarse | V - Very | GR - Gray | BN - Brown | YEL - Yellow | <table border="0" style="width: 100%;"> <tr> <td>E - Easy</td> </tr> <tr> <td>M - Moderate</td> </tr> <tr> <td>D - Difficult</td> </tr> </table> | E - Easy | M - Moderate | D - Difficult | | | | <p>GROUNDWATER</p> <table border="0" style="width: 100%;"> <tr> <td>Elapsed Time</td> <td style="text-align: center;"></td> <td>G.W.L.</td> </tr> <tr> <td>15 mins</td> <td></td> <td>Not Encountered</td> </tr> </table> | Elapsed Time |  | G.W.L. | 15 mins | | Not Encountered |
| BOULDER COUNT | PROPORTIONS USED | ABBREVIATIONS | EXCAVATION EFFORT | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <table border="0" style="width: 100%;"> <tr> <td>Size Range</td> <td>Letter Designation</td> </tr> <tr> <td>6" - 18"</td> <td>A</td> </tr> <tr> <td>18" - 36"</td> <td>B</td> </tr> <tr> <td>36" and Larger</td> <td>C</td> </tr> </table> | Size Range | Letter Designation | 6" - 18" | A | 18" - 36" | B | 36" and Larger | C | <table border="0" style="width: 100%;"> <tr> <td>TRACE (TR)</td> <td>0-10%</td> </tr> <tr> <td>LITTLE (L)</td> <td>10-20%</td> </tr> <tr> <td>SOME (SO)</td> <td>20-35%</td> </tr> <tr> <td>AND</td> <td>35-50%</td> </tr> </table> | TRACE (TR) | 0-10% | LITTLE (L) | 10-20% | SOME (SO) | 20-35% | AND | 35-50% | <table border="0" style="width: 100%;"> <tr> <td>F - Fine</td> </tr> <tr> <td>M - Medium</td> </tr> <tr> <td>C - Coarse</td> </tr> <tr> <td>F/M - Fine to Medium</td> </tr> <tr> <td>F/C - Fine to Coarse</td> </tr> <tr> <td>V - Very</td> </tr> <tr> <td>GR - Gray</td> </tr> <tr> <td>BN - Brown</td> </tr> <tr> <td>YEL - Yellow</td> </tr> </table> | F - Fine | M - Medium | C - Coarse | F/M - Fine to Medium | F/C - Fine to Coarse | V - Very | GR - Gray | BN - Brown | YEL - Yellow | <table border="0" style="width: 100%;"> <tr> <td>E - Easy</td> </tr> <tr> <td>M - Moderate</td> </tr> <tr> <td>D - Difficult</td> </tr> </table> | E - Easy | M - Moderate | D - Difficult | | | | | | | | | | | | | | | | |
| Size Range | Letter Designation | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6" - 18" | A | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 18" - 36" | B | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 36" and Larger | C | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TRACE (TR) | 0-10% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LITTLE (L) | 10-20% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOME (SO) | 20-35% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| AND | 35-50% | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F - Fine | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M - Medium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| C - Coarse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F/M - Fine to Medium | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F/C - Fine to Coarse | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| V - Very | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GR - Gray | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| BN - Brown | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| YEL - Yellow | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| E - Easy | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| M - Moderate | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| D - Difficult | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | <p>GROUNDWATER</p> <table border="0" style="width: 100%;"> <tr> <td>Elapsed Time</td> <td style="text-align: center;"></td> <td>G.W.L.</td> </tr> <tr> <td>15 mins</td> <td></td> <td>Not Encountered</td> </tr> </table> | Elapsed Time |  | G.W.L. | 15 mins | | Not Encountered | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Elapsed Time |  | G.W.L. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 mins | | Not Encountered | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |




Photographic Log

| | | | |
|---|--------------------------|---|-------------------------------------|
| Client Name: F. D. Rich Construction Company | | Site Location: 128-132 Broad Street Stamford, Connecticut | Project No. 05.0046879.01 |
| Photo No. 1 | Date: 11/19/21 |  | |
| Direction Photo Taken: North | | | |
| Description: TP-1 Bricks observed in Fill. Possible Foundation Remnants Sand and Gravel observed beneath Fill. | | | |

| | | |
|--|--------------------------|--|
| Photo No. 2 | Date: 11/19/21 |  |
| Direction Photo Taken: Northwest | | |
| Description: TP-1 Spoil Pile | | |



Photographic Log


| | | | |
|---|--------------------------|---|-------------------------------------|
| Client Name: F. D. Rich Construction Company | | Site Location: 128-132 Broad Street Stamford, Connecticut | Project No. 05.0046879.01 |
| Photo No. 3 | Date: 11/19/21 |  | |
| Direction Photo Taken: Northwest | | | |
| Description: TP-2 Stacked brick and boulders adjacent to neighboring existing building, possibly foundation remnants. Adjacent building foundations were not evident. | | | |

| | | | |
|---|--------------------------|--|--|
| Photo No. 4 | Date: 11/19/21 |  | |
| Direction Photo Taken: East | | | |
| Description: TP-2 spoil pile. | | | |



Photographic Log

| | | |
|--|---|--------------------------------------|
| Client Name: F. D. Rich Construction Company | Site Location: 128-132 Broad Street Stamford, Connecticut | Project No. 05.00468791.01 |
|--|---|--------------------------------------|

| | | |
|---|--------------------------|---|
| Photo No. 5 | Date: 11/19/21 |  |
| Direction Photo Taken: Northeast | | |
| Description: TP-3 Concrete foundations encountered along north and west test pit sidewalls from about 4 to 8.5 feet below ground surface. Test pit refusal on concrete slab at approximately 8.5 feet below ground surface. | | |

| | | |
|--|--------------------------|--|
| Photo No. 6 | Date: 11/19/21 |  |
| Direction Photo Taken: West | | |
| Description: TP-3 Spoil Pile | | |

**Appendix G:
Existing Strom Drain
Conveyance System Capacity**

Note: All capacity calculations are based on mannings equation

Existing Storm Drainage Conveyance System

| Uphill Structure | Downhill Structure | Size (in) | Type | n | Slope (ft/ft) | Existing 25-yr Storm (CFS) | Qfull using Mannings Equation (CFS) |
|------------------|--------------------|-----------|------|-------|---------------|----------------------------|-------------------------------------|
| Ex. SDMH #1 | Ex. SDMH #2 | 24 | RCP | 0.013 | 0.0049 | 21.31 | 15.9 |
| Ex. SDMH #2 | Ex. SDMH #3 | 18 | RCP | 0.013 | 0.0390 | 20.98 | 20.8 |
| Ex. SDMH#3 | Downstream | 24 | RCP | 0.013 | 0.0084 | - | 20.8 |
| Ex. CB#1 | Ex. SDMH#6 | 12 | RCP | 0.013 | 0.006 | 1.09 | 2.8 |
| Ex. SDMH #6 | Downstream | 18 | RCP | 0.013 | 0.004 | 1.09 | 6.7 |

**Appendix H:
Conveyance Computations**

The following is a summary of the computations performed to design the proposed storm drainage system drain sizes. The proposed watershed flows were taken from the results of the HydroCAD storm drainage analysis performed on the site. Refer to Appendix "L" for HydroCAD model input data, computations, and results. Refer to Exhibit "B" for a depiction of the proposed on-site watershed areas. HydroCAD runoff computations are based on the 25-year design storm frequency event. Culvert conveyance computations are based on the Manning's Equation.

Culvert Capacity Summary Table

Maximum pipe capacities were calculated using the Manning equation for full flow conditions. The proposed pipe information, 25-year peak design flows, and corresponding maximum capacities are summarized in the following table. Refer to the Development Plan for pipe and structure locations. All pipes have been sized to convey the flow rates for at least the 25-year design storm frequency event.

| Uphill Structure | Downhill Structure | Diameter (in) | Type | Roughness (n) | Slope (ft/ft) | 25-yr Storm (CFS) | Qfull using Mannings Equation (CFS) |
|------------------|--------------------|---------------|------|---------------|---------------|-------------------|-------------------------------------|
| JB#2 | JB#1 | 12 | PVC | 0.011 | 0.006 | 2.30 | 3.27 |
| JB#1 | Double CB | 12 | PVC | 0.011 | 0.005 | 2.30 | 2.99 |
| Double CB | SDMH#5 | 18 | PVC | 0.011 | 0.005 | 12.82 | 17.60 |
| SDMH#5 | SDMH#4 | 18 | PVC | 0.011 | 0.005 | 12.82 | 17.60 |
| SDMH#4 | SDMH#3 | 18 | PVC | 0.011 | 0.005 | 16.97 | 17.60 |
| Ex. SDMH | SDMH#3 | 24 | PVC | 0.011 | 0.005 | 5.22 | 18.96 |
| SDMH#3 | SDMH#2 | 18 | PVC | 0.011 | 0.005 | 21.93 | 17.60 |
| SDMH#2 | SDMH#1 | 18 | PVC | 0.011 | 0.005 | 21.93 | 17.60 |
| SDMH#1 | Ex. SDMH#2 | 18 | PVC | 0.011 | 0.005 | 20.46 | 17.60 |
| Ex. SDMH# | Ex. SDMH#3 | 18 | PVC | 0.011 | 0.039 | 20.87 | 24.58 |
| CB#1 | JB#3 | 12 | PVC | 0.011 | 0.010 | 0.05 | 4.22 |
| SDMH#1 | JB#3 | 8 | PVC | 0.011 | 0.005 | 1.54 | 1.01 |
| JB#3 | Ex. SDMH#6 | 12 | PVC | 0.011 | 0.010 | 1.59 | 4.22 |

**Appendix I:
Stage-Area-Storage Tables**

Stage-Area-Storage for Pond 5P: Ex. SDMH #1 / POC A

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---------------------|-------------------------|---------------------|-------------------------|
| 13.20 | 0 | 15.80 | 186 |
| 13.25 | 1 | 15.85 | 245 |
| 13.30 | 1 | 15.90 | 326 |
| 13.35 | 2 | 15.95 | 432 |
| 13.40 | 3 | 16.00 | 564 |
| 13.45 | 3 | 16.05 | 729 |
| 13.50 | 4 | 16.10 | 930 |
| 13.55 | 4 | 16.15 | 1,171 |
| 13.60 | 5 | 16.20 | 1,456 |
| 13.65 | 6 | 16.25 | 1,798 |
| 13.70 | 6 | 16.30 | 2,210 |
| 13.75 | 7 | 16.35 | 2,690 |
| 13.80 | 8 | 16.40 | 3,232 |
| 13.85 | 8 | 16.45 | 3,843 |
| 13.90 | 9 | 16.50 | 4,530 |
| 13.95 | 9 | 16.55 | 5,290 |
| 14.00 | 10 | 16.60 | 6,121 |
| 14.05 | 11 | 16.65 | 7,027 |
| 14.10 | 11 | 16.70 | 8,011 |
| 14.15 | 12 | 16.75 | 9,063 |
| 14.20 | 13 | 16.80 | 10,174 |
| 14.25 | 13 | 16.85 | 10,174 |
| 14.30 | 14 | 16.90 | 10,175 |
| 14.35 | 14 | 16.95 | 10,175 |
| 14.40 | 15 | 17.00 | 10,175 |
| 14.45 | 16 | 17.05 | 10,175 |
| 14.50 | 16 | 17.10 | 10,175 |
| 14.55 | 17 | | |
| 14.60 | 18 | | |
| 14.65 | 18 | | |
| 14.70 | 19 | | |
| 14.75 | 19 | | |
| 14.80 | 20 | | |
| 14.85 | 21 | | |
| 14.90 | 21 | | |
| 14.95 | 22 | | |
| 15.00 | 23 | | |
| 15.05 | 23 | | |
| 15.10 | 24 | | |
| 15.15 | 25 | | |
| 15.20 | 25 | | |
| 15.25 | 26 | | |
| 15.30 | 26 | | |
| 15.35 | 27 | | |
| 15.40 | 28 | | |
| 15.45 | 29 | | |
| 15.50 | 32 | | |
| 15.55 | 39 | | |
| 15.60 | 54 | | |
| 15.65 | 76 | | |
| 15.70 | 105 | | |
| 15.75 | 141 | | |

Stage-Area-Storage for Pond 10P: Parking Lot

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---------------------|-------------------------|---------------------|-------------------------|
| 13.40 | 0 | 16.00 | 564 |
| 13.45 | 1 | 16.05 | 723 |
| 13.50 | 2 | 16.10 | 915 |
| 13.55 | 2 | 16.15 | 1,144 |
| 13.60 | 3 | 16.20 | 1,412 |
| 13.65 | 4 | 16.25 | 1,733 |
| 13.70 | 5 | 16.30 | 2,119 |
| 13.75 | 6 | 16.35 | 2,568 |
| 13.80 | 6 | 16.40 | 3,071 |
| 13.85 | 7 | 16.45 | 3,636 |
| 13.90 | 8 | 16.50 | 4,268 |
| 13.95 | 9 | 16.55 | 4,959 |
| 14.00 | 10 | 16.60 | 5,700 |
| 14.05 | 10 | 16.65 | 6,493 |
| 14.10 | 11 | 16.70 | 7,337 |
| 14.15 | 12 | 16.75 | 8,237 |
| 14.20 | 13 | 16.80 | 9,197 |
| 14.25 | 14 | 16.85 | 9,197 |
| 14.30 | 14 | 16.90 | 9,197 |
| 14.35 | 15 | 16.95 | 9,197 |
| 14.40 | 16 | 17.00 | 9,197 |
| 14.45 | 17 | 17.05 | 9,197 |
| 14.50 | 18 | 17.10 | 9,197 |
| 14.55 | 18 | | |
| 14.60 | 19 | | |
| 14.65 | 20 | | |
| 14.70 | 21 | | |
| 14.75 | 22 | | |
| 14.80 | 22 | | |
| 14.85 | 23 | | |
| 14.90 | 24 | | |
| 14.95 | 25 | | |
| 15.00 | 26 | | |
| 15.05 | 26 | | |
| 15.10 | 27 | | |
| 15.15 | 28 | | |
| 15.20 | 29 | | |
| 15.25 | 30 | | |
| 15.30 | 30 | | |
| 15.35 | 31 | | |
| 15.40 | 32 | | |
| 15.45 | 34 | | |
| 15.50 | 37 | | |
| 15.55 | 44 | | |
| 15.60 | 59 | | |
| 15.65 | 82 | | |
| 15.70 | 110 | | |
| 15.75 | 145 | | |
| 15.80 | 190 | | |
| 15.85 | 249 | | |
| 15.90 | 329 | | |
| 15.95 | 433 | | |

Stage-Area-Storage for Pond 17P: Retention System#1

| Elevation (feet) | Storage (cubic-feet) | Elevation (feet) | Storage (cubic-feet) |
|---------------------|-------------------------|---------------------|-------------------------|
| 9.20 | 0 | 14.40 | 7,248 |
| 9.30 | 78 | 14.50 | 7,395 |
| 9.40 | 155 | 14.60 | 7,542 |
| 9.50 | 233 | 14.70 | 7,689 |
| 9.60 | 310 | 14.80 | 7,706 |
| 9.70 | 388 | 14.90 | 7,723 |
| 9.80 | 534 | 15.00 | 7,741 |
| 9.90 | 679 | 15.10 | 7,758 |
| 10.00 | 825 | 15.20 | 7,776 |
| 10.10 | 970 | 15.30 | 7,793 |
| 10.20 | 1,116 | 15.40 | 7,805 |
| 10.30 | 1,262 | 15.50 | 7,806 |
| 10.40 | 1,407 | 15.60 | 7,808 |
| 10.50 | 1,553 | 15.70 | 7,809 |
| 10.60 | 1,698 | 15.80 | 7,810 |
| 10.70 | 1,844 | 15.90 | 7,811 |
| 10.80 | 1,989 | 16.00 | 7,813 |
| 10.90 | 2,135 | 16.10 | 7,814 |
| 11.00 | 2,281 | 16.20 | 7,815 |
| 11.10 | 2,426 | 16.30 | 7,816 |
| 11.20 | 2,572 | 16.40 | 7,818 |
| 11.30 | 2,717 | 16.50 | 7,819 |
| 11.40 | 2,863 | 16.60 | 7,820 |
| 11.50 | 3,009 | 16.70 | 7,821 |
| 11.60 | 3,154 | 16.80 | 7,823 |
| 11.70 | 3,300 | 16.90 | 7,824 |
| 11.80 | 3,445 | 17.00 | 7,825 |
| 11.90 | 3,591 | | |
| 12.00 | 3,736 | | |
| 12.10 | 3,882 | | |
| 12.20 | 4,028 | | |
| 12.30 | 4,173 | | |
| 12.40 | 4,319 | | |
| 12.50 | 4,464 | | |
| 12.60 | 4,610 | | |
| 12.70 | 4,756 | | |
| 12.80 | 4,901 | | |
| 12.90 | 5,047 | | |
| 13.00 | 5,192 | | |
| 13.10 | 5,339 | | |
| 13.20 | 5,486 | | |
| 13.30 | 5,633 | | |
| 13.40 | 5,780 | | |
| 13.50 | 5,926 | | |
| 13.60 | 6,073 | | |
| 13.70 | 6,220 | | |
| 13.80 | 6,367 | | |
| 13.90 | 6,514 | | |
| 14.00 | 6,661 | | |
| 14.10 | 6,808 | | |
| 14.20 | 6,954 | | |
| 14.30 | 7,101 | | |

**Appendix J:
HydroCAD Summary—Peak Flows and Volumes**

HydroCAD Summary
TR Broad II, LLC
128 Broad Street Stamford, CT
Project ID: 21UT

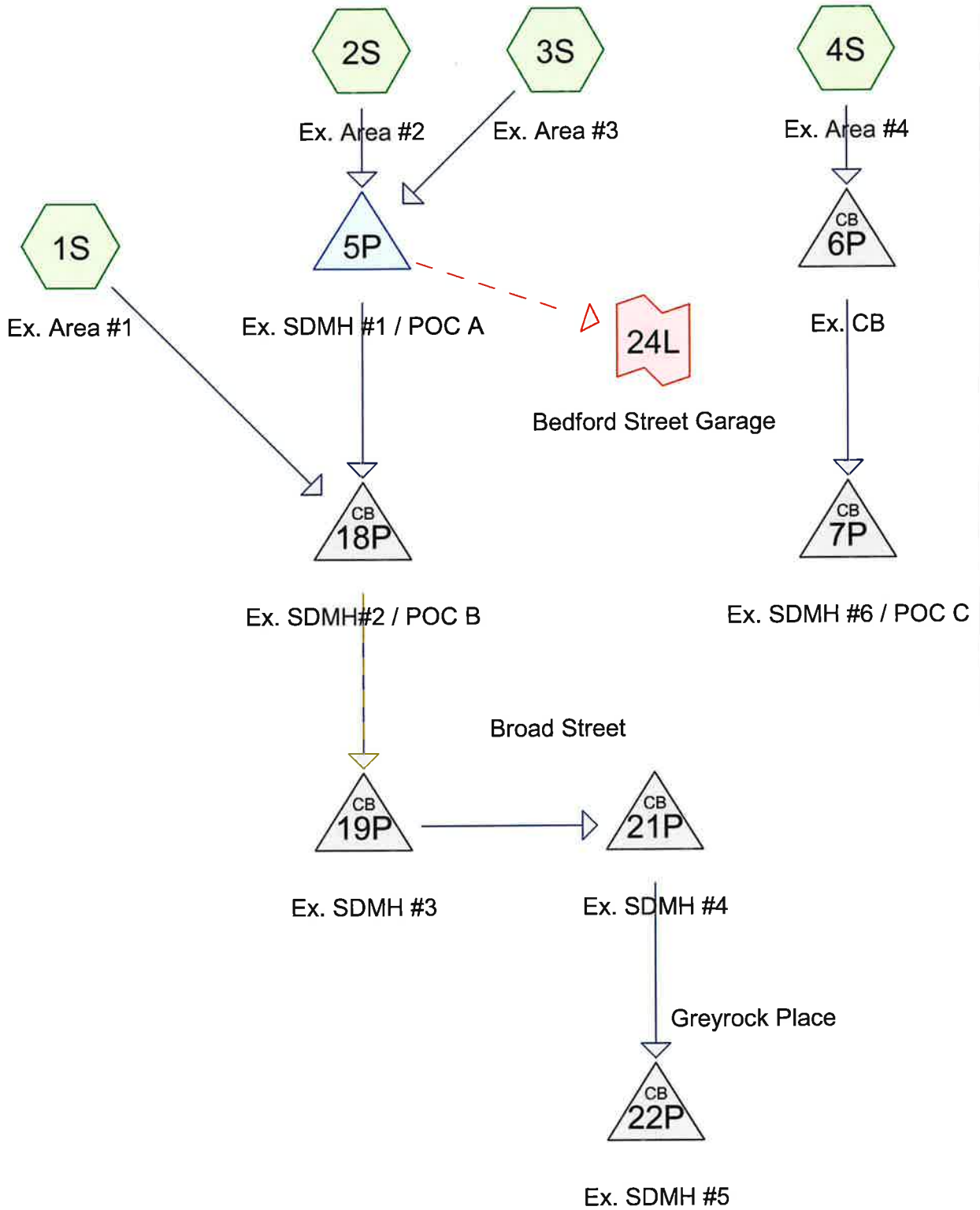
| POC | 1 Year Storm | | | | 2 Year Storm | | | | 5 Year Storm | | | | 10 Year Storm | | | | 25 Year Storm | | | | 50 Year Storm | | | | 100 year Storm | | | |
|----------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|--------------------------------------|-------------------------------------|-------------------------|--------------------------|
| | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) | q _{ex} (ft ³ /s) | q _p (ft ³ /s) | Δq (ft ³ /s) | %Δq (ft ³ /s) |
| A | 9.65 | 8.76 | -0.89 | -9% | 11.43 | 10.64 | -0.79 | -7% | 15.20 | 13.72 | -1.48 | -10% | 18.01 | 18.88 | 0.87 | 5% | 21.31 | 21.93 | 0.62 | 3% | 23.42 | 20.80 | -2.62 | -11% | 25.31 | 33.72 | 8.41 | 33% |
| B | 10.02 | 8.90 | -1.12 | -11% | 11.91 | 10.67 | -1.24 | -10% | 15.91 | 13.22 | -2.69 | -17% | 18.88 | 17.86 | -1.02 | -5% | 20.98 | 20.87 | -0.11 | -1% | 21.26 | 19.79 | -1.47 | -7% | 21.32 | 31.80 | 10.48 | 49% |
| C | 0.31 | 0.04 | -0.27 | -87% | 0.43 | 0.18 | -0.25 | -58% | 0.65 | 0.82 | 0.17 | 26% | 0.83 | 1.28 | 0.45 | 54% | 1.09 | 1.59 | 0.50 | 46% | 1.29 | 1.54 | 0.25 | 19% | 1.50 | 2.04 | 0.54 | 36% |
| Parking Garage | 0.00 | 0.00 | 0.00 | 0% | 0.00 | 0.00 | 0.00 | 0% | 0.00 | 0.00 | 0.00 | 0% | 0.00 | 0.00 | 0.00 | 0% | 1.30 | 0.73 | -0.57 | - | 3.87 | 3.25 | -0.62 | -16% | 7.99 | 9.90 | 1.91 | 24% |

Table 1: Comparison of Existing and Proposed Peak Flow Rates for all Points of Concern.

| POC | 1 Year Storm | | | | 2 Year Storm | | | | 5 Year Storm | | | | 10 Year Storm | | | | 25 Year Storm | | | | 50 Year Storm | | | | 100 Year Storm | | | |
|----------------|----------------------|---------------------|---------|----------|----------------------|---------------------|---------|----------|----------------------|---------------------|---------|----------|----------------------|---------------------|---------|----------|----------------------|---------------------|---------|----------|----------------------|---------------------|---------|----------|----------------------|---------------------|---------|----------|
| | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) | v _{ex} (cf) | v _p (cf) | Δv (cf) | %Δv (cf) |
| A | 38,300 | 36,837 | -1,463 | -4% | 47,066 | 46,486 | -580 | -1% | 61,709 | 62,381 | 672 | 1% | 73,804 | 75,481 | 1,677 | 2% | 90,293 | 93,553 | 3,260 | 4% | 102,445 | 105,598 | 3,153 | 3% | 115,658 | 115,447 | -211 | 0% |
| B | 39,553 | 37,450 | -2,103 | -5% | 48,695 | 47,181 | -1,514 | -3% | 63,974 | 63,004 | -970 | -2% | 76,601 | 75,553 | -1,048 | -1% | 93,174 | 92,894 | -280 | 0% | 103,996 | 104,583 | 587 | 1% | 114,845 | 113,954 | -891 | -1% |
| C | 1,239 | 79 | -1,160 | -94% | 1,723 | 154 | -1,569 | -91% | 2,576 | 484 | -2,092 | -81% | 3,313 | 1,247 | -2,066 | -62% | 4,375 | 2,273 | -2,102 | -48% | 5,173 | 2,847 | -2,326 | -45% | 6,049 | 3,560 | -2,489 | -41% |
| Parking Garage | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% | 0 | 0 | 0 | 0% | 666 | 183 | -483 | - | 2,551 | 1,860 | -691 | -27% | 5,518 | 6,461 | 943 | 17% |

Table 2: Comparison of Existing and Proposed Runoff Volumes for all Points of Concern.

**Appendix K:
HydroCAD Analysis—Existing Conditions**



Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--|---|
| Subcatchment 1S: Ex. Area #1 | Runoff Area=7,923 sf 51.43% Impervious Runoff Depth=1.90" Flow Length=181' Tc=5.8 min CN=89.3 Runoff=0.40 cfs 1,253 cf |
| Subcatchment 2S: Ex. Area #2 | Runoff Area=132,315 sf 97.01% Impervious Runoff Depth=2.68" Tc=10.0 min CN=97.5 Runoff=7.56 cfs 29,584 cf |
| Subcatchment 3S: Ex. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=2.74" Tc=5.0 min CN=98.0 Runoff=2.58 cfs 8,717 cf |
| Subcatchment 4S: Ex. Area #4 | Runoff Area=12,053 sf 0.54% Impervious Runoff Depth=1.23" Flow Length=119' Tc=13.7 min CN=80.1 Runoff=0.31 cfs 1,239 cf |
| Pond 5P: Ex. SDMH #1 / POC A | Peak Elev=15.11' Storage=24 cf Inflow=9.67 cfs 38,300 cf Primary=9.65 cfs 38,300 cf Secondary=0.00 cfs 0 cf Outflow=9.65 cfs 38,300 cf |
| Pond 6P: Ex. CB | Peak Elev=12.70' Inflow=0.31 cfs 1,239 cf 12.0" Round Culvert n=0.013 L=98.0' S=0.0061 '/' Outflow=0.31 cfs 1,239 cf |
| Pond 7P: Ex. SDMH #6 / POC C | Peak Elev=11.99' Inflow=0.31 cfs 1,239 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=0.31 cfs 1,239 cf |
| Pond 18P: Ex. SDMH#2 / POC B | Peak Elev=14.54' Inflow=10.02 cfs 39,553 cf Primary=10.02 cfs 39,553 cf Secondary=0.00 cfs 0 cf Tertiary=0.00 cfs 0 cf Outflow=10.02 cfs 39,553 cf |
| Pond 19P: Ex. SDMH #3 | Peak Elev=12.46' Inflow=10.02 cfs 39,553 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=10.02 cfs 39,553 cf |
| Pond 21P: Ex. SDMH #4 | Peak Elev=10.04' Inflow=10.02 cfs 39,553 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=10.02 cfs 39,553 cf |
| Pond 22P: Ex. SDMH #5 | Peak Elev=9.25' Inflow=10.02 cfs 39,553 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=10.02 cfs 39,553 cf |
| Link 24L: Bedford Street Garage | Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf |

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Ex. Area #1 Runoff Area=7,923 sf 51.43% Impervious Runoff Depth=2.47"
Flow Length=181' Tc=5.8 min CN=89.3 Runoff=0.52 cfs 1,629 cf

Subcatchment 2S: Ex. Area #2 Runoff Area=132,315 sf 97.01% Impervious Runoff Depth=3.30"
Tc=10.0 min CN=97.5 Runoff=9.21 cfs 36,383 cf

Subcatchment 3S: Ex. Area #3 Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=3.36"
Tc=5.0 min CN=98.0 Runoff=3.13 cfs 10,683 cf

Subcatchment 4S: Ex. Area #4 Runoff Area=12,053 sf 0.54% Impervious Runoff Depth=1.72"
Flow Length=119' Tc=13.7 min CN=80.1 Runoff=0.43 cfs 1,723 cf

Pond 5P: Ex. SDMH #1 / POC A Peak Elev=15.65' Storage=76 cf Inflow=11.76 cfs 47,066 cf
Primary=11.43 cfs 47,066 cf Secondary=0.00 cfs 0 cf Outflow=11.43 cfs 47,066 cf

Pond 6P: Ex. CB Peak Elev=12.76' Inflow=0.43 cfs 1,723 cf
12.0" Round Culvert n=0.013 L=98.0' S=0.0061 '/' Outflow=0.43 cfs 1,723 cf

Pond 7P: Ex. SDMH #6 / POC C Peak Elev=12.05' Inflow=0.43 cfs 1,723 cf
18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=0.43 cfs 1,723 cf

Pond 18P: Ex. SDMH#2 / POC B Peak Elev=15.11' Inflow=11.91 cfs 48,695 cf
Primary=11.91 cfs 48,695 cf Secondary=0.00 cfs 0 cf Tertiary=0.00 cfs 0 cf Outflow=11.91 cfs 48,695 cf

Pond 19P: Ex. SDMH #3 Peak Elev=12.65' Inflow=11.91 cfs 48,695 cf
24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=11.91 cfs 48,695 cf

Pond 21P: Ex. SDMH #4 Peak Elev=10.26' Inflow=11.91 cfs 48,695 cf
24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=11.91 cfs 48,695 cf

Pond 22P: Ex. SDMH #5 Peak Elev=9.43' Inflow=11.91 cfs 48,695 cf
24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=11.91 cfs 48,695 cf

Link 24L: Bedford Street Garage Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--|---|
| Subcatchment 1S: Ex. Area #1 | Runoff Area=7,923 sf 51.43% Impervious Runoff Depth=3.43" Flow Length=181' Tc=5.8 min CN=89.3 Runoff=0.71 cfs 2,265 cf |
| Subcatchment 2S: Ex. Area #2 | Runoff Area=132,315 sf 97.01% Impervious Runoff Depth=4.32" Tc=10.0 min CN=97.5 Runoff=11.90 cfs 47,589 cf |
| Subcatchment 3S: Ex. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=4.37" Tc=5.0 min CN=98.0 Runoff=4.03 cfs 13,922 cf |
| Subcatchment 4S: Ex. Area #4 | Runoff Area=12,053 sf 0.54% Impervious Runoff Depth=2.56" Flow Length=119' Tc=13.7 min CN=80.1 Runoff=0.65 cfs 2,576 cf |
| Pond 5P: Ex. SDMH #1 / POC A | Peak Elev=16.27' Storage=1,930 cf Inflow=15.19 cfs 61,511 cf Primary=18.90 cfs 61,709 cf Secondary=0.00 cfs 0 cf Outflow=18.90 cfs 61,709 cf |
| Pond 6P: Ex. CB | Peak Elev=12.85' Inflow=0.65 cfs 2,576 cf 12.0" Round Culvert n=0.013 L=98.0' S=0.0061 '/' Outflow=0.65 cfs 2,576 cf |
| Pond 7P: Ex. SDMH #6 / POC C | Peak Elev=12.13' Inflow=0.65 cfs 2,576 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=0.65 cfs 2,576 cf |
| Pond 18P: Ex. SDMH#2 / POC B | Peak Elev=16.32' Inflow=19.21 cfs 63,974 cf Primary=15.15 cfs 61,911 cf Secondary=4.06 cfs 2,063 cf Tertiary=0.00 cfs 0 cf Outflow=19.21 cfs 63,974 cf |
| Pond 19P: Ex. SDMH #3 | Peak Elev=13.61' Inflow=19.21 cfs 63,974 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=19.21 cfs 63,974 cf |
| Pond 21P: Ex. SDMH #4 | Peak Elev=11.12' Inflow=19.21 cfs 63,974 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=19.21 cfs 63,974 cf |
| Pond 22P: Ex. SDMH #5 | Peak Elev=10.41' Inflow=19.21 cfs 63,974 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=19.21 cfs 63,974 cf |
| Link 24L: Bedford Street Garage | Inflow=0.00 cfs 0 cf Primary=0.00 cfs 0 cf |

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Ex. Area #1 Runoff Area=7,923 sf 51.43% Impervious Runoff Depth=4.24"
Flow Length=181' Tc=5.8 min CN=89.3 Runoff=0.87 cfs 2,797 cf

Subcatchment 2S: Ex. Area #2 Runoff Area=132,315 sf 97.01% Impervious Runoff Depth=5.15"
Tc=10.0 min CN=97.5 Runoff=14.11 cfs 56,829 cf

Subcatchment 3S: Ex. Area #3 Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=5.21"
Tc=5.0 min CN=98.0 Runoff=4.78 cfs 16,592 cf

Subcatchment 4S: Ex. Area #4 Runoff Area=12,053 sf 0.54% Impervious Runoff Depth=3.30"
Flow Length=119' Tc=13.7 min CN=80.1 Runoff=0.83 cfs 3,313 cf

Pond 5P: Ex. SDMH #1 / POC A Peak Elev=16.42' Storage=3,436 cf Inflow=18.01 cfs 73,420 cf
Primary=19.76 cfs 73,804 cf Secondary=0.00 cfs 0 cf Outflow=19.76 cfs 73,804 cf

Pond 6P: Ex. CB Peak Elev=12.92' Inflow=0.83 cfs 3,313 cf
12.0" Round Culvert n=0.013 L=98.0' S=0.0061 '/' Outflow=0.83 cfs 3,313 cf

Pond 7P: Ex. SDMH #6 / POC C Peak Elev=12.19' Inflow=0.83 cfs 3,313 cf
18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=0.83 cfs 3,313 cf

Pond 18P: Ex. SDMH#2 / POC B Peak Elev=16.36' Inflow=20.20 cfs 76,601 cf
Primary=15.25 cfs 72,897 cf Secondary=4.96 cfs 3,704 cf Tertiary=0.00 cfs 0 cf Outflow=20.20 cfs 76,601 cf

Pond 19P: Ex. SDMH #3 Peak Elev=14.02' Inflow=20.20 cfs 76,601 cf
24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=20.20 cfs 76,601 cf

Pond 21P: Ex. SDMH #4 Peak Elev=11.26' Inflow=20.20 cfs 76,601 cf
24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=20.20 cfs 76,601 cf

Pond 22P: Ex. SDMH #5 Peak Elev=10.58' Inflow=20.20 cfs 76,601 cf
24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=20.20 cfs 76,601 cf

Link 24L: Bedford Street Garage Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

128-136 Broad Street 10-3-22

Type III 24-hr 25-Year Rainfall=6.62"

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Summary for Subcatchment 1S: Ex. Area #1

Runoff = 1.09 cfs @ 12.08 hrs, Volume= 3,547 cf, Depth= 5.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------------|
| 3,848 | 80.0 | >75% Grass cover, Good, HSG D |
| 4,075 | 98.0 | Paved parking, HSG D |
| 7,923 | 89.3 | Weighted Average |
| 3,848 | | 48.57% Pervious Area |
| 4,075 | | 51.43% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 4.8 | 48 | 0.0270 | 0.17 | | Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.30" |
| 0.1 | 10 | 0.0400 | 1.16 | | Sheet Flow, Paved Smooth surfaces n= 0.011 P2= 3.30" |
| 0.6 | 58 | 0.0070 | 1.70 | | Shallow Concentrated Flow, Gutter Paved Kv= 20.3 fps |
| 0.3 | 65 | 0.0060 | 3.51 | 2.76 | Pipe Channel, 12" RCP 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 |
| 5.8 | 181 | Total | | | |

Summary for Subcatchment 2S: Ex. Area #2

Runoff = 17.18 cfs @ 12.13 hrs, Volume= 69,707 cf, Depth= 6.32"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------------|
| 3,953 | 80.0 | >75% Grass cover, Good, HSG D |
| 128,362 | 98.0 | Paved parking, HSG D |
| 132,315 | 97.5 | Weighted Average |
| 3,953 | | 2.99% Pervious Area |
| 128,362 | | 97.01% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|----------------------|
| 10.0 | | | | | Direct Entry, |

Summary for Subcatchment 3S: Ex. Area #3

Runoff = 5.81 cfs @ 12.07 hrs, Volume= 20,312 cf, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------|
| 38,197 | 98.0 | Roofs, HSG D |
| 38,197 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0 | | | | | Direct Entry, |

Summary for Subcatchment 4S: Ex. Area #4

Runoff = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf, Depth= 4.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------------|
| 65 | 98.0 | Paved parking, HSG D |
| 11,988 | 80.0 | >75% Grass cover, Good, HSG D |
| 12,053 | 80.1 | Weighted Average |
| 11,988 | | 99.46% Pervious Area |
| 65 | | 0.54% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|--|
| 4.4 | 24 | 0.0083 | 0.09 | | Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.30" |
| 9.3 | 95 | 0.0200 | 0.17 | | Sheet Flow, Grass Grass: Short n= 0.150 P2= 3.30" |
| 13.7 | 119 | Total | | | |

Summary for Pond 5P: Ex. SDMH #1 / POC A

Inflow Area = 170,512 sf, 97.68% Impervious, Inflow Depth = 6.34" for 25-Year event
 Inflow = 21.93 cfs @ 12.12 hrs, Volume= 90,019 cf
 Outflow = 21.31 cfs @ 12.24 hrs, Volume= 90,293 cf, Atten= 3%, Lag= 7.5 min
 Primary = 20.21 cfs @ 12.16 hrs, Volume= 89,627 cf
 Secondary = 1.30 cfs @ 12.25 hrs, Volume= 666 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.55' @ 12.25 hrs Surf.Area= 16,021 sf Storage= 5,357 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 1.5 min (750.5 - 749.0)

128-136 Broad Street 10-3-22

Type III 24-hr 25-Year Rainfall=6.62"

Prepared by RVDI

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| Volume | Invert | Avail.Storage | Storage Description |
|--------|--------|---------------|---|
| #1 | 13.20' | 46 cf | 4.00'D x 3.70'H Mahole |
| #2 | 15.40' | 10,128 cf | Trench Drain / Double CB (Irregular) Listed below (Recalc) |
| | | 10,175 cf | Total Available Storage |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|------------------|-------------------|---------------|------------------------|------------------------|------------------|
| 15.40 | 8 | 12.0 | 0 | 0 | 8 |
| 15.50 | 72 | 36.0 | 3 | 3 | 100 |
| 15.60 | 378 | 130.0 | 20 | 24 | 1,341 |
| 15.70 | 620 | 166.0 | 49 | 73 | 2,190 |
| 15.80 | 986 | 212.0 | 80 | 153 | 3,573 |
| 15.90 | 1,843 | 326.0 | 139 | 292 | 8,454 |
| 16.00 | 2,941 | 396.0 | 237 | 529 | 12,476 |
| 16.10 | 4,386 | 455.0 | 364 | 893 | 16,472 |
| 16.20 | 6,169 | 545.0 | 525 | 1,418 | 23,634 |
| 16.30 | 8,980 | 684.0 | 753 | 2,172 | 37,228 |
| 16.40 | 11,481 | 725.0 | 1,020 | 3,192 | 41,826 |
| 16.50 | 14,507 | 781.0 | 1,296 | 4,488 | 48,538 |
| 16.60 | 17,337 | 847.0 | 1,590 | 6,079 | 57,089 |
| 16.70 | 20,473 | 796.0 | 1,888 | 7,967 | 63,757 |
| 16.80 | 22,778 | 818.0 | 2,162 | 10,128 | 66,584 |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|--|
| #1 | Primary | 13.20' | 24.0" Round RCP_Round 24" L= 103.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.20' / 12.70' S= 0.0049 ' /' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 3.14 sf |
| #2 | Secondary | 16.45' | Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 9.10 17.80 26.65 36.06 43.97 53.90 62.08 71.77 Height (feet) 0.69 0.26 0.14 0.10 0.00 0.02 0.24 0.41 0.69 |

Primary OutFlow Max=6.50 cfs @ 12.16 hrs HW=16.49' TW=16.30' (Dynamic Tailwater)
 ↑1=RCP_Round 24" (Outlet Controls 6.50 cfs @ 2.07 fps)

Secondary OutFlow Max=1.25 cfs @ 12.25 hrs HW=16.55' TW=0.00' (Dynamic Tailwater)
 ↑2=Asymmetrical Weir (Weir Controls 1.25 cfs @ 0.60 fps)

Summary for Pond 6P: Ex. CB

Inflow Area = 12,053 sf, 0.54% Impervious, Inflow Depth = 4.36" for 25-Year event
 Inflow = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf
 Outflow = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 13.01' @ 12.19 hrs
 Flood Elev= 15.10'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 12.40' | 12.0" Round RCP_Round 12" L= 98.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.40' / 11.80' S= 0.0061 '/ Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 0.79 sf |

Primary OutFlow Max=1.08 cfs @ 12.19 hrs HW=13.00' TW=12.26' (Dynamic Tailwater)
 ↳1=RCP_Round 12" (Outlet Controls 1.08 cfs @ 3.14 fps)

Summary for Pond 7P: Ex. SDMH #6 / POC C

Inflow Area = 12,053 sf, 0.54% Impervious, Inflow Depth = 4.36" for 25-Year event
 Inflow = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf
 Outflow = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.09 cfs @ 12.19 hrs, Volume= 4,375 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 12.26' @ 12.19 hrs
 Flood Elev= 17.20'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 11.70' | 18.0" Round 18" RCP L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.70' / 11.30' S= 0.0040 '/ Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |

Primary OutFlow Max=1.09 cfs @ 12.19 hrs HW=12.26' (Free Discharge)
 ↳1=18" RCP (Barrel Controls 1.09 cfs @ 2.69 fps)

Summary for Pond 18P: Ex. SDMH#2 / POC B

Inflow Area = 178,435 sf, 95.63% Impervious, Inflow Depth = 6.27" for 25-Year event
 Inflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf
 Outflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf, Atten= 0%, Lag= 0.0 min
 Primary = 15.32 cfs @ 12.16 hrs, Volume= 88,200 cf
 Secondary = 5.67 cfs @ 12.16 hrs, Volume= 4,973 cf
 Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.40' @ 12.16 hrs
 Flood Elev= 16.70'

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|--|
| #1 | Primary | 12.40' | 18.0" Round RCP_Round 18" L= 30.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.40' / 11.20' S= 0.0400 '/ Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |
| #2 | Secondary | 16.10' | 24.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Tertiary | 16.40' | 24.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |

Primary OutFlow Max=12.61 cfs @ 12.16 hrs HW=16.27' TW=14.08' (Dynamic Tailwater)
 ↑1=RCP_Round 18" (Inlet Controls 12.61 cfs @ 7.14 fps)

Secondary OutFlow Max=5.67 cfs @ 12.16 hrs HW=16.38' TW=14.19' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Weir Controls 5.67 cfs @ 1.72 fps)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=12.40' TW=11.00' (Dynamic Tailwater)
 ↑3=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 19P: Ex. SDMH #3

Inflow Area = 178,435 sf, 95.63% Impervious, Inflow Depth = 6.27" for 25-Year event
 Inflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf
 Outflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 14.41' @ 12.24 hrs
 Flood Elev= 16.70'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 11.00' | 24.0" Round RCP_Round 24" L= 303.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.00' / 8.40' S= 0.0086 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=18.25 cfs @ 12.16 hrs HW=14.12' TW=11.35' (Dynamic Tailwater)
 ↑1=RCP_Round 24" (Outlet Controls 18.25 cfs @ 5.81 fps)

Summary for Pond 21P: Ex. SDMH #4

Inflow Area = 178,435 sf, 95.63% Impervious, Inflow Depth = 6.27" for 25-Year event
 Inflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf
 Outflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 11.38' @ 12.17 hrs
 Flood Elev= 16.10'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 8.40' | 24.0" Round RCP_Round 24" L= 62.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 8.40' / 7.80' S= 0.0097 ' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=12.71 cfs @ 12.16 hrs HW=11.35' TW=10.64' (Dynamic Tailwater)
 ↑1=RCP_Round 24" (Inlet Controls 12.71 cfs @ 4.05 fps)

Summary for Pond 22P: Ex. SDMH #5

Inflow Area = 178,435 sf, 95.63% Impervious, Inflow Depth = 6.27" for 25-Year event
 Inflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf
 Outflow = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.98 cfs @ 12.16 hrs, Volume= 93,174 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 10.72' @ 12.16 hrs
 Flood Elev= 16.50'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 7.80' | 24.0" Round RCP_Round 24" L= 78.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 7.80' / 6.45' S= 0.0173 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=20.54 cfs @ 12.16 hrs HW=10.64' (Free Discharge)
 ↳1=RCP_Round 24" (Inlet Controls 20.54 cfs @ 6.54 fps)

Summary for Link 24L: Bedford Street Garage

Inflow = 1.30 cfs @ 12.25 hrs, Volume= 666 cf
 Primary = 1.30 cfs @ 12.25 hrs, Volume= 666 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--|---|
| Subcatchment 1S: Ex. Area #1 | Runoff Area=7,923 sf 51.43% Impervious Runoff Depth=6.21" Flow Length=181' Tc=5.8 min CN=89.3 Runoff=1.25 cfs 4,102 cf |
| Subcatchment 2S: Ex. Area #2 | Runoff Area=132,315 sf 97.01% Impervious Runoff Depth=7.18" Tc=10.0 min CN=97.5 Runoff=19.43 cfs 79,178 cf |
| Subcatchment 3S: Ex. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=7.24" Tc=5.0 min CN=98.0 Runoff=6.57 cfs 23,047 cf |
| Subcatchment 4S: Ex. Area #4 | Runoff Area=12,053 sf 0.54% Impervious Runoff Depth=5.15" Flow Length=119' Tc=13.7 min CN=80.1 Runoff=1.29 cfs 5,173 cf |
| Pond 5P: Ex. SDMH #1 / POC A | Peak Elev=16.62' Storage=6,493 cf Inflow=24.80 cfs 102,225 cf Primary=20.63 cfs 99,894 cf Secondary=3.87 cfs 2,551 cf Outflow=23.42 cfs 102,445 cf |
| Pond 6P: Ex. CB | Peak Elev=13.07' Inflow=1.29 cfs 5,173 cf 12.0" Round Culvert n=0.013 L=98.0' S=0.0061 '/' Outflow=1.29 cfs 5,173 cf |
| Pond 7P: Ex. SDMH #6 / POC C | Peak Elev=12.31' Inflow=1.29 cfs 5,173 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=1.29 cfs 5,173 cf |
| Pond 18P: Ex. SDMH#2 / POC B | Peak Elev=16.42' Inflow=21.26 cfs 103,996 cf Primary=15.30 cfs 98,824 cf Secondary=5.96 cfs 5,172 cf Tertiary=0.00 cfs 0 cf Outflow=21.26 cfs 103,996 cf |
| Pond 19P: Ex. SDMH #3 | Peak Elev=14.50' Inflow=21.26 cfs 103,996 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=21.26 cfs 103,996 cf |
| Pond 21P: Ex. SDMH #4 | Peak Elev=11.46' Inflow=21.26 cfs 103,996 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=21.26 cfs 103,996 cf |
| Pond 22P: Ex. SDMH #5 | Peak Elev=10.77' Inflow=21.26 cfs 103,996 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=21.26 cfs 103,996 cf |
| Link 24L: Bedford Street Garage | Inflow=3.87 cfs 2,551 cf Primary=3.87 cfs 2,551 cf |

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Ex. Area #1 Runoff Area=7,923 sf 51.43% Impervious Runoff Depth=7.13"
Flow Length=181' Tc=5.8 min CN=89.3 Runoff=1.42 cfs 4,705 cf

Subcatchment 2S: Ex. Area #2 Runoff Area=132,315 sf 97.01% Impervious Runoff Depth=8.11"
Tc=10.0 min CN=97.5 Runoff=21.87 cfs 89,422 cf

Subcatchment 3S: Ex. Area #3 Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=8.17"
Tc=5.0 min CN=98.0 Runoff=7.39 cfs 26,006 cf

Subcatchment 4S: Ex. Area #4 Runoff Area=12,053 sf 0.54% Impervious Runoff Depth=6.02"
Flow Length=119' Tc=13.7 min CN=80.1 Runoff=1.50 cfs 6,049 cf

Pond 5P: Ex. SDMH #1 / POC A Peak Elev=16.69' Storage=7,735 cf Inflow=27.91 cfs 115,428 cf
Primary=20.48 cfs 110,140 cf Secondary=7.99 cfs 5,518 cf Outflow=25.31 cfs 115,658 cf

Pond 6P: Ex. CB Peak Elev=13.13' Inflow=1.50 cfs 6,049 cf
12.0" Round Culvert n=0.013 L=98.0' S=0.0061 '/' Outflow=1.50 cfs 6,049 cf

Pond 7P: Ex. SDMH #6 / POC C Peak Elev=12.36' Inflow=1.50 cfs 6,049 cf
18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=1.50 cfs 6,049 cf

Pond 18P: Ex. SDMH#2 / POC B Peak Elev=16.43' Inflow=21.32 cfs 114,845 cf
Primary=15.31 cfs 109,536 cf Secondary=6.01 cfs 5,308 cf Tertiary=0.00 cfs 0 cf Outflow=21.32 cfs 114,845 cf

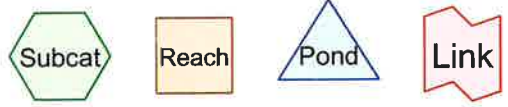
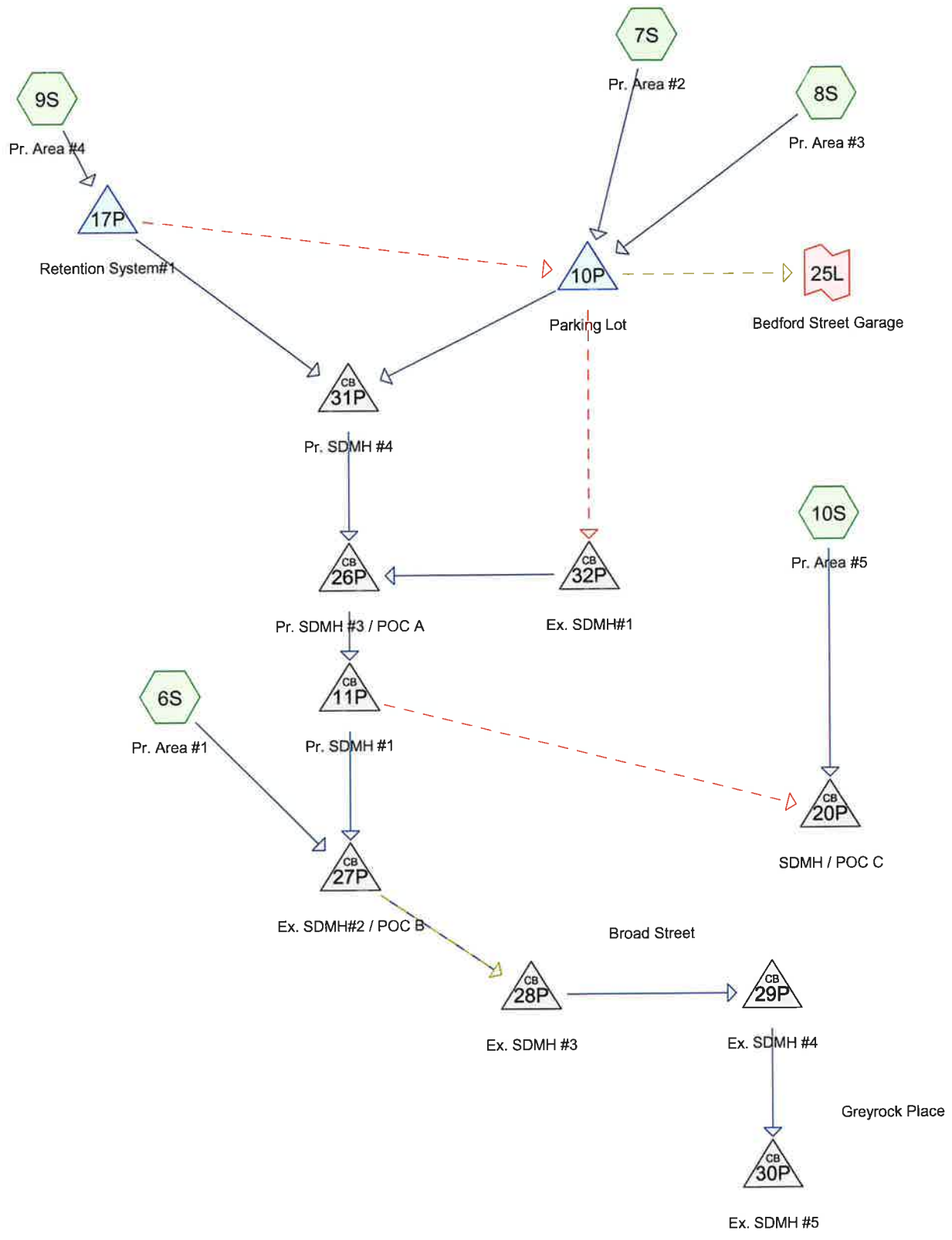
Pond 19P: Ex. SDMH #3 Peak Elev=14.53' Inflow=21.32 cfs 114,845 cf
24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=21.32 cfs 114,845 cf

Pond 21P: Ex. SDMH #4 Peak Elev=11.49' Inflow=21.32 cfs 114,845 cf
24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=21.32 cfs 114,845 cf

Pond 22P: Ex. SDMH #5 Peak Elev=10.79' Inflow=21.32 cfs 114,845 cf
24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=21.32 cfs 114,845 cf

Link 24L: Bedford Street Garage Inflow=7.99 cfs 5,518 cf
Primary=7.99 cfs 5,518 cf

**Appendix L:
HydroCAD Analysis—Proposed Conditions**



Routing Diagram for 128-136 Broad Street 10-3-22
 Prepared by RVDI, Printed 9/30/2022
 HydroCAD® 10.00-26 s/n 07353 © 2020 HydroCAD Software Solutions LLC

128-136 Broad Street 10-3-22

Type III 24-hr 1-Year Rainfall=2.97"

Prepared by RVDI

Printed 9/30/2022

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Link 25L: Bedford Street Garage

Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--------------------------------------|---|
| Subcatchment 6S: Pr. Area #1 | Runoff Area=2,714 sf 100.00% Impervious Runoff Depth=3.36" Tc=5.0 min CN=98.0 Runoff=0.22 cfs 759 cf |
| Subcatchment 7S: Pr. Area #2 | Runoff Area=115,349 sf 100.00% Impervious Runoff Depth=3.36" Tc=10.0 min CN=98.0 Runoff=8.07 cfs 32,261 cf |
| Subcatchment 8S: Pr. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=3.36" Tc=5.0 min CN=98.0 Runoff=3.13 cfs 10,683 cf |
| Subcatchment 9S: Pr. Area #4 | Runoff Area=33,888 sf 100.00% Impervious Runoff Depth=3.36" Tc=5.0 min CN=98.0 Runoff=2.77 cfs 9,478 cf |
| Subcatchment 10S: Pr. Area #5 | Runoff Area=322 sf 100.00% Impervious Runoff Depth=3.36" Tc=5.0 min CN=98.0 Runoff=0.03 cfs 90 cf |
| Pond 10P: Parking Lot | Peak Elev=15.01' Storage=26 cf Inflow=10.65 cfs 42,944 cf Primary=7.07 cfs 10,806 cf Secondary=3.62 cfs 32,137 cf Tertiary=0.00 cfs 0 cf Outflow=10.64 cfs 42,943 cf |
| Pond 11P: Pr. SDMH #1 | Peak Elev=13.94' Inflow=10.64 cfs 46,486 cf Primary=10.48 cfs 46,422 cf Secondary=0.16 cfs 64 cf Outflow=10.64 cfs 46,486 cf |
| Pond 17P: Retention System#1 | Peak Elev=13.86' Storage=6,461 cf Inflow=2.77 cfs 9,478 cf Primary=0.42 cfs 3,543 cf Secondary=0.00 cfs 0 cf Outflow=0.42 cfs 3,543 cf |
| Pond 20P: SDMH / POC C | Peak Elev=11.93' Inflow=0.18 cfs 154 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 ' / ' Outflow=0.18 cfs 154 cf |
| Pond 26P: Pr. SDMH #3 / POC A | Peak Elev=14.52' Inflow=10.64 cfs 46,486 cf 18.0" Round Culvert x 2.00 n=0.011 L=96.0' S=0.0052 ' / ' Outflow=10.64 cfs 46,486 cf |
| Pond 27P: Ex. SDMH#2 / POC B | Peak Elev=13.55' Inflow=10.67 cfs 47,181 cf Primary=10.67 cfs 47,181 cf Secondary=0.00 cfs 0 cf Tertiary=0.00 cfs 0 cf Outflow=10.67 cfs 47,181 cf |
| Pond 28P: Ex. SDMH #3 | Peak Elev=12.52' Inflow=10.67 cfs 47,181 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 ' / ' Outflow=10.67 cfs 47,181 cf |
| Pond 29P: Ex. SDMH #4 | Peak Elev=10.11' Inflow=10.67 cfs 47,181 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 ' / ' Outflow=10.67 cfs 47,181 cf |
| Pond 30P: Ex. SDMH #5 | Peak Elev=9.31' Inflow=10.67 cfs 47,181 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 ' / ' Outflow=10.67 cfs 47,181 cf |
| Pond 31P: Pr. SDMH #4 | Peak Elev=14.68' Inflow=7.07 cfs 14,349 cf 18.0" Round Culvert x 2.00 n=0.011 L=29.0' S=0.0052 ' / ' Outflow=7.07 cfs 14,349 cf |
| Pond 32P: Ex. SDMH#1 | Peak Elev=14.61' Inflow=3.62 cfs 32,137 cf 24.0" Round Culvert n=0.011 L=18.0' S=0.0056 ' / ' Outflow=3.62 cfs 32,137 cf |

128-136 Broad Street 10-3-22

Type III 24-hr 2-Year Rainfall=3.59"

Prepared by RVDI

Printed 9/30/2022

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Link 25L: Bedford Street Garage

Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--------------------------------------|---|
| Subcatchment 6S: Pr. Area #1 | Runoff Area=2,714 sf 100.00% Impervious Runoff Depth=4.37" Tc=5.0 min CN=98.0 Runoff=0.29 cfs 989 cf |
| Subcatchment 7S: Pr. Area #2 | Runoff Area=115,349 sf 100.00% Impervious Runoff Depth=4.37" Tc=10.0 min CN=98.0 Runoff=10.41 cfs 42,043 cf |
| Subcatchment 8S: Pr. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=4.37" Tc=5.0 min CN=98.0 Runoff=4.03 cfs 13,922 cf |
| Subcatchment 9S: Pr. Area #4 | Runoff Area=33,888 sf 100.00% Impervious Runoff Depth=4.37" Tc=5.0 min CN=98.0 Runoff=3.58 cfs 12,352 cf |
| Subcatchment 10S: Pr. Area #5 | Runoff Area=322 sf 100.00% Impervious Runoff Depth=4.37" Tc=5.0 min CN=98.0 Runoff=0.03 cfs 117 cf |
| Pond 10P: Parking Lot | Peak Elev=15.39' Storage=32 cf Inflow=13.73 cfs 55,965 cf Primary=9.78 cfs 16,144 cf Secondary=3.99 cfs 39,821 cf Tertiary=0.00 cfs 0 cf Outflow=13.72 cfs 55,965 cf |
| Pond 11P: Pr. SDMH #1 | Peak Elev=14.31' Inflow=13.72 cfs 62,381 cf Primary=12.96 cfs 62,015 cf Secondary=0.80 cfs 366 cf Outflow=13.72 cfs 62,381 cf |
| Pond 17P: Retention System#1 | Peak Elev=14.65' Storage=7,621 cf Inflow=3.58 cfs 12,352 cf Primary=2.11 cfs 6,417 cf Secondary=0.00 cfs 0 cf Outflow=2.11 cfs 6,417 cf |
| Pond 20P: SDMH / POC C | Peak Elev=12.18' Inflow=0.82 cfs 484 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/ Outflow=0.82 cfs 484 cf |
| Pond 26P: Pr. SDMH #3 / POC A | Peak Elev=14.87' Inflow=13.72 cfs 62,381 cf 18.0" Round Culvert x 2.00 n=0.011 L=96.0' S=0.0052 '/ Outflow=13.72 cfs 62,381 cf |
| Pond 27P: Ex. SDMH#2 / POC B | Peak Elev=13.75' Inflow=13.22 cfs 63,004 cf Primary=13.22 cfs 63,004 cf Secondary=0.00 cfs 0 cf Tertiary=0.00 cfs 0 cf Outflow=13.22 cfs 63,004 cf |
| Pond 28P: Ex. SDMH #3 | Peak Elev=12.78' Inflow=13.22 cfs 63,004 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/ Outflow=13.22 cfs 63,004 cf |
| Pond 29P: Ex. SDMH #4 | Peak Elev=10.41' Inflow=13.22 cfs 63,004 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/ Outflow=13.22 cfs 63,004 cf |
| Pond 30P: Ex. SDMH #5 | Peak Elev=9.56' Inflow=13.22 cfs 63,004 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/ Outflow=13.22 cfs 63,004 cf |
| Pond 31P: Pr. SDMH #4 | Peak Elev=15.09' Inflow=9.78 cfs 22,560 cf 18.0" Round Culvert x 2.00 n=0.011 L=29.0' S=0.0052 '/ Outflow=9.78 cfs 22,560 cf |
| Pond 32P: Ex. SDMH#1 | Peak Elev=14.93' Inflow=3.99 cfs 39,821 cf 24.0" Round Culvert n=0.011 L=18.0' S=0.0056 '/ Outflow=3.99 cfs 39,821 cf |

128-136 Broad Street 10-3-22

Prepared by RVDI

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Type III 24-hr 5-Year Rainfall=4.61"

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Link 25L: Bedford Street Garage

Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--------------------------------------|---|
| Subcatchment 6S: Pr. Area #1 | Runoff Area=2,714 sf 100.00% Impervious Runoff Depth=5.21" Tc=5.0 min CN=98.0 Runoff=0.34 cfs 1,179 cf |
| Subcatchment 7S: Pr. Area #2 | Runoff Area=115,349 sf 100.00% Impervious Runoff Depth=5.21" Tc=10.0 min CN=98.0 Runoff=12.33 cfs 50,105 cf |
| Subcatchment 8S: Pr. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=5.21" Tc=5.0 min CN=98.0 Runoff=4.78 cfs 16,592 cf |
| Subcatchment 9S: Pr. Area #4 | Runoff Area=33,888 sf 100.00% Impervious Runoff Depth=5.21" Tc=5.0 min CN=98.0 Runoff=4.24 cfs 14,720 cf |
| Subcatchment 10S: Pr. Area #5 | Runoff Area=322 sf 100.00% Impervious Runoff Depth=5.21" Tc=5.0 min CN=98.0 Runoff=0.04 cfs 140 cf |
| Pond 10P: Parking Lot | Peak Elev=16.14' Storage=1,078 cf Inflow=16.26 cfs 66,697 cf Primary=11.71 cfs 21,113 cf Secondary=4.58 cfs 45,583 cf Tertiary=0.00 cfs 0 cf Outflow=16.08 cfs 66,696 cf |
| Pond 11P: Pr. SDMH #1 | Peak Elev=14.95' Inflow=18.88 cfs 75,481 cf Primary=17.62 cfs 74,374 cf Secondary=1.25 cfs 1,107 cf Outflow=18.88 cfs 75,481 cf |
| Pond 17P: Retention System#1 | Peak Elev=16.06' Storage=7,813 cf Inflow=4.24 cfs 14,720 cf Primary=4.22 cfs 8,785 cf Secondary=0.00 cfs 0 cf Outflow=4.22 cfs 8,785 cf |
| Pond 20P: SDMH / POC C | Peak Elev=12.31' Inflow=1.28 cfs 1,247 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=1.28 cfs 1,247 cf |
| Pond 26P: Pr. SDMH #3 / POC A | Peak Elev=15.82' Inflow=18.88 cfs 75,481 cf 18.0" Round Culvert x 2.00 n=0.011 L=96.0' S=0.0052 '/' Outflow=18.88 cfs 75,481 cf |
| Pond 27P: Ex. SDMH#2 / POC B | Peak Elev=14.19' Inflow=17.86 cfs 75,553 cf Primary=17.86 cfs 75,553 cf Secondary=0.00 cfs 0 cf Tertiary=0.00 cfs 0 cf Outflow=17.86 cfs 75,553 cf |
| Pond 28P: Ex. SDMH #3 | Peak Elev=13.32' Inflow=17.86 cfs 75,553 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=17.86 cfs 75,553 cf |
| Pond 29P: Ex. SDMH #4 | Peak Elev=11.10' Inflow=17.86 cfs 75,553 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=17.86 cfs 75,553 cf |
| Pond 30P: Ex. SDMH #5 | Peak Elev=10.15' Inflow=17.86 cfs 75,553 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=17.86 cfs 75,553 cf |
| Pond 31P: Pr. SDMH #4 | Peak Elev=16.03' Inflow=14.71 cfs 29,898 cf 18.0" Round Culvert x 2.00 n=0.011 L=29.0' S=0.0052 '/' Outflow=14.71 cfs 29,898 cf |
| Pond 32P: Ex. SDMH#1 | Peak Elev=15.88' Inflow=4.58 cfs 45,583 cf 24.0" Round Culvert n=0.011 L=18.0' S=0.0056 '/' Outflow=4.58 cfs 45,583 cf |

128-136 Broad Street 10-3-22

Type III 24-hr 10-Year Rainfall=5.45"

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Link 25L: Bedford Street Garage

Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf

Summary for Subcatchment 6S: Pr. Area #1

Runoff = 0.41 cfs @ 12.07 hrs, Volume= 1,443 cf, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------|
| 2,714 | 98.0 | Paved parking, HSG D |
| 2,714 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0 | | | | | Direct Entry, |

Summary for Subcatchment 7S: Pr. Area #2

Runoff = 15.00 cfs @ 12.13 hrs, Volume= 61,339 cf, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------|
| 115,349 | 98.0 | Paved parking, HSG D |
| 115,349 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 10.0 | | | | | Direct Entry, |

Summary for Subcatchment 8S: Pr. Area #3

Runoff = 5.81 cfs @ 12.07 hrs, Volume= 20,312 cf, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------|
| 38,197 | 98.0 | Roofs, HSG D |
| 38,197 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0 | | | | | Direct Entry, |

Summary for Subcatchment 9S: Pr. Area #4

Runoff = 5.15 cfs @ 12.07 hrs, Volume= 18,021 cf, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------|
| 33,888 | 98.0 | Roofs, HSG B |
| 33,888 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0 | | | | | Direct Entry, |

Summary for Subcatchment 10S: Pr. Area #5

Runoff = 0.05 cfs @ 12.07 hrs, Volume= 171 cf, Depth= 6.38"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
Type III 24-hr 25-Year Rainfall=6.62"

| Area (sf) | CN | Description |
|-----------|------|-------------------------------|
| 322 | 98.0 | Paved parking, HSG D |
| 0 | 80.0 | >75% Grass cover, Good, HSG D |
| 322 | 98.0 | Weighted Average |
| 322 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---------------|
| 5.0 | | | | | Direct Entry, |

Summary for Pond 10P: Parking Lot

Inflow Area = 153,546 sf, 100.00% Impervious, Inflow Depth = 6.38" for 25-Year event
 Inflow = 19.79 cfs @ 12.11 hrs, Volume= 81,651 cf
 Outflow = 18.29 cfs @ 12.23 hrs, Volume= 81,650 cf, Atten= 8%, Lag= 6.8 min
 Primary = 12.82 cfs @ 12.23 hrs, Volume= 27,690 cf
 Secondary = 5.22 cfs @ 12.24 hrs, Volume= 53,778 cf
 Tertiary = 0.73 cfs @ 12.21 hrs, Volume= 183 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.53' @ 12.21 hrs Surf.Area= 13,955 sf Storage= 4,689 cf
 Flood Elev= 16.90' Surf.Area= 19,811 sf Storage= 9,197 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
 Center-of-Mass det. time= 1.0 min (747.3 - 746.3)

128-136 Broad Street 10-3-22

Type III 24-hr 25-Year Rainfall=6.62"

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| Volume | Invert | Avail.Storage | Storage Description |
|--------|--------|---------------|---|
| #1 | 13.40' | 37 cf | 4.00'W x 4.00'L x 2.30'H CB |
| #2 | 15.40' | 9,160 cf | Trench Drain / Double CB (Irregular) Listed below (Recalc) |
| | | 9,197 cf | Total Available Storage |

| Elevation (feet) | Surf.Area (sq-ft) | Perim. (feet) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
|------------------|-------------------|---------------|------------------------|------------------------|------------------|
| 15.40 | 8 | 12.0 | 0 | 0 | 8 |
| 15.50 | 72 | 36.0 | 3 | 3 | 100 |
| 15.60 | 378 | 130.0 | 20 | 24 | 1,341 |
| 15.70 | 620 | 166.0 | 49 | 73 | 2,190 |
| 15.80 | 986 | 212.0 | 80 | 153 | 3,573 |
| 15.90 | 1,843 | 326.0 | 139 | 292 | 8,454 |
| 16.00 | 2,886 | 393.0 | 235 | 527 | 12,288 |
| 16.10 | 4,188 | 448.0 | 352 | 878 | 15,969 |
| 16.20 | 5,792 | 544.0 | 497 | 1,375 | 23,547 |
| 16.30 | 8,436 | 679.0 | 707 | 2,083 | 36,686 |
| 16.40 | 10,645 | 710.0 | 952 | 3,034 | 40,113 |
| 16.50 | 13,336 | 740.0 | 1,197 | 4,231 | 43,576 |
| 16.60 | 15,337 | 779.0 | 1,432 | 5,663 | 48,291 |
| 16.70 | 17,423 | 794.0 | 1,637 | 7,300 | 50,170 |
| 16.80 | 19,795 | 822.0 | 1,860 | 9,160 | 53,771 |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|--|
| #1 | Primary | 13.80' | 18.0" Round Twin 18" PVC X 2.00 L= 117.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.80' / 13.25' S= 0.0047 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf |
| #2 | Secondary | 13.45' | 12.0" W x 12.0" H Box Culvert L= 10.0' Box, headwall w/3 square edges, Ke= 0.500 Inlet / Outlet Invert= 13.45' / 13.20' S= 0.0250 '/' Cc= 0.900 n= 0.013, Flow Area= 1.00 sf |
| #3 | Tertiary | 16.45' | Asymmetrical Weir, C= 3.27 Offset (feet) 0.00 9.10 17.80 26.65 36.06 43.97 53.90 62.08 71.77 Height (feet) 0.69 0.26 0.14 0.10 0.00 0.02 0.24 0.41 0.69 |

Primary OutFlow Max=8.86 cfs @ 12.23 hrs HW=16.51' TW=16.22' (Dynamic Tailwater)
 ↑1=Twin 18" PVC (Outlet Controls 8.86 cfs @ 2.51 fps)

Secondary OutFlow Max=4.05 cfs @ 12.24 hrs HW=16.50' TW=15.79' (Dynamic Tailwater)
 ↑2=Culvert (Inlet Controls 4.05 cfs @ 4.05 fps)

Tertiary OutFlow Max=0.65 cfs @ 12.21 hrs HW=16.52' TW=0.00' (Dynamic Tailwater)
 ↑3=Asymmetrical Weir (Weir Controls 0.65 cfs @ 0.52 fps)

Summary for Pond 11P: Pr. SDMH #1

Inflow Area = 187,434 sf, 100.00% Impervious, Inflow Depth = 5.99" for 25-Year event
 Inflow = 21.93 cfs @ 12.06 hrs, Volume= 93,553 cf
 Outflow = 21.93 cfs @ 12.06 hrs, Volume= 93,553 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.46 cfs @ 12.06 hrs, Volume= 91,451 cf
 Secondary = 1.54 cfs @ 12.08 hrs, Volume= 2,102 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 15.64' @ 12.08 hrs
 Flood Elev= 16.60'

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|--|
| #1 | Primary | 12.55' | 18.0" Round 24" PVC X 2.00 L= 10.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.55' / 12.50' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf |
| #2 | Secondary | 13.70' | 8.0" Round Culvert L= 130.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.70' / 13.00' S= 0.0054 '/' Cc= 0.900 n= 0.011, Flow Area= 0.35 sf |

Primary OutFlow Max=13.70 cfs @ 12.06 hrs HW=15.30' TW=14.65' (Dynamic Tailwater)
 ↳1=24" PVC (Inlet Controls 13.70 cfs @ 3.88 fps)

Secondary OutFlow Max=1.52 cfs @ 12.08 hrs HW=15.59' TW=12.38' (Dynamic Tailwater)
 ↳2=Culvert (Barrel Controls 1.52 cfs @ 4.36 fps)

Summary for Pond 17P: Retention System#1

Inflow Area = 33,888 sf, 100.00% Impervious, Inflow Depth = 6.38" for 25-Year event
 Inflow = 5.15 cfs @ 12.07 hrs, Volume= 18,021 cf
 Outflow = 4.94 cfs @ 12.09 hrs, Volume= 12,085 cf, Atten= 4%, Lag= 0.9 min
 Primary = 4.94 cfs @ 12.09 hrs, Volume= 12,085 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.58' @ 12.14 hrs Surf.Area= 1,953 sf Storage= 7,820 cf

Plug-Flow detention time= 213.2 min calculated for 12,072 cf (67% of inflow)
 Center-of-Mass det. time= 113.7 min (856.5 - 742.8)

| Volume | Invert | Avail.Storage | Storage Description |
|--------|--------|---------------|--|
| #1A | 9.20' | 1,304 cf | 10.00'W x 194.00'L x 6.17'H Field A 11,963 cf Overall - 8,704 cf Embedded = 3,259 cf x 40.0% Voids |
| #2A | 9.70' | 6,471 cf | retain_it retain_it 5.0' x 24 Inside #1 Inside= 84.0"W x 60.0"H => 36.41 sf x 8.00'L = 291.3 cf Outside= 96.0"W x 68.0"H => 45.33 sf x 8.00'L = 362.7 cf 1 Rows adjusted for 519.5 cf perimeter wall |
| #3 | 13.00' | 50 cf | 4.00'D x 4.00'H Vertical Cone/Cylinder |
| | | 7,825 cf | Total Available Storage |

Storage Group A created with Chamber Wizard

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|--|
| #1 | Primary | 13.50' | 18.0" Round 18" PVC L= 12.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.50' / 13.30' S= 0.0167 '/ Cc= 0.900 n= 0.011, Flow Area= 1.77 sf |
| #2 | Secondary | 16.60' | 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |

Primary OutFlow Max=0.00 cfs @ 12.09 hrs HW=15.89' TW=16.29' (Dynamic Tailwater)
 ↑1=18" PVC (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=9.20' TW=13.40' (Dynamic Tailwater)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 20P: SDMH / POC C

Inflow Area = 322 sf, 100.00% Impervious, Inflow Depth = 84.70" for 25-Year event
 Inflow = 1.59 cfs @ 12.08 hrs, Volume= 2,273 cf
 Outflow = 1.59 cfs @ 12.08 hrs, Volume= 2,273 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.59 cfs @ 12.08 hrs, Volume= 2,273 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 12.38' @ 12.08 hrs
 Flood Elev= 17.20'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 11.70' | 18.0" Round 18" RCP L= 100.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 11.70' / 11.30' S= 0.0040 '/ Cc= 0.900 n= 0.013, Flow Area= 1.77 sf |

Primary OutFlow Max=1.57 cfs @ 12.08 hrs HW=12.38' (Free Discharge)
 ↑1=18" RCP (Barrel Controls 1.57 cfs @ 2.97 fps)

Summary for Pond 26P: Pr. SDMH #3 / POC A

Inflow Area = 187,434 sf, 100.00% Impervious, Inflow Depth = 5.99" for 25-Year event
 Inflow = 21.93 cfs @ 12.06 hrs, Volume= 93,553 cf
 Outflow = 21.93 cfs @ 12.06 hrs, Volume= 93,553 cf, Atten= 0%, Lag= 0.0 min
 Primary = 21.93 cfs @ 12.06 hrs, Volume= 93,553 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.36' @ 12.09 hrs
 Flood Elev= 17.00'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|--|
| #1 | Primary | 13.10' | 18.0" Round Culvert X 2.00 L= 96.0' CPP, square edge headwall, Ke= 0.500 |

Inlet / Outlet Invert= 13.10' / 12.60' S= 0.0052 '/' Cc= 0.900
 n= 0.011, Flow Area= 1.77 sf

Primary OutFlow Max=13.64 cfs @ 12.06 hrs HW=15.96' TW=15.32' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 13.64 cfs @ 3.86 fps)

Summary for Pond 27P: Ex. SDMH#2 / POC B

Inflow Area = 190,148 sf, 100.00% Impervious, Inflow Depth = 5.86" for 25-Year event
 Inflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf
 Outflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs

Peak Elev= 14.87' @ 12.08 hrs

Flood Elev= 16.70'

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|--|
| #1 | Primary | 12.40' | 18.0" Round Culvert X 2.00 L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 12.40' / 11.20' S= 0.0400 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf |
| #2 | Secondary | 16.10' | 24.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Tertiary | 16.40' | 24.0" x 48.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |

Primary OutFlow Max=14.49 cfs @ 12.06 hrs HW=14.65' TW=13.92' (Dynamic Tailwater)

↑1=Culvert (Inlet Controls 14.49 cfs @ 4.10 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=12.40' TW=11.00' (Dynamic Tailwater)

↑2=Orifice/Grate (Controls 0.00 cfs)

Tertiary OutFlow Max=0.00 cfs @ 0.00 hrs HW=12.40' TW=11.00' (Dynamic Tailwater)

↑3=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond 28P: Ex. SDMH #3

Inflow Area = 190,148 sf, 100.00% Impervious, Inflow Depth = 5.86" for 25-Year event
 Inflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf
 Outflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs

Peak Elev= 14.25' @ 12.07 hrs

Flood Elev= 16.70'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|----------------------------------|
| #1 | Primary | 11.00' | 24.0" Round RCP_Round 24" |

L= 303.0' RCP, square edge headwall, Ke= 0.500
 Inlet / Outlet Invert= 11.00' / 8.40' S= 0.0086 '/' Cc= 0.900
 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=16.78 cfs @ 12.06 hrs HW=13.92' TW=11.59' (Dynamic Tailwater)
 ↑1=RCP_Round 24" (Outlet Controls 16.78 cfs @ 5.34 fps)

Summary for Pond 29P: Ex. SDMH #4

Inflow Area = 190,148 sf, 100.00% Impervious, Inflow Depth = 5.86" for 25-Year event
 Inflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf
 Outflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 12.03' @ 12.08 hrs
 Flood Elev= 16.10'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 8.40' | 24.0" Round RCP_Round 24" L= 62.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 8.40' / 7.80' S= 0.0097 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=16.33 cfs @ 12.06 hrs HW=11.59' TW=10.42' (Dynamic Tailwater)
 ↑1=RCP_Round 24" (Inlet Controls 16.33 cfs @ 5.20 fps)

Summary for Pond 30P: Ex. SDMH #5

Inflow Area = 190,148 sf, 100.00% Impervious, Inflow Depth = 5.86" for 25-Year event
 Inflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf
 Outflow = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf, Atten= 0%, Lag= 0.0 min
 Primary = 20.87 cfs @ 12.06 hrs, Volume= 92,894 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 10.62' @ 12.06 hrs
 Flood Elev= 16.50'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 7.80' | 24.0" Round RCP_Round 24" L= 78.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 7.80' / 6.45' S= 0.0173 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf |

Primary OutFlow Max=19.27 cfs @ 12.06 hrs HW=10.42' (Free Discharge)
 ↑1=RCP_Round 24" (Inlet Controls 19.27 cfs @ 6.13 fps)

Summary for Pond 31P: Pr. SDMH #4

Inflow Area = 187,434 sf, 100.00% Impervious, Inflow Depth = 2.55" for 25-Year event
 Inflow = 16.97 cfs @ 12.06 hrs, Volume= 39,775 cf
 Outflow = 16.97 cfs @ 12.06 hrs, Volume= 39,775 cf, Atten= 0%, Lag= 0.0 min
 Primary = 16.97 cfs @ 12.06 hrs, Volume= 39,775 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.41' @ 12.11 hrs
 Flood Elev= 16.60'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|--|
| #1 | Primary | 13.25' | 18.0" Round Culvert X 2.00 L= 29.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.25' / 13.10' S= 0.0052 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf |

Primary OutFlow Max=0.00 cfs @ 12.06 hrs HW=15.87' TW=15.91' (Dynamic Tailwater)
 ↑1=Culvert (Controls 0.00 cfs)

Summary for Pond 32P: Ex. SDMH#1

Inflow = 5.22 cfs @ 12.24 hrs, Volume= 53,778 cf
 Outflow = 5.22 cfs @ 12.24 hrs, Volume= 53,778 cf, Atten= 0%, Lag= 0.0 min
 Primary = 5.22 cfs @ 12.24 hrs, Volume= 53,778 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs
 Peak Elev= 16.42' @ 12.13 hrs
 Flood Elev= 17.00'

| Device | Routing | Invert | Outlet Devices |
|--------|---------|--------|---|
| #1 | Primary | 13.20' | 24.0" Round Culvert L= 18.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 13.20' / 13.10' S= 0.0056 '/' Cc= 0.900 n= 0.011, Flow Area= 3.14 sf |

Primary OutFlow Max=0.00 cfs @ 12.24 hrs HW=15.79' TW=15.88' (Dynamic Tailwater)
 ↑1=Culvert (Controls 0.00 cfs)

Summary for Link 25L: Bedford Street Garage

Inflow = 0.73 cfs @ 12.21 hrs, Volume= 183 cf
 Primary = 0.73 cfs @ 12.21 hrs, Volume= 183 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.04 hrs

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--------------------------------------|---|
| Subcatchment 6S: Pr. Area #1 | Runoff Area=2,714 sf 100.00% Impervious Runoff Depth=7.24" Tc=5.0 min CN=98.0 Runoff=0.47 cfs 1,638 cf |
| Subcatchment 7S: Pr. Area #2 | Runoff Area=115,349 sf 100.00% Impervious Runoff Depth=7.24" Tc=10.0 min CN=98.0 Runoff=16.97 cfs 69,599 cf |
| Subcatchment 8S: Pr. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=7.24" Tc=5.0 min CN=98.0 Runoff=6.57 cfs 23,047 cf |
| Subcatchment 9S: Pr. Area #4 | Runoff Area=33,888 sf 100.00% Impervious Runoff Depth=7.24" Tc=5.0 min CN=98.0 Runoff=5.83 cfs 20,447 cf |
| Subcatchment 10S: Pr. Area #5 | Runoff Area=322 sf 100.00% Impervious Runoff Depth=7.24" Tc=5.0 min CN=98.0 Runoff=0.06 cfs 194 cf |
| Pond 10P: Parking Lot | Peak Elev=16.61' Storage=5,827 cf Inflow=23.28 cfs 92,786 cf Primary=14.97 cfs 33,187 cf Secondary=5.60 cfs 58,039 cf Tertiary=3.25 cfs 1,860 cf Outflow=21.55 cfs 93,086 cf |
| Pond 11P: Pr. SDMH #1 | Peak Elev=15.50' Inflow=20.80 cfs 105,598 cf Primary=19.37 cfs 102,945 cf Secondary=1.49 cfs 2,653 cf Outflow=20.80 cfs 105,598 cf |
| Pond 17P: Retention System#1 | Peak Elev=16.73' Storage=7,822 cf Inflow=5.83 cfs 20,447 cf Primary=6.47 cfs 14,372 cf Secondary=0.92 cfs 140 cf Outflow=6.45 cfs 14,512 cf |
| Pond 20P: SDMH / POC C | Peak Elev=12.37' Inflow=1.54 cfs 2,847 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=1.54 cfs 2,847 cf |
| Pond 26P: Pr. SDMH #3 / POC A | Peak Elev=16.37' Inflow=20.80 cfs 105,598 cf 18.0" Round Culvert x 2.00 n=0.011 L=96.0' S=0.0052 '/' Outflow=20.80 cfs 105,598 cf |
| Pond 27P: Ex. SDMH#2 / POC B | Peak Elev=14.83' Inflow=19.79 cfs 104,583 cf Primary=19.79 cfs 104,583 cf Secondary=0.00 cfs 0 cf Tertiary=0.00 cfs 0 cf Outflow=19.79 cfs 104,583 cf |
| Pond 28P: Ex. SDMH #3 | Peak Elev=13.95' Inflow=19.79 cfs 104,583 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=19.79 cfs 104,583 cf |
| Pond 29P: Ex. SDMH #4 | Peak Elev=11.80' Inflow=19.79 cfs 104,583 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=19.79 cfs 104,583 cf |
| Pond 30P: Ex. SDMH #5 | Peak Elev=10.51' Inflow=19.79 cfs 104,583 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=19.79 cfs 104,583 cf |
| Pond 31P: Pr. SDMH #4 | Peak Elev=16.59' Inflow=16.03 cfs 47,560 cf 18.0" Round Culvert x 2.00 n=0.011 L=29.0' S=0.0052 '/' Outflow=16.03 cfs 47,560 cf |
| Pond 32P: Ex. SDMH#1 | Peak Elev=16.41' Inflow=5.60 cfs 58,039 cf 24.0" Round Culvert n=0.011 L=18.0' S=0.0056 '/' Outflow=5.60 cfs 58,039 cf |

128-136 Broad Street 10-3-22

Type III 24-hr 50-Year Rainfall=7.48"

Prepared by RVDI

Printed 9/30/2022

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Link 25L: Bedford Street Garage

Inflow=3.25 cfs 1,860 cf
Primary=3.25 cfs 1,860 cf

Time span=0.00-36.00 hrs, dt=0.04 hrs, 901 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

| | |
|--------------------------------------|---|
| Subcatchment 6S: Pr. Area #1 | Runoff Area=2,714 sf 100.00% Impervious Runoff Depth=8.17" Tc=5.0 min CN=98.0 Runoff=0.53 cfs 1,848 cf |
| Subcatchment 7S: Pr. Area #2 | Runoff Area=115,349 sf 100.00% Impervious Runoff Depth=8.17" Tc=10.0 min CN=98.0 Runoff=19.09 cfs 78,533 cf |
| Subcatchment 8S: Pr. Area #3 | Runoff Area=38,197 sf 100.00% Impervious Runoff Depth=8.17" Tc=5.0 min CN=98.0 Runoff=7.39 cfs 26,006 cf |
| Subcatchment 9S: Pr. Area #4 | Runoff Area=33,888 sf 100.00% Impervious Runoff Depth=8.17" Tc=5.0 min CN=98.0 Runoff=6.56 cfs 23,072 cf |
| Subcatchment 10S: Pr. Area #5 | Runoff Area=322 sf 100.00% Impervious Runoff Depth=8.17" Tc=5.0 min CN=98.0 Runoff=0.06 cfs 219 cf |
| Pond 10P: Parking Lot | Peak Elev=16.71' Storage=7,518 cf Inflow=27.53 cfs 105,657 cf Primary=21.95 cfs 36,723 cf Secondary=7.69 cfs 62,706 cf Tertiary=9.90 cfs 6,461 cf Outflow=30.63 cfs 105,891 cf |
| Pond 11P: Pr. SDMH #1 | Peak Elev=17.08' Inflow=33.72 cfs 115,447 cf Primary=31.69 cfs 112,107 cf Secondary=2.03 cfs 3,341 cf Outflow=33.72 cfs 115,447 cf |
| Pond 17P: Retention System#1 | Peak Elev=16.91' Storage=7,824 cf Inflow=6.56 cfs 23,072 cf Primary=7.20 cfs 16,018 cf Secondary=2.36 cfs 1,119 cf Outflow=7.29 cfs 17,137 cf |
| Pond 20P: SDMH / POC C | Peak Elev=12.48' Inflow=2.04 cfs 3,560 cf 18.0" Round Culvert n=0.013 L=100.0' S=0.0040 '/' Outflow=2.04 cfs 3,560 cf |
| Pond 26P: Pr. SDMH #3 / POC A | Peak Elev=18.03' Inflow=33.72 cfs 115,447 cf 18.0" Round Culvert x 2.00 n=0.011 L=96.0' S=0.0052 '/' Outflow=33.72 cfs 115,447 cf |
| Pond 27P: Ex. SDMH#2 / POC B | Peak Elev=18.87' Inflow=31.80 cfs 113,954 cf Primary=29.88 cfs 112,635 cf Secondary=1.92 cfs 963 cf Tertiary=1.74 cfs 357 cf Outflow=31.80 cfs 113,954 cf |
| Pond 28P: Ex. SDMH #3 | Peak Elev=18.80' Inflow=31.80 cfs 113,954 cf 24.0" Round Culvert n=0.013 L=303.0' S=0.0086 '/' Outflow=31.80 cfs 113,954 cf |
| Pond 29P: Ex. SDMH #4 | Peak Elev=14.28' Inflow=31.80 cfs 113,954 cf 24.0" Round Culvert n=0.013 L=62.0' S=0.0097 '/' Outflow=31.80 cfs 113,954 cf |
| Pond 30P: Ex. SDMH #5 | Peak Elev=13.22' Inflow=31.80 cfs 113,954 cf 24.0" Round Culvert n=0.013 L=78.0' S=0.0173 '/' Outflow=31.80 cfs 113,954 cf |
| Pond 31P: Pr. SDMH #4 | Peak Elev=19.00' Inflow=26.03 cfs 52,741 cf 18.0" Round Culvert x 2.00 n=0.011 L=29.0' S=0.0052 '/' Outflow=26.03 cfs 52,741 cf |
| Pond 32P: Ex. SDMH#1 | Peak Elev=18.04' Inflow=7.69 cfs 62,706 cf 24.0" Round Culvert n=0.011 L=18.0' S=0.0056 '/' Outflow=7.69 cfs 62,706 cf |

128-136 Broad Street 10-3-22

Prepared by RVDI

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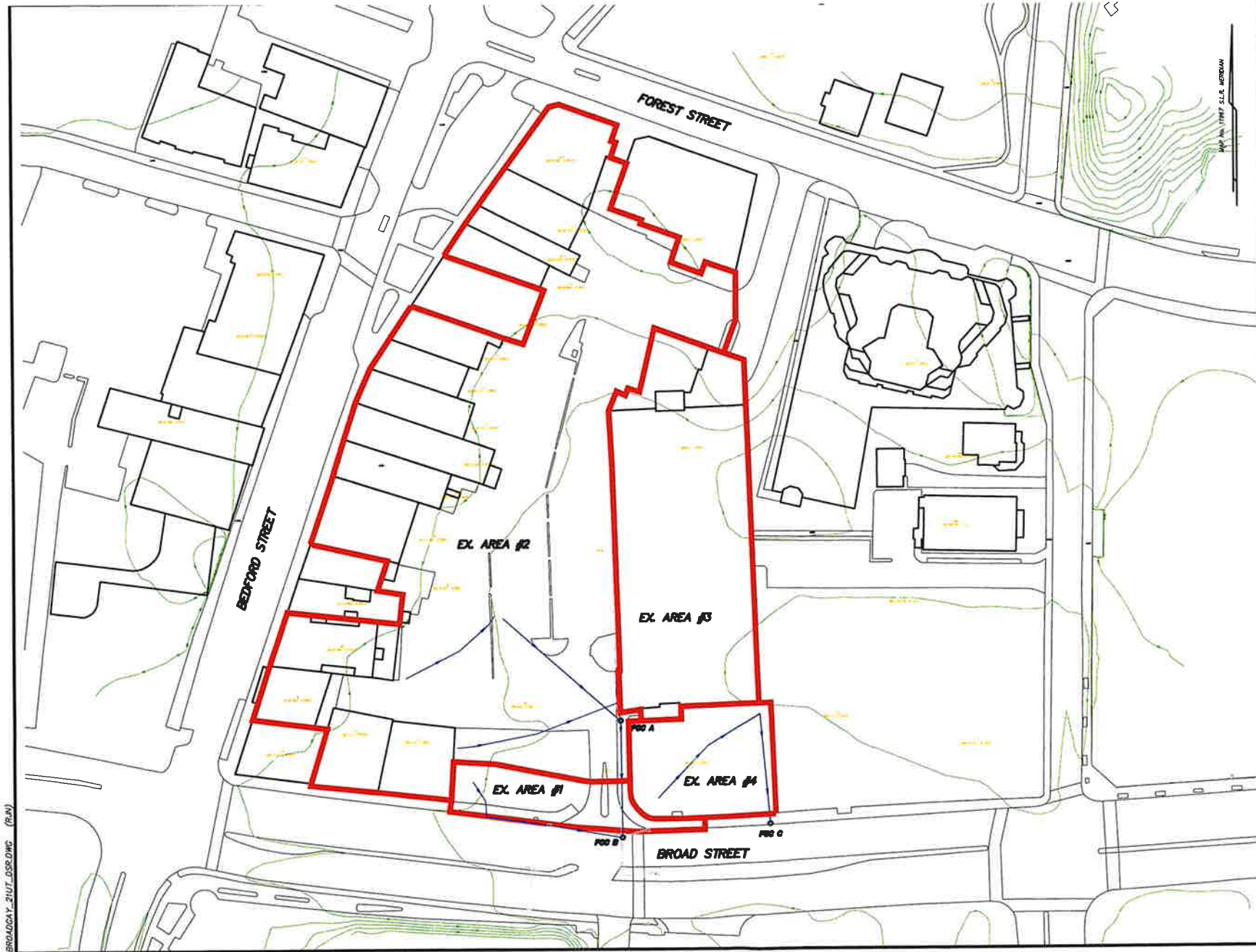
Type III 24-hr 100-Year Rainfall=8.41"

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Link 25L: Bedford Street Garage

Inflow=9.90 cfs 6,461 cf
Primary=9.90 cfs 6,461 cf



LOCATION MAP

NOTES:

1. Refer to a plan entitled "Mixed Use Development, TR Broad II LLC, 128 Broad Street Stamford, Connecticut, Grading Plan, Sheet 1 of 6," as prepared by D'Andrea Surveying & Engineering, PC.
2. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD 88).

EXISTING WATERSHED MAP

PREPARED FOR
TR BROAD II, LLC

LOCATION
**128-136 BROAD STREET
STAMFORD, CONNECTICUT**

D'ANDREA SURVEYING & ENGINEERING, PC

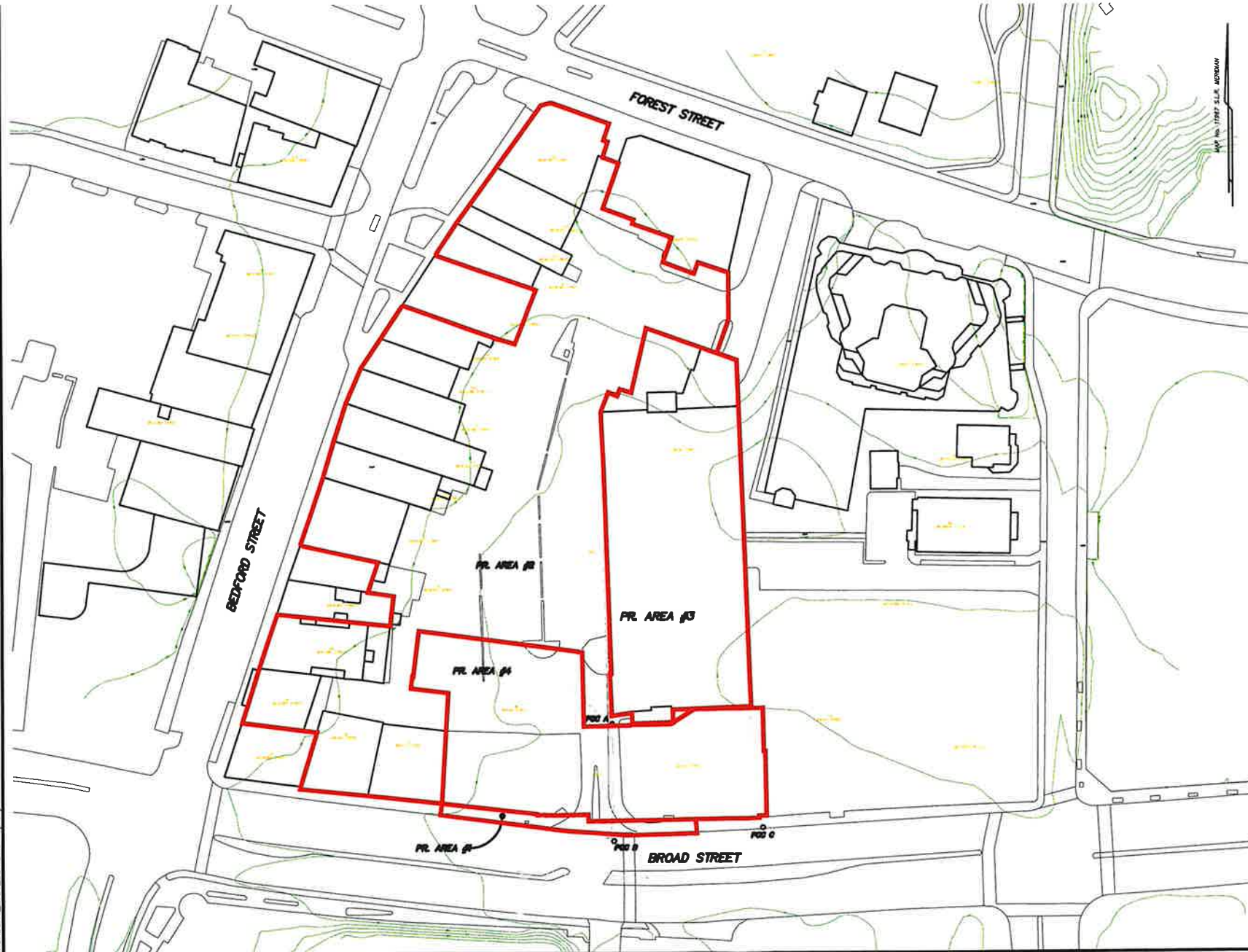
DATE:
10-3-22

SHEET No.
EXH-A

SCALE:
1"=80'

BROADCAY_21UT_DSGE.DWG (R.UN)

BROADWAY_21UT_DS0.DWG (RJM)

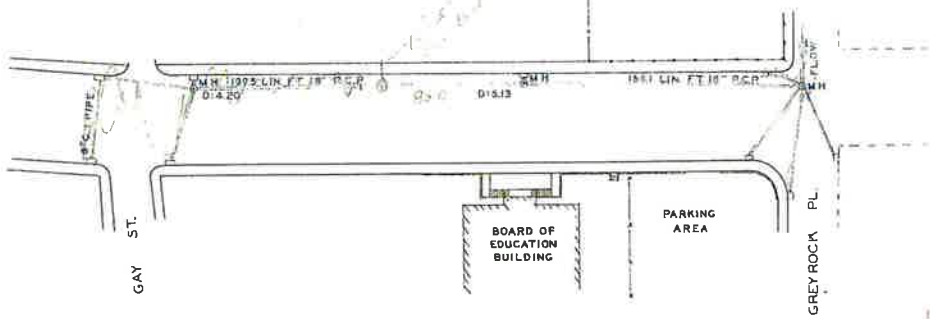


LOCATION MAP

NOTES:

1. Refer to a plan entitled "Mixed Use Development, TR Broad II LLC, 128 Broad Street Stamford, Connecticut, Grading Plan, Sheet 1 of 6," as prepared by D'Andrea Surveying & Engineering, PC.
2. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD 88).

| | |
|---|---------------------------|
| PROPOSED WATERSHED MAP | |
| PREPARED FOR TR BROAD II, LLC | |
| LOCATION 128-136 BROAD STREET STAMFORD, CONNECTICUT | |
| D'ANDREA SURVEYING & ENGINEERING, PC | |
| DATE: 10-3-22 | SHEET No. EXH-B |
| SCALE: 1"=80' | |

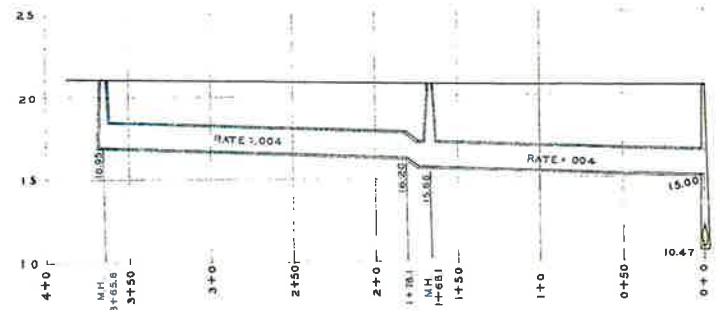


**BROAD ST.
STORM WATER SEWER**

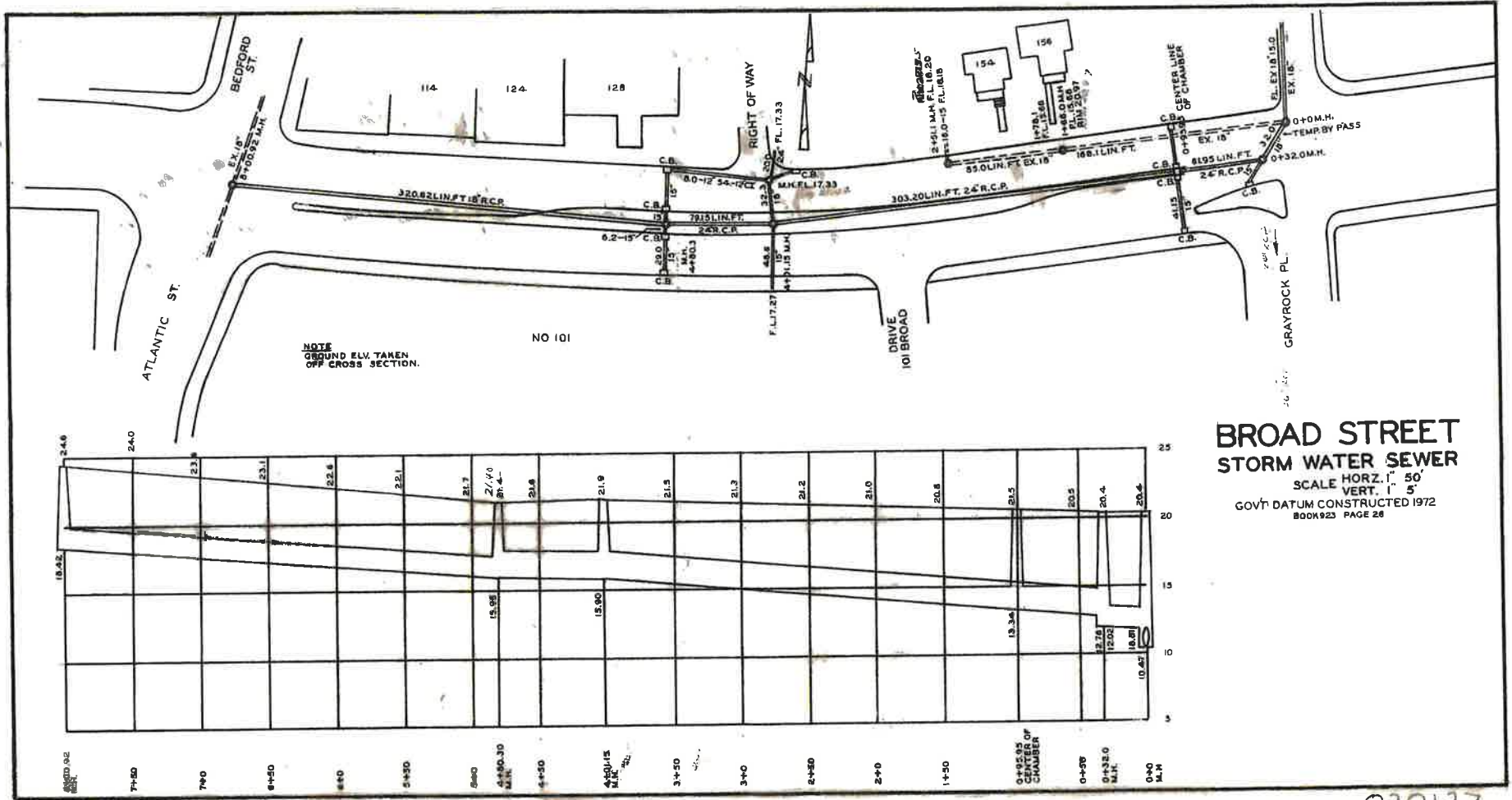
SCALE : HORZ. 1" = 50'
 VERT. 1" = 5'
 GOV'T DATUM CONSTRUCTED 1960
 BOOK 714 PAGE 112



C.B. LATERALS 12" R.C.P.

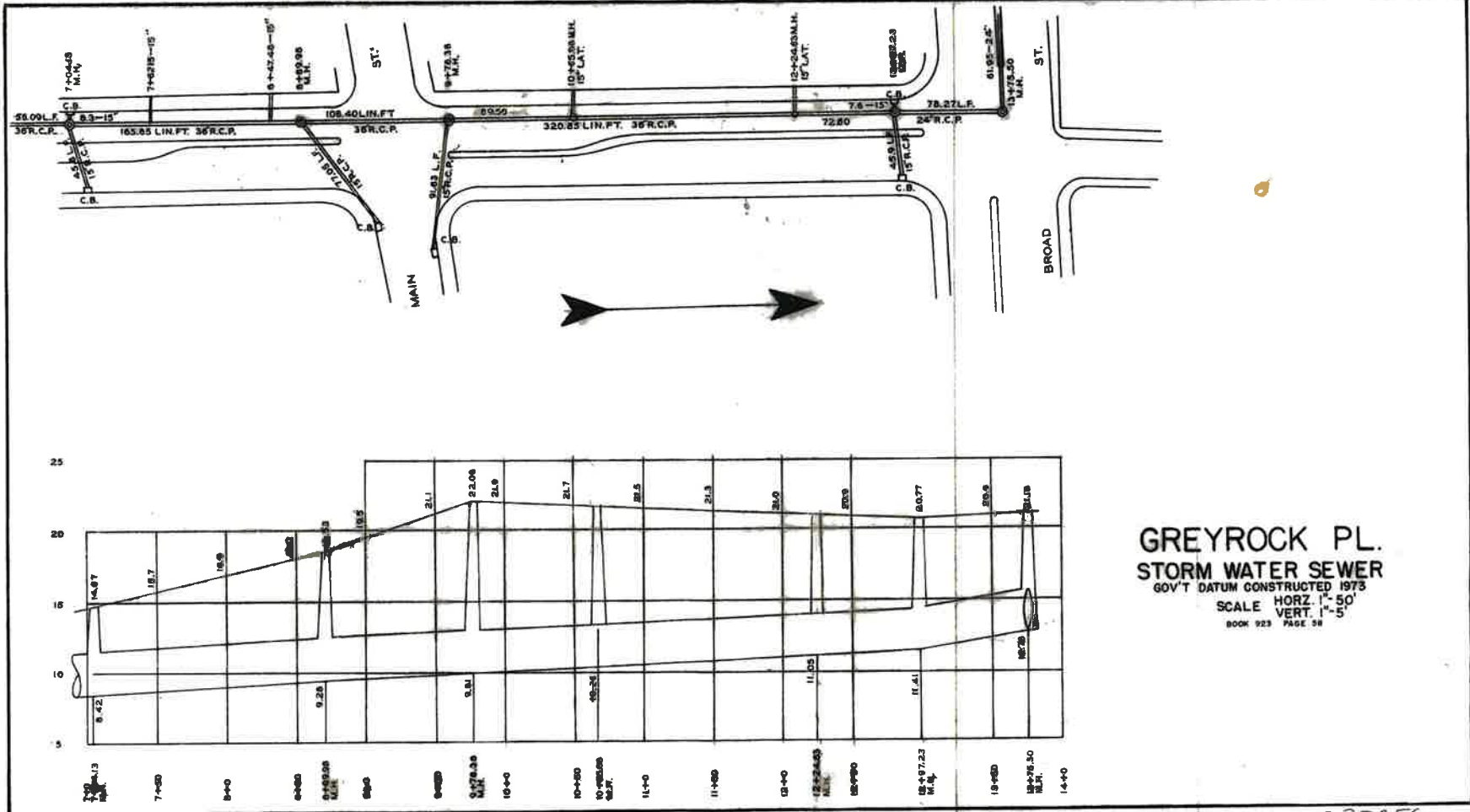


020127



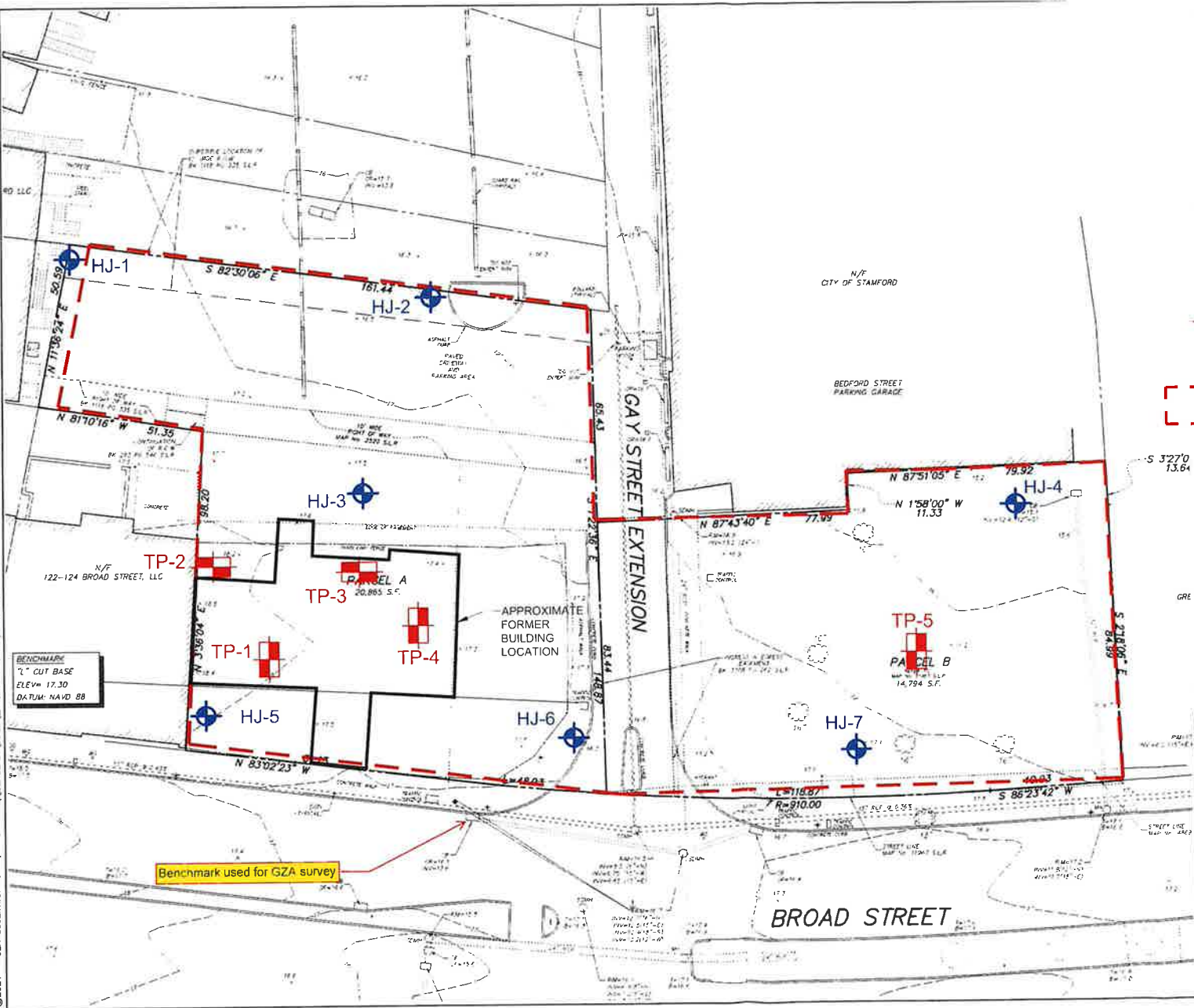
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020456

©2021 - GZA GeoEnvironmental, Inc. GZA - G:\GZA\GIST\JOBS\146_5000-46,999\46879-01.DWG\CAD\FIGURES\EXPLORATION LOCATION PLAN-MSH.DWG LAYOUT: NOVEMBER 23, 2021: MARTHA HARRIS



- GENERAL NOTES**
1. BASE MAP DEVELOPED FROM AEROPHOTO COPY OF TOPOGRAPHIC SURVEY ORIGINAL SCALE 1" = 20' BY PARLO BY DIANDELA SURVEYING & ENGINEERING PC, DATED JULY 8, 2014.
 2. THE TEST BORINGS LOCATIONS WERE OBTAINED FROM FIGURE 1 BORING LOCATION PLAN FROM GEOLOGICAL ENGINEERING REPORT PREPARED BY HELLER AND JOHNSON, DATED SEPTEMBER, 2014.
 3. TEST PITS LOCATED IN THE FIELD BY GZA BY TAPPING FROM EXISTING SITE FEATURES. LOCATIONS SHOULD BE CONSIDERED ACCURATE TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND

- APPROXIMATE LOCATION OF TEST BORINGS BY HELLER AND JOHNSON
- HJ-1**
- APPROXIMATE LOCATION OF TEST PITS PERFORMED BY CONTE COMPANY ON 11/9/2021 AND OBSERVED BY GZA PERSONNEL
- TP-1**
- APPROXIMATE FOOTPRINT OF PROPOSED BUILDING

SCALE

0 15' 30' 60'

SCALE IN FEET 1" = 30'

COMPASS

N
E
S
W

| | | | |
|---|------------------------------|----------------------------------|------------------|
| 128-132 BROAD STREET STAMFORD, CONNECTICUT | | | |
| EXPLORATION LOCATION PLAN | | | |
| PREPARED BY GZA GeoEnvironmental, Inc Engineers and Scientists www.gza.com | | PREPARED FOR F D RICH COMPANY | |
| PROJ MGR JFD | REVIEWED BY JFD | CHECKED BY DMR | FIG OR DWG 2 |
| DESIGNED BY MSH | DRAWN BY MSH | SCALE 1"=30' | SHEET NO. 2 OF 2 |
| DATE NOVEMBER, 2021 | PROJECT NO. 05 0046879.01 | REVISION NO. | |



City of Stamford
 Engineering Bureau
 888 Washington Boulevard, 7th Floor Stamford, CT 06901
 Phone 203-977-4189

CHECKLISTS

Project Name: Mixed Use Development

Project Address 128-136 Broad Street

Property Owner(s) TR Broad II LLC

Tax Account Number(s) 001-2688, 004-0515

Engineer's Signature _____ Date: 10/28/2022

All checklists must be completed and submitted. Provide a brief explanation for any items not provided. Check boxes as completed or N/A as not applicable.

| | |
|---|---|
| ✓ | Existing Conditions Plan |
| ✓ | Stormwater Management Report |
| ✓ | Stormwater Management Plan / Construction Plan |
| | Certificate of Occupancy |

Checklist for Existing Conditions Plan

I. General Information

| | |
|---|---|
| ✓ | Site address |
| ✓ | Orientation, block, zone, City, street name |
| ✓ | Applicant name and legal address |
| ✓ | Surveyor name, address, contact information |
| ✓ | North arrow, bar scale, horizontal and vertical datum |
| ✓ | 24" x 36" sheet size unless otherwise approved |
| ✓ | Existing conditions survey shall be prepared in accordance with the Minimum Standards for Surveys and Maps in the State of Connecticut. The class of survey shall be A-2 and T-2 and shall be represented as such on the map. The base map shall be sealed and signed by a Professional Land Surveyor licensed in the State of Connecticut. |
| ✓ | Drawing scale shall be set at 1" = 20' or 1" = 40' when possible |



II. Existing Conditions Plan Elements

| | |
|---|---|
| ✓ | Show and label all property boundaries with linear bearing / distances and curve information |
| | Required zoning setbacks |
| ✓ | Show and label monument information |
| ✓ | Show and label at least one permanent benchmark on the parcel with northing, easting and elevation |
| ✓ | Label adjacent property ownership information |
| ✓ | Existing contours based on NAVD 88 (no exceptions) at 2 foot contour interval or 1 foot contour interval when slope is flatter than 2 percent at a minimum of 20 ft. beyond the property boundaries of the subject parcel |
| ✓ | Show spot elevations at low points, high points, and where topography is flatter than 2 percent |
| ✓ | All buildings and structures (label current use and finished floor elevations) |
| ✓ | All pavement, parking, driveways, property access points |
| ✓ | All roadways, streets, and rights-of-way. Label streets as public or private with street name |
| ✓ | All patios, decks, walkways, sidewalks, curb ramps (both adjacent to and opposite and existing roadways or intersections) |
| ✓ | Show and label (size, material, inverts) all existing utilities (overhead and underground) within the right-of-way and the project site (label ownership) including but not limited to water, gas and electrical services, wells, storm sewers, sanitary sewers and subsurface sewerage disposal systems. |
| ✓ | Show and label existing conveyance systems (swales, ditches, storm drains) including dimensions, elevations, sizes, slopes, and direction of flow |
| ✓ | Show and label boundaries of all easements, both public and private, with type, owner, and width |
| ✓ | Show and label all other existing features and improvements (e.g. light poles, mature trees of 8" (dbh) diameter or greater, vegetation, walls with top and bottom elevations, fences, pavement markings) |

III. Resource Areas

| | |
|--|--|
| | Show and label limits of inland wetlands, tidal wetlands and any associated setbacks. |
| | Show and label existing natural site features including tree canopy, outcroppings, permanent and intermittent watercourses, waterbodies, streams |
| | Show and label limits of floodplain and floodway along with FIRM references (Community Number, Panel, Suffix, and Date) including any effective Letters of Map Revision/Amendment, zone designation and elevation. |
| | Show and label any Conservation Easement Areas |
| | Show and label Connecticut Coastal Jurisdiction Line (CJL) |
| | Show and label existing steep slopes (25% and greater) |



Checklist for Stormwater Management Report

I. Project Report

A. Applicant / Site Information

| | |
|---|--|
| ✓ | Applicant name, legal address, contact information (email & phone) |
| ✓ | Engineers name, legal address, contact information (email & phone) |
| ✓ | Site address and legal description |
| ✓ | Current / proposed zoning and land use |
| ✓ | Site vicinity map (8.5" x 11") |

B. Project Description and Purpose

| | |
|---|---|
| ✓ | Project description including proposed project elements and anticipated construction schedule |
|---|---|

C. Existing Conditions Description

| | |
|---|---|
| ✓ | Site area, ground cover, vegetation, features (roads, buildings, utilities, etc.) |
| ✓ | Site topography, slopes, drainage patterns, conveyances systems (swales, storm drains, etc.), stormwater discharge locations |
| | Receiving waterbody information including stormwater impairments and TMDL information (See the most recent State of Connecticut Integrated Water Quality Report) |
| ✓ | Site soils information including soil types, hydrologic soil group, bedrock / outcroppings, groundwater elevation, significant geologic features |
| ✓ | Provide NRCS Soils Mapping |
| | Resource protection areas (wetlands, streams, lakes, etc.), buffers, floodplains, floodways |

D. Summary of Applicable General Design Criteria

| | |
|---|-------------------------------------|
| ✓ | Methodology, design storm frequency |
| ✓ | Hydrologic design criteria |
| ✓ | Hydraulic design criteria |
| | Flood hazard areas |

| | |
|--|--|
| | <u>Applying under "Lite" Stormwater Management: Skip to Section I</u> (Refer to Flow Chart on page vii of the City of Stamford Stormwater Drainage Manual) |
|--|--|

E. Project Type in Accordance with Standard 1 Definitions

| | |
|---|---|
| | Area of disturbance, receiving waterbody classification (High Quality, Tidal Wetlands, Direct Waterfront) |
| ✓ | Project type (development, redevelopment, linear development) |
| ✓ | Pollutant reduction standard per flowchart Section 2.4 |



F. Summary of LID Site Constraints

| | |
|--|---|
| | Description of sensitive areas for protection |
| | Mature tree inventory, which shall include 8-inch (dbh) diameter trees or greater |
| | Steep slopes |
| | Ledge and bedrock depth |
| | Seasonal high groundwater elevation |
| | Pollutant hotspots |
| | Summary of infiltration rates |

G. Summary of Proposed Stormwater Treatment Practices

| | |
|---|---|
| ✓ | Proposed LID controls (i.e. minimize impervious, minimize DCIA, minimize disturbance, increase time of concentrations, other LID controls and strategies) |
| ✓ | Location, size, types |
| ✓ | Design criteria and references |
| ✓ | Stormwater treatment practice, drainage area characteristics / details |

H. Summary of Compliance with Standards 1

| | |
|---|---|
| ✓ | Required pollutant reduction criteria |
| ✓ | Provided pollutant reduction (WQV) by stormwater treatment practice |
| ✓ | Summary of compliance with Standard 1 |

I. Summary of Compliance with Standards 2, 3, and 4

| | |
|---|--|
| ✓ | Description of proposed stormwater management system |
| ✓ | Pre-development site hydrology with delineation of each watershed area and sub-basin |
| ✓ | Post-development site hydrology with delineation of each watershed area and sub-basin |
| ✓ | Comparison table of pre- and post-development hydrology, peak flow, volume, and percent difference |
| ✓ | Summary table of watershed areas and sub-basin areas, time of concentration and runoff coefficients |
| ✓ | Summary table demonstrating the 2-year, 24-hour post development peak flow rate is less than or equal to the lowest of either: - The pre-development 1-year, 24-hour storm peak flow rate - 50 percent of the pre-development 2-year, 24-hour storm peak flow rate |
| ✓ | Conveyance protection, emergency outlet sizing |
| | Hydraulic grade line summary and tail water elevation used in analysis |
| ✓ | Construction erosion and sediment control description, Standard 3 |
| ✓ | Operation and Maintenance, maintenance tasks and schedule on construction plans per Standard 4 |



J. Summary of Compliance with Applicable Drainage Facility Design Requirements

| | |
|---|--|
| ✓ | Description of applicable design requirements and compliance |
| ✓ | Description of proposed drainage facilities and compliance |

K. Stormwater Management Report

| | |
|---|--|
| ✓ | Signed and stamped by professional engineer licensed in the State of Connecticut |
| ✓ | Drainage impact statement in accordance with Standard 5B. |

II. Supporting Calculations (as appendix to Project Report)

| |
|---|
| Applying under "Lite" Stormwater Management: Skip to Section N |
|---|

L. Water Quality Volume / Water Quality Flow Calculations

| | |
|---|--|
| ✓ | Calculations demonstrating the total Water Quality Volume generated by the post-development site and the required retention/treatment volume per Standard 1 in cubic feet. |
| ✓ | Calculations demonstrating the total Water Quality Volume retained/treated by each stormwater treatment practice and the total Water Quality Volume generated by the post-development contributing drainage area to each stormwater treatment practice |

M. Stormwater Treatment Practice Sizing Calculations

| | |
|---|--|
| ✓ | Calculations demonstrating how each stormwater treatment practice has been designed and sized in accordance with the Structural Stormwater BMP Design references in Appendix B. Calculations will vary by stormwater treatment practice, but a minimum, applicants shall provide calculations in accordance with design criteria from the Connecticut Stormwater Quality Manual. |
|---|--|

N. Hydrologic and Hydraulic Design Calculations

| | |
|---|--|
| ✓ | Stream channel protection, Standard 2A |
| ✓ | Conveyance protection, Standard 2B |
| ✓ | Peak flow control (1-year, 2-year, 5-year, 10-year, 25-year, and 50-year storms), Standard 2C |
| | Inlet analysis |
| | Gutter flow (Site by site basis as requested by Engineering Bureau) |
| ✓ | Storm sewers and culverts (velocities, capacity, hydraulics) |
| | Hydraulic grade line required when pipe is flowing at full capacity <ul style="list-style-type: none"> ○ Provide existing and proposed summary table ○ Provide existing and proposed mapping, label structures |
| ✓ | Detention facilities (outlet structure, stage/storage, freeboard) |
| ✓ | Emergency outlet sizing, safely pass the 100 year storm, Standard 2D |
| | Outlet protection calculations, based on conveyance protection (i.e. riprap, energy dissipater) |



O. Hydrologic and Hydraulic Model, Existing and Proposed

| | |
|---|--------------------------|
| ✓ | Drainage routing diagram |
| ✓ | Summary |
| ✓ | Storage pond input |

P. Downstream analysis (Site by site basis as required by the Engineering Bureau)

| | |
|--|----------------------------------|
| | Downstream analysis, Standard 2E |
|--|----------------------------------|

III. Supporting Mapping (as appendix to Project Report)

Q. Pre-Development Drainage Basin Area Mapping

| | |
|---|---|
| ✓ | 11" x 17" or 8.5" x 11" sheet size |
| ✓ | Topography, drainage patterns, drainage area boundaries and sub basins, flow paths, times of concentration |
| ✓ | Locations of existing stormwater discharges |
| | Perennial and intermittent streams, wetlands, and floodplain / floodways |
| | NRCS soil types, locations, boring locations, infiltration testing locations |
| | Vegetation and groundcover |
| ✓ | Existing roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, decks and other structures |
| ✓ | Location, size, type of existing structural stormwater controls, facilities and conveyance systems |

R. Post-Development Drainage Basin Area Mapping

| | |
|---|--|
| ✓ | 11" x 17" or 8.5" x 11" sheet size |
| ✓ | Topography, drainage patterns, drainage area boundaries and sub basins, flow paths, times of concentration |
| ✓ | Locations of proposed stormwater discharges |
| | Perennial and intermittent streams, wetlands, and floodplain / floodways |
| | NRCS soil types, locations, boring locations, infiltration testing locations |
| | Vegetation, ground cover and proposed limits of clearing/disturbance |
| ✓ | Proposed, roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, decks and other structures |
| ✓ | Location, size, type of proposed structural stormwater controls, facilities and conveyance systems |

IV. DCIA Tracking Worksheet (as appendix to Project Report)

| | |
|---|--|
| ✓ | DCIA Tracking Worksheet (Use form found in Appendix E) |
|---|--|



V. Proposed LID Review Map

| | |
|--|---|
| | Applying under "Lite" Stormwater Management - Proposed LID Review Map <u>NOT</u> required. |
|--|---|

A. General

| | |
|--|--|
| | Site address |
| | Applicant name, legal address, contact information |
| | Engineers name, address, contact information |
| | North arrow, bar scale, horizontal and vertical datum |
| | Drawing scale shall be set at 1"=20' or 1"=40' when possible |
| | Signed and stamped by a Licensed Professional Engineer in the State of Connecticut |
| | 11" x 17" or 24" x 36" sheet size unless otherwise approved |
| | Existing and proposed contours based on NAVD 88 at 2 foot contour interval or 1 foot contour interval when slope is flatter than 2 percent |
| | Locations of existing stormwater discharges |
| | Roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, and decks and other structures |
| | Location, size, ownership of stormwater conveyance systems (swales, pipes, etc.) |

B. LID Constraints:

| | |
|--|--|
| | Boring / test pit locations |
| | Infiltration testing locations and results |
| | Vegetation and proposed limits of clearing / disturbance |
| | NRCS soils mapping |
| | Steep slopes |
| | Surface waters / Perennial and intermittent streams |
| | Resource protection areas and buffers, wetlands, floodplain / floodways |
| | Existing vegetation and mature trees, which shall include 8-inch (dbh) diameter trees or greater |
| | Poor soils (HSG C & D) |
| | Shallow bedrock / ledge |
| | Seasonal high groundwater elevation |
| | Other site constraints (e.g. brownfield caps) |

C. Proposed Stormwater Treatment Measures:

| | |
|--|---|
| | Location, size, type, limits, and WQV provided by each proposed stormwater treatment practices |
| | Drainage area to each proposed stormwater treatment practice (total area, impervious area, WQV) |

D. Site Summary Table:

| | |
|--|---|
| | Total site area, disturbed area, pre- and post-development impervious areas |
| | Required pollutant reduction volume (retention or detention) |
| | Provided pollutant reduction volume (retention or detention) |



Checklist for Stormwater Management Plan / Construction Plans

A. General

| | |
|---|---|
| ✓ | Site orientation, address and legal description |
| ✓ | Applicant name, legal address, contact information |
| ✓ | Engineers name, address, contact information |
| ✓ | North arrow, bar scale, horizontal and vertical datum |
| ✓ | Drawing scale shall be set at 1"=20' or 1"=40' when possible |
| ✓ | Stamped by a Licensed Professional Engineer in the State of Connecticut |
| ✓ | 24" x 36" sheet size unless otherwise approved |

B. Site Development Plans

| | |
|---|---|
| ✓ | City of Stamford Standard Notes |
| ✓ | As required by the Drainage Maintenance Agreement, provide a written narrative describing the nature of the proposed development activity and the program for operation and maintenance of drainage facilities and control measures throughout the life of the project. |
| ✓ | Existing and proposed contours based on NAVD 88 at 2 foot contour interval or 1 foot contour interval when slope is flatter than 2 percent |
| ✓ | All required spot elevations to clearly depict positive pitch |
| ✓ | Top and bottom elevation of all walls |
| ✓ | Roads, buildings, driveways, parking areas, walks, patios, pools and other impervious surfaces, and decks and other structures |
| ✓ | All utilities and easements |
| ✓ | Location, size, maintenance access, type of proposed structural stormwater controls and facilities with elevations and inverts |
| ✓ | Location, size, maintenance access, type of proposed non-structural stormwater controls and facilities with elevations and inverts |
| ✓ | Location, size, type of proposed stormwater infrastructure, inlets, manholes, infiltration and detentions systems, control structures with elevations and inverts |
| | Location, size, ownership of stormwater conveyance systems (swales, pipes, etc.) with elevations and inverts |
| ✓ | Identify roof leaders, curtain drains and foundation drains with elevations and inverts |
| ✓ | Proposed water quality treatment systems, size and model type |
| ✓ | Final stabilization measures which may include slope stabilization |

C. Erosion and Sedimentation Control Plan

| | |
|---|---|
| ✓ | Phasing and schedule |
| ✓ | Construction access and staging and stock pile areas |
| ✓ | Operation and maintenance of erosion and sedimentation controls |
| | Tree protection |
| ✓ | Downstream protection such as location of silt fencing |
| ✓ | Limit of disturbance |
| ✓ | Construction fencing |



City of Stamford
Engineering Bureau
888 Washington Boulevard, 7th Floor Stamford, CT 06901
Phone 203-977-4189

D. Construction Details

| | |
|---|-----------------------------------|
| ✓ | Standard City of Stamford details |
| ✓ | Infiltration system details |
| ✓ | Control structure details |
| ✓ | Water quality treatment details |
| | Infiltration testing results |

Checklist for Certificate of Occupancy

| | |
|--|---|
| | Final Improvement Location Survey |
| | Stormwater Management Certification Form |
| | Final DCIA Tracking Worksheet |
| | Standard City of Stamford Drainage Maintenance Agreement (Agreement Covenant) |

Other Certifications at the discretion of the Engineering Bureau and/or EPB

| | |
|--|--|
| | Wall Certification |
| | Landscape Certification |
| | Landscape Maintenance Agreement |
| | Waiver Covering Storm Sewer Connection |
| | Waiver Covering Granite Block, Depressed Curb, and Driveway Aprons |
| | Flood Certification |

FINAL SITE PLAN REVIEW SET

" MIXED USE DEVELOPMENT "

LOCATION

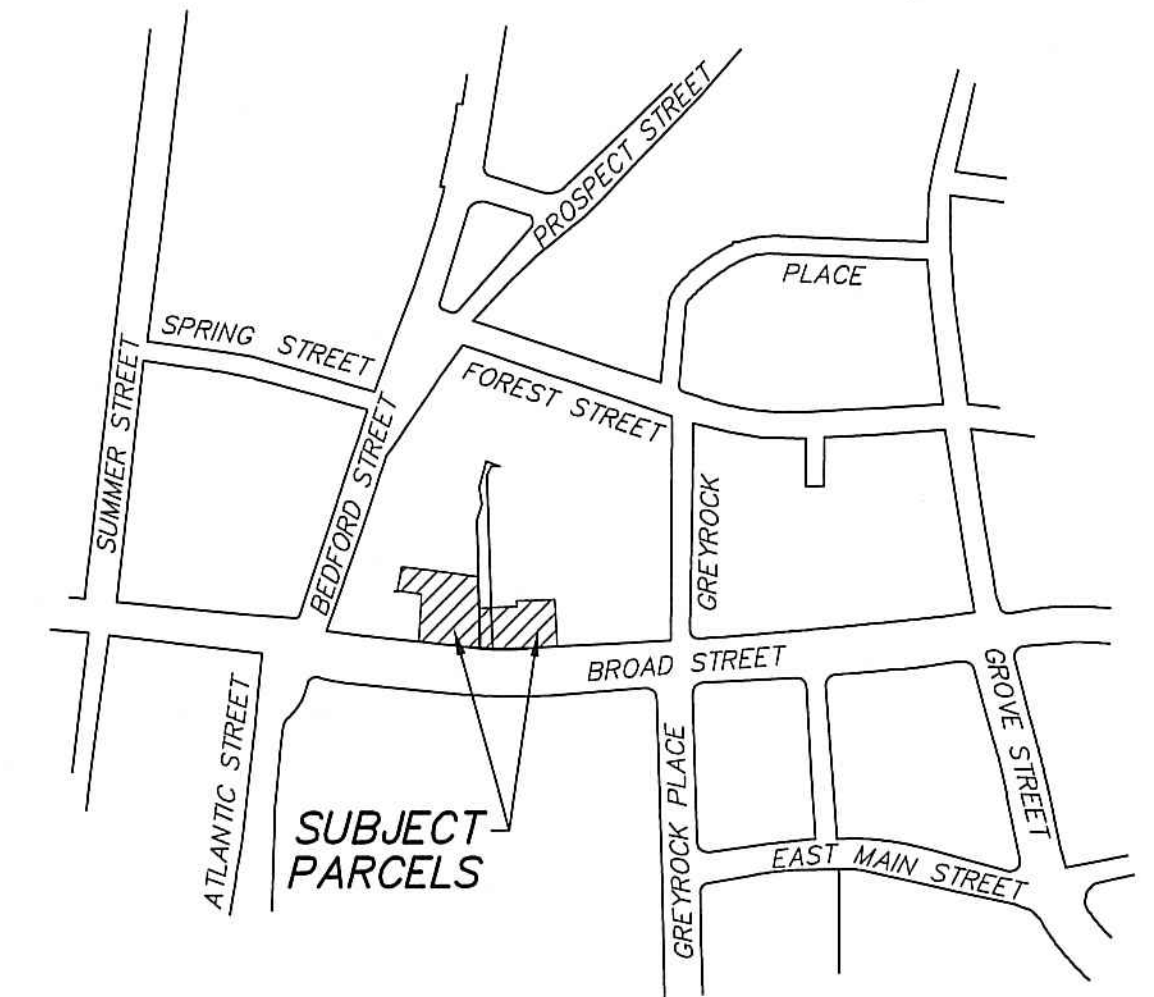
128 BROAD STREET
STAMFORD, CONNECTICUT

PREPARED FOR

TR BROAD II LLC

BLOCK No. 176
"C-G" ZONING DISTRICT
PARCEL A = 20,865 SQ.FT.
PARCEL B = 14,794 SQ.FT.

MAP No. 11967 S.L.R. MERIDIAN



LOCATION MAP

SHEET INDEX

| SHEET | TITLE | REVISION | DATE |
|--------|---------------------------------------|----------|----------|
| - | TOPOGRAPHIC SURVEY | 3 | 6-28-22 |
| 1 OF 6 | GRADING PLAN | 0 | 10-28-22 |
| 2 OF 6 | STORM DRAINAGE & UTILITY PLAN | 0 | 10-28-22 |
| 3 OF 6 | PAVEMENT MARKINGS & SIGNAGE PLAN | 0 | 10-28-22 |
| 4 OF 6 | SEDIMENTATION & EROSION CONTROL PLAN | 0 | 10-28-22 |
| 5 OF 6 | NOTES AND DETAILS | 0 | 10-28-22 |
| 6 OF 6 | DETAILS | 0 | 10-28-22 |
| 1 OF 1 | OFFSITE PARKING LOT MODIFICATION PLAN | 0 | 10-28-22 |
| 1 OF 1 | CROSS SECTION PLAN | 0 | 10-28-22 |
| 1 OF 1 | CONSTRUCTION LOGISTICS PLAN | 0 | 10-28-22 |

ENGINEERING PLANS PREPARED BY:

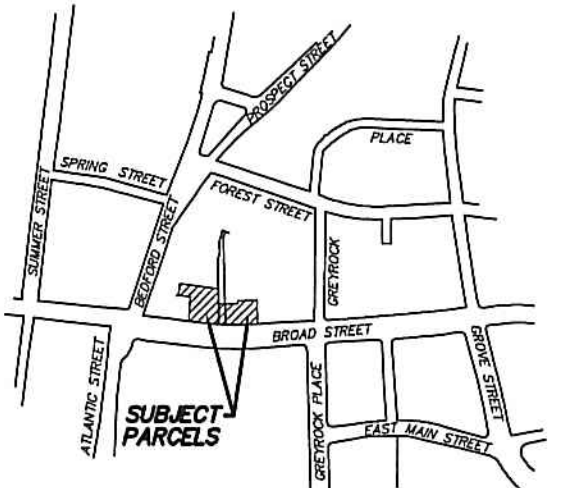
Leonard C. D'Andrea 10-28-22
D'ANDREA SURVEYING & ENGINEERING, P.C. DATE
LEONARD C. D'ANDREA, CT PE No. 14869

ONLY COPIES OF THIS SET, BEARING AN ORIGINAL
IMPRINT OF THE ENGINEER'S / SURVEYOR'S EMBOSSED
SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.

D'ANDREA SURVEYING & ENGINEERING, PC
LAND PLANNERS
ENGINEERS
P.O. BOX 549 RIVERSIDE, CT 06878
6 NEIL LANE TEL. 637-1779

| | |
|--------------|---|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |

| | | |
|------|----------|-------------------|
| REV. | DATE | DESCRIPTION |
| 0 | 10-28-22 | ZONING SUBMISSION |

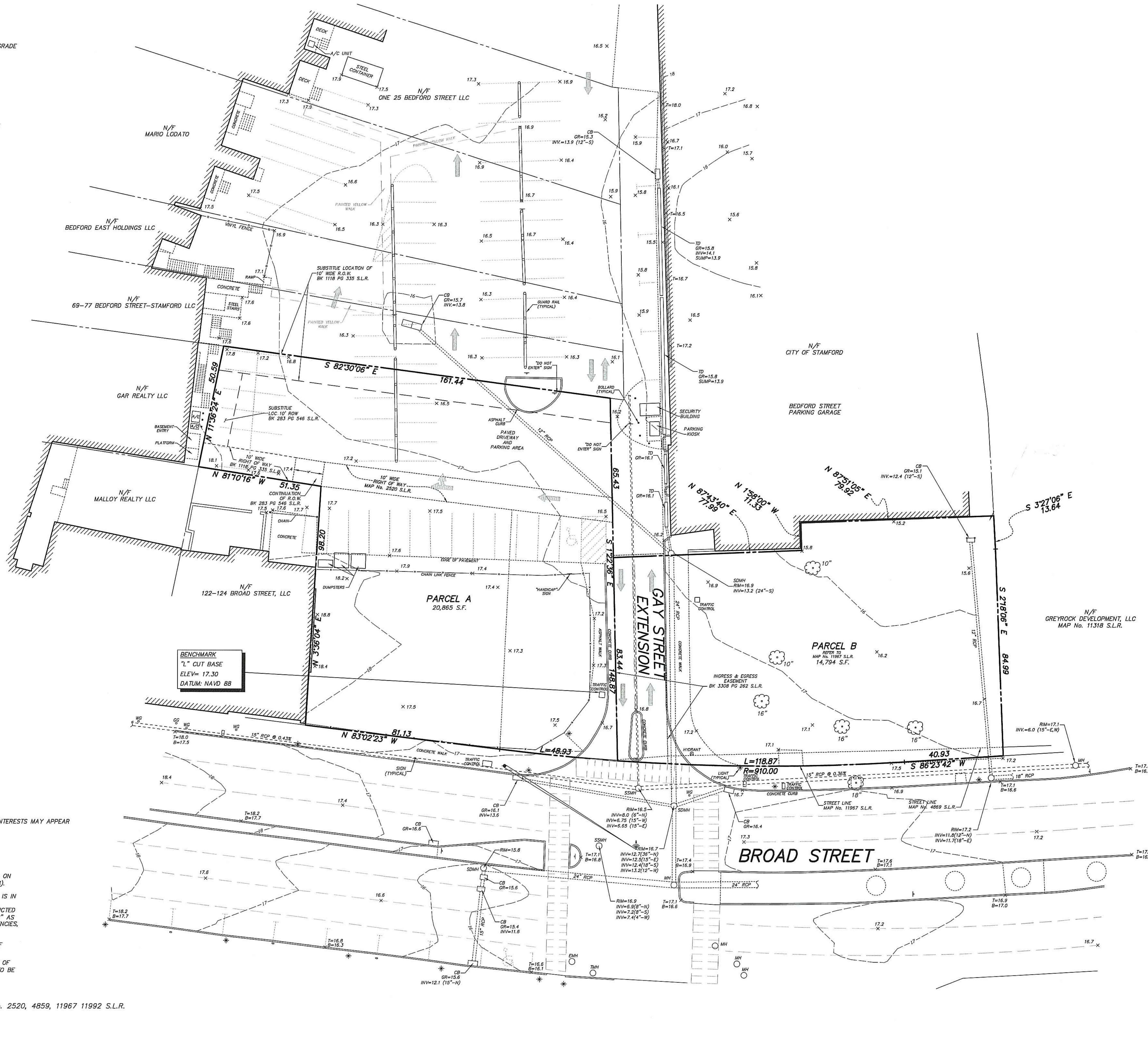


LOCATION MAP - 1" = 800'±

MAP No. 11967 S.L.R., MERIDIAN

LEGEND

- BB --- EXISTING CONTOUR
- X --- EXISTING SPOT GRADE
- X --- EXISTING WALL/CURB SPOT GRADE
- DECIDUOUS TREE
- CONIFEROUS TREE
- PROPERTY LINE
- ZONING DISTRICT LIMIT LINE
- C --- CABLE SERVICE
- E --- ELECTRIC SERVICE
- G --- GAS SERVICE
- T --- TELECOMMUNICATION SERVICE
- W --- WATER SERVICE
- GG --- GAS GATE
- WG --- WATER GATE
- WM --- WATER METER
- OSW --- OVERHEAD SERVICE WIRES
- P --- UTILITY POLE
- CB --- CATCH BASIN
- SDMH --- STORM DRAIN MANHOLE
- SSMH --- SANITARY SEWER MANHOLE
- PVC --- POLYVINYL CHLORIDE
- RCP --- REINFORCED CONCRETE PIPE
- VTP --- VITRIFIED TILE PIPE
- T --- TOP OF WALL/CURB
- B --- BOTTOM OF WALL/CURB
- GR --- GRATE ELEVATION
- RIM --- RIM ELEVATION
- INV --- INVERT ELEVATION
- FL --- FLOWLINE



THIS MAP DEPICTS SITE CONDITIONS AS OF MAY 2, 2022.

THE UNDERSIGNED DECLARES TO:
 M&T BANK, ITS SUCCESSORS AND/OR ASSIGNS AS THEIR INTERESTS MAY APPEAR
 FIRST AMERICAN TITLE INSURANCE COMPANY
 TR BROAD II, LLC

CONTOURS AND ELEVATIONS DEPICTED HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
 THIS MAP IS A TOPOGRAPHIC SURVEY. TOPOGRAPHIC DATA IS IN ACCORDANCE WITH CLASS "T-2" TOPOGRAPHIC ACCURACY. BOUNDARY INFORMATION IS BASED ON A RESURVEY CONDUCTED IN ACCORDANCE WITH HORIZONTAL ACCURACY CLASS "A-2" AS DEFINED IN THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20.

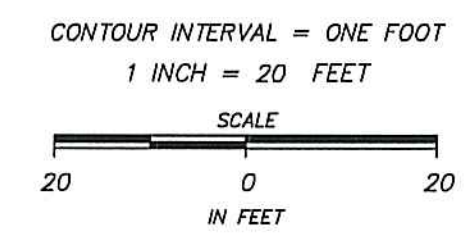
NEW MONUMENTATION HAS NOT BEEN SET AS A RESULT OF THIS SURVEY.
 ONLY COPIES OF THIS MAP, BEARING AN ORIGINAL IMPRINT OF THE SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.

AREA = 35,659 S.F.
 REFER TO BOOK 4416 PAGE 166 AND MAPS No. 2520, 4859, 11967 11992 S.L.R.
 LAND LIES IN "C-G" ZONING DISTRICT

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

D'ANDREA SURVEYING & ENGINEERING, P.C.
 SURVEYOR
 ANTHONY L. D'ANDREA, CT LS No. 9673
 RIVERSIDE, CONNECTICUT

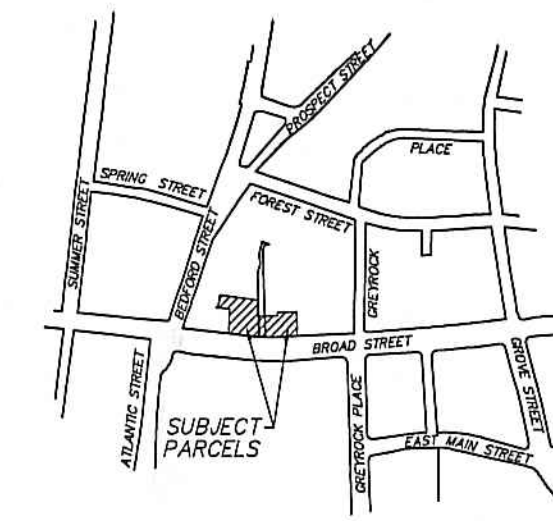
JANUARY 12, 2022 JANUARY 18, 2022 MAY 2, 2022 JUNE 28, 2022



TOPOGRAPHIC SURVEY
 DEPICTING
 128-136 BROAD STREET
 AND
 GAY STREET EXTENSION
 IN
 STAMFORD, CONNECTICUT
 PREPARED FOR
 TR BROAD II LLC

DRAWING: 21111_11967_11992 (CAD)

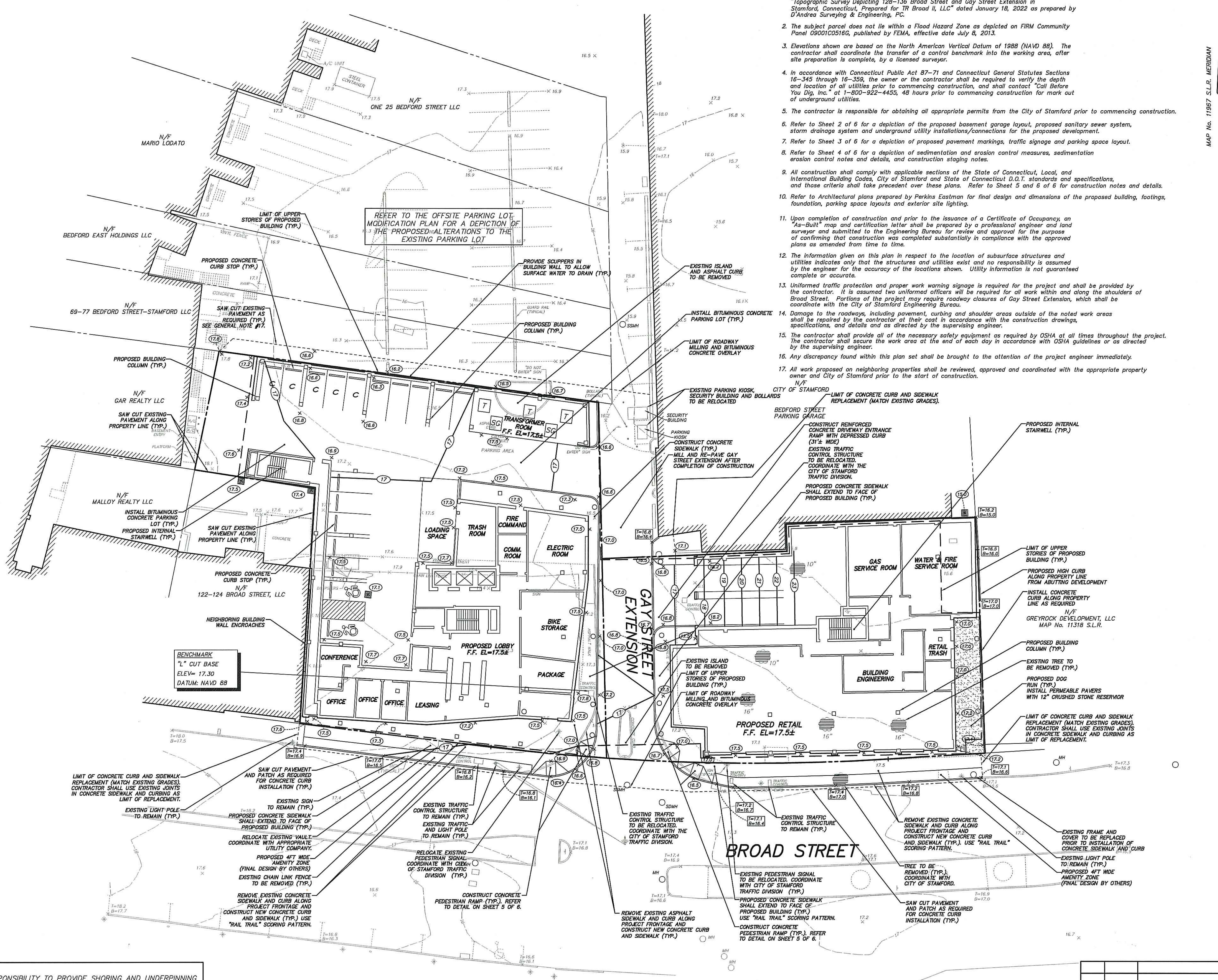
2/11



LOCATION MAP - 1" = 800'±

GENERAL NOTES:

1. Boundary information, existing features, and topography were taken from a survey entitled "Topographic Survey Depicting 128-136 Broad Street and Gay Street Extension in Stamford, Connecticut, Prepared for TR Broad II, LLC" dated January 18, 2022 as prepared by D'Andrea Surveying & Engineering, P.C.
2. The subject parcel does not lie within a Flood Hazard Zone as depicted on FIRM Community Panel 05001C05160, published by FEMA, effective date July 8, 2013.
3. Elevations shown are based on the North American Vertical Datum of 1988 (NAVD 88). The contractor shall coordinate the transfer of a control benchmark into the working area, after site preparation is complete, by a licensed surveyor.
4. In accordance with Connecticut Public Act 87-71 and Connecticut General Statutes Sections 16-345 through 16-359, the owner or the contractor shall be required to verify the depth and location of all utilities prior to commencing construction, and shall contact "Call Before You Dig, Inc." at 1-800-922-4455, 48 hours prior to commencing construction for mark out of underground utilities.
5. The contractor is responsible for obtaining all appropriate permits from the City of Stamford prior to commencing construction.
6. Refer to Sheet 2 of 6 for a depiction of the proposed basement garage layout, proposed sanitary sewer system, storm drainage system and underground utility installations/connections for the proposed development.
7. Refer to Sheet 3 of 6 for a depiction of proposed pavement markings, traffic signage and parking space layout.
8. Refer to Sheet 4 of 6 for a depiction of sedimentation and erosion control measures, sedimentation erosion control notes and details, and construction staging notes.
9. All construction shall comply with applicable sections of the State of Connecticut, Local, and International Building Codes, City of Stamford and State of Connecticut D.O.T. standards and specifications, and these criteria shall take precedent over these plans. Refer to Sheet 5 and 6 of 6 for construction notes and details.
10. Refer to Architectural plans prepared by Perkins Eastman for final design and dimensions of the proposed building, footings, foundation, parking space layouts and exterior site lighting.
11. Upon completion of construction and prior to the issuance of a Certificate of Occupancy, an "As-Built" map and certification letter shall be prepared by a professional engineer and land surveyor and submitted to the Engineering Bureau for review and approval for the purpose of confirming that construction was completed substantially in compliance with the approved plans as amended from time to time.
12. The information given on this plan in respect to the location of subsurface structures and utilities indicates only that the structures and utilities exist and no responsibility is assumed by the engineer for the accuracy of the locations shown. Utility information is not guaranteed complete or accurate.
13. Uniformed traffic protection and proper work warning signage is required for the project and shall be provided by the contractor. It is assumed two uniformed officers will be required for all work within and along the shoulders of Broad Street. Portions of the project may require roadway closures of Gay Street Extension, which shall be coordinated with the City of Stamford Engineering Bureau.
14. Damage to the roadways, including pavement, curbing and shoulder areas outside of the noted work areas shall be repaired by the contractor at their cost in accordance with the construction drawings, specifications, and details and as directed by the supervising engineer.
15. The contractor shall provide all of the necessary safety equipment as required by OSHA at all times throughout the project. The contractor shall secure the work area at the end of each day in accordance with OSHA guidelines or as directed by the supervising engineer.
16. Any discrepancy found within this plan set shall be brought to the attention of the project engineer immediately.
17. All work proposed on neighboring properties shall be reviewed, approved and coordinated with the appropriate property owner and City of Stamford prior to the start of construction.

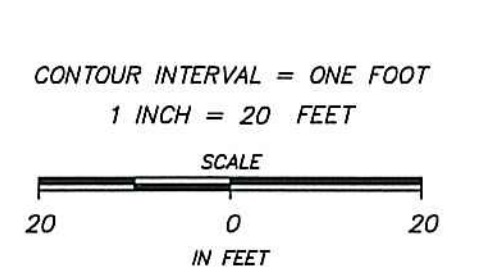


LEGEND

| | |
|--------|---|
| --- BB | EXISTING CONTOUR |
| x BEA | EXISTING SPOT GRADE |
| x BEB | EXISTING WALL/CURB SPOT GRADE |
| x BEC | PROPOSED SPOT GRADE |
| --- BB | PROPOSED CONTOUR |
| x BEB | PROPOSED WALL/CURB SPOT GRADE |
| --- BB | DEEDIOUS TREE |
| --- BB | CONFEROUS TREE |
| --- BB | TREE TO BE REMOVED |
| --- BB | UNDERGROUND UTILITY SERVICE: C=CABLE, E=ELECTRIC, G=GAS, T=TELEPHONE, W=WATER |
| --- | PROPERTY LINE |
| ① | REGULAR PARKING SPACE (8.5'x18') |
| C | COMPACT PARKING SPACE (8.5'x16') |
| ♿ | HANDICAPPED PARKING SPACE |
| GG | GAS GATE |
| WG | WATER GATE |
| WM | WATER METER |
| UP | UTILITY POLE |
| CB | CATCH BASIN |
| MH | MANHOLE |
| EMH | ELECTRIC MANHOLE |
| SDMH | STORM DRAIN MANHOLE |
| SSMH | SANITARY SEWER MANHOLE |
| CPP | CORRUGATED POLYETHYLENE PIPE |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| VTP | VITRIFIED TILE PIPE |
| T | TOP OF WALL/CURB |
| B | BOTTOM OF WALL/CURB |
| GR | GRATE ELEVATION |
| RM | RIM ELEVATION |
| INV | INVERT ELEVATION |
| AOBE | AS ORDERED BY ENGINEER |
| VF | VERIFY IN FIELD |

NOTE:
 IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE SHORING AND UNDERPINNING AS REQUIRED, DESIGNED BY A STRUCTURAL ENGINEER, DURING THE EXCAVATION AND CONSTRUCTION OF THE PROPOSED BUILDING FOOTINGS AND FOUNDATIONS TO PROTECT AND MAINTAIN NEIGHBORING BUILDING FOUNDATIONS AND PROPERTIES.

NOTE:
 A "STREET OPENING PERMIT" MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE CITY OF STAMFORD RIGHT-OF-WAY. ALL CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL BE COORDINATED WITH THE CITY OF STAMFORD ENGINEERING BUREAU.



BUILDING FOOTING NOTE:
 THE PROPOSED BUILDING FOOTINGS AND ASSOCIATED EXCAVATIONS SHALL NOT EXTEND BEYOND THE PROPERTY LINES.

DEMOLITION NOTE:
 ALL EXISTING TREES, ASPHALT PAVEMENT, FENCING, AND MISC. DEBRIS SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

NOTE:
 THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING AND MAINTAINING TRAFFIC FLOW ON ADJOINING ROADWAYS THROUGHOUT THE PROJECT.

D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS

P.O. BOX 549
 RIVERSIDE, CT 06878

6 NEIL LANE
 TEL. 637-1779

| PROJECT | MIXED USE DEVELOPMENT | | | | | | |
|--------------|--|-------------------|------|-------------|---|----------|-------------------|
| PREPARED FOR | TR BROAD II, LLC | | | | | | |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT | | | | | | |
| DATE | 10-28-22 | | | | | | |
| REVISIONS | <table border="1"> <tr> <th>REV.</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>0</td> <td>10-28-22</td> <td>ZONING SUBMISSION</td> </tr> </table> | REV. | DATE | DESCRIPTION | 0 | 10-28-22 | ZONING SUBMISSION |
| REV. | DATE | DESCRIPTION | | | | | |
| 0 | 10-28-22 | ZONING SUBMISSION | | | | | |
| ENGINEER | 10-28-22 | | | | | | |
| DATE | | | | | | | |

ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

BROADWAY_ZHUT_DP_07_REV.DWG

2/07

BLOCK No. 176
"C-G" ZONING DISTRICT
PARCEL A = 20,865 SQ.FT.
PARCEL B = 14,794 SQ.FT.



LOCATION MAP - 1" = 800'±

GENERAL NOTES:

- The purpose of this plan is only to depict the layout of the proposed storm drainage, sanitary sewer, and utilities; water, gas, electric, telephone, and cable. This plan shall not be used for the construction of any other aspect of this project.
- Boundary Information, existing features, and topography were taken from a survey entitled "Topographic Survey Depicting 128-136 Broad Street and Gay Street Extension in Stamford, Connecticut, Prepared for TR Broad II, LLC" dated January 18, 2022 as prepared by D'Andrea Surveying & Engineering, PC.
- Elevations shown are based on the North American Vertical Datum of 1988 (NAVD 88). The contractor shall coordinate the transfer of a control benchmark into the working area, after site preparation is complete, by a licensed surveyor.
- In accordance with Connecticut Public Act 87-71 and Connecticut General Statutes Sections 16-345 through 16-359, the owner or the contractor shall be required to verify the depth and location of all utilities prior to commencing construction, and shall contact "Call Before You Dig, Inc." at 1-800-922-4455, 48 hours prior to commencing construction for mark out of underground utilities.
- The information given on this plan in respect to the location of subsurface structures and utilities indicates only that the structures and utilities exist and no responsibility is assumed by the engineer for the accuracy of the locations shown. Utility information is not guaranteed complete or accurate.
- The proposed development will be served by the City of Stamford sanitary sewer system. A sewer permit shall be obtained prior to the commencement of construction.
- The proposed development shall be served by YankeeGas and the Aquarion Water Company. New service laterals shall be installed to the new building as depicted on this plan. Final service lateral locations and any utility relocation shall be coordinated with each respective utility company.
- All roof drains for the proposed building shall be piped internally and connected to the proposed storm drainage system as depicted on the plan. Final locations and sizes of the roof drain connections shall be coordinated between the architect, contractor and project engineer.
- The locations and elevations of the proposed storm drainage system depicted hereon may be modified with the approval of the project engineer and City of Stamford Engineering Bureau.
- Existing drainage structures and piping to remain shall be cleaned and inspected to determine if replacement is warranted. Existing piping to remain shall be widened to determine their condition, prior to construction.
- The contractor shall obtain all appropriate permits prior to commencing construction.
- All construction shall comply with City of Stamford and State of Connecticut D.O.T. standards and specifications. Refer to Sheet 5 and 6 of 6 for construction notes and details.

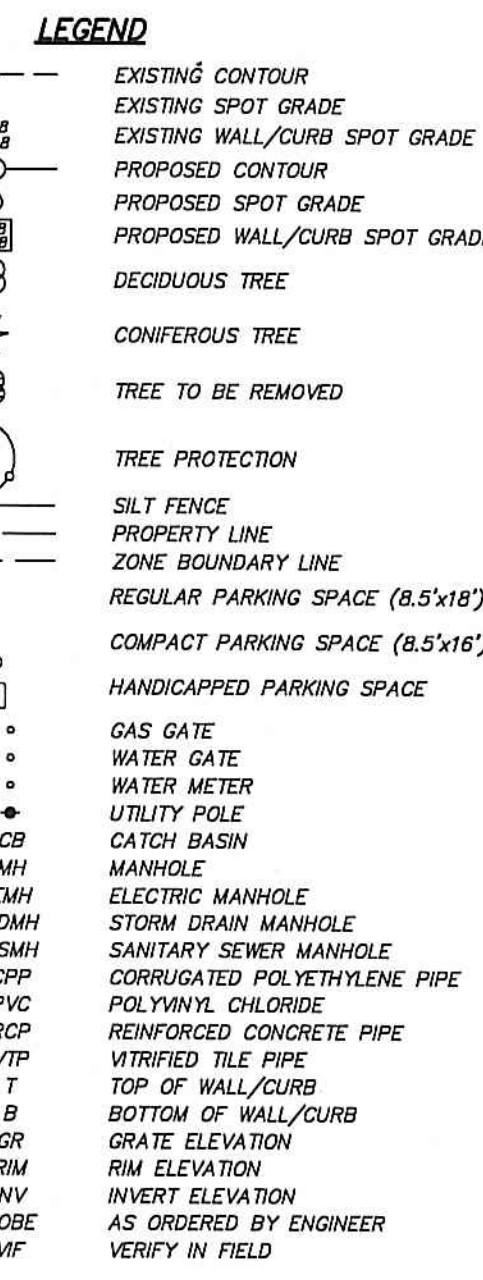
- Prior to any construction, the contractor shall coordinate a test pit schedule with the City of Stamford and project engineer. Test pits shall be excavated where indicated hereon or wherever design conflicts may occur to determine actual location and elevation of utility service mains/laterals within the project Right-of-Way along the project frontage. Design conflicts if any, shall be brought to the immediate attention of the project engineer. Plate or backfill and patch test pits as directed by the project engineer.
- The contractor is responsible for providing adequate support/protection for existing utility laterals and/or mains exposed during the excavation and installation of the proposed utility service laterals. Care shall be taken to not undermine the existing mains/laterals anymore than necessary to install the proposed utility laterals. Any damage to the existing utility mains/laterals or service interruption caused during the proposed utility installation shall be repaired by the contractor at no expense to the City of Stamford, properly owner served or the property owner of 128-136 Broad Street. Any exposed utility service lateral shall be backfilled with one foot of clean sand above the lateral.
- During construction activities within the City of Stamford Right-of-Way, the contractor must maintain traffic flow at all times. Contractor shall provide all necessary traffic control devices for the maintenance and protection of both vehicular and pedestrian traffic. All traffic control devices shall be installed in conformance with the Manual on Uniform Traffic Control Devices, 2009 Edition, as published by the U.S. Department of Transportation, Federal Highway Administration, and as amended to date.
- All trenches shall be backfilled and/or plated after work hours each day, with the traffic/pedestrian right-of-way restored to safe/serviceable condition.
- The Engineering Bureau of the City of Stamford shall be notified three days prior to commencement of any construction within the City of Stamford Right-of-Way.
- All work within the City of Stamford Right-of-Way shall be in accordance with all applicable City of Stamford standards.
- Certification will be required by a Professional Engineer licensed in the State of Connecticut that work has been completed in compliance with the approved drawings.
- A Final Location Plan will be required by a Professional Land Surveyor licensed in the State of Connecticut.
- Contractor is responsible for ensuring all exposed utility lateral/mains are backfilled in compliance with each respective utility company's requirements.
- All utility relocation and installations shall be coordinated with each respective utility company prior to construction. Coordinate all utility installation and connection specifications with each respective utility company.
- The contractor shall coordinate the final location and installation of all proposed utility splice boxes/vaults with each respective utility company.
- Depicted locations of the proposed gas services, water services, and underground utilities; electric, telephone, and cable are approximate for approval purposes only. Final locations and installation requirements shall be coordinated between each respective utility company and the owner.
- A Drainage Maintenance Agreement shall be provided to the City of Stamford prior to obtaining a final Certificate of Occupancy.

NOTE:
 THE CONTRACTOR AND/OR OWNER SHALL COORDINATE WITH EACH RESPECTIVE UTILITY COMPANY REGARDING THE ABANDONMENT OR RELOCATION PROCEDURES REQUIRED FOR ALL EXISTING UTILITIES WITHIN GAY STREET EXTENSION.

NOTE:
 THE CONTRACTOR AND/OR OWNER SHALL COORDINATE WITH EACH RESPECTIVE UTILITY COMPANY TO DETERMINE THE AVAILABILITY, LOCATION AND SERVICE REQUIREMENTS FOR ELECTRICAL, TELEPHONE AND CABLE SERVICE FOR THE PROPOSED DEVELOPMENT.

NOTE:
 THE CONTRACTOR SHALL DIG TEST PITS TO VERIFY THE DEPTH AND LOCATIONS OF EXISTING UTILITIES, SEWERS, AND STORM DRAINS PRIOR TO INSTALLATION OF ANY PROPOSED UTILITIES. ANY POTENTIAL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER IMMEDIATELY.

NOTE:
 A "STREET OPENING PERMIT" MUST BE OBTAINED PRIOR TO ANY CONSTRUCTION ACTIVITY IN THE CITY OF STAMFORD RIGHT-OF-WAY. ALL CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL BE COORDINATED WITH THE CITY OF STAMFORD ENGINEERING BUREAU. ALL WORK IN THE CITY R.O.W. SHALL BE BUILT IN ACCORDANCE TO CITY OF STAMFORD STANDARDS.

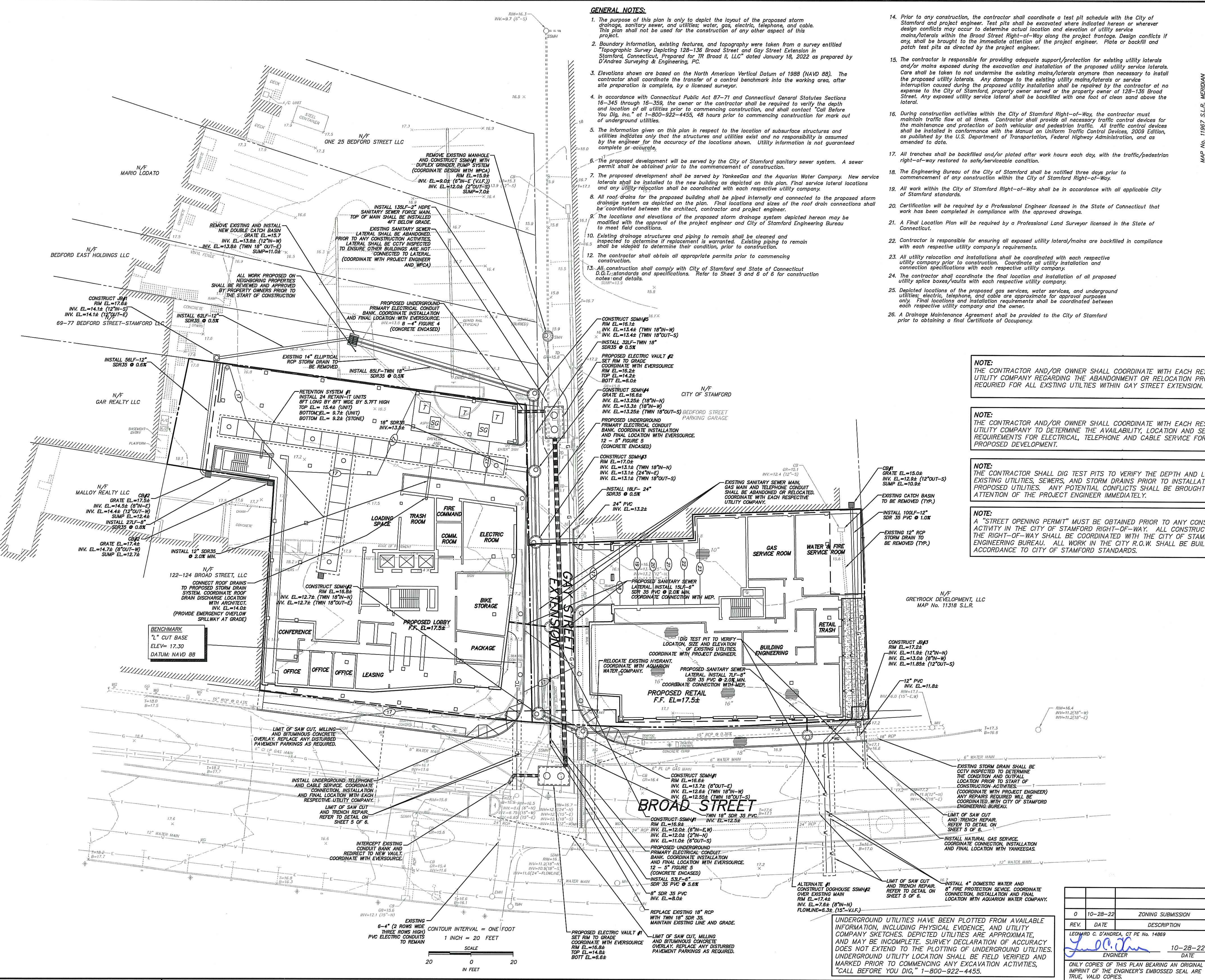


D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS
 P.O. BOX 549
 RIVERSIDE, CT 06878
 6 NEIL LANE
 TEL. 637-1779

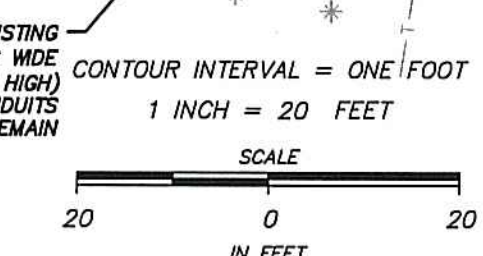
| | |
|--------------|---|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| 2 OF 6 | STORM DRAINAGE & UTILITY PLAN |

| REV. | DATE | DESCRIPTION |
|------|----------|--------------------------------------|
| 0 | 10-28-22 | ZONING SUBMISSION |
| 1 | 10-28-22 | LEONARD C. D'ANDREA, CT PE No. 14869 |
| | | 10-28-22 |
| | | ENGINEER DATE |

ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

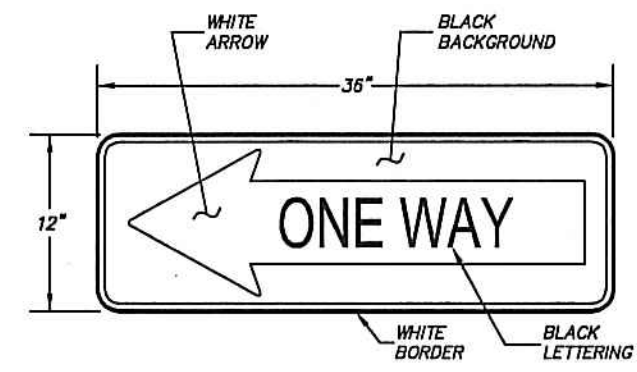


FILES: BROADWAY_21UT_DP_07_05V.DWG
 BROADWAY_21UT_LP_01_REV.DWG (REV)



UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION, INCLUDING PHYSICAL EVIDENCE, AND UTILITY COMPANY SKETCHES. DEPICTED UTILITIES ARE APPROXIMATE AND MAY BE INCOMPLETE. SURVEY DECLARATION OF ACCURACY DOES NOT EXTEND TO THE PLOTTING OF UNDERGROUND UTILITIES. UNDERGROUND UTILITY LOCATION SHALL BE FIELD VERIFIED AND MARKED PRIOR TO COMMENCING ANY EXCAVATION ACTIVITIES, "CALL BEFORE YOU DIG," 1-800-922-4455.

- NOTES:**
1. Refer to topographic survey for a declaration of survey class accuracy.
 2. The purpose of this plan is only to depict the proposed locations and details for all internal pavement markings and signage. This plan shall not be used for any other aspect of construction.
 3. All traffic control devices, including traffic signs and pavement markings, shall be installed in conformance with the Manual on Uniform Traffic Control Devices, Millennium Edition, as published by the U.S. Department of Transportation, Federal Highway Administration, and as amended to date.
 4. All traffic control markings and cross walk striping disturbed during construction shall be refreshed at the completion of construction in accordance with City of Stamford standards.



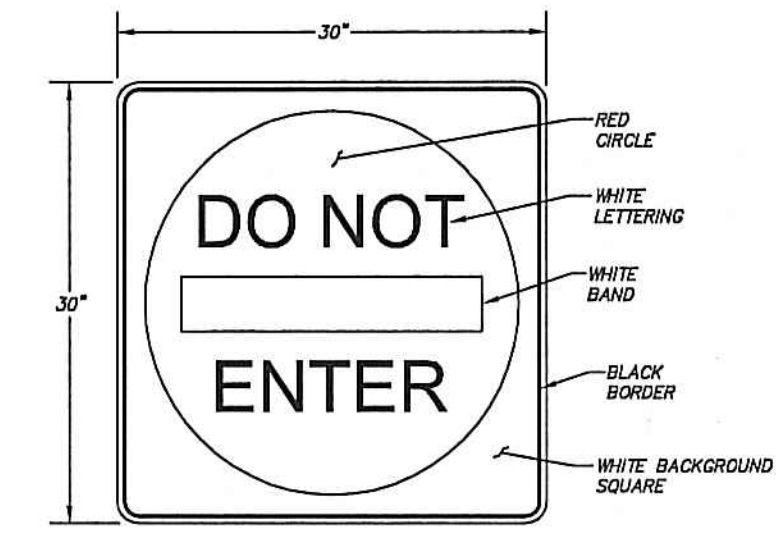
All "ONE WAY" signs shall be a 12-inch high by 36-inch wide black rectangle on which is inscribed a white arrow pointing in the direction of traffic flow.

The legend "ONE WAY" shall appear in black letters, with the words "ONE WAY" centered within the arrow, and with respect to the sign rectangle.

All "ONE WAY" signs shall be installed at a height of at least 5 feet, as measured from the bottom of the sign to the near edge of the pavement.

"ONE WAY" sign lettering, color, size, and installation shall be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, Millennium Edition, as amended to date.

"ONE WAY" SIGN DETAIL (R6-1)
N.T.S.



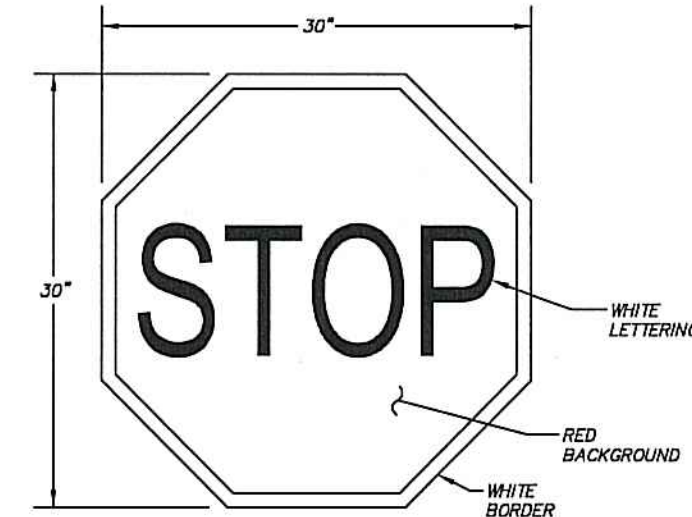
All "DO NOT ENTER" signs shall be a 30-inch white square on which is inscribed a red circle, with a white band placed horizontally across the center of the circle.

The legend "DO NOT ENTER" shall appear in white letters with the words DO NOT above the band and ENTER below the band.

All "DO NOT ENTER" signs shall be installed at a height of at least 5 feet, measured from the bottom of the sign to the near edge of the pavement.

"DO NOT ENTER" sign legend, color, size, and installation shall be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, Millennium Edition, as amended to date.

"DO NOT ENTER" SIGN DETAIL (R5-1)
N.T.S.



All "STOP" signs shall be an octagon with a white legend and border on a red background.

The standard "STOP" sign shall be 30 x 30 inches.

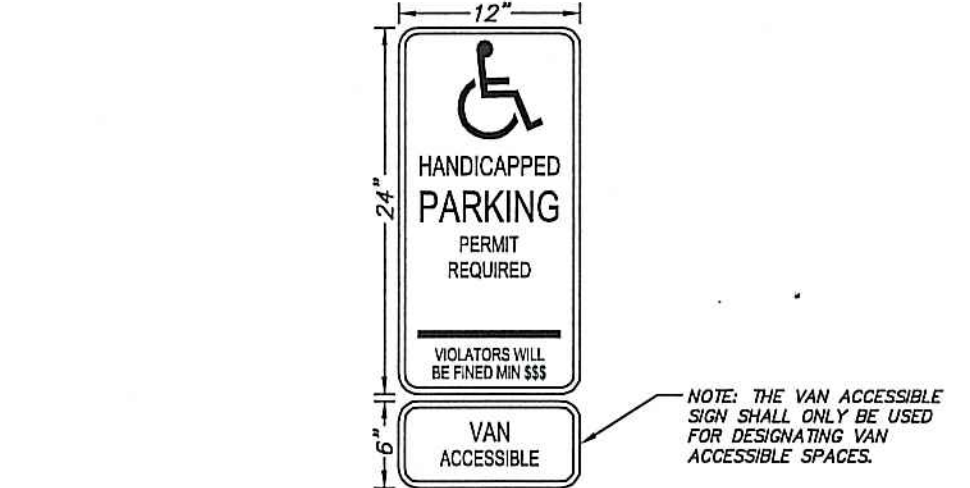
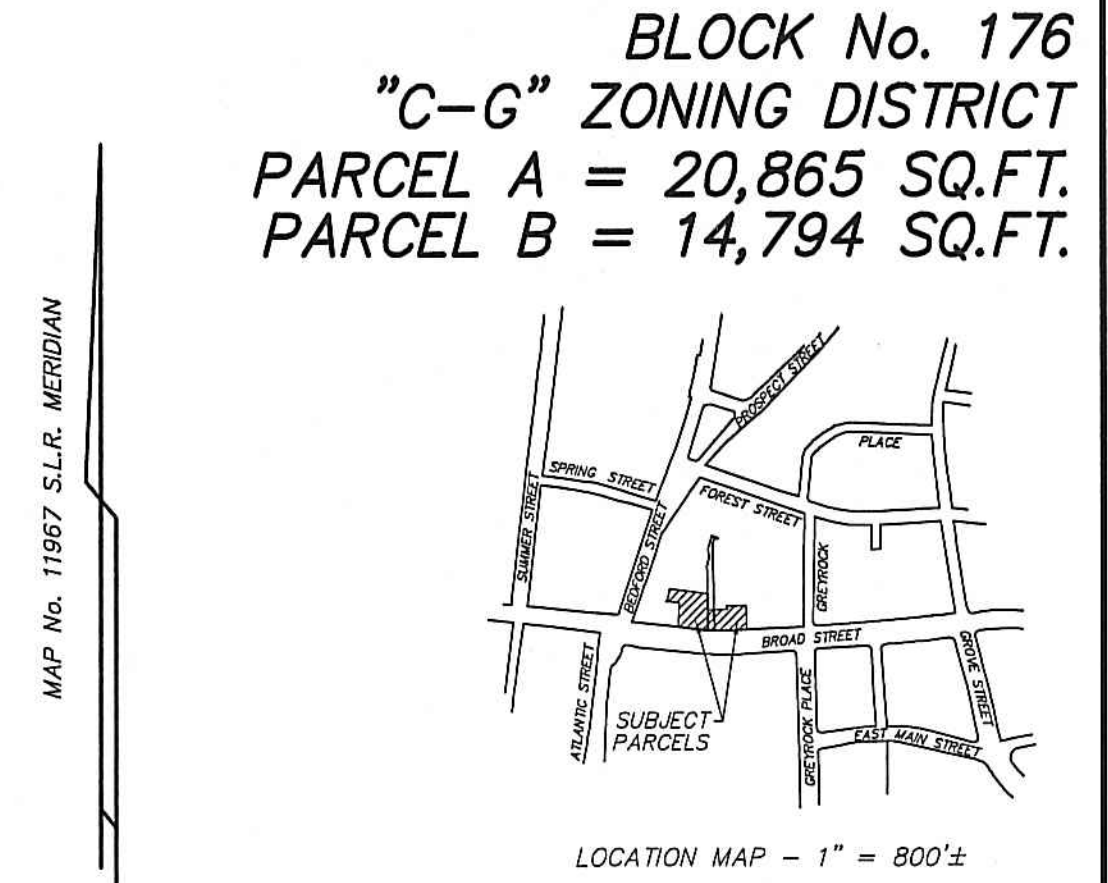
All "STOP" signs shall be installed at a height of at least 5 feet, measured from the bottom of the sign to the near edge of the pavement.

"STOP" sign lettering, color, size, and installation shall be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, Millennium Edition, as amended to date.

"STOP" SIGN DETAIL (R1-1)
N.T.S.

SURFACE PARKING SUMMARY

- 10 REGULAR PARKING SPACES (8.5'x18')
- 5 COMPACT PARKING SPACES (8.5'x16')
- 2 VAN HANDICAP PARKING SPACE
- 17 PARKING SPACES PROVIDED



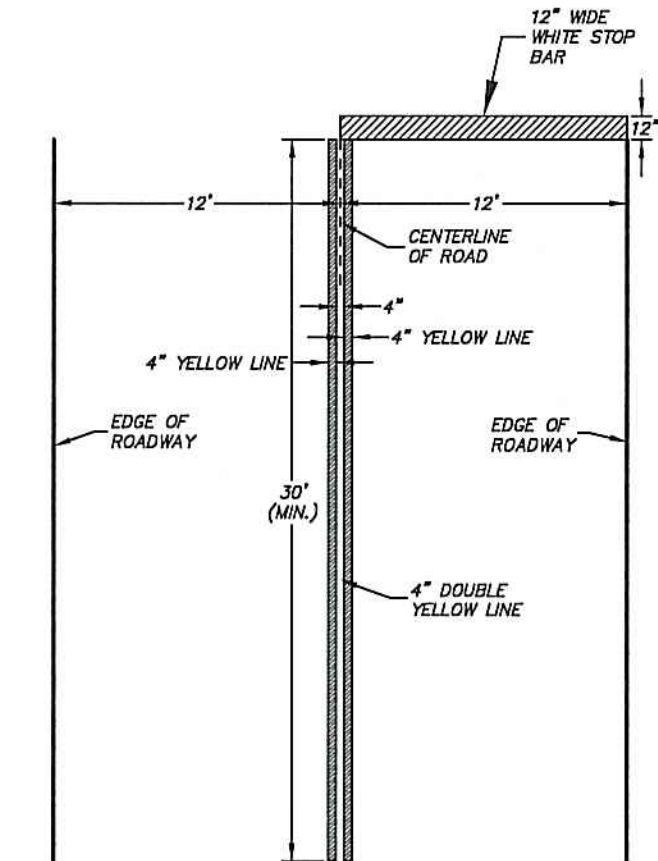
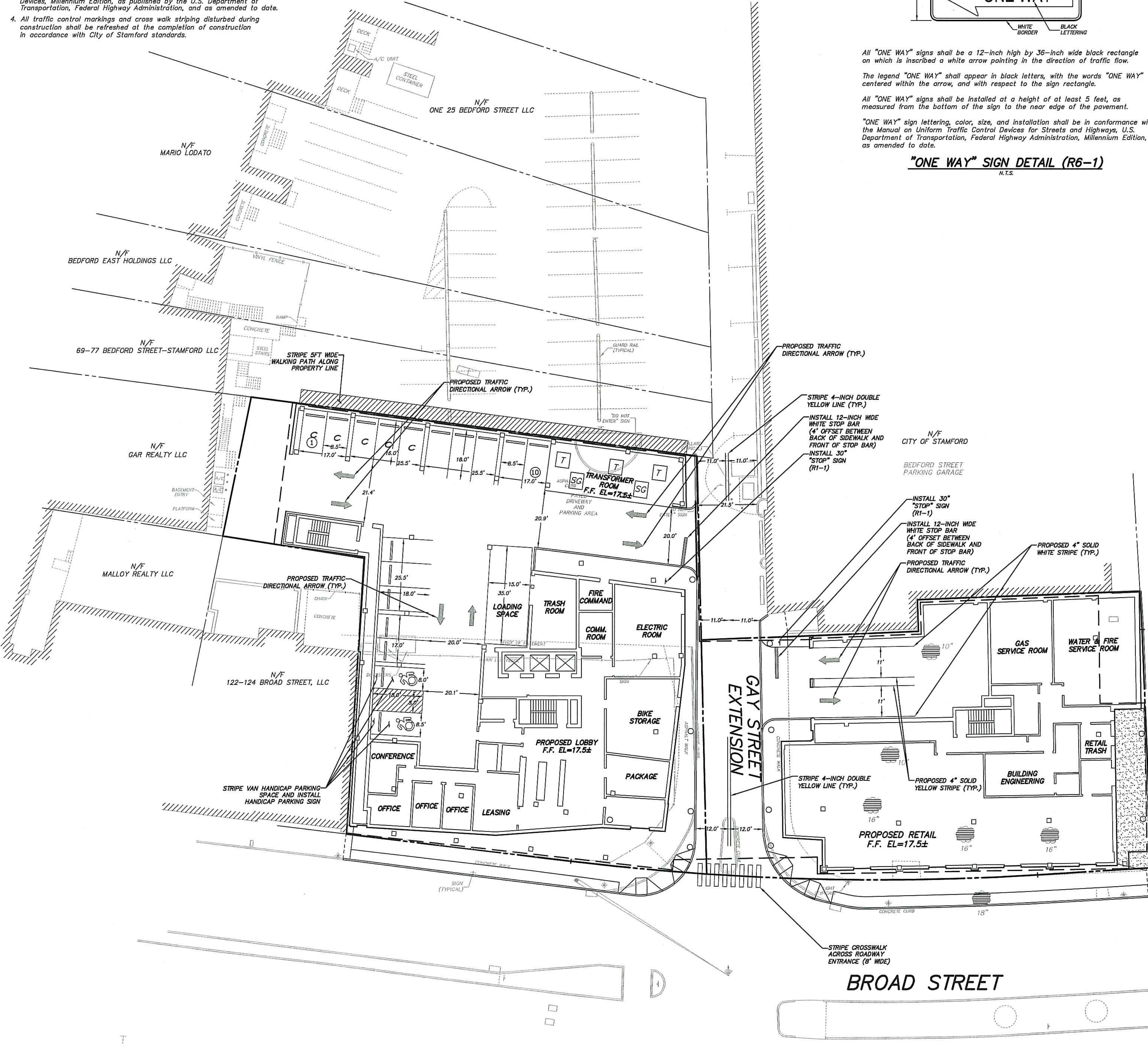
"HANDICAPPED PARKING PERMIT REQUIRED" & "VAN ACCESSIBLE" signs shall have white lettering against a blue background.

All accessible signage sizes, lettering, and symbols shall comply with federal and state specifications.

All accessible signage shall be installed 60" (minimum) above the floor or ground surface of the parking space, measured to the bottom of the sign.

Confirm fine amount prior to sign fabrication.

HANDICAPPED PARKING SPACE SIGN DETAIL
N.T.S.



PAVEMENT MARKING DETAIL
N.T.S.

- STOP BAR NOTES:**
1. STOP BARS SHALL BE 12" WIDE (MIN.) UNLESS OTHERWISE NOTED ON THE PLANS.
 2. IF THERE IS AN EXISTING CROSSWALK, THE STOP BAR SHALL BE PLACED A MINIMUM OF 4 FT BEHIND THE NEAREST EDGE OF THE CROSSWALK.
 3. IN THE ABSENCE OF A MARKED CROSSWALK, THE STOP BAR SHALL BE PLACED AT THE DESIRED STOPPING POINT. IN NO CASE SHALL THIS BE MORE THAN 30 FT OF LESS THAN 5 FT FROM THE NEAREST EDGE OF THE INTERSECTING ROADWAY. THE STOP BAR SHALL BE AT A 90° ANGLE WITH RESPECT TO THE CENTERLINE OF THE ROADWAY.
 4. THE STOP BAR SHALL BE PLACED IN LINE WITH THE STOP SIGN. IF THE STOP SIGN CANNOT BE LOCATED EXACTLY WHERE VEHICLES ARE EXPECTED TO STOP, IT SHALL BE PLACED AT THE STOPPING POINT.

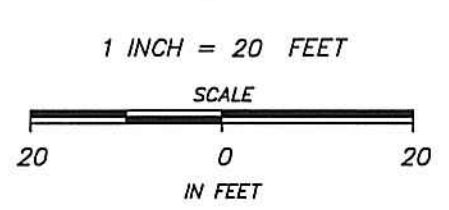
- LEGEND**
- BB --- EXISTING CONTOUR
 - - - - - EXISTING SPOT GRADE
 - - - - - EXISTING WALL/CURB SPOT GRADE
 - - - - - PROPOSED CONTOUR
 - - - - - PROPOSED SPOT GRADE
 - - - - - PROPOSED WALL/CURB SPOT GRADE
 - ☀ DEODIOUS TREE
 - ☀ CONIFEROUS TREE
 - ☀ TREE TO BE REMOVED
 - - - - - UNDERGROUND UTILITY SERVICE:
C=CABLE, E=ELECTRIC, G=GAS,
T=TELEPHONE, W=WATER
 - - - - - PROPERTY LINE
 - ① REGULAR PARKING SPACE (8.5'x18')
 - C COMPACT PARKING SPACE (8.5'x16')
 - ⓪ HANDICAPPED PARKING SPACE
 - ⓪ GAS GATE
 - ⓪ WATER GATE
 - ⓪ WATER METER
 - ⓪ UTILITY POLE
 - ⓪ CATCH BASIN
 - ⓪ MANHOLE
 - ⓪ ELECTRIC MANHOLE
 - ⓪ STORM DRAIN MANHOLE
 - ⓪ SANITARY SEWER MANHOLE
 - ⓪ CORRUGATED POLYETHYLENE PIPE
 - ⓪ POLYVINYL CHLORIDE
 - ⓪ REINFORCED CONCRETE PIPE
 - ⓪ VITRIFIED TILE PIPE
 - ⓪ TOP OF WALL/CURB
 - ⓪ BOTTOM OF WALL/CURB
 - ⓪ GRADE ELEVATION
 - ⓪ RIM ELEVATION
 - ⓪ INVERT ELEVATION
 - ⓪ AS ORDERED BY ENGINEER
 - ⓪ VERIFY IN FIELD

D'ANDREA SURVEYING & ENGINEERING, PC
LAND PLANNERS
ENGINEERS
SURVEYORS
P.O. BOX 549
RIVERSIDE, CT 06878
8 NEIL LANE
TEL. 637-1779

| | |
|--------------|---|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| 3 OF 6 | PAVEMENT MARKINGS & SIGNAGE PLAN |

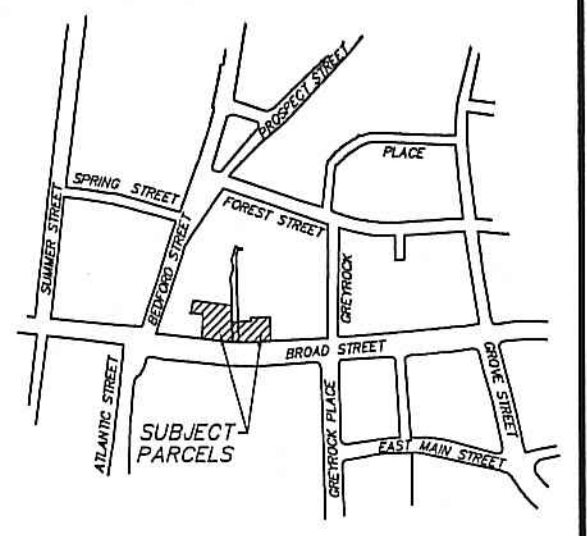
| | | |
|------|----------|-------------------|
| REV. | DATE | DESCRIPTION |
| 0 | 10-28-22 | ZONING SUBMISSION |
| 1 | 10-28-22 | ENGINEER |

ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.



XREF: BROADGAY_21UT_DP_07_REV0.DWG
BROADGAY_21UT_DP_PARKING_DP_REV0.DWG (RWN)

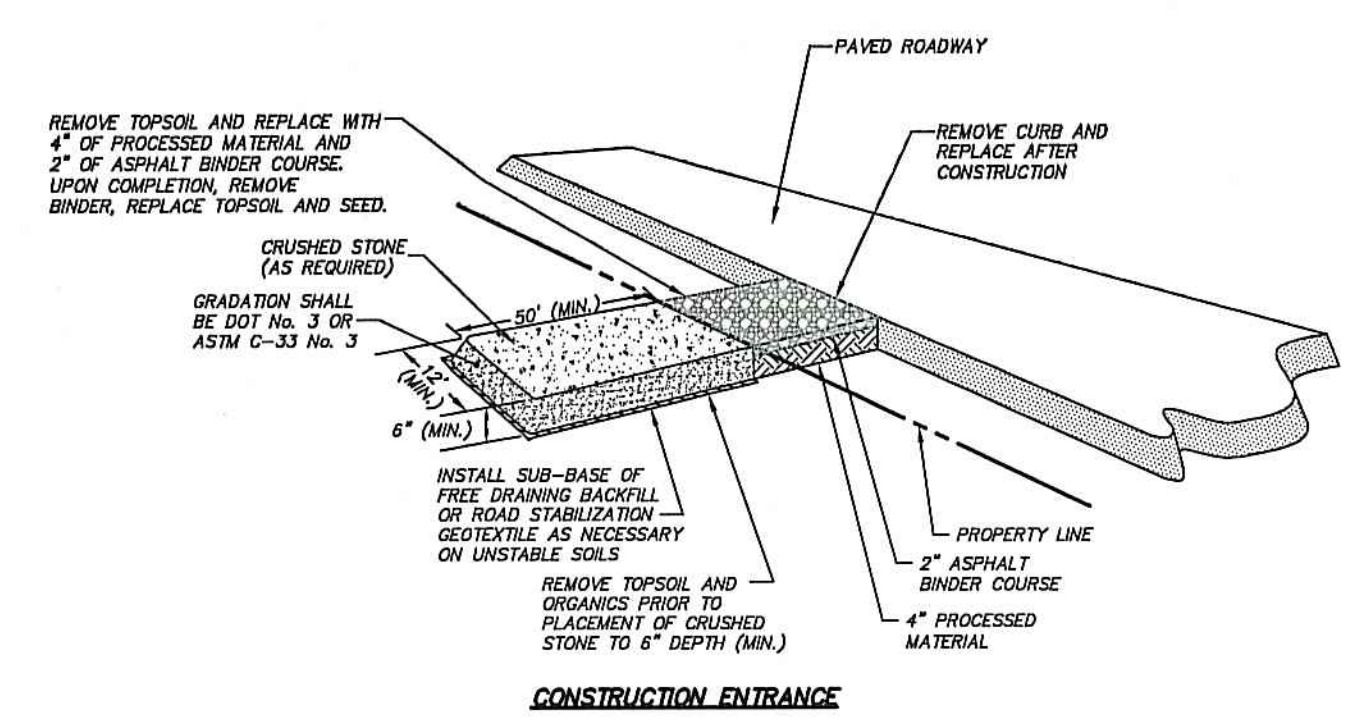
BLOCK No. 176
"C-G" ZONING DISTRICT
PARCEL A = 20,865 SQ.FT.
PARCEL B = 14,794 SQ.FT.



LOCATION MAP - 1" = 800'±

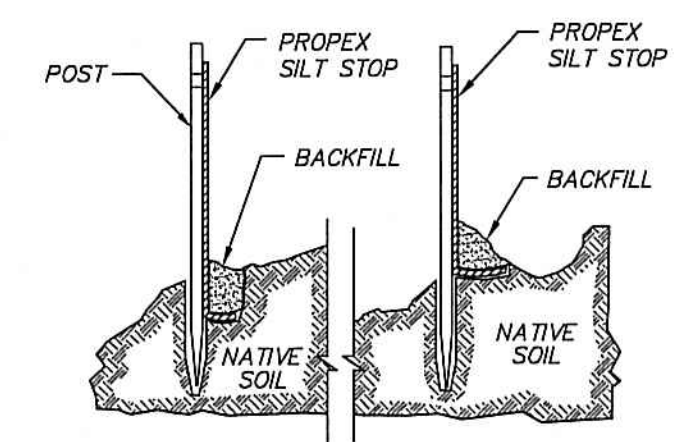
SEDIMENTATION AND EROSION CONTROL NOTES:

1. Temporary soil and erosion control measures inclusive of filter barriers, water breaks, check dams, and anti-tracking areas shall remain in place for as long as necessary to permanently stabilize developed areas.
2. Erosion and sediment control devices shall be installed in their proper sequence. No clearing or grading may be done in any area until the devices for that area, as shown on the plan, are in place and functional.
3. Natural vegetation shall be maintained and protected to the greatest extent practical.
4. All sediment and erosion control devices and provisions shall be maintained in operational condition by the contractor until final acceptance of the project.
5. No changes of this soil erosion and sediment control plan may be made without approval of the project engineer.
6. Land disturbance is to be kept to a minimum and re-establishment and/or stabilization of disturbed areas shall be scheduled as soon as practical.
7. Erosion controls shall be monitored periodically to verify that they are maintained in effective working order. If, during construction, additional control measures are necessary, they shall be installed.
8. Sediment fencing shall be installed where required prior to commencing construction and shall remain in place for the duration of the project. Fencing shall be *Propex Silt Stop (TM)* as manufactured by Amoco or approved equal.
9. The contractor may provide alternate means of sediment control, but he may not eliminate placement of protection in the areas indicated hereon.
10. The contractor shall regrade, topsoil, and seed all disturbed areas immediately after construction has been completed.
11. Copies of the Sedimentation and Erosion Control Plan are to be maintained at the site and provided to the project foreman and subcontractors prior to the start of work.
12. Additional protection measures shall be implemented as site conditions warrant.
13. An additional 10% of trap rock, hay bales, snowfencing, fabric fencing, and other control materials are to be stockpiled on site for use as necessary.
14. Refer to Erosion and Sedimentation Control Handbook - Connecticut for additional details and specifications for sedimentation control.
15. Water and/or calcium chloride shall be applied to unpaved construction areas to prevent wind generated sediments and dust.

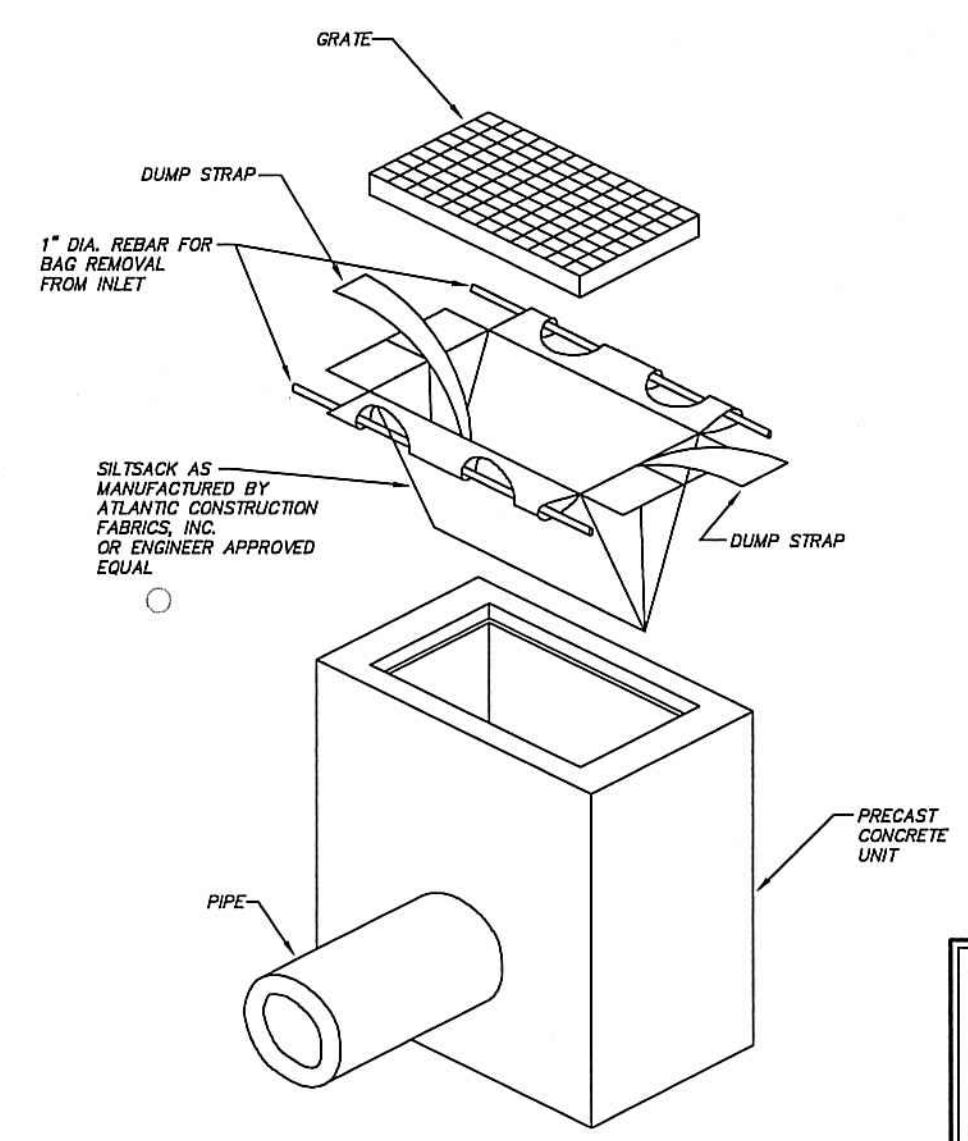
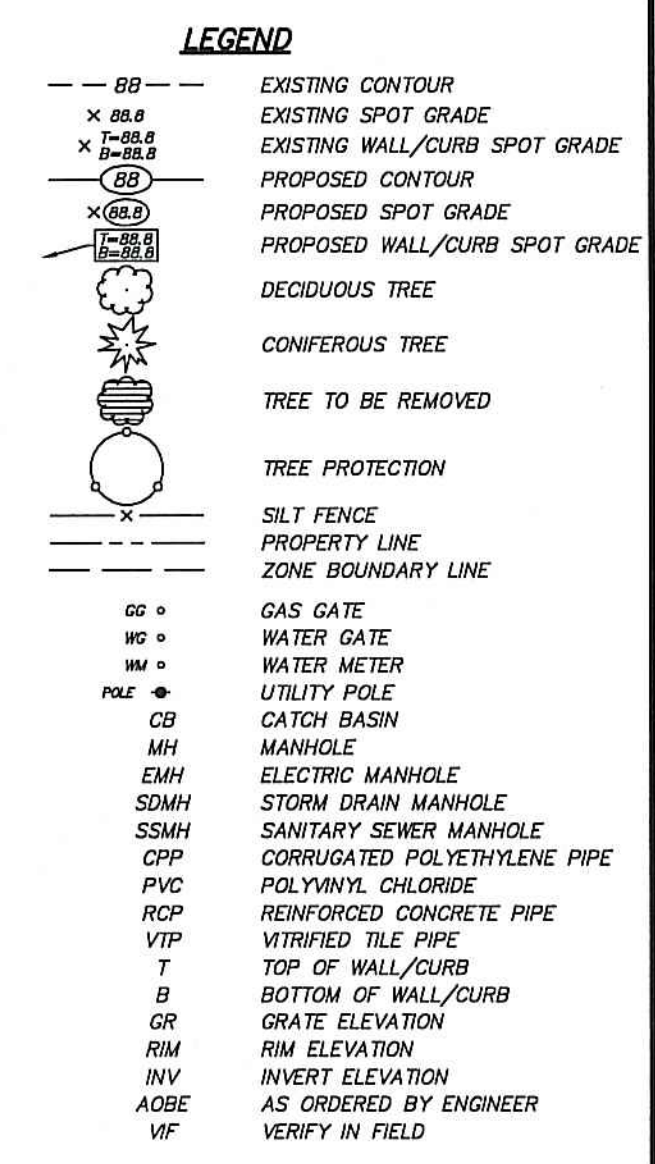
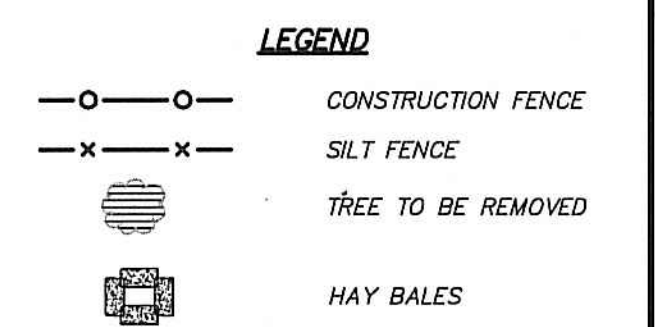


ANTI-TRACKING PAD DETAIL
N.T.S.

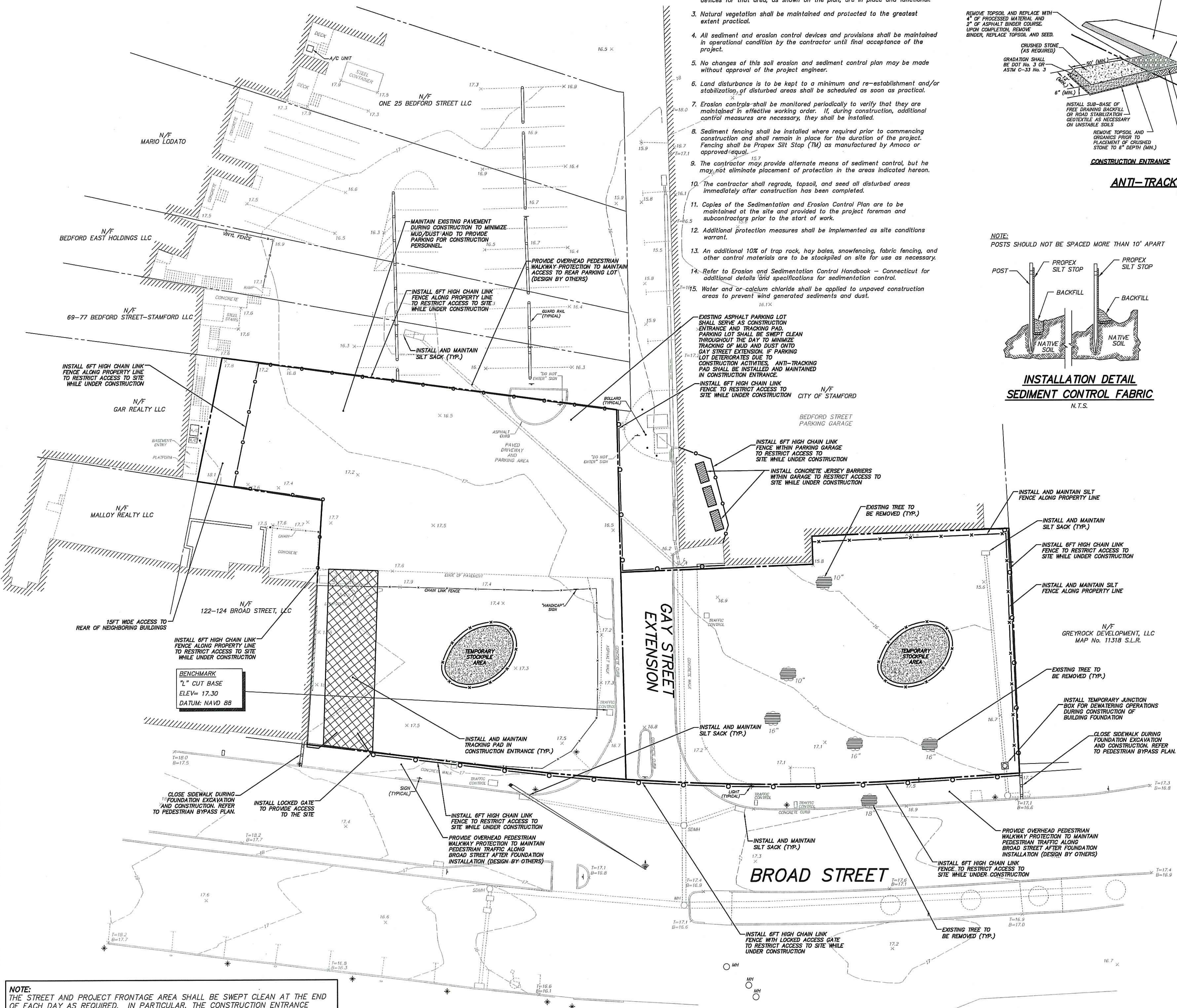
NOTE:
POSTS SHOULD NOT BE SPACED MORE THAN 10' APART



INSTALLATION DETAIL SEDIMENT CONTROL FABRIC
N.T.S.

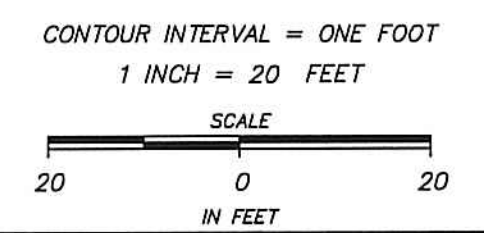


CATCH BASIN SILTSACK DETAIL
N.T.S.



NOTE:
THE STREET AND PROJECT FRONTAGE AREA SHALL BE SWEEP CLEAN AT THE END OF EACH DAY AS REQUIRED. IN PARTICULAR, THE CONSTRUCTION ENTRANCE SHALL BE KEPT FREE OF DUST AND SEDIMENT.

NOTE:
THIS PLAN SHALL BE USED EXPRESSLY FOR THE IMPLEMENTATION OF SEDIMENTATION AND EROSION CONTROL MEASURES. IN NO WAY IS THIS PLAN INTENDED FOR PURPOSES OTHER THAN SEDIMENTATION AND EROSION CONTROL MEASURES.



NOTE: FOUNDATION DEWATERING
DURING FOUNDATION CONSTRUCTION THE CONTRACTOR SHALL ENSURE THAT THERE IS NO DISCHARGE OF SILTY WATER TO ADJACENT PROPERTIES OR INTO STORM SEWER STRUCTURES. DEWATERING DISCHARGE, IF REQUIRED, SHALL BE PUMPED INTO A CRUSHED STONE DEWATERING AREA SURROUNDED WITH SILT FENCE OR OTHER ENGINEER APPROVED EQUIVALENT DEWATERING METHOD. THIS REQUIREMENT SHALL APPLY TO ALL ON-SITE EXCAVATIONS.

D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS
 P.O. BOX 549 RIVERSIDE, CT 06878
 6 NEIL LANE TEL. 637-1779

| | |
|--------------|--|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| DATE | 10-28-22 |
| REV. DATE | DESCRIPTION |
| 0 | 10-28-22 ZONING SUBMISSION |
| 1 | 10-28-22 |
| 4 OF 6 | SEDIMENTATION & EROSION CONTROL PLAN |

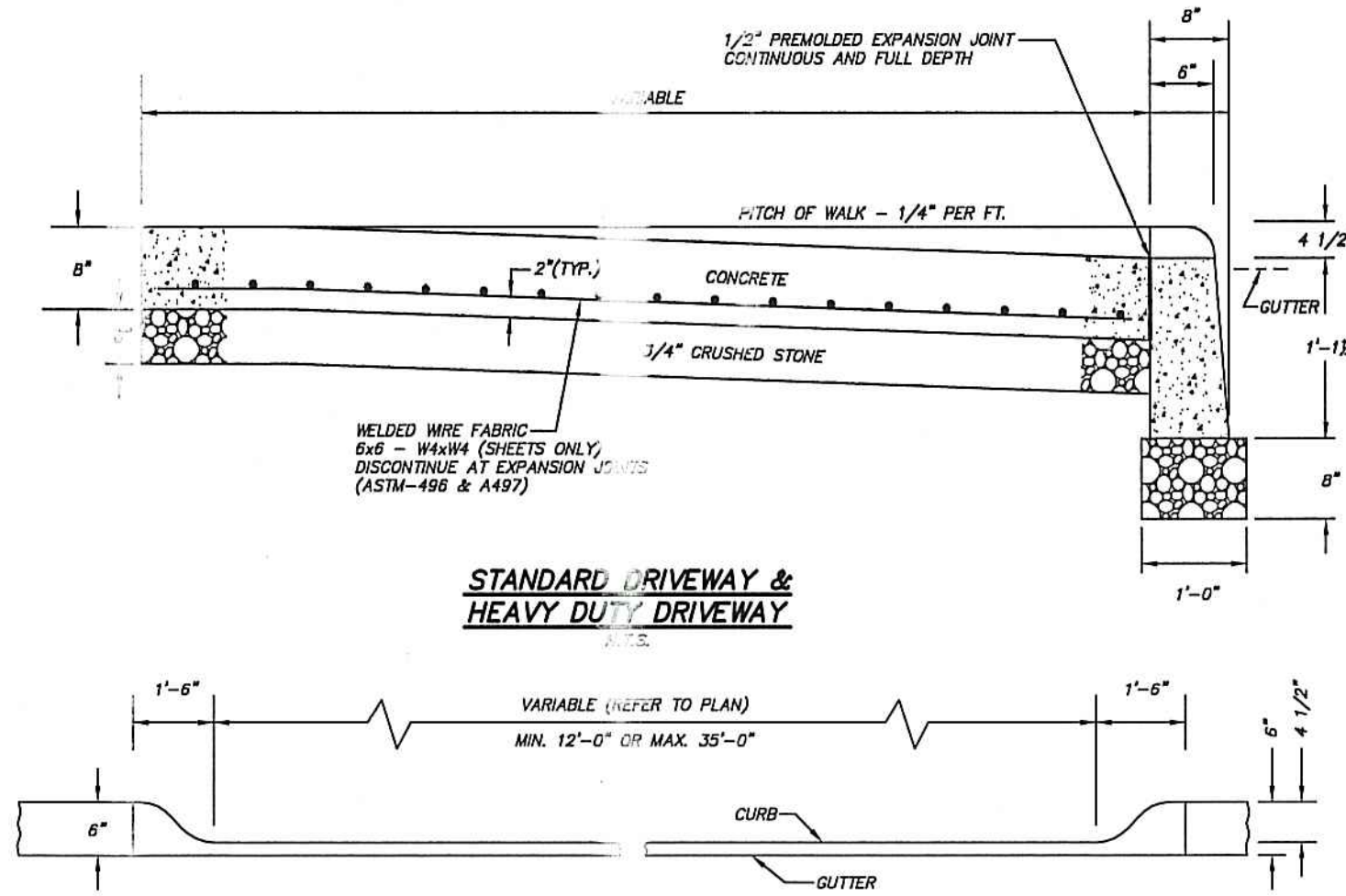
XREF: BROADGAY_21UT_DP_01_REV01.DWG
BROADGAY_21UT_SAME_01_REV01.DWG (R-M)

CONSTRUCTION NOTES:

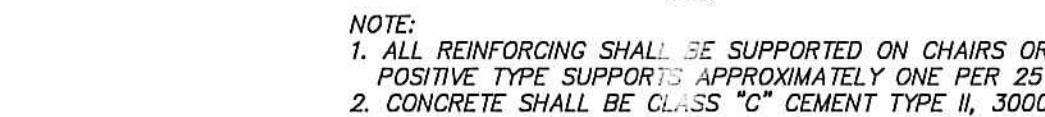
- In accordance with Connecticut Public Act 87-71 and Connecticut General Statutes Sections 16-345 through 16-359, the owner or the contractor shall be required to verify the depth and location of all utilities prior to commencing construction, and shall contact "Call Before You Dig, Inc." at 1-800-922-4455, 48 hours prior to commencing construction for mark out of underground utilities.
- The contractor shall be solely responsible to coordinate his work being done by others. The contractor shall likewise bear the responsibility for delays or other factors related to the work by others. No claims shall be allowed due to the contractor's failure to adequately coordinate such work.
- THE CITY OF STAMFORD ENGINEERING BUREAU SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION AFFECTING THE CITY RIGHT-OF-WAY.
- All construction shall comply with applicable sections of the State of Connecticut, Local, and International Building codes, and those criteria shall take precedence over these plans.
- All construction shall be inspected by a professional engineer prior to backfill and as the work progresses.
- The project engineer shall be notified a minimum of three working days prior to the commencement of each phase of construction.
- Appropriate measures shall be taken to control any sedimentation and erosion which may result during construction.
- All excavated material shall be stockpiled and contained on-site within silt fencing. The contractor shall be responsible for the removal of all excess material excavated during construction. All excess material shall be removed in a careful and environmentally sound manner and shall be disposed of legally off-site.
- All specimen tests shall be protected during the construction period, except those specifically designated to be removed, in accordance with generally accepted standards.
- The proposed building shall be designed by an architect in order to conform with current applicable zoning setback criteria and regulations, and a building permit shall be obtained prior to commencing construction.
- Existing utilities in conflict through or above this parcel shall be relocated as directed by the appropriate utility company or the owner. The contractor shall excavate test pits to verify the location and depth of utilities where conflicts may exist.
- Pavement replacement shall be bituminous concrete, placed in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
- Shoulders and disturbed areas shall receive four inches of topsoil, fine graded and seeded as soon as practical to prevent erosion.
- The contractor shall not commence any paving until the grading and shaping of the compacted gravel base has been approved by the project engineer.
- Regrading, filling, and other such alterations to the site shall be restricted to the minimum level necessary to complete the project as shown on the plan.
- Existing inverts on storm drains, sanitary sewers, and utility conduits shall be field verified where appropriate, before commencing construction. The contractor shall excavate test pits where indicated hereon or whenever construction conflicts may occur. The contractor shall notify the project engineer of the test pit schedule. Design conflicts if any, shall be brought to the immediate attention of the project engineer. Place or backfill and patch test pits as directed by the project engineer.
- The project engineer, with the approval of the owner and City of Stamford, may direct a change in the location of the utilities, storm drainage or sanitary sewer structures to meet field conditions or requirements of final building design.
- Junction boxes shall be 32"x32" as manufactured by Eastern Precast Co., Inc., with Pattern No. 1057, cast iron frame and cover, as manufactured by Campbell Foundry Co., or engineer approved equal, unless noted otherwise. All junction boxes shall have 2" (minimum) sumps and ball traps, installed immediately upon making pipe connections, unless noted otherwise.
- Manhole structures shall be precast concrete with gaskets as manufactured by Eastern Precast Co., Inc. or engineer approved equal, unless noted otherwise.
- All gravity PVC storm drain and sanitary sewer pipes shall conform to ASTM D 3034 "Standard Specification for type PSM Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings" or approved equal (SDR33).
- All reinforced concrete pipe shall be Class IV with joints as approved by the City of Stamford Engineering Bureau.
- Where unsuitable foundation is encountered during construction of storm drains or sanitary sewers, the contractor shall remove the unsuitable material and replace it with other material approved by the project engineer. All unsuitable material shall be removed from the project area and disposed of legally.
- Bedding and backfill material shall conform to ASTM D2321 specification "standard recommended practice for underground installations of flexible thermoplastic sewer pipe (PVC)".
- All site drainage and sewer connections shall be sloped at 2% (minimum) or as otherwise noted.
- All drainage and sewer conduits if located under a paved or traveled way shall have 2 1/2 foot minimum cover within the municipal right-of-way, or be encased in concrete as ordered by the supervising engineer.
- The contractor shall provide all equipment, tools, labor and materials necessary to satisfactorily clean and remove all visible obstructions, dirt, sand, sludge, roots, gravel, stones, etc., from the storm drains, sanitary sewers, and manholes.
- Processed aggregate shall be in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
- Roadway and parking lot pavement shall be 2 course bituminous concrete placed in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
- All existing manhole frames, catch basin grates, and utility structures will be adjusted to new finish grade as required. Contractor to coordinate with existing utility companies to ensure their facilities are adjusted to finish grade.
- Storm drain manhole sumps and risers shall be 48" diameter as manufactured by Eastern Precast Co., Inc., or engineer approved equivalent. Frames and risers located in the City of Stamford right-of-way shall be pattern no. 1027 as manufactured by Campbell Foundry Co., Inc., or engineer approved equivalent, and shall have "Stamford CONN" cast on cover.
- Sanitary sewer manhole sumps and risers shall be 48" diameter as manufactured by Eastern Precast Co., Inc., or engineer approved equivalent. Frames and risers located in the City of Stamford right-of-way shall be pattern no. 1027 as manufactured by Campbell Foundry Co., Inc., or engineer approved equivalent, and shall have "Sewer" cast on cover.
- Connections between manholes and PVC sanitary sewer pipes shall be made with flexible rubbers boots with connections sealed water tight with a stainless steel clamp. Connections to manholes for reinforced concrete storm and sanitary sewer pipe shall be made with concrete brick masonry and non-shrink grout. The contractor shall make sure that all connections of new sanitary sewers to manholes are water tight.
- Precast concrete cone sections shall be eccentric cones, and flat slab tops are to have eccentric openings. Eccentric cone sections shall be used when the vertical distance between the manhole frame and the top of the highest pipe is six (6) feet or greater. Otherwise, flat slab tops shall be used. Aluminum manhole steps (drop form type) shall be provided in all manholes at 12 inch intervals. Each step shall be capable of supporting a minimum load of 1,000 pounds. Wall joints shall be "O-ring" rubber gasket types with the interior and exterior joint faces sealed with waterproof non-shrink grout.
- Exterior surfaces of all sanitary manholes shall be coated with two (2) coats of coal-tar sealer as manufactured by Kopper, Mobil or PPG, or engineer approved equivalent.
- Sanitary sewer manholes shall be watertight; all leaks shall be permanently plugged.
- All traffic control devices, including traffic signs and pavement markings, shall be installed in conformance with the Manual on Uniform Traffic Control Devices, Millennium Edition, as published by the U.S. Department of Transportation, Federal Highway Administration, and as amended to date.
- All new utilities including electric, telephone and cable TV shall be installed underground.
- Proposed services such as gas, water, and electric are shown schematically only. Final design for all utilities, other than sewer and drainage shall be provided by the respective utility company.
- Curbs and sidewalks in the City right-of-way shall be constructed in accordance with the City of Stamford standards and specifications. The contractor shall pay specific attention to the location of construction joints.
- The project engineer, with the approval of the City of Stamford, may direct a change in the location of the proposed storm drainage structures to meet field conditions, or requirements of final design.
- Any changes to the plan without the prior written approval of the design engineer is not permitted.
- All traffic control devices, including traffic signs and pavement markings, shall be installed in conformance with the Manual on Uniform Traffic Control Devices, Millennium Edition, as published by the U.S. Department of Transportation, Federal Highway Administration, and as amended to date.
- Stamford Police Officers shall be used during the portion of work involving right-of-way restrictions as required by the City of Stamford to ensure pedestrian, vehicular, and work site safety.
- Pursuant to Sec. 14-314b of the Connecticut General Statutes, no traffic control sign, signal, device, pavement marking, guardrail, or like device or part thereof shall be removed, obstructed, relocated, or otherwise disturbed, altered, or rendered ineffective in any way without the prior approval from the City of Stamford. Contractor is responsible for replacement, to the specification from the City of Stamford. Contractor is responsible for replacement, to the specification and satisfaction of the Engineering Bureau, of any pavement markings or other traffic control devices removed or damaged due to work done or related activity.

CITY OF STAMFORD STANDARD NOTES:

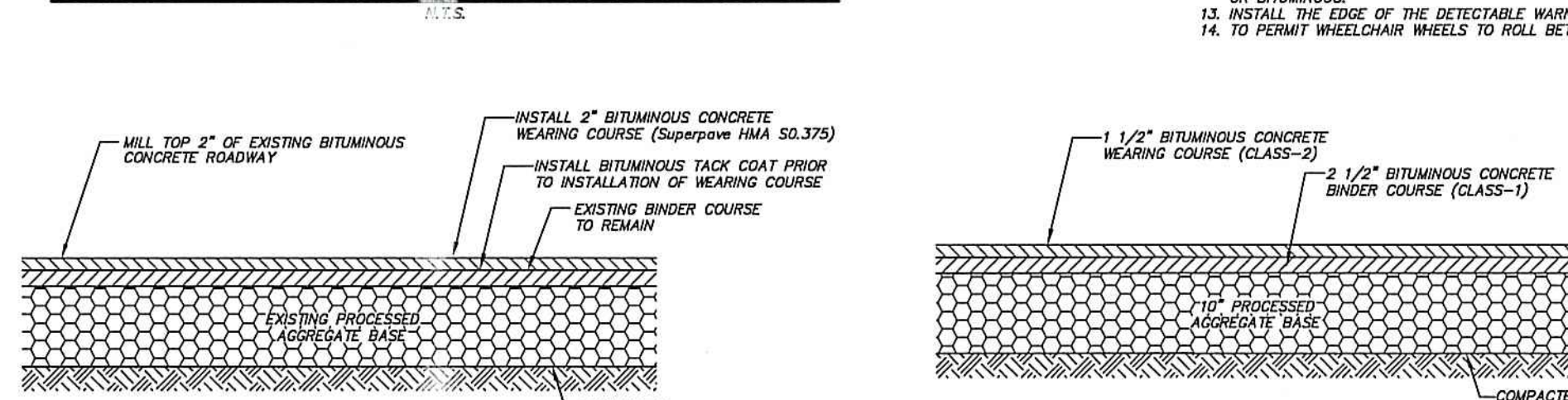
- A Street Opening Permit is required for all work within the City of Stamford Right-of-Way.
- All work within the City of Stamford Right-of-Way shall be constructed to City of Stamford requirements, the State of Connecticut Basic Building Code and the Connecticut Guidelines for Soil Erosion and Sedimentation Control.
- The City of Stamford Engineering Bureau shall be notified three days prior to any commencement of work within the City of Stamford Right-of-Way.
- Trees within the City of Stamford Right-of-Way to be removed shall be posted in accordance with the Tree Ordinance.
- Prior to any excavation the Contractor and/or Applicant/Owner, in accordance with Public Act 77-350, shall be required to contact "Call Before You Dig" at 1-800-922-4455 for mark out of underground utilities.
- All retaining walls greater than three (3) feet are required to be designed and inspected during construction by a Professional Engineer licensed in the State of Connecticut. Certification of the retaining wall shall be required prior to issuance of a Certificate of Occupancy and/or bond release.
- Certification will be required by a Professional Engineer licensed in the State of Connecticut that work has been completed in compliance with the approved drawings.
- A Final Location Plan will be required by a Professional Land Surveyor licensed in the State of Connecticut depicting all completed improvements.
- Granite block or other decorative stone or brick, depressed curb, driveway apron and curbing within the City of Stamford Right-of-Way shall require a waiver from the City of Stamford Engineering Bureau.
- Sediment and erosion controls shall be maintained and repaired as necessary throughout construction until the site is stabilized.
- Trees proposed to be planted within the City of Stamford Right-of-Way shall be reviewed and approved by the City's Tree Warden.



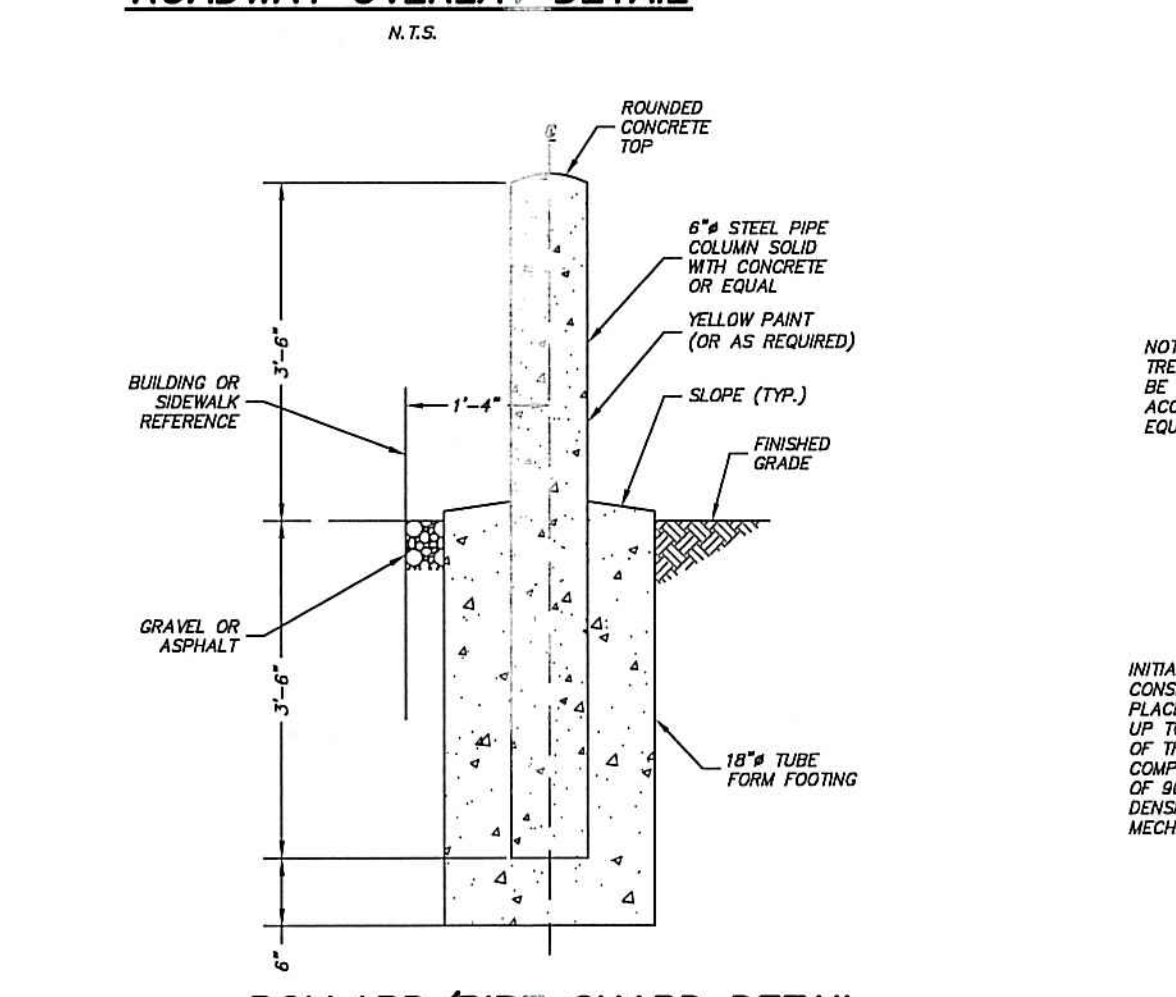
TYPICAL CONSTRUCTION OF CURB AT DRIVEWAY



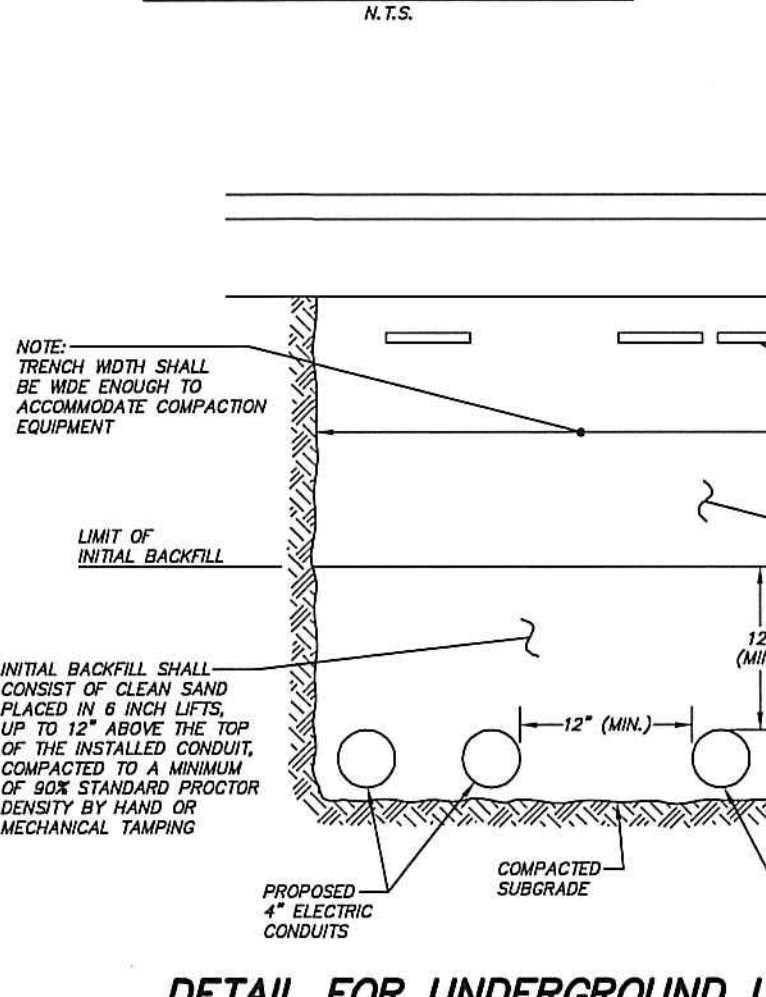
REINFORCED CONCRETE DRIVEWAY ENTRANCE



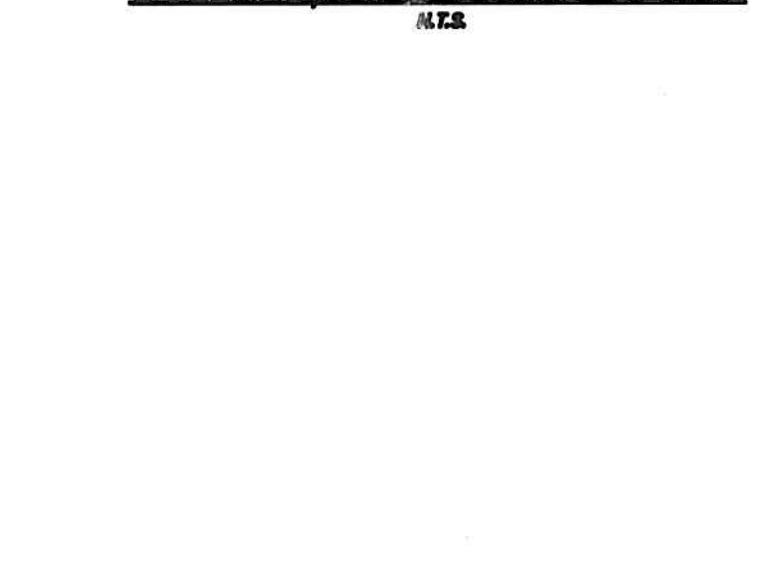
BITUMINOUS CONCRETE ROADWAY OVERLAY DETAIL



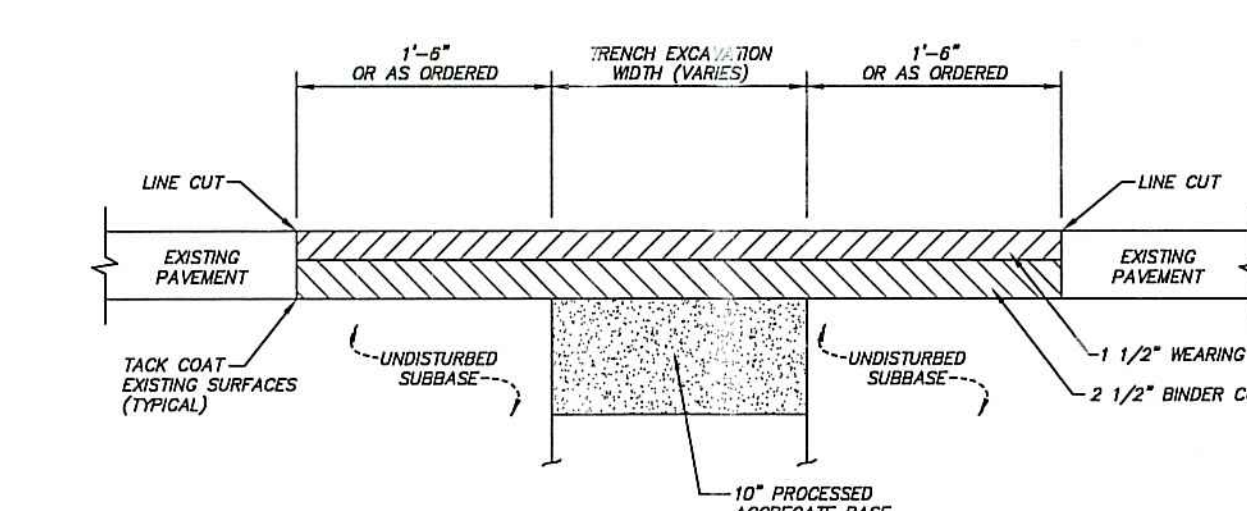
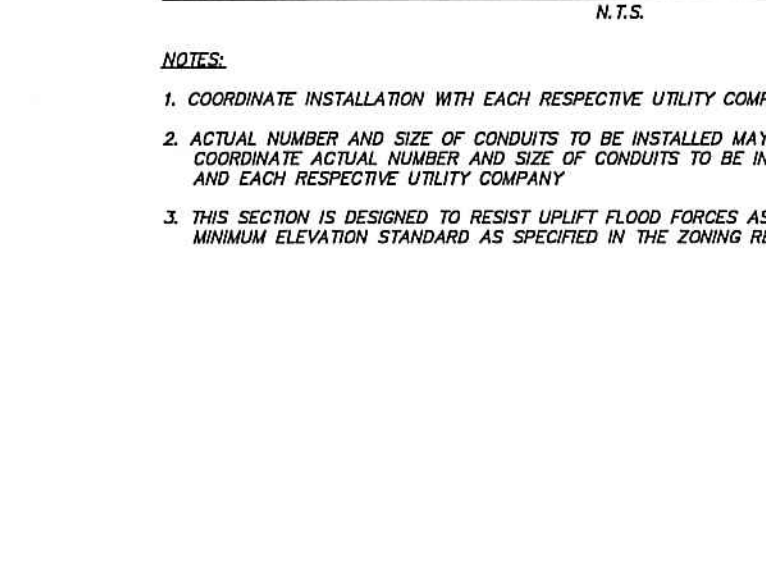
BITUMINOUS CONCRETE ROADWAY & PARKING LOT DETAIL



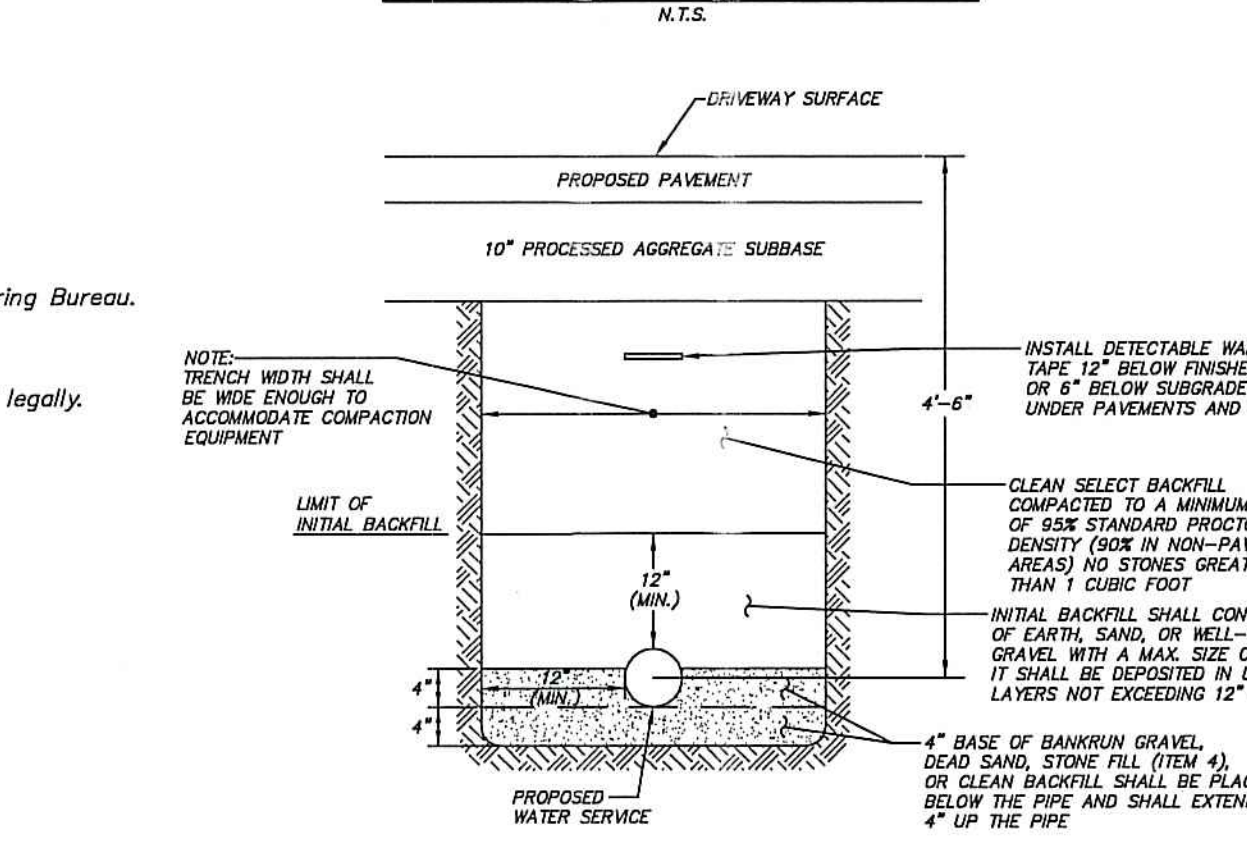
BOLLARD/PIPE GUARD DETAIL



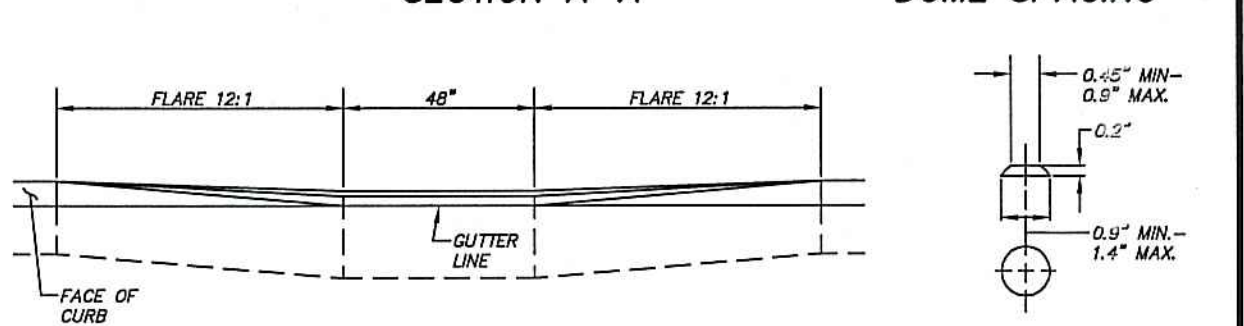
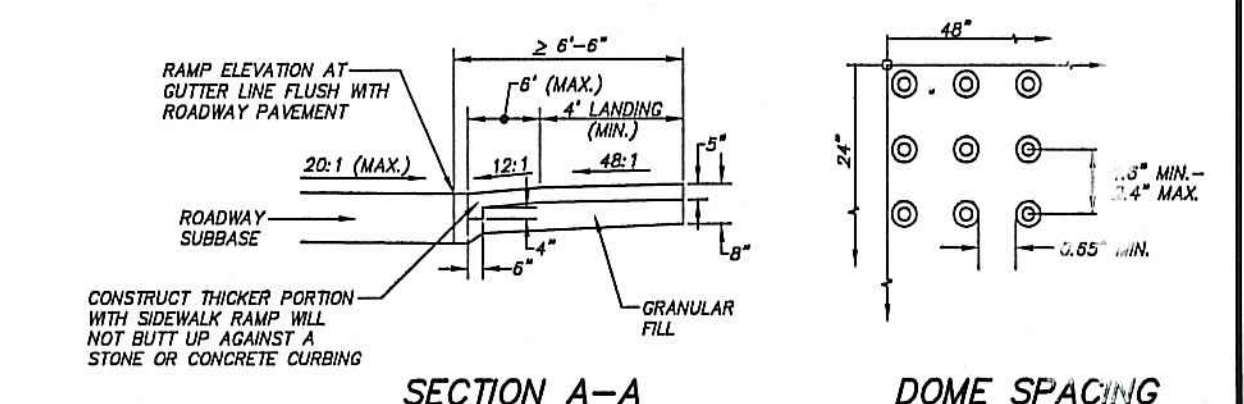
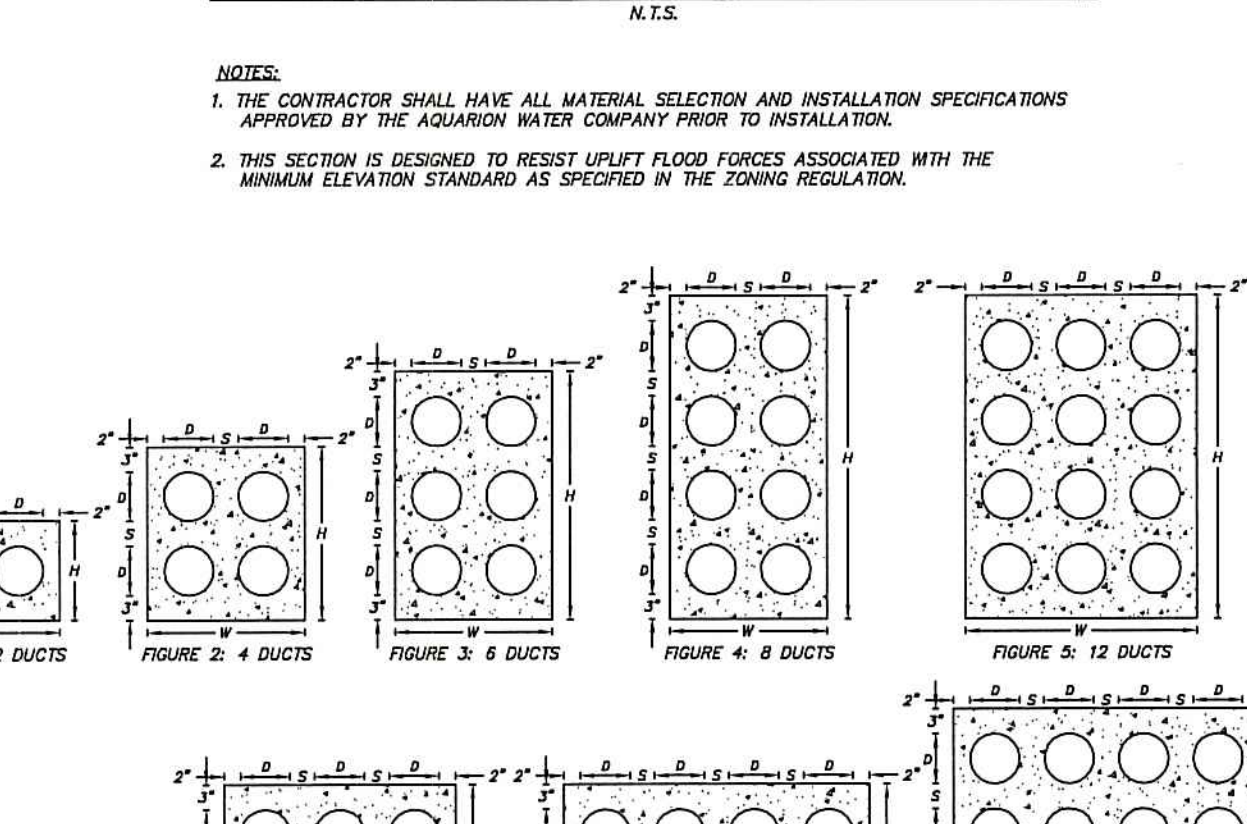
DETAIL FOR UNDERGROUND UTILITY TRENCH



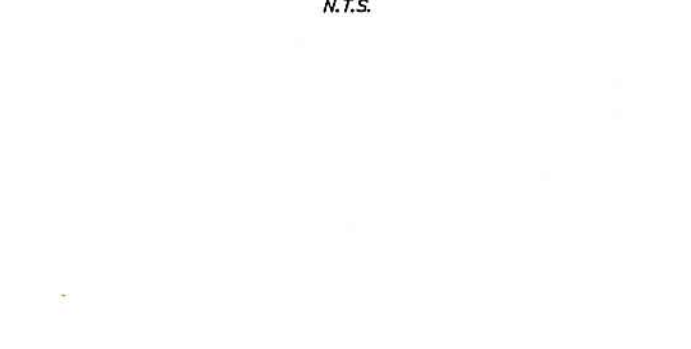
DETAIL FOR TRENCH REPAIR



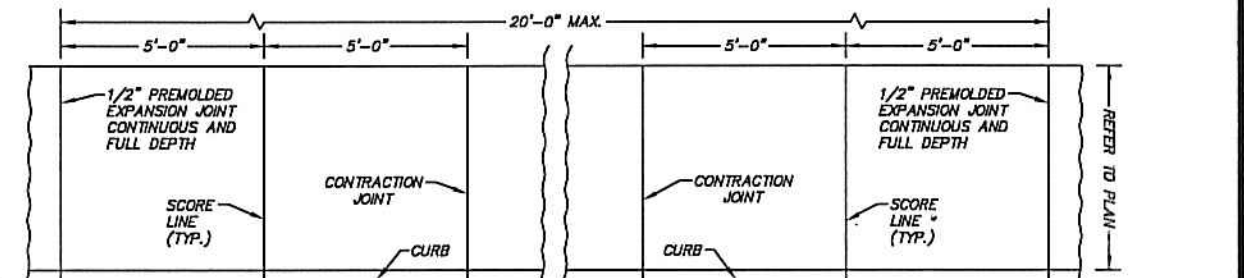
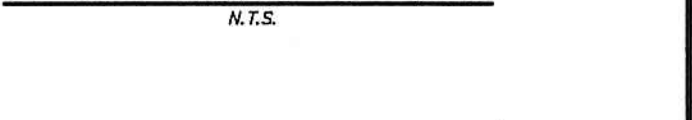
DETAIL FOR WATER SERVICE INSTALLATION



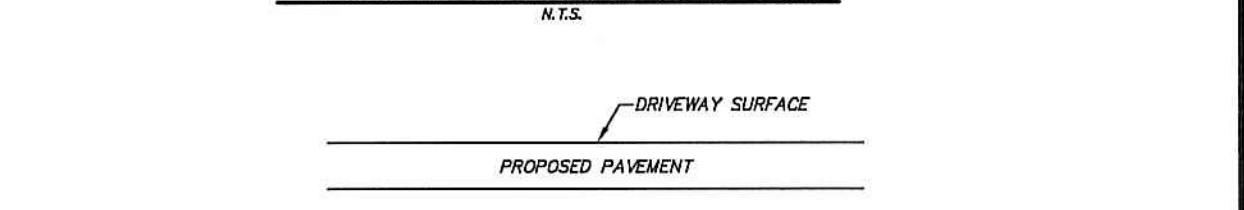
DETAILS FOR SIDEWALK RAMPS



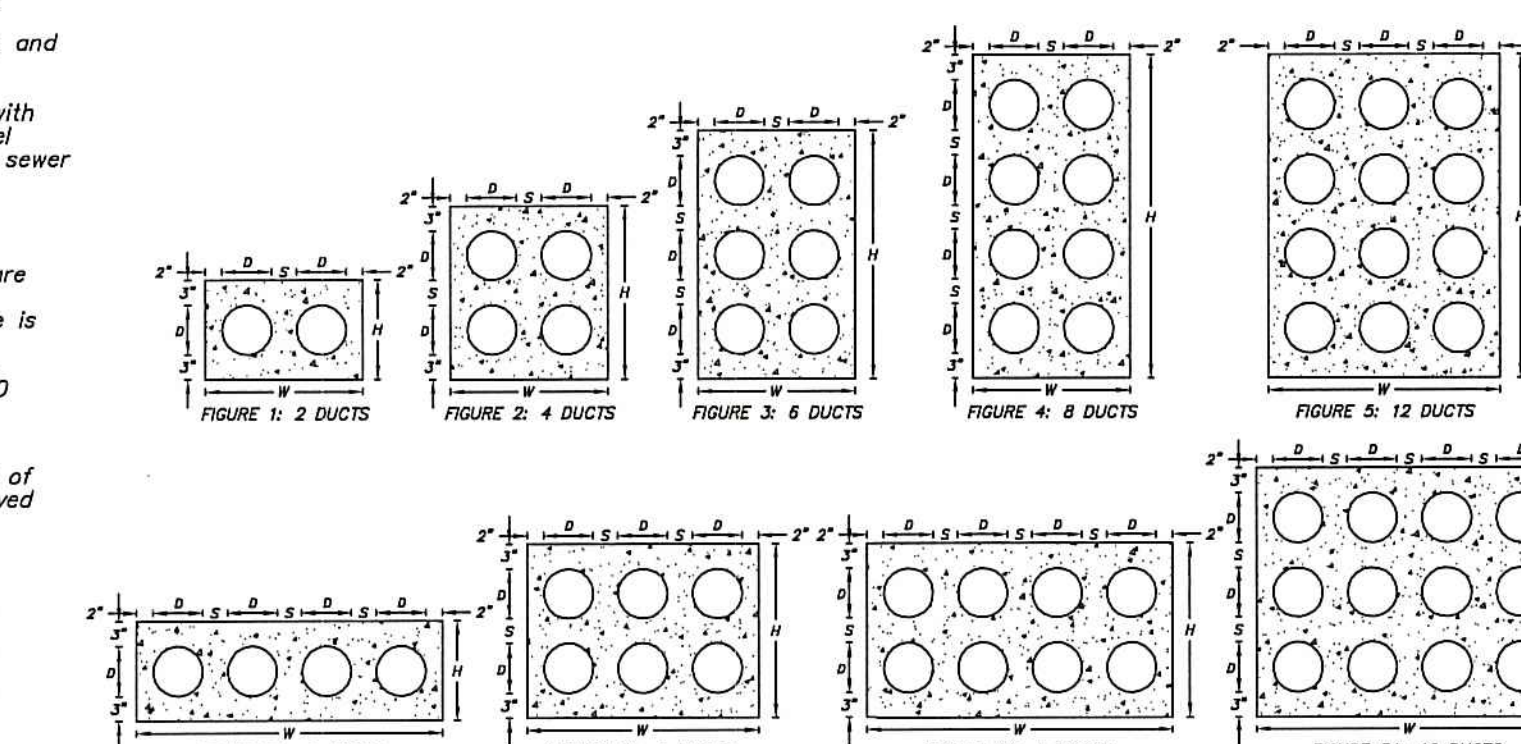
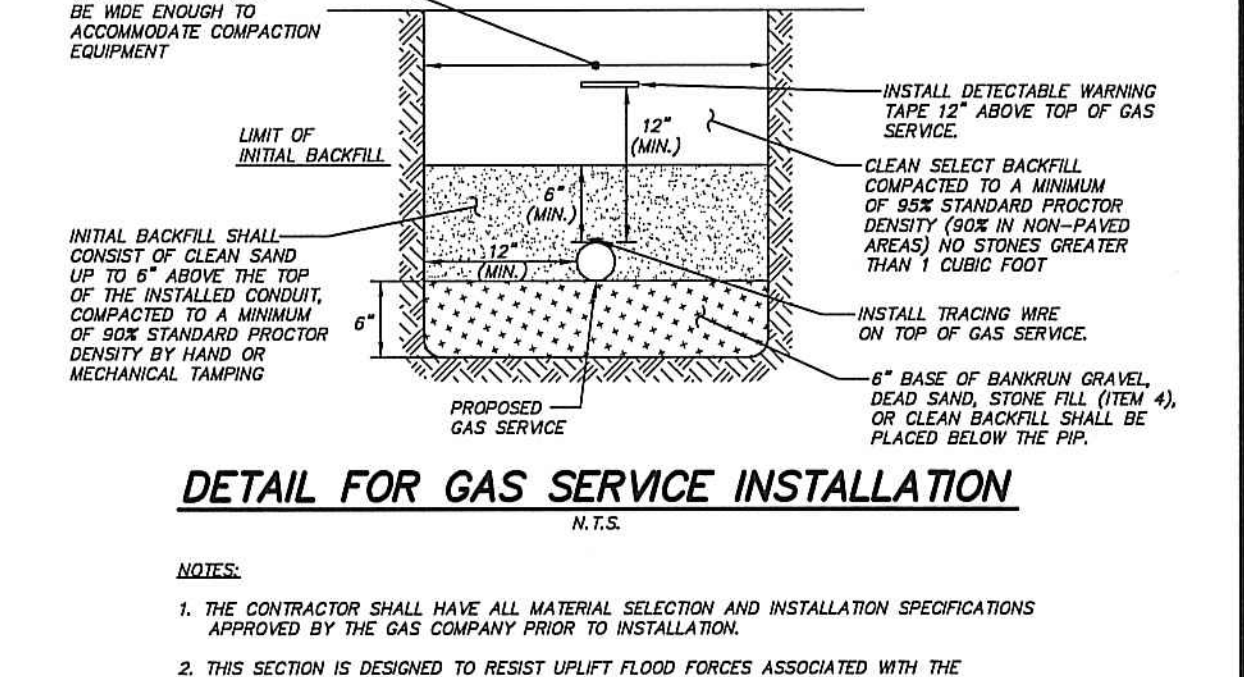
CONCRETE CURB IN CITY RIGHT-OF-WAY



CONCRETE SIDEWALK WITH CURB



DETAIL FOR GAS SERVICE INSTALLATION



| Fig. | Dimensions in Inches | | | | | | | |
|------|----------------------|--------|--------|--------|---------|--------|--------|--------|
| | 4" Duct | | | | 6" Duct | | | |
| 1 | 14-1/2 | 15-1/2 | 14-1/2 | 16-1/2 | 14-1/2 | 14-1/2 | 19 | 12-1/2 |
| 2 | 14-1/2 | 16-1/2 | 14-1/2 | 16-1/2 | 16-1/2 | 14-1/2 | 19 | 21 |
| 2A | 28-1/2 | 10-1/2 | 14-1/2 | 30-1/2 | 11-1/2 | 14-1/2 | 36 | 12-1/2 |
| 3 | 14-1/2 | 22-1/2 | 14-1/2 | 16-1/2 | 28-1/2 | 14-1/2 | 19 | 28-1/2 |
| 3A | 20-1/2 | 16-1/2 | 14-1/2 | 23-1/2 | 18-1/2 | 14-1/2 | 27-1/2 | 21 |
| 4 | 14-1/2 | 28-1/2 | 14-1/2 | 16-1/2 | 33-1/2 | 14-1/2 | 18 | 38 |
| 4A | 28-1/2 | 16-1/2 | 14-1/2 | 35-1/2 | 18-1/2 | 14-1/2 | 38 | 21 |
| 5 | 20-1/2 | 28-1/2 | 14-1/2 | 23-1/2 | 32-1/2 | 14-1/2 | 27-1/2 | 38 |
| 5A | 28-1/2 | 22-1/2 | 14-1/2 | 30-1/2 | 28-1/2 | 14-1/2 | 36 | 28-1/2 |

NOTE:
REFER TO NORTHEAST UTILITIES CONDUIT BANK CONSTRUCTION DETAIL DTR 73.209

PHOTO RECORD (CONTRACTOR TAKE NOTICE)

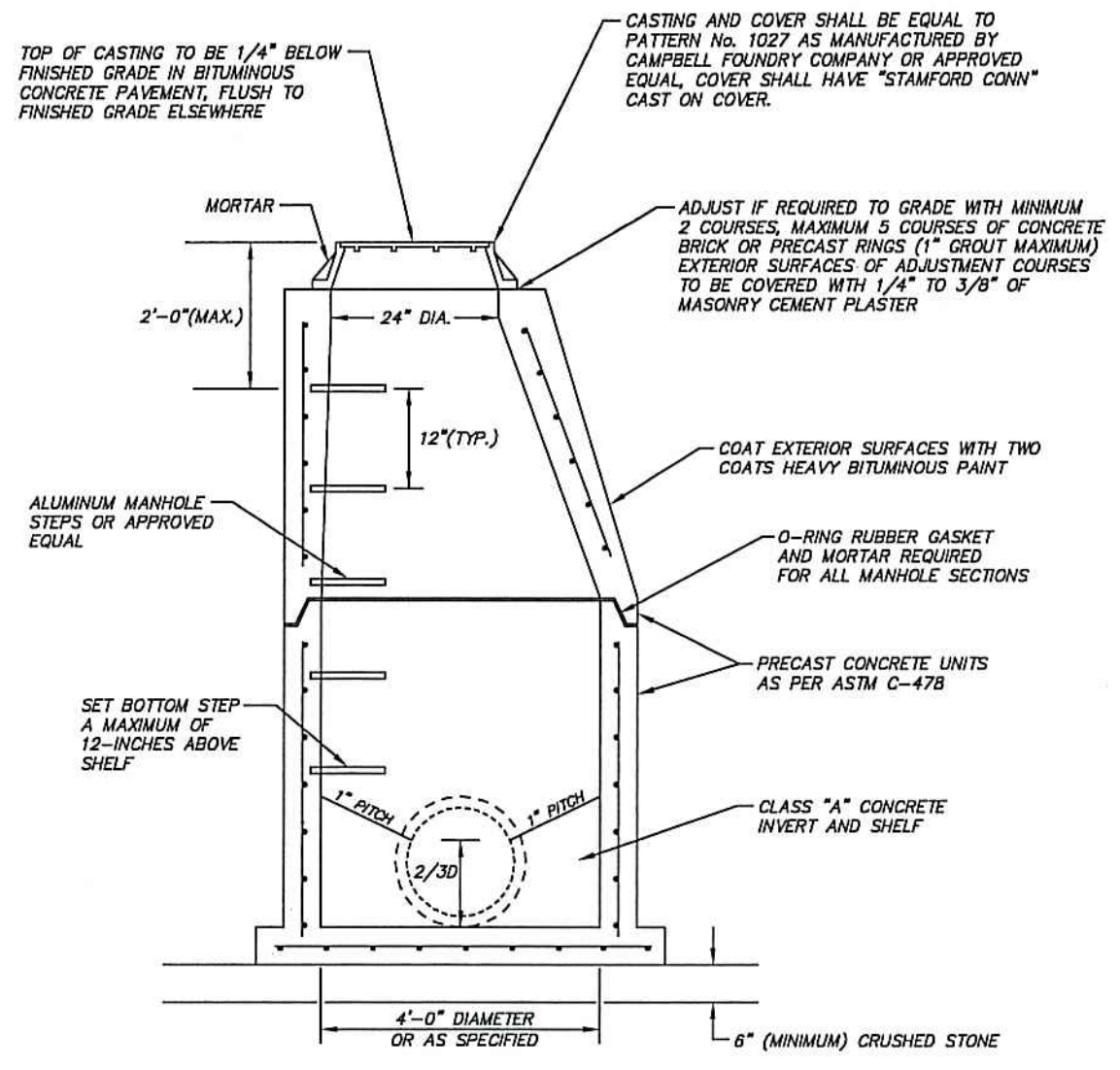
THE SITE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE SITE PICTURES OF ALL THE FOLLOWING MILESTONES AND TO NOTIFY THE PROJECT ENGINEER OF EACH MILESTONE BEING REACHED. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER WITH A DIGITAL LIBRARY OF THE PHOTOGRAPHY AS THE PROJECT PROGRESSES WITH A COMPLETE LIBRARY AT THE END OF THE SITE WORK PHASE.

| PROJECT MILESTONES | |
|--------------------|---|
| 1 | E & S Controls at start of construction |
| 2 | Protection and/or installation of each non-structural LID BMP |
| 3 | Soils verification for each detention/retention/structural LID BMP |
| 4 | Amended soils verification for each BMP |
| 5 | Each detention/retention/structural LID BMP during construction |
| 6 | Each detention/retention/structural LID BMP prior to backfilling/completion |
| 7 | Each detention/retention/structural LID BMP at completion |
| 8 | Final site inspection throughout site |

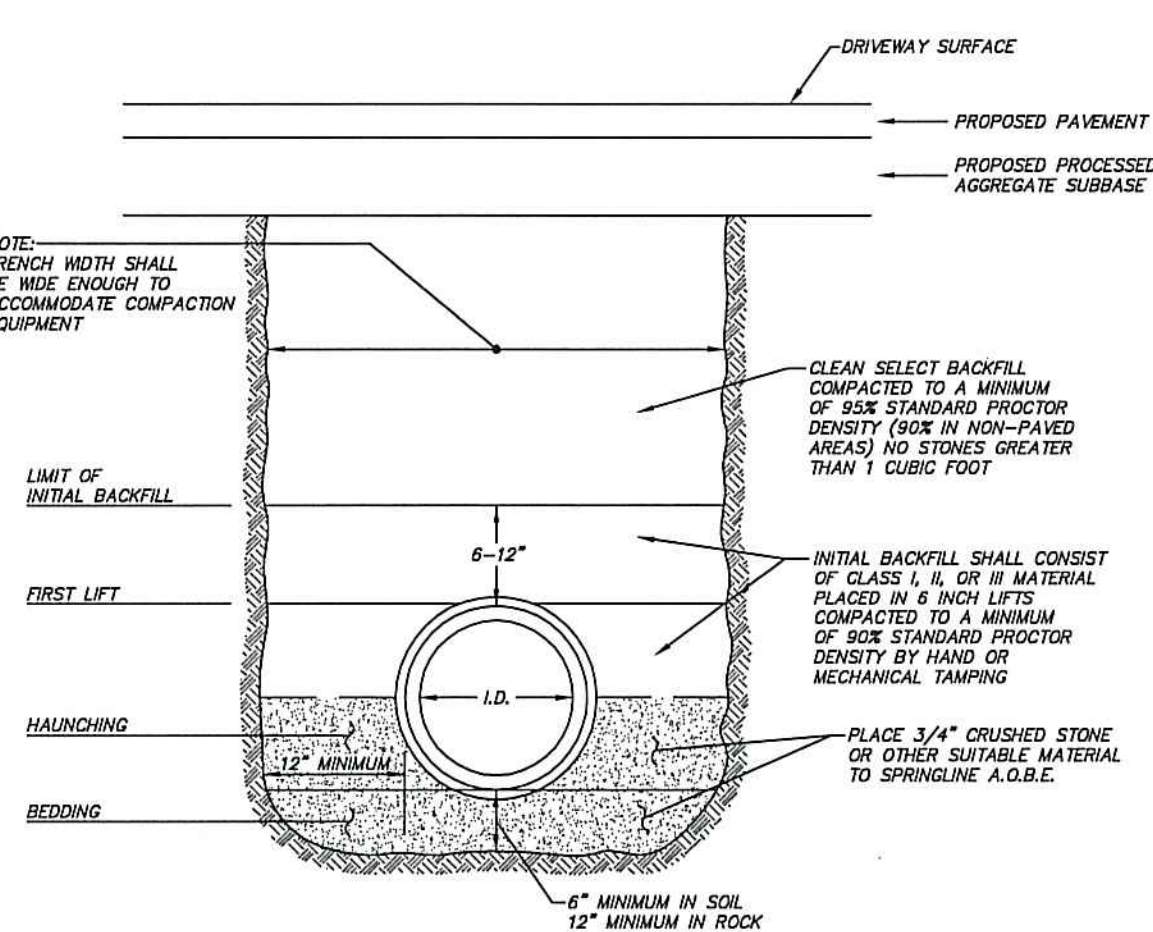
NOTE:
CONTRACTOR SHALL PROVIDE SAMPLES AND/OR CUT SHEETS OF ALL MATERIALS TO BE INSTALLED FOR REVIEW BY THE PROJECT ENGINEER PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALLOW THREE DAYS FOR PROJECT ENGINEER TO REVIEW MATERIALS AND/OR CUT SHEETS FOR APPROVAL. ALL MATERIALS AND PRODUCTS MUST BE APPROVED BY THE PROJECT ENGINEER PRIOR TO INSTALLATION.

D'ANDREA SURVEYING & ENGINEERING, PC
LAND PLANNERS
ENGINEERS
SURVEYORS
P.O. BOX 549
RIVERSIDE, CT 06878
6 NEIL LANE
TEL. 637-1779

PROJECT MIXED USE DEVELOPMENT
PREPARED FOR TR BROAD II, LLC
LOCATION 128 BROAD STREET STAMFORD, CONNECTICUT
REV. DATE DESCRIPTION
10-28-22 ZONING SUBMISSION
10-28-22 LEONARDO C. D'ANDREA, CT PE No. 14869
Leonardo C. D'Andrea ENGINEER DATE
5 OF 6 NOTES & DETAILS
ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.



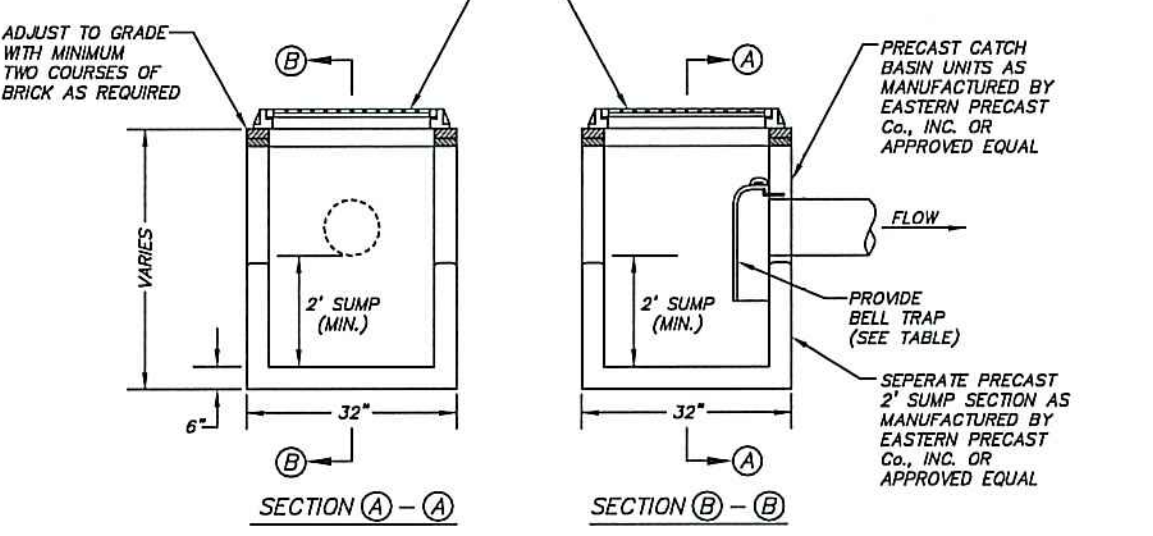
SANITARY SEWER MANHOLE DETAIL
N.T.S.



DETAIL FOR PVC SANITARY SEWER AND PVC/RCP STORM DRAIN INSTALLATION
N.T.S.

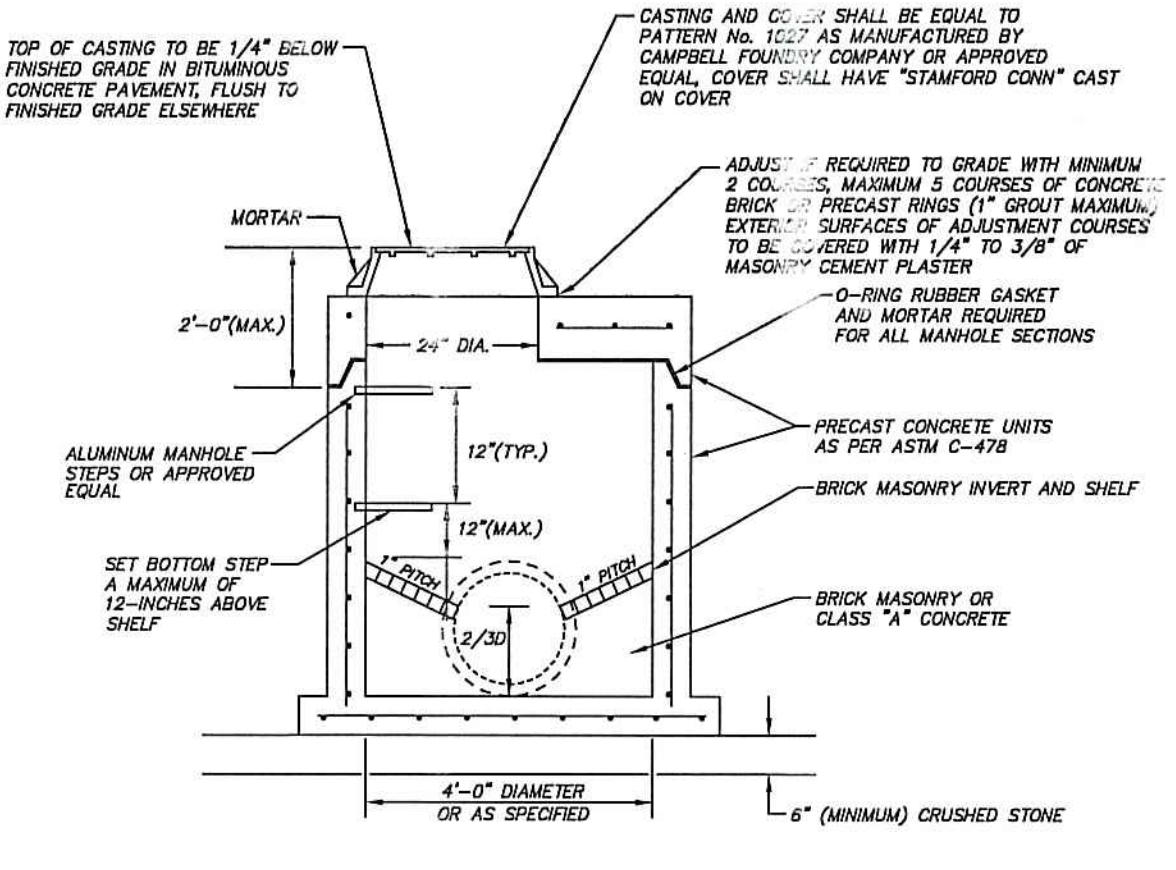
- NOTES:
- REFER TO ASTM D2321 (STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS) FOR TRENCHING SPECIFICATIONS.

| PIPE SIZE | CAMPBELL FOUNDRY PATTERN NUMBER |
|-----------|---------------------------------|
| 6" | 2560 |
| 8" | 2561 |
| 10" | 2562 |
| 12" | 2563 |

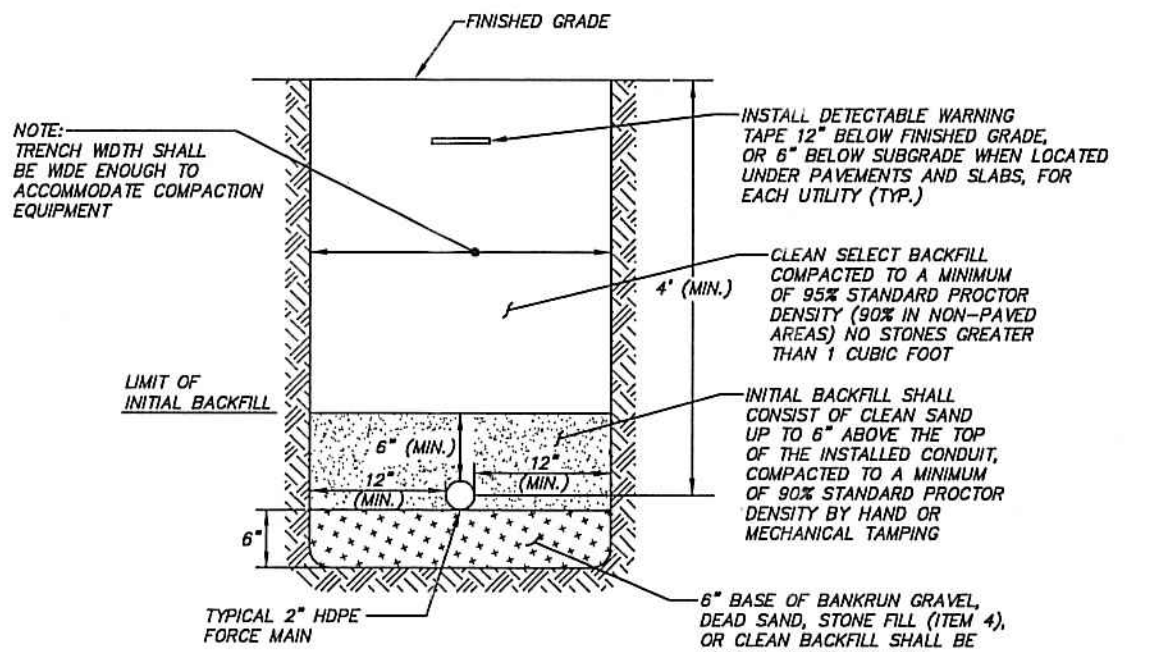


CATCH BASIN #1 DETAIL TYPE "CL"
N.T.S.

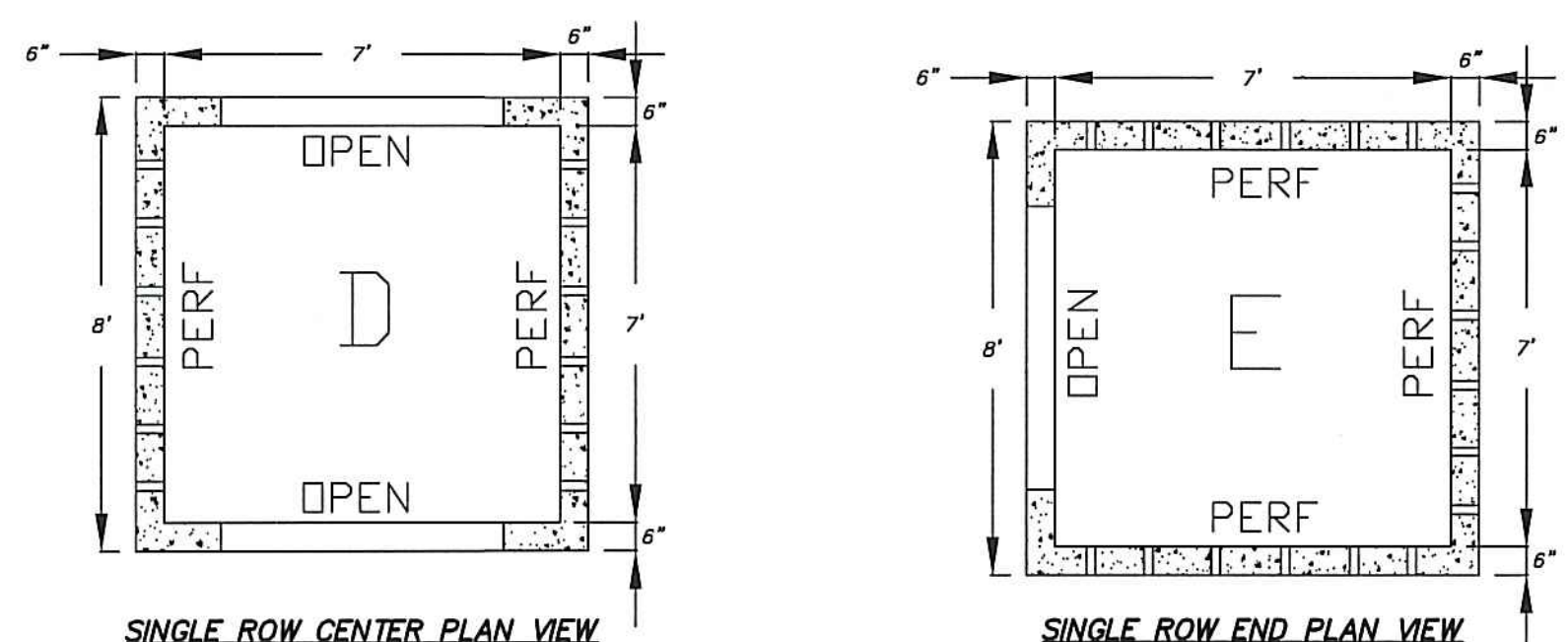
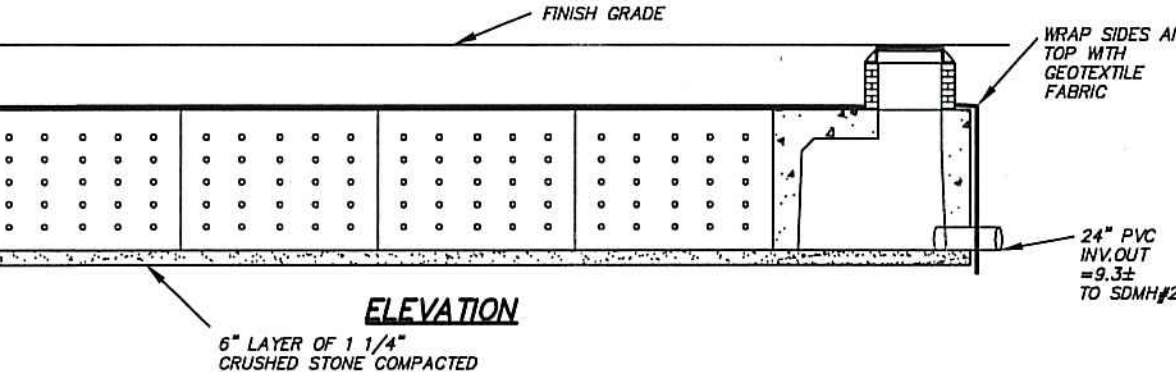
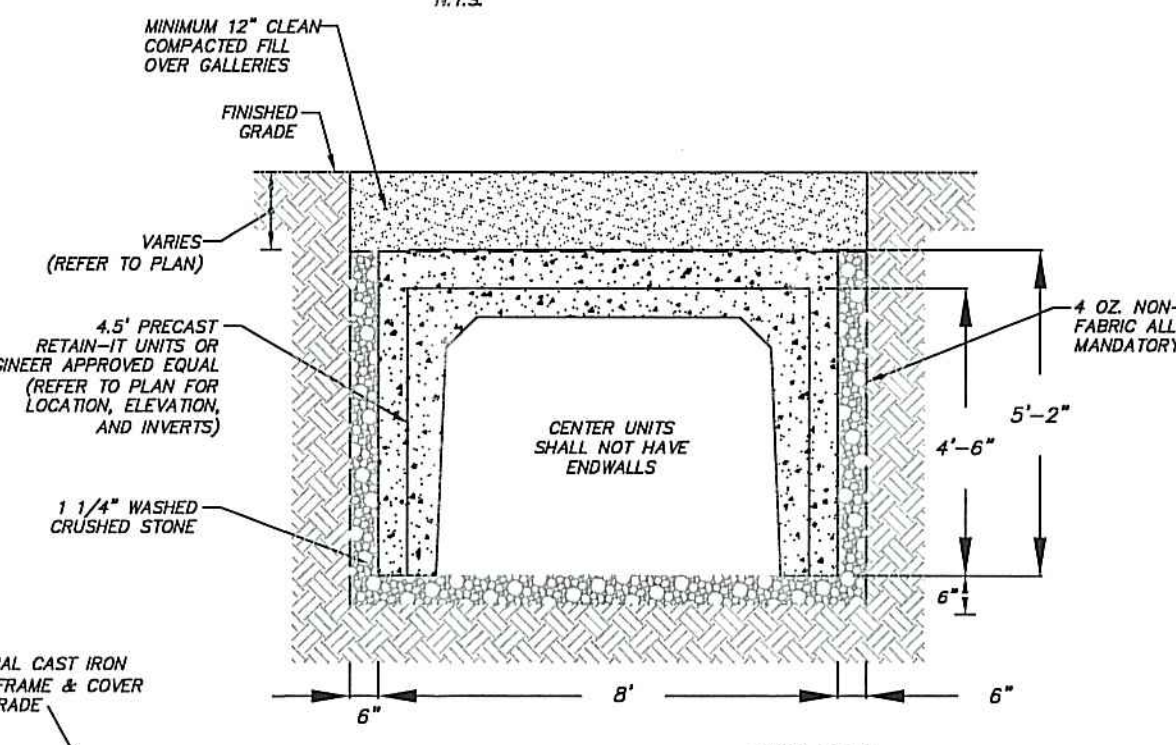
SUMP NOTE:
CATCH BASIN SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.



SHALLOW STORM DRAIN MANHOLE DETAIL
N.T.S.

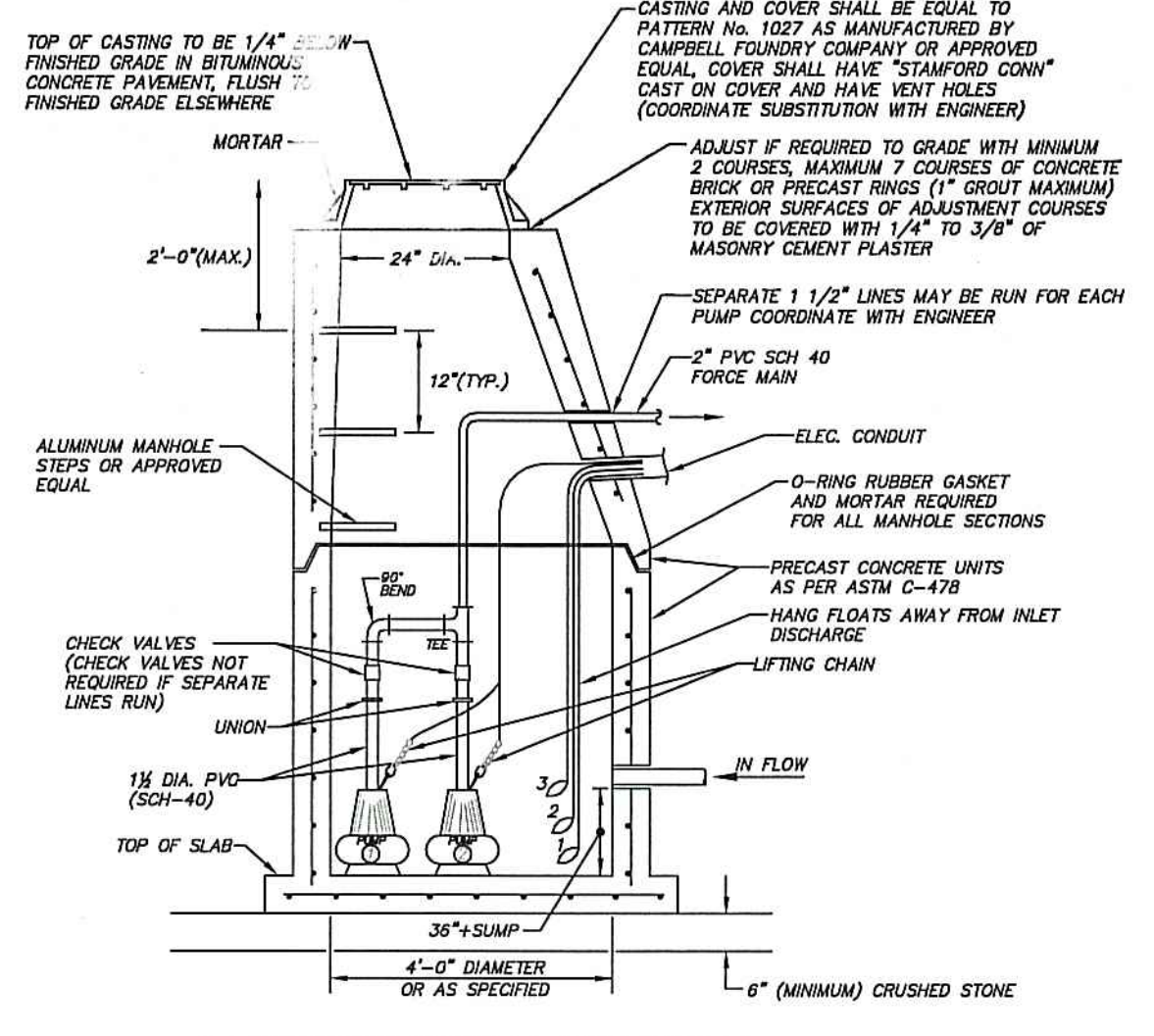


LOW PRESSURE SANITARY SEWER FORCE MAIN INSTALLATION DETAIL
N.T.S.



4.5' PRECAST RETAIN-IT SYSTEM DETAIL
N.T.S.

- NOTES:
- THE SOILS BENEATH THE INFILTRATION SYSTEM SHALL BE SCARIFIED OR TILED TO IMPROVE INFILTRATION.

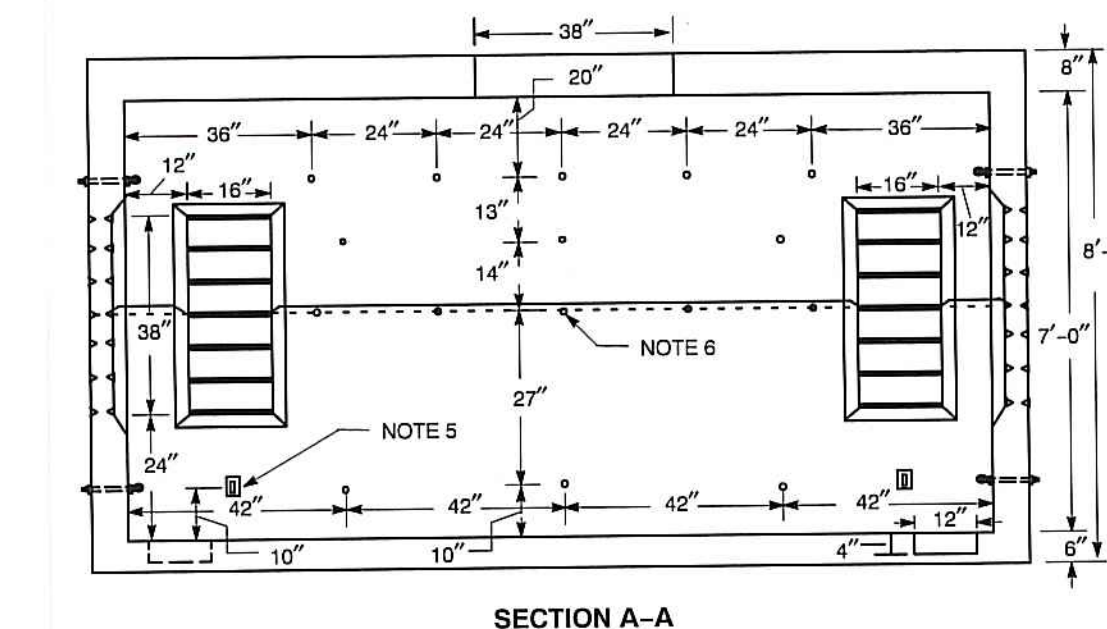
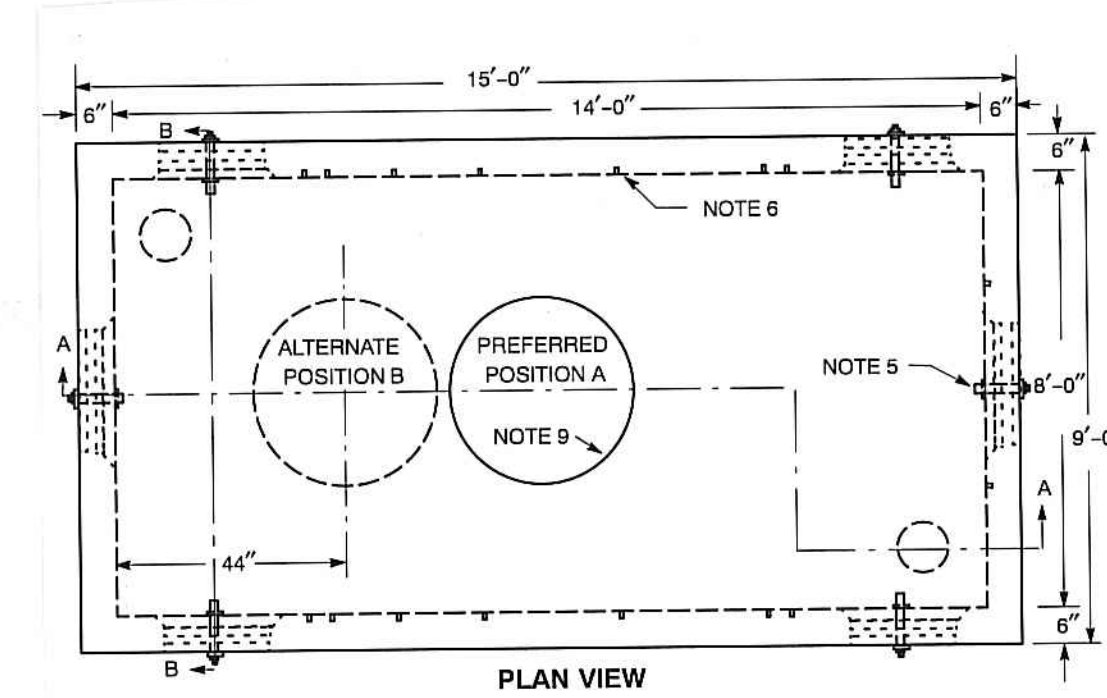


SANITARY SEWER MANHOLE WITH GRINDER PUMPS DETAIL
N.T.S.

- NOTES:
1. RUMP OFF: (6"± OFF BOTTOM)
 2. PUMP ON: (15"± BOTTOM)
 3. ALARM AND LAG PUMP ON (WITH SAME FLOAT); (18"± OFF BOTTOM)

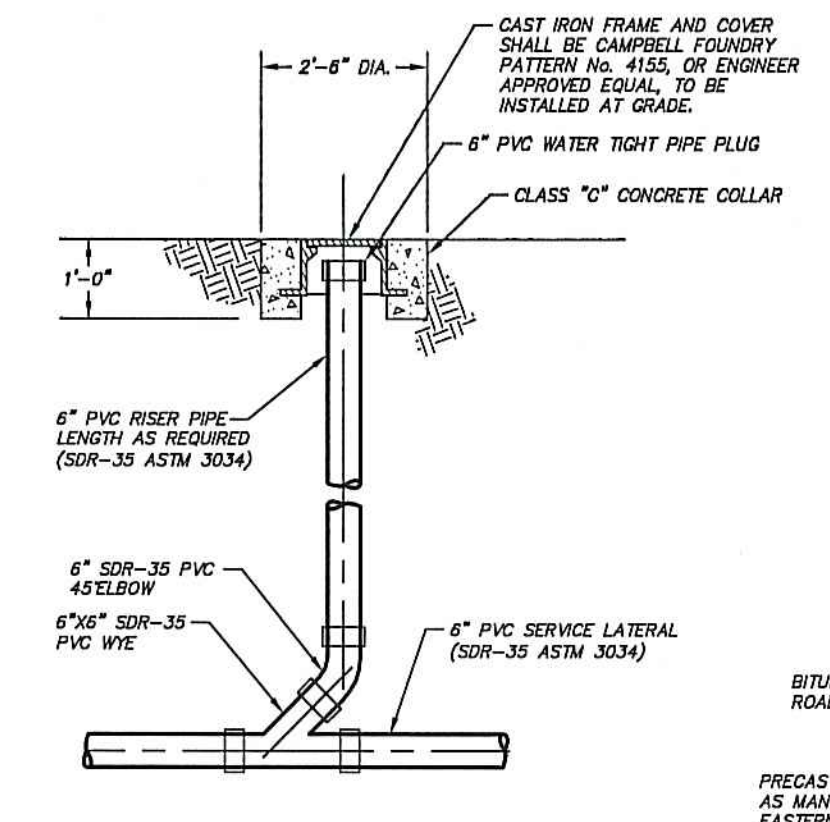
- NOTES:
1. TURNISH AND INSTALL 2. GOLD'S SEWAGE GRINDER PUMPS WITH GOLD PANEL No. AG-2012 WITH A NEMA-1 ENCLOSURE AND 3. FLOAT CONTROLS POLYURETHANE FOAM FLOAT A2325W (A2-3)
 2. PUMPS AND CONTROLS SHALL BE CONNECTED TO A BACK UP POWER SUPPLY TO RUN DURING POWER FAILURES. LICENSED ELECTRICIAN TO COORDINATE WITH ENGINEER AND PROVIDE WIRING SCHEMATIC AS REQUIRED.
 3. CONTRACTOR TO PROVIDE AND INSTALL PIPING, VALVES AND FITTINGS AS REQUIRED.
 4. PANEL TO BE INSTALLED PROMINENT TO OTHER CONTROL PANELS IN BASEMENT, COORDINATE WITH MECHANICAL ENGINEER.
 5. ENGINEER TO BE NOTIFIED TO ATTEND START UP TEST WHEN INSTALLATION IS COMPLETE.
 6. PUMPS, CONTROLS, AND MANHOLE MAY BE SUPPLIED BY EASTERN PRECAST 1-203-775-0230. ENGINEER MAY APPROVE EQUAL SUBSTITUTIONS. SUBMIT FOR APPROVAL IN WRITING.

NOTE:
DUPLX PUMP SYSTEM DEPICTED HEREON IS FOR DEMONSTRATION PURPOSES ONLY. FLOW CALCULATIONS AND DESIGN OF PUMPS/FLOATS TO BE COMPLETED BY OTHERS.

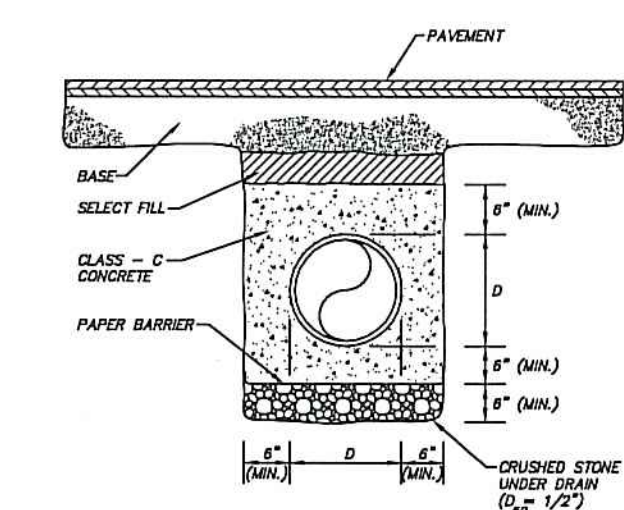


- Notes
1. Manhole shall be designed for the following loads:
 - a. The roof shall be designed for AASHTO HS20-1996 direct wheel load.
 - b. The walls shall be designed for the summation of the following:
 - 1) Soil pressure of not less than an equivalent fluid pressure of 33 pcf.
 - 2) Hydrostatic pressure of 5 feet measured from the base of the manhole.
 - 3) A surcharge of 2.5 feet of soil weighing 120 pcf.
 2. The floor shall be designed to resist the hydrostatic pressure resulting from the 5-foot head called for in 1.b.2) above.
 3. Concrete and concrete design shall be in accordance with ACI 318-1999.
 4. Concrete shall have a minimum and maximum 28-day strength of 4000 and 5000 psi respectively.
 5. Steel reinforcing bars shall conform to ASTM A615-1992 Grade 40 or 60. Welded wire mesh shall conform to ASTM A185-1997 or A497-1999.
 6. Pulling eyebolts, with a minimum 8000-pound pulling strength, shall be installed adjacent to window knockouts, at eight places.
 7. Zinc alloy inserts 1/2 inch - 13 x 1 1/2 inch shall be installed at 48 places.
 8. Openings and knockouts shall be clear of reinforcement.
 9. Construction joint shall be sealed with asphalt cement or equivalent.
 10. Manufacturer's identification and month/year when manufactured shall be legibly marked in/on concrete in the side of the 38-inch opening.
 11. This is an oversized manhole only to be used in special cases. A crane will be needed to set both sections of this manhole.

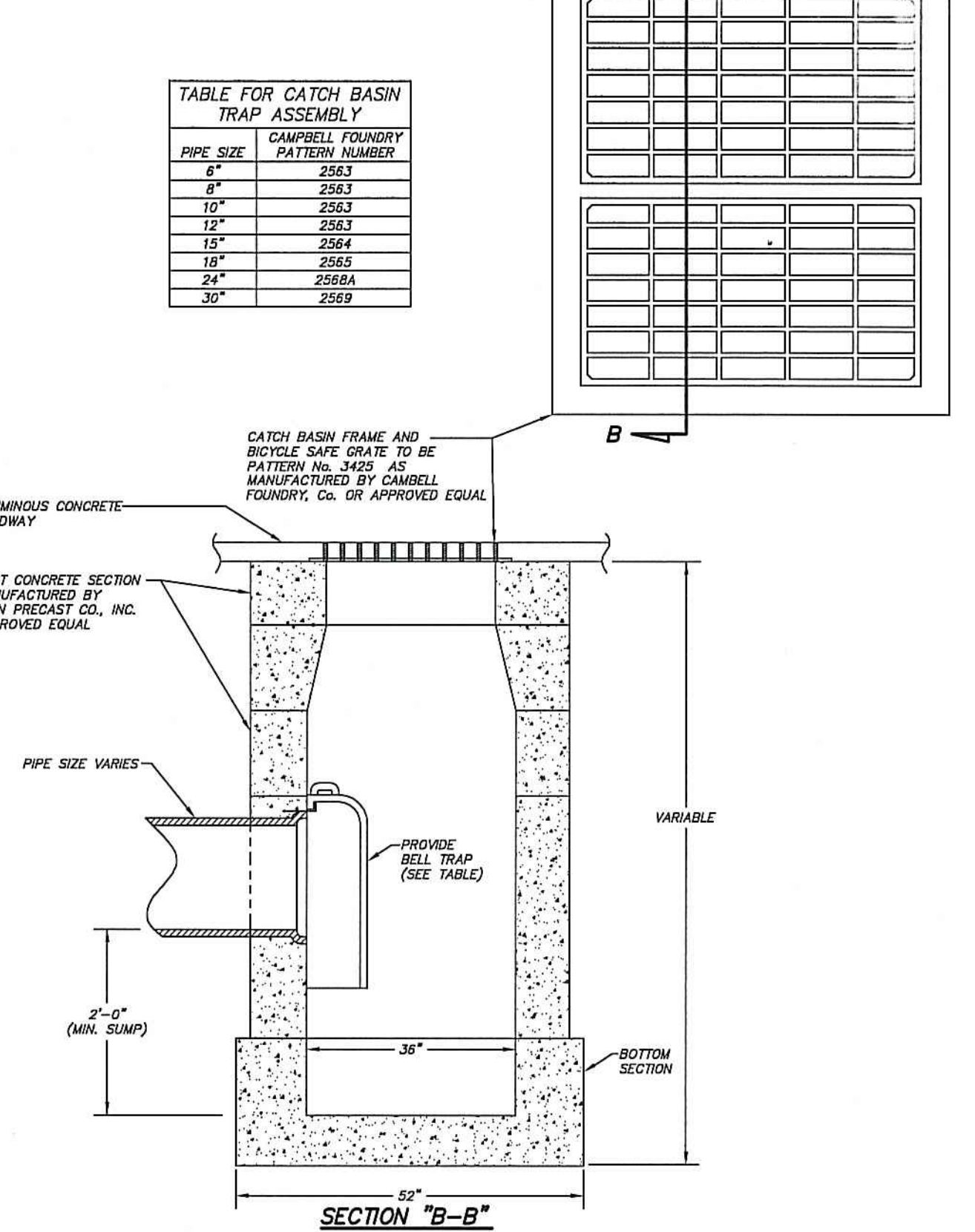
| ORIGINAL | MANHOLE - PRECAST REINFORCED CONCRETE |
|----------|---------------------------------------|
| 50975 | 8'-0" x 14'-0" x 7'-0" INSIDE |
| APPROVED | MATERIAL SPECIFICATION |
| 11807 | EVERSOURCE ENERGY SPC M-039.02 9 |



CLEAN OUT DETAIL
N.T.S.



CONCRETE CASING DETAIL
N.T.S.



CATCH BASIN DETAIL (DOUBLE TYPE "CL")
N.T.S.

SUMP NOTE:
CATCH BASIN SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.

| PIPE SIZE | CAMPBELL FOUNDRY PATTERN NUMBER |
|-----------|---------------------------------|
| 6" | 2560 |
| 8" | 2561 |
| 10" | 2562 |
| 12" | 2563 |

JUNCTION BOX DETAIL
N.T.S.

SUMP NOTE:
JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.

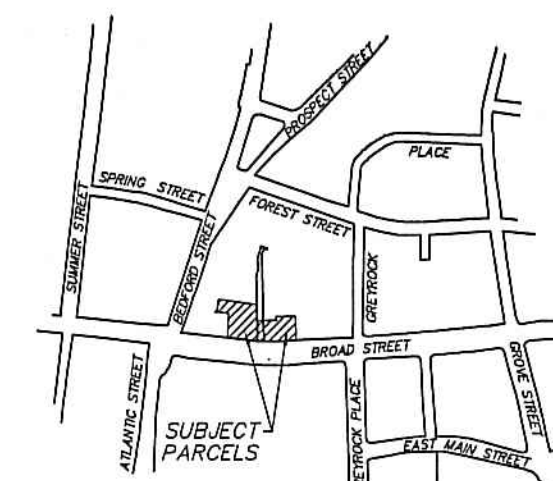
D'ANDREA SURVEYING & ENGINEERING, PC
LAND PLANNERS
ENGINEERS
SURVEYORS
P.O. BOX 549 RIVERSIDE, CT 06878
6 NEIL LANE TEL. 637-1779

| | |
|--------------|--|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| 6 OF 6 | DETAILS |

| REV. | DATE | DESCRIPTION |
|------|----------|-------------------|
| 0 | 10-28-22 | ZONING SUBMISSION |
| 1 | 10-28-22 | ENGINEER |

LEONARD C. D'ANDREA, CT DE No. 14869
ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

BLOCK No. 176
"C-G" ZONING DISTRICT
PARCEL A = 20,865 SQ.FT.
PARCEL B = 14,794 SQ.FT.

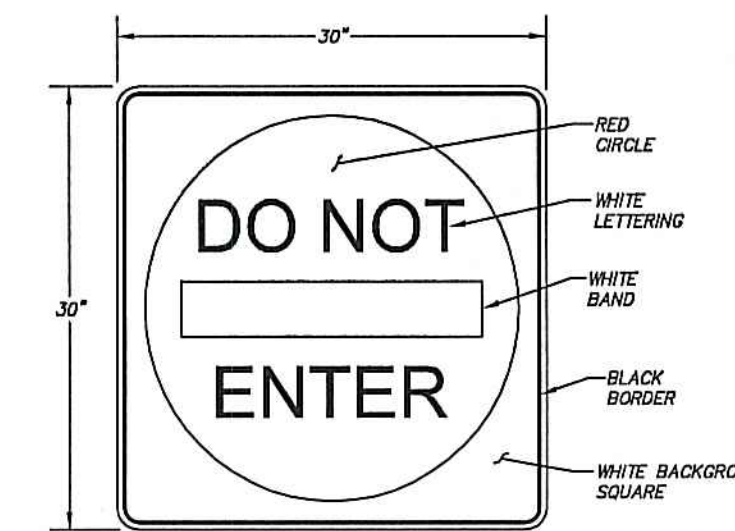


LOCATION MAP - 1" = 800'±

MAP No. 11967 S.L.R. MERIDIAN

NOTES:

1. Refer to topographic survey for a declaration of survey class accuracy.
2. The purpose of this plan is to depict possible alterations to the offsite parking lot to maintain functionality due to the construction of the proposed development at 128-136 Broad Street. Final alterations to the offsite parking lot shall be reviewed and approved by the neighboring property owners and coordinate with the City of Stamford. This plan shall not be used for any other aspect of construction.
3. All traffic control devices, including traffic signs and pavement markings, shall be installed in conformance with the Manual on Uniform Traffic Control Devices, Millennium Edition, as published by the U.S. Department of Transportation, Federal Highway Administration, and as amended to date.



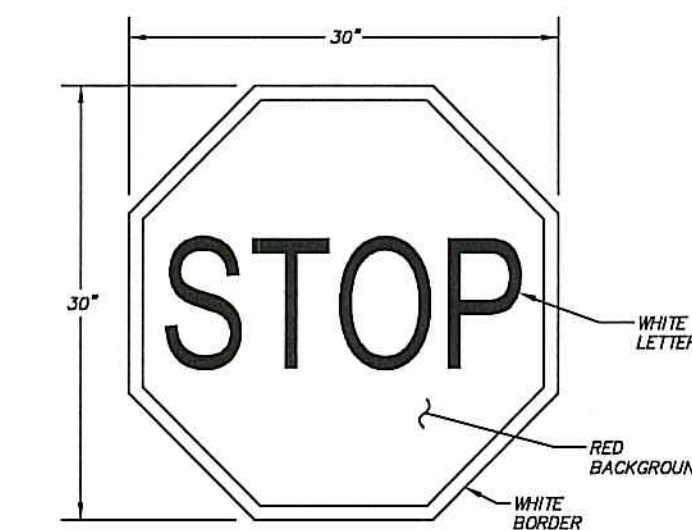
All "DO NOT ENTER" signs shall be a 30-inch white square on which is inscribed a red circle, with a white band placed horizontally across the center of the circle.

The legend "DO NOT ENTER" shall appear in white letters with the words DO NOT above the band and ENTER below the band.

All "DO NOT ENTER" signs shall be installed at a height of at least 5 feet, measured from the bottom of the sign to the near edge of the pavement.

"DO NOT ENTER" sign legend, color, size, and installation shall be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, Millennium Edition, as amended to date.

"DO NOT ENTER" SIGN DETAIL (R5-1)
N.T.S.



All "STOP" signs shall be an octagon with a white legend and border on a red background.

The standard "STOP" sign shall be 30 x 30 inches.

All "STOP" signs shall be installed at a height of at least 5 feet, measured from the bottom of the sign to the near edge of the pavement.

"STOP" sign lettering, color, size, and installation shall be in conformance with the Manual on Uniform Traffic Control Devices for Streets and Highways, U.S. Department of Transportation, Federal Highway Administration, Millennium Edition, as amended to date.

"STOP" SIGN DETAIL (R1-1)
N.T.S.



NOTE: THE VAN ACCESSIBLE SIGN SHALL ONLY BE USED FOR DESIGNATING VAN ACCESSIBLE SPACES.

"HANDICAPPED PARKING PERMIT REQUIRED" & "VAN ACCESSIBLE" signs shall have white lettering against a blue background.

All accessible signage sizes, lettering, and symbols shall comply with federal and state specifications.

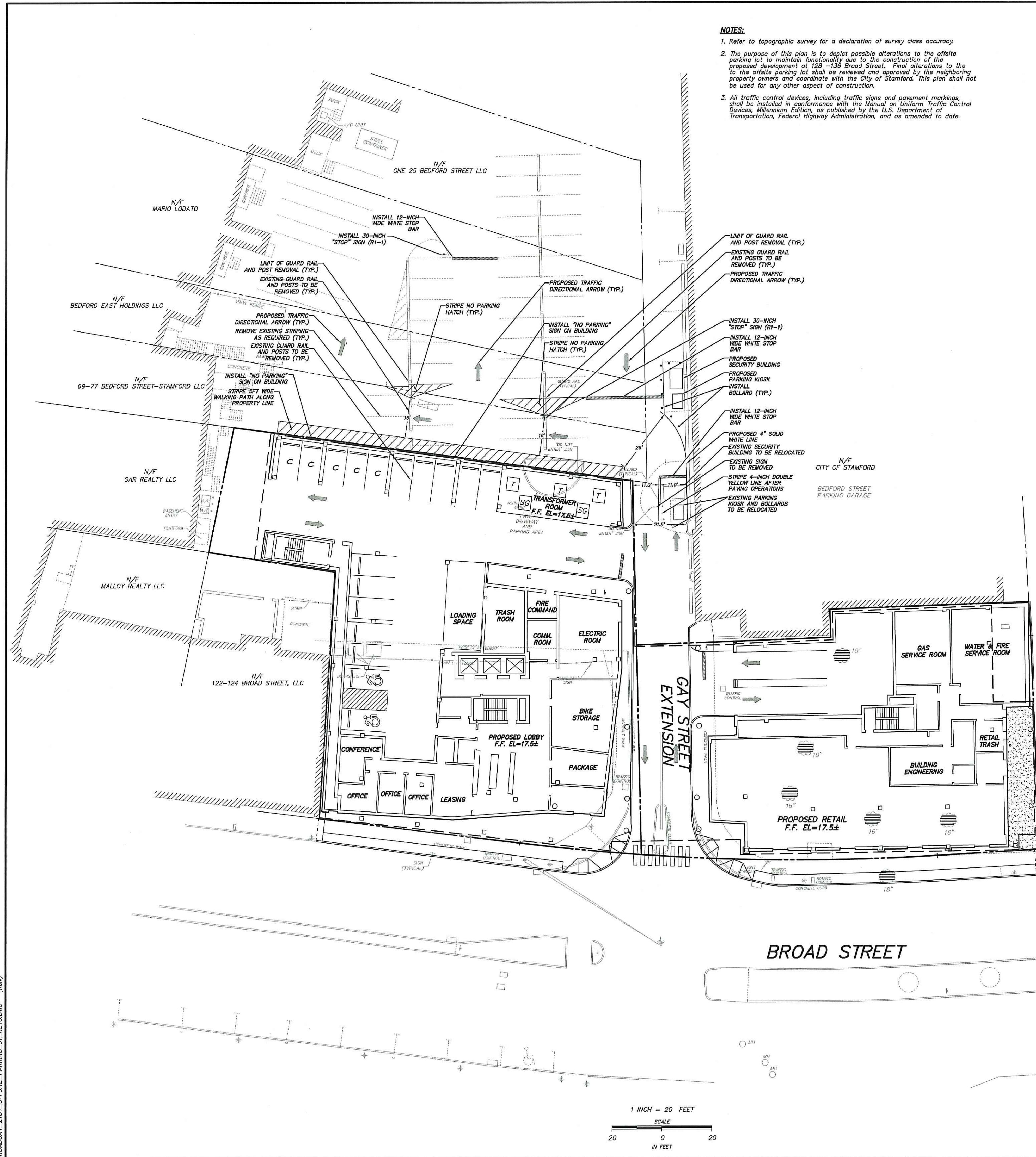
All accessible signage shall be installed 60" (minimum) above the floor or ground surface of the parking space, measured to the bottom of the sign.

Confirm fine amount prior to sign fabrication.

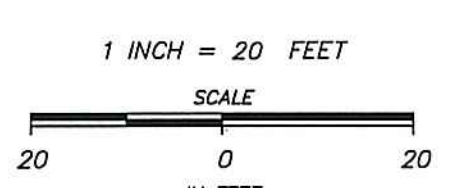
HANDICAPPED PARKING SPACE SIGN DETAIL
N.T.S.

LEGEND

- BB - EXISTING CONTOUR
- X-BB - EXISTING SPOT GRADE
- X-BB-B - EXISTING WALL/CURB SPOT GRADE
- BB - PROPOSED CONTOUR
- X(BB) - PROPOSED SPOT GRADE
- X(BB-B) - PROPOSED WALL/CURB SPOT GRADE
- TREE - DECIDUOUS TREE
- CONIFEROUS TREE
- TREE TO BE REMOVED
- UNDERGROUND UTILITY SERVICE: C=CABLE, E=ELECTRIC, G=GAS, T=TELEPHONE, W=WATER
- PROPERTY LINE
- ① - REGULAR PARKING SPACE (8.5'x18')
- C - COMPACT PARKING SPACE (8.5'x16')
- ♿ - HANDICAPPED PARKING SPACE
- WG - GAS GATE
- WG - WATER GATE
- WM - WATER METER
- UM - UTILITY POLE
- POLE - CATCH BASIN
- CB - MANHOLE
- EMH - ELECTRIC MANHOLE
- SDMH - STORM DRAIN MANHOLE
- SSMH - SANITARY SEWER MANHOLE
- CSP - CORRUGATED POLYETHYLENE PIPE
- PVC - POLYVINYL CHLORIDE
- RCP - REINFORCED CONCRETE PIPE
- VTP - VITRIFIED TILE PIPE
- T - TOP OF WALL/CURB
- B - BOTTOM OF WALL/CURB
- GR - GRADE ELEVATION
- RM - RIM ELEVATION
- INV - INVERT ELEVATION
- AOBE - AS ORDERED BY ENGINEER
- VF - VERIFY IN FIELD



BROAD STREET



XREF: BROADGAY_21UT_DP_07_REV02.DWG
BROADGAY_21UT_OFFSITE_PARKING_01_REV02.DWG (R.N.)

D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS

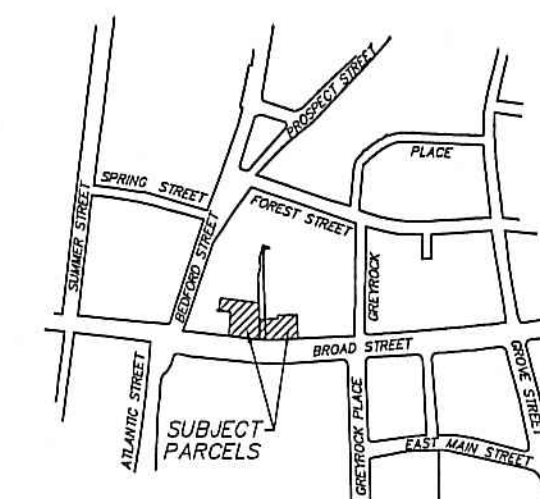
P.O. BOX 549 RIVERSIDE, CT 06878 TEL. 637-1779

| | |
|--------------|--|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| 1 OF 1 | OFFSITE PARKING LOT MODIFICATION PLAN |

REV. DATE DESCRIPTION
 0 10-28-22 ZONING SUBMISSION
 LEONARD C. D'ANDREA, CT PE No. 14869
 ENGINEER DATE 10-28-22

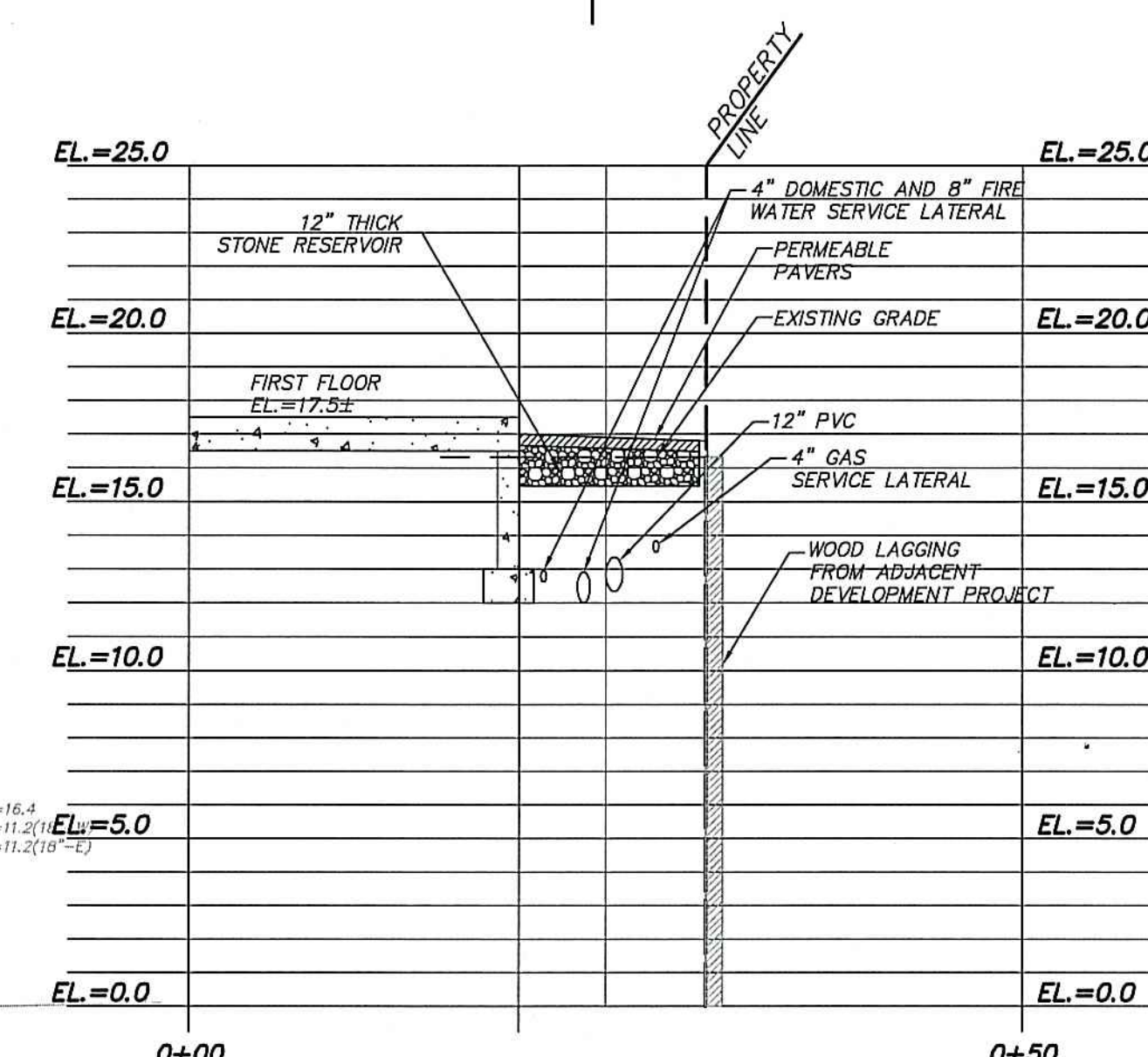
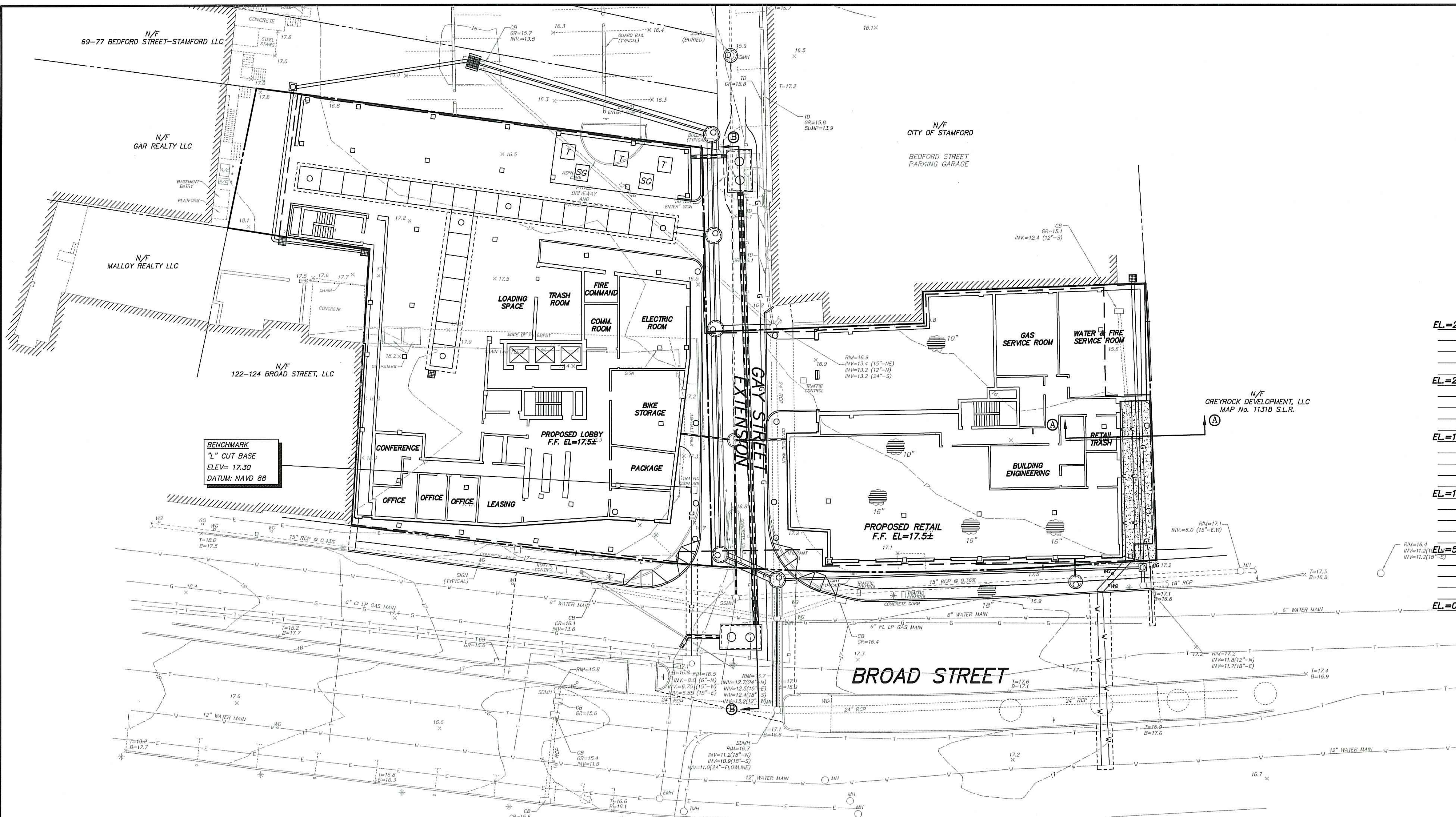
ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

BLOCK No. 176
 "C-G" ZONING DISTRICT
 PARCEL A = 20,865 SQ.FT.
 PARCEL B = 14,794 SQ.FT.



LOCATION MAP - 1" = 800'

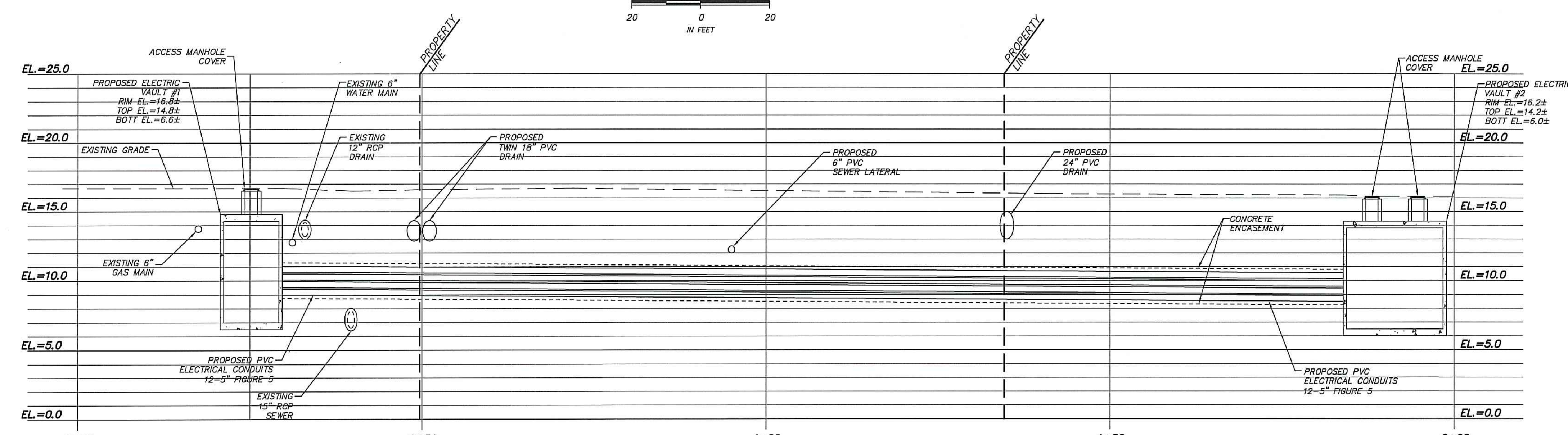
MAP No. 11987 S.L.R. MERIDIAN



SECTION A-A
 SCALES: 1"=10' HORIZONTAL
 1"=5' VERTICAL

- LEGEND**
- EXISTING CONTOUR
 - x 00.0 EXISTING SPOT GRADE
 - x 00.0 EXISTING WALL/CURB SPOT GRADE
 - - - - - PROPOSED CONTOUR
 - x 00.0 PROPOSED SPOT GRADE
 - - - - - PROPOSED WALL/CURB SPOT GRADE
 - DEODIOUS TREE
 - CONIFEROUS TREE
 - TREE TO BE REMOVED
 - TREE PROTECTION
 - SILT FENCE
 - PROPERTY LINE
 - ZONE BOUNDARY LINE
 - GAS GATE
 - WATER GATE
 - WATER METER
 - UTILITY POLE
 - CATCH BASIN
 - MANHOLE
 - ELECTRIC MANHOLE
 - STORM DRAIN MANHOLE
 - SANITARY SEWER MANHOLE
 - CORRUGATED POLYETHYLENE PIPE
 - POLYVINYL CHLORIDE
 - REINFORCED CONCRETE PIPE
 - VITRIFIED TILE PIPE
 - TOP OF WALL/CURB
 - BOTTOM OF WALL/CURB
 - GRATE ELEVATION
 - RIM ELEVATION
 - INVERT ELEVATION
 - AS ORDERED BY ENGINEER
 - VERIFY IN FIELD

CONTOUR INTERVAL = ONE FOOT
 1 INCH = 20 FEET
 SCALE
 0 20
 IN FEET



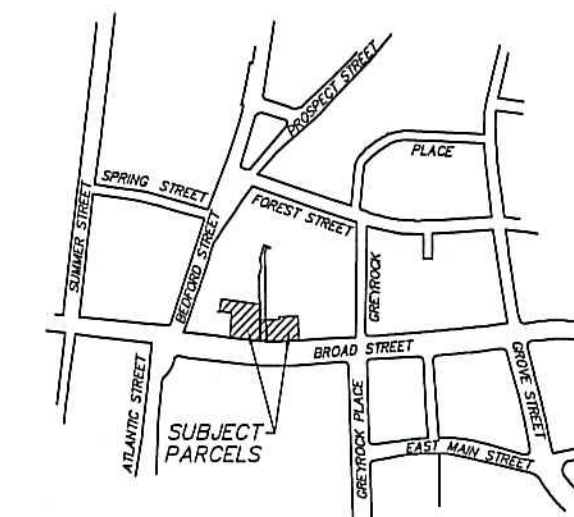
SECTION B-B
 SCALES: 1"=10' HORIZONTAL
 1"=5' VERTICAL

D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS
 P.O. BOX 548
 RIVERSIDE, CT 06878
 6 NEIL LANE
 TEL. 637-1779

| | |
|--|---|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| DATE | 10-28-22 |
| ENGINEER | [Signature] |
| DATE | 10-28-22 |
| ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES. | |

XREF: BROADGAY_21UT_DP_07_REVOLDWG
 BROADGAY_21UT_XSECTION_01_REVOLDWG (R/W)

**BLOCK No. 176
"C-G" ZONING DISTRICT
PARCEL A = 20,865 SQ.FT.
PARCEL B = 14,794 SQ.FT.**



LOCATION MAP - 1" = 800'

MAP No. 11867 S.L.R. MERIDIAN

Notes:

- The contractor shall be required to coordinate and install security fencing around the entire project limits as noted hereon or as agreed to with the owner and the City of Stamford Office of Operations. As noted hereon, certain sections of fencing fall outside of the property boundary. The owner shall coordinate a temporary work easement with the City of Stamford prior to the installation of the fencing. The location of the double access gate shall be mutually agreed upon with the City of Stamford prior to the installation of the fencing.
- Material laydown area, project trailer, and temporary sanitary facilities depicted for initial stages of construction. These features will be relocated during subsequent phases of construction.
- The contractor shall be responsible for coordinating temporary power to the project trailer.
- The owner and/or contractor shall coordinate off-site parking for the project workforce (if required) with the City of Stamford in the Bedford Street parking garage or other off-site parking operator.
- The installation of a tower crane or contractor people lift shall be coordinated with the architect and structural engineer for the project.
- The contractor shall arrange for debris containers throughout the construction phase and containers shall not be overfilled.
- Contractor shall arrange for the proper number of temporary sanitary facilities throughout the construction phase and such facilities shall be properly maintained and sanitized throughout the construction phase.

PHASE 1: CONSTRUCTION STAGING:

Note: Area enclosed by existing chain link fence on Parcel A shall serve as construction staging area for initial stages of construction. Contractor shall enclose grass area on Parcel B with temporary chain link fence to provide additional staging area. Contractor shall remove grass/topsoil and install bank run gravel or process aggregate base material to provide construction parking and storage areas for construction materials.

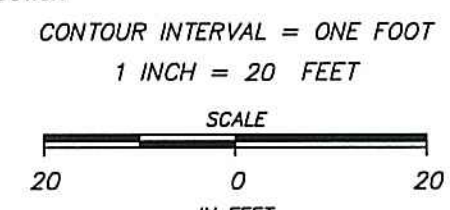
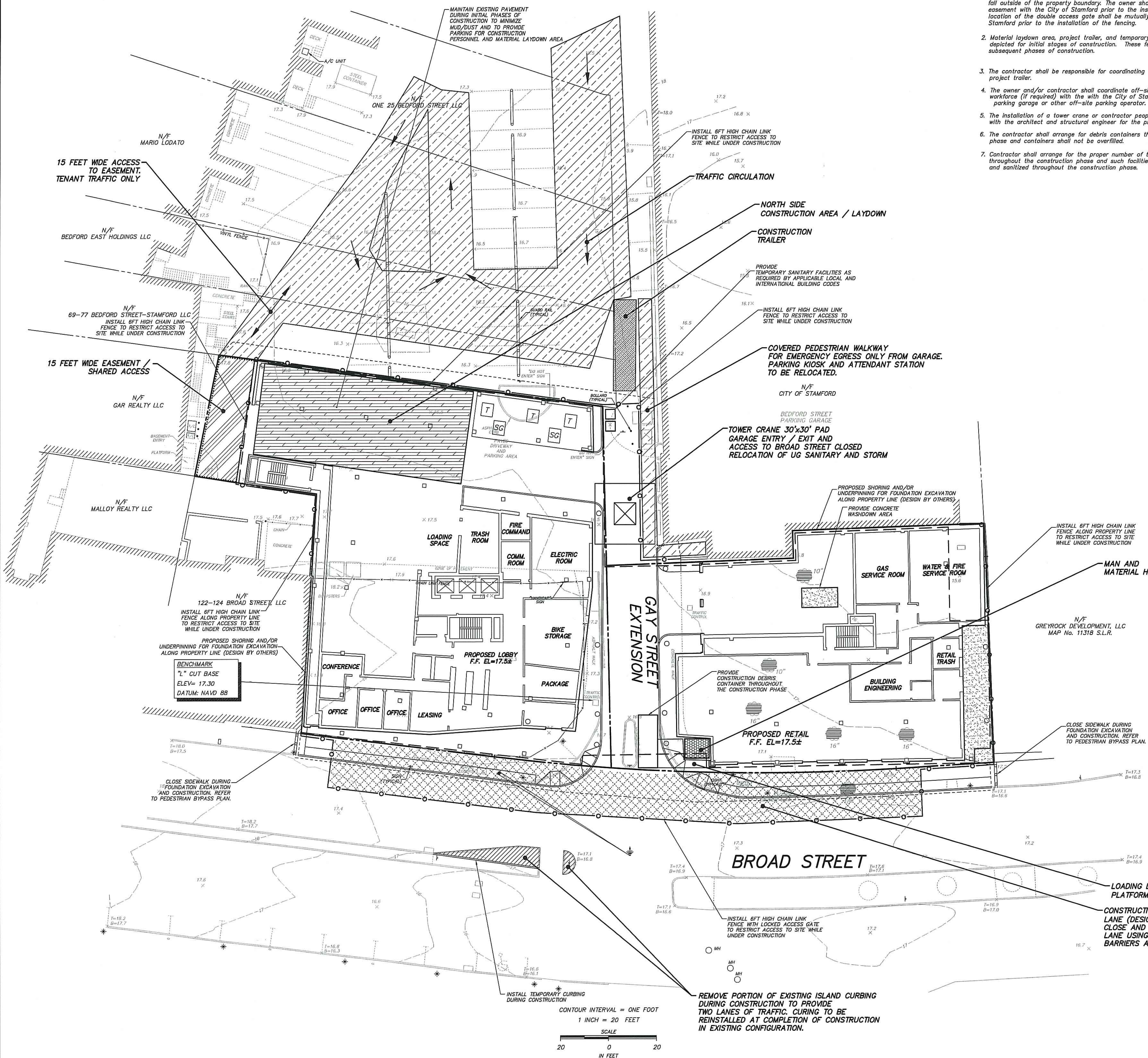
- Remove parking kiosk, bollards, signage and guard rails in offsite parking lot as indicated on the development plan.
- Remove existing striping as required and re-stripe offsite parking lot as indicated on plan.
- Install new signage in offsite parking lot as required.
- Install sedimentation and erosion controls, chain link fence, and overhead pedestrian walkway protection.
- Mark and cut trees to be removed.
- Relocate existing utilities, sanitary sewer and storm drainage systems as required within Gay Street Extension.
- Excavate for proposed building footings. Provide shoring/underpinning as required (design by others).
- Construct proposed building footings, foundation walls, columns and first floor slab.
- Backfill and rough grade around first floor slab.
- Construct second and third floor parking decks.
- Install and grade surface parking lot base material.
- Install asphalt binder course for surface parking lot.

PHASE 2: CONSTRUCTION STAGING:

- Construct proposed building.
- Install sanitary sewer and utilities from Broad Street to building.
- Install storm drainage system for building. Modify existing drainage system as indicated on development plan.
- Construct walks, curbing, pedestrian ramps, and driveway entrance.
- Install wearing course of asphalt on parking lot.
- Stripe parking lot and install signage as required.
- Remove sedimentation and erosion controls, chain link fence, and overhead pedestrian walkway protection.
- Mill and resurface Gay Street Extension and Broad Street. Restripe as required.

LEGEND

| | |
|----------|-------------------------------|
| BB | EXISTING CONTOUR |
| X 88.8 | EXISTING SPOT GRADE |
| X 188.8 | EXISTING WALL/CURB SPOT GRADE |
| BB | PROPOSED CONTOUR |
| X 88.8 | PROPOSED SPOT GRADE |
| X 188.8 | PROPOSED WALL/CURB SPOT GRADE |
| (Symbol) | DECIDUOUS TREE |
| (Symbol) | CONIFEROUS TREE |
| (Symbol) | TREE TO BE REMOVED |
| (Symbol) | TREE PROTECTION |
| (Symbol) | SILT FENCE |
| (Symbol) | PROPERTY LINE |
| (Symbol) | ZONE BOUNDARY LINE |
| GG | GAS GATE |
| WG | WATER GATE |
| WM | WATER METER |
| UP | UTILITY POLE |
| CB | CATCH BASIN |
| MH | MANHOLE |
| EMH | ELECTRIC MANHOLE |
| SDMH | STORM DRAIN MANHOLE |
| SSMH | SANITARY SEWER MANHOLE |
| CPP | CORRUGATED POLYETHYLENE PIPE |
| PVC | POLYVINYL CHLORIDE |
| RCP | REINFORCED CONCRETE PIPE |
| VIP | VITRIFIED TILE PIPE |
| T | TOP OF WALL/CURB |
| B | BOTTOM OF WALL/CURB |
| GR | GRATE ELEVATION |
| RM | RM ELEVATION |
| INV | INVERT ELEVATION |
| AOBE | AS ORDERED BY ENGINEER |
| VF | VERIFY IN FIELD |



XREF: BROADGAY_21UT_DP_07_REVOLDWG BROADGAY_21UT_GLD_02_REVOLDWG (RW)

D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS
 P.O. BOX 549 RIVERSIDE, CT 06878
 6 NIEL LANE TEL. 637-1779

| | |
|--------------|--|
| PROJECT | MIXED USE DEVELOPMENT |
| PREPARED FOR | TR BROAD II, LLC |
| LOCATION | 128 BROAD STREET STAMFORD, CONNECTICUT |
| 1 OF 1 | CONSTRUCTION LOGISTICS PLAN |

| | | |
|--|----------|-------------------|
| REV. | DATE | DESCRIPTION |
| 0 | 10-28-22 | ZONING SUBMISSION |
| LEONARD C. D'ANDREA, CT PE No. 14869 ENGINEER DATE 10-28-22 | | |

ONLY COPIES OF THIS PLAN BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL ARE TRUE, VALID COPIES.

AGREEMENT COVENANT

AGREEMENT made this _____ day of _____ by and between TR Broad II LLC of Stamford, CT (hereinafter referred to as "Owner") and the **CITY OF STAMFORD**, 888 Washington Blvd. Stamford CT 06901, a municipal corporation lying within the County of Fairfield and State of Connecticut, acting herein by its duly authorized Mayor, Caroline Simmons (hereinafter referred to as the "City"), and the **ENVIRONMENTAL PROTECTION BOARD OF THE CITY OF STAMFORD**, acting herein by its duly authorized Chairman, Gary H. Stone (hereinafter referred to as the "EPB").

WITNESSETH:

WHEREAS, OWNER has commenced the planning and construction of a mixed use development on a parcel of land owned by them and as more particularly described on Schedule "A", attached hereto and made a part hereof (the "Property").

WHEREAS, certain drainage facilities ("Drainage Facilities"), including but not limited to subsurface retention system as more particularly described on Schedule "B" attached (the "Construction Plans") shall be installed in connection with the aforesaid construction and in accordance with the Construction Plans and _____ issued therefore, (the "Permit") and;

WHEREAS, OWNER, the CITY and EPB share a joint concern that the Drainage Facilities be maintained in a functioning condition so as to avoid

pollution of surface and groundwaters, flooding and/or improper drainage.

NOW, THEREFORE, in consideration of ten dollars and other good and valuable consideration receipt of which is hereby acknowledged by the OWNER, it is hereby agreed as follows:

- 1) OWNER shall clean the drainage facilities or cause such facilities to be cleaned by periodic removal of accumulated sediment and debris in a good and workman-like manner, at least two (2) times during every twelve (12) month period, which times shall be in the period between April and June and between October and December and more often as the City may determine to be necessary.
- 2) OWNER shall sweep, or cause to be swept, garage facilities, driveways and roadway surfaces located on the Property at least once per calendar quarter.
- 3) OWNER shall utilize only sand or calcium chloride in connection with the de-icing of areas within the Property meaning and intending that road salt (Sodium Chloride) shall not be used for said purpose.
- 4) OWNER shall repair or replace any defects or defective drainage facilities so as to maintain the drainage facilities, at all times, in a fully functional capacity.
- 5) OWNER shall file as-built drainage plans with the EPB immediately upon the completion of work. Said plans shall be prepared by a professional engineer/surveyor registered in the State of Connecticut.

- 6) OWNER grants the CITY and/or EPB, its agents, and employees, the right to enter the Property at all reasonable times upon twenty-four (24) hours notice to the OWNER for the purpose of inspecting the Property to determine if OWNER is complying with the requirements hereunder. A representative of the Owner shall have the right to accompany the City and/or EPB on their inspection of the Property.

- 7) If, after an inspection is made pursuant to Paragraph Six (6) hereof, the CITY and/or EPB determines that the owner has failed to comply with the aforesaid undertakings, then the CITY and/or EPB shall give written notice of said determination to the then OWNER of the Property which notice shall also specify the said failure. Said notice shall be sent by registered or certified mail to the last known address of said Owner. If the Owner disputes the claim, he shall give written notice thereof to City and/or EPB within ten (10) days of receipt of said notice, and the EPB shall hold a hearing as promptly as possible to decide the merits of the disputed claim. If the claim is not disputed within said ten (10) days, the OWNER shall have thirty (30) days from the receipt of said notice to correct said failure, unless it is impossible to cure said defect within said time, in which case, the necessary repairs shall be immediately commenced and diligently pursued to completion within a reasonable time.

- 8) If the said failure is not remedied within the time frame herein stated, the CITY and/or EPB may proceed to cure the same and charge the actual cost thereof to the OWNER of the Property.

- 9) OWNER agrees to reimburse the CITY and/or EPB for reasonable legal fees and court costs if it becomes necessary for the CITY and/or EPB to sue for reimbursement of sums expended by the CITY and/or EPB in performance of OWNER'S obligation.
- 10) OWNER agrees and covenants to indemnify and save harmless the CITY and the EPB against any and all claims, suits, actions or judgments arising out of the delay in the performance of any of their obligations pursuant to this Agreement.
- 11) OWNER agrees that this covenant and restriction shall apply to and run with the land. It shall be binding on all future owners, administrators, executors, successors and assigns.
- 12) The OWNER hereby represents to the CITY and EPB that he/she is the owner, in fee simple, of all of the property described in "Schedule A" attached hereto and made a part hereof.
- 13) OWNER agrees that this Agreement and restrictive covenant upon execution of the same, shall be recorded on the land records at the OWNER'S expense at the time that a permit is issued for the Property herein and while the OWNER is in title.
- 14) OWNER agrees not to assert the invalidity of this document.
- 15) OWNER agrees that nothing herein shall be construed to be a limitation upon the right of the EPB to assert and enforce any

rights it may have under federal, state or City statute, ordinance or regulation.

16) This agreement shall be governed by the laws of the State of Connecticut.

IN WITNESS WHEREOF, the said parties hereto have hereunto set their hands and seals, the day and year first above written.

WITNESSED:

#1 _____
Printed Name:

THE CITY OF STAMFORD
BY: _____
Caroline Simmons
Its duly authorized Mayor

#2 _____
Printed Name:

#1 _____
Printed Name:

THE ENVIRONMENTAL PROTECTION BOARD
BY: _____
Gary H. Stone
Its duly authorized Chairman

#2 _____
Printed Name:

#1 _____
Printed Name:

OWNER
BY: _____

#2 _____
Printed Name:

(Owner's Name)

(Acknowledgement on the Following Page)

STATE OF CONNECTICUT}
} ss: STAMFORD Date: _____
COUNTY OF FAIRFIELD }

Personally appeared Caroline Simmons, Mayor of the City of Stamford, signer and sealer of the foregoing Instrument, and acknowledged the same to be her free act and deed and the free act and deed of said City, before me.

Commissioner of the Superior Court or Notary Public

STATE OF CONNECTICUT}
} ss: STAMFORD Date: _____
COUNTY OF FAIRFIELD }

Personally appeared Gary H. Stone, Chairman of the Environmental Protection Board of the City of Stamford, signer and sealer of the foregoing Instrument, and acknowledged the same to be his free act and deed and the free act and deed of said Commission, before me.

Commissioner of the Superior Court or Notary Public

STATE OF CONNECTICUT}
} ss: STAMFORD Date: _____
COUNTY OF FAIRFIELD }

Personally appeared _____ signer and sealer of the foregoing instrument, and acknowledged the same to be ___ free act and deed, before me.

Commissioner of the Superior Court or Notary Public

SCHEDULE "A"

PARCEL A:

ALL THAT CERTAIN piece, parcel or tract of land, with the buildings and improvements thereon, situated in the City of Stamford, County of Fairfield and State of Connecticut, and known as 128 Broad Street, which is more particularly bounded and described as follows:

NORTHERLY: One Hundred Sixty-one (161) feet, more or less, by land now or formerly of The Estate of Mary M. Scofield, dec'd.

EASTERLY: One Hundred Forty-eight (148) feet, more or less, by a driveway, now or formerly known as Gay Street Extension;

SOUTHERLY: One Hundred Thirty (130) feet by Broad Street;

WESTERLY: Ninety-eight (98) feet, more or less, by land now or formerly of Charles M. Lounsbury, dec'd. et al, and now or formerly of George Dimenstein;

SOUTHERLY AGAIN: Fifty-one (51) feet, more or less, by land now or formerly of the Estate of Charles Lounsbury, dec'd. et al and now or formerly of George Dimenstein; and

WESTERLY AGAIN: Fifty and 05/100 (50.5) feet by land now or formerly of Merwin Realty Co., and now or formerly of Floyd B. Bertram. et al.

SAID PREMISES are known and designated as "Parcel 'C', 7,883+/- Sq. Ft." and "Parcel 'D', 12,982+/- Sq. Ft." as shown on a certain map entitled, "Map Prepared for Thomas K. Standish, Stamford, Connecticut, Scale 1" = 20', Aug. 22, 1988", certified "Substantially Correct" by William W. Seymour, Conn. L.S. Reg. No. 11352 for William W. Seymour and Associates, P.C., Land Surveyors, Darien, Conn., which map is on file in the Office of the Town Clerk of the City of Stamford as Map No. 11192, reference thereto being had.

PARCEL B:

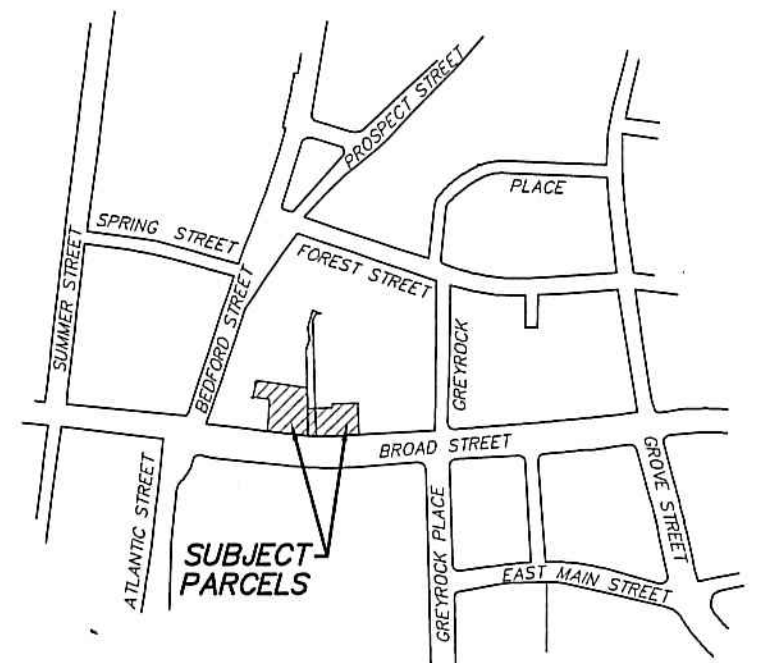
ALL THAT CERTAIN piece, parcel or tract of land, located in the City of Stamford, County of Fairfield and State of Connecticut, located at the northeast corner of Broad Street including the southerly terminus of Gay Street Extension, and bounded and described as follows:

BEGINNING at a point on the new northerly street line of Broad Street as it now exists where said northerly street line intersects the westerly property line of land of United Broad Street Associates, said point being further located 3.65 feet southerly of the southwesterly corner of said land of United Broad Street Associates as shown and delineated on Map No. 11318 of the Stamford Land Records. Thence westerly along said northerly street line of Broad Street, the following courses and distances: S. 86° 23' 42" W. a distance of 40.93 feet, thence continuing on a curve to the right, thence continuing on a curve to the right, the radius of which is 910.00 feet a distance of 118.869 feet to land of Anthony R. Lorenzo, Trustee. Thence northerly along land of said Anthony R. Lorenzo, Trustee N. 1° 22' 36" W. a distance of 83.437 feet to a point, thence easterly, northerly and again easterly through in part across Gay Street Extension and land of the City of Stamford, the following courses and distances: N. 87° 43' 40" E. a distance of 77.992 feet, N. 1° 58' 00" W. a distance of 11.33 feet and N. 87° 51' 05" E. a distance of 79.917 feet to land of United Broad Street Associates. Thence southerly along land of said United Broad Street Associates the following courses and distances: S. 3° 27' 06" E. a distance of 13.64 feet and S. 2° 18' 06" E. a distance of 84.99 feet to the point or place of beginning.

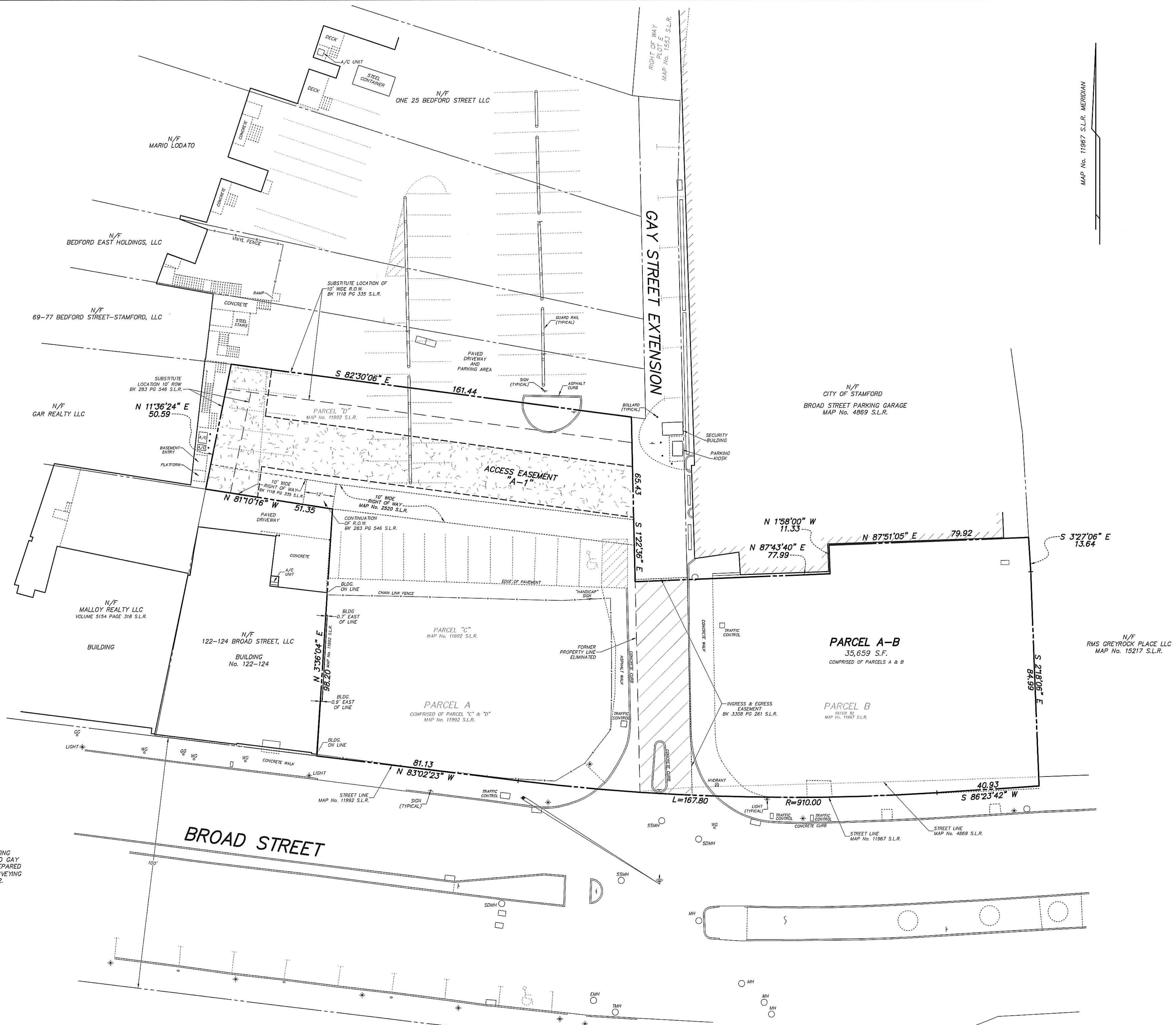
SAID PREMISES are shown and delineated on a certain map entitled, "Map Showing a Portion of Property of the City of Stamford, Stamford, Connecticut.", certified by Paul R. Manula, Land Surveyor, on December 22, 1987, which map is on file in the Stamford Town Clerk's Office as Map No. 11967, reference thereto being had.

THE above-described property contains 14,794 square feet and lies in Block 176 of the Stamford Land Records.

Properties are known as 136 Broad Street, Stamford, Connecticut &
0 Broad Street (Account #004-0515), Stamford, Connecticut



LOCATION MAP - 1" = 600'±



ACCESS EASEMENT "A-1"

REFER TO A MAP ENTITLED "EASEMENT MAP DEPICTING ACCESS EASEMENT LOCATED AT BROAD STREET AND GAY STREET EXTENSION IN STAMFORD, CONNECTICUT PREPARED FOR TR BROAD II LLC PREPARED BY D'ANDREA SURVEYING & ENGINEERING P.C. AND DATED OCTOBER 28, 2022.

REFER TO A MAP ENTITLED "PROPERTY SURVEY PREPARED FOR BROADGAY L.L.C. STAMFORD, CT." PREPARED BY REDWISS & HEAD AND DATED FEBRUARY 24, 1995.

THIS MAP IS A PROPERTY SURVEY. BOUNDARY INFORMATION IS BASED ON A RESURVEY CONDUCTED IN ACCORDANCE WITH HORIZONTAL ACCURACY CLASS "A-2" AS DEFINED IN THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20.

NEW MONUMENTATION HAS NOT BEEN SET AS A RESULT OF THIS SURVEY.

ONLY COPIES OF THIS MAP BEARING AN ORIGINAL IMPRINT OF THE SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.

REFER TO VOLUME 13022 PAGE 140 AND MAPS No. 11192 & 11967 S.L.R.

LAND LIES IN "C-G" ZONING DISTRICT

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

D'ANDREA SURVEYING & ENGINEERING, P.C.

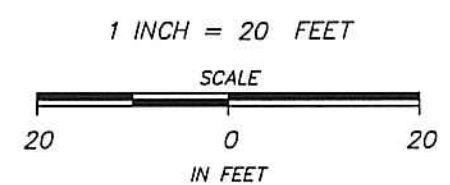
ROBERT L. LIDDEL JR., CT LS No. 15775 RIVERSIDE, CONNECTICUT OCTOBER 28, 2022

APPROVED FOR SUBMISSION AND FILING.

ON _____ BY _____ OWNER OR AGENT

APPROVED BY THE STAMFORD PLANNING BOARD. FOR FILING PURPOSES. (NOT A SUBDIVISION PURSUANT TO CGS 8-18)

ON _____ BY _____ CHAIR OR SECRETARY



PROPERTY SURVEY DEPICTING CONSOLIDATION OF PARCELS AT 128-136 BROAD STREET AND GAY STREET EXTENSION IN STAMFORD, CONNECTICUT PREPARED FOR TR BROAD II, LLC

Sanitary Sewer Flow Calculations

Name: TR Broad II, LLC
Address: 128 Broad Street Stamford, Connecticut
Date: October 28, 2022

□ Summary

The following calculations were performed to determine if the existing sanitary sewer main, which extends along the frontage of the proposed development, has sufficient capacity to handle contributing flows from the proposed building. The sanitary sewer connections from the proposed building to the existing sanitary sewer main are depicted on Sheet 2 of 6 of the Final Site Plan Review Set, as prepared by D'Andrea Surveying & Engineering, PC.

The existing sanitary sewer main receiving contributing flows from the proposed building is a 15-inch RCP that directs flow to the east along the northern edge of the Broad Street Right-of-Way towards Greyrock Place.

□ Proposed Building Daily Residential Sewer Discharge Volume:

| | | |
|--|---|------------|
| Proposed Number of Studio Units | = | 31 |
| Proposed Number of One Bedroom Units | = | 87 |
| Proposed Number of Two Bedroom Units | = | 69 |
| Proposed Number of Three Bedroom Units | = | 9 |
| Sewer Discharge Per Capita Per Day | = | 75 gallons |

Studio Units

$$V_{1BR} = 31 \text{ units} \times \frac{1 \text{ bedroom}}{1 \text{ unit}} \times \frac{1 \text{ persons}}{1 \text{ bedroom}} \times 75 \text{ gpcd} = 2,325 \text{ gpd}$$

One Bedroom Units

$$V_{1BR} = 87 \text{ units} \times \frac{1 \text{ bedroom}}{1 \text{ unit}} \times \frac{2 \text{ persons}}{1 \text{ bedroom}} \times 75 \text{ gpcd} = 13,050 \text{ gpd}$$

Two Bedroom Units

$$V_{2BR} = 69 \text{ units} \times \frac{2 \text{ bedroom}}{1 \text{ unit}} \times \frac{2 \text{ persons}}{1 \text{ bedroom}} \times 75 \text{ gpcd} = 20,700 \text{ gpd}$$

Three Bedroom Units

$$V_{3BR} = 9 \text{ units} \times \frac{3 \text{ bedroom}}{1 \text{ unit}} \times \frac{2 \text{ persons}}{1 \text{ bedroom}} \times 75 \text{ gpcd} = 4,050 \text{ gpd}$$

□ **Proposed Building Retail Sewer Discharge Volume:**

Eastern Retail: 4,284 sq.ft. (Approximately)

Assume this space will be used for a restaurant and/or food establishment.

Assume restaurant has 150 seats and serves breakfast, lunch and dinner.

Sewer Discharge Per Seat Per Day (Restaurant with Public Toilet) = 45 gallons

$$V_{Western\ Retail} = 150\text{seats} \times \frac{45\ GPD}{1\ seat} = 6,750\ gpd$$

□ **Proposed Building Total Combined Daily Discharge Volume:**

$$V_{Total} = 2,325 + 13,050 + 20,700 + 4,050 + 6,750 = 46,875\ Gallons$$

Total Combined Daily Discharge Volume < 50,000 gpd, therefore only a local discharge permit is required.

□ **Proposed Building Peak Daily Discharge Rate:**

$$\begin{aligned} \text{Total Combined Daily Discharge Volume} &= 46,875\ \text{gal} \\ \text{Peak Factor of Safety} &= 6.0 \end{aligned}$$

Peak Daily Discharge Rate

$$\begin{aligned} q_{peak} &= V_{Total} \times \text{Peak Factor} = 46,875 \times 6.0 = 281,250\ gpd \\ &= 260\ \text{gpm (18 hour period)} \end{aligned}$$

□ **Maximum Capacity of Existing 15" RCP Sewer Main in Broad Street**

| | | | |
|----------------|---|---------------------------------|-------------------------|
| Q | = | Pipe Capacity | |
| n | = | Manning's Roughness Coefficient | = 0.013 (RCP) |
| s | = | Pipe Slope | = 0.004 ft/ft |
| D | = | Pipe Diameter | = 15 in |
| A | = | Pipe Area | = 1.227 ft ² |
| P _w | = | Wetted Perimeter | = 3.927 ft |
| R _h | = | Hydraulic Radius | = 0.3125 ft |

$$\begin{aligned} Q &= \frac{1.49}{n} AR_H^{\frac{2}{3}} S^{\frac{1}{2}} = \frac{1.49}{0.013} (1.227)(0.3125)^{\frac{2}{3}} (0.004)^{\frac{1}{2}} = 4.10\ cfs \\ &= 1,840\ \text{gpm} \end{aligned}$$


□ **Existing Peak Daily Flow Rate (Per Field Observations)**

An inspection of the existing sanitary sewer manhole approximately 30 feet to the east of 136 Broad Street has revealed a high water mark stain/scum line contained within the flow line trough of the manhole. Therefore, an assumption has been made that under “high flow conditions”, flow in the sewer main is approximately 8” above the invert of the 15” sewer main. Therefore, the peak flow rate under “high flow conditions” is approximately 2.3 cfs or 1,032 gpm.

□ **Conclusion Summary**

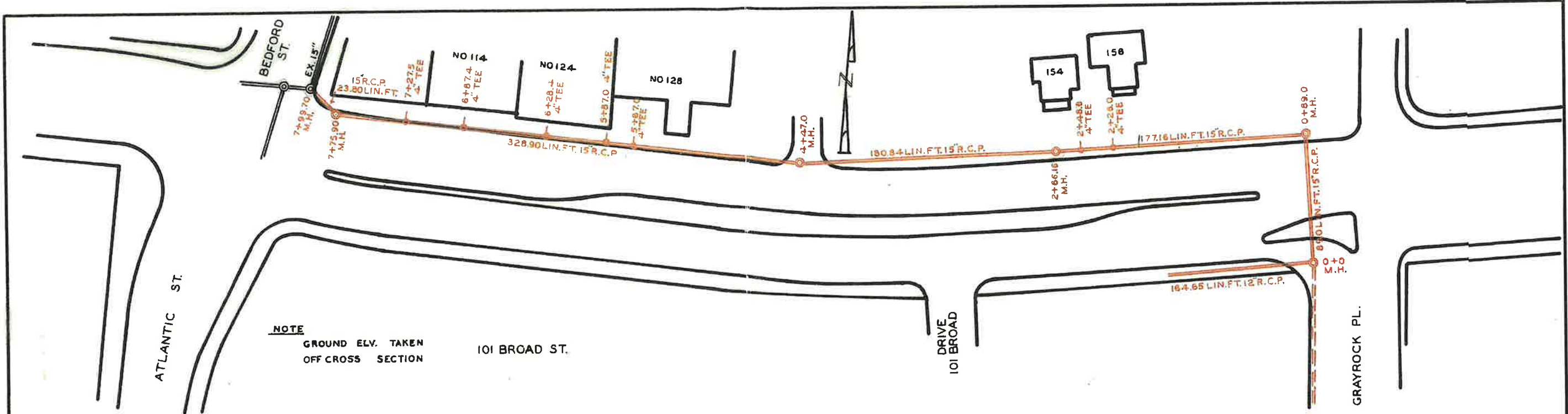
| | | | |
|--|---|--------|-----|
| Proposed Total Combined Daily Discharge Volume | = | 46,875 | gal |
| Existing Daily Peak Flow Rate | = | 1,032 | gpm |
| Proposed Increase in Daily Peak Flow Rate | = | 260 | gpm |
| Proposed Daily Peak Flow Rate | = | 1,292 | gpm |
| Capacity of Existing 15-inch RCP Sewer | = | 1,840 | gpm |

The proposed total combined daily discharge volume from the proposed development is estimated to be approximately 46,875 gallons and will therefore require a local discharge permit from the WPCA. The addition of the calculated peak discharge from the project site, 260 gpm, plus the approximate existing “high flow condition” flow rate, 1,032 gpm, equals 1,292 gpm, which is still less than the maximum flow capacity of the sewer pipe, 1,840 gpm, by approximately 30 percent. Therefore, the existing sanitary sewer main has sufficient capacity to handle the increase in the daily peak flow rate from the proposed building.

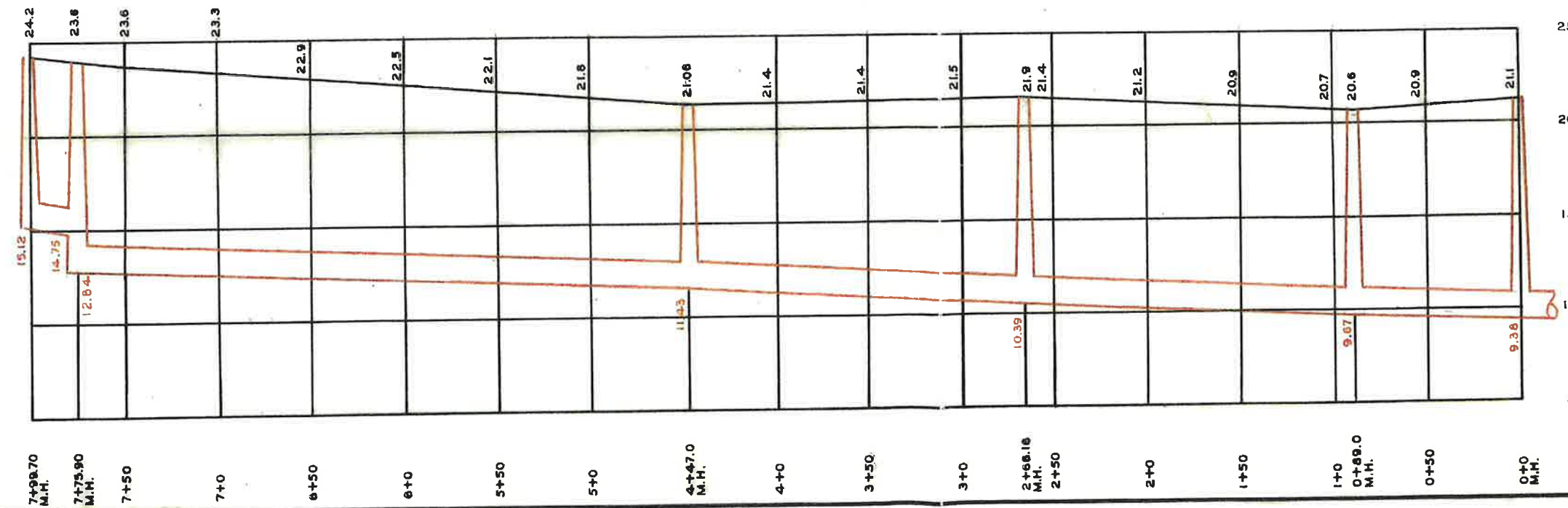

Leonard C. D'Andrea, PE
CT License No. 14869



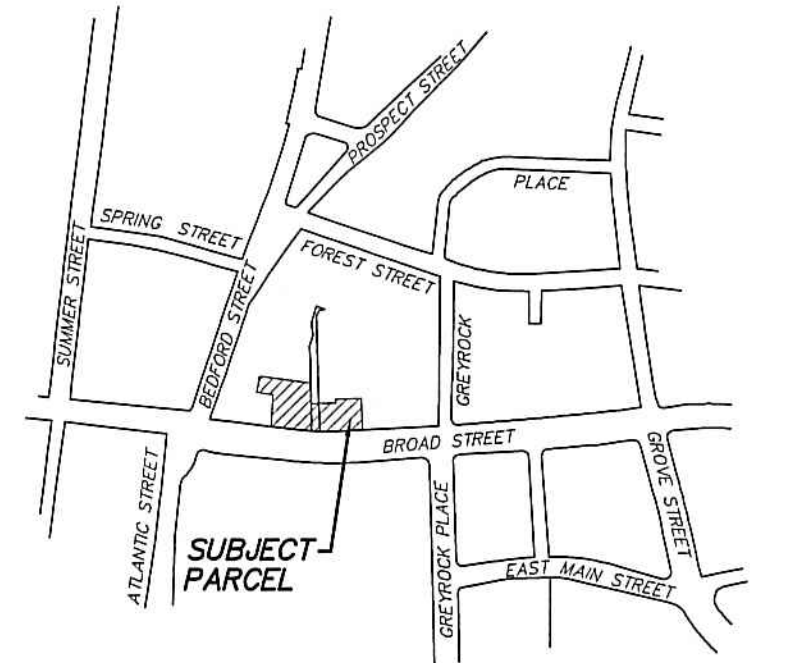
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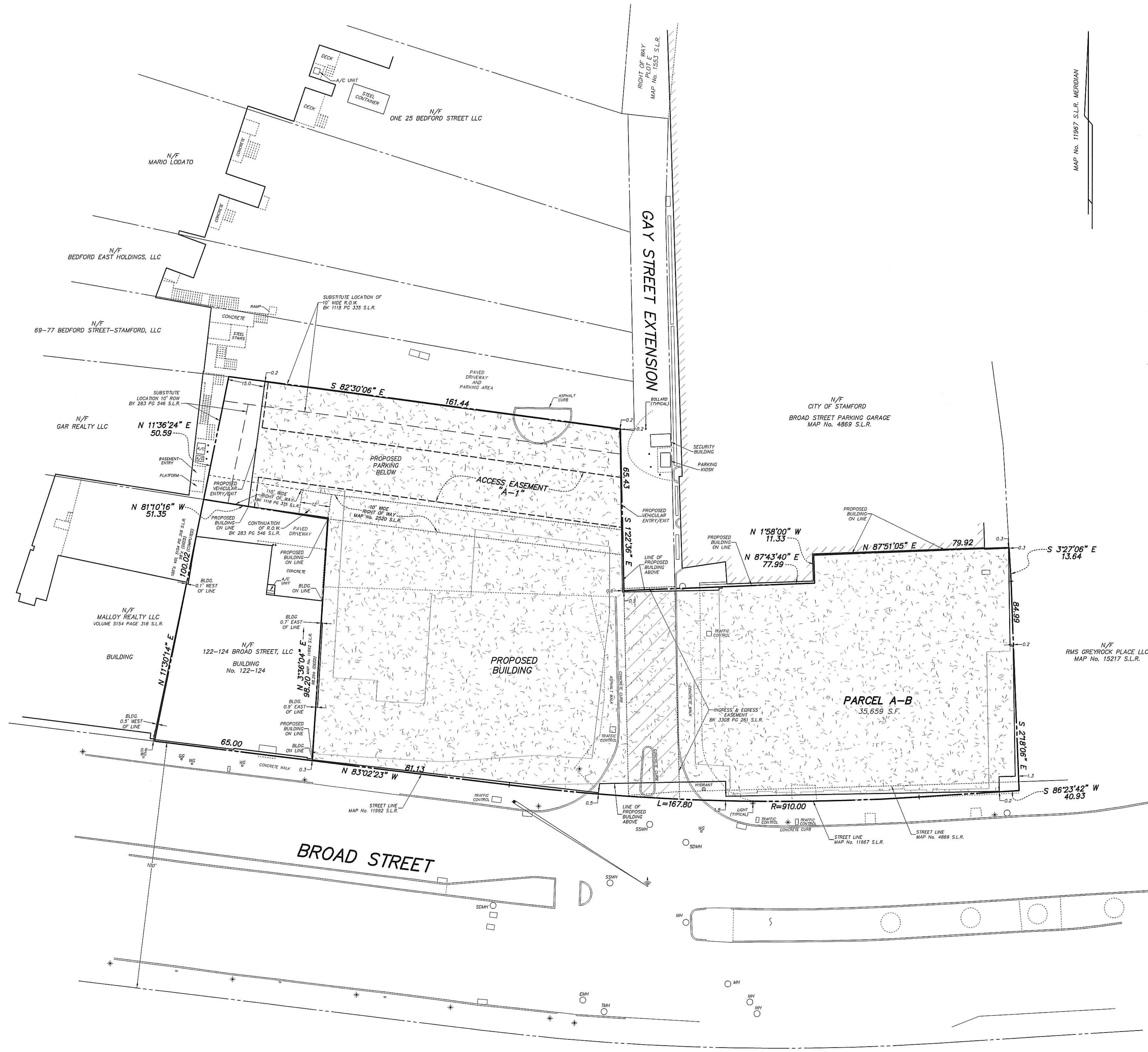
NOTE
GROUND ELV. TAKEN
OFF CROSS SECTION



**BROAD STREET
SANITARY SEWER**
SCALE HORZ. 1" = 50'
VERT 1" = 5'
GOV'T DATUM CONSTRUCTED 1972
BOOK 923 PAGE 23



LOCATION MAP - 1" = 600'±



PROPOSED BUILDING COVERAGE
LOT AREA = 35,658 S.F.
PROPOSED BUILDING = 33,945 S.F.
PERCENT COVERAGE = 95.2%

REFER TO A MAP ENTITLED "PROPERTY SURVEY DEPICTING CONSOLIDATION OF PARCELS AT 128-136 BROAD STREET AND GAY STREET EXTENSION IN STAMFORD, CONNECTICUT PREPARED FOR TR BROAD II, LLC" PREPARED BY D'ANDREA SURVEYING & ENGINEERING, P.C. AND DATED OCTOBER 28, 2022.

REFER TO A MAP ENTITLED "EASEMENT MAP DEPICTING ACCESS EASEMENT LOCATED AT BROAD STREET AND GAY STREET EXTENSION IN STAMFORD, CONNECTICUT PREPARED FOR TR BROAD II LLC PREPARED BY D'ANDREA SURVEYING & ENGINEERING P.C. AND DATED OCTOBER 28, 2022.

THIS MAP IS A ZONING LOCATION SURVEY. BOUNDARY INFORMATION IS BASED ON A RESURVEY CONDUCTED IN ACCORDANCE WITH HORIZONTAL ACCURACY CLASS "A-2" AS DEFINED IN THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THROUGH 20-300b-20.

NEW MONUMENTATION HAS NOT BEEN SET AS A RESULT OF THIS SURVEY.

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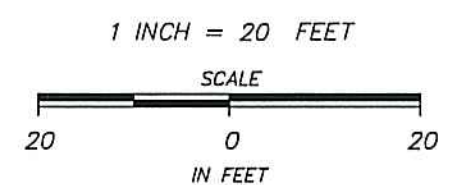
REFER TO VOLUME 13022 PAGE 140 AND MAPS No. 11192 & 11967 S.L.R.

LAND LIES IN "C-G" ZONING DISTRICT

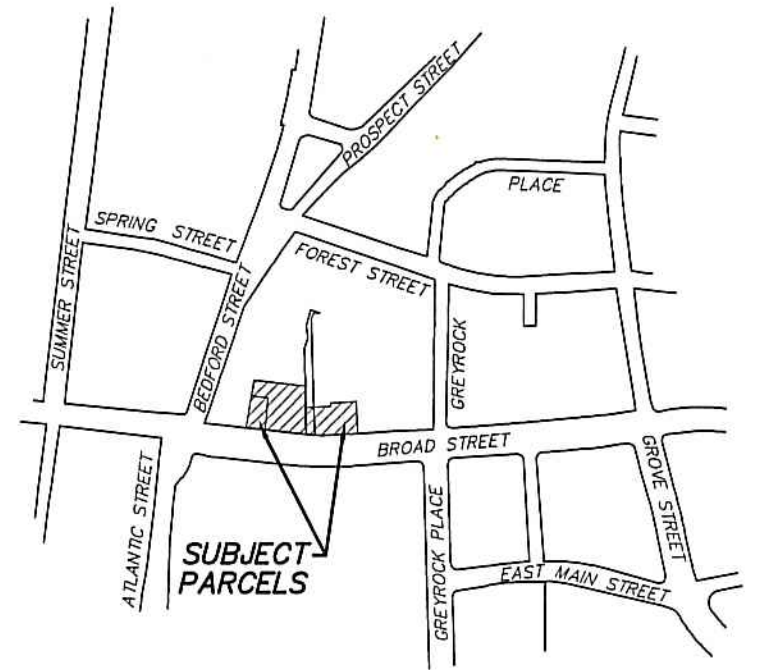
TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

D'ANDREA SURVEYING & ENGINEERING, P.C.

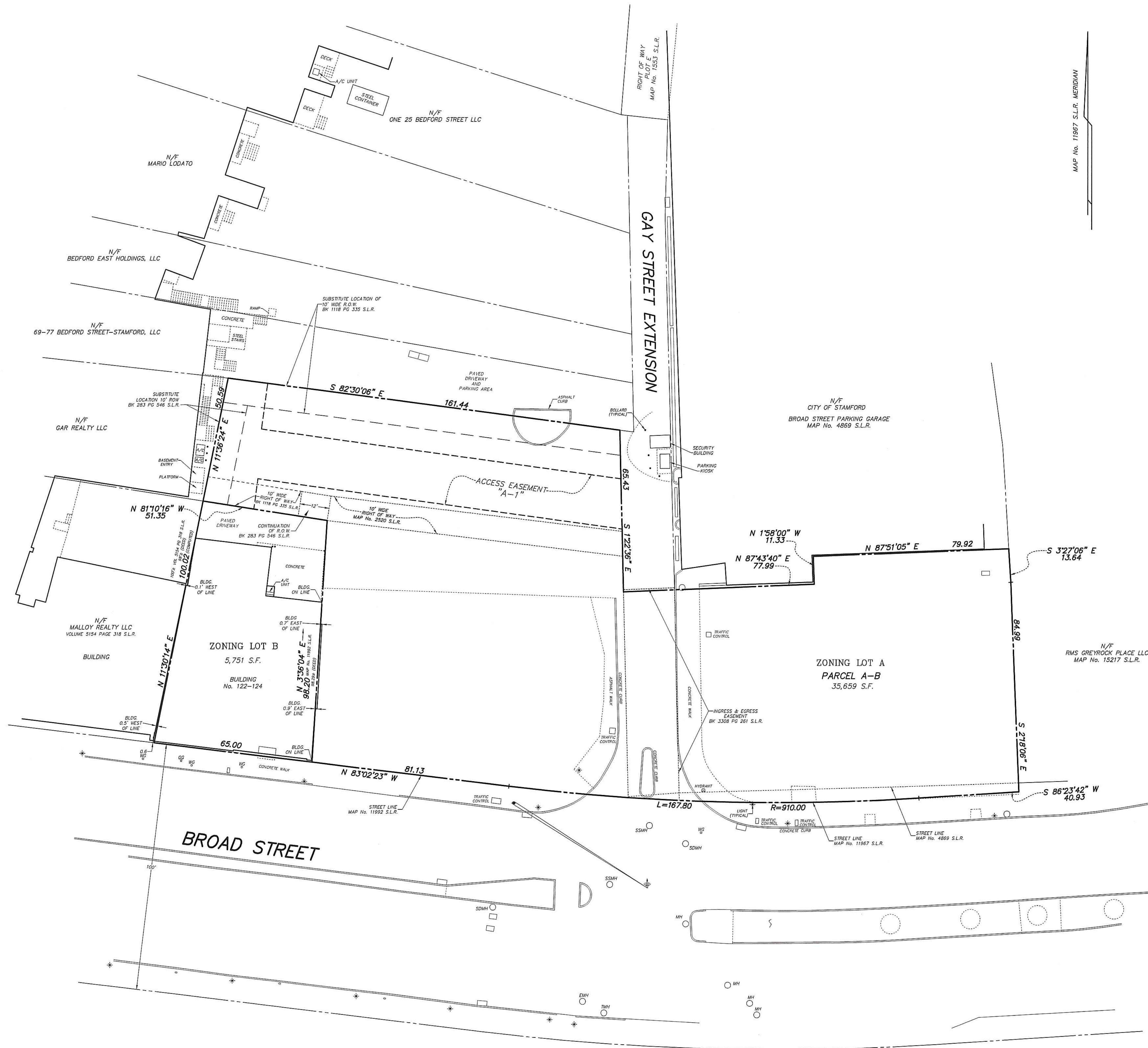
ROBERT L. LIDDEL JR., CT LS No. 15775
RIVERSIDE, CONNECTICUT
OCTOBER 28, 2022



ZONING LOCATION SURVEY
OF PROPERTY AT
128-136 BROAD STREET
AND
GAY STREET EXTENSION
IN
STAMFORD, CONNECTICUT
PREPARED FOR
TR BROAD II, LLC



LOCATION MAP - 1" = 600'±



ZONING LOT AREA
 ZONING LOT A
 ZONING LOT AREA = 35,658 S.F.
 ZONING LOT B
 ZONING LOT AREA = 5,751 S.F.
 TOTAL ZONING LOT AREA = 41,410 S.F.

REFER TO A MAP ENTITLED "PROPERTY SURVEY DEPICTING CONSOLIDATION OF PARCELS AT 128-136 BROAD STREET AND GAY STREET EXTENSION IN STAMFORD, CONNECTICUT PREPARED FOR TR BROAD II, LLC" PREPARED BY D'ANDREA SURVEYING & ENGINEERING, P.C. AND DATED OCTOBER 28, 2022.

REFER TO A MAP ENTITLED "EASEMENT MAP DEPICTING ACCESS EASEMENT LOCATED AT BROAD STREET AND GAY STREET EXTENSION IN STAMFORD, CONNECTICUT PREPARED FOR TR BROAD II, LLC" PREPARED BY D'ANDREA SURVEYING & ENGINEERING P.C. AND DATED OCTOBER 28, 2022.

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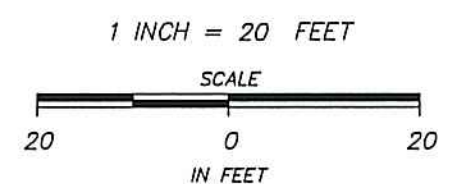
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LAND LIES IN "C-G" ZONING DISTRICT

TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

D'ANDREA SURVEYING & ENGINEERING, P.C.

Robert L. Liddel
 ROBERT L. LIDEL JR., CT LS No. 15775
 RIVERSIDE, CONNECTICUT
 OCTOBER 28, 2022



GENERAL LOCATION SURVEY
 DEPICTING
 ZONING LOTS SURVEY
 OF PROPERTY AT
 128-136 BROAD STREET
 AND
 122-124 BROAD STREET
 AT
 GAY STREET EXTENSION
 IN
 STAMFORD, CONNECTICUT
 PREPARED FOR
 TR BROAD II, LLC