

February 8, 2022

City of Stamford Zoning Board  
c/o Ralph Blessing, Land Use Bureau Chief  
888 Washington Boulevard  
Stamford, CT 06901

**Re: 819-831 East Main Street & 15, and 27-29 Lafayette Street**  
**Zone Map Change, GDP, Special Permit, and Final Site and Architectural Plan**  
**Application**

Dear Mr. Blessing and Board Members,

As discussed, on behalf of 819 East Main Street LLC, 831-833 East Main Street LLC, and New Star Lafayette LLC (collectively “the Applicants”), enclosed please find an application and supportive materials for a Zone Change, Special Permit, and Final Site and Architectural Plans to facilitate the construction of an 130-unit residential development with ground floor retail and associated site improvements. Application details and design elements are described further in the attached Project Narrative and reflected in the enclosed plans.

In support of the applications, enclosed please find:

1. A check in the amount of \$5,235.64 for:
  - Zone Change: \$1,060;
  - Special Permit: \$3,175.64
  - Public Hearing Fee: \$1,000
2. Planning Board request Letter;
3. Zone Change Application;
4. GDP Application;
5. Special Permit Application;
6. Site & Architectural Plan (FSP) application;
7. Project Narrative;
8. Parking Management Plan;
9. Drawing List;
10. Aerial Exhibit;
11. MX-D Exhibit;
12. General Property Description;
13. Zone Change Map;

14. Zone Change Area Description;
15. Owner List;
16. Zoning Data Charts;
17. Civil Engineering Plans;
18. Architectural Plans and Elevations;
19. Landscaping Plan prepared;
20. Lighting Plan;
21. Sustainability Score Card;
22. Drainage Narrative;
23. Traffic Report
24. Letters of Authorization.

Please feel free to contact us with any questions or comments. We look forward to continuing to work with you and the Planning & Zoning Boards on this exciting redevelopment.

Sincerely,



Raymond R. Mazzeo, AICP

Enclosures

CC: V. Mathur, Associate Planner  
Redevelopment Team



February 10, 2022

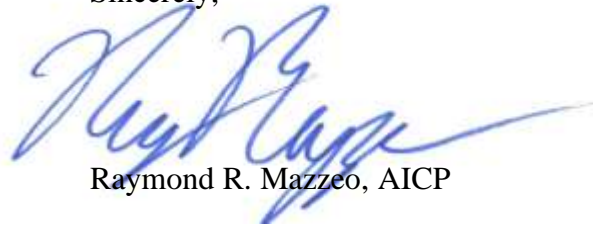
City of Stamford Planning Board  
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**Re: 819-831 East Main Street & 15, and 27-29 Lafayette Street**  
**Zone Map Change, GDP, Special Permit, and Final Site and Architectural Plan**  
**Application**

Dear Mr. Blessing,

As you may be aware, we have submitted a Zone Map Change, GDP, Special Permit, and Final Site and Architectural Plan Application applications. Please let this letter serve as our formal request for members of the consultant team to speak, should the Planning Board have any questions for the applicant at the forthcoming referral meeting. Please let us know if you have any questions or would like additional information.

Sincerely,



Raymond R. Mazzeo, AICP

Enclosures

CC: V. Mathur, Associate Planner



**APPLICATION FOR CHANGE IN THE ZONING MAP OF STAMFORD, CONNECTICUT**

Complete, notarize, and forward thirteen (13) hard copies and (1) electronic copy in PDF format to Clerk of the Zoning Board with a **\$1,000.00 Public Hearing Fee** and the required application filing fee (see Fee Schedule below), payable to the City of Stamford.

**NOTE:** Cost of required Public Hearing advertisements are payable by the Applicant and performance of mailing of required property owners is the sole responsibility of the applicant. **LAND RECORDS RECORDING FEE:** \$60.00 for First page - \$5.00 for each additional page)

**Fee Schedule**

Map Change (Affected Area of 1 Acre or Less)	\$1,060.00
Map Change (Affected Area of greater than 1 Acre)	\$1,060.00 + \$2,000 per acre or portion thereof in excess of 1 acre

APPLICANT NAME (S): 819 East Main Street LLC, 831-833 East Main Street LLC, and New Star Lafayette LLC (collectively "the Applicants")

APPLICANT ADDRESS: c/o Redniss & Mead - 22 First Street, Stamford, CT 06905

APPLICANT PHONE #: c/o 203-327-0500

IS APPLICANT AN OWNER OF PROPERTY IN THE CITY OF STAMFORD? Yes

PRESENT ZONING DISTRICT: C-I PROPOSED ZONING DISTRICT: MX-D

LOCATION OF PROPOSED CHANGE: (Give boundaries of each parcel in proposed change and indicate dimensions from nearest intersecting street. Also include Assessor's Card number and Town Clerk's Block number, and square footage of land. Attach twelve (12) copies of map showing area proposed for change.)

Please see attached Zone Change Description

LIST NAME AND ADDRESS OF THE OWNERS OF ALL LAND INCLUDED WITHIN THE PROPOSED CHANGE:

NAME & ADDRESS LOCATION

Please see attached Owner List

ARE THERE DEED RESTRICTIONS THAT CONFLICT WITH THE PROPOSED ZONE DISTRICT FOR THIS PROPERTY?

N/A

IF YES, LIST REFERENCE TO TOWN CLERK BOOK & PAGE #: \_\_\_\_\_

DOES ANY PORTION OF THE PREMISES AFFECTED BY THIS APPLICATION LIE WITHIN 500 FEET OF THE BORDER LINE WITH GREENWICH, DARIEN OR NEW CANAAN? No (If yes, notification must be sent to Town Clerk of neighboring community by registered mail within 7 days of receipt of application – PA 87-307).



City of Stamford  
 Zoning Board · Land Use Bureau  
 Government Center · 888 Washington Boulevard · Stamford, CT 06904-2152  
 Phone: 203.977.4719 · Fax: 203.977.4100

DATED AT STAMFORD, CONNECTICUT, THIS 8<sup>th</sup> DAY OF February 2022

SIGNED: [Signature]

**NOTE:** The application cannot be scheduled for public hearing until 35 days have elapsed from the date of referral to the Stamford Planning Board. If applicant wishes to withdraw the application, this must be done in writing, and be received by the Zoning Board at least three (3) working days prior to public hearing in order to provide sufficient time to publicize the withdrawal. Applications withdrawn less than three (3) days prior to a schedule hearing date will not be rescheduled within 90 days.

STATE OF CONNECTICUT  
 COUNTY OF FAIRFIELD ss STAMFORD February 8 2022

Personally appeared Raymond R. Mazzeo, signer of the foregoing application, who made oath to the truth of the contents thereof, before me.

DAVID PINTO  
 Notary Public, State of Connecticut  
 My Commission Expires Mar 31, 2026

[Signature]  
 Notary Public - Commissioner of the Superior Court

**FOR OFFICE USE ONLY**

APPL. #: \_\_\_\_\_ Received in the office of the Zoning Board: Date: \_\_\_\_\_

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



**APPLICATION FOR APPROVAL OF SITE & ARCHITECTURAL PLANS AND / OR REQUESTED USES**

Complete, notarize, and forward **thirteen (13) copies and one (1) electronic copy in PDF format** to Clerk of the Zoning Board with a **\$1,000.00 Public Hearing Fee** and the required application filling fee (**see Fee Schedule below**), payable to the City of Stamford.

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**(GENERAL DEVELOPMENT PLAN)**

**Fee Schedule**

General Development Plan – Sites 20,000 sq. ft. or less parcel area.	\$460.00
General Development Plan – Sites more than 20,000 sq. ft. or parcel area.	\$460 + \$20 per 1,000 sq. ft. in excess of 20,000 sq. ft.

APPLICANT NAME (S): 819 East Main Street LLC, 831-833 East Main Street LLC, and New Star Lafayette LLC (collectively "the Applicants")

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APPLICANT PHONE #: c/o 203-327-0500

IS APPLICANT AN OWNER OF PROPERTY IN THE CITY OF STAMFORD? Yes

LOCATION OF PROPERTY IN STAMFORD OWNED BY APPLICANT (S): Please see attached Owner List

ADDRESS OF SUBJECT PROPERTY: Please see attached Owner List

PRESENT ZONING DISTRICT: MX-D & C-I

TITLE OF SITE PLANS & ARCHITECTURAL PLANS: Please see attached Drawing List

REQUESTED USE: Please see attached Project Narrative

LOCATION: (Give boundaries of land affected, distance from nearest intersecting streets, lot depths and Town Clerk's Block Number)

Please see attached Property Description

NAME AND ADDRESS OF OWNERS OF ALL PROPERTY INVOLVED IN REQUEST:

**NAME & ADDRESS**

**LOCATION**

Please see attached Owner List

DOES ANY PORTION OF THE PREMISES AFFECTED BY THIS APPLICATION LIE WITHIN 500 FEET OF THE BORDER LINE WITH GREENWICH, DARIEN OR NEW CANAAN? No (If yes, notification must be sent to Town Clerk of neighboring community by registered mail within 7 days of receipt of application – PA 87-307).

DOES THE PROJECT RESULT IN THE CREATION OF 10 OR MORE UNITS OR 10,000 SF OR MORE IN FLOOR AREA OR DISTURBANCE OF 20,000 SF OR MORE IN LAND AREA, THROUGH NEW DEVELOPMENT, RECONSTRUCTION, ENLARGEMENT OR SUBSTANTIAL ALTERATIONS? Yes (If yes, then complete the Stamford Sustainability Scorecard per Section 15.F).



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 Phone: 203.977.4719 · Fax: 203.977.4100

DATED AT STAMFORD, CONNECTICUT, THIS 8<sup>th</sup> DAY OF February 2022

SIGNED: [Signature]

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STATE OF CONNECTICUT  
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Personally appeared Raymond R. Mazzeo, signer of the foregoing application, who made oath to the truth of the contents thereof, before me.

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 Notary Public, State of Connecticut  
 My Commission Expires Mar 31, 2026  
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[Signature]  
 Notary Public - Commissioner of the Superior Court

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



# APPLICATION FOR SPECIAL PERMIT

Complete, notarize, and forward **thirteen (13) hard copies and (1) electronic copy in PDF format** to Clerk of the Zoning Board with a **\$1,000.00 Public Hearing Fee** and the required application filing fee (**see Fee Schedule below**), payable to the City of Stamford.

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### Fee Schedule

Special Permit 20,000 sq. ft. or less	\$460.00
Special Permit more than 20,000 sq. ft.	\$460.00 + \$30 per 1,000 sq. ft. or portion thereof in excess of 20,000 sq. ft.

APPLICANT NAME (S): 819 East Main Street LLC, 831-833 East Main Street LLC, and New Star Lafayette LLC (collectively "the Applicants")

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ADDRESS OF SUBJECT PROPERTY: Please see attached Owner List

PRESENT ZONING DISTRICT: MX-D & C-I

TITLE OF SITE PLANS & ARCHITECTURAL PLANS: Please see attached Drawing List

REQUESTED SPECIAL PERMIT: (Attach written statement describing request)  
Please see attached Project Narrative

LOCATION: (Give boundaries of land affected, distance from nearest intersecting streets, lot depths and Town Clerk's Block Number)  
Please see attached Property Description

NAME AND ADDRESS OF OWNERS OF ALL PROPERTY INVOLVED IN REQUEST:  
NAME & ADDRESS                                  LOCATION

Please see attached Owner List

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**Fee Schedule –WITHOUT GDP**

Site Plans 20,000 sq. ft. or less of building area application fee –without GDP	\$460.00
Site Plans more than 20,000 sq. ft. of building area-application Fee –without GDP	\$460.00 + \$30 per 1,000 sq. ft. or portion thereof in excess of 20,000 sq. ft.

**Fee Schedule –WITH GDP**

Site Plans 20,000 sq. ft. or less of building area application fee –with GDP.	\$260.00
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APPL. #: \_\_\_\_\_ Received in the office of the Zoning Board: Date: \_\_\_\_\_

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

**Project Narrative**  
**819- 831 East Main Street and 15-31 Lafayette Street**  
**Special Permit and Site & Architectural Plan Applications**  
**February 8, 2022**

**1. Introduction/Overview**

819 East Main Street, LLC (“**the Applicant**”) is a related entity of Wellbuilt and the owner and contract purchaser of several contiguous parcels along East Main Street and Lafayette Street. The combined parcels are approximately 1.15 acres and includes the following properties (**collectively “the Site”**):

- a) 819-821 E. Main Street – commercial/retail building
- b) 825 & 827 E. Main Street – multi-family dwellings with nonconforming street front parking
- c) 831 E. Main Street – vacant lot
- d) 27 & 29 Lafayette Street – multi-family dwellings with nonconforming street front parking
- e) 15 Lafayette Street – multi-family dwellings with nonconforming street front parking

The Applicant is proposing a comprehensive redevelopment of the Site that will revitalize the property and neighborhood by removing dangerous nonconforming parking and access on US-1 and Lafayette Street, activating vacant and blighted parcels and transforming underutilized land into a new and exciting residential community. The proposed plan will create 130 new apartments including 18 onsite Below Market Rate units, approximately 3,000 sf of ground level retail, and 650± linear feet of new sidewalks with associated onsite parking, landscaping and usable open space.

In order to facilitate the potential redevelopment, the Applicant is proposing an expansion and modification of prior approvals to incorporate 15 Lafayette Street into the overall site and MXD Zone. Applications include a Zoning Map Change, Special Permit, General Development Plan and Site & Architectural Plans and/or Requested Uses, as further described herein.

**2. Approval History**

This is the third iteration of this proposed redevelopment. Each time the project has improved and expanded to include surrounding underutilized parcels in need of redevelopment, with the current proposal comprising more of the full block from E. Main Street to N. State Street in a comprehensive building design. Prior approvals include:

- A. In 2018 the Zoning Board approved applications (#218-35 & 218-36) for a redevelopment of the properties including 819-827 East Main Street and 27-31 Lafayette Street (the “**Original Property**”). These approvals included a zone change to MX-D as well as General Development Plan and Special Permit approvals to facilitate a mixed-use building with 63 one- and two-bedroom apartments, including 7 BMR units, above approximately 2,150 square feet of ground floor retail and residential amenities (the “**Original Approval**”). Special Permit approvals related to the proposed parking ratio,

proximity of parking to residential units and a fee-in-lieu payment related to the fractional Below Market Rate requirement.

- B. The Applicant then completed the purchase of the Original Property and contracted to purchase the adjacent vacant outparcel (831 East Main Street). In 2021 The Zoning Board approved a modified and expanded project incorporating the vacant lot (Apps #220-45, 220-46 and 221-19). This set of approvals included another zone change to MX-D (for the vacant lot) as well as General Development Plan, Special Permit and Final Site & Architectural Plan and/or Requested Uses approvals to create 85 one- and two-bedroom apartments, including 10 BMR units, with ground floor retail and residential amenities (the “**Recent Approval**”). Special Permit approvals related to equivalencies of proposed BMR units, location of parking spaces in proximity to the building and reduced parking requirements consisting of 1.0 spaces onsite and another 0.25 spaces to be provided offsite within 500’ of the property.
- C. To complete the block, the Applicant has now secured a contract for the remaining piece at the corner of Lafayette Street and N. State Street to be incorporated into the overall redevelopment as further described herein. The property was subject to Special Exception approval (90-007) relating to historic preservation and associated bonuses. The building has since fallen into disrepair with structural deterioration, and will be difficult to maintain going forward due to significant and recurring flooding issues in the immediate area.

### **3. Surrounding Area**

The surrounding area consists primarily of Master Plan Category 9 (Urban Mixed Use) with portions of Category 11 (Downtown) and 13 (Industrial – General) to the south. Adjacent zoning districts include R-H and C-N to the north, C-I to the east, M-L to the south, and R-MF to the west.

Properties along this stretch of CT Route 1 (East Main Street) are used for a variety of purposes including medium-to-high density multifamily, retail, commercial and industrial uses. The site is less than a mile from the Stamford Transportation Center and the Stamford Town Center. It is well served by local bus routes and sidewalk connections to the surrounding community. The eastern entrance to the Urban Transitway, which serves as a connection between the East Side neighborhood and the Stamford Transportation Center, is located just two blocks from the Site.

In recent years, there has been a concerted effort to remove some of the less “neighborhood friendly” uses and replace them with housing and updated commercial storefronts. Glenview House and Eastside Commons, both located on the opposite side of East Main Street from the Site, and the shopping center at the northwest corner of the intersection of Lafayette Street and East Main Street are examples of this effort. However, other properties in the immediate area which require significant capital investment, including the subject site, remain.

### **4. Project Area/Development Site**

The Site is approximately 1.15 acres with frontage on East Main Street, Lafayette Street, and North State Street. It is improved with five separate buildings: three multi-family buildings, one

single-family home, and one multi-tenant commercial building. The residential buildings are noted on the tax card as being constructed between 1875 and 1900, though little, if any, of the original character of the buildings appears to remain. The buildings are in need of significant aesthetic, safety and functional improvements and appear out of place among the ongoing redevelopment of this stretch of Stamford's East Side. Much of the Site's access and parking is nonconforming with oversized curb-cuts, perpendicular spaces backing directly out into both Lafayette Street and East Main Street, creating unsafe conditions for pedestrians and motorists, and nonconforming parking and trash enclosure directly abutting the N. State Street sidewalk.

The Site has been identified by the City and neighborhood as a target for redevelopment. Several supportive letters from neighbors are being submitted under separate cover, including a detailed and highly supportive letter from the East Side Partnership that puts the existing Site, and welcomed redevelopment thereof, in an appropriate context.

## **5. Proposed Development**

The proposed development project consists of up to 130 apartments and approximately 3,000 square feet of ground floor retail/flex amenity space along the East Main Street frontage. This modified proposal increases the amount of housing by more than 50% over the Recent Approval, thereby helping to address the serious housing shortage facing Stamford today.

### *A. Unit Mix*

The current unit mix includes 44 studio, 55 one-bedroom and 31 two-bedroom apartments. This is a significant change from the Prior Approval which included 42 2-BR units comprising 50% of the development and no studios. The Applicant believes the more diversified mix better addresses the market demand and should reduce parking demand as well. The exact unit size and mix may change slightly depending on market conditions and other factors which may arise as the plans develop.

### *B. Below Market Rate Housing*

The MX-D infill zone includes a base 10% Below Market Rate (BMR) unit requirement which equates to 13 of the 130 proposed apartments. Because 17 units of existing "Market Rate Affordable Housing" will be removed from the Site to enable its redevelopment, an additional BMR unit, affordable at 65% of Area Median Income, is required for every 2 units removed. This equates to an additional 8.5 BMR units (@65% AMI), or 5.1 BMR units (@50% AMI) based on the equivalencies in Section 7.4. Based on this calculation, the total BMR obligation for the project is 18 units (@50% AMI). The Applicants intend to satisfy this requirement by providing 5 studio, 8 one-bedroom and 5 two-bedroom units onsite. A special permit request pursuant to Sections 7.4.C.1.g and 7.4C.1.k is included to facilitate this aspect of the proposal.

### *C. Site/Building Composition & Features*

The building has been designed with its main lobby and resident entrance at the corner of East Main and Lafayette Street and 2 potential retail storefronts completing the East Main Street frontage. Four additional levels of apartments continue above with a landscaped rooftop providing approximately 8,700 sf of open space for use by residents. An additional 1,500 sf of usable open space is located on top of the sub-grade garage along the N. State Street frontage.

While no designated child play area is specifically required in this design district, approximately 2,000 square feet has been set aside on the roof for this purpose and an alternative interior space is also contemplated on the ground floor.

The design depicts a clearly defined “base, middle, and top” with TerraNeo finish Dryvit at the base, brick patterned façade on the middle floors and Azek trim and decorative banding and paneling at the top floor. The Vertical window line and tower element help to accentuate the prominent building corner at the intersection of E. Main and Lafayette. The roofline then drops one story as the building continues down Lafayette Street. A clean, sophisticated color palette has been employed which is complementary to the attractive renovations to the retail center across East Main Street. White and dark grey brick colors alternate to break up the building length, along with 1’ deep façade articulations. A partial 5<sup>th</sup> floor extends along the interior of the building approximately 30’ from the Lafayette building face. The short N. State Street frontage mimics the design of Lafayette Street, with a concrete base for the exposed portion of the basement garage level.

The sole vehicular access will be at the south end of the site on North State Street. Parking is provided beneath and behind the building at grade. Parking is provided in accordance with Sections 9.C.4.i, 9.C.5.b.5 and 12.D, with a total of 148 striped spaces and two shared vehicle spaces (accounting for an additional 8 spaces), or 156 total onsite parking spaces (a ratio of 1.20 parking spaces per unit, and 0.98 spaces per bedroom). This is an improvement from the prior approval which provided onsite a ratio of 1.0 spaces per unit and 0.67 spaces per bedroom. The applicant is requesting, by Special Permit pursuant to Section 12.D.1.d, to provide the remaining 17 required spaces on an as-needed basis. Such spaces may be provided onsite through the use of valet and/or vehicle stackers, or, similar to the prior approval, at an offsite location within 500’ of the property. While there is no parking requirement for retail in the MX-D zone, depending on the ultimate retail tenant and residential demand, some spaces may be shared for retail use outside of the peak residential demand times. Should this become desirable, the Applicants would return to the Zoning Board for administrative approval of a Shared Parking Agreement, in conformance with Section 12.I of the Stamford Zoning Regulations, to the extent necessary.

The site frontages will be lined by a continuous sidewalk with overall widths varying from 10’ on the Lafayette and N. State Street sides to 15’ along East Main Street. This represents a major improvement over the wide driveways and unmitigated head-in parking spaces that make up the current frontages. One streetside loading space can be created along Lafayette Street, and metered street parking will be maintained along the rest of the frontage. At least one of the street spaces is intended to be designated for short term drop-off and pick-up only, subject to approval by the Transportation Advisory Committee. This will encourage and accommodate the use of parking demand management strategies like Uber, Lyft and/or other ride share opportunities.

#### *D. Construction Timing*

Site work would likely begin in fall of 2022 with an 18-month construction schedule to be completed by the Spring of 2024.

#### *E. Conformity with Stamford Zoning Regulations, Master Plan and East Main Street Corridor Neighborhood Plan*

## Master Plan

Category 9 (Urban Mixed-Use) of the Master Plan contemplates “a full array of uses including high-density residential uses as the primary use in this category, supported by a dynamic mix of neighborhood retail and service uses, office, and recreational uses serviced by mass transportation and quality streetscapes that enhance connections between the Downtown and outlying neighborhoods.”

## Zoning Regulations

As previously noted, the majority of the Site was rezoned to MX-D in 2018 and 2021. The current proposal seeks to extend that designation to the southern lot. The MX-D infill zone, which “promotes the creation of new residential dwelling units in under-utilized areas,” is the perfect tool to implement the Master Plan’s goals for this neighborhood. Moreover, the proposed development meets all of the requirements of the MX-D Infill Zone. Please refer to the Zoning Data Chart for additional zoning information.

## East Main Street Corridor Neighborhood Plan

The proposed development and related streetscape improvements serve to implement several of the Plan’s goals, including:

- Eliminate or reconfigure non-standard front yard parking lots;
- Enhance facades and business signage;
- Reduce widths and quantity of curb cuts;
- Remove concrete curbs, replace with granite;
- Add ornamental pedestrian scale lighting;
- Provide uniform and continuous concrete sidewalk with decorative/amenity band;
- Separate sidewalk from curb with lawn strip or decorative pavement and street trees;

## **6. Action Items**

To facilitate the development, the Applicants have the following applications.

- A. Zone Change (from CI to MX-D) related to 15 Lafayette Street;
- B. General Development Plan and Final Site & Architectural Plans and Requested Uses, including the following specific requests/findings of the Zoning Board;
  - i. Pursuant to Sections 9.C.3 and 9.C.6.a, in order to maximize flexibility and potential success of the retail space, Applicants request approval for all retail and restaurant type uses allowed in the zone.<sup>1</sup>
  - ii. Pursuant to Section 9.C.4.h, Applicant requests approval of the proposed relationship of yard requirements and separation of Structures on the site.
  - iii. Pursuant to Section 9.C.5.b.3, Applicant requests approval of the proposed location and design of required Usable Open Space.

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<sup>1</sup> The Applicants recognize that retail is a desirable use in this space; however, to ensure this is an active frontage, the Applicants reserve the right to utilize this space for other purposes permitted in the MX-D infill zone, including resident amenity space, in the event an appropriate retail tenant cannot be obtained.



- iv. Pursuant to Section 12.D.1.e provision of two (2) shared vehicles at a ratio of four (4) parking spaces each constituting less than 10% of required parking.
- C. Special Permits pursuant to the following sections of the Zoning Regulations and specific requests:
- i. Section 7.4.C.1.g, in conjunction with 7.4.C.1.k, Applicants request Special Permit approval to provide 18 BMR units at 50% of AMI.
  - ii. Section 7.Q, Applicant requests the child play area to be located on the rooftop.
  - iii. Pursuant to Section 12.D.1.d and 19.F, Applicant requests that seventeen (17) spaces, constituting less than 10% of the parking requirement, be provided on an as-needed basis.

## **7. Conclusions**

The proposed development embodies nearly all of the applicable policy goals of both the Urban Mixed-Use Master Plan Category, MX-D Zone and East Main Street Corridor Neighborhood Plan by “providing a mix of uses complimentary and supportive of the Downtown” with “high-density residential uses as the primary use” with “quality streetscapes that enhance connections between the Downtown and outlying neighborhoods of the City.” It will revitalize an important stretch of East Main Street and alleviate unsafe parking and curb cuts along multiple street frontages.

## **8. Statement of Findings**

- I. The above referenced specific Special Permit requests are integral to the development project as a whole. Thus, for purposes of demonstrating compliance with the standards and conditions below, the entire development proposal is considered. The Applicants submit that all applicable criteria contained in Stamford Zoning Regulations Article V, Section 19.C.2 are met for the following specific reasons:
- a. *Special Permits shall be granted by the reviewing board only upon a finding that the proposed use or structure or the proposed extension or alteration of an existing use or structure is in accord with the public convenience and welfare after taking into account, where appropriate:*
    - 1) *the location and nature of the proposed site including its size and configuration, the proposed size, scale and arrangement of structures, drives and parking areas and the proximity of existing dwellings and other structures.*

The proposed development is appropriately located within a mixed residential and commercial neighborhood and the Urban Mixed-Use Master Plan Category. The proposed building is compatible in scale and style with the surrounding area, particularly the more recently constructed Glenview House and Eastside Commons developments. The proposed setbacks and arrangement of buildings are appropriate for infill development and serve to activate pedestrian street frontages while maintaining ideal sidewalk width, adequate parking and open space. All parking is appropriately accommodated onsite below and

behind the proposed building. A single access drive on N. State Street greatly improves the existing unsafe condition of multiple curb cuts with vehicles backing into rights-of-way.

- 2) *the nature and intensity of the proposed use in relation to its site and the surrounding area. Operations in connection with special permit uses shall not be injurious to the neighborhood, shall be in harmony with the general purpose and intent of these Regulations and shall not be more objectionable to nearby properties by reason of noise, fumes, vibration, artificial lighting or other potential disturbances to the health, safety or peaceful enjoyment of property than the public necessity demands.*

Category 9 (Urban Mixed-Use) of the Master Plan contemplates “a full array of uses including high-density residential uses as the primary use in this category, supported by a dynamic mix of neighborhood retail and service uses, office, and recreational uses serviced by mass transportation and quality streetscapes that enhance connections between the Downtown and outlying neighborhoods.” The proposed development fits within this category and fulfills the policy goals of the neighborhood. The proposed structures are similar in scale and design to the surrounding multifamily and commercial buildings and will significantly improve upon existing conditions. Improvements to parking and streetscapes also serve as an enhancement of the property and surrounding neighborhood with added health and safety benefits. Thus, the Applicants submit that the proposed development is appropriate for the neighborhood, will increase property values and will not be objectionable to nearby properties.

- 3) *the resulting traffic patterns, the adequacy of existing streets to accommodate the traffic associated with the proposed use, the adequacy of proposed off-street parking and loading, and the extent to which proposed driveways may cause a safety hazard, or traffic nuisance.*

Traffic can be safely and adequately accommodated on the surrounding streets and the residential use will not adversely impact any peak traffic demand. The elimination of existing curb cuts and formalization of existing street parking on both Lafayette Street and E. Main Street will serve to further improve safety of both motorists and pedestrians. Parking is safely and adequately provided onsite.

- 4) *the nature of the surrounding area and the extent to which the proposed use or feature might impair its present and future development.*

The surrounding area includes a variety of residential, commercial, industrial and retail uses. The proposed residential use is compatible with these uses and will serve as a further catalyst for others to invest in their properties. It will also place people on the streets thereby increasing the patronage of nearby retail and service establishments and encourage further redevelopment.

- 5) *the Master Plan of the City of Stamford and all statements of the purpose and intent of these regulations.*

The site lies within Master Plan Category 9 (Urban Mixed-Use) and meets the goals of the Master Plan, as previously stated. Other goals of the Master Plan that are advanced by this proposal include:

- 6C.2: Promote development of a variety of housing types.



- 6C.5: Encourage increased density along transit corridors and within Downtown through land-use regulations and developer incentives.
- ES1.2: Promote new, higher-density mixed-use development along the Stamford Urban Transitway
- ES2.1: Promote context-sensitive residential and mixed-use development that relates well in scale and design to the surrounding residential areas.
- ES2.3: Promote efforts to formalize East Main Street as a key gateway into Stamford...and overall streetscape improvements such as landscaping, building façade enhancements; and aesthetically attractive streetlights.
- ES3: Promote new retail opportunities and services for the neighborhood.
- ES4: Improve mobility and circulation.

II. *Pursuant to Section 19.C.2.a of the Zoning Regulations, the Zoning Board must find that the proposed use or structure or the proposed extension or alteration of an existing use or structure is in accord with the public convenience and welfare.*

The Applicants are proposing to raze the existing residential and commercial improvements on the property and construct a new mixed-use building with associated parking and streetscape improvements in its place. The existing improvements are in disrepair and out of scale and character with the changing neighborhood. The replacement of these improvements with the proposed building will increase the tax base and significantly improve the appearance of one of the most visible thoroughfares in Stamford. The active ground floor frontage and 130 new residential units, both affordable and market rate, will enliven this long-underutilized site and breathe new life into the East Side neighborhood. This housing is sorely needed to help address the significant housing crisis facing our community today. For all of these reasons, the Applicants submit that the proposal, and the associated Special Permit requests which are inextricably intertwined, are in accord with the public convenience and welfare.

III. *Pursuant to Section 9.C.2 of the Stamford Zoning Regulations, additional land may be designated and incorporated as an integral part of the MX-D Development at the discretion of the Zoning Board, provided that the additional land is contiguous ... and that the incorporation and Development of said property is consistent with the standards and objectives of the MX-D District.*

The Applicants confirm that 15 Lafayette Street is contiguous to the previously approved development site and, as detailed in the preceding narrative, the proposed development is consistent with the standards and objectives of the MX-D District.

IV. *Pursuant to Sections 9.C.5.b.2 of the Stamford Zoning Regulations, there shall be no net increase in commercial uses.*

According to the Stamford Tax Assessor Records, the existing commercial building on the Site is 4,209 sf. The proposed commercial square footage is approximately 2,950 sf. Thus, there will be no net increase in commercial uses.

- V. *Pursuant to Sections 9.C.5.b.3 of the Stamford Zoning Regulations, a minimum of 75 sf of Usable Open Space per dwelling unit is required for sites with at least 50% of the street frontage either vacant or used for parking.*

Today, over 50% of the street frontage is either vacant or used for parking. Thus, the proposal qualifies for the 75 sf Usable Open Space standard.

- VI. *Pursuant to Sections 9.C.4.c and 9.C.5.b.5 of the Stamford Zoning Regulations, the Zoning Board must find that a minimum of 2/3 of the parking structure is integrated within the building and/or screened/hidden from sensitive views.*

The proposed plan effectively uses the multiple street frontages, sloping grade, and at-grade landscaping to provide adequate parking without impacting sensitive pedestrian views. The parking is tucked behind the building frontage and beneath the building. Any surface parking not located directly beneath the building will be significantly screened from public view by the building and landscaping and does not exceed the 1/3 maximum.

- VII. *Pursuant to Sections 9.C.4.h of the Stamford Zoning Regulations, the Zoning Board must find that the proposal provides for adequate light, open space, screening, landscape, safety and privacy for existing and proposed dwelling units.*

The proposal has been reviewed by the adjacent neighbors to ensure there are no adverse impacts on their respective properties. All parties are supportive of the project and believe it will be beneficial for the entire neighborhood. The proposed setbacks and arrangement of buildings provide adequate light, and the planned landscape and streetscape improvements will improve open space, safety and privacy conditions for adjacent properties.

# **PARKING & TRANSPORTATION DEMAND MANAGEMENT PLAN PROPOSED RESIDENTIAL / MIXED-USE DEVELOPMENT**

**East Main Street, Lafayette Street & N. State Street  
Stamford, CT**

**February 8, 2022**

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This plan has been prepared in support of a proposed residential / mixed-use development encompassing approximately 1.15 acres of land in Master Plan Category 9 (Urban – Mixed Use) and the MX-D Zone with frontage on E. Main Street, Lafayette Street and N. State Street.

## **PROJECT OVERVIEW**

The Applicant proposes to redevelop the existing site which currently contains a mix of retail and multi-family residential buildings with associated surface parking. The proposed development will consist of 130 rental apartments in a 5-story building with up to 2,950 square feet of new retail space. Apartments will be comprised of 44 studio, 55 one-bedroom and 31 two-bedroom units. The new building will include 82 striped spaces in a lower-level garage and 68 surface spaces for a total of 150 striped spaces. A net addition of 8 street parking spaces (15 total) will also be created along the site frontage through the closing of several existing curb cuts. The proposed development will include modern tenant amenities, including a lounge and communal rooftop terrace, and onsite bicycle storage space.

## **EXISTING DATA**

Section 9.C.4.i of the Stamford Zoning Regulations states that no parking is required for any retail uses (provided such uses are less than 10% of the total proposed floor area) and requires 1.25 spaces for residential units of 1 bedroom or less and 1.5 spaces for 2-bedroom units. With the proposed unit mix, the parking standard requires 171 spaces for residents of the site. No additional off-street parking is required. By Special Permit pursuant to Section 12.D.1.d of the regulations, up to 10% of the required parking (17 spaces) may be provided on an “as needed” basis. This leaves 154 required spaces.

The site is located approximately one mile from both the Stamford Transportation Center and the Glenbrook Train Station with multiple bus lines running across the E. Main Street frontage. The site has a Walk Score of 87 “Very Walkable” and a Transit Score of 62 “Good Transit”. Given the site’s urban location and proximity to multiple transit nodes and many retail, restaurant and service establishments, these parking standards are appropriate.

The current plan includes a total of 148 self-parking spaces available to residents with an additional 2 spaces allocated to shared vehicles. Collectively, this parking arrangement is expected to easily meet/exceed residential demand.

## **PARKING OPERATIONS**

Parking operations will be actively supervised by the onsite property management employees. A total of 148 full time self-parking spaces are proposed onsite. Two shared vehicles will also be provided, for a total of 156 effective parking spaces.

Vehicle access will be provided from the sole curb cut on N. State Street which will lead to both the rear surface spaces and below grade garage spaces.

To comply with code, 13 handicapped-accessible spaces are proposed. The regulations also require 19 Class A and 13 Class B bicycle spaces. A total of 72 bicycles can be stored on vertical wall racks within the secure garage. Up to 14 spaces, to be designated as charging stations for electric vehicles, are proposed, exceeding the minimum requirement of 12.

The site will operate generally as a self-park facility. Property managers will monitor and document parking usage at regular intervals during and after the initial “lease-up” period to ensure the regular tenant demand is being met.

Patrons of the retail space may have shared use of the surface parking with specific hours of use to be determined once tenants have been secured. Should this become desirable, the Applicant would return to the Zoning Board for administrative approval in conformance with Section 12.I of the Stamford Zoning Regulations, to the extent necessary. All spaces will be signed and enforced accordingly.

## **ADDITIONAL PARKING CAPACITY**

While the Applicant is confident the parking demand will be met with the provided spaces, should it be determined during the reporting period that the additional 17 “as needed” spaces are in demand, one or more of the following strategies to increase parking capacity could be employed:

1. Vehicle Stackers could be implemented within portions of the surface lot.
2. Offsite parking could be attained by leasing spaces at one of several nearby retail/commercial establishments within 500’ of the site.

## **DEMAND MANAGEMENT STRATEGIES**

### **Shared Vehicles**

The developer is proposing to provide two (2) “shared vehicles” (i.e. ZipCar). Shared vehicles provide residents with a useful amenity and viable alternative to private vehicle ownership.

### **Unbundled Parking**

The rent structure of the residential units is proposed to be “unbundled” with regard to parking. Apartments will not automatically include a “free” parking space (which has been demonstrated to encourage vehicle ownership and usage). The separate charge for spaces provides an incentive for residents to consider an alternative to individual car ownership and

usually results in lower demand. It also allows those residents without cars to enjoy a lower cost of living (rather than pay for parking they do not need).

### **Public Transportation**

The proposed development is located within a mile of both the Stamford Transportation Center (which provides access to both Amtrak and Metro North Railroad services, as well as Greyhound and Peter Pan buses) and the Glenbrook Train Station.

Connecticut Transit has multiple stops in and around the downtown area, including the 341 (Stamford-Norwalk), 342 (East Main and Stamford Transportation Center), and 344 (STC, Glenbrook Station, Noroton Heights Station) which stop directly across from the site on East Main Street. Additional lines to other parts of Stamford make stops at nearby Grove Street.

Additionally, Uber, Lyft, Metro Pool and NuRide provide corporate and personal ride sharing programs that are currently utilized by residents in the downtown area, as well as the suburbs.

### **Bicycle Storage**

To encourage ridership as an alternate means of travel, and as an amenity to building residents, the applicant is providing well above the minimum number of bicycle parking spaces – up to 72 spaces where a total of 32 (Class A and B combined) are required. Additional bike racks may be installed on the ground level of the site if needed.

### **LOADING**

An on-street loading space can be accommodated along the Lafayette Street frontage. Additionally, one or more of the onsite surface parking spaces can also be used for loading purposes outside of peak residential demand times. All spaces will be signed and enforced accordingly.

**819-833 E. Main Street and 15, 27 & 29 Lafayette Street  
Special Permit and Site & Architectural Plans**

**Zoning Data Chart - MXD Infill**

Standard	Permitted MX-D Infill	Prior Approval	Proposed GDP/FSP	Notes
<b>Min Lot Area</b>	20,000	34,562	50,237	<b>Complies.</b> §9.C.5.a.2 Proposed area includes acquisition of 15 Lafayette Street
<b>Max Building Stories</b>	n/a	5	No Change	<b>Complies.</b> §9.C.5.b.1 (no specified Story limitation)
<b>Max Building Height</b>	90'	58'±	59'±	
<b>Max Building Coverage</b>	80%	51%±	52.4%±	<b>Complies.</b> §9.C.5.b.4
<b>Max Commercial FAR</b>	4,209 (existing)	2,750	2,950	<b>Complies.</b> §9.C.5.b.2
<b>Max Total FAR</b>	2.5	2.4	2.2	<b>Complies.</b> §9.C.5.b.2 and 9.C.4.c (permitted exemptions for amenity space and onsite BMRs have not been deducted from FAR totals)
<b>Max Dwelling Units</b>	199 (max per MP Cat.9)	85	130	<b>Complies.</b> Underlying Master Plan (Cat. 9 Urban Mixed Use) limits density to 172.8 units per acre, or 199 total units on the subject site.
<b>Usable Open Space</b>	75 sf / DU	6,799 (80± sf / DU)	10,200 (78± sf / DU)	<b>Complies.</b> §9.C.5.b.3 Proposed area includes landscaped/open space on top of sub-grade garage and 4th floor roof level.
<b>Front Setback (E. Main)</b>	ZB	7'±	No Change	<b>Complies.</b> §9.C.4.h (the Zoning Board may approve "appropriate relationship of yard requirements and separation of structures...") Proposed setbacks are 15' on E. Main St., 10' on Lafayette St. and 12' on N. State St. as measured from building to face of curb.
<b>Front Setback (Lafayette)</b>	ZB	3.5'±	No Change	
<b>Front Setback (N. State)</b>	ZB	n/a	2.0'±	
<b>Side Setback (east)</b>	ZB	0'	No Change	

**Notes**

Per plans provided by Do H. Chung & Partners and by DiMarzo & Berezcky

**Zoning Data (cont.)**  
**819-833 E. Main Street and 15, 27 & 29 Lafayette Street**  
**Special Permit and Site & Architectural Plans**

**Parking Calculation**

Residential (by unit)		Req. per Unit	(total req)	Provided	Notes
Studio (market)	44	1.25	55.0	<b>156</b>	<b>Complies.</b> §9.C.4.i and §9.C.5.b.5 •Special Permit per §12.D.1.d to permit up to 10% of required parking to be provided on an "as needed" basis. •148 self-park spaces + 2 shared vehicles (8 spaces) = 156 parking spaces •Additional spaces (off-site, stackers, etc.) to be provided as outlined in Parking Management Plan. •Prior approval provided 1.0 spaces onsite with 0.25 additional offsite requirement
1-BR (market)	55	1.25	68.8		
2-BR (market)	<u>31</u>	1.50	<u>46.5</u>		
<b>TOTAL</b>	<b>130</b>	-	<b>170.3</b>		
<b>Amount to be provided "as needed"</b>			<b>-17.0</b>		
<b>Minimum Onsite Requirement</b>			<b>153.3</b>		

**Below Market Rate****Required units:**

$$130 \text{ (total proposed dwelling units)} \times 10\% = 13.0 \text{ (50\% AMI)} \quad [\text{\$7.4 - Table 7.4.1}]$$

$$17 \text{ (existing market rate aff)} \div 2 = 8.5 \text{ (65\% AMI)} \times 0.6 \text{ (equivalency)} = 5.1 \text{ (50\% AMI)} \quad [\text{\$7.4.c.1.n.2}]$$

$$13.0 + 5.1 = 18.1 \text{ (50\% AMI)} \quad 14\%$$

Total Units		Affordability Level (AMI)	Conversion Rate (per §7.4)	Required BMR		Proposed BMR		Notes	
				Number of Units	Equivalency Units	Number of Units	Equivalency Units		
Studio	44	50%	0.33	10%	4.4	1.47	5	1.67	<b>Complies.</b> Special Permit Request per §7.4.C.1 subsections (g) and (k)
		65%	0.20	n/a	2.9	0.58		0.00	
1BR	55	50%	0.50	10%	5.5	2.75	8	4.00	
		65%	0.30	n/a	3.6	1.08		0.00	
2BR	31	50%	1.00	10%	3.1	3.10	5	5.00	
		65%	0.60	n/a	2.0	1.22	0	0.00	
<b>TOTAL</b>	<b>130</b>				<b>21.5</b>	<b>10.19</b>	<b>18</b>	<b>10.67</b>	

**Drawing List**  
**819-831 East Main Street & 15, and 27-29 Lafayette Street**  
**Zone Map Change, GDP, Special Permit, and Final Site and Architectural Plan Application**  
**February 8, 2022**

<u>Sheet #</u>	<u>Title/Description</u>	<u>Prepared by</u>	<u>Date</u>
<b><u>Civil</u></b>			
PTS	Property & Topographic Survey	DiMarzo & Berezky	12/14/2021
ZLS	Zoning Location Survey	DiMarzo & Berezky	02/03/2022
C-1	Site Plan	DiMarzo & Berezky	02/03/2022
C-2	Utility & Grading Plan	DiMarzo & Berezky	02/03/2022
C-3	Traffic Signage & Pavement Plan	DiMarzo & Berezky	02/03/2022
C-4	Erosion & Sediment Control Plan	DiMarzo & Berezky	02/03/2022
C-5	Notes & Details	DiMarzo & Berezky	02/03/2022
C-6	Details-1	DiMarzo & Berezky	02/03/2022
C-7	Details-2	DiMarzo & Berezky	02/03/2022
C-8	Details-3	DiMarzo & Berezky	02/03/2022
C-9	Low Impact Development Plan	DiMarzo & Berezky	02/03/2022
<b><u>Architectural</u></b>			
CS-1	Cover Sheet	Do H. Chung & Partners	01/24/2022
A-001	Overall Site & Grading Plan	Do H. Chung & Partners	01/24/2022
	Open Space Areas		
A-101	Basement Plan	Do H. Chung & Partners	01/24/2022
A-102	First Floor Plan	Do H. Chung & Partners	01/24/2022
A-103	Second Floor Plan	Do H. Chung & Partners	01/24/2022
A-104	Third Floor Plan	Do H. Chung & Partners	01/24/2022
A-105	Fourth Floor Plan	Do H. Chung & Partners	01/24/2022
A-106	Fifth Floor Plan	Do H. Chung & Partners	01/24/2022
A-107	Roof Plan	Do H. Chung & Partners	01/24/2022
A-201	Typ. Bldg. Elevations	Do H. Chung & Partners	01/24/2022
A-202	Typ. Bldg. Elevations	Do H. Chung & Partners	01/24/2022
A-203	Typ. Bldg. Elevation	Do H. Chung & Partners	01/24/2022
A-301	Typ. Sections	Do H. Chung & Partners	01/24/2022
A-302	Typ. Sections	Do H. Chung & Partners	01/24/2022
<b><u>Landscape</u></b>			
LP.1	Landscape Plan	Environmental Land Solutions, LLC	02/04/2022
<b><u>Lighting</u></b>			
SL-1	Lighting Plan	Illuminate	02/03/2022



**Owner List**

**819-831 East Main Street & 15, and 27-29 Lafayette Street**

*Zone Map Change, GDP, Special Permit, and Final Site and Architectural Plan Application*

**February 8, 2022**

**Property Address:** 27, 29 Lafayette Street and 821, 825, 827 East Main Street

**Owner Name:** 819 East Main Street, LLC

**Owner Address:** 2 Armonk Street  
Greenwich, CT 06930

**Property Address:** 831 East Main Street

**Owner Name:** 831-833 East Main Street, LLC

**Owner Address:** 1156 Newfield Avenue  
Stamford, CT 06905

**Property Address:** 15 Lafayette Street

**Owner Name:** New Star Lafayette LLC


**Owner Address:** 19 High Ridge Road #8120  
Stamford, CT 06905-9993





APPROXIMATE  
LOCATION OF  
PROPERTY LINES

**AERIAL EXHIBIT**  
**819 EAST MAIN STREET**  
**STAMFORD, CT**



**REDNISS  
& MEAD**

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LAND SURVEYING  
CIVIL ENGINEERING  
PLANNING & ZONING CONSULTING  
PERMITTING

22 First Street | Stamford, CT 06905  
Tel: 203.327.0500 | Fax: 203.357.1118  
www.rednissmead.com

COMM. NO.:	DATE:
6903	1/11/2022
	SCALE:
	N.T.S.



# MX-D DESIGNATION CRITERIA EXHIBIT

## 819 EAST MAIN STREET STAMFORD, CT



Pursuant to Section 9.C.5.a.

1. Min. 25% of Site area used for commercial purposes or vacant.
  - 1.1. Provided 33%±
2. Min Lot Areas of 20,000 square feet.
  - 2.1. Provided 50,237 square feet (per Survey provided by DiMarzo & Bereczky dated 12/14/2021)
3. Min. frontage 50'.
  - 3.1. Provided 624± LF.
4. Min. 50% of site frontage either vacant or used for parking.
  - 4.1. Provided 351' (56%).

## General Property Description

15, 27 & 29 Lafayette Street; 821, 825, 827 & 831 East Main Street

January 21, 2022

Block #: 104  
Area: 50,237 ± SqFt

All those parcels of land commonly known as 15 Lafayette Street (001-1420), 27 Lafayette Street (001-7662), 29 Lafayette Street (001-7663), 821 East Main Street (001-7666), 825 East Main Street (001-7664), 827 East Main Street (002-5499) and 831 East Main Street (000-4639); located in the City of Stamford, and generally described as follows:

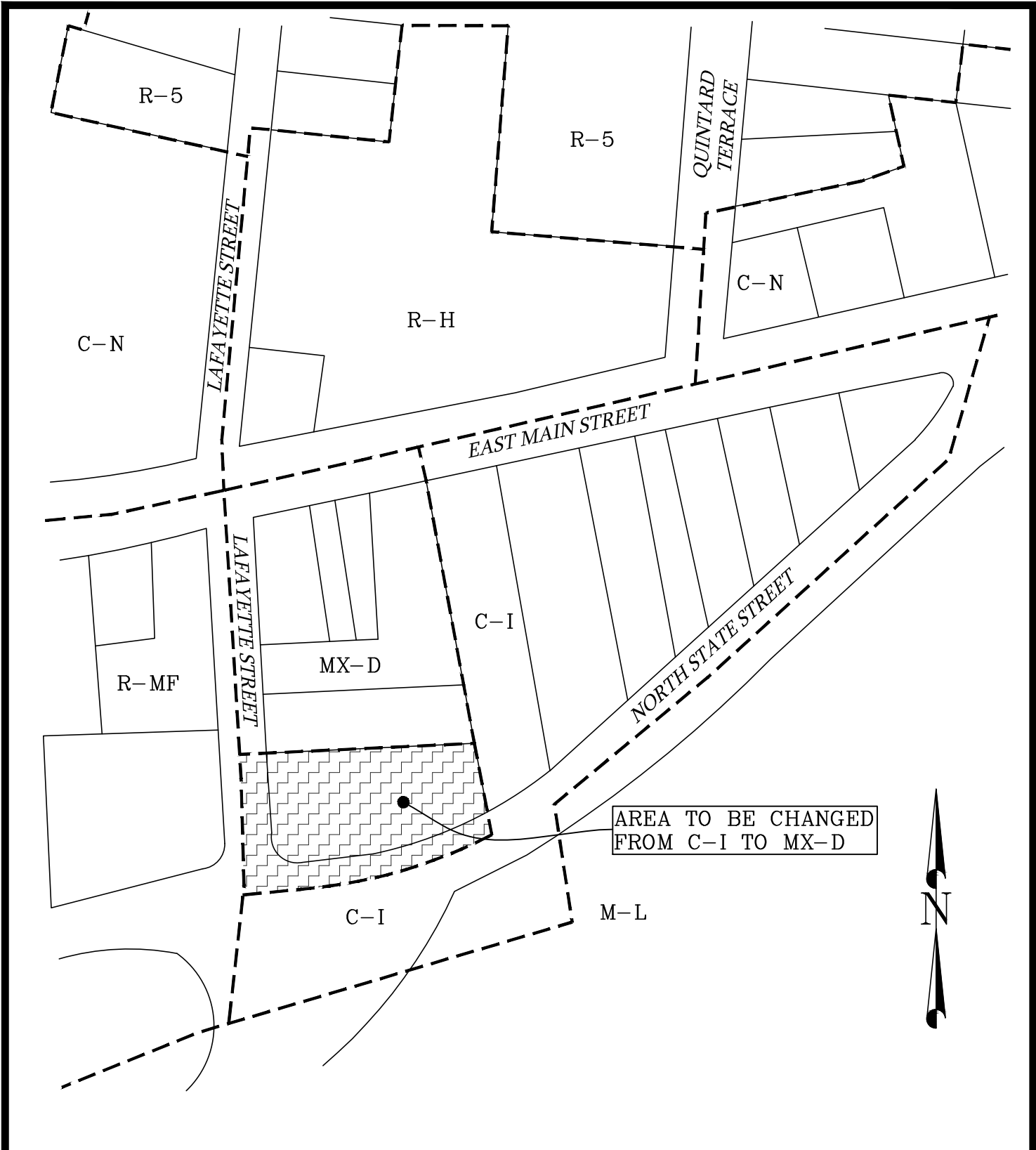
Beginning at the intersection of the southerly side of East Main Street and the easterly side of Lafayette Street, said land is bounded by the following:

Northerly: 150' ± by the southerly side of East Main Street;

Easterly: 284' ± by the land n/f of 837-845 East Main ST Assoc (835 East Main Street);

Southerly: 187' ± by the northerly side of North State Street;

Westerly: 297' ± by the easterly side of Lafayette Street to the point of beginning;



AREA TO BE CHANGED  
FROM C-I TO MX-D



- AREA TO BE CHANGED  
FROM C-I TO MX-D

**DIMARZO &  
BERECKY**

191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.857.4110

LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

**ZONE CHANGE  
EXHIBIT  
EAST MAIN STREET  
STAMFORD, CT**

DATE: 1/21/2022  
JOB NO. 173  
SCALE: N.T.S.

## Zone Change Description

**819 East Main Street**

**January 21, 2022**

Block #: 104

Area: 21,980 ± SqFt (includes 6,854 ± SqFt of portion of Lafayette St and North State Street right-of-ways along site frontage, each in part).

### DESCRIPTION OF AREA OF ZONE CHANGE FORM C-1 (Intermediate Commercial District) TO M-XD (MIXED USE DEVELOPMENT DISTRICT):

Parcel of land commonly known as 15 Lafayette Street (001-1420); located in the City of Stamford, and generally described as follows:

Beginning at a point at the intersection of the centerline of Lafayette Street and centerline of North State Street, said land is bounded by the following:

Westerly: 119' ± by the centerline of Lafayette Street;

Northerly: 199' ± by the land n/f of 819 East Main Street LLC (27 Lafayette Street), and a portion of Lafayette Street, each in part;

Easterly: 79' ± by the land n/f of 837-845 East Main ST Assoc (835 East Main Street), and a portion of North State Street, each in part;

Southerly: 218' ± by the centerline of North State Street, to the point of beginning

January 18, 2022

City of Stamford Planning & Zoning Boards  
c/o Ralph Blessing, Land Use Bureau Chief  
888 Washington Boulevard  
Stamford, CT 06901

**Re: 831 E. Main Street - Stamford, CT**

Dear Mr. Blessing:

This letter serves to authorize the firms of Redniss & Mead Inc. (with offices at 22 First in Stamford, CT), to act as our agents in connection with the preparing, filing, and processing of any and all applications required for Planning and Zoning approvals relating to the above referenced properties.

Thank you for your acknowledgement of said authority.

Sincerely



831-833 EAST MAIN STREET LLC

January 18, 2022

City of Stamford Planning & Zoning Boards  
c/o Ralph Blessing, Land Use Bureau Chief  
888 Washington Boulevard  
Stamford, CT 06901

**Re: 15 Lafayette Street - Stamford, CT**

Dear Mr. Blessing:

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Thank you for your acknowledgement of said authority.

Sincerely



Anuj L Gupta  
Member, Manager  
New Star Lafayette LLC



January 18, 2022

City of Stamford Planning & Zoning Boards  
c/o Ralph Blessing, Land Use Bureau Chief  
888 Washington Boulevard  
Stamford, CT 06901

**Re: 821, 825, 827 & 831 E. Main Street and 15, 27-29 Lafayette Street - Stamford, CT**

Dear Mr. Blessing:

This letter serves to authorize the firms of Redniss & Mead Inc. (with offices at 22 First in Stamford, CT), to act as our agents in connection with the preparing, filing, and processing of any and all applications required for Planning and Zoning approvals relating to the above referenced properties.

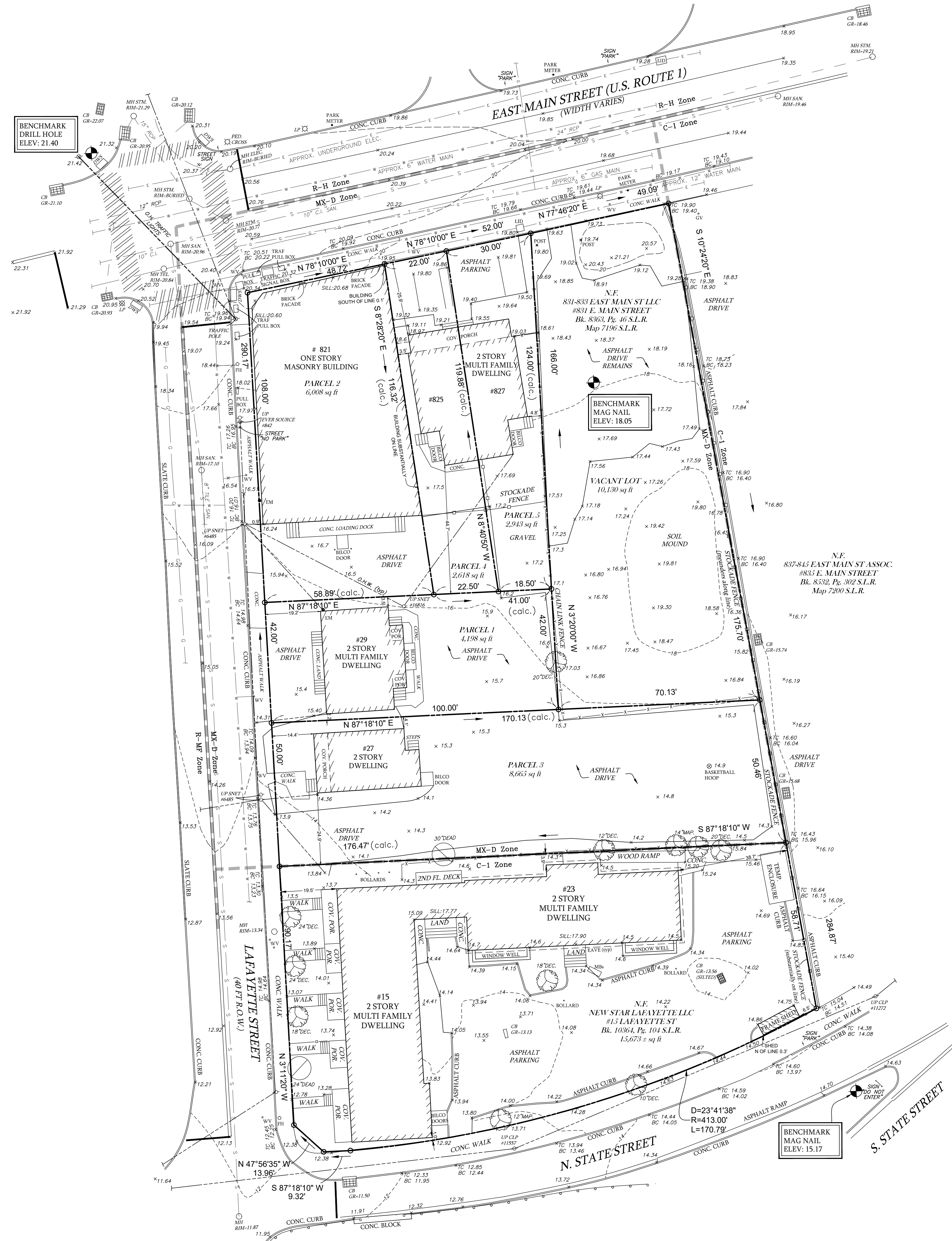
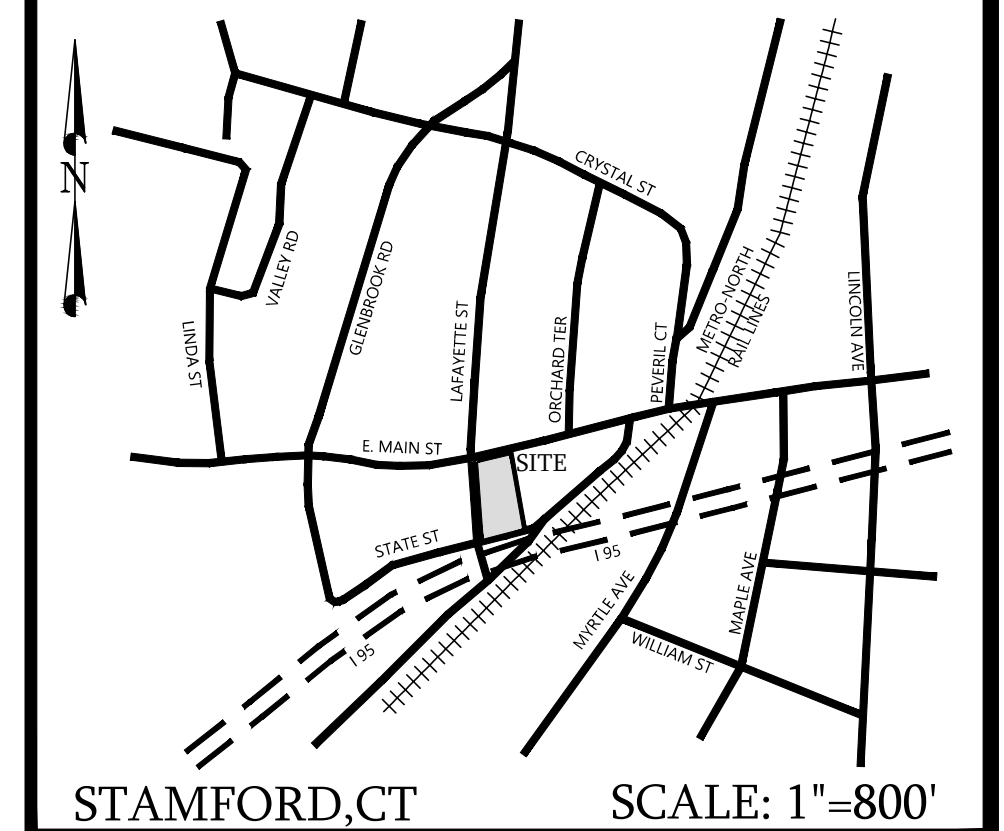
Thank you for your acknowledgement of said authority.

Sincerely



01/19/21.

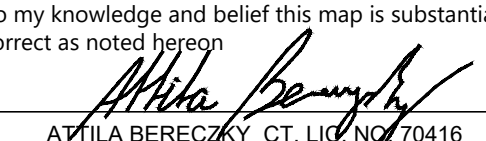
819 EAST MAIN STREET LLC

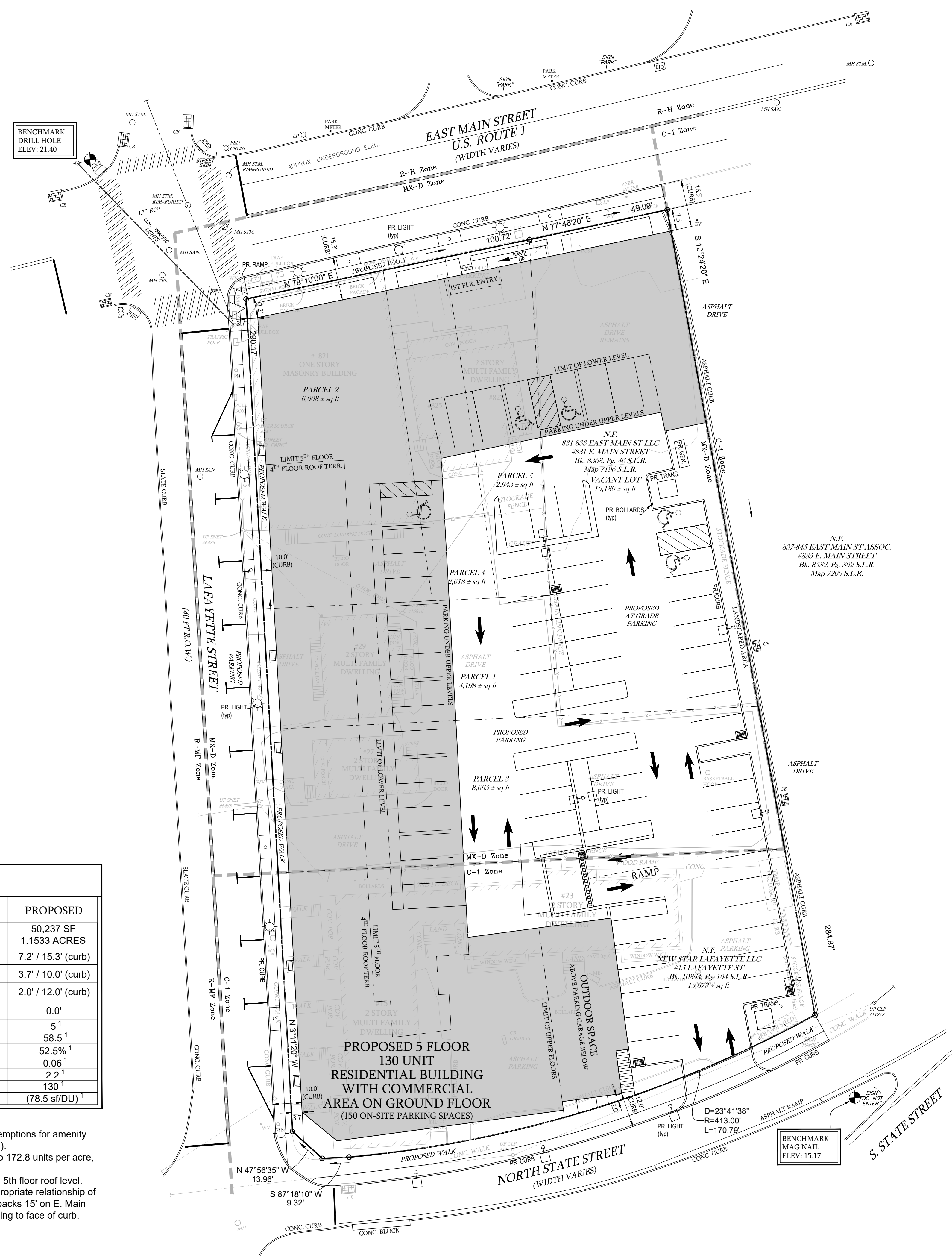
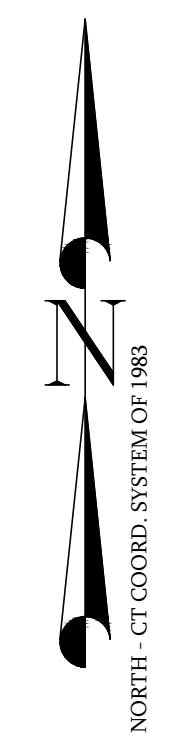
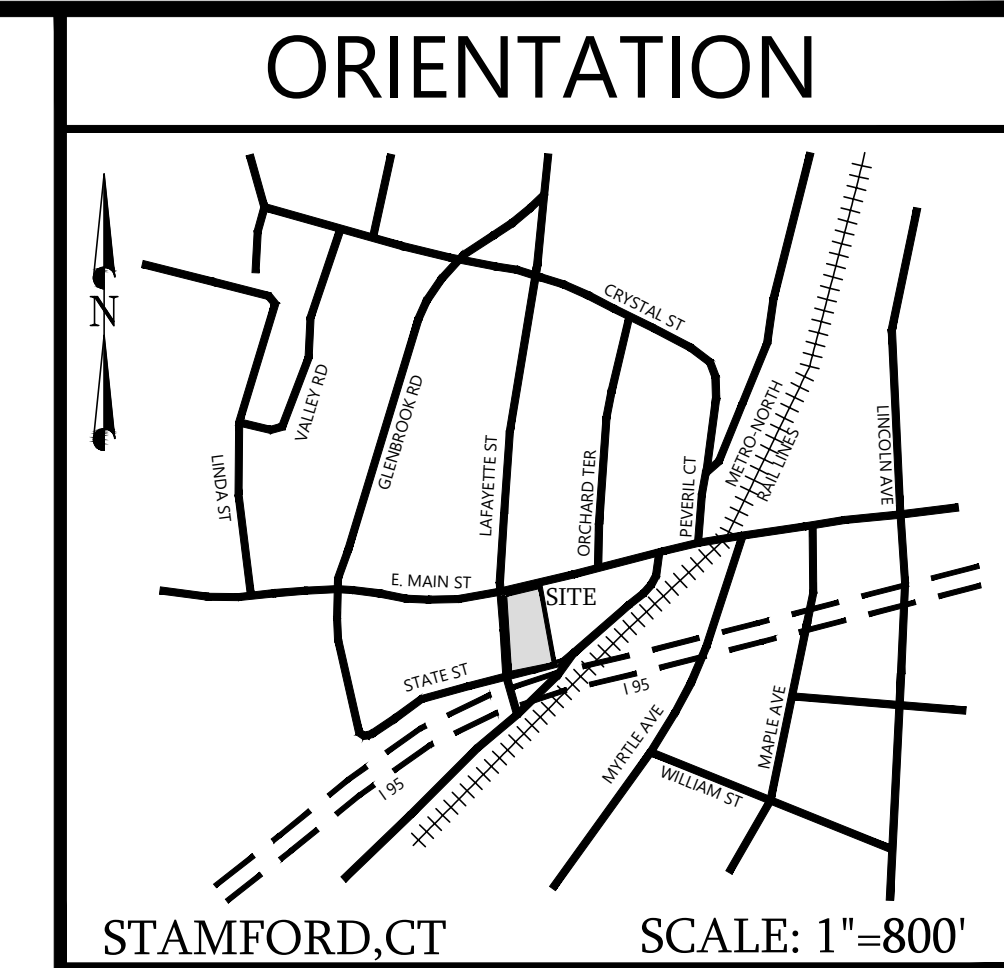


**NOTES:**

- This survey has been prepared in accordance with Sections 20-300b-1 thru 20-300b-20 of the Regulations of Connecticut State Agencies and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. as a Property and Topographic Survey the Boundary Determination Category of which is a Resurvey conforming to Horizontal Accuracy Class A-2 and the locations and elevations of which conform to Topographic Accuracy Class T-2. It is intended to depict property boundaries, locations and elevations of improvements and topographic features.
- Reference is made to Maps 56, 5762, 5781, 5931, 7196, 8515 & 7200 of the Stamford Land Records (S.L.R.).
- Reference is made to deeds of record:  
27 Lafayette St: Parcel 3, Vol. 12082, Pg. 44 S.L.R.  
29 Lafayette St: Parcel 1, Vol. 12082, Pg. 44 S.L.R.  
821 E. Main St: Parcel 2, Vol. 12082, Pg. 44 S.L.R.  
825 E. Main St: Parcel 4, Vol. 12082, Pg. 44 S.L.R.  
827 E. Main St: Parcel 5, Vol. 12082, Pg. 44 S.L.R.  
831 E. Main St: Vol. 8363, Pg. 46 S.L.R.  
15-23 Lafayette St: Vol. 10364, Pg. 104 S.L.R.
- Reference is made to Connecticut State Highway Department Right of Way Map 135-42 sheet 9.
- Reference is made to instruments of record as labeled hereon.
- Total Lot area : 50,237 ± Sq. Ft. or 1.1532 ± Acres
- Elevations depicted hereon are based on the North American Vertical Datum of 1988 (NAVD-88).
- Bearings depicted hereon are based on Connecticut State Coordinate System - NAD'83.
- Subject parcel does not lie within a Special Flood Hazard Area as depicted on FEMA Flood Insurance Rate Map Community Panel No. 09001C0517G Map Effective July 8, 2013.
- Wetlands, if any, not depicted hereon
- Location, extent and sizes of underground utilities not guaranteed. Consult with the appropriate utility company or agency prior to designing improvements, commencing demolition or construction.

**PROPERTY & TOPOGRAPHIC SURVEY**  
 DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET**  
**15, 27 & 29 LAFAYETTE STREET**  
 STAMFORD, CT  
 PREPARED FOR  
**819 EAST MAIN STREET, LLC**

DATE: 12/14/2021	0 20 40
JOB NO. 173	1"=20'
To my knowledge and belief this map is substantially correct as noted hereon	
 ANITA BERECKZY CT. LIC. NO. 70416 12/14/2021 DATE	
This document and copies thereof are valid only if they bear the signature and embossed seal of the designated licensed professional. Unauthorized alterations render any declaration hereon null & void.	
<b>DIMARZO &amp; BERECKZY</b> LAND SURVEYING 191 LLOYD DRIVE FAIRFIELD, CT 06825 203.857.4110 CIVIL ENGINEERING PERMITTING	
<b>PTS</b>	



**NOTES:**

- This survey has been prepared in accordance with Sections 20-300b-1 thru 20-300b-20 of the Regulations of Connecticut State Agencies and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. as a Zoning Location Survey the Boundary Determination Category of which is a Resurvey conforming to Horizontal Accuracy Class A-2 and Vertical Accuracy Class V-2. It is intended to be used for application for determination of zoning compliance and for building permit purposes.
- Reference is made to Maps 56, 5762, 5931, 7196, 7200 and 8515 of the Stamford Land Records (S.L.R.).
- Reference is made to deeds of record:  
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- Subject parcel does not lie within a Special Flood Hazard Area as depicted on FEMA Flood Insurance Rate Map Community Panel No. 09001C0517G Map Effective July 8, 2013.
- Reference is made to an unrecorded map titled "Property & Topographic Survey depicting 821, 825, 827 & 831 East Main St, 15, 27 & 29 Lafayette St, Stamford, CT, prepared for 819 East Main Street, LLC" dated 12/14/2021, prepared by this office.
- Reference is made to Site Plans depicting 27 & 29 Lafayette St, 821, 825, 827 & 831 East Main St, Stamford, CT, prepared for 819 East Main Street, LLC" dated 2/03/2022, prepared by this office.
- Reference is made to Architectural plans titled "The Lafayette, 819 E. Main St, Stamford, CT" dated 1/22/2022 and prepared by Wellbuilt Co, DO H. CHUNG & PARTNERS.
- Location, extent and sizes of underground utilities not guaranteed. Consult with the appropriate utility company or agency prior to designing improvements, commencing demolition or construction.
- Property to be consolidated, currently consists of seven parcels.

**ZONING DATA: MX-D**

REGULATION	MIN / MAX	PROPOSED
MIN. LOT SIZE	20,000 SF	50,237 SF 1.1533 ACRES
MIN. FRONT YARD (E. MAIN) <sup>5</sup>	see note 5	7.2' / 15.3' (curb)
MIN. FRONT YARD (LAFAYETTE) <sup>5</sup>	see note 5	3.7' / 10.0' (curb)
MIN. FRONT YARD (N. STATE) <sup>5</sup>	see note 5	2.0' / 12.0' (curb)
MIN. SIDE YARD (EAST) <sup>5</sup>	see note 5	0.0'
STORIES	n/a	5 <sup>1</sup>
HEIGHT	90'	58.5' <sup>1</sup>
BUILDING COVERAGE	80%	52.5% <sup>1</sup>
COMMERCIAL FAR	0.30	0.06 <sup>1</sup>
TOTAL FAR <sup>2</sup>	2.5	2.2 <sup>1</sup>
DWELLING UNITS <sup>3</sup>	199	130 <sup>1</sup>
OPEN SPACE <sup>4</sup>	(75 sf/DU)	(78.5 sf/DU) <sup>1</sup>

- Provided by Do H. Chung & Partners.
- Pursuant to Section 9.C.5.b.2 and 9.C.4.c, (permitted exemptions for amenity space and onsite BMRs have not been deducted from FAR totals).
- Underlying Master Plan (Cat. 9 Urban Mixed Use) limits density to 172.8 units per acre, or 199 total units on the subject site.
- Includes landscaped/open space on top of sub-grade garage and 5th floor roof level.
- Pursuant to Section 9.C.4.h, the Zoning Board may approve "appropriate relationship of yard requirements and separation of structures...". Proposed setbacks 15' on E. Main St. and 10' on Lafayette St. and N. State St. measured from building to face of curb.

**ZONING LOCATION SURVEY**  
 DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET**  
**15, 27 & 29 LAFAYETTE STREET**  
 STAMFORD, CT  
 PREPARED FOR  
**819 EAST MAIN STREET, LLC**

DATE: 2/03/2022	0 20 40
JOB NO. 173	1" = 20'

To my knowledge and belief this map is substantially correct as noted hereon.

ANITA BERECZKY CT. LIC. NO. 70416  
 2/03/2022  
 DATE

**DIMARZO & BERECZKY**  
 191 LLOYD DRIVE LAND SURVEYING  
 FAIRFIELD, CT 06825 CIVIL ENGINEERING  
 203.857.4110 PERMITTING

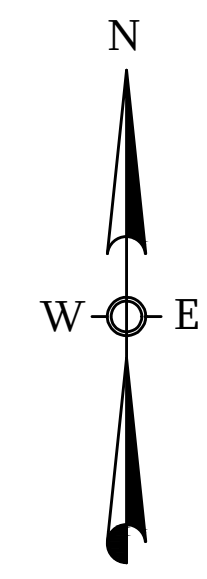
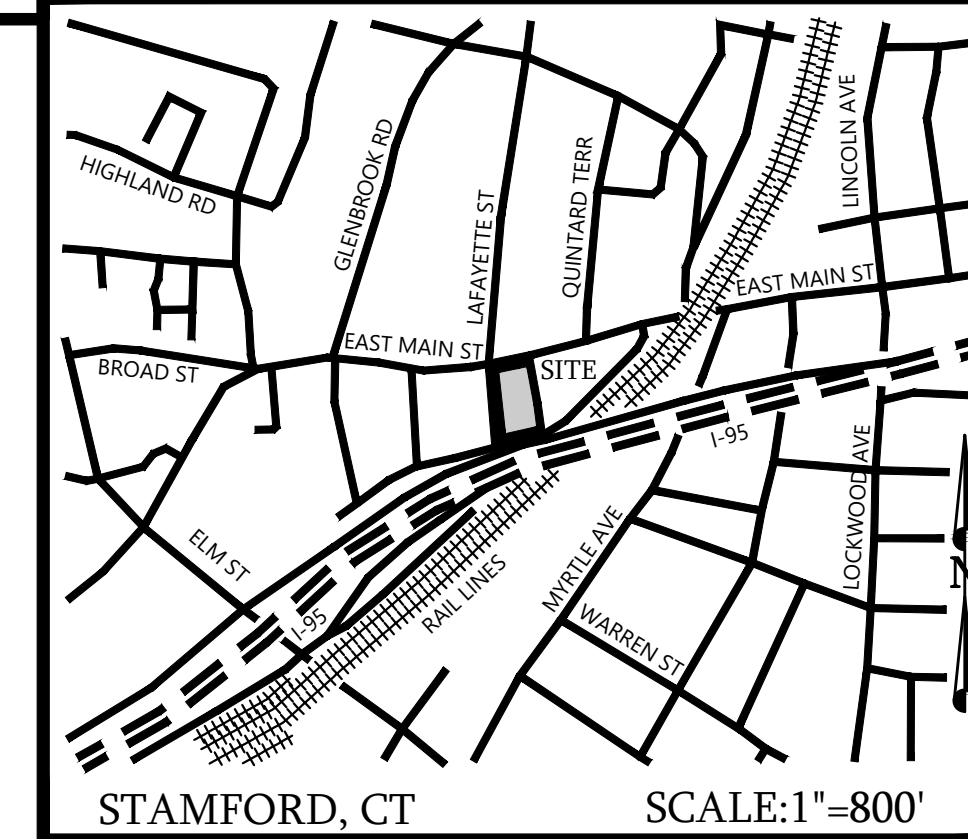
**ZLS**

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ZONES: MX-D, C-1  
LOT AREA: 50,237 SF

ORIENTATION



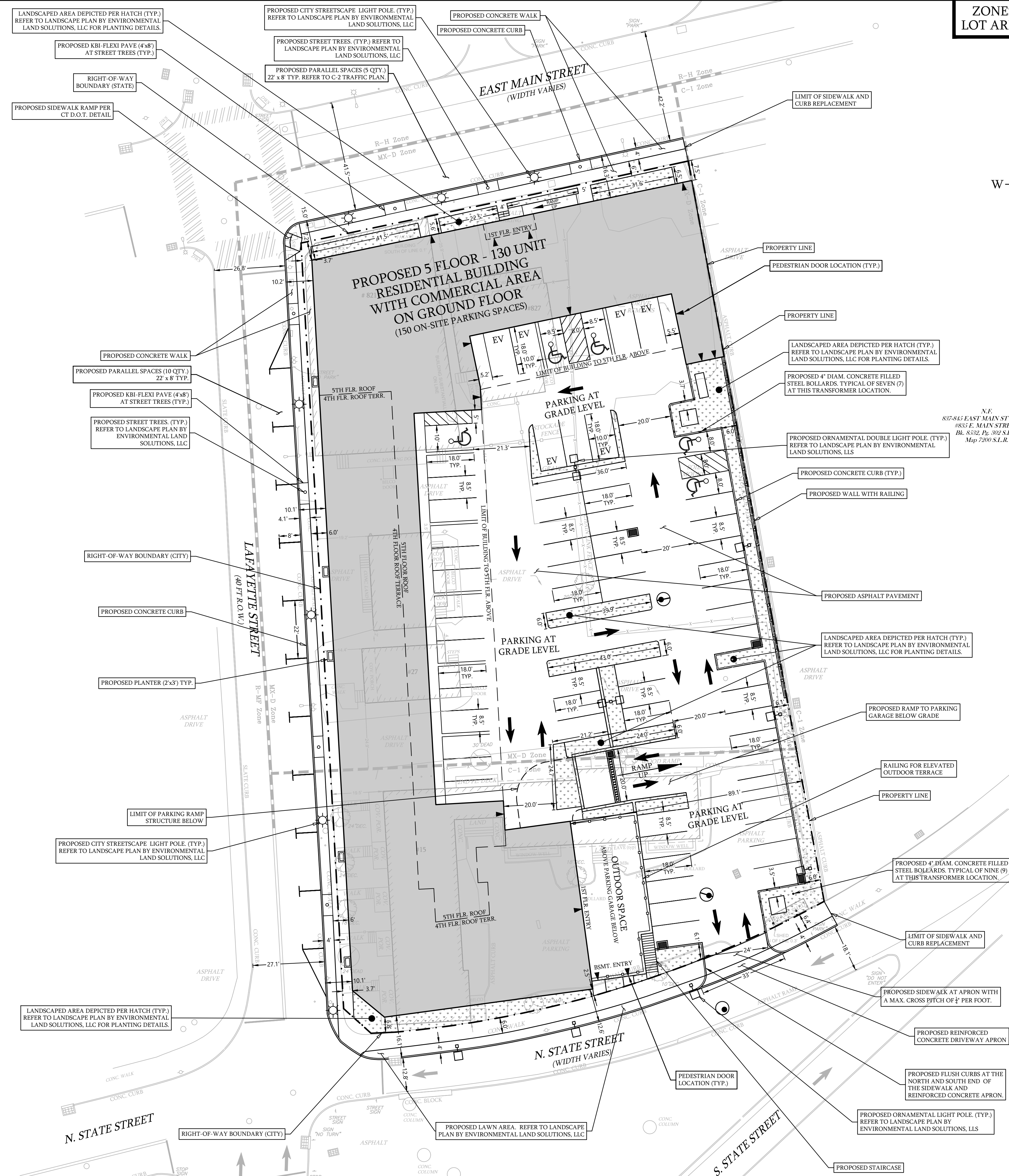
NOTES:

- THE INTENT OF THESE DRAWINGS IS FOR THE DEPICTION OF THE SITE GRADING, STORMWATER MANAGEMENT SYSTEM, SITE UTILITIES AND EROSION AND SEDIMENT CONTROL PLANS SHOWN HEREIN.
- REFER TO THE STORMWATER MANAGEMENT REPORT PREPARED BY OUR OFFICE DATED 2/03/2021.
- SURVEY DATA, BOUNDARY LINES, TOPOGRAPHY AND BUILDING LOCATIONS ARE FROM AN A-2 AND T-2 CERTIFIED SURVEY PREPARED BY THIS OFFICE TITLED "PROPERTY AND TOPOGRAPHIC SURVEY DEPICTING 821, 825, 827 & 831 EAST MAIN STREET, 15, 27, & 29 LAFAYETTE STREET, STAMFORD, CT PREPARED FOR 819 EAST MAIN STREET, LLC" DATED 12/14/2021. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD-88).
- AREA OF THE PARCEL = 50,237 ± SF OR 1.1532 ± ACRES.
- ALL CONSTRUCTION SHALL COMPLY WITH CITY OF STAMFORD REQUIREMENTS, THE STATE OF CONNECTICUT BASIC BUILDING CODE, THE CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, AND O.S.H.A. ALL PERMITS SHALL BE OBTAINED AND NECESSARY INSPECTIONS COMPLETED PRIOR TO BACKFILLING.
- INFORMATION ON EXISTING UTILITIES HAS BEEN COMPILED FROM INFORMATION INCLUDING FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES INCLUDING SERVICES.
- THE PROPERTY SHALL BE SERVED BY PUBLIC WATER AND SEWERS.
- CONTRACTOR SHALL SUPPLY COMPLETE SHOP DRAWINGS INCLUDING MANUFACTURER'S PRODUCT DATA SHEETS TO THE SITE ENGINEER, FOR ALL CONSTRUCTION MATERIAL USED IN CONJUNCTION WITH THESE DRAWINGS. CONTRACTOR SHALL ALLOW A 5 DAY REVIEW PERIOD, PRIOR TO FABRICATION AND INSTALLATION.
- PRIOR TO ANY EXCAVATION THE CONTRACTOR, LAND OWNER OR APPLICANT SHALL BE REQUIRED TO CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 FOR MARK-OUT OF UNDERGROUND UTILITIES.
- ALL MATERIALS REMOVED FROM THE PROJECT SITE SHALL BE DISPOSED OF IN CONFORMANCE WITH ALL JURISDICTIONAL AGENCIES.
- ANY MATERIAL, MAN-MADE OR NATURAL, WHICH IS IN ANY WAY DISTURBED AND/OR UTILIZED DURING WORK SHALL NOT BE DEPOSITED IN ANY WETLAND OR WATERCOURSE, EITHER ON OR OFF-SITE, UNLESS SPECIFICALLY AUTHORIZED BY A DOCUMENTED PERMIT.
- THE WORK SHALL BE DONE IN CONFORMANCE WITH THE CONTRACT DOCUMENTS/PLANS UNLESS CHANGES HAVE BEEN APPROVED IN WRITING BY THE DESIGN ENGINEER PRIOR TO THE WORK BEING DONE.
- A PRE-CONSTRUCTION MEETING SHALL BE HELD WITH THE OWNER, CONTRACTOR AND ENGINEER TO REVIEW THE SCOPE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THE PRE-CONSTRUCTION MEETING.

STANDARD CITY OF STAMFORD 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 AND EROSION AND SEDIMENT CONTROL.
- THE ENGINEERING BUREAU OF THE CITY OF STAMFORD SHALL BE NOTIFIED THREE (3) DAYS PRIOR TO ANY COMMENCEMENT OF CONSTRUCTION OR 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 77-250, SHALL BE REQUIRED TO CONTACT "CALL BEFORE YOU DIG" AT 1-800-922-4455 FOR MARK-OUT OF UNDERGROUND UTILITIES.
- ALL RETAINING WALLS THREE (3) FEET OR HIGHER MEASURED FROM FINISHED GRADE AT THE BOTTOM OF THE WALL TO FINISHED GRADE AT THE TOP OF THE WALL AND RETAINING WALLS SUPPORTING A SURCHARGE OR IMPOUNDING CLASS I, II OR III-A LIQUIDS ARE REQUIRED TO HAVE A BUILDING PERMIT. RETAINING WALLS SHALL BE DESIGNED AND INSPECTED DURING CONSTRUCTION BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY, RETAINING WALLS SHALL BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT.
- 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 SURVEY WILL BE REQUIRED BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF CONNECTICUT.
- CONNECTION TO A CITY-OWNED STORM SEWER SHALL REQUIRE THE "WAIVER COVERING STORM SEWER CONNECTION" TO BE FILED WITH THE CITY OF STAMFORD ENGINEERING BUREAU.
- GRANITE BLOCK OR OTHER DECORATIVE STONE OR BRICK, DEPRESSED CURB, DRIVEWAY APRON AND CURBING WITHIN CITY OF STAMFORD RIGHT-OF-WAY SHALL REQUIRE THE "WAIVER COVERING GRANITE BLOCK DEPRESSED CURB AND DRIVEWAY APRONS" TO BE FILED WITH THE CITY OF STAMFORD ENGINEERING BUREAU.
- SEDIMENT AND EROSION CONTROLS SHALL BE MAINTAINED AND REPAIRED AS NECESSARY THROUGHOUT CONSTRUCTION UNTIL THE SITE IS STABILIZED.
- TO OBTAIN A CERTIFICATE OF OCCUPANCY, SUBMITTAL MUST INCLUDE ALL ITEMS OUTLINED IN THE CHECKLIST FOR CERTIFICATE OF OCCUPANCY (APPENDIX D OF THE CITY OF STAMFORD DRAINAGE MANUAL).
- REFERENCE IS MADE TO DEMOLITION PERMITS D-22-1, D-22-2, D-22-3, D-22-4, AND D-22-5.

PARKING LEVEL	PARKING TOTALS			TOTAL
	REGULAR	HANDICAP ACCESSIBLE	E.V.	
	8.5' x 18'	10' x 18' STANDARD 8' x 18' VAN	10' x 18'	
BASEMENT GARAGE	66	8	8	82
1ST FLOOR / ON GRADE	57	5	6	68
TOTAL	123	13	14	150



LEGEND

PROPOSED CONTOUR	---	102
PROPOSED SPOT ELEVATION	●	101.4
TC = TOP OF CURB ELEVATION	●	TC 100.8
BC = BOTTOM OF CURB ELEVATION	●	BC 100.3
TW = TOP OF WALL ELEVATION	●	TW 103.3
BW = BOTTOM OF WALL ELEVATION	●	BW 100.0
PROPOSED DOOR LOCATIONS	▶	
TEST PIT, SOILS	■	TP3A
BOREHOLE INFILTRATION TEST, SOILS	⊕	BH#3
STORM SEWER, GRAVITY	---	
SANITARY SEWER, GRAVITY	---	
DOMESTIC WATER SERVICE	---	
ELECTRIC SERVICE CONDUITS	---	
COMM. SERVICE CONDUITS	---	
GAS SERVICE	---	

DRAWING LIST

DRAWING TITLE	NUMBER	ORIG. DATE
SITE PLAN	C-1	2/03/2022
UTILITY & GRADING PLAN	C-2	2/03/2022
TRAFFIC SIGNAGE & PAVEMENT PLAN	C-3	2/03/2022
EROSION & SEDIMENT CONTROL PLAN	C-4	2/03/2022
NOTES & DETAILS	C-5	2/03/2022
DETAILS - 1	C-6	2/03/2022
DETAILS - 2	C-7	2/03/2022
DETAILS - 3	C-8	2/03/2022
LOW IMPACT DEVELOPMENT PLAN	C-9	2/03/2022

**SITE PLAN**  
DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET**  
**15, 27 & 29 LAFAYETTE STREET**  
STAMFORD, CT  
PREPARED FOR  
**819 EAST MAIN STREET, LLC**

DATE: 2/03/2022  
JOB NO. 173

SCALE: 0 20 40  
1" = 20'

To my knowledge and belief this map is substantially correct as noted hereon.

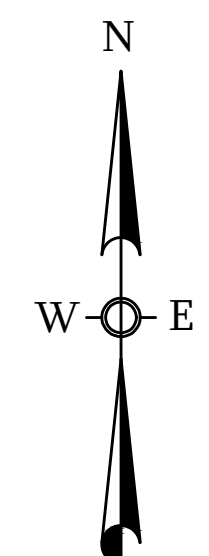
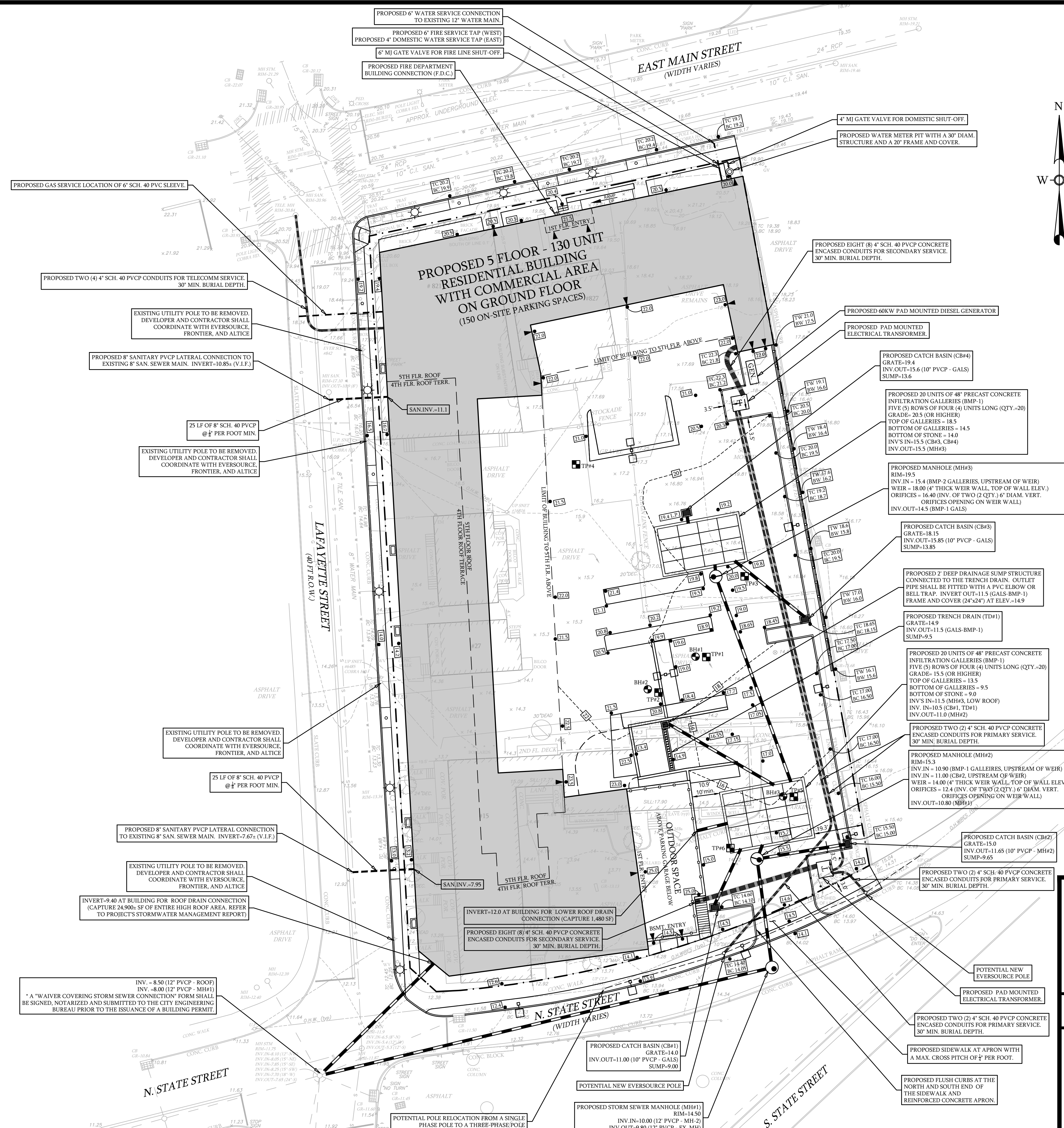
*Louis Dimarzo*  
LOUIS DIMARZO  
2/03/2022

**DIMARZO & BERECKLY**  
191 LLOYD DRIVE  
FAIRFIELD, CT 06425  
203.897.4110

LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

**C-1**





DOWNSTREAM	PIPE INFO.	UPSTREAM
EX.MH	60 LF OF 12" PVC @ 0.015 FFF	ROOF
EX.MH	180 LF OF 12" PVC @ 0.01 FFF	MH#1
MH#1	40 LF OF 12" PVC @ 0.02 FFF	MH#2
MH#2	4 LF OF 12" PVC @ 0.025 FFF	GALS (BMP-1)
MH#2	32 LF OF 10" PVC @ 0.02 FFF	CB#2
GALS (BMP-1)	85 LF OF 12" PVC @ 0.035 FFF	MH#3
GALS (BMP-1)	25 LF OF 10" PVC @ 0.02 FFF	CB#1
GALS (BMP-1)	13 LF OF 8" PVC @ 0.04 FFF	ROOF
GALS (BMP-1)	48 LF OF 10" PVC @ 0.02 FFF	TD#1
MH#3	3 LF OF 12" PVC @ 0.033 FFF	GALS (BMP-2)
GALS (BMP-2)	35 LF OF 10" PVC @ 0.01 FFF	CB#3
GALS (BMP-2)	3 LF OF 10" PVC @ 0.033 FFF	CB#4

LEGEND	
PROPOSED CONTOUR	--- 102 ---
PROPOSED SPOT ELEVATION	● 101.1
TC = TOP OF CURB ELEVATION	● TC 100.3
BC = BOTTOM OF CURB ELEVATION	● BC 100.2
TW = TOP OF WALL ELEVATION	● TW 103.3
BW = BOTTOM OF WALL ELEVATION	● BW 100.0
PROPOSED DOOR LOCATIONS	▶
TEST PIT, SOILS	TP#3A
BOREHOLE INFILTRATION TEST, SOILS	BH#4
STORM SEWER, GRAVITY	—
SANITARY SEWER, GRAVITY	—
DOMESTIC WATER SERVICE	—
ELECTRIC SERVICE CONDUITS	—
COMM. SERVICE CONDUITS	—
GAS SERVICE	—

**UTILITY & GRADING PLAN**  
 DEPICTING  
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**15, 27 & 29 LAFAYETTE STREET**  
 STAMFORD, CT  
 PREPARED FOR  
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DATE: 2/03/2022      SCALE: 0      20      40  
 JOB NO. 173      1" = 20"

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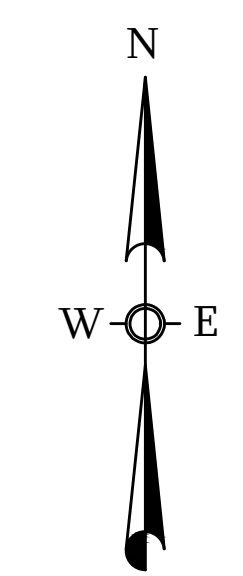
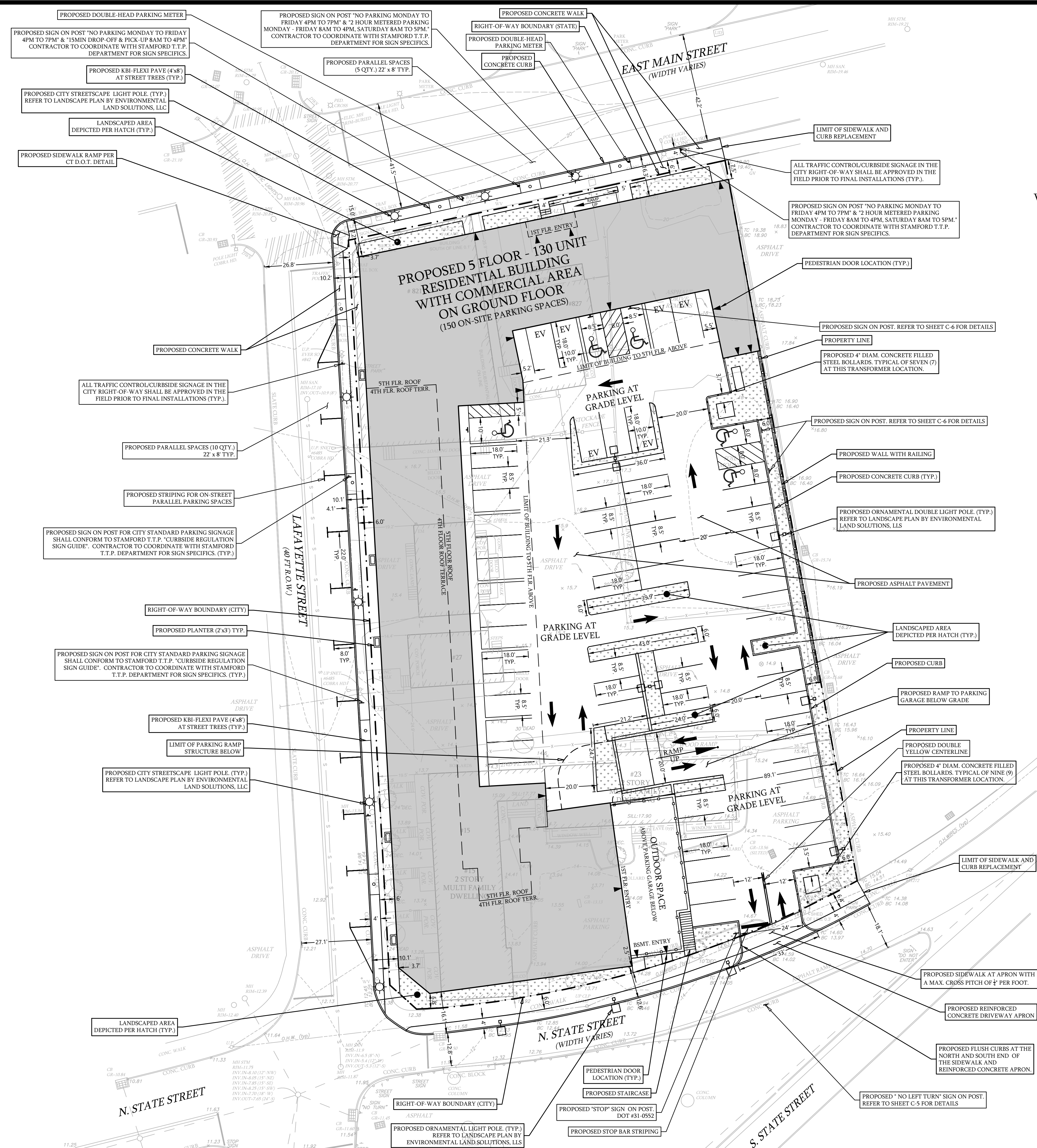
*Louis Dimarzo*  
 LOUIS DIMARZO, REGISTERED PROFESSIONAL ENGINEER  
 2/03/2022

**DIMARZO & BEREZKY**  
 LAND SURVEYING  
 CIVIL ENGINEERING  
 PERMITTING  
 191 LLOYD DRIVE  
 FAIRFIELD, CT 06425  
 203.897.4110

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**C-2**





LEGEND	
PROPOSED CONTOUR	--- 100 ---
PROPOSED SPOT ELEVATION	● 100.1
TC = TOP OF CURB ELEVATION	● TC 100.3
BC = BOTTOM OF CURB ELEVATION	● BC 100.3
TW = TOP OF WALL ELEVATION	● TW 103.3
BW = BOTTOM OF WALL ELEVATION	● BW 100.0
PROPOSED SIGN LOCATIONS	▲
TEST PIT, SOILS	TP#3A
BOREHOLE INFILTRATION TEST, SOILS	BH#3
STORM SEWER, GRAVITY	—
SANITARY SEWER, GRAVITY	—
DOMESTIC WATER SERVICE	—
ELECTRIC SERVICE CONDUITS	—
COMM. SERVICE CONDUITS	—
GAS SERVICE	—

**TRAFFIC SIGNAGE & PAVEMENT PLAN**  
 DEPICTING  
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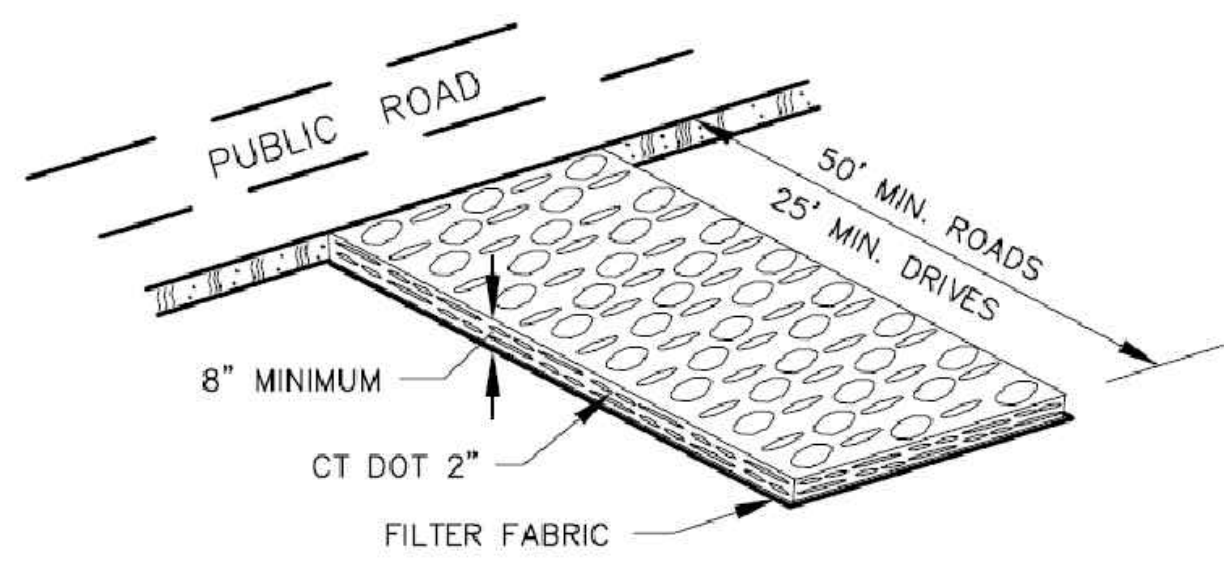
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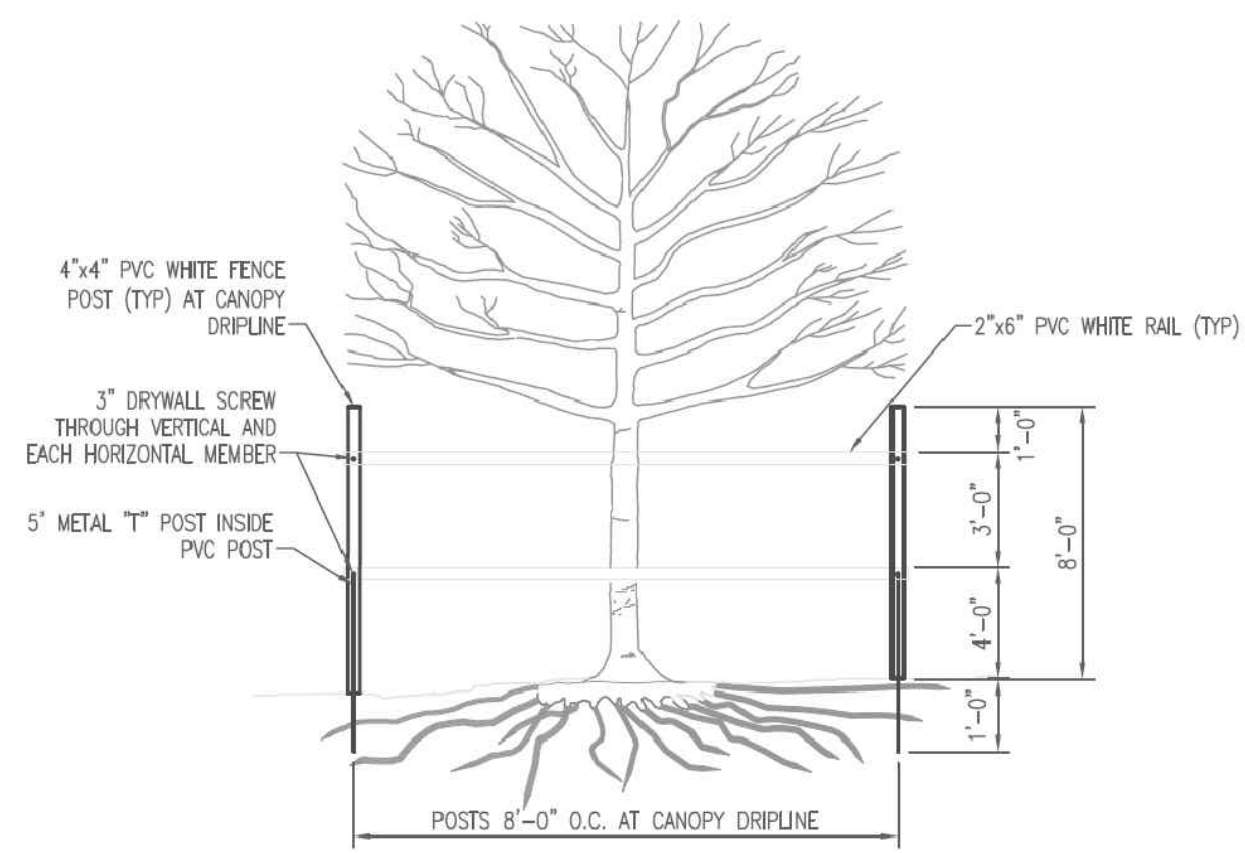
*Louis Dimarzo*  
 LOUIS DIMARZO  
 2/03/2022  
 DATE

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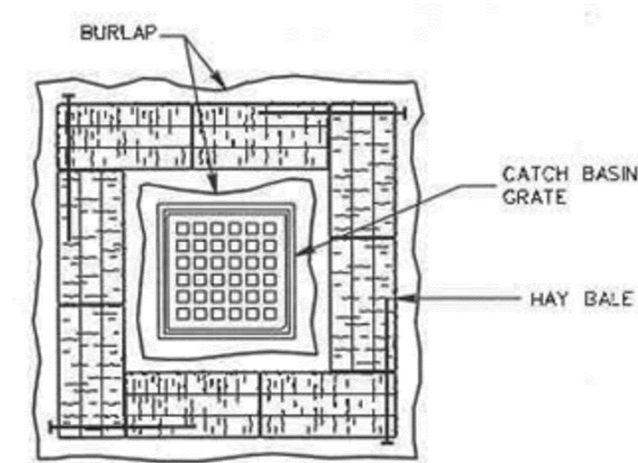




**ANTI-TRACKING PAD  
CONSTRUCTION ACCESS DETAIL**  
N.T.S.



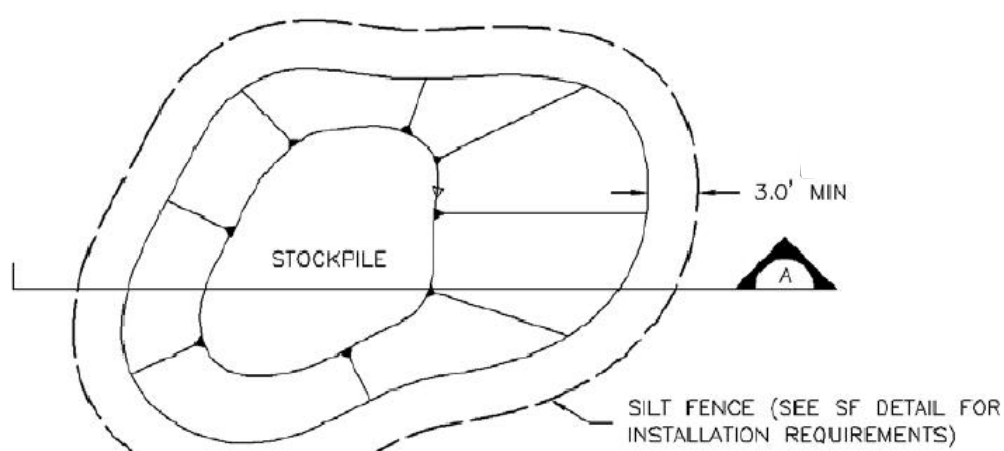
**TREE PROTECTION DETAIL**  
N.T.S.



SURROUND STREET DRAINAGE STRUCTURE INLET WITH HAY BALES PRIOR TO CONSTRUCTION AND MAINTAIN UNTIL CONSTRUCTION IS COMPLETED. ACCUMULATED SEDIMENTS SHALL BE REMOVED ON A REGULAR SCHEDULE.

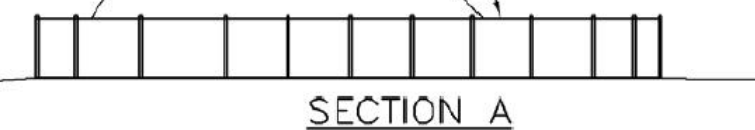
IN CERTAIN INSTANCES, HAY BALES MAY BE REMOVED ON THE UP-STREAM SIDE OF THE CATCH BASIN IN ORDER TO CAPTURE RUNOFF.

**HAY BALE INLET PROTECTION  
SEDIMENT FILTER**  
N.T.S.

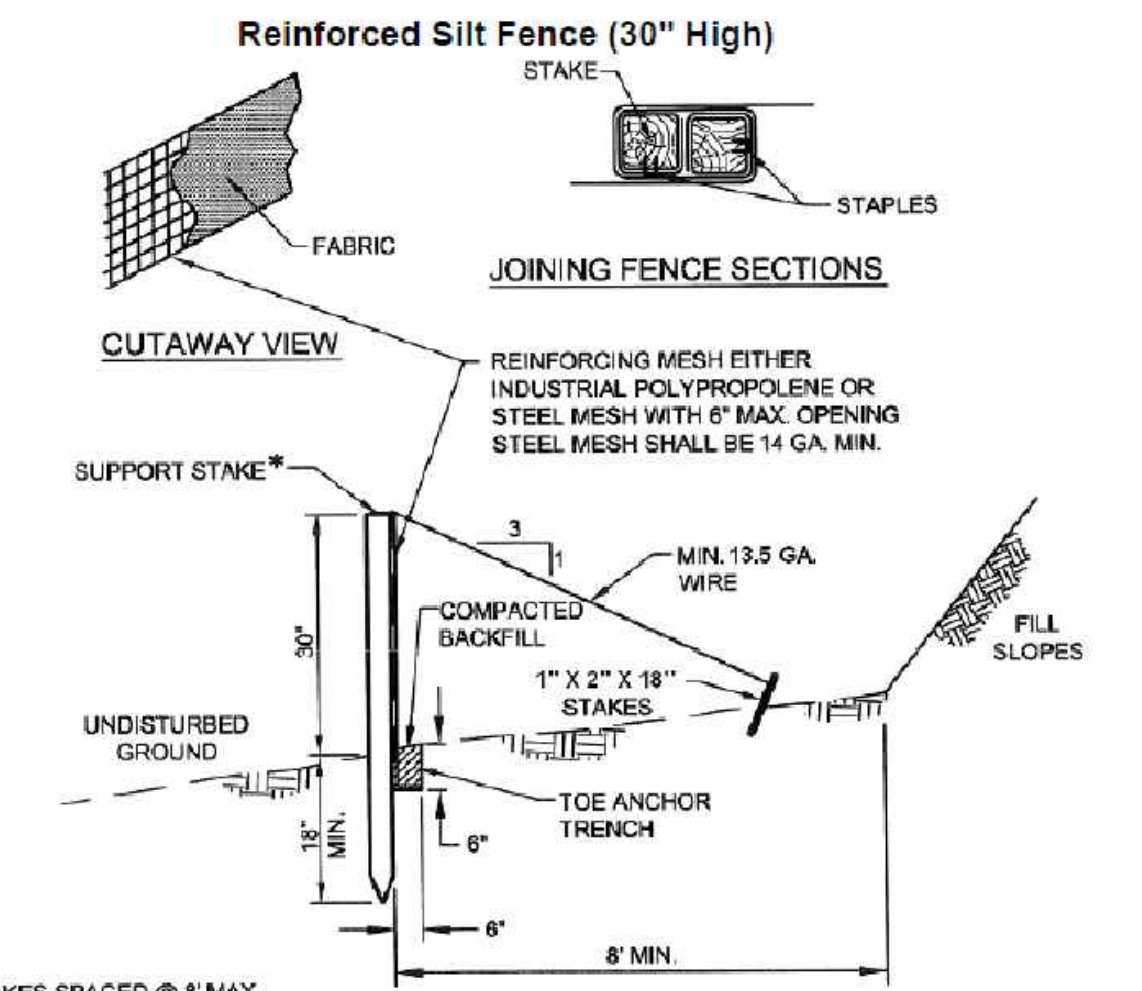
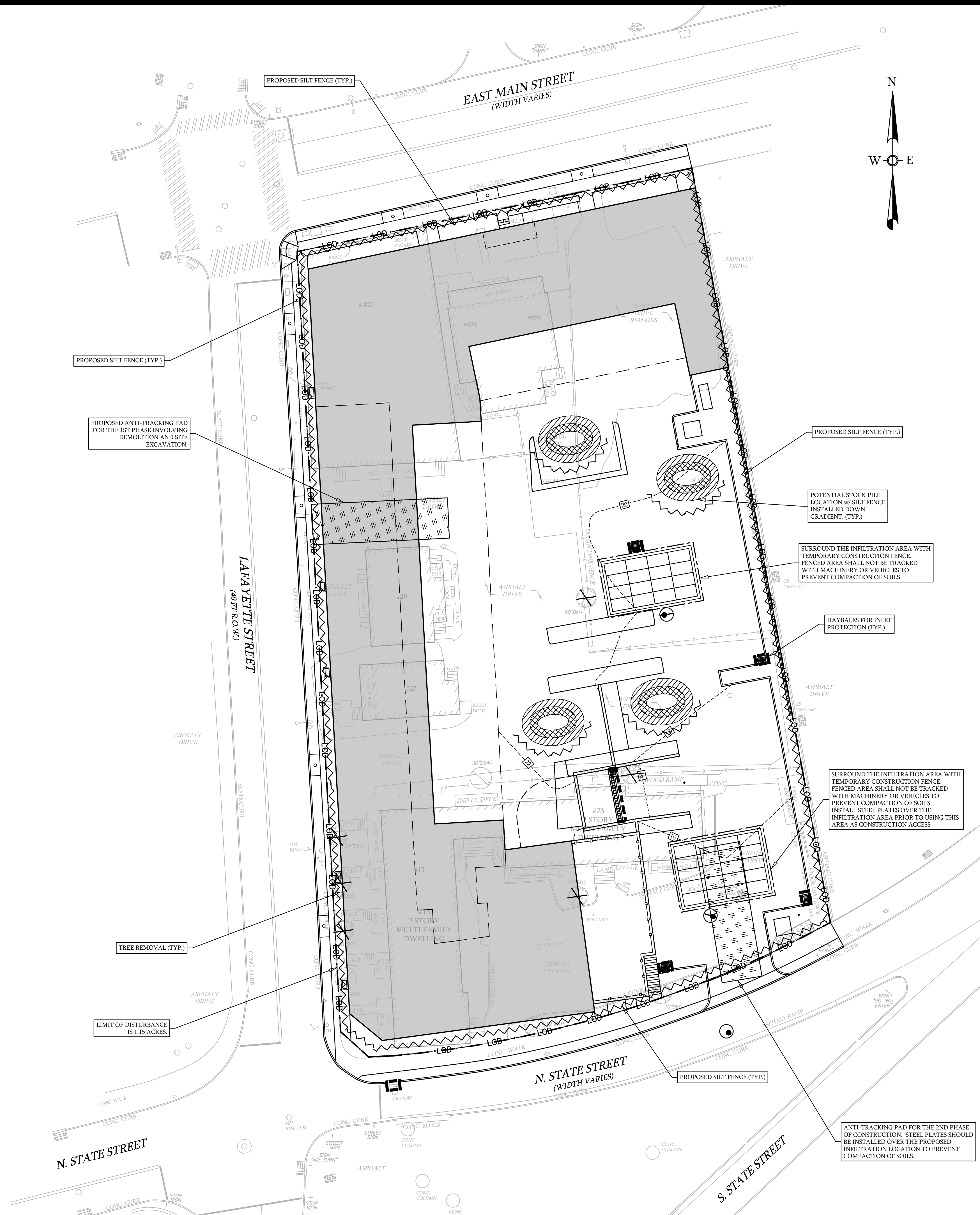


**STOCKPILE PROTECTION PLAN**

MAXIMUM 2' 1" SILT FENCE (SEE SF DETAIL FOR INSTALLATION REQUIREMENTS)



**STOCKPILE PROTECTION DETAIL**  
N.T.S.



**FABRIC & POST SILTATION BARRIER DETAIL**  
(SILT FENCE)  
N.T.S.

LEGEND	
SILT FENCE	
TEMP. CONSTRUCTION FENCE	
LIMIT OF DISTURBANCE	
HAYBALES (SEDIMENT FILTER)	
ANTI-TRACKING PAD	
TREE REMOVAL	
TREE PROTECTION	
STOCKPILE (TEMPORARY)	

**EROSION & SEDIMENT CONTROL PLAN**  
DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET**  
**15, 27 & 29 LAFAYETTE STREET**  
STAMFORD, CT  
PREPARED FOR  
**819 EAST MAIN STREET, LLC**

DATE: 2/03/2022  
JOB NO. 173

SCALE: 0 20 40  
1" = 20'

To my knowledge and belief this map is substantially correct as noted herein.  
*Louis Dimarzo*  
LOUIS DIMARZO  
2/03/2022  
DATE

**DIMARZO & BERECZKY**  
191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.897.4110  
LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

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**EARTHWORK & GRADING:**

- 1. GRADE AWAY FROM BUILDING WALLS AT 2% MINIMUM (TYPICAL).
- 2. EARTH SLOPES SHALL BE NO STEEPER THAN 2:1 (HORZ.:VERT).
- 3. NO WORK SHALL COMMENCE UNTIL EROSION CONTROLS HAVE BEEN INSPECTED AND APPROVED BY THE PROJECT ENGINEER OR DESIGNATED INSPECTORS.
- 4. GENERAL FILL BEYOND PAVED AREAS SHALL BE FREE OF BRUSH RUBBISH, STUMPS AND STONES LARGER THAN 4". FILL SHALL BE PLACED IN COMPACTED LAYERS NOT TO EXCEED 8" IN THICKNESS. THE DRY DENSITY AFTER COMPACTION SHALL NOT BE LESS THAN 95% OF THE STANDARD PROCTOR TEST.
- 5. FILL UNDER PAVED AREAS SHALL BE TILL, LOAM, SAND OR GRAVEL MIXTURE. IT SHALL HAVE NOT MORE THAN 10% FINES PASSING THE #100 SIEVE, NOT MORE THAN 10% PASSING THE #200 SIEVE, AND NO STONES LARGER THAN 4".
- 6. SUBGRADE AND FILL UNDER PAVED AREAS SHALL BE UNIFORMLY COMPACTED BY THE USE OF EQUIPMENT MANUFACTURED FOR THAT PURPOSE.
- 7. FILL OR TOPSOIL SHALL NOT BE PLACED NOR COMPACTED WHILE IN A FROZEN OR MUDDY CONDITION OR WHILE SUBGRADE IS FROZEN.

**RETAINING WALLS:**

- 8. ALL RETAINING WALLS GREATER THAN THREE FEET ARE REQUIRED TO BE DESIGNED, AND INSPECTED DURING CONSTRUCTION BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CONNECTICUT.
- 9. RETAINING WALLS WITH A GRADE DIFFERENCE EQUAL TO OR GREATER THAN 2.5 FEET WILL REQUIRE A SAFETY BARRIER ON THE TOP OF THE WALL. RETAINING WALLS AND BARRIERS ARE TO BE DESIGNED BY OTHERS.
- 10. RETAINING WALLS ARE SHOWN FOR SCHEMATIC PURPOSES ONLY, AND SHALL BE DESIGNED BY THE STRUCTURAL ENGINEER. ALL STRUCTURAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE BASIC BUILDING CODE OF THE STATE OF CONNECTICUT, LATEST EDITION AND THE CITY OF STAMFORD REQUIREMENTS.

**STORM AND SANITARY SEWER SYSTEMS:**

- 11. ALL PIPE SHALL BE INSTALLED STRAIGHT AND AT THE VERTICAL AND HORIZONTAL ALIGNMENT SHOWN. PIPES SHALL HAVE A UNIFORM SLOPE AS SPECIFIED.
- 12. MINIMUM COVER ON ALL PIPES SHALL BE TWO FEET (2') UNLESS OTHERWISE NOTED.
- 13. ALL STORM PIPE SPECIFIED AS POLY VINYL CHLORIDE PIPE (PVC-P) SHALL BE SDR 35 WITH RUBBER GASKETED JOINTS AND MEET THE REQUIREMENTS OF ASTM D3034 AND D3212.
- 14. WHEN CONNECTING NEW PIPES TO EXISTING STRUCTURES SUCH AS MANHOLES AND CATCH BASINS, THE STRUCTURE SHALL BE COMPLETELY CLEANED OUT. THE HOLE MADE IN THE STRUCTURE SHALL BE MADE AS SMALL AS POSSIBLE. THE STRUCTURE SHALL BE REPAIRED TO MATCH ITS ORIGINAL TYPE OF CONSTRUCTION. THE JOINT BETWEEN THE STRUCTURE AND THE PIPE SHALL BE MADE WATERTIGHT BY FILLING THE JOINT WITH MORTAR.
- 15. UNDER NO CIRCUMSTANCES SHALL TRENCH WATER BE ALLOWED TO DRAIN OFF THROUGH SANITARY SEWER LINES.
- 16. ALL CATCH BASINS SHALL HAVE TWO FOOT (2') MIN. SLUMPS AND BELL TRAPS INSTALLED.
- 17. ALL CRUSHED STONE SHALL BE GRADATION NO. 4 AS PER CT DOT FORM 818, TABLE M.01.02-2. STONE SHALL CONSIST OF SOUND, TOUGH, DURABLE PARTICLES.
- 18. AT THE END OF CONSTRUCTION, AFTER THE SITE HAS BEEN FULLY STABILIZED, ALL NEW AND PREVIOUSLY EXISTING STORM SEWER FACILITIES INCLUDING, BUT NOT LIMITED TO, CATCH BASINS, AREA DRAINS, MANHOLES, JUNCTION BOXES, FLOW CONTROL STRUCTURES, PIPES, OIL GRIT SEPARATORS, PERMEABLE PAVERS AND POROUS PAVEMENT SHALL BE FULLY CLEANED WITH EQUIPMENT DESIGNED FOR THAT PURPOSE TO THE SATISFACTION OF THE INSPECTING ENGINEER.

**UTILITIES:**

- 19. PROPOSED ELECTRIC, TELEPHONE, CABLE SERVICES ARE SHOWN FOR SCHEMATIC PURPOSES ONLY AND ARE SUBJECT TO CHANGE PENDING UTILITY COMPANY REVIEW. THESE UTILITIES SHALL BE DESIGNED BY OTHERS AND INSTALLED IN CONFORMANCE TO THE REQUIREMENTS OF THE GOVERNING UTILITY COMPANIES.
- 20. DETECTABLE TAPE SHALL BE USED TO MARK PIPING LISTED BELOW. THE IDENTIFICATION TAPE SHALL BE BURIED AT LEAST 6-INCHES TO 10-INCHES BELOW FINAL GRADE BUT NO CLOSER THAN 12-INCHES TO THE BURIED UTILITY PIPING OR SERVICE.  

HIGH VOLTAGE	RED	CAUTION ELECTRIC LINE BURIED BELOW 600 VOLTS & ABOVE
LOW VOLTAGE	RED	CAUTION ELECTRIC LINE BURIED BELOW 600 VOLTS & BELOW
TELEPHONE & CONTROL	ORANGE	CAUTION TELEPHONE LINE BURIED
BELOW NATURAL GAS	YELLOW	CAUTION GAS LINE BURIED BELOW
WATER SYSTEMS	BLUE	CAUTION WATER LINE BURIED BELOW
FIRE PROTECTION SYSTEMS	BLUE	CAUTION FIRE LINE BURIED BELOW
SPRINKLER MAINS	BLUE	CAUTION SPRINKLER LINE BURIED
BELOW SEWER SYSTEM	GREEN	CAUTION SEWER LINE BURIED BELOW
COMMUNICATION CONDUIT	ORANGE	CAUTION COMM. LINE BURIED BELOW
- 21. UNDERGROUND-TYPE PLASTIC LINE MARKER, MANUFACTURER'S STANDARD PERMANENT, BRIGHT-COLORED DETECTABLE TAPE, CONTINUOUS-PRINTED PLASTIC TAPE, INTENDED FOR DIRECT-BURIAL SERVICE, NOT LESS THAN 4" WIDE X 4 MILS THICK.

**PAVEMENT:**

- 22. AREAS OF NEW ASPHALT SHALL FOLLOW THE DETAIL ON SHEET C-5.
- 23. AREAS OF ASPHALT PAVEMENT THAT ARE DISTURBED BY THE CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED IN ACCORDANCE WITH THE ASPHALT PAVEMENT DETAIL. THE FINISHED GRADE OF ASPHALT PAVING SHALL BLEND TO EXISTING GRADE AND THE EDGE OF THE CONCRETE PAVEMENT SMOOTHLY.
- 24. FINISHED PAVING SHALL BE FREE OF "BIRD BATHS" AND BE SMOOTH AT THE SLOPES SPECIFIED ON THE PLANS.
- 25. THE PAVEMENT SHALL BE PROTECTED FROM VEHICULAR TRAFFIC OF ANY KIND WITH THE USE OF BARRICADES, ETC. FOR A MINIMUM PERIOD OF 24 HOURS AFTER FINAL ROLLING. MAINTAIN AND PROTECT ASPHALT SURFACE FROM SCRAPES, SEARS, SPILLS, HYDRAULIC LEAKS, AND ANY OTHER CONSTRUCTION DAMAGE FOR THE REMAINDER OF CONSTRUCTION UNTIL OWNER'S ACCEPTANCE.
- 26. THICKNESSES OF ALL LAYERS SHOWN ARE AFTER COMPACTION. COMPACT ALL LAYERS TO 95% PER ASTM D 1557 (MODIFIED PROCTOR METHOD).

**SEDIMENT AND EROSION CONTROL NOTES:**

- 27. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED IN THEIR PROPER SEQUENCE. NO CLEARING OR GRADING MAY BE DONE IN ANY AREA UNTIL THE EROSION CONTROL DEVICES FOR THAT AREA, AS SHOWN ON THE PLAN, ARE IN PLACE AND FUNCTIONAL.
- 28. SHEET C-4 IS INTENDED TO DESCRIBE THE SOIL, SEDIMENT AND EROSION CONTROL TREATMENT OF THIS SITE ONLY. FOR OTHER DETAILS WITH RESPECT TO CONSTRUCTION, SEE APPROPRIATE DRAWINGS.
- 29. ALL SEDIMENT AND EROSION CONTROLS SHALL BE DONE IN CONFORMANCE WITH THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" DATED MAY 2002 PREPARED BY THE CONNECTICUT COUNCIL ON SOIL AND WATER CONSERVATION.
- 30. THE CONTRACTOR IS ASSIGNED THE RESPONSIBILITY FOR IMPLEMENTING THE SEDIMENT AND EROSION CONTROL PLAN.
- 31. TEMPORARY SEDIMENT CONTROL MEASURES AND TREE PROTECTION MUST BE INSTALLED IN ACCORDANCE WITH DRAWINGS AND MANUFACTURER RECOMMENDATIONS PRIOR TO WORK IN ANY UPLAND AREAS.
- 32. NO CONSTRUCTION OR CONSTRUCTION EQUIPMENT OR STORAGE OF MATERIALS WILL BE ALLOWED ON THE DOWNHILL SIDE OF THE SILT FENCE.
- 33. SILT FENCE AND FILTER FABRIC SHALL BE APPROVED BY SITE ENGINEER. INSTALL SILT FENCE ACCORDING TO MANUFACTURER'S INSTRUCTION, PARTICULARLY, BURY LOWER EDGE OF FABRIC INTO GROUND.
- 34. ALL ROOF LEADER DOWNSPOUTS SHALL TEMPORARILY DISCHARGE ONTO SPLASH PADS.
- 35. LAND DISTURBANCE SHALL BE KEPT TO A MINIMUM.
- 36. ALL DISTURBED LAND AREAS SHALL BE PLANTED AS SOON AS PRACTICABLE. SEED AND MULCH DISTURBED AREAS WITH GRASS SEED WHEN NECESSARY. PLANTINGS AND SOD ARE NOT CALLED FOR, AS SOON AS PRACTICABLE.
- 37. PREPARE SEEDBED WITH A MINIMUM OF 6" OF TOPSOIL. SEED, RAKE, ROLL, WATER AND MULCH AREAS ACCORDING TO THE MIXES BELOW. WATER AS OFTEN AS NECESSARY TO ESTABLISH COVER. MULCH SEEDBED AREAS AT 1 TO 2 TONS/ACRE WITH STRAW HAY. MAINTAIN MULCH AND WATERING UNTIL GRASS IS 3" HIGH WITH 85% COVER. RESEED IF NECESSARY.

- 38. SEEDING SHOULD OCCUR DURING THE OPTIMUM SEEDING DATES OF APRIL 15 THROUGH JUNE 15 OR AUGUST 15 THROUGH OCTOBER 1.
- 39. IF DISTURBED AREAS CAN NOT BE SEED IMMEDIATELY DUE TO THE TIME OF YEAR, THEN MULCH AREA AND MAINTAIN MULCH UNTIL SEEDING CAN OCCUR. REMOVE MULCH AND SEED AND RE-MULCH WHEN SEASON PERMITS.
- 40. IF EXCAVATION DEWATERING IS REQUIRED, ALL DEWATERING PUMPING MUST HAVE SEDIMENT AND EROSION CONTROL PROVISIONS TO MAINTAIN CLEAR WATER DISCHARGE.
- 41. UPON INSTALLATION OF EACH CATCH BASIN AND AREA DRAIN, IMMEDIATELY SURROUND IT WITH HAYBALES AS PER SEDIMENT FILTER DETAIL.
- 42. HAYBALES SHALL BE NEW AND ARE TO BE REPLACED WHENEVER THEIR CONDITION DETERIORATES BEYOND REASONABLE USABILITY.
- 43. LOADED TRUCKS SHALL BE COVERED AS REQUIRED TO KEEP DOWN DUST.
- 44. AFFECTED PORTIONS OF OFF SITE ROADS AND SIDEWALKS MUST BE SWEEPED CLEAN WHEN REQUIRED TO KEEP DOWN DUST AND PREVENT SAFETY HAZARDS OR AT LEAST ONCE A WEEK DURING CONSTRUCTION AND AS DIRECTED BY SITE ENGINEER.
- 45. DUST CONTROL TO BE ACHIEVED WITH WATERING DOWN DISTURBED AREAS AS REQUIRED.
- 46. AFTER EACH STORM EVENT OR ONCE BI-WEEKLY, ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED.
- 47. ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES WILL BE MAINTAINED IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD UNTIL UPLAND DISTURBED AREAS ARE THOROUGHLY STABILIZED. UPON COMPLETION OF WORK AND STABILIZATION OF ALL UPLAND AREAS, ALL TEMPORARY SEDIMENT CONTROL DEVICES AND TREE PROTECTION SHALL BE REMOVED FROM THE SITE AND ANY SILT DISPOSED OF LEGALLY.

**CONSTRUCTION PHASING:**

THE FOLLOWING DESCRIPTION OF CONSTRUCTION PHASING IS INTENDED TO DEMONSTRATE A FEASIBLE SEQUENCE OF CONSTRUCTION. THE ACTUAL SEQUENCE MAY VARY DUE TO FIELD CONDITIONS IF APPROVED BY THE PROJECT ENGINEER.

**PHASE 1: PREPARATION & DEMOLITION**

- A. AT LEAST ONE WEEK PRIOR TO THE START OF CONSTRUCTION, THE INSPECTING ENGINEER SHALL MEET WITH THE CONTRACTOR AND OWNER TO REVIEW THE SEDIMENT AND EROSION CONTROL PLAN.
- B. INSTALL SEDIMENT AND EROSION CONTROLS AS SHOWN ON THE PLANS.
- C. INSTALL TREE PROTECTION AS REQUIRED.
- D. MARK AND CUT TREES TO BE REMOVED.
- E. DISCONNECT AND ABANDON SITE UTILITIES AS NEEDED. COORDINATE WITH THE APPROPRIATE UTILITY COMPANY.
- F. REMOVE/DEMOLISH EXISTING BUILDINGS AND EXISTING HARDSCAPES. REMOVE EXISTING PAVEMENT ONLY AS NECESSARY TO PROVIDE AN ANTI-TRACKING PAD FOR CONSTRUCTION.

**PHASE 2: CONSTRUCTION**

- A. STRIP TOPSOIL AND STOCKPILE WITH APPROPRIATE E & S CONTROLS.
- B. ROUGH GRADE SITE, GENERAL EARTHWORK. EXCAVATE FOR BUILDING FOUNDATION, INSTALL CONSTRUCTION DEWATERING AND TEMPORARY FILTERING SYSTEM AS NECESSARY.
- C. CONSTRUCT FOUNDATION AND BACKFILL AS SOON AS POSSIBLE. AS-BUILT THE FOUNDATION PLAN.
- D. ROUGH-IN THE DRIVEWAY AND PARKING AREAS. PREPARE SUBGRADE FOR STORMWATER MANAGEMENT PRACTICES.
- E. INSTALL STORM WATER SYSTEM. THE DRAINAGE UTILITIES WILL BE INSTALLED AND READY TO RECEIVE STORM WATER PRIOR TO THE INSTALLATION OF PAVING.
- F. INSTALL SEDIMENT AND EROSION CONTROLS ASSOCIATED WITH DRAINAGE STRUCTURES.
- G. FINAL GRADING AND PAVING.
- H. MAINTAIN ALL SEDIMENT AND EROSION CONTROLS IN AN EFFECTIVE CONDITION DURING THE CONSTRUCTION PERIOD.

**PHASE 3: CLEAN UP AFTER ALL AREAS ARE STABILIZED**

- A. CLEAN EFFECTED PORTION OF ON & OFF SITE ROADS AND DRIVEWAYS.
- B. REMOVE ACCUMULATED SILT AND DEBRIS FROM CATCH BASIN SLUMPS & PIPES OF EFFECTED ON & OFF SITE STORM DRAINS.
- C. REMOVE ACCUMULATED SEDIMENT FROM EFFECTED AREAS AND DISPOSE OF LEGALLY.
- D. REMOVE TEMPORARY SEDIMENT AND EROSION CONTROL AND TREE PROTECTION.
- E. MAKE ANY NECESSARY REPAIRS TO PERMANENT SEDIMENT AND EROSION CONTROLS.

TP#1 - SOIL TEST PIT  
Date: 11/17/2020 - Inspector: Lou DiMarzo, P.E.

Depth	Description
0 - 18"	Fill
18" - 30"	Sand & Gravel w/ silt
30" - 96"	Sand & Gravel w/ 2" to 3" stones

Water: None    Mottling: None  
Ledger: None    Roots: 30" sparse

TP#2 - SOIL TEST PIT  
Date: 11/17/2020 - Inspector: Lou DiMarzo, P.E.

Depth	Description
0 - 28"	Fill
28" - 40"	Sand & Gravel w/ silt
40" - 98"	Medium Coarse Sand & Gravel

Water: None    Mottling: None  
Ledger: None    Roots: 32" sparse

TP#3 - SOIL TEST PIT  
Date: 11/17/2020 - Inspector: Lou DiMarzo, P.E.

Depth	Description
0 - 60"	Fill
60" - 115"	Medium Coarse Sand & Gravel

Water: None    Mottling: None  
Ledger: None    Roots: None

TP#4 - SOIL TEST PIT  
Date: 11/17/2020 - Inspector: Lou DiMarzo, P.E.

Depth	Description
0 - 24"	Fill
24" - 96"	Medium Coarse Sand & Gravel

Water: None    Mottling: None  
Ledger: None    Roots: None

TP#5 - SOIL TEST PIT  
Date: 1/26/2022 - Inspector: Lou DiMarzo, P.E.

Depth	Description
0 - 36"	Fill
36" - 60"	Brown Silty Loam
60" - 96"	Sand & Gravel

Water: None    Mottling: None  
Ledger: None    Roots: None

TP#6 - SOIL TEST PIT  
Date: 1/26/2022 - Inspector: Lou DiMarzo, P.E.

Depth	Description
0 - 28"	Fill
28" - 50"	Brown Silty Loam
50" - 98"	Sand & Gravel

Water: None    Mottling: None  
Ledger: None    Roots: 50"

BH#1 - INFILTRATION TEST  
Date: 11/17/2020 - Inspector: Lou DiMarzo, P.E.

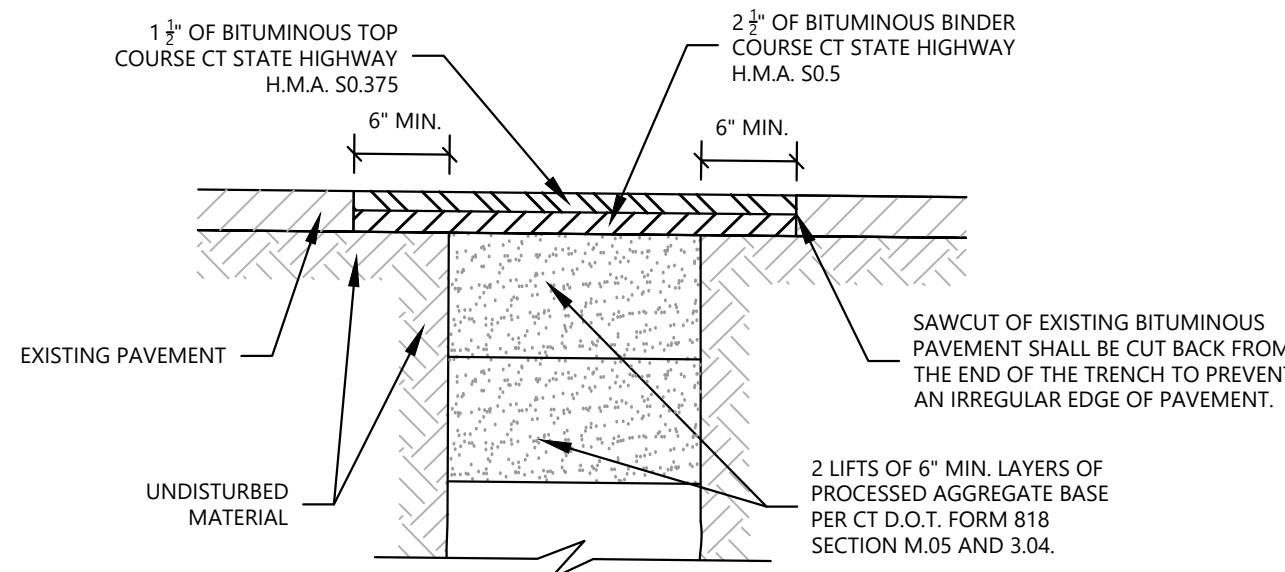
Pre-Soak Date: 11/17/2020		Depth from excavated Bench = 30"		Depth from Existing Grade = 66"		Diam. = 6" pvc casing		
Hole Number	Run No.	Start	Stop	Elapsed Time Min.	Depth to Water from Bench Surface Start Inches	Depth to Water from Bench Surface Stop Inches	Water Level Drop in Inches	Infiltration Rate in/inches/hour
BH#1	1	12:12	1:12	60	6"	18.5"	12.5"	12.5" in/hr
	2	1:18	2:18	60	6"	16.25"	10.25"	10.25" in/hr
	3	2:22	3:22	60	6"	15.75"	9.5"	9.5" in/hr
	4	3:26	4:26	60	6"	14.75"	8.75"	8.75" in/hr
Average of Rates = 10.2 in/hr				Field Infiltration Rate = 5.1 in/hr				

BH#2 - INFILTRATION TEST  
Date: 11/17/2020 - Inspector: Lou DiMarzo, P.E.

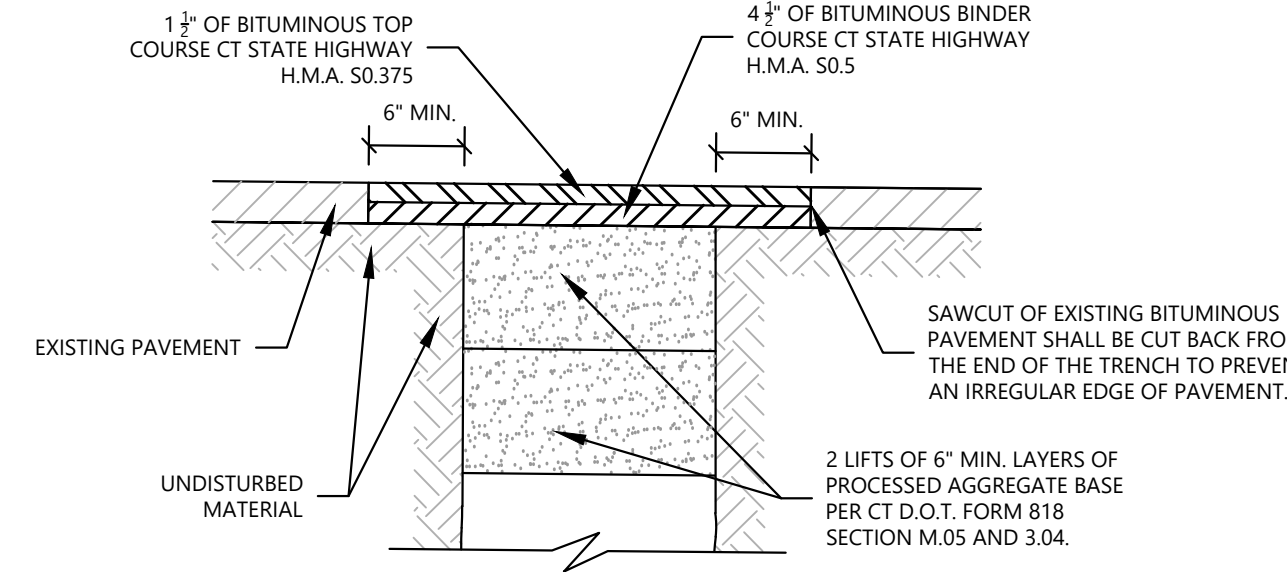
Pre-Soak Date: 11/17/2020		Depth from excavated Bench = 30"		Depth from Existing Grade = 66"		Diam. = 6" pvc casing		
Hole Number	Run No.	Start	Stop	Elapsed Time Min.	Depth to Water from Bench Surface Start Inches	Depth to Water from Bench Surface Stop Inches	Water Level Drop in Inches	Infiltration Rate in/inches/hour
BH#2	1	12:15	1:15	60	6"	16.25"	10.25"	10.25" in/hr
	2	1:21	2:21	60	6"	15.5"	9.5"	9.5" in/hr
	3	2:25	3:25	60	6"	15.25"	9.25"	9.25" in/hr
	4	3:29	4:29	60	6"	14.5"	8.5"	8.5" in/hr
Average of Rates = 9.3 in/hr				Field Infiltration Rate = 4.6 in/hr				

BH#3 - INFILTRATION TEST  
Date: 1/26/2022 - Inspector: Lou DiMarzo, P.E.

Pre-Soak Date: 1/26/2022		Depth from excavated Bench = 30"		Depth from Existing Grade = 72"		Diam. = 4" pvc casing		
Hole Number	Run No.	Start	Stop	Elapsed Time Min.	Depth to Water from Bench Surface Start Inches	Depth to Water from Bench Surface Stop Inches	Water Level Drop in Inches	Infiltration Rate in/inches/hour
BH#3	1	9:57	10:57	60	6"	27"	21.0"	21.0" in/hr
	2	10:59	11:59	60	6"	25.5"	19.5"	19.5" in/hr
	3	12:02	1:02	60	6"	21.5"	15.5"	15.5" in/hr
	4	1:05	2:05	60	6"	19"	13.0"	13.0" in/hr
Average of Rates = 17.2 in/hr				Field Infiltration Rate = 8.6 in/hr				



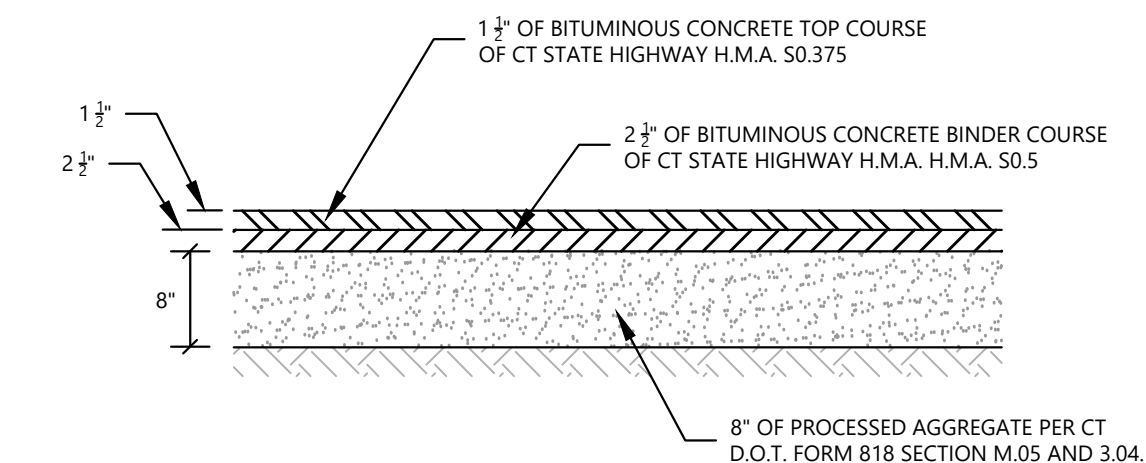
- NOTES:**
- 1. THICKNESS OF ALL LAYERS ARE SHOWN AFTER PLACEMENT AND COMPACTION.
  - 2. IF EXISTING THICKNESS OF BITUMINOUS PAVING LAYERS ARE GREATER THAN SHOWN ABOVE, THEN MATCH THE EXISTING THICKNESS OF LAYERS.



- NOTES:**
- 1. THICKNESS OF ALL LAYERS ARE SHOWN AFTER PLACEMENT AND COMPACTION.
  - 2. IF EXISTING THICKNESS OF BITUMINOUS PAVING LAYERS ARE GREATER THAN SHOWN ABOVE, THEN MATCH THE EXISTING THICKNESS OF LAYERS.

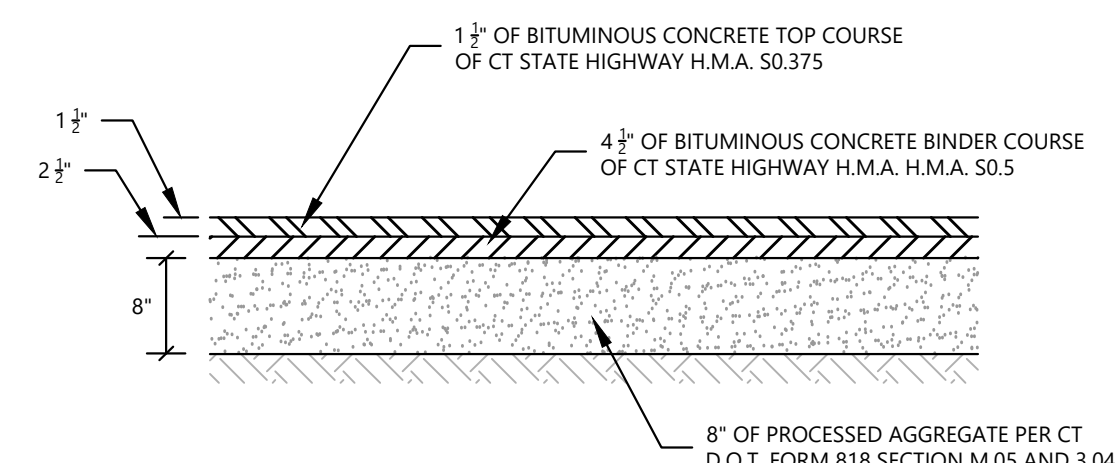
**ASPHALT TRENCH REPAIR DETAIL (LAFAYETTE ST) N.T.S.**

**ASPHALT TRENCH REPAIR DETAIL (NORTH STATE ST) N.T.S.**



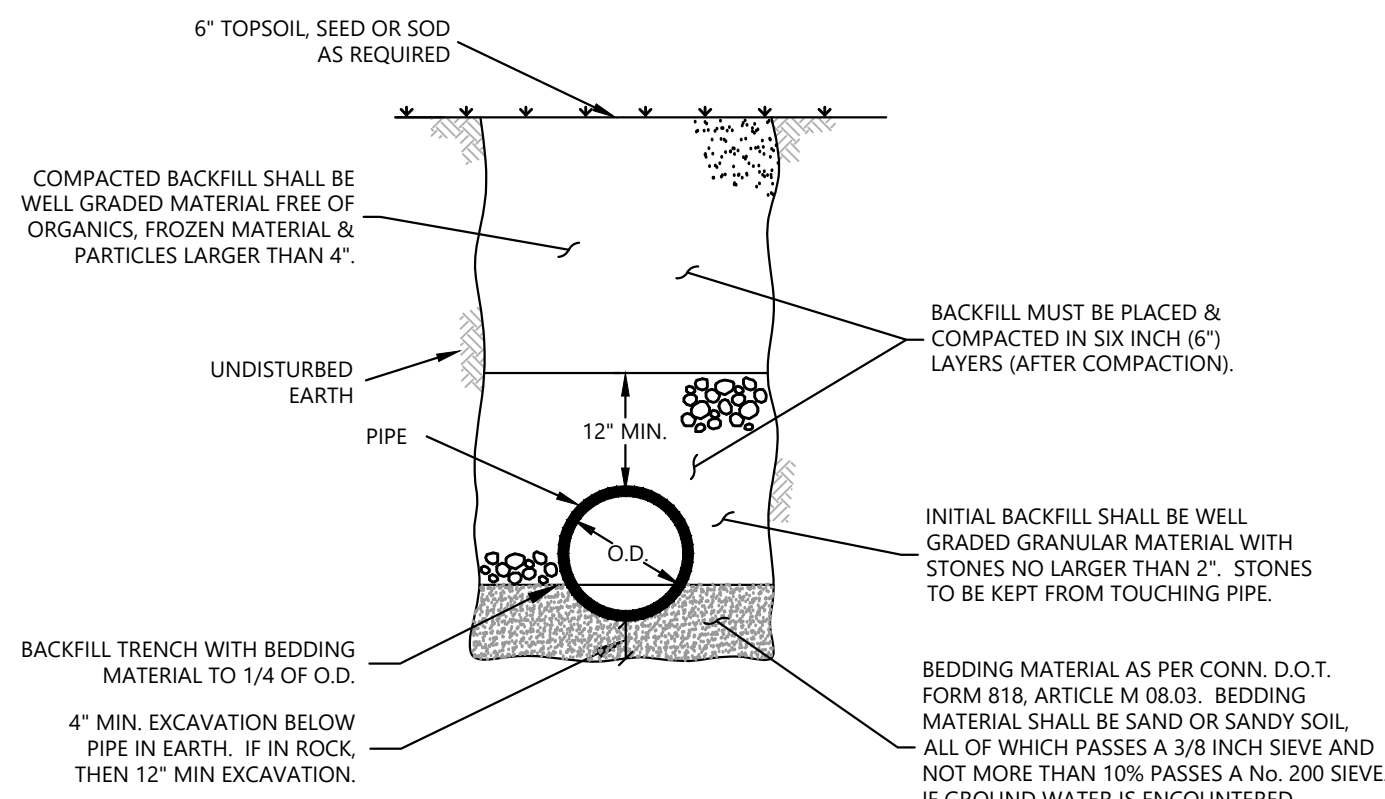
- NOTES:**
- 1. THICKNESS OF ALL LAYERS ARE SHOWN AFTER PLACEMENT AND COMPACTION.

**ASPHALT PAVEMENT DETAIL (LAFAYETTE ST) N.T.S.**



- NOTES:**
- 1. THICKNESS OF ALL LAYERS ARE SHOWN AFTER PLACEMENT AND COMPACTION.

**ASPHALT PAVEMENT DETAIL (NORTH STATE ST) N.T.S.**



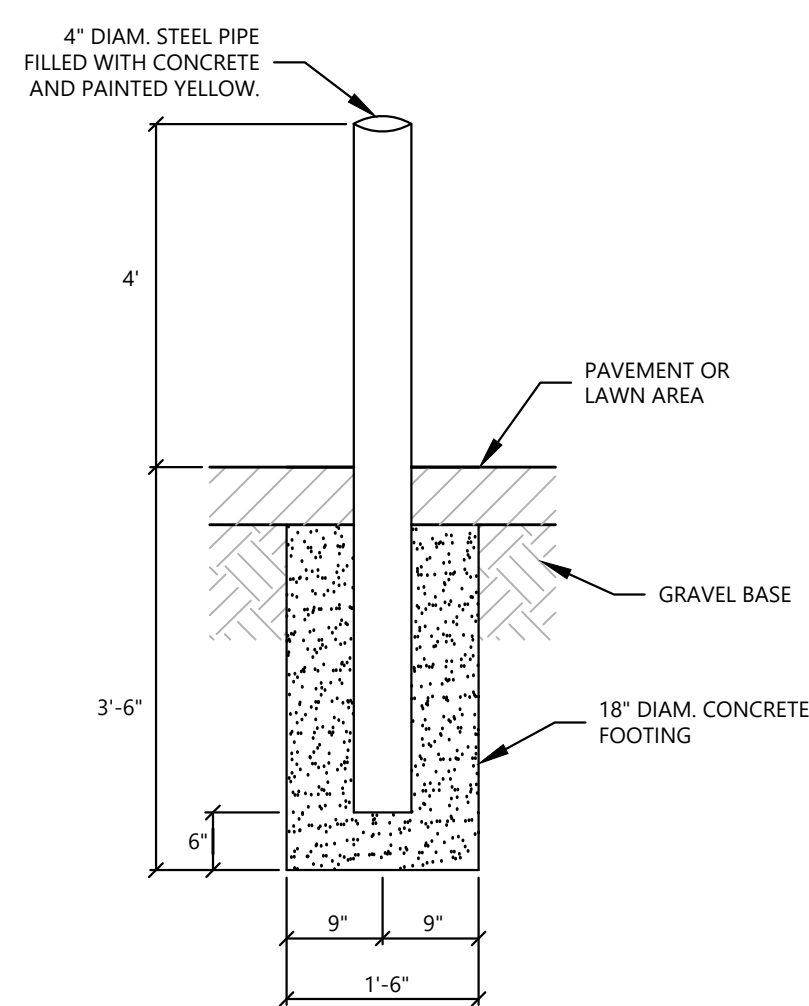
- NOTES:**
- 1. ALL MATERIAL TO BE COMPACTED TO 95% OF THE MAX. DRY DENSITY AS DETERMINED BY ASTM D1557, EXCEPT COMPACTED BACKFILL\* NOT UNDER PAVEMENT WHICH SHALL BE COMPACTED TO A DENSITY AT LEAST EQUAL TO THAT OF THE ADJACENT UNDISTURBED MATERIAL.
  - 2. ALL BEDDING, INITIAL BACKFILL & BACKFILL MATERIAL TO BE APPROVED BY THE DESIGN ENGINEER.

**STORM/SAN PIPE INSTALLATION (48" DIA. & UNDER) N.T.S.**

**NOTES & DETAILS**  
DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET  
15, 27 & 29 LAFAYETTE STREET  
STAMFORD, CT  
PREPARED FOR  
819 EAST MAIN STREET, LLC**

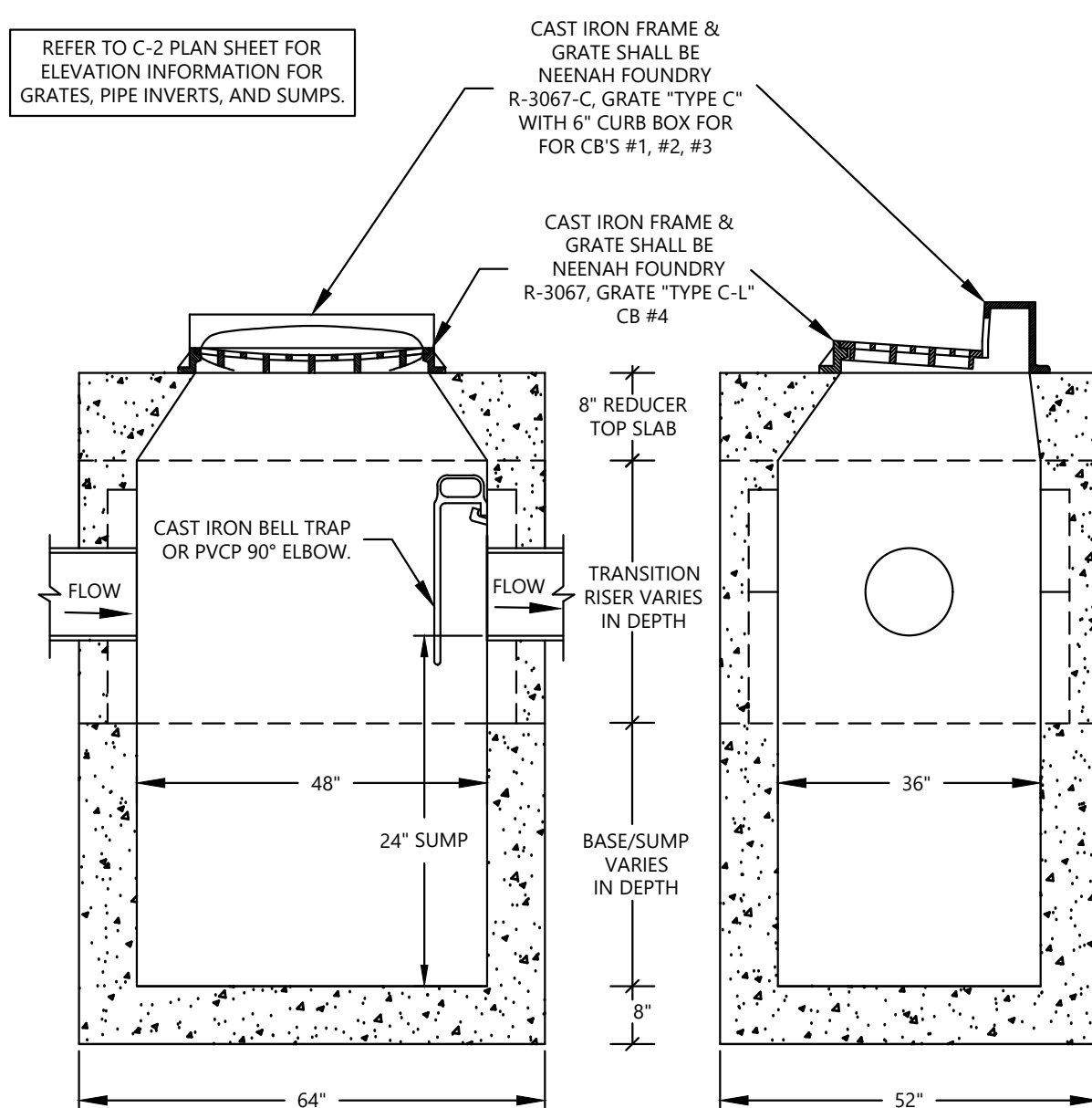
DATE: 2/03/2022	SCALE: AS NOTED
JOB NO. 173	
To my knowledge and belief this map is substantially correct as noted hereon	
	<b>DIMARZO &amp; BEREZKY</b> 191 LLOYD DRIVE FAIRFIELD, CT 06825 203.897.4110 LAND SURVEYING CIVIL ENGINEERING PERMITTING
This document is valid only if it is signed by the Engineer of Record and the designated licensed professional. Any alteration or addition to this document renders contents null and void.	
<b>C-5</b>	





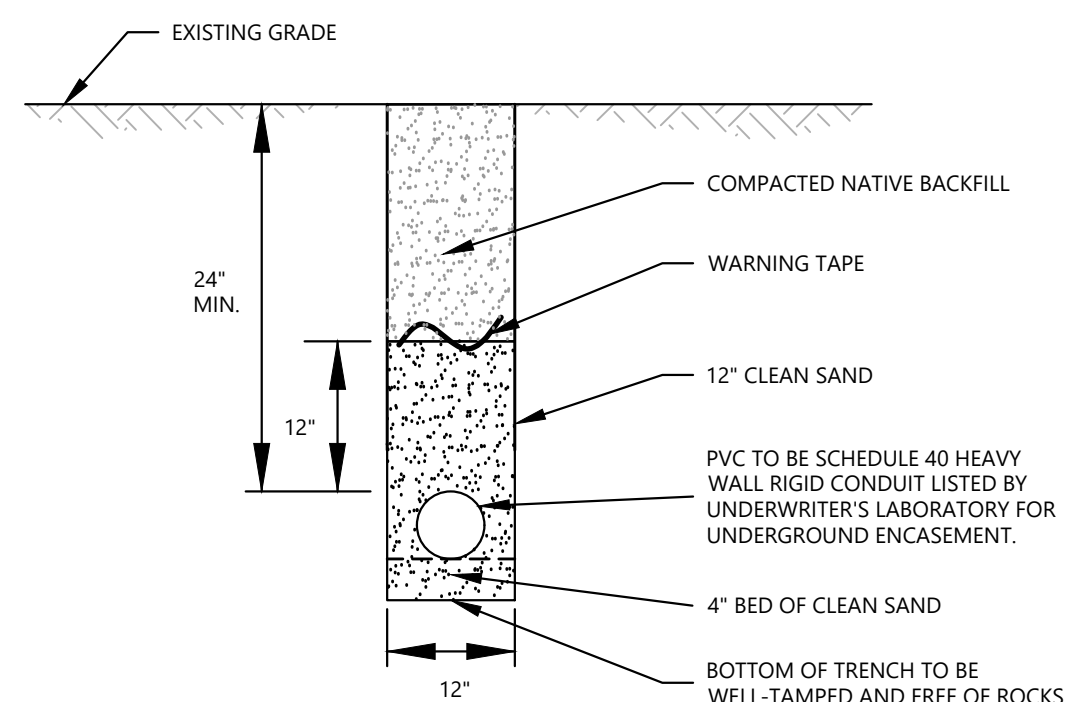
NOTES:  
1. CONCRETE TO BE MINIMUM OF 2,500 PSI STRENGTH.

**BOLLARD DETAIL**  
N.T.S.



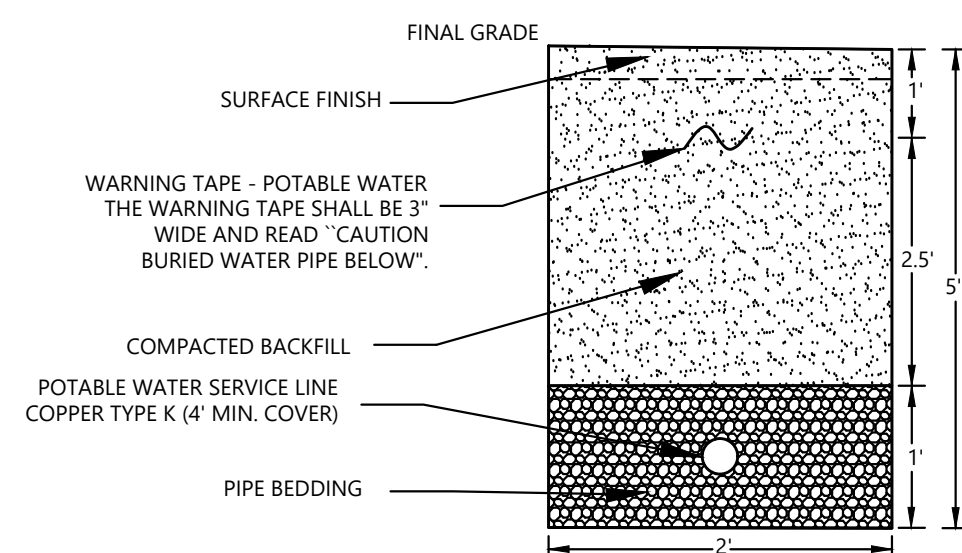
NOTES:  
1. CATCH BASIN BASE/SUMP STRUCTURE SHALL BE PLACED ON A 6" MIN. LAYER OF CRUSHED STONE. CRUSHED STONE SHALL BE PER CT D.O.T. FORM 818 TABLE M.01.02-2 GRADATION NO.4.  
2. ANY FILL MATERIAL PLACED UNDER THE CATCH BASIN STRUCTURE SHALL BE COMPACTED TO 95% OF THE MAX. DRY DENSITY AS DETERMINED BY ASTM D1557.  
3. DESIGN AND REINFORCEMENT OF PRECAST CONCRETE SHALL COMPLY WITH ASTM C 478.  
4. CATCH BASIN STRUCTURE SHALL COMPLY WITH AASHTO HS-20 LOADING.  
5. THIN WALL KNOCKOUT SPACE ALONG THE PRECAST WALL SHALL BE FILLED WITH BRICK AND MORTAR SO TO MAKE ALL WALL THICKNESS 8" MIN. EXCLUDING THE PIPE PENETRATION.  
6. ALL JOINTS AND PENETRATIONS SHALL BE MORTARED SMOOTH WITH THE FACE OF THE ADJACENT PRECAST CONCRETE SURFACE.  
7. REFER TO CONNECTICUT PRECAST CORP. CATCH BASIN PRODUCT 36"x48" STANDARD PRECAST CTDOT DROP INLET - 8" WALL, TYPE-C FOR PRODUCT SPECIFICATION.

**CATCH BASIN DETAIL**  
N.T.S.



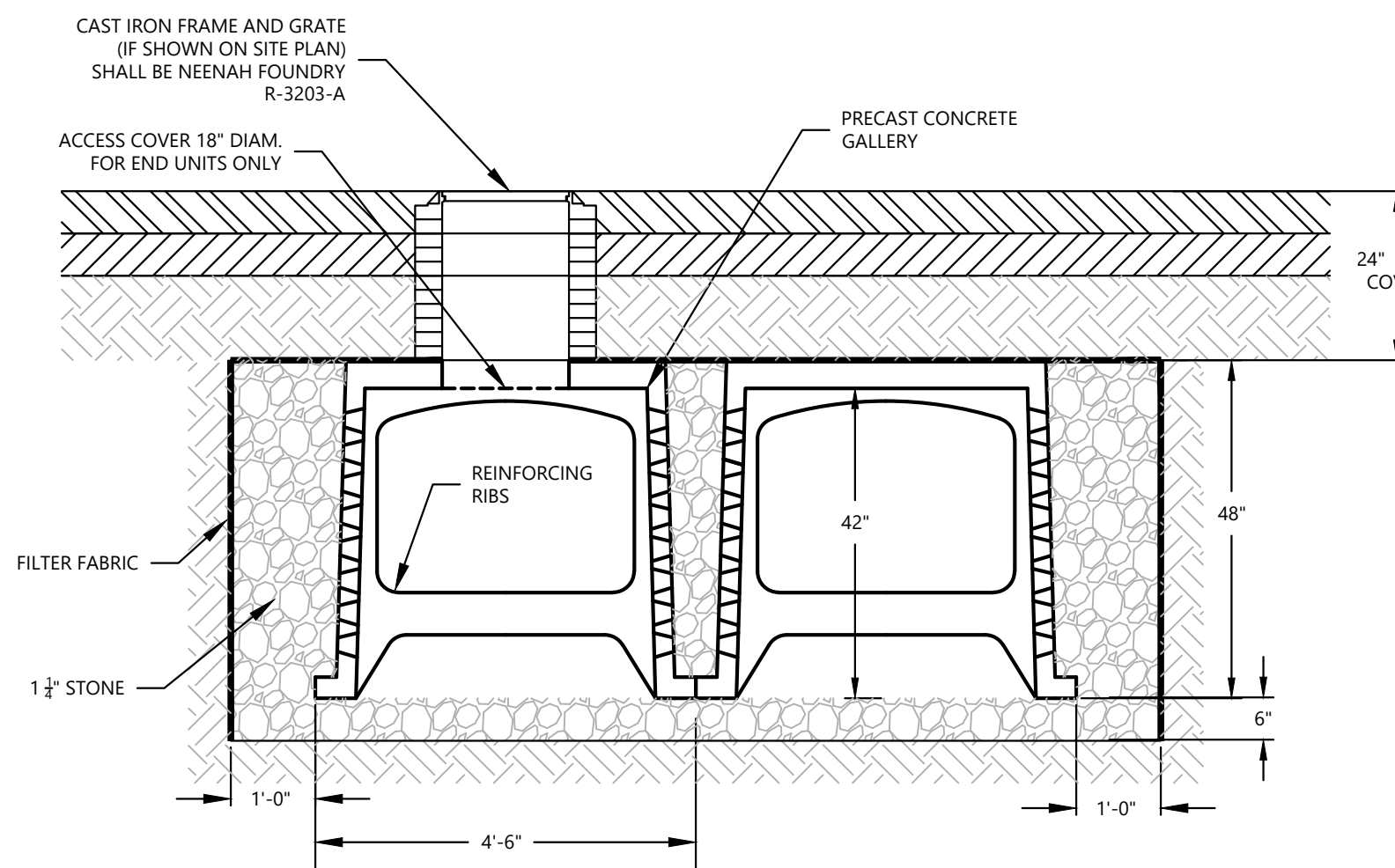
NOTES:  
1. IF 24" OF COVER CANNOT BE OBTAINED OVER THE CONDUIT, CONDUIT SHALL BE CONCRETE ENCASED.  
2. ALL BACKFILL MATERIAL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557.  
3. ALL WORK SHALL BE PERFORMED ACCORDING TO THE APPROPRIATE UTILITY COMPANY REQUIREMENTS.

**CONDUIT TRENCH (SAND BEDDING)**  
N.T.S.



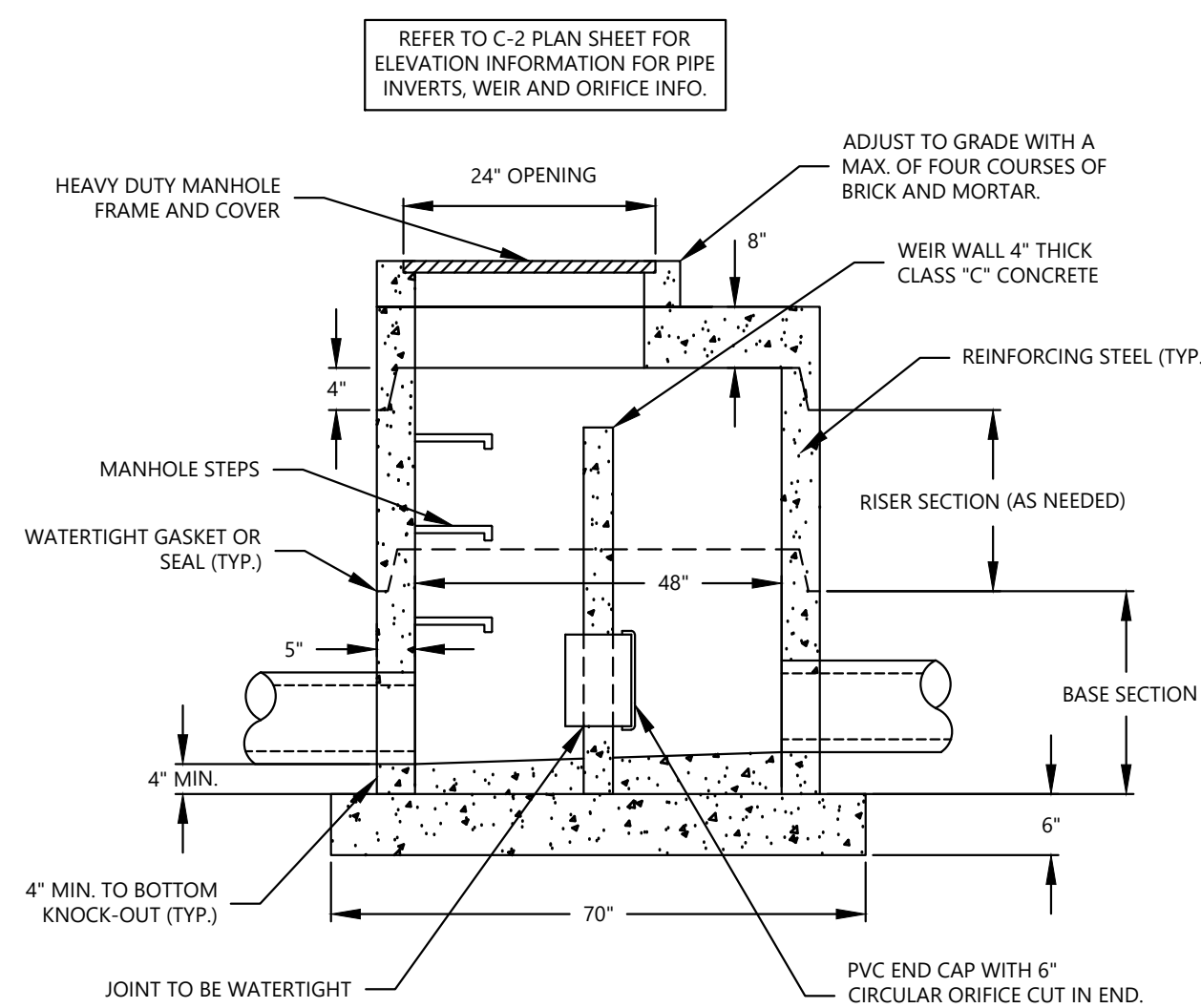
NOTES:  
BEDDING MATERIAL AS PER CONN. D.O.T. FORM 818, ARTICLE M 08.03. BEDDING MATERIAL SHALL BE SAND OR SANDY SOIL, ALL OF WHICH PASSES A 3/8 INCH SIEVE AND NOT MORE THAN 10% PASSES A No. 200 SIEVE. IF GROUND WATER IS ENCOUNTERED, CONTACT THE DESIGN ENGINEER.  
POTABLE WATER PIPES SHALL BE LAID AT LEAST 10' HORIZONTALLY FROM ANY EXISTING OR PROPOSED SANITARY PIPE.  
POTABLE WATER PIPES CROSSING SANITARY PIPES SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18" BETWEEN THE OUTSIDE OF THE WATER PIPE AND THE OUTSIDE OF THE SANITARY PIPE. THIS SEPARATION SHALL BE THE CASE WHEN THE WATER PIPE IS EITHER ABOVE OR BELOW THE SEWER WITH PREFERENCE TO THE WATER PIPE LOCATED ABOVE THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SANITARY PIPE AS POSSIBLE.  
ALL BURIED PIPE USED FOR POTABLE WATER DISTRIBUTION SHALL BE PRESSURE TESTED UNDER THE SUPERVISION OF THE ENGINEER IN ACCORDANCE WITH AWWA C600 AT 75 PSI.  
ALL NEW CLEANED OR REPAIRED POTABLE WATER PIPES AND EQUIPMENT SHALL BE DISINFECTED UNDER THE SUPERVISION OF THE ENGINEER IN ACCORDANCE WITH AWWA STANDARD C651-92, EXCEPT SECTION 5.1 (THE TABLE METHOD).  
THE POTABLE WATER SUPPLY WELL SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C654-87 AFTER INSTALLATION AND PRIOR TO PLACING INTO SERVICE. PRIOR TO PLACING INTO SERVICE, A WATER SAMPLE SHALL BE COLLECTED TO DOCUMENT THE ABSENCE OF COLIFORM BACTERIA.

**WATER SERVICE DETAIL**  
N.T.S.



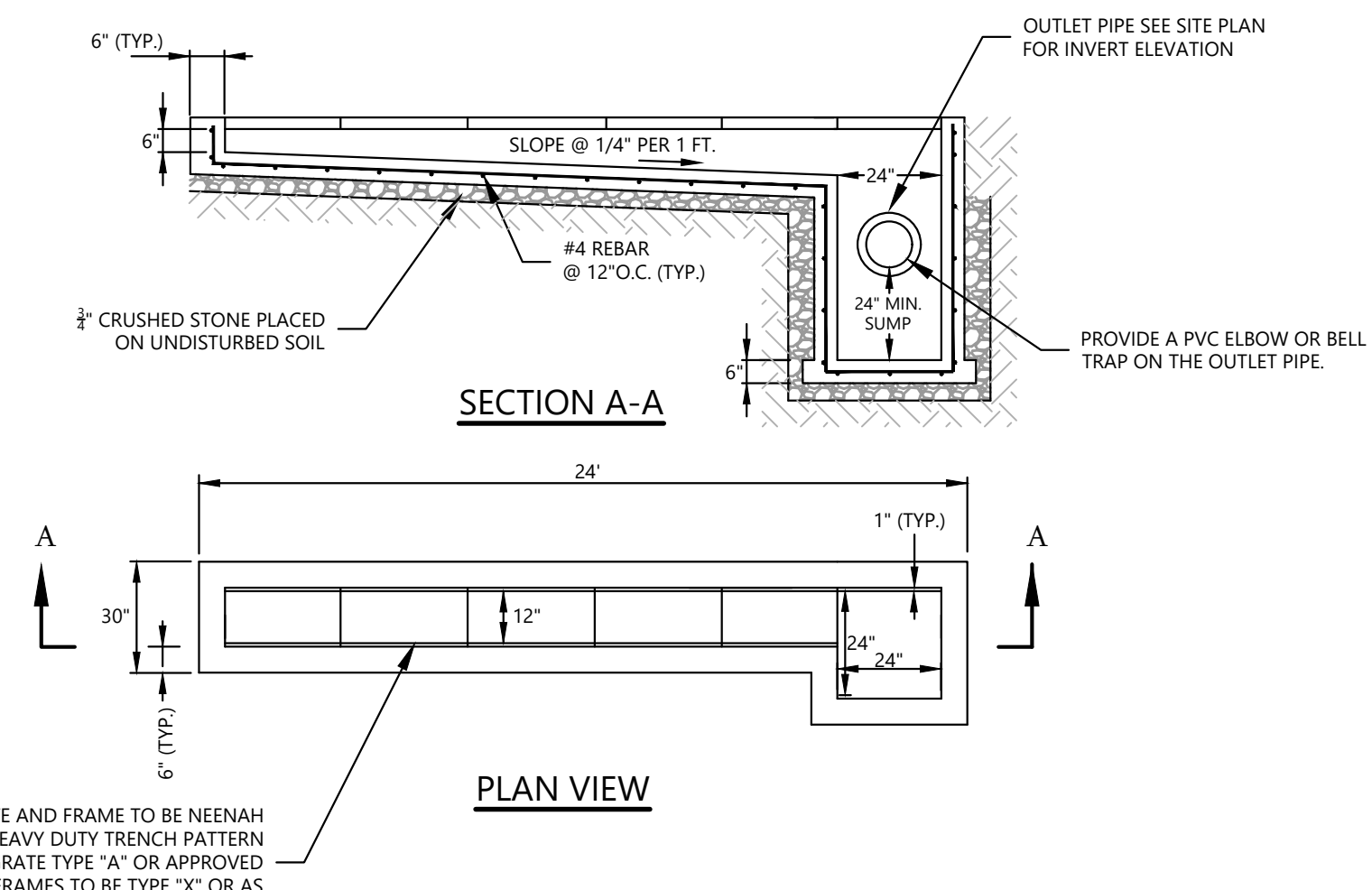
NOTES:  
1. ALL GALLERIES TO HANDLE H-20 LOADINGS AND SHALL COMPLY WITH THE DETAIL. INTERIOR SECTIONS TO HAVE NO END WALLS. END SECTIONS TO HAVE ONE END WALL. END UNITS TO BE INSTALLED AT ENDS OF ALL GALLERY RUNS.  
2. ALL GALLERY SECTIONS TO HAVE HOLES BROKEN TO ALLOW FLOW PRIOR TO PLACEMENT.  
3. THERE SHALL BE A 6" LAYER OF 1 1/4" CRUSHED STONE BELOW ALL GALLERIES.  
4. THE ROWS OF GALLERIES SHALL BE PLACED SUCH THAT BASES ARE TOUCHING. SPACE BETWEEN GALLERY ROWS SHALL BE FILLED WITH 1 1/4" CRUSHED STONE.  
5. THERE SHALL BE A MINIMUM OF 1" OF 1 1/4" CRUSHED STONE ON THE SIDES OF THE OUTER GALLERIES.  
6. A 6" BY 5" BY 4" CONCRETE SLAB (1-2-3 CONCRETE) SHALL BE INSTALLED AT ANY PIPE ENTRANCE TO THE GALLERIES TO PREVENT EROSION.  
7. RAISE FRAME AND GRATE TO GRADE USING SOLID CONCRETE BLOCK AND MORTAR.  
8. REMOVE ANY TOPSOIL PRIOR TO INSTALLATION OF GALLERY.  
9. CONTACT THE DESIGN ENGINEER THREE DAYS PRIOR TO EXCAVATION FOR THE GALLERIES. DURING THE EXCAVATION, THE DESIGN ENGINEER MAY REVISE THE ELEVATIONS OF THE GALLERIES IF FIELD CONDITIONS DICTATE.  
10. CRUSHED STONE SHALL BE PER CT D.O.T. FORM 818 TABLE M.01.02-2 GRADATION NO.4.

**48" PRECAST CONCRETE GALLERY DETAIL**  
(4'W x 8'L)  
N.T.S.



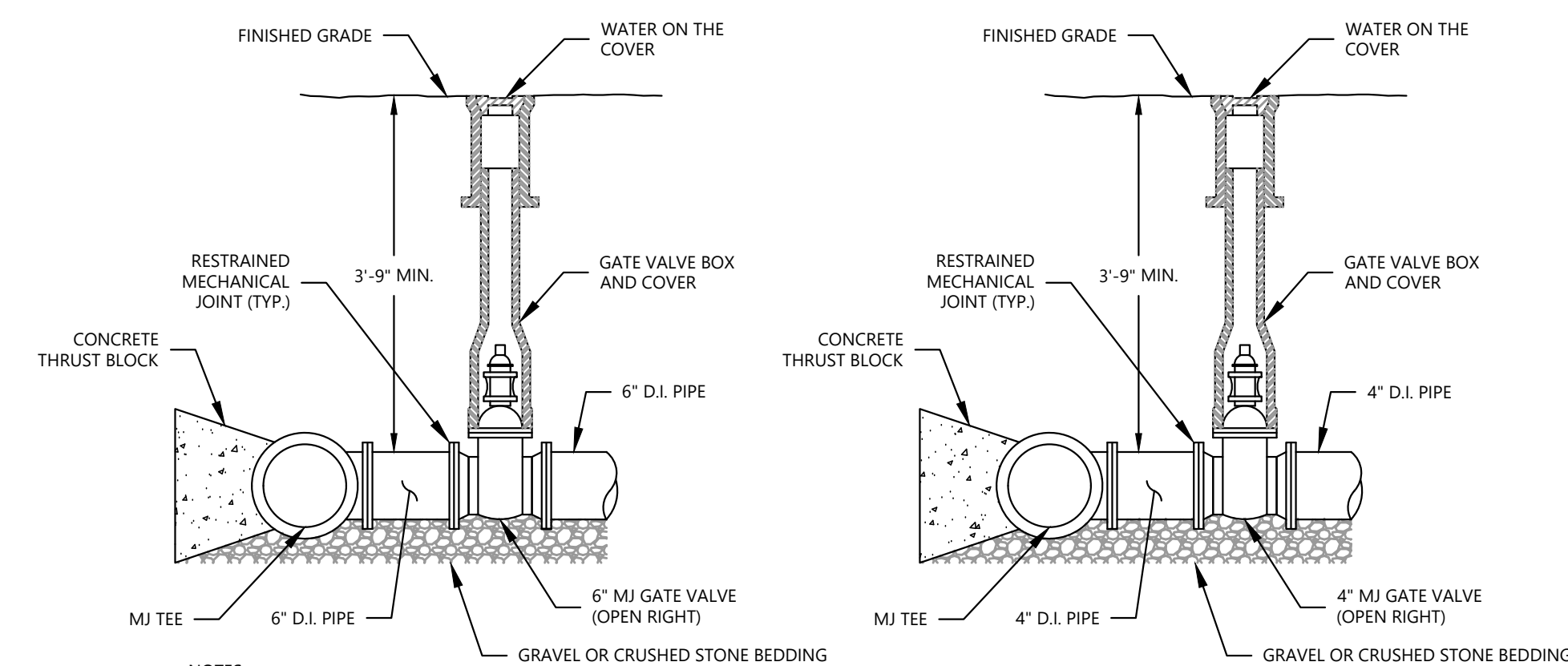
NOTES:  
1. OVERALL MANHOLE SPECIFICATIONS SHALL MEET OR EXCEED THE CITY OF STAMFORD STANDARD MANHOLE DETAIL ON THE CITY "STORM DRAINAGE DETAILS" SHEET SD-1.  
2. MANHOLE BASE SLAB OR BASE SECTION SHALL BE PLACED ON A 6" MIN. LAYER OF CRUSHED STONE. CRUSHED STONE SHALL BE PER CT D.O.T. FORM 818 TABLE M.01.02-2 GRADATION NO.4. ANY FILL MATERIAL PLACED UNDER THE MANHOLE STRUCTURE SHALL BE COMPACTED TO 95% OF THE MAX. DRY DENSITY AS DETERMINED BY ASTM D1557.  
3. DESIGN AND REINFORCEMENT OF PRECAST CONCRETE SHALL COMPLY WITH ASTM C 478.  
4. MANHOLE SHALL COMPLY WITH AASHTO HS-20 LOADING.  
5. MANHOLE STEPS SHALL COMPLY WITH ASTM A-615 GRADE 60 (STEEL) OR ASTM D-4104 (POLY).  
6. ALL JOINTS AND PENETRATIONS SHALL BE MORTARED SMOOTH WITH THE FACE OF THE ADJACENT PRECAST CONCRETE SURFACE.

**MANHOLE WITH OVERFLOW WEIR DETAIL**  
(MH#2 & MH#3)  
48" DIAMETER w/ TOP SLAB  
N.T.S.



TRENCH GRATE AND FRAME TO BE NEENAH FOUNDRY HEAVY DUTY TRENCH PATTERN #R-4990-DX GRATE TYPE "A" OR APPROVED EQUIVALENT. FRAMES TO BE TYPE "X" OR AS RECOMMENDED BY THE MANUFACTURER.

**TRENCH DRAIN (TD#1)**  
N.T.S.



NOTES:  
1. DUCTILE IRON (D.I.) PIPE FOR WATER SERVICE SHALL BE A.W.W.A. C151, WITH CEMENT MORTAR LINING COMPLYING WITH A.W.W.A. C104. D.I. PIPE SHALL BE DOUBLE CEMENT LINED INSIDE.  
2. GATE VALVES SHALL BE OF DOUBLE DISC, PARALLEL SEAT TYPE WITH CAST IRON BODY BRONZE STEM AND RINGS DESIGNED FOR 175 P.S.I. WORKING PRESSURE. ALL GATE VALVES SHALL BE TESTED HYDRAULICALLY TO 300 P.S.I. GATE VALVES SHALL MEET THAT LATEST A.W.W.A. C500.  
3. VALVE BOXES: FURNISH VALVE BOXES 5-INCHES IN DIAMETER, 1/2" THICK, WITH CAST IRON BASES AND COVERS. PROVIDE MUELLER H-10360, TWO-PIECE, SCREW TYPE WITH BASE, TOP SECTION AND COVER AS REQUIRED, OR AN APPROVED EQUAL.  
4. WATER SERVICE PIPING TESTS, DISINFECTION TESTING AND ACCEPTANCE AS PER AQUARIUM WATER COMPANY SPECIFICATIONS.

**MJ 6" GATE VALVE INSTALLATION**  
N.T.S.

**MJ 4" GATE VALVE INSTALLATION**  
N.T.S.

**DETAILS - 1**

DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET**  
**15, 27 & 29 LAFAYETTE STREET**  
**STAMFORD, CT**  
PREPARED FOR  
**819 EAST MAIN STREET, LLC**

DATE: 2/03/2022  
JOB NO. 173

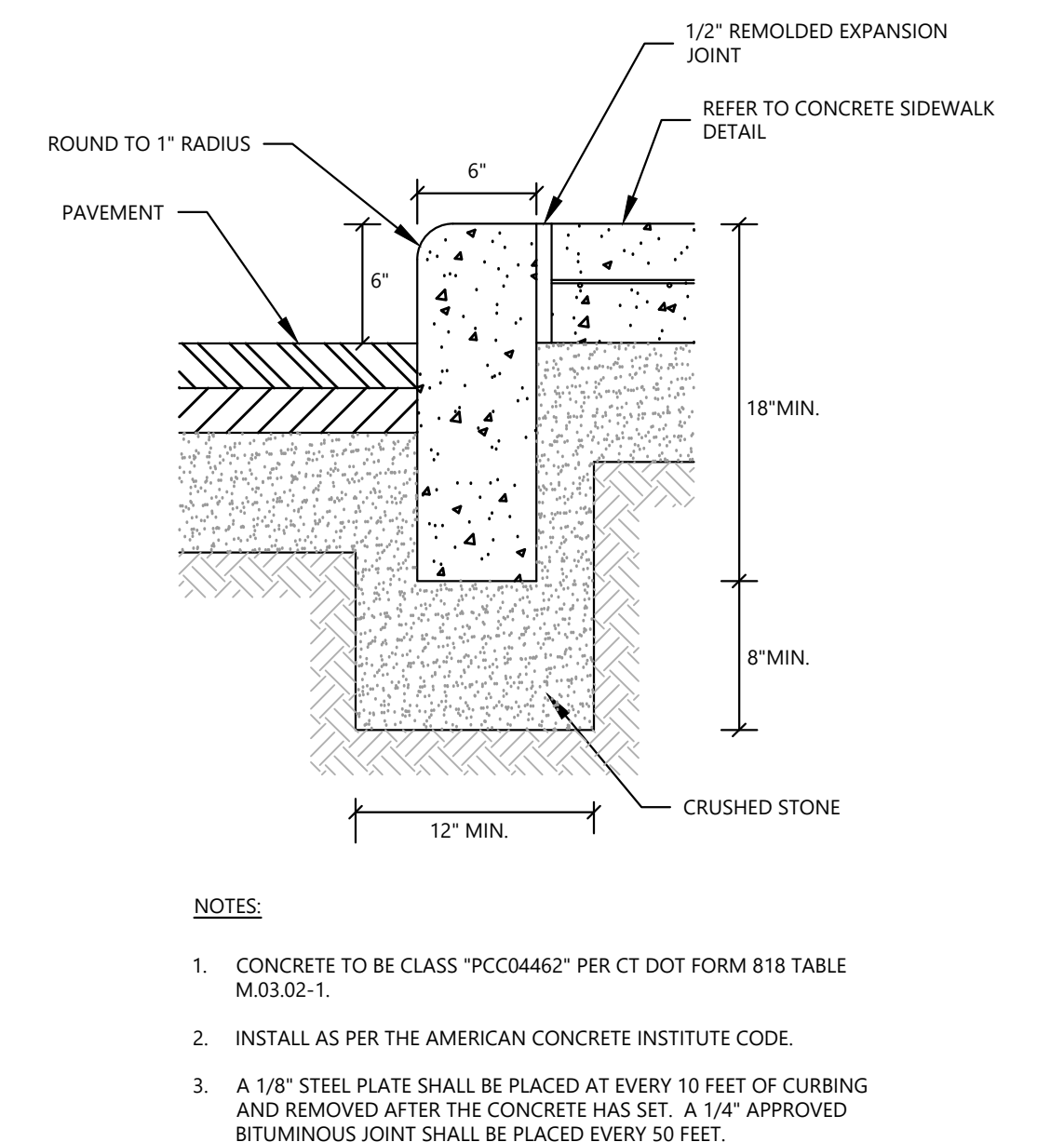
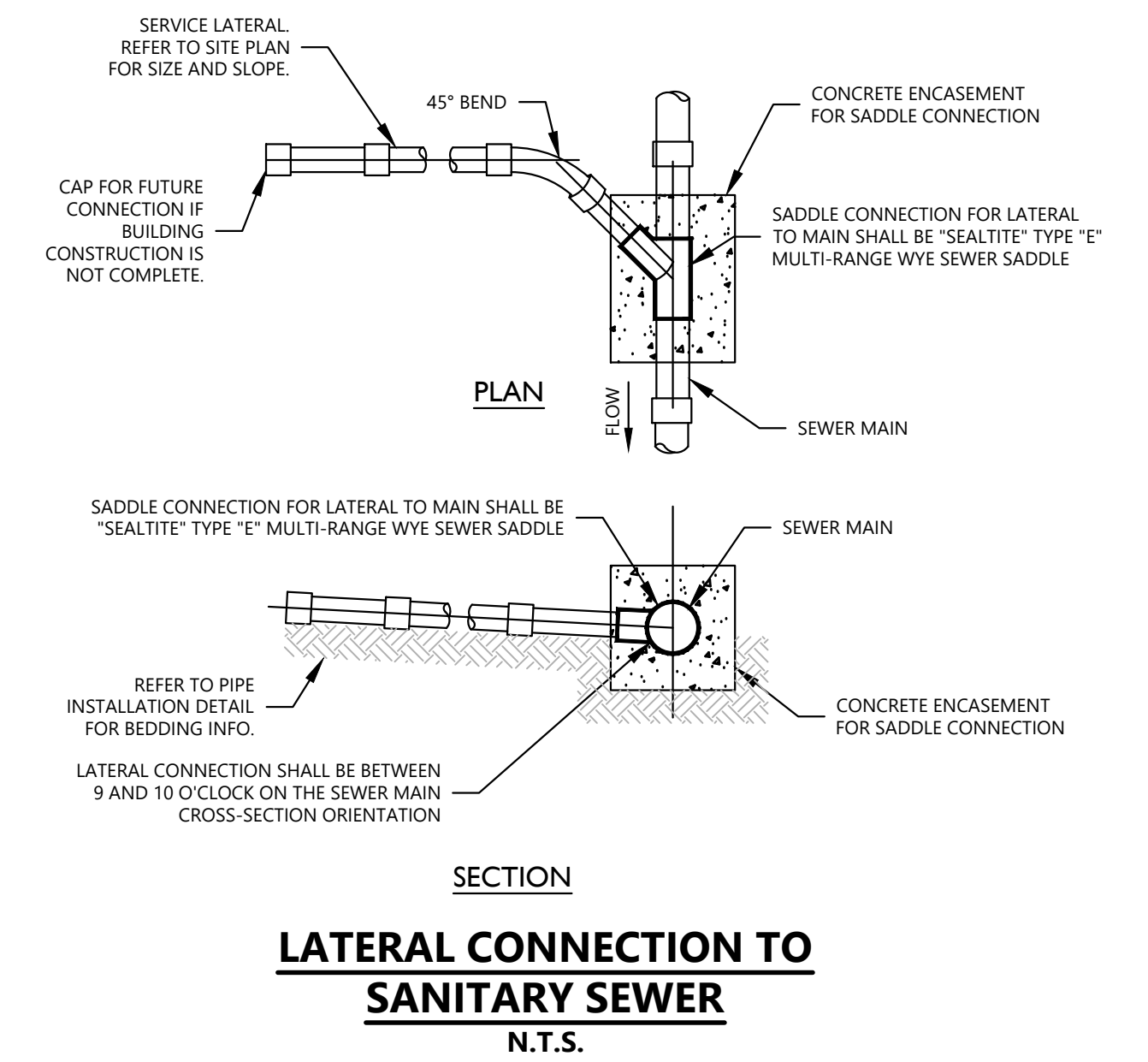
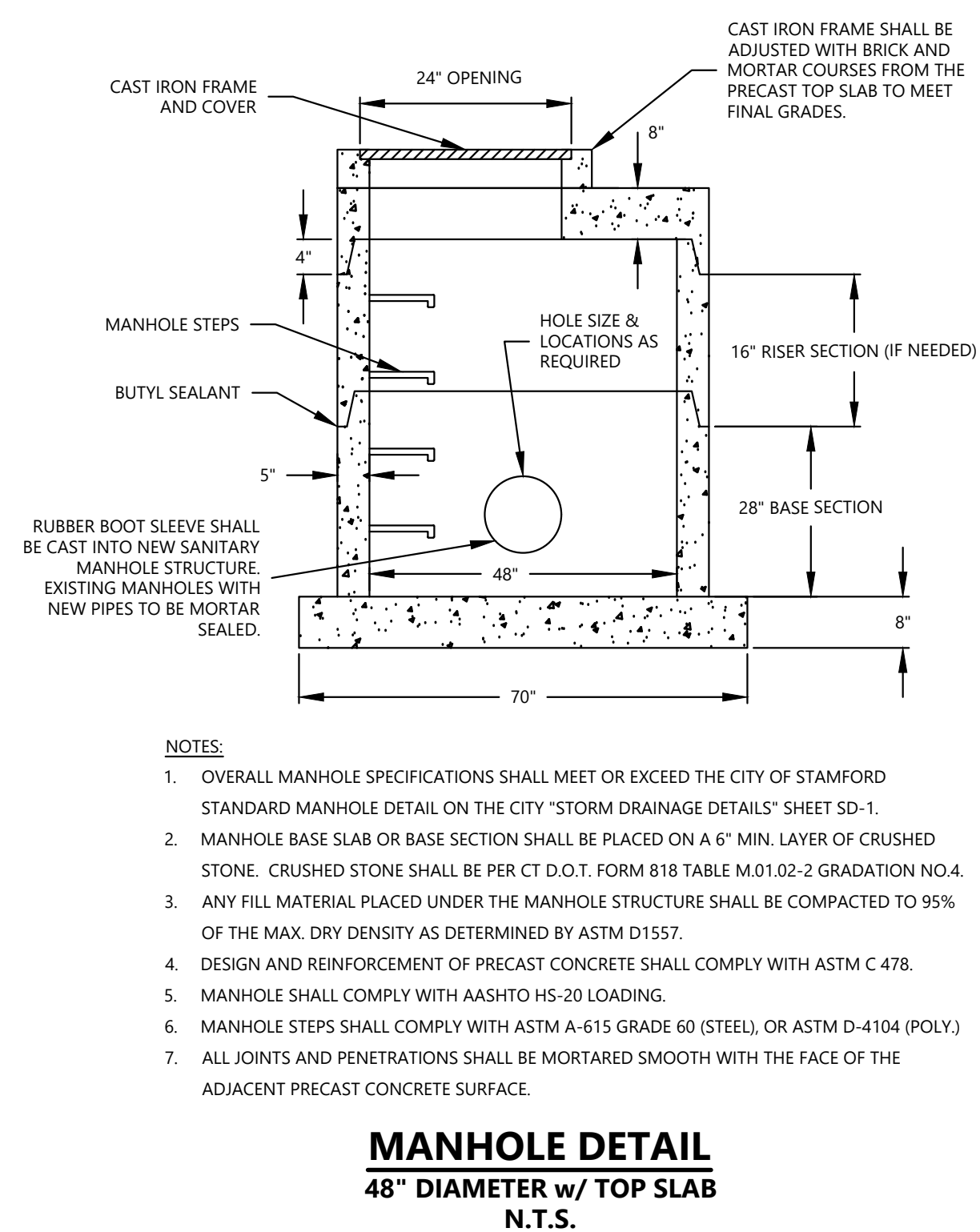
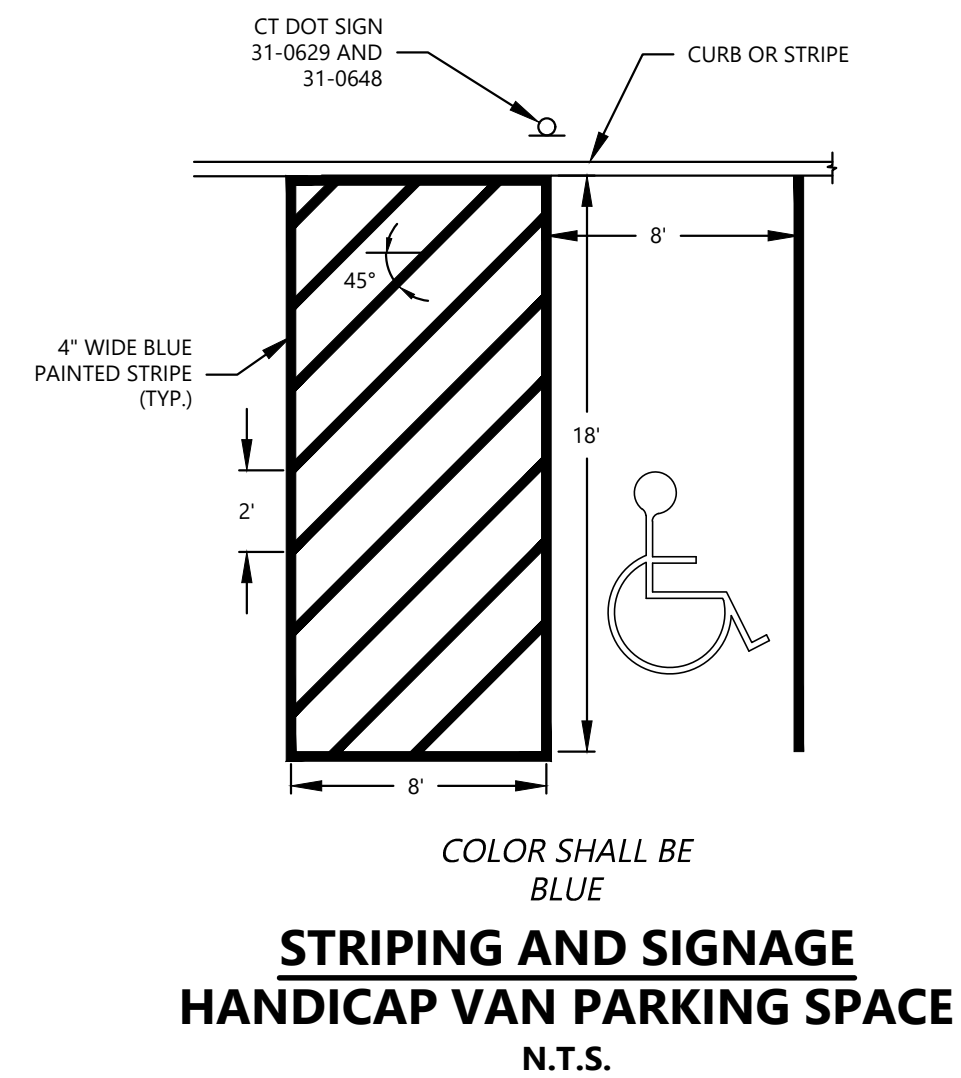
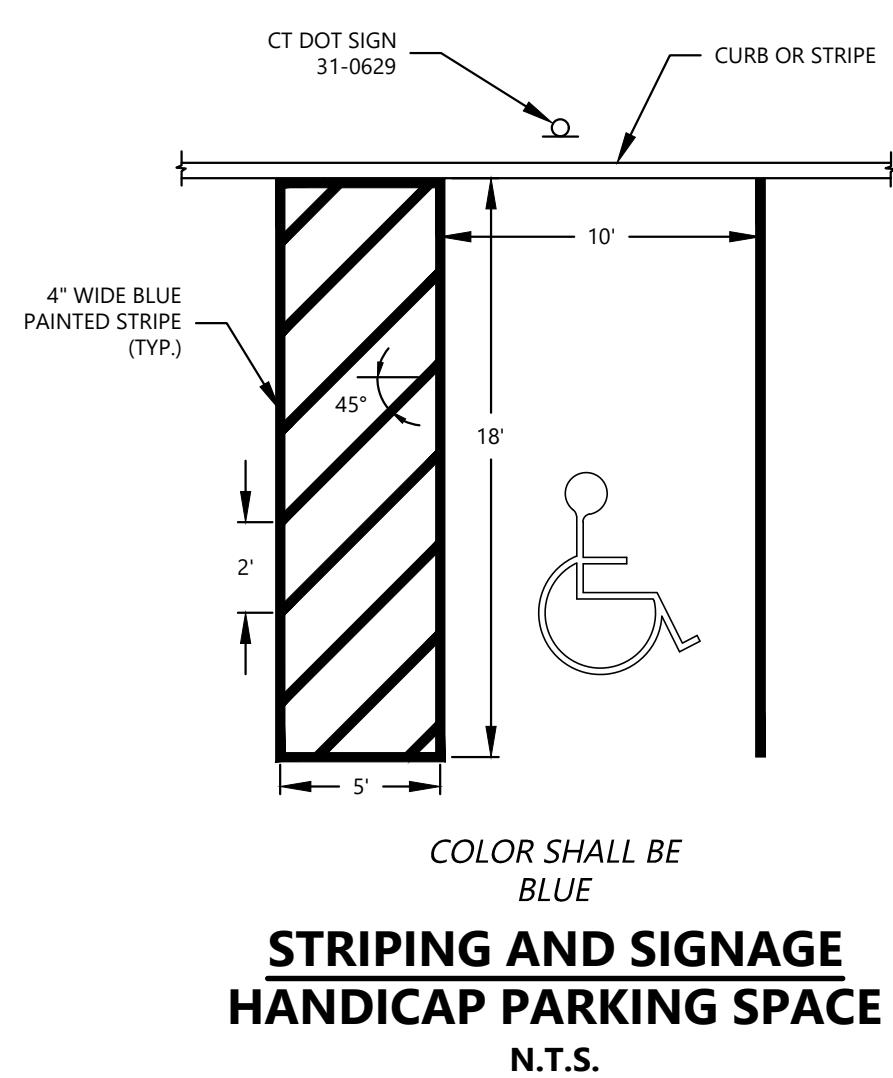
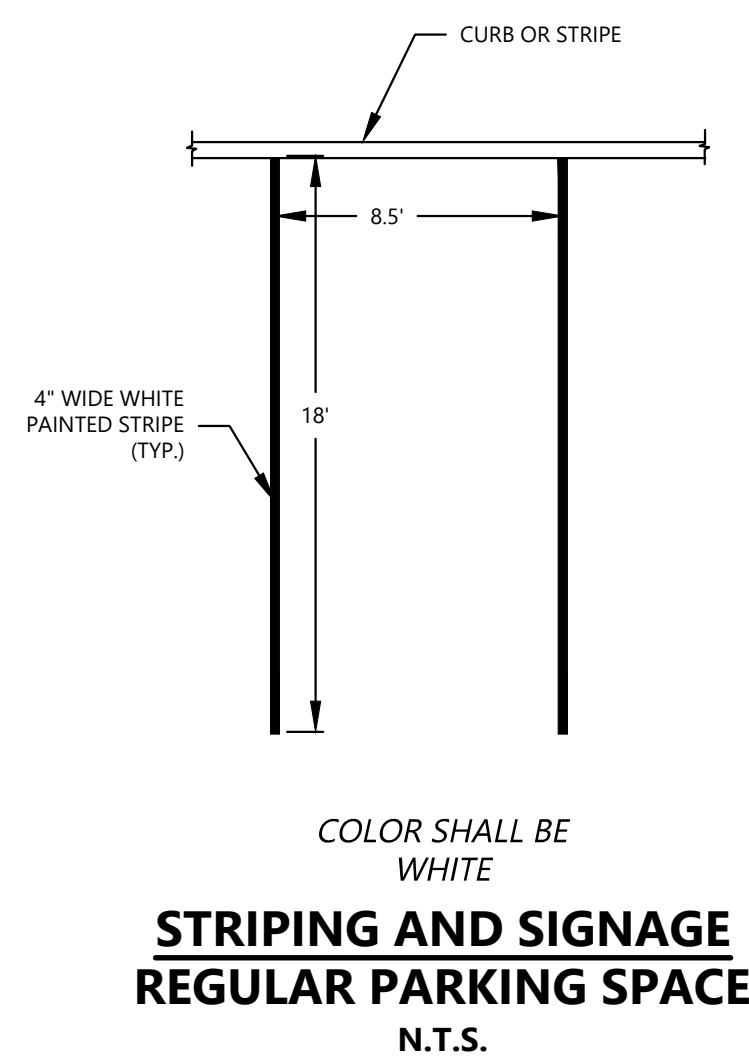
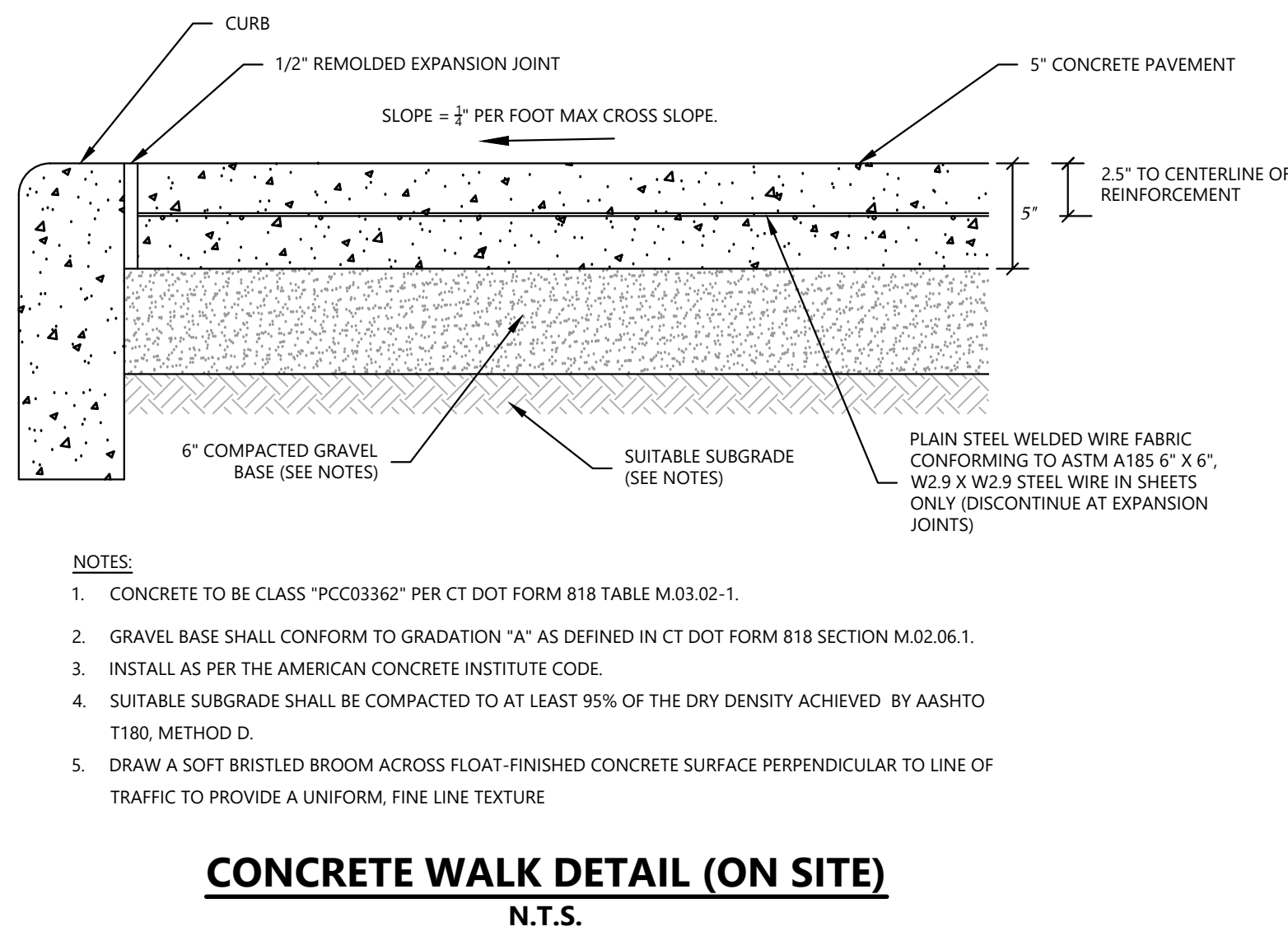
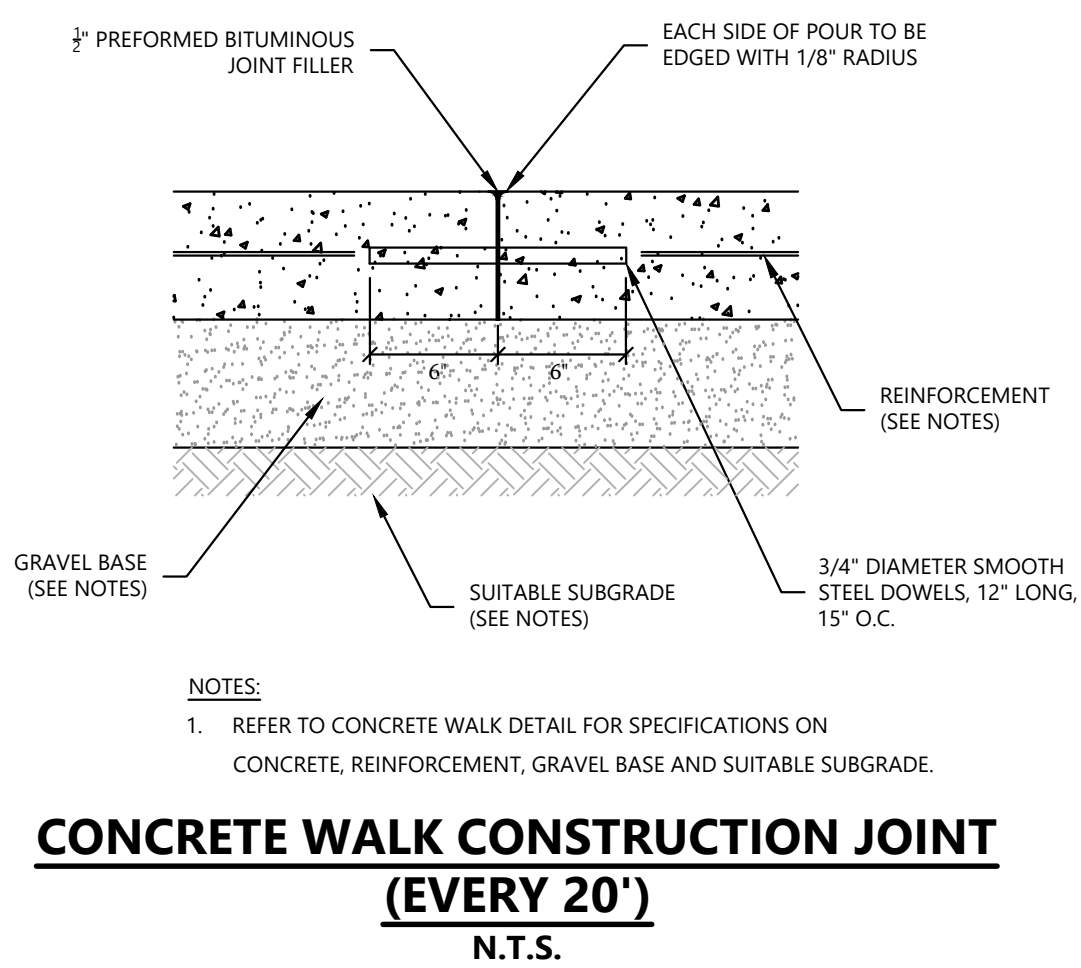
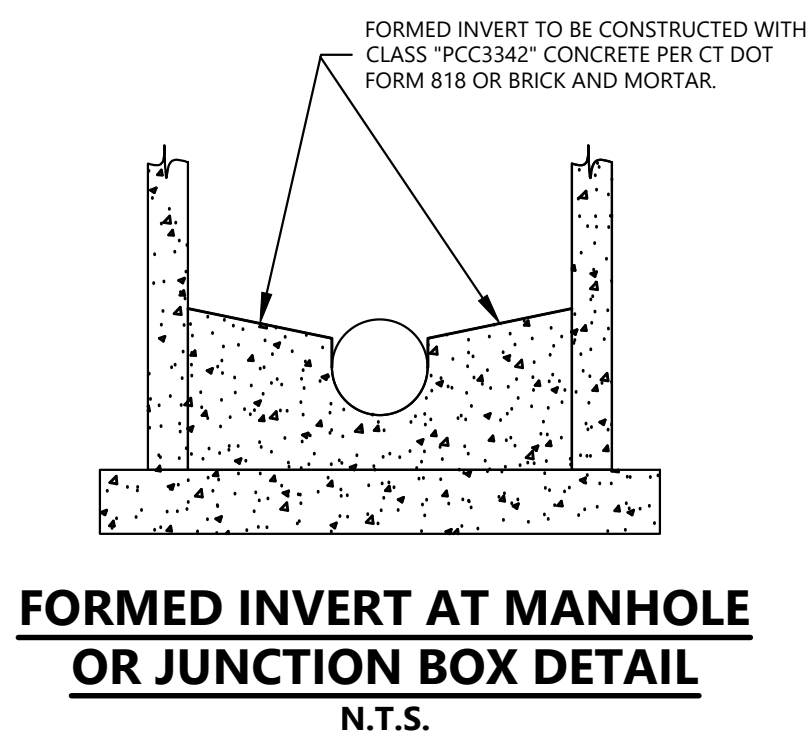
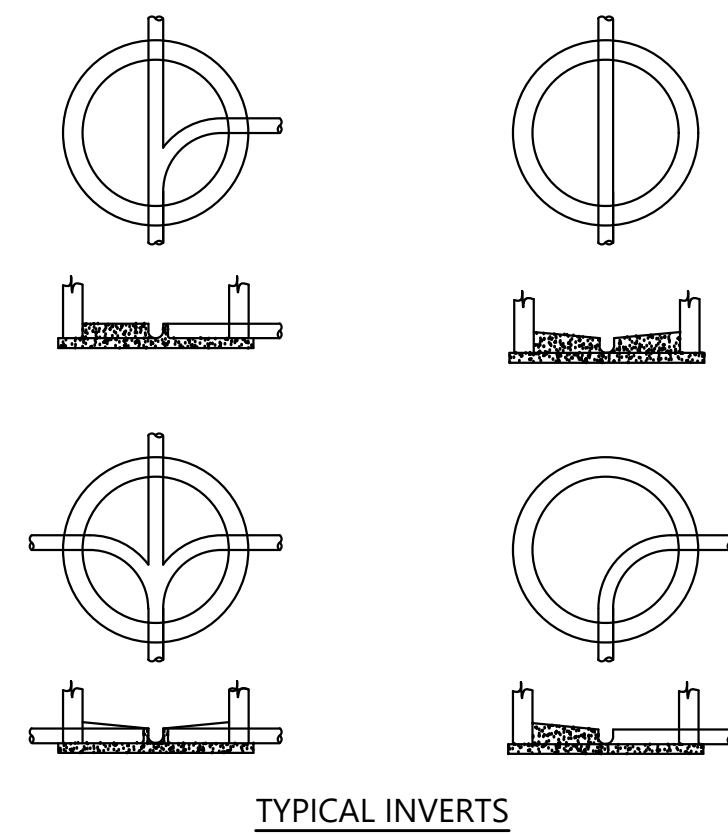
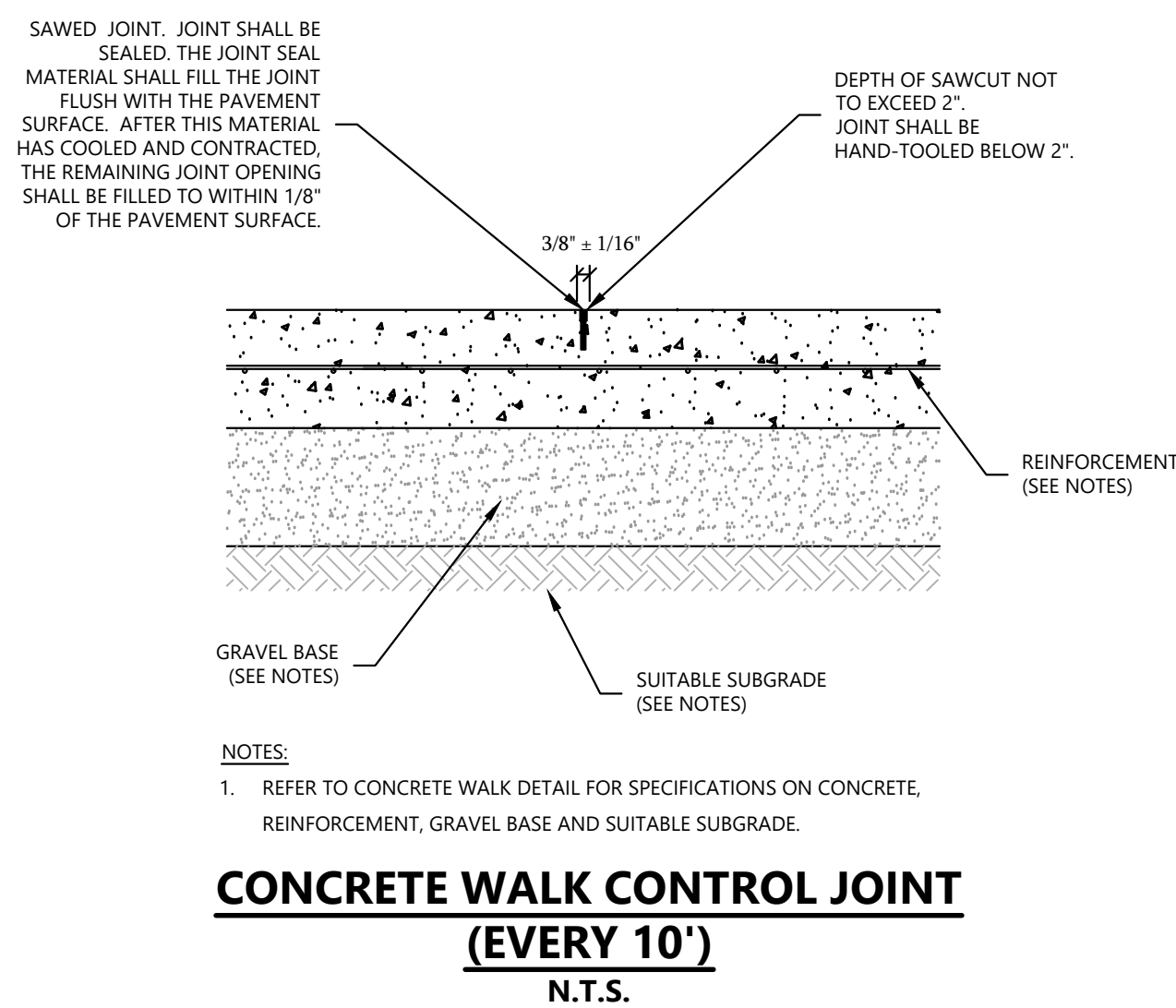
SCALE: AS NOTED

To my knowledge and belief this map is substantially correct as noted hereon

*Louis Dimarzo*  
LOUIS DIMARZO  
2/03/2022  
DATE

**DIMARZO & BEREZKY**  
191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.897.4110  
LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

This document is valid only if it is signed by the designated licensed professional engineer or architect. Any alteration or addition to this document renders it null and void.



**DETAILS - 2**  
DEPICTING  
821, 825, 827 & 831 EAST MAIN STREET  
15, 27 & 29 LAFAYETTE STREET  
STAMFORD, CT  
PREPARED FOR  
819 EAST MAIN STREET, LLC

DATE: 2/03/2022  
JOB NO. 173

SCALE: AS NOTED

To my knowledge and belief this map is substantially correct as noted hereon.

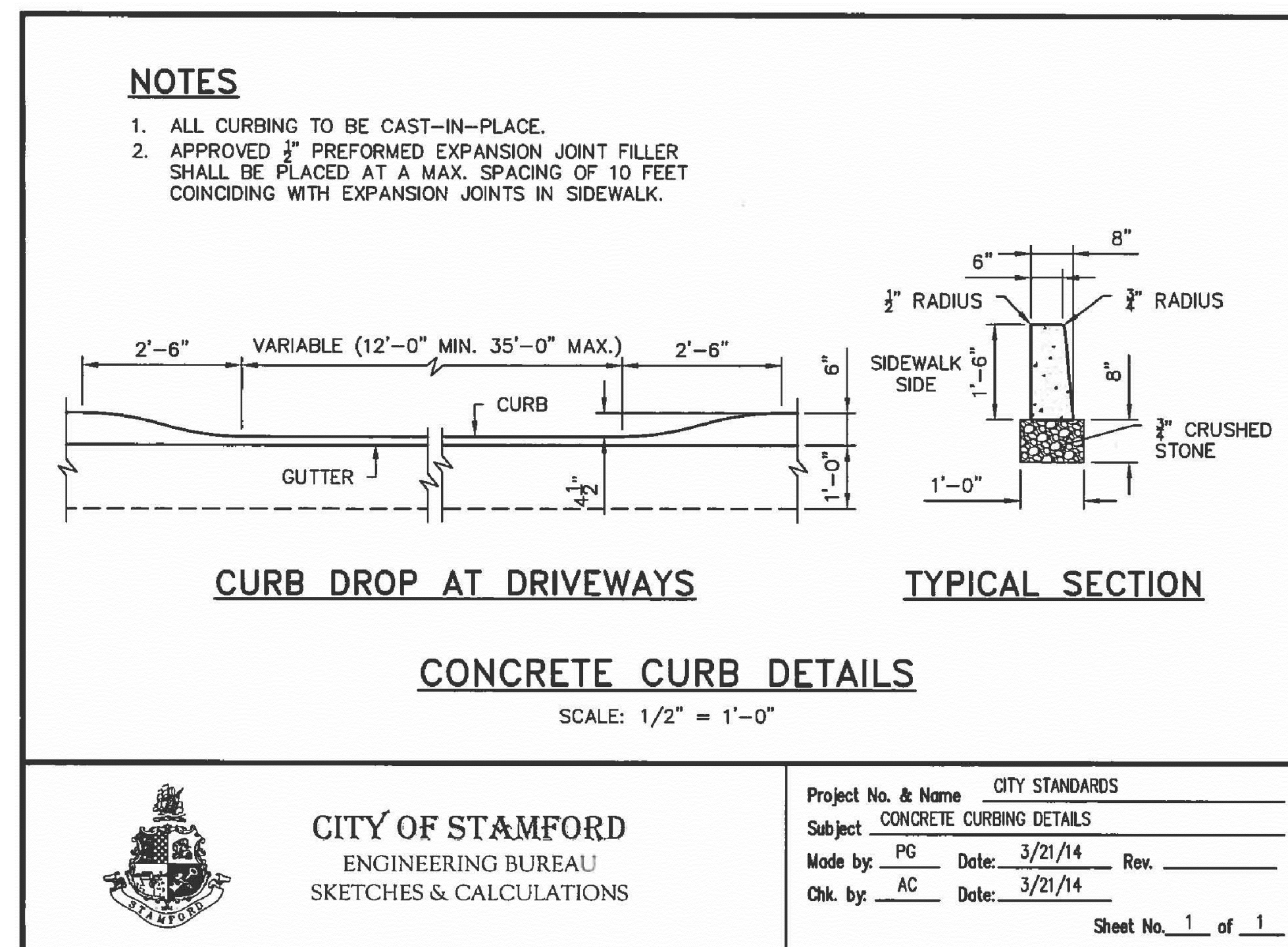
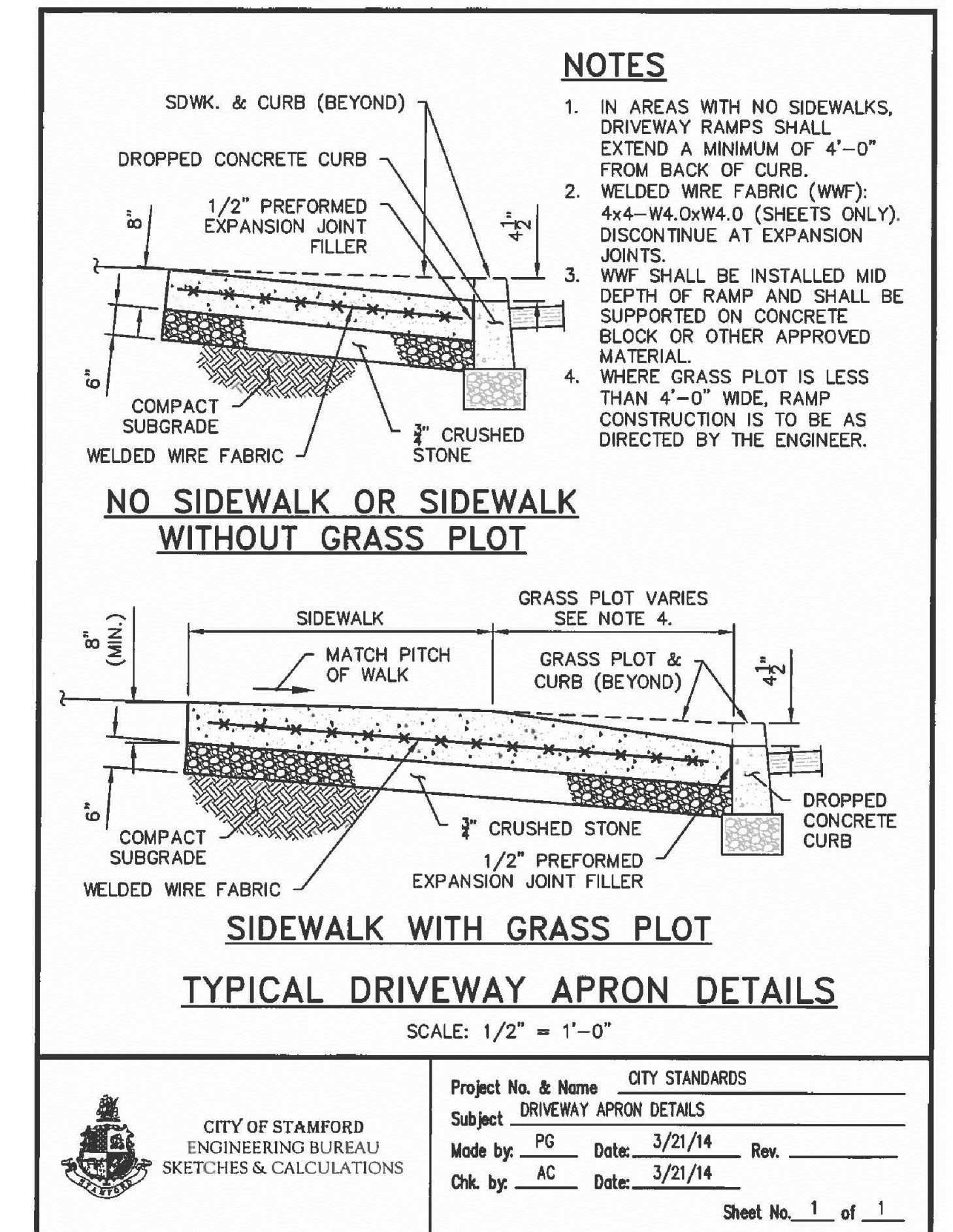
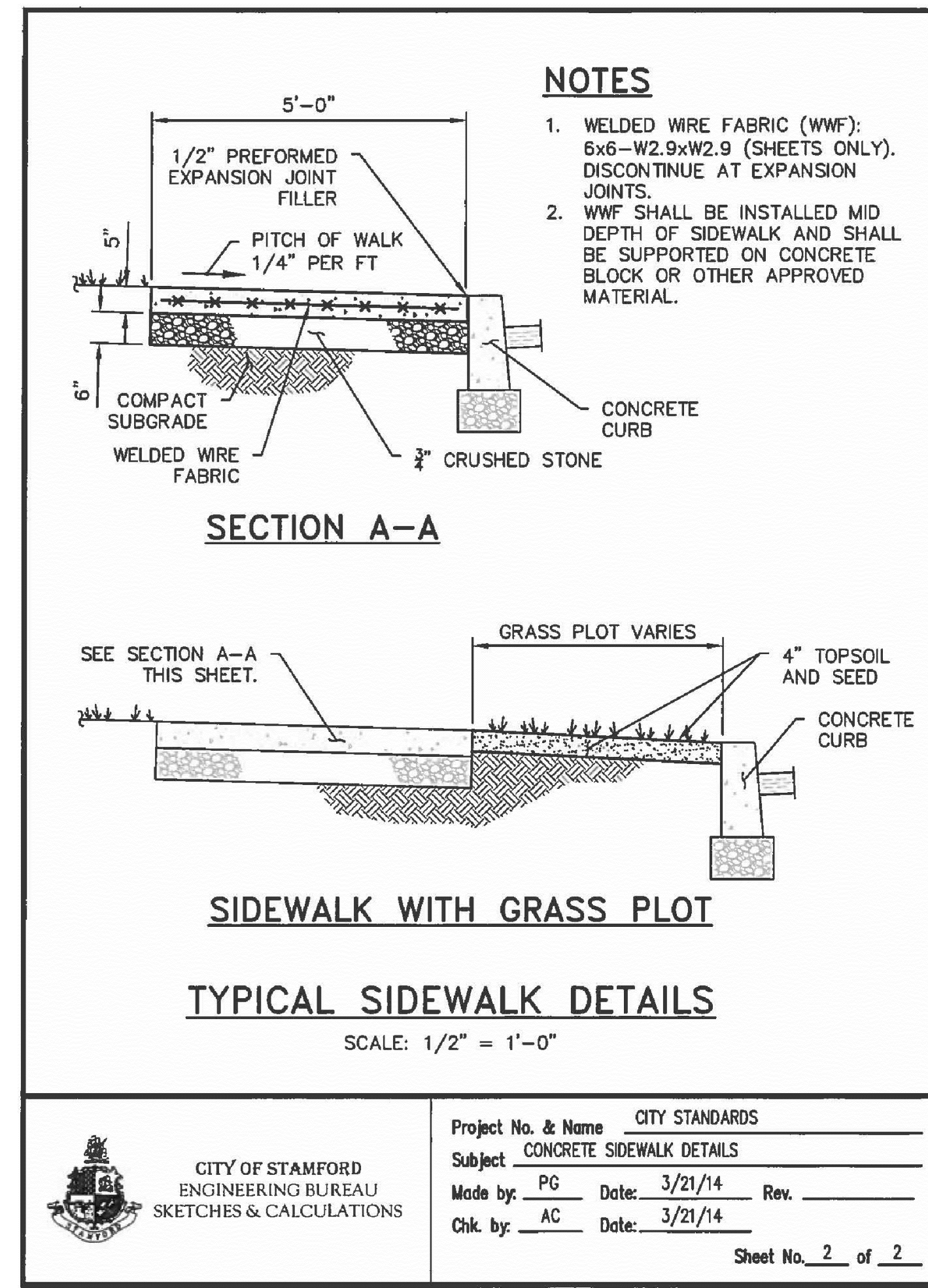
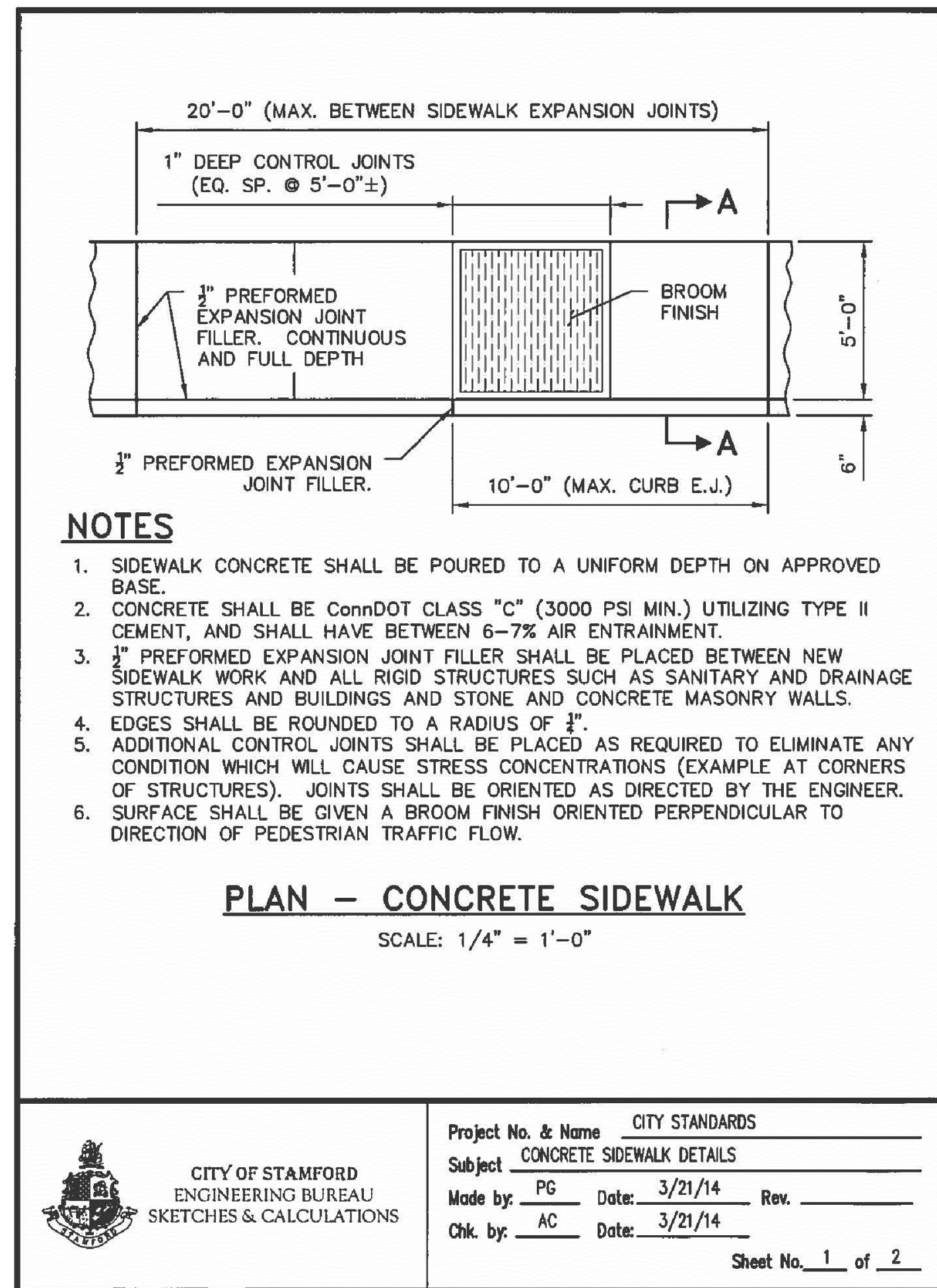
*Louis Dimarzo*  
LOUIS DIMARZO  
2/03/2022  
DATE

LAND SURVEYING  
**DIMARZO & BEREZKY**  
CIVIL ENGINEERING  
PERMITTING  
191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.897.4110

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**C-7**





**DETAILS - 3**  
DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET  
15, 27 & 29 LAFAYETTE STREET  
STAMFORD, CT  
PREPARED FOR  
819 EAST MAIN STREET, LLC**

DATE: 2/03/2022	SCALE: AS NOTED
JOB NO. 173	
To my knowledge and belief this map is substantially correct as noted hereon.	
 LOUIS DIMARZO 2/03/2022 DATE	<b>DIMARZO &amp; BEREZKY</b> LAND SURVEYING CIVIL ENGINEERING PERMITTING 191 LLOYD DRIVE FAIRFIELD, CT 06825 203.897.4110
This document is valid only if it is signed by the designated licensed professional engineer or architect. Any alteration or addition to this document without the signature of the designated licensed professional engineer or architect renders the document null and void.	
<b>C-8</b>	



**MAINTENANCE PLAN & SCHEDULE OF STORMWATER SYSTEM:**

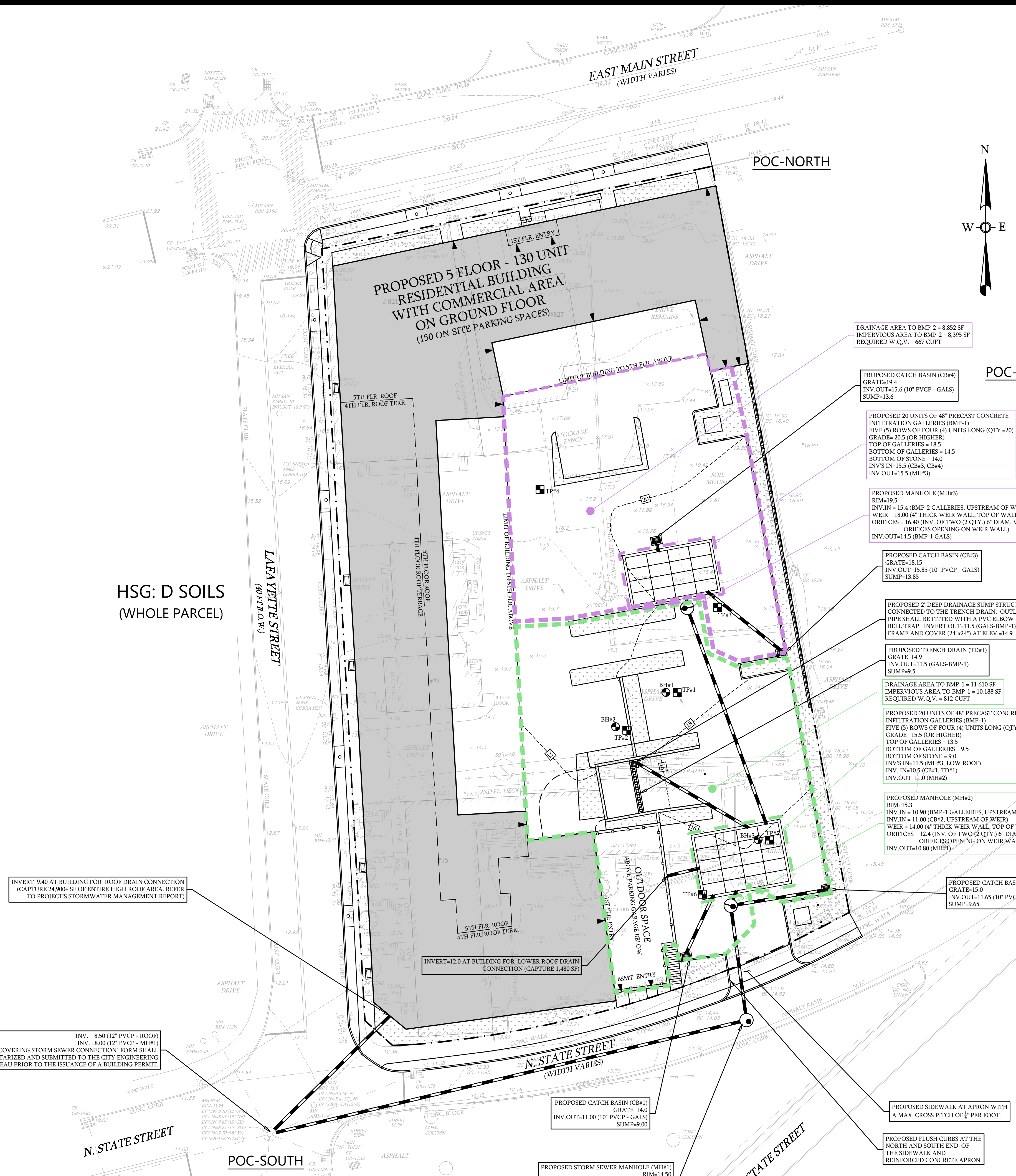
- THE PURPOSE OF THE MAINTENANCE PLAN AND SCHEDULE IS TO ENSURE THE STORMWATER COMPONENTS INSTALLED ARE MAINTAINED IN OPERATIONAL CONDITION THROUGHOUT THE LIFE OF THE DEVELOPMENT.
- STORMWATER COMPONENTS SHOULD BE CHECKED ON A PERIODIC BASIS AND KEPT IN FULL WORKING ORDER. ULTIMATELY, THE REQUIRED FREQUENCY OF INSPECTION AND SERVICE WILL VARY DEPENDING ON STORM FREQUENCY, POLLUTANT LOADING, AND DEBRIS BUILD-UP. STORMWATER COMPONENTS SHOULD BE INSPECTED AND SERVICED TWICE PER YEAR. FIRST BEFORE WINTER BEGINS AND AGAIN DURING SPRING CLEANUP.
- THE INSPECTIONS MUST BE COMPLETED BY AN INDIVIDUAL EXPERIENCED IN THE CONSTRUCTION AND MAINTENANCE OF STORMWATER MANAGEMENT SYSTEMS.
- ALL DEBRIS AND SEDIMENT REMOVED FROM THE STORMWATER COMPONENTS SHALL BE DISPOSED OF LEGALLY. THERE SHALL BE NO DUMPING OF SILT OR DEBRIS INTO OR IN PROXIMITY TO ANY INLAND OR TIDAL WETLANDS.
- THE OWNERS(S) SHALL MAINTAIN ALL RECORDS (LOGS, INVOICES, REPORTS, DATA, ETC.).
- SERVICE PROCEDURES:
  - CATCH BASINS & DRAINAGE INLETS:
    - CATCH BASINS AND DRAINAGE INLETS SHALL BE COMPLETELY CLEANED OF ACCUMULATED DEBRIS AND SEDIMENTS AT THE COMPLETION OF CONSTRUCTION.
    - FOR THE FIRST YEAR, CATCH BASINS AND DRAINAGE INLETS SHALL BE INSPECTED ON A QUARTERLY BASIS.
    - ANY ACCUMULATED DEBRIS WITHIN THE CATCH BASINS/INLETS SHALL BE REMOVED AND ANY REPAIRS AS REQUIRED.
    - FROM THE SECOND YEAR ONWARD, VISUAL INSPECTIONS SHALL OCCUR TWICE PER YEAR, ONCE IN THE SPRING AND ONCE IN THE FALL, AFTER FALL CLEANUP OF LEAVES HAS OCCURRED.
    - ACCUMULATED DEBRIS WITHIN THE CATCH BASINS/INLETS SHALL BE REMOVED AND REPAIRS MADE AS REQUIRED.
    - ACCUMULATED SEDIMENTS SHALL BE REMOVED AT WHICH TIME THEY ARE WITHIN 12 INCHES OF THE INVERT OF THE OUTLET PIPE.
    - ANY ADDITIONAL MAINTENANCE REQUIRED PER THE MANUFACTURER'S SPECIFICATIONS SHALL ALSO BE COMPLETED.
  - STORM DRAINAGE PIPING AND MANHOLES/JUNCTION BOXES:
    - ALL STORM DRAINAGE PIPING SHALL BE COMPLETELY FLUSHED OF DEBRIS AND ACCUMULATED SEDIMENT AT THE COMPLETION OF CONSTRUCTION.
    - MANHOLES/JUNCTION BOXES SHALL BE INSPECTED AND REPAIRED ON AN ANNUAL BASIS.
    - UNLESS SYSTEM PERFORMANCE INDICATES DEGRADATION OF PIPING, COMPREHENSIVE VIDEO INSPECTION OF STORM DRAINAGE PIPING SHALL OCCUR EVERY TEN YEARS.
    - ANY ADDITIONAL MAINTENANCE REQUIRED PER THE MANUFACTURER'S SPECIFICATIONS SHALL ALSO BE COMPLETED.
  - STORMWATER CONTROL STRUCTURES:
    - ALL CONTROL STRUCTURES (ORIFICE, WEIR, ETC.) SHALL BE COMPLETELY CLEANED OF ACCUMULATED DEBRIS AND SEDIMENTS AT THE COMPLETION OF CONSTRUCTION. ANY REPAIRS SHALL BE PERFORMED.
    - FOR THE FIRST YEAR, CONTROL STRUCTURES (ORIFICE, WEIR, ETC.) SHALL BE INSPECTED ON A QUARTERLY BASIS.
    - ANY ACCUMULATED DEBRIS SHALL BE REMOVED AND ANY REPAIRS MADE TO THE CONTROL STRUCTURES (ORIFICE, WEIR, ETC.) AS REQUIRED.
    - FROM THE SECOND YEAR ONWARD, VISUAL INSPECTIONS SHALL OCCUR TWICE PER YEAR, ONCE IN THE SPRING AND ONCE IN THE FALL, AFTER FALL CLEANUP OF LEAVES HAS OCCURRED.
    - ACCUMULATED DEBRIS WITHIN THE UNITS SHALL BE REMOVED AND REPAIRS MADE AS REQUIRED.
    - ANY ADDITIONAL MAINTENANCE REQUIRED PER THE MANUFACTURER'S SPECIFICATIONS SHALL ALSO BE COMPLETED.
  - INFILTRATION SYSTEMS:
    - ALL INFILTRATORS SHALL BE COMPLETELY CLEANED OF ACCUMULATED DEBRIS AND SEDIMENTS UPON THE COMPLETION OF CONSTRUCTION.
    - FOR THE FIRST YEAR, THE INFILTRATORS SHALL BE INSPECTED ON A QUARTERLY BASIS.
    - ANY ACCUMULATED DEBRIS WITHIN THE INFILTRATORS SHALL BE REMOVED AND ANY REPAIRS MADE TO THE UNITS AS REQUIRED.
    - FROM THE SECOND YEAR ONWARD, VISUAL INSPECTION SHALL OCCUR TWICE PER YEAR, ONCE IN THE SPRING AND ONCE IN THE FALL, AFTER FALL CLEANUP OF LEAVES HAS OCCURRED.
    - ACCUMULATED DEBRIS WITHIN THE UNITS SHALL BE REMOVED AND REPAIRS MADE AS REQUIRED.
    - ANY ADDITIONAL MAINTENANCE REQUIRED PER THE MANUFACTURER'S SPECIFICATIONS SHALL ALSO BE COMPLETED.
  - ROOF GUTTERS:
    - REMOVE ACCUMULATED DEBRIS AND INSPECT FOR DAMAGE. ANY DAMAGE SHOULD BE REPAIRED AS REQUIRED.

PIPE TABLE - STORMWATER		
DOWNSTREAM	PIPE INFO.	UPSTREAM
EX.MH	60 LF OF 12" PVC @ 0.015 FPF	ROOF
EX. MH	180 LF OF 12" PVC @ 0.01 FPF	MH#1
MH#1	40 LF OF 12" PVC @ 0.02 FPF	MH#2
MH#2	4 LF OF 12" PVC @ 0.025 FPF	GALS (BMP-1)
MH#2	32 LF OF 10" PVC @ 0.02 FPF	CB#2
GALS (BMP-1)	85 LF OF 12" PVC @ 0.035 FPF	MH#3
GALS (BMP-1)	25 LF OF 10" PVC @ 0.02 FPF	CB#1
GALS (BMP-1)	13 LF OF 8" PVC @ 0.04 FPF	ROOF
GALS (BMP-1)	48 LF OF 10" PVC @ 0.02 FPF	TD#1
MH#3	3 LF OF 12" PVC @ 0.033 FPF	GALS (BMP-2)
GALS (BMP-2)	35 LF OF 10" PVC @ 0.01 FPF	CB#3
GALS (BMP-2)	3 LF OF 10" PVC @ 0.033 FPF	CB#4

INV. = 8.50 (12" PVC - ROOF)  
INV. = 8.00 (12" PVC - MH#1)  
\* A "WAIVER COVERING STORM SEWER CONNECTION" FORM SHALL BE SIGNED, NOTARIZED AND SUBMITTED TO THE CITY ENGINEERING BUREAU PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.

INVERT=9.40 AT BUILDING FOR ROOF DRAIN CONNECTION (CAPTURE 24,900 SF OF ENTIRE HIGH ROOF AREA. REFER TO PROJECT'S STORMWATER MANAGEMENT REPORT)

INVERT=12.0 AT BUILDING FOR LOWER ROOF DRAIN CONNECTION (CAPTURE 1,480 SF)



	SOUTH P.O.C.	EAST P.O.C.	NORTH P.O.C.
TOTAL AREA (SF)	48,211	1,251	775
DISTURBANCE AREA (SF)	48,211	1,251	775
IMPERVIOUS AREA, PRE-DEVELOPMENT (SF)	38,631	-	749
IMPERVIOUS AREA, POST-DEVELOPMENT (SF)	45,260	-	213
W.Q.V. REQUIRED (CF)	3,620	-	-
W.Q.V. PROVIDED (CF)	3,625	-	-

LEGEND	
PROPOSED CONTOUR	---
TEST PIT, SOILS	TP#3
BOREHOLE INFILTRATION TEST, SOILS	BH#3
STORM SEWER, GRAVITY	---

- NOTES:**
- THE INTENT OF THESE DRAWINGS IS FOR THE DEPICTION OF SITE GRADING, STORMWATER MANAGEMENT SYSTEM, SITE UTILITIES AND EROSION AND SEDIMENT CONTROL PLANS SHOWN HEREIN.
  - REFER TO "STANDARD CITY OF STAMFORD NOTES" ON SHEET C-1.
  - 819 EAST MAIN STREET, LLC OF 2 ARMONK ST, GREENWICH, CT 06803 IS THE APPLICANT FOR MUNICIPAL PERMITS FOR THIS PROJECT.
  - REFER TO THE STORMWATER MANAGEMENT REPORT PREPARED BY OUR OFFICE DATED 2/03/2022.
  - SURVEY DATA, BOUNDARY LINES, TOPOGRAPHY AND BUILDING LOCATIONS ARE FROM AN A-2 AND T-2 CERTIFIED SURVEY PREPARED BY THIS OFFICE TITLED "PROPERTY AND TOPOGRAPHIC SURVEY DEPICTING 821,825, 827, & 831 EAST MAIN STREET, 15, 27, & 29 LAFAYETTE STREET, STAMFORD, CT PREPARED FOR 819 EAST MAIN STREET, LLC" DATED 12/14/2021. ELEVATIONS ARE BASED ON NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD-88).
  - TEST PIT DATA IS LOCATED ON DRAWING SHEET C-5.
  - STEEP SLOPES (25% AND GREATER) FOR A MINIMUM DISTANCE OF 50 LF DO NOT EXIST ON THE PARCEL.

**LOW IMPACT DEVELOPMENT PLAN**  
 DEPICTING  
**821, 825, 827 & 831 EAST MAIN STREET**  
**15, 27 & 29 LAFAYETTE STREET**  
 STAMFORD, CT  
 PREPARED FOR  
**819 EAST MAIN STREET, LLC**

DATE: 2/03/2022  
 JOB NO. 173

SCALE: 0 20 40  
 1" = 20'

To my knowledge and belief this map is substantially correct as noted hereon

*Louis Dimarzo*  
 LOUIS DIMARZO  
 2/03/2022

**DIMARZO & BERECKZY**  
 191 LLOYD DRIVE  
 FAIRFIELD, CT 06825  
 203.897.4110

LAND SURVEYING  
 CIVIL ENGINEERING  
 PERMITTING

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**C-9**



# THE LAFAYETTE

819 E. MAIN ST. STAMFORD, CT 06902

## PROJECT OWNER

WELLBUILT COMPANY  
2 ARMONK STREET  
GREENWICH, CT 06830  
(866)846-4874

## PROJECT TEAM

### ARCHITECT

DO H. CHUNG and PARTNERS  
ARCHITECTS PLANNERS  
105 BEDFORD ST, STAMFORD, CONNECTICUT 06901  
T. 203.357.0089 F. 203-353-0336

### CIVIL ENGINEERS:

DIMARZO & BERECZKY  
10 HIGH CIRCLE LANE  
FAIRFIELD, CT 06825  
(203) 857-4110

### LANDSCAPE ARCHITECT:

ENVIRONMENTAL LAND  
SOLUTIONS, LLC  
8 KNIGHT STREET  
#203  
NORWALK, CT 06851  
(203)855-7879

### SURVEYOR:

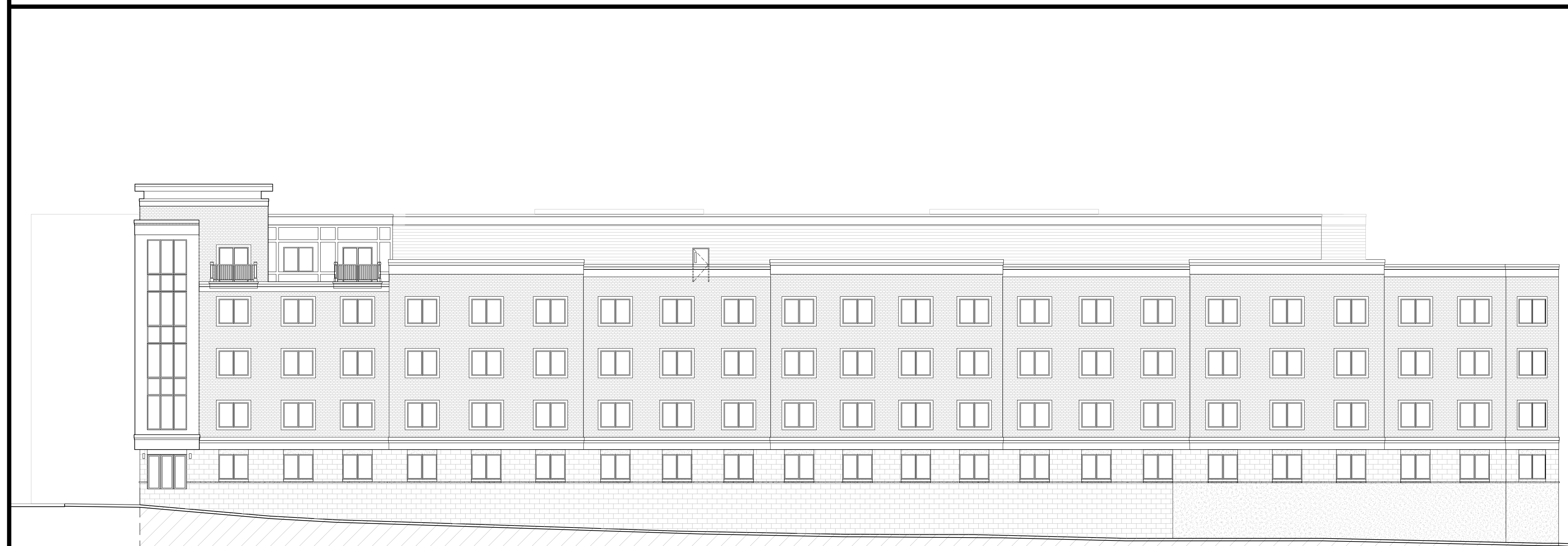
DIMARZO & BERECZKY  
10 HIGH CIRCLE LANE  
FAIRFIELD, CT 06825  
(203) 857-4110

### MECHANICAL ENGINEERS:

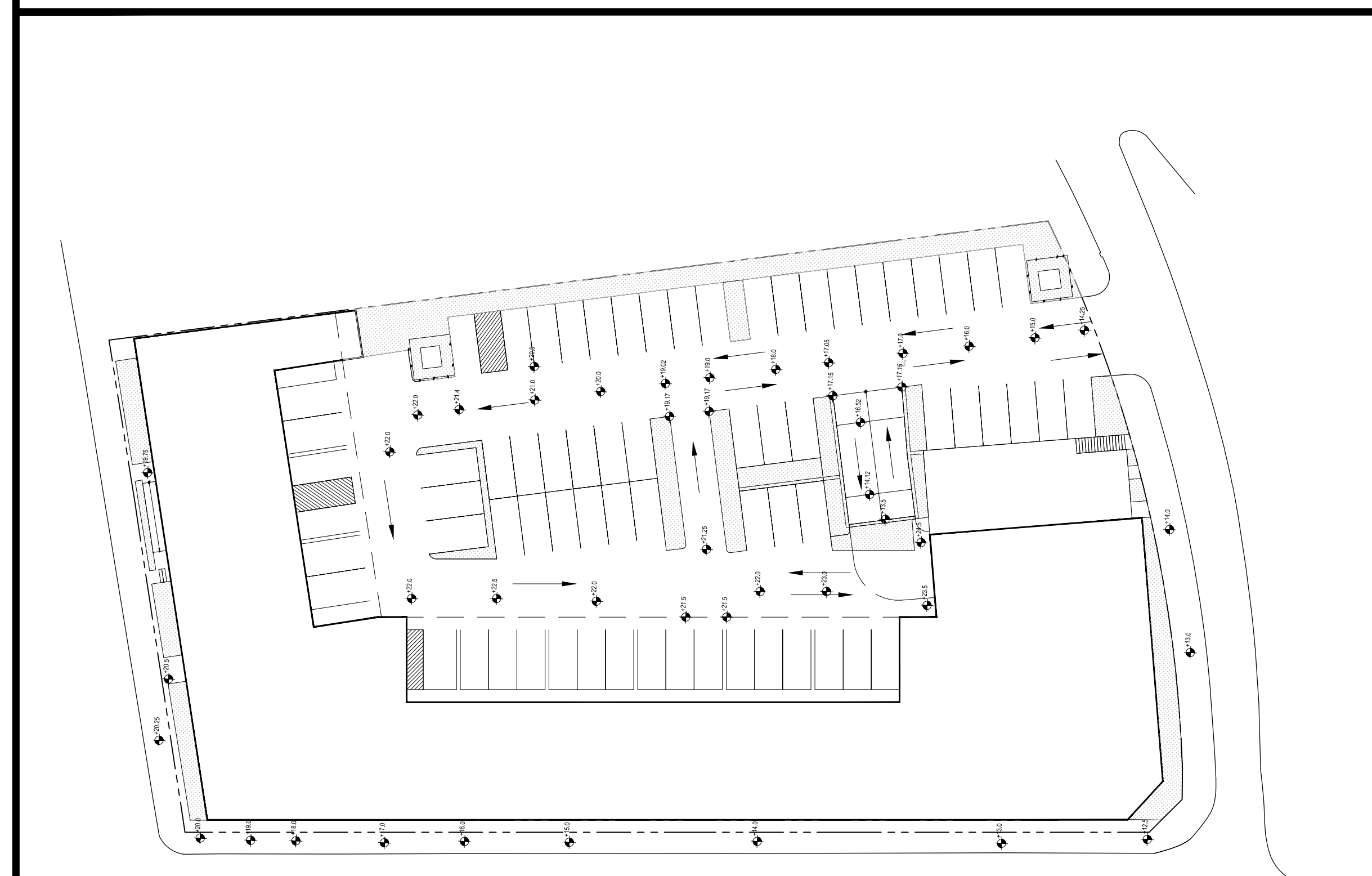
STANTEC  
30 OAK ST.  
FOURTH FLOOR  
STAMFORD, CT 06905  
(203)352-1717

### STRUCTURAL ENGINEER:

CONSULTING STRUCTURAL  
ENGINEERS  
4 LANDMARK SQUARE, SUITE 170  
STAMFORD, CT. 06901  
(203)327-0408



WEST ELEVATION (FROM LAFAYETTE ST.)



KEY PLAN 

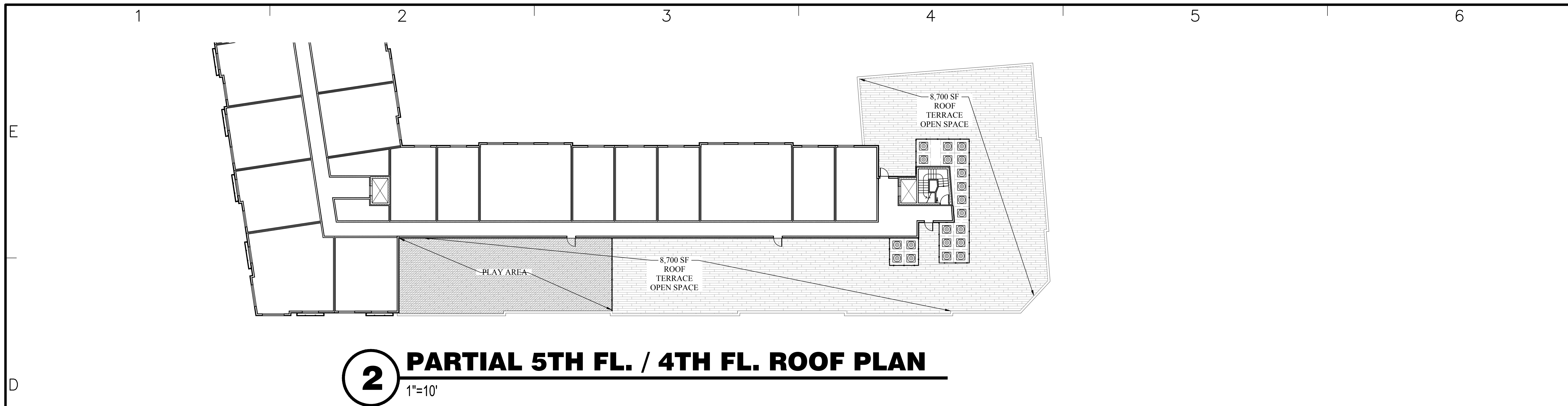
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### ARCHITECTURAL

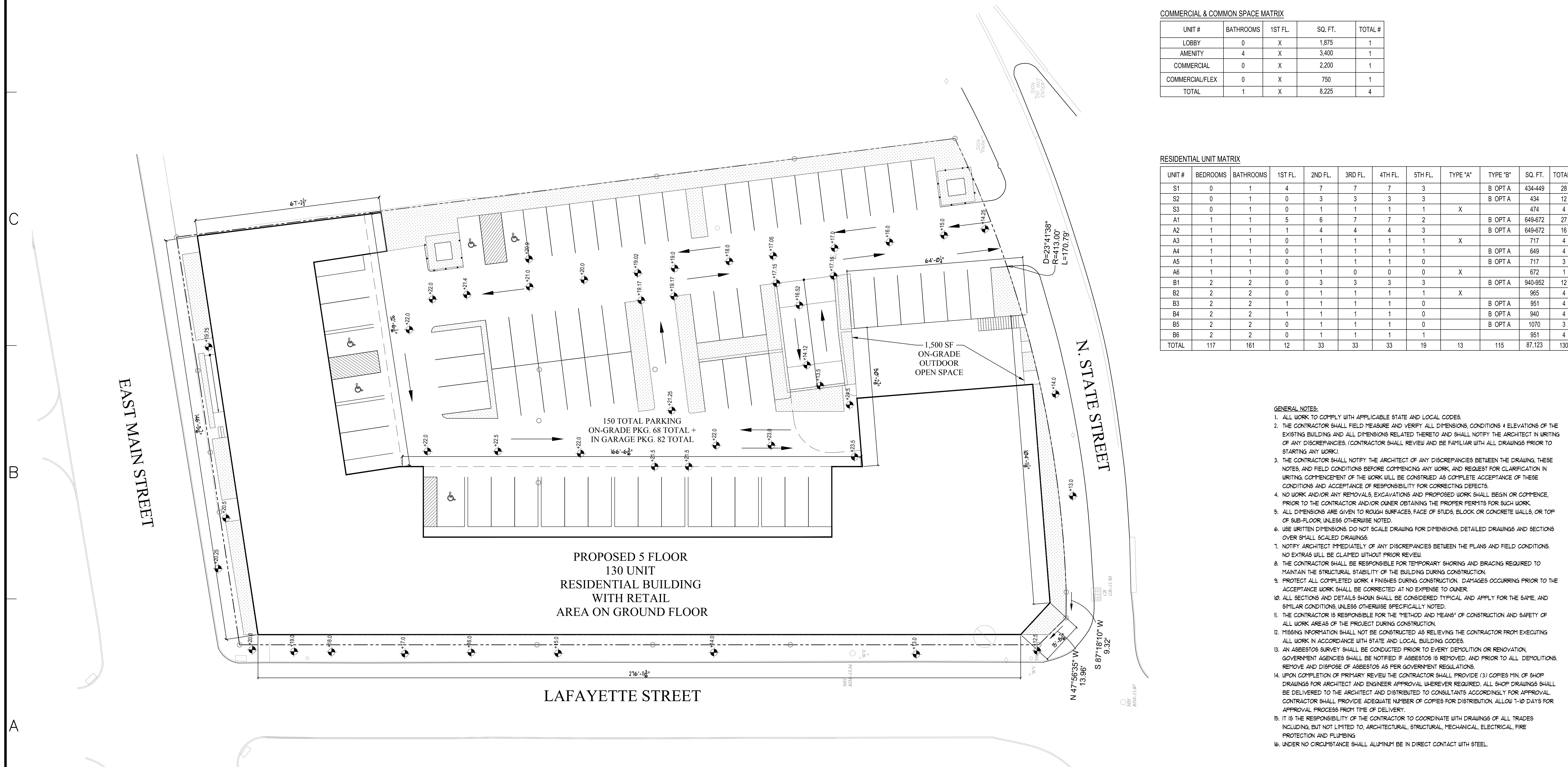
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2	A-101	BASEMENT PLAN				
3	A-102	1ST FLOOR PLAN				
4	A-103	2ND FLOOR PLAN				
5	A-104	3RD FLOOR PLAN				
6	A-105	4TH FLOOR PLAN				
7	A-106	5TH FLOOR PLAN				
8	A-107	ROOF PLAN				
9	A-201	TYP. BLDG. ELEVATIONS				
10	A-202	TYP. BLDG. ELEVATIONS				
11	A-203	TYP. BLDG. ELEVATIONS				
12	A-301	TYP. SECTIONS				
13	A-302	TYP. SECTIONS				

ZONING ADDENDUM  
1-24-2022

CS - 1



**2 PARTIAL 5TH FL. / 4TH FL. ROOF PLAN**  
1"=10'



**1 OVERALL SITE & GRADING PLAN**  
1"=10'

**COMMERCIAL & COMMON SPACE MATRIX**

UNIT #	BATHROOMS	1ST FL.	SQ. FT.	TOTAL #
LOBBY	0	X	1,875	1
AMENITY	4	X	3,400	1
COMMERCIAL	0	X	2,200	1
COMMERCIAL/FLEX	0	X	750	1
TOTAL	1	X	8,225	4

**RESIDENTIAL UNIT MATRIX**

UNIT #	BEDROOMS	BATHROOMS	1ST FL.	2ND FL.	3RD FL.	4TH FL.	5TH FL.	TYPE "A"	TYPE "B"	SQ. FT.	TOTAL #
S1	0	1	4	7	7	7	3		B OPT A	434-449	28
S2	0	1	0	3	3	3	3		B OPT A	434	12
S3	0	1	0	1	1	1	1	X		474	4
A1	1	1	5	6	7	7	2		B OPT A	649-672	27
A2	1	1	1	4	4	4	3		B OPT A	649-672	16
A3	1	1	0	1	1	1	1	X		717	4
A4	1	1	0	1	1	1	1		B OPT A	649	4
A5	1	1	0	1	1	1	0		B OPT A	717	3
A6	1	1	0	1	0	0	0	X		672	1
B1	2	2	0	3	3	3	3		B OPT A	940-952	12
B2	2	2	0	1	1	1	1	X		965	4
B3	2	2	1	1	1	1	0		B OPT A	951	4
B4	2	2	1	1	1	1	0		B OPT A	940	4
B5	2	2	0	1	1	1	0		B OPT A	1070	3
B6	2	2	0	1	1	1	1			951	4
TOTAL	117	161	12	33	33	33	19	13	115	87,123	130

**GENERAL NOTES:**

- ALL WORK TO COMPLY WITH APPLICABLE STATE AND LOCAL CODES.
- THE CONTRACTOR SHALL FIELD MEASURE AND VERIFY ALL DIMENSIONS, CONDITIONS & ELEVATIONS OF THE EXISTING BUILDING AND ALL DIMENSIONS RELATED THERETO AND SHALL NOTIFY THE ARCHITECT IN WRITING OF ANY DISCREPANCIES. (CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH ALL DRAWINGS PRIOR TO STARTING ANY WORK).
- THE CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES BETWEEN THE DRAWINGS, THESE NOTES, AND FIELD CONDITIONS BEFORE COMMENCING ANY WORK, AND REQUEST FOR CLARIFICATION IN WRITING. COMMENCEMENT OF THE WORK WILL BE CONSIDERED AS COMPLETE ACCEPTANCE OF THESE CONDITIONS AND ACCEPTANCE OF RESPONSIBILITY FOR CORRECTING DEFECTS.
- NO WORK AND/OR ANY REMOVALS, EXCAVATIONS AND PROPOSED WORK SHALL BEGIN OR COMMENCE, PRIOR TO THE CONTRACTOR AND/OR OWNER OBTAINING THE PROPER PERMITS FOR SUCH WORK.
- ALL DIMENSIONS ARE GIVEN TO ROUGH SURFACES, FACE OF STUDS, BLOCK OR CONCRETE WALLS, OR TOP OF SUB-FLOOR, UNLESS OTHERWISE NOTED.
- USE WRITTEN DIMENSIONS, DO NOT SCALE DRAWINGS FOR DIMENSIONS. DETAILED DRAWINGS AND SECTIONS OVER SMALL SCALED DRAWINGS.
- NOTIFY ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS. NO EXTRAS WILL BE CLAIMED WITHOUT PRIOR REVIEW.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SHORING AND BRACING REQUIRED TO MAINTAIN THE STRUCTURAL STABILITY OF THE BUILDING DURING CONSTRUCTION.
- PROTECT ALL COMPLETED WORK, FINISHES DURING CONSTRUCTION. DAMAGES OCCURRING PRIOR TO THE ACCEPTANCE WORK SHALL BE CORRECTED AT NO EXPENSE TO OWNER.
- ALL SECTIONS AND DETAILS SHOWN SHALL BE CONSIDERED TYPICAL AND APPLY FOR THE SAME, AND SIMILAR CONDITIONS, UNLESS OTHERWISE SPECIFICALLY NOTED.
- THE CONTRACTOR IS RESPONSIBLE FOR THE "METHOD AND MEANS" OF CONSTRUCTION AND SAFETY OF ALL WORK AREAS OF THE PROJECT DURING CONSTRUCTION.
- MISSING INFORMATION SHALL NOT BE CONSTRUCTED AS RELIEVING THE CONTRACTOR FROM EXECUTING ALL WORK IN ACCORDANCE WITH STATE AND LOCAL BUILDING CODES.
- AN ASBESTOS SURVEY SHALL BE CONDUCTED PRIOR TO EVERY DEMOLITION OR RENOVATION. GOVERNMENT AGENCIES SHALL BE NOTIFIED IF ASBESTOS IS REMOVED, AND PRIOR TO ALL DEMOLITIONS, REMOVE AND DISPOSE OF ASBESTOS AS PER GOVERNMENT REGULATIONS.
- UPON COMPLETION OF PRIMARY REVIEW THE CONTRACTOR SHALL PROVIDE (3) COPIES MIN. OF SHOP DRAWINGS FOR ARCHITECT AND ENGINEER APPROVAL WHEREVER REQUIRED. ALL SHOP DRAWINGS SHALL BE DELIVERED TO THE ARCHITECT AND DISTRIBUTED TO CONSULTANTS ACCORDINGLY FOR APPROVAL. CONTRACTOR SHALL PROVIDE ADEQUATE NUMBER OF COPIES FOR DISTRIBUTION. ALLOW 1-10 DAYS FOR APPROVAL PROCESS FROM TIME OF DELIVERY.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH DRAWINGS OF ALL TRADES INCLUDING, BUT NOT LIMITED TO, ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, FIRE PROTECTION AND PLUMBING.
- UNDER NO CIRCUMSTANCE SHALL ALUMINUM BE IN DIRECT CONTACT WITH STEEL.

ARCHITECT  
**DO H. CHUNG and PARTNERS**  
 ARCHITECTS PLANNERS  
 105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
 T. 203.357.0089 F. 203.353.0336

CONSULTANTS  
**CIVIL ENGINEERS:**  
 DIMARZO & BEREZKY  
 10 HIGH CIRCLE LANE  
 FAIRFIELD, CT 06825  
 (203)857-4110

**LANDSCAPE ARCHITECT:**  
 ENVIRONMENTAL LAND  
 SOLUTIONS, LLC  
 8 KNIGHT STREET  
 #203  
 NORWALK, CT 06851  
 (203)855-7879

**SURVEYOR:**  
 DIMARZO & BEREZKY  
 10 HIGH CIRCLE LANE  
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 (203)857-4110

**MECHANICAL ENGINEERS:**  
 STANTEC  
 30 OAK ST.  
 FOURTH FLOOR  
 STAMFORD, CT 06905  
 (203)352-1717

**STRUCTURAL ENGINEER:**  
 CONSULTING STRUCTURAL  
 ENGINEERS  
 4 LANDMARK SQUARE, SUITE 170  
 STAMFORD, CT. 06901  
 (203)327-0408

OWNER  
**WELLBUILT COMPANY**  
 2 ARMONK STREET  
 GREENWICH, CT 06830  
 (866)846-4874

PROJECT  
**THE LAFAYETTE**  
 819 E. MAIN ST. STAMFORD,  
 CT 06902

NO.	DATE	DESCRIPTION
1/20/2021	1/20/2021	ZONING ADDENDUM
1/20/2021	1/20/2021	1/20/2021

PROJECT NO: ----  
 CAD DWG FILE: A-001 OVERALL SITE & GRADING PLAN.DWG  
 DRAWN BY: --  
 CHK'D BY: --  
 COPYRIGHT:

SHEET TITLE  
**OVERALL SITE & GRADING  
 PLAN, OPEN SPACE AREAS**

A - 001  
 SHEET OF



ARCHITECT  
**DO H. CHUNG and PARTNERS**  
 ARCHITECTS PLANNERS  
 105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
 T. 203.357.0089 F. 203.353.0336

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PROJECT  
**THE LAFAYETTE**  
 819 E. MAIN ST. STAMFORD,  
 CT 06902

MARK	DATE	DESCRIPTION

PROJECT NO: ---  
 CAD DWG FILE: A-101.DWG  
 DRAWN BY: ---  
 CHK'D BY: ---  
 COPYRIGHT: ---

SHEET TITLE  
**BASEMENT PLAN**

SHEET **A - 101** OF ---



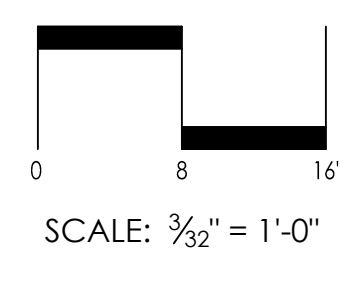
**RESIDENTIAL UNIT PROGRAM**

FLOOR	STUDIO	1 BR	2 BR	TOTAL
1ST FLOOR	4	6	2	12
2ND FLOOR	11	14	8	33
3RD FLOOR	11	14	8	33
4TH FLOOR	11	14	8	33
5TH FLOOR	7	7	5	19
TOTAL	44	55	31	130

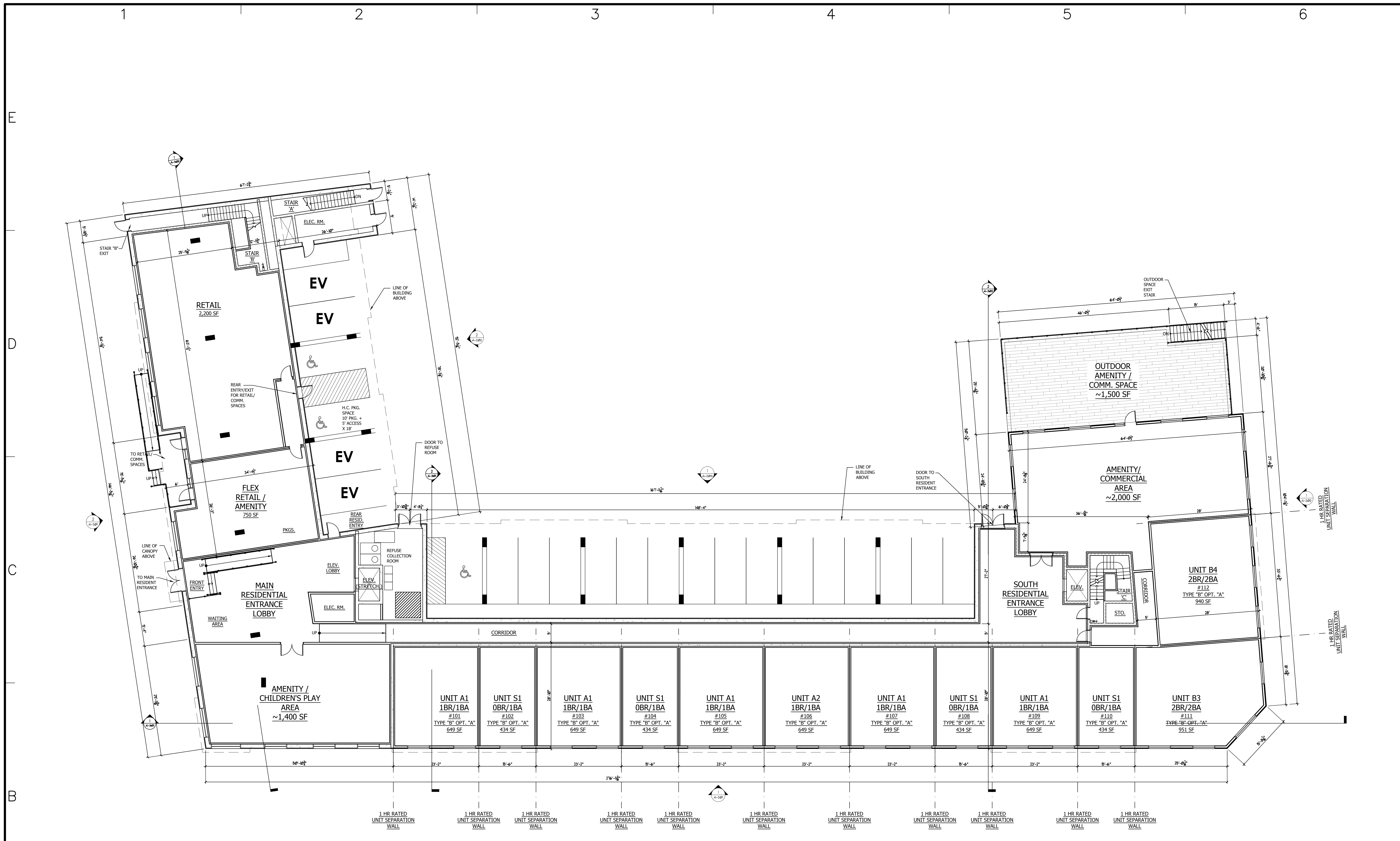
**PARKING TOTALS**

PARKING LEVEL	REGULAR	HANDICAP	EV	TOTAL
	8.5'X18'	10'X18' OR 8'X18' (VAN)	10'X18	
BSMT. GARAGE	66	8	8	82
1ST FLOOR / ON GRADE	57	5	6	68
TOTAL	123	13	14	150

**1 BASEMENT PLAN**  
 SCALE: 3/32" = 1'-0"







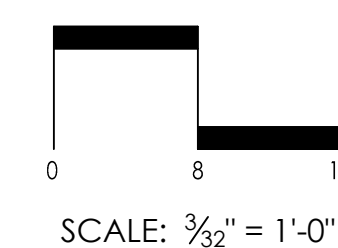
**RESIDENTIAL UNIT PROGRAM**

FLOOR	STUDIO	1 BR	2 BR	TOTAL
1ST FLOOR	4	6	2	12
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5TH FLOOR	7	7	5	19
<b>TOTAL</b>	<b>44</b>	<b>55</b>	<b>31</b>	<b>130</b>

**PARKING TOTALS**

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BSMT. GARAGE	66	8	8	82
1ST FLOOR / ON GRADE	57	5	6	68
<b>TOTAL</b>	<b>123</b>	<b>13</b>	<b>14</b>	<b>150</b>

**1 FIRST FLOOR PLAN**  
SCALE: 3/32" = 1'-0"



ARCHITECT  
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 DIMARZO & BERECZKY  
 10 HIGH CIRCLE LANE  
 FAIRFIELD, CT 06825  
 (203)857-4110

**LANDSCAPE ARCHITECT:**  
 ENVIRONMENTAL LAND  
 SOLUTIONS, LLC  
 8 KNIGHT STREET  
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 NORWALK, CT 06851  
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**SURVEYOR:**  
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**MECHANICAL ENGINEERS:**  
 STANTEC  
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 FOURTH FLOOR  
 STAMFORD, CT 06905  
 (203)352-1717

**STRUCTURAL ENGINEER:**  
 CONSULTING STRUCTURAL  
 ENGINEERS  
 4 LANDMARK SQUARE, SUITE 170  
 STAMFORD, CT. 06901  
 (203)327-0408

OWNER  
**WELLBUILT COMPANY**  
 2 ARMONK STREET  
 GREENWICH, CT 06830  
 (866)846-4874

PROJECT  
**THE LAFAYETTE**  
 819 E. MAIN ST. STAMFORD,  
 CT 06902

DATE	REVISION	DESCRIPTION
1/18/2022	ZONING ADDENDUM	
4/10/2021	ZONING SUBMITTAL	

PROJECT NO: ----  
 CAD DWG FILE: A-101.DWG  
 DRAWN BY: --  
 CHKD BY: --  
 COPYRIGHT: --

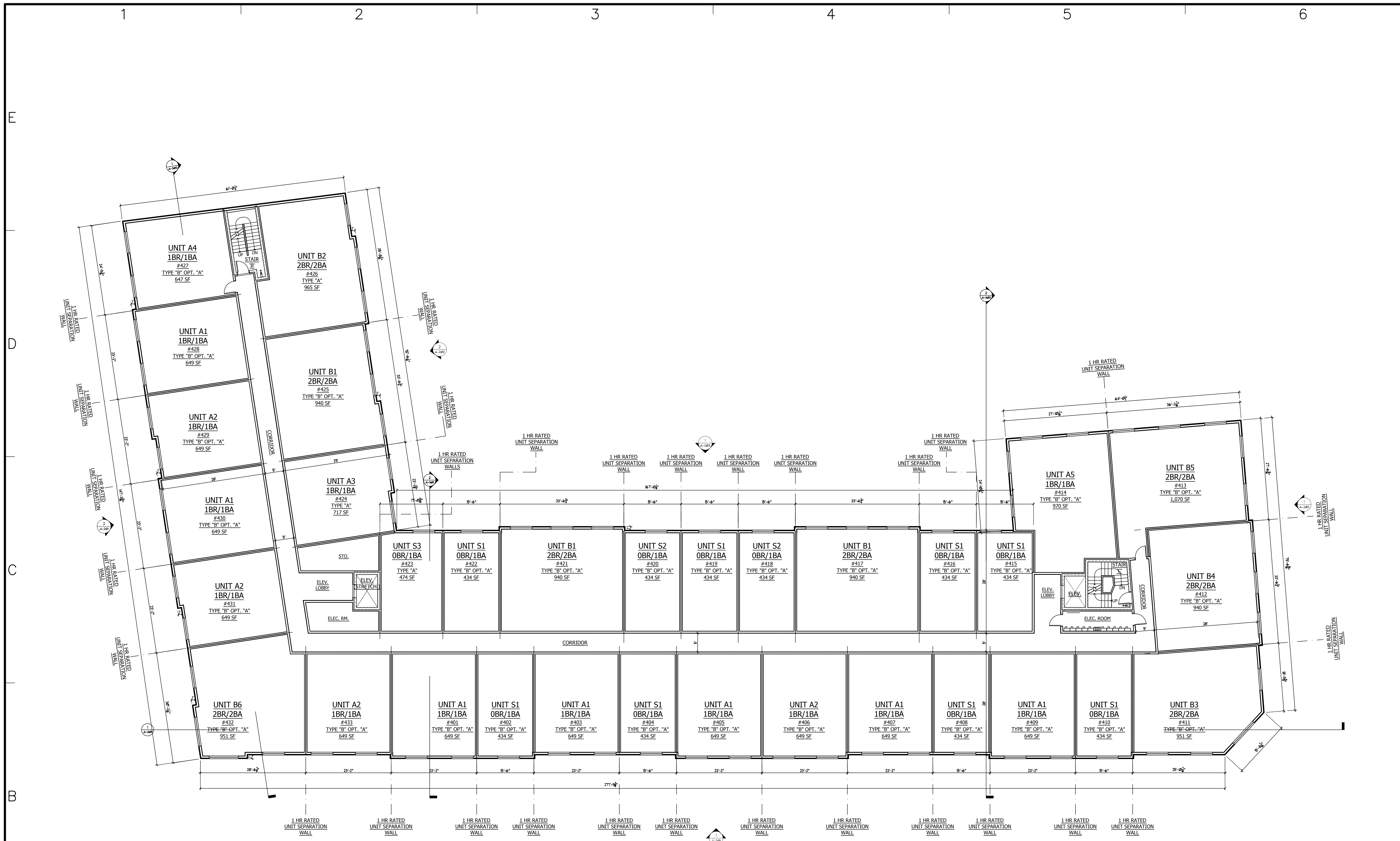
SHEET TITLE  
**FIRST FLOOR PLAN**

A - 102  
 OF









**RESIDENTIAL UNIT PROGRAM**

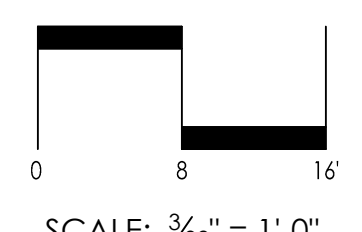
FLOOR	STUDIO	1 BR	2 BR	TOTAL
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4TH FLOOR	11	14	8	33
5TH FLOOR	7	7	5	19
TOTAL	44	55	31	130

**PARKING TOTALS**

PARKING LEVEL	REGULAR	HANDICAP	EV	TOTAL
	8.5'X18'	10'X18' OR 8'X18' (VAN)	10'X18'	
BSMT. GARAGE	66	8	8	82
1ST FLOOR / ON GRADE	57	5	6	68
TOTAL	123	13	14	150

**1 FOURTH FLOOR PLAN**

SCALE: 3/32" = 1'-0"



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CONSULTANTS  
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 FAIRFIELD, CT 06825  
 (203)857-4110

**LANDSCAPE ARCHITECT:**  
 ENVIRONMENTAL LAND  
 SOLUTIONS, LLC  
 8 KNIGHT STREET  
 #203  
 NORWALK, CT 06851  
 (203)855-7879

**SURVEYOR:**  
 DIMARZO & BERECZKY  
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 FAIRFIELD, CT 06825  
 (203)857-4110

**MECHANICAL ENGINEERS:**  
 STANTEC  
 30 OAK ST.  
 FOURTH FLOOR  
 STAMFORD, CT 06905  
 (203)352-1717

**STRUCTURAL ENGINEER:**  
 CONSULTING STRUCTURAL  
 ENGINEERS  
 4 LANDMARK SQUARE, SUITE 170  
 STAMFORD, CT. 06901  
 (203)327-0408

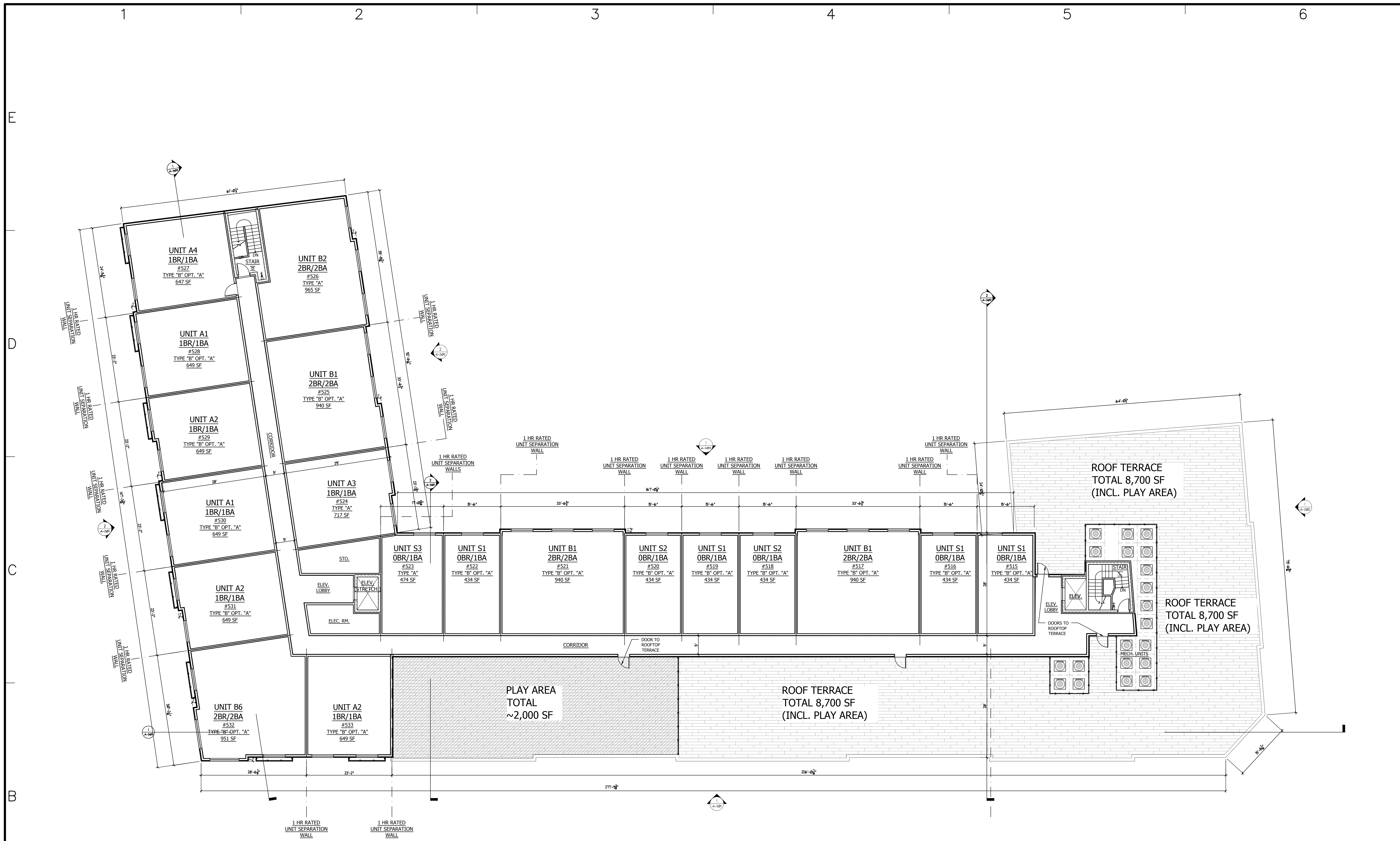
OWNER  
**WELLBUILT COMPANY**  
 2 ARMONK STREET  
 GREENWICH, CT 06830  
 (866)846-4874

PROJECT  
**THE LAFAYETTE**  
 819 E. MAIN ST. STAMFORD,  
 CT 06902

MARK	DATE	DESCRIPTION
1/18/2012		ZONING ADDENDUM
4/10/2011		ZONING SUBMITTAL

PROJECT NO: ----  
 CAD DWG FILE: A-101.DWG  
 DRAWN BY: -  
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**FOURTH FLOOR PLAN**



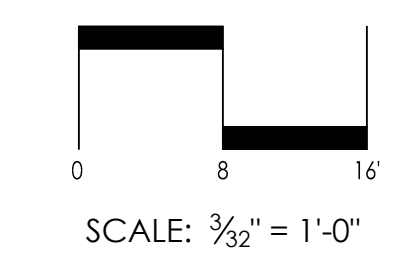
**RESIDENTIAL UNIT PROGRAM**

FLOOR	STUDIO	1 BR	2 BR	TOTAL
1ST FLOOR	4	6	2	12
2ND FLOOR	11	14	8	33
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4TH FLOOR	11	14	8	33
5TH FLOOR	7	7	5	19
<b>TOTAL</b>	<b>44</b>	<b>55</b>	<b>31</b>	<b>130</b>

**PARKING TOTALS**

PARKING LEVEL	REGULAR	HANDICAP	EV	TOTAL
	8.5'X18'	10'X18' OR 8'X18' (VAN)	10'X18	
BSMT. GARAGE	66	8	8	82
1ST FLOOR / ON GRADE	57	5	6	68
<b>TOTAL</b>	<b>123</b>	<b>13</b>	<b>14</b>	<b>150</b>

**1 FIFTH FLOOR PLAN**  
SCALE: 3/32" = 1'-0"



ARCHITECT  
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CONSULTANTS  
**CIVIL ENGINEERS:**  
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(203)857-4110

**LANDSCAPE ARCHITECT:**  
ENVIRONMENTAL LAND  
SOLUTIONS, LLC  
8 KNIGHT STREET  
#203  
NORWALK, CT 06851  
(203)855-7879

**SURVEYOR:**  
DIMARZO & BERCZKY  
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(203)857-4110

**MECHANICAL ENGINEERS:**  
STANTEC  
30 OAK ST.  
FOURTH FLOOR  
STAMFORD, CT 06905  
(203)352-1717

**STRUCTURAL ENGINEER:**  
CONSULTING STRUCTURAL  
ENGINEERS  
4 LANDMARK SQUARE, SUITE 170  
STAMFORD, CT. 06901  
(203)327-0408

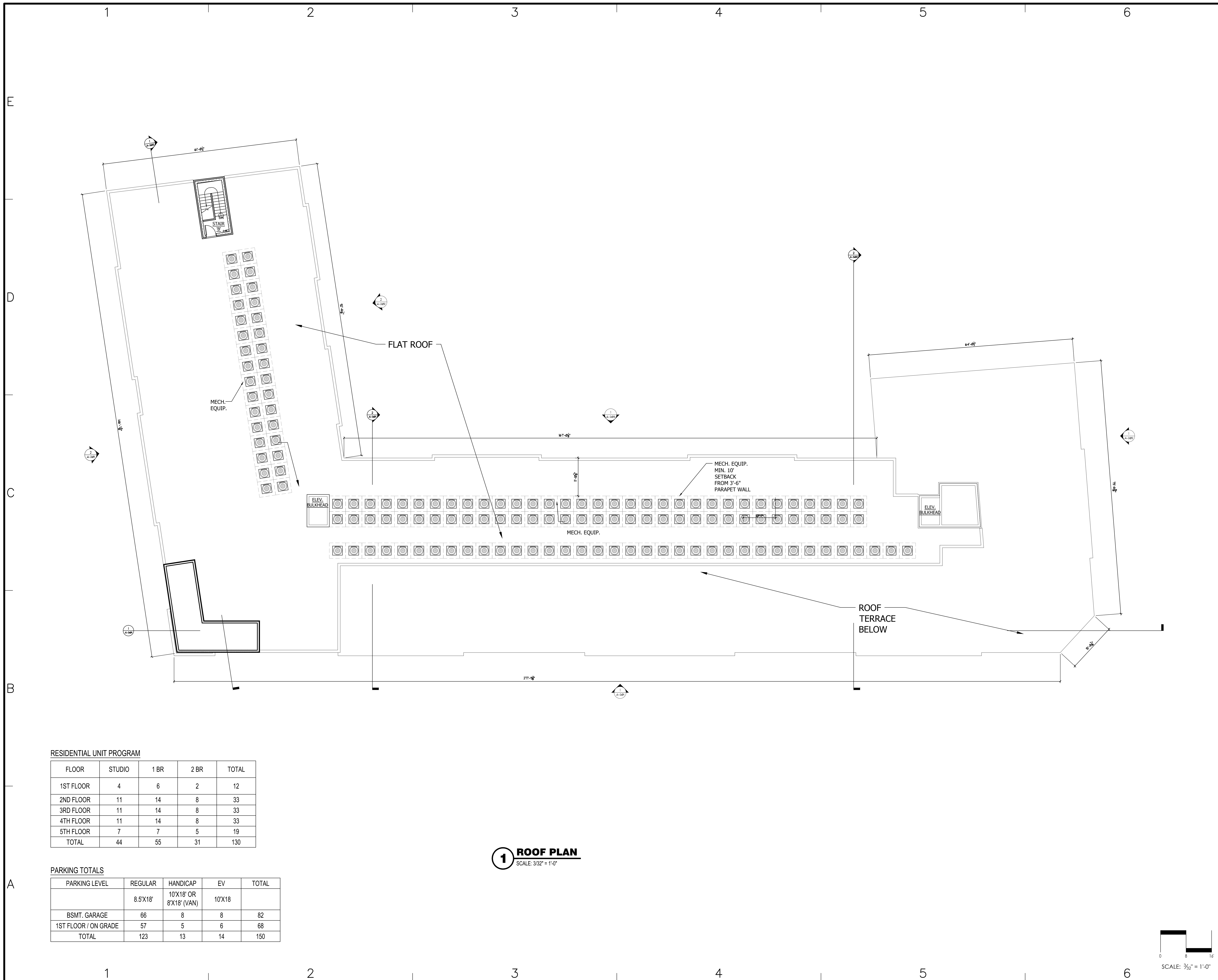
OWNER  
**WELLBUILT COMPANY**  
2 ARMONK STREET  
GREENWICH, CT 06830  
(866)846-4874

PROJECT  
**THE LAFAYETTE**  
819 E. MAIN ST. STAMFORD,  
CT 06902

DATE	DESCRIPTION
1/18/2012	ZONING ADDENDUM
4/10/2011	ZONING SUBMITTAL

PROJECT NO: ---  
CAD DWG FILE: A-101.DWG  
DRAWN BY: ---  
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SHEET TITLE  
**FIFTH FLOOR PLAN**  
A - 106  
SHEET OF



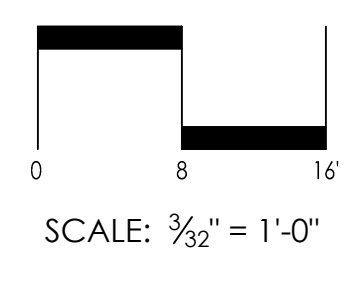
**RESIDENTIAL UNIT PROGRAM**

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1ST FLOOR / ON GRADE	57	5	6	68
<b>TOTAL</b>	<b>123</b>	<b>13</b>	<b>14</b>	<b>150</b>

**1 ROOF PLAN**  
SCALE: 3/32" = 1'-0"



**ARCHITECT**  
DO H. CHUNG and PARTNERS  
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105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
T. 203.357.0089 F. 203.353.0336

**CONSULTANTS**

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DIMARZO & BEREZKY  
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FAIRFIELD, CT 06825  
(203)857-4110

**LANDSCAPE ARCHITECT:**  
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**STRUCTURAL ENGINEER:**  
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STAMFORD, CT. 06901  
(203)327-0408

**OWNER**  
WELLBUILT COMPANY  
2 ARMONK STREET  
GREENWICH, CT 06830  
(866)846-4874

**PROJECT**  
**THE LAFAYETTE**  
819 E. MAIN ST. STAMFORD, CT 06902

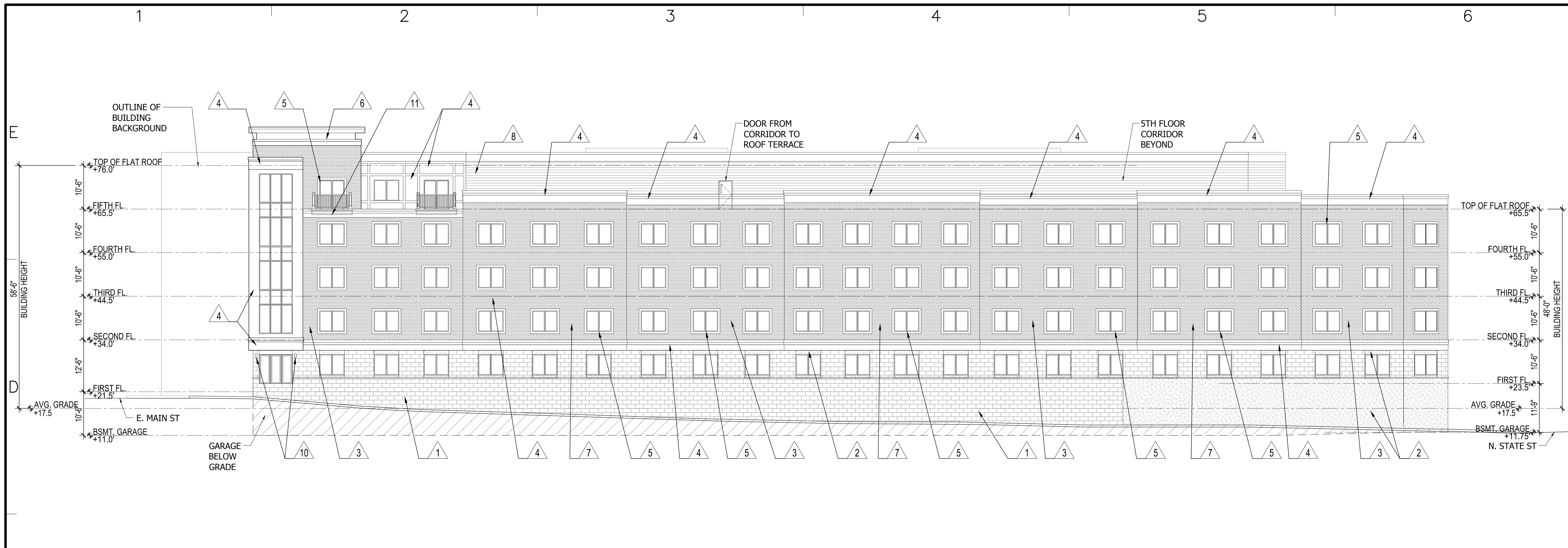
DATE	DESCRIPTION
1/18/2022	ZONING ADDENDUM
4/19/2021	ZONING SUBMITTAL

PROJECT NO: ----  
CAD DWG FILE: A-101.DWG  
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**SHEET TITLE**  
**ROOF PLAN**

**A - 107**  
SHEET OF





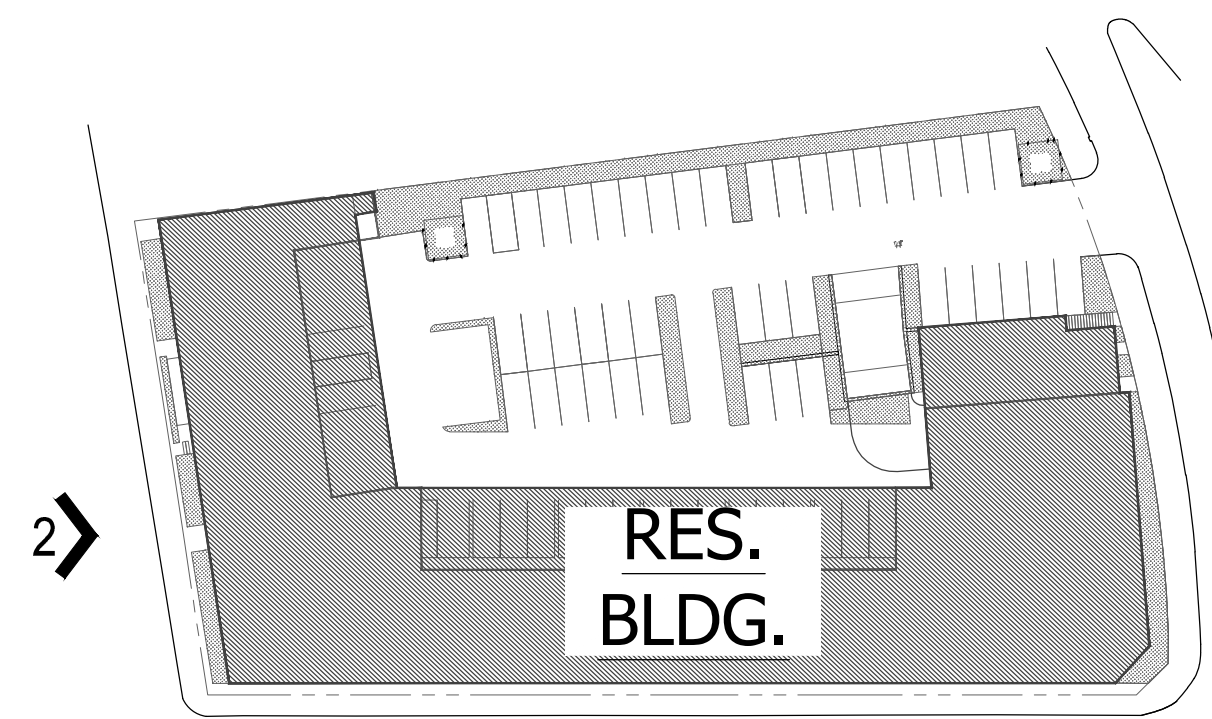
**1 WEST ELEVATION (FROM LAFAYETTE ST.)**  
3/32"=1'-0"



**2 NORTH ELEVATION (FROM E. MAIN ST.)**  
3/32"=1'-0"

**LEGEND**

1 DRYVIT TERRENO EXTERIOR FINISH	7 STUCCO STENCIL BRICK - DARK GREY
2 PARGED CONCRETE FINISH	8 LAP SIDING
3 STUCCO STENCIL BRICK - OFF WHITE	9 METAL CANOPY
4 AZEK SHEET & TRIM	10 DECORATIVE SCOSCE LIGHTING
5 VINYL WINDOWS & DOORS	11 FRENCH BALCONY w/ METAL RAILING
6 AZEK TRIM	12 METAL RAILING
X RESID. UNIT DOOR	COMMON DOOR
	WINDOW



KEY PLAN

ARCHITECT  
**DO H. CHUNG and PARTNERS**  
ARCHITECTS PLANNERS  
105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
T. 203.357.0089 F. 203.353.0336

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GREENWICH, CT 06830  
(866)846-4874

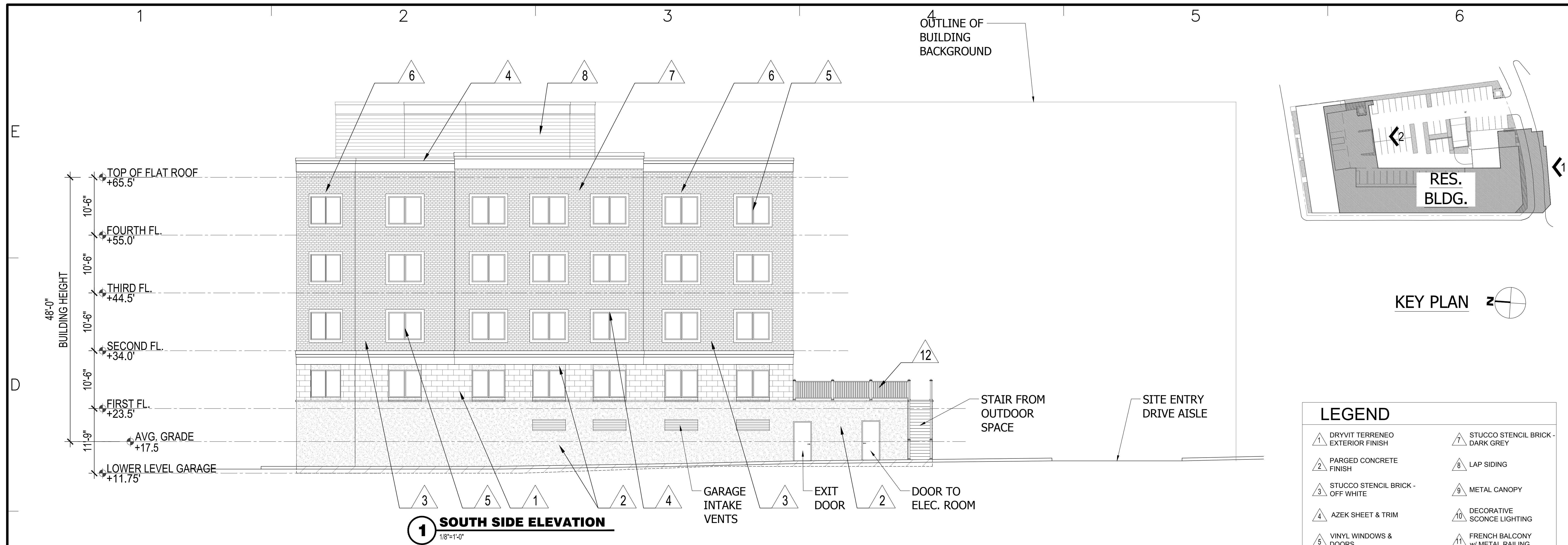
PROJECT  
**THE LAFAYETTE**  
819 E. MAIN ST. STAMFORD, CT 06902

DATE	DESCRIPTION	
1/18/2022	ZONING ADDENDUM	
6/7/2021	S.D. SET	
MARK	DATE	DESCRIPTION

PROJECT NO: ---  
CAD DWG FILE: A-201 ELEVATIONS.DWG  
DRAWN BY: ---  
CHKD BY: ---  
COPYRIGHT: ---

SHEET TITLE  
**TYP. BLDG. ELEVATIONS**

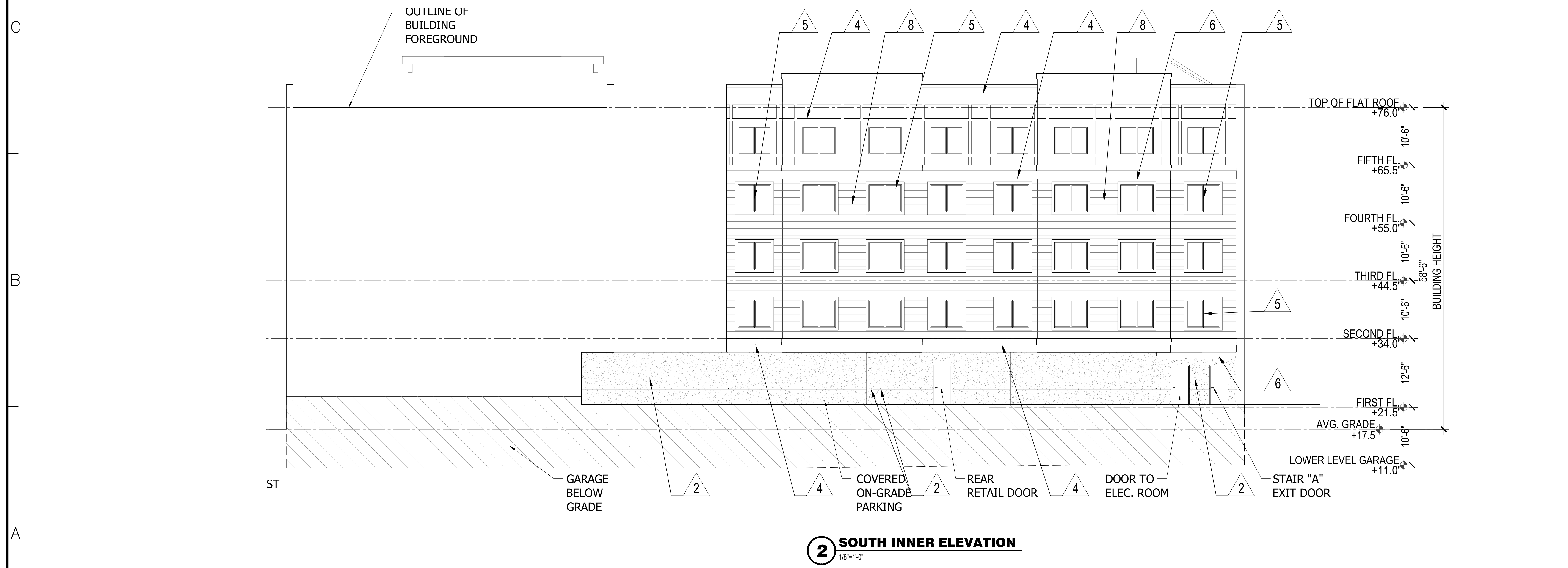




**1 SOUTH SIDE ELEVATION**  
1/8"=1'-0"

**LEGEND**

1 DRYVIT TERRENEO EXTERIOR FINISH	7 STUCCO STENCIL BRICK - DARK GREY
2 PARGED CONCRETE FINISH	8 LAP SIDING
3 STUCCO STENCIL BRICK - OFF WHITE	9 METAL CANOPY
4 AZEK SHEET & TRIM	10 DECORATIVE SCENCE LIGHTING
5 VINYL WINDOWS & DOORS	11 FRENCH BALCONY w/ METAL RAILING
6 AZEK TRIM	12 METAL RAILING
X RESID. UNIT DOOR	COMMON DOOR
	WINDOW



**2 SOUTH INNER ELEVATION**  
1/8"=1'-0"

ARCHITECT  
**DO H. CHUNG and PARTNERS**  
 ARCHITECTS PLANNERS  
 105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
 T. 203.357.0089 F. 203.353.0336

CONSULTANTS  
**CIVIL ENGINEERS:**  
 DIMARZO & BERECKZY  
 10 HIGH CIRCLE LANE  
 FAIRFIELD, CT 06825  
 (203)857-4110

**LANDSCAPE ARCHITECT:**  
 ENVIRONMENTAL LAND SOLUTIONS, LLC  
 8 KNIGHT STREET  
 #203  
 NORWALK, CT 06851  
 (203)855-7879

**SURVEYOR:**  
 DIMARZO & BERECKZY  
 10 HIGH CIRCLE LANE  
 FAIRFIELD, CT 06825  
 (203)857-4110

**MECHANICAL ENGINEERS:**  
 STANTEC  
 30 OAK ST.  
 FOURTH FLOOR  
 STAMFORD, CT 06905  
 (203)352-1717

**STRUCTURAL ENGINEER:**  
 CONSULTING STRUCTURAL ENGINEERS  
 4 LANDMARK SQUARE, SUITE 170  
 STAMFORD, CT. 06901  
 (203)327-0408

OWNER  
**WELLBUILT COMPANY**  
 2 ARMONK STREET  
 GREENWICH, CT 06830  
 (866)846-4874

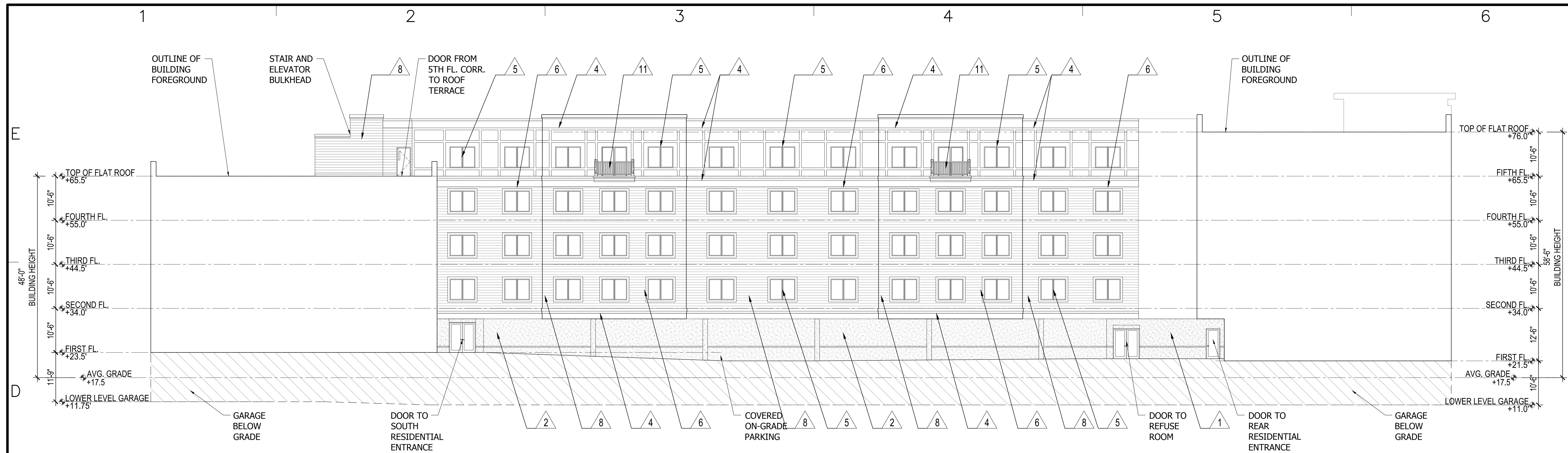
PROJECT  
**THE LAFAYETTE**  
 819 E. MAIN ST. STAMFORD, CT 06902

DATE	DESCRIPTION
1/18/2022	ZONING ADDENDUM
6/7/2021	S.D. SET

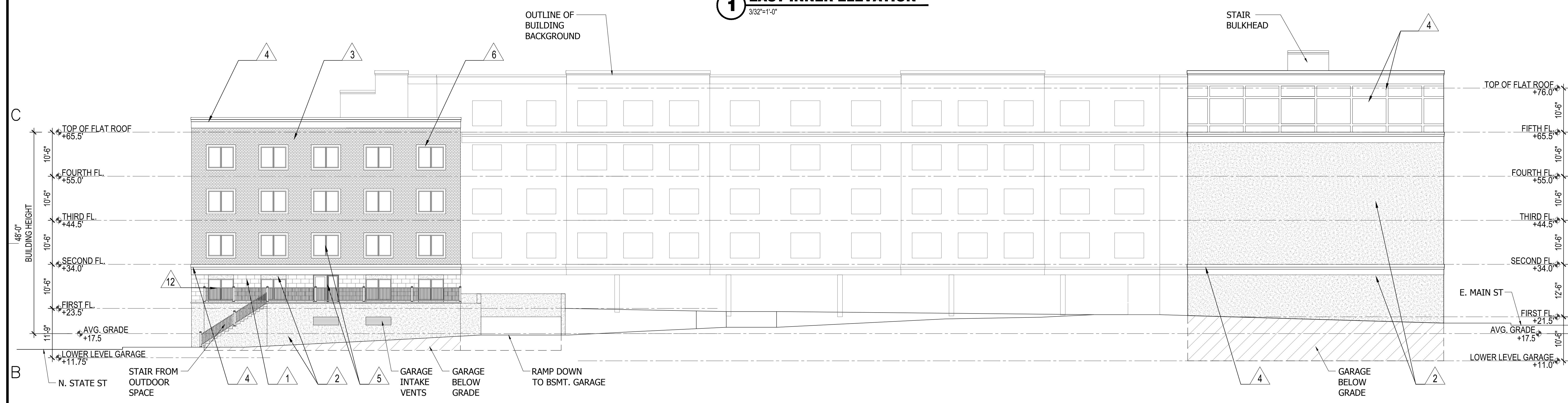
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 CHKD BY: -  
 COPYRIGHT: -

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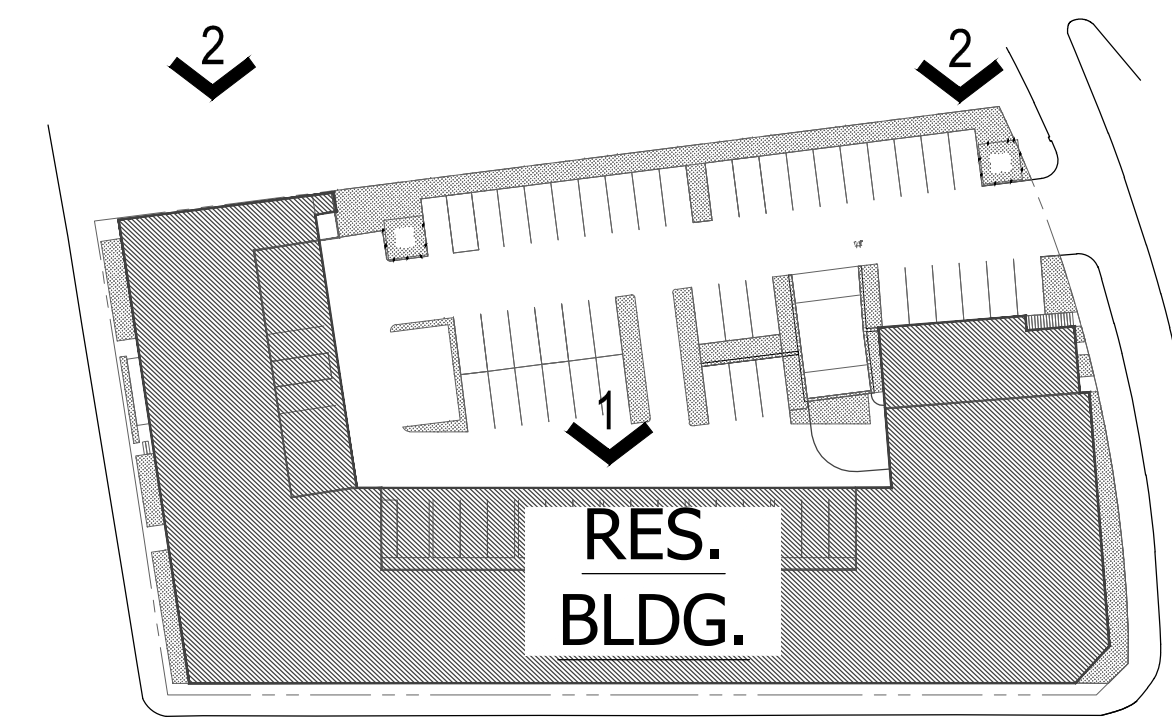
SHEET  
**A - 202**  
 OF



**1 EAST INNER ELEVATION**  
3/32"=1'-0"



**1 EAST OUTER ELEVATION**  
3/32"=1'-0"



KEY PLAN

ARCHITECT  
**DO H. CHUNG and PARTNERS**  
ARCHITECTS PLANNERS  
105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
T. 203.357.0089 F. 203.353.0336

CONSULTANTS  
**CIVIL ENGINEERS:**  
DIMARZO & BERECKZY  
10 HIGH CIRCLE LANE  
FAIRFIELD, CT 06825  
(203)857-4110

**LANDSCAPE ARCHITECT:**  
ENVIRONMENTAL LAND  
SOLUTIONS, LLC  
8 KNIGHT STREET  
#203  
NORWALK, CT 06851  
(203)855-7879

**SURVEYOR:**  
DIMARZO & BERECKZY  
10 HIGH CIRCLE LANE  
FAIRFIELD, CT 06825  
(203)857-4110

**MECHANICAL ENGINEERS:**  
STANTEC  
30 OAK ST.  
FOURTH FLOOR  
STAMFORD, CT 06905  
(203)352-1717

**STRUCTURAL ENGINEER:**  
CONSULTING STRUCTURAL  
ENGINEERS  
4 LANDMARK SQUARE, SUITE 170  
STAMFORD, CT. 06901  
(203)327-0408

OWNER  
**WELLBUILT COMPANY**  
2 ARMONK STREET  
GREENWICH, CT 06830  
(866)846-4874

PROJECT  
**819 E. MAIN ST.**  
819 E. MAIN ST. STAMFORD,  
CT 06902

DATE	DESCRIPTION
1/18/2022	ZONING ADDENDUM
8/7/2021	B.D. SET

PROJECT NO: ---  
CAD DWG FILE: A-201 ELEVATIONS.DWG  
DRAWN BY: ---  
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COPYRIGHT: ---

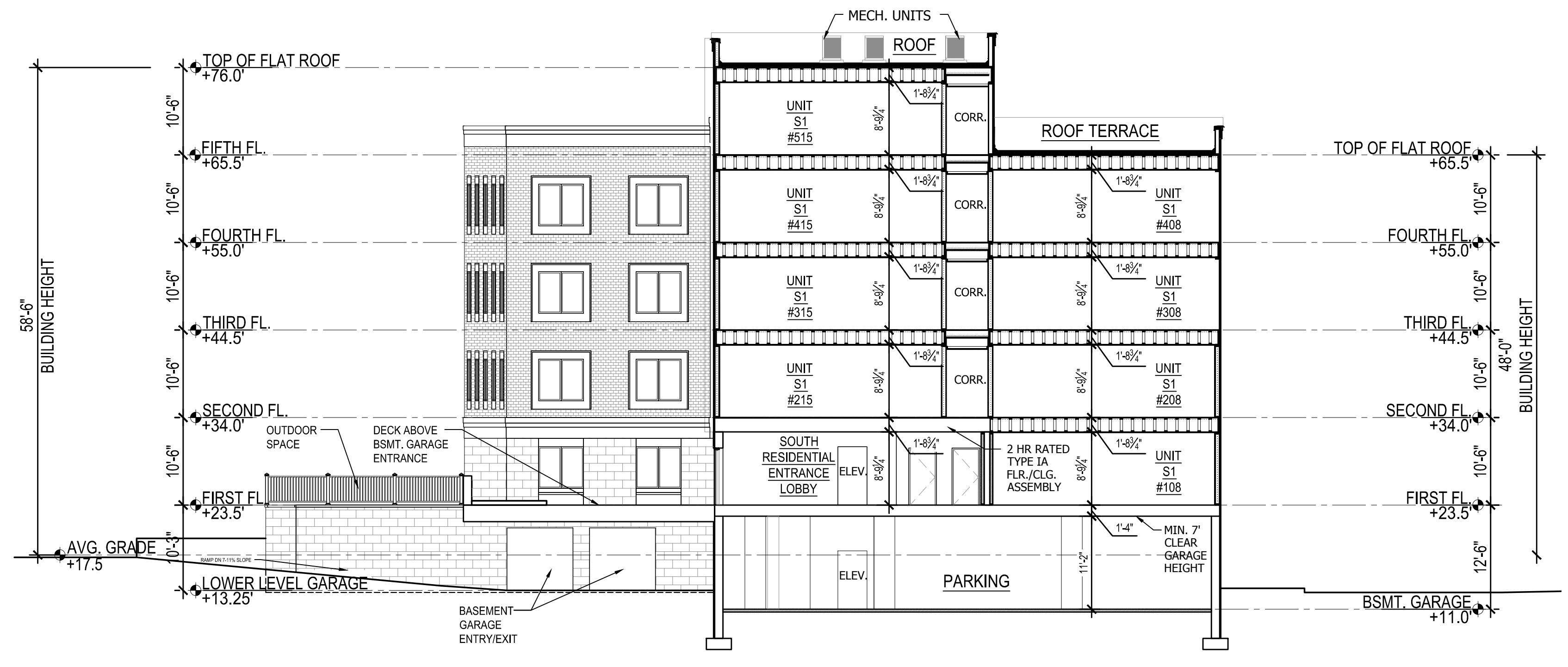
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A - 203  
SHEET OF

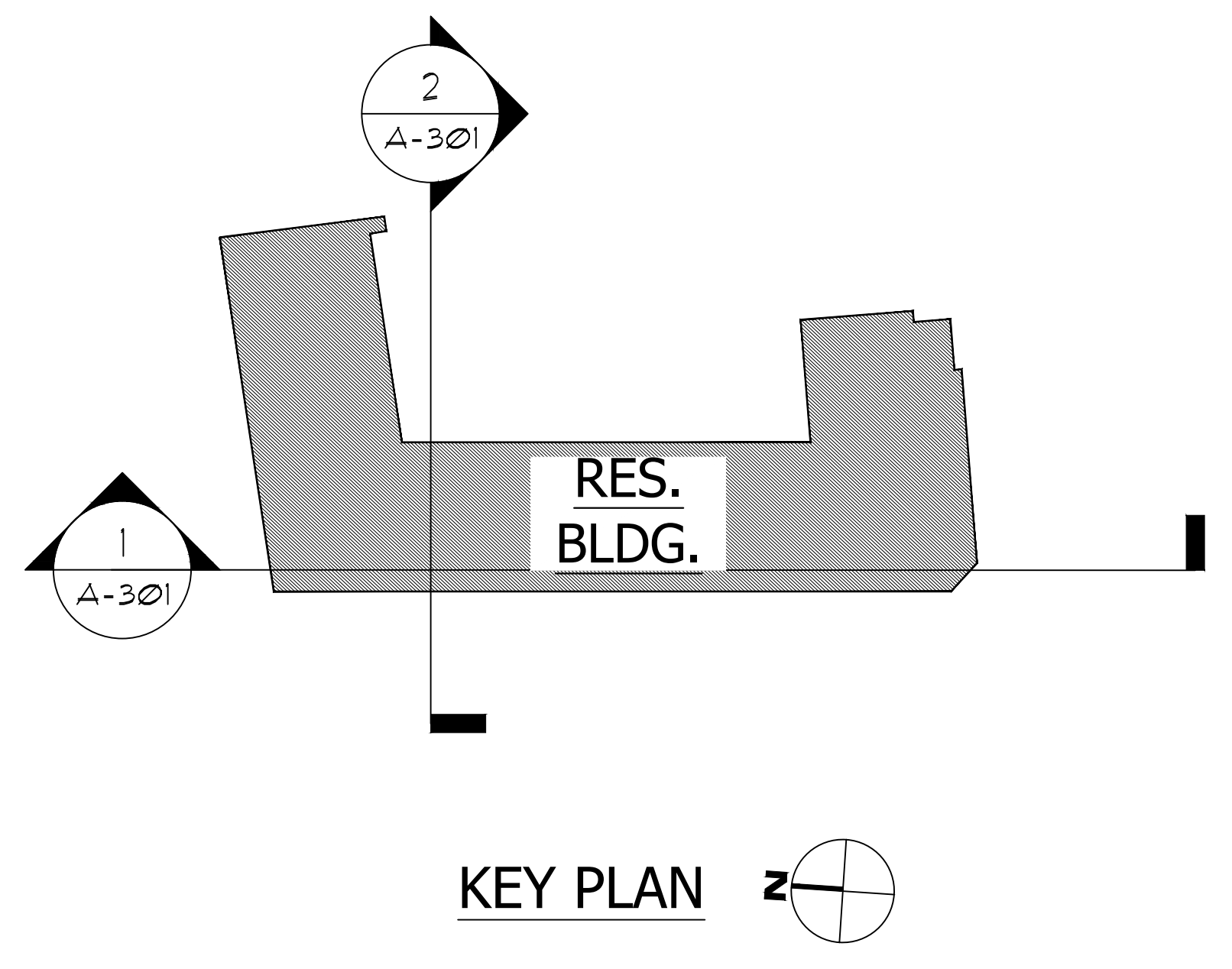


DATE	REVISION	DESCRIPTION
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4/10/2021	2	ZONING SUBMITTAL

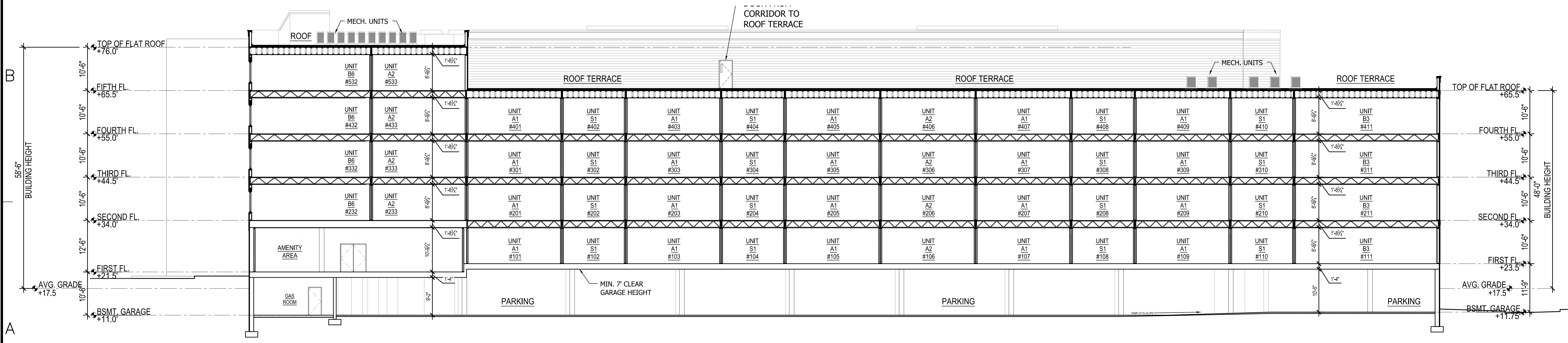
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 CHK'D BY: -  
 COPYRIGHT: -



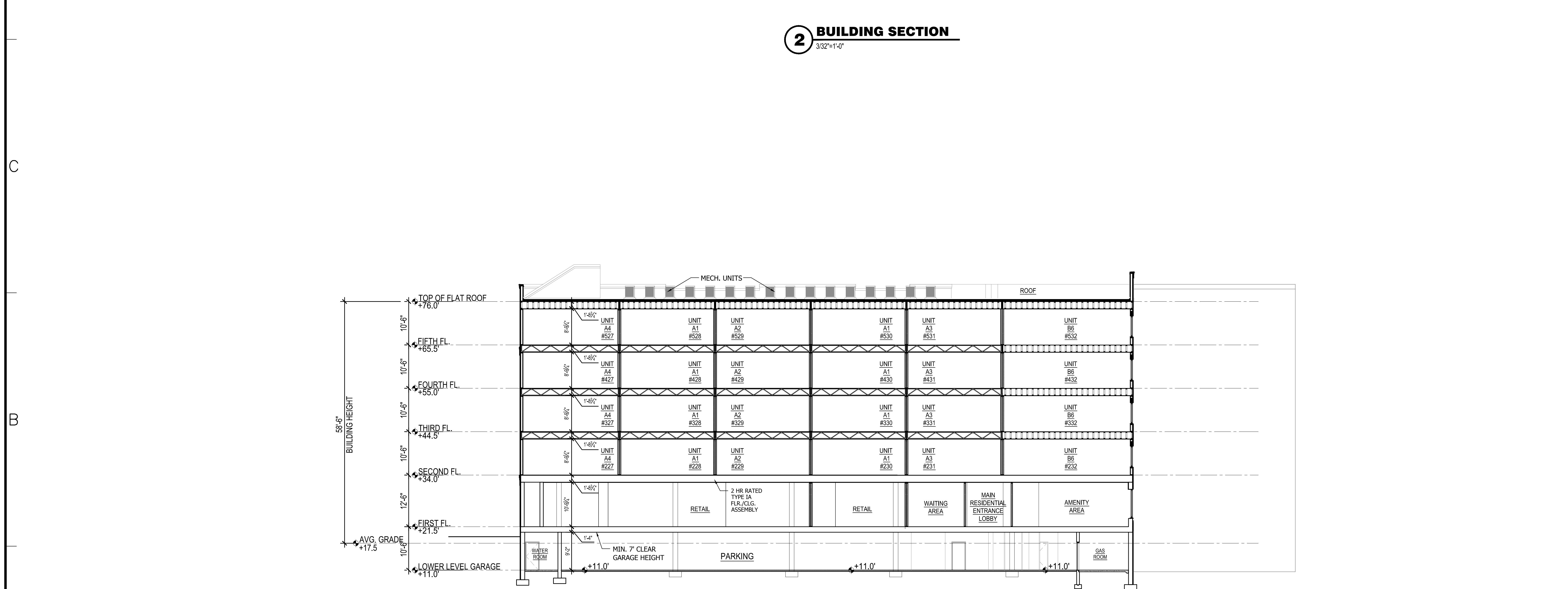
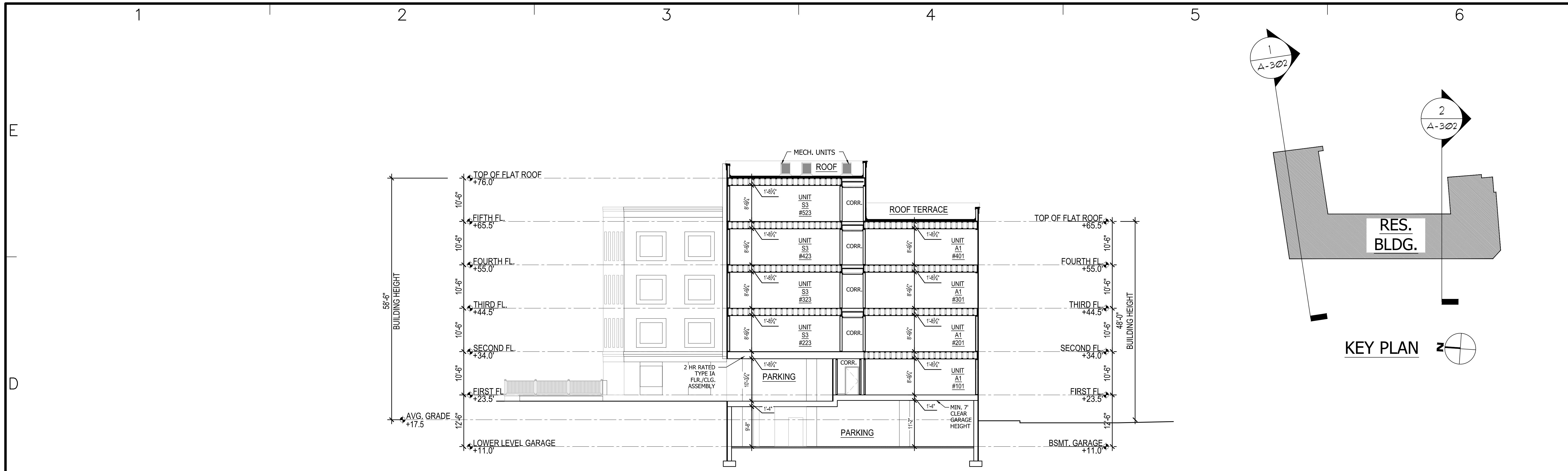
**2 BUILDING SECTION**  
 3/32"=1'-0"



KEY PLAN



**1 BUILDING SECTION**  
 3/32"=1'-0"



ARCHITECT  
**DO H. CHUNG and PARTNERS**  
 ARCHITECTS PLANNERS  
 105 BEDFORD ST., STAMFORD, CONNECTICUT 06901  
 T. 203.357.0089 F. 203.353.0336

CONSULTANTS  
**CIVIL ENGINEERS:**  
 DIMARZO & BEREZKY  
 10 HIGH CIRCLE LANE  
 FAIRFIELD, CT 06825  
 (203)857-4110

**LANDSCAPE ARCHITECT:**  
 ENVIRONMENTAL LAND  
 SOLUTIONS, LLC  
 8 KNIGHT STREET  
 #203  
 NORWALK, CT 06851  
 (203)855-7879

**SURVEYOR:**  
 DIMARZO & BEREZKY  
 10 HIGH CIRCLE LANE  
 FAIRFIELD, CT 06825  
 (203)857-4110

**MECHANICAL ENGINEERS:**  
 COLLECTIVE DESIGN  
 ASSOCIATES  
 46 RIVERSIDE AVENUE  
 WESTPORT, CT 06880  
 (203)299-0250

**STRUCTURAL ENGINEER:**  
 CONSULTING STRUCTURAL  
 ENGINEERS  
 4 LANDMARK SQUARE, SUITE 170  
 STAMFORD, CT. 06901  
 (203)327-0408

OWNER  
**WELLBUILT COMPANY**  
 2 ARMONK STREET  
 GREENWICH, CT 06830  
 (866)846-4874

PROJECT  
**THE LAFAYETTE**  
 819 E. MAIN ST. STAMFORD,  
 CT 06902

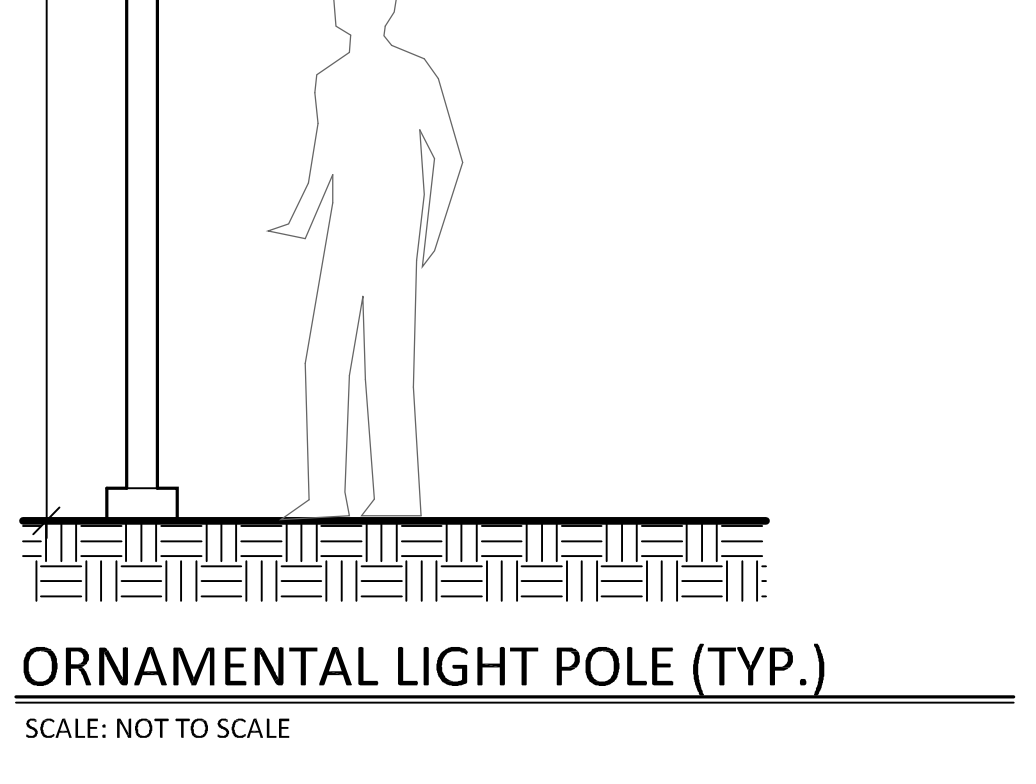
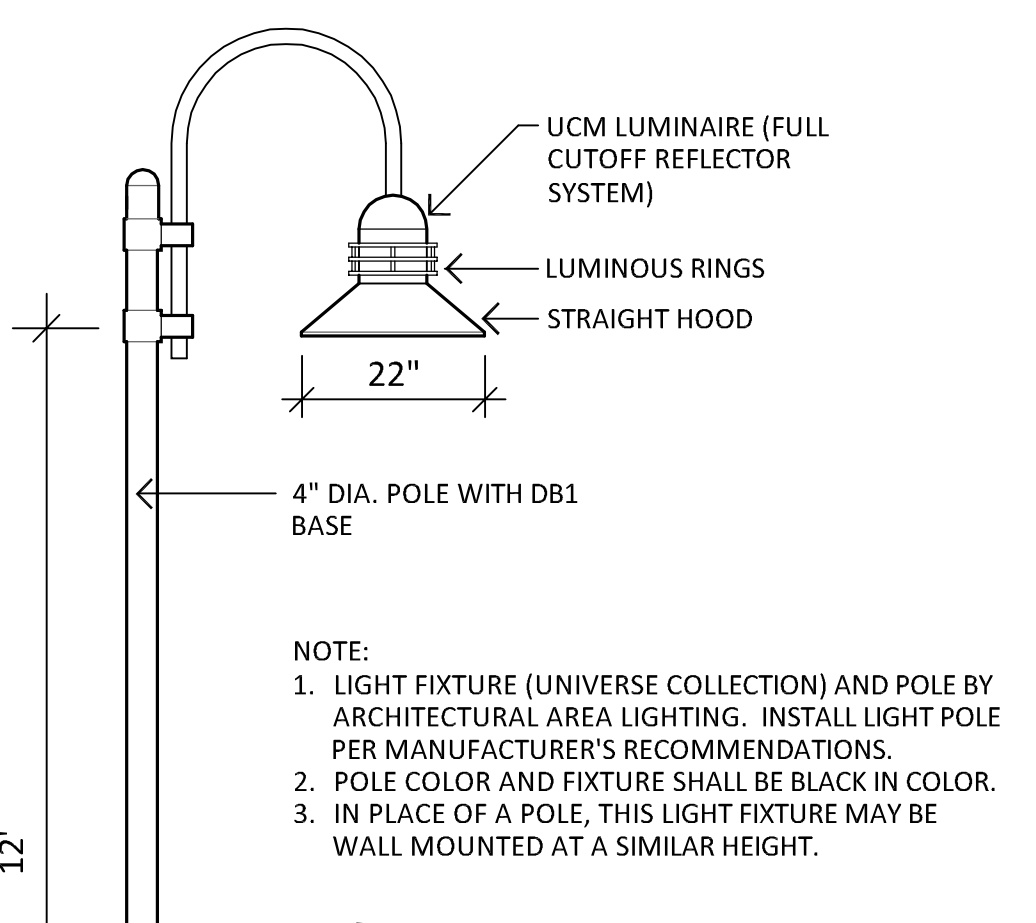
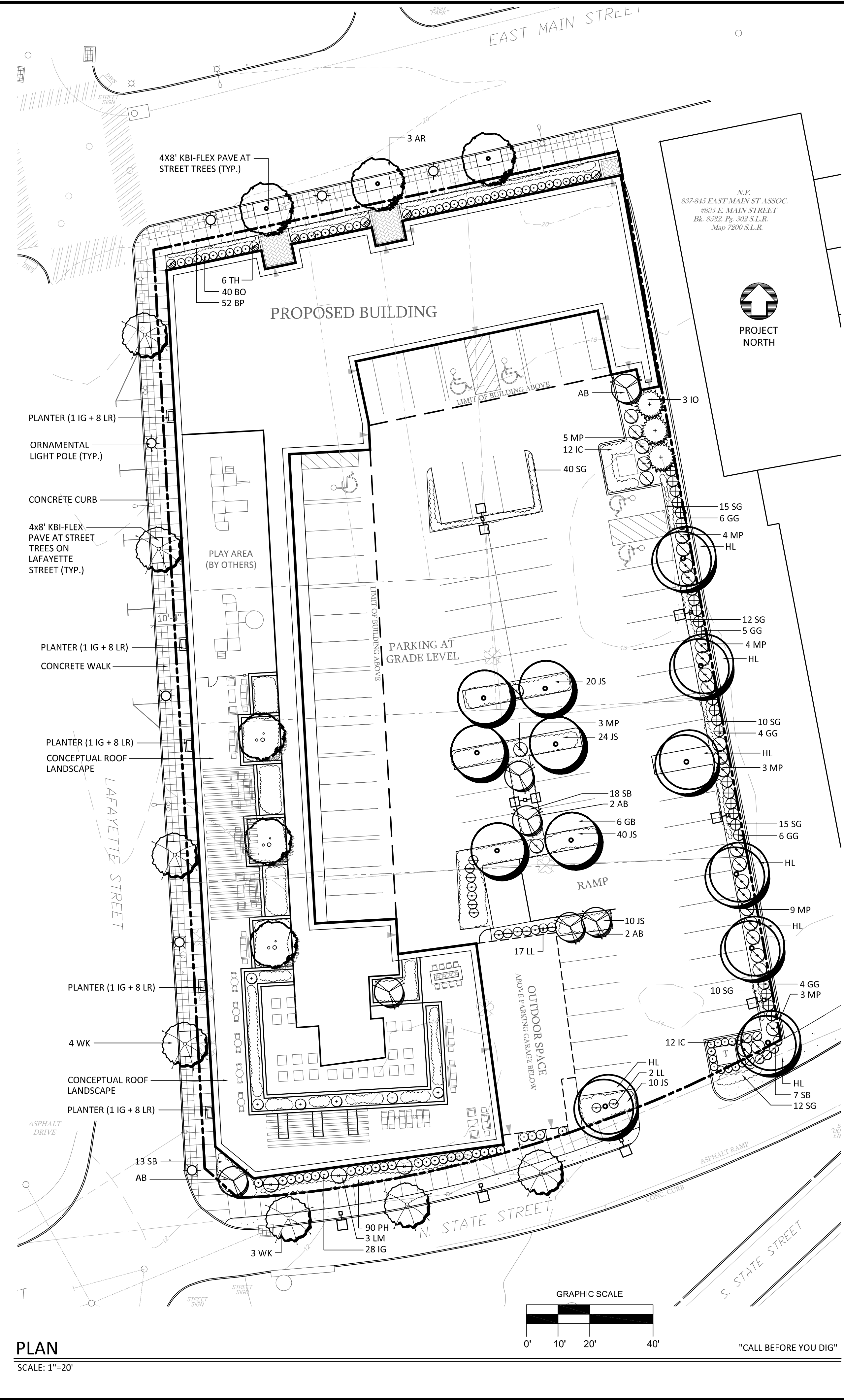
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4/16/2011		ISSUE SUBMITTAL

PROJECT NO: ----  
 CAD DWG FILE: A-301 TYP. SECTIONS.DWG  
 DRAWN BY: -  
 CHK'D BY: -  
 COPYRIGHT: -

SHEET TITLE  
**TYP. SECTIONS**

A - 302  
 SHEET OF





**PLANT LIST**

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	PLANTING HEIGHT	MATURE HEIGHT	NOTES
3	AR	ACER RUBRUM 'ARMSTRONG'	ARMSTRONG RED MAPLE	3-3 1/2" CAL.	B&B	14-16" HT.	50' HT. x 20' WIDE	RED FALL COLOR
6	GB	GINKGO BILOBA 'AUTUMN GOLD'	AUTUMN GOLD GINKGO	3-3 1/2" CAL.	B&B	14-16" HT.	50' HT. x 30' WIDE	YELLOW FALL COLOR
7	HL	GLEDITSIA TRIACANTHOS 'SHADEMASTER'	SHADEMASTER HONEY LOCUST	3-3 1/2" CAL.	B&B	14-16" HT.	45' HT. x 30' WIDE	COMPOUND LEAF
6	AB	AMELANCHIER 'AUTUMN BRILLIANCE'	AUTUMN BRILLIANCE SHAD	6-8" HT.	B&B	6-8" HT.	20' HT. x 10' WIDE	WHITE FLOWERS
7	WK	CRATAEGUS 'WINTER KING'	WINTER KING HAWTHORN	2 1/2-3" CAL.	B&B	12-14" HT.	20' HT. x 18' WIDE	RED BERRIES
3	IO	ILEX OPACA	AMERICAN HOLLY	6-7" HT.	B&B	6-7" HT.	40' HT. x 20' WIDE	EVERGREEN, NATIVE
25	GG	THUJA 'GREEN GIANT'	GREEN GIANT ARBORVITAE	8-9" HT.	B&B	8-9" HT.	30' HT. x 10' WIDE	EVERGREEN
40	BO	HYDRANGEA 'BOBO'	BOBO HYDRANGEA	2-3" HT.	CONT.	2-3" HT.	3' HT. x 3' WIDE	WHITE FLOWERS
19	LL	HYDRANGEA PANICULATA 'LITTLE LIME'	LITTLE LIME HYDRANGEA	2-3" HT.	CONT.	2-3" HT.	4' HT. x 4' WIDE	WHITE FLOWERS
3	LM	HYDRANGEA PANICULATA 'LIME LIGHT'	LIME LIGHT HYDRANGEA	3-4" HT.	CONT.	3-4" HT.	8' HT. x 8' WIDE	WHITE FLOWERS
24	IC	ILEX CRENATA 'CHESAPEAKE'	CHESAPEAKE HOLLY	3-4" HT.	B&B	3-4" HT.	8' HT. x 4' WIDE	EVERGREEN
33	IG	ILEX GLABRA 'SHAMROCK'	COMPACT INKBERRY	2-3" HT.	CONT.	2-3" HT.	4' HT. x 4' WIDE	EVERGREEN
108	JS	JUNIPERUS CHINENSIS VAR. 'SARGENTII'	SARGENT JUNIPER	2-3" SPR.	CONT.	2-3" SPR.	CONT.	EVERGREEN
52	BP	JUNIPERUS CONFERTA 'BLUE PACIFIC'	BLUE PACIFIC JUNIPER	2-3" SPR.	CONT.	2-3" SPR.	CONT.	EVERGREEN
31	MP	MYRTICA PENSYLVANICA	NORTHERN BAYBERRY	36-42" HT.	CONT.	36-42" HT.	12' HT. x 7' WIDE	NATIVE
38	SB	SPIRAEA 'SHIROBANA'	SHIROBANA SPIREA	24-30" HT.	CONT.	24-30" HT.	7' HT. x 3' WIDE	WHITE AND PINK FLOWERS
6	TH	THUJA OCCIDENTALIS 'HOLMSTRUP'	HOLMSTRUP ARBORVITAE	3-4" HT.	B&B	3-4" HT.	7' HT. x 3' WIDE	EVERGREEN
40	LR	LIRIOPE MUSCARI 'MONROE WHITE'	MONROE WHITE LIRIOPE	1 QT.	1 QT.	1 QT.	5' HT.	NATIVE
114	SG	PANICUM VIRGATUM 'HANSE HERMS'	HANSE HERMS SWITCHGRASS	1 GAL.	1 GAL.	1 GAL.	2' HT.	NATIVE
90	PH	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN HAMELN GRASS	1 GAL.	1 GAL.	1 GAL.	2' HT.	NATIVE

- SITE LIGHTING NOTES:**
- SITE LIGHTING INFORMATION AND LIGHTING PLANS PREPARED BY ENVIRONMENTAL LAND SOLUTIONS, LLC ARE DESIGNED FOR GENERAL LANDSCAPE AESTHETIC PURPOSES ONLY. LIGHTING INFORMATION SHOWN ON THIS PLAN SHALL NOT BE USED FOR SECURITY OR SAFETY PURPOSES.
  - LOCATION AND TYPE OF LIGHT FIXTURES ARE TYPICAL AND MAY VARY BASED ON ACTUAL FIELD CONDITIONS, SITE AND ARCHITECTURAL PLAN REVISIONS, USE OF EXISTING LIGHTING (IF ANY), NEW BUILDING MOUNTED LIGHTING, AESTHETICS, AND CONSULTATIONS WITH LIGHTING CONSULTANT AND/OR MANUFACTURER.
  - THIS PLAN ASSUMES THAT THE BUILDING WILL HAVE WALL MOUNTED FIXTURES (BY OTHERS) TO LIGHT THE FACADE AND ADJACENT LANDSCAPE AREAS (INCLUDING WALKS AND DOORS).
  - INSTALL LIGHT FIXTURES AS RECOMMENDED BY THE MANUFACTURER.

- PLANTER NOTES**
- PLANTERS ON LAFAYETTE STREET TO BE APPROX. 2' WIDE, 30" HT., AND 4' LONG.

**CITY STREETSCAPE LIGHT POLE**

**ORDERING GUIDE:**

C13813: LUMINAIRE  
 Modifications:  
 - Full top reflector.  
 C13813: ARM BRACKET  
 Modifications:  
 - GR outlet w/ in-use cover.  
 C13813: 10" POLE ASSEMBLY (shown)  
 C13813A: 10" POLE ASSEMBLY

Color: (specify)

Luminaire Detail Scale 1:16

Color: (specify)

PASTENERS:  
HEX HEAD BOLTS  
COLOR: (specify)  
- BLACK  
- WHITE  
- BRONZE  
- GREEN

POLE ASSEMBLY:  
2 LIGHTS @ 180°, CAST ALUMINUM CENTER HUB TO FIT ON 3" TENON, MODIFIED W/ 120V GR OUTLET W/ IN-USE COVER & (2) BRASS LOOPS ATTACHED TO ARMS

POLE ASSEMBLY:  
5" ROUND FLAT FLUTED ALUMINUM W/ 3" O.D. TENON, 0.188"-0.250" WALL THICKNESS, CAST ALUMINUM BASE W/ ACCESS DOOR

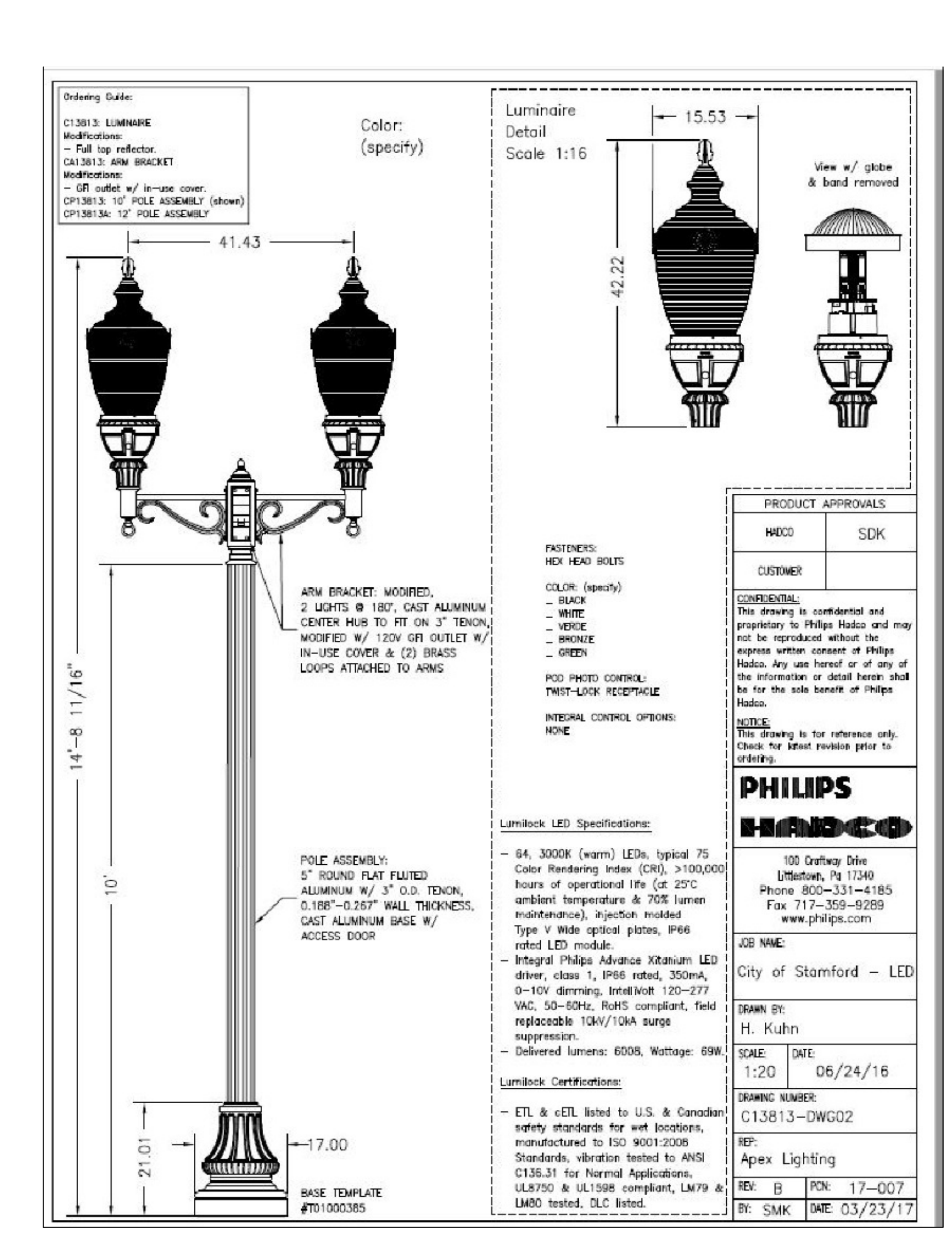
BASE TEMPLATE #701000305

PHILIPS HADCO  
 100 Duffway Drive  
 Easton, PA 17840  
 Phone: 800-331-4185  
 Fax: 717-355-0289  
 www.philips.com

PRODUCT APPROVALS  
 NACO SDK  
 CUSTOMER  
 CONFIDENTIAL: This drawing is confidential and proprietary to Philips Hadco and may not be reproduced without the express written consent of Philips Hadco. Any use hereof or of any of the information or detail herein shall be for the sole benefit of Philips Hadco.  
 NOTES: This drawing is for reference only. Check for latest revision prior to ordering.  
 PHILIPS HADCO  
 JOB NAME: City of Stamford - LED  
 TEAM BY: H. Kuhn  
 SCALE: 1:20 DATE: 06/24/16  
 DRAWING NUMBER: C13813-DWG02  
 REP: Apex Lighting  
 REV: B PON: 17-007  
 BY: SMK DATE: 03/23/17

**NOTES:**

- POLE AND FIXTURE COLOR SHALL BE GREEN.
- FIXTURE SHALL HAVE FULL TOP REFLECTOR.
- POLE SHALL BE 10' IN HEIGHT WITH GFI OUTLET.



**REVISIONS:**

NO.	DATE	DESCRIPTION
3	2.4.22	REVISED SITE PLAN
2	7.25.21	ADD PLANTING HEIGHTS IN PLANT LIST
1	7.22.21	REVISED PARKING LAYOUT

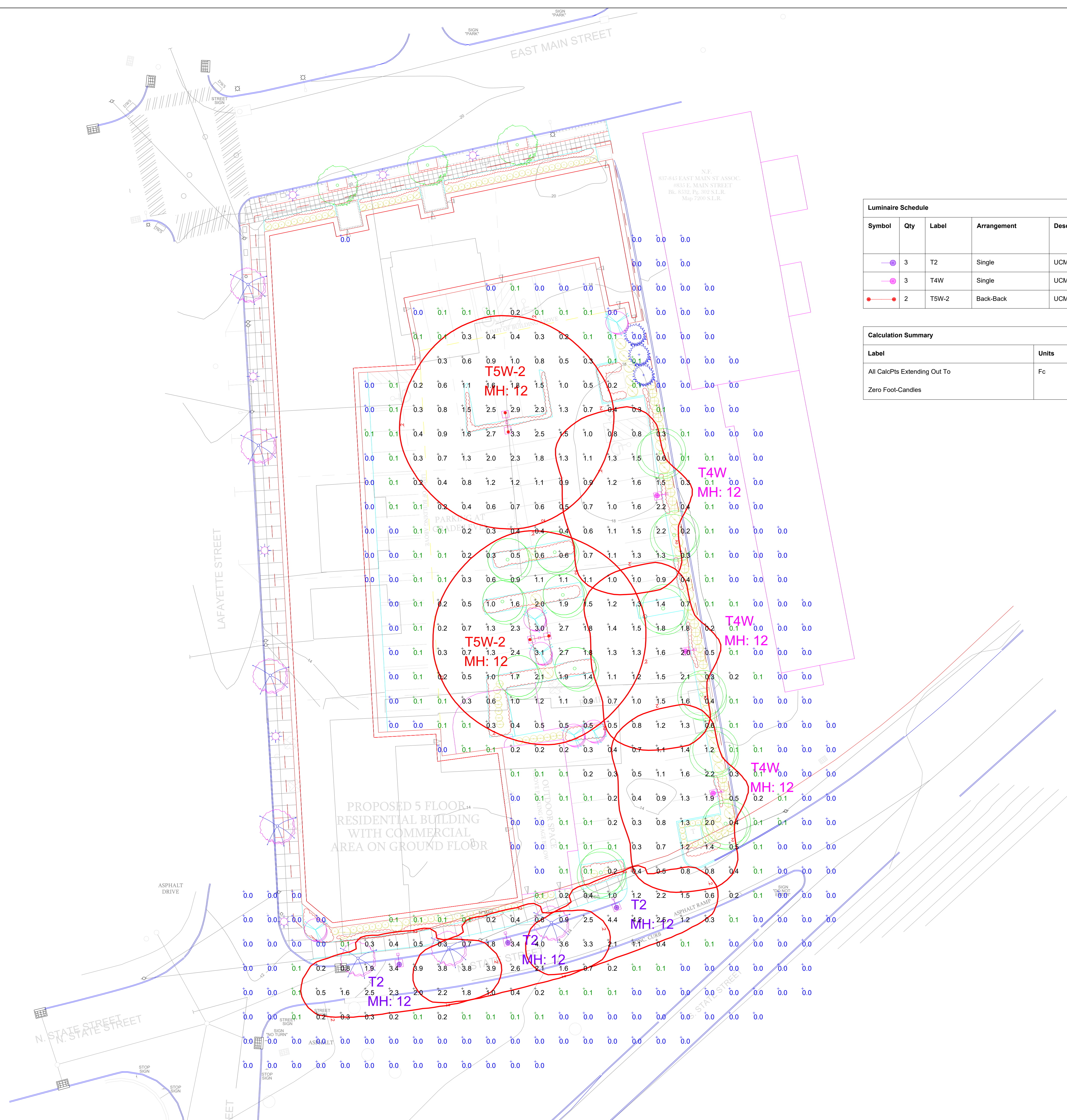
**DRAWING TITLE:**  
LANDSCAPE PLAN

**PROJECT:**  
819 EAST MAIN STREET  
STAMFORD, CONNECTICUT

**SEAL:**  
ENVIRONMENTAL LAND SOLUTIONS, LLC  
Landscape Architecture and Environmental Planning  
8 KNIGHT STREET, SUITE 203  
NORWALK, CONNECTICUT 06851  
Tel: (203) 855-7879 Fax: (203) 855-7836  
info@elsllc.net www.elsllc.net

**DATE:** 4.23.21  
**SCALE:** AS SHOWN  
**DRAWING NO.:** LP.1





Luminaire Schedule										
Symbol	Qty	Label	Arrangement	Description	LLF	Luminaire Lumens	Luminaire Watts	Arrangement Watts	Total Watts	
●	3	T2	Single	UCM2-ANG-36L-260-3K7-2	0.850	3788	31.52	31.52	94.56	
●	3	T4W	Single	UCM2-ANG-36L-260-3K7-4W	0.850	3749	31.52	31.52	94.56	
●	2	T5W-2	Back-Back	UCM2-ANG-36L-260-3K7-5W	0.850	3822	31.52	63.04	126.08	

Calculation Summary									
Label	Units	Avg	Max	Min	Avg/Min	Max/Min	PtSpclr	PtSpctb	
All CalcPts Extending Out To	Fc	0.55	4.4	0.0	N.A.	N.A.	10	10	
Zero Foot-Candles									

Project: 819 East Main.		Detail: Photometric Calculation	
Contact: Cliff Gilbert Specifications - Southern CT (203) 788-0814 cgilbert@illuminate.com		Date: 2/3/2022	
Revision: ----		Scale: 1" = 20'-0"	
Drawing Number:		Drawn By: -	
 44 Sixth Road Woburn, MA 01801 (781) 935-8500 333 Pleasant Valley Road South Windsor, CT 06074 (860) 282-0597		<h1>SL-1</h1>	
		Sheet 1 of 1	

**Office Use only**

Received Date	
Application #	

<b>1. Address of Development</b>	
Address1	819 E Main St
Address2	

<b>2. Applicant Info</b>	
Name	
Company	
Address1	
Address2	
Email	
Phone	

<b>3. Owner info</b>	
Name	
Company	Wellbuilt Co
Address1	
Address2	Greenwich CT
Email	
Phone	

<b>4. Mark one</b>	
X	First Submission
	Second Sumbission

**Office Use Only**

**POINT CALCULATIONS**

Max Potential	Eligible	Claimed	Notes (Indicate the plan/document where relevant information is located)
---------------	----------	---------	---

**5. Building Health**

BH1 - Indoor Air Quality <i>2nd Submission ONLY</i>	1	0	0	
BH2 – Low Emitting Materials <i>2nd Submission ONLY</i>	1	0	0	
BH3 – Moisture Control	1	1	1	Will provide HVAC plans showing humidity mitigation measures
BH4 – Daylighting <i>LARGE PROJECTS ONLY</i>	1	1	0	
BH5 – Window Shading <i>2nd Submission only</i>	1	0	0	
BH6 – Operable Windows	1	1	1	Windows will be operative
BH7- Active Design	1	1	0	
BH8- Fitness Equipment <i>LARGE PROJECTS ONLY</i>	1	1	0	

**6. Energy Usage**

<b>POINT CALCULATIONS</b>	<b>Office Use Only</b>			<b>Notes</b> (Indicate the plan/document where relevant information is located)
	<b>Max Potential</b>	<b>Eligible</b>	<b>Claimed</b>	
EU1 – Energy Usage <i>2nd Submission ONLY</i>	7	0	0	
EU2 – Submetering	2	2	2	Will have individual meters for each residential unit and each commercial tenant
EU3 – Cool Roofs	2	2	2	Flat roof will have TPO membrane which should meet SRI requirements
EU4 – Exterior Lighting	1	1	1	Will provide lighting plan. All landscape lighting to be down-lighting
EU5 – Interior Lighting	1	1	1	Will have timed lights to account for usage patterns
EU6 – Solar Ready Design <i>(NOT APPLICABLE FOR ADAPTIVE REUSE PROJECTS)</i>	2	0	0	
EU7 – Renewable Energy Production	5	0	0	
EU8 – Combined Heat and Power	3	3	3	Energy Star compliant mechanical items to be used

#### 7. Land Use

LU1 – Brownfield Redevelopment <i>2nd Submission ONLY</i>	3	0	0	
LU2 – Redevelopment	1	1	1	Redevelopment of underutilized plots which contained mostly construction fill and over-paved lots
LU3 – Adaptive Reuse	2	0	0	
LU4 – Historic Preservation	2	0	0	
LU5 – Mixed Use	4	4	2	Primary entrances within ¼ mile of 3 neighborhood services
LU6 – Transit-supportive Density	2	2	1	

#### 8. Landscaping and Open Space

LA1 – Green Roof	2	2	0	
LA2 – Tree Preservation	1	1	0	
LA3 – Tree Canopy	1	1	0	
LA4 – Additional Landscaping	1	1	0	
LA5 – Native Plants	1	1	1	Will provide landscaping plan with native plants
LA6 – Xeriscaping	1	1	1	Will provide landscaping plan with water-efficient plants
LA7 – Organic Land Care <i>2nd Submission ONLY</i>	1	0	0	



<b>POINT CALCULATIONS</b>	<b>Office Use Only</b>			<b>Notes</b> (Indicate the plan/document where relevant information is located)
	<b>Max Potential</b>	<b>Eligible</b>	<b>Claimed</b>	
LA8 – New Publicly Accessible Amenity Space <b>LARGE PROJECTS ONLY: ONLY TO LOTS 1 ACRE AND LARGER IN MP 5, 9, 11</b>	2	0	0	

### 9. Mobility

MO1 – Reduce Vehicle Travel <b>LARGE PROJECTS ONLY (non-residential uses only)</b>	2	0	0	
MO2 – Transit Proximity	3	1	1	Primary entrance within 800 feet of existing bus stop
MO3 – Shared Parking	3	0	0	
MO4 – Incentivize Transit Use <b>LARGE PROJECTS ONLY (non-residential uses only)</b>	2	0	0	
MO5 – Car Share <b>LARGE PROJECTS ONLY</b>	2	2	1	Will submit plan for car share program
MO6 – Shuttles or Support for Transit <b>LARGE PROJECTS ONLY</b>	2	2	0	
MO7 – Bicycle Facilities	1	1	0	
MO8 – Parking Availability	1	1	1	Will provide plans showing that parking provided is less than 105% of min required
MO9 – Electric Vehicles	1	1	0	
MO10 – Unbundled Parking	1	1	0	
MO11 – Road Infrastructure Contributions <b>LARGE PROJECTS ONLY 2nd Submission ONLY</b>	1	0	0	
MO12 – Walkscore	1	1	0	

### 10. Resiliency

RE1 – Development outside the floodplain	3	3	3	Outside of 500 year flood plain
RE2 – Flood Resiliency	2	0	0	
RE3 – Building Resiliency	2	2	1	Backup generator will be provided for generator.
RE4 – Sea Level Rise	2	2	0	Cannot find map mentioned in reporting instructions
RE5 – Emergency preparation and continuation of operations plan <b>LARGE PROJECTS ONLY 2nd Submission ONLY</b>	1	0	0	

### 11. Urban Design

**Office  
Use Only**

**POINT CALCULATIONS**

	Max Potential	Eligible	Claimed	Notes (Indicate the plan/document where relevant information is located)
UD1 –Block size	1	1	1	
UD2 –Minimal Visual Impact of Parking	2	2	1	All surface parking blocked from view
UD3 – Building Orientation	1	1	1	
UD4 – Building façade	1	1	1	
UD5 –Building Materials	1	1	0	
UD6 –Proximity of Building to Street	1	1	1	
UD7 – Building Certification <i>2nd Submission ONLY</i>	3	0	0	

**12. Waste Management**

WM1 –Construction and demolition debris <i>2nd Submission ONLY</i>	2	0	0	
WM2 - Recycling <i>2nd Submission ONLY</i>	1	0	0	
WM3 – Organic Waste <i>2nd Submission ONLY</i>	2	0	0	
WM4 – Reusable Materials <i>(non-residential buildings only)</i>	1	0	0	

**13. Water Use**

WU1 – Indoor Water Management	3	3	0	
WU2 – Outdoor Water Management	1	1	0	
WU3 – Stormwater Management	2	2	0	
WU4 – Stormwater Retention	1	1	1	Plan to increase stormwater detention

<b>TOTAL</b>	<b>108</b>	<b>59</b>	<b>30</b>	
	<b>SCORE</b>	<b>51%</b>	<b>NR</b>	

# TRAFFIC ACCESS AND IMPACT STUDY

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## Mixed-Use Development 819 East Main Street Stamford, Connecticut



**Prepared for:  
Wellbuilt**

**January 2022**



January 14, 2022

Mr. Scott Lumby  
Wellbuilt Company  
2 Armonk Street  
Greenwich, Connecticut 06830

Dear Mr. Lumby:

As requested, we are pleased to submit this Traffic Study for submission to the City of Stamford, Connecticut Department of Transportation (CTDOT) and the Office of the State Traffic Administration (OSTA). The proposal is to redevelop several properties located at the intersection of East Main Street, Lafayette Street and North State Street. The development comprises 130-units of multi-family housing and 2,950 square feet of commercial space. Previously, a portion of this site was approved for a 85-unit residential development in September 2021, with 2,900 square feet of commercial space. For this proposal, the access to a parking garage and at-grade parking will be from North State Street, with pedestrian access mainly from East Main Street.

The full development will generate 55 and 70 vehicle trip ends during the typical weekday morning and weekday afternoon peak hours, respectively. The previously approved development of this property would have generated 38 and 52 vehicle trip ends during the same two peak hours. Therefore, for comparison purposes only, the net increase in site traffic generation will be 17 and 18 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative, this traffic analysis does not take any credit for existing traffic generated by the several different land uses located on the Subject Property.

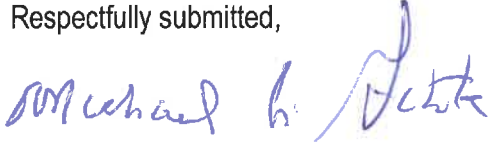
The analysis includes the signalized intersections of East Main Street at Lafayette Street and East Main Street at North State Street and the unsignalized intersections of Lafayette Street at North State Street/South Main Street, as well as the proposed site access drive to North State Street. Results of the analyses indicate that under a build condition all locations will continue to operate at very acceptable Levels of Service during the two peak hours. At the east Main Street/Lafayette Street signalized intersection it will maintain an overall Level of Service "C." At the signalized intersection of East Main Street/North State Street intersection it will maintain a Level of Service "A." For the unsignalized intersections of Lafayette Street intersections of North State Street and South Street and the site access drive all will operate at Level of Service "A," with little, if any delays.

Based on the results of the analyses, off-site road improvements or modifications to traffic control are not necessary to accommodate the additional traffic to be generated by this development. Note that this traffic

Mr. Scott Lumby  
Page 2  
January 14, 2022

analysis is based on the full redevelopment of the site with 130 residential units and 2,950 square feet of commercial space.

Respectfully submitted,



**Michael A. Galante**  
**Director of Traffic**  
**Hardesty & Hanover, LLC**

Enclosure

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## SUMMARY

This Traffic Access and Impact Study was prepared to provide the City of Stamford, the Connecticut Department of Transportation (CTDOT) and the Office of the State Traffic Administration (OSTA) with a detailed analysis to determine potential traffic impacts from the proposed mixed-use development located at 819 East Main Street. The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. The site has a previous approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space from September 2021. Site access is proposed via right turn in/right turn out to North State Street.

This Study addresses traffic conditions for the 2021 existing, 2024 no-build and 2024 build conditions during the weekday morning and weekday afternoon peak hours. Traffic counts were conducted at the Study Area intersections by Hardesty & Hanover, LLC in December 2021. Based on discussions CTDOT Planning Division, no COVID adjustments are needed.

The 2024 future projected traffic volumes, without the proposed development, employed a 0.6 percent annual growth rate, as per discussions with CTDOT Planning Division. Based on discussions with CTDOT Planning Division and the City of Stamford, no other nearby developments were identified.

Based on trip rates from "Trip Generation," 11<sup>th</sup> Edition, published by ITE, 2021, it is estimated that the proposed 130-units will generate a total of 48 and 51 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed 2,950 square feet of commercial space is estimated to generate a total of 7 and 19 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. Therefore, the total proposed site will generate a total of 55 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative no pass-by credit was applied to the commercial space.

This site received an approval for 85-units of multifamily housing and 2,900 square feet of commercial space in September 2021. For comparison purposes, that approved development would generate a total of 38 and 52 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed site will generate a total of 17 and 18 additional vehicle trip ends during the weekday



morning and weekday afternoon peak hours, respectively, when compared to the approved development. However, this traffic analysis is based on the full proposal.

A review of current traffic patterns at the Study Area intersections and in the vicinity of the project influence area was conducted to determine trip distribution for the proposed development. For arriving site traffic, it was found that 40 percent will arrive from the east on U.S. Route 1, 35 percent will arrive from the west on U.S. Route 1, 15 percent will arrive from the north on Lafayette Street and 10 percent will arrive from the south on South State Street. For departing site traffic, it was found that 40 percent will depart to the east on U.S. Route 1 and 60 percent will depart to the west on U.S. Route 1.

SYNCHRO 10 capacity analyses were conducted for 2021 existing, 2024 no-build and 2024 build conditions to identify incremental impacts and needs that the proposed development will generate. Results of the analyses indicate that the signalized intersection of U.S. Route 1 at Lafayette Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. The westbound and northbound lane groups and approaches will have an acceptable change in Level of Service from "A" to "B" and "B" to "C," respectively, during the weekday morning peak hour. The eastbound lane group and approach will have an acceptable change in Level of Service from "A" to "B" during the weekday afternoon peak hour. The southbound left turn lane group and approach will maintain a Level of Service "E" during both peak hours.

The signalized intersection of U.S. Route 1 and North State Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. All lane groups and approaches will maintain the same Levels of Service during both peak hours. At the all-way STOP-controlled intersection of North State Street and Lafayette Street/South State Street, all critical lanes and the intersection overall will maintain the same Level of Service during both peak hours. The proposed site driveway will operate at Level of Service "A" during both peak hours.

## INTRODUCTION

This report has been prepared to address the potential impacts related to the proposed mixed-use development. An analysis was completed for area roadways and key nearby intersections for the typical weekday morning and weekday afternoon peak hours for existing, no-build and build conditions. An assessment of the results of these analyses indicate impacts and any need for mitigation. In this report there is a discussion of area roadways, accident history, site access considerations, current and future traffic volumes, site traffic generation and assignment, capacity analysis procedures and the results of these analyses. Based on the results of the analysis any mitigation necessary is described.

### **Project Understanding**

The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. The site has a previous approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space. Site access is proposed via right turn in/right turn out to North State Street. It is assumed that the proposal will be built and fully occupied by the end of 2024.

## EXISTING CONDITIONS

In this section of the report there is a description of the existing traffic volumes obtained on area roadways near the site for the weekday morning and weekday afternoon peak hours. It also includes a description of area roads, current traffic control and accident history.

### Roadways

As noted above, the development is located at 819 East Main Street and adjacent properties.

1. East Main Street – This is generally an east-west, two to four-lane, State-maintained roadway, also designated U.S. Route 1. It begins as a continuation of Tresser Boulevard, also designated U.S. Route 1, to the west at the signalized intersection with Elm Street. It continues east past the site to the Darien Town Line, where it continues as Post Road, also designated U.S. Route 1. In the Study Area this roadway provides a double yellow centerline, curbing and sidewalks along both sides of the road. Currently there is two-hour meter parking from 9 A.M. to 8 P.M. with NO PARKING 4 P.M. to 7 P.M. TOW AWAY ZONE along the south side of the road and NO PARKING 7 A.M. to 9 A.M. TOW AWAY ZONE along the north side of the road between Lafayette Street and Quintard Terrace. The section between Lafayette Street and Quintard Terrace operates as one-lane eastbound during the weekday morning peak hour and one-lane westbound during the weekday afternoon peak hour. NO PARKING ANYTIME is posted everywhere else along East Main Street in the Study Area. The roadway width is 40 feet and the land use is residential and commercial.
2. Lafayette Street – This is a north-south, City-maintained roadway. It begins to the north at the signalized intersection of Daskam Place/Crystal Street as a continuation of Daskam Place. It continues south as a one-way southbound roadway to the signalized intersection with East Main Street, also designated U.S. Route 1. To the north of East Main Street this roadway provides curbing and sidewalks along both sides of the road. There is NO PARKING along the easterly side of the road, as well as along the westerly side of the road along the shopping center frontage. The roadway width is generally 23 feet with a mix of residential and commercial uses.

South of East Main Street, this roadway provides two lanes, with one lane in each directions to the intersection of North State Street. To the south of East Main Street this roadway provides a double



yellow centerline, curbing and sidewalks along both sides of the road. There is NO PARKING along the westerly side of the road for the entire length. The roadway width is generally 27 feet with a mix of residential and commercial uses.

3. North State Street – This is an east-west, City-maintained roadway. From East Main Street to South State Street this roadway is a two-lane, two-way roadway with a double yellow centerline, curbing along both sides of the road and a sidewalk along the northerly side of the road. For a short section between South State Street and Lafayette Street, this roadway is one-way westbound with curbing along both sides of the road, a sidewalk along the northerly side of the road and NO PARKING ANYTIME. West of Lafayette Street, this roadway is a two-lane, two-way roadway with a double yellow centerline, curbing along both sides of the road and a sidewalk along the northerly side of the road. The roadway terminates with access to a large office building. Land use is generally commercial.

Figure 1 provides a summary of current street system characteristics. Photographs of the Study Area intersections are provided in the Appendix of this report.

### **Traffic Volumes**

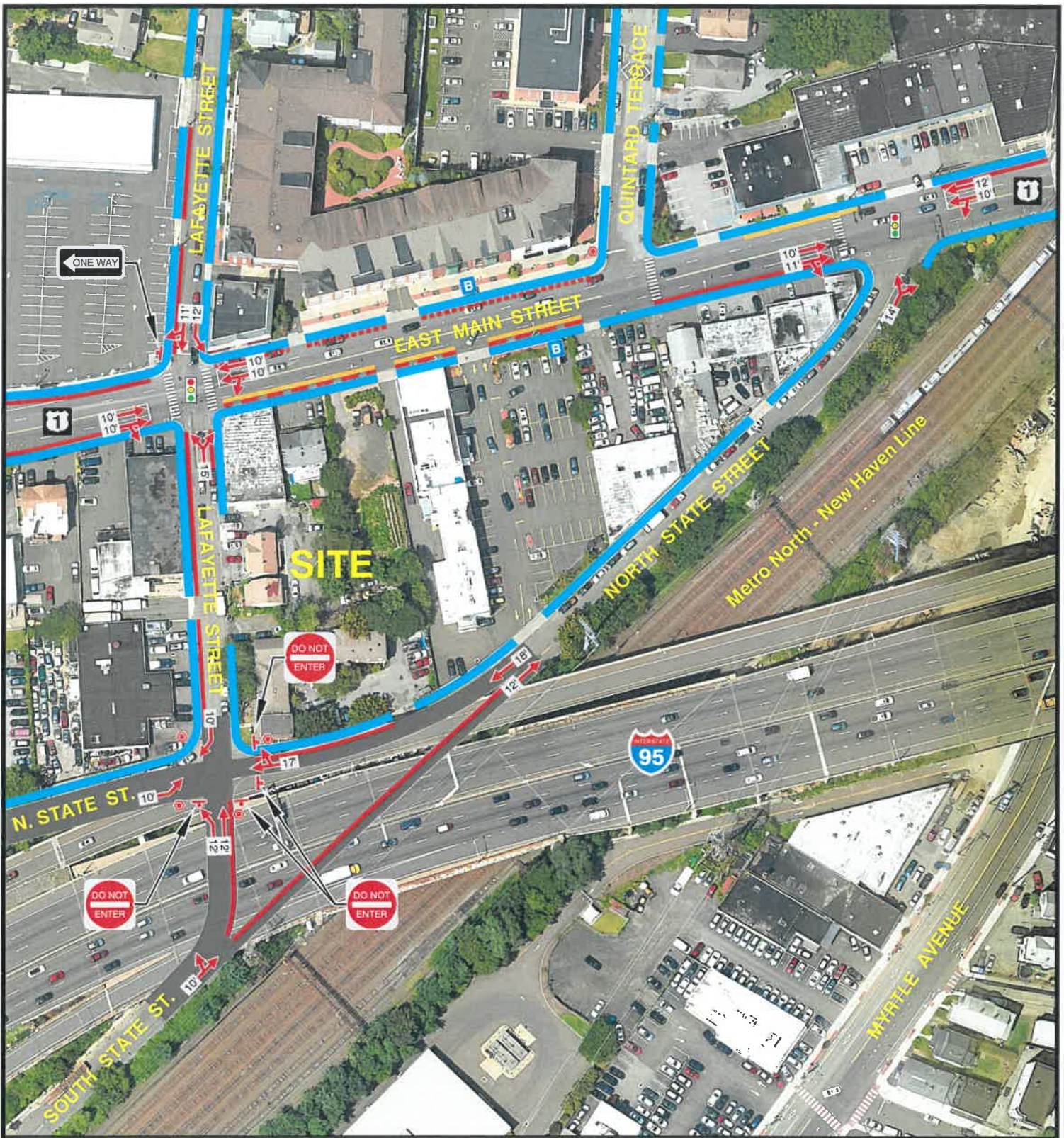
To develop baseline traffic volumes for the Study Area intersections and roadways, turning movement counts were conducted at the following intersections:

- U.S. Route 1 at Lafayette Street;
- U.S. Route 1 at North State Street;
- North State Street at Lafayette Street/South State Street, and,
- At the South State Street Split.











The turning movement counts were conducted during the following times:

- Wednesday, December 15, 2021 – 7:00 to 9:00 A.M.; and,
- Tuesday, December 14, 2021 – 4:00 to 6:00 P.M.





**LEGEND:**

-  Traffic Lane
-  Traffic Signal
-  Stop Sign
-  Sidewalk
-  Pedestrian Crosswalk
-  Bus Stop
-  No Parking Anytime
-  No Parking 4 to 7 PM, 2 Hr. Meter Parking 9 AM to 8 PM
-  No Parking 7 to 9 AM, 2 Hr. Meter Parking 9 AM to 8 PM
-  2 Hr. Metered Parking

**CURRENT STREET SYSTEM CHARACTERISTICS**

**MIXED-USE DEVELOPMENT**  
**819 East Main Street**  
**Stamford, Connecticut**



Scale in Feet



1

1/10/22



Based on the results of the traffic counting program the following peak hours were identified at the Study Area intersections:

- Weekday morning – 7:15 to 8:15 A.M.; and,
- Weekday afternoon – 4:00 to 5:00 P.M.

Figures 2 and 3 graphically illustrates the 2021 existing traffic volumes for the weekday morning and weekday afternoon peak hours, respectively. Raw and summarized turning movement count data collected by Hardesty & Hanover, LLC for all Study peak periods can be found in the Appendix of this report.

Based on the results of the traffic counting program the traffic volumes were identified for area roadways and includes U.S. Route 1, west of Lafayette Street, which had a two-way volume of 1,325 and 1,411 vehicles during the weekday morning and weekday afternoon peak hours, respectively. U.S. Route 1, east of Lafayette Street, had a two-way volume of 1,499 and 1,546 vehicles during the same two peak hours noted above, respectively. Lafayette Street, north of U.S. Route 1, had a one-way volume of 276 and 205 vehicles during the two peak hours noted above, respectively. Lafayette Street, south of U.S. Route 1, had a two-way volume of 44 and 94 vehicles during the two peak hours noted above, respectively.

U.S. Route 1, west of North State Street, had a two-way volume of 1,519 and 1,597 vehicles during the weekday morning and weekday afternoon peak hours, respectively. U.S. Route 1, east of North State Street, had a two-way volume of 1,573 and 1,735 vehicles during the same two peak hours noted above, respectively. North State Street, south of U.S. Route 1, had a two-way volume of 76 and 148 vehicles during the two peak hours noted above, respectively.

North State Street, west of Lafayette Street, had a two-way volume of 36 and 101 vehicles during the weekday morning and weekday afternoon peak hours, respectively. North State Street, east of Lafayette Street, had a one-way volume of 9 and 21 vehicles during the same two peak hours noted above, respectively. South State Street, south of North State Street, had a one-way volume of 47 and 124 vehicles during the two peak hours noted above, respectively. Table 1 provides a summary of the recorded two-way volumes.



Table 1  
 2021 TRAFFIC VOLUMES – PEAK HOURS  
 Mixed-Use Development  
 819 East Main Street  
 Stamford, Connecticut

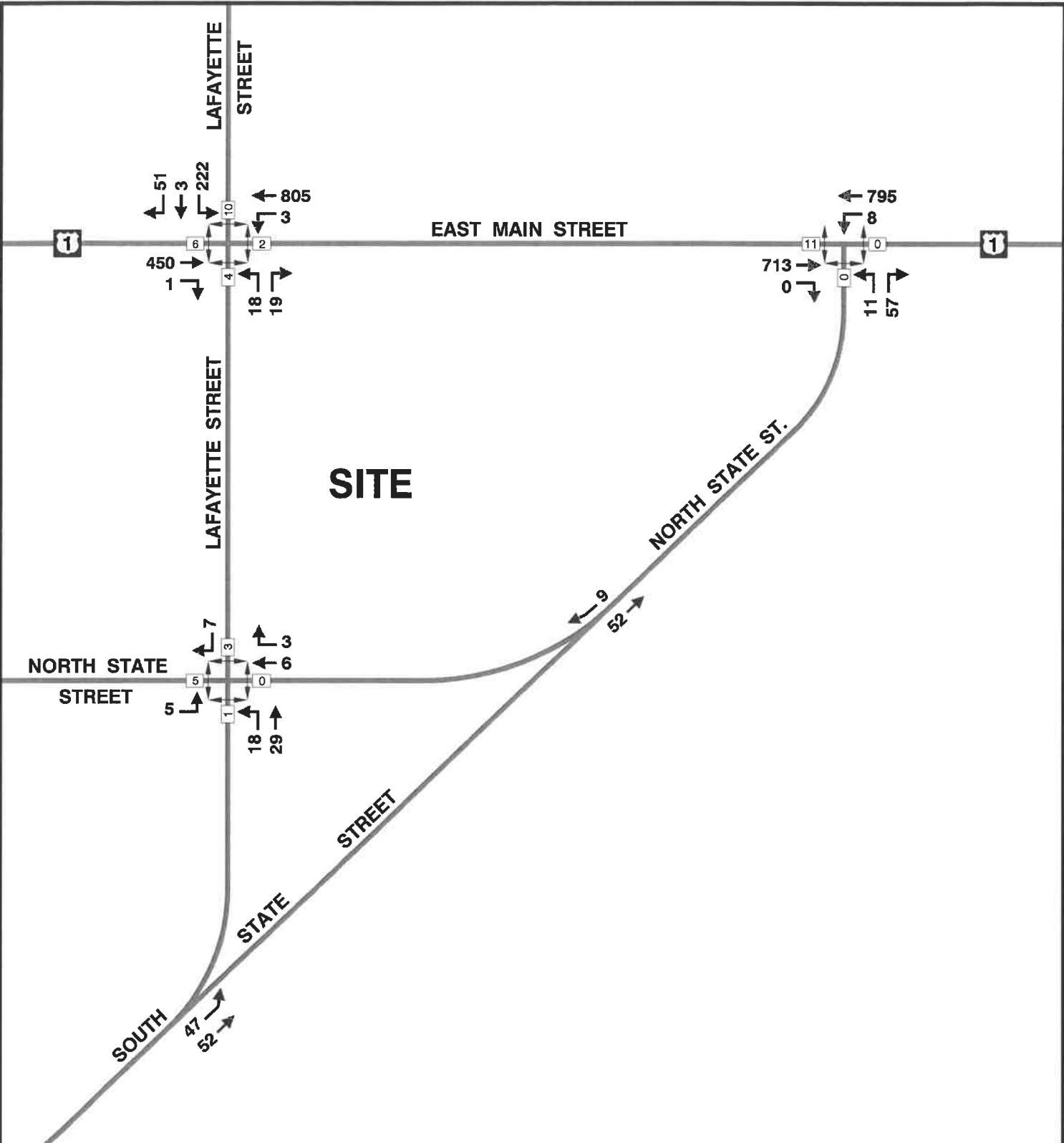
LOCATION	VEHICLES	
	Weekday Morning	Weekday Afternoon
U.S. Route 1, West of Lafayette Street	1,325	1,411
U.S. Route 1, East of Lafayette Street	1,499	1,546
Lafayette Street, North of U.S. Route 1	276	205
Lafayette Street, South of U.S. Route 1	44	94
U.S. Route 1, West of North State Street	1,519	1,597
U.S. Route 1, East of North State Street	1,573	1,735
North State Street, South of U.S. Route 1	76	148
North State Street, West of Lafayette Street/South State Street	36	101
North State Street, East of Lafayette Street/South State Street	9	21
Lafayette Street, North of North State Street	44	94
South State Street, South of North State Street	47	124

Sources: Turning movement counts conducted by Hardesty & Hanover on Tuesday, December 14 and Wednesday, December 15, 2021.

Notes: Based on discussions with CTDOT Planning Division, no COVID adjustments were needed.

Hardesty & Hanover

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 1/6/2022



**LEGEND:**  
 Pedestrians

**NOTES:**  
 1. Turning movement counts conducted by Hardesty & Hanover, LLC on Wednesday, December 15, 2021 from 7:00 to 9:00 A.M.  
 2. Based on discussions with CTDOT Planning Division, no COVID adjustment is needed.

2021 EXISTING TRAFFIC VOLUMES  
 WEEKDAY MORNING PEAK HOUR  
 (7:15 to 8:15 A.M.)

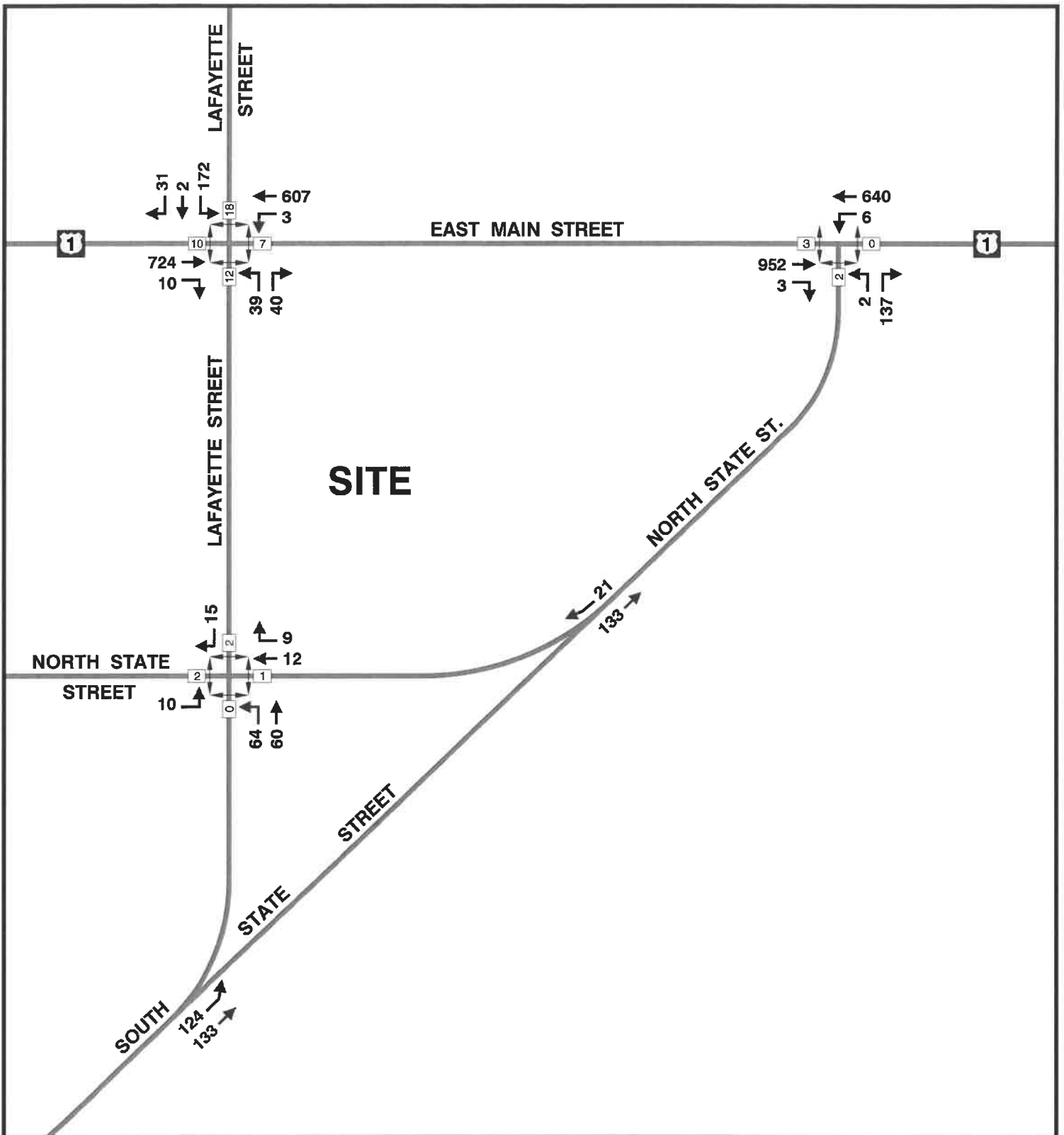
**MIXED-USE DEVELOPMENT**  
**819 East Main Street**  
**Stamford, Connecticut**



2

Not to Scale

1/10/22



**LEGEND:**

→ [ ] Pedestrians

**NOTES:**

1. Turning movement counts conducted by Hardesty & Hanover, LLC on Tuesday, December 14, 2021 from 4:00 to 6:00 P.M.
2. Based on discussions with CTDOT Planning Division, no COVID adjustment is needed.

2021 EXISTING TRAFFIC VOLUMES  
WEEKDAY AFTERNOON PEAK HOUR  
(4:00 to 5:00 P.M.)

**MIXED-USE DEVELOPMENT**  
**819 East Main Street**  
**Stamford, Connecticut**



**3**

Not to Scale

1/10/22



## **Accident Experience**

The latest available accident data was obtained from the Connecticut Crash Data Repository (CTCDR) for a period beginning October 1, 2018 to September 30, 2021 for U.S. Route 1, which is the latest three years available at this time. Accident data from 2020 was included and was during COVID-19 conditions. At the intersection of U.S. Route 1 and Lafayette Street, there were a total of 27 accidents recorded during this three-year period. Data indicates that 74 percent of the accidents involved property damage and 26 percent involved injuries. The collision types were 37 percent involving an angle collision, 22 percent involving a rear-end collision, 19 percent involving a sideswipe in the same direction, 11 percent involving a head-on collision, 7 percent involving a single vehicle crash and 4 percent involving other collision. The contribution factors were 25 percent for failure to stay in lane, 22 percent for running a red light, 15 percent for other action, 11 percent for failure to yield right-of-way, 7 percent for unknown and 4 percent for following too closely, ran STOP sign, improper backing, operate in a reckless manner and operator inattentive. It was found that 70 percent of the accidents occurred during daylight hours and 77 percent occurred on dry road conditions.

For the section of U.S. Route 1, between Lafayette Street and Quintard Terrace, there were a total of 37 accidents recorded during this three-year period. Data indicates that 89 percent of the accidents involved property damage and 11 percent involved injuries. The collision types were 38 percent involving an angle collision and a sideswipe in the same direction, 11 percent involving a rear-end collision, 8 percent involving a sideswipe in the opposite direction and 5 percent involving a single vehicle crash. The contribution factors were 27 percent for failure to stay in lane, 24 percent for failure to yield right-of-way, 14 percent for following too closely, 8 percent for other action, unknown and no contributing action, 5 percent for improper passing and 3 percent for improper backing and improper turning. It was found that 62 percent of the accidents occurred during daylight hours and 83 percent occurred on dry road conditions.

At the intersection of U.S. Route 1 and Quintard Terrace, there were a total of 15 accidents recorded during this three-year period. Data indicates that 60 percent of the accidents involved property damage and 40 percent involved injuries. The collision types were 39 percent involving a rear-end collision, 33 percent involving an angle collision and 7 percent involving a sideswipe in the same and in the opposite directions, a single vehicle crash and other collision. The contribution factors were 33 percent for failure to yield right-of-way, 26 percent for following too closely, 13 percent for improper passing and 7 percent for other action, ran

STOP sign, improper backing and improper passing. It was found that 67 percent of the accidents occurred during daylight hours and 73 percent occurred on dry road conditions.

For the section of U.S. Route 1, between Quintard Terrace and North State Street, there were a total of 11 accidents recorded during this three-year period. Data indicates that 82 percent of the accidents involved property damage and 18 percent involved injuries. The collision types were 46 percent involving a rear-end collision, 27 percent involving a sideswipe in the same direction, 18 percent involving an angle collision and 9 percent involving a sideswipe in the opposite direction. The contribution factors were 28 percent for failure to stay in lane, 18 percent for following too closely, other action and improper backing and 9 percent for failure to yield right-of-way and unknown. It was found that 64 percent of the accidents occurred during daylight hours and 91 percent occurred on dry road conditions.

At the intersection of U.S. Route 1 and North State Street, there were a total of 10 accidents recorded during this three-year period. Data indicates that 70 percent of the accidents involved property damage and 30 percent involved injuries. The collision types were 80 percent involving an angle collision and 10 percent involving a rear-end collision and a sideswipe in the same direction. The contribution factors were 40 percent for failure to yield right-of-way, 20 percent for improper turning and 10 percent for following too closely, failure to stay in lane, no contributing action and wrong side/way. It was found that 80 percent of the accidents occurred during daylight hours and 70 percent occurred on dry road conditions. Table 2 provides a more detailed summary of the accident data. The accident data from the CTCDR is included in the Appendix of this report.

The latest available accident data was requested from the City of Stamford Police Department for a period beginning January 1, 2018 through December 31, 2020 for North State Street, South State Street and Lafayette Street. Once this data is received, it will be summarized in Table 3.

Table 2  
**ACCIDENT EXPERIENCE SUMMARY – U.S. ROUTE 1**  
 Mixed-Use Development  
 819 East Main Street  
 Stamford, Connecticut

ACCIDENT CHARACTERISTICS		U.S. ROUTE 1											
		At Lafayette Street (7.85)		Between Lafayette Street and Quintard Terrace (7.86-7.92)		At Quintard Terrace (7.93)		Between Quintard Terrace and North State Street (7.94-7.97)		At North Street (7.98)			
		Total	%	Total	%	Total	%	Total	%	Total	%		
<b>Year</b>													
▪ 2018/2019	11	41	11	30	7	47	3	28	5	50			
▪ 2019/2020	12	44	13	35	3	20	4	36	3	30			
▪ 2020/2021	4	15	13	35	5	33	4	36	2	20			
▪ Total	27	100	37	100	15	100	11	100	10	100			
<b>Accident Severity</b>													
▪ Property Damage	20	74	33	89	9	60	9	82	7	70			
▪ Injury	7	26	4	11	6	40	2	18	3	30			
<b>Collision Type</b>													
▪ Rear End	6	22	4	11	6	39	5	46	1	10			
▪ Angle	10	37	14	38	5	33	2	18	8	80			
▪ Sideswipe-Same Direction	5	19	14	38	1	7	3	27	1	10			
▪ Sideswipe-Opposite Direction	0	0	3	8	1	7	1	9	0	0			
▪ Head On	3	11	0	0	0	0	0	0	0	0			
▪ Single Vehicle	2	7	2	5	1	7	0	0	0	0			
▪ Other	1	4	0	0	1	7	0	0	0	0			



Table 2 Cont'd

ACCIDENT CHARACTERISTICS	U.S. ROUTE 1									
	At Lafayette Street (7.85)		Between Lafayette Street and Quintard Terrace (7.86-7.92)		At Quintard Terrace (7.93)		Between Quintard Terrace and North State Street (7.94-7.97)		At North Street (7.98)	
	Total	%	Total	%	Total	%	Total	%	Total	%
<b>Contributing Factor</b>										
▪ Following Too Closely	1	4	5	14	4	26	2	18	1	10
▪ Failure to Yield ROW	3	11	9	24	5	33	1	9	4	40
▪ Failure to Stay in Lane	7	25	10	27	0	0	3	28	1	10
▪ Ran Red Light	6	22	0	0	0	0	0	0	0	0
▪ Other Action	4	15	3	8	1	7	2	18	0	0
▪ Unknown	2	7	3	8	0	0	1	9	0	0
▪ Ran STOP Sign	1	4	0	0	1	7	0	0	0	0
▪ Improper Backing	1	4	1	3	1	7	2	18	0	0
▪ Operate Reckless	1	4	0	0	0	0	0	0	0	0
▪ Operate Inattentive	1	4	0	0	0	0	0	0	0	0
▪ Improper Turn	0	0	1	3	2	13	0	0	2	20
▪ Improper Passing	0	0	2	5	1	7	0	0	0	0
▪ No Contributing Action	0	0	3	8	0	0	0	0	1	10
▪ Wrong Side/Way	0	0	0	0	0	0	0	0	1	10
<b>Light Condition</b>										
▪ Daylight	19	70	23	62	10	67	7	64	8	80
▪ Dark – Lighted	7	26	10	27	5	33	3	27	1	10
▪ Dark – Not Lighted	0	0	2	5	0	0	1	9	0	0
▪ Dusk	1	4	1	3	0	0	0	0	1	10
▪ Other	0	0	1	3	0	0	0	0	0	0
<b>Surface Condition</b>										
▪ Dry	21	77	31	83	11	73	10	91	7	70
▪ Wet	5	19	5	14	3	20	1	9	3	30
▪ Snow	1	4	0	0	0	0	0	0	0	0
▪ Slush	0	0	1	3	0	0	0	0	0	0
▪ Ice/Frost	0	0	0	0	1	7	0	0	0	0

Table 2 Cont'd

ACCIDENT CHARACTERISTICS		U.S. ROUTE 1											
		At Lafayette Street (7.85)		Between Lafayette Street and Quintard Terrace (7.86-7.92)		At Quintard Terrace (7.93)		Between Quintard Terrace and North State Street (7.94-7.97)		At North Street (7.98)			
		Total	%	Total	%	Total	%	Total	%	Total	%		
<b>Weather Conditions</b>													
▪ Clear		20	74	30	81	12	80	7	64	9	90		
▪ Cloudy		2	7	3	8	0	0	3	27	0	0		
▪ Rain		4	15	4	11	3	20	1	9	1	10		
▪ Snow		1	4	0	0	0	0	0	0	0	0		

Source: Connecticut Crash Data Repository from October 1, 2018 to September 30, 2021.

Notes:

- 1) October 1, 2018 to September 30, 2021 is the latest three years of accident data available.
- 2) 2018/2019 = October 1, 2018 to September 30, 2019.
- 3) 2019/2020 = October 1, 2019 to September 30, 2020.
- 4) 2020/2021 = October 1, 2020 to September 30, 2021.

Hardesty & Hanover, LLC

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1/4/22

Table 3  
 ACCIDENT EXPERIENCE SUMMARY – NORTH STATE STREET/LAFAYETTE STREET  
 Mixed-Use Development  
 819 East Main Street  
 Stamford, Connecticut

ACCIDENT CHARACTERISTICS	NORTH STATE STREET				LAFAYETTE STREET	
	Between U.S. Route 1 and Lafayette Street/South State Street		At Lafayette Street/South State Street		Between North State Street and U.S. Route 1	
	Total	%	Total	%	Total	%
<b>Year</b>						
<ul style="list-style-type: none"> <li>▪ 2019</li> <li>▪ 2020</li> <li>▪ 2021</li> <li>▪ Total</li> </ul>						
<b>Accident Severity</b>	<b>DATA NOT RECEIVED</b>					
<ul style="list-style-type: none"> <li>▪ Property Damage</li> <li>▪ Injury</li> </ul>						
<b>Collision Type</b>						
<ul style="list-style-type: none"> <li>▪ Rear End</li> <li>▪ Head On</li> <li>▪ Angle</li> <li>▪ Sideswipe-Same Direction</li> </ul>						
<b>Contributing Factor</b>						
<ul style="list-style-type: none"> <li>▪ Following Too Closely</li> <li>▪ Failure to Yield ROW</li> <li>▪ Failure to Stay in Lane</li> <li>▪ Ran Off Roadway</li> <li>▪ Improper Turn</li> <li>▪ Improper Backing</li> </ul>						
<b>Light Condition</b>						
<ul style="list-style-type: none"> <li>▪ Daylight</li> <li>▪ Dark – Lighted</li> <li>▪ Dark – Not Lighted</li> </ul>						
<b>Surface Condition</b>						
<ul style="list-style-type: none"> <li>▪ Dry</li> <li>▪ Wet</li> </ul>						
<b>Weather Conditions</b>						
<ul style="list-style-type: none"> <li>▪ Clear</li> <li>▪ Cloudy</li> <li>▪ Rain</li> </ul>						

Source: Stamford Police Department from January 1, 2019 to December 31, 2021.

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## **FUTURE TRAFFIC IMPACTS**

This section of the report describes the future 2024 traffic conditions for the Study Area. It includes 2024 no-build traffic volumes, estimates for site traffic generation, distribution and assignment of the proposed site traffic, future build traffic volumes and the results of capacity analyses. The capacity analyses are completed for a no-build and build condition, which provides a basis for determining potential impact to area roads and nearby intersections and the need for mitigation, if necessary.

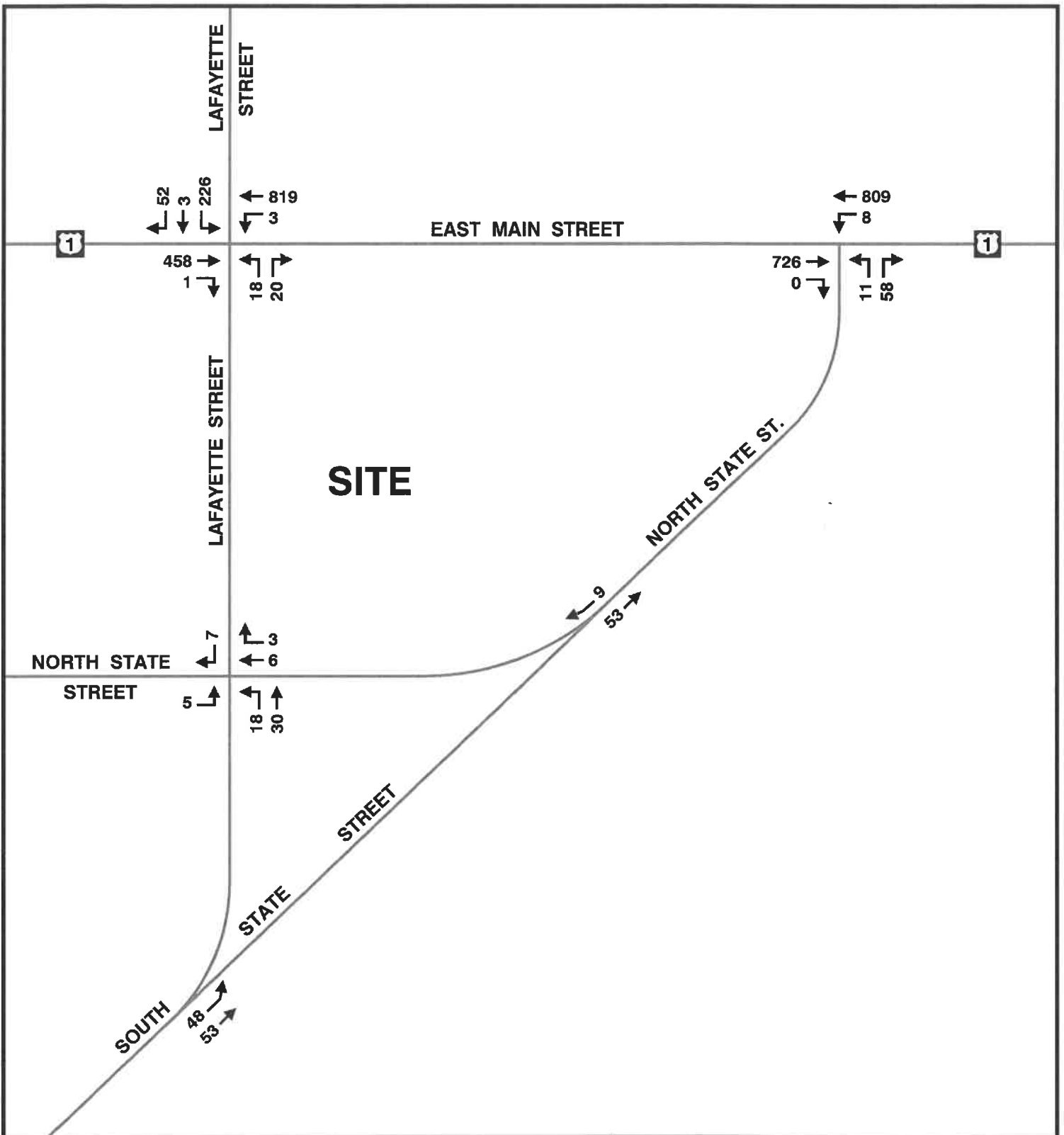
### **No-Build Traffic Volumes**

The 2021 existing traffic volumes, which were previously described, were expanded to reflect a 2024 traffic condition for each of the intersections by applying an annual growth rate of 0.6 percent, as per discussions with CTDOT Planning Division, to account for general growth in the immediate vicinity of the surrounding area. Based on discussions with the CTDOT Planning Division and the City of Stamford, no other developments were identified. The 2024 no-build traffic volumes are graphically illustrated in Figures 4 and 5 for the weekday morning and weekday afternoon peak hours, respectively.

### **Estimation of Site Traffic Generation**

The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. Based on trip rates from "Trip Generation," 11<sup>th</sup> Edition, published by ITE, 2021, it is estimated that the proposed 130-units would generate a total of 48 and 51 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed 2,950 square feet of commercial space is estimated to generate a total of 7 and 19 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. It is estimated that the total proposed site will generate a total of 55 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative no pass-by credit was applied to the trips generated by the commercial space.

It should be noted that there is a recent approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space on the site. For comparison purposes, that approved development would generate a total of 38 and 52 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed site will generate a total of 17 and 18 additional vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively, when compared to the approved



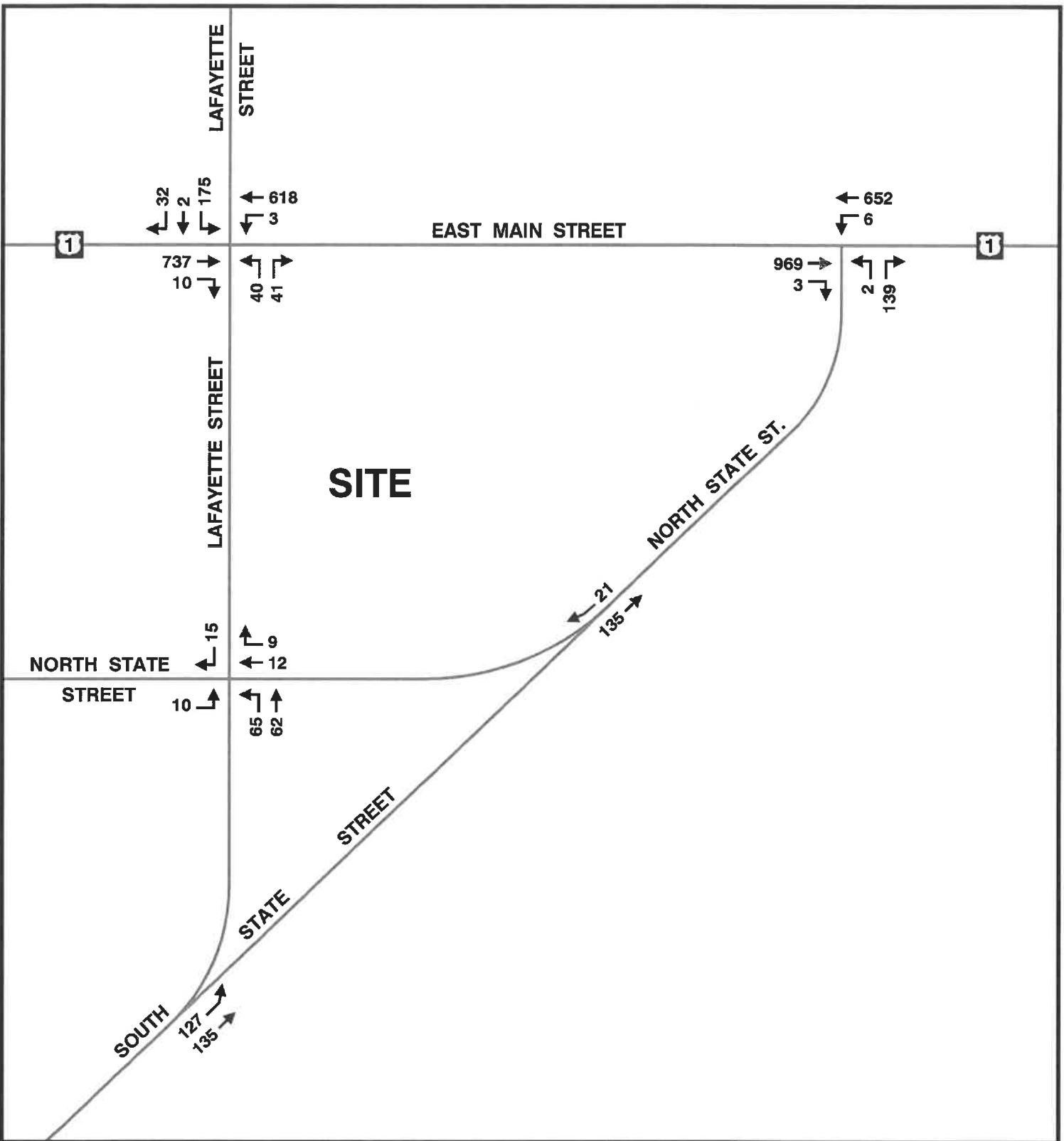
**NOTE:**  
An annual growth rate of 0.6 percent was employed to the horizon year 2024, as per discussions with CTDOT Planning Division.

**2024 NO-BUILD TRAFFIC VOLUMES  
WEEKDAY MORNING PEAK HOUR**

**MIXED-USE DEVELOPMENT  
819 East Main Street  
Stamford, Connecticut**



**4**



**NOTE:**  
An annual growth rate of 0.6 percent was employed to the horizon year 2024, as per discussions with CTDOT Planning Division.

**2024 NO-BUILD TRAFFIC VOLUMES  
WEEKDAY AFTERNOON PEAK HOUR**

**MIXED-USE DEVELOPMENT  
819 East Main Street  
Stamford, Connecticut**



Not to Scale



**5**

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development. The traffic analysis is based on the full proposal. Table 4 illustrates the details of the site traffic generation by entering and exiting.

### **Distribution and Assignment of Site Traffic**

A review of current traffic patterns at the Study Area intersections and in the vicinity of the project influence area was conducted to determine trip distribution for the proposed development. For arriving site traffic, it was found that 40 percent will arrive from the east on U.S. Route 1, 35 percent will arrive from the west on U.S. Route 1, 15 percent will arrive from the north on Lafayette Street and 10 percent will arrive from the south on South State Street. For departing site traffic, it was found that 40 percent will depart to the east on U.S. Route 1 and 60 percent will depart to the west on U.S. Route 1.

Figure 6 provides the site traffic distribution of the proposed development. Figures 7 and 8 graphically illustrate the site traffic generation and assignment for the proposed development for the weekday morning and weekday afternoon peak hours, respectively.

### **Build Traffic Volumes**

Build traffic volumes for a 2024 condition are graphically illustrated in Figures 9 and 10 for the weekday morning and weekday afternoon peak hours, respectively. The 2024 build traffic volumes include the 2024 no-build traffic volumes and the site traffic generation volumes for the proposed development for each time period.

### **Capacity Analysis Procedures**

Capacity analysis procedures are provided in the Appendix of this report. The analyses is based on a SYNCHRO computer model and information provided by the Transportation Research Board (TRB) and the Highway Capacity Manual (HCM) 6<sup>th</sup> Edition.

### **Capacity Analysis Results – Existing, No-Build and Build Conditions**

The following is a summary of the results of analyses for an existing, no-build and build conditions at the Study Area intersections and site access drive for each of the time periods included in this analysis.

Table 4  
 SITE TRAFFIC GENERATION – PEAK HOURS  
 Mixed-Use Development  
 819 East Main Street  
 Stamford, Connecticut

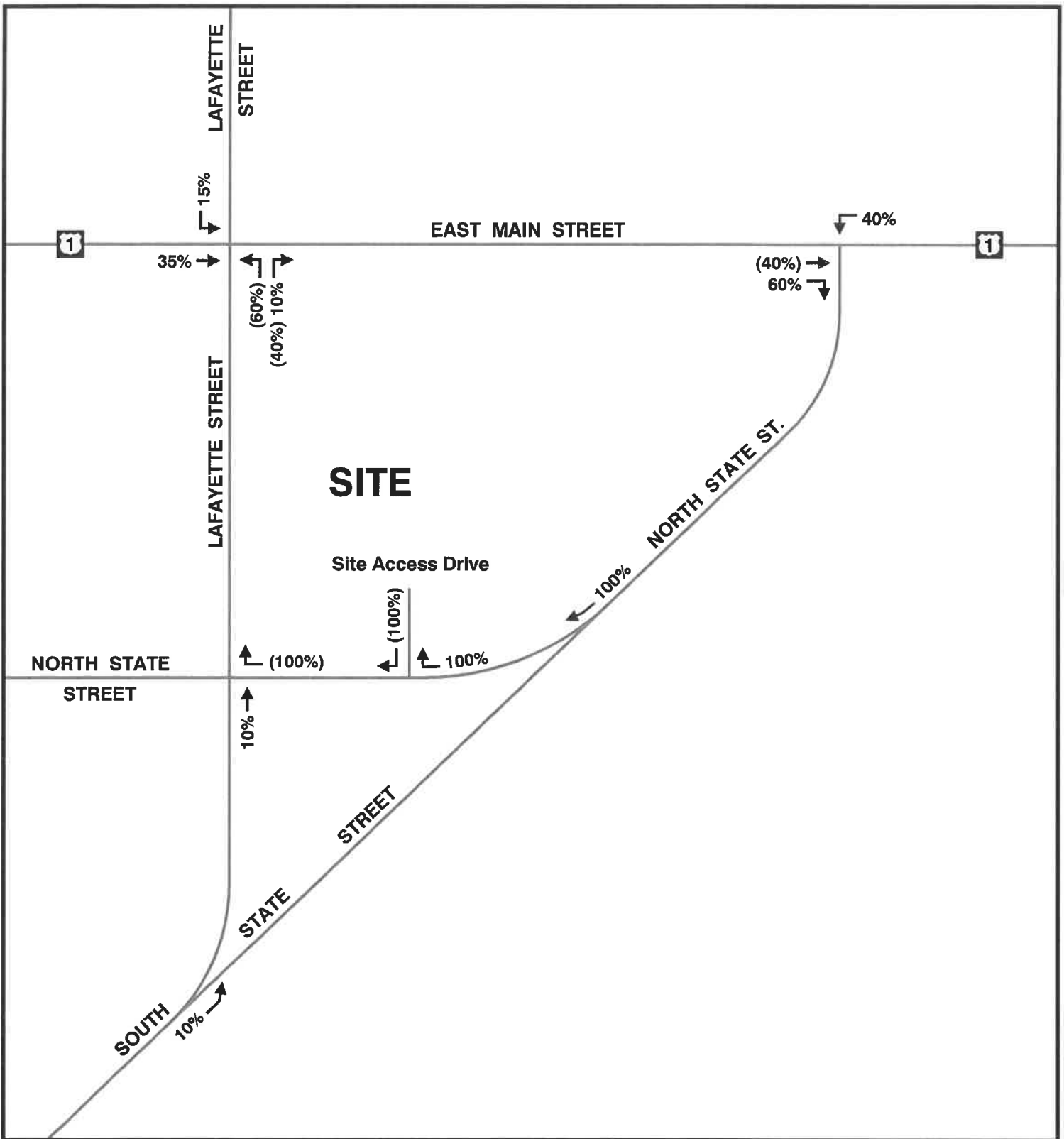
LAND USE	SIZE	TRAFFIC DIRECTION	VEHICLE TRIP ENDS	
			Weekday Morning	Weekday Afternoon
Approved Multifamily Housing (Mid-Rise)	85 Dwelling Units	Enter	7	20
		Exit	<u>24</u>	<u>13</u>
		Total	31	33
Approved Strip Retail Plaza	2,900 S.F.	Enter	4	9
		Exit	<u>3</u>	<u>10</u>
		Total	7	19
1) Approved Total Site Traffic		Enter	11	29
		Exit	<u>27</u>	<u>23</u>
		Total	38	52
Proposed Multifamily Housing (Mid-Rise)	130 Dwelling Units	Enter	11	31
		Exit	<u>37</u>	<u>20</u>
		Total	48	51
Proposed Strip Retail Plaza	2,950 S.F.	Enter	4	9
		Exit	<u>3</u>	<u>10</u>
		Total	7	19
2) Proposed Total Site Traffic		Enter	15	40
		Exit	<u>40</u>	<u>30</u>
		Total	55	70
Net Increase Site Traffic (2-1)		Enter	4	11
		Exit	<u>13</u>	<u>7</u>
		Total	17	18

Sources: "Trip Generation," 11<sup>th</sup> Edition, published by the Institute of Transportation Engineers (ITE), 2021 using Multifamily Housing (Mid-Rise), Code #221 average rates and Strip Retail Plaza, Code #822 average rates.

Note: No pass-by credit was applied to the commercial space, to be conservative.

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SITE TRAFFIC  
 Enter 00%  
 Exit (00%)

SITE TRAFFIC DISTRIBUTION

MIXED-USE DEVELOPMENT  
 819 East Main Street  
 Stamford, Connecticut

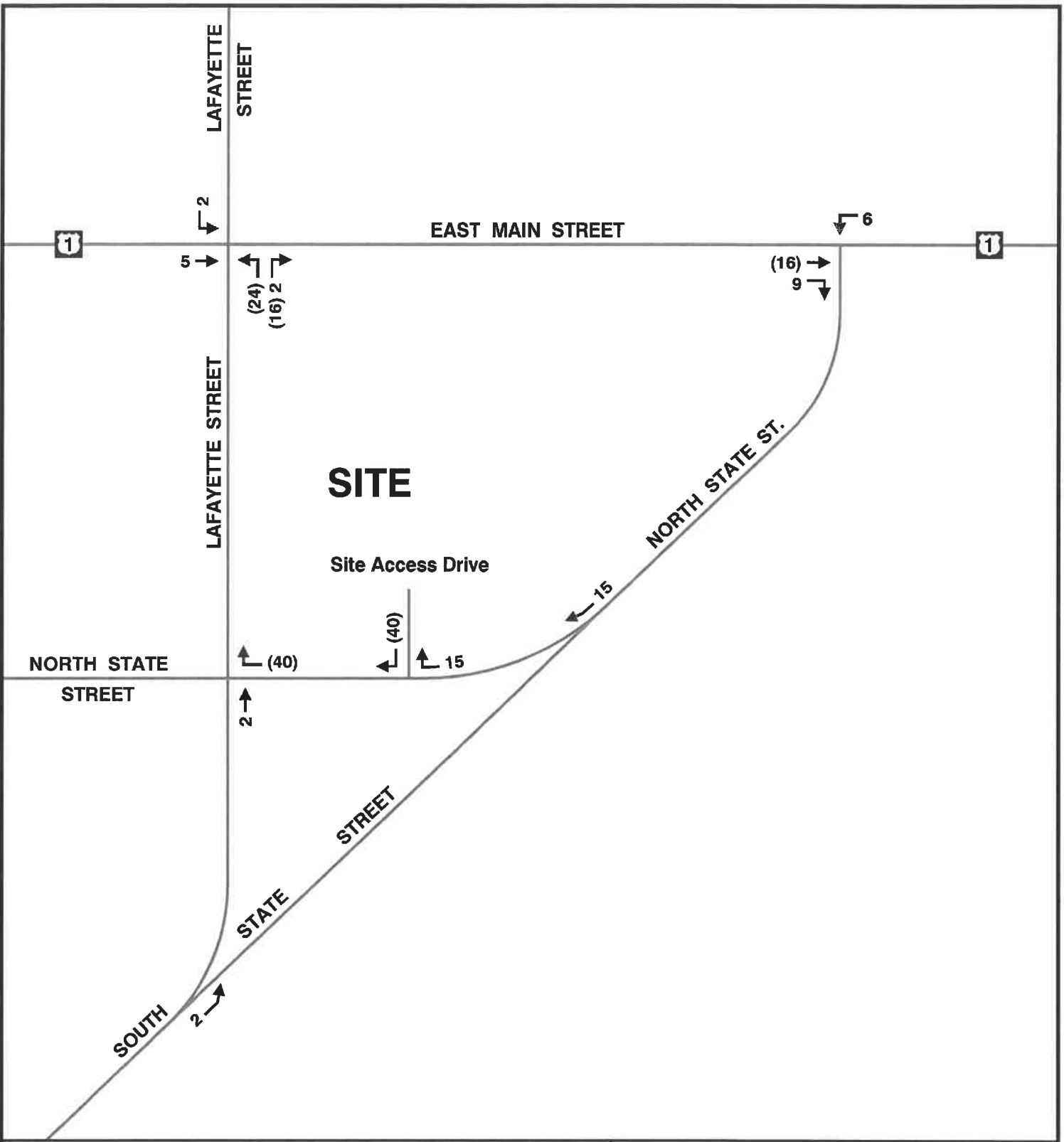


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**TOTAL SITE TRAFFIC:**  
 Enter 15  
 Exit (40)  
 Total 55 Vehicle Trip Ends

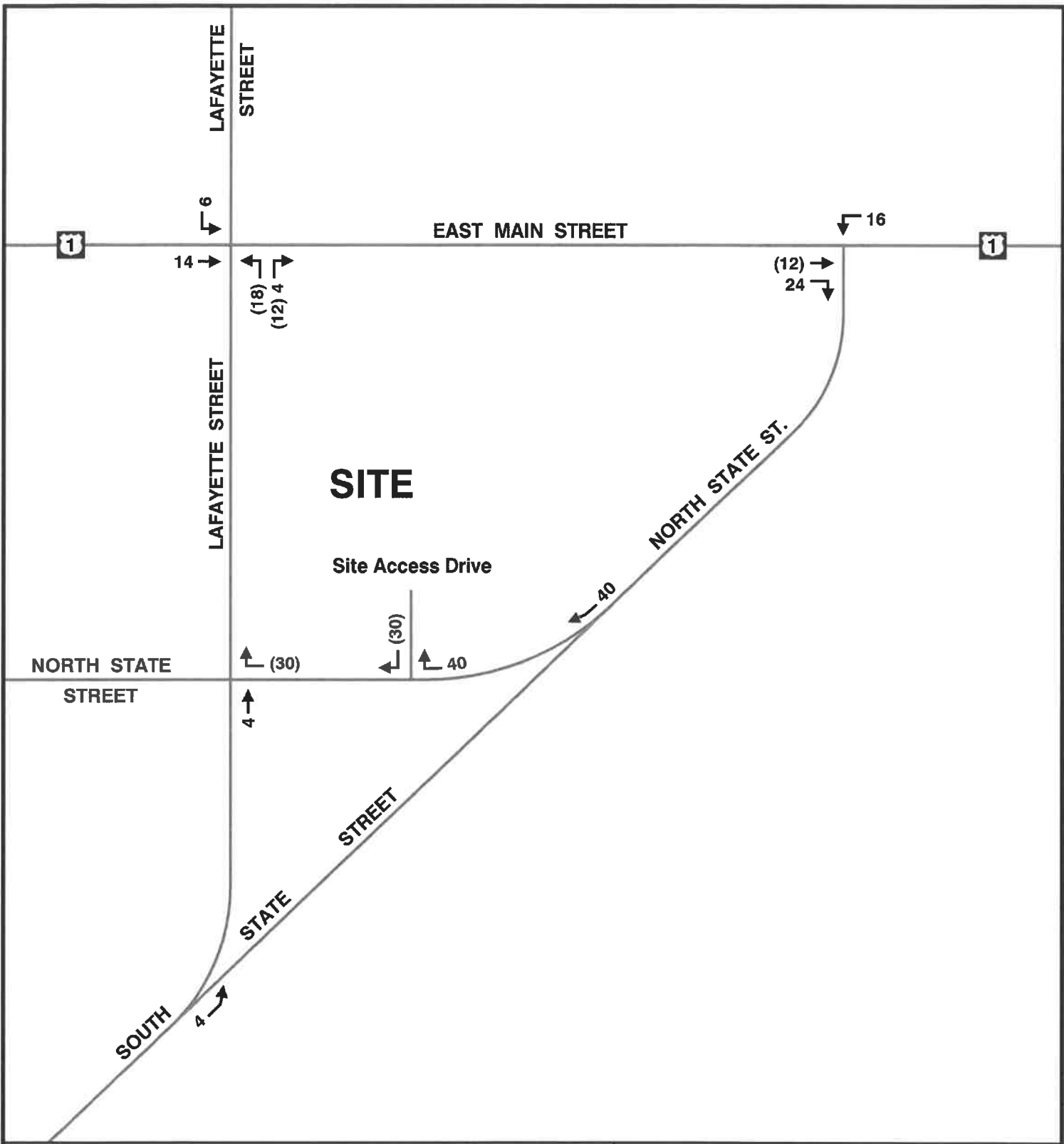
**SITE TRAFFIC GENERATION & ASSIGNMENT  
 WEEKDAY MORNING PEAK HOUR**

**MIXED-USE DEVELOPMENT  
 819 East Main Street  
 Stamford, Connecticut**



**7**

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**SITE**

Site Access Drive

TOTAL SITE TRAFFIC:  
 Enter 40  
 Exit (30)  
 Total 70 Vehicle Trip Ends

SITE TRAFFIC GENERATION & ASSIGNMENT  
 WEEKDAY AFTERNOON PEAK HOUR

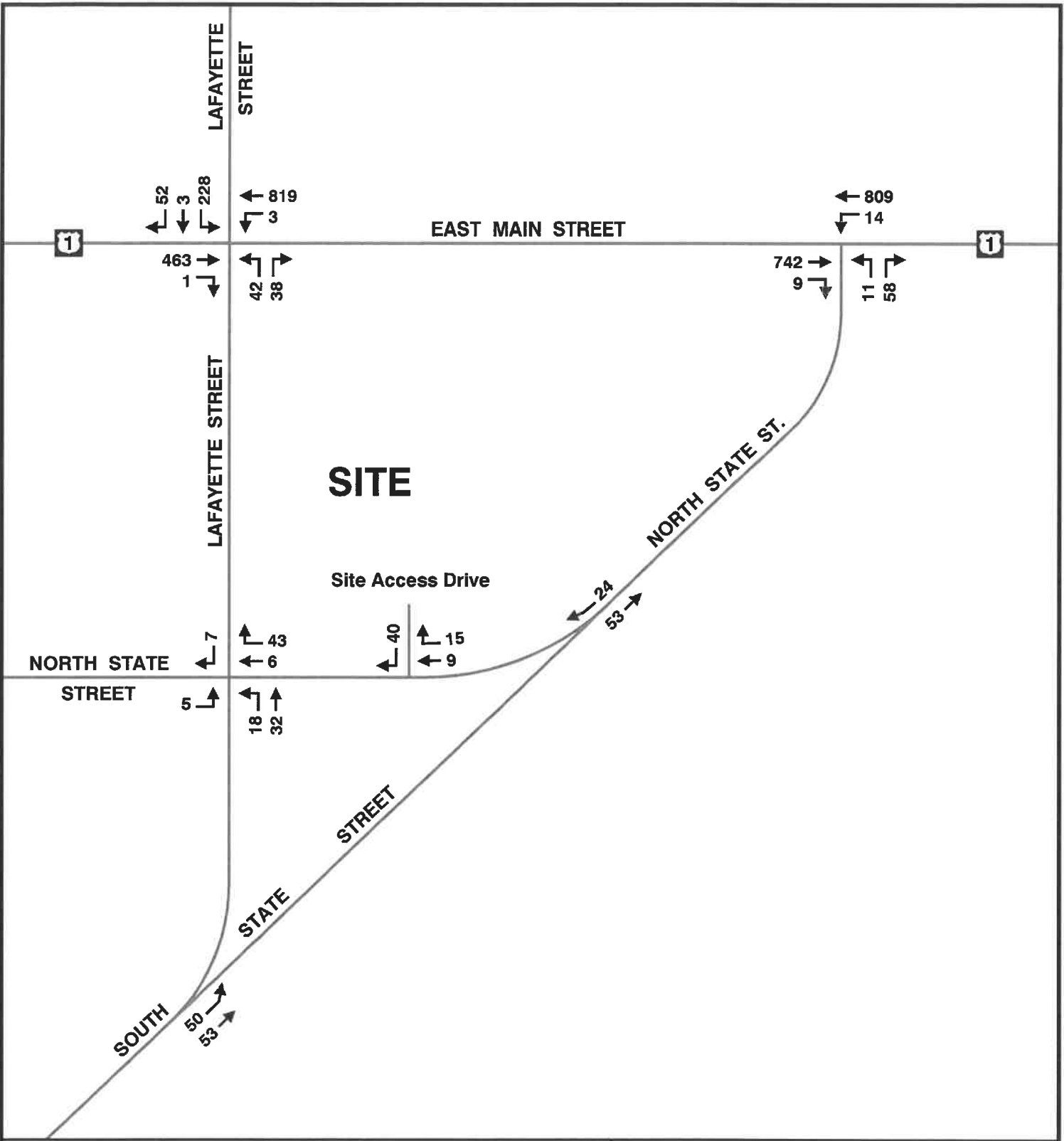
MIXED-USE DEVELOPMENT  
**819 East Main Street**  
**Stamford, Connecticut**



8

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**NOTE:**  
The 2024 Build Traffic Volumes includes the 2024 No-Build Traffic Volumes and Site Traffic Generation.

**2024 BUILD TRAFFIC VOLUMES**  
WEEKDAY MORNING PEAK HOUR

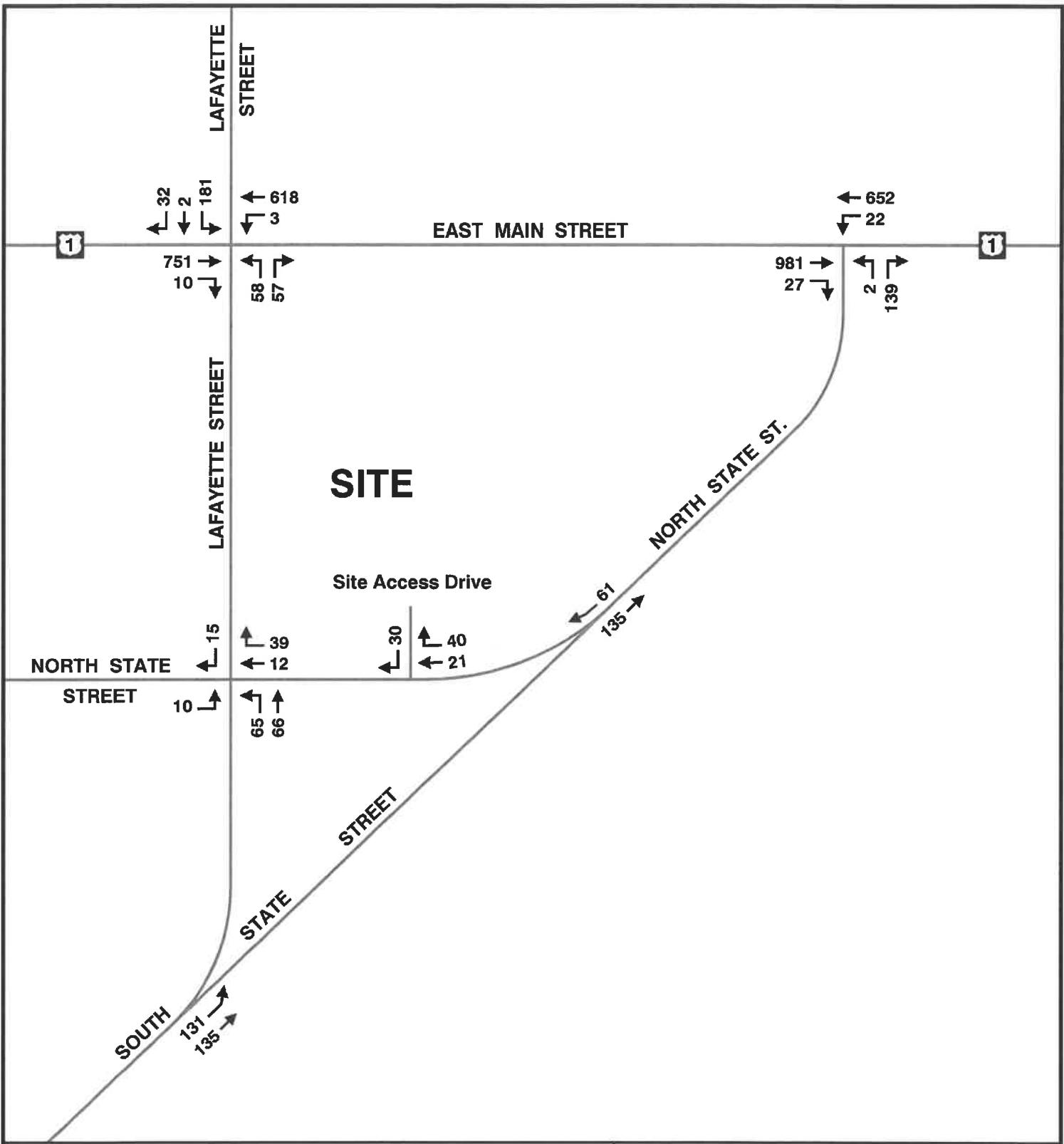
**MIXED-USE DEVELOPMENT**  
**819 East Main Street**  
**Stamford, Connecticut**



**9**

Not to Scale

1/10/22



**NOTE:**  
The 2024 Build Traffic Volumes includes the 2024 No-Build Traffic Volumes and Site Traffic Generation.

**2024 BUILD TRAFFIC VOLUMES**  
WEEKDAY AFTERNOON PEAK HOUR

**MIXED-USE DEVELOPMENT**  
**819 East Main Street**  
**Stamford, Connecticut**



**10**

Not to Scale

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1. U.S. Route 1 at Lafayette Street

**Existing** – Results of the analysis of this signalized intersection indicate that it currently operates at an overall Level of Service “B” and “C” during the weekday morning and weekday afternoon peak hours, respectively. The southbound left turn lane group and approach operate at a Level of Service “E” during both peak hours.

**No-Build** – Results of the analysis of this signalized intersection indicate that it will operate at an overall Level of Service “B” and “C” during the weekday morning and weekday afternoon peak hours, respectively. The southbound left turn lane group and approach operate at a Level of Service “E” during both peak hours.

**Build** – Results of the analysis indicate that with the site-generated traffic added to this signalized intersection it will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. The westbound and northbound lane groups and approaches will have an acceptable change in Level of Service from “A” to “B” and “B” to “C,” respectively, during the weekday morning peak hour. The eastbound lane group and approach will have an acceptable change in Level of Service from “A” to “B” during the weekday afternoon peak hour. All remaining lane groups and approaches will maintain the same Levels of Service during all peak hours.

2. U.S. Route 1 at North State Street

**Existing** – Results of the analysis of this signalized intersection indicate that it currently operates at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

**No-Build** – Results of the analysis of this signalized intersection indicate that it will operate at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

**Build** – Results of the analysis indicate that with the site-generated traffic added to this signalized intersection it will continue to operate at the same overall Level of Service during both peak hours. All lane groups and approaches will maintain the same Levels of Service during all peak hours.

3. North State Street at Lafayette Street/South State Street

**Existing** – Results of the analysis of this all-way STOP-controlled intersection indicate that it currently operates at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

**No-Build** – Results of the analysis of this all-way STOP-controlled intersection indicate that it will operate at an overall Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

**Build** – Results of the analysis indicate that with the site-generated traffic added to this all-way STOP-controlled intersection it will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delays. All lanes will maintain the same Levels of Service during all peak hours.

4. North State Street at Site Access Drive

**Build** – Results of the analysis of this two-way STOP controlled intersection indicate that it will operate at a Level of Service “A” during both the weekday morning and weekday afternoon peak hours.

Table 5 provides a more detailed summary of the results of the capacity analyses for the Study Area intersections, as described above. This table provides Level of Service, average vehicle delay and volume to capacity ratio for each lane group, approach, intersection overall and lane during each of the peak hours for the existing, no-build and build conditions. It also provides a project assessment between the no-build and build conditions, which identifies the potential impact. The results of the Storage/Queue analyses for the Study Area intersections are also provided for each lane group and lane during each of the peak hours for the existing, no-build and build conditions. The capacity worksheets are included in the Appendix of this report.

## **Findings**

This Traffic Access and Impact Study was prepared to provide the City of Stamford, the Connecticut Department of Transportation (CTDOT) and the Office of the State Traffic Administration (OSTA) with a detailed analysis to determine potential traffic impacts from the proposed mixed-use development located at 819 East Main Street. The proposal is to construct 130-units of multifamily housing (mid-rise) and 2,950 square feet of commercial space. The site has a previous approval for 85-units of multifamily housing (mid-rise) and 2,900 square feet of commercial space from September 2021. Site access is proposed via right turn in/right turn out to North State Street.

Table 5  
 CAPACITY AND STORAGE/QUEUE ANALYSIS RESULTS – MEASURE OF EFFECTIVENESS (MOE) AND IMPACT ASSESSMENT – PEAK HOURS  
 Mixed-Use Development  
 819 East Main Street  
 Stamford, Connecticut

INTERSECTION	CONTROL TYPE	STORAGE/ LINK LENGTH	PHYSICAL UNITS	2021 EXISTING CONDITIONS (BASELINE)						2024 NO-BUILD CONDITIONS						2024 BUILD CONDITIONS						PROJECT IMPACTS (NO-BUILD TO BUILD)			
				Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning			Weekday Afternoon			Weekday Morning		Weekday Afternoon	
				LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	LOS/ Delay	V/C Ratio	Queue Length (Feet)	Deterioration in LOS	Project Delay (Seconds)	Deterioration in LOS	Project Delay (Seconds)
U.S. Route 1 at Lafayette Street	Traffic Signal	285	EB TR	A/8.0	0.22	116	A/9.6	0.44	154	A/10.0	0.46	157	A/8.7	0.23	125	B/12.1	0.49	162	No	0.5	A-B	2.1			
			APP.	A/8.0	--	--	A/9.6	--	--	A/10.0	--	--	A/8.7	--	--	B/12.1	--	--	No	0.5	A-B	2.1			
			WB LT	A/9.5	0.42	274	C/21.4	0.70	403	A/9.9	0.43	288	C/24.1	0.72	455	B/10.8	0.43	305	A-B	0.9	No	5.3			
			APP.	A/9.5	--	--	C/21.4	--	--	A/9.9	--	--	C/24.1	--	--	B/10.8	--	--	A-B	0.9	No	5.3			
			NB LR	B/16.5	0.11	34	C/25.8	0.29	70	B/16.7	0.11	34	C/26.1	0.29	73	C/21.8	0.23	68	B-C	5.1	No	3.9			
U.S. Route 1 at North State Street	Traffic Signal	105	SB L	E/68.0	0.84	255	E/73.7	0.86	212	E/73.0	0.86	217	E/67.7	0.85	261	E/64.0	0.82	249	No	0.0	No	-9.0			
			TR	A/10.0	0.16	33	B/12.5	0.12	22	A/9.9	0.16	33	B/12.3	0.13	22	A/9.5	0.15	33	B/11.9	0.11	22	No	-0.4		
			APP.	E/56.7	--	--	E/63.9	--	--	E/56.5	--	--	E/63.1	--	--	E/56.5	--	--	E/55.7	--	0.0	0.0	-7.4		
			APP.	B/17.5	--	--	C/21.7	--	--	B/17.8	--	--	C/22.8	--	--	B/18.6	--	--	B/18.6	--	0.8	0.8	2.2		
			Overall	A/1.2	0.25	37	A/2.6	0.38	127	A/2.6	0.38	127	A/2.7	0.39	131	A/1.2	0.26	38	A/3.3	0.41	129	No	0.0	No	0.6
North State Street at Lafayette Street/ South State Street	AWSC	280	EB Ln1	A/7.3	0.007	0	A/7.7	0.015	0	A/7.7	0.015	0	A/7.4	0.007	0	A/7.7	0.015	0	No	0.1	No	0.0			
			WB Ln1	A/6.9	0.011	0	A/7.2	0.030	3	A/6.9	0.011	0	A/7.2	0.030	3	A/6.8	0.057	5	A/7.2	0.070	5	No	0.0		
			NB Ln1	A/7.9	0.030	3	A/8.5	0.114	10	A/7.9	0.030	3	A/8.5	0.115	10	A/8.0	0.030	3	A/8.6	0.117	10	No	0.1		
			NB Ln2	A/7.5	0.043	3	A/7.8	0.096	8	A/7.5	0.044	3	A/7.8	0.100	8	A/7.6	0.048	5	A/8.0	0.107	10	No	0.2		
			Overall	A/7.5	0.008	0	A/8.8	0.019	3	A/6.6	0.008	0	A/6.8	0.019	3	A/6.7	0.008	0	A/6.9	0.020	3	No	0.1		
North State Street at Site Access Drive	TWSC	100	SB Ln1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A			
			Overall	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

Notes:

- Synchro 10.0/HCM 6th Edition results are used for capacity analysis.
- Level of Service determining parameter is called the service measure.
- For Signalized Intersections: Level of Service/Average Total delay per vehicle (seconds/vehicle).
- For TWSC and AWSC Intersections: Level of Service/Average Control delay per vehicle (seconds/vehicle).
- ITE publication for Traffic Access and Impact Studies for site development "A Recommended Practice" indicated that overall Level of Service ratings of A to D are normally considered acceptable for signalized intersections (Level C or better are considered desirable). Levels of Service E and F are normally undesirable.
- V/C ratio indicates the amount of congestion for each Lane Group, Movement and Lane. Any V/C ratio greater than or equal to one indicates that the Lane Group, Movement and Lane are operating at above capacity.
- The Queue Length rows show the 95th percentile maximum queue length in feet.
- The Queue Length is for each lane. The total queue length is divided by the number of lanes and the lane utilization factor.
- The 95th percentile queue is the maximum back of the queue with the 95th percentile traffic volumes.
- Bolded** 95th percentile queue exceeds the storage available.
- TWSC = Two-Way STOP Control.
- AWSC = All-Way STOP Control.
- N/A = Not Available.
- Physical Units consist of the following:
  - Lane Group and Intersection Overall for Traffic Signal Controlled Intersections.
  - TWSC Intersections: Critical Lane and Critical Movement.
  - AWSC Intersections: Lane and Intersection Overall.

NB = Northbound    EB = Eastbound    SB = Southbound    WB = Westbound  
 L = Left Turn    T = Through    R = Right Turn    APP. = Approach    Ln = Lane

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This Study addresses traffic conditions for the 2021 existing, 2024 no-build and 2024 build conditions during the weekday morning and weekday afternoon peak hours. Traffic counts were conducted at the Study Area intersections by Hardesty & Hanover, LLC in December 2021. Based on discussions CTDOT Planning Division, no COVID adjustments are needed.

The 2024 future projected traffic volumes, without the proposed development, employed a 0.6 percent annual growth rate, as per discussions with CTDOT Planning Division. Based on discussions with CTDOT Planning Division and the City of Stamford, no other nearby developments were identified.

Based on trip rates from "Trip Generation," 11<sup>th</sup> Edition, published by ITE, 2021, it is estimated that the proposed 130-units will generate a total of 48 and 51 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed 2,950 square feet of commercial space is estimated to generate a total of 7 and 19 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. Therefore, the total proposed site will generate a total of 55 and 70 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. To be conservative no pass-by credit was applied to the commercial space.

This site received an approval for 85-units of multifamily housing and 2,900 square feet of commercial space in September 2021. For comparison purposes, that approved development would generate a total of 38 and 52 vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively. The proposed site will generate a total of 17 and 18 additional vehicle trip ends during the weekday morning and weekday afternoon peak hours, respectively, when compared to the approved development. However, this traffic analysis is based on the full proposal.

A review of current traffic patterns at the Study Area intersections and in the vicinity of the project influence area was conducted to determine trip distribution for the proposed development. For arriving site traffic, it was found that 40 percent will arrive from the east on U.S. Route 1, 35 percent will arrive from the west on U.S. Route 1, 15 percent will arrive from the north on Lafayette Street and 10 percent will arrive from the south on South State Street. For departing site traffic, it was found that 40 percent will depart to the east on U.S. Route 1 and 60 percent will depart to the west on U.S. Route 1.



SYNCHRO 10 capacity analyses were conducted for 2021 existing, 2024 no-build and 2024 build conditions to identify incremental impacts and needs that the proposed development will generate. Results of the analyses indicate that the signalized intersection of U.S. Route 1 at Lafayette Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. The westbound and northbound lane groups and approaches will have an acceptable change in Level of Service from "A" to "B" and "B" to "C," respectively, during the weekday morning peak hour. The eastbound lane group and approach will have an acceptable change in Level of Service from "A" to "B" during the weekday afternoon peak hour. The southbound left turn lane group and approach will maintain a Level of Service "E" during both peak hours.

The signalized intersection of U.S. Route 1 and North State Street will continue to operate at the same overall Level of Service during both peak hours with a minimal increase in vehicle delay. All lane groups and approaches will maintain the same Levels of Service during both peak hours. At the all-way STOP-controlled intersection of North State Street and Lafayette Street/South State Street, all critical lanes and the intersection overall will maintain the same Level of Service during both peak hours. The proposed site driveway will operate at Level of Service "A" during both peak hours.

APPENDIX

PHOTOGRAPHS



U.S. Route 1 at Lafayette Street Looking East



U.S. Route 1 at Lafayette Street Looking West

January 10, 2022  
Hardesty & Hanover, LLC

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**Exhibit 1**





Lafayette Street at U.S. Route 1 Looking North



Lafayette Street at U.S. Route 1 Looking South

January 10, 2022  
Hardesty & Hanover, LLC

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**Exhibit 2**



U.S. Route 1 at North State Street Looking East



U.S. Route 1 at North State Street Looking West

January 10, 2022  
Hardesty & Hanover, LLC

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**Exhibit 3**





North State Street at U.S. Route 1 Looking South



North State Street at South State Street-Lafayette Street Looking East

January 10, 2022  
Hardesty & Hanover, LLC

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**Exhibit 4**



North State Street at South State Street-Lafayette Street Looking West



Lafayette Street at North State Street Looking North

January 10, 2022  
Hardesty & Hanover, LLC

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**Exhibit 5**





South State Street at North State Street Looking South

January 10, 2022  
Hardesty & Hanover, LLC

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**Exhibit 6**

## TURNING MOVEMENT COUNTS

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)  
 FIELD DATA SUMMARY - U.S. Route 1 (East Main St) at Lafayette St

Wednesday 15-Dec-21	Eastbound - U.S. Route 1			Westbound - U.S. Route 1			Northbound - Lafayette St			Southbound - Lafayette St			Last 4 Quarters	Pedestrians							
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		Total	EB	WB	NB	SB			
7:00 AM	0	75	0	132	0	132	3	0	2	5	34	1	16	1	1	1	2	4			
7:15 AM	0	134	1	183	0	183	2	2	10	12	87	1	14	102	5	0	1	5			
7:30 AM	0	107	0	214	0	214	5	0	5	42	42	0	15	57	1	0	1	2			
7:45 AM	0	101	0	217	0	217	6	0	2	8	61	0	12	73	1,487	0	2	2			
8:00 AM	0	108	0	183	0	183	5	0	7	12	32	2	10	44	348	1,572	0	0			
8:15 AM	0	93	7	233	0	233	9	0	3	12	46	3	11	60	405	1,536	1	1			
8:30 AM	0	86	0	154	0	154	6	0	1	7	35	2	3	40	287	1,440	0	0			
8:45 AM	0	111	3	196	0	197	10	0	4	14	33	1	8	42	367	1,407	1	1			
AM Peak Hour Vol.	0	450	1	796	9	808	18	0	19	37	222	3	51	276	1,572	6	2	4	10		
Peak Hour Factor	0.84			0.93			0.77			0.82			0.68			0.89					
Tuesday 14-Dec-21	Eastbound - U.S. Route 1			Westbound - U.S. Route 1			Northbound - Lafayette St			Southbound - Lafayette St			Last 4 Quarters	Pedestrians							
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total		EB	WB	NB	SB				
4:00 PM	1	160	4	132	0	133	8	0	9	17	40	1	6	47	362	3	0	3	2		
4:15 PM	0	189	2	191	0	193	12	0	10	22	33	1	8	42	414	0	2	2	7		
4:30 PM	0	260	2	202	2	204	11	0	13	24	60	0	12	72	560	4	3	4	7		
4:45 PM	0	114	2	116	1	117	8	0	8	16	39	0	5	44	292	1,628	3	2	3		
5:00 PM	0	175	0	141	0	141	5	0	9	14	38	0	19	57	387	1,653	3	2	5		
5:15 PM	0	169	1	170	0	171	6	0	9	15	39	1	14	54	386	1,625	0	0	2		
5:30 PM	0	210	1	211	3	214	15	0	14	29	44	0	11	55	493	1,568	5	0	6		
5:45 PM	0	168	0	168	0	168	7	0	5	12	52	0	12	64	355	1,621	1	1	5		
PM Peak Hour Vol.	1	723	10	734	3	737	39	0	40	79	172	2	31	205	1,628	10	7	12	18		
Peak Hour Factor	0.70			0.75			0.82			0.71			0.73								

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05-498.00)  
 FIELD DATA SUMMARY - U.S. Route 1 (East Main St) at N State St

Wednesday 15-Dec-21	Eastbound - U.S. Route 1			Westbound - U.S. Route 1			Northbound - N State St			Southbound - Commercial Driveway			Total	Last 4 Quarters	Pedestrians					
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right			Left	Thru	Right	EB	WB	NB
7:00 AM	8	103	0	111	0	134	12	146	1	12	13	6	12	282		3	0	3	2	
7:15 AM	3	186	0	189	1	185	11	197	0	11	12	8	19	417		5	0	0	1	
7:30 AM	6	150	0	156	2	185	13	200	3	17	20	12	16	392		2	0	0	0	
7:45 AM	3	179	0	182	1	197	12	210	1	14	16	1	22	430	1,521	3	0	0	0	
8:00 AM	4	182	0	186	4	182	10	196	3	2	15	11	16	418	1,657	1	0	0	1	
8:15 AM	3	146	0	149	2	212	9	223	2	1	24	5	10	406	1,646	2	0	0	3	
8:30 AM	2	152	2	156	2	151	7	160	1	8	9	5	7	332	1,586	1	0	0	0	
8:45 AM	6	130	1	137	2	180	2	184	0	9	9	3	8	338	1,494	0	0	0	0	
AM Peak Hour Vol.	16	697	0	713	8	749	46	803	7	4	57	47	73	1,657		11	0	0	2	
Peak Hour Factor				0.94				0.96				0.85				0.83				
Tuesday 14-Dec-21	Eastbound - U.S. Route 1			Westbound - U.S. Route 1			Northbound - N State St			Southbound - Commercial Driveway			Total	Last 4 Quarters	Pedestrians					
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left			Thru	Right	EB	WB	NB	SB
4:00 PM	3	224	1	228	3	149	8	160	0	38	38	3	8	434		1	0	0	4	
4:15 PM	2	199	2	203	1	147	1	149	0	31	31	4	2	389		0	0	0	8	
4:30 PM	5	233	0	238	1	157	2	160	0	32	32	3	6	436		0	0	0	2	
4:45 PM	1	285	0	286	1	173	3	177	1	36	38	7	9	510	1,769	2	0	2	3	
5:00 PM	3	137	0	140	1	146	3	150	4	2	16	22	3	315	1,650	0	0	0	1	
5:15 PM	5	215	1	221	0	162	8	170	3	0	28	31	5	433	1,694	1	0	0	1	
5:30 PM	1	252	2	255	1	158	6	165	1	2	52	65	7	491	1,749	2	0	0	3	
5:45 PM	3	167	2	172	0	154	4	158	0	1	29	30	2	366	1,605	2	0	0	2	
PM Peak Hour Vol.	11	941	3	955	6	626	14	646	1	1	137	139	17	1,769		3	0	2	17	
Peak Hour Factor				0.83				0.91				0.81				0.87				



MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)  
 FIELD DATA SUMMARY - Lafayette St at N State St

Wednesday 15-Dec-21	Eastbound - N State St			Westbound - N State St			Northbound - Lafayette St			Southbound - Lafayette St			Last 4 Quarters	Pedestrians				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		Total	EB	WB	NB	SB
7:00 AM	2	0	0	2	0	0	3	3	1	0	0	0	4	0	0	0	0	2
7:15 AM	2	0	0	2	0	3	1	4	4	0	0	0	8	0	0	0	0	14
7:30 AM	0	2	0	2	0	2	2	4	7	3	0	0	10	0	0	0	0	16
7:45 AM	0	0	0	0	0	1	0	1	5	6	0	0	11	0	0	0	0	54
8:00 AM	1	0	0	1	0	0	0	2	8	0	0	0	10	0	0	0	0	13
8:15 AM	2	0	0	2	0	2	2	4	11	0	0	0	13	0	0	0	0	12
8:30 AM	2	0	0	2	0	1	0	1	4	5	0	0	9	0	0	0	0	20
8:45 AM	2	0	0	2	0	1	4	5	6	8	0	0	14	0	0	0	0	13
9:00 AM	2	0	0	2	0	0	1	3	9	18	21	0	39	0	0	0	0	69
AM Peak Hour Vol.	3	2	0	5	0	6	3	9	18	21	0	0	39	0	0	0	0	55
Peak Hour Factor	0.63			0.56			0.89			0.50			0.86					
Tuesday 14-Dec-21	Eastbound - N State St			Westbound - N State St			Northbound - Lafayette St			Southbound - Lafayette St			Last 4 Quarters	Pedestrians				
4:00 PM	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		Total	EB	WB	NB	SB
4:15 PM	1	0	0	1	0	3	1	4	19	10	0	0	29	0	0	0	0	34
4:30 PM	3	0	0	3	0	4	6	10	13	13	0	0	26	0	0	0	0	41
4:45 PM	2	1	0	3	0	2	1	3	11	10	0	0	21	0	0	0	0	28
5:00 PM	3	0	0	3	0	3	1	4	21	18	1	0	40	0	0	0	0	47
5:15 PM	2	0	0	2	0	3	3	6	9	12	0	0	21	0	0	0	0	29
5:30 PM	0	0	0	0	0	2	2	4	7	8	0	0	15	0	0	0	0	19
5:45 PM	1	0	0	1	0	7	3	10	19	23	0	0	42	0	0	0	0	55
6:00 PM	3	0	0	3	0	0	4	4	5	10	0	0	15	0	0	0	0	24
PM Peak Hour Vol.	9	1	0	10	0	12	9	21	64	51	1	0	116	0	0	0	0	150
Peak Hour Factor	0.83			0.53			0.73			0.38			0.80					

MIXED-USE DEVELOPMENT, 819 EAST MAIN STREET, STAMFORD, CONNECTICUT (#05498.00)  
 FIELD DATA SUMMARY - Lafayette St at S State St

Wednesday 15-Dec-21	Eastbound - S State St			Westbound			Northbound			Southbound			Last 4 Quarters	Pedestrians				
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right		Total	EB	WB	NB	SB
7:00 AM	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	6	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	9	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	11	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	21	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	9	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	15	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AM Peak Hour Vol.	47	52	0	0	1	2	3	0	0	0	0	0	0	0	0	0	0	0
Peak Hour Factor	0.60			0.75			#DIV/0!			0.25			0.63					
Tuesday 14-Dec-21	Eastbound - S State St			Westbound			Northbound			Southbound			Last 4 Quarters	Pedestrians				
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Total		EB	WB	NB	SB	
4:00 PM	32	27	0	0	0	0	0	0	0	0	0	0	59	0	0	0	0	
4:15 PM	21	29	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	
4:30 PM	22	30	0	0	0	0	0	0	0	0	0	0	52	0	0	0	0	
4:45 PM	32	47	0	0	0	0	0	0	0	0	0	0	79	0	0	0	0	
5:00 PM	24	28	0	0	0	0	0	0	0	0	0	0	52	0	0	0	0	
5:15 PM	20	43	0	0	0	0	0	0	0	0	0	0	63	0	0	0	0	
5:30 PM	42	48	0	0	0	0	0	0	0	0	0	0	90	0	0	0	0	
5:45 PM	14	35	0	0	0	0	0	0	0	0	0	0	49	0	0	0	0	
6:00 PM	14	35	0	0	0	0	0	0	0	0	0	0	49	0	0	0	0	
PM Peak Hour Vol.	107	133	0	0	0	0	0	0	0	0	0	0	240	0	0	0	0	
Peak Hour Factor	0.76			#DIV/0!			#DIV/0!			#DIV/0!			0.76					

**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Route 1 at Lafayette Street  
 Stamford, Connecticut

File Name : 22487  
 Site Code : 22487  
 Start Date : 12/15/2021  
 Page No : 1

Groups Printed- Lights - Trucks - Buses

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	16	1	34	4	55	0	132	0	1	133	2	0	3	2	7	0	75	0	1	76	271
07:15 AM	14	1	87	5	107	9	183	0	0	192	10	0	2	1	13	1	134	0	5	140	452
07:30 AM	15	0	42	2	59	0	213	1	0	214	0	0	5	1	6	0	107	0	1	108	387
07:45 AM	12	0	61	2	75	0	217	1	2	220	2	0	6	2	10	0	101	0	0	101	406
Total	57	2	224	13	296	9	745	2	3	759	14	0	16	6	36	1	417	0	7	425	1516
08:00 AM	10	2	32	1	45	0	183	1	0	184	7	0	5	0	12	0	108	0	0	108	349
08:15 AM	11	3	46	2	62	0	233	0	1	234	3	0	9	3	15	7	93	0	1	101	412
08:30 AM	3	2	35	2	42	0	154	0	0	154	1	0	6	0	7	0	86	0	0	86	289
08:45 AM	8	1	33	3	45	0	196	1	1	198	4	0	10	2	16	3	111	0	1	115	374
Total	32	8	146	8	194	0	766	2	2	770	15	0	30	5	50	10	398	0	2	410	1424
Grand Total	89	10	370	21	490	9	1511	4	5	1529	29	0	46	11	86	11	815	0	9	835	2940
Apprch %	18.2	2	75.5	4.3		0.6	98.8	0.3	0.3		33.7	0	53.5	12.8		1.3	97.6	0	1.1		
Total %	3	0.3	12.6	0.7	16.7	0.3	51.4	0.1	0.2	52	1	0	1.6	0.4	2.9	0.4	27.7	0	0.3	28.4	
Lights	85	7	355	21	468	9	1477														
% Lights	95.5	70	95.9	100	95.5	100	97.7	100	100	97.8	96.6	0	95.7	100	96.5	90.9	95.1	0	100	95.1	96.6
Trucks	0	0	6	0	6	0	18	0	0	18	0	0	2	0	2	0	9	0	0	9	35
% Trucks	0	0	1.6	0	1.2	0	1.2	0	0	1.2	0	0	4.3	0	2.3	0	1.1	0	0	1.1	1.2
Buses	4	3	9	0	16	0	16	0	0	16	1	0	0	0	1	1	31	0	0	32	65
% Buses	4.5	30	2.4	0	3.3	0	1.1	0	0	1	3.4	0	0	0	1.2	9.1	3.8	0	0	3.8	2.2

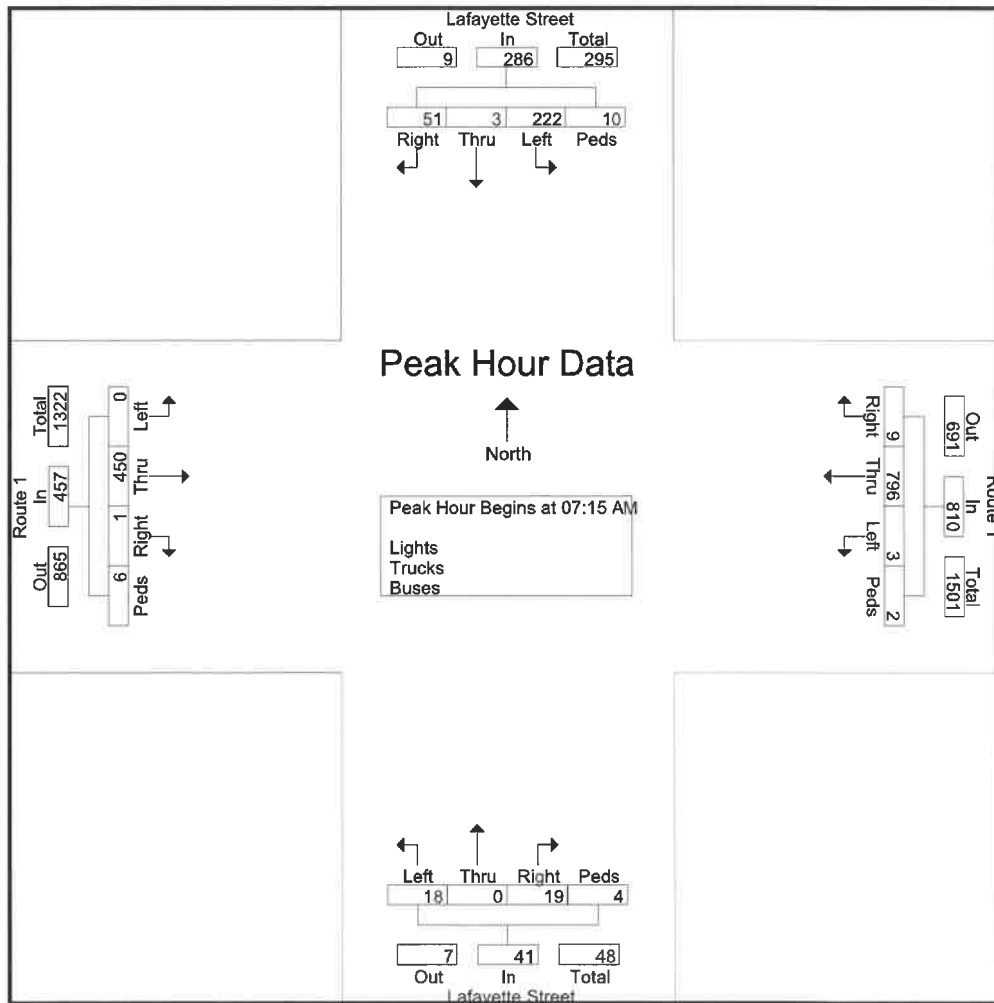
# Connecticut Counts LLC

## Kensington, Connecticut 06037

(860) 828-1693

File Name : 22487  
 Site Code : 22487  
 Start Date : 12/15/2021  
 Page No : 2

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	14	1	87	5	107	9	183	0	0	192	10	0	2	1	13	1	134	0	5	140	452
07:30 AM	15	0	42	2	59	0	213	1	0	214	0	0	5	1	6	0	107	0	1	108	387
07:45 AM	12	0	61	2	75	0	217	1	2	220	2	0	6	2	10	0	101	0	0	101	406
08:00 AM	10	2	32	1	45	0	183	1	0	184	7	0	5	0	12	0	108	0	0	108	349
Total Volume	51	3	222	10	286	9	796	3	2	810	19	0	18	4	41	1	450	0	6	457	1594
% App. Total	17.8	1	77.6	3.5		1.1	98.3	0.4	0.2		46.3	0	43.9	9.8		0.2	98.5	0	1.3		
PHF	.850	.375	.638	.500	.668	.250	.917	.750	.250	.920	.475	.000	.750	.500	.788	.250	.840	.000	.300	.816	.882





# Connecticut Counts LLC

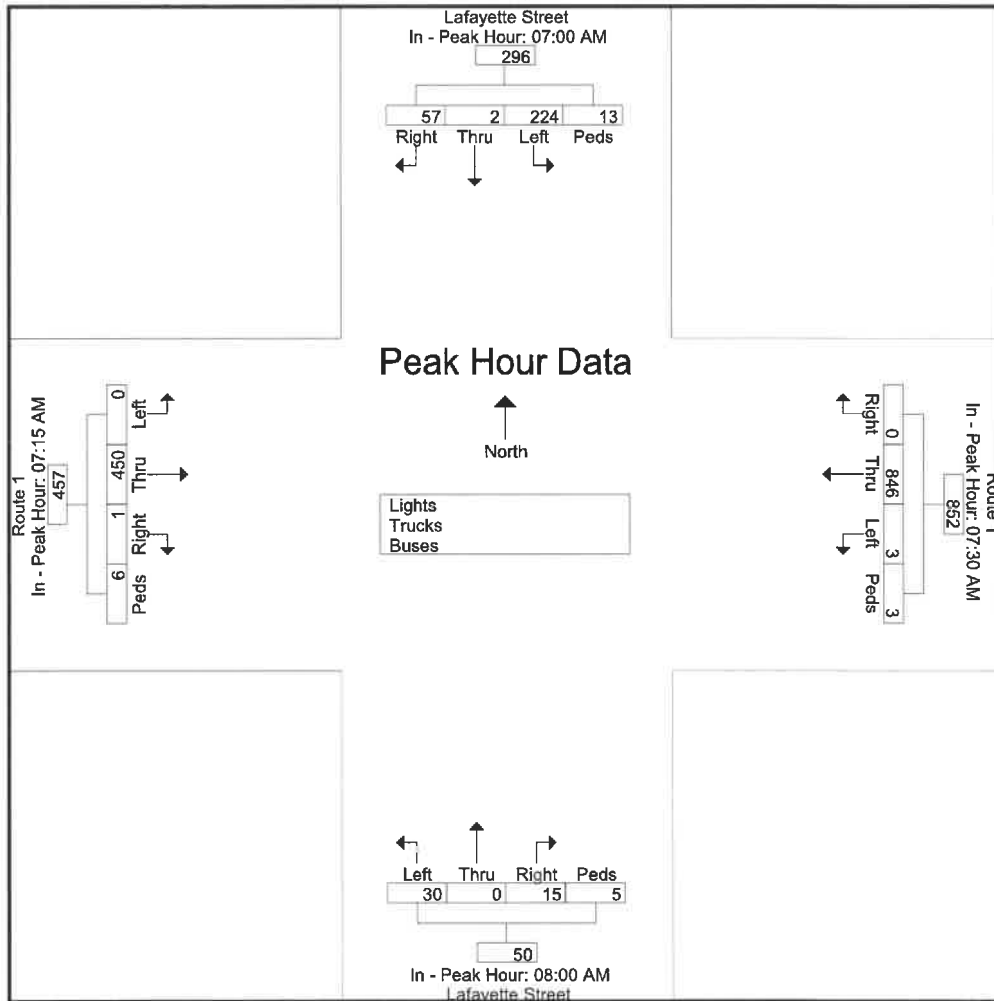
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22487  
Site Code : 22487  
Start Date : 12/15/2021  
Page No : 3

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	07:00 AM					07:30 AM					08:00 AM					07:15 AM				
+0 mins.	16	1	34	4	55	0	213	1	0	214	7	0	5	0	12	1	134	0	5	140
+15 mins.	14	1	87	5	107	0	217	1	2	220	3	0	9	3	15	0	107	0	1	108
+30 mins.	15	0	42	2	59	0	183	1	0	184	1	0	6	0	7	0	101	0	0	101
+45 mins.	12	0	61	2	75	0	233	0	1	234	4	0	10	2	16	0	108	0	0	108
Total Volume	57	2	224	13	296	0	846	3	3	852	15	0	30	5	50	1	450	0	6	457
% App. Total	19.3	0.7	75.7	4.4		0	99.3	0.4	0.4		30	0	60	10		0.2	98.5	0	1.3	
PHF	.891	.500	.644	.650	.692	.000	.908	.750	.375	.910	.536	.000	.750	.417	.781	.250	.840	.000	.300	.816



**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Route 1 at Lafayette Street  
 Stamford, Connecticut

File Name : 22488  
 Site Code : 22488  
 Start Date : 12/14/2021  
 Page No : 1

Groups Printed- Lights - Trucks - Buses

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	6	1	40	2	49	1	132	0	0	133	9	0	8	3	20	4	160	1	3	168	370
04:15 PM	8	1	33	7	49	1	158	0	2	161	10	0	12	2	24	2	189	0	0	191	425
04:30 PM	12	0	60	7	79	0	200	2	3	205	13	0	11	4	28	2	260	0	4	266	578
04:45 PM	5	0	39	2	46	0	115	1	2	118	8	0	8	3	19	2	114	0	3	119	302
<b>Total</b>	<b>31</b>	<b>2</b>	<b>172</b>	<b>18</b>	<b>223</b>	<b>2</b>	<b>605</b>	<b>3</b>	<b>7</b>	<b>617</b>	<b>40</b>	<b>0</b>	<b>39</b>	<b>12</b>	<b>91</b>	<b>10</b>	<b>723</b>	<b>1</b>	<b>10</b>	<b>744</b>	<b>1675</b>
05:00 PM	19	0	38	3	60	0	141	0	2	143	9	0	5	5	19	0	175	0	3	178	400
05:15 PM	14	1	39	0	54	0	147	0	0	147	9	0	6	2	17	1	169	0	0	170	388
05:30 PM	11	0	44	3	58	0	195	3	0	198	14	0	15	6	35	1	210	0	5	216	507
05:45 PM	12	0	52	0	64	0	111	0	1	112	5	0	7	5	17	0	168	0	1	169	362
<b>Total</b>	<b>56</b>	<b>1</b>	<b>173</b>	<b>6</b>	<b>236</b>	<b>0</b>	<b>594</b>	<b>3</b>	<b>3</b>	<b>600</b>	<b>37</b>	<b>0</b>	<b>33</b>	<b>18</b>	<b>88</b>	<b>2</b>	<b>722</b>	<b>0</b>	<b>9</b>	<b>733</b>	<b>1657</b>
<b>Grand Total</b>	<b>87</b>	<b>3</b>	<b>345</b>	<b>24</b>	<b>459</b>	<b>2</b>	<b>1199</b>	<b>6</b>	<b>10</b>	<b>1217</b>	<b>77</b>	<b>0</b>	<b>72</b>	<b>30</b>	<b>179</b>	<b>12</b>	<b>1445</b>	<b>1</b>	<b>19</b>	<b>1477</b>	<b>3332</b>
<b>Apprch %</b>	<b>19</b>	<b>0.7</b>	<b>75.2</b>	<b>5.2</b>		<b>0.2</b>	<b>98.5</b>	<b>0.5</b>	<b>0.8</b>		<b>43</b>	<b>0</b>	<b>40.2</b>	<b>16.8</b>		<b>0.8</b>	<b>97.8</b>	<b>0.1</b>	<b>1.3</b>		
<b>Total %</b>	<b>2.6</b>	<b>0.1</b>	<b>10.4</b>	<b>0.7</b>	<b>13.8</b>	<b>0.1</b>	<b>36</b>	<b>0.2</b>	<b>0.3</b>	<b>36.5</b>	<b>2.3</b>	<b>0</b>	<b>2.2</b>	<b>0.9</b>	<b>5.4</b>	<b>0.4</b>	<b>43.4</b>	<b>0</b>	<b>0.6</b>	<b>44.3</b>	
<b>Lights</b>	<b>85</b>	<b>3</b>	<b>339</b>	<b>24</b>	<b>451</b>	<b>1</b>	<b>1186</b>									<b>1427</b>					
<b>% Lights</b>	<b>97.7</b>	<b>100</b>	<b>98.3</b>	<b>100</b>	<b>98.3</b>	<b>50</b>	<b>98.9</b>	<b>100</b>	<b>100</b>	<b>98.8</b>	<b>100</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>98.8</b>	<b>100</b>	<b>100</b>	<b>98.8</b>	<b>98.8</b>
<b>Trucks</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>9</b>
<b>% Trucks</b>	<b>0</b>	<b>0</b>	<b>1.2</b>	<b>0</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.3</b>	<b>0</b>	<b>0</b>	<b>0.3</b>	<b>0.3</b>
<b>Buses</b>	<b>2</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>4</b>	<b>1</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>0</b>	<b>0</b>	<b>13</b>	<b>31</b>
<b>% Buses</b>	<b>2.3</b>	<b>0</b>	<b>0.6</b>	<b>0</b>	<b>0.9</b>	<b>50</b>	<b>1.1</b>	<b>0</b>	<b>0</b>	<b>1.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0.9</b>

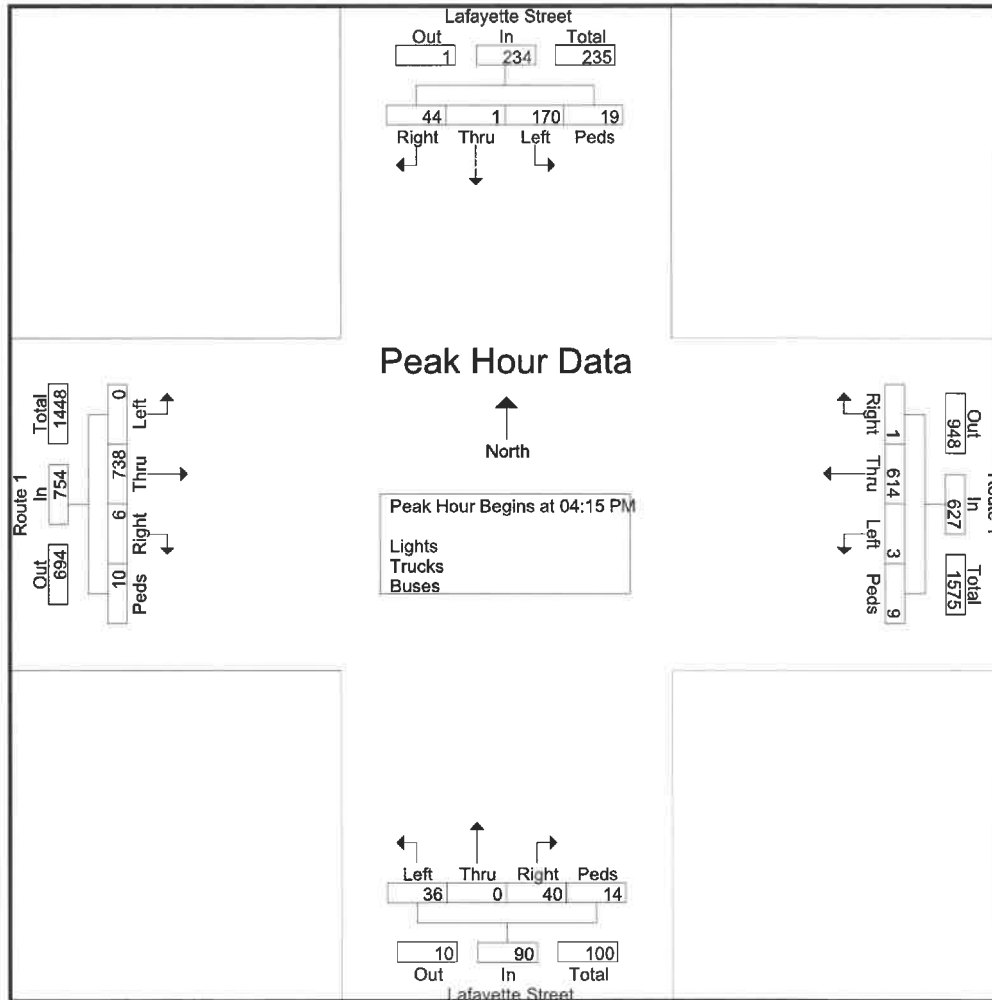
# Connecticut Counts LLC

## Kensington, Connecticut 06037

(860) 828-1693

File Name : 22488  
 Site Code : 22488  
 Start Date : 12/14/2021  
 Page No : 2

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:15 PM																					
04:15 PM	8	1	33	7	49	1	158	0	2	161	10	0	12	2	24	2	189	0	0	191	425
04:30 PM	12	0	60	7	79	0	200	2	3	205	13	0	11	4	28	2	260	0	4	266	578
04:45 PM	5	0	39	2	46	0	115	1	2	118	8	0	8	3	19	2	114	0	3	119	302
05:00 PM	19	0	38	3	60	0	141	0	2	143	9	0	5	5	19	0	175	0	3	178	400
Total Volume	44	1	170	19	234	1	614	3	9	627	40	0	36	14	90	6	738	0	10	754	1705
% App. Total	18.8	0.4	72.6	8.1		0.2	97.9	0.5	1.4		44.4	0	40	15.6		0.8	97.9	0	1.3		
PHF	.579	.250	.708	.679	.741	.250	.768	.375	.750	.765	.769	.000	.750	.700	.804	.750	.710	.000	.625	.709	.737



# Connecticut Counts LLC

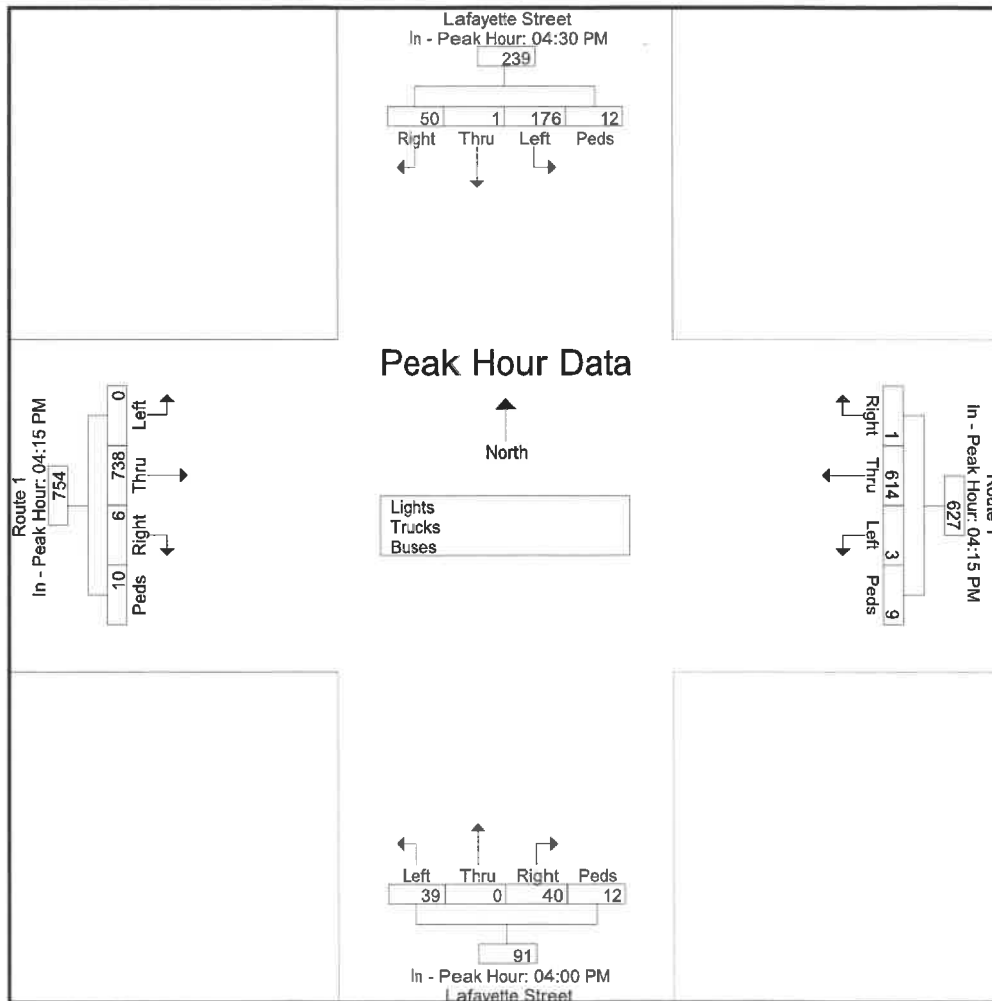
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22488  
Site Code : 22488  
Start Date : 12/14/2021  
Page No : 3

Start Time	Lafayette Street From North					Route 1 From East					Lafayette Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:30 PM					04:15 PM					04:00 PM					04:15 PM				
+0 mins.	12	0	60	7	79	1	158	0	2	161	9	0	8	3	20	2	189	0	0	191
+15 mins.	5	0	39	2	46	0	200	2	3	205	10	0	12	2	24	2	260	0	4	266
+30 mins.	19	0	38	3	60	0	115	1	2	118	13	0	11	4	28	2	114	0	3	119
+45 mins.	14	1	39	0	54	0	141	0	2	143	8	0	8	3	19	0	175	0	3	178
Total Volume	50	1	176	12	239	1	614	3	9	627	40	0	39	12	91	6	738	0	10	754
% App. Total	20.9	0.4	73.6	5		0.2	97.9	0.5	1.4		44	0	42.9	13.2		0.8	97.9	0	1.3	
PHF	.658	.250	.733	.429	.756	.250	.768	.375	.750	.765	.769	.000	.813	.750	.813	.750	.710	.000	.625	.709





**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Route 1 at N. State St/Private Dr  
 Stamford, Connecticut

File Name : 22489  
 Site Code : 22489  
 Start Date : 12/15/2021  
 Page No : 1

Groups Printed- Lights - Trucks - Buses

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Inc. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	6	0	6	2	14	12	134	0	0	146	12	1	0	3	16	0	103	8	3	114	290
07:15 AM	11	0	8	1	20	11	185	1	0	197	11	1	0	0	12	0	186	3	5	194	423
07:30 AM	4	0	12	0	16	13	185	2	0	200	17	0	3	0	20	0	150	6	2	158	394
07:45 AM	5	1	16	0	22	12	197	1	0	210	14	1	1	0	16	0	179	3	3	185	433
Total	26	1	42	3	72	48	701	4	0	753	54	3	4	3	64	0	618	20	13	651	1540
08:00 AM	5	0	11	1	17	10	182	4	0	196	15	2	3	0	20	0	182	4	1	187	420
08:15 AM	5	0	5	3	13	9	212	2	0	223	21	1	2	0	24	0	146	3	2	151	411
08:30 AM	2	0	5	0	7	7	151	2	0	160	8	0	1	0	9	2	152	2	1	157	333
08:45 AM	3	0	5	0	8	2	180	2	0	184	9	0	0	0	9	1	130	6	0	137	338
Total	15	0	26	4	45	28	725	10	0	763	53	3	6	0	62	3	610	15	4	632	1502
Grand Total	41	1	68	7	117	76	1426	14	0	1516	107	6	10	3	126	3	1228	35	17	1283	3042
Apprch %	35	0.9	58.1	6		5	94.1	0.9	0		84.9	4.8	7.9	2.4		0.2	95.7	2.7	1.3		
Total %	1.3	0	2.2	0.2	3.8	2.5	46.9	0.5	0	49.8	3.5	0.2	0.3	0.1	4.1	0.1	40.4	1.2	0.6	42.2	
Lights	41	1	68	7	117	76	1397									1177					
% Lights	100	100	100	100	100	100	98	85.7	0	98	100	100	90	100	99.2	100	95.8	100	100	96	97.3
Trucks	0	0	0	0	0	0	14	0	0	14	0	0	1	0	1	0	8	0	0	8	23
% Trucks	0	0	0	0	0	0	1	0	0	0.9	0	0	10	0	0.8	0	0.7	0	0	0.6	0.8
Buses	0	0	0	0	0	0	15	2	0	17	0	0	0	0	0	0	43	0	0	43	60
% Buses	0	0	0	0	0	0	1.1	14.3	0	1.1	0	0	0	0	0	0	3.5	0	0	3.4	2

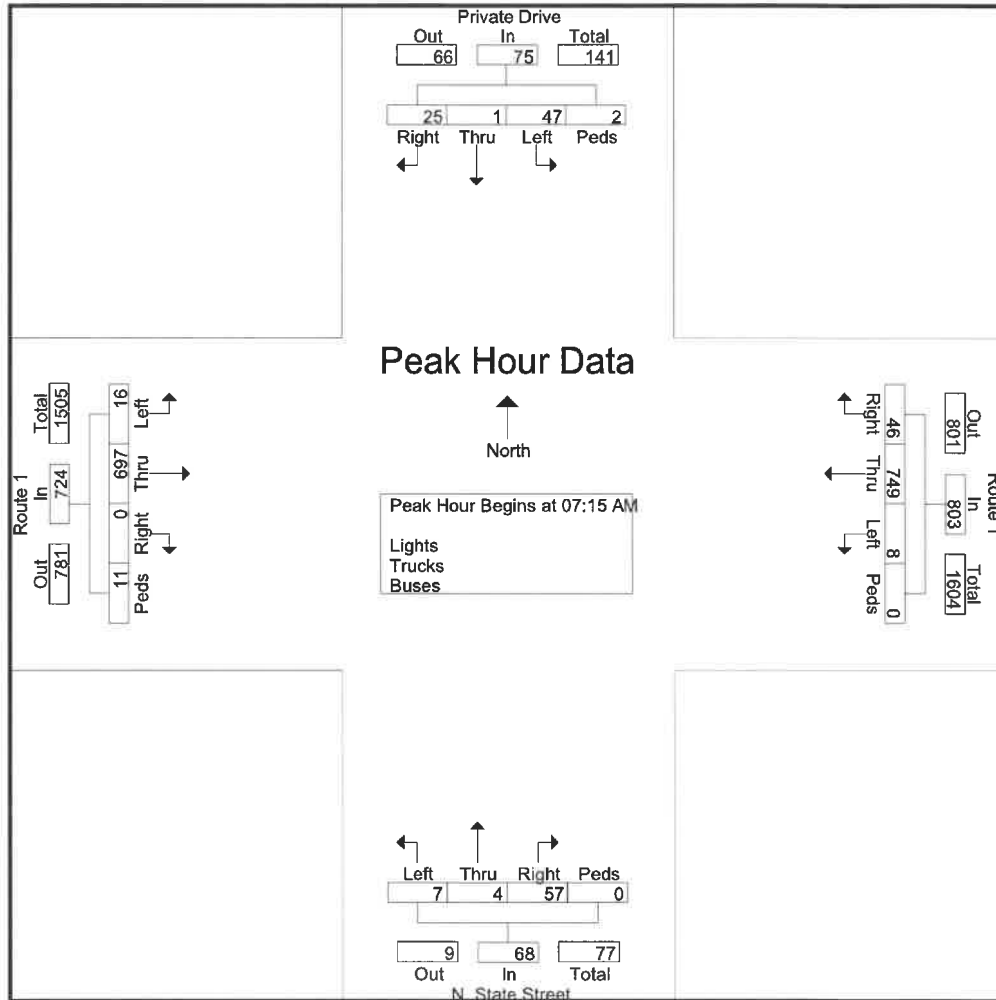
# Connecticut Counts LLC

## Kensington, Connecticut 06037

(860) 828-1693

File Name : 22489  
 Site Code : 22489  
 Start Date : 12/15/2021  
 Page No : 2

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	11	0	8	1	20	11	185	1	0	197	11	1	0	0	12	0	186	3	5	194	423
07:30 AM	4	0	12	0	16	13	185	2	0	200	17	0	3	0	20	0	150	6	2	158	394
07:45 AM	5	1	16	0	22	12	197	1	0	210	14	1	1	0	16	0	179	3	3	185	433
08:00 AM	5	0	11	1	17	10	182	4	0	196	15	2	3	0	20	0	182	4	1	187	420
Total Volume	25	1	47	2	75	46	749	8	0	803	57	4	7	0	68	0	697	16	11	724	1670
% App. Total	33.3	1.3	62.7	2.7		5.7	93.3	1	0		83.8	5.9	10.3	0		0	96.3	2.2	1.5		
PHF	.568	.250	.734	.500	.852	.885	.951	.500	.000	.956	.838	.500	.583	.000	.850	.000	.937	.667	.550	.933	.964



# Connecticut Counts LLC

## Kensington, Connecticut 06037

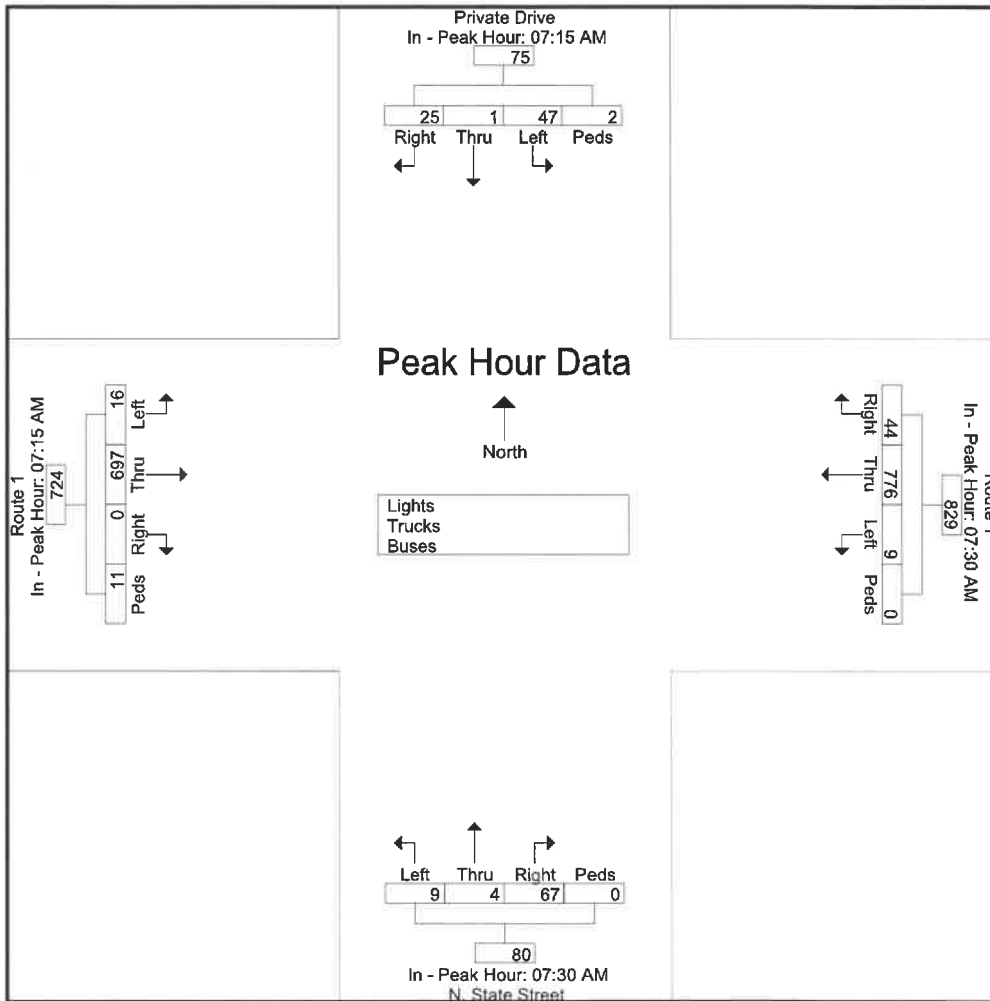
(860) 828-1693

File Name : 22489  
 Site Code : 22489  
 Start Date : 12/15/2021  
 Page No : 3

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
 Peak Hour for Each Approach Begins at:

	07:15 AM					07:30 AM					07:30 AM					07:15 AM				
+0 mins.	11	0	8	1	20	13	185	2	0	200	17	0	3	0	20	0	186	3	5	194
+15 mins.	4	0	12	0	16	12	197	1	0	210	14	1	1	0	16	0	150	6	2	158
+30 mins.	5	1	16	0	22	10	182	4	0	196	15	2	3	0	20	0	179	3	3	185
+45 mins.	5	0	11	1	17	9	212	2	0	223	21	1	2	0	24	0	182	4	1	187
Total Volume	25	1	47	2	75	44	776	9	0	829	67	4	9	0	80	0	697	16	11	724
% App. Total	33.3	1.3	62.7	2.7		5.3	93.6	1.1	0		83.8	5	11.2	0		0	96.3	2.2	1.5	
PHF	.568	.250	.734	.500	.852	.846	.915	.563	.000	.929	.798	.500	.750	.000	.833	.000	.937	.667	.550	.933



**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Route 1 at N. State St/Private Dr  
 Stamford, Connecticut

File Name : 22490  
 Site Code : 22490  
 Start Date : 12/14/2021  
 Page No : 1

Groups Printed- Lights - Trucks - Buses

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	5	0	3	4	12	8	149	3	0	160	38	0	0	0	38	1	224	3	1	229	439
04:15 PM	2	0	4	8	14	1	147	1	0	149	31	0	0	0	31	2	199	2	0	203	397
04:30 PM	3	0	3	2	8	2	157	1	0	160	32	0	0	0	32	0	233	5	0	238	438
04:45 PM	2	0	7	3	12	3	173	1	0	177	36	1	1	2	40	0	285	1	2	288	517
<b>Total</b>	<b>12</b>	<b>0</b>	<b>17</b>	<b>17</b>	<b>46</b>	<b>14</b>	<b>626</b>	<b>6</b>	<b>0</b>	<b>646</b>	<b>137</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>141</b>	<b>3</b>	<b>941</b>	<b>11</b>	<b>3</b>	<b>958</b>	<b>1791</b>
05:00 PM	2	0	1	1	4	3	146	1	0	150	16	2	4	0	22	0	137	3	0	140	316
05:15 PM	6	0	5	1	12	8	162	0	0	170	28	0	3	0	31	1	215	5	1	222	435
05:30 PM	9	0	7	3	19	6	158	1	0	165	52	2	1	0	55	2	252	1	2	257	496
05:45 PM	4	0	2	2	8	4	154	0	0	158	29	1	0	0	30	2	167	3	2	174	370
<b>Total</b>	<b>21</b>	<b>0</b>	<b>15</b>	<b>7</b>	<b>43</b>	<b>21</b>	<b>620</b>	<b>2</b>	<b>0</b>	<b>643</b>	<b>125</b>	<b>5</b>	<b>8</b>	<b>0</b>	<b>138</b>	<b>5</b>	<b>771</b>	<b>12</b>	<b>5</b>	<b>793</b>	<b>1617</b>
<b>Grand Total</b>	<b>33</b>	<b>0</b>	<b>32</b>	<b>24</b>	<b>89</b>	<b>35</b>	<b>1246</b>	<b>8</b>	<b>0</b>	<b>1289</b>	<b>262</b>	<b>6</b>	<b>9</b>	<b>2</b>	<b>279</b>	<b>8</b>	<b>1712</b>	<b>23</b>	<b>8</b>	<b>1751</b>	<b>3408</b>
<b>Apprch %</b>	<b>37.1</b>	<b>0</b>	<b>36</b>	<b>27</b>		<b>2.7</b>	<b>96.7</b>	<b>0.6</b>	<b>0</b>		<b>93.9</b>	<b>2.2</b>	<b>3.2</b>	<b>0.7</b>		<b>0.5</b>	<b>97.8</b>	<b>1.3</b>	<b>0.5</b>		
<b>Total %</b>	<b>1</b>	<b>0</b>	<b>0.9</b>	<b>0.7</b>	<b>2.6</b>	<b>1</b>	<b>36.6</b>	<b>0.2</b>	<b>0</b>	<b>37.8</b>	<b>7.7</b>	<b>0.2</b>	<b>0.3</b>	<b>0.1</b>	<b>8.2</b>	<b>0.2</b>	<b>50.2</b>	<b>0.7</b>	<b>0.2</b>	<b>51.4</b>	
<b>Lights</b>	<b>33</b>	<b>0</b>	<b>32</b>	<b>24</b>	<b>89</b>	<b>35</b>	<b>1229</b>										<b>1692</b>				
<b>% Lights</b>	<b>100</b>	<b>0</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>98.6</b>	<b>100</b>	<b>0</b>	<b>98.7</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>98.8</b>	<b>100</b>	<b>100</b>	<b>98.9</b>	<b>98.9</b>
<b>Trucks</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>5</b>
<b>% Trucks</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>0.1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.2</b>	<b>0</b>	<b>0</b>	<b>0.2</b>	<b>0.1</b>
<b>Buses</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>32</b>
<b>% Buses</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1.3</b>	<b>0</b>	<b>0</b>	<b>1.2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0</b>	<b>0</b>	<b>0.9</b>	<b>0.9</b>



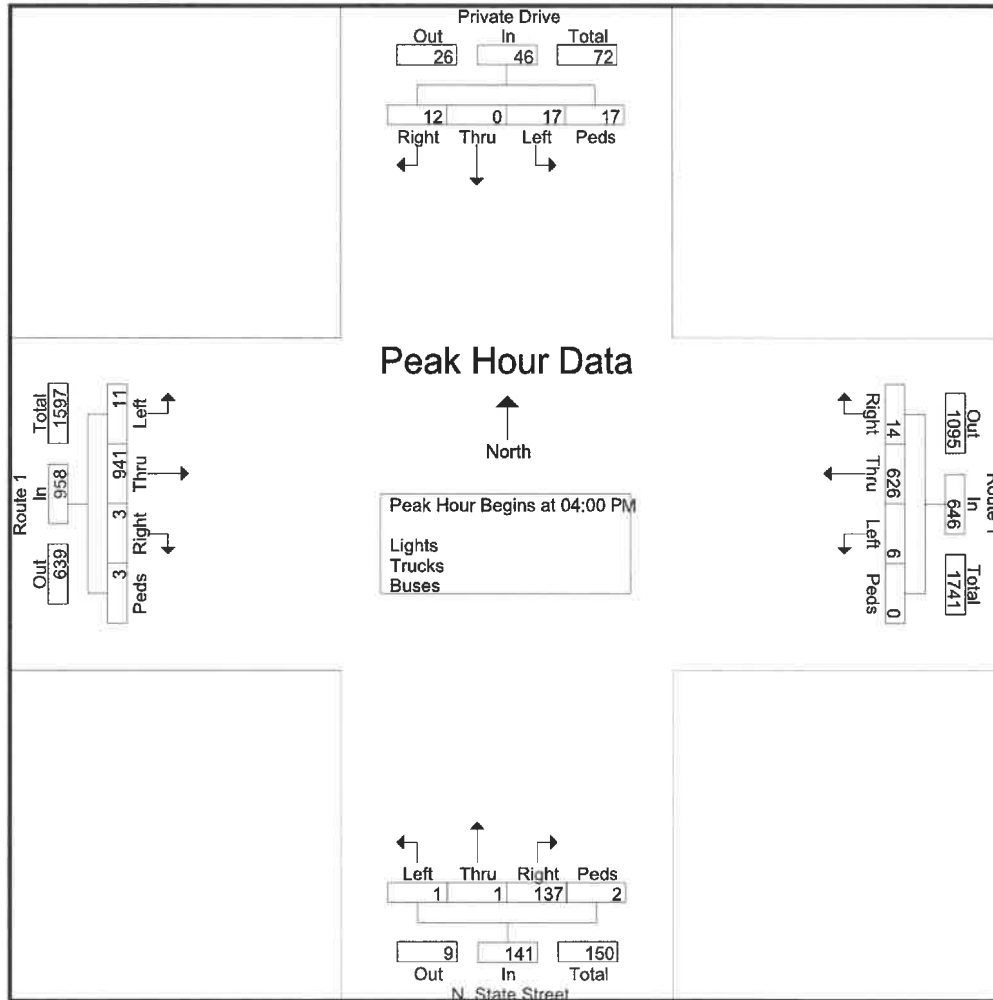
# Connecticut Counts LLC

## Kensington, Connecticut 06037

(860) 828-1693

File Name : 22490  
 Site Code : 22490  
 Start Date : 12/14/2021  
 Page No : 2

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	5	0	3	4	12	8	149	3	0	160	38	0	0	0	38	1	224	3	1	229	439
04:15 PM	2	0	4	8	14	1	147	1	0	149	31	0	0	0	31	2	199	2	0	203	397
04:30 PM	3	0	3	2	8	2	157	1	0	160	32	0	0	0	32	0	233	5	0	238	438
04:45 PM	2	0	7	3	12	3	173	1	0	177	36	1	1	2	40	0	285	1	2	288	517
Total Volume	12	0	17	17	46	14	626	6	0	646	137	1	1	2	141	3	941	11	3	958	1791
% App. Total	26.1	0	37	37		2.2	96.9	0.9	0		97.2	0.7	0.7	1.4		0.3	98.2	1.1	0.3		
PHF	.600	.000	.607	.531	.821	.438	.905	.500	.000	.912	.901	.250	.250	.250	.881	.375	.825	.550	.375	.832	.866



# Connecticut Counts LLC

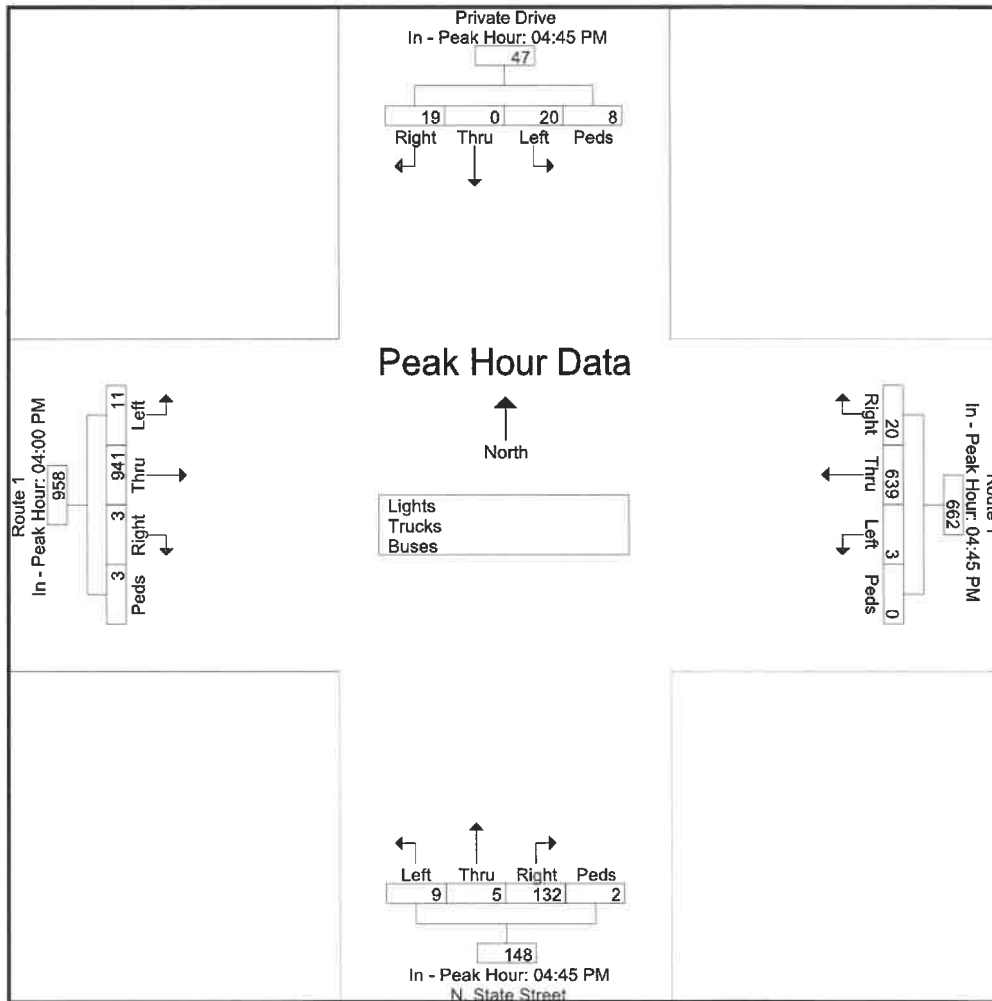
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22490  
Site Code : 22490  
Start Date : 12/14/2021  
Page No : 3

Start Time	Private Drive From North					Route 1 From East					N. State Street From South					Route 1 From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:45 PM					04:45 PM					04:45 PM					04:00 PM				
+0 mins.	2	0	7	3	12	3	173	1	0	177	36	1	1	2	40	1	224	3	1	229
+15 mins.	2	0	1	1	4	3	146	1	0	150	16	2	4	0	22	2	199	2	0	203
+30 mins.	6	0	5	1	12	8	162	0	0	170	28	0	3	0	31	0	233	5	0	238
+45 mins.	9	0	7	3	19	6	158	1	0	165	52	2	1	0	55	0	285	1	2	288
Total Volume	19	0	20	8	47	20	639	3	0	662	132	5	9	2	148	3	941	11	3	958
% App. Total	40.4	0	42.6	17		3	96.5	0.5	0		89.2	3.4	6.1	1.4		0.3	98.2	1.1	0.3	
PHF	.528	.000	.714	.667	.618	.625	.923	.750	.000	.935	.635	.625	.563	.250	.673	.375	.825	.550	.375	.832



**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Lafayette St at N. State Street  
 Stamford, Connecticut

File Name : 22491  
 Site Code : 22491  
 Start Date : 12/15/2021  
 Page No : 1

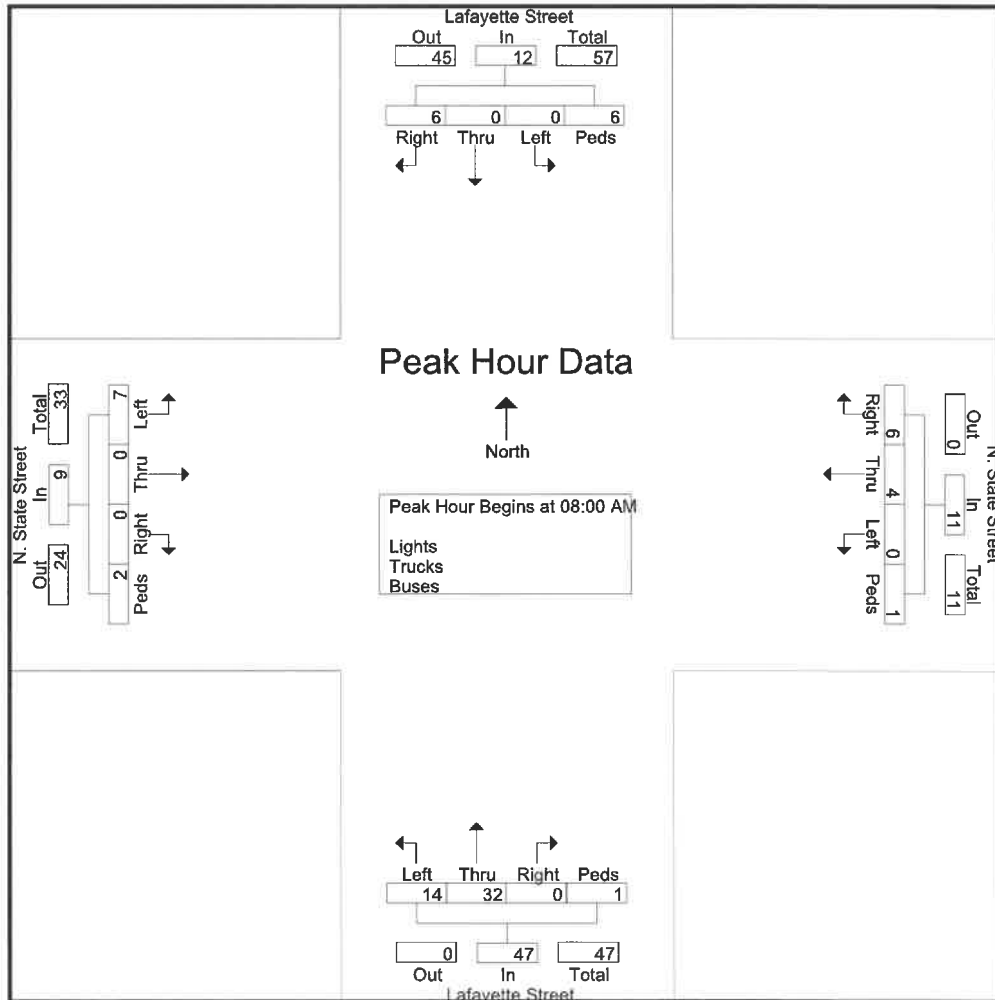
Groups Printed- Lights - Trucks - Buses

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	2	0	0	2	4	3	0	0	0	3	0	1	3	0	4	0	0	2	0	2	13
07:15 AM	0	0	0	0	0	1	3	0	0	4	0	4	4	0	8	0	0	2	2	4	16
07:30 AM	0	0	0	1	1	2	2	0	0	4	0	3	7	0	10	0	2	0	1	3	18
07:45 AM	1	0	0	1	2	0	1	0	0	1	0	6	5	0	11	0	0	0	0	0	14
<b>Total</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>12</b>	<b>0</b>	<b>14</b>	<b>19</b>	<b>0</b>	<b>33</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>3</b>	<b>9</b>	<b>61</b>
08:00 AM	1	0	0	1	2	0	0	0	0	0	0	8	2	1	11	0	0	1	2	3	16
08:15 AM	1	0	0	4	5	2	2	0	0	4	0	11	2	0	13	0	0	2	0	2	24
08:30 AM	1	0	0	0	1	0	1	0	0	1	0	5	4	0	9	0	0	2	0	2	13
08:45 AM	3	0	0	1	4	4	1	0	1	6	0	8	6	0	14	0	0	2	0	2	26
<b>Total</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>12</b>	<b>6</b>	<b>4</b>	<b>0</b>	<b>1</b>	<b>11</b>	<b>0</b>	<b>32</b>	<b>14</b>	<b>1</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>2</b>	<b>9</b>	<b>79</b>
<b>Grand Total</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>19</b>	<b>12</b>	<b>10</b>	<b>0</b>	<b>1</b>	<b>23</b>	<b>0</b>	<b>46</b>	<b>33</b>	<b>1</b>	<b>80</b>	<b>0</b>	<b>2</b>	<b>11</b>	<b>5</b>	<b>18</b>	<b>140</b>
<b>Apprch %</b>	<b>47.4</b>	<b>0</b>	<b>0</b>	<b>52.6</b>		<b>52.2</b>	<b>43.5</b>	<b>0</b>	<b>4.3</b>		<b>0</b>	<b>57.5</b>	<b>41.2</b>	<b>1.2</b>		<b>0</b>	<b>11.1</b>	<b>61.1</b>	<b>27.8</b>		
<b>Total %</b>	<b>6.4</b>	<b>0</b>	<b>0</b>	<b>7.1</b>	<b>13.6</b>	<b>8.6</b>	<b>7.1</b>	<b>0</b>	<b>0.7</b>	<b>16.4</b>	<b>0</b>	<b>32.9</b>	<b>23.6</b>	<b>0.7</b>	<b>57.1</b>	<b>0</b>	<b>1.4</b>	<b>7.9</b>	<b>3.6</b>	<b>12.9</b>	
<b>Lights</b>	<b>6</b>	<b>0</b>	<b>0</b>	<b>10</b>	<b>16</b>	<b>12</b>	<b>8</b>	<b>0</b>	<b>1</b>	<b>21</b>	<b>0</b>	<b>46</b>	<b>32</b>	<b>1</b>	<b>79</b>	<b>0</b>	<b>2</b>	<b>10</b>	<b>5</b>	<b>17</b>	<b>133</b>
<b>% Lights</b>	<b>66.7</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>84.2</b>	<b>100</b>	<b>80</b>	<b>0</b>	<b>100</b>	<b>91.3</b>	<b>0</b>	<b>100</b>	<b>97</b>	<b>100</b>	<b>98.8</b>	<b>0</b>	<b>100</b>	<b>90.9</b>	<b>100</b>	<b>94.4</b>	<b>95</b>
<b>Trucks</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>% Trucks</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Buses</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>7</b>
<b>% Buses</b>	<b>33.3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15.8</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>8.7</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>1.2</b>	<b>0</b>	<b>0</b>	<b>9.1</b>	<b>0</b>	<b>5.6</b>	<b>5</b>

**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

File Name : 22491  
 Site Code : 22491  
 Start Date : 12/15/2021  
 Page No : 2

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	1	0	0	1	2	0	0	0	0	0	0	8	2	1	11	0	0	1	2	3	16
08:15 AM	1	0	0	4	5	2	2	0	0	4	0	11	2	0	13	0	0	2	0	2	24
08:30 AM	1	0	0	0	1	0	1	0	0	1	0	5	4	0	9	0	0	2	0	2	13
08:45 AM	3	0	0	1	4	4	1	0	1	6	0	8	6	0	14	0	0	2	0	2	26
Total Volume	6	0	0	6	12	6	4	0	1	11	0	32	14	1	47	0	0	7	2	9	79
% App. Total	50	0	0	50		54.5	36.4	0	9.1		0	68.1	29.8	2.1		0	0	77.8	22.2		
PHF	.500	.000	.000	.375	.600	.375	.500	.000	.250	.458	.000	.727	.583	.250	.839	.000	.000	.875	.250	.750	.760





# Connecticut Counts LLC

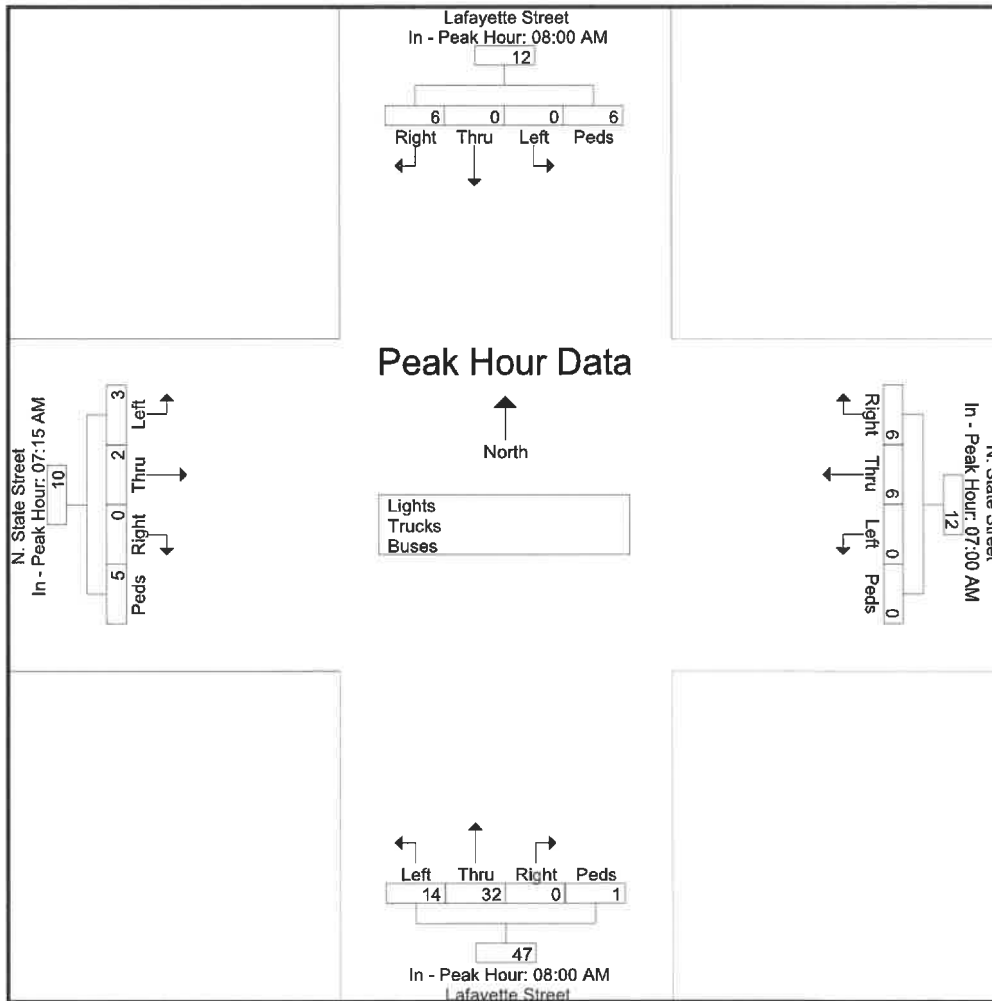
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22491  
Site Code : 22491  
Start Date : 12/15/2021  
Page No : 3

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	08:00 AM					07:00 AM					08:00 AM					07:15 AM				
+0 mins.	1	0	0	1	2	3	0	0	0	3	0	8	2	1	11	0	0	2	2	4
+15 mins.	1	0	0	4	5	1	3	0	0	4	0	11	2	0	13	0	2	0	1	3
+30 mins.	1	0	0	0	1	2	2	0	0	4	0	5	4	0	9	0	0	0	0	0
+45 mins.	3	0	0	1	4	0	1	0	0	1	0	8	6	0	14	0	0	1	2	3
Total Volume	6	0	0	6	12	6	6	0	0	12	0	32	14	1	47	0	2	3	5	10
% App. Total	50	0	0	50		50	50	0	0		0	68.1	29.8	2.1		0	20	30	50	
PHF	.500	.000	.000	.375	.600	.500	.500	.000	.000	.750	.000	.727	.583	.250	.839	.000	.250	.375	.625	.625



**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Lafayette St at N. State Street  
 Stamford, Connecticut

File Name : 22492  
 Site Code : 22492  
 Start Date : 12/14/2021  
 Page No : 1

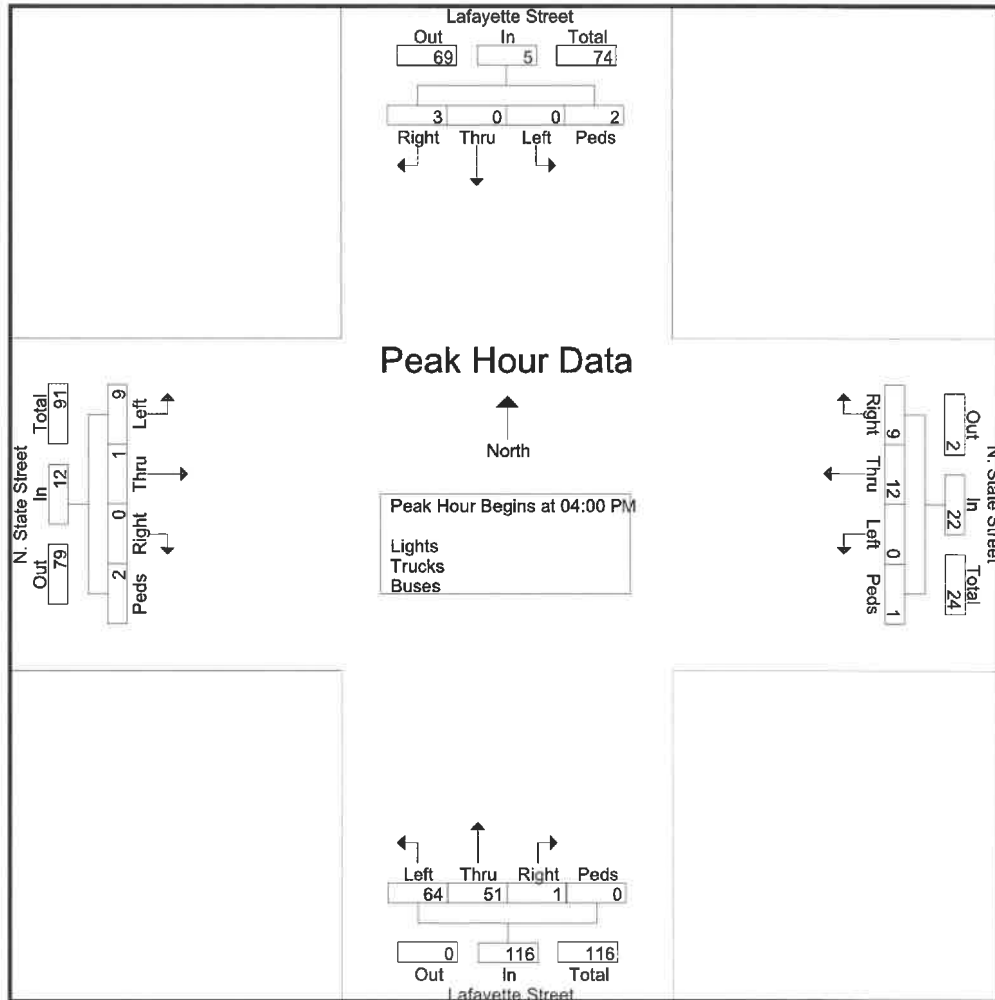
Groups Printed- Lights - Trucks - Buses

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	2	2	1	3	0	1	5	0	10	19	0	29	0	0	1	1	2	38
04:15 PM	2	0	0	0	2	6	4	0	0	10	0	13	13	0	26	0	0	3	0	3	41
04:30 PM	1	0	0	0	1	1	2	0	0	3	0	10	11	0	21	0	1	2	1	4	29
04:45 PM	0	0	0	0	0	1	3	0	0	4	1	18	21	0	40	0	0	3	0	3	47
<b>Total</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>9</b>	<b>12</b>	<b>0</b>	<b>1</b>	<b>22</b>	<b>1</b>	<b>51</b>	<b>64</b>	<b>0</b>	<b>116</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>2</b>	<b>12</b>	<b>155</b>
05:00 PM	0	0	0	0	0	3	3	0	0	6	0	12	9	0	21	0	0	2	0	2	29
05:15 PM	0	0	0	0	0	2	2	0	0	4	0	8	7	1	16	0	0	0	1	1	21
05:30 PM	2	0	0	0	2	3	7	0	0	10	0	23	19	0	42	0	0	1	3	4	58
05:45 PM	2	0	0	1	3	4	0	0	0	4	0	10	5	0	15	0	0	3	1	4	26
<b>Total</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>12</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>24</b>	<b>0</b>	<b>53</b>	<b>40</b>	<b>1</b>	<b>94</b>	<b>0</b>	<b>0</b>	<b>6</b>	<b>5</b>	<b>11</b>	<b>134</b>
<b>Grand Total</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>10</b>	<b>21</b>	<b>24</b>	<b>0</b>	<b>1</b>	<b>46</b>	<b>1</b>	<b>104</b>	<b>104</b>	<b>1</b>	<b>210</b>	<b>0</b>	<b>1</b>	<b>15</b>	<b>7</b>	<b>23</b>	<b>289</b>
Apprch %	70	0	0	30		45.7	52.2	0	2.2		0.5	49.5	49.5	0.5		0	4.3	65.2	30.4		
Total %	2.4	0	0	1	3.5	7.3	8.3	0	0.3	15.9	0.3	36	36	0.3	72.7	0	0.3	5.2	2.4	8	
Lights	7	0	0	3	10	21	24	0	1	46	1	104	103	1	209	0	1	15	7	23	288
% Lights	100	0	0	100	100	100	100	0	100	100	100	100	99	100	99.5	0	100	100	100	100	99.7
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0.5	0	0	0	0	0	0.3
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

File Name : 22492  
 Site Code : 22492  
 Start Date : 12/14/2021  
 Page No : 2

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	0	0	2	2	1	3	0	1	5	0	10	19	0	29	0	0	1	1	2	38
04:15 PM	2	0	0	0	2	6	4	0	0	10	0	13	13	0	26	0	0	3	0	3	41
04:30 PM	1	0	0	0	1	1	2	0	0	3	0	10	11	0	21	0	1	2	1	4	29
04:45 PM	0	0	0	0	0	1	3	0	0	4	1	18	21	0	40	0	0	3	0	3	47
Total Volume	3	0	0	2	5	9	12	0	1	22	1	51	64	0	116	0	1	9	2	12	155
% App. Total	60	0	0	40		40.9	54.5	0	4.5		0.9	44	55.2	0		0	8.3	75	16.7		
PHF	.375	.000	.000	.250	.625	.375	.750	.000	.250	.550	.250	.708	.762	.000	.725	.000	.250	.750	.500	.750	.824



# Connecticut Counts LLC

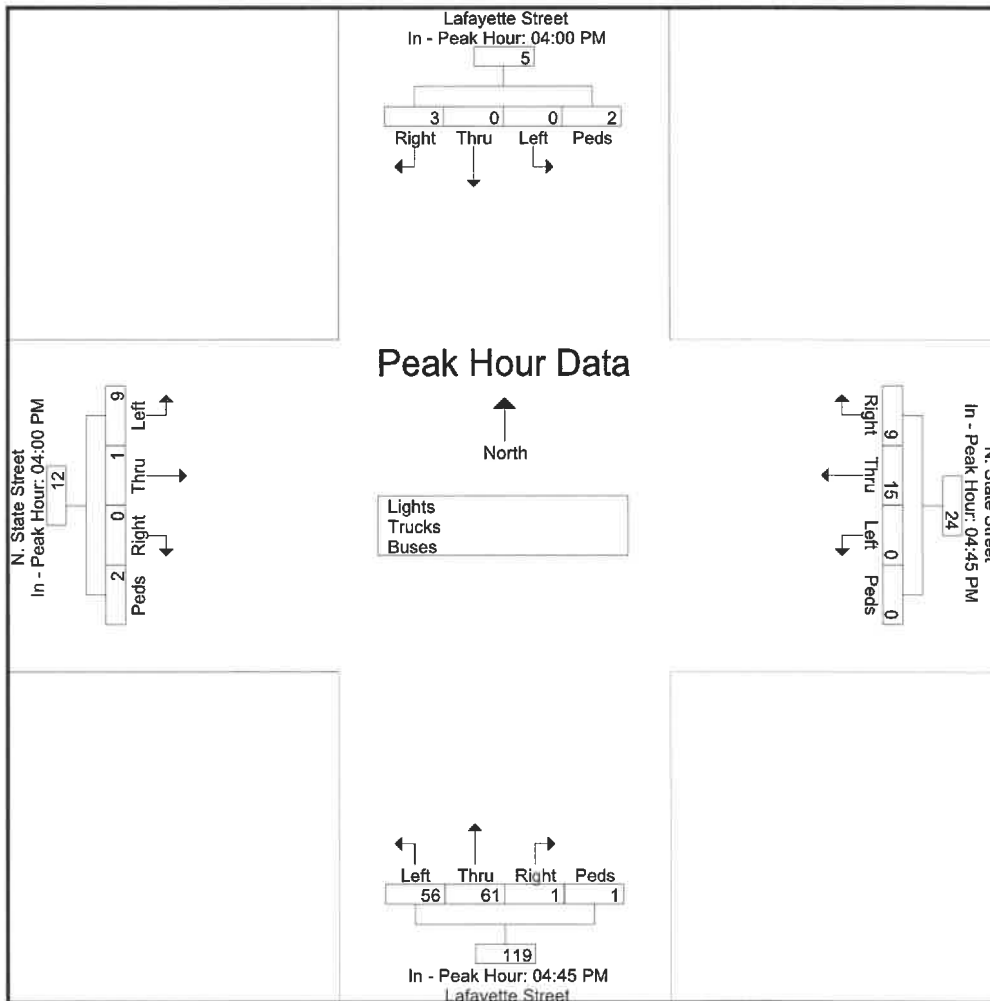
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22492  
Site Code : 22492  
Start Date : 12/14/2021  
Page No : 3

Start Time	Lafayette Street From North					N. State Street From East					Lafayette Street From South					N. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:00 PM					04:45 PM					04:45 PM					04:00 PM				
+0 mins.	0	0	0	2	2	1	3	0	0	4	1	18	21	0	40	0	0	1	1	2
+15 mins.	2	0	0	0	2	3	3	0	0	6	0	12	9	0	21	0	0	3	0	3
+30 mins.	1	0	0	0	1	2	2	0	0	4	0	8	7	1	16	0	1	2	1	4
+45 mins.	0	0	0	0	0	3	7	0	0	10	0	23	19	0	42	0	0	3	0	3
Total Volume	3	0	0	2	5	9	15	0	0	24	1	61	56	1	119	0	1	9	2	12
% App. Total	60	0	0	40		37.5	62.5	0	0		0.8	51.3	47.1	0.8		0	8.3	75	16.7	
PHF	.375	.000	.000	.250	.625	.750	.536	.000	.000	.600	.250	.663	.667	.250	.708	.000	.250	.750	.500	.750





**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Lafayette Street at S. State Street  
 Stamford, Connecticut

File Name : 22493  
 Site Code : 22493  
 Start Date : 12/15/2021  
 Page No : 1

Groups Printed- Lights - Trucks - Buses

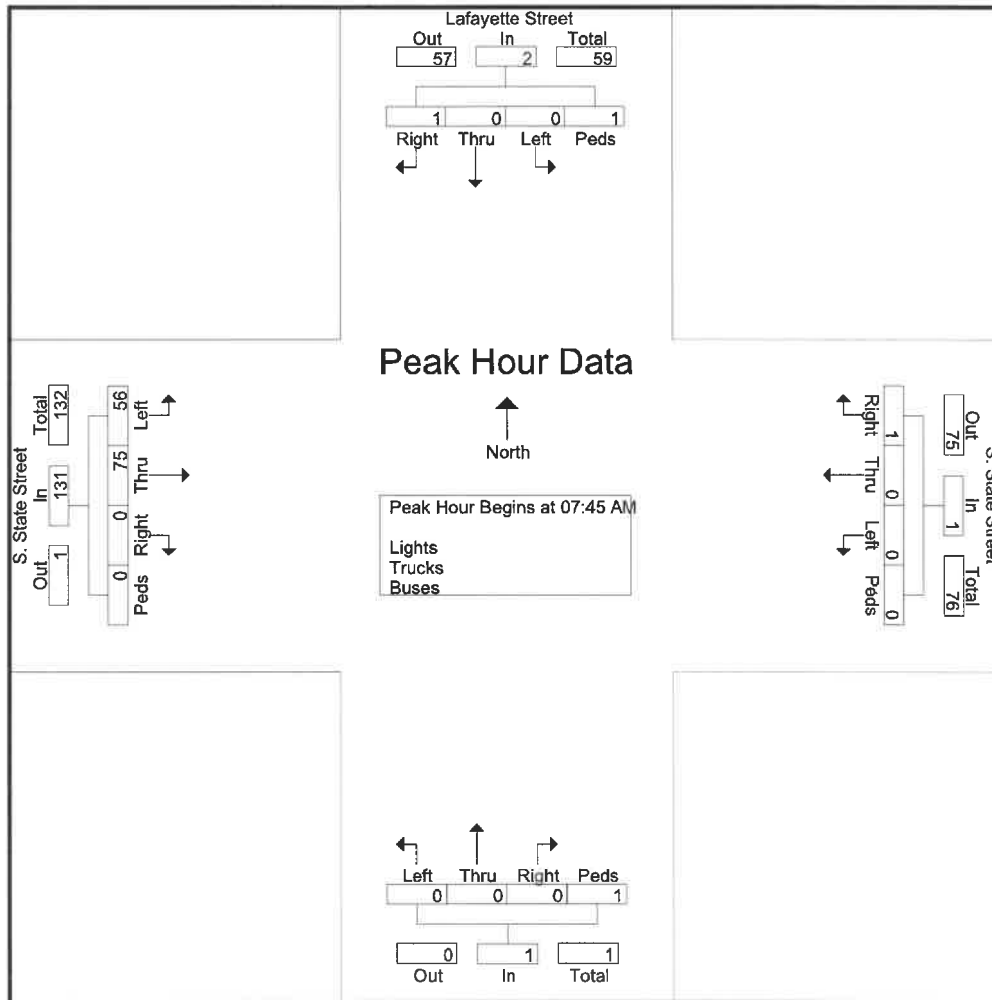
Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	5	0	7	7
07:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	6	0	12	13
07:30 AM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	9	9	0	18	19
07:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	17	11	0	28	30
Total	1	0	0	0	1	2	1	0	0	3	0	0	0	0	0	0	34	31	0	65	69
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	20	21	0	41	42
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	18	9	0	27	28
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	15	0	35	35
Grand Total	1	0	0	1	2	2	1	0	0	3	0	0	0	1	1	0	92	76	0	168	174
Apprch %	50	0	0	50		66.7	33.3	0	0		0	0	0	100		0	54.8	45.2	0		
Total %	0.6	0	0	0.6	1.1	1.1	0.6	0	0	1.7	0	0	0	0.6	0.6	0	52.9	43.7	0	96.6	
Lights	1	0	0	1	2	2	1	0	0	3	0	0	0	1	1	0	92	75	0	167	173
% Lights	100	0	0	100	100	100	100	0	0	100	0	0	0	100	100	0	100	98.7	0	99.4	99.4
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0.6	0.6

# Connecticut Counts LLC

Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22493  
Site Code : 22493  
Start Date : 12/15/2021  
Page No : 2

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	17	11	0	28	30
08:00 AM	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	20	21	0	41	42
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	18	9	0	27	28
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	15	0	35	35
Total Volume	1	0	0	1	2	1	0	0	0	1	0	0	0	1	1	0	75	56	0	131	135
% App. Total	50	0	0	50		100	0	0	0		0	0	0	100		0	57.3	42.7	0		
PHF	.250	.000	.000	.250	.500	.250	.000	.000	.000	.250	.000	.000	.000	.250	.250	.000	.938	.667	.000	.799	.804



# Connecticut Counts LLC

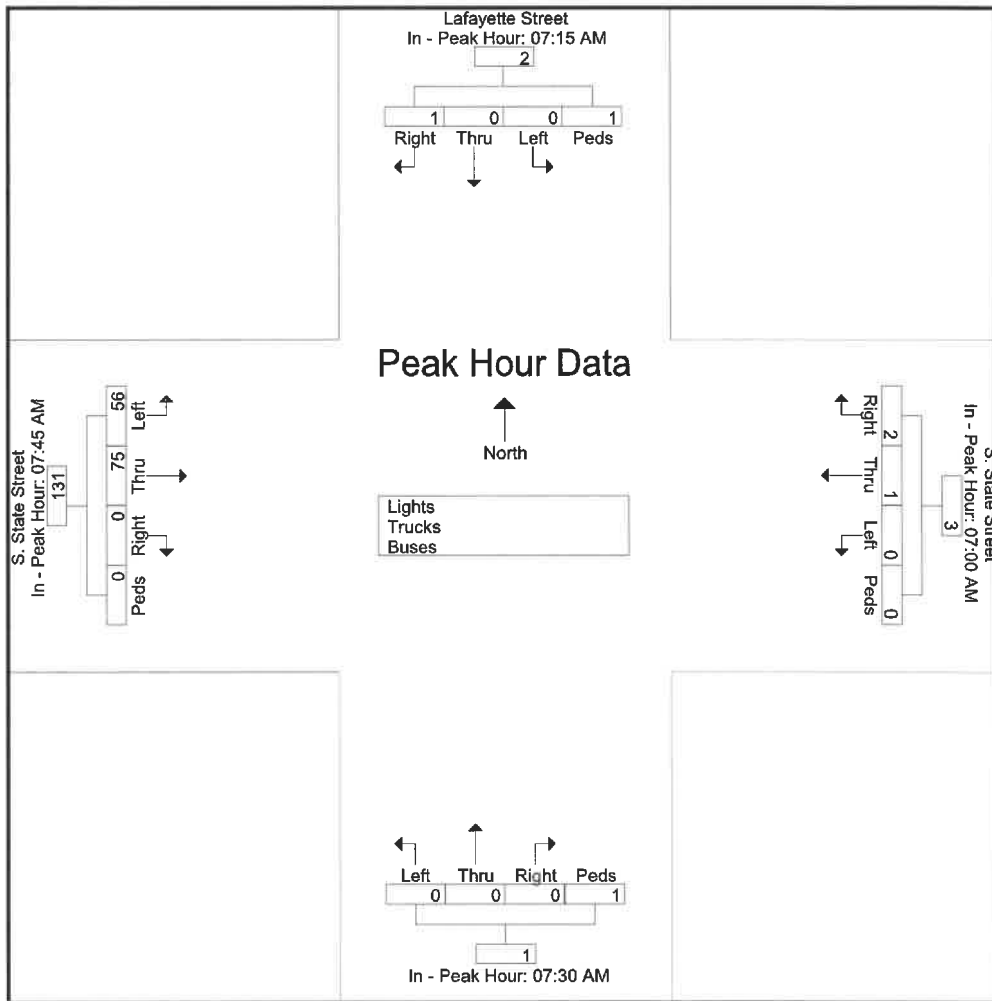
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22493  
Site Code : 22493  
Start Date : 12/15/2021  
Page No : 3

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 07:00 AM to 08:30 AM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	07:15 AM					07:00 AM					07:30 AM					07:45 AM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	11	0	28
+15 mins.	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	20	21	0	41
+30 mins.	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	18	9	0	27
+45 mins.	0	0	0	1	1	1	0	0	0	1	0	0	0	1	1	0	20	15	0	35
Total Volume	1	0	0	1	2	2	1	0	0	3	0	0	0	1	1	0	75	56	0	131
% App. Total	50	0	0	50		66.7	33.3	0	0		0	0	0	100		0	57.3	42.7	0	
PHF	.250	.000	.000	.250	.500	.500	.250	.000	.000	.750	.000	.000	.000	.250	.250	.000	.938	.667	.000	.799



**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

Lafayette Street at S. State Street  
 Stamford, Connecticut

File Name : 22494  
 Site Code : 22494  
 Start Date : 12/14/2021  
 Page No : 1

Groups Printed- Lights - Trucks - Buses

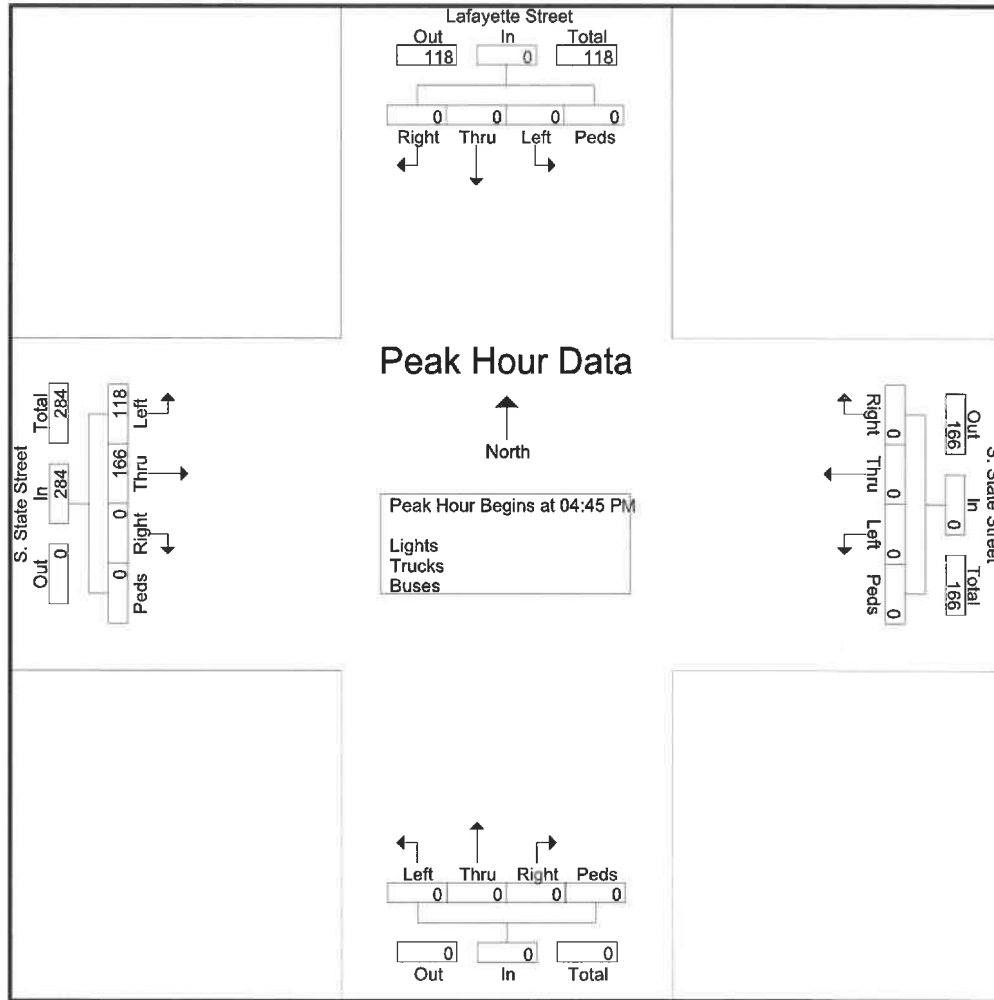
Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27	32	0	59	59
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	21	0	50	50
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	22	0	52	52
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	32	0	79	79
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133	107	0	240	240
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	24	0	52	52
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	20	0	63	63
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	42	0	90	90
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	14	0	49	49
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	154	100	0	254	254
Grand Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	287	207	0	494	494
Apprch %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.1	41.9	0		
Total %	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.1	41.9	0	100	
Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	287	207	0	494	494
% Lights	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100	100	0	100	100
Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



**Connecticut Counts LLC**  
**Kensington, Connecticut 06037**  
**(860) 828-1693**

File Name : 22494  
 Site Code : 22494  
 Start Date : 12/14/2021  
 Page No : 2

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	32	0	79	79
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	24	0	52	52
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	20	0	63	63
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	42	0	90	90
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166	118	0	284	284
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.5	41.5	0		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.865	.702	.000	.789	.789



# Connecticut Counts LLC

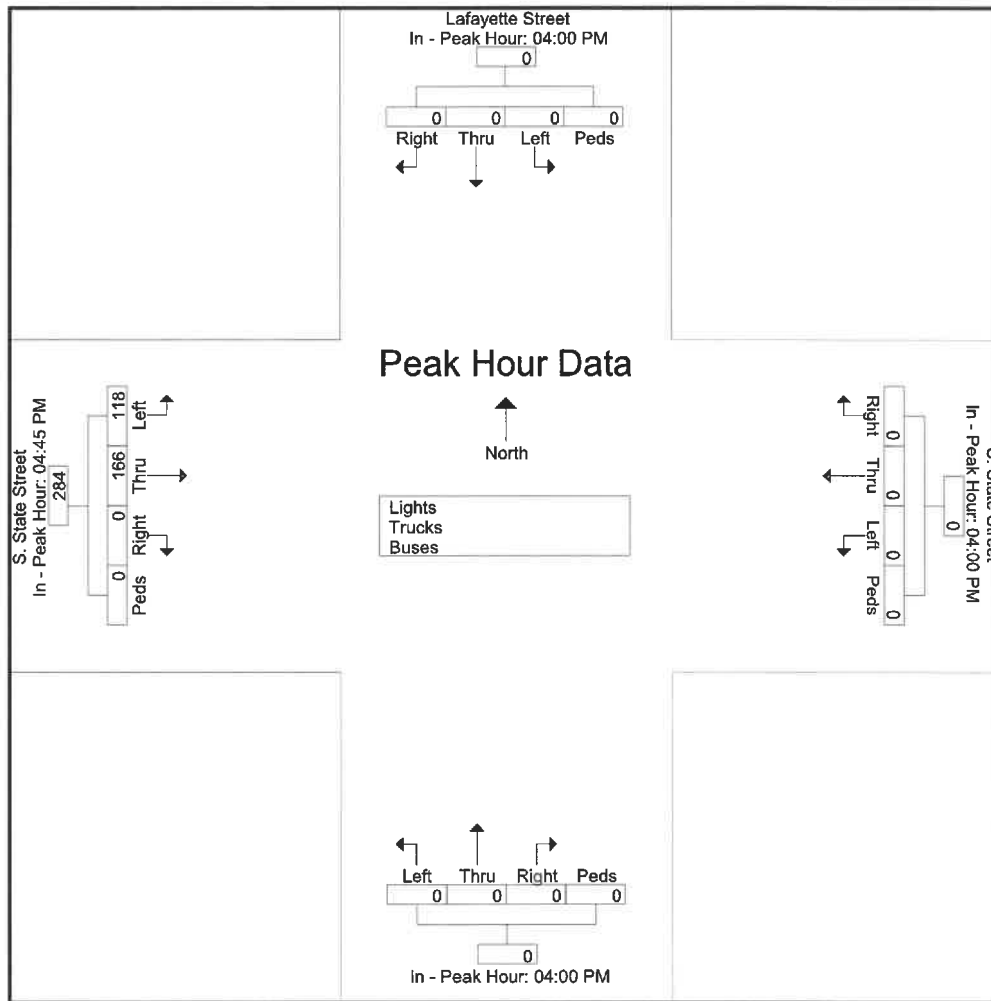
Kensington, Connecticut 06037  
(860) 828-1693

File Name : 22494  
Site Code : 22494  
Start Date : 12/14/2021  
Page No : 3

Start Time	Lafayette Street From North					S. State Street From East					From South					S. State Street From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1  
Peak Hour for Each Approach Begins at:

	04:00 PM					04:00 PM					04:00 PM					04:45 PM				
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	32	0	79
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	24	0	52
+30 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	20	0	63
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48	42	0	90
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	166	118	0	284
% App. Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58.5	41.5	0	
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.865	.702	.000	.789



## ACCIDENT HISTORY

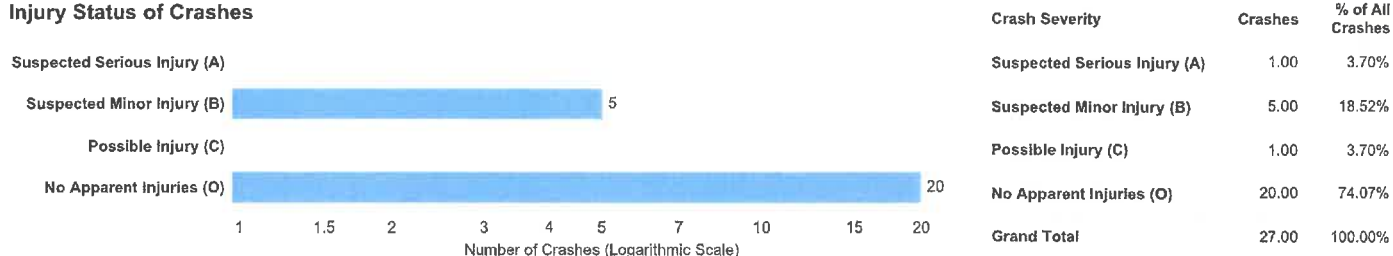
# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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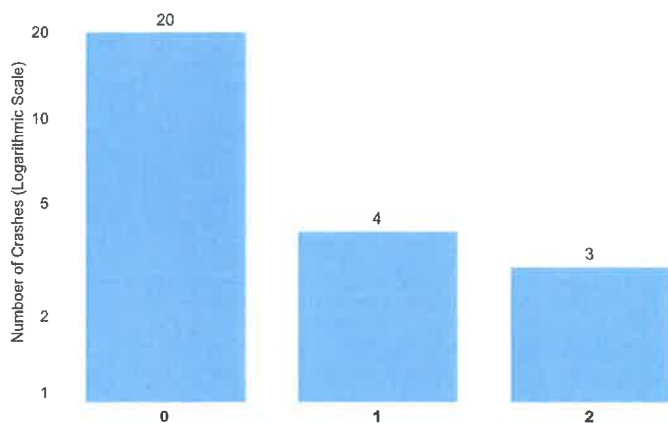
Queries Selected: Town: *Stamford*, Date (Year: *All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.85* to *7.85*

These figures display **crash-level data only** and provide the totals for crashes involving an injury of that type.

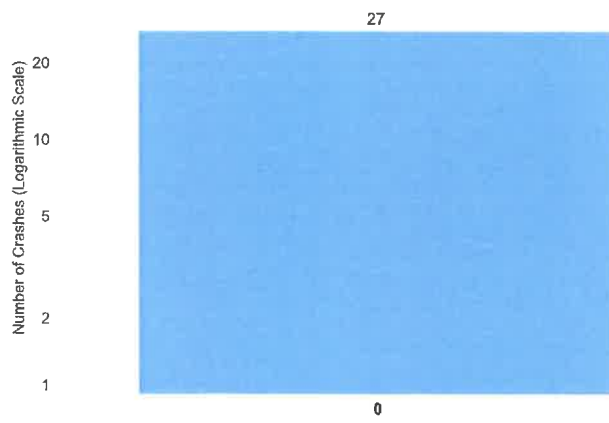
## Injury Status of Crashes



## Injuries per Crash



## Fatalities per Crash



Injuries per Crash	Crashes	% of All Crashes	Fatalities per Crash	Crashes	% of All Crashes
0	20.00	74.07%	0	27.00	100.00%
1	4.00	14.81%			
2	3.00	11.11%			
<b>Grand Total</b>	<b>27.00</b>	<b>100.00%</b>	<b>Grand Total</b>	<b>27.00</b>	<b>100.00%</b>

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021



# Collision Analysis Safety Tables

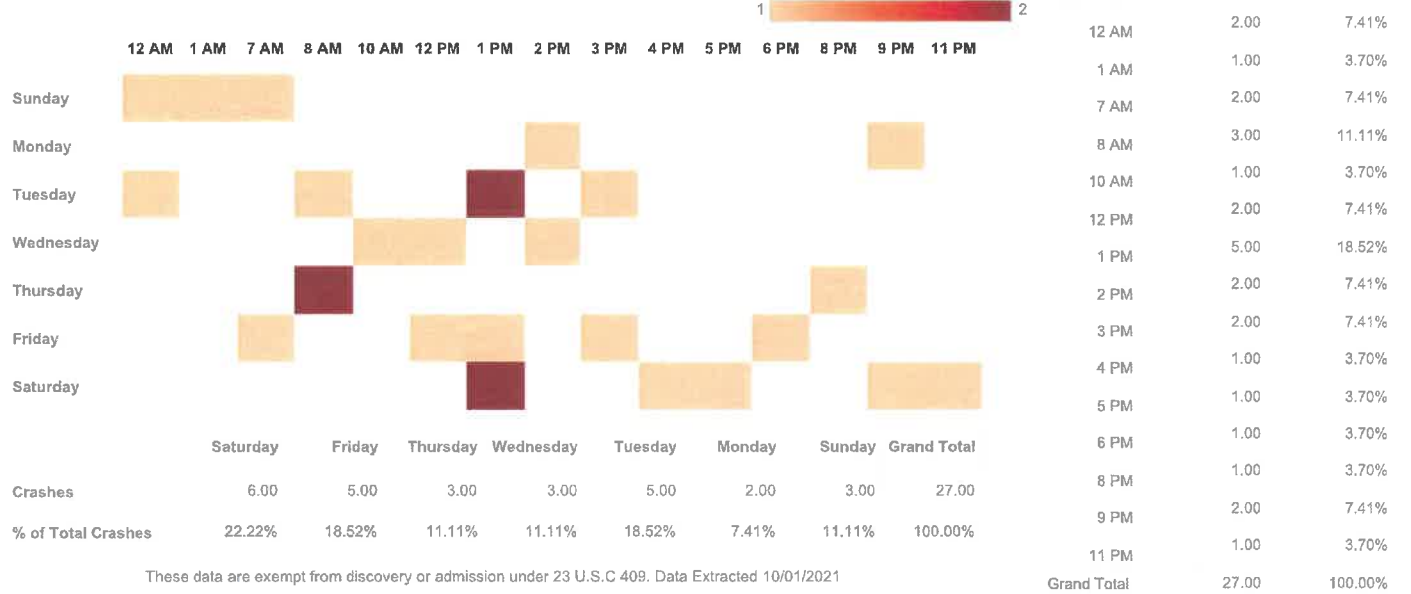
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.85 to 7.85

## Month and Date of Crashes



## Time and Day of the Week



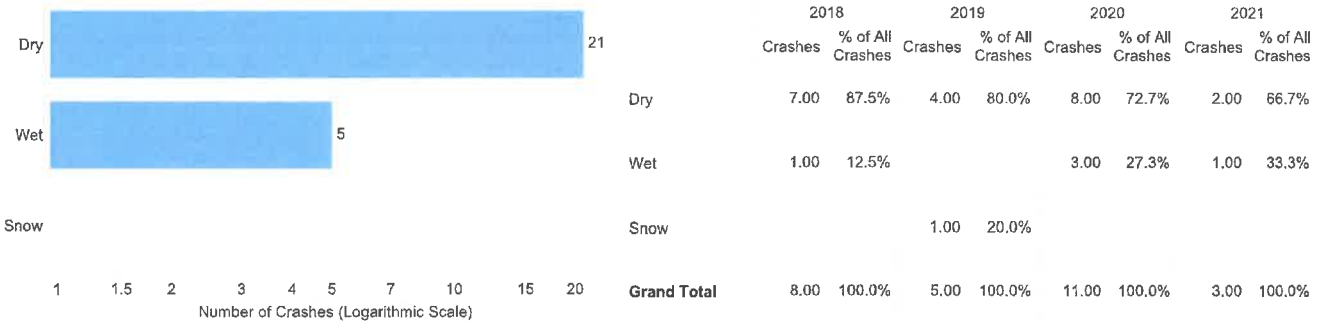
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

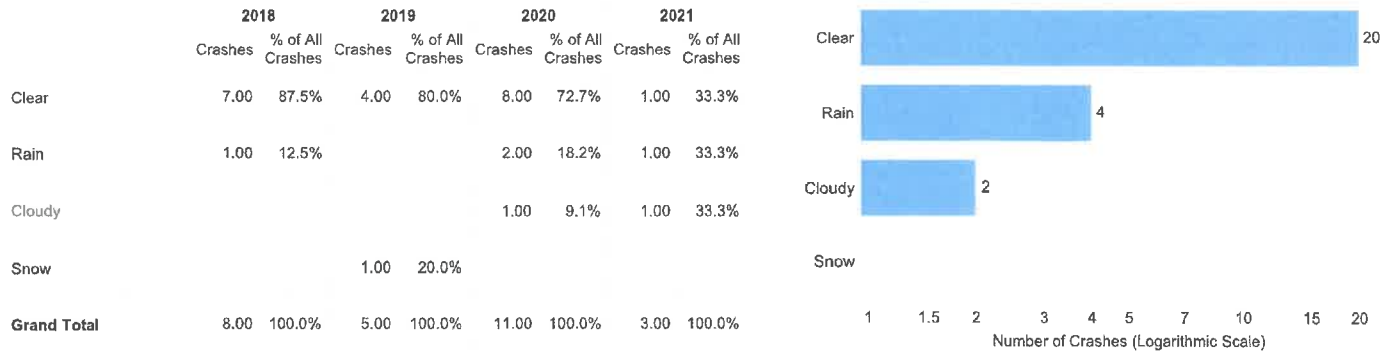
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.85 to 7.85

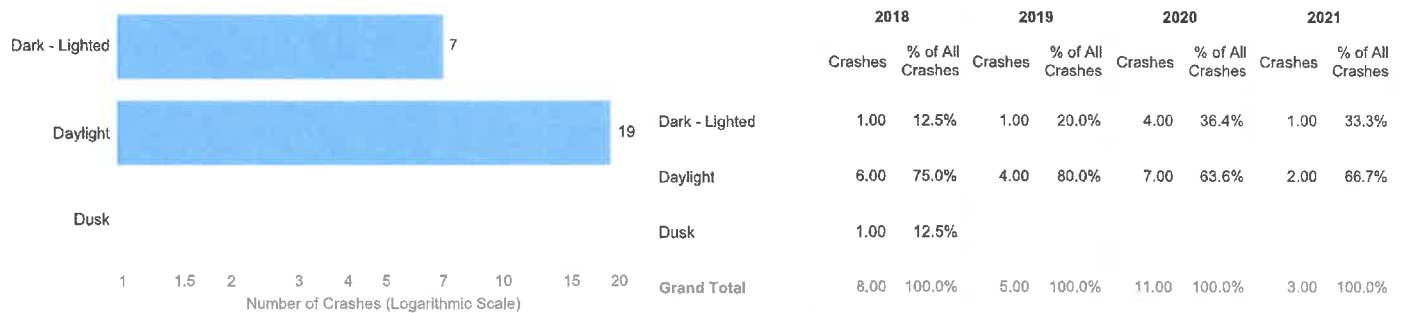
## Traffic Surface Conditions



## Weather Conditions



## Light Conditions



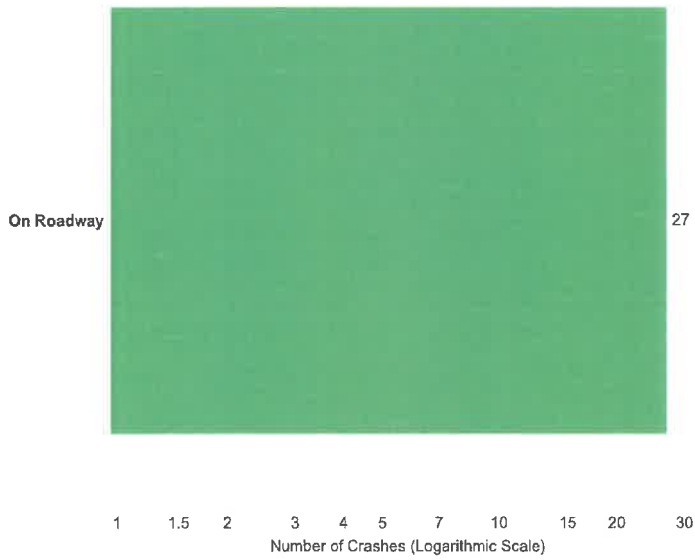
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

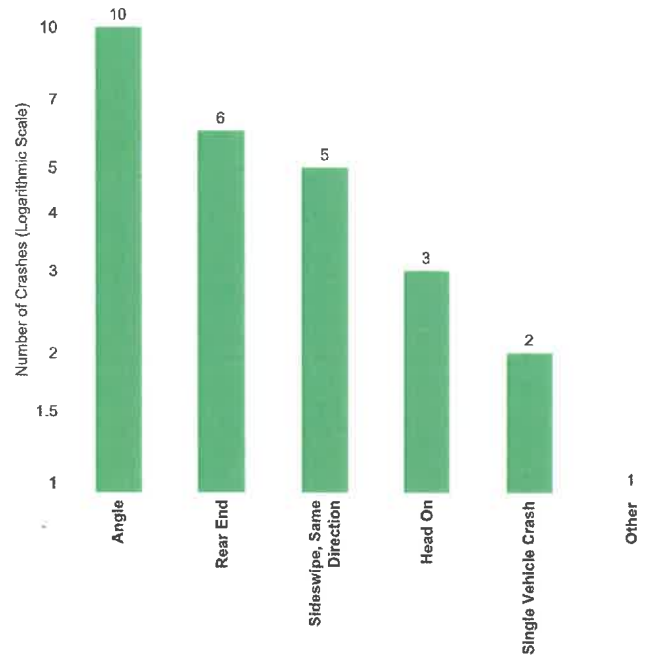
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
--------------------	----------------------	------------------------------	---------------------------	-----------------------	-----------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.85 to 7.85

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful..	Crashes	% of All Crashes	Manner Of Crash		
			Crashes	% of All Crashes	
On Roadway	27.00	100.00%	Angle	10.00	37.04%
			Rear End	6.00	22.22%
			Sideswipe, Same Direction	5.00	18.52%
			Head On	3.00	11.11%
			Single Vehicle Crash	2.00	7.41%
Grand Total	27.00	100.00%	Other	1.00	3.70%
			<b>Grand Total</b>	<b>27.00</b>	<b>100.00%</b>

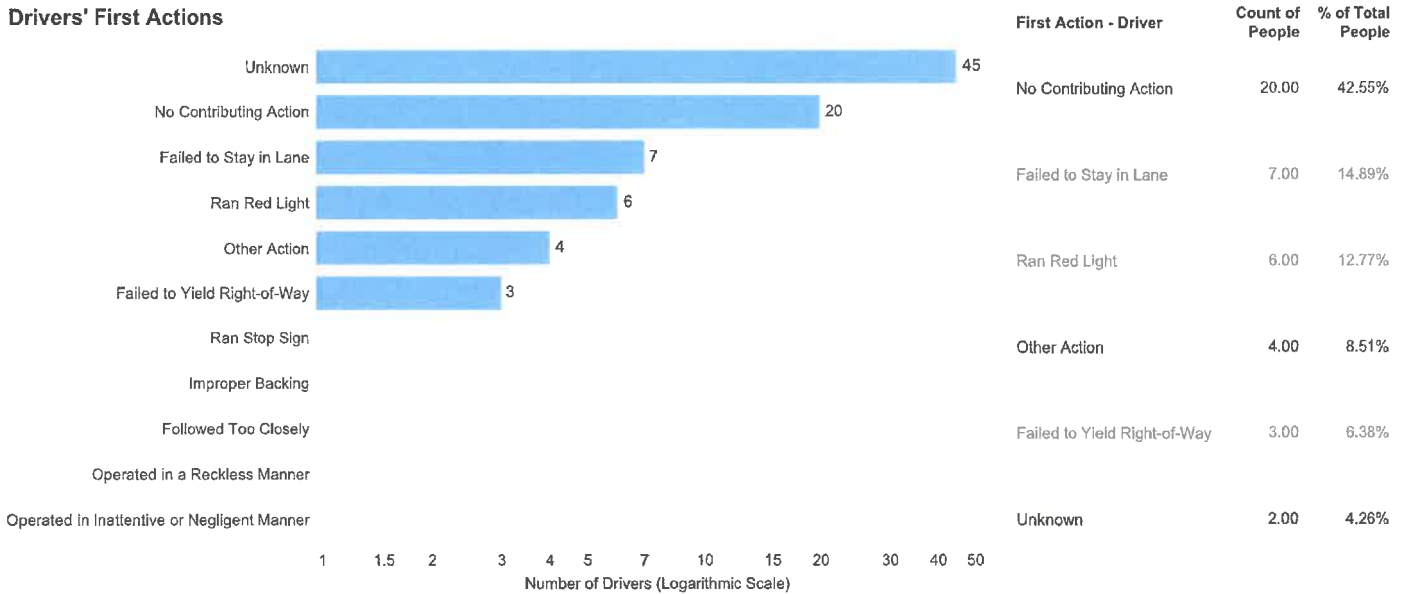
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

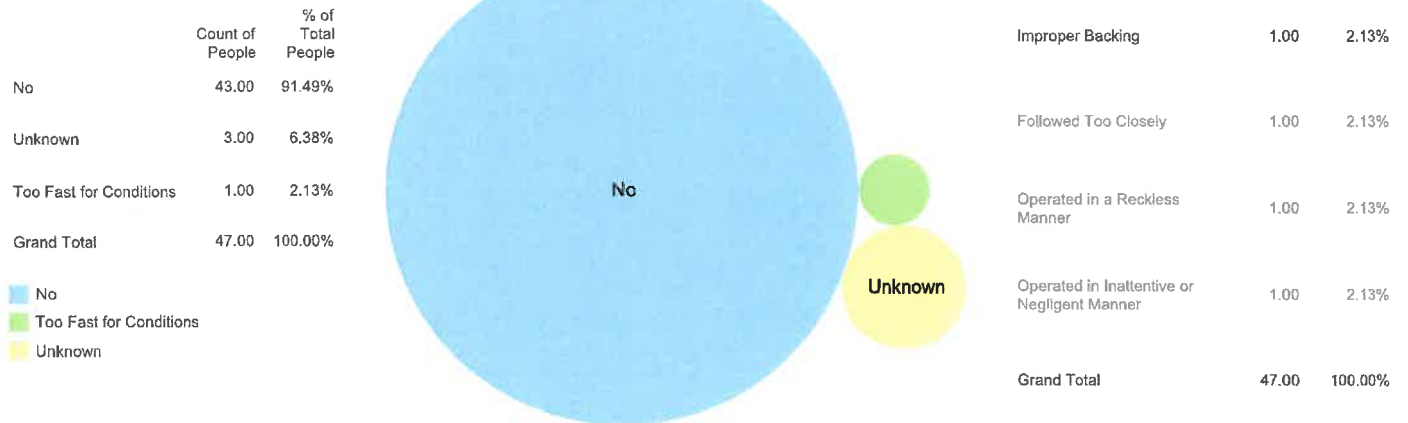
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	<b>Driver Actions</b>	Driver Distraction	Pedestrians	Motorcycle Crashes
--------------	-------------------	------------------------------	-----------------------	--------------------	-------------	--------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.85 to 7.85

## Drivers' First Actions



## Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

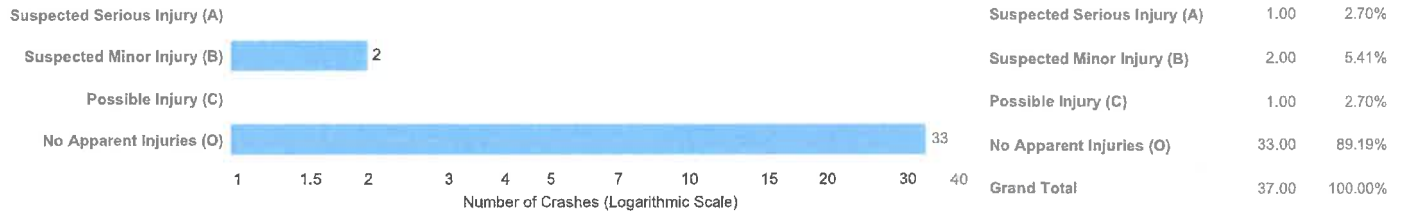
# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

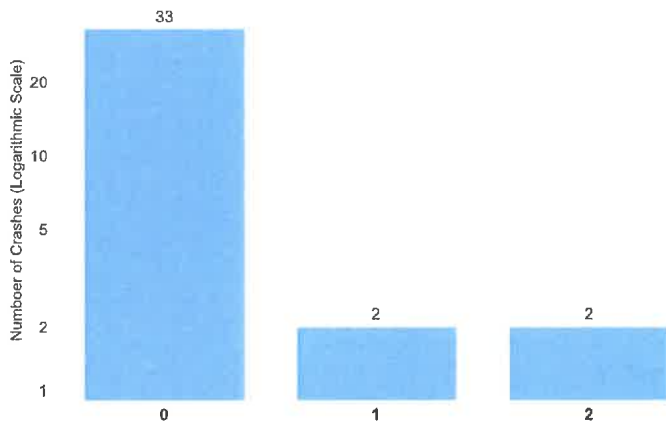
Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

These figures display crash-level data only and provide the totals for crashes involving an injury of that type.

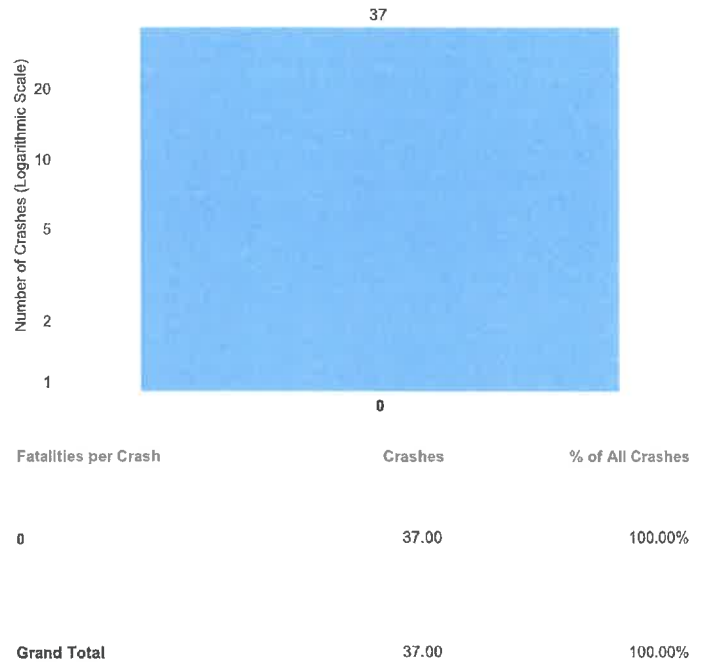
## Injury Status of Crashes



## Injuries per Crash



## Fatalities per Crash



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

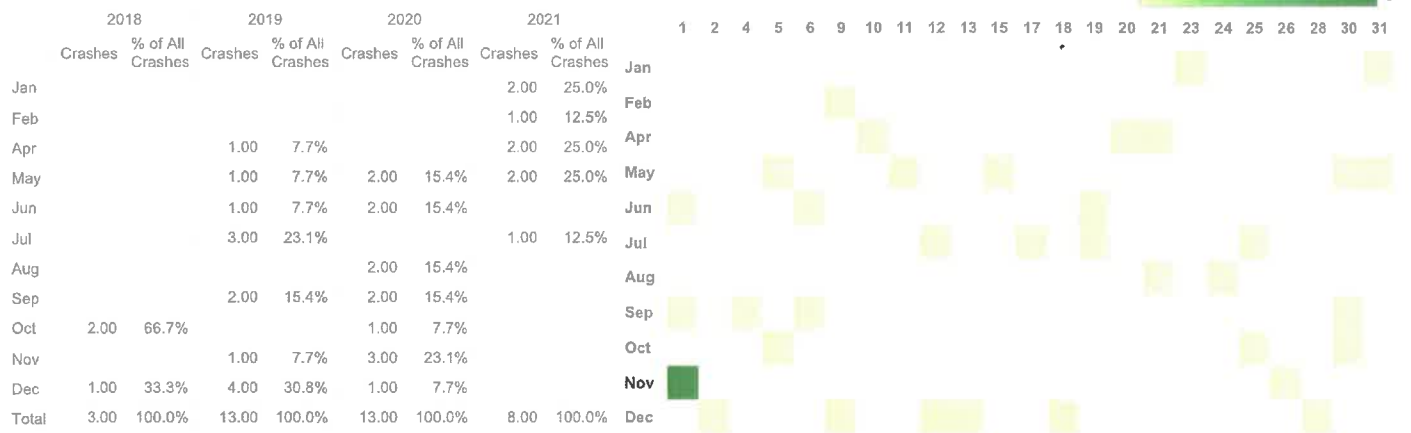


# Collision Analysis Safety Tables

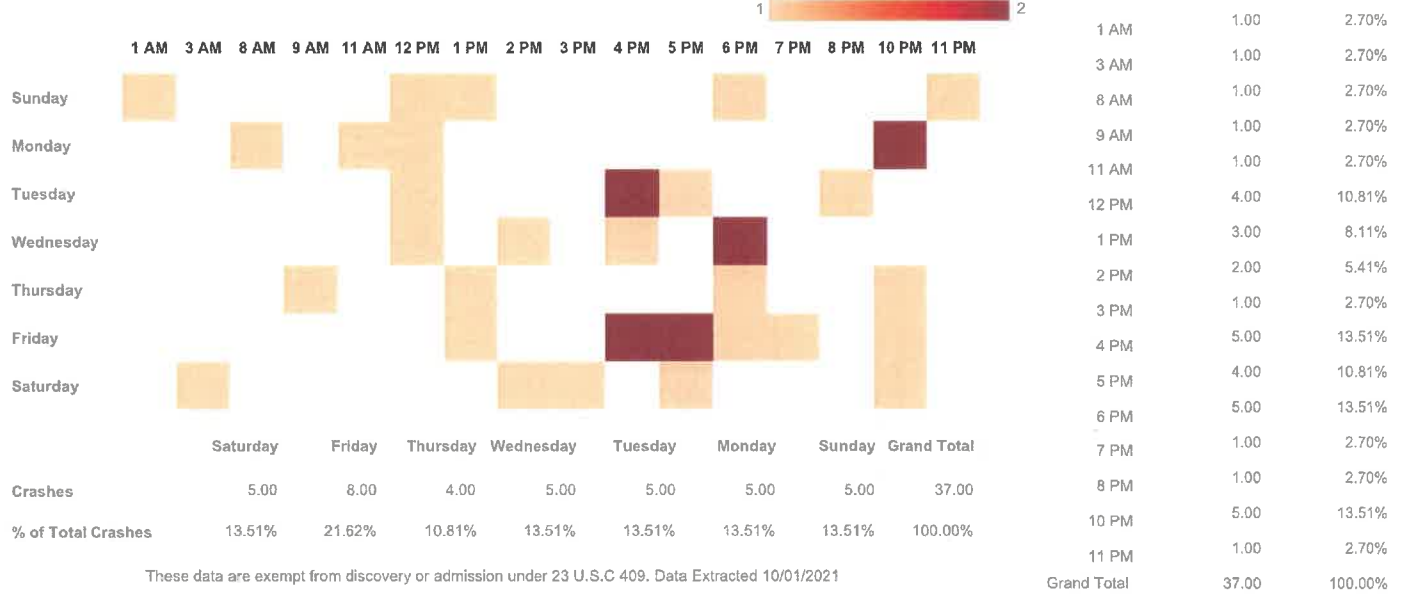
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

## Month and Date of Crashes



## Time and Day of the Week

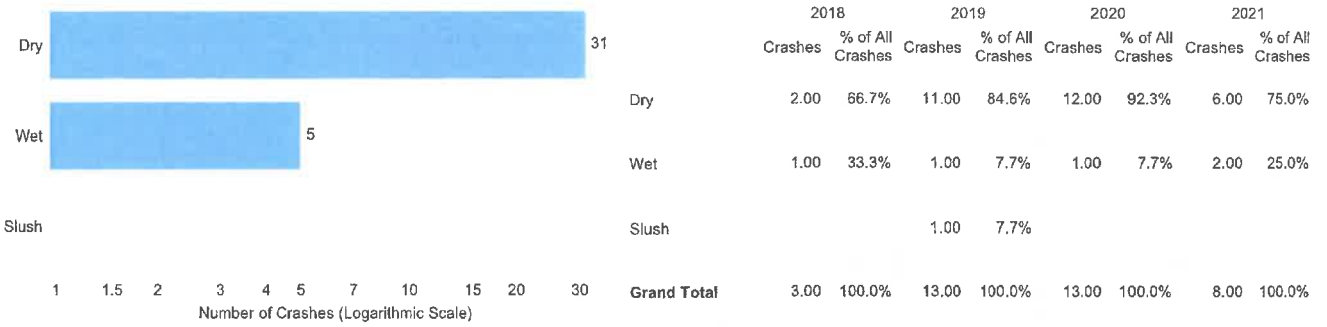


# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

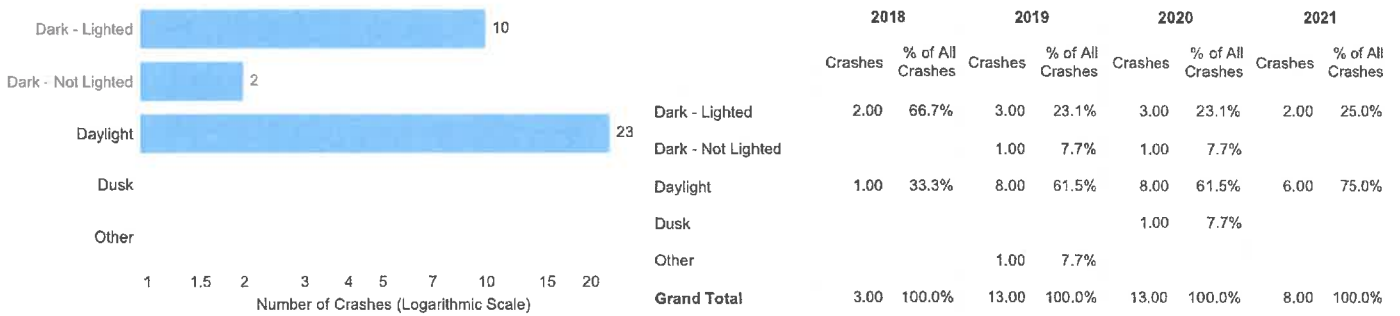
## Traffic Surface Conditions



## Weather Conditions



## Light Conditions



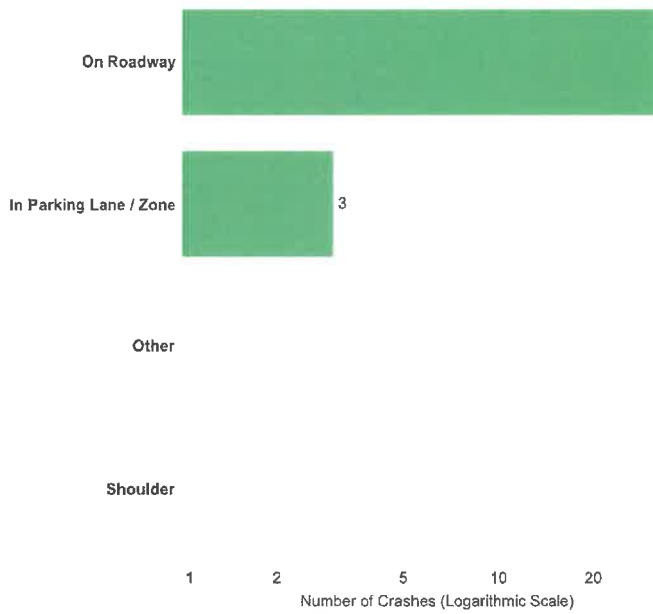
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

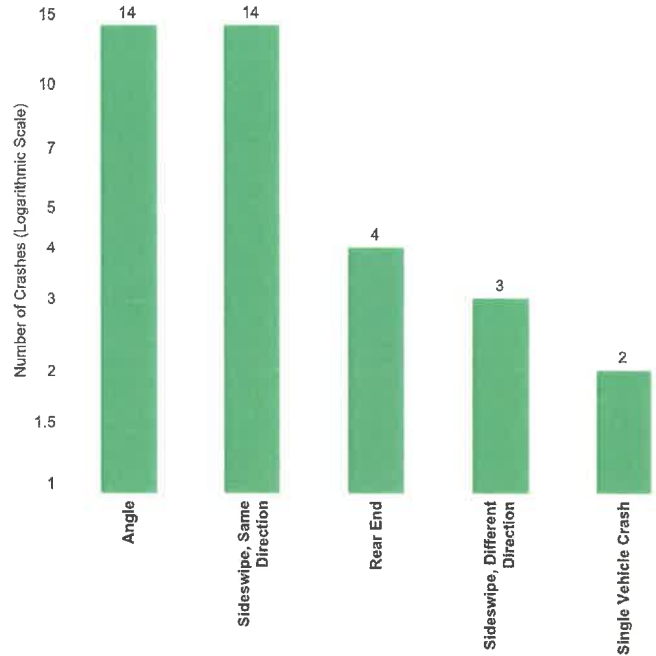
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
--------------------	----------------------	------------------------------	---------------------------	-----------------------	-----------------------	----------------------

Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful Event	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	32.00	86.49%	Sideswipe, Same Direction	14.00	37.84%
In Parking Lane / Zone	3.00	8.11%	Angle	14.00	37.84%
Shoulder	1.00	2.70%	Rear End	4.00	10.81%
Other	1.00	2.70%	Sideswipe, Different Direction	3.00	8.11%
			Single Vehicle Crash	2.00	5.41%
<b>Grand Total</b>	<b>37.00</b>	<b>100.00%</b>	<b>Grand Total</b>	<b>37.00</b>	<b>100.00%</b>

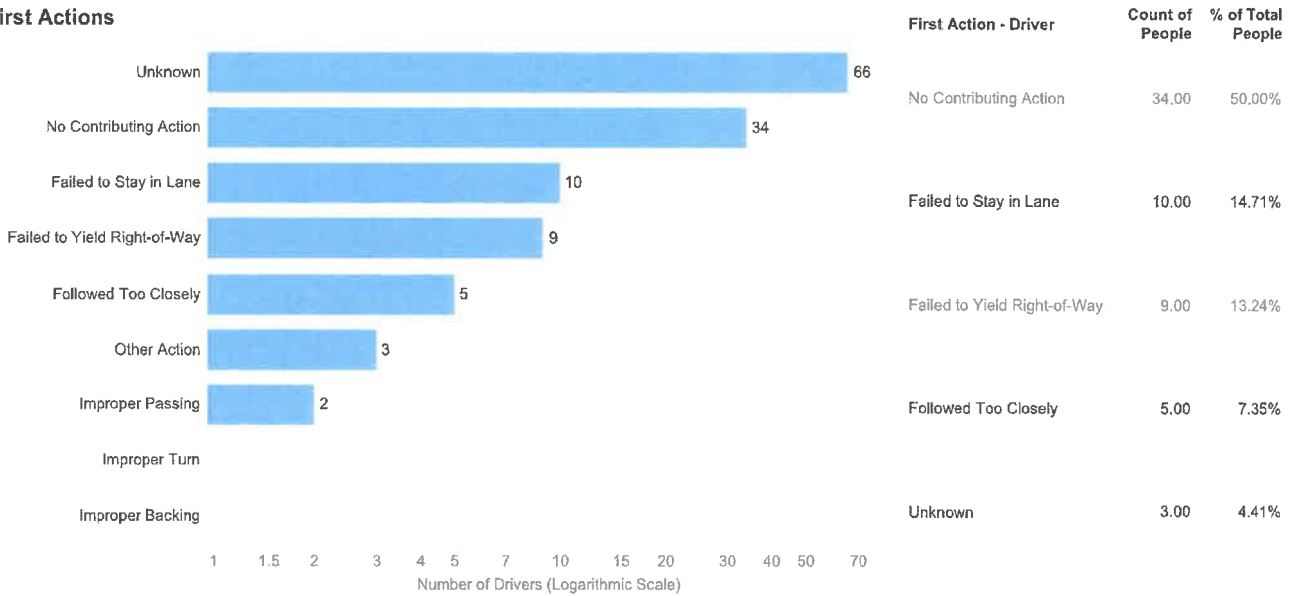
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

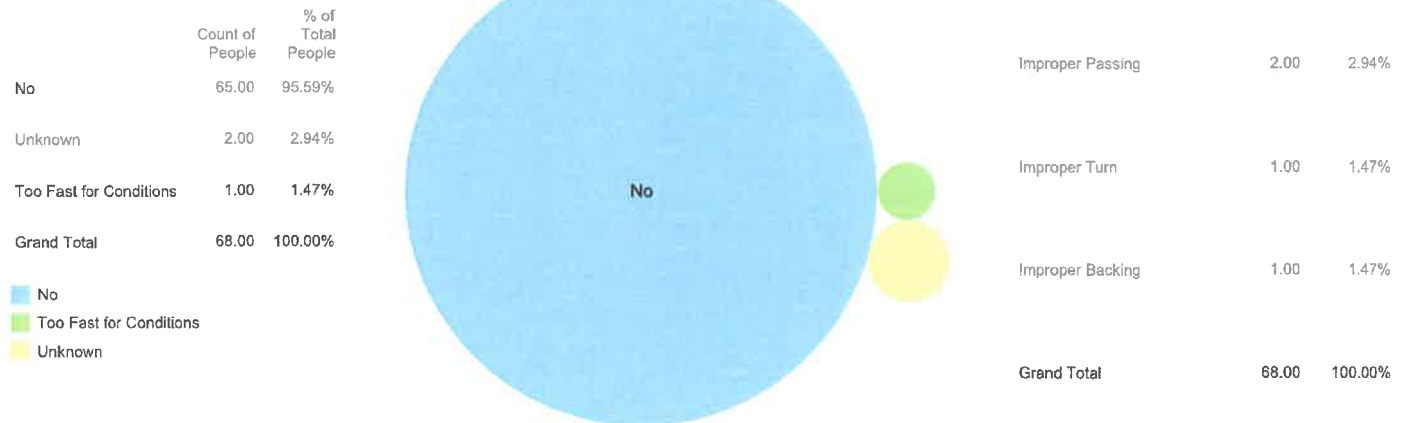
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	<b>Driver Actions</b>	Driver Distraction	Pedestrians	Motorcyclist Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.86 to 7.92

## Drivers' First Actions



## Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

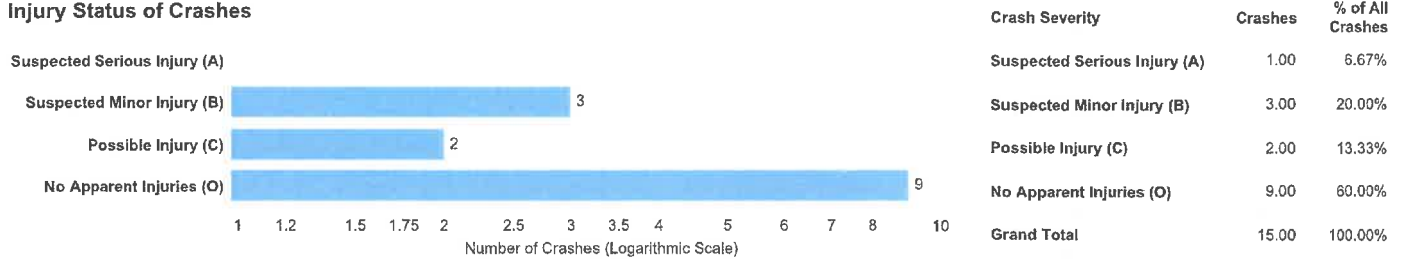
# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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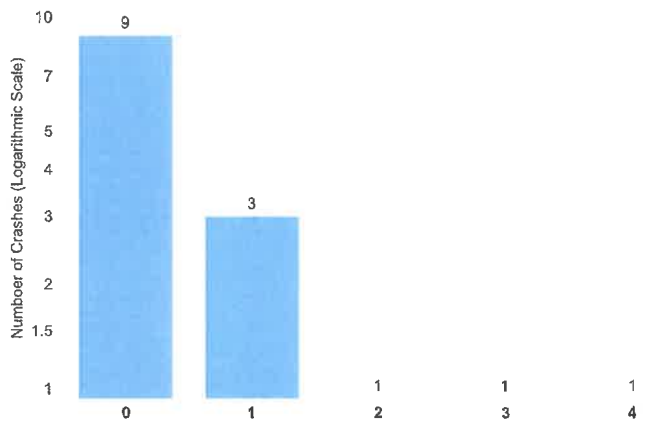
Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

These figures display crash-level data only and provide the totals for crashes involving an injury of that type.

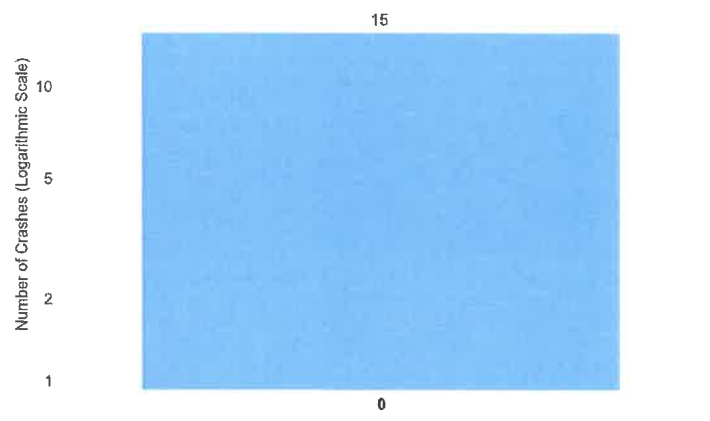
## Injury Status of Crashes



## Injuries per Crash



## Fatalities per Crash



Injuries per Crash	Crashes	% of All Crashes	Fatalities per Crash	Crashes	% of All Crashes
0	9.00	60.00%	0	15.00	100.00%
1	3.00	20.00%			
2	1.00	6.67%			
3	1.00	6.67%			
4	1.00	6.67%			
<b>Grand Total</b>	<b>15.00</b>	<b>100.00%</b>	<b>Grand Total</b>	<b>15.00</b>	<b>100.00%</b>

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021



# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

## Month and Date of Crashes

2018		2019		2020		2021		4		5	6	11	12	13	21	24	25	26	30			
Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Jan	Feb	Jun	Jul	Oct	Nov	Dec	Jan	Feb	Jun	Jul	Oct	Nov	Dec	
		1.000	20.0%																			
Jan																						
Feb				2.000	40.0%	1.000	20.0%	1.000	50.0%													
Jun				1.000	20.0%					1.000	50.0%											
Jul						1.000	20.0%															
Oct	1.000	33.3%			1.000	20.0%																
Nov	2.000	66.7%			2.000	40.0%																
Dec				1.000	20.0%																	
<b>Total</b>	<b>3.000</b>	<b>100.0%</b>	<b>5.000</b>	<b>100.0%</b>	<b>5.000</b>	<b>100.0%</b>	<b>2.000</b>	<b>100.0%</b>														

## Time and Day of the Week

8 AM		9 AM	11 AM	12 PM	1 PM	2 PM	4 PM	5 PM	7 PM	10 PM	Hour of Crash Time	Crashes	% of All Crashes
Sunday											8 AM	1.00	6.67%
Monday											9 AM	1.00	6.67%
Tuesday											11 AM	2.00	13.33%
Wednesday											12 PM	2.00	13.33%
Friday											1 PM	1.00	6.67%
Saturday											2 PM	2.00	13.33%
											4 PM	1.00	6.67%
											5 PM	3.00	20.00%
											7 PM	1.00	6.67%
											10 PM	1.00	6.67%
											Grand Total	15.00	100.00%
<b>Crashes</b>		2.00	1.00	3.00	3.00	3.00	3.00	3.00					
<b>% of Total Crashes</b>		13.33%	6.67%	20.00%	20.00%	20.00%	20.00%	20.00%					

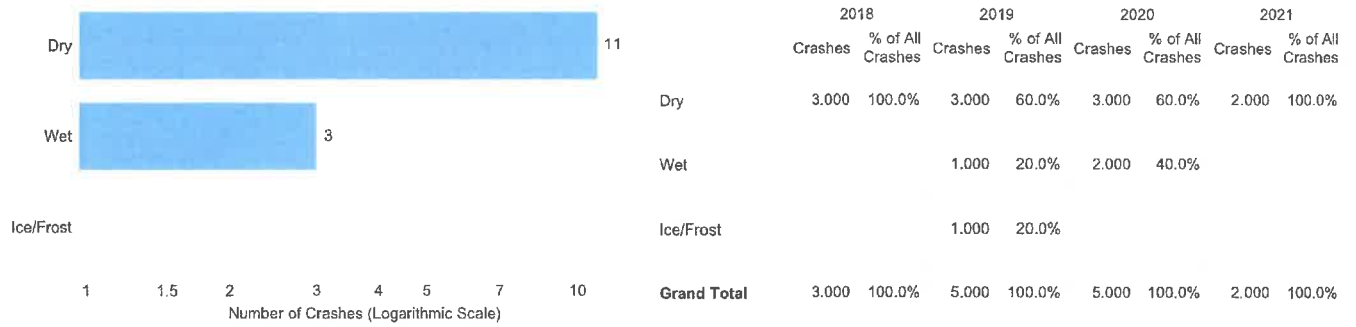
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# Collision Analysis Safety Tables

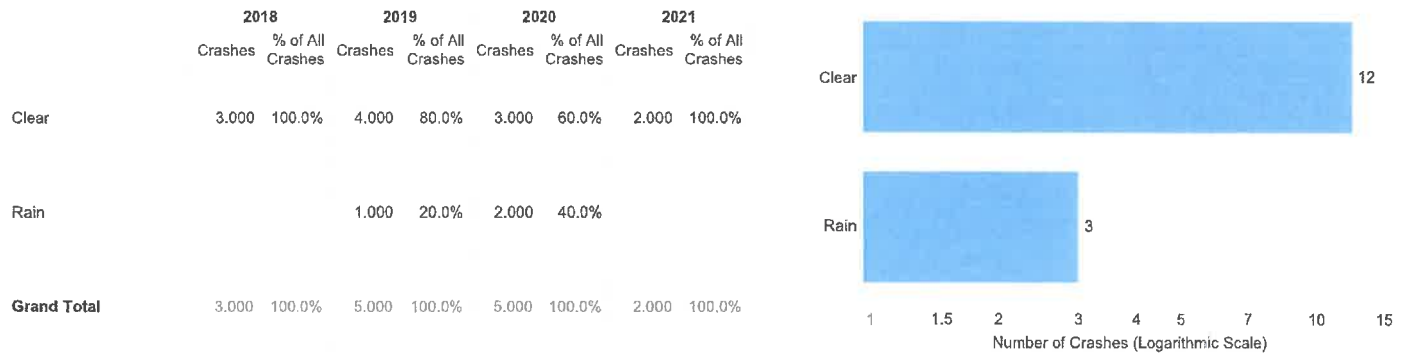
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

## Traffic Surface Conditions



## Weather Conditions



## Light Conditions



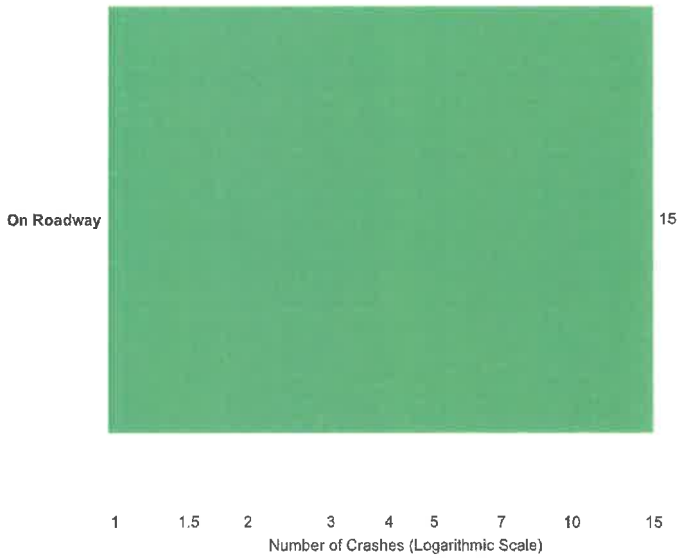
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

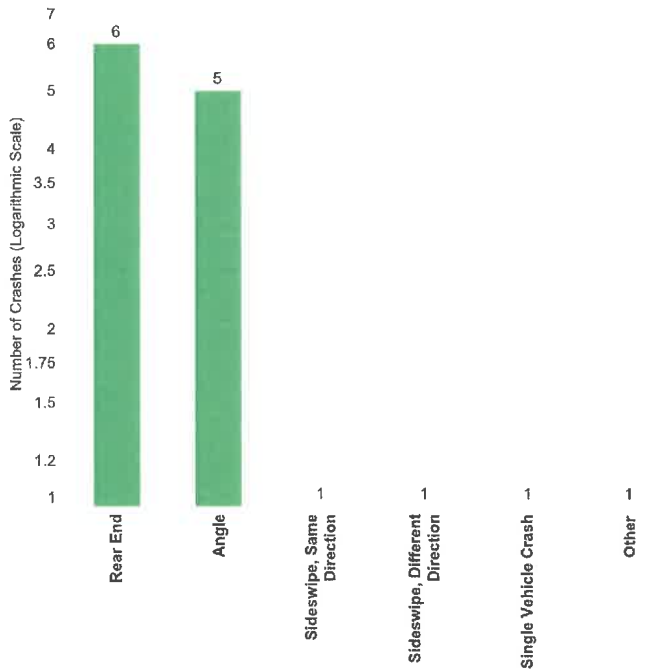
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful..	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	15.00	100.00%	Rear End	6.00	40.00%
			Angle	5.00	33.33%
			Other	1.00	6.67%
Grand Total	15.00	100.00%	Single Vehicle Crash	1.00	6.67%
			Sideswipe, Different Direction	1.00	6.67%
			Sideswipe, Same Direction	1.00	6.67%
			<b>Grand Total</b>	<b>15.00</b>	<b>100.00%</b>

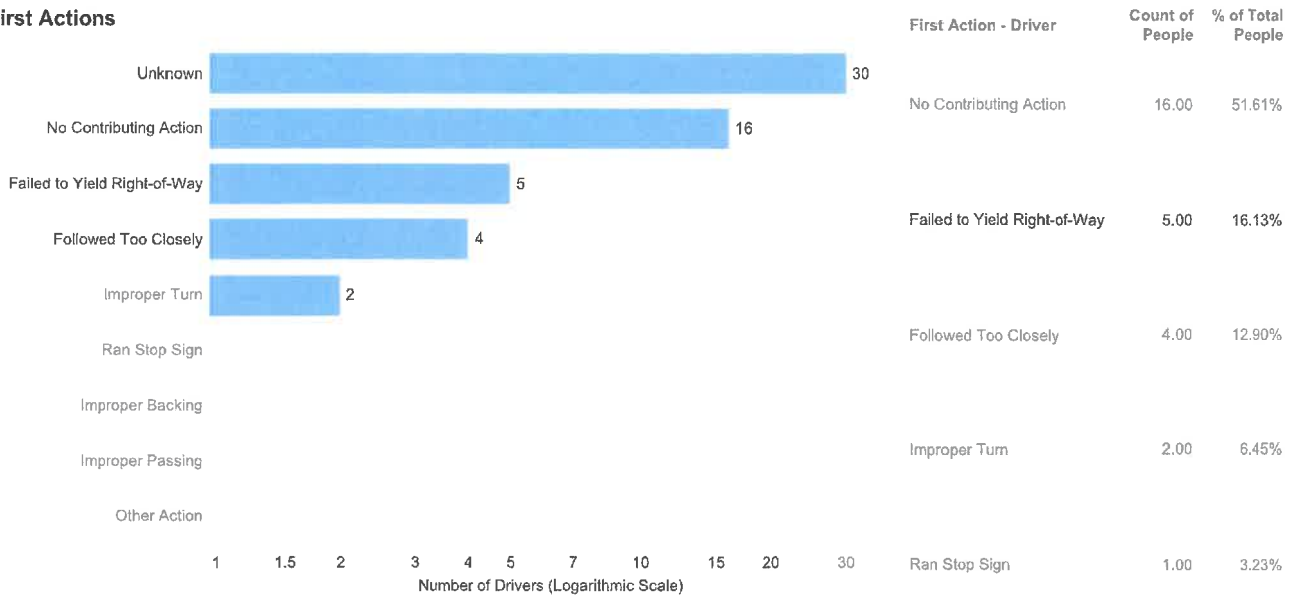
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

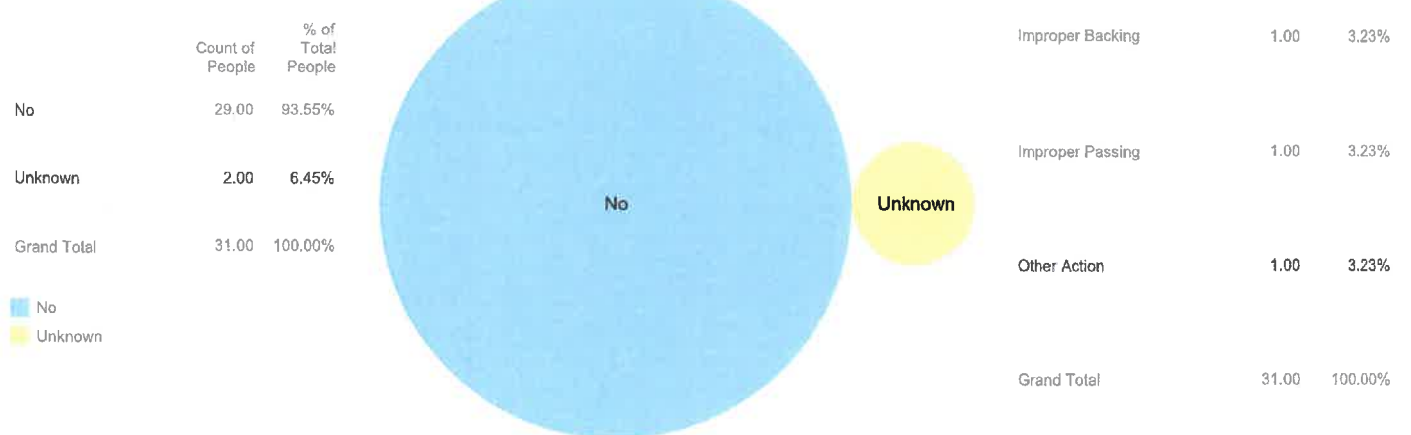
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	<b>Driver Actions</b>	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.93 to 7.93

## Drivers' First Actions



## Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

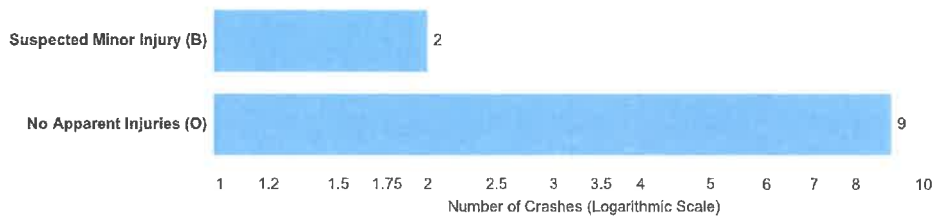
# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.94 to 7.97

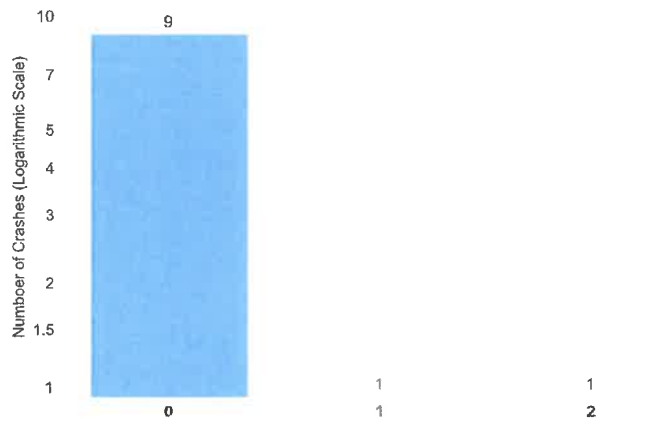
These figures display **crash-level data only** and provide the totals for crashes involving an injury of that type.

## Injury Status of Crashes

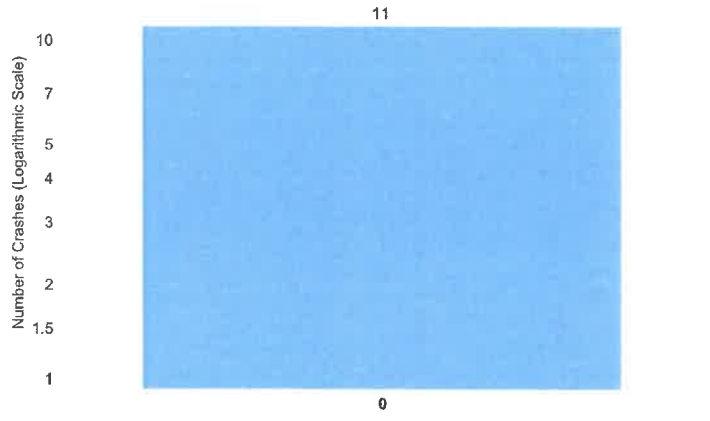


Crash Severity	Crashes	% of All Crashes
Suspected Minor Injury (B)	2.00	18.18%
No Apparent Injuries (O)	9.00	81.82%
<b>Grand Total</b>	<b>11.00</b>	<b>100.00%</b>

## Injuries per Crash



## Fatalities per Crash



Injuries per Crash	Crashes	% of All Crashes	Fatalities per Crash	Crashes	% of All Crashes
0	9.00	81.82%	0	11.00	100.00%
1	1.00	9.09%			
2	1.00	9.09%			
<b>Grand Total</b>	<b>11.00</b>	<b>100.00%</b>	<b>Grand Total</b>	<b>11.00</b>	<b>100.00%</b>

These data are exempt from discovery or admission under 23 U.S.C. 409. Data Extracted 10/01/2021

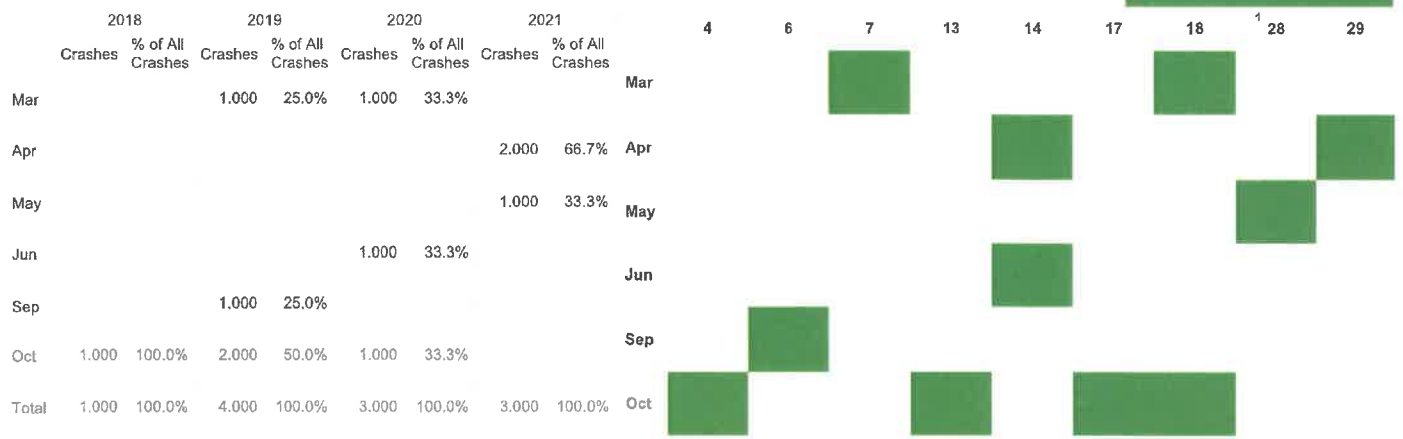


# Collision Analysis Safety Tables

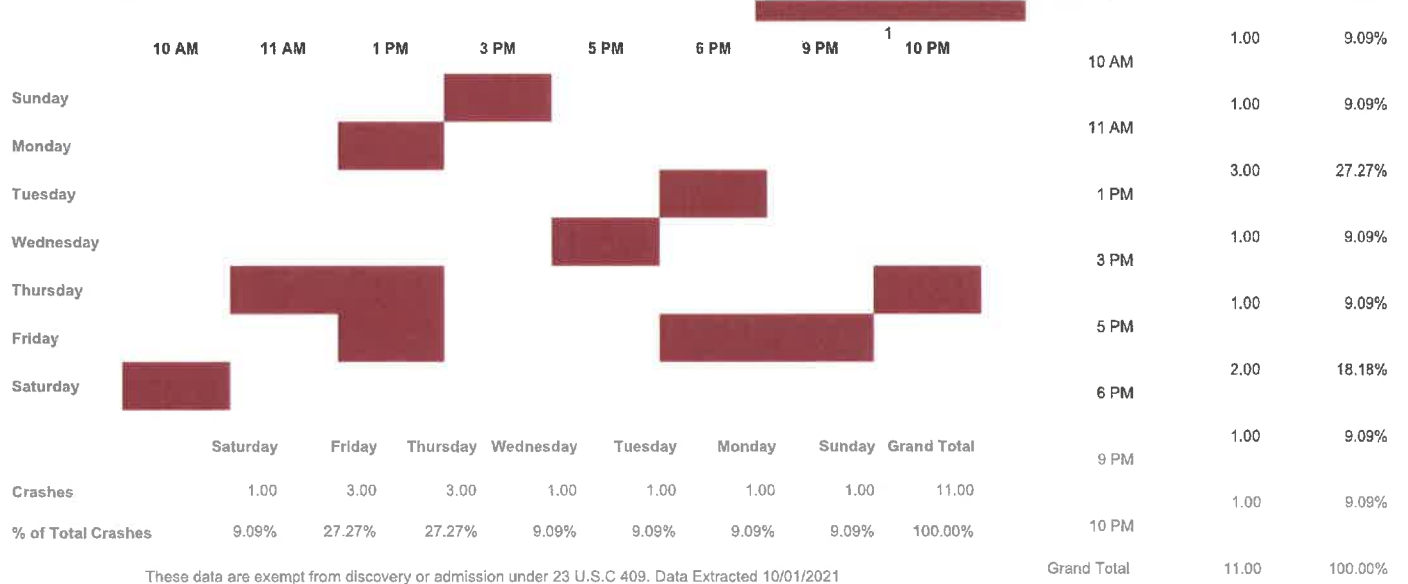
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.94 to 7.97

## Month and Date of Crashes



## Time and Day of the Week



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: *Stamford*, Date (Year: *All* or *10/1/2018* to *9/30/2021*), Severity: *All*, Route Class: *US Route*, Road Number: *1*, Local Road Name: *All*, Mile Markers: *7.94* to *7.97*

## Traffic Surface Conditions



## Weather Conditions



## Light Conditions



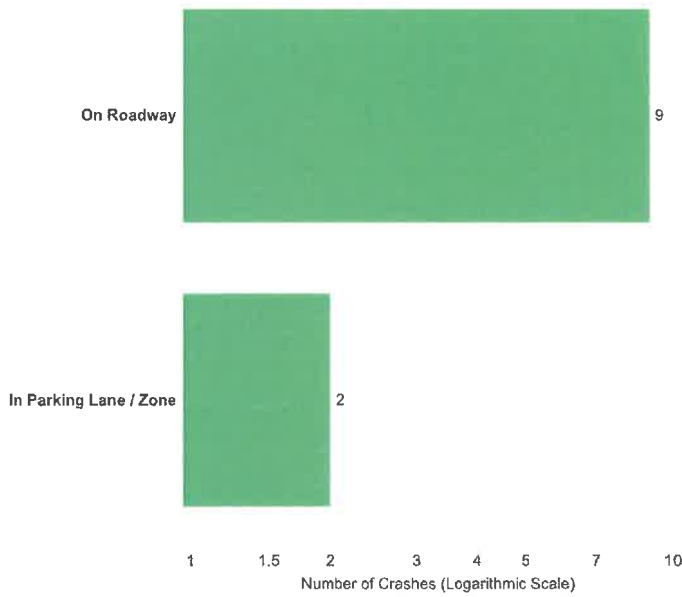
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

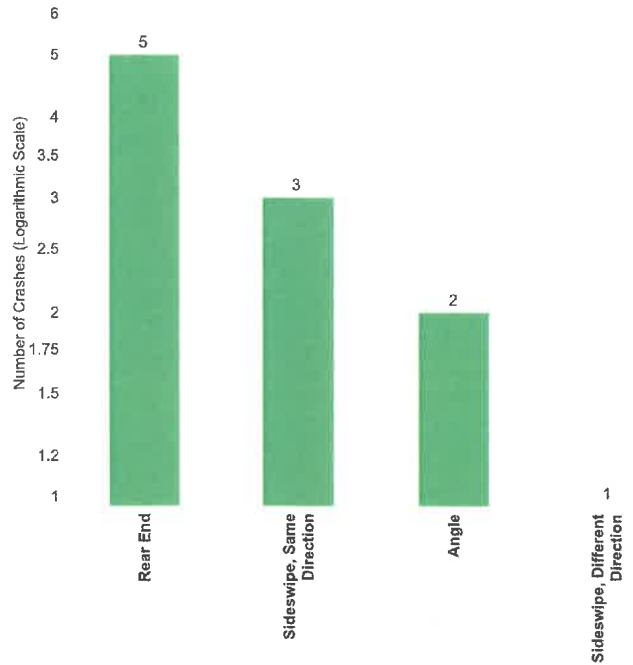
Roadway Features 2	Contributing Factors	Contributing Factors -Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.94 to 7.97

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful Event	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	9.00	81.82%	Rear End	5.00	45.45%
			Sideswipe, Same Direction	3.00	27.27%
			Angle	2.00	18.18%
In Parking Lane / Zone	2.00	18.18%	Sideswipe, Different Direction	1.00	9.09%
Grand Total	11.00	100.00%	Grand Total	11.00	100.00%

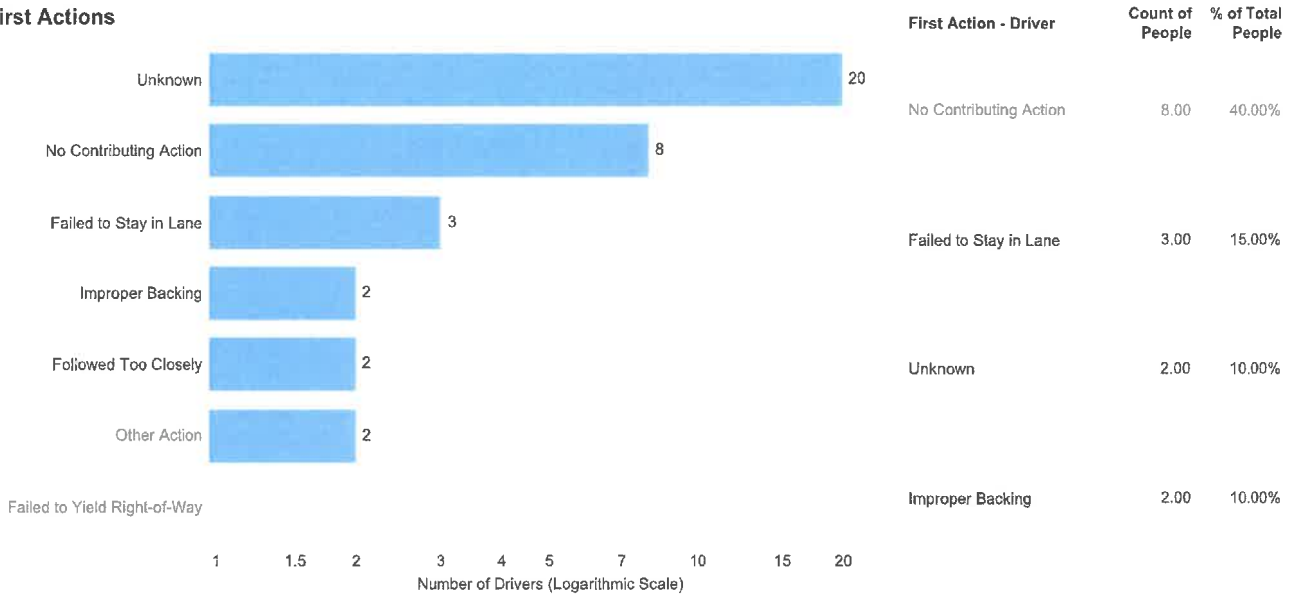
These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

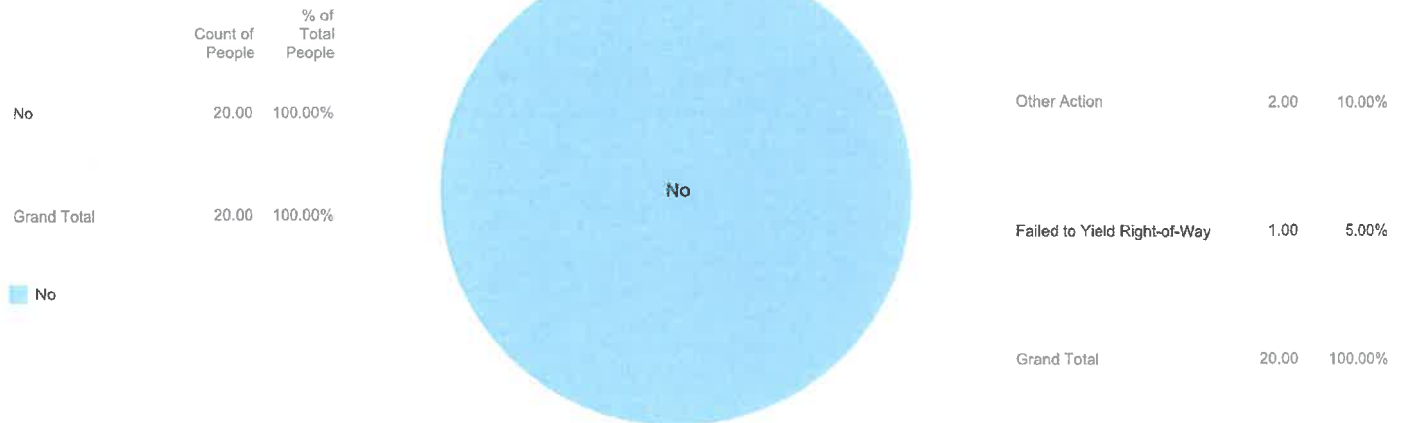
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	<b>Driver Actions</b>	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.94 to 7.97

## Drivers' First Actions



## Speed Related



These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

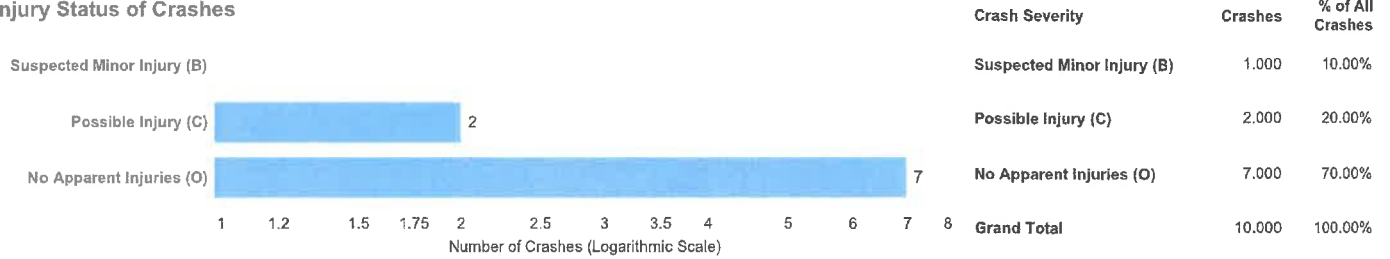
# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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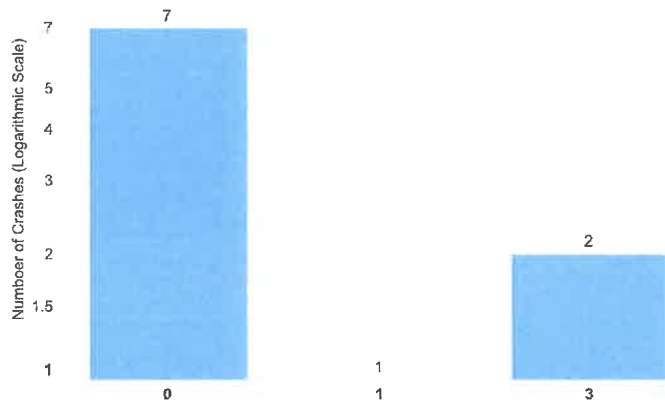
Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

These figures display **crash-level data only** and provide the totals for crashes involving an injury of that type.

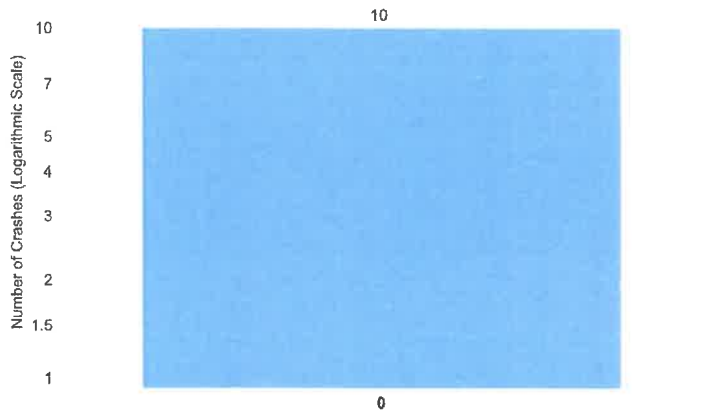
## Injury Status of Crashes



## Injuries per Crash



## Fatalities per Crash



Injuries per Crash	Crashes	% of All Crashes	Fatalities per Crash	Crashes	% of All Crashes
0	7.000	70.00%	0	10.000	100.00%
1	1.000	10.00%			
3	2.000	20.00%			
<b>Grand Total</b>	<b>10.000</b>	<b>100.00%</b>	<b>Grand Total</b>	<b>10.000</b>	<b>100.00%</b>

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021



# Collision Analysis Safety Tables

Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
----------------	---------------	--------------------------	------------------	--------------------	--------------------	----------------------

Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

## Month and Date of Crashes

2018		2019		2020		2021		6		7		8		15		21		28 <sup>1</sup>		29	
Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes	Crashes	% of All Crashes														
Jan		1.000	25.0%					Jan													
Feb				1.000	33.3%			Feb													
Mar		1.000	25.0%					Mar													
Apr							1.000	50.0%	Apr												
May		1.000	25.0%	1.000	33.3%	1.000	50.0%	May													
Jul		1.000	25.0%	1.000	33.3%			Jul													
Nov	1.000	100.0%						Nov													
Total	1.000	100.0%	4.000	100.0%	3.000	100.0%	2.000	100.0%													

## Time and Day of the Week

7 AM		11 AM		12 PM		1 PM		4 PM		5 PM		8 PM		10 PM		Hour of Crash Time	Crashes	% of All Crashes
Monday																7 AM	1.000	10.00%
Wednesday																11 AM	1.000	10.00%
Thursday																12 PM	1.000	10.00%
Friday																1 PM	1.000	10.00%
Saturday																4 PM	2.000	20.00%
																5 PM	2.000	20.00%
																8 PM	1.000	10.00%
																10 PM	1.000	10.00%
																Grand Total	10.000	100.00%
Crashes		1.000	1.000	3.000	3.000	2.000	10.000											
% of Total Crashes		10.00%	10.00%	30.00%	30.00%	20.00%	100.00%											

These data are exempt from discovery or admission under 23 U.S.C 409. Data Extracted 10/01/2021

# Collision Analysis Safety Tables

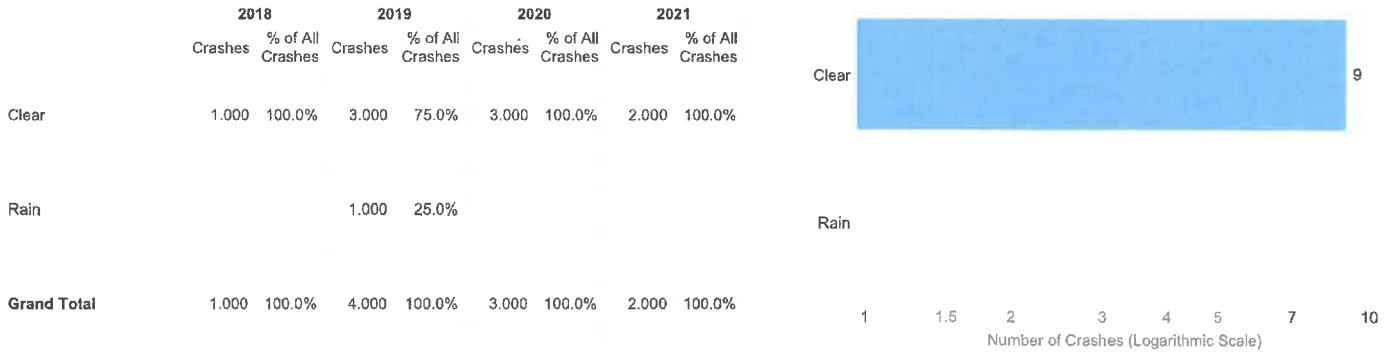
Crash Severity	Top 10 Routes	Time and Date of Crashes	Crash Conditions	Roadway Features 1	Roadway Features 2	Contributing Factors
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Queries Selected: Town: Stamford, Date (Year: All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

## Traffic Surface Conditions



## Weather Conditions



## Light Conditions



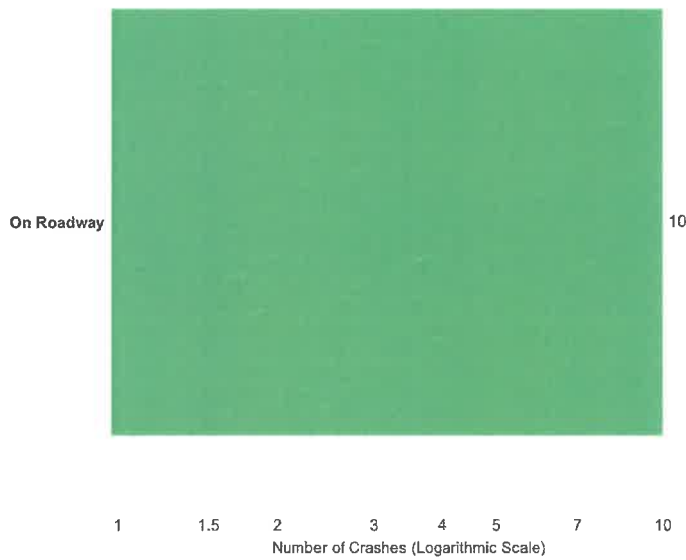
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# Collision Analysis Safety Tables

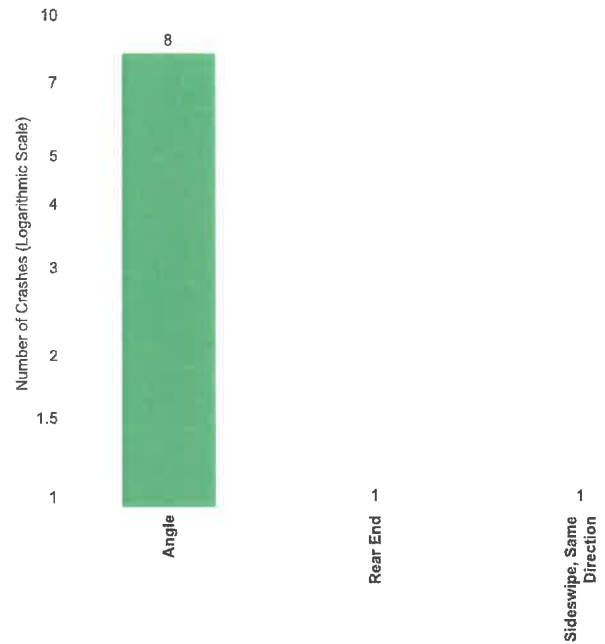
Roadway Features 2	Contributing Factors	Contributing Factors-Vehicle	Crash Manner and Location	First Harmful Event 1	First Harmful Event 2	Vehicle Crash Events
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Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

Location of First Harmful Event



Manner of Crashes



Location Of First Harmful..	Crashes	% of All Crashes	Manner Of Crash	Crashes	% of All Crashes
On Roadway	10.000	100.00%	Angle	8.000	80.00%
			Sideswipe, Same Direction	1.000	10.00%
			Rear End	1.000	10.00%
Grand Total	10.000	100.00%	Grand Total	10.000	100.00%

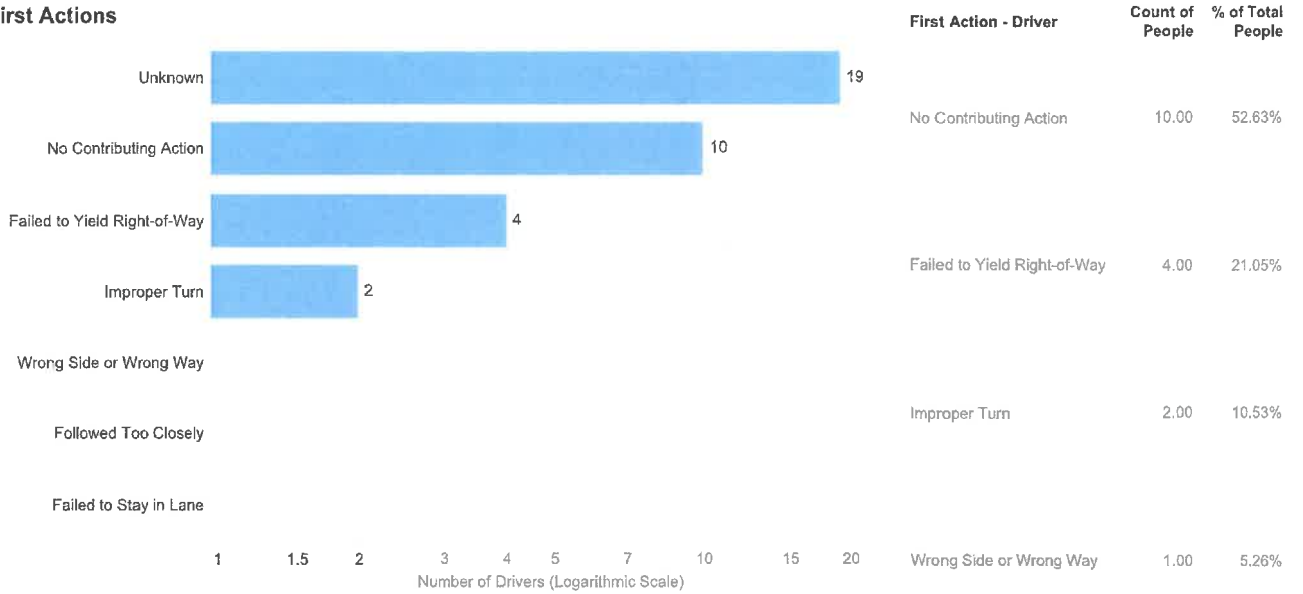
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# Collision Analysis Safety Tables

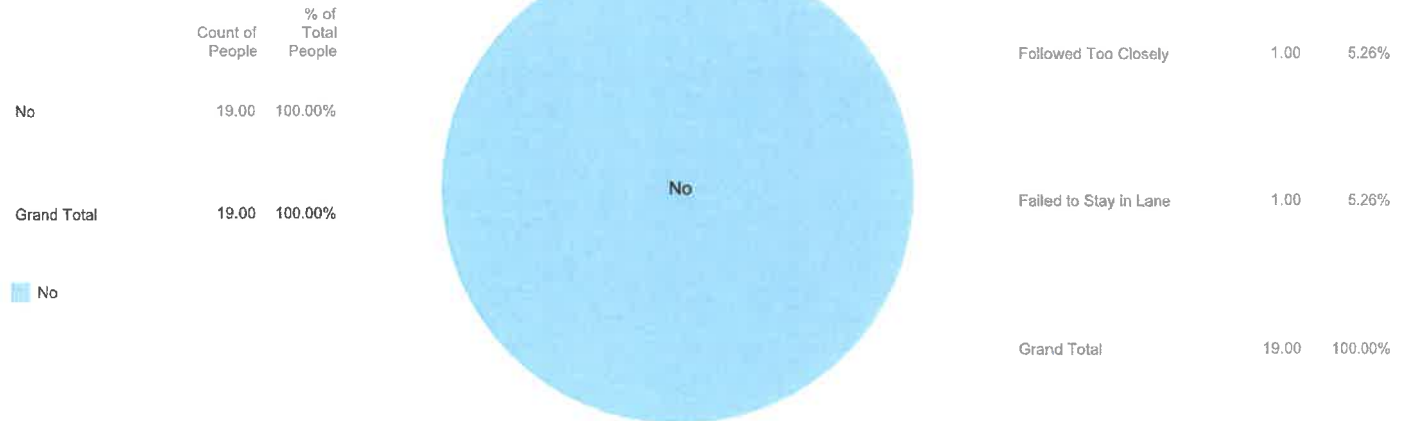
Seatbelt Use	Airbag Deployment	Ejection Status and Injuries	<b>Driver Actions</b>	Driver Distraction	Pedestrians	Motorcycle Crashes
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Queries Selected: Town: Stamford, Date (Year:All or 10/1/2018 to 9/30/2021), Severity: All, Route Class: US Route, Road Number: 1, Local Road Name: All, Mile Markers: 7.98 to 7.98

## Drivers' First Actions



## Speed Related



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## CAPACITY ANALYSIS PROCEDURES



## CAPACITY ANALYSIS PROCEDURES

*Intersections* – Four methods of analysis are needed to evaluate different kinds of intersections. These methods are based on procedures found in the Sixth Edition of the Highway Capacity Manual 2016 and are described below.

### ***Signalized Intersections***

This chapter's methodology applies to three-leg and four-leg intersections of two streets or highways where the signalization operates in isolation from nearby intersections.

*Performance Measure* – An intersection's performance is described by the use of one or more quantitative measures that characterize some aspect of the service provided to a specific road user group. Performance measures include automobile volume-to-capacity ratio, automobile delay, queue storage ratio, pedestrian delay, pedestrian circulation area, pedestrian perception score, bicycle delay, and bicycle perception score. LOS is considered a performance measure. It is computed for the automobile, pedestrian, and bicycle travel modes.

*Travel Modes* – There are three methodologies that can be used to evaluate intersection performance from the perspective of motorists, pedestrians, and bicyclists. They are referred to as the automobile methodology, the pedestrian methodology, and the bicycle methodology.

*Lane Groups and Movement Groups* – A separate lane group is established to (a) each lane (or combination of adjacent lanes) that exclusively serves one movement and (b) each lane shared by two or more movements. The concept of movement groups is also established to facilitate data entry. A separate movement group is established for (a) each turn movement with one or more exclusive turn lanes and (b) the through movement (inclusive of any turn movements that share a lane).

*LOS Criteria* – LOS criteria for the automobile mode are different from those for the non-automobile modes. The automobile-mode criteria are based on performance measures that are field measurable and perceivable by travelers. The criteria for the non-automobile modes are based on scores reported by travelers indicating their perception of service quality.

*Automobile Mode* – LOS for Automobile Mode can be characterized for the entire intersection, each intersection approach, and each lane group. Control delay alone is used to characterize LOS for entire intersection or an approach. Control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. Delay quantifies the increase in travel time due to traffic signal control. It is also a surrogate measure of driver discomfort and fuel consumption. The volume-to-capacity ratio quantifies the degree to which a phase's capacity is utilized by a lane group. The following describes each LOS.

*Level of Service A* – It describes operations with a control delay of 10.0 seconds per vehicle or less and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned

when the volume-to-capacity ratio is low and either progression is exceptionally favorable or the cycle length is very short. If it is due to favorable progression, most vehicles arrive during the green indication and travel through the intersection without stopping.

*Level of Service B* – It describes operations with control delay between 10 to 20 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicle stop than with LOS A.

*Level of Service C* – It describes operations with control delay between 20 to 35 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.

*Level of Service D* – It describes operations with control delay between 35 to 55 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable.

*Level of Service E* – It describes operations with control delay between 55 to 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

*Level of Service F* – It describes operations with control delay between 55 to 80 seconds per vehicle and a volume-to-capacity ratio no greater than 1.0. This level is typically assigned when the volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent.

The LOS thresholds established for automobile mode at a signalized intersection

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO	
	≤ 1.0	>1.0
≤ 10	A	F
>10 to 20	B	F
>20 to 35	C	F
>35 to 55	D	F
>55 to 80	E	F
>80	F	F

Note: For approach-based and intersection-wide assessments, LOS is defined by control delay.

### ***Two-Way STOP-Controlled Intersections (TWSC)***

One typical configuration is a four-leg intersection, where the major street is uncontrolled, while the minor street is controlled by STOP signs. The other typical configuration is a three-leg intersection, where the single minor-street approach is controlled by a STOP sign.

*Theoretical Basic* – Gap-acceptance models begin with the recognition that TWSC Intersections give no positive indication or control to the driver on the minor street as to when it is appropriate to leave the stop line and enter the major street. The driver must determine when a gap on the major street is large enough to permit entry and when to enter, on the basis of the relative priority of the competing movements. This decision-making process has been formalized analytically into what is commonly known as gap-acceptance theory. Gap-acceptance theory includes three basic elements: the size and distribution (availability) of gaps on the major street, the usefulness of these gaps to the minor-street drivers, and the relative priority of the various movements at the intersection.

*Critical Headway and Follow-Up Headway* – The *critical headway* is defined as the minimum interval in the major street traffic stream that allows intersection entry for one minor-street vehicle. Thus, the driver's critical headway is the minimum headway that would be acceptable. Critical headway can be estimated on the basis of observations of the largest rejected and smallest accepted headway for a given intersection. The *follow-up headway* is defined as the time between the departure of one vehicle from the minor street and the departure of the next vehicle using the same major-street headway, under a condition of continuous queuing on the minor street.

### Base Critical Headways for TWSC Intersections

VEHICLE MOVEMENT	BASE CRITICAL HEADWAY		
	Two Lanes	Four Lanes	Six Lanes
Left turn from major	4.1	4.1	5.3
U-turn from major	N/A	6.4 (wide) 6.9 (narrow)	5.6
Right turn from minor	6.2	6.9	7.1
Through traffic On major	1-stage:6.5 2-stage, stage I: 5.5 2-stage, Stage II: 5.5	1-stage:6.5 2-stage, stage I: 5.5 2-stage, Stage II: 5.5	1-stage:6.5* 2-stage, stage I: 5.5* 2-stage, Stage II: 5.5*
Left turn from minor	1-stage:7.1 2-stage, stage I: 6.1 2-stage, Stage II: 6.1	1-stage:7.5 2-stage, stage I: 6.5 2-stage, Stage II: 6.5	1-stage:6.4 2-stage, stage I: 7.3 2-stage, Stage II: 6.7

\*Use caution; values estimated

### Base Follow-up Headways for TWSC Intersections

VEHICLE MOVEMENT	BASE FOLLOW-UP HEADWAY		
	Two Lanes	Four Lanes	Six Lanes
Left turn from major	2.2	2.2	3.1
U-turn from major	N/A	2.5 (wide) 3.1 (narrow)	2.3
Right turn from minor	3.3	3.3	3.9
Through traffic on major	4.0	4.0	4.0
Left turn from minor	3.5	3.5	3.8

*Level Of Service Criteria* – LOS for a TWSC intersection is determined by the computed or measured control delay. For motor vehicles, LOS is determined for each minor-street movement (or shared movement) as well as major-street left turn. LOS is not defined for the intersection as a whole or for major-street approaches. LOS F is assigned to the movement if the volume-to-capacity ratio for the movement exceeds 1.0, regardless of the control delay.

*Automobile Mode* – The methodology applies to TWSC intersections with up to three lanes (either shared or exclusive) on the major-street approaches and up to three lanes on the minor-street

approaches (with no more than one exclusive lane for each movement on the minor-street approach). Effects from other intersections are accounted for only in situations in which a TWSC intersection is located on an urban street segment between coordinated signalized intersections. In this situation, the intersection can be analyzed by using the procedures in urban street segment.

Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO	
	1.0	>1.0
0- 10	A	F
>10 to 15	B	F
>15 to 25	C	F
>25 to 35	D	F
>35 to 50	E	F
>50	F	F

Note: The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection as a whole.

**All-Way STOP-Controlled Intersections**

AWSC intersections require every vehicle to stop at the intersection before proceeding. Because each driver must stop, the decision to proceed into the intersection is a function of traffic conditions on the other approaches. If no traffic is present on the other approaches, a driver can proceed immediately after stopping. If there is traffic on one or more of the other approaches, a driver proceeds only after determining that no vehicles are currently in the intersection and that it is the driver's turn to proceed.

*Level Of Service Criteria* – For the assessment of LOS at the approach and intersection levels, LOS is based solely on control delay. LOS F is assigned if volume-to-capacity ratio of a lane exceeds 1.0, regardless of the control delay.



Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO*	
	$v/c \leq 1.0$	$v/c > 1.0$
0- 10	A	0- 10
>10 to 15	B	>10 to 15
>15 to 25	C	>15 to 25
>25 to 35	D	>25 to 35
>35 to 50	E	>35 to 50
>50	F	>50

Note: \* For approaches and intersection wide assessment, LOS is defined solely by control delay.

*Automobile Mode* – Methodologies in this chapter apply to isolated AWSC intersection with up to three lanes on each approach. They do not account for intersection effects with other intersections. The methodologies do not apply to AWSC intersections with more than four approaches. In addition, the effect of conflicting pedestrians on automobiles is not considered in this procedure.

*Pedestrian and Bicycle Modes* – The current methodologies for analyzing LOS and delay at AWSC intersections do not extend to pedestrians and bicycles.

*Roundabouts* – Roundabouts are intersections with a generally circular shape, characterized by yield on entry and circulation around a central island. The analysis boundaries are the roundabout itself, including associated pedestrian crosswalks. The methodology does not account for the effects of adjacent traffic control devices such as nearby traffic signals or signalized pedestrian crossing.

*Level of Service Criteria* – Assessment of LOS for automobiles in roundabouts at the approach and intersection levels is based solely on control delay. LOS F is assigned if the volume-to-capacity ratio of a lane exceeds 1.0 regardless of the control delay.

*Imitation of the Methodology* – The methodology applies to isolated roundabouts with up to two entry lanes and up to one bypass lane per approach.

Level-of Service Criteria for Automobile Mode

CONTROL DELAY (SECONDS PER VEHICLE)	LOS BY VOLUME-TO-CAPACITY RATIO*	
	$v/c \leq 1.0$	$v/c > 1.0$
0- 10	A	0- 10
>10 to 15	B	>10 to 15
>15 to 25	C	>15 to 25
>25 to 35	D	>25 to 35
>35 to 50	E	>35 to 50
>50	F	>50



















Note: For approaches and intersection wide assessment, LOS is defined solely by control delay.

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## CAPACITY ANALYSIS WORKSHEETS

# CAPACITY ANALYSIS WORKSHEETS

Existing Conditions

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	450	1	3	805	0	18	0	19	222	3	51	
Future Volume (vph)	0	450	1	3	805	0	18	0	19	222	3	51	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11	
Grade (%)		0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		200	
Storage Lanes	0		0	0		0	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00			0.98		0.99	0.98		
Fr <sub>t</sub>								0.931			0.857		
Fl <sub>t</sub> Protected								0.976		0.950			
Satd. Flow (prot)	0	3303	0	0	3303	0	0	1837	0	1770	1510	0	
Fl <sub>t</sub> Permitted					0.954			0.874		0.730			
Satd. Flow (perm)	0	3303	0	0	3151	0	0	1637	0	1352	1510	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)								28			57		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		333			411			360			606		
Travel Time (s)		7.6			9.3			8.2			13.8		
Confl. Peds. (#/hr)	10		4	4		10	6		2	2		6	
Confl. Bikes (#/hr)													
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	0	506	1	3	904	0	20	0	21	249	3	57	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	507	0	0	907	0	0	41	0	249	60	0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			2			4			4		
Permitted Phases				2			4			4			
Detector Phase		2		2	2		4	4		4	4		
Switch Phase													
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0		
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1		
Total Split (s)		82.0		82.0	82.0		38.0	38.0		38.0	38.0		
Total Split (%)		68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%		
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6		
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5		
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0		
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1		
Lead/Lag													
Lead-Lag Optimize?													
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None		
Act Effct Green (s)		82.5			82.5			26.3		26.3	26.3		



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.69			0.69			0.22		0.22	0.22	
v/c Ratio		0.22			0.42			0.11		0.84	0.16	
Control Delay		8.0			9.5			16.5		68.0	10.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		8.0			9.5			16.5		68.0	10.0	
LOS		A			A			B		E	A	
Approach Delay		8.0			9.5			16.5			56.7	
Approach LOS		A			A			B			E	
Queue Length 50th (ft)		69			147			8		186	2	
Queue Length 95th (ft)		116			274			34		255	33	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2284			2179			476		376	461	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.22			0.42			0.09		0.66	0.13	













Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 27 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 17.5  
 Intersection Capacity Utilization 52.6%  
 Analysis Period (min) 15

Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 	 	
Traffic Volume (vph)	713	0	8	795	11	57
Future Volume (vph)	713	0	8	795	11	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor					1.00	
Fr <sub>t</sub>					0.886	
Fit Protected					0.992	
Satd. Flow (prot)	3421	0	0	3421	1746	0
Fit Permitted				0.948	0.992	
Satd. Flow (perm)	3421	0	0	3243	1741	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					59	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)					11	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	743	0	8	828	11	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	743	0	0	836	70	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	105.3			105.3	7.5	

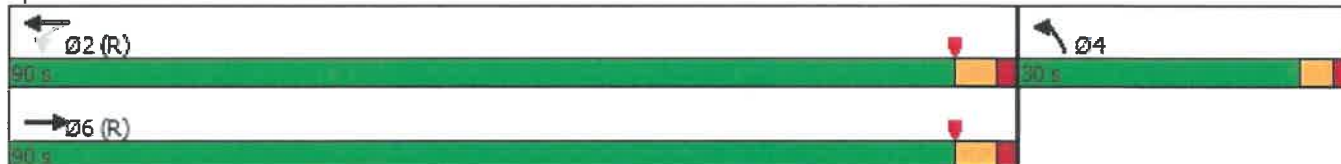
	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.88			0.88	0.06	
v/c Ratio	0.25			0.29	0.43	
Control Delay	1.2			2.0	25.7	
Queue Delay	0.0			0.0	0.0	
Total Delay	1.2			2.0	25.7	
LOS	A			A	C	
Approach Delay	1.2			2.0	25.7	
Approach LOS	A			A	C	
Queue Length 50th (ft)	25			48	8	
Queue Length 95th (ft)	37			74	55	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	3000			2844	410	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.25			0.29	0.17	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 31 (26%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.43  
 Intersection Signal Delay: 2.6  
 Intersection Capacity Utilization 42.4%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1





















Intersection













Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←				↔		←	↑				↗
Traffic Vol, veh/h	5	0	0	0	6	3	18	29	0	0	0	7
Future Vol, veh/h	5	0	0	0	6	3	18	29	0	0	0	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	0	7	3	21	34	0	0	0	8
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB		NB			SB		
Opposing Approach	WB				EB		SB			NB		
Opposing Lanes	1				1		1			2		
Conflicting Approach Left	SB				NB		EB			WB		
Conflicting Lanes Left	1				2		1			1		
Conflicting Approach Right	NB				SB		WB			EB		
Conflicting Lanes Right	2				1		1			1		
HCM Control Delay	7.3				6.9		7.7			6.6		
HCM LOS	A				A		A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	0%
Vol Right, %	0%	0%	0%	33%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	29	5	9	7
LT Vol	18	0	5	0	0
Through Vol	0	29	0	6	0
RT Vol	0	0	0	3	7
Lane Flow Rate	21	34	6	10	8
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.029	0.043	0.007	0.011	0.008
Departure Headway (Hd)	5.066	4.565	4.249	3.845	3.501
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	710	788	838	925	1021
Service Time	2.774	2.274	2.296	1.892	1.528
HCM Lane V/C Ratio	0.03	0.043	0.007	0.011	0.008
HCM Control Delay	7.9	7.5	7.3	6.9	6.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	724	10	3	607	0	39	0	40	172	2	31	
Future Volume (vph)	0	724	10	3	607	0	39	0	40	172	2	31	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11	
Grade (%)		0%			0%			0%			0%		
Storage Length (ft)	0		0	0		0	0		0	0		200	
Storage Lanes	0		0	0		0	0		0	1		1	
Taper Length (ft)	25			25			25			25			
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		1.00			1.00			0.98		0.99	0.97		
Fr <sub>t</sub>		0.998						0.931			0.860		
Flt Protected								0.976		0.950			
Satd. Flow (prot)	0	3294	0	0	1739	0	0	1839	0	1770	1506	0	
Flt Permitted					0.996			0.839		0.672			
Satd. Flow (perm)	0	3294	0	0	1732	0	0	1568	0	1240	1506	0	
Right Turn on Red			Yes			Yes			Yes			Yes	
Satd. Flow (RTOR)		3						40			42		
Link Speed (mph)		30			30			30			30		
Link Distance (ft)		333			411			360			606		
Travel Time (s)		7.6			9.3			8.2			13.8		
Confl. Peds. (#/hr)	18		12	12		18	10		7	7		10	
Confl. Bikes (#/hr)													
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)													
Mid-Block Traffic (%)		0%			0%			0%			0%		
Adj. Flow (vph)	0	992	14	4	832	0	53	0	55	236	3	42	
Shared Lane Traffic (%)													
Lane Group Flow (vph)	0	1006	0	0	836	0	0	108	0	236	45	0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		2			2			4			4		
Permitted Phases				2			4			4			
Detector Phase		2		2	2		4	4		4	4		
Switch Phase													
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0		
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1		
Total Split (s)		88.0		88.0	88.0		32.0	32.0		32.0	32.0		
Total Split (%)		73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%		
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6		
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5		
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)		6.1		6.1	6.1		5.1	5.1		5.1	5.1		
Lead/Lag													
Lead-Lag Optimize?													
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None		
Act Effct Green (s)		82.3		82.3	82.3			26.5		26.5	26.5		



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.69			0.69			0.22		0.22	0.22	
v/c Ratio		0.44			0.70			0.29		0.86	0.12	
Control Delay		9.6			20.8			25.8		73.7	12.5	
Queue Delay		0.0			0.6			0.0		0.0	0.0	
Total Delay		9.6			21.4			25.8		73.7	12.5	
LOS		A			C			C		E	B	
Approach Delay		9.6			21.4			25.8			63.9	
Approach LOS		A			C			C			E	
Queue Length 50th (ft)		181			408			42		172	2	
Queue Length 95th (ft)		154			403			70		212	22	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2302			1210			401		293	388	
Starvation Cap Reductn		0			123			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.44			0.77			0.27		0.81	0.12	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 79 (66%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 21.7  
 Intersection Capacity Utilization 60.0%  
 Analysis Period (min) 15

Intersection LOS: C  
 ICU Level of Service B

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↙	
Traffic Volume (vph)	952	3	6	640	2	137
Future Volume (vph)	952	3	6	640	2	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Fr <sub>t</sub>					0.867	
Fl <sub>t</sub> Protected					0.999	
Satd. Flow (prot)	3421	0	0	3421	1721	0
Fl <sub>t</sub> Permitted				0.944	0.999	
Satd. Flow (perm)	3421	0	0	3230	1721	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				139	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Conf. Peds. (#/hr)		2	2		3	
Conf. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1094	3	7	736	2	157
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1097	0	0	743	159	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	100.7			100.7	8.5	

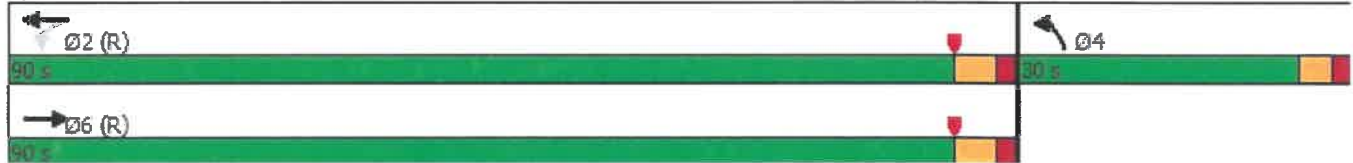
	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.84			0.84	0.07	
v/c Ratio	0.38			0.27	0.64	
Control Delay	2.5			2.4	23.9	
Queue Delay	0.1			0.0	0.0	
Total Delay	2.6			2.4	23.9	
LOS	A			A	C	
Approach Delay	2.6			2.4	23.9	
Approach LOS	A			A	C	
Queue Length 50th (ft)	50			41	15	
Queue Length 95th (ft)	127			74	74	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2871			2710	468	
Starvation Cap Reductn	594			0	0	
Spillback Cap Reductn	0			150	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.48			0.29	0.34	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 95 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.64  
 Intersection Signal Delay: 4.2  
 Intersection Capacity Utilization 44.0%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	←				↔		←	↑				↗
Traffic Vol, veh/h	10	0	0	0	12	9	64	60	0	0	0	15
Future Vol, veh/h	10	0	0	0	12	9	64	60	0	0	0	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	0	0	15	11	80	75	0	0	0	19
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	7.7			7.2			8.2			6.8		
HCM LOS	A			A			A			A		

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	57%	0%
Vol Right, %	0%	0%	0%	43%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	64	60	10	21	15
LT Vol	64	0	10	0	0
Through Vol	0	60	0	12	0
RT Vol	0	0	0	9	15
Lane Flow Rate	80	75	12	26	19
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.114	0.096	0.016	0.03	0.019
Departure Headway (Hd)	5.111	4.61	4.581	4.11	3.611
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	702	778	786	876	976
Service Time	2.836	2.335	2.582	2.111	1.691
HCM Lane V/C Ratio	0.114	0.096	0.015	0.03	0.019
HCM Control Delay	8.5	7.8	7.7	7.2	6.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0	0.1	0.1

# CAPACITY ANALYSIS WORKSHEETS

No-Build Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	458	1	3	819	0	18	0	20	226	3	52
Future Volume (vph)	0	458	1	3	819	0	18	0	20	226	3	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		0.99	0.98	
Frts								0.929			0.857	
Flt Protected								0.977		0.950		
Satd. Flow (prot)	0	3303	0	0	3303	0	0	1835	0	1770	1510	0
Flt Permitted					0.954			0.877		0.730		
Satd. Flow (perm)	0	3303	0	0	3151	0	0	1639	0	1352	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								28			58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	10		4	4		10	6		2	2		6
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	515	1	3	920	0	20	0	22	254	3	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	516	0	0	923	0	0	42	0	254	61	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)		68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		82.0			82.0			26.8		26.8	26.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.68			0.68			0.22		0.22	0.22	
v/c Ratio		0.23			0.43			0.11		0.84	0.16	
Control Delay		8.2			9.9			16.7		67.7	9.9	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		8.2			9.9			16.7		67.7	9.9	
LOS		A			A			B		E	A	
Approach Delay		8.2			9.9			16.7			56.5	
Approach LOS		A			A			B			E	
Queue Length 50th (ft)		72			154			9		189	2	
Queue Length 95th (ft)		120			288			34		260	33	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2274			2169			477		377	463	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.23			0.43			0.09		0.67	0.13	













Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 27 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.84  
 Intersection Signal Delay: 17.8  
 Intersection Capacity Utilization 53.2%  
 Analysis Period (min) 15

Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	 			 	 	
Traffic Volume (vph)	726	0	8	809	11	58
Future Volume (vph)	726	0	8	809	11	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor					1.00	
Fr <sub>t</sub>					0.886	
Fl <sub>t</sub> Protected					0.992	
Satd. Flow (prot)	3421	0	0	3421	1746	0
Fl <sub>t</sub> Permitted				0.948	0.992	
Satd. Flow (perm)	3421	0	0	3243	1741	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)					60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)					11	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	756	0	8	843	11	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	756	0	0	851	71	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	105.3			105.3	7.5	

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.88			0.88	0.06	
v/c Ratio	0.25			0.30	0.43	
Control Delay	1.2			2.0	25.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	1.2			2.0	25.5	
LOS	A			A	C	
Approach Delay	1.2			2.0	25.5	
Approach LOS	A			A	C	
Queue Length 50th (ft)	25			50	8	
Queue Length 95th (ft)	37			76	55	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	3000			2844	411	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.25			0.30	0.17	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 31 (26%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.43  
 Intersection Signal Delay: 2.6  
 Intersection Capacity Utilization 42.8%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection













Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔				↔		↔	↔				↔
Traffic Vol, veh/h	5	0	0	0	6	3	18	30	0	0	0	7
Future Vol, veh/h	5	0	0	0	6	3	18	30	0	0	0	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	0	7	3	21	35	0	0	0	8
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB		NB				SB	
Opposing Approach	WB				EB		SB				NB	
Opposing Lanes	1				1		1				2	
Conflicting Approach Left	SB				NB		EB				WB	
Conflicting Lanes Left	1				2		1				1	
Conflicting Approach Right	NB				SB		WB				EB	
Conflicting Lanes Right	2				1		1				1	
HCM Control Delay	7.3				6.9		7.7				6.6	
HCM LOS	A				A		A				A	

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	67%	0%
Vol Right, %	0%	0%	0%	33%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	30	5	9	7
LT Vol	18	0	5	0	0
Through Vol	0	30	0	6	0
RT Vol	0	0	0	3	7
Lane Flow Rate	21	35	6	10	8
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.029	0.044	0.007	0.011	0.008
Departure Headway (Hd)	5.066	4.565	4.251	3.847	3.502
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	710	788	838	925	1021
Service Time	2.774	2.274	2.298	1.894	1.528
HCM Lane V/C Ratio	0.03	0.044	0.007	0.011	0.008
HCM Control Delay	7.9	7.5	7.3	6.9	6.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	737	10	3	618	0	40	0	41	175	2	32
Future Volume (vph)	0	737	10	3	618	0	40	0	41	175	2	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		0.99	0.97	
Frt		0.998						0.932			0.860	
Flt Protected								0.976		0.950		
Satd. Flow (prot)	0	3294	0	0	1739	0	0	1841	0	1770	1506	0
Flt Permitted					0.996			0.836		0.669		
Satd. Flow (perm)	0	3294	0	0	1732	0	0	1564	0	1234	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		3						39			44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	18		12	12		18	10		7	7		10
Confl. Bikes (#/hr)												
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1010	14	4	847	0	55	0	56	240	3	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1024	0	0	851	0	0	111	0	240	47	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		88.0		88.0	88.0		32.0	32.0		32.0	32.0	
Total Split (%)		73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		81.8			81.8			27.0		27.0	27.0	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.68			0.68			0.22		0.22	0.22	
v/c Ratio		0.46			0.72			0.29		0.86	0.13	
Control Delay		10.0			23.1			26.1		73.0	12.3	
Queue Delay		0.0			1.0			0.0		0.0	0.0	
Total Delay		10.0			24.1			26.1		73.0	12.3	
LOS		A			C			C		E	B	
Approach Delay		10.0			24.1			26.1			63.1	
Approach LOS		A			C			C			E	
Queue Length 50th (ft)		190			455			44		174	2	
Queue Length 95th (ft)		157			455			73		#217	22	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2294			1206			403		295	393	
Starvation Cap Reductn		0			150			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.45			0.81			0.28		0.81	0.12	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 79 (66%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 55  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.86  
 Intersection Signal Delay: 22.8  
 Intersection Capacity Utilization 60.7%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Intersection LOS: C  
 ICU Level of Service B

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↖↖	↗↗	
Traffic Volume (vph)	969	3	6	652	2	139
Future Volume (vph)	969	3	6	652	2	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Fr <sub>t</sub>					0.867	
Fl <sub>t</sub> Protected					0.999	
Satd. Flow (prot)	3421	0	0	3421	1721	0
Fl <sub>t</sub> Permitted				0.944	0.999	
Satd. Flow (perm)	3421	0	0	3230	1721	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	1				133	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)		2	2		3	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1114	3	7	749	2	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1117	0	0	756	162	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effect Green (s)	100.4			100.4	8.8	

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.84			0.84	0.07	
v/c Ratio	0.39			0.28	0.65	
Control Delay	2.6			2.5	26.3	
Queue Delay	0.1			0.0	0.0	
Total Delay	2.7			2.5	26.3	
LOS	A			A	C	
Approach Delay	2.7			2.5	26.3	
Approach LOS	A			A	C	
Queue Length 50th (ft)	51			42	22	
Queue Length 95th (ft)	131			79	81	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2862			2702	463	
Starvation Cap Reductn	587			0	0	
Spillback Cap Reductn	0			204	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.49			0.30	0.35	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 95 (79%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.65  
 Intersection Signal Delay: 4.5  
 Intersection Capacity Utilization 44.6%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↙				↘		↙	↘				↘
Traffic Vol, veh/h	10	0	0	0	12	9	65	62	0	0	0	15
Future Vol, veh/h	10	0	0	0	12	9	65	62	0	0	0	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	0	0	15	11	81	78	0	0	0	19
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	1			1			1			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	1			2			1			1		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			1			1			1		
HCM Control Delay	7.7			7.2			8.2			6.8		
HCM LOS	A			A			A			A		













Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	57%	0%
Vol Right, %	0%	0%	0%	43%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	62	10	21	15
LT Vol	65	0	10	0	0
Through Vol	0	62	0	12	0
RT Vol	0	0	0	9	15
Lane Flow Rate	81	78	12	26	19
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.115	0.099	0.016	0.03	0.019
Departure Headway (Hd)	5.111	4.61	4.588	4.117	3.614
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	702	778	785	875	975
Service Time	2.836	2.335	2.589	2.118	1.694
HCM Lane V/C Ratio	0.115	0.1	0.015	0.03	0.019
HCM Control Delay	8.5	7.8	7.7	7.2	6.8
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.3	0	0.1	0.1



# CAPACITY ANALYSIS WORKSHEETS

Build Conditions

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	463	1	3	819	0	42	0	38	228	3	52
Future Volume (vph)	0	463	1	3	819	0	42	0	38	228	3	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		1.00	0.98	
Fr <sub>t</sub>								0.935			0.857	
Fl <sub>t</sub> Protected								0.975		0.950		
Satd. Flow (prot)	0	3303	0	0	3303	0	0	1845	0	1770	1510	0
Fl <sub>t</sub> Permitted					0.954			0.831		0.701		
Satd. Flow (perm)	0	3303	0	0	3151	0	0	1564	0	1299	1510	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)								38			58	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Conf. Peds. (#/hr)	10		4	4		10	6		2	2		6
Conf. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	520	1	3	920	0	47	0	43	256	3	58
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	521	0	0	923	0	0	90	0	256	61	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		82.0		82.0	82.0		38.0	38.0		38.0	38.0	
Total Split (%)		68.3%		68.3%	68.3%		31.7%	31.7%		31.7%	31.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		80.9			80.9			27.9		27.9	27.9	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.67			0.67			0.23		0.23	0.23	
v/c Ratio		0.23			0.43			0.23		0.85	0.15	
Control Delay		8.7			10.8			21.8		67.7	9.5	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		8.7			10.8			21.8		67.7	9.5	
LOS		A			B			C		E	A	
Approach Delay		8.7			10.8			21.8			56.5	
Approach LOS		A			B			C			E	
Queue Length 50th (ft)		75			160			32		190	2	
Queue Length 95th (ft)		125			305			68		261	33	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2252			2148			468		366	467	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.23			0.43			0.19		0.70	0.13	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 27 (23%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 45  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 18.6  
 Intersection Capacity Utilization 53.4%  
 Analysis Period (min) 15

Intersection LOS: B  
 ICU Level of Service A

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↙	
Traffic Volume (vph)	742	9	14	809	11	58
Future Volume (vph)	742	9	14	809	11	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor					1.00	
Frt	0.998				0.886	
Flt Protected				0.999	0.992	
Satd. Flow (prot)	3414	0	0	3418	1746	0
Flt Permitted				0.936	0.992	
Satd. Flow (perm)	3414	0	0	3202	1741	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	2				60	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)					11	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	773	9	15	843	11	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	782	0	0	858	71	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	105.3			105.3	7.5	

	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.88			0.88	0.06	
v/c Ratio	0.26			0.31	0.43	
Control Delay	1.2			2.0	25.5	
Queue Delay	0.0			0.0	0.0	
Total Delay	1.2			2.0	25.5	
LOS	A			A	C	
Approach Delay	1.2			2.0	25.5	
Approach LOS	A			A	C	
Queue Length 50th (ft)	26			50	8	
Queue Length 95th (ft)	38			77	55	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2994			2809	411	
Starvation Cap Reductn	0			0	0	
Spillback Cap Reductn	0			0	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.26			0.31	0.17	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 31 (26%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.43  
 Intersection Signal Delay: 2.6  
 Intersection Capacity Utilization 47.1%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖				↗		↖	↗				↗
Traffic Vol, veh/h	5	0	0	0	6	43	18	32	0	0	0	7
Future Vol, veh/h	5	0	0	0	6	43	18	32	0	0	0	7
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	0	0	0	7	50	21	37	0	0	0	8
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	7.4	6.8	7.7	6.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	12%	0%
Vol Right, %	0%	0%	0%	88%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	32	5	49	7
LT Vol	18	0	5	0	0
Through Vol	0	32	0	6	0
RT Vol	0	0	0	43	7
Lane Flow Rate	21	37	6	57	8
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.03	0.048	0.007	0.056	0.008
Departure Headway (Hd)	5.149	4.648	4.291	3.524	3.587
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	698	772	828	1007	994
Service Time	2.863	2.363	2.346	1.576	1.622
HCM Lane V/C Ratio	0.03	0.048	0.007	0.057	0.008
HCM Control Delay	8	7.6	7.4	6.8	6.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0	0.2	0




















Intersection

Int Delay, s/veh	5.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↶			↷
Traffic Vol, veh/h	0	0	9	15	0	40
Future Vol, veh/h	0	0	9	15	0	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	10	16	0	43

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	SB
HCM Control Delay, s	0	8.5
HCM LOS		A

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	1061
HCM Lane V/C Ratio	-	-	0.041
HCM Control Delay (s)	-	-	8.5
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	751	10	3	618	0	58	0	57	181	2	32
Future Volume (vph)	0	751	10	3	618	0	58	0	57	181	2	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	10	10	15	15	15	12	11	11
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		200
Storage Lanes	0		0	0		0	0		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.98		0.99	0.97	
Frt		0.998						0.933			0.860	
Fit Protected								0.975		0.950		
Satd. Flow (prot)	0	3294	0	0	1739	0	0	1841	0	1770	1506	0
Fit Permitted					0.996			0.825		0.629		
Satd. Flow (perm)	0	3294	0	0	1732	0	0	1545	0	1162	1506	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2						38			44	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		333			411			360			606	
Travel Time (s)		7.6			9.3			8.2			13.8	
Confl. Peds. (#/hr)	18		12	12		18	10		7	7		10
Confl. Bikes (#/hr)												
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	1029	14	4	847	0	79	0	78	248	3	44
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1043	0	0	851	0	0	157	0	248	47	0
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases				2			4			4		
Detector Phase		2		2	2		4	4		4	4	
Switch Phase												
Minimum Initial (s)		15.0		15.0	15.0		7.0	7.0		7.0	7.0	
Minimum Split (s)		21.1		21.1	21.1		12.1	12.1		12.1	12.1	
Total Split (s)		88.0		88.0	88.0		32.0	32.0		32.0	32.0	
Total Split (%)		73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
Yellow Time (s)		4.1		4.1	4.1		3.6	3.6		3.6	3.6	
All-Red Time (s)		2.0		2.0	2.0		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		6.1			6.1			5.1		5.1	5.1	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Min		C-Min	C-Min		None	None		None	None	
Act Effct Green (s)		77.5			77.5			31.3		31.3	31.3	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio		0.65			0.65			0.26		0.26	0.26	
v/c Ratio		0.49			0.76			0.37		0.82	0.11	
Control Delay		12.1			27.0			30.0		64.0	11.9	
Queue Delay		0.0			2.4			0.0		0.0	0.0	
Total Delay		12.1			29.4			30.0		64.0	11.9	
LOS		B			C			C		E	B	
Approach Delay		12.1			29.4			30.0			55.7	
Approach LOS		B			C			C			E	
Queue Length 50th (ft)		220			571			72		175	2	
Queue Length 95th (ft)		162			474			108		#249	22	
Internal Link Dist (ft)		253			331			280			526	
Turn Bay Length (ft)												
Base Capacity (vph)		2248			1182			430		302	424	
Starvation Cap Reductn		0			207			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.46			0.87			0.37		0.82	0.11	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 79 (66%), Referenced to phase 2:EBWB, Start of Yellow  
 Natural Cycle: 65  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.82  
 Intersection Signal Delay: 25.0  
 Intersection Capacity Utilization 60.9%  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: LAFAYETTE STREET & U.S. ROUTE 1



	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘↙	
Traffic Volume (vph)	981	27	22	652	2	139
Future Volume (vph)	981	27	22	652	2	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	14	14
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	0		0	0
Storage Lanes		0	0		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00
Ped Bike Factor	1.00			1.00	1.00	
Fr <sub>t</sub>	0.996				0.867	
Fit Protected				0.998	0.999	
Satd. Flow (prot)	3405	0	0	3414	1721	0
Fit Permitted				0.883	0.999	
Satd. Flow (perm)	3405	0	0	3021	1721	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	5				130	
Link Speed (mph)	30			30	30	
Link Distance (ft)	258			323	552	
Travel Time (s)	5.9			7.3	12.5	
Confl. Peds. (#/hr)		2	2		3	
Confl. Bikes (#/hr)						
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1128	31	25	749	2	160
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1159	0	0	774	162	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	6			2	4	
Permitted Phases			2			
Detector Phase	6		2	2	4	
Switch Phase						
Minimum Initial (s)	15.0		15.0	15.0	7.0	
Minimum Split (s)	20.8		20.8	20.8	12.0	
Total Split (s)	90.0		90.0	90.0	30.0	
Total Split (%)	75.0%		75.0%	75.0%	25.0%	
Yellow Time (s)	3.8		3.8	3.8	3.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0			0.0	0.0	
Total Lost Time (s)	5.8			5.8	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	C-Min		C-Min	C-Min	None	
Act Effct Green (s)	100.3			100.3	8.9	

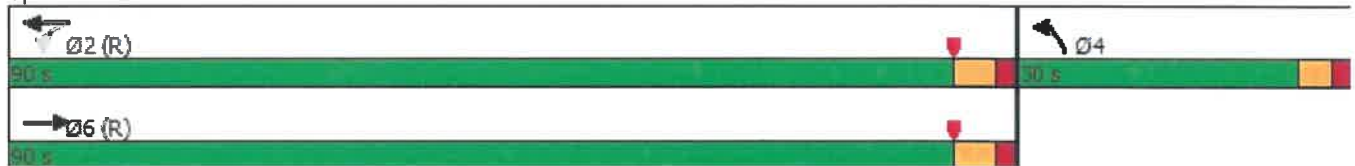
	→	↘	↙	←	↖	↗
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Actuated g/C Ratio	0.84			0.84	0.07	
v/c Ratio	0.41			0.31	0.66	
Control Delay	3.2			2.7	27.1	
Queue Delay	0.1			0.0	0.0	
Total Delay	3.3			2.7	27.1	
LOS	A			A	C	
Approach Delay	3.3			2.7	27.1	
Approach LOS	A			A	C	
Queue Length 50th (ft)	52			45	24	
Queue Length 95th (ft)	129			85	84	
Internal Link Dist (ft)	178			243	472	
Turn Bay Length (ft)						
Base Capacity (vph)	2847			2525	461	
Starvation Cap Reductn	605			0	0	
Spillback Cap Reductn	0			293	0	
Storage Cap Reductn	0			0	0	
Reduced v/c Ratio	0.52			0.35	0.35	

Intersection Summary

Area Type: Other  
 Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 95 (79%), Referenced to phase 2:WBTL and 6:EBT, Start of Yellow  
 Natural Cycle: 40  
 Control Type: Actuated-Coordinated  
 Maximum v/c Ratio: 0.66  
 Intersection Signal Delay: 4.9  
 Intersection Capacity Utilization 51.7%  
 Analysis Period (min) 15

Intersection LOS: A  
 ICU Level of Service A

Splits and Phases: 2: NORTH STATE STREET & U.S. ROUTE 1



Intersection

Intersection Delay, s/veh	7.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶				↷		↶	↷				↷
Traffic Vol, veh/h	10	0	0	0	12	39	65	66	0	0	0	15
Future Vol, veh/h	10	0	0	0	12	39	65	66	0	0	0	15
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	0	0	0	15	49	81	83	0	0	0	19
Number of Lanes	1	0	0	0	1	0	1	1	0	0	0	1
Approach	EB				WB		NB					SB
Opposing Approach	WB				EB		SB					NB
Opposing Lanes	1				1		1					2
Conflicting Approach Left	SB				NB		EB					WB
Conflicting Lanes Left	1				2		1					1
Conflicting Approach Right	NB				SB		WB					EB
Conflicting Lanes Right	2				1		1					1
HCM Control Delay	7.7				7.2		8.3					6.9
HCM LOS	A				A		A					A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	100%	0%	0%
Vol Thru, %	0%	100%	0%	24%	0%
Vol Right, %	0%	0%	0%	76%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	66	10	51	15
LT Vol	65	0	10	0	0
Through Vol	0	66	0	12	0
RT Vol	0	0	0	39	15
Lane Flow Rate	81	82	12	64	19
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.117	0.107	0.016	0.07	0.019
Departure Headway (Hd)	5.178	4.678	4.641	3.932	3.686
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	691	765	775	917	952
Service Time	2.915	2.414	2.644	1.932	1.783
HCM Lane V/C Ratio	0.117	0.107	0.015	0.07	0.02
HCM Control Delay	8.6	8	7.7	7.2	6.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.4	0	0.2	0.1



Intersection

Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↕			↕
Traffic Vol, veh/h	0	0	21	40	0	30
Future Vol, veh/h	0	0	21	40	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	23	43	0	33

Major/Minor	Major2	Minor2
Conflicting Flow All	-	0
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	WB	SB
HCM Control Delay, s	0	8.6
HCM LOS		A

Minor Lane/Major Mvmt	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	1025
HCM Lane V/C Ratio	-	-	0.032
HCM Control Delay (s)	-	-	8.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.1

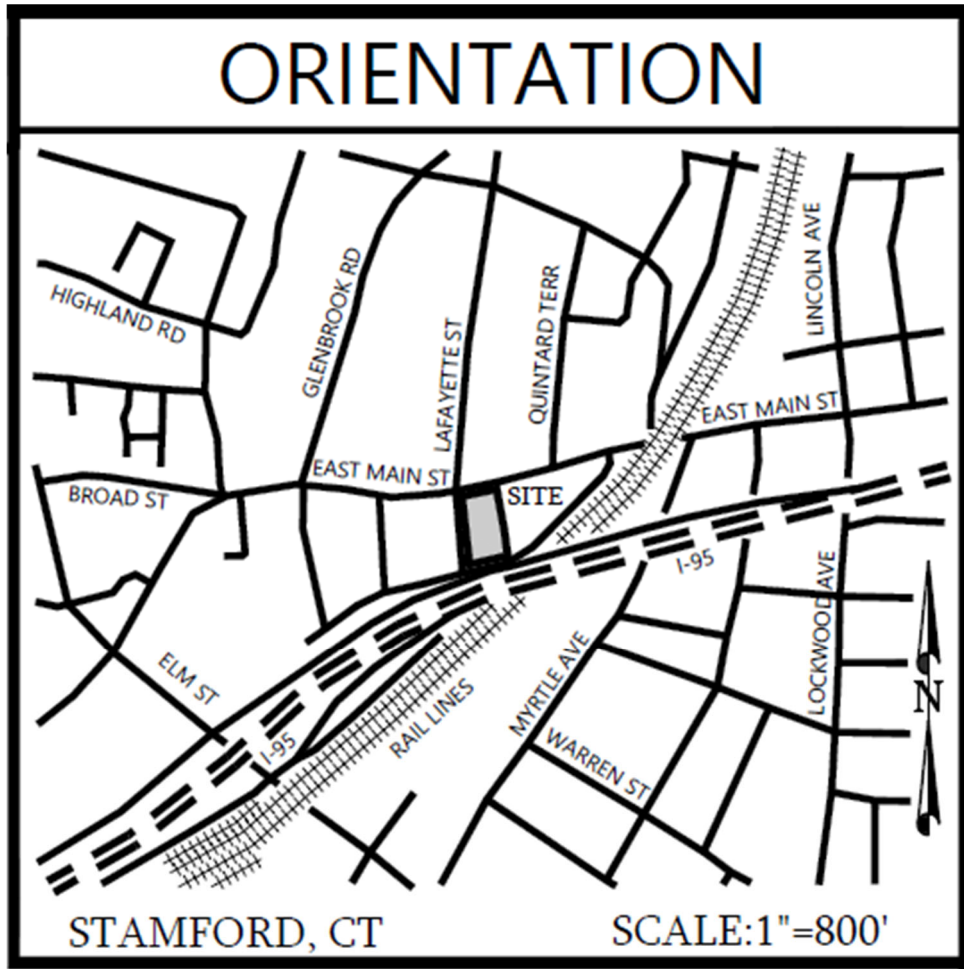
STORMWATER MANAGEMENT REPORT

819, 825, 827 & 831 EAST MAIN STREET +  
15, 27 & 29, LAFAYETTE STREET,  
STAMFORD, CT  
(1.15 acres)

prepared for  
819 EAST MAIN STREET, LLC

Date: 2/03/2022

SITE VICINITY MAP



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**Appendix A:** FEMA Flood Insurance Map  
Soil Mapping for Hydrologic Soil Groups per NRCS Web Soil Survey  
NOAA Atlas 14 Volume 10 – Precipitation Frequency

**Appendix B:** Drainage Area Maps – Onsite - (Existing and Proposed Conditions)  
HydroCAD Analysis - (Existing and Proposed Conditions)

**Appendix C:** Water Quality Volume Calculation  
Drawdown Calculation

**Appendix D:** Pipe Conveyance Exhibit  
Conveyance Calculations

**Appendix E:** Offsite Drainage Analysis for the Bayberrie & Westover Watershed  
**Existing Conditions**  
Watershed Drainage Basin Map  
Schematic Layout for Hydraulic Grade Line Analysis  
Data Tables for Hydraulic Grade Line Analysis

- Appendix F:**      Offsite Drainage Analysis for the Bayberrie & Westover Watershed  
                         **Proposed Conditions**  
                         Watershed Drainage Basin Map  
                         Schematic Layout for Hydraulic Grade Line Analysis  
                         Data Tables for Hydraulic Grade Line Analysis
- Appendix G:**      DCIA Tracking Worksheet
- Appendix H:**      Checklists for City Engineering Bureau Stormwater Management Report
- Appendix I:**      Waiver Covering Storm Sewer Connection  
                         Operation and Maintenance Agreement

## **Introduction**

The property owner is proposing a re-development of seven (7) contiguous parcels at 821, 825, 827, 831 East Main Street and 15, 27, 29 Lafayette Street for the construction of a five (5) story mixed-use building. The re-development includes one hundred thirty (130) dwelling units, 2,950 square feet (SF) of commercial area, off-street parking and associated site utilities. A total of one hundred fifty (150) parking spaces are proposed with on-site at-grade parking and within a parking garage below the first floor of the proposed building. Streetscape improvements are proposed along the street frontage of East Main Street, Lafayette Street, and North State Street.

The total project site area is 1.15 acres. The project is proposed to be re-zoned to MX-D. The contiguous parcels shall be consolidated into one corner lot. The project lot is bounded by East Main Street to the north, Lafayette Street to the west, and North State Street to the south. The commercial property of 835 East Main Street abuts the property to the east. The seven existing parcels are developed with buildings, surface parking, various hardscapes and various entrance drives on East Main Street, Lafayette Street, and North State Street. The properties are served by public water and City sewer.

Based on a review of the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Community Panel No. 09001C0517G map effective July 8, 2013, the re-development site is not located within a Flood Hazard Area. The site is tributary to the Southwest Shoreline basin and ultimately to Long Island Sound. The water quality classification for proximate surface water and groundwater is SB and GB, respectively, per the Connecticut Department of Energy & Environmental Protection. The Natural Resources Conservation Service (NRCS) information indicates the soils are in the D Hydrologic Soil Group. Refer to Appendix A for the NRCS web soil survey and the FEMA Flood Insurance map.

Reference is made to the project's Site Plan drawing sheets C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, and C-9 prepared by DiMarzo & Bereczky, Inc. dated 2/03/2022. Our firm also prepared a Property and Topographic Survey dated 12/14/2021 and a Zoning Location Survey dated 2/03/2022. The anticipated construction schedule is 3/1/2022 to 2/28/2023.

## **Existing Conditions**

The existing conditions of the project site consists of five (5) buildings, asphalt pavement, gravel pavement, lawn and planting beds. Stormwater runoff flows from the site in three directions. Runoff from the vast majority of the property flows overland to the south, and its tributary to an existing storm drain at the intersection of North State Street and Lafayette Street. Runoff from a



small on-site area abutting East Main Street flows to the north. A small runoff area along the eastern property line flows to the abutting commercial property (BevMax) to an existing private stormwater management system.

The USDA Natural Resources Conservation Service’s Websoil Survey indicates the soils on the property are labeled as Urban Land within Hydrologic Soils Group D. Deep test pits and borehole infiltration tests were performed on-site to identify any sub-grade restrictive soil conditions (ledge, groundwater, etc.). A total of six (6) deep test pits were performed. No groundwater, mottling or ledge were encountered in any of the test pits. A well-draining sand and gravel was found under a fill layer in the six deep test pits. Three borehole infiltration tests were conducted to determine if the in-situ soil can adequately infiltrate stormwater. The field infiltration rates were 5.1, 4.6 and 8.6 inches per hour. Test pit and infiltration test results can be reviewed on site plan sheet C-5. The locations are shown on utility plan C-2.

The current onsite impervious coverage is 39,380 square feet (SF). Runoff for the on-site drainage analysis is calculated using the computer program HydroCAD version 10.0 produced by HydroCAD Software Solutions, LLC. The 24-hour design storms analyzed include the 1, 2, 5, 10, 25, and 50 year storm events, with rainfall depths of 2.96, 3.58, 4.60, 5.45, 6.61 and 7.47 inches respectively. The method used is USDA, NRCS TR-55. The rainfall information is provided by NOAA Atlas 14.

Refer to Appendix B for the Onsite HydroCAD report. The existing drainage basin areas, curve numbers, time of concentrations and 25-year peak flow rates are summarized as follows:

Existing Conditions - Onsite						
Basin	Area (acres)	Sub-Basin	Area (acres)	CN	Tc (min.)	Q <sub>25</sub> (cfs)
South	1.104	South	0.744	95.25	5.0	7.30
East	0.031	East	0.031	84.00	5.0	0.18
North	0.018	North	0.018	97.09	5.0	0.12

In preparing the offsite drainage study, DiMarzo & Bereczky conducted site visits, surveyed portions of the existing City/State owned drainage system and used record information obtained from the City Engineering Bureau.

The offsite watershed for both the onsite southern and eastern basins consists of an urban land use, and it is over 19 acres in size. The outfall point of analysis is at the 24” diameter reinforced

concrete pipe (RCP) storm sewer within South State Street just east of the on-ramp spur to I-95 northbound. Under existing conditions, 97.7% of the onsite project area is tributary to this system. Refer to the enclosed Watershed Drainage Basin Map in Appendix E.

A hydraulic grade line (HGL) analysis model has been created using StormCAD Connect Edition Update 3 by Bentley Systems for the offsite storm sewer network. The analysis uses a storm event recurrence interval of 25 years based on the NOAA rainfall information. A starting tail-water elevation of 6.4 NAVD’88 is applied at the outfall connection. This tail-water considers the 24” pipe in South State Street is running at a half-full depth.

The HGL model results in ten (10) of fifteen (15) manholes overflowing within the South State Street, North State Street and Lafayette Street stormwater sewer system. Twelve (12) of twenty-two (22) catch basins are overflowing. Refer to Appendix E for further detail.

**Proposed Conditions**

The proposed improvements are classified as a development project with more than a ½ acre of disturbance. Thus, the project must comply with Standards 1 through 5 of the Stamford Drainage Manual dated 6/10/2020. Under proposed conditions, the net increase in onsite impervious coverage is 6,093 SF. The proposed drainage design is focused on providing pollutant reduction and reducing peak flow rates to the offsite watershed. In addition, the design shall match or decrease both peak flow rates and volume of runoff in the northern basin. The northern basin is tributary to the East Main Street storm sewer. The proposed drainage basin onsite areas, curve numbers, time of concentrations and 25-year peak flow rates are summarized as follows:

Proposed Conditions - Onsite						
Basin	Area (acres)	Sub-Basin	Area (acres)	CN	Tc (min.)	Q <sub>25</sub> (cfs)
South	1.107	South - 1	0.267	96.29	5.0	1.78
		South - 2	0.203	97.28	5.0	1.36
		South Bypass	0.327	97.46	5.0	4.27
East	0.029	East	0.029	84.00	5.0	0.16
North	0.018	North	0.018	87.85	5.0	0.11

The runoff from the proposed at-grade parking area shall be collected by an on-site stormwater management system of catch basins and a trench drain. The collected stormwaters shall be conveyed to two separate underground infiltration galleries. The gallery system labeled as BMP-1

consists of twenty (20) four-foot (4') high precast concrete galleries units and crushed stone. The second gallery system is labeled BMP-2, and it consists of sixteen (16) four-foot (4') high precast concrete galleries units and crushed stone. Both infiltration systems are metered with outlet devices within separate downstream manhole connections. Each manhole has a 4' wide weir overflow and two (2) six inch (6") vertical orifices within the weir wall. The orifice outlets are at a lower elevation than the overflow weir. Further downstream, a new manhole and a twelve-inch (12") storm drain are proposed within North State Street. They will connect to the City's existing storm sewer system at the intersection of Lafayette Street and North State Street.

The following table depicts existing and proposed peak rates of runoff and the hydraulic volume comparisons for the three onsite drainage basins and their respective points of concern. Additional information may be found in the HydroCAD report in Appendix B.

South Basin			
Storm Event (yrs)	Existing Peak Rate of Runoff (cfs)	Proposed Peak Rate of Runoff (cfs)	% change
1	3.09	1.88	-39.2%
2	3.82	2.28	-40.3%
5	5.00	2.95	-41.0%
10	5.97	4.19	-29.8%
25	7.30	7.12	-2.5%
50	8.28	7.97	-3.7%

South Basin						
Storm Event (yrs)	Hydraulic Volume (cubic feet)			Hydraulic Volume (acre feet)		
	Existing	Proposed	% change	Existing	Proposed	% change
1	9752	6918	-29.1	0.224	0.159	-29.1
2	12188	9385	-23.0	0.280	0.215	-23.0
5	16222	13454	-17.1	0.372	0.309	-17.1
10	19596	16851	-14.0	0.450	0.387	-14.0
25	24213	21490	-11.2	0.556	0.493	-11.2
50	27641	24933	-9.8	0.635	0.572	-9.8

East Basin			
Storm Event (yrs)	Existing Peak Rate of Runoff (cfs)	Proposed Peak Rate of Runoff (cfs)	% change
1	0.06	0.05	-16.7%
2	0.08	0.07	-12.5%
5	0.11	0.10	-9.1%
10	0.14	0.13	-7.1%
25	0.18	0.16	-11.1%
50	0.21	0.19	-9.5%

East Basin						
Storm Event (yrs)	Hydraulic Volume (cubic feet)			Hydraulic Volume (acre feet)		
	Existing	Proposed	% change	Existing	Proposed	% change
1	167	154	-7.8	0.004	0.004	-7.8
2	226	209	-7.5	0.005	0.005	-7.5
5	328	303	-7.6	0.008	0.007	-7.6
10	415	384	-7.5	0.010	0.009	-7.5
25	538	497	-7.6	0.012	0.011	-7.6
50	630	582	-7.6	0.014	0.013	-7.6

North Basin			
Storm Event (yrs)	Existing Peak Rate of Runoff (cfs)	Proposed Peak Rate of Runoff (cfs)	% change
1	0.05	0.04	-20.0%
2	0.07	0.05	-28.6%
5	0.09	0.07	-22.2%
10	0.10	0.09	-10.0%
25	0.12	0.11	-8.3%
50	0.14	0.12	-14.3%

North Basin						
Storm Event (yrs)	Hydraulic Volume (cubic feet)			Hydraulic Volume (acre feet)		
	Existing	Proposed	% change	Existing	Proposed	% change
1	175	114	-34.9	0.004	0.003	-34.9
2	216	150	-30.6	0.005	0.003	-30.6
5	284	211	-25.7	0.007	0.005	-25.7
10	341	263	-22.9	0.008	0.006	-22.9
25	418	335	-19.9	0.010	0.008	-19.9
50	475	389	-18.1	0.011	0.009	-18.1

Under post construction conditions, the calculations in the HGL analysis indicate that the City’s existing system will continue to operate under current conditions. There are either decreases or no changes in the HGL elevations. Similar to the existing condition results, ten (10) of fifteen (15) manholes are overflowing and twelve (12) of twenty-two (22) catch basins are overflowing. The following chart compares the existing and proposed HGL elevations for the storm sewer network to the outfall.

Offsite Storm Sewer System Comparison from South State Street to the upstream networks of North State St and Lafayette Street Hydraulic Grade Line (H.G.L.) Elevation Change in Feet within the Storm Main (NAVD'88)					
Pipe	Structure (Upstream)	Rim Elevation	H.G.L. (Ex. Conditions)	H.G.L. (Pr. Conditions)	Change (ft)
P-2	MH-2	16.64	23.46	23.38	-0.08
P-3	MH-3	15.50	21.29	21.29	0.00
P-4	MH-4	13.70	23.55	23.54	-0.01
P-5	MH-5	14.41	14.12	14.12	0.00
P-6	MH-6	15.30	14.41	14.41	0.00
P-7	MH-7	11.75	30.45	30.38	-0.07
P-8	MH-8	12.39	11.95	11.95	0.00
P-9	MH-9	11.35	24.43	24.43	0.00
P-10	MH-10	11.46	24.00	24.00	0.00
P-11	MH-11	14.20	11.69	11.69	0.00
P-12	MH-12	13.43	31.72	31.72	0.00
P-13	MH-13	14.80	19.44	19.44	0.00
P-14	MH-14	17.83	20.98	20.98	0.00
P-15	MH-15	19.23	20.18	20.18	0.00
P-16	MH-16	20.20	19.96	19.96	0.00

Note: Pr. Conditions represent the proposed development with infiltration galleries.

The offsite watershed flow of runoff at the outfall decreases from 83.61 cfs to 83.42 cfs. Overall, the analysis shows a proposed peak flow rate of runoff decrease of 0.2% in the 25-year storm at the 24" rcp outfall.

Per our hydraulic analysis, the proposed pipe network from the development to the downstream connection at the Lafayette and North State Street intersection is sized to ensure adequate capacity to convey stormwater runoff from the 25-year storm event. Refer to Appendix D for conveyance calculations.

The project proposes to connect to public utilities such as the public sanitary sewer, public water, gas, electric and communication services within the fronting public right-of-ways of Lafayette Street, East Main Street, and North State Street.



## **Compliance with Stormwater Management Standards**

### **Standard 1. Runoff and Pollutant Reduction**

Per section 2.4 of the City Stormwater Drainage Manual, the project is required to retain the full water quality volume (WQV) on-site using non-structural practices or infiltration best management practices.

Provisions shall be made to improve the quality of the stormwater runoff flowing from the site. The Water Quality Volume calculated for the proposed development site is 3,620 cubic feet per a calculation in conformance with the 2004 Connecticut Stormwater Quality Manual section 7.4.1. Refer to Appendix C. The two proposed stormwater infiltration systems provide for a cumulative 3,625 cubic feet prior to discharging pass the overflow weir.

### **Standard 2. Peak Flow Control**

- A. Stream channel protection is not required for this project, because the property does not discharge directly into a water body or watercourse. Regardless, the project demonstrates compliance. The post development 24 hour 2-year storm event peak flow rate of runoff of 2.28 cfs is less than the pre-development 1-year peak flow rate of 3.09 cfs.
- B. The proposed stormwater system is designed to adequately pass flows up to the 25-year design storm event as required in Section 3 of the drainage manual. Refer to the HydroCAD model found in Appendix B, and the Conveyance calculations in Appendix D.
- C. The post-development peak flow rates from the 1-year, 2-year, 5-year, 10-year, 25-year and 50- year, 24-hour storm events are controlled to the corresponding pre-development peak discharge rates. Reference is made to the HydroCAD report found in Appendix B.
- D. The infiltration galleries are designed with separate metering manhole downstream. They are equipped with high overflow weir walls to pass the larger 50 and 100-year storm events.
- E. A downstream hydraulic grade line analysis has been prepared for the project. Refer to Appendices E and F herein.

### **Standard 3. Construction Erosion and Sediment Control**

- A. A detailed Erosion and Sediment Control Plan (sheet C-4) is designed to minimize erosion and contain and properly dispose of any accumulated sediment during construction. The erosion control measures proposed are to be installed and maintained in accordance with the Connecticut Guidelines for Soil Erosion and Sediment Control. Temporary sediment and erosion controls include an anti-tracking pad, silt fence, and tree protection. The proper use of the sediment and erosion control measures minimizes potential negative impacts during

construction. Additionally, the proposed catch basins and trench drain will have two-foot (2') sumps and bell trap/pvc elbow to remove sediment and/or floatables.

#### Standard 4. Operation and Maintenance


- A. A Standard City of Stamford Drainage Maintenance Agreement will be executed with the Environmental Protection Board at the completion of construction. A draft maintenance agreement has been prepared and is included in Appendix I.
- B. The Low Impact Development Plan on sheet C-9 includes notes describing the long-term maintenance requirements for the project's drainage system. This includes routine and non-route inspection and maintenance tasks to be undertaken after construction is completed as well as the schedule for implementing these tasks.


#### Standard 5. Stormwater Management Report

- A. This document and its enclosed appendices serve as the required Stormwater Management.
- B. Our certification is provided herein.

#### Summary

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.”

  
Louis DiMarzo, P.E.  
CT Registration # 26847  
February 3, 2022

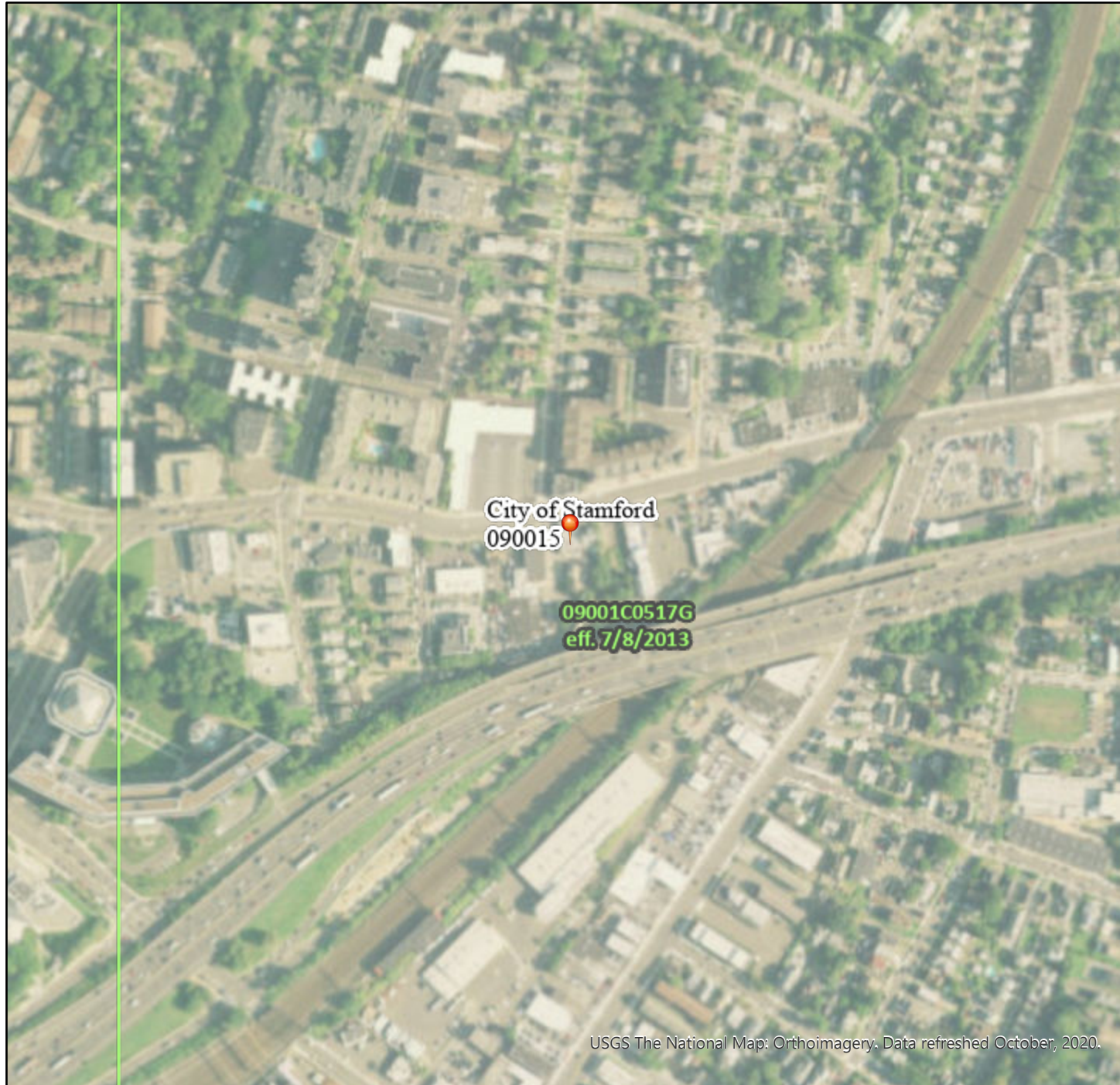


# APPENDIX – A

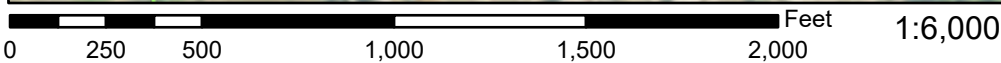
# National Flood Hazard Layer FIRMMette



73°31'56"W 41°3'32"N



USGS The National Map: Orthoimagery. Data refreshed October, 2020.



73°31'19"W 41°3'5"N

## Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i>
		With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i>
		Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i>
		Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i>
		Area with Flood Risk due to Levee <i>Zone D</i>
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i>
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard <i>Zone D</i>
		Channel, Culvert, or Storm Sewer
OTHER FEATURES		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
MAP PANELS		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
OTHER FEATURES		Limit of Study
		Jurisdiction Boundary
OTHER FEATURES		Coastal Transect Baseline
		Profile Baseline
OTHER FEATURES		Hydrographic Feature
		Digital Data Available
MAP PANELS		No Digital Data Available
		Unmapped
OTHER FEATURES		The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

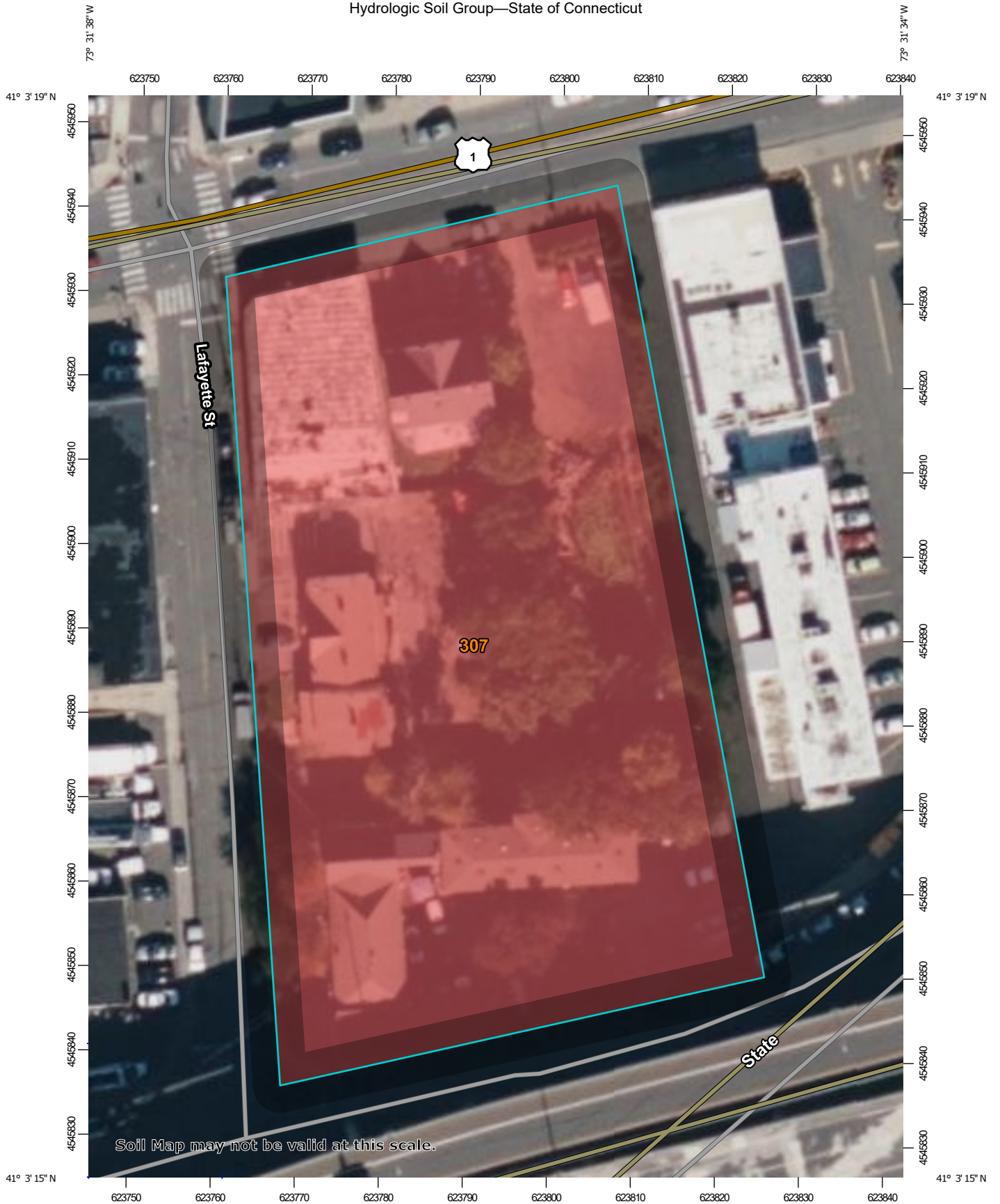
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **11/9/2020 at 9:50 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



Hydrologic Soil Group—State of Connecticut



Map Scale: 1:625 if printed on A portrait (8.5" x 11") sheet.

0 5 10 20 30 Meters

0 30 60 120 180 Feet

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



Natural Resources  
Conservation Service

Web Soil Survey  
National Cooperative Soil Survey

1/27/2022  
Page 1 of 4

## 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 21, Sep 7, 2021

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

Date(s) aerial images were photographed: Oct 8, 2020—Oct 14, 2020

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

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
307	Urban land	D	1.3	100.0%
<b>Totals for Area of Interest</b>			<b>1.3</b>	<b>100.0%</b>

### 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



NOAA Atlas 14, Volume 10, Version 3  
 Location name: Stamford, Connecticut, USA\*  
 Latitude: 41.0551°, Longitude: -73.5271°  
 Elevation: 18.08 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 & aerials](#)

**PF tabular**

<b>PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)<sup>1</sup></b>										
Duration	Average recurrence interval (years)									
	1	2	5	10	25	50	100	200	500	1000
5-min	0.365 (0.282-0.463)	0.425 (0.328-0.540)	0.523 (0.403-0.667)	0.605 (0.463-0.775)	0.717 (0.532-0.951)	0.802 (0.583-1.08)	0.890 (0.628-1.24)	0.985 (0.662-1.40)	1.12 (0.724-1.64)	1.23 (0.775-1.83)
10-min	0.517 (0.400-0.657)	0.602 (0.465-0.765)	0.741 (0.571-0.945)	0.856 (0.656-1.10)	1.01 (0.753-1.35)	1.14 (0.825-1.53)	1.26 (0.889-1.75)	1.40 (0.939-1.99)	1.59 (1.03-2.32)	1.74 (1.10-2.59)
15-min	0.608 (0.470-0.772)	0.708 (0.547-0.901)	0.872 (0.671-1.11)	1.01 (0.772-1.29)	1.20 (0.886-1.59)	1.34 (0.971-1.81)	1.48 (1.05-2.06)	1.64 (1.11-2.34)	1.86 (1.21-2.73)	2.04 (1.29-3.05)
30-min	0.850 (0.658-1.08)	0.991 (0.766-1.26)	1.22 (0.941-1.56)	1.41 (1.08-1.81)	1.68 (1.24-2.22)	1.88 (1.36-2.53)	2.08 (1.47-2.89)	2.30 (1.55-3.27)	2.60 (1.69-3.81)	2.84 (1.80-4.23)
60-min	1.09 (0.845-1.39)	1.27 (0.985-1.62)	1.57 (1.21-2.00)	1.82 (1.39-2.33)	2.16 (1.60-2.86)	2.42 (1.75-3.26)	2.68 (1.89-3.72)	2.96 (1.99-4.21)	3.34 (2.16-4.89)	3.63 (2.30-5.42)
2-hr	1.41 (1.10-1.78)	1.66 (1.29-2.10)	2.07 (1.61-2.63)	2.41 (1.86-3.08)	2.88 (2.15-3.80)	3.24 (2.37-4.35)	3.61 (2.56-4.99)	4.01 (2.71-5.66)	4.57 (2.97-6.65)	5.01 (3.18-7.44)
3-hr	1.63 (1.27-2.05)	1.93 (1.50-2.42)	2.42 (1.88-3.05)	2.82 (2.18-3.58)	3.38 (2.53-4.45)	3.80 (2.79-5.09)	4.24 (3.02-5.86)	4.73 (3.20-6.66)	5.42 (3.53-7.86)	5.98 (3.80-8.83)
6-hr	2.05 (1.61-2.56)	2.44 (1.92-3.05)	3.08 (2.41-3.87)	3.61 (2.81-4.55)	4.35 (3.28-5.69)	4.89 (3.62-6.52)	5.47 (3.93-7.54)	6.13 (4.16-8.57)	7.07 (4.62-10.2)	7.85 (5.00-11.5)
12-hr	2.53 (2.00-3.14)	3.03 (2.39-3.76)	3.84 (3.03-4.78)	4.51 (3.54-5.65)	5.44 (4.13-7.08)	6.14 (4.56-8.14)	6.87 (4.97-9.42)	7.72 (5.26-10.7)	8.95 (5.87-12.8)	9.98 (6.39-14.5)
24-hr	2.96 (2.36-3.65)	3.58 (2.85-4.42)	4.60 (3.65-5.70)	5.45 (4.29-6.77)	6.61 (5.05-8.56)	7.47 (5.59-9.87)	8.40 (6.11-11.5)	9.49 (6.49-13.1)	11.1 (7.30-15.8)	12.5 (8.00-18.0)
2-day	3.31 (2.65-4.05)	4.07 (3.26-4.99)	5.32 (4.25-6.54)	6.35 (5.04-7.85)	7.78 (5.98-10.0)	8.83 (6.66-11.6)	9.97 (7.32-13.6)	11.3 (7.79-15.6)	13.4 (8.86-19.0)	15.2 (9.80-21.9)
3-day	3.57 (2.87-4.35)	4.40 (3.54-5.38)	5.77 (4.63-7.07)	6.91 (5.50-8.50)	8.47 (6.54-10.9)	9.62 (7.28-12.6)	10.9 (8.01-14.8)	12.4 (8.52-16.9)	14.7 (9.71-20.7)	16.7 (10.7-23.9)
4-day	3.82 (3.09-4.65)	4.70 (3.79-5.73)	6.14 (4.94-7.50)	7.34 (5.86-9.00)	8.98 (6.95-11.5)	10.2 (7.73-13.3)	11.5 (8.50-15.6)	13.1 (9.03-17.9)	15.5 (10.3-21.8)	17.6 (11.4-25.1)
7-day	4.55 (3.70-5.51)	5.51 (4.47-6.67)	7.07 (5.72-8.59)	8.37 (6.72-10.2)	10.2 (7.89-12.9)	11.5 (8.73-14.9)	12.9 (9.53-17.3)	14.6 (10.1-19.8)	17.1 (11.4-23.9)	19.2 (12.5-27.3)
10-day	5.27 (4.30-6.36)	6.28 (5.11-7.58)	7.92 (6.43-9.59)	9.29 (7.49-11.3)	11.2 (8.69-14.1)	12.6 (9.57-16.2)	14.1 (10.4-18.7)	15.8 (11.0-21.3)	18.3 (12.2-25.5)	20.4 (13.2-28.9)
20-day	7.44 (6.10-8.91)	8.57 (7.02-10.3)	10.4 (8.50-12.5)	12.0 (9.69-14.4)	14.1 (11.0-17.6)	15.7 (11.9-19.9)	17.3 (12.7-22.6)	19.1 (13.3-25.6)	21.5 (14.4-29.7)	23.5 (15.3-33.0)
30-day	9.23 (7.60-11.0)	10.4 (8.60-12.5)	12.4 (10.2-14.9)	14.1 (11.5-17.0)	16.4 (12.8-20.3)	18.1 (13.9-22.9)	19.9 (14.6-25.8)	21.7 (15.2-28.9)	24.1 (16.1-33.1)	25.9 (16.9-36.2)
45-day	11.4 (9.46-13.6)	12.8 (10.5-15.2)	14.9 (12.3-17.8)	16.7 (13.7-20.0)	19.2 (15.1-23.7)	21.1 (16.2-26.5)	23.0 (16.9-29.5)	24.9 (17.5-33.0)	27.2 (18.3-37.2)	28.9 (18.9-40.3)
60-day	13.3 (11.0-15.7)	14.7 (12.2-17.4)	17.0 (14.0-20.2)	18.9 (15.5-22.6)	21.5 (16.9-26.4)	23.6 (18.1-29.4)	25.6 (18.8-32.7)	27.5 (19.3-36.3)	29.8 (20.1-40.6)	31.5 (20.6-43.7)

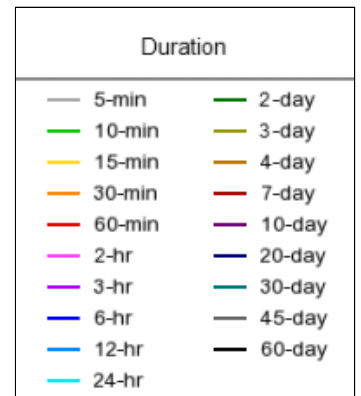
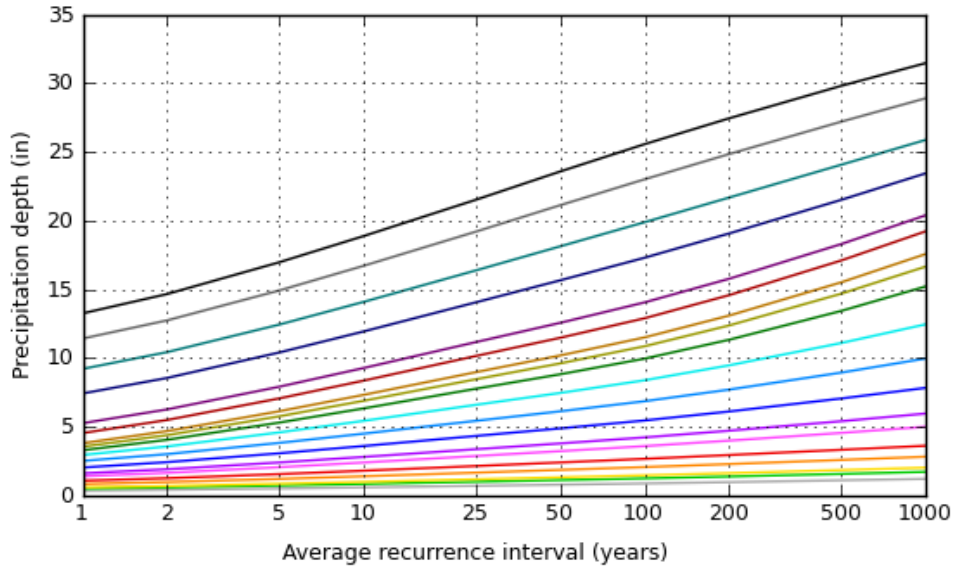
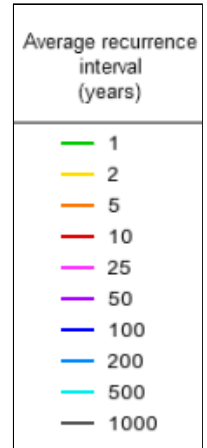
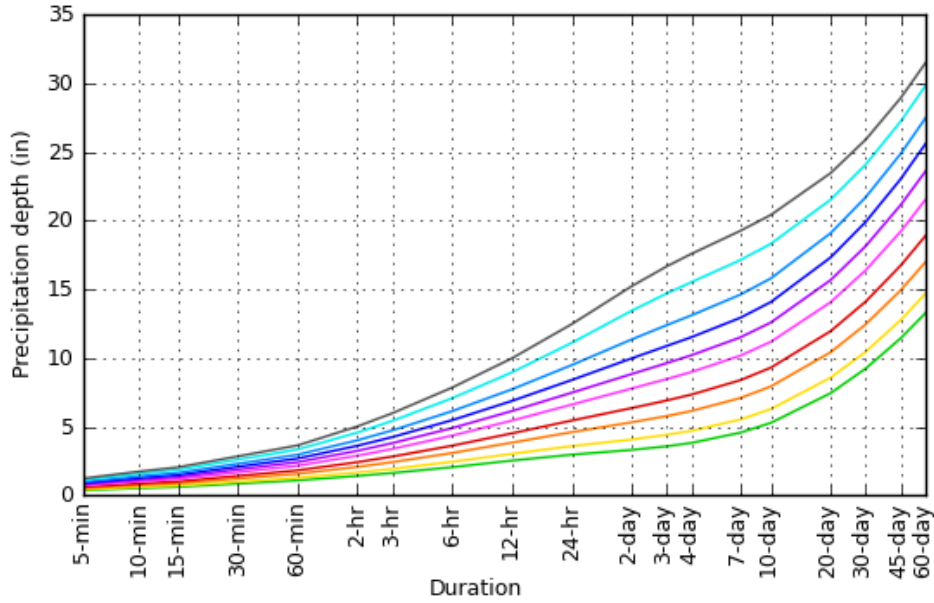
<sup>1</sup> Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS). Numbers in parenthesis are PF estimates at lower and upper bounds of the 90% confidence interval. The probability that precipitation frequency estimates (for a given duration 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

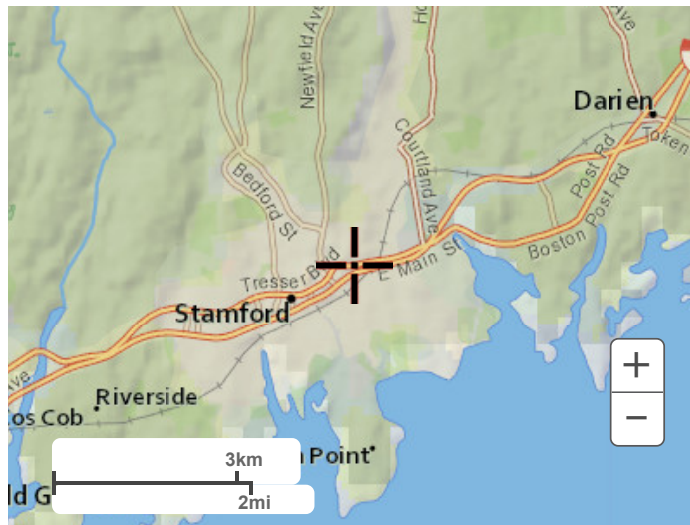
Latitude: 41.0551°, Longitude: -73.5271°



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**Maps & aerials**

**Small scale terrain**



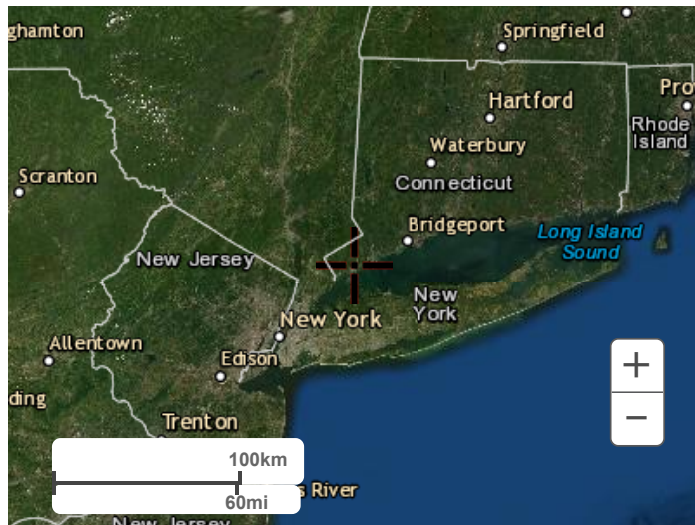
Large scale terrain



Large scale map



Large scale aerial



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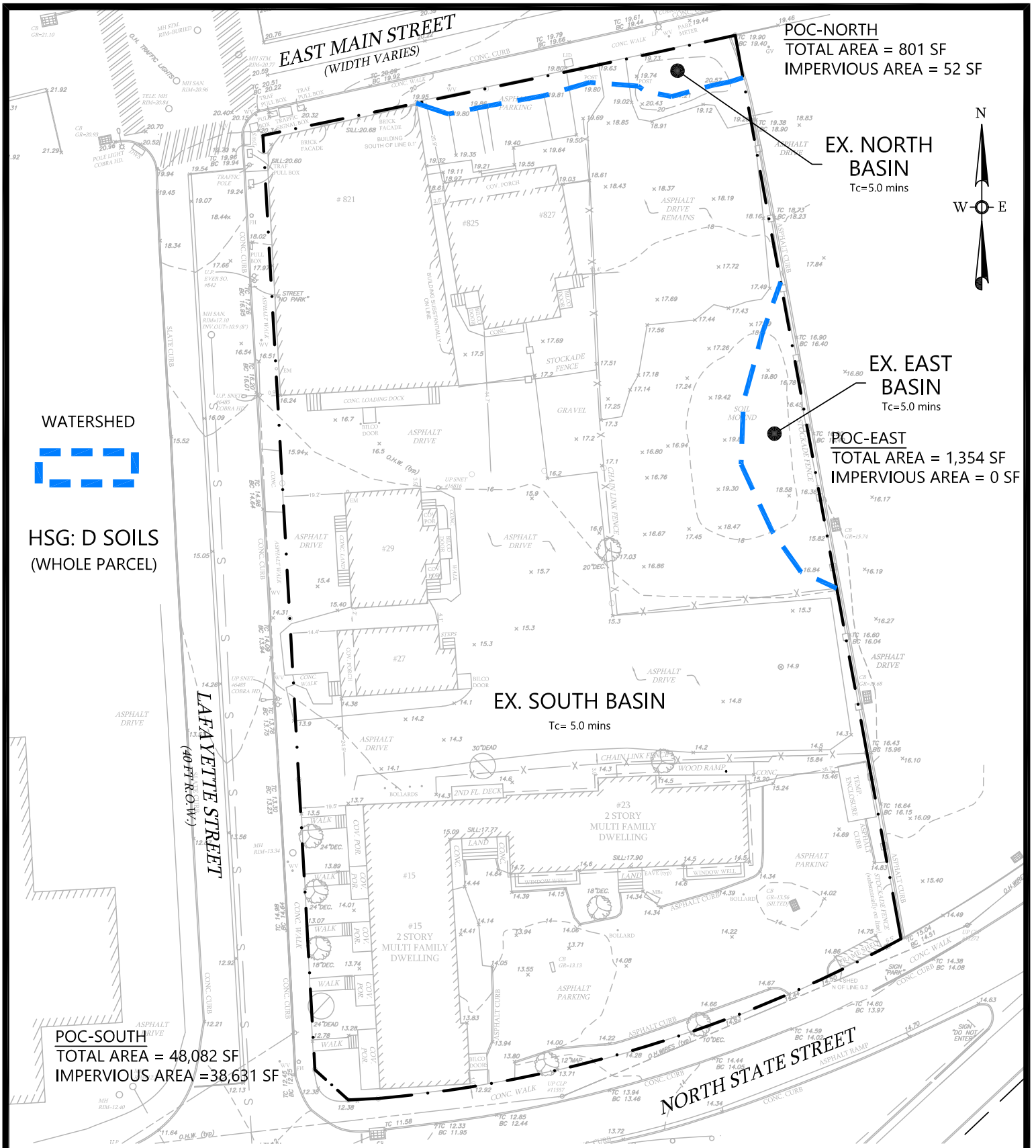
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[US Department of Commerce](#)  
[National Oceanic and Atmospheric Administration](#)  
[National Weather Service](#)  
[National Water Center](#)  
1325 East West Highway  
Silver Spring, MD 20910  
Questions?: [HDSC.Questions@noaa.gov](mailto:HDSC.Questions@noaa.gov)

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# APPENDIX – B



**POC-NORTH**  
 TOTAL AREA = 801 SF  
 IMPERVIOUS AREA = 52 SF

**EX. NORTH BASIN**  
 Tc=5.0 mins

**EX. EAST BASIN**  
 Tc=5.0 mins

**POC-EAST**  
 TOTAL AREA = 1,354 SF  
 IMPERVIOUS AREA = 0 SF

**EX. SOUTH BASIN**  
 Tc= 5.0 mins

**POC-SOUTH**  
 TOTAL AREA = 48,082 SF  
 IMPERVIOUS AREA = 38,631 SF

**WATERSHED**



**HSG: D SOILS**  
 (WHOLE PARCEL)

**DIMARZO & BEREZKY**

191 LLOYD DRIVE  
 FAIRFIELD, CT 06825  
 203.857.4110

LAND SURVEYING  
 CIVIL ENGINEERING  
 PERMITTING

**DRAINAGE BASIN MAP**  
**ONSITE - EXISTING CONDITIONS**

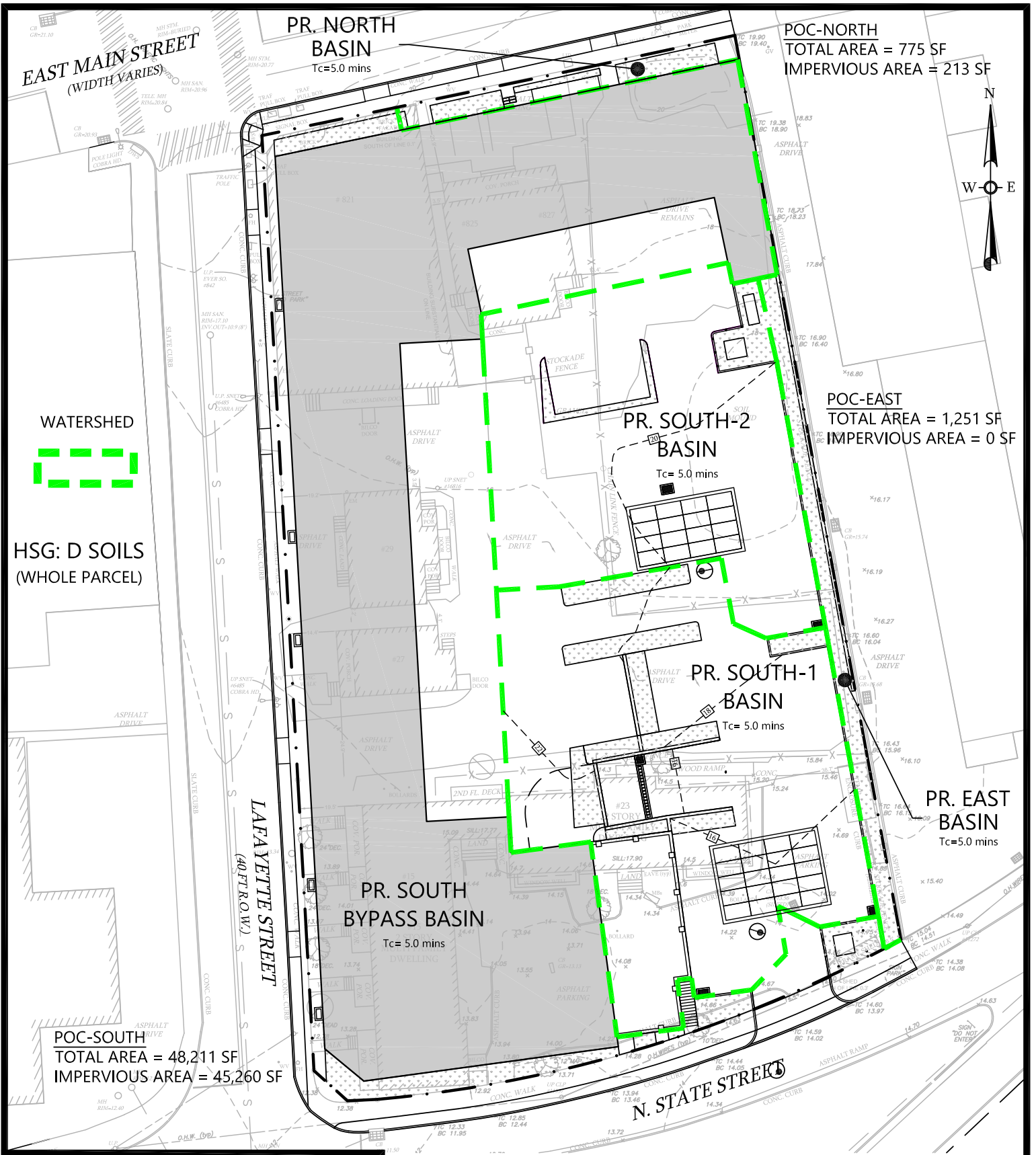
PREPARED FOR  
**819 EAST MAIN STREET**  
**STAMFORD, CT**

**DR-EX**

DATE: 2/03/2022

SCALE: 0 40  
 1"=40'





POC-NORTH  
TOTAL AREA = 775 SF  
IMPERVIOUS AREA = 213 SF

POC-EAST  
TOTAL AREA = 1,251 SF  
IMPERVIOUS AREA = 0 SF

POC-SOUTH  
TOTAL AREA = 48,211 SF  
IMPERVIOUS AREA = 45,260 SF

PR. NORTH  
BASIN  
Tc=5.0 mins

PR. SOUTH-2  
BASIN  
Tc= 5.0 mins

PR. SOUTH-1  
BASIN  
Tc= 5.0 mins

PR. SOUTH  
BYPASS BASIN  
Tc= 5.0 mins

PR. EAST  
BASIN  
Tc=5.0 mins

**DIMARZO &  
BERECZKY**

191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.857.4110

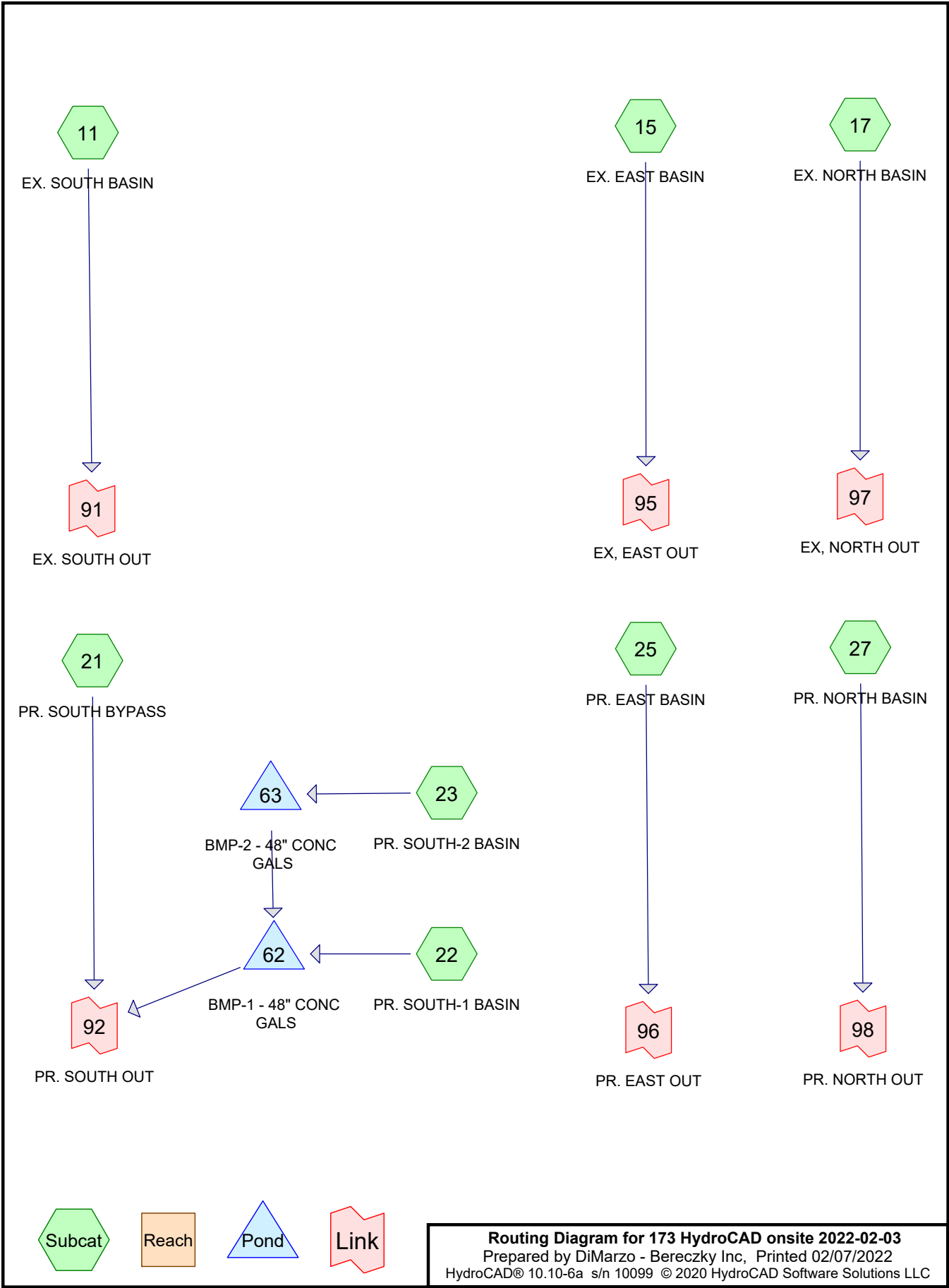
LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

**DRAINAGE BASIN MAP  
ONSITE - PROPOSED CONDITIONS**  
PREPARED FOR  
**819 EAST MAIN STREET  
STAMFORD, CT**

**DR-PR**

DATE: 2/03/2022

SCALE: 0 40  
1"=40'



EX. SOUTH BASIN



EX. SOUTH OUT



EX. EAST BASIN



EX, EAST OUT



EX. NORTH BASIN



EX, NORTH OUT



PR. SOUTH BYPASS



PR. SOUTH OUT



BMP-2 - 48" CONC  
GALS



BMP-1 - 48" CONC  
GALS



PR. SOUTH-2 BASIN



PR. SOUTH-1 BASIN



PR. EAST BASIN



PR. EAST OUT



PR. NORTH BASIN



PR. NORTH OUT



**Routing Diagram for 173 HydroCAD onsite 2022-02-03**  
 Prepared by DiMarzo - Bereczky Inc, Printed 02/07/2022  
 HydroCAD® 10.10-6a s/n 10099 © 2020 HydroCAD Software Solutions LLC

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

<b>Subcatchment 11: EX. SOUTH BASIN</b>	Runoff Area=48,082 sf 80.34% Impervious Runoff Depth>2.43" Tc=5.0 min CN=95.25 Runoff=3.09 cfs 9,752 cf
<b>Subcatchment 15: EX. EAST BASIN</b>	Runoff Area=1,354 sf 0.00% Impervious Runoff Depth>1.48" Tc=5.0 min CN=84.00 Runoff=0.06 cfs 167 cf
<b>Subcatchment 17: EX. NORTH BASIN</b>	Runoff Area=801 sf 93.51% Impervious Runoff Depth>2.63" Tc=5.0 min CN=97.09 Runoff=0.05 cfs 175 cf
<b>Subcatchment 21: PR. SOUTH BYPASS</b>	Runoff Area=27,749 sf 96.14% Impervious Runoff Depth>2.67" Tc=5.0 min CN=97.46 Runoff=1.88 cfs 6,167 cf
<b>Subcatchment 22: PR. SOUTH-1 BASIN</b>	Runoff Area=11,610 sf 87.75% Impervious Runoff Depth>2.54" Tc=5.0 min CN=96.29 Runoff=0.77 cfs 2,459 cf
<b>Subcatchment 23: PR. SOUTH-2 BASIN</b>	Runoff Area=8,852 sf 94.84% Impervious Runoff Depth>2.65" Tc=5.0 min CN=97.28 Runoff=0.60 cfs 1,953 cf
<b>Subcatchment 25: PR. EAST BASIN</b>	Runoff Area=1,251 sf 0.00% Impervious Runoff Depth>1.48" Tc=5.0 min CN=84.00 Runoff=0.05 cfs 154 cf
<b>Subcatchment 27: PR. NORTH BASIN</b>	Runoff Area=775 sf 27.48% Impervious Runoff Depth>1.77" Tc=5.0 min CN=87.85 Runoff=0.04 cfs 114 cf
<b>Pond 62: BMP-1 - 48" CONC GALS</b>	Peak Elev=12.48' Storage=2,076 cf Inflow=0.77 cfs 2,802 cf Outflow=0.04 cfs 751 cf
<b>Pond 63: BMP-2 - 48" CONC GALS</b>	Peak Elev=16.45' Storage=1,630 cf Inflow=0.60 cfs 1,953 cf Outflow=0.02 cfs 343 cf
<b>Link 91: EX. SOUTH OUT</b>	Inflow=3.09 cfs 9,752 cf Primary=3.09 cfs 9,752 cf
<b>Link 92: PR. SOUTH OUT</b>	Inflow=1.88 cfs 6,918 cf Primary=1.88 cfs 6,918 cf
<b>Link 95: EX, EAST OUT</b>	Inflow=0.06 cfs 167 cf Primary=0.06 cfs 167 cf
<b>Link 96: PR. EAST OUT</b>	Inflow=0.05 cfs 154 cf Primary=0.05 cfs 154 cf
<b>Link 97: EX, NORTH OUT</b>	Inflow=0.05 cfs 175 cf Primary=0.05 cfs 175 cf
<b>Link 98: PR. NORTH OUT</b>	Inflow=0.04 cfs 114 cf Primary=0.04 cfs 114 cf

---

**Total Runoff Area = 100,474 sf   Runoff Volume = 20,942 cf   Average Runoff Depth = 2.50"**  
**15.55% Pervious = 15,621 sf   84.45% Impervious = 84,853 sf**



**Summary for Subcatchment 11: EX. SOUTH BASIN**

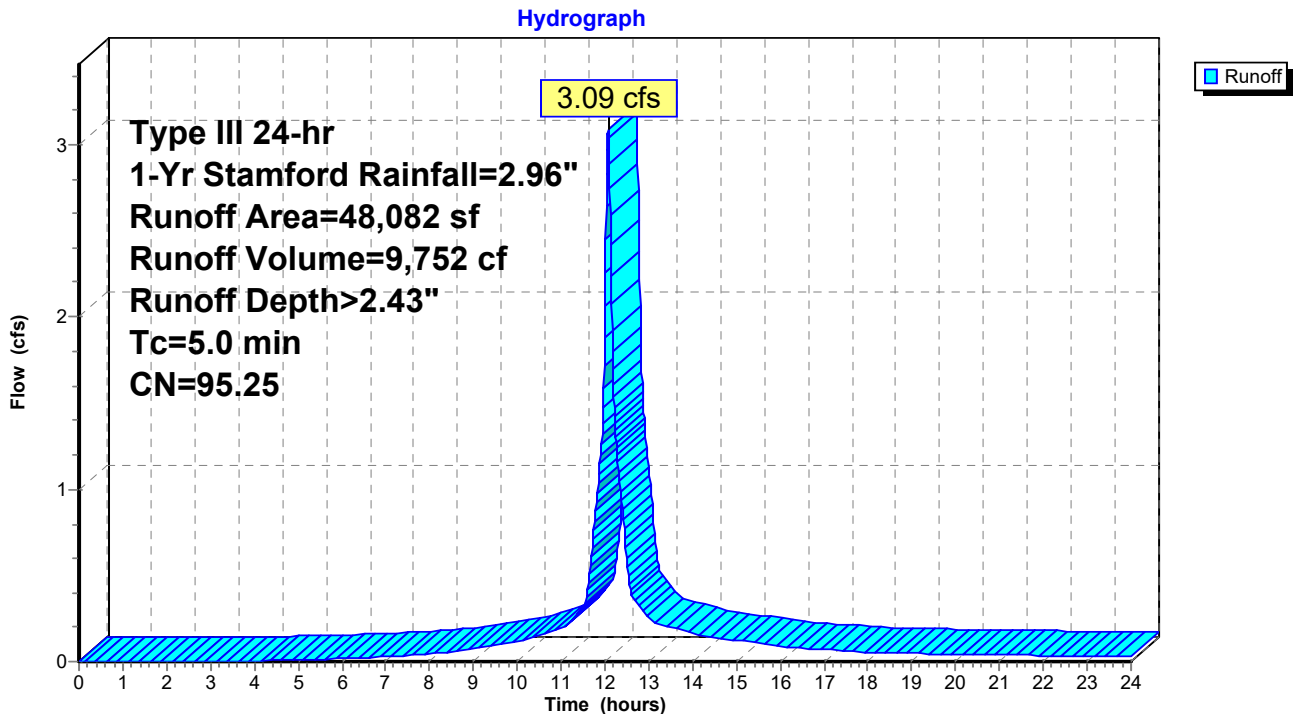
Runoff = 3.09 cfs @ 12.07 hrs, Volume= 9,752 cf, Depth> 2.43"  
 Routed to Link 91 : EX. SOUTH OUT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
12,667	98.00	Roofs, HSG D
* 25,964	98.00	Paved Hardscapes, HSG D
9,451	84.00	50-75% Grass cover, Fair, HSG D
48,082	95.25	Weighted Average
9,451		19.66% Pervious Area
38,631		80.34% Impervious Area

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

**Subcatchment 11: EX. SOUTH BASIN**



**Summary for Subcatchment 15: EX. EAST BASIN**

Runoff = 0.06 cfs @ 12.08 hrs, Volume= 167 cf, Depth> 1.48"  
 Routed to Link 95 : EX, EAST OUT

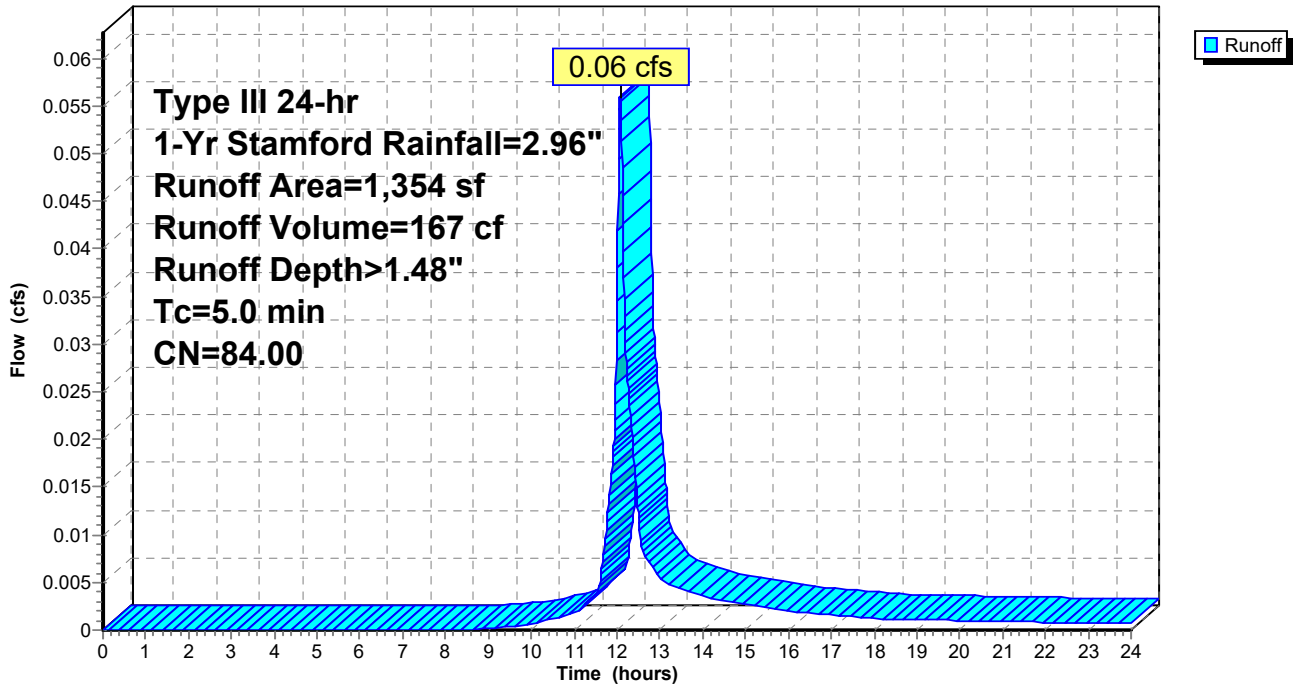
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
0	98.00	Roofs, HSG D
* 0	98.00	Paved Hardscapes, HSG D
1,354	84.00	50-75% Grass cover, Fair, HSG D
1,354	84.00	Weighted Average
1,354		100.00% Pervious Area

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

**Subcatchment 15: EX. EAST BASIN**

Hydrograph



**Summary for Subcatchment 17: EX. NORTH BASIN**

Runoff = 0.05 cfs @ 12.07 hrs, Volume= 175 cf, Depth> 2.63"  
 Routed to Link 97 : EX, NORTH OUT

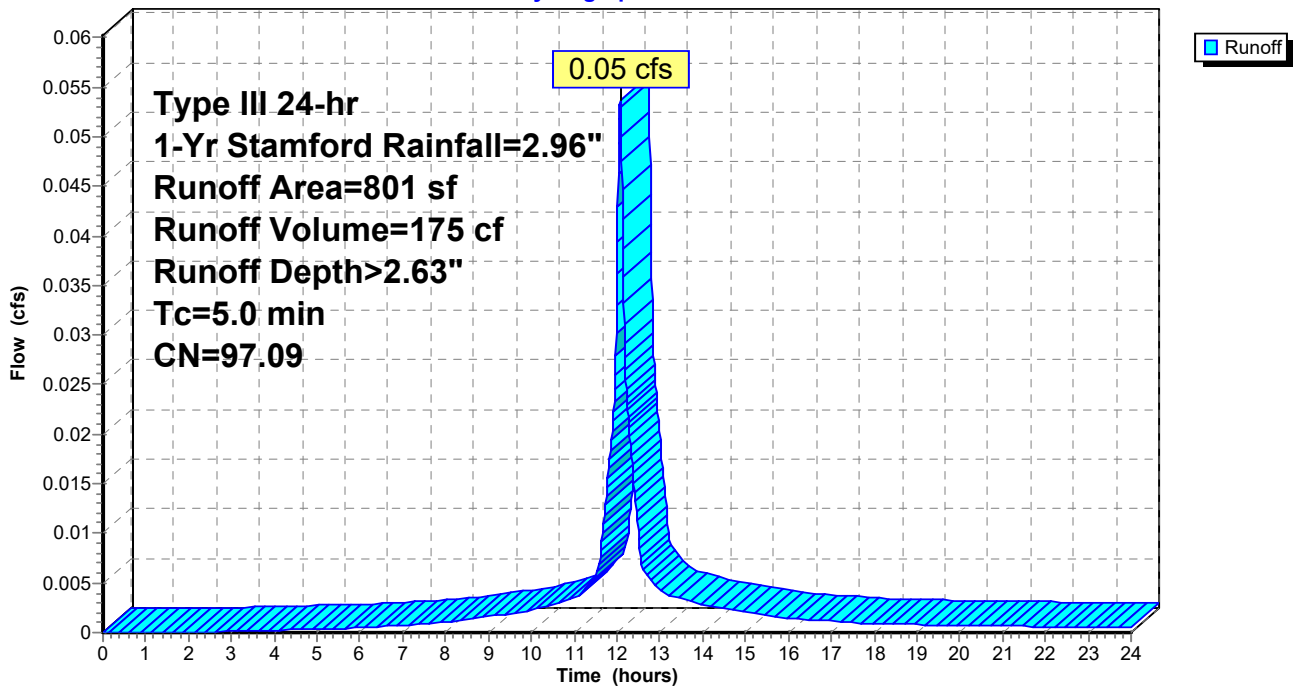
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
0	98.00	Roofs, HSG D
* 749	98.00	Paved Hardscapes, HSG D
52	84.00	50-75% Grass cover, Fair, HSG D
801	97.09	Weighted Average
52		6.49% Pervious Area
749		93.51% Impervious Area

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

**Subcatchment 17: EX. NORTH BASIN**

Hydrograph



**Summary for Subcatchment 21: PR. SOUTH BYPASS**

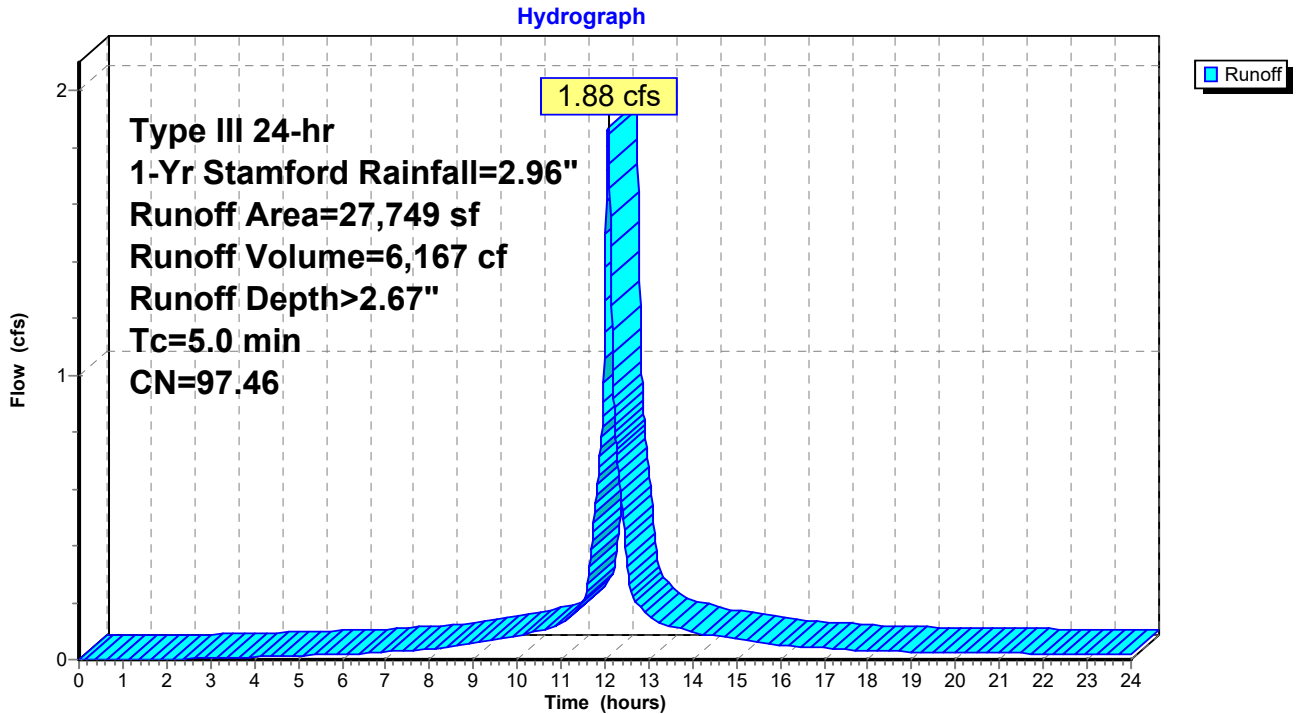
Runoff = 1.88 cfs @ 12.07 hrs, Volume= 6,167 cf, Depth> 2.67"  
 Routed to Link 92 : PR. SOUTH OUT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
24,917	98.00	Roofs, HSG D
* 1,760	98.00	Paved Hardscapes, HSG D
1,072	84.00	50-75% Grass cover, Fair, HSG D
27,749	97.46	Weighted Average
1,072		3.86% Pervious Area
26,677		96.14% Impervious Area

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

**Subcatchment 21: PR. SOUTH BYPASS**



**Summary for Subcatchment 22: PR. SOUTH-1 BASIN**

Runoff = 0.77 cfs @ 12.07 hrs, Volume= 2,459 cf, Depth> 2.54"  
 Routed to Pond 62 : BMP-1 - 48" CONC GALS

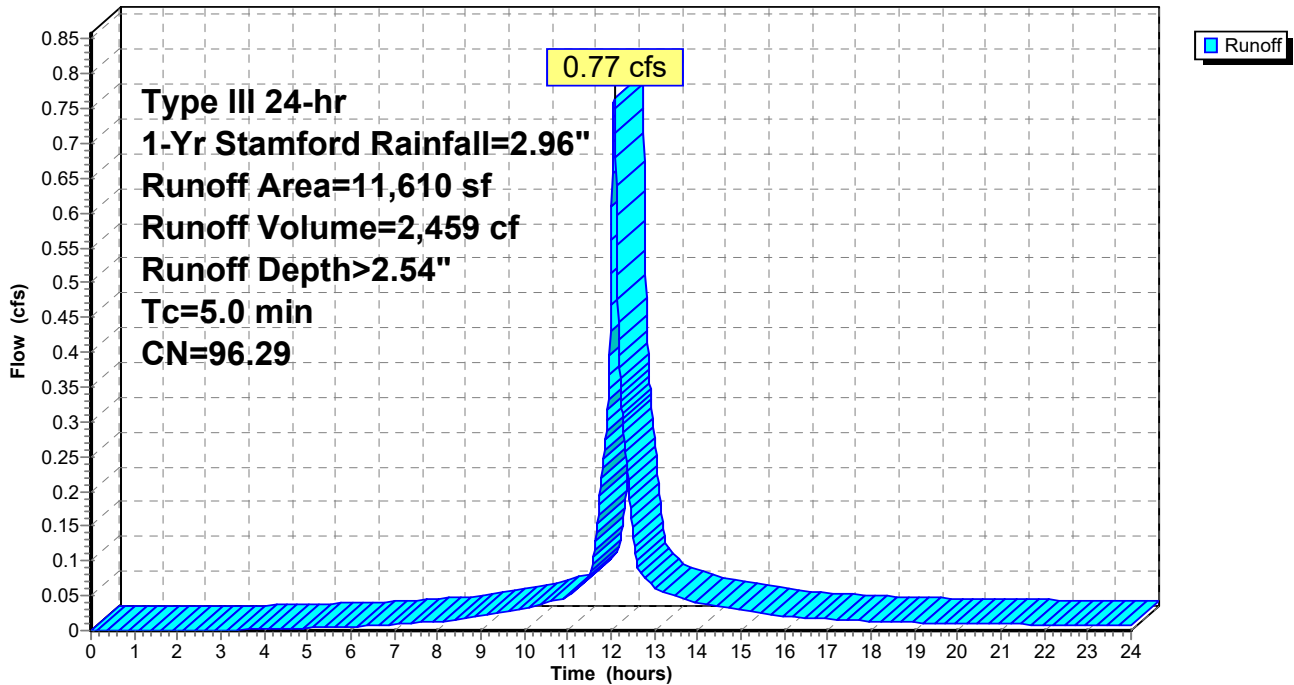
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
1,480	98.00	Roofs, HSG D
* 8,708	98.00	Paved Hardscapes, HSG D
1,422	84.00	50-75% Grass cover, Fair, HSG D
11,610	96.29	Weighted Average
1,422		12.25% Pervious Area
10,188		87.75% Impervious Area

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

**Subcatchment 22: PR. SOUTH-1 BASIN**

Hydrograph



**Summary for Subcatchment 23: PR. SOUTH-2 BASIN**

Runoff = 0.60 cfs @ 12.07 hrs, Volume= 1,953 cf, Depth> 2.65"  
 Routed to Pond 63 : BMP-2 - 48" CONC GALS

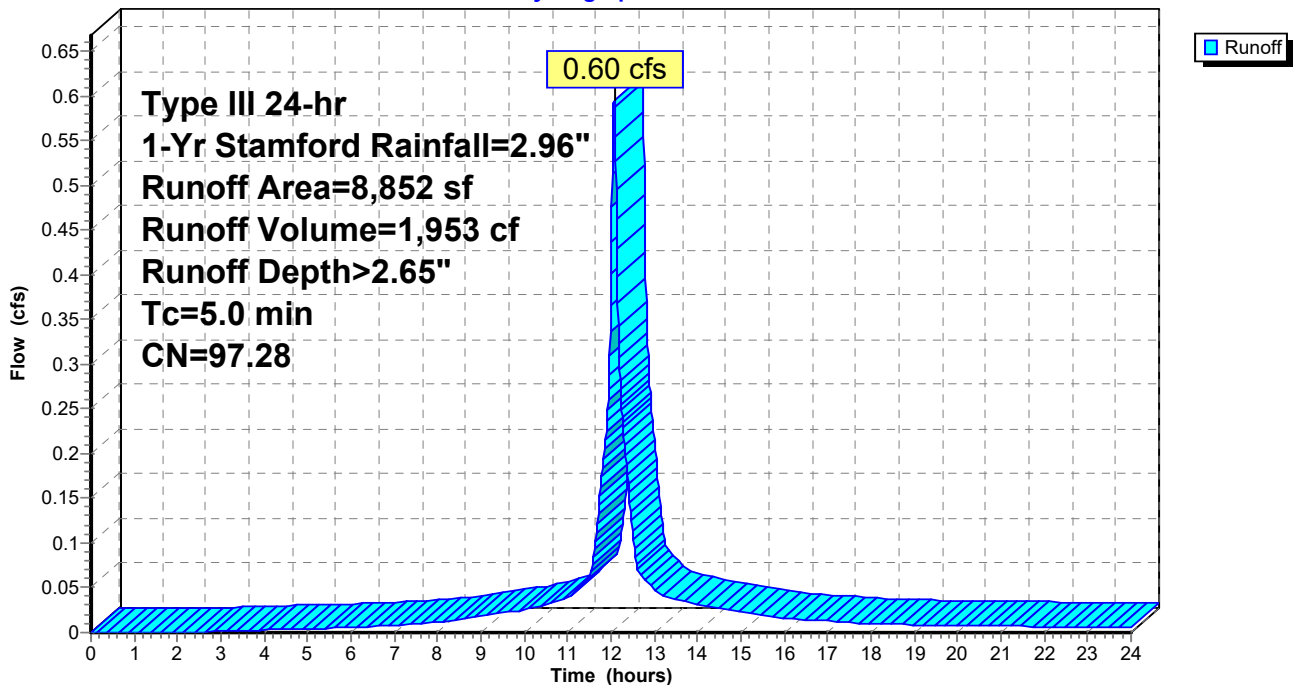
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
0	98.00	Roofs, HSG D
* 8,395	98.00	Paved Hardscapes, HSG D
457	84.00	50-75% Grass cover, Fair, HSG D
8,852	97.28	Weighted Average
457		5.16% Pervious Area
8,395		94.84% Impervious Area

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

**Subcatchment 23: PR. SOUTH-2 BASIN**

Hydrograph





**Summary for Subcatchment 25: PR. EAST BASIN**

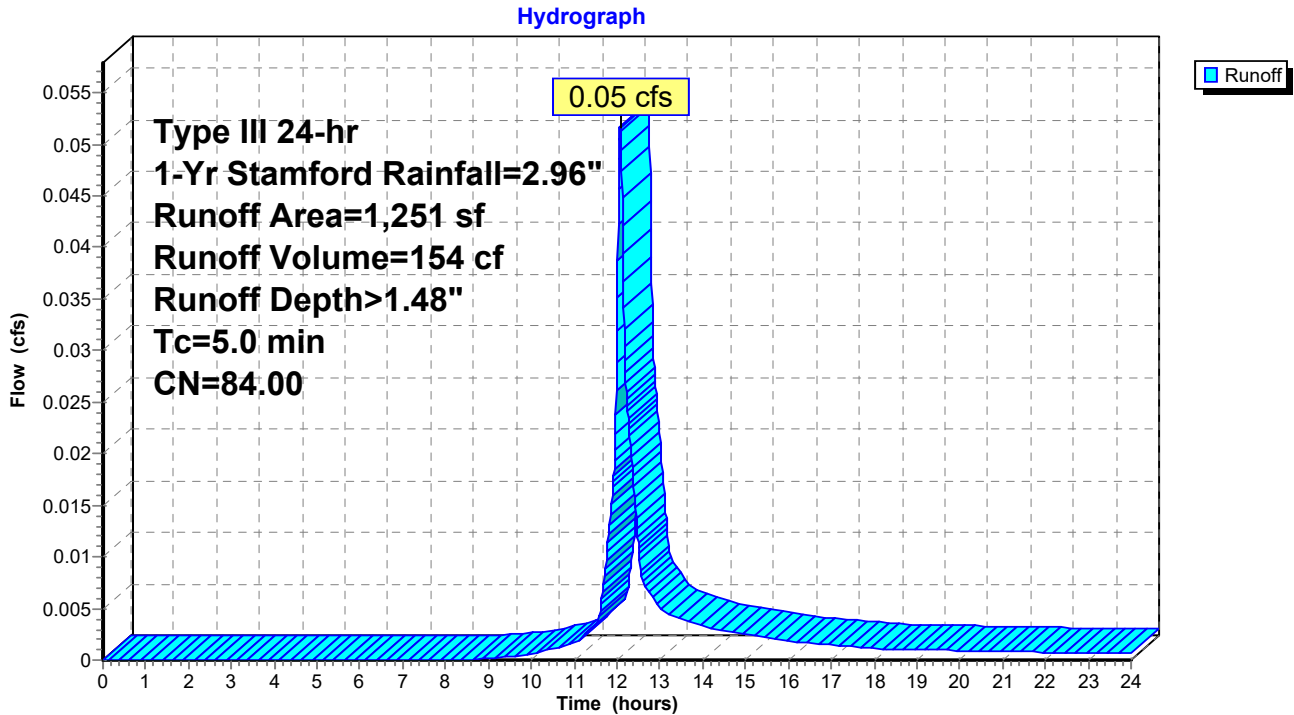
Runoff = 0.05 cfs @ 12.08 hrs, Volume= 154 cf, Depth> 1.48"  
 Routed to Link 96 : PR. EAST OUT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
0	98.00	Roofs, HSG D
* 0	98.00	Paved Hardscapes, HSG D
1,251	84.00	50-75% Grass cover, Fair, HSG D
1,251	84.00	Weighted Average
1,251		100.00% Pervious Area

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

**Subcatchment 25: PR. EAST BASIN**



**Summary for Subcatchment 27: PR. NORTH BASIN**

Runoff = 0.04 cfs @ 12.07 hrs, Volume= 114 cf, Depth> 1.77"  
 Routed to Link 98 : PR. NORTH OUT

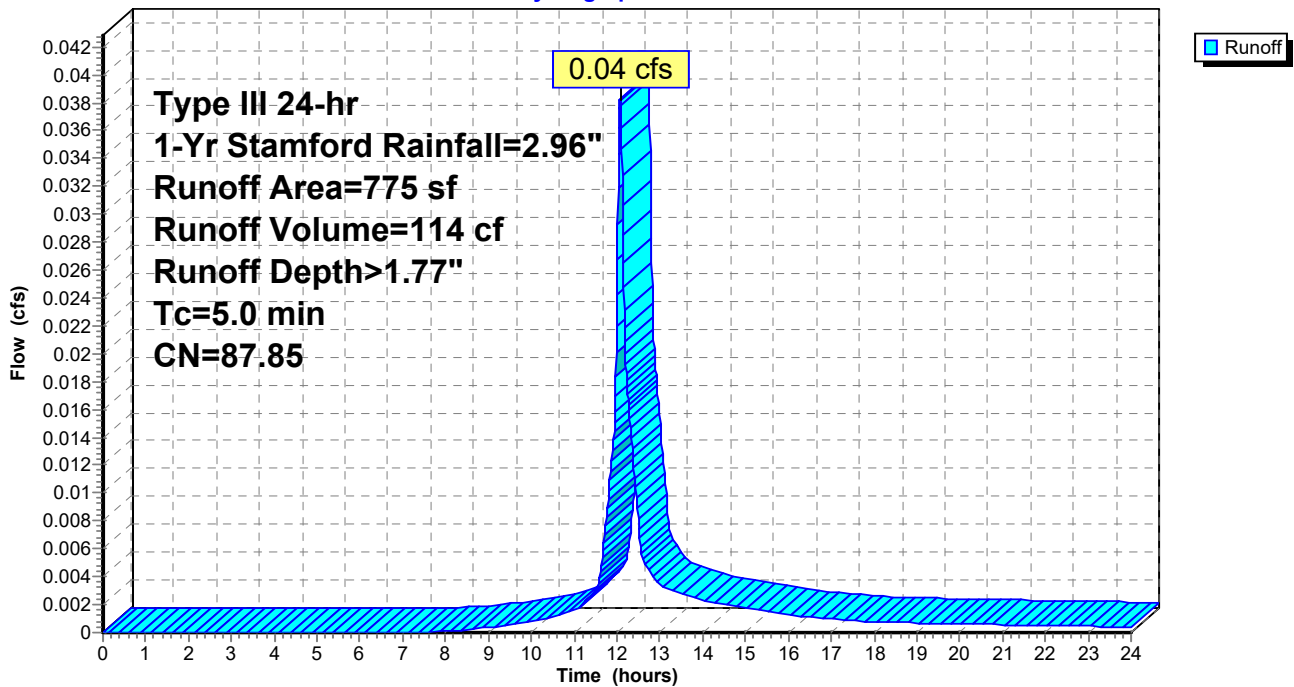
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs  
 Type III 24-hr 1-Yr Stamford Rainfall=2.96"

Area (sf)	CN	Description
0	98.00	Roofs, HSG D
* 213	98.00	Paved Hardscapes, HSG D
562	84.00	50-75% Grass cover, Fair, HSG D
775	87.85	Weighted Average
562		72.52% Pervious Area
213		27.48% Impervious Area

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

**Subcatchment 27: PR. NORTH BASIN**

Hydrograph



**Summary for Pond 62: BMP-1 - 48" CONC GALS**

[79] Warning: Submerged Pond 63 Primary device # 3 OUTLET by 0.98'

Inflow Area = 20,462 sf, 90.82% Impervious, Inflow Depth > 1.64" for 1-Yr Stamford event  
 Inflow = 0.77 cfs @ 12.07 hrs, Volume= 2,802 cf  
 Outflow = 0.04 cfs @ 15.74 hrs, Volume= 751 cf, Atten= 95%, Lag= 220.0 min  
 Primary = 0.04 cfs @ 15.74 hrs, Volume= 751 cf  
 Routed to Link 92 : PR. SOUTH OUT

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4  
 Peak Elev= 12.48' @ 15.74 hrs Surf.Area= 901 sf Storage= 2,076 cf

Plug-Flow detention time= 502.1 min calculated for 751 cf (27% of inflow)  
 Center-of-Mass det. time= 302.1 min ( 1,115.5 - 813.3 )

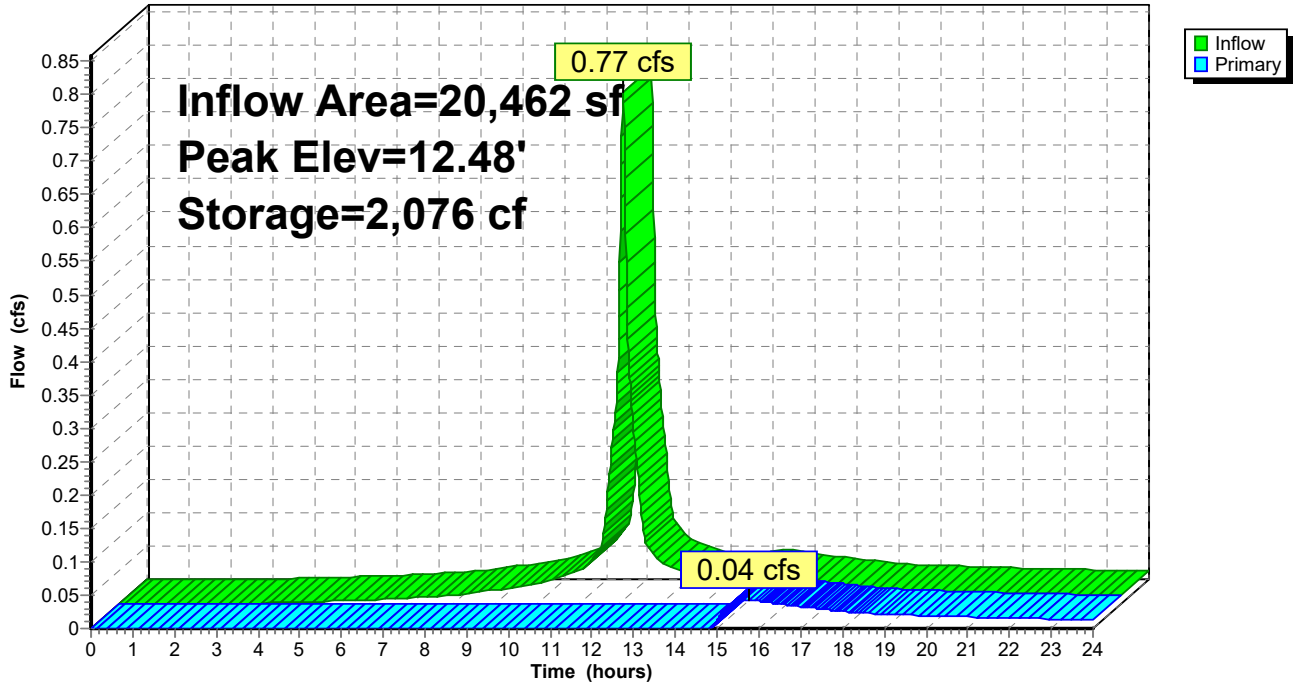
Volume	Invert	Avail.Storage	Storage Description
#1	9.00'	526 cf	<b>24.50'W x 34.00'L x 4.50'H Prismaoid</b> 3,749 cf Overall - 2,433 cf Embedded = 1,316 cf x 40.0% Voids
#2	9.50'	1,871 cf	<b>Concrete Galley 4x8x4 x 20 Inside #1</b> Inside= 42.0"W x 43.0"H => 12.47 sf x 7.50'L = 93.6 cf Outside= 52.8"W x 48.0"H => 15.20 sf x 8.00'L = 121.6 cf 20 Chambers in 5 Rows
#3	11.60'	41 cf	<b>3.00'W x 4.00'L x 3.40'H CB#2</b>
#4	11.75'	27 cf	<b>3.00'W x 4.00'L x 2.25'H CB#1</b>
#5	11.50'	67 cf	<b>12.0" Round Pipe Storage</b> L= 85.0' S= 0.0350 '/'
#6	11.00'	27 cf	<b>10.0" Round Pipe Storage</b> L= 50.0' S= 0.0200 '/'
#7	11.50'	14 cf	<b>10.0" Round Pipe Storage</b> L= 25.0' S= 0.0200 '/'
#8	11.00'	16 cf	<b>10.0" Round Pipe Storage</b> L= 30.0' S= 0.0200 '/'
		2,589 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Device 3	14.00'	<b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)
#2	Device 3	12.40'	<b>6.0" Vert. Orifice X 2.00</b> C= 0.600 Limited to weir flow at low heads
#3	Primary	10.80'	<b>12.0" Round Culvert</b> L= 40.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 10.80' / 10.00' S= 0.0200 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=0.04 cfs @ 15.74 hrs HW=12.48' TW=9.65' (Fixed TW Elev= 9.65')  
 ↳ **3=Culvert** (Passes 0.04 cfs of 4.11 cfs potential flow)  
 ↳ ↳ **1=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)  
 ↳ ↳ ↳ **2=Orifice** (Orifice Controls 0.04 cfs @ 0.95 fps)

### Pond 62: BMP-1 - 48" CONC GALS

Hydrograph



**Stage-Area-Storage for Pond 62: BMP-1 - 48" CONC GAL**

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
9.00	0	11.65	1,501	14.30	2,566
9.05	17	11.70	1,535	14.35	2,568
9.10	33	11.75	1,569	14.40	2,569
9.15	50	11.80	1,604	14.45	2,571
9.20	67	11.85	1,639	14.50	2,573
9.25	83	11.90	1,674	14.55	2,574
9.30	100	11.95	1,709	14.60	2,576
9.35	117	12.00	1,744	14.65	2,578
9.40	133	12.05	1,779	14.70	2,579
9.45	150	12.10	1,815	14.75	2,581
9.50	167	12.15	1,850	14.80	2,582
9.55	196	12.20	1,885	14.85	2,584
9.60	226	12.25	1,919	14.90	2,585
9.65	256	12.30	1,954	14.95	2,586
9.70	286	12.35	1,989	15.00	2,587
9.75	317	12.40	2,023	15.05	2,588
9.80	347	12.45	2,057	15.10	2,588
9.85	378	12.50	2,091	15.15	2,589
9.90	409	12.55	2,124	15.20	2,589
9.95	440	12.60	2,158	15.25	2,589
10.00	471	12.65	2,191	15.30	2,589
10.05	502	12.70	2,224	15.35	2,589
10.10	533	12.75	2,257	15.40	2,589
10.15	564	12.80	2,289	15.45	<b>2,589</b>
10.20	595	12.85	2,322		
10.25	626	12.90	2,355		
10.30	657	12.95	2,387		
10.35	688	13.00	2,420		
10.40	719	13.05	2,452		
10.45	750	13.10	2,475		
10.50	781	13.15	2,482		
10.55	811	13.20	2,489		
10.60	842	13.25	2,496		
10.65	873	13.30	2,504		
10.70	904	13.35	2,511		
10.75	935	13.40	2,518		
10.80	965	13.45	2,525		
10.85	996	13.50	2,532		
10.90	1,027	13.55	2,535		
10.95	1,058	13.60	2,537		
11.00	1,088	13.65	2,539		
11.05	1,119	13.70	2,542		
11.10	1,150	13.75	2,544		
11.15	1,181	13.80	2,546		
11.20	1,212	13.85	2,549		
11.25	1,243	13.90	2,551		
11.30	1,275	13.95	2,553		
11.35	1,307	14.00	2,556		
11.40	1,338	14.05	2,557		
11.45	1,370	14.10	2,559		
11.50	1,403	14.15	2,561		
11.55	1,435	14.20	2,562		
11.60	1,468	14.25	2,564		

**Summary for Pond 63: BMP-2 - 48" CONC GALS**

Inflow Area = 8,852 sf, 94.84% Impervious, Inflow Depth > 2.65" for 1-Yr Stamford event  
 Inflow = 0.60 cfs @ 12.07 hrs, Volume= 1,953 cf  
 Outflow = 0.02 cfs @ 15.61 hrs, Volume= 343 cf, Atten= 97%, Lag= 212.2 min  
 Primary = 0.02 cfs @ 15.61 hrs, Volume= 343 cf  
 Routed to Pond 62 : BMP-1 - 48" CONC GALS

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs / 4  
 Peak Elev= 16.45' @ 15.61 hrs Surf.Area= 713 sf Storage= 1,630 cf

Plug-Flow detention time= 582.7 min calculated for 343 cf (18% of inflow)  
 Center-of-Mass det. time= 341.0 min ( 1,105.0 - 764.1 )

Volume	Invert	Avail.Storage	Storage Description
#1	13.00'	446 cf	<b>20.00'W x 34.00'L x 4.50'H Prismatic</b> 3,060 cf Overall - 1,946 cf Embedded = 1,114 cf x 40.0% Voids
#2	13.50'	1,497 cf	<b>Concrete Galley 4x8x4 x 16 Inside #1</b> Inside= 42.0"W x 43.0"H => 12.47 sf x 7.50'L = 93.6 cf Outside= 52.8"W x 48.0"H => 15.20 sf x 8.00'L = 121.6 cf 16 Chambers in 4 Rows
#3	16.10'	40 cf	<b>3.00'W x 4.00'L x 3.30'H CB#4</b>
#4	15.90'	27 cf	<b>3.00'W x 4.00'L x 2.25'H CB#3</b>
#5	15.20'	20 cf	<b>10.0" Round Pipe Storage</b> L= 36.0' S= 0.0200 'f'
		2,029 cf	Total Available Storage

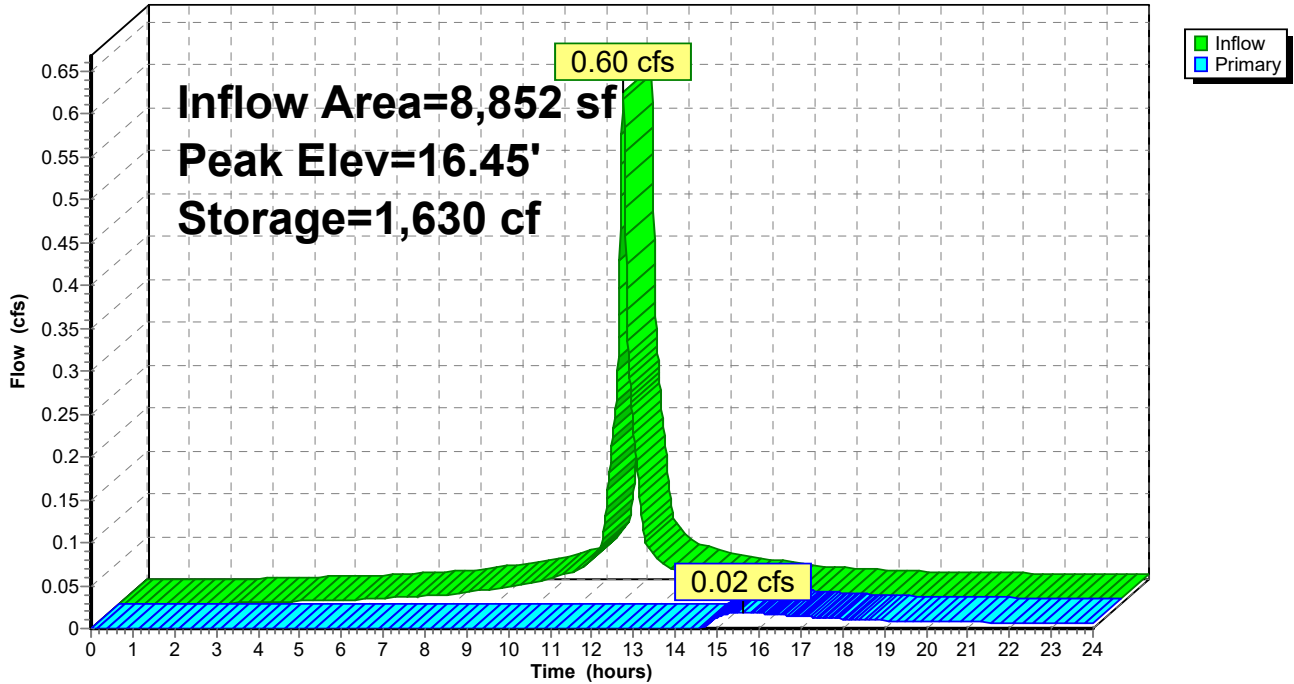
Device	Routing	Invert	Outlet Devices
#1	Device 3	18.00'	<b>4.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)
#2	Device 3	16.40'	<b>6.0" Vert. Orifice/Grate X 2.00</b> C= 0.600 Limited to weir flow at low heads
#3	Primary	14.50'	<b>12.0" Round Culvert</b> L= 85.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 14.50' / 11.50' S= 0.0353 'f' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.79 sf

**Primary OutFlow** Max=0.02 cfs @ 15.61 hrs HW=16.45' (Free Discharge)  
 ↑ **3=Culvert** (Passes 0.02 cfs of 4.56 cfs potential flow)  
 ↑ **1=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)  
 ↑ **2=Orifice/Grate** (Orifice Controls 0.02 cfs @ 0.79 fps)



### Pond 63: BMP-2 - 48" CONC GALS

Hydrograph



**Stage-Area-Storage for Pond 63: BMP-2 - 48" CONC GALS**

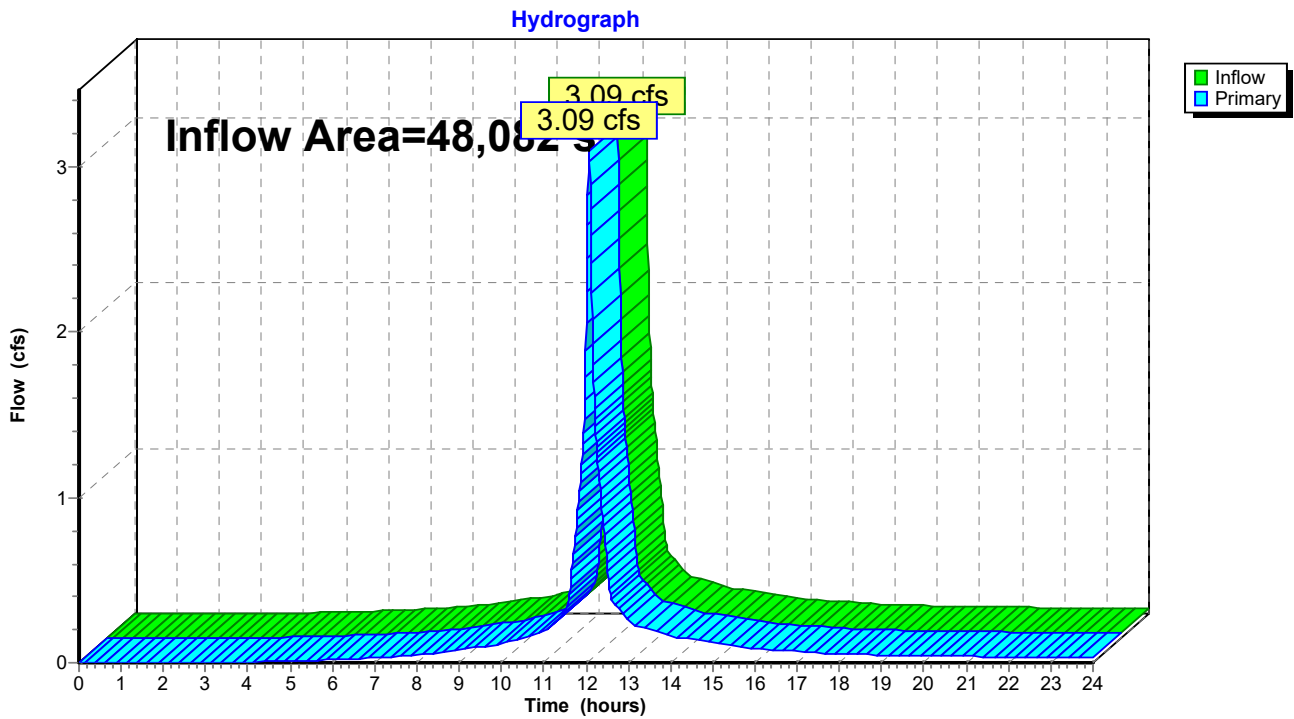
Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
13.00	0	15.65	1,207	18.30	2,016
13.05	14	15.70	1,232	18.35	2,016
13.10	27	15.75	1,258	18.40	2,017
13.15	41	15.80	1,284	18.45	2,017
13.20	54	15.85	1,310	18.50	2,018
13.25	68	15.90	1,335	18.55	2,019
13.30	82	15.95	1,362	18.60	2,019
13.35	95	16.00	1,389	18.65	2,020
13.40	109	16.05	1,415	18.70	2,020
13.45	122	16.10	1,442	18.75	2,021
13.50	136	16.15	1,468	18.80	2,022
13.55	160	16.20	1,495	18.85	2,022
13.60	184	16.25	1,522	18.90	2,023
13.65	208	16.30	1,549	18.95	2,023
13.70	233	16.35	1,575	19.00	2,024
13.75	257	16.40	1,602	19.05	2,025
13.80	282	16.45	1,628	19.10	2,025
13.85	307	16.50	1,654	19.15	2,026
13.90	332	16.55	1,680	19.20	2,026
13.95	357	16.60	1,706	19.25	2,027
14.00	383	16.65	1,732	19.30	2,028
14.05	408	16.70	1,758	19.35	2,028
14.10	433	16.75	1,784	19.40	2,029
14.15	458	16.80	1,809		
14.20	483	16.85	1,835		
14.25	508	16.90	1,861		
14.30	533	16.95	1,886		
14.35	558	17.00	1,912		
14.40	583	17.05	1,938		
14.45	608	17.10	1,955		
14.50	633	17.15	1,961		
14.55	658	17.20	1,966		
14.60	682	17.25	1,971		
14.65	707	17.30	1,977		
14.70	732	17.35	1,982		
14.75	757	17.40	1,987		
14.80	782	17.45	1,993		
14.85	807	17.50	1,998		
14.90	832	17.55	1,999		
14.95	857	17.60	2,001		
15.00	882	17.65	2,002		
15.05	907	17.70	2,003		
15.10	931	17.75	2,004		
15.15	956	17.80	2,005		
15.20	981	17.85	2,007		
15.25	1,006	17.90	2,008		
15.30	1,031	17.95	2,009		
15.35	1,056	18.00	2,010		
15.40	1,081	18.05	2,011		
15.45	1,106	18.10	2,013		
15.50	1,131	18.15	2,014		
15.55	1,156	18.20	2,014		
15.60	1,181	18.25	2,015		

### Summary for Link 91: EX. SOUTH OUT

Inflow Area = 48,082 sf, 80.34% Impervious, Inflow Depth > 2.43" for 1-Yr Stamford event  
Inflow = 3.09 cfs @ 12.07 hrs, Volume= 9,752 cf  
Primary = 3.09 cfs @ 12.07 hrs, Volume= 9,752 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 91: EX. SOUTH OUT

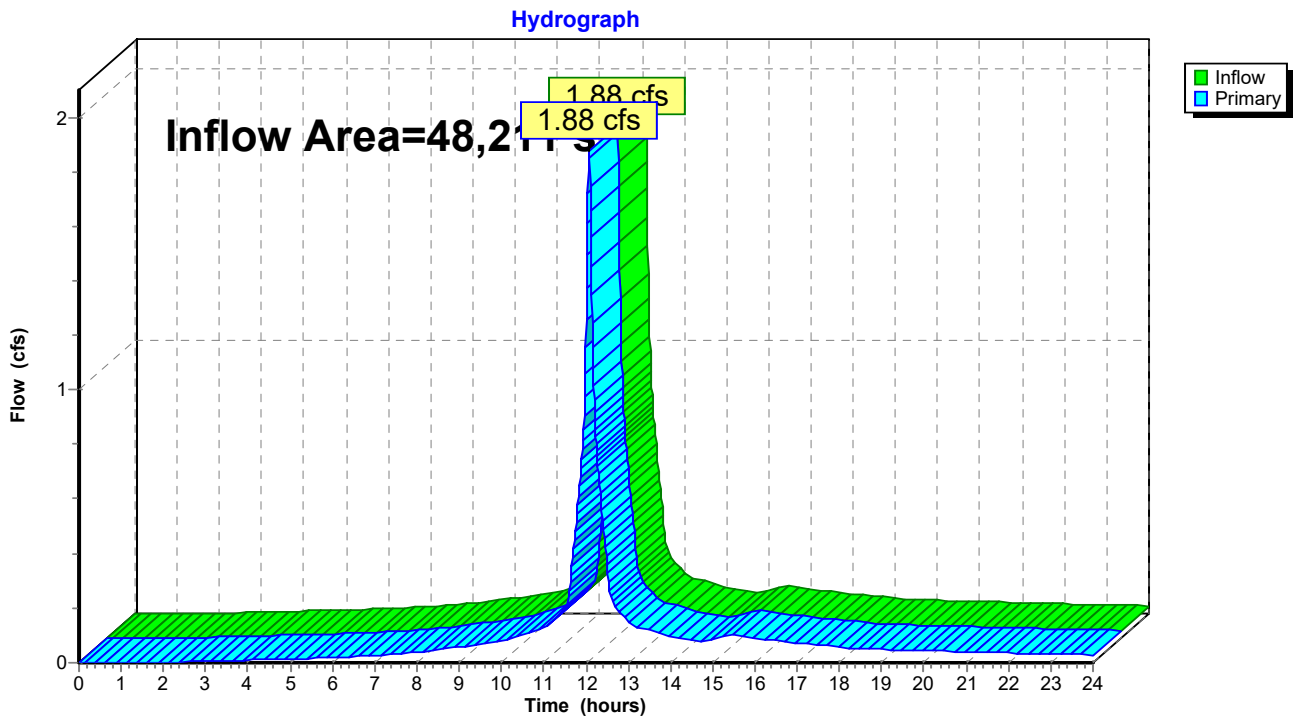


### Summary for Link 92: PR. SOUTH OUT

Inflow Area = 48,211 sf, 93.88% Impervious, Inflow Depth > 1.72" for 1-Yr Stamford event  
Inflow = 1.88 cfs @ 12.07 hrs, Volume= 6,918 cf  
Primary = 1.88 cfs @ 12.07 hrs, Volume= 6,918 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 92: PR. SOUTH OUT

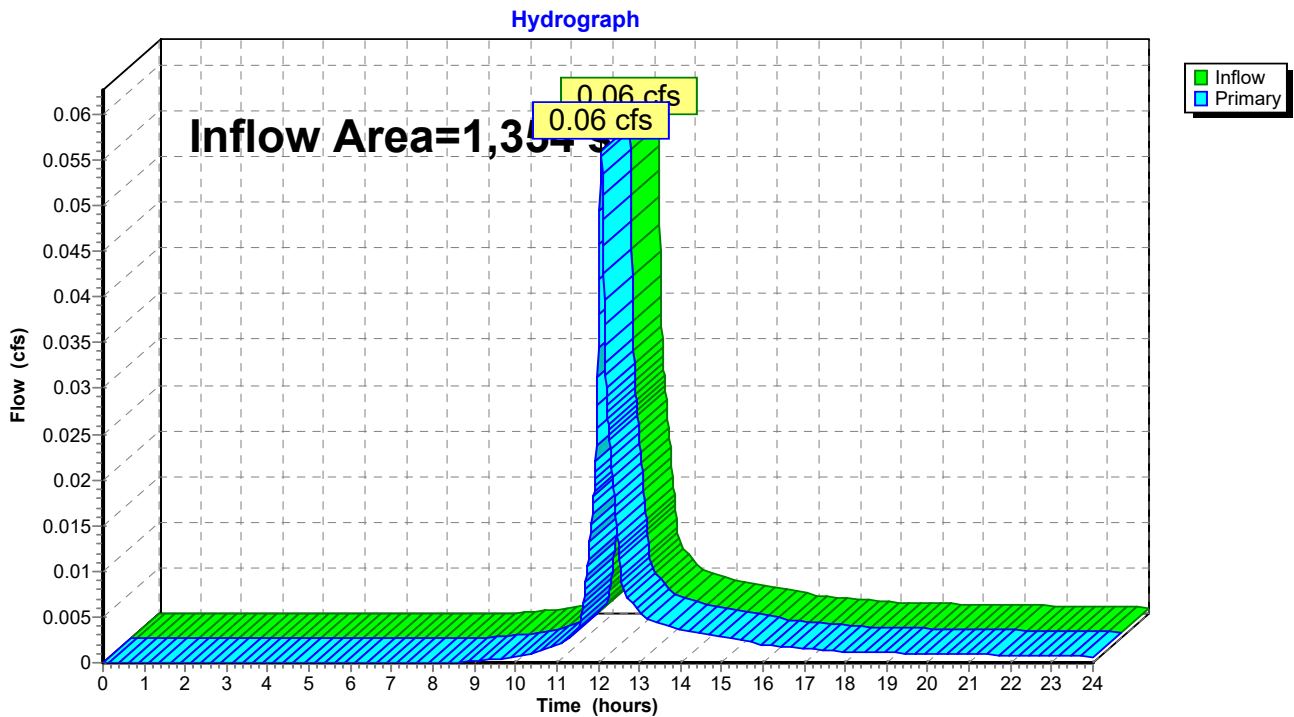


### Summary for Link 95: EX, EAST OUT

Inflow Area = 1,354 sf, 0.00% Impervious, Inflow Depth > 1.48" for 1-Yr Stamford event  
Inflow = 0.06 cfs @ 12.08 hrs, Volume= 167 cf  
Primary = 0.06 cfs @ 12.08 hrs, Volume= 167 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 95: EX, EAST OUT

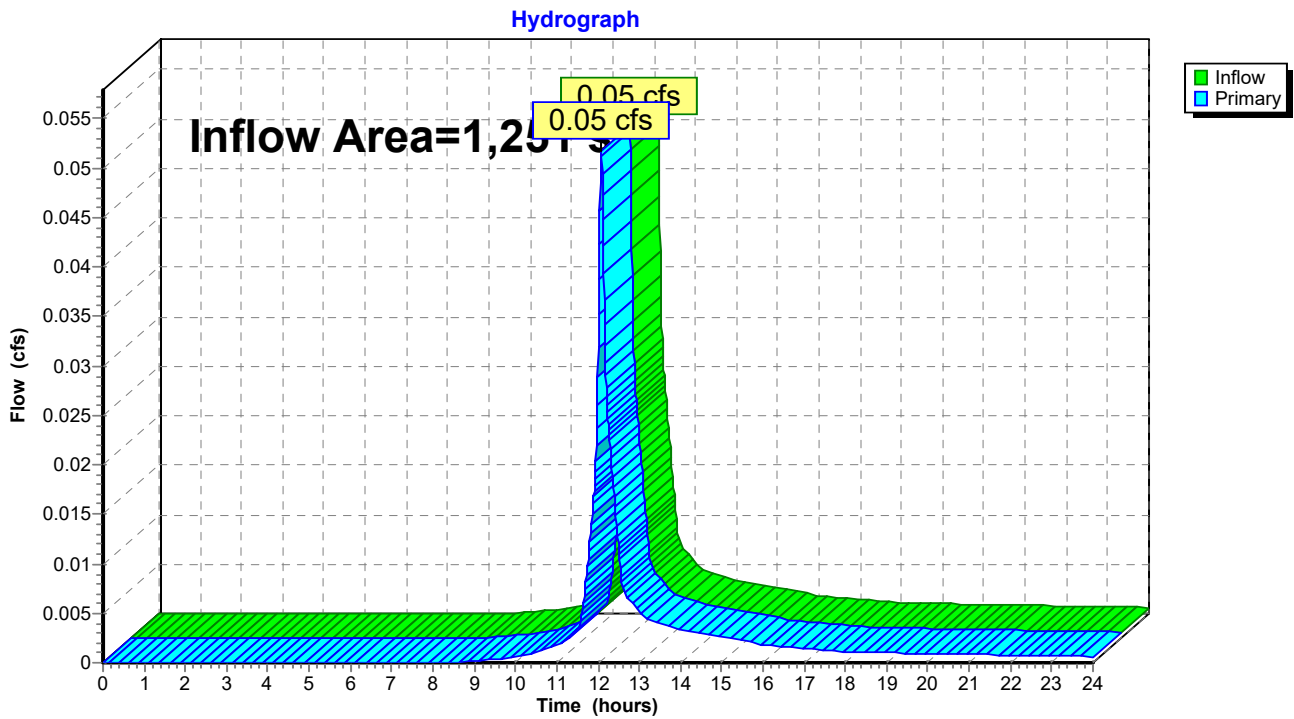


### Summary for Link 96: PR. EAST OUT

Inflow Area = 1,251 sf, 0.00% Impervious, Inflow Depth > 1.48" for 1-Yr Stamford event  
Inflow = 0.05 cfs @ 12.08 hrs, Volume= 154 cf  
Primary = 0.05 cfs @ 12.08 hrs, Volume= 154 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 96: PR. EAST OUT



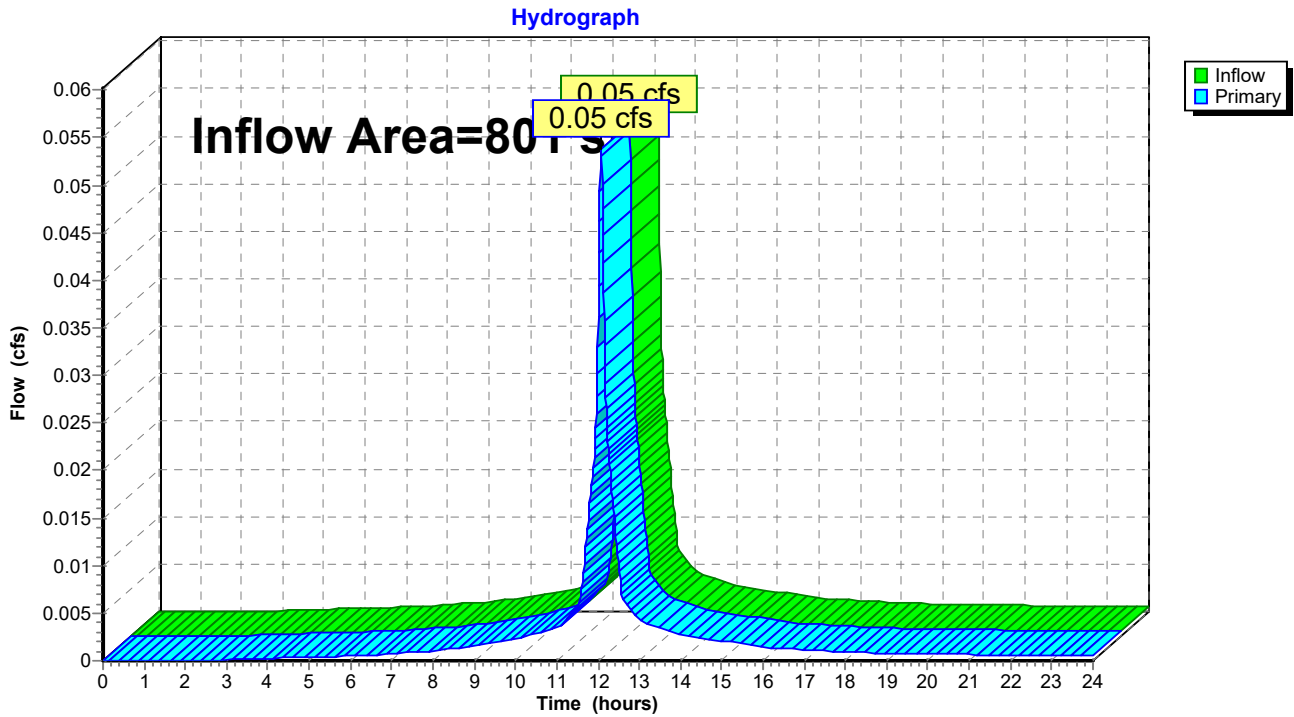


### Summary for Link 97: EX, NORTH OUT

Inflow Area = 801 sf, 93.51% Impervious, Inflow Depth > 2.63" for 1-Yr Stamford event  
Inflow = 0.05 cfs @ 12.07 hrs, Volume= 175 cf  
Primary = 0.05 cfs @ 12.07 hrs, Volume= 175 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 97: EX, NORTH OUT

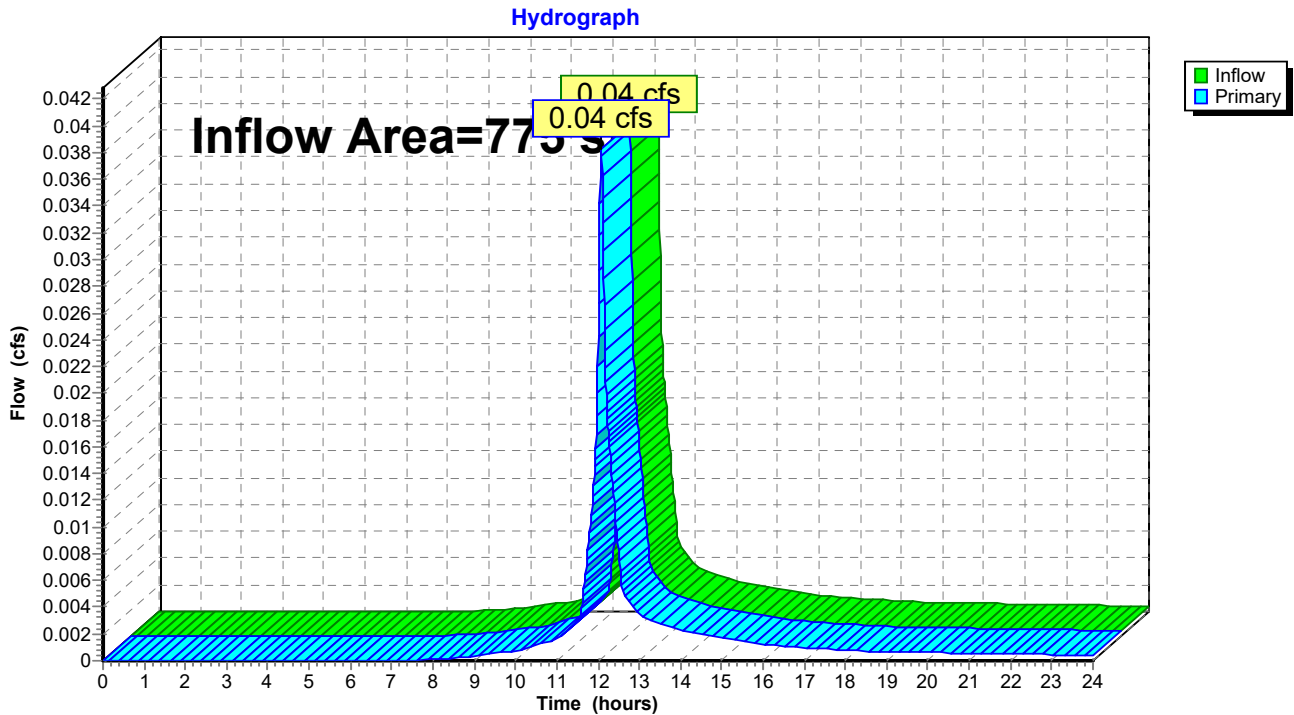


### Summary for Link 98: PR. NORTH OUT

Inflow Area = 775 sf, 27.48% Impervious, Inflow Depth > 1.77" for 1-Yr Stamford event  
Inflow = 0.04 cfs @ 12.07 hrs, Volume= 114 cf  
Primary = 0.04 cfs @ 12.07 hrs, Volume= 114 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

### Link 98: PR. NORTH OUT



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

<b>Subcatchment 11: EX. SOUTH BASIN</b>	Runoff Area=48,082 sf 80.34% Impervious Runoff Depth>3.04" Tc=5.0 min CN=95.25 Runoff=3.82 cfs 12,188 cf
<b>Subcatchment 15: EX. EAST BASIN</b>	Runoff Area=1,354 sf 0.00% Impervious Runoff Depth>2.00" Tc=5.0 min CN=84.00 Runoff=0.08 cfs 226 cf
<b>Subcatchment 17: EX. NORTH BASIN</b>	Runoff Area=801 sf 93.51% Impervious Runoff Depth>3.24" Tc=5.0 min CN=97.09 Runoff=0.07 cfs 216 cf
<b>Subcatchment 21: PR. SOUTH BYPASS</b>	Runoff Area=27,749 sf 96.14% Impervious Runoff Depth>3.28" Tc=5.0 min CN=97.46 Runoff=2.28 cfs 7,592 cf
<b>Subcatchment 22: PR. SOUTH-1 BASIN</b>	Runoff Area=11,610 sf 87.75% Impervious Runoff Depth>3.15" Tc=5.0 min CN=96.29 Runoff=0.94 cfs 3,051 cf
<b>Subcatchment 23: PR. SOUTH-2 BASIN</b>	Runoff Area=8,852 sf 94.84% Impervious Runoff Depth>3.26" Tc=5.0 min CN=97.28 Runoff=0.73 cfs 2,407 cf
<b>Subcatchment 25: PR. EAST BASIN</b>	Runoff Area=1,251 sf 0.00% Impervious Runoff Depth>2.00" Tc=5.0 min CN=84.00 Runoff=0.07 cfs 209 cf
<b>Subcatchment 27: PR. NORTH BASIN</b>	Runoff Area=775 sf 27.48% Impervious Runoff Depth>2.33" Tc=5.0 min CN=87.85 Runoff=0.05 cfs 150 cf
<b>Pond 62: BMP-1 - 48" CONC GALS</b>	Peak Elev=12.55' Storage=2,127 cf Inflow=0.94 cfs 3,846 cf Outflow=0.14 cfs 1,794 cf
<b>Pond 63: BMP-2 - 48" CONC GALS</b>	Peak Elev=16.50' Storage=1,654 cf Inflow=0.73 cfs 2,407 cf Outflow=0.07 cfs 795 cf
<b>Link 91: EX. SOUTH OUT</b>	Inflow=3.82 cfs 12,188 cf Primary=3.82 cfs 12,188 cf
<b>Link 92: PR. SOUTH OUT</b>	Inflow=2.28 cfs 9,385 cf Primary=2.28 cfs 9,385 cf
<b>Link 95: EX, EAST OUT</b>	Inflow=0.08 cfs 226 cf Primary=0.08 cfs 226 cf
<b>Link 96: PR. EAST OUT</b>	Inflow=0.07 cfs 209 cf Primary=0.07 cfs 209 cf
<b>Link 97: EX, NORTH OUT</b>	Inflow=0.07 cfs 216 cf Primary=0.07 cfs 216 cf
<b>Link 98: PR. NORTH OUT</b>	Inflow=0.05 cfs 150 cf Primary=0.05 cfs 150 cf

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**Total Runoff Area = 100,474 sf   Runoff Volume = 26,040 cf   Average Runoff Depth = 3.11"**  
**15.55% Pervious = 15,621 sf   84.45% Impervious = 84,853 sf**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

<b>Subcatchment 11: EX. SOUTH BASIN</b>	Runoff Area=48,082 sf 80.34% Impervious Runoff Depth>4.05" Tc=5.0 min CN=95.25 Runoff=5.00 cfs 16,222 cf
<b>Subcatchment 15: EX. EAST BASIN</b>	Runoff Area=1,354 sf 0.00% Impervious Runoff Depth>2.90" Tc=5.0 min CN=84.00 Runoff=0.11 cfs 328 cf
<b>Subcatchment 17: EX. NORTH BASIN</b>	Runoff Area=801 sf 93.51% Impervious Runoff Depth>4.26" Tc=5.0 min CN=97.09 Runoff=0.09 cfs 284 cf
<b>Subcatchment 21: PR. SOUTH BYPASS</b>	Runoff Area=27,749 sf 96.14% Impervious Runoff Depth>4.30" Tc=5.0 min CN=97.46 Runoff=2.95 cfs 9,940 cf
<b>Subcatchment 22: PR. SOUTH-1 BASIN</b>	Runoff Area=11,610 sf 87.75% Impervious Runoff Depth>4.17" Tc=5.0 min CN=96.29 Runoff=1.22 cfs 4,030 cf
<b>Subcatchment 23: PR. SOUTH-2 BASIN</b>	Runoff Area=8,852 sf 94.84% Impervious Runoff Depth>4.28" Tc=5.0 min CN=97.28 Runoff=0.94 cfs 3,156 cf
<b>Subcatchment 25: PR. EAST BASIN</b>	Runoff Area=1,251 sf 0.00% Impervious Runoff Depth>2.90" Tc=5.0 min CN=84.00 Runoff=0.10 cfs 303 cf
<b>Subcatchment 27: PR. NORTH BASIN</b>	Runoff Area=775 sf 27.48% Impervious Runoff Depth>3.27" Tc=5.0 min CN=87.85 Runoff=0.07 cfs 211 cf
<b>Pond 62: BMP-1 - 48" CONC GALS</b>	Peak Elev=12.82' Storage=2,304 cf Inflow=1.22 cfs 5,571 cf Outflow=0.78 cfs 3,514 cf
<b>Pond 63: BMP-2 - 48" CONC GALS</b>	Peak Elev=16.67' Storage=1,742 cf Inflow=0.94 cfs 3,156 cf Outflow=0.38 cfs 1,541 cf
<b>Link 91: EX. SOUTH OUT</b>	Inflow=5.00 cfs 16,222 cf Primary=5.00 cfs 16,222 cf
<b>Link 92: PR. SOUTH OUT</b>	Inflow=2.95 cfs 13,454 cf Primary=2.95 cfs 13,454 cf
<b>Link 95: EX, EAST OUT</b>	Inflow=0.11 cfs 328 cf Primary=0.11 cfs 328 cf
<b>Link 96: PR. EAST OUT</b>	Inflow=0.10 cfs 303 cf Primary=0.10 cfs 303 cf
<b>Link 97: EX, NORTH OUT</b>	Inflow=0.09 cfs 284 cf Primary=0.09 cfs 284 cf
<b>Link 98: PR. NORTH OUT</b>	Inflow=0.07 cfs 211 cf Primary=0.07 cfs 211 cf

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**Total Runoff Area = 100,474 sf   Runoff Volume = 34,473 cf   Average Runoff Depth = 4.12"**  
**15.55% Pervious = 15,621 sf   84.45% Impervious = 84,853 sf**



Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

<b>Subcatchment 11: EX. SOUTH BASIN</b>	Runoff Area=48,082 sf 80.34% Impervious Runoff Depth>4.89" Tc=5.0 min CN=95.25 Runoff=5.97 cfs 19,596 cf
<b>Subcatchment 15: EX. EAST BASIN</b>	Runoff Area=1,354 sf 0.00% Impervious Runoff Depth>3.68" Tc=5.0 min CN=84.00 Runoff=0.14 cfs 415 cf
<b>Subcatchment 17: EX. NORTH BASIN</b>	Runoff Area=801 sf 93.51% Impervious Runoff Depth>5.10" Tc=5.0 min CN=97.09 Runoff=0.10 cfs 341 cf
<b>Subcatchment 21: PR. SOUTH BYPASS</b>	Runoff Area=27,749 sf 96.14% Impervious Runoff Depth>5.15" Tc=5.0 min CN=97.46 Runoff=3.51 cfs 11,899 cf
<b>Subcatchment 22: PR. SOUTH-1 BASIN</b>	Runoff Area=11,610 sf 87.75% Impervious Runoff Depth>5.01" Tc=5.0 min CN=96.29 Runoff=1.46 cfs 4,847 cf
<b>Subcatchment 23: PR. SOUTH-2 BASIN</b>	Runoff Area=8,852 sf 94.84% Impervious Runoff Depth>5.12" Tc=5.0 min CN=97.28 Runoff=1.12 cfs 3,780 cf
<b>Subcatchment 25: PR. EAST BASIN</b>	Runoff Area=1,251 sf 0.00% Impervious Runoff Depth>3.68" Tc=5.0 min CN=84.00 Runoff=0.13 cfs 384 cf
<b>Subcatchment 27: PR. NORTH BASIN</b>	Runoff Area=775 sf 27.48% Impervious Runoff Depth>4.08" Tc=5.0 min CN=87.85 Runoff=0.09 cfs 263 cf
<b>Pond 62: BMP-1 - 48" CONC GALS</b>	Peak Elev=13.30' Storage=2,504 cf Inflow=2.02 cfs 7,011 cf Outflow=1.53 cfs 4,951 cf
<b>Pond 63: BMP-2 - 48" CONC GALS</b>	Peak Elev=16.83' Storage=1,823 cf Inflow=1.12 cfs 3,780 cf Outflow=0.79 cfs 2,164 cf
<b>Link 91: EX. SOUTH OUT</b>	Inflow=5.97 cfs 19,596 cf Primary=5.97 cfs 19,596 cf
<b>Link 92: PR. SOUTH OUT</b>	Inflow=4.19 cfs 16,851 cf Primary=4.19 cfs 16,851 cf
<b>Link 95: EX, EAST OUT</b>	Inflow=0.14 cfs 415 cf Primary=0.14 cfs 415 cf
<b>Link 96: PR. EAST OUT</b>	Inflow=0.13 cfs 384 cf Primary=0.13 cfs 384 cf
<b>Link 97: EX, NORTH OUT</b>	Inflow=0.10 cfs 341 cf Primary=0.10 cfs 341 cf
<b>Link 98: PR. NORTH OUT</b>	Inflow=0.09 cfs 263 cf Primary=0.09 cfs 263 cf

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**Total Runoff Area = 100,474 sf   Runoff Volume = 41,527 cf   Average Runoff Depth = 4.96"**  
**15.55% Pervious = 15,621 sf   84.45% Impervious = 84,853 sf**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

<b>Subcatchment 11: EX. SOUTH BASIN</b>	Runoff Area=48,082 sf 80.34% Impervious Runoff Depth>6.04" Tc=5.0 min CN=95.25 Runoff=7.30 cfs 24,213 cf
<b>Subcatchment 15: EX. EAST BASIN</b>	Runoff Area=1,354 sf 0.00% Impervious Runoff Depth>4.77" Tc=5.0 min CN=84.00 Runoff=0.18 cfs 538 cf
<b>Subcatchment 17: EX. NORTH BASIN</b>	Runoff Area=801 sf 93.51% Impervious Runoff Depth>6.26" Tc=5.0 min CN=97.09 Runoff=0.12 cfs 418 cf
<b>Subcatchment 21: PR. SOUTH BYPASS</b>	Runoff Area=27,749 sf 96.14% Impervious Runoff Depth>6.30" Tc=5.0 min CN=97.46 Runoff=4.27 cfs 14,575 cf
<b>Subcatchment 22: PR. SOUTH-1 BASIN</b>	Runoff Area=11,610 sf 87.75% Impervious Runoff Depth>6.17" Tc=5.0 min CN=96.29 Runoff=1.78 cfs 5,965 cf
<b>Subcatchment 23: PR. SOUTH-2 BASIN</b>	Runoff Area=8,852 sf 94.84% Impervious Runoff Depth>6.28" Tc=5.0 min CN=97.28 Runoff=1.36 cfs 4,634 cf
<b>Subcatchment 25: PR. EAST BASIN</b>	Runoff Area=1,251 sf 0.00% Impervious Runoff Depth>4.77" Tc=5.0 min CN=84.00 Runoff=0.16 cfs 497 cf
<b>Subcatchment 27: PR. NORTH BASIN</b>	Runoff Area=775 sf 27.48% Impervious Runoff Depth>5.19" Tc=5.0 min CN=87.85 Runoff=0.11 cfs 335 cf
<b>Pond 62: BMP-1 - 48" CONC GALS</b>	Peak Elev=14.12' Storage=2,559 cf Inflow=2.80 cfs 8,978 cf Outflow=2.80 cfs 6,915 cf
<b>Pond 63: BMP-2 - 48" CONC GALS</b>	Peak Elev=17.00' Storage=1,912 cf Inflow=1.36 cfs 4,634 cf Outflow=1.12 cfs 3,014 cf
<b>Link 91: EX. SOUTH OUT</b>	Inflow=7.30 cfs 24,213 cf Primary=7.30 cfs 24,213 cf
<b>Link 92: PR. SOUTH OUT</b>	Inflow=7.12 cfs 21,490 cf Primary=7.12 cfs 21,490 cf
<b>Link 95: EX, EAST OUT</b>	Inflow=0.18 cfs 538 cf Primary=0.18 cfs 538 cf
<b>Link 96: PR. EAST OUT</b>	Inflow=0.16 cfs 497 cf Primary=0.16 cfs 497 cf
<b>Link 97: EX, NORTH OUT</b>	Inflow=0.12 cfs 418 cf Primary=0.12 cfs 418 cf
<b>Link 98: PR. NORTH OUT</b>	Inflow=0.11 cfs 335 cf Primary=0.11 cfs 335 cf

**Total Runoff Area = 100,474 sf   Runoff Volume = 51,175 cf   Average Runoff Depth = 6.11"**  
**15.55% Pervious = 15,621 sf   84.45% Impervious = 84,853 sf**

Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 points  
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN  
 Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

<b>Subcatchment 11: EX. SOUTH BASIN</b>	Runoff Area=48,082 sf 80.34% Impervious Runoff Depth>6.90" Tc=5.0 min CN=95.25 Runoff=8.28 cfs 27,641 cf
<b>Subcatchment 15: EX. EAST BASIN</b>	Runoff Area=1,354 sf 0.00% Impervious Runoff Depth>5.58" Tc=5.0 min CN=84.00 Runoff=0.21 cfs 630 cf
<b>Subcatchment 17: EX. NORTH BASIN</b>	Runoff Area=801 sf 93.51% Impervious Runoff Depth>7.12" Tc=5.0 min CN=97.09 Runoff=0.14 cfs 475 cf
<b>Subcatchment 21: PR. SOUTH BYPASS</b>	Runoff Area=27,749 sf 96.14% Impervious Runoff Depth>7.16" Tc=5.0 min CN=97.46 Runoff=4.83 cfs 16,560 cf
<b>Subcatchment 22: PR. SOUTH-1 BASIN</b>	Runoff Area=11,610 sf 87.75% Impervious Runoff Depth>7.02" Tc=5.0 min CN=96.29 Runoff=2.01 cfs 6,794 cf
<b>Subcatchment 23: PR. SOUTH-2 BASIN</b>	Runoff Area=8,852 sf 94.84% Impervious Runoff Depth>7.14" Tc=5.0 min CN=97.28 Runoff=1.54 cfs 5,267 cf
<b>Subcatchment 25: PR. EAST BASIN</b>	Runoff Area=1,251 sf 0.00% Impervious Runoff Depth>5.58" Tc=5.0 min CN=84.00 Runoff=0.19 cfs 582 cf
<b>Subcatchment 27: PR. NORTH BASIN</b>	Runoff Area=775 sf 27.48% Impervious Runoff Depth>6.03" Tc=5.0 min CN=87.85 Runoff=0.12 cfs 389 cf
<b>Pond 62: BMP-1 - 48" CONC GALS</b>	Peak Elev=14.16' Storage=2,561 cf Inflow=3.17 cfs 10,438 cf Outflow=3.16 cfs 8,373 cf
<b>Pond 63: BMP-2 - 48" CONC GALS</b>	Peak Elev=17.11' Storage=1,957 cf Inflow=1.54 cfs 5,267 cf Outflow=1.29 cfs 3,645 cf
<b>Link 91: EX. SOUTH OUT</b>	Inflow=8.28 cfs 27,641 cf Primary=8.28 cfs 27,641 cf
<b>Link 92: PR. SOUTH OUT</b>	Inflow=7.97 cfs 24,933 cf Primary=7.97 cfs 24,933 cf
<b>Link 95: EX, EAST OUT</b>	Inflow=0.21 cfs 630 cf Primary=0.21 cfs 630 cf
<b>Link 96: PR. EAST OUT</b>	Inflow=0.19 cfs 582 cf Primary=0.19 cfs 582 cf
<b>Link 97: EX, NORTH OUT</b>	Inflow=0.14 cfs 475 cf Primary=0.14 cfs 475 cf
<b>Link 98: PR. NORTH OUT</b>	Inflow=0.12 cfs 389 cf Primary=0.12 cfs 389 cf

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**Total Runoff Area = 100,474 sf   Runoff Volume = 58,339 cf   Average Runoff Depth = 6.97"**  
**15.55% Pervious = 15,621 sf   84.45% Impervious = 84,853 sf**



# APPENDIX – C

**Water Quality Volume Calculation**

**Project:** 819 East Main St, Stamford, CT

**Date:** 02/03/2022

**WQV = Water Quality Volume = (1.0" \* R \* A)/12**

<b>Proposed Conditions of Whole Site</b>	Area=	1.1533	acres
	Impervious Area=	1.0439	acres
	I=	90.5%	<sup>a</sup>
	R=	0.865	<sup>b</sup>
	WQV=	0.0831	ac. ft. <sup>c</sup>
	WQV=	3,620	ft. <sup>3</sup>

<b>*Required WQV=</b>	<b>3,620 ft.<sup>3</sup></b>
-----------------------	------------------------------

\* Retainage of **full WQV** is required per the City of Stamford Stormwater Drainage Manual Standard 1 of section 2.4 Stormwater Management Standards

<sup>a</sup> I=Percent Impervious Coverage

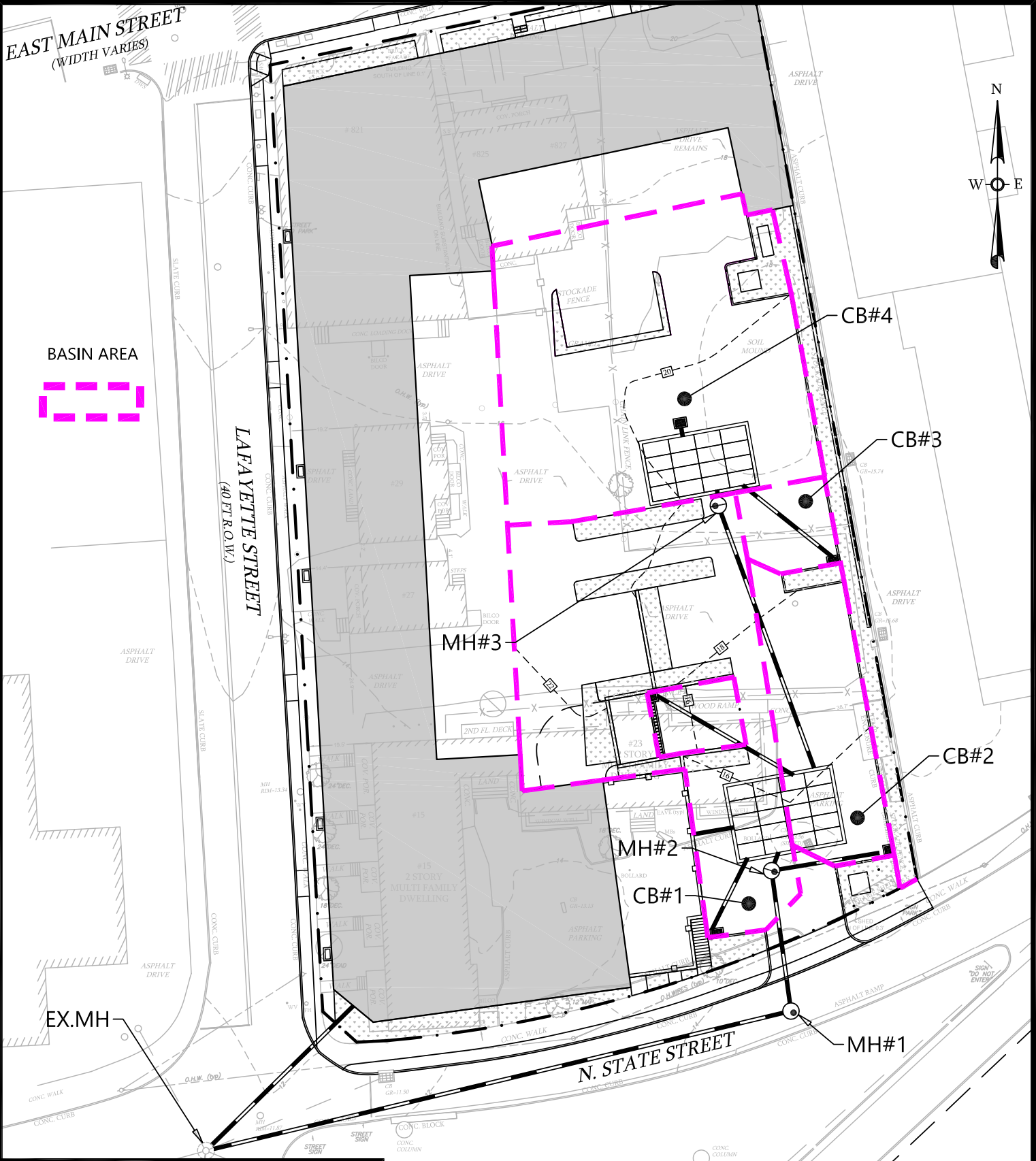
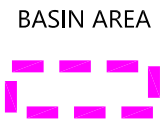
<sup>b</sup> R=0.05+0.009(I); Volumetric runoff Coefficient, Equation taken from 2004 Connecticut Stormwater Quality Manual section 7.4.1

<sup>c</sup> WQV=(1.0"xRxA)/12; Water Quality Volume, Equation taken from 2004 Connecticut Stormwater Quality Manual section 7.4.1

<b>Drawdown Calculations (72 hours max.)</b>			
$TIME_{drawdown} = Vol / (K * SA_{bot})$ <p>Refer to City of Stamford Stormwater Drainage Manual dated 6/10/2020 section 5.5 for Drawdown Analysis</p> <p>* Volume of Infiltration Storage is the total storage capacity at the weir outfall elevation.</p>			
Volume of Infiltration Storage Infiltration Rate BH#3 (2x Factor of Safety) Bottom Surface Area of Infiltration Storage	<b>BMP - 1 - 48" PRECAST GALLERIES</b>		
	* Vol =	2,556	cubic feet
	K =	8.60	inches per hour
	SA <sub>bot</sub> =	833	square feet
	TIME <sub>drawdown</sub> =	4.28	hours
Volume of Infiltration Storage Infiltration Rate BH#1 (2x Factor of Safety) Bottom Surface Area of Infiltration Storage	<b>BMP - 2 - 48" PRECAST GALLERIES</b>		
	* Vol =	2,010	cubic feet
	K =	5.10	inches per hour
	SA <sub>bot</sub> =	680	square feet
	TIME <sub>drawdown</sub> =	6.96	hours

# APPENDIX – D

EAST MAIN STREET  
(WIDTH VARIES)



# DIMARZO & BERECZKY

191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.857.4110

LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

**DRAINAGE PIPE  
CONVEYANCE EXHIBIT**  
PREPARED FOR  
**819 EAST MAIN STREET  
STAMFORD, CT**

# CONVEY-EXH

DATE: 2/03/2022

SCALE: 0 40  
1"=40'

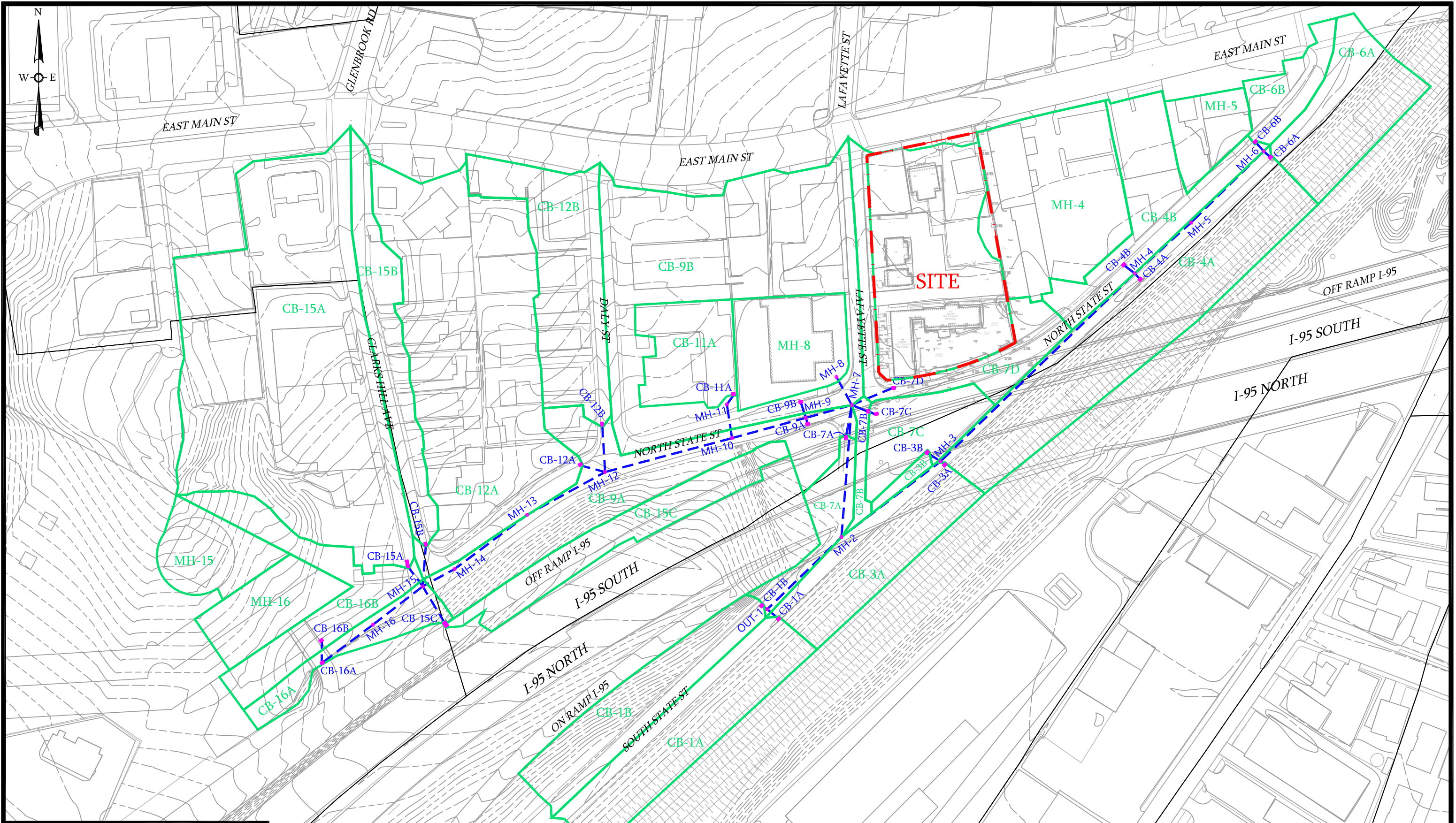
Conveyance Calculations											
Rational Method - Peak Rate of Runoff - 25 Year Storm Event											
ROOF to EX.MH	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.572	0.95	Impervious	0.543							
	0.000	0.30	Pervious	0.000							
	0.572		Total	0.543					5	7.6	4.13
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation Q <sub>full</sub> =(1.49/n)*A*S <sup>1/2</sup> *R <sup>2/3</sup>		
4.13	12	60	0.011	PVC	0.0150	5.17	79.9%				
MH#1 to EX.MH	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.000	0.95	Impervious	0.000							
	0.000	0.30	Pervious	0.000							
	0.000		Total	0.000					HydroCAD Report		2.80
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation Q <sub>full</sub> =(1.49/n)*A*S <sup>1/2</sup> *R <sup>2/3</sup>		
2.80	12	180	0.011	PVC	0.0100	4.22	66.3%				
MH#2 to MH#1	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.000	0.95	Impervious	0.000							
	0.000	0.30	Pervious	0.000							
	0.000		Total	0.000					HydroCAD Report		2.80
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation Q <sub>full</sub> =(1.49/n)*A*S <sup>1/2</sup> *R <sup>2/3</sup>		
2.80	12	40	0.011	PVC	0.020	5.97	46.9%				



Conveyance Calculations											
Rational Method - Peak Rate of Runoff - 25 Year Storm Event											
MH#3 to BMP-1	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.000	0.95	Impervious	0.000							
	0.000	0.30	Pervious	0.000							
	0.000		Total	0.000					HydroCAD Report		1.12
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation $Q_{full}=(1.49/n)*A*S^{1/2}*R^{2/3}$		
1.12	12	85	0.011	PVC	0.035	7.90	14.2%				
CB#1 to BMP-1	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.120	0.95	Impervious	0.114							
	0.031	0.30	Pervious	0.009							
	0.151		Total	0.123					5	7.6	0.94
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation $Q_{full}=(1.49/n)*A*S^{1/2}*R^{2/3}$		
0.94	10	25	0.011	PVC	0.020	3.67	25.5%				
CB#2 to MH#2	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.058	0.95	Impervious	0.055							
	0.002	0.30	Pervious	0.001							
	0.060		Total	0.056					5	7.6	0.42
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation $Q_{full}=(1.49/n)*A*S^{1/2}*R^{2/3}$		
0.42	10	32	0.011	PVC	0.020	3.67	11.6%				

Conveyance Calculations											
Rational Method - Peak Rate of Runoff - 25 Year Storm Event											
TD#1 to BMP-1	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.013	0.95	Impervious	0.012							
	0.000	0.30	Pervious	0.000							
	0.013		Total	0.012					5	7.6	0.09
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation $Q_{full}=(1.49/n)*A*S^{1/2}*R^{2/3}$		
0.09	10	48	0.011	PVC	0.020	3.67	2.5%				
CB#3 to BMP-2	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.016	0.95	Impervious	0.016							
	0.000	0.30	Pervious	0.000							
	0.016		Total	0.016					5	7.6	0.12
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation $Q_{full}=(1.49/n)*A*S^{1/2}*R^{2/3}$		
0.12	10	35	0.011	PVC	0.010	2.60	4.6%				
CB#4 to BMP-2	Basin Description				Drainage Path				Q = ACI (cfs)		
	Acres	C	Description	AC	Length	ΔH	Slope %	Description	Time (min)	Intensity (in/hr)	Q <sub>25</sub>
	0.176	0.95	Impervious	0.167							
	0.011	0.30	Pervious	0.003							
	0.187		Total	0.171					5	7.6	1.30
	Q <sub>25</sub> (cfs)	Pipe Size (inches)	Pipe Length (feet)	Roughness Coefficient (n)	Material	Slope (ft/ft)	Q <sub>full</sub> (cfs)	Q <sub>25</sub> / Q <sub>full</sub> (%)	Pipe Flow Capacity per the Mannings Equation $Q_{full}=(1.49/n)*A*S^{1/2}*R^{2/3}$		
1.30	10	3	0.011	PVC	0.033	4.72	27.5%				

# APPENDIX – E



**DIMARZO &  
BERECKKY**

191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.857.4110

LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

**EXISTING CONDITIONS  
OFFSITE - DRAINAGE BASIN MAP**  
PREPARED FOR  
**819 EAST MAIN STREET  
STAMFORD, CT**

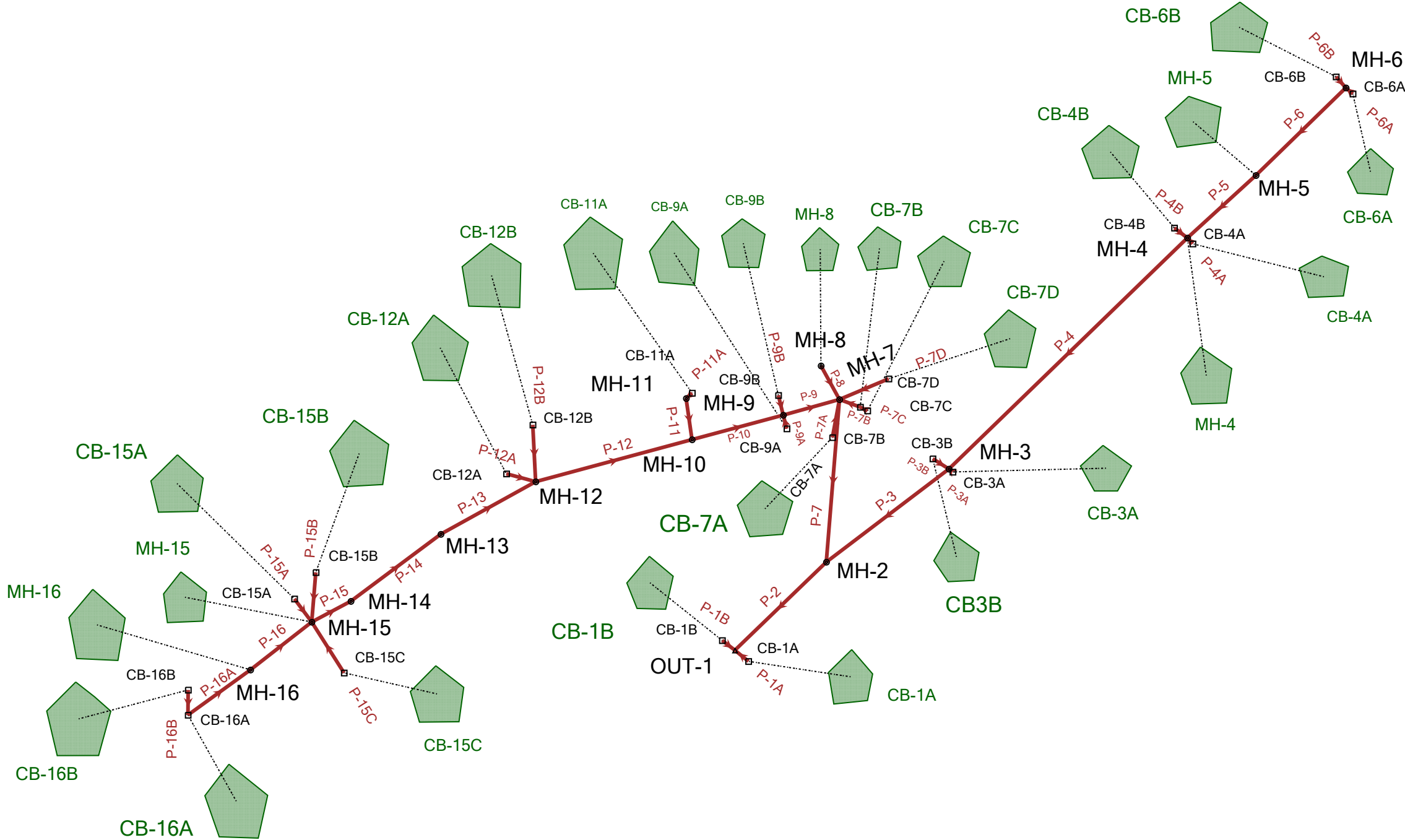
**DR-EX-OFFSITE**

SCALE: 0 120  
1"=120'

DATE: 2/03/2022  
JOB NO. 173



Scenario: Existing Conditions



### FlexTable: Conduit Table

Label	Start Node	Stop Node	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Invert (Start) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Flow (cfs)	Capacity (Full Flow) (cfs)	Velocity (ft/s)
P-1A	CB-1A	OUT-1	17.18	14.03	13.30	17.48	13.44	12.88	19.0	0.022	12.0	Concrete	2.94	5.30	6.92
P-1B	CB-1B	OUT-1	17.30	13.89	13.20	17.48	13.39	12.90	6.5	0.046	12.0	Concrete	2.59	7.65	8.80
P-2	MH-2	OUT-1	16.64	23.46	6.84	17.48	7.40	5.40	134.0	0.011	24.0	Concrete	78.31	23.45	24.93
P-3	MH-3	MH-2	15.50	21.29	7.50	16.64	16.64	6.90	164.0	0.004	18.0	Concrete	17.69	6.35	10.01
P-3A	CB-3A	MH-3	15.38	15.52	11.60	15.50	15.50	11.40	5.0	0.040	12.0	Concrete	2.18	7.13	2.78
P-3B	CB-3B	MH-3	14.90	15.50	11.80	15.50	15.50	11.40	20.0	0.020	12.0	Concrete	0.27	5.04	0.35
P-4	MH-4	MH-3	13.70	23.55	8.90	15.50	15.50	7.50	355.0	0.004	18.0	Concrete	15.82	6.60	8.95
P-4A	CB-4A	MH-4	13.18	13.73	9.10	13.70	13.70	8.90	8.0	0.025	15.0	Concrete	3.94	10.21	3.21
P-4B	CB-4B	MH-4	13.25	13.77	9.20	13.70	13.70	8.90	15.0	0.020	15.0	Concrete	4.32	9.14	3.52
P-5	MH-5	MH-4	14.41	14.12	9.20	13.70	13.70	8.95	98.0	0.003	15.0	Concrete	4.23	3.26	3.44
P-6	MH-6	MH-5	15.30	14.41	10.00	14.41	14.12	9.30	132.0	0.005	15.0	Concrete	3.03	4.70	2.47
P-6A	CB-6A	MH-6	14.78	14.43	10.30	15.30	14.41	10.10	10.0	0.020	12.0	Concrete	1.79	5.04	2.28
P-6B	CB-6B	MH-6	14.83	14.44	10.40	15.30	14.41	10.10	15.0	0.020	12.0	Concrete	1.55	5.04	1.97
P-7	MH-7	MH-2	11.75	30.45	7.65	16.64	16.64	7.05	172.0	0.003	24.0	Concrete	64.11	13.36	20.41
P-7A	CB-7A	MH-7	11.78	11.76	8.60	11.75	11.75	8.25	39.0	0.009	15.0	Concrete	0.78	6.12	0.63
P-7B	CB-7B	MH-7	11.60	11.79	7.90	11.75	11.75	7.75	20.0	0.008	15.0	Concrete	2.84	5.59	2.31
P-7C	CB-7C	CB-7B	11.45	11.61	8.15	11.60	11.60	7.90	8.0	0.031	15.0	Concrete	2.37	11.42	1.93
P-7D	CB-7D	MH-7	11.50	11.86	8.50	11.75	11.75	8.05	5.0	0.090	15.0	Concrete	9.67	19.38	7.88
P-8	MH-8	MH-7	12.39	11.95	8.50	11.75	11.75	8.10	39.0	0.010	12.0	PVC	3.30	4.69	4.20
P-9	MH-9	MH-7	11.35	24.43	7.95	11.75	11.75	7.70	58.0	0.004	18.0	Concrete	49.11	6.90	27.79
P-9A	CB-9A	MH-9	10.80	11.38	8.20	11.35	11.35	8.10	4.0	0.025	12.0	Concrete	2.87	5.63	3.65
P-9B	CB-9B	MH-9	10.84	11.88	8.35	11.35	11.35	8.05	16.0	0.019	12.0	PVC	8.42	6.34	10.72
P-10	MH-10	MH-9	11.46	24.00	8.30	11.35	11.35	8.00	96.0	0.003	18.0	Concrete	38.13	5.87	21.58
P-11	MH-11	MH-10	14.20	11.69	9.00	11.46	11.46	8.60	43.0	0.009	12.0	Concrete	2.58	3.44	3.29
P-11A	CB-11A	MH-11	14.66	11.72	10.70	14.20	11.69	10.50	6.0	0.033	12.0	Concrete	2.58	6.50	3.29
P-12	MH-12	MH-10	13.43	31.72	9.10	11.46	11.46	8.40	170.0	0.004	18.0	Concrete	36.26	6.74	20.52
P-12A	CB-12A	MH-12	13.32	13.97	9.70	13.43	13.43	9.30	31.0	0.013	15.0	Concrete	8.50	7.34	6.93
P-12B	CB-12B	MH-12	15.00	13.64	10.90	13.43	13.43	9.50	59.0	0.024	15.0	Concrete	3.90	9.95	3.18
P-13	MH-13	MH-12	14.80	19.44	10.80	13.43	13.43	9.20	114.0	0.014	18.0	Concrete	24.13	12.44	13.65
P-14	MH-14	MH-13	17.83	20.98	13.50	14.80	14.80	10.90	116.0	0.022	18.0	Concrete	24.24	15.73	13.72
P-15	MH-15	MH-14	19.23	20.18	14.10	17.83	17.83	13.60	44.0	0.011	18.0	Concrete	24.28	11.20	13.74
P-15A	CB-15A	MH-15	19.80	20.47	16.00	19.23	19.23	15.10	30.0	0.030	15.0	Concrete	13.12	11.19	10.69
P-15B	CB-15B	MH-15	20.43	19.34	17.20	19.23	19.23	14.80	51.0	0.047	15.0	Concrete	3.06	14.01	2.49
P-15C	CB-15C	MH-15	41.10	20.67	20.00	19.23	19.23	14.30	53.0	0.108	15.0	Concrete	2.75	21.18	11.90
P-16	MH-16	MH-15	20.20	19.96	15.00	19.23	19.23	14.20	79.0	0.010	15.0	Concrete	6.21	6.50	5.06
P-16A	CB-16A	MH-16	19.00	20.88	15.90	20.20	19.96	15.10	78.0	0.010	12.0	Concrete	3.87	3.61	4.93
P-16B	CB-16B	CB-16A	19.20	19.13	16.40	19.00	19.00	16.00	27.0	0.015	12.0	Concrete	2.51	4.34	3.20



**FlexTable: Catch Basin Table**

Label	Elevation (Ground) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Flow (Captured) (cfs)	Flow (Additional Carryover) (cfs)	Flow (Total Out) (cfs)	Elevation (Invert) (ft)	Is Surcharged?	Inlet C	Local CA (ft <sup>2</sup> )	Structure Type	Length (ft)	Width (ft)	Inlet Location	Longitudinal Slope (Inlet) (ft/ft)
CB-1A	17.18	14.03	False	2.94	0.00	2.94	11.30	False	0.690	20,807.0	Box Structure	5.40	4.40	On Grade	0.011
CB-1B	17.30	13.89	False	2.59	0.00	2.59	11.20	False	0.755	18,380.5	Box Structure	5.40	4.40	On Grade	0.011
CB-3A	15.38	15.38	True	2.18	0.00	2.18	9.40	True	0.625	15,456.3	Box Structure	5.40	4.40	On Grade	0.004
CB-3B	14.90	14.90	True	0.27	0.00	0.27	9.80	True	0.950	1,543.7	Box Structure	5.40	4.40	On Grade	0.004
CB-4A	13.18	13.18	True	3.94	0.00	3.94	7.10	True	0.495	27,909.1	Box Structure	5.40	4.40	On Grade	0.004
CB-4B	13.25	13.25	True	4.32	0.00	4.32	7.20	True	0.950	24,538.5	Box Structure	5.40	4.40	On Grade	0.004
CB-6A	14.78	14.43	False	1.79	0.00	1.79	8.30	True	0.528	12,703.3	Box Structure	5.40	4.40	On Grade	0.005
CB-6B	14.83	14.44	False	1.55	0.00	1.55	8.40	True	0.950	8,787.5	Box Structure	5.40	4.40	On Grade	0.005
CB-7A	11.78	11.76	False	0.78	0.00	0.78	6.65	True	0.495	4,416.4	Box Structure	5.40	4.40	On Grade	0.009
CB-7B	11.60	11.60	True	0.48	0.00	2.84	5.90	True	0.950	2,745.5	Box Structure	5.40	4.40	In Sag	
CB-7C	11.45	11.45	True	2.37	0.00	2.37	6.15	True	0.950	13,448.2	Box Structure	5.40	4.40	In Sag	
CB-7D	11.50	11.50	True	9.67	7.30	9.67	6.50	True	0.885	16,776.9	Box Structure	5.40	4.40	In Sag	
CB-9A	10.80	10.80	True	2.87	0.00	2.87	6.20	True	0.495	20,313.8	Box Structure	5.40	4.40	In Sag	
CB-9B	10.84	10.84	True	8.42	0.00	8.42	6.35	True	0.788	59,663.4	Box Structure	5.40	4.40	In Sag	
CB-11A	14.66	11.72	False	2.58	0.00	2.58	8.70	True	0.885	14,693.7	Box Structure	5.40	4.40	On Grade	0.010
CB-12A	13.32	13.32	True	8.50	0.00	8.50	7.70	True	0.690	60,211.5	Box Structure	5.40	4.40	On Grade	0.010
CB-12B	15.00	13.64	False	3.90	0.00	3.90	8.90	True	0.820	27,611.0	Box Structure	5.40	4.40	On Grade	0.010
CB-15A	19.80	19.80	True	13.12	0.00	13.12	14.00	True	0.788	92,914.8	Box Structure	10.80	4.40	On Grade	0.012
CB-15B	20.43	19.34	False	3.06	0.00	3.06	15.20	True	0.820	17,393.8	Box Structure	5.40	4.40	On Grade	0.012
CB-15C	41.10	20.67	False	2.75	0.00	2.75	20.00	False	0.820	15,608.7	Box Structure	10.80	4.40	On Grade	0.060
CB-16A	19.00	19.00	True	1.38	0.00	3.87	13.90	True	0.755	7,865.6	Box Structure	5.40	4.40	In Sag	
CB-16B	19.20	19.13	False	2.51	0.00	2.51	14.40	True	0.625	14,271.3	Box Structure	5.40	4.40	In Sag	

### FlexTable: Manhole Table

Label	Elevation (Ground) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Flow (Known) (cfs)	Flow (Total Out) (cfs)	Elevation (Invert) (ft)	Is Surcharged?
MH-2	16.64	16.64	True	0.00	78.31	6.84	True
MH-3	15.50	15.50	True	0.00	17.69	6.90	True
MH-4	13.70	13.70	True	0.00	15.82	8.90	True
MH-5	14.41	14.12	False	0.00	4.23	9.20	True
MH-6	15.30	14.41	False	0.00	3.03	10.00	True
MH-7	11.75	11.75	True	0.00	64.11	7.65	True
MH-8	12.39	11.95	False	0.00	3.30	8.50	True
MH-9	11.35	11.35	True	0.00	49.11	7.95	True
MH-10	11.46	11.46	True	0.00	38.13	8.30	True
MH-11	14.20	11.69	False	0.00	2.58	9.00	True
MH-12	13.43	13.43	True	0.00	36.26	9.10	True
MH-13	14.80	14.80	True	0.00	24.13	10.80	True
MH-14	17.83	17.83	True	0.00	24.24	13.50	True
MH-15	19.23	19.23	True	0.00	24.28	14.10	True
MH-16	20.20	19.96	False	0.00	6.21	15.00	True

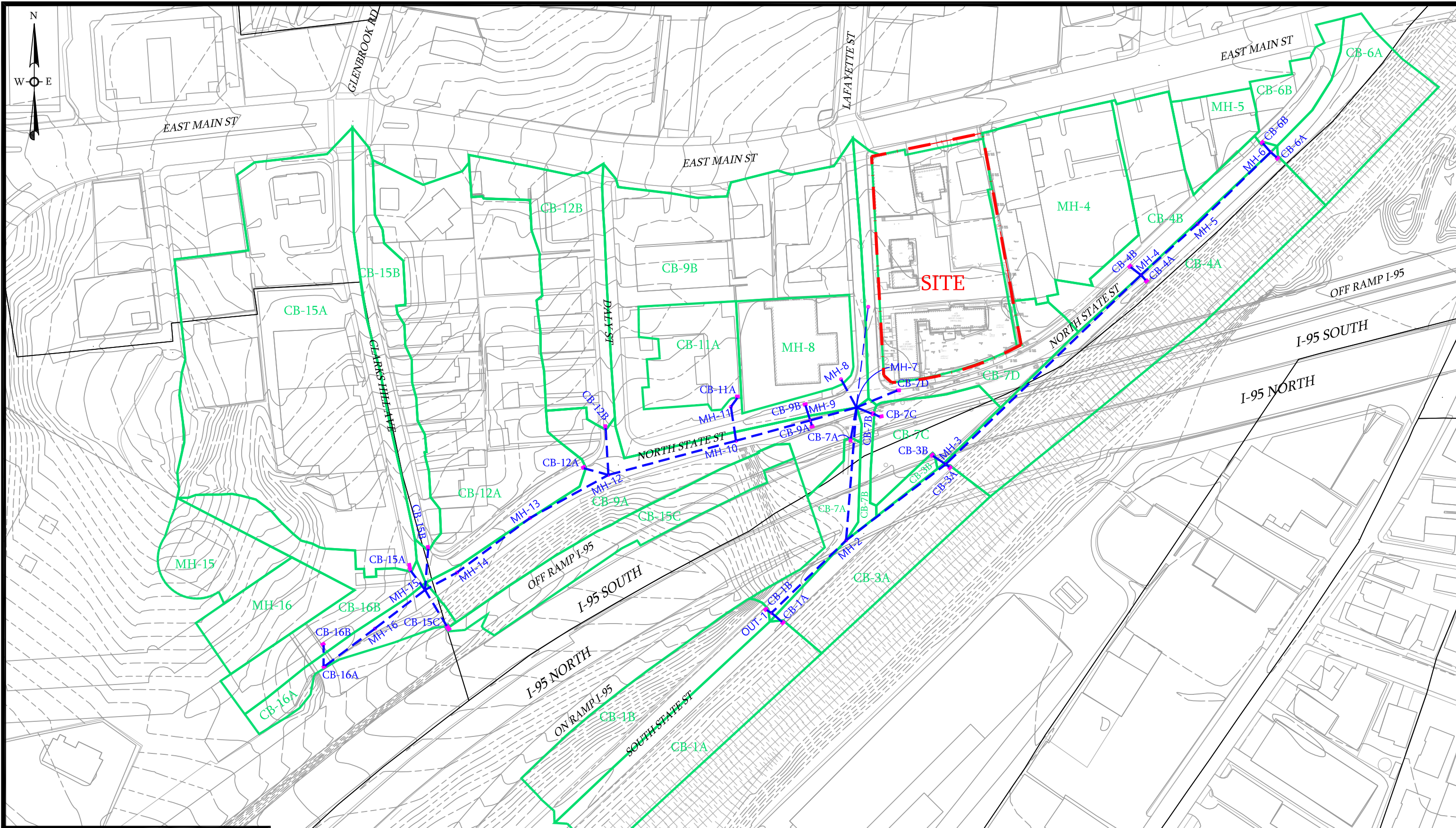
### FlexTable: Outfall Table

Label	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Elevation (User Defined Tailwater) (ft)	Boundary Condition Type	Hydraulic Grade (ft)	Flow (Total Out) (cfs)	Notes
OUT-1	17.48	5.40	6.40	User Defined Tailwater	13.39	83.61	

### FlexTable: Catchment Table

Outflow Element	Area (User Defined) (ft <sup>2</sup> )	Runoff Coefficient (Rational)	Catchment CA (ft <sup>2</sup> )	Time of Concentration (min)	Flow (Total Out) (cfs)	Notes
MH-4	40,184.0	0.853	34,256.9	5.000	6.02	
MH-15	13,864.0	0.755	10,467.3	5.000	1.84	
MH-8	19,736.0	0.950	18,749.2	5.000	3.30	
MH-16	14,484.0	0.950	13,759.8	5.000	2.42	
MH-5	9,915.0	0.950	9,419.3	5.000	1.66	
CB-1A	30,155.0	0.690	20,807.0	10.000	2.94	
CB-1B	24,345.0	0.755	18,380.5	10.000	2.59	
CB-3B	1,625.0	0.950	1,543.8	5.000	0.27	
CB-3A	24,730.0	0.625	15,456.3	10.000	2.18	
CB-4B	25,830.0	0.950	24,538.5	5.000	4.32	
CB-4A	56,382.0	0.495	27,909.1	10.000	3.94	
CB-6A	24,082.0	0.528	12,703.3	10.000	1.79	
CB-6B	9,250.0	0.950	8,787.5	5.000	1.55	
CB-7B	2,890.0	0.950	2,745.5	5.000	0.48	
CB-7C	14,156.0	0.950	13,448.2	5.000	2.37	
CB-7A	8,922.0	0.495	4,416.4	5.000	0.78	
CB-7D	18,957.0	0.885	16,776.9	10.000	2.37	
CB-11A	16,603.0	0.885	14,693.7	5.000	2.58	
CB-12B	33,672.0	0.820	27,611.0	10.000	3.90	
CB-12A	87,263.0	0.690	60,211.5	10.000	8.50	
CB-15A	117,987.0	0.788	92,914.8	10.000	13.12	
CB-15B	21,212.0	0.820	17,393.8	5.000	3.06	
CB-16B	22,834.0	0.625	14,271.3	5.000	2.51	
CB-16A	10,418.0	0.755	7,865.6	5.000	1.38	
CB-9A	41,038.0	0.495	20,313.8	10.000	2.87	
CB-9B	75,763.0	0.788	59,663.4	10.000	8.42	
CB-15C	19,035.0	0.820	15,608.7	5.000	2.75	

# APPENDIX – F



**DIMARZO & BERECZKY**

191 LLOYD DRIVE  
FAIRFIELD, CT 06825  
203.857.4110

LAND SURVEYING  
CIVIL ENGINEERING  
PERMITTING

**PROPOSED CONDITIONS  
OFFSITE - DRAINAGE BASIN MAP**  
PREPARED FOR  
**819 EAST MAIN STREET  
STAMFORD, CT**

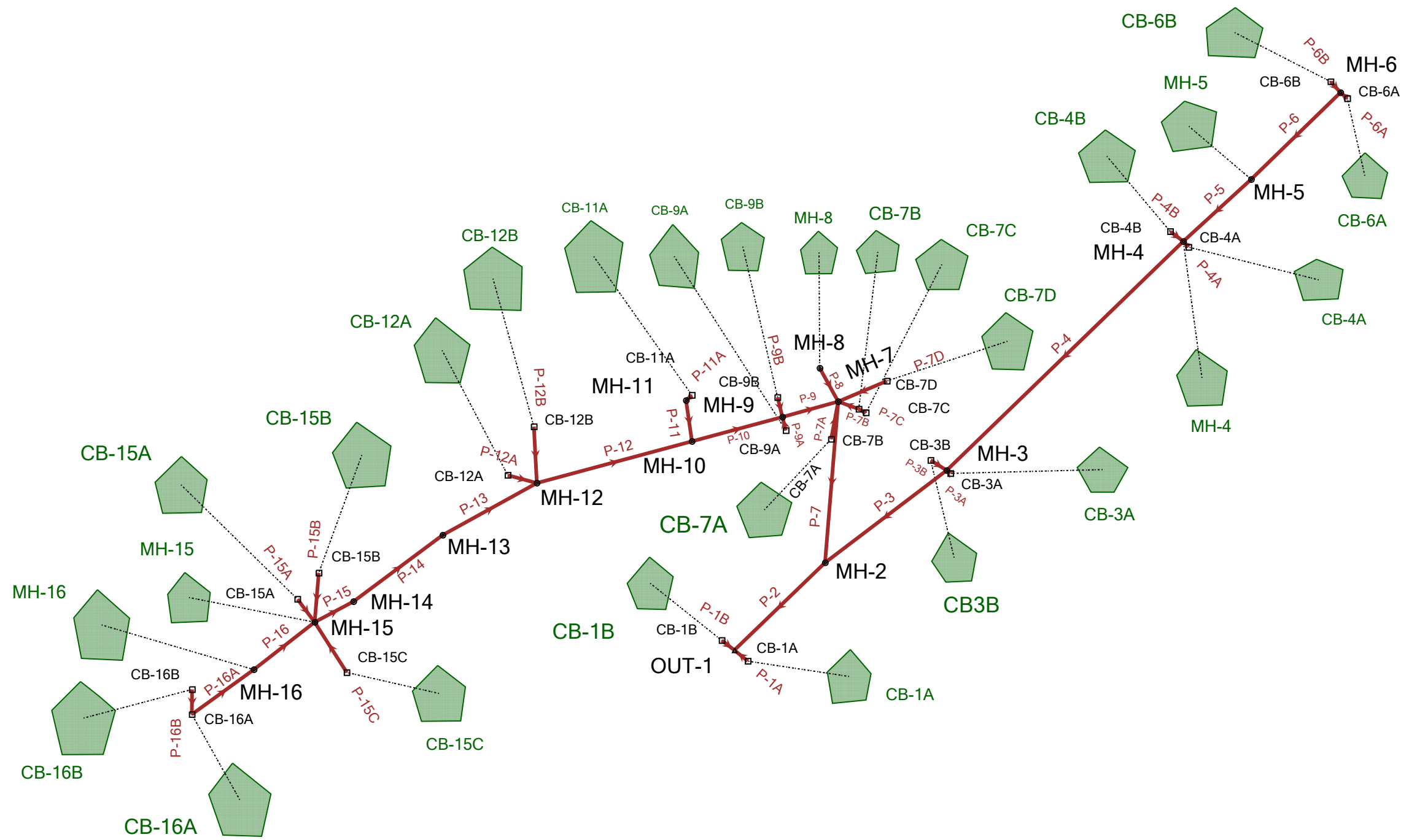
**DR-PR-OFFSITE**

SCALE: 0 120  
1"=120'

DATE: 2/03/2022  
JOB NO. 173



# Scenario: Proposed Conditions



**FlexTable: Conduit Table**

Label	Start Node	Stop Node	Elevation Ground (Start) (ft)	Hydraulic Grade Line (In) (ft)	Invert (Start) (ft)	Elevation Ground (Stop) (ft)	Hydraulic Grade Line (Out) (ft)	Invert (Stop) (ft)	Length (User Defined) (ft)	Slope (Calculated) (ft/ft)	Diameter (in)	Material	Flow (cfs)	Capacity (Full Flow) (cfs)	Velocity (ft/s)
P-1A	CB-1A	OUT-1	17.18	14.03	13.30	17.48	13.44	12.88	19.0	0.022	12.0	Concrete	2.94	5.30	6.92
P-1B	CB-1B	OUT-1	17.30	13.89	13.20	17.48	13.39	12.90	6.5	0.046	12.0	Concrete	2.59	7.65	8.80
P-2	MH-2	OUT-1	16.64	23.38	6.84	17.48	7.40	5.40	134.0	0.011	24.0	Concrete	78.12	23.45	24.87
P-3	MH-3	MH-2	15.50	21.29	7.50	16.64	16.64	6.90	164.0	0.004	18.0	Concrete	17.68	6.35	10.01
P-3A	CB-3A	MH-3	15.38	15.52	11.60	15.50	15.50	11.40	5.0	0.040	12.0	Concrete	2.18	7.13	2.78
P-3B	CB-3B	MH-3	14.90	15.50	11.80	15.50	15.50	11.40	20.0	0.020	12.0	Concrete	0.27	5.04	0.35
P-4	MH-4	MH-3	13.70	23.54	8.90	15.50	15.50	7.50	355.0	0.004	18.0	Concrete	15.81	6.60	8.94
P-4A	CB-4A	MH-4	13.18	13.73	9.10	13.70	13.70	8.90	8.0	0.025	15.0	Concrete	3.94	10.21	3.21
P-4B	CB-4B	MH-4	13.25	13.77	9.20	13.70	13.70	8.90	15.0	0.020	15.0	Concrete	4.32	9.14	3.52
P-5	MH-5	MH-4	14.41	14.12	9.20	13.70	13.70	8.95	98.0	0.003	15.0	Concrete	4.23	3.26	3.44
P-6	MH-6	MH-5	15.30	14.41	10.00	14.41	14.12	9.30	132.0	0.005	15.0	Concrete	3.03	4.70	2.47
P-6A	CB-6A	MH-6	14.78	14.43	10.30	15.30	14.41	10.10	10.0	0.020	12.0	Concrete	1.79	5.04	2.28
P-6B	CB-6B	MH-6	14.83	14.44	10.40	15.30	14.41	10.10	15.0	0.020	12.0	Concrete	1.55	5.04	1.97
P-7	MH-7	MH-2	11.75	30.38	7.65	16.64	16.64	7.05	172.0	0.003	24.0	Concrete	63.93	13.36	20.35
P-7A	CB-7A	MH-7	11.78	11.76	8.60	11.75	11.75	8.25	39.0	0.009	15.0	Concrete	0.78	6.12	0.63
P-7B	CB-7B	MH-7	11.60	11.79	7.90	11.75	11.75	7.75	20.0	0.008	15.0	Concrete	2.84	5.59	2.31
P-7C	CB-7C	CB-7B	11.45	11.61	8.15	11.60	11.60	7.90	8.0	0.031	15.0	Concrete	2.37	11.42	1.93
P-7D	CB-7D	MH-7	11.50	11.76	8.50	11.75	11.75	8.05	5.0	0.090	15.0	Concrete	2.37	19.38	1.93
P-8	MH-8	MH-7	12.39	11.95	8.50	11.75	11.75	8.10	39.0	0.010	12.0	PVC	3.30	4.69	4.20
P-9	MH-9	MH-7	11.35	24.43	7.95	11.75	11.75	7.70	58.0	0.004	18.0	Concrete	49.11	6.90	27.79
P-9A	CB-9A	MH-9	10.80	11.38	8.20	11.35	11.35	8.10	4.0	0.025	12.0	Concrete	2.87	5.63	3.65
P-9B	CB-9B	MH-9	10.84	11.88	8.35	11.35	11.35	8.05	16.0	0.019	12.0	PVC	8.42	6.34	10.72
P-10	MH-10	MH-9	11.46	24.00	8.30	11.35	11.35	8.00	96.0	0.003	18.0	Concrete	38.13	5.87	21.58
P-11	MH-11	MH-10	14.20	11.69	9.00	11.46	11.46	8.60	43.0	0.009	12.0	Concrete	2.58	3.44	3.29
P-11A	CB-11A	MH-11	14.66	11.72	10.70	14.20	11.69	10.50	6.0	0.033	12.0	Concrete	2.58	6.50	3.29
P-12	MH-12	MH-10	13.43	31.72	9.10	11.46	11.46	8.40	170.0	0.004	18.0	Concrete	36.26	6.74	20.52
P-12A	CB-12A	MH-12	13.32	13.97	9.70	13.43	13.43	9.30	31.0	0.013	15.0	Concrete	8.50	7.34	6.93
P-12B	CB-12B	MH-12	15.00	13.64	10.90	13.43	13.43	9.50	59.0	0.024	15.0	Concrete	3.90	9.95	3.18
P-13	MH-13	MH-12	14.80	19.44	10.80	13.43	13.43	9.20	114.0	0.014	18.0	Concrete	24.13	12.44	13.65
P-14	MH-14	MH-13	17.83	20.98	13.50	14.80	14.80	10.90	116.0	0.022	18.0	Concrete	24.24	15.73	13.72
P-15	MH-15	MH-14	19.23	20.18	14.10	17.83	17.83	13.60	44.0	0.011	18.0	Concrete	24.28	11.20	13.74
P-15A	CB-15A	MH-15	19.80	20.47	16.00	19.23	19.23	15.10	30.0	0.030	15.0	Concrete	13.12	11.19	10.69
P-15B	CB-15B	MH-15	20.43	19.34	17.20	19.23	19.23	14.80	51.0	0.047	15.0	Concrete	3.06	14.01	2.49
P-15C	CB-15C	MH-15	41.10	20.67	20.00	19.23	19.23	14.30	53.0	0.108	15.0	Concrete	2.75	21.18	11.90
P-16	MH-16	MH-15	20.20	19.96	15.00	19.23	19.23	14.20	79.0	0.010	15.0	Concrete	6.21	6.50	5.06
P-16A	CB-16A	MH-16	19.00	20.88	15.90	20.20	19.96	15.10	78.0	0.010	12.0	Concrete	3.87	3.61	4.93
P-16B	CB-16B	CB-16A	19.20	19.13	16.40	19.00	19.00	16.00	27.0	0.015	12.0	Concrete	2.51	4.34	3.20

**FlexTable: Catch Basin Table**

Label	Elevation (Ground) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Flow (Captured) (cfs)	Flow (Additional Carryover) (cfs)	Flow (Total Out) (cfs)	Elevation (Invert) (ft)	Is Surcharged?	Inlet C	Local CA (ft <sup>2</sup> )	Structure Type	Length (ft)	Width (ft)	Inlet Location	Longitudinal Slope (Inlet) (ft/ft)
CB-1A	17.18	14.03	False	2.94	0.00	2.94	11.30	False	0.690	20,807.0	Box Structure	5.40	4.40	On Grade	0.011
CB-1B	17.30	13.89	False	2.59	0.00	2.59	11.20	False	0.755	18,380.5	Box Structure	5.40	4.40	On Grade	0.011
CB-3A	15.38	15.38	True	2.18	0.00	2.18	9.40	True	0.625	15,456.3	Box Structure	5.40	4.40	On Grade	0.004
CB-3B	14.90	14.90	True	0.27	0.00	0.27	9.80	True	0.950	1,543.7	Box Structure	5.40	4.40	On Grade	0.004
CB-4A	13.18	13.18	True	3.94	0.00	3.94	7.10	True	0.495	27,909.1	Box Structure	5.40	4.40	On Grade	0.004
CB-4B	13.25	13.25	True	4.32	0.00	4.32	7.20	True	0.950	24,538.5	Box Structure	5.40	4.40	On Grade	0.004
CB-6A	14.78	14.43	False	1.79	0.00	1.79	8.30	True	0.528	12,703.3	Box Structure	5.40	4.40	On Grade	0.005
CB-6B	14.83	14.44	False	1.55	0.00	1.55	8.40	True	0.950	8,787.5	Box Structure	5.40	4.40	On Grade	0.005
CB-7A	11.78	11.76	False	0.78	0.00	0.78	6.65	True	0.495	4,416.4	Box Structure	5.40	4.40	On Grade	0.009
CB-7B	11.60	11.60	True	0.48	0.00	2.84	5.90	True	0.950	2,745.5	Box Structure	5.40	4.40	In Sag	
CB-7C	11.45	11.45	True	2.37	0.00	2.37	6.15	True	0.950	13,448.2	Box Structure	5.40	4.40	In Sag	
CB-7D	11.50	11.50	True	2.37	0.00	2.37	6.50	True	0.885	16,776.9	Box Structure	5.40	4.40	In Sag	
CB-9A	10.80	10.80	True	2.87	0.00	2.87	6.20	True	0.495	20,313.8	Box Structure	5.40	4.40	In Sag	
CB-9B	10.84	10.84	True	8.42	0.00	8.42	6.35	True	0.788	59,663.4	Box Structure	5.40	4.40	In Sag	
CB-11A	14.66	11.72	False	2.58	0.00	2.58	8.70	True	0.885	14,693.7	Box Structure	5.40	4.40	On Grade	0.010
CB-12A	13.32	13.32	True	8.50	0.00	8.50	7.70	True	0.690	60,211.5	Box Structure	5.40	4.40	On Grade	0.010
CB-12B	15.00	13.64	False	3.90	0.00	3.90	8.90	True	0.820	27,611.0	Box Structure	5.40	4.40	On Grade	0.010
CB-15A	19.80	19.80	True	13.12	0.00	13.12	14.00	True	0.788	92,914.8	Box Structure	10.80	4.40	On Grade	0.012
CB-15B	20.43	19.34	False	3.06	0.00	3.06	15.20	True	0.820	17,393.8	Box Structure	5.40	4.40	On Grade	0.012
CB-15C	41.10	20.67	False	2.75	0.00	2.75	20.00	False	0.820	15,608.7	Box Structure	10.80	4.40	On Grade	0.060
CB-16A	19.00	19.00	True	1.38	0.00	3.87	13.90	True	0.755	7,865.6	Box Structure	5.40	4.40	In Sag	
CB-16B	19.20	19.13	False	2.51	0.00	2.51	14.40	True	0.625	14,271.3	Box Structure	5.40	4.40	In Sag	

### FlexTable: Manhole Table

Label	Elevation (Ground) (ft)	Hydraulic Grade Line (Out) (ft)	Is Overflowing?	Flow (Known) (cfs)	Flow (Total Out) (cfs)	Elevation (Invert) (ft)	Is Surcharged?
MH-2	16.64	16.64	True	0.00	78.12	6.84	True
MH-3	15.50	15.50	True	0.00	17.68	6.90	True
MH-4	13.70	13.70	True	0.00	15.81	8.90	True
MH-5	14.41	14.12	False	0.00	4.23	9.20	True
MH-6	15.30	14.41	False	0.00	3.03	10.00	True
MH-7	11.75	11.75	True	7.12	63.93	7.65	True
MH-8	12.39	11.95	False	0.00	3.30	8.50	True
MH-9	11.35	11.35	True	0.00	49.11	7.95	True
MH-10	11.46	11.46	True	0.00	38.13	8.30	True
MH-11	14.20	11.69	False	0.00	2.58	9.00	True
MH-12	13.43	13.43	True	0.00	36.26	9.10	True
MH-13	14.80	14.80	True	0.00	24.13	10.80	True
MH-14	17.83	17.83	True	0.00	24.24	13.50	True
MH-15	19.23	19.23	True	0.00	24.28	14.10	True
MH-16	20.20	19.96	False	0.00	6.21	15.00	True

### FlexTable: Outfall Table

Label	Elevation (Ground) (ft)	Elevation (Invert) (ft)	Elevation (User Defined Tailwater) (ft)	Boundary Condition Type	Hydraulic Grade (ft)	Flow (Total Out) (cfs)	Notes
OUT-1	17.48	5.40	6.40	User Defined Tailwater	13.39	83.42	

### FlexTable: Catchment Table

Outflow Element	Area (User Defined) (ft <sup>2</sup> )	Runoff Coefficient (Rational)	Catchment CA (ft <sup>2</sup> )	Time of Concentration (min)	Flow (Total Out) (cfs)	Notes
MH-4	40,081.0	0.853	34,169.1	5.000	6.01	
MH-15	13,864.0	0.755	10,467.3	5.000	1.84	
MH-8	19,736.0	0.950	18,749.2	5.000	3.30	
MH-16	14,484.0	0.950	13,759.8	5.000	2.42	
MH-5	9,915.0	0.950	9,419.3	5.000	1.66	
CB-1A	30,155.0	0.690	20,807.0	10.000	2.94	
CB-1B	24,345.0	0.755	18,380.5	10.000	2.59	
CB-3B	1,625.0	0.950	1,543.8	5.000	0.27	
CB-3A	24,730.0	0.625	15,456.3	10.000	2.18	
CB-4B	25,830.0	0.950	24,538.5	5.000	4.32	
CB-4A	56,382.0	0.495	27,909.1	10.000	3.94	
CB-6A	24,082.0	0.528	12,703.3	10.000	1.79	
CB-6B	9,250.0	0.950	8,787.5	5.000	1.55	
CB-7B	2,890.0	0.950	2,745.5	5.000	0.48	
CB-7C	14,156.0	0.950	13,448.2	5.000	2.37	
CB-7A	8,922.0	0.495	4,416.4	5.000	0.78	
CB-7D	18,957.0	0.885	16,776.9	10.000	2.37	
CB-11A	16,603.0	0.885	14,693.7	5.000	2.58	
CB-12B	33,672.0	0.820	27,611.0	10.000	3.90	
CB-12A	87,263.0	0.690	60,211.5	10.000	8.50	
CB-15A	117,987.0	0.788	92,914.8	10.000	13.12	
CB-15B	21,212.0	0.820	17,393.8	5.000	3.06	
CB-16B	22,834.0	0.625	14,271.3	5.000	2.51	
CB-16A	10,418.0	0.755	7,865.6	5.000	1.38	
CB-9A	41,038.0	0.495	20,313.8	10.000	2.87	
CB-9B	75,763.0	0.788	59,663.4	10.000	8.42	
CB-15C	19,035.0	0.820	15,608.7	5.000	2.75	



# APPENDIX – G

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**

<b>Part 1: General Information (All Projects)</b>	
Project Name	819 EAST MAIN STREET
Project Address	821, 825, 827 & 831 EAST MAIN STREET + 15, 27 & 29 LAFAYETTE STREET
Project Applicant	819 EAST MAIN STREET, LLC
Title of Plan	Site Plan depicting 821, 825, 827 & 831 East Main St, 15, 27, & 29 Lafayette St, Stamford, CT
Revision Date of Plan	2/03/2022
Tax Account Number	001-7666, 002-5499, 000-4640, 000-4639, 001-1420, 001-7662, 001-7663

<b>Part 2: Project Details (All Projects)</b>	
1. What type of development is this? (choose from dropdown)	Development
2. What is the total area of the project site?	50,237 ft <sup>2</sup>
3. What is the total area of land disturbance for this project?	50,237 ft <sup>2</sup>
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

<b>Part 3: Water Quality Target Total (Only for Standard 1 Projects)</b>	
5. What is the <u>current (pre-development) DCIA</u> for the site?	39,380 ft <sup>2</sup>
6. Will the proposed development increase <u>DCIA</u> (without consideration of proposed stormwater management)? (Yes/No)	YES
7. What is the <u>proposed-development total impervious area</u> for the site?	45,473 ft <sup>2</sup>
Water Quality Volume (WQV)	3,620 ft <sup>3</sup>
Standard 1 requirement	RETAIN FULL W.Q.V.
Required treatment/retention volume	3,620 ft <sup>3</sup>
Provided treatment/retention volume for proposed development	3,669 ft <sup>3</sup>

<b>Part 4: Proposed DCIA Tracking (Only for Standard 1 Projects)</b>	
<u>Pre-development total impervious area</u>	39,380 ft <sup>2</sup>
<u>Current DCIA</u>	39,380 ft <sup>2</sup>
<u>Proposed-development total impervious area</u>	45,473 ft <sup>2</sup>
<u>Proposed-development DCIA</u> (after stormwater management)	31,672 ft <sup>2</sup>
<u>Net change in DCIA</u> from <u>current</u> to <u>proposed-development</u>	-7,708 ft <sup>2</sup>

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

**Certification Statement**

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

Engineer's Signature L DM Date 2/03/2022 Engineer's Seal



# APPENDIX – H



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

## CHECKLISTS

Project Name: 819 EAST MAIN STREET  
 Project Address 821, 825, 827 & 831 EAST MAIN STREET + 15, 27 & 29 LAFAYETTE STREET  
 Property Owner(s) 819 EAST MAIN STREET, LLC  
 Tax Account Number(s) 001-7666, 002-5499, 000-4640, 000-4639, 001-1420, 001-7662, 001-7663  
 Engineer's Signature *[Handwritten Signature]* Date: 02/03/2022

**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.**

<input checked="" type="checkbox"/>	<b>Existing Conditions Plan</b>
<input checked="" type="checkbox"/>	<b>Stormwater Management Report</b>
<input checked="" type="checkbox"/>	<b>Stormwater Management Plan / Construction Plan</b>
<input type="checkbox"/>	<b>Certificate of Occupancy</b>

### Checklist for Existing Conditions Plan

**I. General Information**

<input checked="" type="checkbox"/>	Site address
<input checked="" type="checkbox"/>	Orientation, block, zone, City, street name
<input checked="" type="checkbox"/>	Applicant name and legal address
<input checked="" type="checkbox"/>	Surveyor name, address, contact information
<input checked="" type="checkbox"/>	North arrow, bar scale, horizontal and vertical datum
<input checked="" type="checkbox"/>	24" x 36" sheet size unless otherwise approved
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	Drawing scale shall be set at 1" = 20' or 1" = 40' when possible



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**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**

N/A	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
N/A	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.
N/A	Show and label any Conservation Easement Areas
N/A	Show and label Connecticut Coastal Jurisdiction Line (CJL)
N/A	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 <a href="#">State of Connecticut Integrated Water Quality Report</a> )
✓	Site soils information including soil types, hydrologic soil group, bedrock / outcroppings, groundwater elevation, significant geologic features
✓	Provide NRCS Soils Mapping
N/A	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
N/A	Flood hazard areas

**Applying under "Lite" Stormwater Management: Skip to Section I**  
 (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

N.A.	Description of sensitive areas for protection
N.A.	Mature tree inventory, which shall include 8-inch (dbh) diameter trees or greater
N/A	Steep slopes
N/A	Ledge and bedrock depth
N/A	Seasonal high groundwater elevation
N.A.	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
N.A.	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)

<b>Applying under "Lite" Stormwater Management: Skip to Section N</b>	
---	--

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.
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N. Hydrologic and Hydraulic Design Calculations

N.A.	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
N.A.	Inlet analysis
N.A.	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"> <li>○ Provide existing and proposed summary table</li> <li>○ Provide existing and proposed mapping, label structures</li> </ul>
	✓ 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

N.A.

✓	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

N.A.

✓	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)
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**V. Proposed LID Review Map**

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

**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
N.A.	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

N.A.

	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)



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## **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



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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



# APPENDIX – I

**CITY OF STAMFORD  
OFFICE OF OPERATIONS  
BUREAU OF ENGINEERING**

**WAIVER COVERING STORM SEWER CONNECTION**

WHEREAS, the CITY OF STAMFORD has granted to the undersigned, the privilege to connect with the City-owned storm water sewer located on \_\_\_\_\_ Street and being in the vicinity of property owned by undersigned, at \_\_\_\_\_ Street, Stamford, Connecticut and which privilege of connecting with said storm water sewer and has been or shall be at the expense of the undersigned.

NOW, THEREFORE, I \_\_\_\_\_ of, the CITY OF STAMFORD, COUNTY OF FAIRFIELD AND STATE OF CONNECTICUT, the undersigned, owning property located at \_\_\_\_\_ Street, Stamford, Connecticut for and in consideration of the privilege heretofore granted to me to connect with the storm water system of the City of Stamford, do hereby expressly waive any and all claims for damages after such connection has been made arising from the backing up of any water from said storm sewer onto my property or for failure of said storm water sewer to absorb any water origination on my said land or for the stoppage, failure or faulty construction of said storm water sewer where I have connected with the same or any part of the entire system, or for any other reason.

AND FURTHERMORE, I do hereby agree to hold the said City of Stamford free and harmless from any liability as aforesaid or from any suit or claim arising under the circumstances above stated, or from any suit or claim presented by any person claiming by, under or through me.

In the Present of:

\_\_\_\_\_(L.S.)  
DATE \_\_\_\_\_

STATE OF CONNECTICUT    )  
  ) ss.Stamford  
COUNTY OF FAIRFIELD    )

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

\_\_\_\_\_  
Notary Public

Date \_\_\_\_\_

Block \_\_\_\_\_

**AGREEMENT COVENANT**

AGREEMENT made this \_\_\_\_\_ by and between \_\_\_\_\_ and the **CITY OF STAMFORD**, a municipal corporation lying within the County of Fairfield and State of Connecticut, acting herein by its duly authorized Mayor, David R. Martin (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 \_\_\_\_\_ 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 \_\_\_\_\_ 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:

\_\_\_\_\_ **THE CITY OF STAMFORD**

BY: \_\_\_\_\_  
David R. Martin  
Its duly authorized Mayor

\_\_\_\_\_ **THE ENVIRONMENTAL PROTECTION BOARD**

BY: \_\_\_\_\_  
Gary H. Stone  
Its duly authorized Chairman

\_\_\_\_\_ **OWNER**

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

\_\_\_\_\_ (Owner's Name)

(Acknowledgement on the Following Page)

STATE OF CONNECTICUT}
} ss: STAMFORD Date: \_\_\_\_\_
COUNTY OF FAIRFIELD }

Personally appeared David R. Martin, Mayor 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 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"**

**SCHEDULE "B"**