

SITE PLAN REVIEW SET

" RESIDENTIAL DEVELOPMENT "

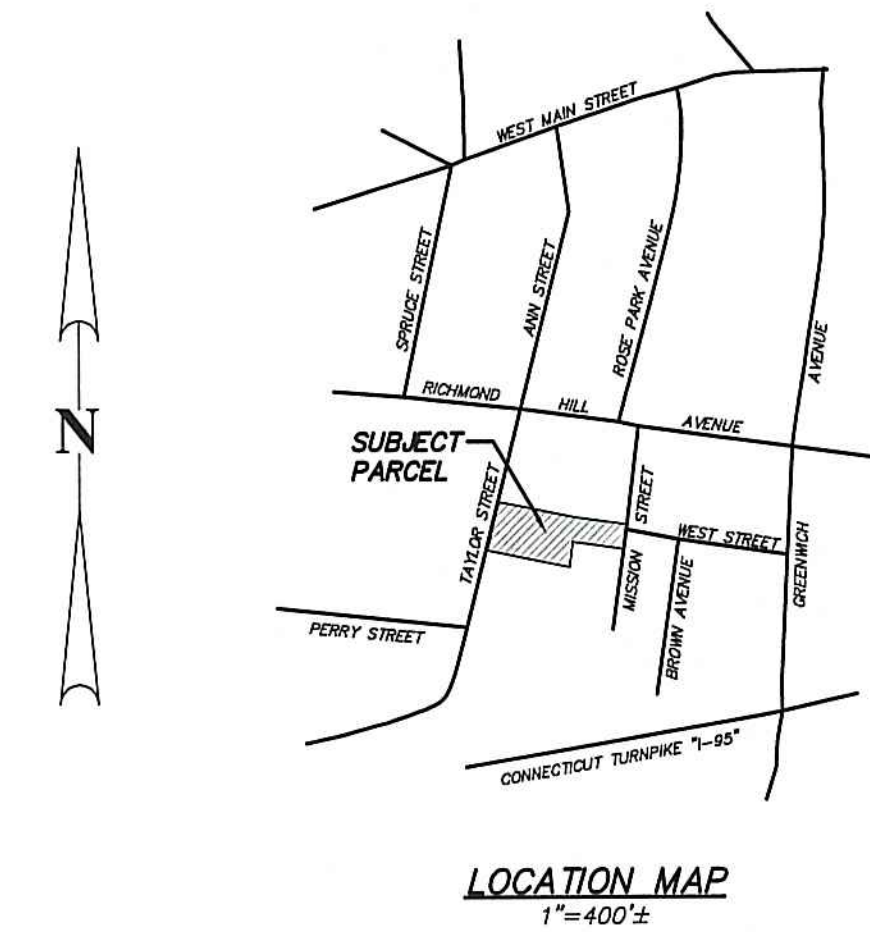
LOCATION

12 & 18 TAYLOR STREET
STAMFORD, CONNECTICUT

PREPARED FOR

G&T TAYLOR STREET LLC

0.5619 ACRES OR 24,478 S.F.
REFER TO MAPS No. 179 AND 12365 S.L.R.
"R-MF" ZONE



SHEET INDEX

SHEET	TITLE	REVISION	DATE
—	TOPOGRAPHIC SURVEY	1	9-21-23
1 OF 1	EXISTING CONDITIONS PLAN	1	9-21-23
1 OF 5	DEVELOPMENT PLAN	5	11-16-23
2 OF 5	UTILITY PLAN	5	11-16-23
3 OF 5	SEDIMENTATION & EROSION CONTROL PLAN	5	11-16-23
4 OF 5	NOTES & DETAILS	5	11-16-23
5 OF 5	DETAILS	5	11-16-23

PARCEL ID 001-9860 PARCEL ID 004-1371

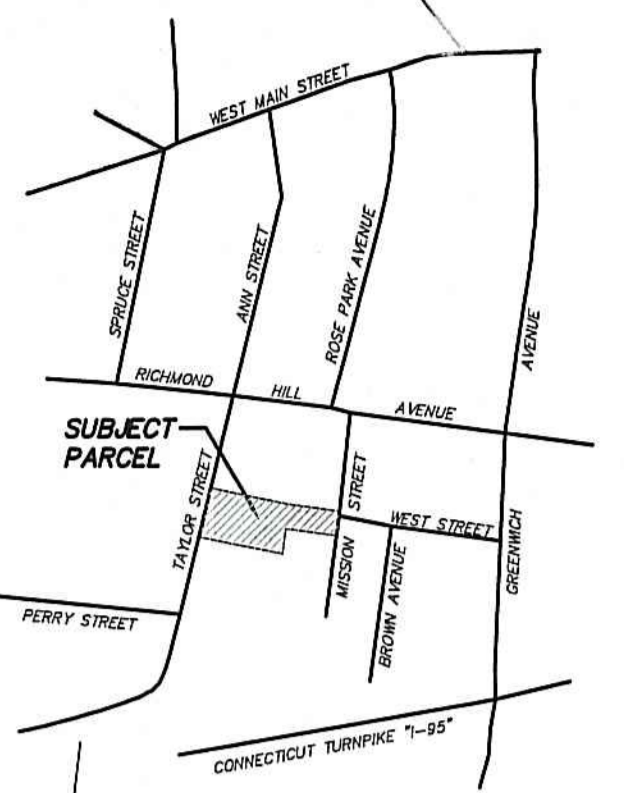
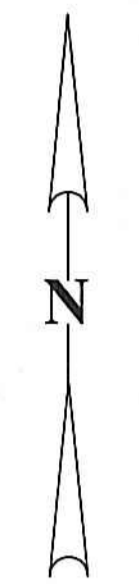
D'ANDREA SURVEYING & ENGINEERING, P.C.
LAND PLANNERS
ENGINEERS
SURVEYORS
P.O. BOX 549 RIVERSIDE, CT 06878 6 NEIL LANE TEL. 637-1779

PLAN SET PREPARED BY:

[Signature] 11-16-23
D'ANDREA SURVEYING & ENGINEERING, P.C. DATE
MATTHEW M. KIVJARY CT. PE No. 36982

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5	11-16-23	RESPOND TO ENG COMMENTS	PROJECT	RESIDENTIAL DEVELOPMENT
4	11-6-23	RESPOND TO ENG COMMENTS	PREPARED FOR	G&T TAYLOR STREET LLC
3	10-2-23	RESPOND TO ENG COMMENTS	LOCATION	12 & 18 TAYLOR STREET STAMFORD, CONNECTICUT
2	9-21-23	RESPOND TO ENG COMMENTS		
1	7-24-23	MINOR REVISIONS		
0	5-2-23	INITIAL SUBMISSION		
REV.	DATE	DESCRIPTION		



LOCATION MAP
 1"=400'

BENCHMARK
 "U" CUT CURB
 ELEV= 35.9
 DATUM: NAVD 88

CONTOURS AND ELEVATIONS DEPICTED HEREON ARE BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

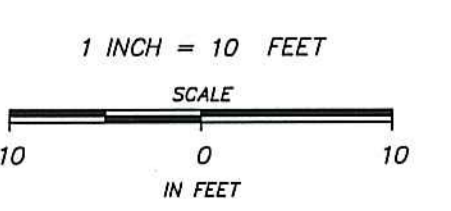
THIS MAP IS A TOPOGRAPHIC SURVEY. TOPOGRAPHIC DATA IS IN ACCORDANCE WITH CLASS "1-2" TOPOGRAPHIC ACCURACY. BOUNDARY INFORMATION IS BASED ON A RESURVEY CONDUCTED IN ACCORDANCE WITH HORIZONTAL ACCURACY CLASS "1-2" AS DEFINED IN THE REGULATIONS OF CONNECTICUT STATE AGENCIES SECTIONS 20-300b-1 THROUGH SEC.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

NEW MONUMENTATION HAS NOT BEEN SET IN THE COURSE OF MAKING THIS SURVEY.

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

AREA = 24,492 S.F.
 REFER TO VOLUME 12434 PAGE 170 S.L.R. & MAP No. 12365 S.L.R.
 LAND LIES IN "R-MF" ZONING DISTRICT
 TO MY KNOWLEDGE AND BELIEF, THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.
 D'ANDREA SURVEYING & ENGINEERING, P.C.
 ANTHONY L. D'ANDREA, CT PE & LS No. 9673
 RIVERSIDE, CONNECTICUT MAY 2, 2023 SEPTEMBER 21, 2023

- SYMBOL LEGEND**
- SDMH ○ STORM DRAIN MANHOLE
 - SSMH ○ SANITARY SEWER MANHOLE
 - UTILITY POLE
 - WG ○ WATER GATE
 - 24 - ELEVATION CONTOURS
 - 24.4 X SPOT ELEVATION
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - HEDGE
 - APPROXIMATE LOCATION OF UNDERGROUND UTILITIES: W-WATER AND G-GAS
- BUILDING COVERAGE**
- LOT AREA = 24,492 S.F.
 - DWELLING = 2,838 S.F.
 - GARAGE = 418 S.F.
 - TOTAL = 3,256 S.F.
 - PERCENT COVERAGE = 13.3%
- TREE LEGEND**
- B - BIRCH
 - CR - CHERRY
 - M - MAPLE
 - MU - MULTI



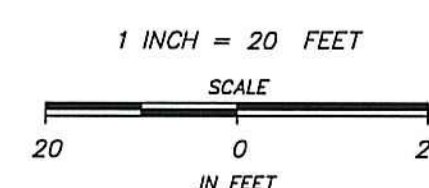
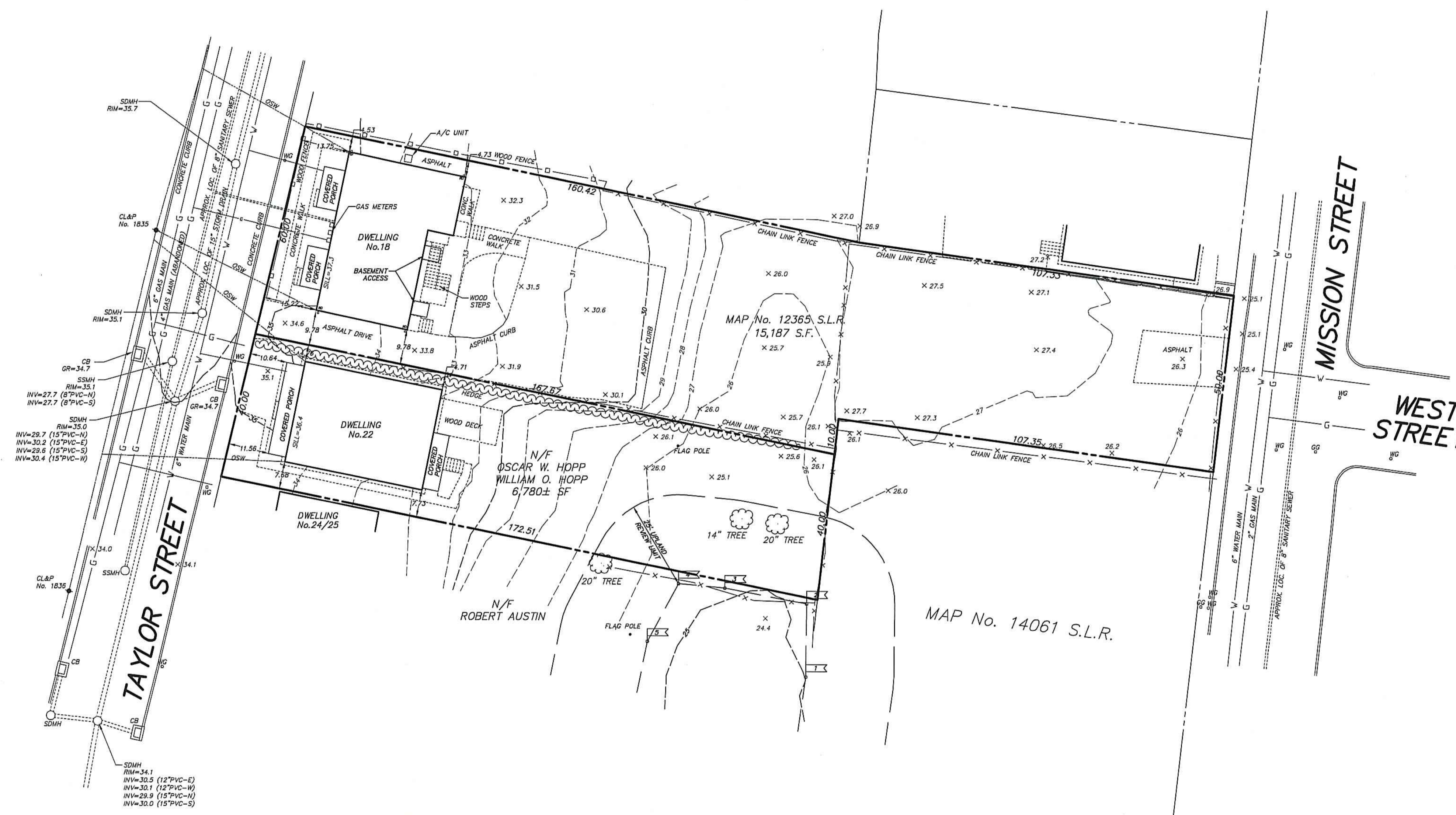
TOPOGRAPHIC SURVEY
 OF PROPERTY AT
 12 & 18 TAYLOR STREET
 IN
 STAMFORD, CONNECTICUT
 PREPARED FOR
G&T TAYLOR STREET LLC

GENERAL NOTES:

1. Refer to a map entitled "Existing Conditions Plan, Owner: Taylor Mission LLC, Site: 18 Taylor Street, Stamford, Connecticut, prepared by Edward J. Frattaroli, Inc. and revised to October 16, 2008.
2. The limits of wetlands are taken from a map entitled "Existing Conditions Plan, Owner: Taylor Mission LLC, Site: 18 Taylor Street, Stamford, Connecticut, prepared by Edward J. Frattaroli, Inc. and revised to October 16, 2008.
3. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD88).
4. In accordance with Connecticut Public Act 87-71 and Connecticut General Statutes (CGS) Sections 16-345 through 16-359, the contractor shall verify the depth and location of all utilities prior to commencing construction, and shall contact "Call Before You Dig, Inc." at 1.800.922.4455, 48 hours prior to commencing construction.
5. The locations of subsurface structures and utilities as depicted hereon indicate only that the structures exist, and no responsibility is assumed by the engineer or surveyor for the accuracy of the locations shown.
6. The contractor shall dig test pits to verify the depth and location of existing utilities, sewers, and storm drains prior to installation. Any potential conflicts shall be brought to the attention of the project engineer.



LOCATION MAP
1"=400'



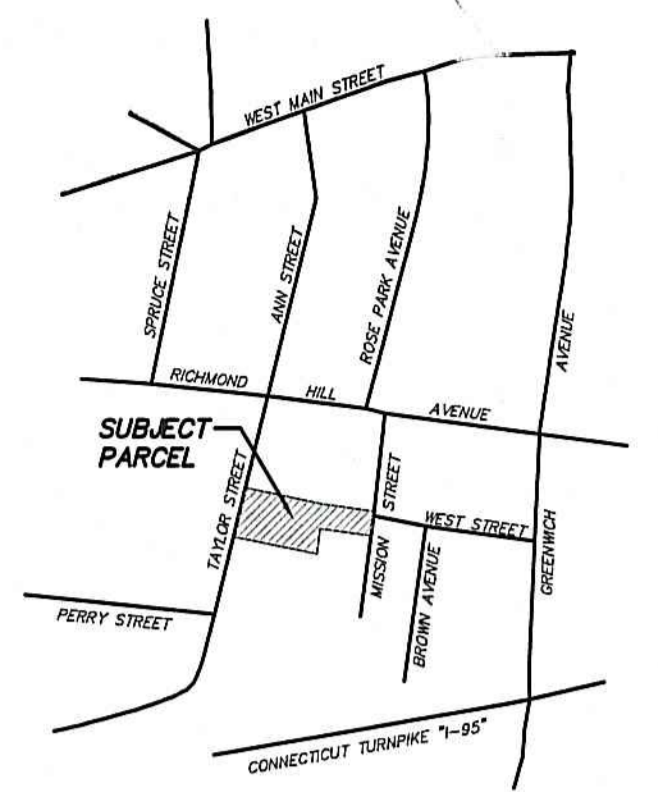
D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS
 P.O. BOX 549
 RIVERSIDE, CT 06878
 6 NEIL LANE
 TEL. 637-1779

PROJECT	RESIDENTIAL DEVELOPMENT
PREPARED FOR	G&T TAYLOR STREET LLC
LOCATION	18 TAYLOR STREET, STAMFORD, CONNECTICUT
1 OF 1	EXISTING CONDITIONS PLAN

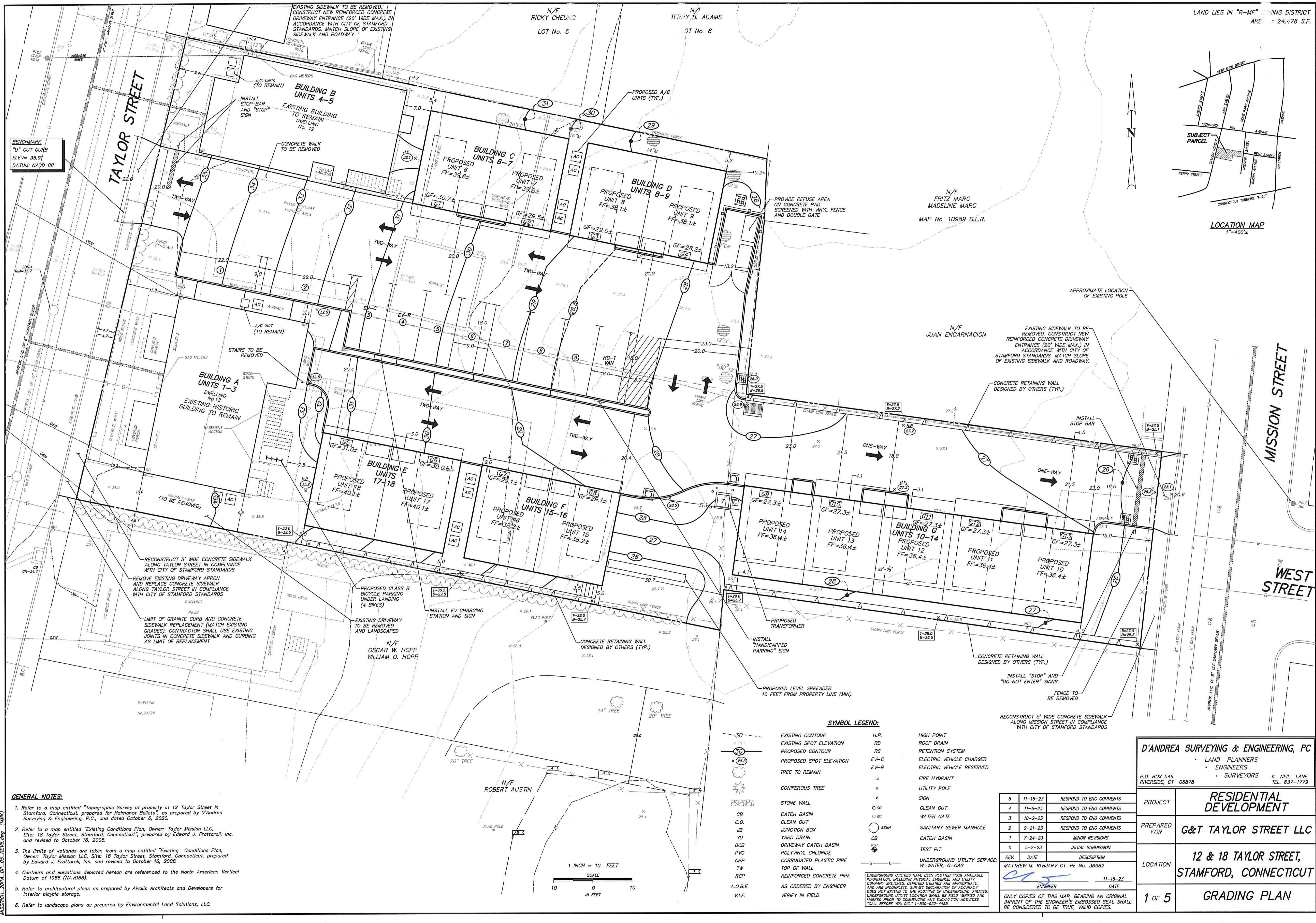
REV.	DATE	DESCRIPTION
1	9-20-23	RESPOND TO ENG COMMENTS
0	5-2-23	INITIAL SUBMISSION
ENGINEER	DATE	
<i>Leonard C. D'Andrea</i>	9-20-23	

LEONARD C. D'ANDREA, CT. PE No. 14869

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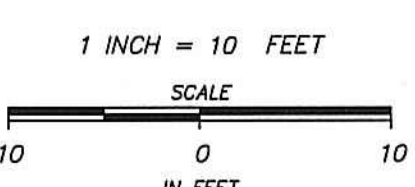


LOCATION MAP
1"=400'



BENCHMARK
"U" CUT CURB
ELEV= 35.9'
DATUM: NAVD 88

- GENERAL NOTES:**
1. Refer to a map entitled "Topographic Survey of property at 12 Taylor Street in Stamford, Connecticut, prepared for Halmonot Belleto", as prepared by D'Andrea Surveying & Engineering, P.C., and dated October 6, 2020.
 2. Refer to a map entitled "Existing Conditions Plan, Owner: Taylor Mission LLC, Site: 18 Taylor Street, Stamford, Connecticut", prepared by Edward J. Frattoni, Inc. and revised to October 16, 2008.
 3. The limits of wetlands are taken from a map entitled "Existing Conditions Plan, Owner: Taylor Mission LLC, Site: 18 Taylor Street, Stamford, Connecticut, prepared by Edward J. Frattoni, Inc. and revised to October 16, 2008.
 4. Contours and elevations depicted herein are referenced to the North American Vertical Datum of 1988 (NAVD88).
 5. Refer to architectural plans as prepared by Alvals Architects and Developers for interior bicycle storage.
 6. Refer to landscape plans as prepared by Environmental Land Solutions, LLC.



SYMBOL LEGEND:

--- 30 ---	EXISTING CONTOUR	H.P.	HIGH POINT
--- 30.1 ---	EXISTING SPOT ELEVATION	RD	ROOF DRAIN
--- 30.2 ---	PROPOSED CONTOUR	RS	RETENTION SYSTEM
--- 30.3 ---	PROPOSED SPOT ELEVATION	EV-C	ELECTRIC VEHICLE CHARGER
○ (25.3)	TREE TO REMAIN	EV-R	ELECTRIC VEHICLE RESERVED
○ (25.4)	CONIFEROUS TREE	⊕	FIRE HYDRANT
○ (25.5)	STONE WALL	⊕	UTILITY POLE
CB	CATCH BASIN	↓	SIGN
C.O.	CLEAN OUT	○ (25.6)	CLEAN OUT
J.B.	JUNCTION BOX	○ (25.7)	WATER GATE
Y.D.	YARD DRAIN	○ (25.8)	SANITARY SEWER MANHOLE
DCB	DRIVEWAY CATCH BASIN	CB	CATCH BASIN
PVC	POLYVINYL CHLORIDE	TEST	TEST PIT
CPP	CORRUGATED PLASTIC PIPE	---	UNDERGROUND UTILITY SERVICE: W=WATER, G=GAS
TW	TOP OF WALL		
RCR	REINFORCED CONCRETE PIPE		
A.O.B.E.	AS ORDERED BY ENGINEER		
V.I.F.	VERIFY IN FIELD		

REV.	DATE	DESCRIPTION
5	11-16-23	RESPOND TO ENG COMMENTS
4	11-6-23	RESPOND TO ENG COMMENTS
3	10-2-23	RESPOND TO ENG COMMENTS
2	9-21-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION

MATTHEW M. KIVMARV CT. PE No. 36982
 ENGINEER
 DATE: 11-16-23

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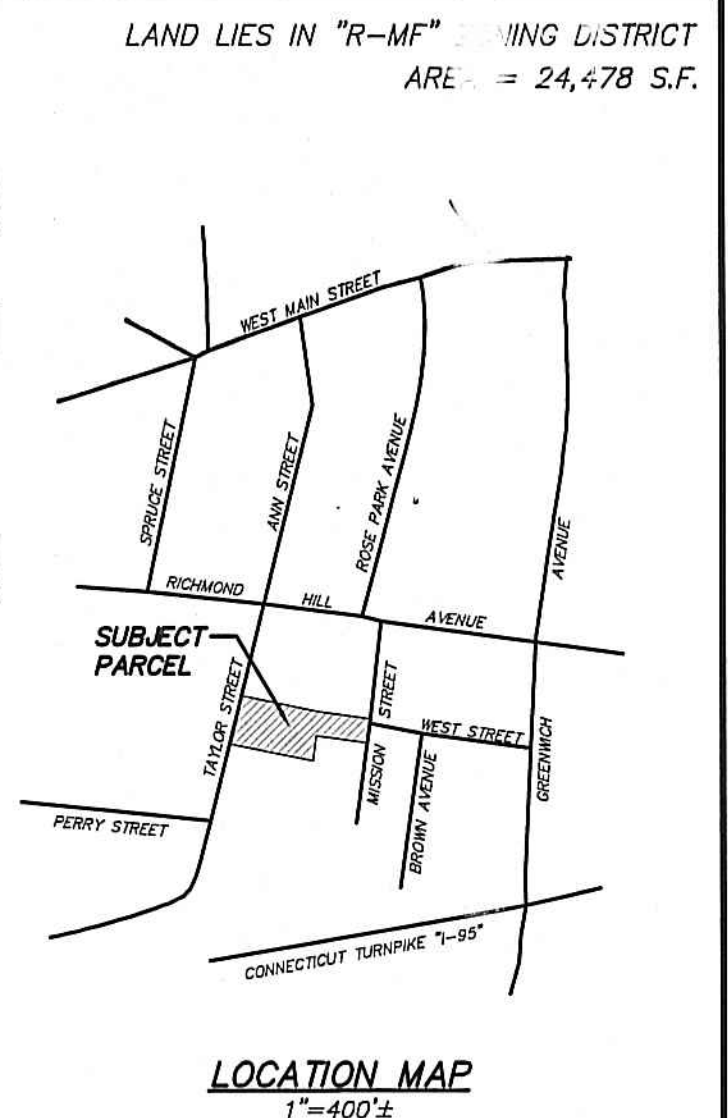
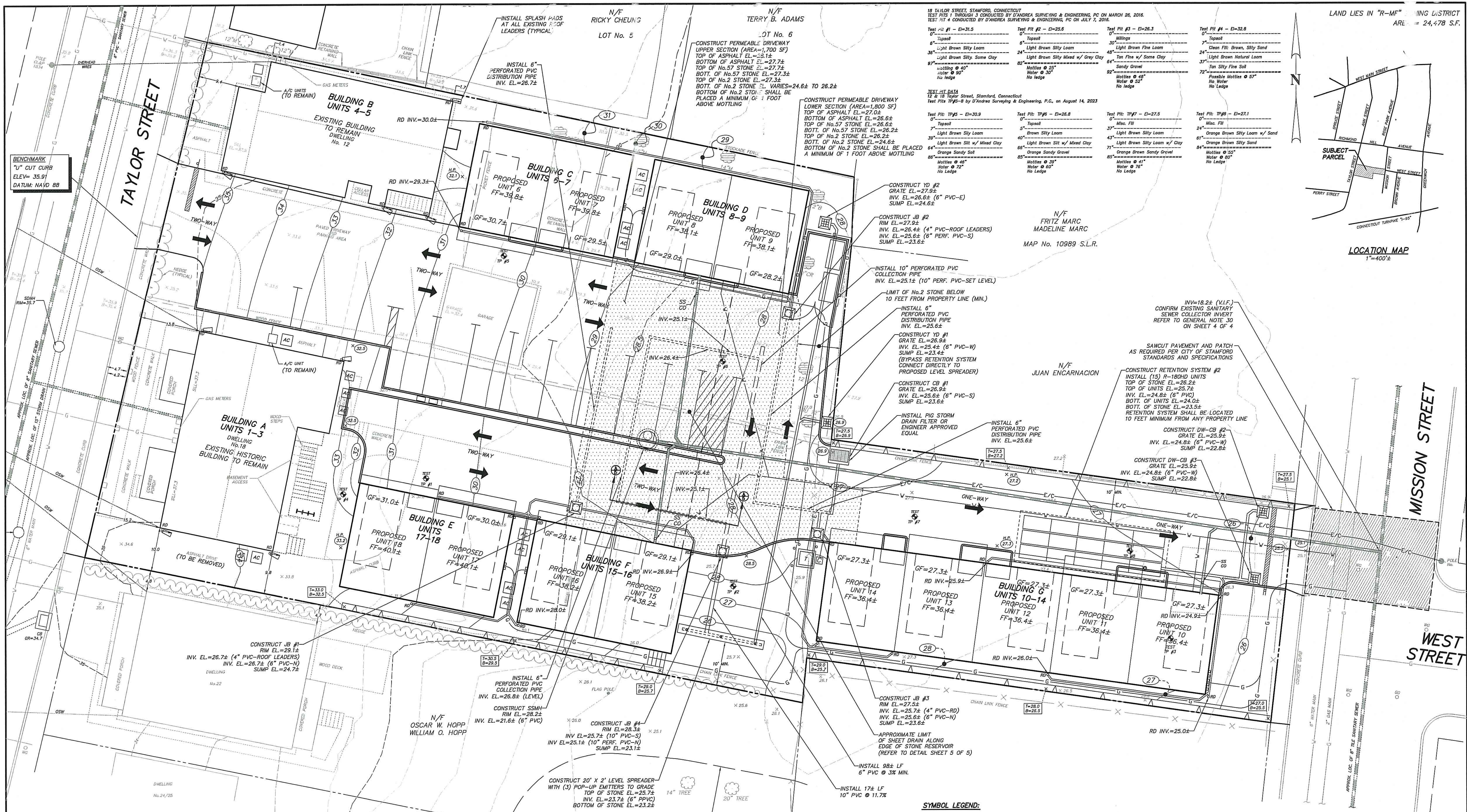
PROJECT: **RESIDENTIAL DEVELOPMENT**

PREPARED FOR: **G&T TAYLOR STREET LLC**

LOCATION: **12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT**

1 OF 5 **GRADING PLAN**

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BENCHMARK
"U" CUT CURB
ELEV= 35.91
DATUM: NAVD 88

PHOTO RECORD
(CONTRACTOR TAKE NOTICE)

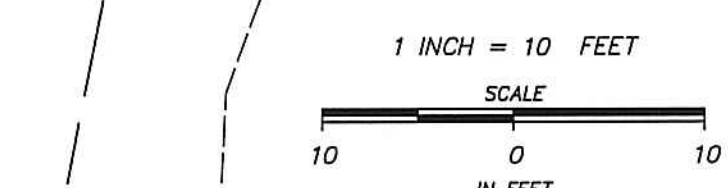
THE SITE CONTRACTOR SHALL BE RESPONSIBLE TO TAKE SITE PICTURES OF ALL THE FOLLOWING MILESTONES AND TO NOTIFY THE PROJECT ENGINEER OF EACH MILESTONE BEING REACHED. THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER WITH A DIGITAL LIBRARY OF THE PHOTOGRAPHY AS THE PROJECT PROGRESSES WITH A COMPLETE LIBRARY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

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

STAMFORD DRAINAGE MAINTENANCE REQUIREMENTS AND SCHEDULE:

NOTE: THE FOLLOWING IS A BEST PRACTICE MAINTENANCE SCHEDULE FOR THE STORMWATER MANAGEMENT STRUCTURES DESIGNED HEREIN ON THIS PLAN SET FOR THE OWNERS OF THE SUBJECT PARCEL TO FOLLOW. IT IS NOT INTENDED TO DESCRIBE OR SUPERSEDE THE MAINTENANCE AGREEMENT COVENANT OF THE SUBJECT PARCEL, AS REQUIRED BY THE CITY OF STAMFORD UPON COMPLETION OF WORK AND PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY. REFER TO THE CITY OF STAMFORD DRAINAGE MAINTENANCE AGREEMENT COVENANT REGARDING LONG-TERM MAINTENANCE REQUIREMENTS, CITY APPROVAL, CITY RIGHTS TO INSPECTION, AND PENALTY AND LEGAL ACTION FOR FAILURE OF COMPLIANCE TO SAID AGREEMENT COVENANT.

- 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.
- OWNER shall sweep, or cause to be swept, garage facilities, driveways and roadway surfaces located on the Property at least once per calendar quarter.
- 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.
- 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.
- 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.



SYMBOL LEGEND:

--- 30 ---	EXISTING CONTOUR	H.P.	HIGH POINT
--- 30.1 ---	EXISTING SPOT ELEVATION	RD	ROOF DRAIN
--- 30 ---	PROPOSED CONTOUR	RS	RETENTION SYSTEM
--- 30.1 ---	PROPOSED SPOT ELEVATION	EV-C	ELECTRIC VEHICLE CHARGER
--- 30 ---	TREE TO REMAIN	EV-R	ELECTRIC VEHICLE RESERVED
--- 30 ---	CONIFEROUS TREE	FD	FIRE HYDRANT
--- 30 ---	STONE WALL	UP	UTILITY POLE
--- 30 ---	CATCH BASIN	○	CLEAN OUT
--- 30 ---	C.O.	○	WATER GATE
--- 30 ---	JB	○	SANITARY SEWER MANHOLE
--- 30 ---	YD	○	CATCH BASIN
--- 30 ---	DRIVEWAY CATCH BASIN	○	TEST PIT
--- 30 ---	PVC	○	UNDERGROUND UTILITY SERVICE: W=WATER, G=GAS
--- 30 ---	CPP	○	
--- 30 ---	TW	○	
--- 30 ---	RCF	○	
--- 30 ---	AS ORDERED BY ENGINEER	○	
--- 30 ---	VERIFY IN FIELD	○	

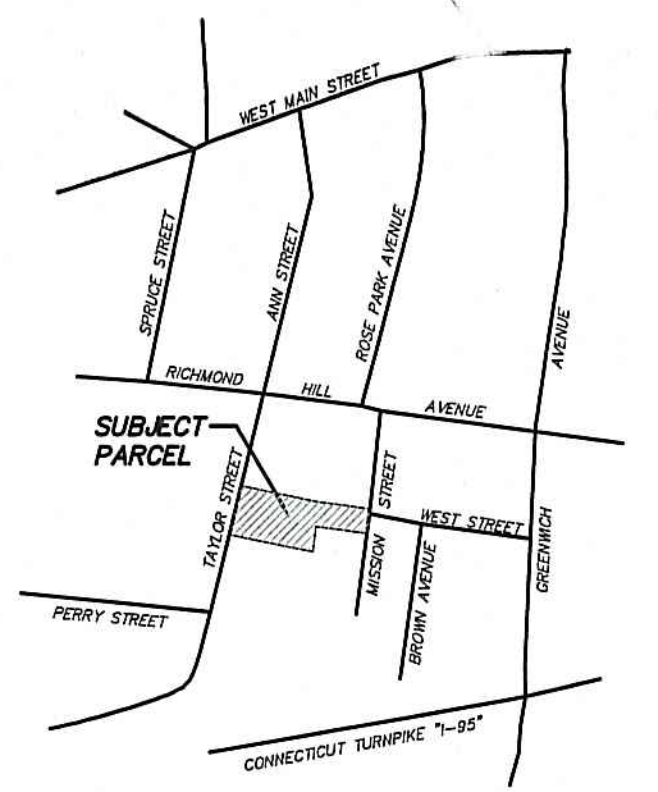
UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION INCLUDING PHYSICAL EVIDENCE AND UTILITY COMPANY SKETCHES. DEPICTED UTILITIES ARE APPROXIMATE, AND ARE INCOMPLETE SURVEY DECLARATION OF ACCURACY, AND DOES NOT EXTEND TO THE PLOTTING OF UNDERGROUND UTILITIES. UNDERGROUND UTILITY LOCATION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

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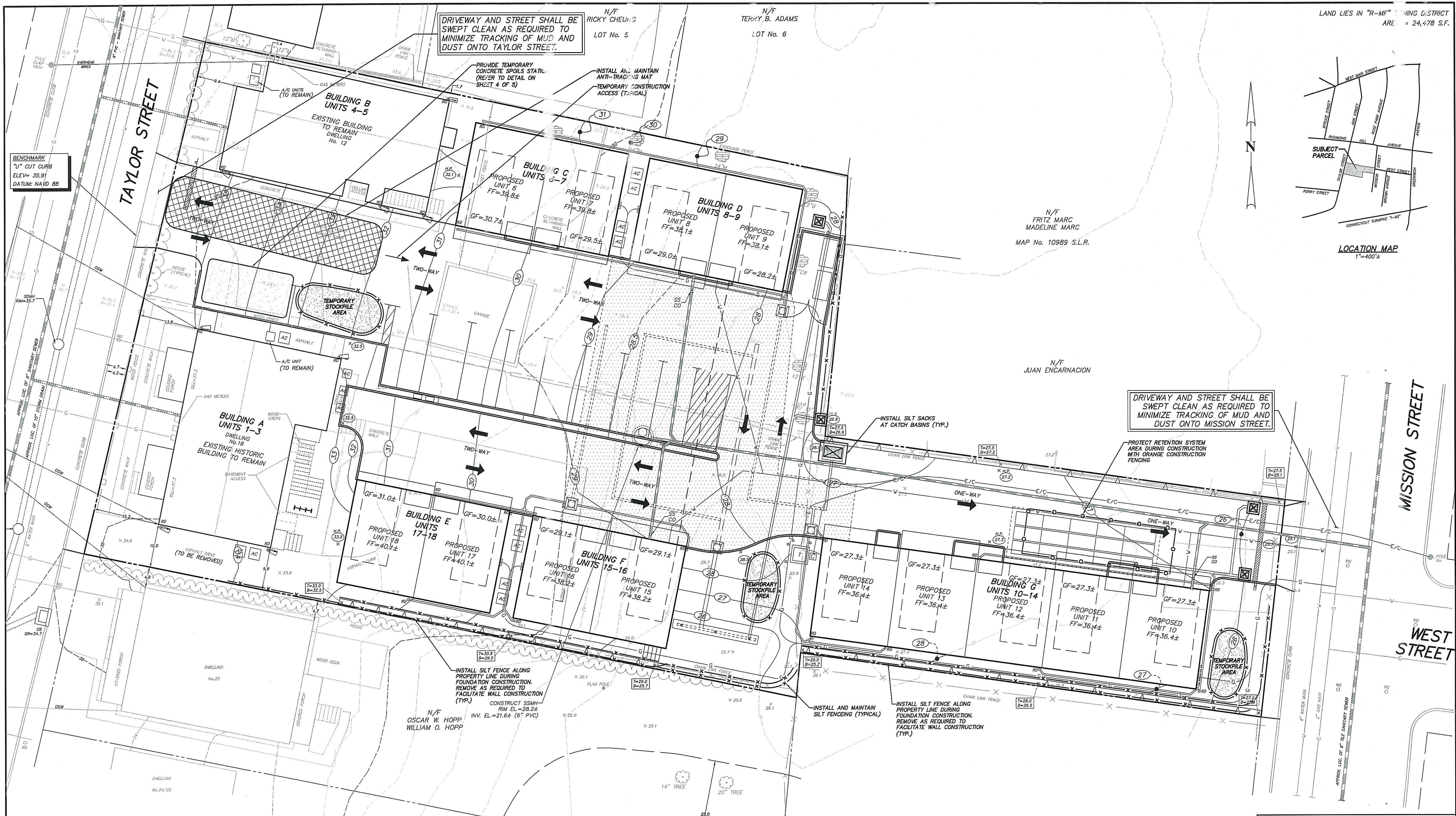
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PROJECT: **RESIDENTIAL DEVELOPMENT**
PREPARED FOR: **G&T TAYLOR STREET LLC**
LOCATION: **12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT**
2 OF 5
UTILITY PLAN

LAND LIES IN "R-MF" ZONING DISTRICT
AREA = 24,478 S.F.



LOCATION MAP
1"=400'±



DRIVEWAY AND STREET SHALL BE SWEEPED CLEAN AS REQUIRED TO MINIMIZE TRACKING OF MUD AND DUST ONTO TAYLOR STREET.

DRIVEWAY AND STREET SHALL BE SWEEPED CLEAN AS REQUIRED TO MINIMIZE TRACKING OF MUD AND DUST ONTO MISSION STREET.

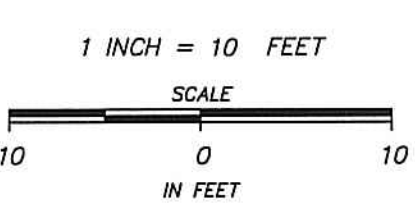
BENCHMARK
"U" CUT CURB
ELEV= 35.91
DATUM: NAVD 88

SEDIMENTATION AND EROSION CONTROL NOTES

1. Temporary soil and erosion control measures, inclusive of filter barriers, water breaks, check dams, and anti-tracking areas, shall remain in place for as long as necessary to permanently stabilize developed areas.
2. Erosion and sediment control devices shall be installed in their proper sequence. No clearing or grading may be done in any area until the erosion control devices for that area, as shown on the plan, are in place and functional.
3. Natural vegetation shall be maintained and protected where practical.
4. All sediment and erosion control devices and provisions shall be maintained in operational condition by the contractor until final acceptance of the project.
5. No changes of this soil erosion and sediment control plan may be made without prior approval of the supervising engineer.
6. Land disturbance is to be kept to a minimum. Reestablishment and/or stabilization of disturbed areas shall be scheduled as soon as practical.
7. Erosion controls shall be monitored periodically to verify that they are maintained in effective working order. If, during construction, additional control measures are necessary, they shall be installed by that contractor.

CONSTRUCTION STAGING:

1. Install sedimentation and erosion controls.
2. Rough in proposed driveway and construction access.
3. Strip topsoil and stockpile it with appropriate sedimentation and erosion control measures.
4. Excavate for proposed dwelling foundations.
5. Construct proposed dwelling foundations and retaining walls.
6. Install storm drainage system, sanitary sewer system, and underground utilities.
7. Backfill and rough grade around dwelling foundations, stabilize all slopes.
8. Construct proposed dwellings.
9. Construct driveway and curbing.
10. Construct steps and walkways.
11. Fine grade and stabilize all slopes.
12. Landscape as required.
13. Remove sedimentation and erosion controls.



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MATTHEW M. KIVJARV CT. PE No. 36982 ENGINEER		
DATE: 11-16-23		

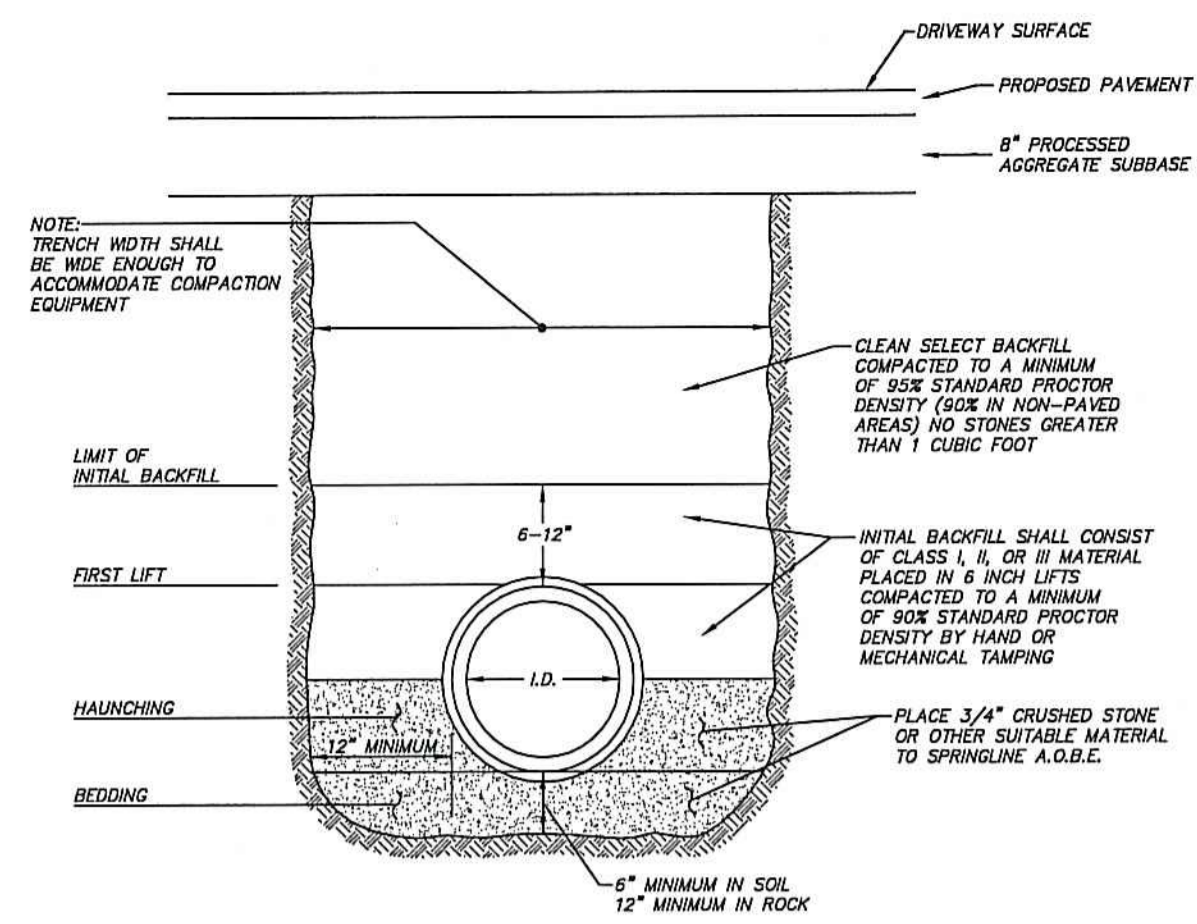
PROJECT: **RESIDENTIAL DEVELOPMENT**

PREPARED FOR: **G&T TAYLOR STREET LLC**

LOCATION: **12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT**

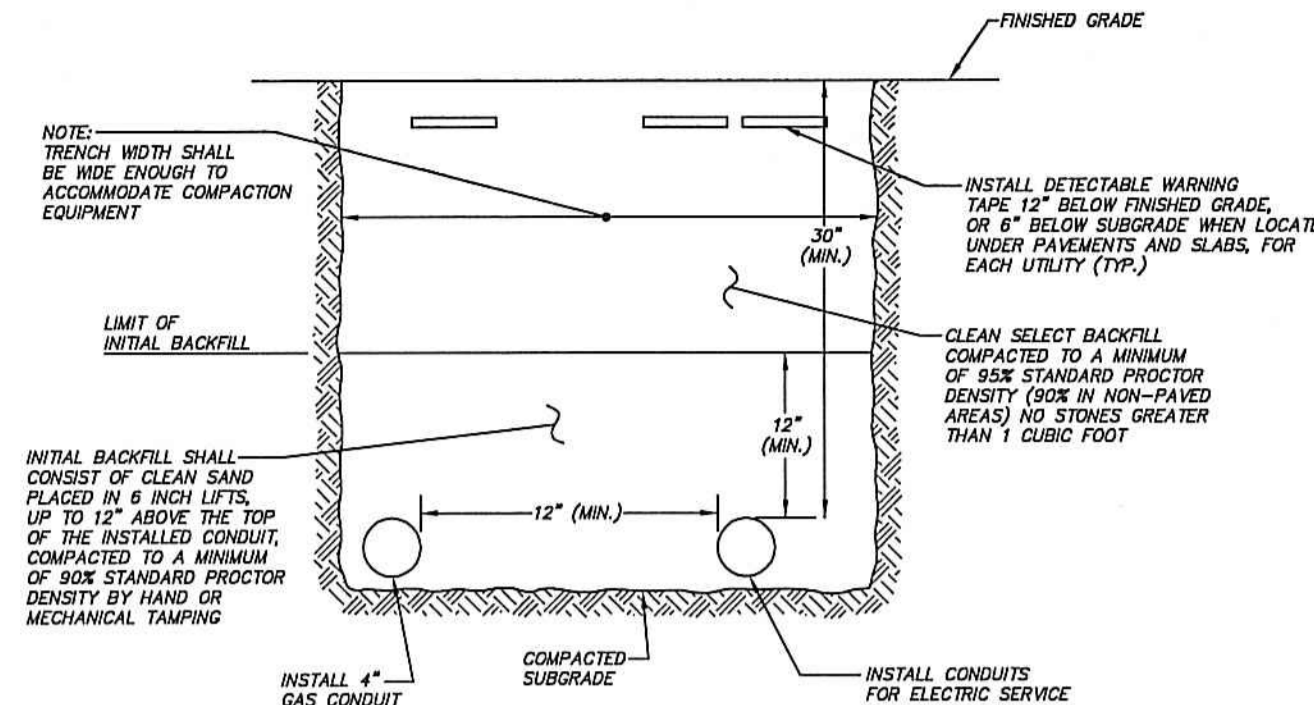
3 OF 5 **SEDIMENTATION AND EROSION CONTROL PLAN**

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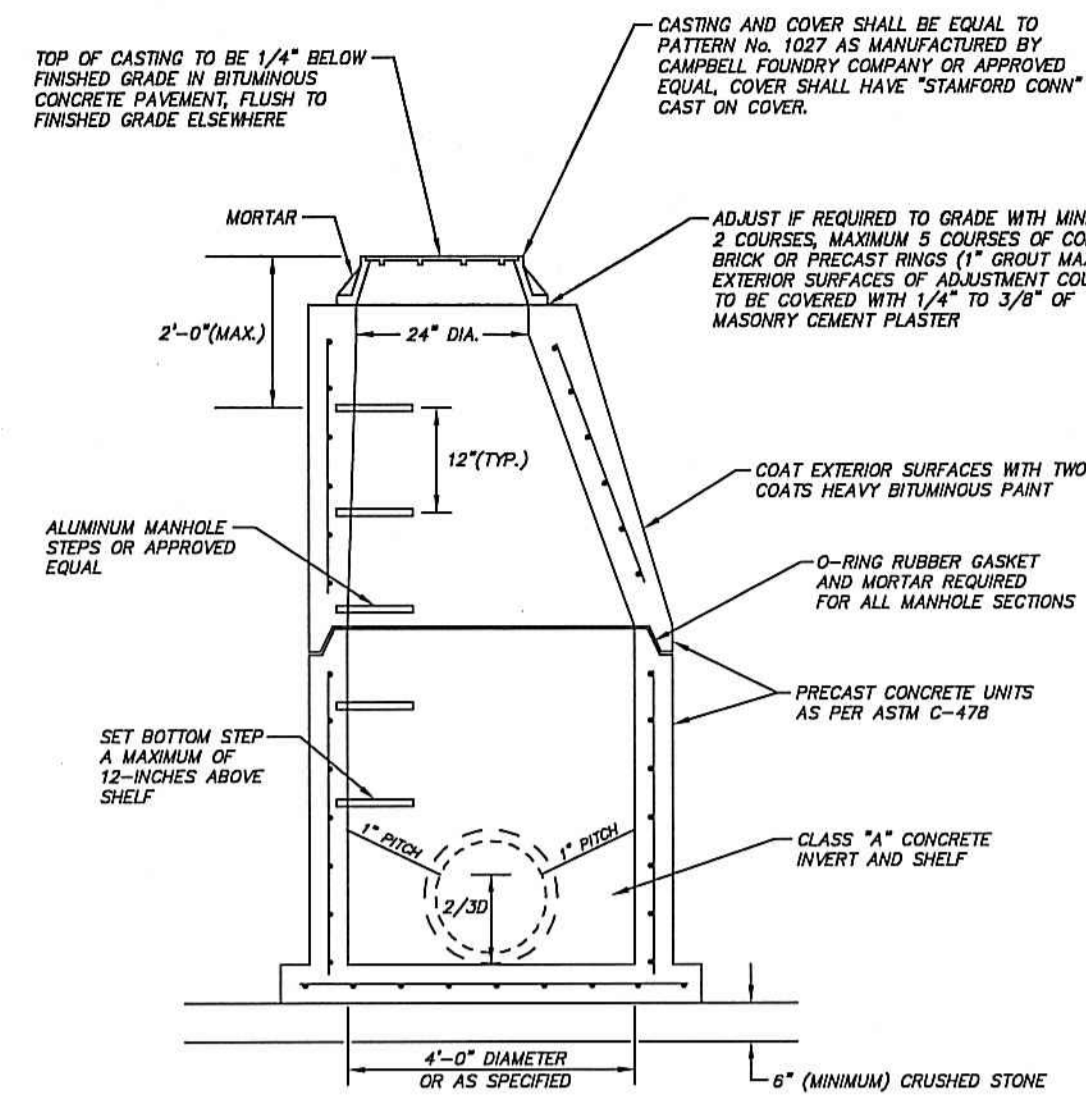
DETAIL FOR PVC SANITARY SEWER AND STORM DRAIN INSTALLATION
N.T.S.

- NOTES:
- REFER TO ASTM D2321 (STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY-FLOW APPLICATIONS) FOR TRENCHING SPECIFICATIONS.
 - THIS SECTION IS DESIGNED TO RESIST UPLIFT FLOOD FORCES ASSOCIATED WITH THE MINIMUM ELEVATION STANDARD AS SPECIFIED IN THE ZONING REGULATIONS.

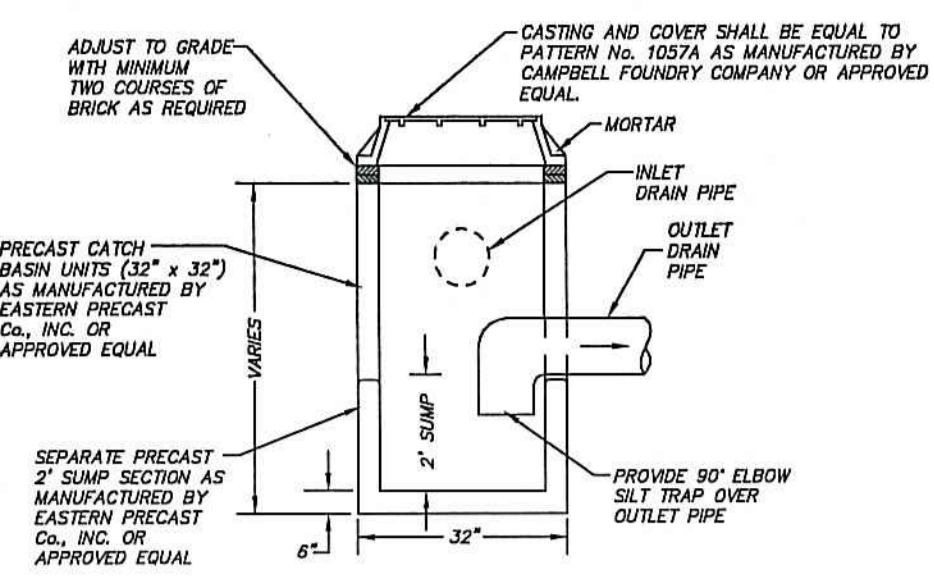


DETAIL FOR UNDERGROUND UTILITY TRENCH
N.T.S.

- NOTES:
- COORDINATE NUMBER AND SIZE OF CONDUIT WITH EACH RESPECTIVE UTILITY COMPANY PRIOR TO INSTALLATION.

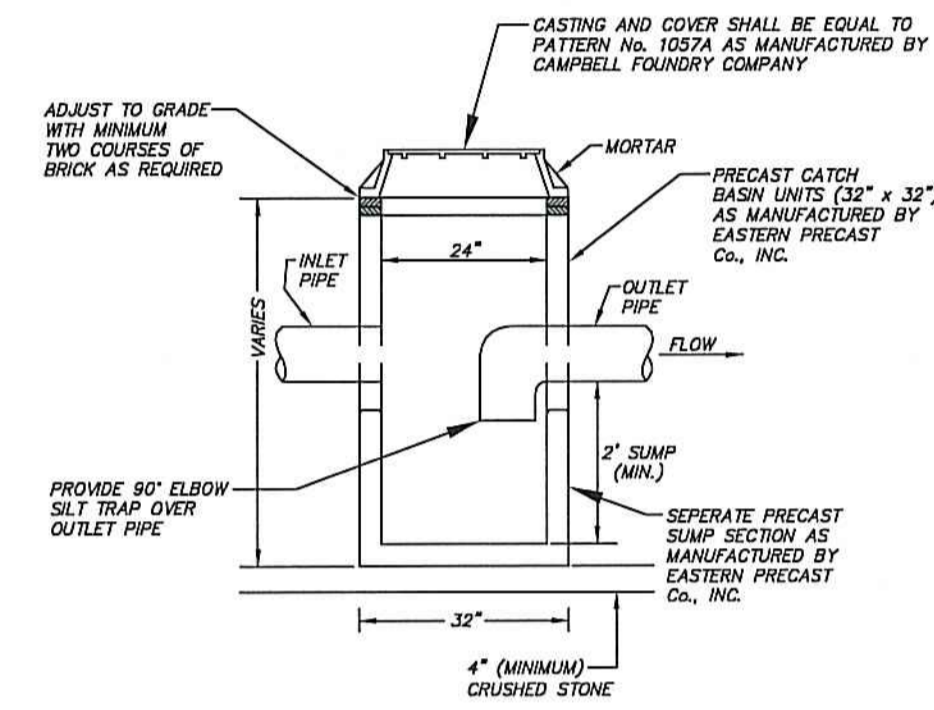


SANITARY SEWER MANHOLE DETAIL
N.T.S.



JUNCTION BOX #1, 2 AND 3 DETAIL
N.T.S.

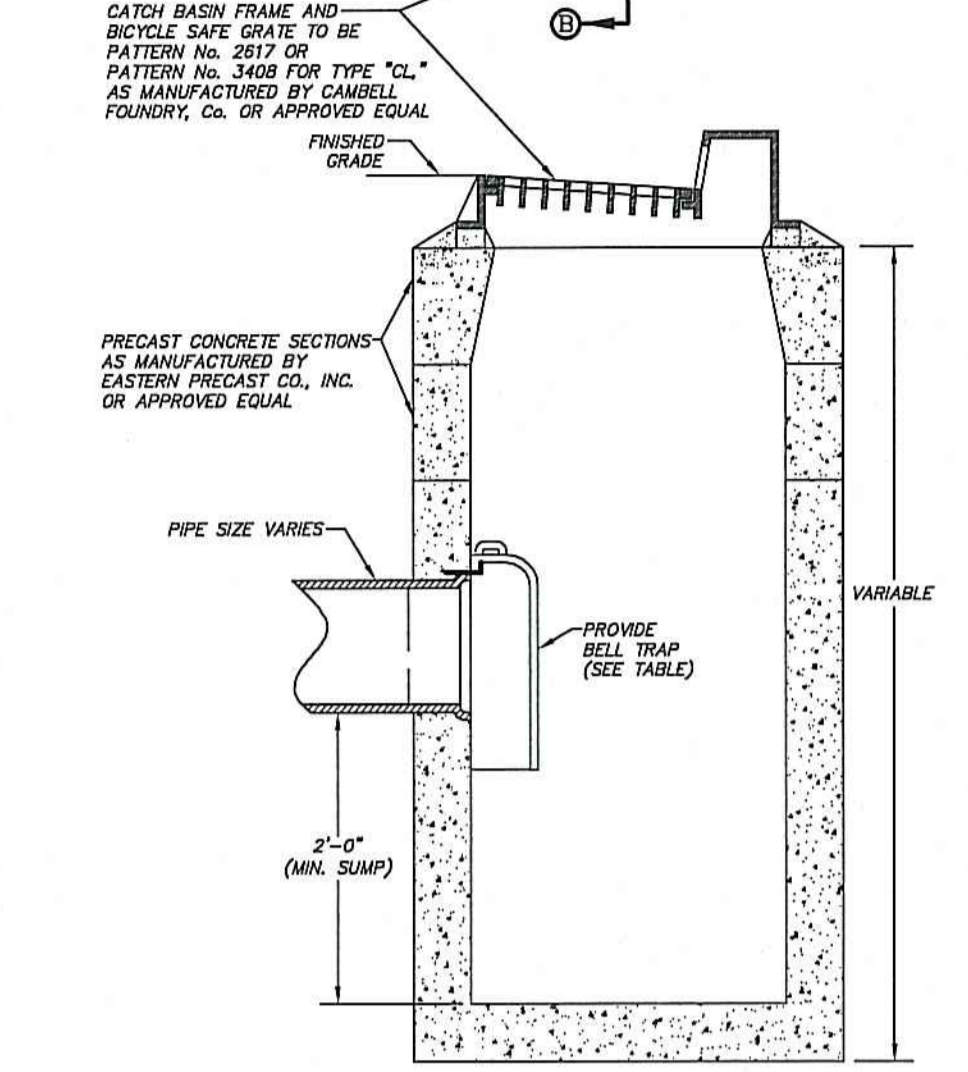
- NOTES:
- JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
- CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.
- REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATION OF ALL PIPES.



JUNCTION BOX #4 DETAIL
N.T.S.

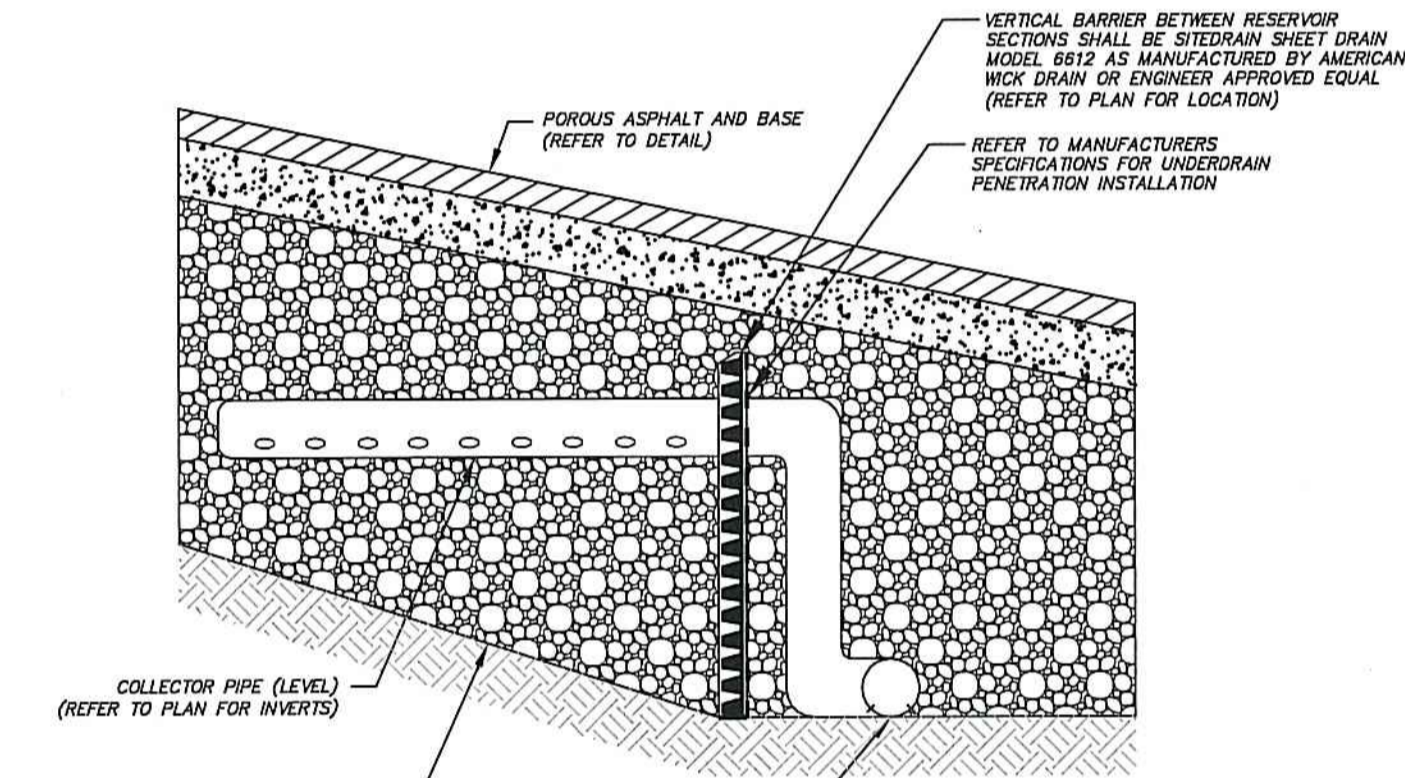
- NOTES:
- JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
- CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.
- REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATION OF ALL PIPES.

TABLE FOR CATCH BASIN TRAP ASSEMBLY	
PIPE SIZE	CAMPBELL FOUNDRY PATTERN NUMBER
6"	2563
8"	2563
10"	2563
12"	2563
15"	2564
18"	2565



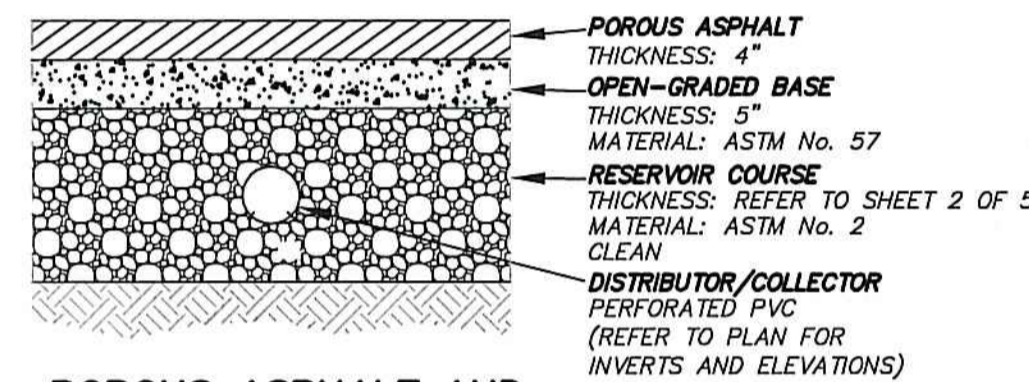
SINGLE CATCH BASIN DETAIL (TYPE "C")
N.T.S.

- NOTES:
- CATCH BASIN SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
- CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION. NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.
- REFER TO DEVELOPMENT PLAN FOR SIZES, LOCATIONS, AND INVERT ELEVATION OF ALL PIPES.



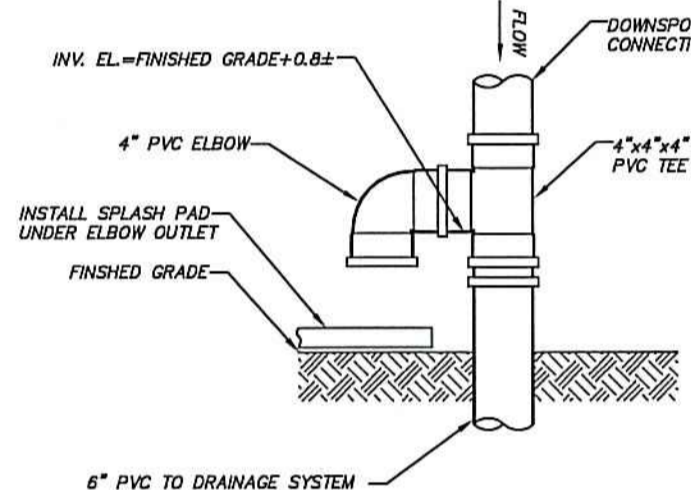
POROUS ASPHALT SYSTEM PROFILE A-A
N.T.S.

- NOTES:
- THE UNDERLYING SOIL SHALL BE SCARIFIED OR TILLED TO IMPROVE INFILTRATION BEFORE APPLYING THE RESERVOIR COURSE.
 - INSTALL IMPERVIOUS LINER ALONG THE BOTTOM AND SIDES OF THE RESERVOIR COURSE WITHIN 10 FEET OF A BUILDING FOUNDATION.
 - IMPERVIOUS LINER SHALL BE ULTRAVIOLET-RESISTANT POLY-LINER, 30-MILS THICK (MINIMUM).
 - DO NOT CONNECT PERFORATED DISTRIBUTION PIPES TO THE UNDERDRAIN.

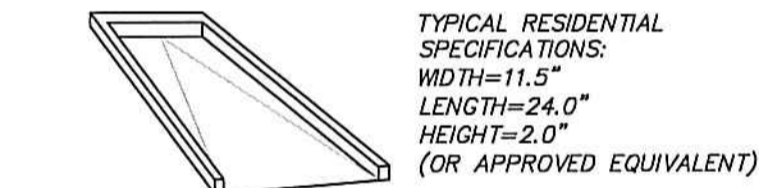


POROUS ASPHALT AND STONE RESERVOIR DETAIL
N.T.S.

- NOTES:
- 3/4" STONE MEETS ASTM No. 2 STANDARDS.
 - THE UNDERLYING SOIL SHALL BE SCARIFIED OR TILLED TO IMPROVE INFILTRATION BEFORE APPLYING THE RESERVOIR COURSE.
 - WHERE THE SYSTEM IS LOCATED WITHIN 10 FEET OF A RETAINING WALL OR FOUNDATION, INSTALL UV-RESISTANT IMPERVIOUS 30 MIL POLY-LINER ON BOTTOM AND SIDES OF THE STONE RESERVOIR AS ORDERED BY THE PROJECT ENGINEER.
 - NON-WOVEN GEOTEXTILE FILTER FABRIC IS RECOMMENDED ALONG THE SIDES. FILTER FABRIC SHALL NOT BE USED ALONG THE BOTTOM OR BETWEEN LAYERS.
 - EACH STONE LAYER SHALL BE COMPACTED BEFORE APPLYING THE LAYER ABOVE.
 - ADD ADDITIONAL RESERVOIR COURSE AS NECESSARY TO PARALLEL THE FINAL GRADE.
 - THE POROUS ASPHALT SHALL BE PROTECTED FROM SEDIMENTS DURING CONSTRUCTION TO PREVENT CLOGGING.

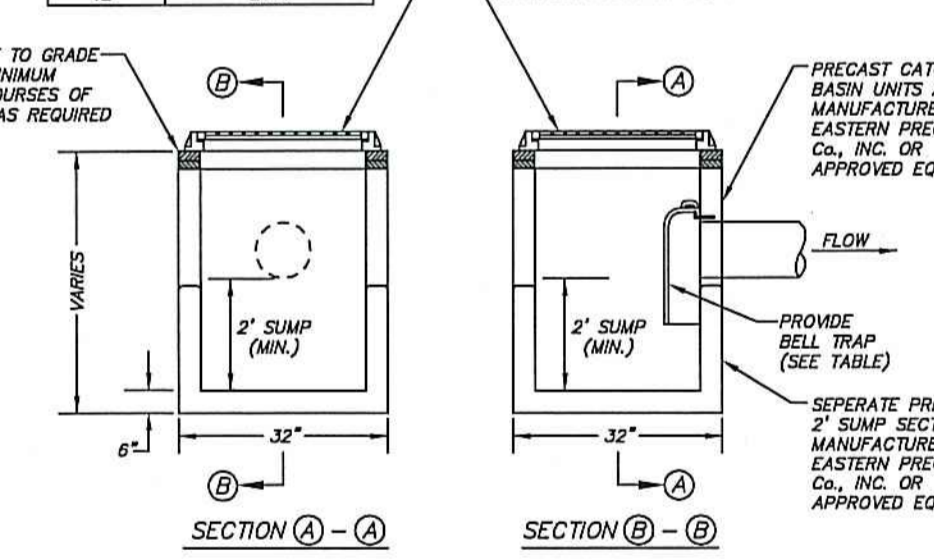


DOWNSPOUT OVERFLOW DETAIL
N.T.S.



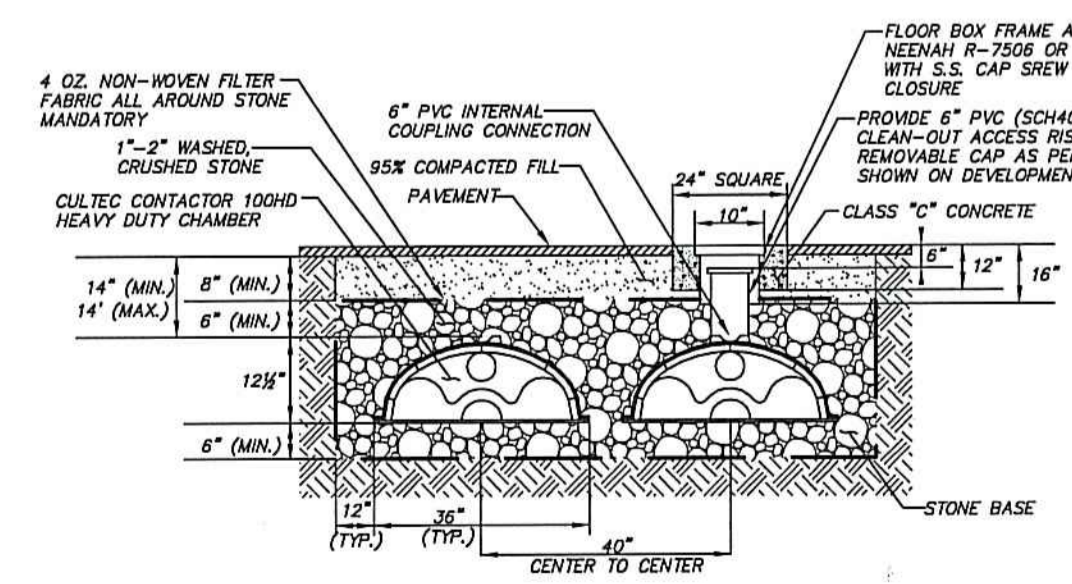
RESIDENTIAL SPLASH PAD DETAIL
N.T.S.

TABLE FOR CATCH BASIN TRAP ASSEMBLY	
PIPE SIZE	CAMPBELL FOUNDRY PATTERN NUMBER
6"	2580
8"	2581
10"	2582
12"	2583



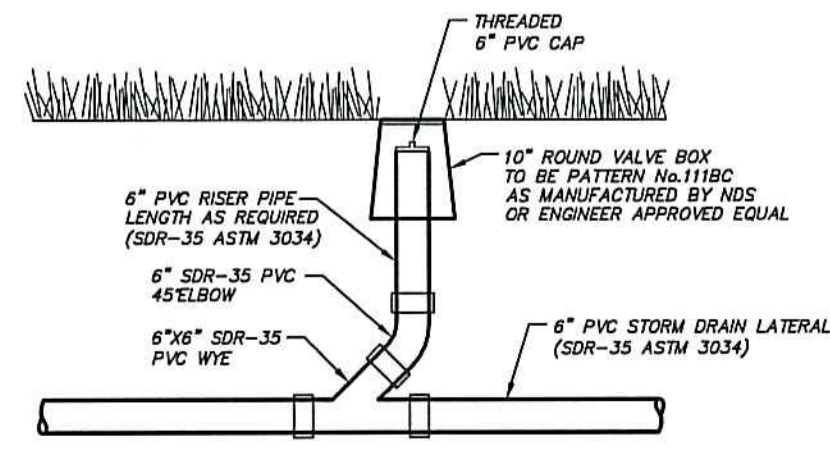
DRIVEWAY CATCH BASIN DETAIL TYPE "CL"
N.T.S.

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



TYPICAL CROSS SECTION DETAIL CULTEC CHAMBER SYSTEM CONTACTOR 100HD PAVED (H-20) LOADING
N.T.S.

- NOTES:
- STORMWATER CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. (800) 428-5032 OR ENGINEER APPROVED EQUAL.
 - ALL CHAMBERS SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.
 - THE SOILS BENEATH THE INFILTRATION SYSTEM SHALL BE SCARIFIED OR TILLED TO IMPROVE INFILTRATION.



ROOF DRAIN CLEAN OUT TO GRADE DETAIL
N.T.S.

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

REV.	DATE	DESCRIPTION
5	11-16-23	RESPOND TO ENG COMMENTS
4	11-6-23	RESPOND TO ENG COMMENTS
3	10-2-23	RESPOND TO ENG COMMENTS
2	9-21-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION

REV. DATE DESCRIPTION

MATTHEW M. KIVIAV CT. PE No. 36982

ENGINEER DATE 11-16-23

PROJECT	RESIDENTIAL DEVELOPMENT
PREPARED FOR	G&T TAYLOR STREET LLC
LOCATION	12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT
DATE	11-16-23
5 OF 5	DETAILS

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

18 TAYLOR STREET STAMFORD CT BUILDING A

JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING A
RESTORATION &
RENOVATION

Project Overview



EXISTING HOUSE TO BE REPAINTED AND REPAIRED. SEE PROPOSED ELEVATIONS AND RENDERINGS FOR DETAILS.

EXISTING FENCE TO BE REPLACED WITH WHITE PVC FENCE MATCHING EXISTING STYLE AND SIZE

EXISTING STREET FACADE

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

SHEET:

A000

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET BUILDING A RESTORATION & RENOVATION

PROPOSED ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A200



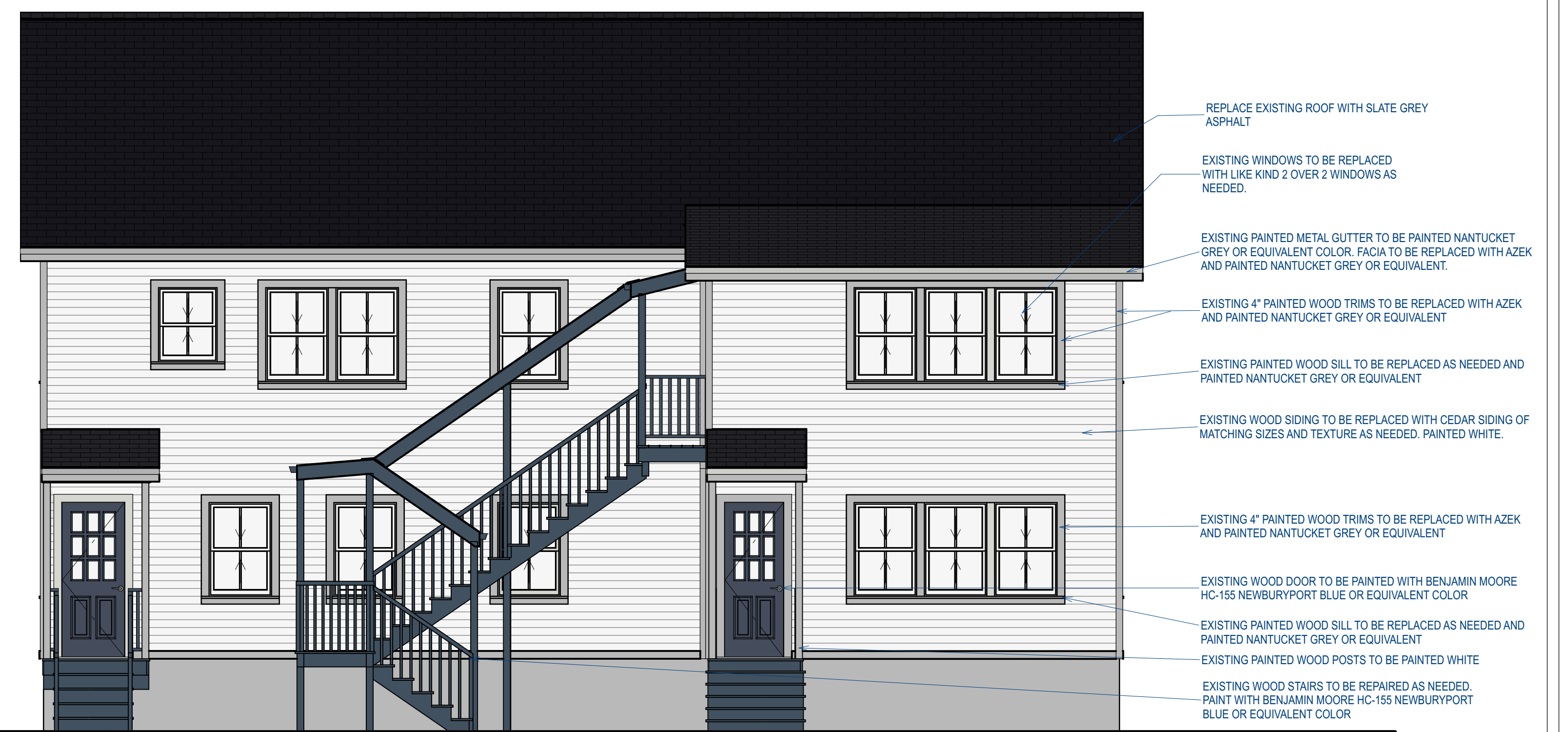
LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION



BACK ELEVATION



PROPOSED BACK RENDERING

NUMBER	DATE	REVISION	TABLE	DESCRIPTION

PROPOSED RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

NTS

SHEET:

A300



PROPOSED STREET FACADE RENDERING

JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	REVISOR	BY	DESCRIPTION

TAYLOR STREET
BUILDING A
RESTORATION &
RENOVATION

PROPOSED RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

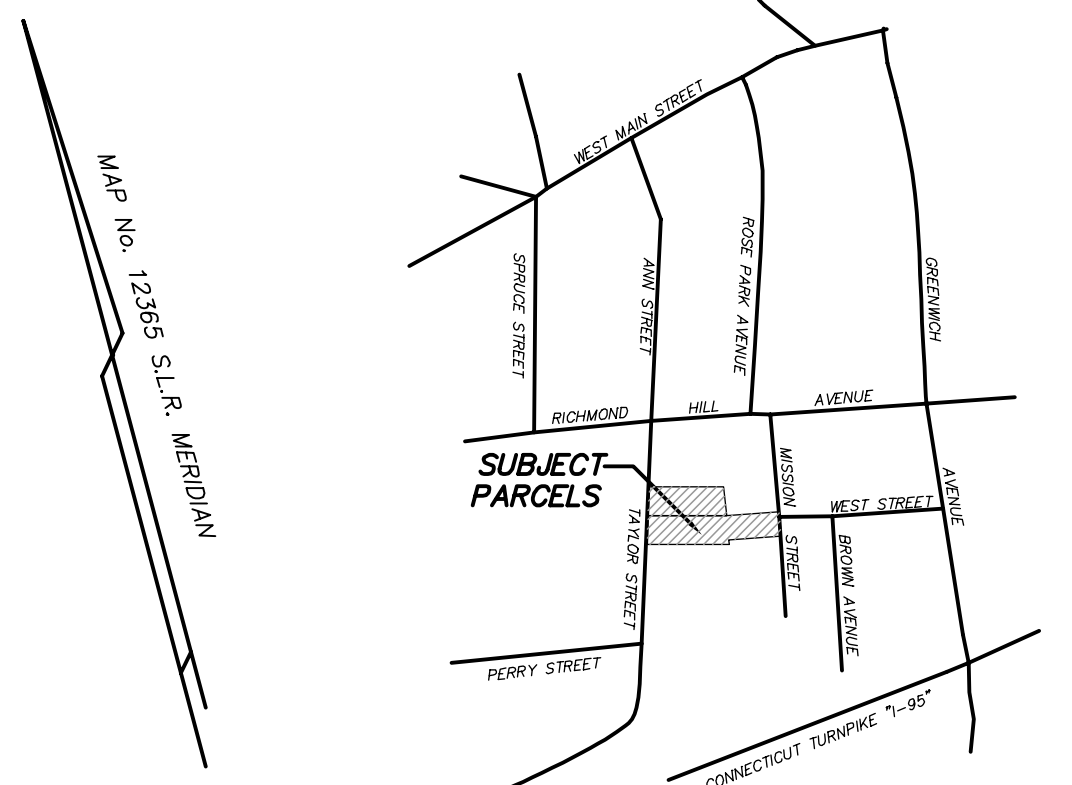
NTS

SHEET:

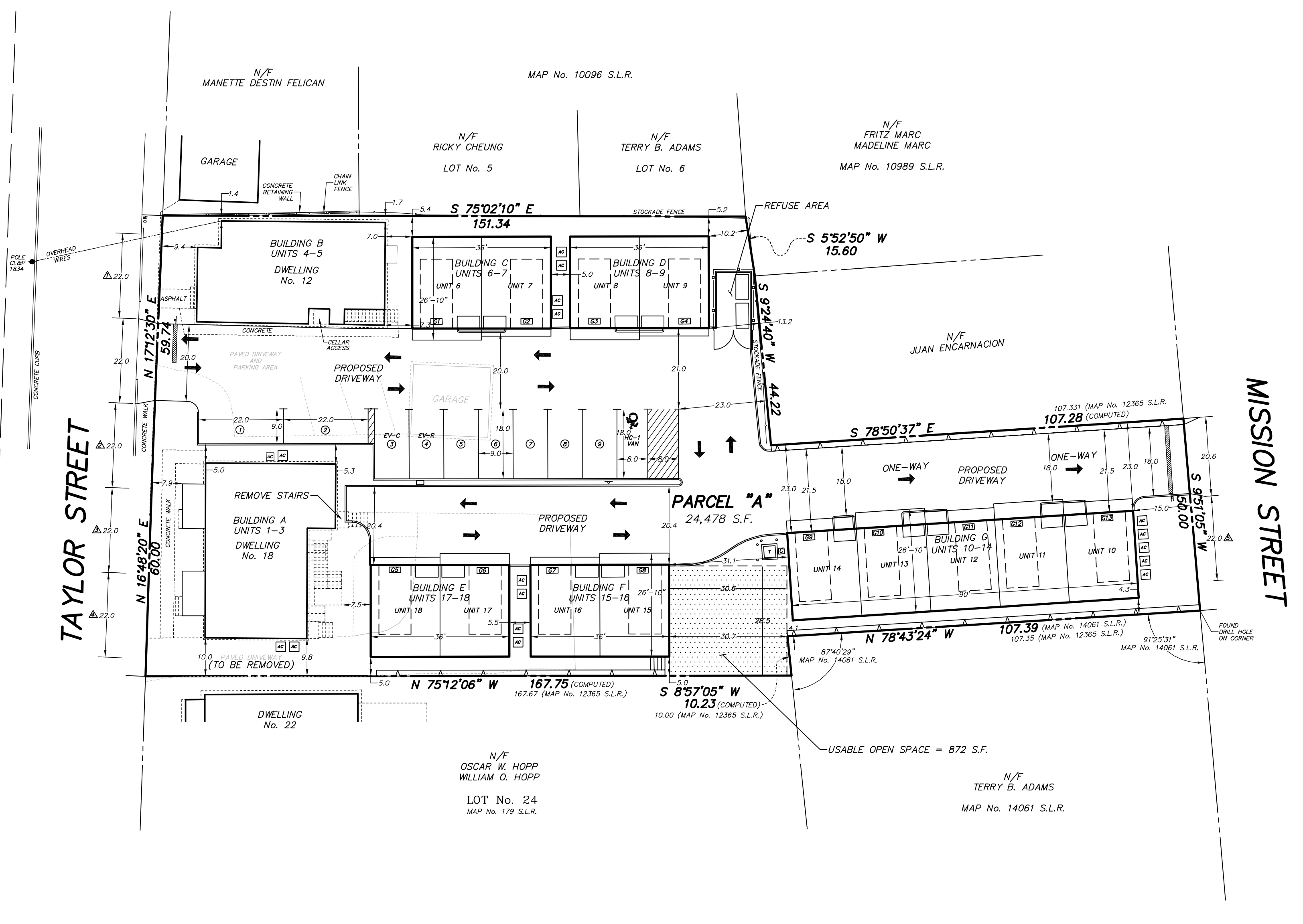
A301

PARKING SUMMARY - REQUIRED		
RESIDENTIAL PARKING:		
REQUIRED (HISTORIC): 1/UNIT	18 X 1.0	= 18.0
	TOTAL REQUIRED	= 18

PARKING SUMMARY - PROVIDED		
GARAGE	=	13 SPACES
UNCOVERED PARKING	=	7 SPACES
HANDICAPPED	=	1 SPACE
EV CHARGER PARKING	=	0.5 SPACE
EV RESERVED PARKING	=	1 SPACE
TOTAL PROVIDED	=	22.5 SPACES
AVAILABLE ON-STREET PARKING	=	5 SPACES



LOCATION MAP - 1" = 400'±



- LEGEND:**
- UNCOVERED PARKING
 - GARAGE PARKING
 - △ AVAILABLE ON-STREET PARKING

EXISTING BUILDING COVERAGE	PROPOSED BUILDING COVERAGE
LOT AREA = 24,478 S.F.	LOT AREA = 24,478 S.F.
DWELLING No. 12 = 1,238 S.F.	DWELLING No. 12 = 1,238 S.F.
GARAGE No. 12 = 362 S.F.	DWELLING No. 18 = 1,322 S.F.
DWELLING No. 18 = 1,322 S.F.	Building C = 1,896 S.F.
TOTAL = 2,922 S.F.	Building D = 2,361 S.F.
PERCENT COVERAGE = 11.9%	Building E = 1,896 S.F.
	TOTAL = 8,713 S.F.
	PERCENT COVERAGE = 35.6%

REFER TO A MAP ENTITLED "ZONING LOCATION SURVEY DEPICTING CONSOLIDATION OF PROPERTY AT 12 & 18 TAYLOR STREET IN STAMFORD, CONNECTICUT" DATED MAY 4, 2023, PREPARED BY D'ANDREA SURVEYING & ENGINEERING, P.C.

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

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

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

AREA = 24,478 S.F. (TOTAL)

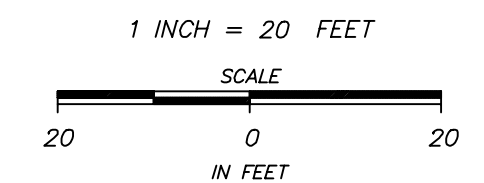
REFER TO MAPS No. 179 AND 12365 S.L.R.

LAND LIES IN "R-MF" ZONING DISTRICT

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

D'ANDREA SURVEYING & ENGINEERING, PC

_____, SURVEYOR
 ROBERT L. LIDDEL JR., CT LS No. 15775
 RIVERSIDE, CONNECTICUT JULY 24, 2023 OCTOBER 27, 2023



ZONING LOCATION SURVEY
 DEPICTING
 12 & 18 TAYLOR STREET
 IN
 STAMFORD, CONNECTICUT
 PREPARED FOR
G&T TAYLOR STREET LLC

18 TAYLOR STREET STAMFORD CT BUILDING C,D,E & F NEW CONSTRUCTION

JIA HUA
ARCHITECT

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING C,D,E & F
NEW
CONSTRUCTION

Project Overview

DRAWINGS PROVIDED BY:

DATE:

10/30/2023

SCALE:

SHEET:

A000

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING C, D, E & F
NEW
CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

10/30/2023

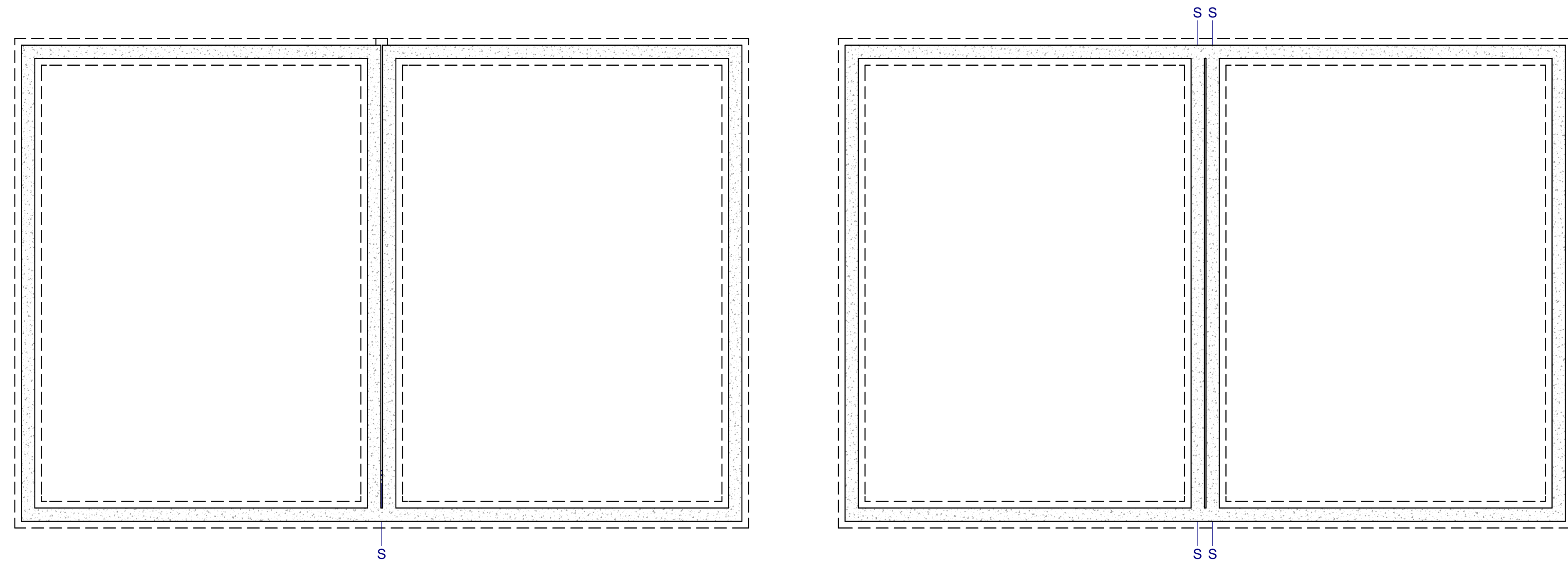
SCALE:

1/4"=1'-0"

SHEET:

A100

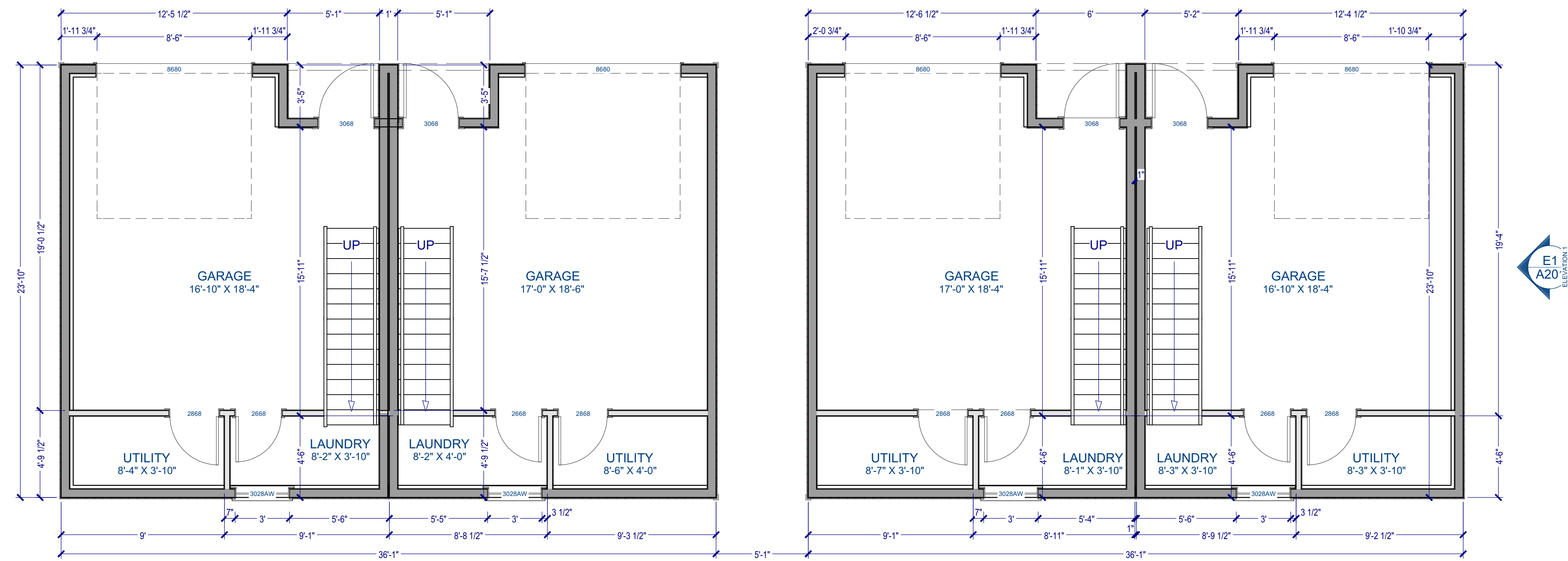
RIGHT ELEVATION
1
A201



FOUNDATION PLAN

1
A200

RIGHT ELEVATION
1
A201



GARAGE FLOOR PLAN

2
A200
BACK ELEVATION

E1
A201
ELEVATION 1

REVISION TABLE	NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING C, D, E & F
NEW
CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

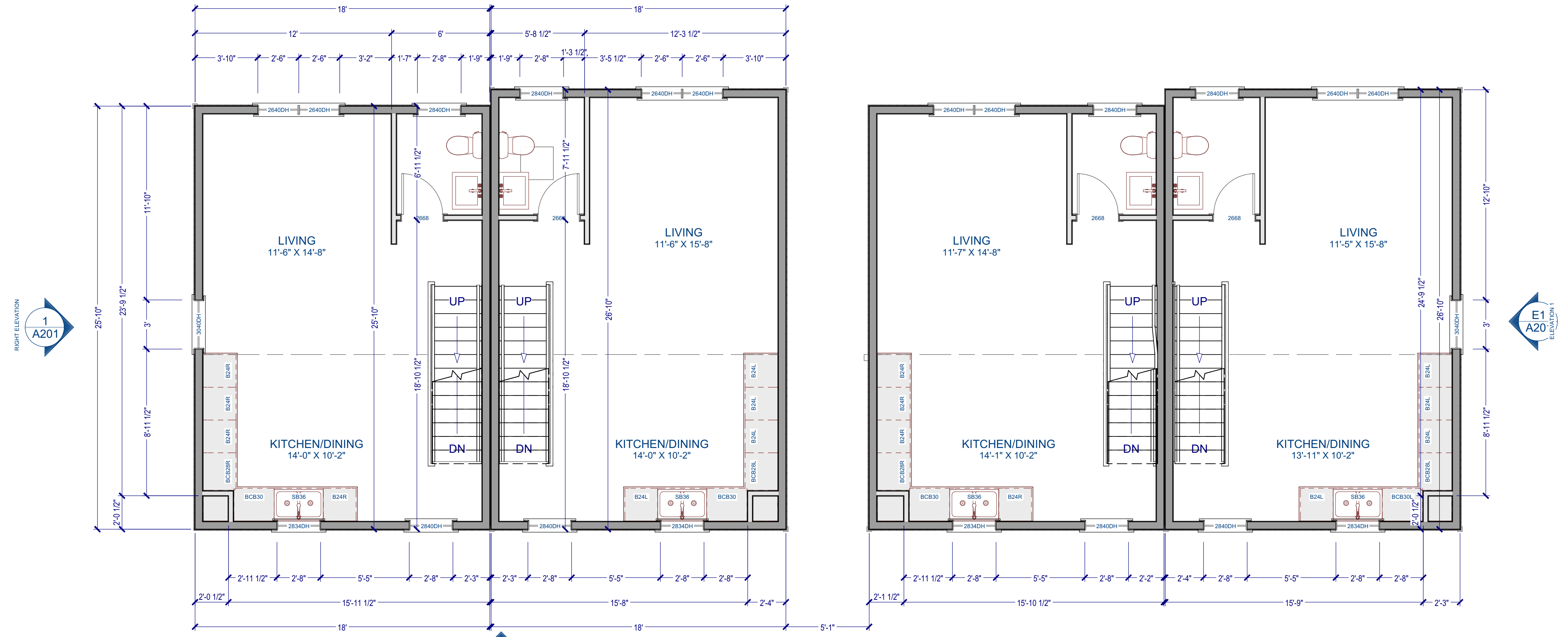
10/30/2023

SCALE:

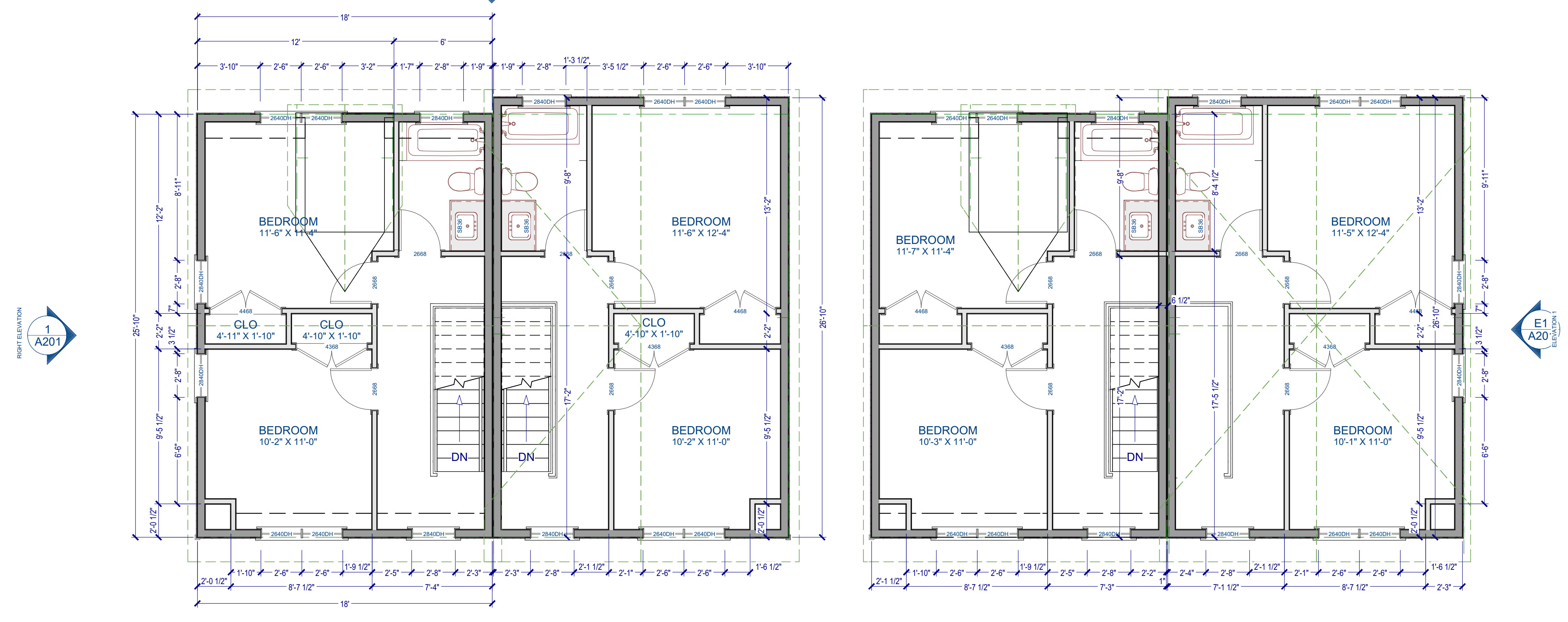
1/4"=1'-0"

SHEET:

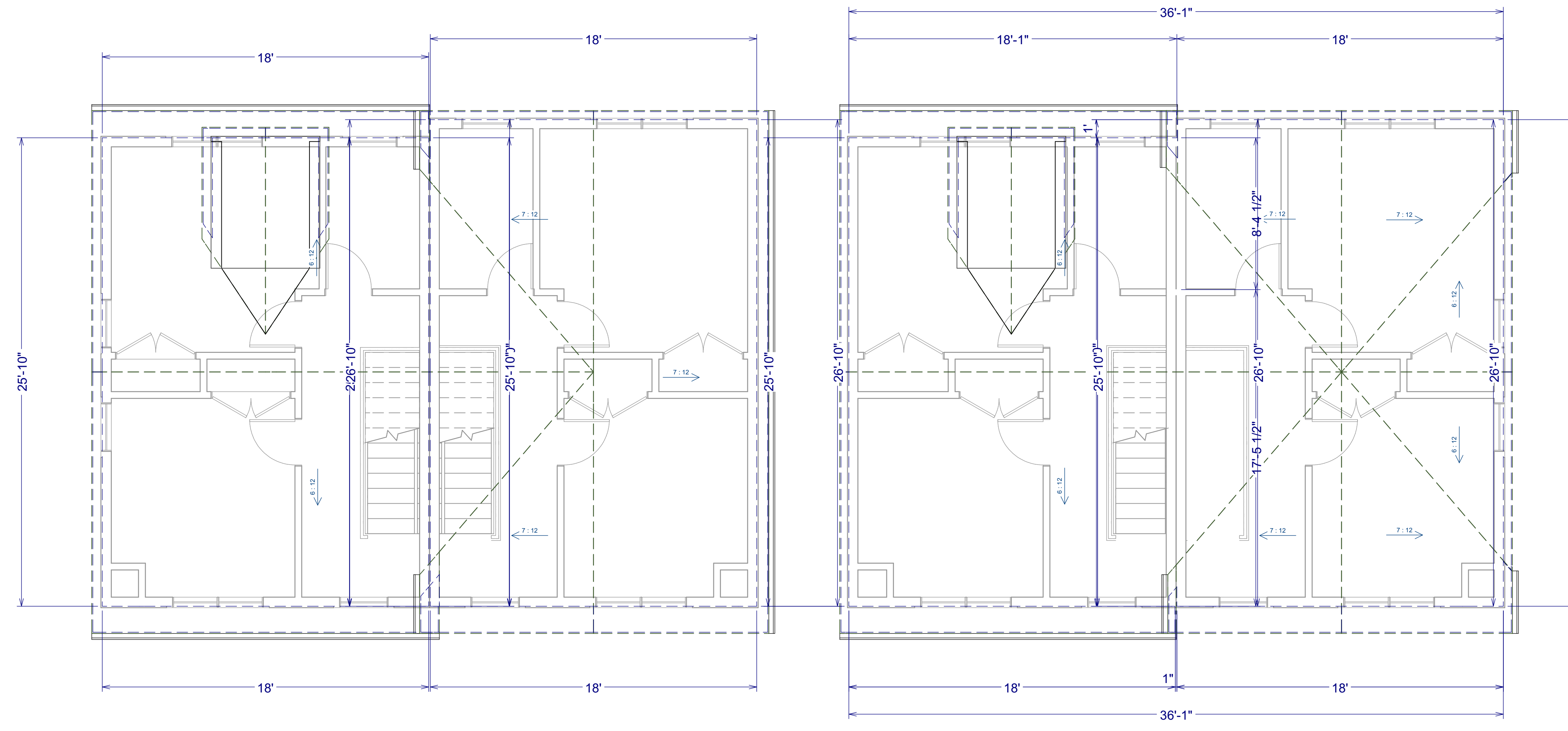
A101



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ATTIC PLAN

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

DRAWINGS PROVIDED BY:

DATE:

10/30/2023

SCALE:

1/4"=1'-0"

SHEET:

A102

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING C,D,E & F
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

10/30/2023

SCALE:

1/4"=1'-0"

SHEET:

A200



- SLATE GREY ASPHALT SHINGLE
- MID POINT OF HIGHEST ROOF
- METAL GUTTER PAINTED BENJAMIN MOORE HCC-111, NANTUCKET GREY OR EQUIVALENT COLOR
- AZEK TRIM PAINTED NANTUCKET GREY OR EQUIVALENT
- BENJAMIN MOORE HC-155 (NEWBURYPORT BLUE) HARDIE SIDING OR EQUIVALENT
- WHITE HARDIE SIDING
- 33'-5 1/2"
- WHITE METAL GARAGE DOOR
- WHITE HARDIE SIDING
- WOOD EXTERIOR DOOR PAINTED NEWBURYPORT BLUE OR EQUIVALENT
- FINISHED GROUND LEVEL

- SLATE GREY ASPHALT SHINGLE
- METAL GUTTER PAINTED NANTUCKET GREY OR EQUIVALENT
- AZEK TRIM PAINTED NANTUCKET GREY OR EQUIVALENT
- NEWBURYPORT BLUE HARDIE SIDING OR EQUIVALENT
- WHITE HARDIE SIDING
- NEWBURYPORT BLUE HARDIE SIDING OR EQUIVALENT

- RIDGE 31.1'
- 6'-6.38"
- TOP OF PLATE 24.4'
- ROUGH CEILING - 3RD FLOOR 23.4'
- 9'-2.18"
- TOP OF PLATE 14.2'
- 8'-0.58"
- FLOOR FINISH - 2ND FLOOR 6.2'
- ROUGH CEILING - 1ST FLOOR 5.1'
- 1'-1.12"
- 8'-0.58"
- TOP OF SUBFLOOR - 1ST FLOOR -3'
- 4'-10.18"
- BOTTOM OF FOOTING -7.8'

- HIGHEST RIDGE 33.1'
- 6'-9.118"
- TOP OF PLATE 27.4'
- 5'-11.144"
- TOP OF PLATE 25.4'
- 7'-1.58"
- TOP OF SUBFLOOR - 3RD FLOOR 18.3'
- TOP OF PLATE 17.2'
- 1'-0.58"
- 8'-1.12"
- TOP OF SUBFLOOR - 2ND FLOOR 9.1'
- 2'-0.58"
- TOP OF PLATE 7.1'
- 7'-0.58"
- TOP OF SUBFLOOR - 1ST FLOOR 0'
- 4'-10.18"
- BOTTOM OF FOOTING -4.8'

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING C, D, E & F
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

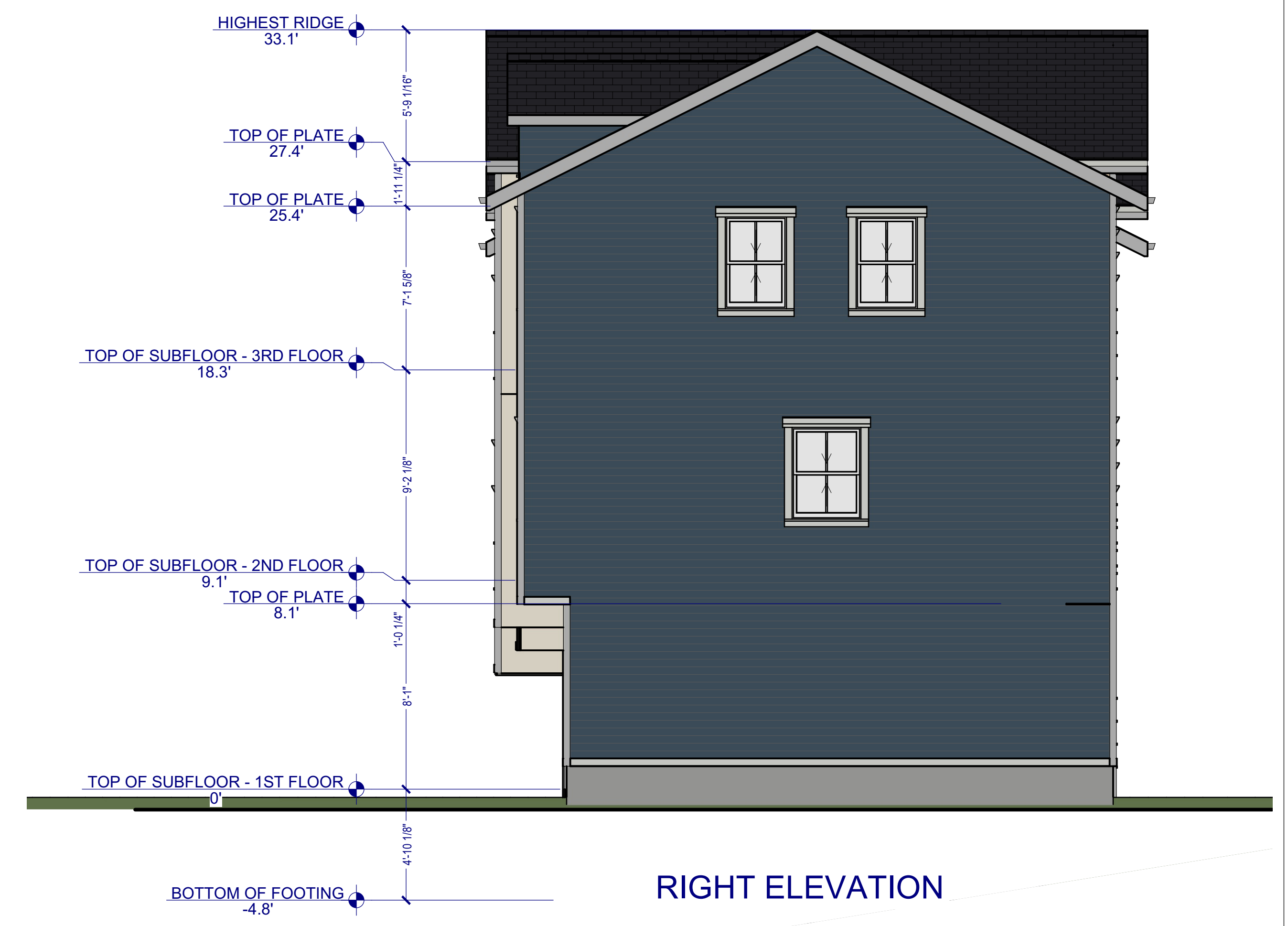
10/30/2023

SCALE:

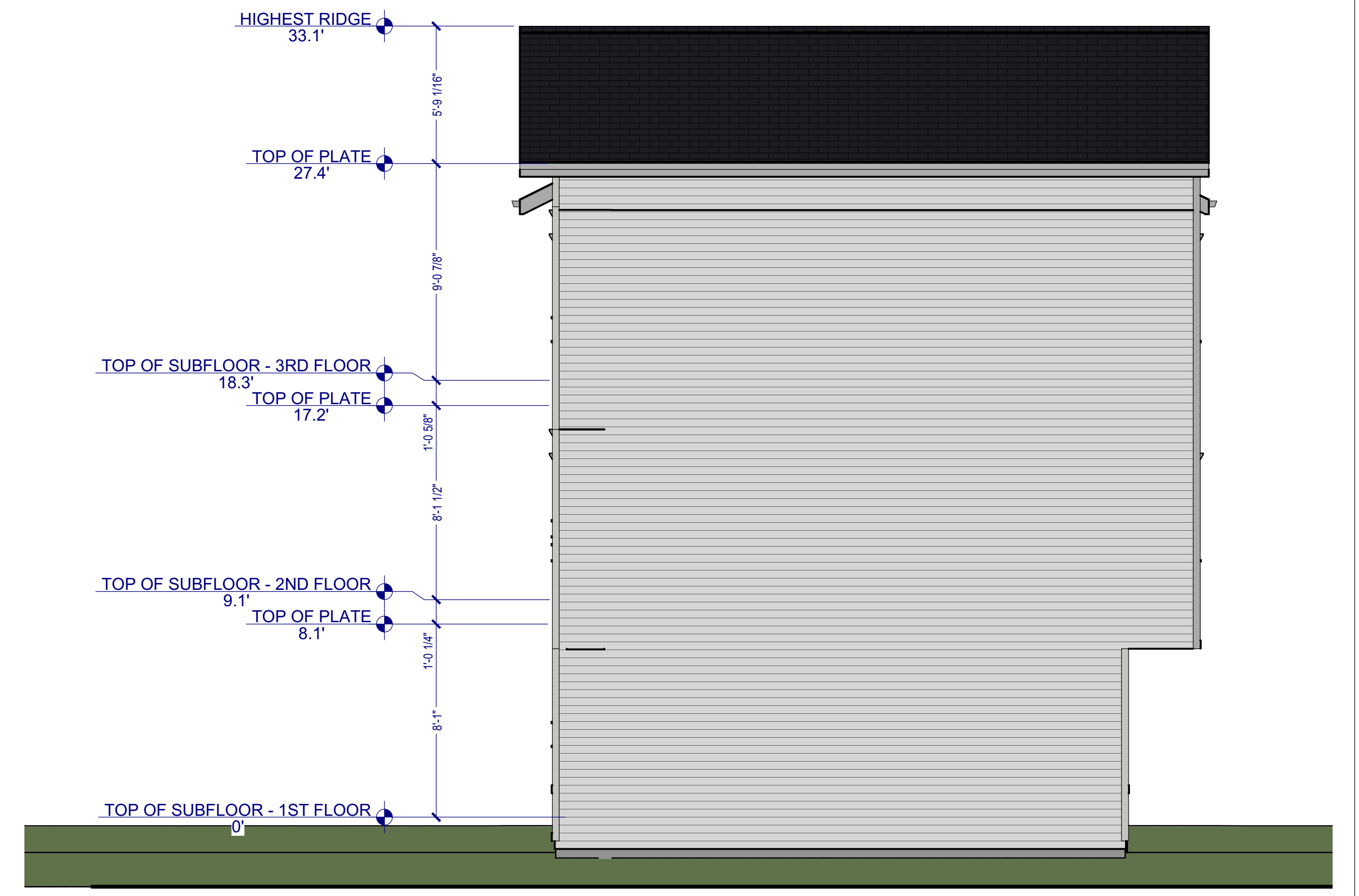
1/4"=1'-0"

SHEET:

A201



RIGHT ELEVATION



LEFT ELEVATION



JIA HUA
ARCHITECT

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING C, D, E & F
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

10/30/2023

SCALE:

1/4"=1'-0"

SHEET:

A300



JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	DESCRIPTION

TAYLOR STREET
BUILDING C, D, E & F
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

10/30/2023

SCALE:

1/4"=1'-0"

SHEET:

A301

DRAINAGE SUMMARY REPORT

For

**12 & 18 Taylor Street
Stamford, Connecticut**


Prepared For

G&T Taylor Street LLC

May 2, 2023

Revised: November 16, 2023




Matthew M. Kivijarvi, P.E.
CT License No. 36982

20PA_DSR_04

Table of Contents

1. Stormwater Management Standards	3
1.1. Runoff and Pollution Reduction	3
1.2. Peak Flow Control	3
1.3. Construction Erosion and Sediment Control	3
1.4. Operations and Maintenance	3
1.5. Stormwater Management Report	3
2. HydroCAD Summary Table	4

Exhibits

Watershed Map – Existing Conditions	Exhibit A
Watershed Map – Proposed Conditions	Exhibit B
USDA Soil Delineation Map	Exhibit C
Site Vicinity Map	Exhibit D

Appendices

Drainage System Design Calculations	Appendix A
HydroCAD Analysis – Existing Conditions	Appendix B
HydroCAD Analysis – Proposed Conditions	Appendix C
Pipe Conveyance and Inlet Capacity Calculations	Appendix D
Directly Connected Impervious Area Tracking Worksheet	Appendix E
Soil Results Forms	Appendix F

1. Stormwater Management Standards

1.1. Runoff and Pollution Reduction

Standard 1: Runoff and Pollutant Reduction is not applicable to this project as determined by the Runoff and Pollutant Reduction Requirements Flowchart. Refer to Appendix "E" for Directly Connected Impervious Area Tracking Worksheet

1.2. Peak Flow Control

The proposed development will decrease peak runoff flow rates to less than pre-construction conditions to all points of concern. Refer to Appendices "B" and "C" for Existing and Proposed HydroCAD results, and to the HydroCAD Summary Table at the end of this introduction. The decrease in peak runoff flow rates meets the standard of reduction for all storms up to the 50-year storm.

Refer to Appendix "D" for Pipe Conveyance Calculations and refer to Appendix "A" for 72-Hour Drawdown Calculations.

1.3. Construction Erosion and Sediment Control

During the construction phase of the project, treatment of storm water runoff will be provided by temporary sedimentation and other erosion control measures as outlined within the Final Site Plan Review Set. This includes the installation of silt fencing, an anti-tracking pad, and hay bales around catch basins. Periodic on-site inspections will be performed to ensure that these measures are maintained in effective working order. Once construction is complete and all disturbed areas are properly graded, seeded and stabilized, the proposed sedimentation and erosion control measures will be removed.

1.4. Operations and Maintenance

Refer to Appendix "G" of the City of Stamford Stormwater Drainage Manual for a Standard City of Stamford Drainage Maintenance Agreement.

1.5. Stormwater Management Report

The applicant is proposing to conduct site improvements on the subject property. Currently, the parcel supports two multi-family dwellings, two asphalt driveways, and various hardscapes. Vegetative cover at the property is primarily lawn with other ornamental plantings. The proposed improvements will include the construction of three multi-family buildings totaling 13 units. Improvements also include the installation of a storm drainage system, site grading, and associated landscaping.

For a depiction of existing and proposed conditions, refer to a plan set prepared by D'Andrea Surveying and Engineering, P.C., entitled "Residential Development depicting property at 12 & 18 Taylor Street, Stamford, Connecticut, prepared for G&T Taylor Street LLC".

The subject parcel is 24,478 square feet in size and is located approximately 140 feet south of the intersection of Taylor Street and Richmond Hill Avenue. The proposed redevelopment of the parcel will increase the impervious coverage by approximately 8,705 square feet. Refer to Appendix "A" for a depiction of the proposed stormwater BMPs and drainage calculations.

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.

HydroCAD Summary
G&T Taylor Street LLC
 Tylor Street, Stamford, CT
 Project ID: 20PA

POC	1 Year Storm				2 Year Storm				5 Year Storm				10 Year Storm				25 Year Storm				50 Year Storm				100 Year Storm			
	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)	q _{ex} (ft ³ /s)	q _p (ft ³ /s)	Δq (ft ³ /s)	%Δq (ft ³ /s)
A	0.91	0.54	-0.37	-41%	1.23	1.07	-0.16	-13%	1.78	1.78	0.00	0%	2.17	2.11	-0.06	-3%	2.55	2.40	-0.15	-6%	2.94	2.66	-0.28	-10%	3.38	2.96	-0.42	-12%
B	0.12	0.03	-0.09	-75%	0.17	0.04	-0.13	-76%	0.27	0.07	-0.20	-74%	0.33	0.18	-0.15	-45%	0.40	0.34	-0.06	-15%	0.47	0.46	-0.01	-2%	0.55	0.53	-0.02	-4%

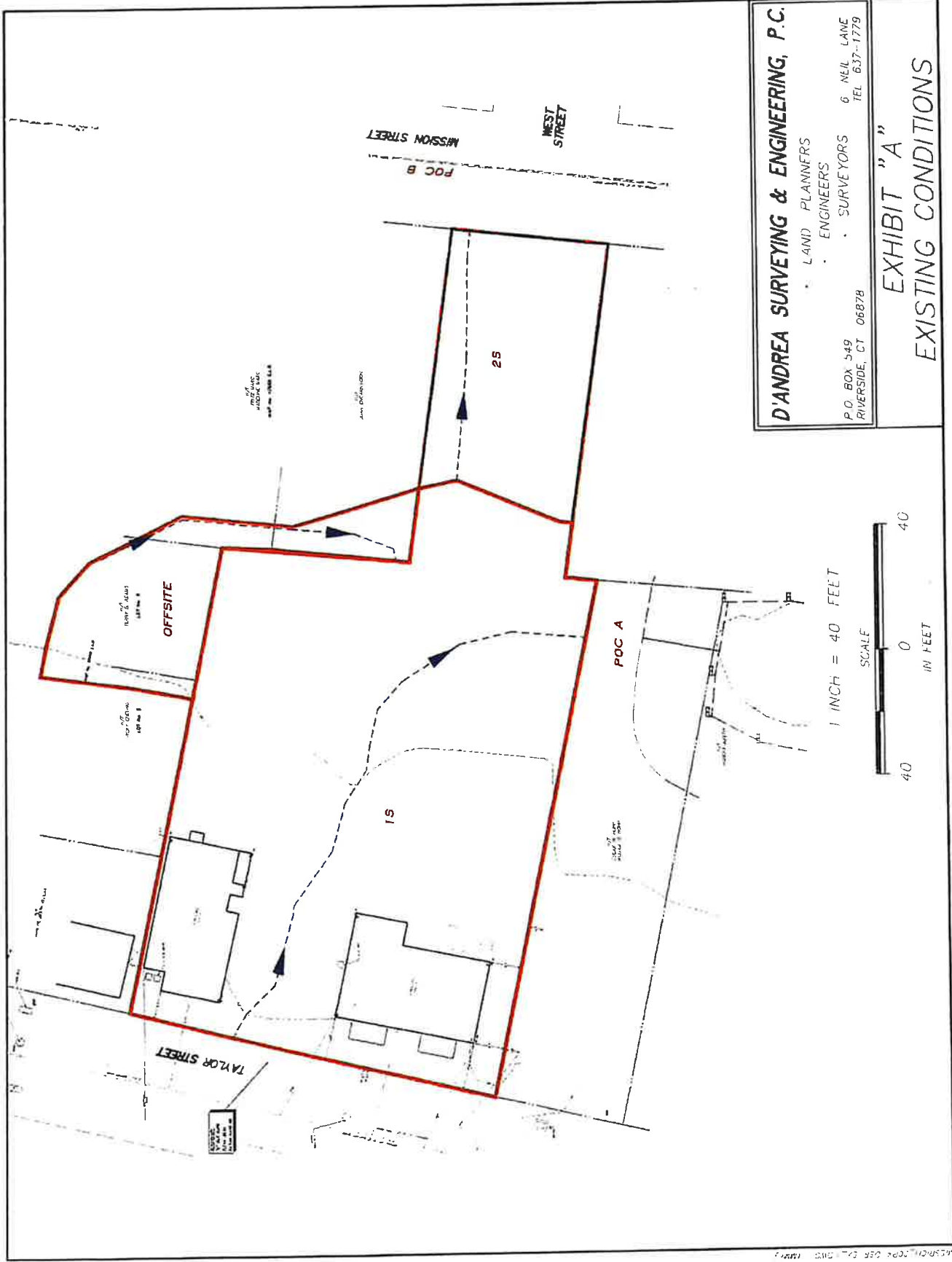
Table 1: Comparison of Existing and Proposed Peak Flow Rates for all Points of Concern.

POC	1 Year Storm				2 Year Storm				5 Year Storm				10 Year Storm				25 Year Storm				50 Year Storm				100 Year Storm			
	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)	v _{ex} (cf)	v _p (cf)	Δv (cf)	%Δv (cf)
A	2,798	2,587	-211	-8%	3,795	3,701	-94	-2%	5,534	5,599	65	1%	6,786	6,948	162	2%	8,058	8,307	249	3%	9,343	9,674	331	4%	10,825	11,243	418	4%
B	414	88	-326	-79%	587	202	-385	-66%	897	482	-415	-46%	1,125	681	-444	-39%	1,358	880	-478	-35%	1,596	1,081	-515	-32%	1,873	1,310	-563	-30%

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

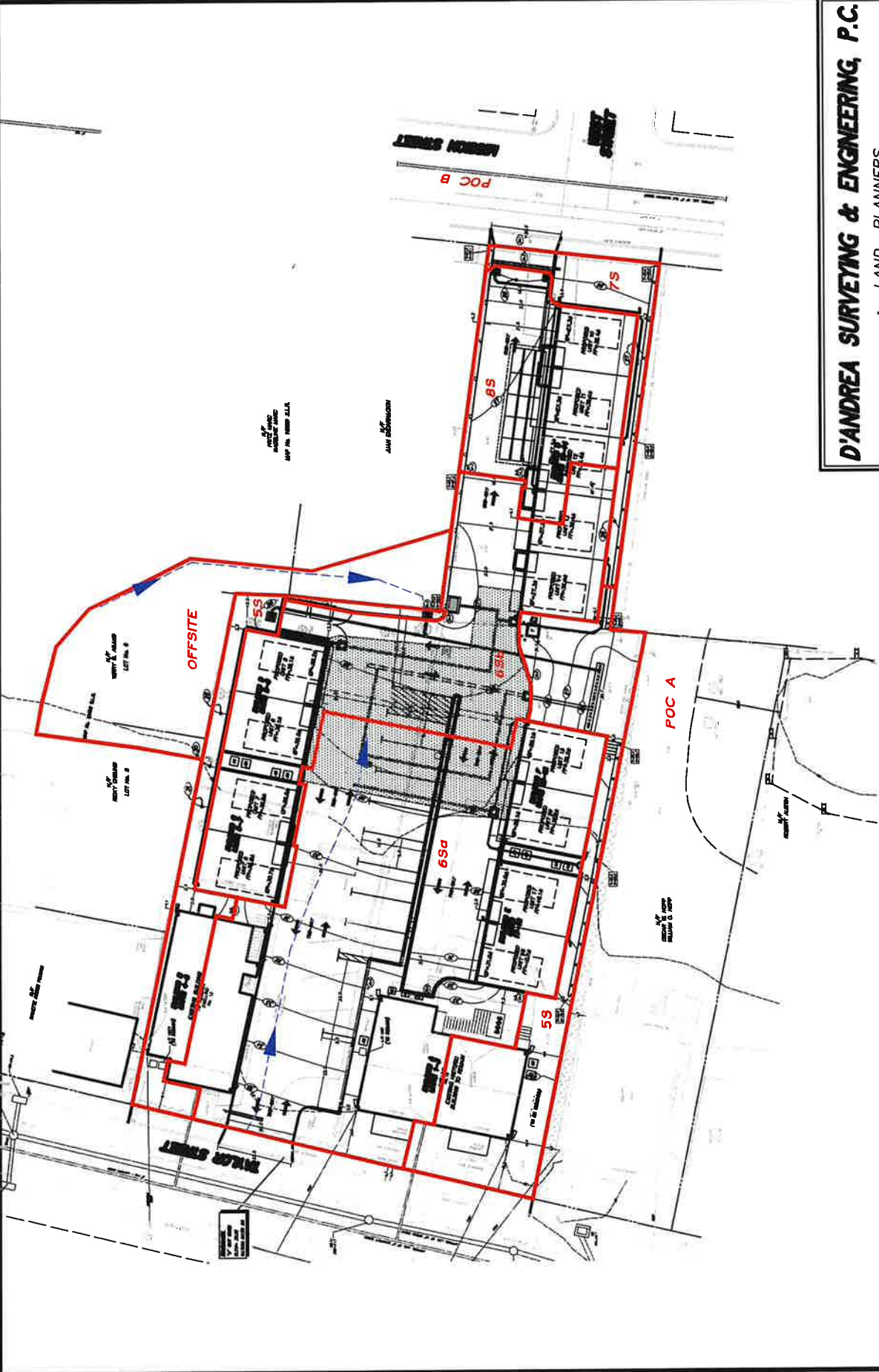
Exhibits “A & B”

**Existing and Proposed
Watershed Maps**

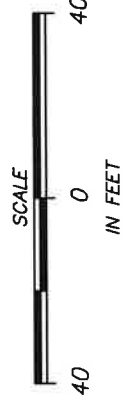


D'ANDREA SURVEYING & ENGINEERING, P.C.
 LAND PLANNERS
 ENGINEERS
 SURVEYORS
 P.O. BOX 549
 RIVERSIDE, CT 06878
 6 NEIL LANE
 TEL 637-1779

EXHIBIT "A"
EXISTING CONDITIONS



1 INCH = 40 FEET



D'ANDREA SURVEYING & ENGINEERING, P.C.
 • LAND PLANNERS
 • ENGINEERS
 • SURVEYORS

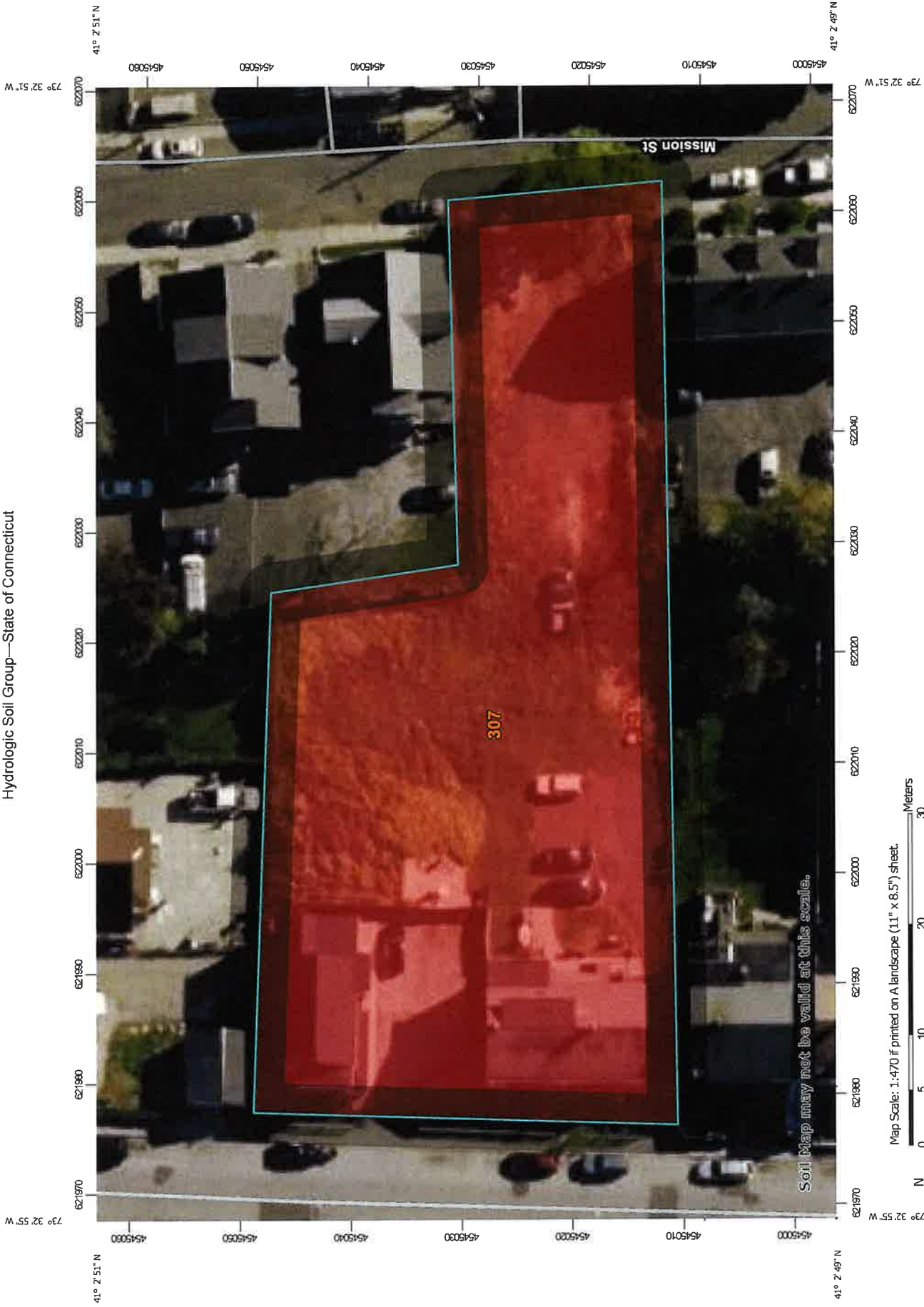
P.O. BOX 549
 RIVERSIDE, CT 06878

6 NEIL LANE
 TEL. 637-1779






































EXHIBIT "B"
PROPOSED CONDITIONS

Exhibit “C”

USDA Soil Delineation Map



MAP LEGEND

 Area of Interest (AOI)	 Area of Interest (AOI)
Soils	
Soil Rating Polygons	
 A	 C
 A/D	 C/D
 B	 D
 B/D	 Not rated or not available
 C	Water Features
 C/D	 Streams and Canals
 D	Transportation
 Not rated or not available	 Rails
Soil Rating Lines	 Interstate Highways
 A	 US Routes
 A/D	 Major Roads
 B	 Local Roads
 B/D	Background
 C	 Aerial Photography
 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	

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 22, Sep 12, 2022

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

Date(s) aerial images were photographed: Oct 21, 2022—Oct 27, 2022

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	0.6	100.0%
Totals for Area of Interest			0.6	100.0%

Description

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

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

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

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

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

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

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

Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Exhibit “D”
Site Vicinity Map

Appendix “A”

**Drainage System
Design Calculations**

BMP Drawdown Calculations:

Infiltration structures must be able to drain fully within 72 hours.

Retention System #1: Permeable Pavement (Upper Section)

$$t_{\text{drawdown}} = DV/kA$$

Where:

DV = Design Volume	=	670 ft ³	
k = Infiltration Rate	=	0.52 inches/hr	Silty Loam
A = Bottom Area	=	1675 ft ²	

$$t_{\text{drawdown}} = 9.2 \text{ hours} \quad \text{Drawdown Requirement Satisfied}$$

Retention System #2: Permeable Pavement (Lower Section)

$$t_{\text{drawdown}} = DV/kA$$

Where:

DV = Design Volume	=	594 ft ³	
k = Infiltration Rate	=	0.52 inches/hr	Silty Loam
A = Bottom Area	=	1350 ft ²	

$$t_{\text{drawdown}} = 10.2 \text{ hours} \quad \text{Drawdown Requirement Satisfied}$$

Retention System #3: Cultec Drywells

$$t_{\text{drawdown}} = DV/kA$$

Where:

DV = Design Volume	=	585 ft ³	
k = Infiltration Rate	=	0.52 inches/hr	Silty Loam
A = Bottom Area	=	403 ft ²	

$$t_{\text{drawdown}} = 33.5 \text{ hours} \quad \text{Drawdown Requirement Satisfied}$$

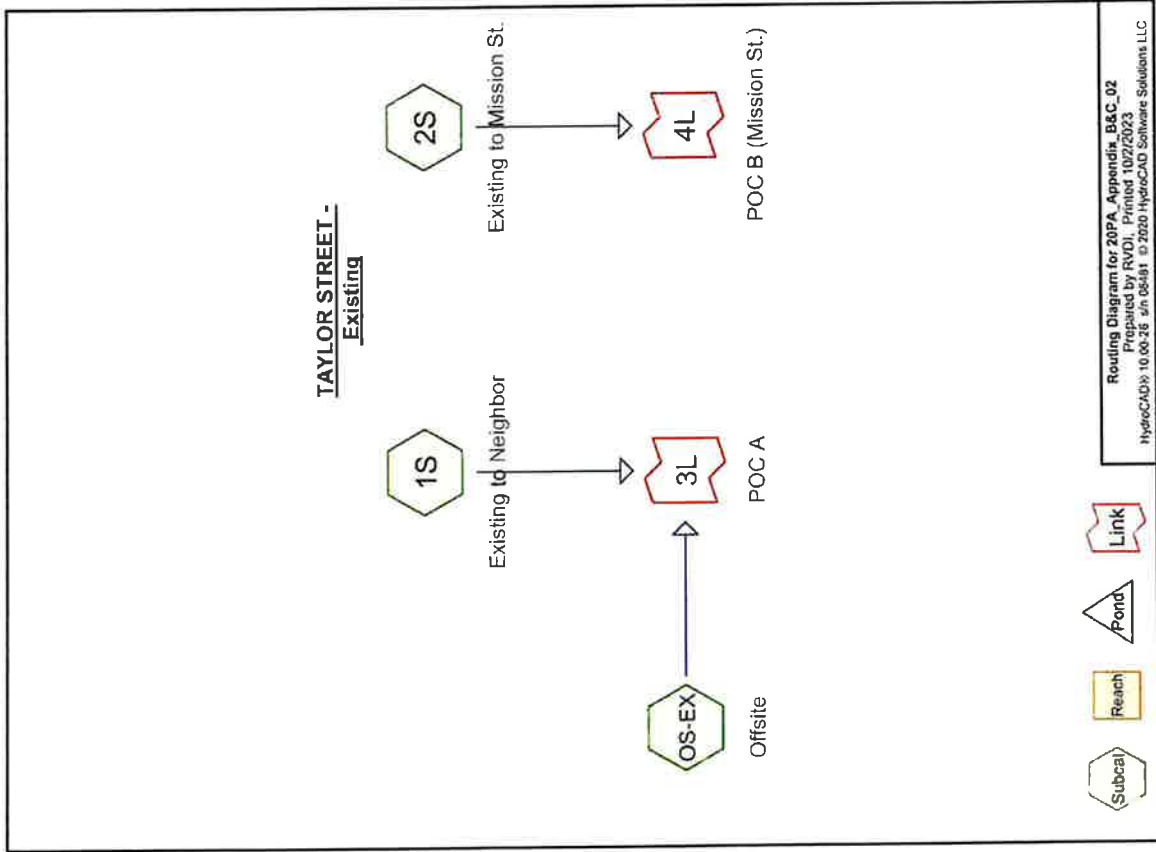
Appendix “B”

HydroCAD Analysis – Existing Conditions

20PA_Appendix_B&C_02

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
18,877	80.0	>75% Grass cover, Good, HSG D (1S, 2S, OS-EX)
4,514	98.0	Paved parking, HSG D (1S, 2S)
3,256	98.0	Roofs, HSG D (1S)
935	98.0	Unconnected pavement, HSG D (1S)
27,582	85.7	TOTAL AREA



Summary for Subcatchment 1S: Existing to Neighbor

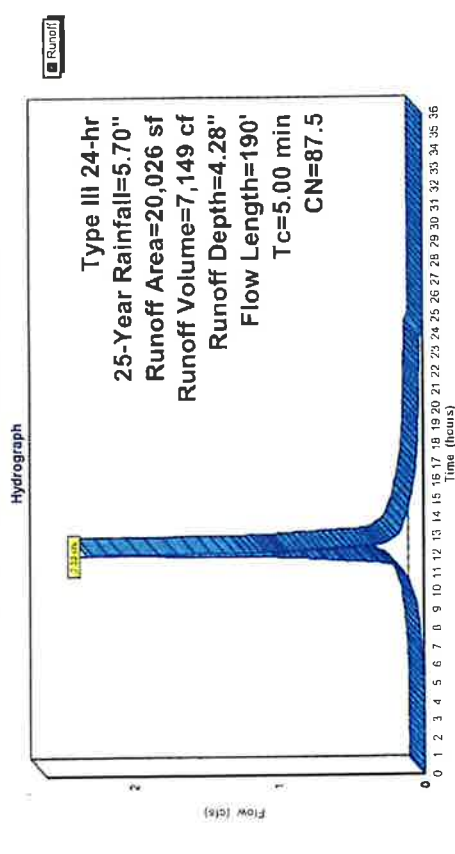
Runoff = 2.33 cfs @ 12.07 hrs, Volume= 7,149 cf, Depth= 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roofs, HSG D
935	98.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683	58.34%	Pervious Area
8,343	41.66%	Impervious Area
935	11.21%	Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		Sheet Flow, Driveway
					Smooth surfaces n= 0.011 P2= 3.30"
1.71	30	0.1367	0.29		Sheet Flow, Lawn
					Grass: Short n= 0.150 P2= 3.30"
0.56	90	0.0322	2.69		Shallow Concentrated Flow, Lawn
					Grassed Waterway Kv= 15.0 f/s
2.77	190	Total	increased to minimum	Tc = 5.00 min	

Subcatchment 1S: Existing to Neighbor



Summary for Subcatchment 2S: Existing to Mission St.

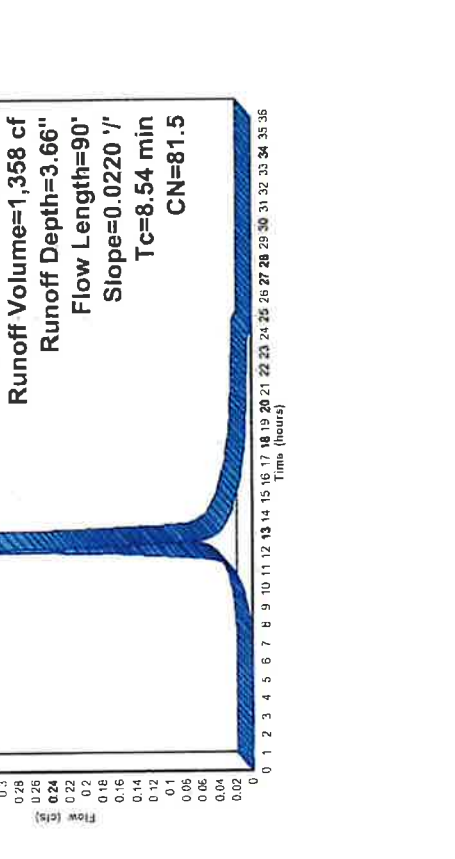
Runoff = 0.40 cfs @ 12.12 hrs, Volume= 1,358 cf, Depth= 3.66"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,090	80.0	>75% Grass cover, Good, HSG D
4,452	81.5	Weighted Average
4,090	91.87%	Pervious Area
362	8.13%	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		Sheet Flow, Sheet Flow
					Grass: Short n= 0.150 P2= 3.30"

Subcatchment 2S: Existing to Mission St.



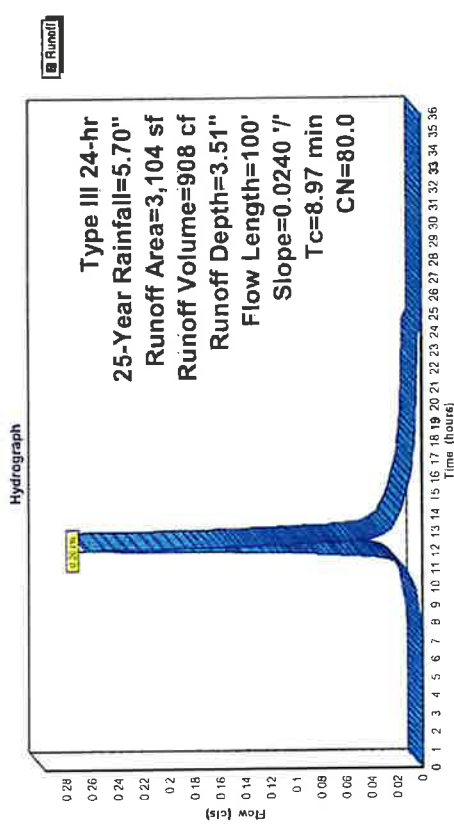
Summary for Subcatchment OS-EX: Offsite

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 908 cf, Depth= 3.51"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19	Sheet Flow, Lawn
				Grass: Short n= 0.150 P2= 3.30"

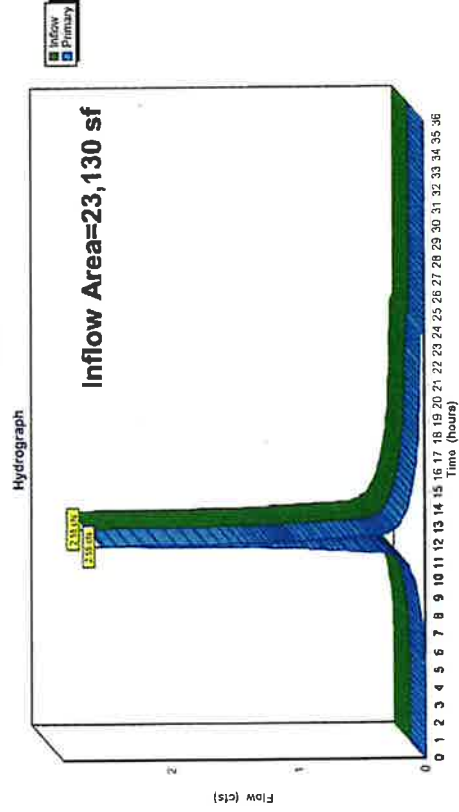
Subcatchment OS-EX: Offsite



Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% impervious, Inflow Depth = 4.18" for 25-Year event
 Inflow = 2.55 cfs @ 12.07 hrs, Volume= 8,058 cf
 Primary = 2.55 cfs @ 12.07 hrs, Volume= 8,058 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

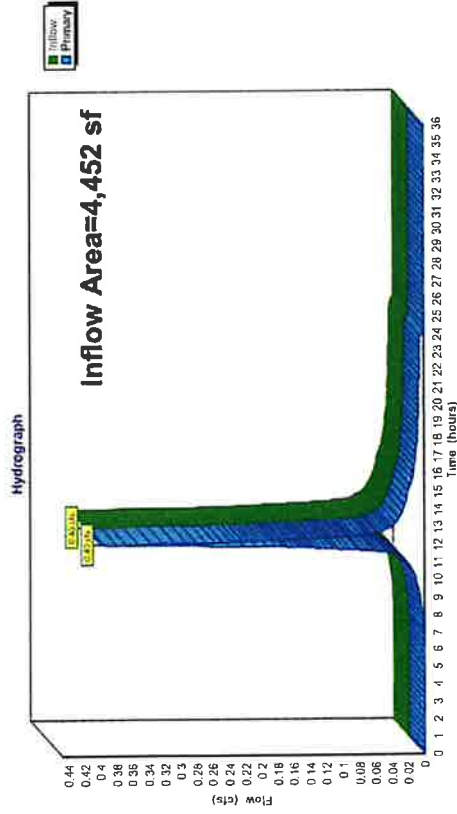
Link 3L: POC A



Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 3.66" for 25-Year event
 Inflow = 0.40 cfs @ 12.12 hrs, Volume= 1,358 cf
 Primary = 0.40 cfs @ 12.12 hrs, Volume= 1,358 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 4L: POC B (Mission St.)



Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 0.85 cfs @ 12.07 hrs, Volume= 2,531 cf, Depth= 1.52"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description			
4,152	98.0	Paved parking, HSG D			
3,256	98.0	Roofs, HSG D			
935	98.0	Unconnected pavement, HSG D			
11,683	80.0	>75% Grass cover, Good, HSG D			
20,026	87.5	Weighted Average			
11,683	58.34%	Pervious Area			
8,343	41.66%	Impervious Area			
935	11.21%	Unconnected			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		Sheet Flow, Driveway Smooth surfaces n=0.011 P2= 3.30"
1.71	30	0.1367	0.29		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"
0.56	90	0.0322	2.69		Shallow Concentrated Flow, Lawn Grassed Waterway Kv= 15.0 fps
2.77	190	Total, Increased to minimum Tc = 5.00 min			

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.12 cfs @ 12.13 hrs, Volume= 414 cf, Depth= 1.12"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description			
362	98.0	Paved parking, HSG D			
4,090	80.0	>75% Grass cover, Good, HSG D			
4,452	81.5	Weighted Average			
4,090	91.87%	Pervious Area			
362	8.13%	Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 3.30"

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.08 cfs @ 12.13 hrs, Volume= 266 cf, Depth= 1.03"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description			
0	98.0	Paved parking, HSG D			
3,104	80.0	>75% Grass cover, Good, HSG D			
0	98.0	Roofs, HSG D			
3,104	80.0	Weighted Average			
3,104	100.00%	Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 1.45" for 1-Year event
 Inflow = 0.91 cfs @ 12.08 hrs, Volume= 2,798 cf
 Primary = 0.91 cfs @ 12.08 hrs, Volume= 2,798 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 1.12" for 1-Year event
 Inflow = 0.12 cfs @ 12.13 hrs, Volume= 414 cf
 Primary = 0.12 cfs @ 12.13 hrs, Volume= 414 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 1.14 cfs @ 12.07 hrs, Volume= 3,413 cf, Depth= 2.05"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roofs, HSG D
935	98.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683	58.34%	Pervious Area
8,343	41.66%	Impervious Area
935	11.21%	Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		
1.71	30	0.1367	0.29		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.30"
0.56	90	0.0322	2.69		Sheet Flow, Lawn Sheet Flow, Short n= 0.150 P2= 3.30" Shallow Concentrated Flow, Lawn Grassed Waterway Kv= 15.0 fps
2.77	190	Total	Increased to minimum	Tc = 5.00 min	

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.17 cfs @ 12.12 hrs, Volume= 587 cf, Depth= 1.58"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,090	80.0	>75% Grass cover, Good, HSG D
4,452	81.5	Weighted Average
4,090	91.87%	Pervious Area
362	8.13%	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 3.30"

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.11 cfs @ 12.13 hrs, Volume= 383 cf, Depth= 1.48"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 1.97" for 2-Year event
 Inflow = 1.23 cfs @ 12.08 hrs, Volume= 3,795 cf
 Primary = 1.23 cfs @ 12.08 hrs, Volume= 3,795 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 1.58" for 2-Year event
 Inflow = 0.17 cfs @ 12.12 hrs, Volume= 587 cf
 Primary = 0.17 cfs @ 12.12 hrs, Volume= 587 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 1.63 cfs @ 12.07 hrs, Volume= 4,941 cf, Depth= 2.96"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roofs, HSG D
935	98.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683		58.34% Pervious Area
8,343		41.66% Impervious Area
935		11.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		
1.71	30	0.1367	0.29		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.30"
0.56	90	0.0322	2.69		Sheet Flow, Lawn Grass, Short n= 0.150 P2= 3.30"
2.77	190	Total	Increased to minimum	Tc = 5.00 min	Shallow Concentrated Flow, Lawn Grassed Waterway Kv= 15.0 fps

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.27 cfs @ 12.12 hrs, Volume= 897 cf, Depth= 2.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,090	80.0	>75% Grass cover, Good, HSG D
4,452	81.5	Weighted Average
4,090		91.87% Pervious Area
362		8.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		
					Sheet Flow, Sheet Flow Grass, Short n= 0.150 P2= 3.30"

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.17 cfs @ 12.13 hrs, Volume= 593 cf, Depth= 2.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
3,104	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		
					Sheet Flow, Lawn Grass, Short n= 0.150 P2= 3.30"

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 2.87" for 5-Year event
 Inflow = 1.78 cfs @ 12.08 hrs, Volume= 5,534 cf
 Primary = 1.78 cfs @ 12.08 hrs, Volume= 5,534 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 2.42" for 5-Year event
 Inflow = 0.27 cfs @ 12.12 hrs, Volume= 897 cf
 Primary = 0.27 cfs @ 12.12 hrs, Volume= 897 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 1.98 cfs @ 12.07 hrs, Volume= 6,038 cf, Depth= 3.62"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roots, HSG D
935	96.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683		58.34% Pervious Area
8,343		41.66% Impervious Area
935		11.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		
1.71	30	0.1367	0.29		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.30"
0.56	90	0.0322	2.69		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30" Shallow Concentrated Flow, Lawn Grassed Waterway Kv= 15.0 fps
2.77	190				Total, Increased to minimum Tc = 5.00 min

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.33 cfs @ 12.12 hrs, Volume= 1,125 cf, Depth= 3.03"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description			
362	98.0	Paved parking, HSG D			
4,090	80.0	>75% Grass cover, Good, HSG D			
4,452	81.5	Weighted Average			
4,090		91.87% Pervious Area			
362		8.13% Impervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		
					Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 3.30"

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.22 cfs @ 12.13 hrs, Volume= 748 cf, Depth= 2.89"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description			
0	98.0	Paved parking, HSG D			
3,104	80.0	>75% Grass cover, Good, HSG D			
	98.0	Roots, HSG D			
3,104	80.0	Weighted Average			
3,104		100.00% Pervious Area			
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		
					Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 3.52" for 10-Year event
 Inflow = 2.17 cfs @ 12.08 hrs, Volume= 6,786 cf
 Primary = 2.17 cfs @ 12.08 hrs, Volume= 6,786 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 3.03" for 10-Year event
 Inflow = 0.33 cfs @ 12.12 hrs, Volume= 1,125 cf
 Primary = 0.33 cfs @ 12.12 hrs, Volume= 1,125 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 2.33 cfs @ 12.07 hrs, Volume= 7,149 cf, Depth= 4.28"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roofs, HSG D
935	98.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683	58.34%	Pervious Area
8,343	41.66%	Impervious Area
935	11.21%	Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		
Sheet Flow, Driveway					
Smooth surfaces n= 0.011 P2= 3.30"					
Sheet Flow, Lawn					
Grass: Short n= 0.150 P2= 3.30"					
Shallow Concentrated Flow, Lawn					
Grassed Waterway Kv= 15.0 fps					
2.77	190	Total	Increased to minimum Tc = 5.00 min		

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.40 cfs @ 12.12 hrs, Volume= 1,358 cf, Depth= 3.66"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,090	80.0	>75% Grass cover, Good, HSG D
4,452	81.5	Weighted Average
4,090	91.87%	Pervious Area
362	8.13%	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		
Sheet Flow, Sheet Flow					
Grass: Short n= 0.150 P2= 3.30"					

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 908 cf, Depth= 3.51"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		
Sheet Flow, Lawn					
Grass: Short n= 0.150 P2= 3.30"					

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 4.18" for 25-Year event
 Inflow = 2.55 cfs @ 12.07 hrs, Volume= 8,058 cf
 Primary = 2.55 cfs @ 12.07 hrs, Volume= 8,058 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 3.66" for 25-Year event
 Inflow = 0.40 cfs @ 12.12 hrs, Volume= 1,358 cf
 Primary = 0.40 cfs @ 12.12 hrs, Volume= 1,358 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 2.67 cfs @ 12.07 hrs, Volume= 6,271 cf, Depth= 4.96"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roofs, HSG D
935	98.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683		58.34% Pervious Area
8,343		41.66% Impervious Area
935		11.21% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		

Sheet Flow, Driveway
 Smooth surfaces n= 0.011 P2= 3.30"
 Sheet Flow, Lawn
 Grass: Short n= 0.150 P2= 3.30"
 Shallow Concentrated Flow, Lawn
 Grassed Waterway Kv= 15.0 fps

2.77 190 Total, Increased to minimum Tc = 5.00 min

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.47 cfs @ 12.12 hrs, Volume= 1,596 cf, Depth= 4.30"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,090	80.0	>75% Grass cover, Good, HSG D
4,452	81.5	Weighted Average
4,090		91.87% Pervious Area
362		8.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		

Sheet Flow, Sheet Flow
 Grass: Short n= 0.150 P2= 3.30"

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.31 cfs @ 12.13 hrs, Volume= 1,072 cf, Depth= 4.14"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		

Sheet Flow, Lawn
 Grass: Short n= 0.150 P2= 3.30"

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 4.85" for 50-Year event
 Inflow = 2.94 cfs @ 12.07 hrs, Volume= 9,343 cf
 Primary = 2.94 cfs @ 12.07 hrs, Volume= 9,343 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 4.30" for 50-Year event
 Inflow = 0.47 cfs @ 12.12 hrs, Volume= 1,596 cf
 Primary = 0.47 cfs @ 12.12 hrs, Volume= 1,596 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 3.06 cfs @ 12.07 hrs, Volume= 9,563 cf, Depth= 5.73"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
4,152	98.0	Paved parking, HSG D
3,256	98.0	Roofs, HSG D
935	98.0	Unconnected pavement, HSG D
11,683	80.0	>75% Grass cover, Good, HSG D
20,026	87.5	Weighted Average
11,683	58.34%	Pervious Area
8,343	41.66%	Impervious Area
935	11.21%	Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34		
1.71	30	0.1367	0.29		Sheet Flow, Driveway Smooth surfaces n= 0.011 P2= 3.30"
0.56	90	0.0322	2.69		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30" Shallow Concentrated Flow, Lawn Grassed Waterway Kv= 15.0 fps
2.77	190	Total	Increased to minimum	Tc = 5.00 min	

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.55 cfs @ 12.12 hrs, Volume= 1,873 cf, Depth= 5.05"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,090	80.0	>75% Grass cover, Good, HSG D
4,452	81.5	Weighted Average
4,090	91.87%	Pervious Area
362	8.13%	Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.54	90	0.0220	0.18		Sheet Flow, Sheet Flow Grass: Short n= 0.150 P2= 3.30"

Summary for Subcatchment OS-EX: Offsite

Runoff = 0.36 cfs @ 12.13 hrs, Volume= 1,262 cf, Depth= 4.88"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"

Summary for Link 3L: POC A

Inflow Area = 23,130 sf, 36.07% Impervious, Inflow Depth = 5.62" for 100-Year event
 Inflow = 3.38 cfs @ 12.07 hrs, Volume= 10,825 cf
 Primary = 3.38 cfs @ 12.07 hrs, Volume= 10,825 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 4L: POC B (Mission St.)

Inflow Area = 4,452 sf, 8.13% Impervious, Inflow Depth = 5.05" for 100-Year event
 Inflow = 0.55 cfs @ 12.12 hrs, Volume= 1,873 cf
 Primary = 0.55 cfs @ 12.12 hrs, Volume= 1,873 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

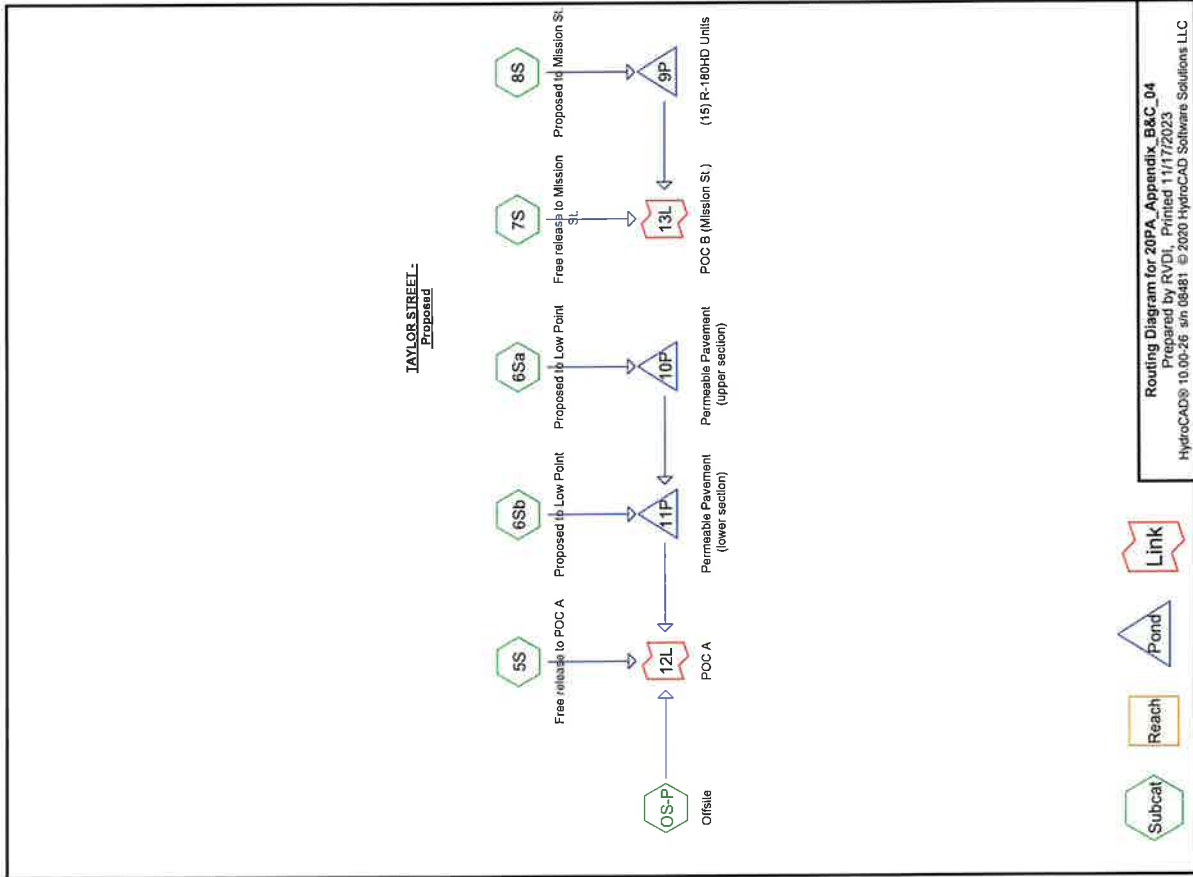
Appendix “C”

HydroCAD Analysis – Proposed Conditions

20PA_Appendix_B&C_04

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
9,018	80.0	>75% Grass cover, Good, HSG D (5S, 6Sa, 6Sb, 7S, OS-P)
9,334	98.0	Paved parking, HSG D (6Sa, 6Sb, 7S, 8S)
8,985	98.0	Roofs, HSG D (5S, 6Sa, 6Sb, 8S)
244	98.0	Unconnected pavement, HSG D (5S, 6Sa)
27,581	92.1	TOTAL AREA



Summary for Subcatchment 5S: Free release to POC A

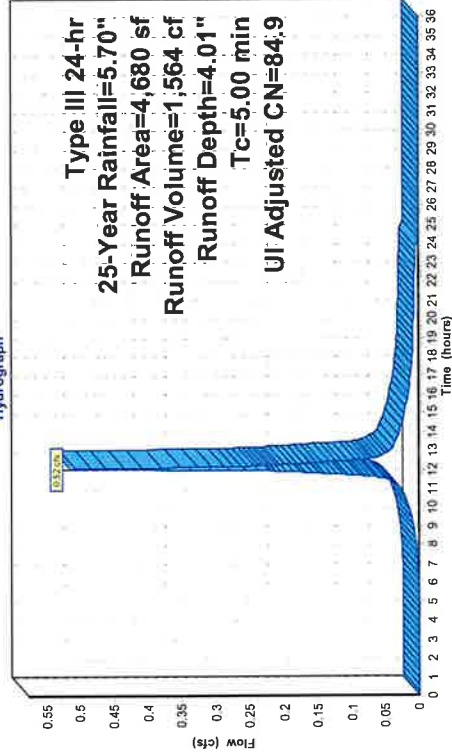
Runoff = 0.52 cfs @ 12.07 hrs, Volume= 1,564 cf, Depth= 4.01"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UI Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Subcatchment 5S: Free release to POC A



Summary for Subcatchment 6Sa: Proposed to Low Point

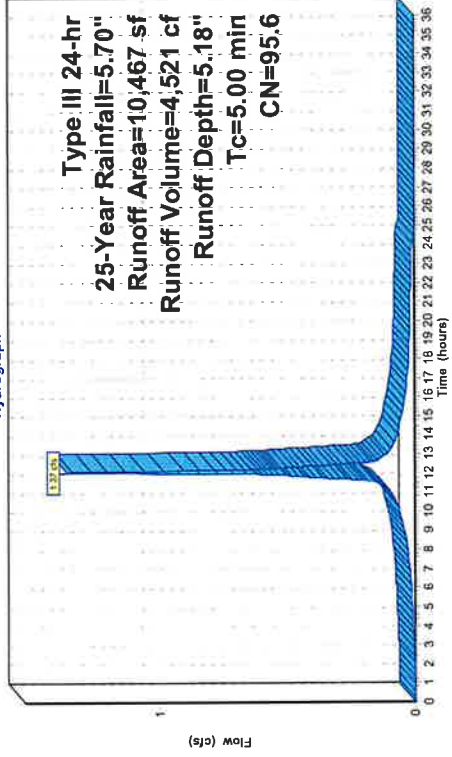
Runoff = 1.37 cfs @ 12.07 hrs, Volume= 4,521 cf, Depth= 5.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Subcatchment 6Sa: Proposed to Low Point



Summary for Subcatchment 6Sb: Proposed to Low Point

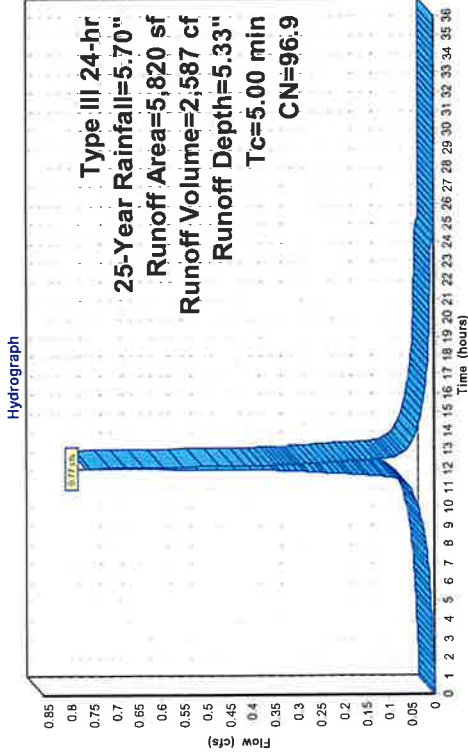
Runoff = 0.77 cfs @ 12.07 hrs, Volume= 2,587 cf, Depth= 5.33"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352	6.05%	Pervious Area
5,468	93.95%	Impervious Area

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

Subcatchment 6Sb: Proposed to Low Point



Summary for Subcatchment 7S: Free release to Mission St.

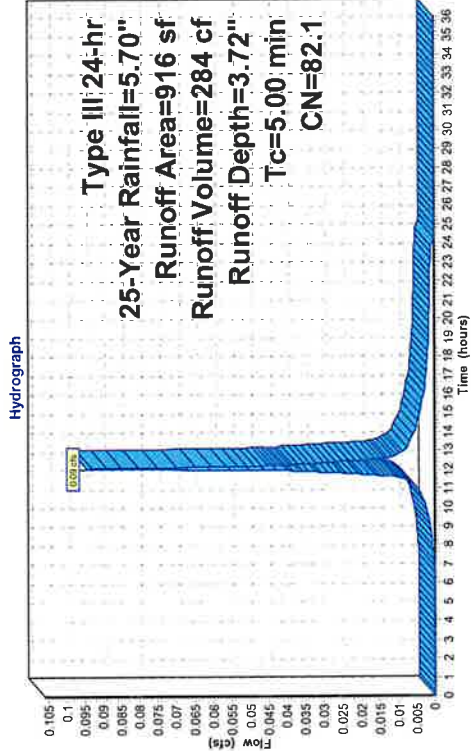
Runoff = 0.09 cfs @ 12.07 hrs, Volume= 284 cf, Depth= 3.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
808	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
916	82.1	Weighted Average
808	88.21%	Pervious Area
108	11.79%	Impervious Area

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

Subcatchment 7S: Free release to Mission St.



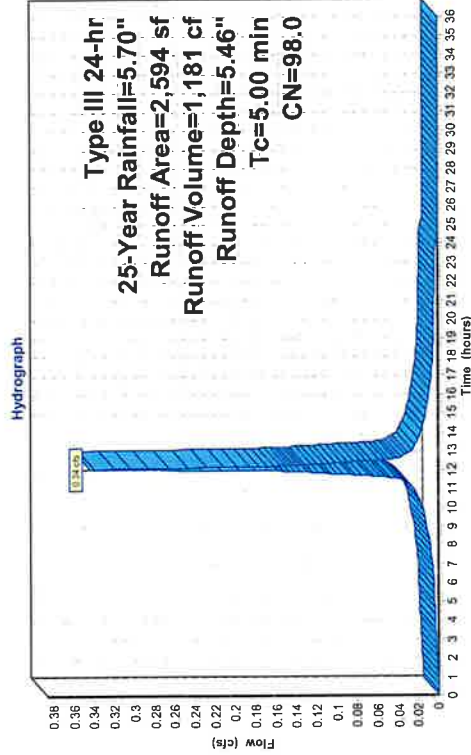
Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.34 cfs @ 12.07 hrs, Volume= 1,181 cf, Depth= 5.46"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
1,184	98.0	Paved parking, HSG D
0	80.0	>75% Grass cover, Good, HSG D
1,410	98.0	Roofs, HSG D
2,594	98.0	Weighted Average
2,594	100.00%	Impervious Area

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

Subcatchment 8S: Proposed to Mission St.



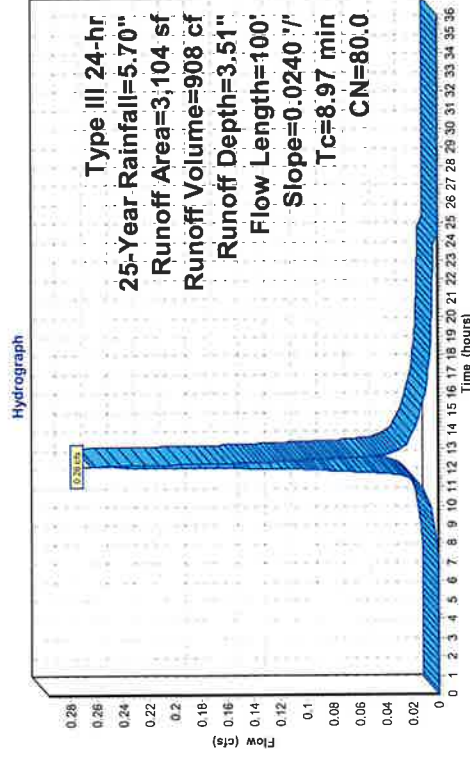
Summary for Subcatchment OS-P: Offsite

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 908 cf, Depth= 3.51"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"

Subcatchment OS-P: Offsite



Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf, 100.00% Impervious, Inflow Depth = 5.46" for 25-Year event
 Inflow = 0.34 cfs @ 12.07 hrs, Volume= 1,181 cf
 Outflow = 0.26 cfs @ 12.13 hrs, Volume= 596 cf, Atten= 23%, Lag= 3.7 min
 Primary = 0.26 cfs @ 12.13 hrs, Volume= 596 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.98' @ 12.13 hrs Surf.Area= 398 sf Storage= 597 cf

Plug-Flow detention time= 259.9 min calculated for 596 cf (50% of inflow)
 Center-of-Mass det. time= 130.2 min (875.2 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Cultec R-180 x 15 Inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
			634 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads
#2	Device 1	24.80'	6.0" Round 6" Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 24.80' / 24.80' S= 0.0000' /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.26 cfs @ 12.13 hrs HW=25.98' TW=0.00' (Dynamic Tailwater)
 1-2 - 2'x2' catch basins (Passes 0.26 cfs of 1.14 cfs potential flow)
 1-2-6" Culvert (Inlet Controls 0.26 cfs @ 1.34 fps)

Pond 9P: (15) R-180HD Units - Chamber Wizard Field A

Chamber Model = Cultec R-180 (Cultec Recharger® 180HD)
 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf
 Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap
 Row Length Adjustment= +1.00' x 3.44 sf x 3 rows

36.0" Wide + 3.0" Spacing = 39.0" C-C Row Spacing

5 Chambers/Row x 6.33' Long + 1.00' Row Adjustment = 32.65' Row Length + 12.0" End Stone x 2 = 34.65' Base Length

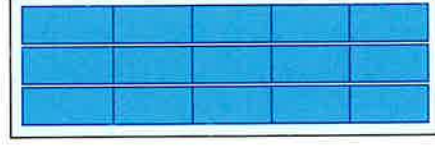
3 Rows x 36.0" Wide + 3.0" Spacing x 2 + 12.0" Side Stone x 2 = 11.50' Base Width
 6.0" Base + 20.5" Chamber Height + 6.0" Cover = 2.71' Field Height

15 Chambers x 21.8 cf + 1.00' Row Adjustment x 3.44 sf x 3 Rows = 336.9 cf Chamber Storage

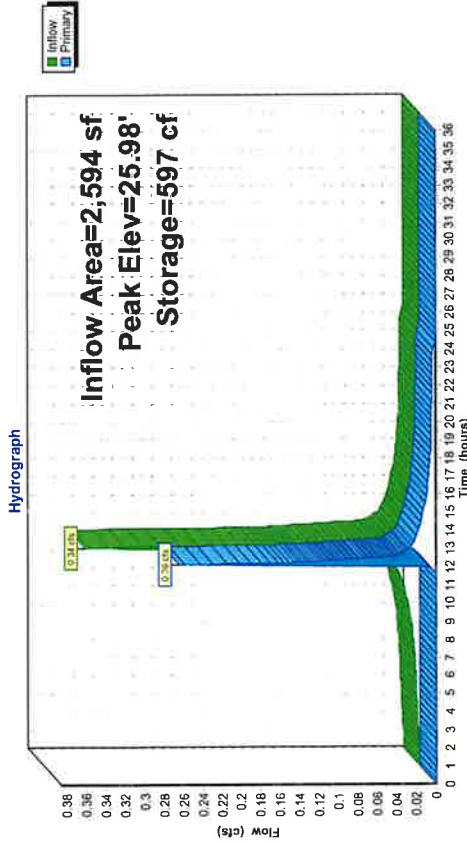
1,079.2 cf Field - 336.9 cf Chambers = 742.3 cf Stone x 40.0% Voids = 296.9 cf Stone Storage

Chamber Storage + Stone Storage = 633.8 cf = 0.015 af
 Overall Storage Efficiency = 58.7%
 Overall System Size = 34.65' x 11.50' x 2.71'

15 Chambers
 40.0 cy Field
 27.5 cy Stone



Pond 9P: (15) R-180HD Units



Summary for Pond 10P: Permeable Pavement (upper section)

The bottom elevation of the No.2 stone varies (average of 26.2 and 24.6) in order to remain 1' above mottling.

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 5.18" for 25-Year event
 Inflow = 1.37 cfs @ 12.07 hrs, Volume= 4,521 cf
 Outflow = 1.05 cfs @ 12.13 hrs, Volume= 3,849 cf, Atten= 23%, Lag= 3.7 min
 Primary = 1.05 cfs @ 12.13 hrs, Volume= 3,849 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.99' @ 12.13 hrs Surf.Area= 1,675 sf Storage= 1,066 cf

Plug-Flow detention time= 125.7 min calculated for 3,849 cf (85% of inflow)
 Center-of-Mass det. time= 61.8 min (822.5 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
1,474 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

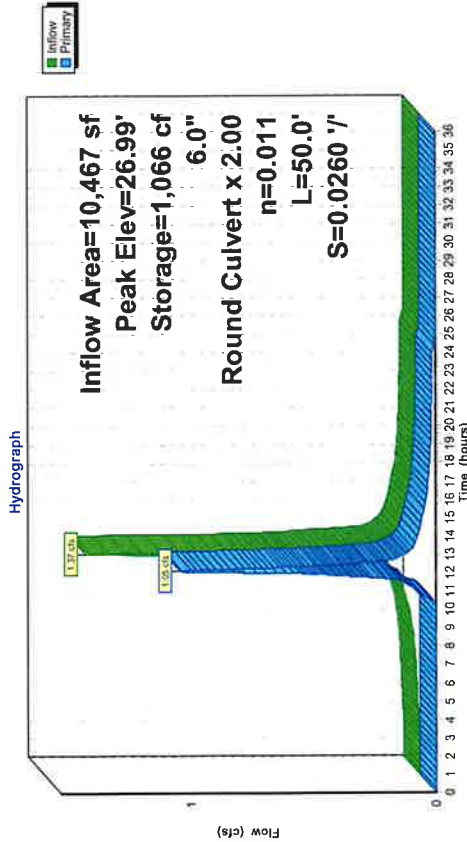
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00 L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 26.40' / 25.10' S= 0.0260 /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary Outflow Max=1.05 cfs @ 12.13 hrs HW=26.99' TW=26.52' (Dynamic Tailwater)
1-6" Underdrain (Outlet Controls 1.05 cfs @ 2.86 fps)

Pond 10P: Permeable Pavement (upper section)



Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 4.74" for 25-Year event
 Inflow = 1.76 cfs @ 12.09 hrs, Volume= 6,435 cf
 Outflow = 1.68 cfs @ 12.12 hrs, Volume= 5,835 cf, Atten= 4%, Lag= 2.0 min
 Primary = 1.68 cfs @ 12.12 hrs, Volume= 5,835 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.52' @ 12.12 hrs Surf.Area= 2,700 sf Storage= 951 cf
 Plug-Flow detention time= 86.7 min calculated for 5,833 cf (91% of inflow)
 Center-of-Mass det. time= 39.3 min (833.8 - 794.5)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc) 2,160 cf Overall x 40.0% Voids
#2	26.20'	108 cf	No.57 Stone (Prismatic) Listed below (Recalc) 540 cf Overall x 20.0% Voids
#3	26.60'	54 cf	Permeable Surface (Prismatic) Listed below (Recalc) 540 cf Overall x 10.0% Voids
1,026 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160

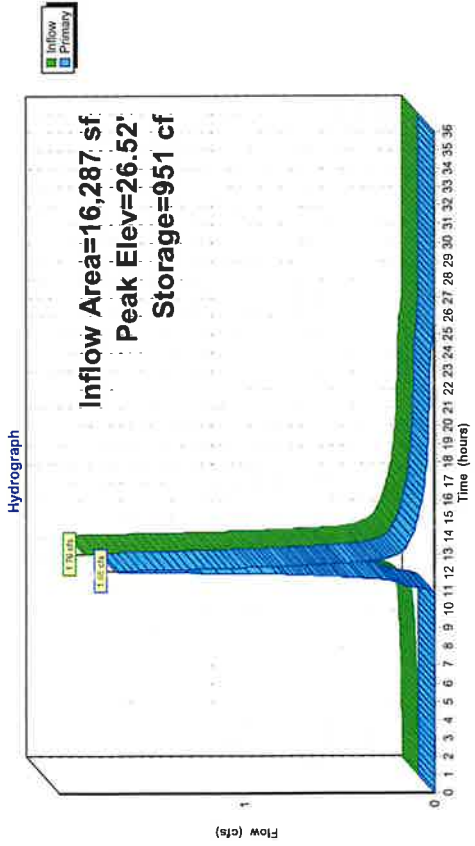
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.62 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0" Round 10" Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176 '/ Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.68 cfs @ 12.12 hrs HW=26.52' TW=0.00' (Dynamic Tailwater)
 1=Broad-Crested Rectangular Weir (Passes 1.68 cfs of 38.84 cfs potential flow)
 2=10" Culvert (Inlet Controls 1.68 cfs @ 3.09 fps)

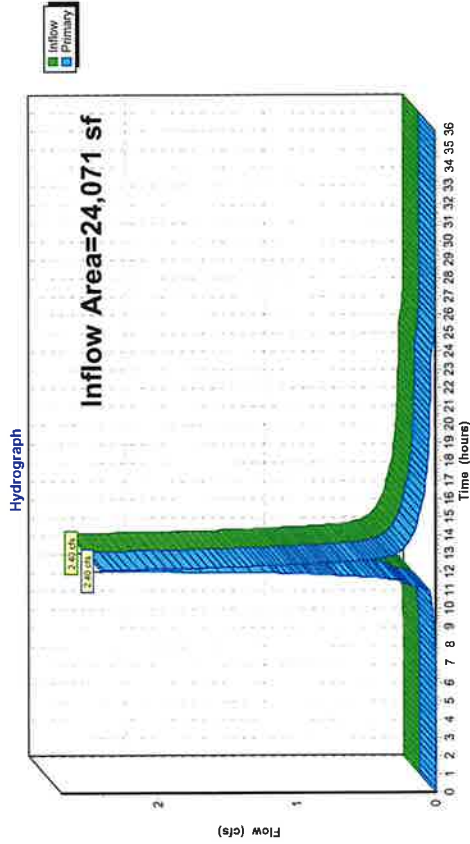
Pond 11P: Permeable Pavement (lower section)



Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth = 4.14" for 25-Year event
 Inflow = 2.40 cfs @ 12.10 hrs, Volume= 8,307 cf
 Primary = 2.40 cfs @ 12.10 hrs, Volume= 8,307 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 12L: POC A

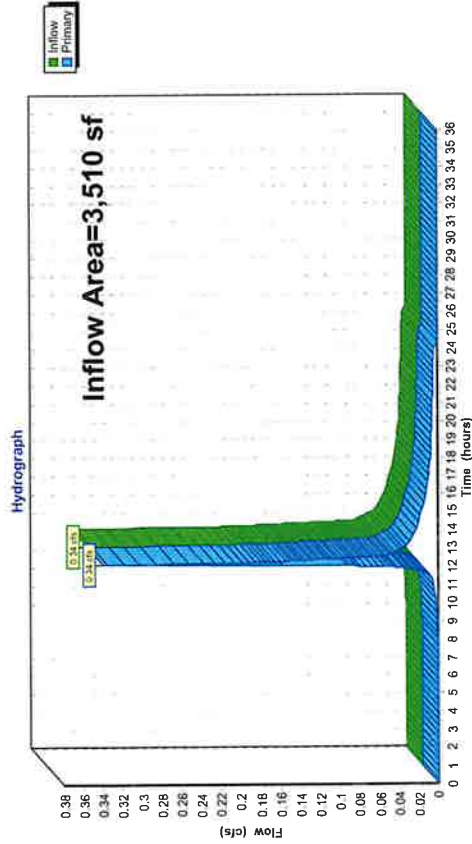


Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.99% Impervious, Inflow Depth = 3.01" for 25-Year event
Inflow = 0.34 cfs @ 12.13 hrs, Volume= 880 cf
Primary = 0.34 cfs @ 12.13 hrs, Volume= 880 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Link 13L: POC B (Mission St.)



Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.17 cfs @ 12.08 hrs, Volume= 520 cf, Depth= 1.33"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UI Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 0.61 cfs @ 12.07 hrs, Volume= 1,934 cf, Depth= 2.22"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,140 cf, Depth= 2.35"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

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

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.03 cfs @ 12.08 hrs, Volume= 88 cf, Depth= 1.15"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
808	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
916	82.1	Weighted Average
808		88.21% Pervious Area
108		11.79% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 534 cf, Depth= 2.47"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description
1,184	98.0	Paved parking, HSG D
0	80.0	>75% Grass cover, Good, HSG D
1,410	98.0	Roofs, HSG D
2,594	98.0	Weighted Average
2,594		100.00% Impervious Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				

Direct Entry,

Runoff = 0.08 cfs @ 12.13 hrs, Volume= 266 cf, Depth= 1.03"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 1-Year Rainfall=2.70"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104		100.00% Pervious Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19	

Sheet Flow, Lawn
 Grass: Short n= 0.150 P2= 3.30"

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf, 100.00% Impervious, Inflow Depth = 2.47" for 1-Year event
 Inflow = 0.16 cfs @ 12.07 hrs, Volume= 534 cf
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0 cf, Atten= 100%, Lag= 0.0 min
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.59' @ 24.29 hrs Surf.Area= 398 sf Storage= 534 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Culvert R-180 x 15 Inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
		634 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0' x 24.0' Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

#2	Device 1	24.80'	6.0" Round 6" Culvert	L= 20.0'	Ke= 0.500
					Inlet / Outlet Invert= 24.80' / 24.80' S= 0.0000' /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=23.50' TW=0.00' (Dynamic Tailwater)
 1-2 - 2'x2' catch basins (Controls 0.00 cfs)
 1-2-6" Culvert (Controls 0.00 cfs)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 2.22" for 1-Year event
 Inflow = 0.61 cfs @ 12.07 hrs, Volume= 1,934 cf
 Outflow = 0.38 cfs @ 12.16 hrs, Volume= 1,262 cf, Atten= 38%, Lag= 5.5 min
 Primary = 0.38 cfs @ 12.16 hrs, Volume= 1,262 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.67' @ 12.16 hrs Surf.Area= 1,675 sf Storage= 849 cf

Plug-Flow detention time= 195.0 min calculated for 1,261 cf (65% of inflow)
 Center-of-Mass det. time= 97.7 min (878.8 - 781.2)

Volume	Invert	Avail.Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
		1,474 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device Routing Invert Outlet Devices

#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00	L= 50.0'	Ke= 0.500
					Inlet / Outlet Invert= 26.40' / 25.10' S= 0.0260' /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary Outflow Max=0.41 cfs @ 12.30 hrs HW=26.04' TW=0.00' (Dynamic Tailwater)
 ↳=Broad-Crested Rectangular Weir (Passes 0.41 cfs of 10.25 cfs potential flow)
 ↳=2=10" Culvert (Inlet Controls 0.41 cfs @ 1.98 fps)

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth > 1.29" for 1-Year event
 Inflow = 0.54 cfs @ 12.28 hrs, Volume= 2,587 cf
 Primary = 0.54 cfs @ 12.28 hrs, Volume= 2,587 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 0.30" for 1-Year event
 Inflow = 0.03 cfs @ 12.08 hrs, Volume= 88 cf
 Primary = 0.03 cfs @ 12.08 hrs, Volume= 88 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Primary Outflow Max=0.38 cfs @ 12.16 hrs HW=26.67' TW=25.89' (Dynamic Tailwater)
 ↳=6" Underdrain (Inlet Controls 0.38 cfs @ 1.76 fps)

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 1.77" for 1-Year event
 Inflow = 0.63 cfs @ 12.12 hrs, Volume= 2,402 cf
 Outflow = 0.41 cfs @ 12.30 hrs, Volume= 1,801 cf, Atten= 34%, Lag= 10.4 min
 Primary = 0.41 cfs @ 12.30 hrs, Volume= 1,801 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.04' @ 12.30 hrs Surf.Area= 1,350 sf Storage= 777 cf

Plug-Flow detention time= 173.6 min calculated for 1,801 cf (75% of inflow)
 Center-of-Mass det. time= 79.1 min (906.5 - 827.4)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc)
#2	26.20'	108 cf	2,160 cf Overall x 40.0% Voids
#3	26.60'	54 cf	No.57 Stone (Prismatic) Listed below (Recalc)
			540 cf Overall x 20.0% Voids
			540 cf Overall x 10.0% Voids
		1,026 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160
26.60	1,350	540	540

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50
			Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88
			2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0" Round 10" Culvert L= 17.0' Ke= 0.500
			Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176' / Cc= 0.900
			n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.24 cfs @ 12.07 hrs, Volume= 716 cf, Depth= 1.84"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UI Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 0.77 cfs @ 12.07 hrs, Volume= 2,447 cf, Depth= 2.81"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.44 cfs @ 12.07 hrs, Volume= 1,428 cf, Depth= 2.94"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.04 cfs @ 12.08 hrs, Volume= 124 cf, Depth= 1.63"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.20 cfs @ 12.07 hrs, Volume= 663 cf, Depth= 3.07"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
1,184	98.0	Paved parking, HSG D
0	80.0	>75% Grass cover, Good, HSG D
1,410	98.0	Roofs, HSG D
2,594	98.0	Weighted Average
2,594		100.00% Impervious Area

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

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Subcatchment OS-P: Offsite

Runoff = 0.11 cfs @ 12.13 hrs, Volume= 383 cf, Depth= 1.48"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 2-Year Rainfall=3.30"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19	Sheet Flow, Lawn

Grass: Short n= 0.150 P2= 3.30"

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf, 100.00% Impervious, Inflow Depth = 3.07" for 2-Year event
 Inflow = 0.20 cfs @ 12.07 hrs, Volume= 663 cf
 Outflow = 0.00 cfs @ 16.31 hrs, Volume= 78 cf, Atten= 98%, Lag= 254.1 min
 Primary = 0.00 cfs @ 16.31 hrs, Volume= 78 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.90' @ 16.31 hrs Surf.Area= 398 sf Storage= 585 cf

Plug-Flow detention time= 739.7 min calculated for 78 cf (12% of inflow)
 Center-of-Mass det. time= 416.0 min (1,170.9 - 754.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Cultec R-180 x 15 Inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
		634 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

#2	Device 1	24.80'	6.0" Round 6" Culvert	L= 20.0'	Ke= 0.500
				Inlet / Outlet Invert= 24.80' / 24.80'	S= 0.0000 /' Cc= 0.900
				n= 0.011	PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.00 cfs @ 16.31 hrs HW=25.90' TW=0.00' (Dynamic Tailwater)
 L=2 - 2'x2' catch basins (Weir Controls 0.00 cfs @ 0.15 fps)
 1-2=6" Culvert (Passes 0.00 cfs of 0.04 cfs potential flow)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 2.81" for 2-Year event
 Inflow = 0.77 cfs @ 12.07 hrs, Volume= 2,447 cf
 Outflow = 0.62 cfs @ 12.13 hrs, Volume= 1,775 cf, Atten= 20%, Lag= 3.3 min
 Primary = 0.62 cfs @ 12.13 hrs, Volume= 1,775 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.76' @ 12.13 hrs Surf.Area= 1,675 sf Storage= 911 cf

Plug-Flow detention time= 171.0 min calculated for 1,775 cf (73% of inflow)
 Center-of-Mass det. time= 82.5 min (857.6 - 775.1)

Volume	Invert	Avail.Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
		1,474 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00 L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 26.40' / 25.10' S= 0.0260 /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary Outflow Max=0.81 cfs @ 12.17 hrs HW=26.20' TW=0.00' (Dynamic Tailwater)
1-1=6" Underdrain (Inlet Controls 0.62 cfs @ 2.04 fps)

Primary Outflow Max=0.62 cfs @ 12.13 hrs HW=26.76' TW=26.16' (Dynamic Tailwater)
1-1=6" Underdrain (Inlet Controls 0.62 cfs @ 2.04 fps)

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 2.36" for 2-Year event
 Inflow = 1.00 cfs @ 12.10 hrs, Volume= 3,203 cf
 Outflow = 0.81 cfs @ 12.17 hrs, Volume= 2,603 cf, Atten= 19%, Lag= 4.4 min
 Primary = 0.81 cfs @ 12.17 hrs, Volume= 2,603 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.20' @ 12.17 hrs Surf.Area= 1,350 sf Storage= 862 cf

Plug-Flow detention time= 138.5 min calculated for 2,603 cf (81% of inflow)
 Center-of-Mass det. time= 60.6 min (877.0 - 816.4)

Volume	Invert	Avail.Storage	Storage	Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc)	
			2,160 cf Overall x 40.0% Voids	
#2	26.20'	108 cf	No.57 Stone (Prismatic) Listed below (Recalc)	
			540 cf Overall x 20.0% Voids	
#3	26.60'	54 cf	Permeable Surface (Prismatic) Listed below (Recalc)	
			540 cf Overall x 10.0% Voids	
				1,026 cf Total Available Storage

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160
Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540
Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00
			2.50 3.00 3.50
			Coef. (English) 2.54 2.61 2.61 2.61 2.66 2.70 2.77 2.89 2.88
			2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0' Round 10' Culvert L= 17.0' Ke= 0.500
			Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176'/' Cc= 0.900
			n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth > 1.85" for 2-Year event
 Inflow = 1.07 cfs @ 12.15 hrs, Volume= 3,701 cf
 Primary = 1.07 cfs @ 12.15 hrs, Volume= 3,701 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 0.69" for 2-Year event
 Inflow = 0.04 cfs @ 12.08 hrs, Volume= 202 cf
 Primary = 0.04 cfs @ 12.08 hrs, Volume= 202 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.35 cfs @ 12.07 hrs, Volume= 1,060 cf, Depth= 2.72"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UI Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 1.02 cfs @ 12.07 hrs, Volume= 3,309 cf, Depth= 3.79"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.58 cfs @ 12.07 hrs, Volume= 1,910 cf, Depth= 3.94"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.06 cfs @ 12.07 hrs, Volume= 189 cf, Depth= 2.47"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.26 cfs @ 12.07 hrs, Volume= 879 cf, Depth= 4.06"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
808	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
916	82.1	Weighted Average
808		88.21% Pervious Area
108		11.79% Impervious Area

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

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

Summary for Subcatchment OS-P: Offsite

Runoff = 0.17 cfs @ 12.13 hrs, Volume= 593 cf, Depth= 2.29"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 5-Year Rainfall=4.30"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		Sheet Flow, Lawn

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf, 100.00% Impervious, Inflow Depth = 4.06" for 5-Year event
 Inflow = 0.26 cfs @ 12.07 hrs, Volume= 879 cf
 Outflow = 0.05 cfs @ 12.49 hrs, Volume= 294 cf, Atten= 80%, Lag= 25.4 min
 Primary = 0.05 cfs @ 12.49 hrs, Volume= 294 cf
 Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.91' @ 12.49 hrs Surf.Area= 398 sf Storage= 586 cf
 Plug-Flow detention time= 376.6 min calculated for 294 cf (33% of inflow)
 Center-of-Mass det. time= 199.8 min (949.5 - 749.7)

Volume	Invert	Avail. Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Cultec R-180 x 15 inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
			634 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0' x 24.0' Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

#2	Device 1	24.80'	6.0" Round 6" Culvert	L= 20.0'	Ke= 0.500
			Inlet / Outlet Invert= 24.80' / 24.80'	S= 0.0000 /'	Cc= 0.900
			n= 0.011	PVC, smooth interior, Flow Area= 0.20 sf	

Primary Outflow Max=0.05 cfs @ 12.49 hrs HW=25.91' TW=0.00' (Dynamic Tailwater)
 1-2 - 2'x2' catch basins (Weir Controls 0.05 cfs @ 0.32 fps)
 1-2-6" Culvert (Passes 0.05 cfs of 0.09 cfs potential flow)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 3.79" for 5-Year event
 Inflow = 1.02 cfs @ 12.07 hrs, Volume= 3,309 cf
 Outflow = 0.82 cfs @ 12.12 hrs, Volume= 2,637 cf, Atten= 19%, Lag= 3.1 min
 Primary = 0.82 cfs @ 12.12 hrs, Volume= 2,637 cf
 Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.85' @ 12.12 hrs Surf.Area= 1,675 sf Storage= 974 cf
 Plug-Flow detention time= 146.7 min calculated for 2,636 cf (80% of inflow)
 Center-of-Mass det. time= 70.8 min (838.5 - 767.7)

Volume	Invert	Avail. Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
			1,474 cf Total Available Storage

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device Routing Invert Outlet Devices

#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00	L= 50.0'	Ke= 0.500
			Inlet / Outlet Invert= 26.40' / 25.10'	S= 0.0260 /'	Cc= 0.900
			n= 0.011	PVC, smooth interior, Flow Area= 0.20 sf	

Primary Outflow Max=0.82 cfs @ 12.12 hrs HW=26.85' TW=26.37' (Dynamic Tailwater)
 1=6" Underdrain (Outlet Controls 0.82 cfs @ 2.88 fps)

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 3.35" for 5-Year event
 Inflow = 1.35 cfs @ 12.09 hrs, Volume= 4,547 cf
 Outflow = 1.30 cfs @ 12.12 hrs, Volume= 3,946 cf, Atten= 4%, Lag= 1.8 min
 Primary = 1.30 cfs @ 12.12 hrs, Volume= 3,946 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.37' @ 12.12 hrs Surf.Area= 2,700 sf Storage= 909 cf
 Plug-Flow detention time= 108.4 min calculated for 3,946 cf (87% of inflow)
 Center-of-Mass det. time= 47.3 min (852.3 - 805.0)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc) 2,160 cf Overall x 40.0% Voids
#2	26.20'	108 cf	No.57 Stone (Prismatic) Listed below (Recalc) 540 cf Overall x 20.0% Voids
#3	26.60'	54 cf	Permeable Surface (Prismatic) Listed below (Recalc) 540 cf Overall x 10.0% Voids
1,026 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.62 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0' Round 10" Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176' / Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary Outflow Max=1.30 cfs @ 12.12 hrs HW=26.37' TW=0.00' (Dynamic Tailwater)
 1=Broad-Crested Rectangular Weir (Passes 1.30 cfs of 28.34 cfs potential flow)
 2=10" Culvert (Inlet Controls 1.30 cfs @ 2.78 fps)

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth = 2.79" for 5-Year event
 Inflow = 1.78 cfs @ 12.11 hrs, Volume= 5,599 cf
 Primary = 1.78 cfs @ 12.11 hrs, Volume= 5,599 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 1.65" for 5-Year event
 Inflow = 0.07 cfs @ 12.49 hrs, Volume= 482 cf
 Primary = 0.07 cfs @ 12.49 hrs, Volume= 482 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.43 cfs @ 12.07 hrs, Volume= 1,310 cf, Depth= 3.36"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UJ Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 1.19 cfs @ 12.07 hrs, Volume= 3,914 cf, Depth= 4.49"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.67 cfs @ 12.07 hrs, Volume= 2,248 cf, Depth= 4.64"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

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

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.08 cfs @ 12.07 hrs, Volume= 236 cf, Depth= 3.09"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
808	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
916	82.1	Weighted Average
808		88.21% Pervious Area
108		11.79% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.30 cfs @ 12.07 hrs, Volume= 1,030 cf, Depth= 4.76"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description
1,184	98.0	Paved parking, HSG D
0	80.0	>75% Grass cover, Good, HSG D
1,410	98.0	Roofs, HSG D
2,594	98.0	Weighted Average
2,594		100.00% Impervious Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				

Direct Entry,

Runoff = 0.22 cfs @ 12.13 hrs, Volume= 748 cf, Depth= 2.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Rainfall=5.00"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	Pervious Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19	Sheet Flow, Lawn Grass, Short n= 0.150 P2= 3.30"

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf, 100.00% Impervious, Inflow Depth = 4.76" for 10-Year event
 Inflow = 0.30 cfs @ 12.07 hrs, Volume= 1,030 cf
 Outflow = 0.14 cfs @ 12.21 hrs, Volume= 445 cf, Atten= 54%, Lag= 8.4 min
 Primary = 0.14 cfs @ 12.21 hrs, Volume= 445 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.92' @ 12.21 hrs Surf.Area= 398 sf Storage= 588 cf

Plug-Flow detention time= 299.9 min calculated for 445 cf (43% of inflow)
 Center-of-Mass det. time= 153.6 min (900.7 - 747.1)

Volume	Invert	Avail. Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Cultec R-180 x 15 Inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
			634 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

#2	Device 1	24.80'	6.0" Round 6" Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 24.80' / 24.80' S= 0.0000 ' /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf
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Primary Outflow Max=0.14 cfs @ 12.21 hrs HW=25.92' TW=0.00' (Dynamic Tailwater)
 1-2'x2' catch basins (Passes 0.14 cfs of 0.17 cfs potential flow)
 1-2-6" Culvert (Inlet Controls 0.14 cfs @ 0.71 fps)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 4.49" for 10-Year event
 Inflow = 1.19 cfs @ 12.07 hrs, Volume= 3,914 cf
 Outflow = 0.95 cfs @ 12.12 hrs, Volume= 3,242 cf, Atten= 21%, Lag= 3.3 min
 Primary = 0.95 cfs @ 12.12 hrs, Volume= 3,242 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.92' @ 12.13 hrs Surf.Area= 1,675 sf Storage= 1,018 cf

Plug-Flow detention time= 135.3 min calculated for 3,242 cf (83% of inflow)
 Center-of-Mass det. time= 65.8 min (829.7 - 763.9)

Volume	Invert	Avail. Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
			1,474 cf Total Available Storage

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf. Area (sq-ft)	Inc. Store (cubic-feet)	Cum. Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device Routing Invert Outlet Devices

#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00 L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 26.40' / 25.10' S= 0.0260 ' /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf
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Primary Outflow Max=0.95 cfs @ 12.12 hrs HW=26.92' TW=26.44' (Dynamic Tailwater)
 1-1=6" Underdrain (Outlet Controls 0.95 cfs @ 2.89 fps)

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 4.05" for 10-Year event
 Inflow = 1.56 cfs @ 12.09 hrs, Volume= 5,490 cf
 Outflow = 1.51 cfs @ 12.12 hrs, Volume= 4,890 cf, Atten= 3%, Lag= 1.7 min
 Primary = 1.51 cfs @ 12.12 hrs, Volume= 4,890 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.44' @ 12.12 hrs Surf.Area= 2,700 sf Storage= 929 cf
 Plug-Flow detention time= 96.0 min calculated for 4,890 cf (89% of inflow)
 Center-of-Mass det. time= 42.6 min (841.9 - 799.3)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc)
#2	26.20'	108 cf	2,160 cf Overall x 40.0% Voids No.57 Stone (Prismatic) Listed below (Recalc)
#3	26.60'	54 cf	540 cf Overall x 20.0% Voids Permeable Surface (Prismatic) Listed below (Recalc) 540 cf Overall x 10.0% Voids
1,026 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.62 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0' Round 10" Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176 /' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary Outflow Max=1.51 cfs @ 12.12 hrs HW=26.44' TW=0.00' (Dynamic Tailwater)
 1-1=Broad-Crested Rectangular Weir (Passes 1.51 cfs of 33.30 cfs potential flow)
 1-2=10" Culvert (Inlet Controls 1.51 cfs @ 2.93 fps)

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth = 3.46" for 10-Year event
 Inflow = 2.11 cfs @ 12.11 hrs, Volume= 6,948 cf
 Primary = 2.11 cfs @ 12.11 hrs, Volume= 6,948 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 2.33" for 10-Year event
 Inflow = 0.18 cfs @ 12.21 hrs, Volume= 681 cf
 Primary = 0.18 cfs @ 12.21 hrs, Volume= 681 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.52 cfs @ 12.07 hrs, Volume= 1,564 cf, Depth= 4.01"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UJ Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

Tc Length Slope Velocity Capacity Description
 (min) (feet) (ft/ft) (ft/sec) (cfs)

5.00

Direct Entry,

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 1.37 cfs @ 12.07 hrs, Volume= 4,521 cf, Depth= 5.18"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

Tc Length Slope Velocity Capacity Description
 (min) (feet) (ft/ft) (ft/sec) (cfs)

5.00

Direct Entry,

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.77 cfs @ 12.07 hrs, Volume= 2,587 cf, Depth= 5.33"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 284 cf, Depth= 3.72"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

Tc Length Slope Velocity Capacity Description
 (min) (feet) (ft/ft) (ft/sec) (cfs)

5.00

Direct Entry,

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.34 cfs @ 12.07 hrs, Volume= 1,181 cf, Depth= 5.46"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
808	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
916	82.1	Weighted Average
808		88.21% Pervious Area
108		11.79% Impervious Area

Tc Length Slope Velocity Capacity Description
 (min) (feet) (ft/ft) (ft/sec) (cfs)

5.00

Direct Entry,

#2	Device 1	24.80'	6.0" Round 6" Culvert	L= 20.0'	Ke= 0.500
			Inlet / Outlet Invert= 24.80' / 24.80'	S= 0.00000'	Cc= 0.900
			n= 0.011	PVC, smooth interior, Flow Area= 0.20 sf	

Primary OutFlow Max=0.26 cfs @ 12.13 hrs HW=25.98' TW=0.00' (Dynamic Tailwater)
 1-2-2'x2' catch basins (Passes 0.26 cfs of 1.14 cfs potential flow)
 1-2-6" Culvert (Inlet Controls 0.26 cfs @ 1.34 fps)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 5.18" for 25-Year event
 Inflow = 1.37 cfs @ 12.07 hrs, Volume= 4,521 cf
 Outflow = 1.05 cfs @ 12.13 hrs, Volume= 3,849 cf, Atten= 23%, Lag= 3.7 min
 Primary = 1.05 cfs @ 12.13 hrs, Volume= 3,849 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.99' @ 12.13 hrs Surf.Area= 1,675 sf Storage= 1,066 cf

Plug-Flow detention time= 125.7 min calculated for 3,849 cf (85% of inflow)
 Center-of-Mass det. time= 61.8 min (822.5 - 760.7)

Volume	Invert	Avail.Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
1,474 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00 L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 26.40' / 25.10' S= 0.0260' / Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Subcatchment OS-P: Offsite
 Runoff = 0.26 cfs @ 12.13 hrs, Volume= 908 cf, Depth= 3.51"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Rainfall=5.70"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104	100.00%	PerVIOUS Area

Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19	Sheet Flow, Lawn Grass: Short n= 0.150 P2= 3.30"

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf 100.00% Impervious, Inflow Depth = 5.46" for 25-Year event
 Inflow = 0.34 cfs @ 12.07 hrs, Volume= 1,181 cf
 Outflow = 0.26 cfs @ 12.13 hrs, Volume= 596 cf, Atten= 23%, Lag= 3.7 min
 Primary = 0.26 cfs @ 12.13 hrs, Volume= 596 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.98' @ 12.13 hrs Surf.Area= 398 sf Storage= 597 cf

Plug-Flow detention time= 259.9 min calculated for 596 cf (50% of inflow)
 Center-of-Mass det. time= 130.2 min (875.2 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Cultec R-180 x 15 Inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
634 cf Total Available Storage			

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

Storage Group A created with Chamber Wizard

Primary Outflow Max=1.05 cfs @ 12.13 hrs HW=26.99' TW=26.52' (Dynamic Tailwater)
1=6" Underdrain (Outlet Controls 1.05 cfs @ 2.86 fps)

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 4.74" for 25-Year event
 Inflow = 1.76 cfs @ 12.09 hrs, Volume= 6,435 cf
 Outflow = 1.68 cfs @ 12.12 hrs, Volume= 5,835 cf, Atten= 4%, Lag= 2.0 min
 Primary = 1.68 cfs @ 12.12 hrs, Volume= 5,835 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.52' @ 12.12 hrs Surf.Area= 2,700 sf Storage= 951 cf

Plug-Flow detention time= 86.7 min calculated for 5,833 cf (91% of inflow)
 Center-of-Mass det. time= 39.3 min (833.8 - 794.5)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc) 2,160 cf Overall x 40.0% Voids
#2	26.20'	108 cf	No.57 Stone (Prismatic) Listed below (Recalc) 540 cf Overall x 20.0% Voids
#3	26.60'	54 cf	Permeable Surface (Prismatic) Listed below (Recalc) 540 cf Overall x 10.0% Voids
1,026 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef (English) 2.54 2.61 2.62 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0' Round 10" Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176 ' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary Outflow Max=1.68 cfs @ 12.12 hrs HW=26.52' TW=0.00' (Dynamic Tailwater)
1=Broad-Crested Rectangular Weir (Passes 1.68 cfs of 38.84 cfs potential flow)
2=10" Culvert (Inlet Controls 1.68 cfs @ 3.09 fps)

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth = 4.14" for 25-Year event
 Inflow = 2.40 cfs @ 12.10 hrs, Volume= 8,307 cf
 Primary = 2.40 cfs @ 12.10 hrs, Volume= 8,307 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 3.01" for 25-Year event
 Inflow = 0.34 cfs @ 12.13 hrs, Volume= 880 cf
 Primary = 0.34 cfs @ 12.13 hrs, Volume= 880 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.60 cfs @ 12.07 hrs, Volume= 1,821 cf, Depth= 4.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UJ Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 1.54 cfs @ 12.07 hrs, Volume= 5,128 cf, Depth= 5.88"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.86 cfs @ 12.07 hrs, Volume= 2,925 cf, Depth= 6.03"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 333 cf, Depth= 4.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.39 cfs @ 12.07 hrs, Volume= 1,332 cf, Depth= 6.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
1,184	98.0	Paved parking, HSG D
0	80.0	>75% Grass cover, Good, HSG D
1,410	98.0	Roofs, HSG D
2,594	98.0	Weighted Average
2,594		100.00% Impervious Area

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

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00					

Direct Entry,

Runoff = 0.31 cfs @ 12.13 hrs, Volume= 1,072 cf, Depth= 4.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 50-Year Rainfall=6.40"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		

Sheet Flow, Lawn
 Grass: Short n= 0.150 P2= 3.30"

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf 100.00% Impervious, Inflow Depth = 6.16" for 50-Year event
 Inflow = 0.39 cfs @ 12.07 hrs, Volume= 1,332 cf
 Outflow = 0.35 cfs @ 12.10 hrs, Volume= 747 cf
 Primary = 0.35 cfs @ 12.10 hrs, Volume= 747 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.04' @ 12.10 hrs Surf.Area= 398 sf Storage= 607 cf

Plug-Flow detention time= 235.3 min calculated for 747 cf (56% of inflow)
 Center-of-Mass det. time= 116.2 min (859.5 - 743.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A
#2A	24.00'	337 cf	1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
			Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf
			Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap
			Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
		634 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0' x 24.0' Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

#2	Device 1	24.80'	6.0" Round 6" Culvert	L= 20.0'	Ke= 0.500
			Inlet / Outlet Invert= 24.80' / 24.80'	S= 0.0000 '/	Cc= 0.900
			n= 0.011	PVC, smooth interior, Flow Area= 0.20 sf	

Primary Outflow Max=0.35 cfs @ 12.10 hrs HW=26.04' TW=0.00' (Dynamic Tailwater)
 1-2' x 2' catch basins (Passes 0.35 cfs of 2.68 cfs potential flow)
 1-2-6" Culvert (Inlet Controls 0.35 cfs @ 1.79 fps)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 5.88" for 50-Year event
 Inflow = 1.54 cfs @ 12.07 hrs, Volume= 5,128 cf
 Outflow = 1.14 cfs @ 12.19 hrs, Volume= 4,456 cf
 Primary = 1.14 cfs @ 12.19 hrs, Volume= 4,456 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 27.09' @ 12.14 hrs Surf.Area= 1,675 sf Storage= 1,132 cf

Plug-Flow detention time= 117.4 min calculated for 4,455 cf (87% of inflow)
 Center-of-Mass det. time= 58.4 min (816.5 - 758.1)

Volume	Invert	Avail.Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
		1,474 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device Routing Invert Outlet Devices

#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00	L= 50.0'	Ke= 0.500
			Inlet / Outlet Invert= 26.40' / 25.10'	S= 0.0260 '/	Cc= 0.900
			n= 0.011	PVC, smooth interior, Flow Area= 0.20 sf	

Primary Outflow Max=1.15 cfs @ 12.19 hrs HW=27.04' TW=26.51' (Dynamic Tailwater)
 1=6" Underdrain (Outlet Controls 1.15 cfs @ 2.95 fps)

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 5.44" for 50-Year event
 Inflow = 1.92 cfs @ 12.08 hrs, Volume= 7,381 cf
 Outflow = 1.81 cfs @ 12.11 hrs, Volume= 6,781 cf, Atten= 6%, Lag= 1.9 min
 Primary = 1.81 cfs @ 12.11 hrs, Volume= 6,781 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.59' @ 12.11 hrs Surf.Area= 2,700 sf Storage= 970 cf

Plug-Flow detention time= 79.7 min calculated for 6,781 cf (92% of inflow)
 Center-of-Mass det. time= 36.7 min (827.1 - 790.4)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc)
#2	26.20'	108 cf	No.57 Stone (Prismatic) Listed below (Recalc)
#3	26.60'	54 cf	Permeable Surface (Prismatic) Listed below (Recalc)
			540 cf Overall x 20.0% Voids
			540 cf Overall x 10.0% Voids
			1,026 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0' Round 10" Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176 1' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary Outflow Max=1.81 cfs @ 12.11 hrs HW=26.59' TW=0.00' (Dynamic Tailwater)
 1=Broad-Crested Rectangular Weir (Passes 1.81 cfs of 44.39 cfs potential flow)
 2=10" Culvert (Inlet Controls 1.81 cfs @ 3.32 fps)

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth = 4.82" for 50-Year event
 Inflow = 2.66 cfs @ 12.10 hrs, Volume= 9,674 cf
 Primary = 2.66 cfs @ 12.10 hrs, Volume= 9,674 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 3.69" for 50-Year event
 Inflow = 0.46 cfs @ 12.10 hrs, Volume= 1,081 cf
 Primary = 0.46 cfs @ 12.10 hrs, Volume= 1,081 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.89 cfs @ 12.07 hrs, Volume= 2,119 cf, Depth= 5.43"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,366	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,680	85.1	84.9	Weighted Average, UJ Adjusted
3,366			71.92% Pervious Area
1,314			28.08% Impervious Area
100			7.61% Unconnected

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

Summary for Subcatchment 6Sa: Proposed to Low Point

Runoff = 1.74 cfs @ 12.07 hrs, Volume= 5,823 cf, Depth= 6.68"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
5,420	98.0	Paved parking, HSG D
1,388	80.0	>75% Grass cover, Good, HSG D
3,515	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
10,467	95.6	Weighted Average
1,388		13.26% Pervious Area
9,079		86.74% Impervious Area
144		1.59% Unconnected

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

Summary for Subcatchment 6Sb: Proposed to Low Point

Runoff = 0.97 cfs @ 12.07 hrs, Volume= 3,312 cf, Depth= 6.83"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.13 cfs @ 12.07 hrs, Volume= 390 cf, Depth= 5.12"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
2,622	98.0	Paved parking, HSG D
352	80.0	>75% Grass cover, Good, HSG D
2,846	98.0	Roofs, HSG D
0	98.0	Unconnected pavement, HSG D
5,820	96.9	Weighted Average
352		6.05% Pervious Area
5,468		93.95% Impervious Area

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

Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.13 cfs @ 12.07 hrs, Volume= 390 cf, Depth= 5.12"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
808	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
916	82.1	Weighted Average
808		88.21% Pervious Area
108		11.79% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.44 cfs @ 12.07 hrs, Volume= 1,505 cf, Depth= 6.96"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
1,184	98.0	Paved parking, HSG D
0	80.0	>75% Grass cover, Good, HSG D
1,410	98.0	Roofs, HSG D
2,594	98.0	Weighted Average
2,594		100.00% Impervious Area

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

Summary for Subcatchment OS-P: Offsite

Runoff = 0.36 cfs @ 12.13 hrs, Volume= 1,262 cf, Depth= 4.88"
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Rainfall=7.20"

Area (sf)	CN	Description
0	98.0	Paved parking, HSG D
3,104	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
3,104	80.0	Weighted Average
3,104		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.97	100	0.0240	0.19		Sheet Flow, Lawn
					Grass: Short n= 0.150 P2= 3.30"

Summary for Pond 9P: (15) R-180HD Units

Inflow Area = 2,594 sf, 100.00% Impervious, Inflow Depth = 6.96" for 100-Year event
 Inflow = 0.44 cfs @ 12.07 hrs, Volume= 1,505 cf
 Outflow = 0.41 cfs @ 12.10 hrs, Volume= 920 cf, Atten= 7%, Lag= 1.8 min
 Primary = 0.41 cfs @ 12.10 hrs, Volume= 920 cf
 Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.08' @ 12.10 hrs Surf.Area= 398 sf Storage= 614 cf
 Plug-Flow detention time= 216.6 min calculated for 920 cf (61% of inflow)
 Center-of-Mass det. time= 106.0 min (847.6 - 741.6)

Volume	Invert	Avail. Storage	Storage Description
#1A	23.50'	297 cf	11.50'W x 34.65'L x 2.71'H Field A 1,079 cf Overall - 337 cf Embedded = 742 cf x 40.0% Voids
#2A	24.00'	337 cf	Cultec R-180 x 15 Inside #1 Effective Size= 33.6"W x 20.0"H => 3.44 sf x 6.33'L = 21.8 cf Overall Size= 36.0"W x 20.5"H x 7.33'L with 1.00' Overlap Row Length Adjustment= +1.00' x 3.44 sf x 3 rows
		634 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.90'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

#2	Device	Length	Slope	Velocity	Capacity	Description
		24.80'				6.0" Round 6" Culvert L= 20.0' Ke= 0.500 Inlet / Outlet Invert= 24.80' / 24.80' S= 0.0000 ' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary OutFlow Max=0.41 cfs @ 12.10 hrs HW=26.08' TW=0.00' (Dynamic Tailwater)
 1-2 - 2'x2' catch basins (Passes 0.41 cfs of 4.11 cfs potential flow)
 1-2-6" Culvert (Inlet Controls 0.41 cfs @ 2.06 fps)

Summary for Pond 10P: Permeable Pavement (upper section)

Inflow Area = 10,467 sf, 86.74% Impervious, Inflow Depth = 6.68" for 100-Year event
 Inflow = 1.74 cfs @ 12.07 hrs, Volume= 5,823 cf
 Outflow = 1.18 cfs @ 12.18 hrs, Volume= 5,151 cf, Atten= 32%, Lag= 6.4 min
 Primary = 1.18 cfs @ 12.18 hrs, Volume= 5,151 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 27.22' @ 12.15 hrs Surf.Area= 1,675 sf Storage= 1,223 cf
 Plug-Flow detention time= 109.9 min calculated for 5,151 cf (88% of inflow)
 Center-of-Mass det. time= 55.2 min (810.8 - 755.5)

Volume	Invert	Avail. Storage	Storage Description
#1	25.40'	1,273 cf	No.2 Stone (Prismatic) Listed below (Recalc) 3,183 cf Overall x 40.0% Voids
#2	27.30'	134 cf	No.57 Stone (Prismatic) Listed below (Recalc) 670 cf Overall x 20.0% Voids
#3	27.70'	67 cf	Permeable Surface (Prismatic) Listed below (Recalc) 670 cf Overall x 10.0% Voids
		1,474 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
25.40	1,675	0	0
27.30	1,675	3,183	3,183

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.30	1,675	0	0
27.70	1,675	670	670

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
27.70	1,675	0	0
28.10	1,675	670	670

Device Routing Invert Outlet Devices

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	6.0" Round 6" Underdrain X 2.00 L= 50.0' Ke= 0.500 Inlet / Outlet Invert= 26.40' / 25.10' S= 0.0260 ' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.20 sf

Primary Outflow Max=1.95 cfs @ 12.10 hrs HW=26.67' TW=0.00' (Dynamic Tailwater)
1=6" Underdrain (Outlet Controls 1.19 cfs @ 3.04 fps)

Primary Outflow Max=1.19 cfs @ 12.18 hrs HW=27.21' TW=26.59' (Dynamic Tailwater)
1=6" Underdrain (Outlet Controls 1.19 cfs @ 3.04 fps)

Summary for Link 12L: POC A

Inflow Area = 24,071 sf, 65.89% Impervious, Inflow Depth = 5.61" for 100-Year event
 Inflow = 2.96 cfs @ 12.09 hrs, Volume= 11,243 cf
 Primary = 2.96 cfs @ 12.09 hrs, Volume= 11,243 cf, Atten= 0%, Lag= 0.0 min

Summary for Pond 11P: Permeable Pavement (lower section)

Inflow Area = 16,287 sf, 89.32% Impervious, Inflow Depth = 6.24" for 100-Year event
 Inflow = 2.06 cfs @ 12.07 hrs, Volume= 8,463 cf
 Outflow = 1.95 cfs @ 12.10 hrs, Volume= 7,863 cf, Atten= 5%, Lag= 2.2 min
 Primary = 1.95 cfs @ 12.10 hrs, Volume= 7,863 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.67' @ 12.10 hrs Surf.Area= 4,050 sf Storage= 982 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.67' @ 12.10 hrs Surf.Area= 4,050 sf Storage= 982 cf

Summary for Link 13L: POC B (Mission St.)

Inflow Area = 3,510 sf, 76.98% Impervious, Inflow Depth = 4.48" for 100-Year event
 Inflow = 0.53 cfs @ 12.09 hrs, Volume= 1,310 cf
 Primary = 0.53 cfs @ 12.09 hrs, Volume= 1,310 cf, Atten= 0%, Lag= 0.0 min

Plug-Flow detention time= 73.0 min calculated for 7,863 cf (93% of inflow)
 Center-of-Mass det. time= 34.3 min (820.7 - 786.4)

Volume	Invert	Avail. Storage	Storage Description
#1	24.60'	864 cf	No.2 Stone (Prismatic) Listed below (Recalc)
#2	26.20'	108 cf	2,160 cf Overall x 40.0% Voids No.57 Stone (Prismatic) Listed below (Recalc)
#3	26.60'	54 cf	540 cf Overall x 20.0% Voids Permeable Surface (Prismatic) Listed below (Recalc)
1,026 cf Total Available Storage			

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	1,350	0	0
26.20	1,350	2,160	2,160

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	1,350	0	0
26.60	1,350	540	540

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.60	1,350	0	0
27.00	1,350	540	540

Device	Routing	Invert	Outlet Devices
#1	Primary	25.70'	20.0' long x 2.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef (English) 2.54 2.61 2.62 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32
#2	Device 1	25.70'	10.0" Round 10" Culvert L= 17.0' Ke= 0.500 Inlet / Outlet Invert= 25.70' / 23.70' S= 0.1176 % Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Stage-Area-Storage for Pond 9P: (15) R-180HD Units

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
23.50	0	24.54	250	25.58	531
23.52	3	24.56	256	25.60	535
23.54	6	24.58	262	25.62	539
23.56	10	24.60	268	25.64	543
23.58	13	24.62	275	25.66	546
23.60	16	24.64	281	25.68	550
23.62	19	24.66	287	25.70	553
23.64	22	24.68	293	25.72	556
23.66	26	24.70	299	25.74	559
23.68	29	24.72	305	25.76	562
23.70	32	24.74	311	25.78	566
23.72	35	24.76	317	25.80	569
23.74	38	24.78	323	25.82	572
23.76	41	24.80	329	25.84	575
23.78	45	24.82	335	25.86	578
23.80	48	24.84	341	25.88	581
23.82	51	24.86	347	25.90	585 OUTLET
23.84	54	24.88	353	25.92	588
23.86	57	24.90	358	25.94	591
23.88	61	24.92	364	25.96	594
23.90	64	24.94	370	25.98	597
23.92	67	24.96	376	26.00	601
23.94	70	24.98	382	26.02	604
23.96	73	25.00	387	26.04	607
23.98	77	25.02	393	26.06	610
24.00	80	25.04	398	26.08	613
24.02	86	25.06	404	26.10	617
24.04	93	25.08	410	26.12	620
24.06	99	25.10	415	26.14	623
24.08	105	25.12	421	26.16	626
24.10	112	25.14	426	26.18	629
24.12	118	25.16	431	26.20	632
24.14	125	25.18	437		
24.16	131	25.20	442		
24.18	137	25.22	447		
24.20	144	25.24	453		
24.22	150	25.26	458		
24.24	156	25.28	463		
24.26	162	25.30	468		
24.28	169	25.32	473		
24.30	175	25.34	478		
24.32	181	25.36	483		
24.34	188	25.38	488		
24.36	194	25.40	493		
24.38	200	25.42	497		
24.40	207	25.44	502		
24.42	213	25.46	506		
24.44	219	25.48	511		
24.46	225	25.50	515		
24.48	231	25.52	519		
24.50	238	25.54	523		
24.52	244	25.56	527		

Stage-Area-Storage for Pond 10P: Permeable Pavement (upper section)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
25.40	0	26.44	697	27.48	1,333
25.42	13	26.46	710	27.50	1,340
25.44	27	26.48	724	27.52	1,347
25.46	40	26.50	737	27.54	1,353
25.48	54	26.52	750	27.56	1,360
25.50	67	26.54	764	27.58	1,367
25.52	80	26.56	777	27.60	1,374
25.54	94	26.58	791	27.62	1,380
25.56	107	26.60	804	27.64	1,387
25.58	121	26.62	817	27.66	1,394
25.60	134	26.64	831	27.68	1,400
25.62	147	26.66	844	27.70	1,407
25.64	161	26.68	858	27.72	1,410
25.66	174	26.70	871	27.74	1,414
25.68	188	26.72	884	27.76	1,417
25.70	201	26.74	898	27.78	1,420
25.72	214	26.76	911	27.80	1,424
25.74	228	26.78	925	27.82	1,427
25.76	241	26.80	938	27.84	1,430
25.78	255	26.82	951	27.86	1,434
25.80	268	26.84	965	27.88	1,437
25.82	281	26.86	978	27.90	1,441
25.84	295	26.88	992	27.92	1,444
25.86	308	26.90	1,005	27.94	1,447
25.88	322	26.92	1,018	27.96	1,451
25.90	335	26.94	1,032	27.98	1,454
25.92	348	26.96	1,045	28.00	1,457
25.94	362	26.98	1,059	28.02	1,461
25.96	375	27.00	1,072	28.04	1,464
25.98	389	27.02	1,085	28.06	1,467
26.00	402	27.04	1,099	28.08	1,471
26.02	415	27.06	1,112	28.10	1,474
26.04	429	27.08	1,126		
26.06	442	27.10	1,139		
26.08	456	27.12	1,152		
26.10	469	27.14	1,166		
26.12	482	27.16	1,179		
26.14	496	27.18	1,193		
26.16	509	27.20	1,206		
26.18	523	27.22	1,219		
26.20	536	27.24	1,233		
26.22	549	27.26	1,246		
26.24	563	27.28	1,260		
26.26	576	27.30	1,273		
26.28	590	27.32	1,280		
26.30	603	27.34	1,286		
26.32	616	27.36	1,293		
26.34	630	27.38	1,300		
26.36	643	27.40	1,307		
26.38	657	27.42	1,313		
26.40	670	27.44	1,320		
26.42	683	27.46	1,327		

OUTLET

Stage-Area-Storage for Pond 11P: Permeable Pavement (lower section)

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
24.60	0	25.64	562	26.68	983
24.62	11	25.66	572	26.70	985
24.64	22	25.68	583	26.72	988
24.66	32	25.70	594	26.74	991
24.68	43	25.72	605	26.76	994
24.70	54	25.74	616	26.78	996
24.72	65	25.76	626	26.80	999
24.74	76	25.78	637	26.82	1,002
24.76	86	25.80	648	26.84	1,004
24.78	97	25.82	659	26.86	1,007
24.80	108	25.84	670	26.88	1,010
24.82	119	25.86	680	26.90	1,012
24.84	130	25.88	691	26.92	1,015
24.86	140	25.90	702	26.94	1,018
24.88	151	25.92	713	26.96	1,021
24.90	162	25.94	724	26.98	1,023
24.92	173	25.96	734	27.00	1,026
24.94	184	25.98	745		
24.96	194	26.00	756		
24.98	205	26.02	767		
25.00	216	26.04	778		
25.02	227	26.06	788		
25.04	238	26.08	799		
25.06	248	26.10	810		
25.08	259	26.12	821		
25.10	270	26.14	832		
25.12	281	26.16	842		
25.14	292	26.18	853		
25.16	302	26.20	864		
25.18	313	26.22	869		
25.20	324	26.24	875		
25.22	335	26.26	880		
25.24	346	26.28	886		
25.26	356	26.30	891		
25.28	367	26.32	896		
25.30	378	26.34	902		
25.32	389	26.36	907		
25.34	400	26.38	913		
25.36	410	26.40	918		
25.38	421	26.42	923		
25.40	432	26.44	929		
25.42	443	26.46	934		
25.44	454	26.48	940		
25.46	464	26.50	945		
25.48	475	26.52	950		
25.50	486	26.54	956		
25.52	497	26.56	961		
25.54	508	26.58	967		
25.56	518	26.60	972		
25.58	529	26.62	975		
25.60	540	26.64	977		
25.62	551	26.66	980		

Appendix “D”

**Pipe Conveyance
And Inlet Capacity
Calculations**

Project ID: 20PA_Appendix_D_Conveyance_&_Outlet_Protection_04.xlsx

Date: 11/16/2023

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

Watershed Analysis Results

Drainage Area	Area (S.F.)	Impervious Area (S.F.)	CN	25-Year Peak Flow Rate (cfs)
5S	4,680	1,314	85.1	0.52
6Sa	10,467	9,079	95.6	1.37
6Sb	5,820	5,468	96.9	0.77
7S	916	108	82.1	0.09
8S	2,594	2,594	98.0	0.34
OS-P	3,104	0	80.0	0.26
9P	-	-	-	0.26
10P	-	-	-	1.05
11P	-	-	-	1.68

Culvert Capacity Summary Table

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

Pipe #	Diameter (inches)	Roughness (n)	Slope (%)	Contributing Watershed	25-Year Peak Design Flow (cfs)	Max Capacity (cfs)
1	6	0.011	3.0%	50% 5S + OS	0.52	1.15
2	10	0.011	11.7%	9P	1.68	8.88

Inlet Capacity Analysis

Gutter flow calculations for proposed catch basins are presented below. The calculations below follow the procedures outlined in Chapter 11.9 of the Connecticut DOT Drainage Manual. Refer to Appendix "C" for the 25-year Watershed Flow Rates and Contributing Drainage Areas watershed information.

Inlet ID	CB Type	Width (ft.)	Length (ft.)	Perimeter
CB -1	Type "C" - 3 open sides	1.8 ft.	4 ft.	5.8 ft.
CB -2	2' x 2'	2 ft.	2 ft.	4 ft.
CB -3	2' x 2'	2 ft.	2 ft.	4 ft.
YD-1	2' x 2'	2 ft.	2 ft.	4 ft.

Inlet ID	Inlet Type	Contributing Drainage Area	25-Year Watershed Flow Rate (ft ³ /s)	Upstream Bypass Flow (ft ³ /s)	Total Design Flow (ft ³ /s)	Roadway Slope (ft/ft)	Roadway Cross Slope (ft/ft)	Depth of Gutter Flow (ft)	Spread (ft)	Width of Traveled Way (ft)	% Spread in Traveled Way	Flow into CB (ft ³ /s)	Flow Bypassing CB (ft ³ /s)
CB-1	Sag	50% 6Sb	0.39	0	0.39	N/A	0.032	0.08	2.46	20.00	12.3%	0.39	0.00
CB-2	On Grade	50% 8S	0.17	0	0.17	0.080	0.022	0.05	2.20	9.00	24.4%	0.17	0.00
CB-3	On Grade	50% 8S	0.17	0	0.17	0.080	0.022	0.05	2.20	9.00	24.4%	0.17	0.00
YD-1	Sag	50% 5S + OS	0.52	0	0.52	N/A	0.060	0.12	2.06	6.00	34.3%	0.52	0.00
YD-2	Sag	50% 5S + OS	0.52	0	0.52	N/A	0.060	0.12	2.06	6.00	34.3%	0.52	0.00

Table: Gutter Flow Calculations, 25-Year Storm Event.

Outlet Protection Sizing Calculations

The following is a summary of the computations performed to design the proposed storm drainage system outlet protection measures. The proposed watershed flows were taken from the results of the HydroCAD storm drainage analysis performed on the site. HydroCAD runoff computations for the sizing of the proposed level spreader are based on the 25-year design storm frequency event. Refer to Appendix "C" for a summary of watershed runoff flow rates. Refer to the Storm Drainage and Utility Layout Plan for proposed level spreader outlet protection locations.

Watershed Analysis Results

Outlet Protection Structure	Drainage Area	Flow Rate (cfs)
Level Spreader #1	11P + OS-P	1.94

Level Spreader Sizing Computations

Assume: 1" (0.083') of flow out of level spreader during storm event. Maximum velocity = 1.50 ft./sec. for fine sand or silt, non-colloidal.

Level Spreader #1

Peak Flow Rate (100-year storm)	2.31 c.f.s.
Length required	18.6 ft.
Level Spreader Length	20.0 ft.
Actual Velocity Out	1.39 ft./sec.

Appendix “E”
DCIA Worksheet



Note to user: complete all cells of this color *only*

Part 1: General Information	
Project Name	Residential Development
Project Address	12, 16 & 18 Taylor Street
Project Applicant	G&T Taylor Street LLC
Date of Submittal	11/16/2023
Tax Account Number	001-9860

Part 2: Project Details	
1. What type of development is this? (choose from dropdown)	Redevelopment
2. What is the total area of the project site?	24,478 ft ²
3. What is the total area of land disturbance for this project?	21,640 ft ²
4. Does project site drain to High Quality Waters, a Direct Waterfront, or within 500 ft. of Tidal Wetlands? (Yes/No)	No
5. What is the <u>current DCIA</u> for the site?	0 ft ²
6. Will the proposed development increase DCIA (without consideration of proposed stormwater management)? (Yes/No)	No
7. What is the <u>proposed-development total impervious area</u> for the site?	18,563 ft ²


Part 3: Water Quality Target Total	
Does Standard 1 apply based on information above?	No, Skip to Part 4
Water Quality Volume (WQV)	N/A ft ³
Standard 1 requirement	N/A
Required treatment/retention volume	N/A ft ³
Provided treatment/retention volume for proposed development	N/A ft ³

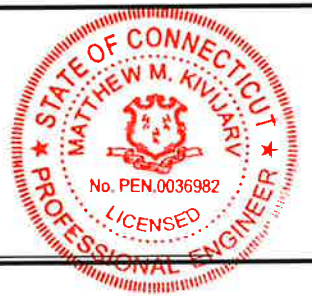
Part 4: Proposed DCIA Tracking	
<u>Pre-development total impervious area</u>	8,705 ft ²
<u>Current DCIA</u>	0 ft ²
<u>Proposed-development total impervious area</u>	18,563 ft ²
<u>Proposed-development DCIA</u> (after stormwater management)	0 ft ²
Net change in DCIA from <u>pre-development</u> to <u>proposed-development</u>	0 ft ²

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

Certification Statement

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

Engineer's Signature  Date 11-16-23 Engineer's Seal



Appendix “F”
Soil Results Forms

Project Name: Residential Development Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Project Address: 12, 16 & 18 Taylor Street Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	Soil Texture (Percent Sand, Silt and Clay)	Ground Elevation:	Depth Range in Inches
4	Topsoil	32.8	0
	Clean F.F.E. Brown Silty Sand	30.8	21
	Light Brown Natural Loam	29.7	37
	Fair Silty Fine Soil	26.8	72

Elevation	Depth in Inches
28.1	57
N/A	N/A
N/A	N/A

* All test pit or soil borings shall be excavated to an elevation four feet below the proposed bottom elevation of the infiltration system

Saturated Hydraulic Conductivity Test Location #: _____

Ground Elevation: _____

Top Elevation of Proposed Infiltration System: _____

Bottom Elevation of Proposed Infiltration System: _____

Elevation of Test* _____

Test Method (check one of the following acceptable methods**):

_____ Borehole infiltration test (SUDES, 2008)

_____ Guelph permeameter - ASTM D5126-90 Method

_____ Falling head permeameter - ASTM D5126-90 Method

_____ Double ring permeameter or infiltrometer - ASTM D3385-03, D5126-90 Methods

_____ Annularmeter or Annularmeter (constant head) permeameter - Annularmeter 1992

Attach field data forms for the respective infiltration test method _____

Calculated Saturated Hydraulic Conductivity Rate: _____

**A percolation test, performed in accordance with the guidelines of the Connecticut State Health Code or otherwise, is not an acceptable test for saturated hydraulic conductivity. Percolation tests overestimate the saturated hydraulic conductivity rate

* All field infiltration tests must be conducted in the actual location and soil layer where stormwater infiltration is proposed

TEST CERTIFICATION

THE REBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS REPORT IS TRUE AND CORRECT.

Matthew M. Kivirav
 Name of Test Conductor



Signature of Test Conductor

5-2-2023

Date

Project Name: Residential Development Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Project Address: 12 & 18 Taylor Street Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Borings #:	5	Ground Elevation:	30.9	Depth Range in Inches
Elevation	30.9	Soil Texture (Percent Sand, Silt and Clay)		
	30.3	Topsoil		0
	27.7	Light Brown Silty Loam		7
	25.6	Light Brown Silt w/ Mixed Clay		39
	23.7	Orange Sandy Soil		64
				86

Elevation	Depth in Inches
27.1	Mottling (Seasonally High Groundwater)
24.9	Groundwater
N/A	Ledger

* All test pits or soil borings shall be excavated to an elevation four feet below the proposed bottom elevation of the infiltration system.

Saturated Hydraulic Conductivity Test Location #: _____

Ground Elevation: _____

Top Elevation of Proposed Infiltration System: _____

Bottom Elevation of Proposed Infiltration System: _____

Elevation of Test*: _____

Test Method (check one of the following acceptable methods**):

_____ Borehole infiltration test (NHDES, 2008)

_____ Cuelph permeameter - ASTM D5126-90 Method

_____ Falling head permeameter - ASTM D5126-90 Method

_____ Double ring permeameter or infiltrometer - ASTM D3385-03, D5093-02, D5126-90 Methods

_____ Amoozegar or Amoozegar (constant head) permeameter - Amoozegar 1992

Attach field data forms for the respective infiltration test method. _____

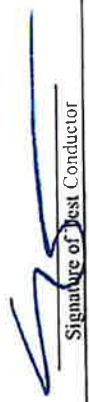
Calculated Saturated Hydraulic Conductivity Rate: _____

**A percolation test, performed in accordance with the guidelines of the Connecticut State Health Code or otherwise, is not an acceptable test for saturated hydraulic conductivity. Percolation tests overestimate the saturated hydraulic conductivity rate.

* All field infiltration tests must be conducted in the actual location and soil layer where stormwater infiltration is proposed.

TEST CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS REPORT IS TRUE AND CORRECT.


 Signature of Test Conductor

9-20-2023
 Date

Matthew M. Kivijarvi
 Name of Test Conductor

Soil Evaluation

Project Name: Residential Development Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Project Address: 12 & 18 Taylor Street Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	6	Ground Elevation:	26.8	Depth Range in Inches
Elevation	26.8	Soil Texture (Percent Sand, Silt, and Clay)		0
	26.4	Topsoil		5
	23.3	Brown Silty Loam		40
	21.3	Light Brown Silt w/ Mixed Clay		66
	19.7	Orange Sandy Gravel		85

Elevation	Depth in Inches
23.6	Mottling (Seasonally High Groundwater)
21.8	Groundwater
N/A	Ledge
	N/A

* All test pits or soil borings shall be excavated to an elevation four feet below the proposed bottom elevation of the infiltration system.

Saturated Hydraulic Conductivity Test Location #: _____

Ground Elevation: _____

Top Elevation of Proposed Infiltration System: _____

Bottom Elevation of Proposed Infiltration System: _____

Elevation of Test*: _____

Test Method (check one of the following acceptable methods**):

_____ Borehole infiltration test (NHDES, 2008)

_____ Guelph permeameter - ASTM D5126-90 Method

_____ Falling head permeameter - ASTM D5126-90 Method

_____ Double ring permeameter or infiltrometer - ASTM D3385-03, D5126-90 Methods

_____ Amoozegar or Amoozegar (constant head) permeameter Amoozegar 1992

Attach field data forms for the respective infiltration test method. _____

Calculated Saturated Hydraulic Conductivity Rate: _____

**A percolation test, performed in accordance with the guidelines of the Connecticut State Health Code or otherwise, is not an acceptable test for saturated hydraulic conductivity. Percolation tests overestimate the saturated hydraulic conductivity rate.

* All field infiltration tests must be conducted in the actual location and soil layer where stormwater infiltration is proposed

TEST CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS REPORT IS TRUE AND CORRECT.

Matthew M. Kivijarvi _____ Date 9-20-2023
 Name of Test Conductor Signature of Test Conductor

Project Name: Residential Development Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Project Address: 12 & 18 Taylor Street Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	7	Ground Elevation:	27.5
Elevation		Depth Range in Inches	
	Soil Texture (Percent Sand, Silt and Clay)		0
	Misc. Fill		37
	Light Brown Silty Loam		43
	Light Brown Silty Loam w/ Clay		71
	Orange Brown Sandy Gravel		85

Elevation	Depth in Inches	
24.1	Mottling (Seasonally High Groundwater)	41
21.2	Groundwater	76
N/A	Ledge	N/A

* All test pits or soil borings shall be excavated to an elevation four feet below the proposed bottom elevation of the infiltration system

Saturated Hydraulic Conductivity Test Location #: _____

Ground Elevation: _____

Top Elevation of Proposed Infiltration System: _____

Bottom Elevation of Proposed Infiltration System: _____

Elevation of Test*: _____

Test Method (check one of the following acceptable methods**):

_____ Borehole infiltration test (NHDFS, 2008)

_____ Guelph permeameter - ASTM D5126-90 Method

_____ Falling head permeameter - ASTM D5126-90 Method

_____ Double ring permeameter or infiltrometer - ASTM D3385-03, D5093-02, D5126-90 Methods

_____ Amoozegar or Amoozegar (constant head) permeameter Amoozegar 1992

Attach field data forms for the respective infiltration test method. _____

Calculated Saturated Hydraulic Conductivity Rate: _____

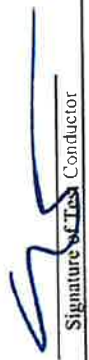
**A percolation test, performed in accordance with the guidelines of the Connecticut State Health Code or otherwise, is not an acceptable test for saturated hydraulic conductivity. Percolation tests overestimate the saturated hydraulic conductivity rate.

* All field infiltration tests must be conducted in the actual location and soil layer where stormwater infiltration is proposed.

TEST CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS REPORT IS TRUE AND CORRECT.

Matthew M. Kivjary
 Name of Test Conductor


 Signature of Test Conductor

9-20-2023
 Date

Soil Evaluation

Project Name: Residential Development Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Project Address: 12 & 18 Taylor Street Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	8	Ground Elevation:	27.1
Elevation	27.1	Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches
		Misc Fill	0
		Orange Brown Silty Loam w/ Sand	24
		Orange Brown Silty Sand	61
			84

Saturated Hydraulic Conductivity Test Location #: _____

Ground Elevation: _____

Top Elevation of Proposed Infiltration System: _____

Bottom Elevation of Proposed Infiltration System: _____

Elevation of Test*: _____

Test Method (check one of the following acceptable methods*):

_____ Borehole infiltration test (NHDES, 2008)

_____ Guelph permeameter - ASTM D5126-90 Method

_____ Falling head permeameter - ASTM D5126-90 Method

_____ Double ring permeameter or infiltrometer - ASTM D3385-03, D5093-02, D5126-90 Methods

_____ Amoozegar or Amoozegar (constant head) permeameter - Amoozegar 1992

Attach field data forms for the respective infiltration test method. _____

Calculated Saturated Hydraulic Conductivity Rate: _____

Elevation	Depth in Inches
22.5	Mottling (Seasonally High Groundwater) 55
20.8	Groundwater 76
N/A	Ledge N/A

**A percolation test, performed in accordance with the guidelines of the Connecticut State Health Code or otherwise, is not an acceptable test for saturated hydraulic conductivity. Percolation tests overestimate the saturated hydraulic conductivity rate.

* All test pits or soil borings shall be excavated to an elevation four feet below the proposed bottom elevation of the infiltration system.

* All field infiltration tests must be conducted in the actual location and soil layer where stormwater infiltration is proposed.

TEST CERTIFICATION

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED IN THIS REPORT IS TRUE AND CORRECT.

Matthew M. Kiviaty _____ Date 9-10-2023
 Name of Test Conductor Signature of Test Conductor

18 TAYLOR STREET STAMFORD CT BUILDING G NEW CONSTRUCTION

JIA HUA
ARCHITECT

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING G
NEW
CONSTRUCTION

Project Overview

DRAWINGS PROVIDED BY:

DATE:

11/15/2023

SCALE:

SHEET:

A000

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET BUILDING G
NEW CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

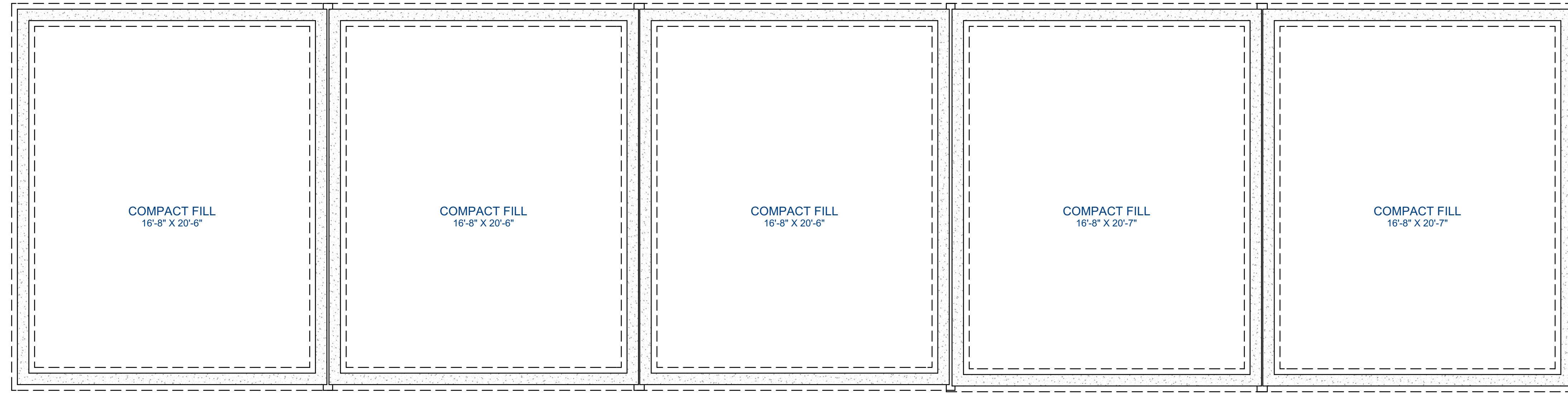
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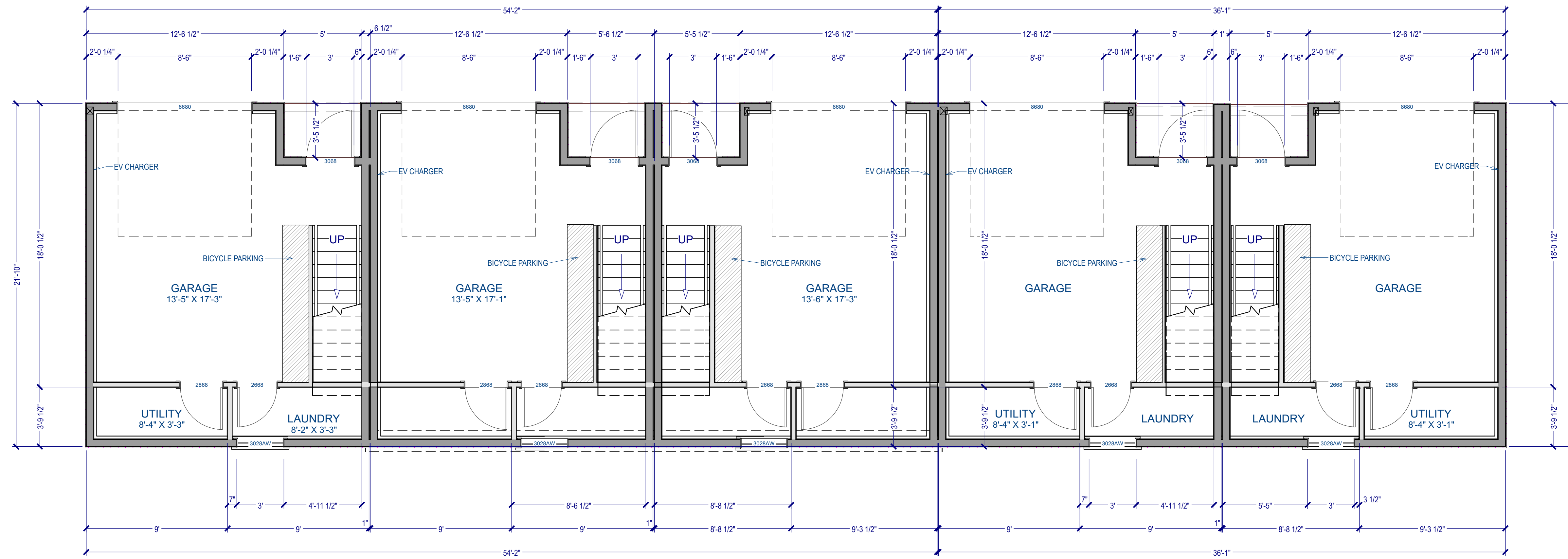
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SHEET:

A100



FOUNDATION PLAN



GARAGE FLOOR PLAN



REVISION TABLE	NUMBER	DATE	REVISED BY	DESCRIPTION

TAYLOR STREET BUILDING G
NEW CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

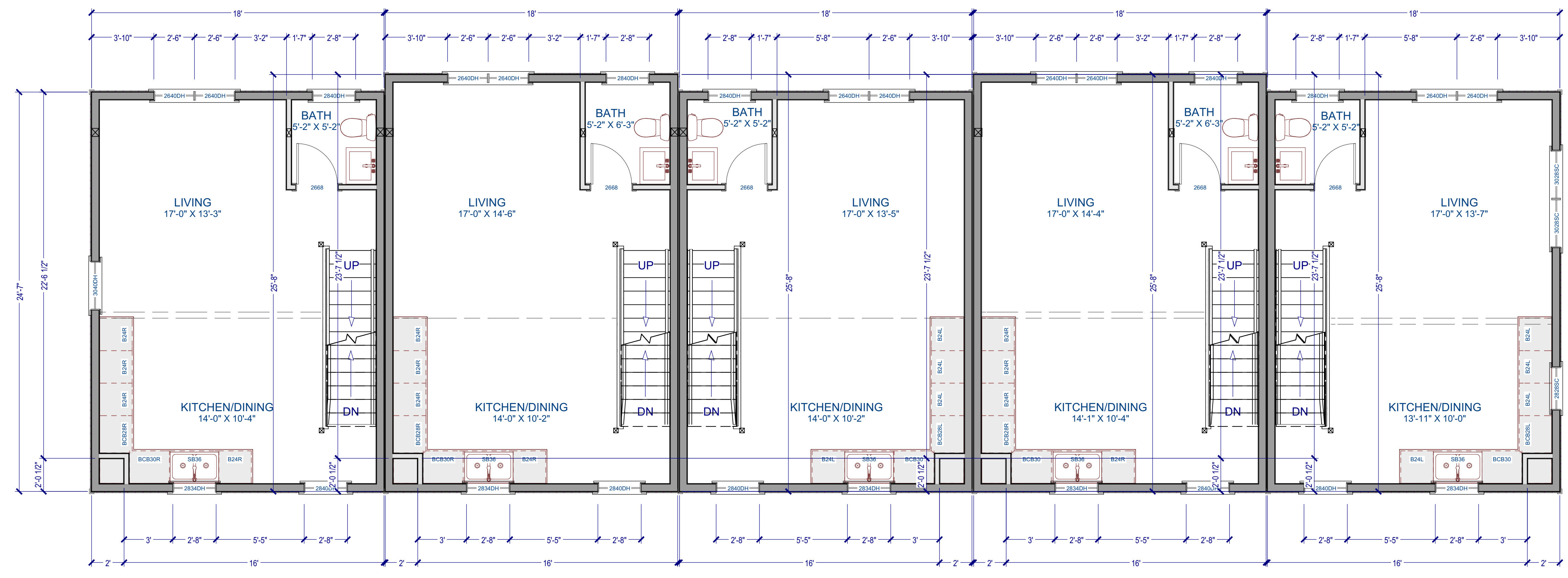
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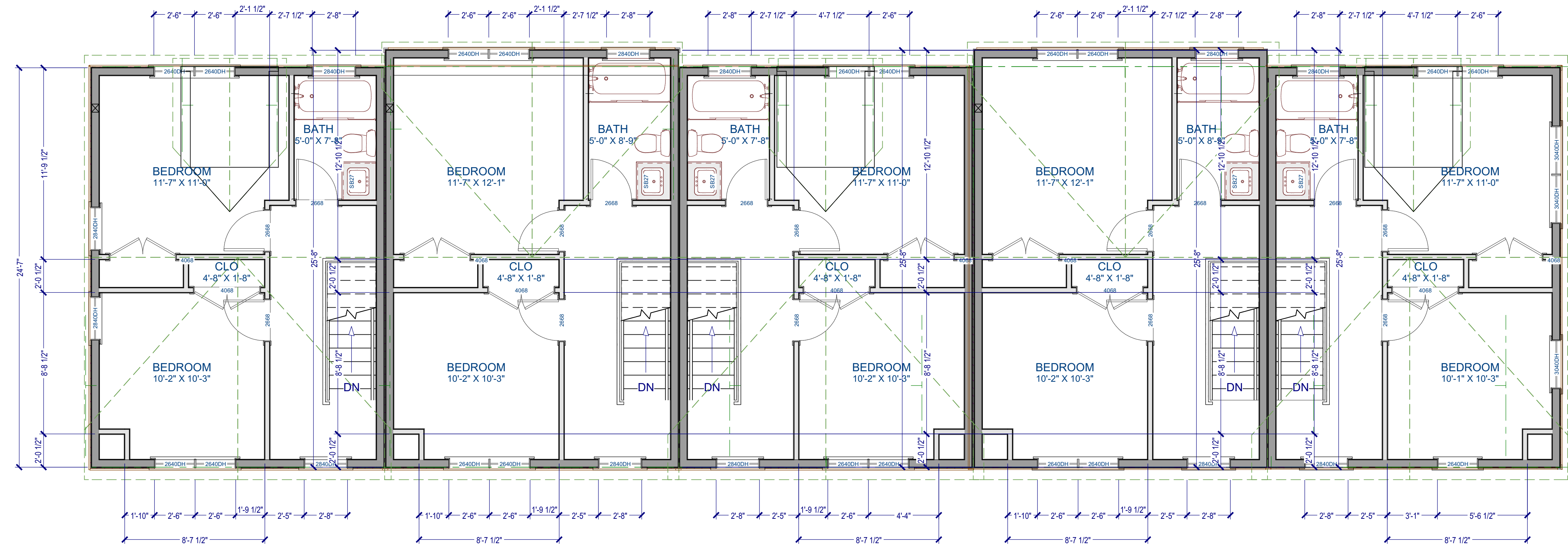
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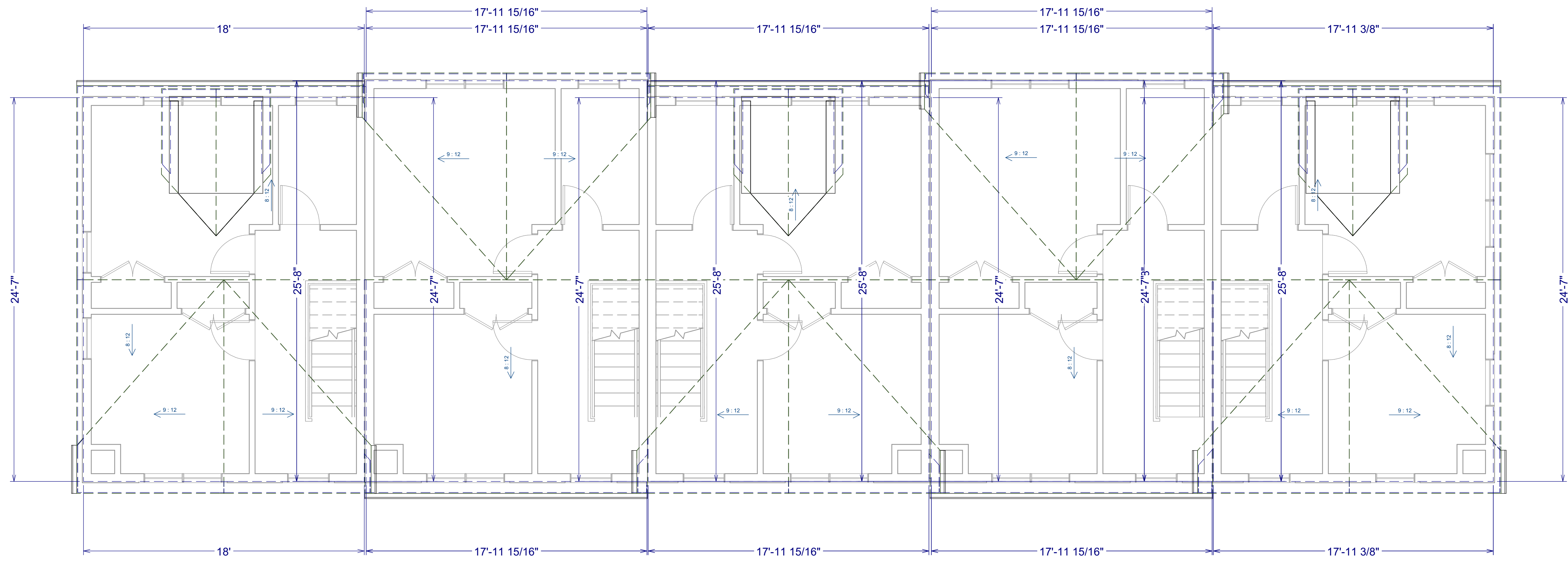
A101



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ATTIC PLAN

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

DRAWINGS PROVIDED BY:

DATE:

11/15/2023

SCALE:

1/4"=1'-0"

SHEET:

A102

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING G
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

11/15/2023

SCALE:

1/4"=1'-0"

SHEET:

A200



- SLATE GREY ASPHALT SHINGLE
- MID POINT OF HIGHEST ROOF
- METAL GUTTER PAINTED BENJAMIN MOORE HCC-111, NANTUCKET GREY OR EQUIVALENT COLOR
- AZEK TRIM NANTUCKET GREY OR EQUIVALENT
- BENJAMIN MOORE HC-155 (NEWBURYPORT BLUE) HARDIE BOARD SIDING OR EQUIVALENT
- WHITE HARDIE SIDING
- 34'-0.3/8"
- WHITE METAL GARAGE DOOR
- WHITE HARDIE SIDING
- WOOD EXTERIOR DOOR PAINTED NEWBURYPORT BLUE OR EQUIVALENT



- SLATE GREY ASPHALT SHINGLE
- METAL GUTTER PAINTED NANTUCKET GREY OR EQUIVALENT
- AZEK TRIM PAINTED NANTUCKET GREY OR EQUIVALENT
- NEWBURYPORT BLUE HARDIE BOARD SIDING OR EQUIVALENT
- 12'-4"
- WHITE HARDIE BOARD SIDING

NUMBER	DATE	REVISED BY	DESCRIPTION

TAYLOR STREET
BUILDING G
NEW
CONSTRUCTION

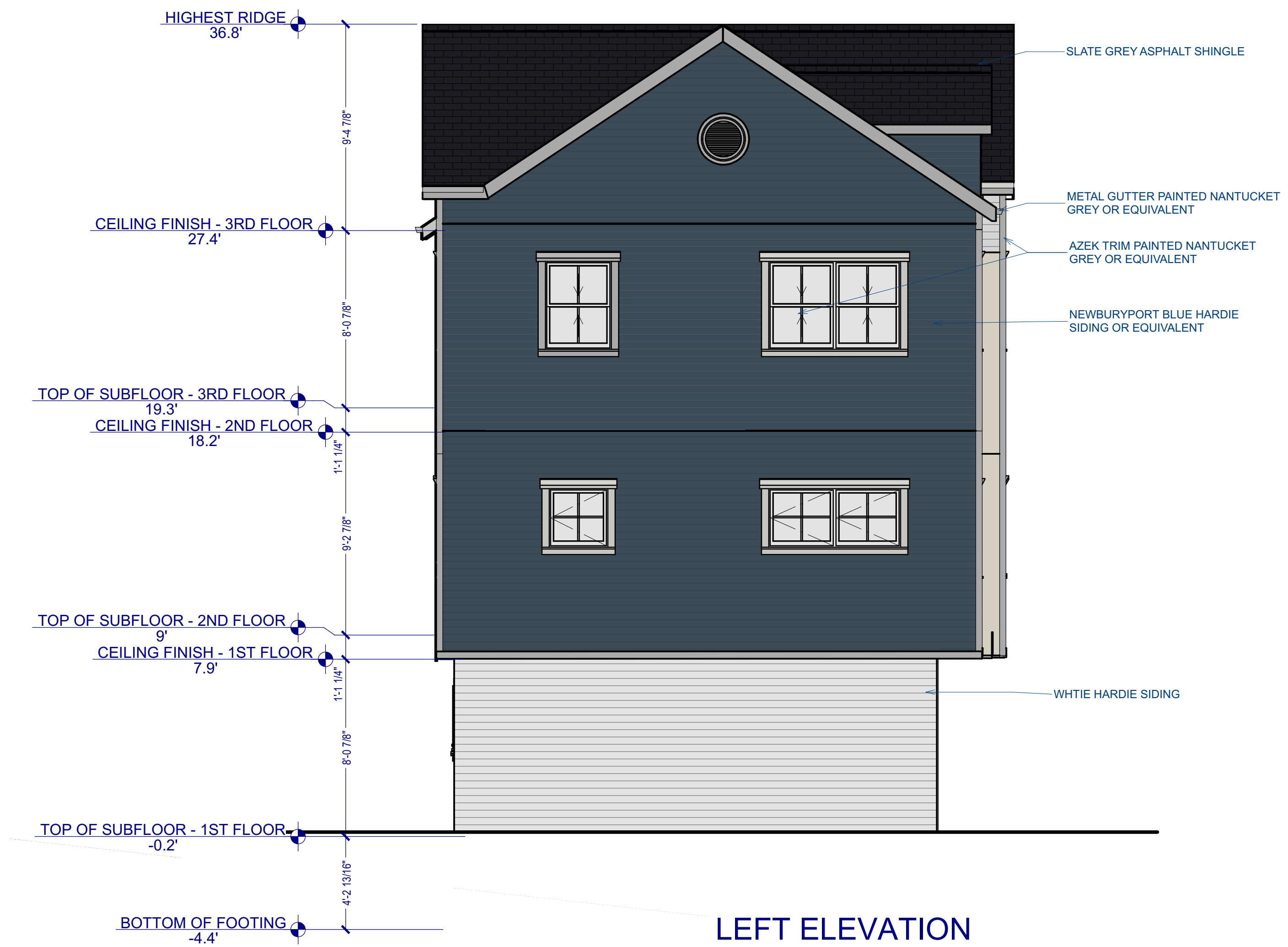
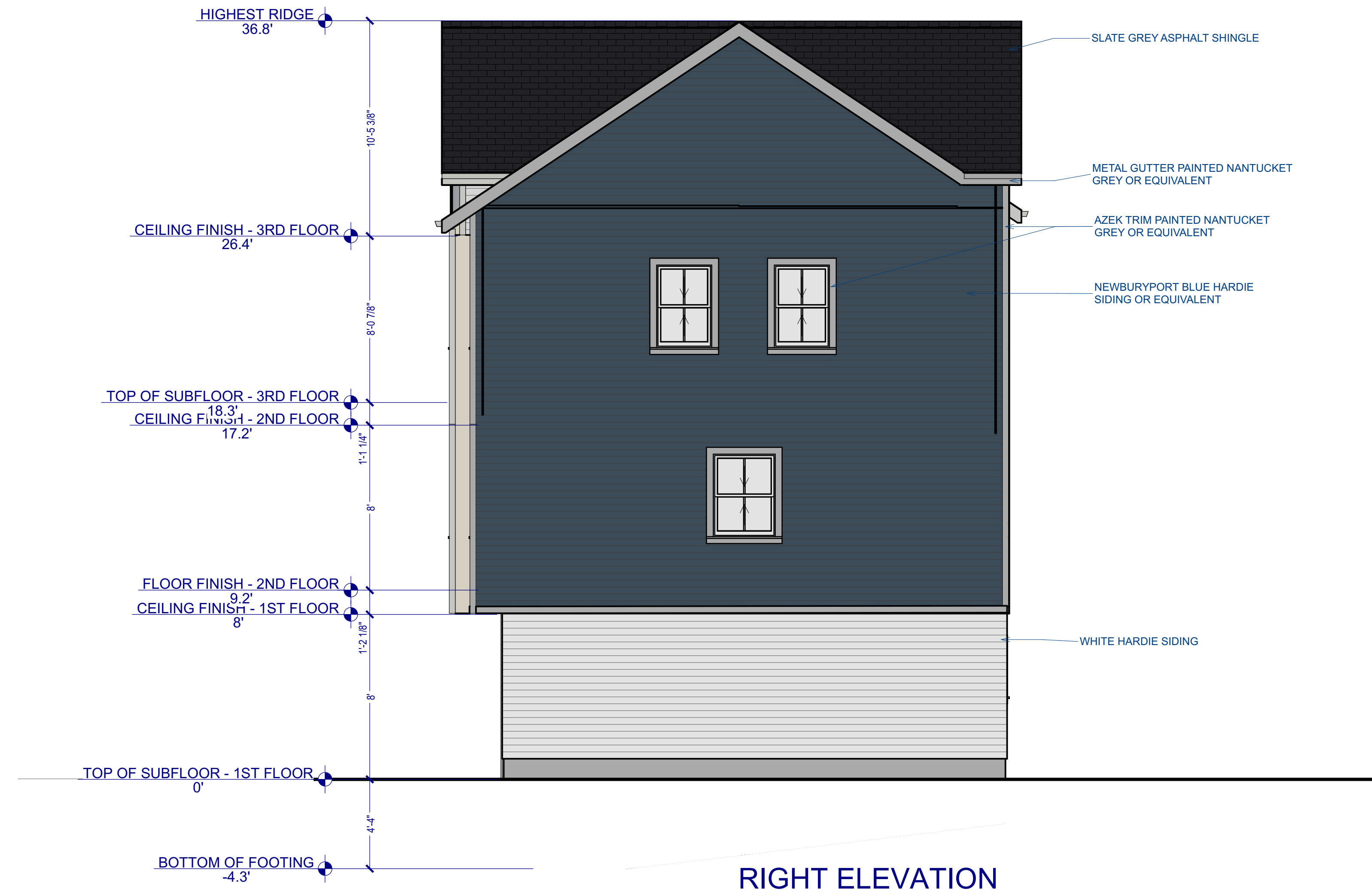
ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:
11/15/2023

SCALE:
1/4"=1'-0"

SHEET:
A201





JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	DESCRIPTION

TAYLOR STREET
BUILDING G
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

11/15/2023

SCALE:

1/4"=1'-0"

SHEET:

A300



JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	DESCRIPTION

TAYLOR STREET
BUILDING G
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

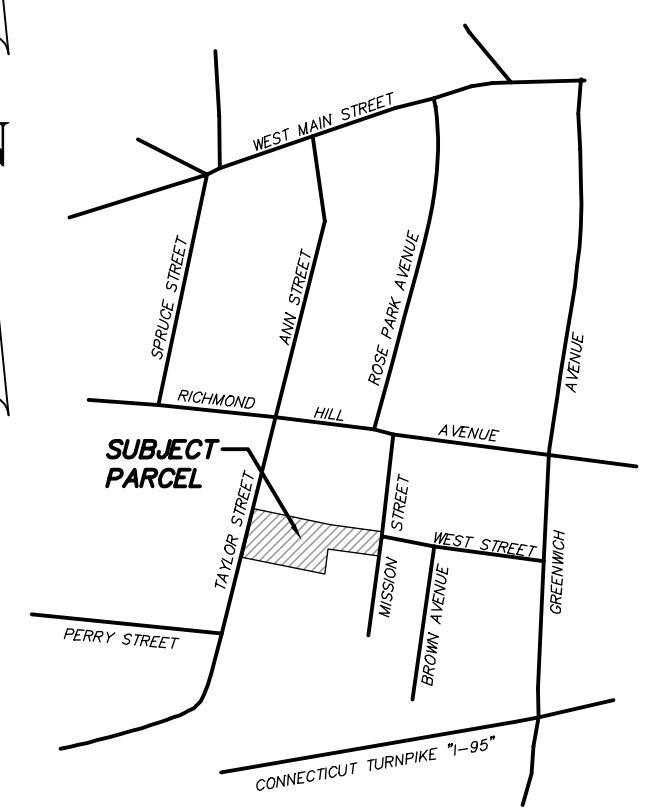
11/15/2023

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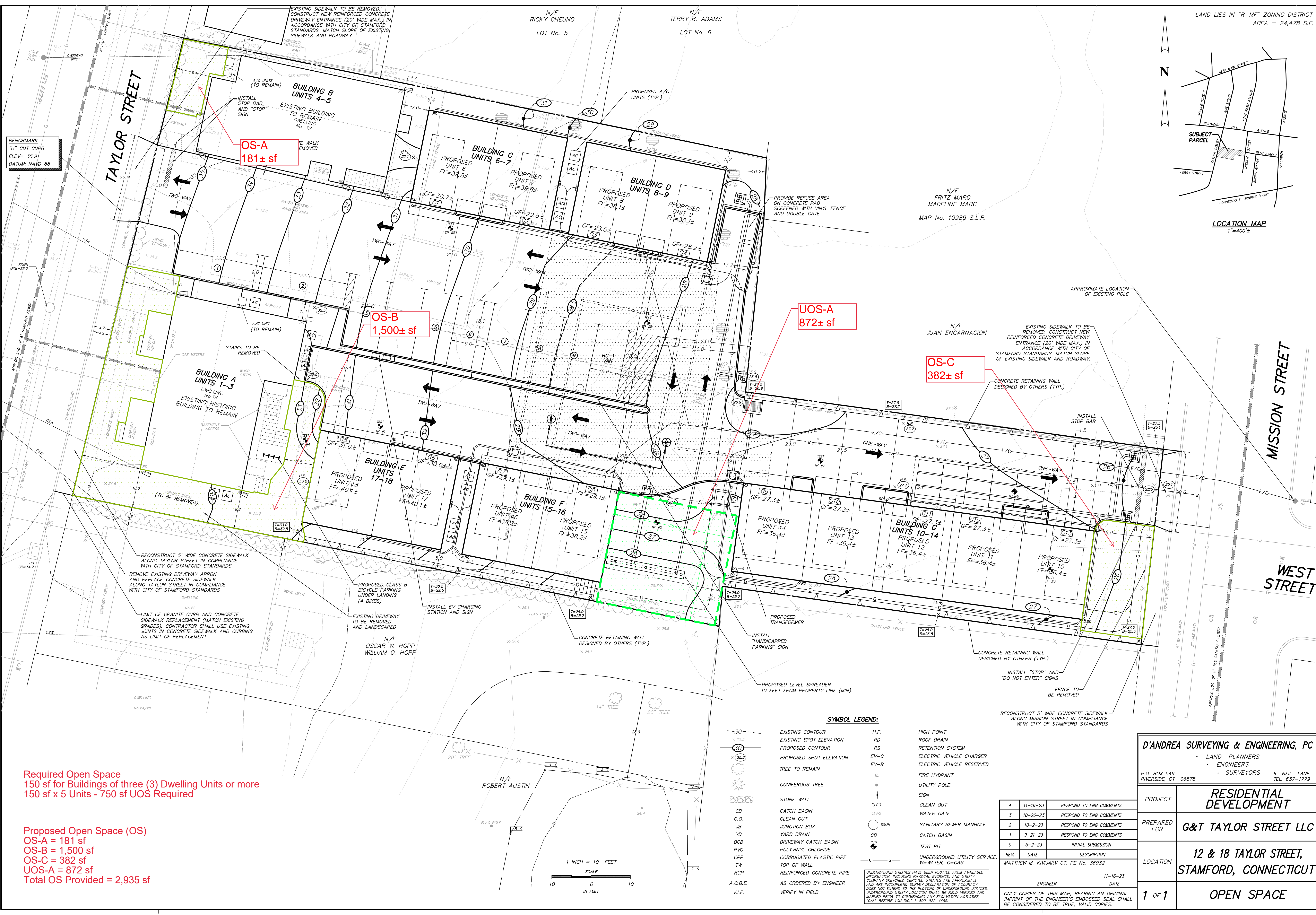
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SHEET:

A301



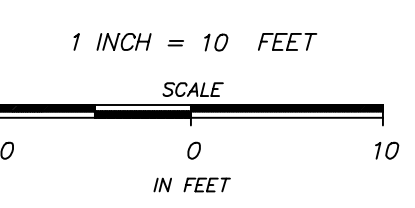
LOCATION MAP
1"=400'



BENCHMARK
"U" CUT CURB
ELEV= 35.91
DATUM: NAVD 88

Required Open Space
150 sf for Buildings of three (3) Dwelling Units or more
150 sf x 5 Units - 750 sf UOS Required

Proposed Open Space (OS)
OS-A = 181 sf
OS-B = 1,500 sf
OS-C = 382 sf
UOS-A = 872 sf
Total OS Provided = 2,935 sf



SYMBOL LEGEND:

- | | | | |
|----------|--------------------------|------|------------------------------------|
| 30 | EXISTING CONTOUR | H.P. | HIGH POINT |
| 30 | EXISTING SPOT ELEVATION | RD | ROOF DRAIN |
| 30 | PROPOSED CONTOUR | RS | RETENTION SYSTEM |
| 25.3 | PROPOSED SPOT ELEVATION | EV-C | ELECTRIC VEHICLE CHARGER |
| 20 | TREE TO REMAIN | EV-R | ELECTRIC VEHICLE RESERVED |
| 20 | CONIFEROUS TREE | FD | FIRE HYDRANT |
| 20 | STONE WALL | UP | UTILITY POLE |
| CB | CATCH BASIN | CD | CLEAN OUT |
| C.O. | CLEAN OUT | WG | WATER GATE |
| JB | JUNCTION BOX | SSMH | SANITARY SEWER MANHOLE |
| YD | YARD DRAIN | CB | CATCH BASIN |
| DCB | DRIVEWAY CATCH BASIN | TP | TEST PIT |
| PVC | POLYVINYL CHLORIDE | W | UNDERGROUND UTILITY SERVICE: WATER |
| CPP | CORRUGATED PLASTIC PIPE | G | UNDERGROUND UTILITY SERVICE: GAS |
| TW | TOP OF WALL | | |
| RCP | REINFORCED CONCRETE PIPE | | |
| A.O.B.E. | AS ORDERED BY ENGINEER | | |
| V.I.F. | VERIFY IN FIELD | | |

REV.	DATE	DESCRIPTION
4	11-16-23	RESPOND TO ENG COMMENTS
3	10-26-23	RESPOND TO ENG COMMENTS
2	10-2-23	RESPOND TO ENG COMMENTS
1	9-21-23	RESPOND TO ENG COMMENTS
0	5-2-23	INITIAL SUBMISSION
REV. DATE		DESCRIPTION
MATTHEW M. KIVUJARI CT. PE No. 36982		11-16-23
ENGINEER		DATE

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

P.O. BOX 549
RIVERSIDE, CT 06878

6 NEIL LANE
TEL. 637-1779

PROJECT	RESIDENTIAL DEVELOPMENT
PREPARED FOR	G&T TAYLOR STREET LLC
LOCATION	12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT
1 OF 1	OPEN SPACE

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

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APPLICATION NARRATIVE - 12 & 18 Taylor Street

Introduction & Background

G&T Taylor Street LLC (the “Applicant”) owns the properties located at 12 and 18 Taylor Street, Stamford in the R-MF Multiple Family Residence District (the “Properties”). The Applicant purchased the Properties in 2021. 18 Taylor Street is improved with a historic three-family house constructed in 1890 in the late-American “Stick Style” that retains many of its original distinctive historical features.¹ Accordingly, 18 Taylor has twice previously been recognized by the Zoning Board as having historical significance worthy of preservation: first in 1991 and again in 2008, when the Zoning Board granted historic preservation Special Exceptions under Section 7.3 of the Zoning Regulations for different projects at the site proposed by two separate prior owners.²

Neither of the two prior projects was ultimately constructed, however, due to the previous owners’ changing plans for the site. Accordingly, 18 Taylor has not yet been the subject of a historic preservation easement, and no redevelopment of the Properties has taken place that includes preservation of 18 Taylor. The current Applicant would now like to finally finish what prior owners admirably started – a redevelopment of the Properties to infill them with much-needed housing (including affordable housing) while improving and beautifying both Properties, historically preserving 18 Taylor, and providing a historic preservation easement to safeguard it in perpetuity. To do so, the Applicant seeks a Special

¹ Adjoining 12 Taylor Street is improved with a recently-renovated two-family house.

² Enclosed in the current application materials are 1991 and 2008 letters from the well-known historic preservation architect Renee Kahn supporting the applications and setting forth her reasons, as well as a 1991 letter in support from the Stamford Historical Society.

Permit under Section 7.3, inclusion of 18 Taylor on the Cultural Resources Inventory, and CAM approval.

Inclusion on Cultural Resources Inventory

The first step toward seeking a Section 7.3 Special Permit is inclusion of 18 Taylor on the City’s Cultural Resources Inventory (“CRI”) pursuant to Section 7.3.B.2(c). That section provides that a Structure shall be listed on the CRI in accordance with the following requirements, among others: (1) that the application has been reviewed by Land Use Bureau staff based on review criteria for historic or architectural significance established by the Land Use Bureau in consultation with HPAC; and (2) that HPAC has recommended that the structure to be added to the CRI is historically or architecturally significant.

Here, 18 Taylor more than meets the criteria for inclusion in the CRI. The CRI application lists several alternative grounds for inclusion, two of which particularly apply here: (1) 18 Taylor embodies the distinctive characteristics of a type, period, or method of construction; and (2) it is associated with events that have made a significant contribution to the broad patterns of Stamford’s history.

First, as can be seen in the accompanying photos and as set forth in the supporting letter from Qualified Historic Preservation Expert Travis Brock Kennedy, 18 Taylor embodies the distinctive characteristics of the late-American “Stick Style” or Queen Anne style, featuring the massing, proportions, and restrained ornamentation typical of houses from this period. Its features are remarkably well preserved, and include timber clapboard (Fig. 1), two-over-two sash windows and other original windows above the front doors and at basement level (Fig. 1, Fig. 2, and Fig. 3), hand-turned veranda posts (Fig. 4), beadboard (Fig. 5), and other decorative features, such as the hand-made trelliswork under the

building’s porches (Fig. 6). All such materials, features, finishes, construction techniques, and examples of craftsmanship characterize the building as an exemplar of domestic architecture from the “Stick Style”/Queen Anne movement. Listing 18 Taylor on the CRI will facilitate these distinctive historic features being preserved and not lost.

Second, 16-18 Taylor is associated with events that have made a significant contribution to the broad patterns of Stamford’s history. As Ms. Kahn recognized in connection with the prior applications and Mr. Kennedy re-emphasizes here, the 1890 house at 18 Taylor is a prime example of the type of workforce housing associated with this formative period in Stamford’s history, when immigrant communities swelled the ranks of the city’s industrial workers. As Ms. Kahn puts it, “18 Taylor Street was one of a row of modest but attractive dwelling units built” in the late 19th century “to house the large numbers of immigrant Irish moving into Stamford at that time.” She further notes that “Taylor Street was named for Michael Taylor who originally owned most of the land in the area. A hundred years ago, the street was little more than an unmarked dirt path, but by 1889 almost twenty families, mostly working-class Irish, had homes on the street.... Owning a home on Taylor Street was undoubtedly the first move up the social ladder in America.” Preserving this part of Stamford’s history will allow it to be studied by scholars and appreciated by the public. Listing 18 Taylor on the CRI will enable that preservation.

Special Permit Under Section 7.3

Under Section 7.3 of the Zoning Regulations (Historic Preservation), the Zoning Board “may modify by *Special Permit* use, bulk, height, *Light and Air*, setback, coverage, density and parking standards based on the standards listed in this Section.” The criteria for obtaining a Special Permit under Section 7.3 are:

- a. Proposed use and site plan are compatible with and implement the objectives and policies of Stamford's *Master Plan*;
- b. Proposed use and site plan are superior to a plan conforming to the standard dimensional requirements and use standards of the underlying zoning district and will not impair the future development of the surrounding area;
- c. Proposed use and site and architectural plans serve to rehabilitate, restore, *Critically Reconstruct*, or preserve *Historic Structures* or *Sites*, and meet the *HPAC* guidelines for Historic Preservation (once they are recommended by *HPAC* and adopted by the Zoning Board), or the appropriate Standards and Guidelines of the Secretary of the Interior, as amended from time to time and published on the National Park Service website, as applied by *HPAC* and the Zoning Board; and
- d. The loss of said *Historic Structure* or *Historic Site* would be detrimental to the neighborhood character, *Local Historic District* or the cultural and historical heritage and identity of the City of Stamford.

Here, the project more than meets these criteria.

First, under (d), as shown above, the loss of the historic building at 18 Taylor would be detrimental to the neighborhood and to Stamford as a whole, because a prime example of a valuable style of architecture and a piece of Stamford's industrial heritage would be irretrievably lost.

Second, under (c), the proposed use and site and architectural plans serve to rehabilitate, restore, and preserve the historic structure at 18 Taylor. As discussed in Mr. Kennedy's report, 18 Taylor will be preserved and restored in accordance with industry standards for preservation, including the Secretary of the Interior's guidelines. The distinctive Stick Style/Queen-Anne features of the house will be preserved intact, and where repairs are needed due to deterioration, they will be made with materials that, while durable, are historically sensitive and designed to maintain the building's visual aesthetic.

Third, under (b), the proposed use and site plan are superior to a plan conforming to the standard dimensional requirements and use standards of the underlying zoning district. The Applicant seeks to do a modest infill development on a through-lot between Taylor and Mission Streets, in the R-MF district where multifamily housing is currently allowed as of

right and there are abundant multifamily developments nearby. The Applicant would be allowed 16 units on the subject parcel as of right, and only seeks to build an additional 2 units under a Section 7.3 historic density bonus.³ The Applicant currently rents out two of the existing units (at 12 Taylor) under the Section 8 Housing Choice Voucher Program voluntarily, and seeks to create two additional below-market-rate units at 18 Taylor in connection with the Project. The Applicant intends to deed-restrict these two units as affordable for the life of the building, thus preserving valuable workforce housing in perpetuity. Because all this affordable housing is being provided on site, the Project additionally qualifies for a density bonus of at least 2 units by Special Permit under Section 7.4 and 9.N.6(h) of the Zoning Regulations. As explained by Mr. Kennedy, the Applicant has strived to design the proposed infill units in an architectural style that is complementary to the existing historic house. The new units will help to screen the high-rise skyline that currently predominates in the site’s viewscape, and thus will help restore more of the residential neighborhood feel to this area.

Due to the characteristics of the properties and the preservation of the lawful nonconforming buildings (including historic 18 Taylor), the Applicant seeks modest relief under Section 7.3 from the underlying zoning district’s requirements for:

- Density: 18 units instead of 16 units maximum;
- Building coverage: 35.6% (8,714 sft.) instead of 35% (8,567 sft.) maximum;
- Sideyard setbacks: 5.5 ft. both sides instead of 11.18 ft. both sides lawfully nonconforming (18 ft. both sides minimum currently required);
 - The lawfully nonconforming 1.4 ft. on the north side and 4.1 ft. on the south side (instead of 8 ft. currently required);⁴

³ The Applicant could have sought a density bonus of up to 3 units under Section 7.3. The Applicant also could have sought an even higher density bonus under Sections 9.N.6(h) and 7.4, for providing all required below-market-rate units on site. By limiting the units on site to 18, the Applicant hopes to strike the right balance between appropriate density, space for parking and landscaping, affordable housing, and historic preservation.

⁴ The current sideyard setback of 12 Taylor Street is 1.4 feet, which is pre-existing lawfully nonconforming.

- Parking and electric vehicle parking: 22.5 spaces, including 1 EV charger and 1 reserved space, instead of 30.75 spaces minimum, including 3 EV chargers and 3 reserved spaces.⁵

All of these requests for zoning relief are well within the parameters allowed to the Board for historic development bonuses under Section 7.3. In all other respects the proposed project conforms to the R-MF zone requirements for what the Applicant could do as of right.

The proposed project will not in any way impair the future development of the surrounding area. To the contrary, it will improve and beautify the area through new and attractive buildings, preservation of the historic 18 Taylor Street, an enhanced streetscape with new landscaping, a modern drainage system, visual screening of the nearby high-rise commercial buildings from the residential neighborhood, and sustainability features such as bike racks and electric vehicle charging stations.

Fourth, under (a), the project is entirely consistent with the Master Plan, and in fact embodies many of the planning techniques that the Master Plan specifically encourages. The Master Plan clearly supports historic preservation of Stamford’s residential neighborhoods:

- “As redevelopment occurs at an increasingly rapid pace, it is now more important than ever for Stamford to maintain the character of historic districts and structures and ensure that new development is in keeping with the City’s historic character.” (159)
- “Because redevelopment in all areas of Stamford is occurring at an increasingly rapid rate, the protection of the City’s valuable architectural resources is critical. The City must embark upon a concerted effort to preserve the historic architectural and landscape heritage that remains. This can be achieved by the implementation of policies that preserve the character and viability of historic resources to ensure that

⁵ The Applicant respectfully requests that the Zoning Board reduce the required parking to 19 spaces (higher than the one space per unit that may be permitted under a Section 7.3 bonus, which would be 18 spaces). In that case, Section 12.L of the Regulations would only require one EV charger and one EV reserved space, which are provided. A total of 22.5 parking spaces are provided on site – 13 garage, 9 uncovered, and 1 EV charger (which counts as .5 spaces). Notably, under the new version of Section 12.L of the Regulations enacted after this application was filed, an EV reserved space counts as a full parking space rather than a half space.

new development respects the established traditions of scale, massing, setbacks and pedestrian-friendly streetscapes and plazas.” (159-60)

- “Several zoning incentives that promote the historic preservation of properties exist. Section 7.3...for example, provides a development density bonus for projects that will result in the appropriate restoration and preservation of buildings of historic significance in the community.” (163)

Moreover, the Master Plan encourages the preservation of existing housing and the organic addition of new housing within existing neighborhoods, rather than demolition of current housing and replacement by new large-scale development. (*See, e.g.*, 7 (goals include “neighborhood preservation, revitalization, and growth”; “Balance new development with preservation of existing residential communities”; “Preserve existing housing and create affordable housing”; “Preserve historic buildings and districts”). Therefore, the Applicant’s proposed infill development (in a property within Master Plan Category #4, Residential – Medium Density Multifamily) is clearly supported by the Master Plan as well:

- “As Stamford continues to attract new market-rate multifamily housing, it will be important for the City to maintain its existing housing policies and balance new residential development with preservation of existing neighborhoods.” (133)
- Policy Recommendation 6A.1: “Balance new development with preservation of existing residential communities.... As new development occurs, the City should encourage preservation of existing residential streets and the rehabilitation of structures.” (*Id.*)

CAM Approval

Lastly, as the project lies just within the Coastal Area Management (CAM) boundary that extends roughly 1000 feet from the Coastal Jurisdiction Line, the Applicant also seeks CAM site plan approval. As set forth in the accompanying CAM application, the project is nowhere near the coast, and the only coastal resource nearby is freshwater wetlands⁶; the

⁶ No portion of the project is located in inland wetlands or the upland review area.

only coastal policy implicated is “general development.” There will be no adverse effects on coastal resources from this residential project. To the contrary, the accompanying Drainage Report demonstrates that the Applicant will be greatly improving stormwater runoff and drainage from the site, which will benefit coastal resources.

Conclusion

For all of the above reasons, the Applicant respectfully asks that you include the historic three-family house at 18 Taylor Street on the Cultural Resources Inventory, grant the requested Special Permit under Section 7.3 of the Zoning Regulations, and grant CAM site plan approval.

THE APPLICANT,
G&T TAYLOR STREET LLC

By: /s/ Leonard M. Braman
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T: 203-327-2300/F: 203-967-9273
Juris No.: 068550

Zoning Data Chart

11/21/2023

Project Name - G&T Taylor Street LLC - 12 & 18 Taylor Street

Application number - 223-36

Address - 12 & 18 Taylor Street

Zoning District(s) - If multiple Zoning Districts, provide requirement and compliance for each portion of site under the different district - R-MF

Zoning Section		Current Required/ Permitted (R-MF)	Proposed Permitted (R-MF w/ historic bonus)	Existing Conditions	Proposed Conditions	Notes (Indicate compliance or Zoning Section for Special Permit if applicable)
9-N-6	Lot Size	Min. 5,000 sf.	N/A	24,478 sf. combined	24,478 sf. combined	Compliant
	Gross Floor Area	N/A	N/A			
	Zoning Floor Area					
	Residential	N/A	N/A			
	Commercial					
	Community Facility					
	Industrial					
	Total	N/A	N/A			
	F.A.R.					
	Residential	N/A	N/A			
	Commercial					
	Community Facility					
	Industrial					
	Total	N/A	N/A			
	Number of units	16 (or more under Sec. 7.4 since all BMR units provided onsite)	18	5	18	Compliant if 7.3 historic bonus
7.4	Below Market Rate Units (#, %, and AMI level)	10% of total # of dwelling units @ 50% AMI	1.8	N/A	2 two-bedroom apts. @ <\$1,928/mo. (<50% of AMI)	Compliant
	Number of seats/ beds / employees if applicable	N/A	N/A			
	Density (Units/Acre)	1500 sft. of Lot Area per Dwelling Unit	1359 sft. of Lot Area per Dwelling Unit	Compliant	1359 sft. of Lot Area per Dwelling Unit	Compliant if 7.3 historic bonus
	Street Frontage	Min. 100 ft.	N/A	169.74 ft. combined	169.74 ft. combined	Compliant
	Building Coverage (Area and %)	35%	37%	11.6% (2,838 sf.)	35.6% (8,714 sf.)	Compliant if 7.3 historic bonus
	Lot coverage (Area and %)	N/A	N/A			
	Building Height (Feet)	40 ft.	N/A	30.3 ft.	34.1 ft. (Bldg G); 33.5 ft. (C, D, E, F)	Compliant
	Number of floors (Stories)	4 Stories	N/A	2 Stories	3 Stories	Compliant
	Active ground floor (sq.ft. and %) if applicable	N/A	N/A			

	Yards					
	Front yard (Streetline)	Min. 15 ft.	9.4 ft.	9.4 ft.	9.4 ft.	Pre-existing lawful non-conforming
	Rear yard	Min. 30 ft.	No rear yard; through lot	N/A	N/A	
	Side yard	Min. one side 8 ft., both sides 18 ft. (since all BMR units provided onsite)	1.4 ft. one side, 5.5 ft. both sides	1.4 ft. one side, 11.18 ft. both sides	1.4 ft. one side, 4.1 ft other side, 5.5 ft. both sides	Pre-existing lawful non-conforming; Compliant if 7.3 historic bonus
Definitions	Light & Air	20 ft.	20 ft.	20 ft.	20 ft.	Compliant
	Parking					
12.D	Residential parking	30.75 spaces (2 per 3BR unit, 1.75 per 2BR unit, 1 per BMR 2BR unit)	19 spaces	N/A	22.5 spaces	Compliant if 7.3 historic bonus
	Commercial parking					
	Community Facility parking					
	Industrial parking					
	Public open space parking					
	Bike parking					
	# of levels of parking garage (if applicable)					
	Square footage of parking area					
	Parking setback					
3	Usable Open Space (Area and %)	Pursuant to Sec. 9.N.6(i), between 0 and 150 sf. per unit for each new Building of 3 units or more, i.e. the 5 new units in Building G (0 - 750 sf.)	N/A	~8,700 sf.	872 sf.	Compliant
	Active (If separate)					
	Passive (If separate)					
12.K; Tree Manual	Sidewalk & Street Trees	1 med. street tree required per 30 ft. of frontage; 1 sm. tree required per 20 ft. of frontage	N/A	0	2 med. & 3 sm. trees on Taylor St (119.74 ft. frontage); 1 med. & 1 sm. tree on Mission St (50 ft. frontage)	Compliant
	Existing	0				
	Proposed	7				
	Total	7				
12.L	EV Charging & Reserved Spaces	3	1 (because only 19 parking spaces required)	0	1	Compliant if 7.3 historic bonus
7.G	Fence height	Max. 6 ft. front & side yards	Max. 6 ft. front & side yards	Compliant	Compliant	Compliant

Parking Management Plan – 12-18 Taylor Street

OVERVIEW

This plan outlines the proposed operation and management of the parking spaces that will support the development to be located at 12 – 18 Taylor Street, Stamford, Connecticut. The development is located in the R-MF Multi-Family Residence Design District. 12 Taylor Street currently contains a two-family house and 18 Taylor Street currently contains a historic three-family house originally built in 1890. The owner, G&T Taylor Street LLC (“G&T” or the “Owner”) seeks to maintain, restore, and beautify the historic structure at 18 Taylor and infill the combined project site with 13 new units of housing and landscaped common areas. The site will include 18 residential units in total with associated amenities. The unit mix will consist of 15 two-bedroom units and 3 three-bedroom units.

Parking for these uses, as specified further in the site plan prepared by RVDI, will be accommodated by 22 parking spaces and 1 electric vehicle parking space (22.5 parking spaces). This includes one van-accessible space, meeting the requirements of the Americans with Disabilities Act of 1990. Each of the 13 newly constructed units will be provided a one-car garage.

EXISTING DEMAND DATA

The site is anticipated to generate a demand of 19 parking spaces based on the 18 dwelling units. The parking demand was calculated for a general urban/suburban site within a half-mile of rail transit, due to the site’s proximity to the Stamford Transportation Center. All parking demand generated by the proposed residential units are anticipated to be accommodated by the proposed 22.5 off-street parking spaces.

The site has also been awarded a Walk Score of 83 “Very Walkable”, a Transit Score of 74 “Excellent Transit”, and a Bike Score of 69, according to walkscore.com.

PARKING OPERATIONS

The rent structure of the residential units is proposed to be “bundled” with regard to parking. Each of the units will automatically include one “free” assigned parking space (which for each of the 13 newly constructed units will be in its garage, and for each of the 5 existing units will be a designated off-street surface space). On-site visitor parking will also be provided, as well as on-street public parking adjacent to both the east and west sides of the site, on Taylor Street and Mission Street respectively.

TRAFFIC FLOW

The site will have a two-way entrance and exit on Taylor Street between the currently existing 12 and 18 Taylor Street buildings. The site will also contain a one-way exit on to Mission Street. This exit on Mission Street will permit entrance by firetrucks and other emergency vehicles only.

The curb cut for the Taylor Street entrance and exit will be 20 feet wide, and the curb cut for the Mission Street exit will also be 20 feet wide, per instructions from the Stamford Fire Marshal. Large trucks and deliveries will access the site from the entrance on Taylor Street and exit the site from the Mission Street exit. The Applicant submitted a Fire Truck Turning Radius template prepared by its engineers at RVDI, which demonstrated to the Fire Marshal's satisfaction that a fire truck will be able to navigate the site.

DEMAND MANAGEMENT STRATEGIES

Public Parking

In addition to the on-site parking provided, the site also has access to public street parking on both the west side of the site on Taylor Street, and the east side of the site on Mission Street. The currently existing southernmost driveway and curb cut at 18 Taylor Street is also proposed to be removed, resulting in the addition of one on-street parking space.

Public Transportation

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

Connecticut Transit also has multiple stops in the area surrounding the site, include the 321 (West Avenue) bus line, which has a stop on Richmond Hill Avenue and Taylor Street, and the 324 (Fairfield Avenue) line.

Additionally, Uber, Lyft, and others provide corporate and personal ride sharing programs that are utilized by area residents.

Bicycle Parking

To encourage ridership as an alternate means of travel and as an amenity to the building residents, a bicycle rack accommodating 4 bikes will be provided on the site behind "Building A" (18 Taylor). Tenants in the newly constructed 13 units will also have the option to store their bikes in the garages.

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11/21/2023

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	Passive (If separate)					
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