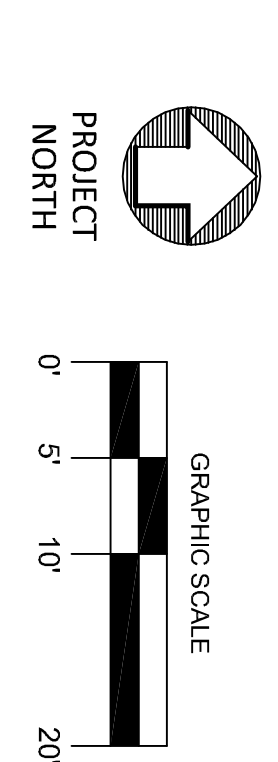
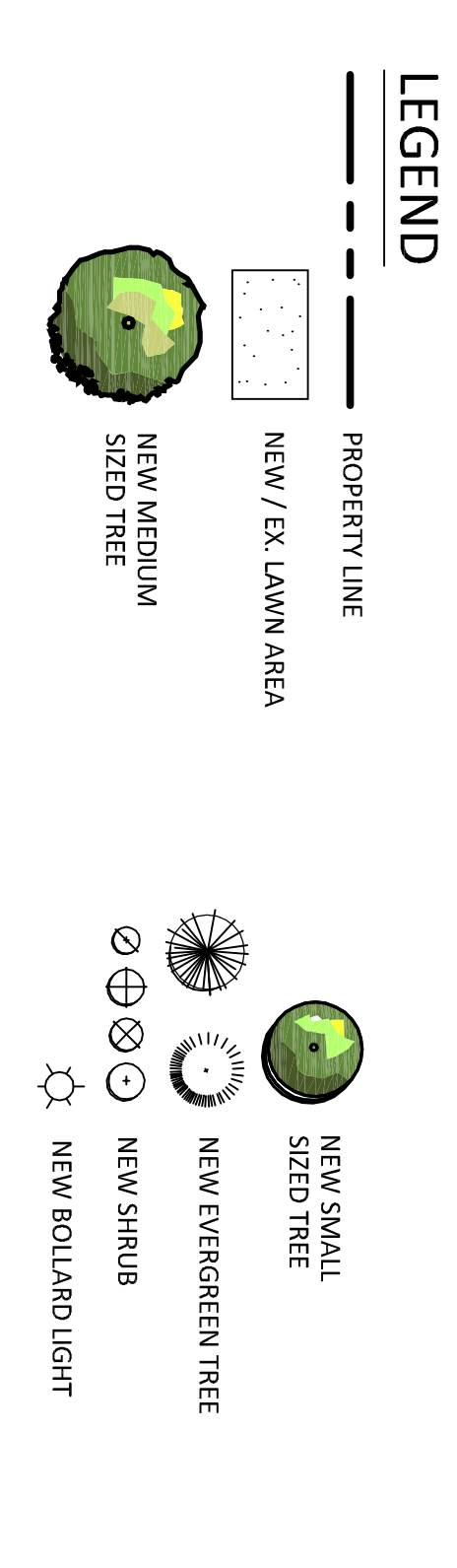


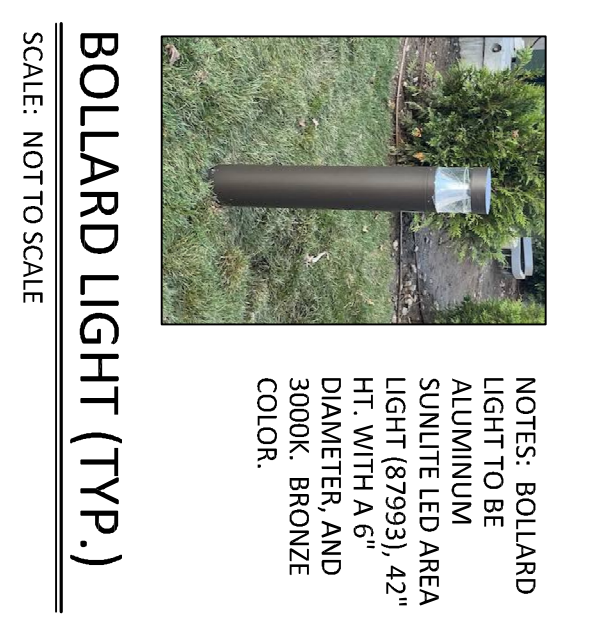
PLANT LIST

QTY	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS	PLANTING HT.	MATURE HT.
4	DH	BETULA NIGRA DURA HEAT	DURA HEAT BIRCH	9-10' HT.	B&B	MULTITRIM	9-10' HT.	25-30' HT.
4	YW	CLADRASTIS LUTEA	YELLOWWOOD	2-2 1/2" CAL.	B&B	MEDIUM TREE SIZE	10-12' HT.	25-30' HT.
1	BB	MAGNOLIA GRAND 'BRACKEN'S BEAUTY'	BRACKEN'S BEAUTY MAGNOLIA	5-6' HT.	B&B	EVERGREEN	5-6' HT.	15-18' HT.
4	TL	SPRINGA RETICULATA 'NOVY SILK'	NOVY SILK TREE LILAC	2-2 1/2" CAL.	B&B	SMALL TREE SIZE	10-12' HT.	20-25' HT.
3	IO	ILEX OPACA	AMERICAN HOLLY	5-6' HT.	B&B	EVERGREEN, NATIVE	5-6' HT.	18-20' HT.
20	TO	THUJA OCCIDENTALIS 'EMERALD GREEN'	EMERALD GREEN ARBORVITAE	4-5' HT.	B&B	EVERGREEN	4-5' HT.	5-6' HT.
1	CA	CLETHRA ALNIFOLIA 'RUBY SPICE'	RUBY SPICE CLETHRA	3-4' HT.	CONT.	NATIVE, FRAGRANT	2.5' HT.	4' HT.
22	HA	HYDRANGEA ARBORESCENS 'ANNABELLE'	ANNABELLE HYDRANGEA	2-3' HT.	CONT.	WHITE FLOWERS	2.5' HT.	3-4' HT.
8	HY	HYDRANGEA 'THE ORIGINAL'	THE ORIGINAL HYDRANGEA	2-3' HT.	CONT.	BLUE FLOWERS	2.5' HT.	4.5' HT.
9	FP	HYDRANGEA 'FOREVER PINK'	FOREVER PINK HYDRANGEA	2-3' HT.	CONT.	PINK FLOWERS	2.5' HT.	4.5' HT.
1	IC	ILEX CREMATA 'CHESAPEAKE'	CHESAPEAKE HOLLY	3-4' HT.	B&B	NATIVE, EVERGREEN	3.5' HT.	6-7' HT.
9	LA	LEICOTHEA AXILLARIS 'SABAH'S CHOICE'	SABAH'S CHOICE LEICOTHEA	2-3' HT.	CONT.	EVERGREEN	4' HT.	4.5' HT.
1	RC	RHOODODENDRON 'CHIRONIDES'	CHIRONIDES RHOODODENDRON	36-42" HT.	B&B	EVERGREEN	3.5' HT.	4.5' HT.
1	RH	RHOODODENDRON 'ENGLISH ROSEUM'	ENGLISH ROSEUM RHOODODENDRON	42-48" HT.	B&B	EVERGREEN	4.5' HT.	7-8' HT.
11	SB	SPRAEA 'SHIROBANK'	SHIROBANK SPRAEA	24-30" HT.	CONT.	PINK/WHITE FLOWERS	2' HT.	3-4' HT.
1	SV	SPRINGA VULGARIS 'CONGO'	CONGO LILAC	24-30" HT.	CONT.	PINK/WHITE FLOWERS	2' HT.	3-4' HT.
165	LR	LIRIOPE PURPUREA 'ROYAL PURPLE'	ROYAL PURPLE LIRIOPE	4-5' HT.	B&B	PERENNIAL, EVERGREEN	4.5' HT.	8-10' HT.
58	HR	HAPPHY RETURNUS DAUTLEY	HAPPHY RETURNUS DAUTLEY	1 GAL.	B&B	PERENNIAL	2' HT.	3-4' HT.
63	SG	PANICUM VIRGATUM 'HANSE HERMS'	HANSE HERMS SWITCHGRASS	1 GAL.	B&B	NATIVE GRASS	4.5' HT.	8-10' HT.



STREET TREE CHART

STREETSCAPE AREA	TOTAL STREET FRONTAGE (LF)	REQUIRED STREET TREES (FRONTAGE/25)	STREET TREES EXISTING	STREET TREES PROPOSED	NUMBER OF STREET CORNERS	TREES SUBJECT TO FE PAVEMENT (STREET TREES REQUIRED - STREET TREES EXISTING - STREET TREES PROVIDED - CORNERS)	FEES IN FIELD REQUIRED (\$3500 PER TREE SUBJECT TO FE PAVEMENT)
TAYLOR STREET	119.8'	4.8	0	5	0	(4.8 - 0 - 5 - 0 = -0.2)	\$0
MISSION STREET	50.0'	2.0	0	2	0	(2.0 - 0 - 2 - 0 = 0.0)	\$0
SUBTOTAL:							\$0



- ### NOTES:
- EXISTING AND PROPOSED SITE INFORMATION TAKEN FROM A DIGITAL AERIAL PHOTOGRAPHY PLAN SUPPLIED BY ROKCO V. D'AMONDO, INC.
 - EXACT LOCATION OF PROPOSED PLANTINGS AND SPECIES REVISIONS AND/OR ACTUAL FIELD CONDITIONS.
 - PLANT SPECIES SUBSTITUTIONS MAY BE MADE WITH THE APPROVAL OF THE PROJECT LANDSCAPE ARCHITECT PRIOR TO PLANTING. SUBSTITUTED PLANTS SHALL BE AT AN EQUAL OR GREATER SIZE AS NOTED USING A SIMILAR TYPE PLANT.
 - THIS PLAN FOR PLANTING PURPOSES ONLY. SEE PLANS BY OTHERS FOR ADDITIONAL INFORMATION.

NOTES (CONT.):

- PLANTING METHODS SHALL BE IN ACCORDANCE WITH THE AMERICAN STANDARDS FOR WOODSURY SITES (ANSI Z60.1-2012) AND THE AMERICAN NATIONAL LANDSCAPE ASSOCIATION.
- THE CONTRACTOR SHALL VERIFY WITH THE PROJECT ENGINEER THAT THE NEW PLANTINGS DO NOT INTERFERE WITH EXISTING AND/OR PROPOSED UTILITIES, SIGHT LINES, AND/OR STRUCTURES.
- SPRAY NEW PLANTINGS IMMEDIATELY AFTER INSTALLATION WITH A WHITE-TAILED DEER REPELLENT AND CONTINUE AS NEEDED TO REPEL WHITE-TAILED DEER FROM SIGNIFICANT DIER BROWSING.

REV.	DATE	DESCRIPTION
4	9.25.23	REV. STREET TREE CHART
3	9.21.23	REV. SITE PLAN
2	7.28.23	REV. PARKING
1	7.18.23	ADD ADDITIONAL STREET TREES AND STREET TREE CHART

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

PROJECT: G&T TAYLOR STREET LLC
12, 16, & 18 TAYLOR STREET
STAMFORD, CONNECTICUT

DATE: 6.29.23
SCALE: 1"=10'
DRAWING NO.: LP.1

SITE PLAN REVIEW SET

" RESIDENTIAL DEVELOPMENT "

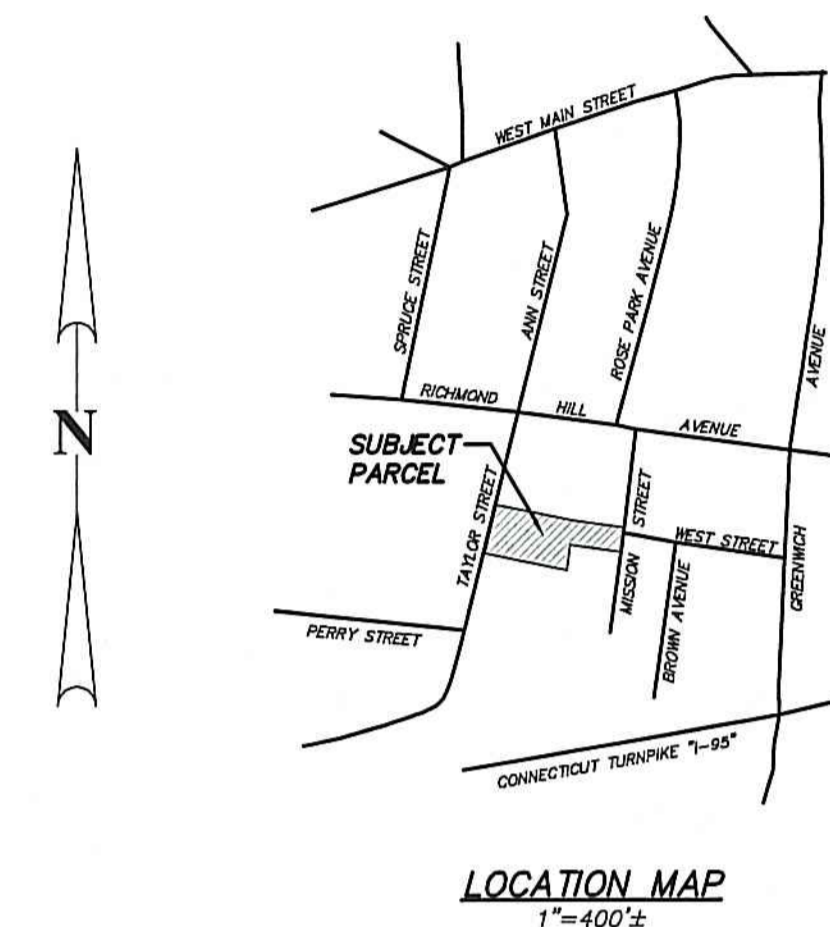
LOCATION

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 12385 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	2	9-21-23
2 OF 5	UTILITY PLAN	2	9-21-23
3 OF 5	SEDIMENTATION & EROSION CONTROL PLAN	2	9-21-23
4 OF 5	NOTES & DETAILS	2	9-21-23
5 OF 5	DETAILS	2	9-21-23

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

PROJECT: RESIDENTIAL DEVELOPMENT

PREPARED FOR: G&T TAYLOR STREET LLC

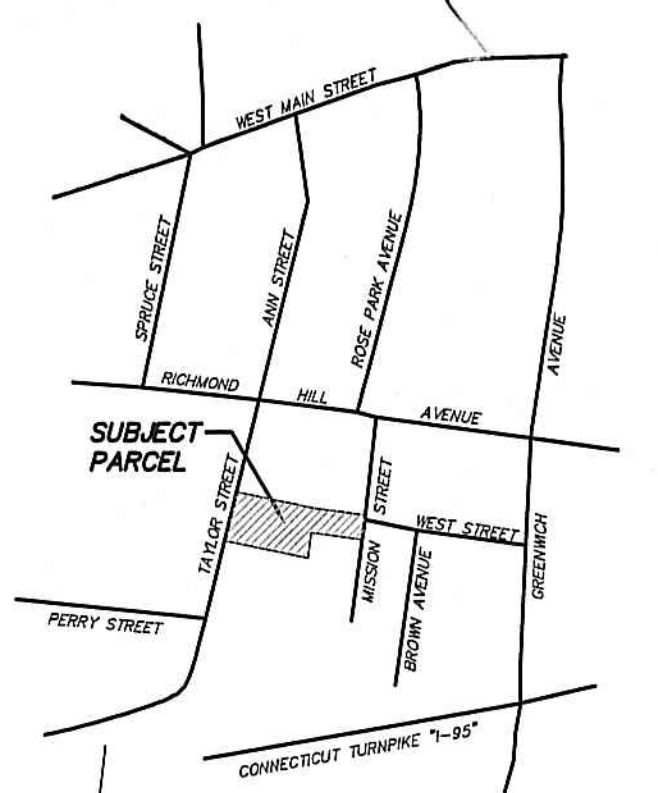
LOCATION: 12 & 18 TAYLOR STREET STAMFORD, CONNECTICUT

PLAN SET PREPARED BY:

Leonard C. D'Andrea
D'ANDREA SURVEYING & ENGINEERING, P.C. 9-21-23
LEONARD C. D'ANDREA CT. PE No. 14869 DATE

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

REV.	DATE	DESCRIPTION
2	9-21-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION



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

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

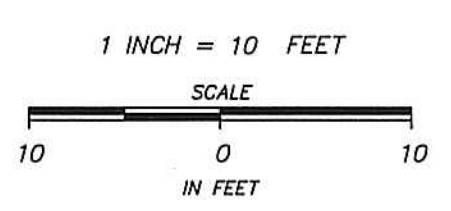
ONLY COPIES OF THIS MAP, BEARING AN ORIGINAL IMPRINT OF THE SURVEYOR'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.

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. 9873
 RIVERSIDE, CONNECTICUT
 MAY 2, 2023
 SEPTEMBER 21, 2023

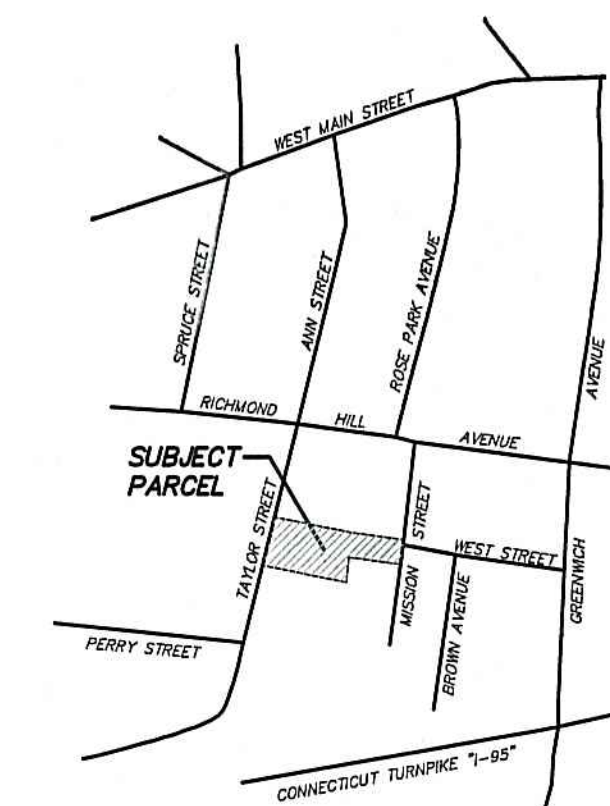
- SYMBOL LEGEND**
- SDMH ○ STORM DRAIN MANHOLE
 - SSMH ○ SANITARY SEWER MANHOLE
 - UTILITY POLE
 - WG ○ WATER GATE
 - 24 — ELEVATION CONTOURS
 - 24.4 X SPOT ELEVATION
 - DECIDUOUS TREE
 - CONIFEROUS TREE
 - HEDGE
 - G — APPROXIMATE LOCATION OF UNDERGROUND UTILITIES: W-WATER AND G-GAS
- BUILDING COVERAGE**
- 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'



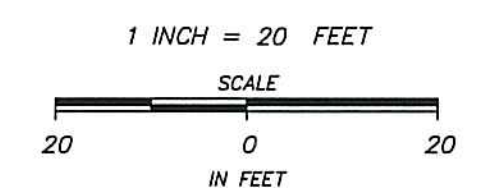
D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 P.O. BOX 549 RIVERSIDE, CT 06878
 6 NEIL LANE TEL. 637-1779

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

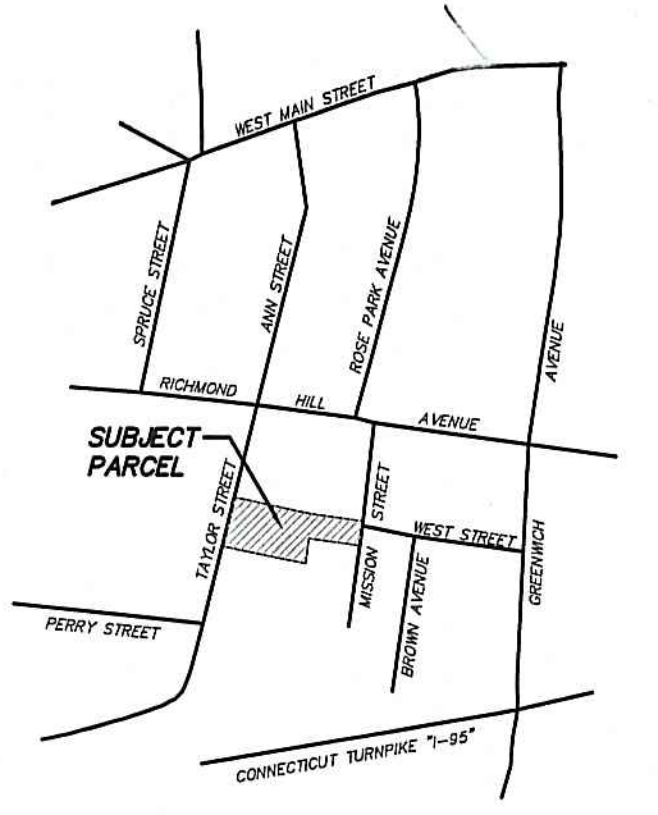
REV.	DATE	DESCRIPTION
1	9-20-23	RESPOND TO ENG COMMENTS
0	5-2-23	INITIAL SUBMISSION

LEONARD C. D'ANDREA CT. PE No. 14869
Leonard C. D'Andrea
 ENGINEER DATE 9-20-23

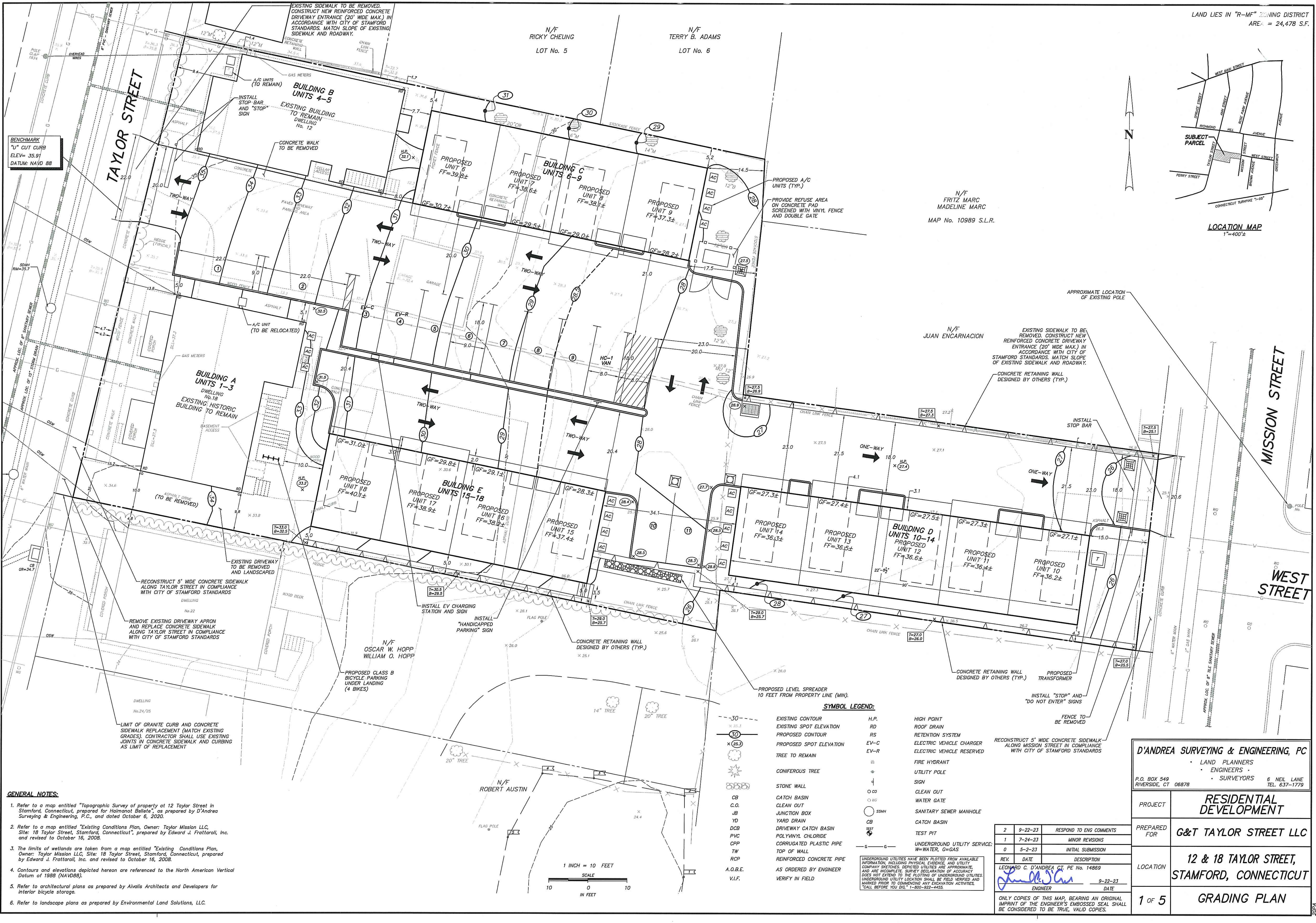
ONLY COPIES OF THIS MAP, BEARING AN ORIGINAL IMPRINT OF THE ENGINEER'S EMBOSSED SEAL SHALL BE CONSIDERED TO BE TRUE, VALID COPIES.



D:\2023\18 TAYLOR ST. 01 REVISED.dwg (AutoCAD)

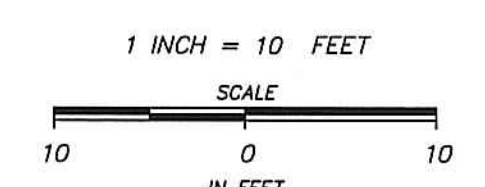


LOCATION MAP
 1"=400'



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

- GENERAL NOTES:**
1. Refer to a map entitled "Topographic Survey of property at 12 Taylor Street in Stamford, Connecticut, prepared for Halimona Bellini", 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. Frattaroli, 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. Frattaroli, Inc. and revised to October 16, 2008.
 4. Contours and elevations depicted hereon are referenced to the North American Vertical Datum of 1988 (NAVD88).
 5. Refer to architectural plans as prepared by Aivalis 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	EXISTING SPOT ELEVATION	RD	ROOF DRAIN
-30-	PROPOSED CONTOUR	RS	RETENTION SYSTEM
x 35.3	PROPOSED SPOT ELEVATION	EV-C	ELECTRIC VEHICLE CHARGER
(T)	TREE TO REMAIN	EV-R	ELECTRIC VEHICLE RESERVED
(T)	CONIFEROUS TREE	(H)	FIRE HYDRANT
(S)	STONE WALL	(U)	UTILITY POLE
CB	CATCH BASIN	(C)	CLEAN OUT
C.O.	CLEAN OUT	(W)	WATER GATE
JB	JUNCTION BOX	(S)	SANITARY SEWER MANHOLE
YD	YARD DRAIN	CB	CATCH BASIN
DCB	DRIVEWAY CATCH BASIN	(P)	TEST PIT
PVC	POLYVINYL CHLORIDE	(G)	UNDERGROUND UTILITY SERVICE: W= WATER, G= GAS
CPP	CORRUGATED PLASTIC PIPE		
TW	TOP OF WALL		
RCF	REINFORCED CONCRETE PIPE		
A.O.B.E.	AS ORDERED BY ENGINEER		
V.I.F.	VERIFY IN FIELD		

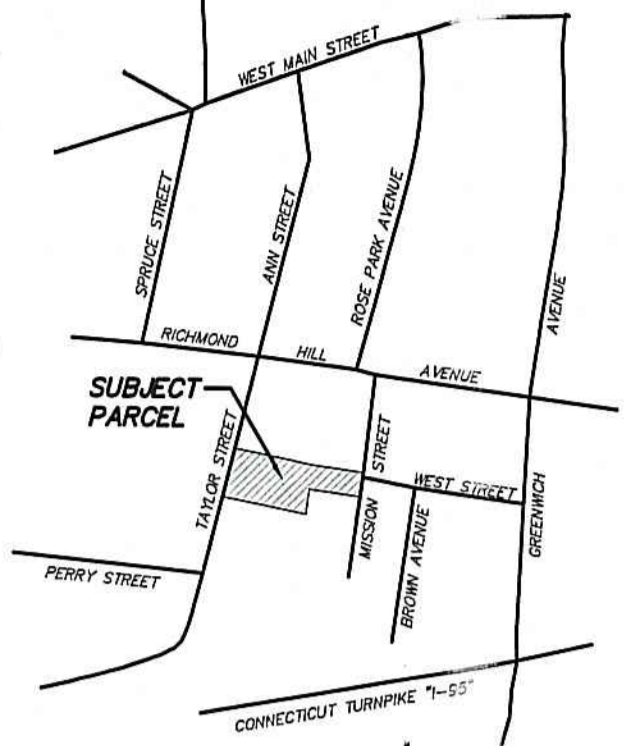
D'ANDREA SURVEYING & ENGINEERING, PC
 LAND PLANNERS
 ENGINEERS
 SURVEYORS

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 5	GRADING PLAN

REV.	DATE	DESCRIPTION
2	9-22-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION
REV.	DATE	DESCRIPTION
	9-22-23	LEONARD C. D'ANDREA, P.E. No. 14859
		ENGINEER

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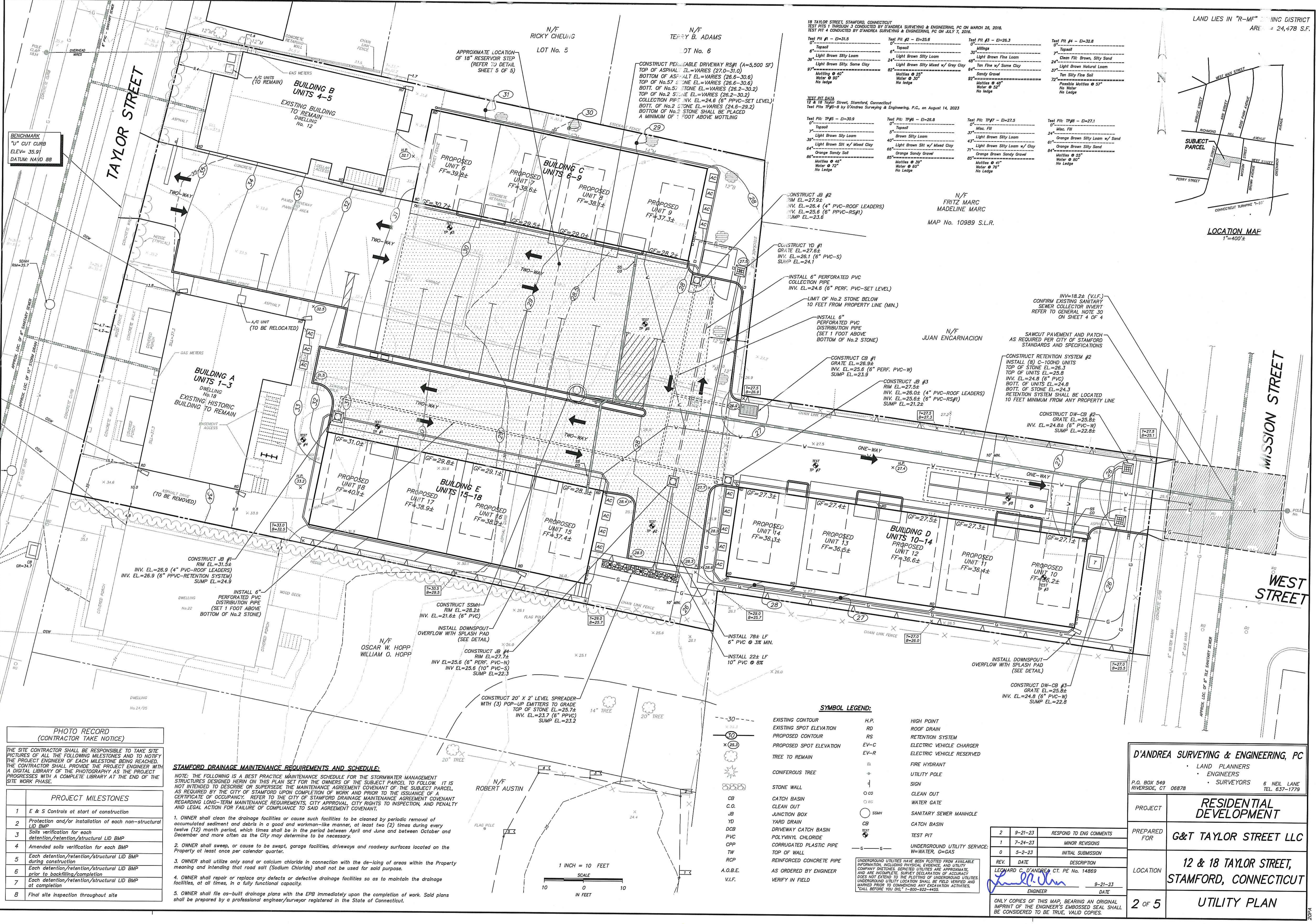
LOCATION MAP
1"=400'

18 TAYLOR STREET, STAMFORD, CONNECTICUT
TEST PITS 1 THROUGH 3 CONDUCTED BY D'ANDREA SURVEYING & ENGINEERING, PC ON MARCH 26, 2016.
TEST PIT 4 CONDUCTED BY D'ANDREA SURVEYING & ENGINEERING, PC ON JULY 7, 2016.

Test Pit #1 - E=31.5 0" Topsoil 6" Light Brown Silty Loam 36" Light Brown Silty, Some Clay 97" Mottling @ 90" Water @ 90" No Ledger	Test Pit #2 - E=25.6 0" Topsoil 24" Light Brown Silty Loam 48" Light Brown Silty Mixed w/ Gray Clay 82" Mottling @ 25" Water @ 30" No Ledger	Test Pit #3 - E=26.3 0" Topsoil 30" Millings 48" Light Brown Fine Loam 64" Tan Fine w/ Some Clay 84" Sandy Gravel 92" Mottling @ 40" Water @ 52" No Ledger	Test Pit #4 - E=32.8 0" Topsoil 30" Clean Fill, Brown, Silty Sand 24" Light Brown Natural Loam 37" Tan Silty Fine Sand 72" Possible Mottling @ 57" No Water No Ledger
---	--	--	--

TEST PIT DATA
12 & 18 Taylor Street, Stamford, Connecticut
Test Pits TP#5-8 by D'Andrea Surveying & Engineering, P.C., on August 14, 2023

Test Pit: TP#5 - E=30.9 0" Topsoil 39" Light Brown Silty Loam 66" Orange Sandy Soil 86" Mottling @ 40" Water @ 72" No Ledger	Test Pit: TP#6 - E=36.8 0" Topsoil 37" Brown Silty Loam 40" Light Brown Silty w/ Mixed Clay 68" Orange Sandy Gravel 85" Mottling @ 39" Water @ 60" No Ledger	Test Pit: TP#7 - E=27.5 0" Misc. Fill 37" Light Brown Silty Loam 43" Light Brown Silty Loam w/ Clay 71" Orange Brown Silty Sand 85" Mottling @ 41" Water @ 70" No Ledger	Test Pit: TP#8 - E=27.1 0" Misc. Fill 37" Light Brown Silty Loam 61" Orange Brown Silty Loam w/ Sand 84" Orange Brown Silty Sand Mottling @ 80" Water @ 80" No Ledger
--	---	---	--



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

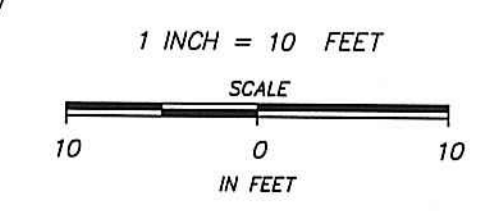
STAMFORD DRAINAGE MAINTENANCE REQUIREMENTS AND SCHEDULE.

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. Sold 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	EXISTING SPOT ELEVATION	RD	ROOF DRAIN
⊙ 30.5	PROPOSED CONTOUR	RS	RETENTION SYSTEM
⊙ 30.5	PROPOSED SPOT ELEVATION	EV-C	ELECTRIC VEHICLE CHARGER
⊙ 30.5	TREE TO REMAIN	EV-R	ELECTRIC VEHICLE RESERVED
⊙ 30.5	CONIFEROUS TREE	⊙	FIRE HYDRANT
⊙ 30.5	STONE WALL	⊙	UTILITY POLE
⊙ 30.5	CATCH BASIN	⊙	SIGN
⊙ 30.5	CLEAN OUT	⊙	CLEAN OUT
⊙ 30.5	JUNCTION BOX	⊙	WATER GATE
⊙ 30.5	YARD DRAIN	⊙	SANITARY SEWER MANHOLE
⊙ 30.5	DRIVEWAY CATCH BASIN	⊙	CATCH BASIN
⊙ 30.5	POLYVINYL CHLORIDE	⊙	TEST PIT
⊙ 30.5	CORRUGATED PLASTIC PIPE	⊙	UNDERGROUND UTILITY SERVICE: W=WATER, G=GAS
⊙ 30.5	TOP OF WALL		
⊙ 30.5	REINFORCED CONCRETE PIPE		
⊙ 30.5	AS ORDERED BY ENGINEER		
⊙ 30.5	VERIFY IN FIELD		



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

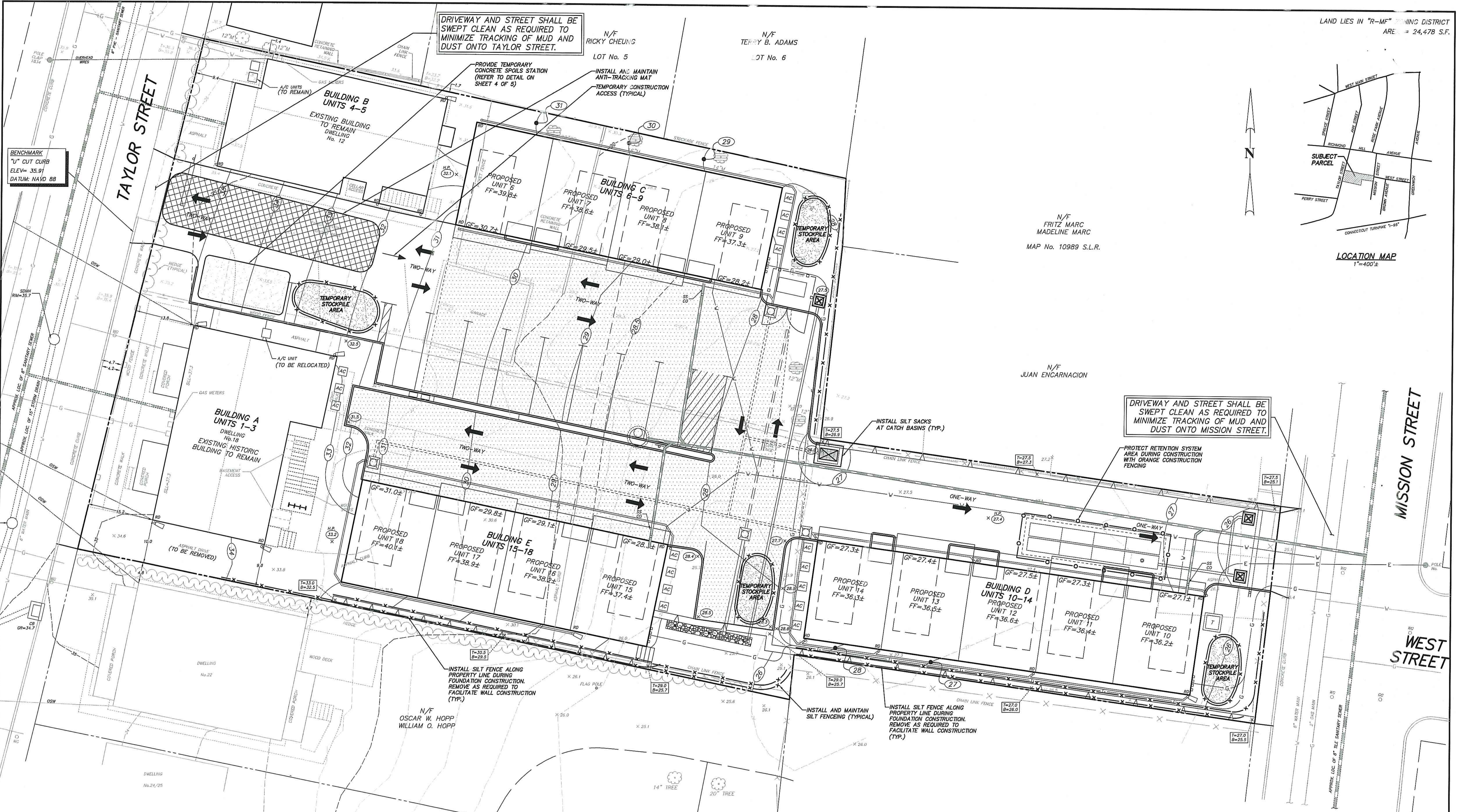
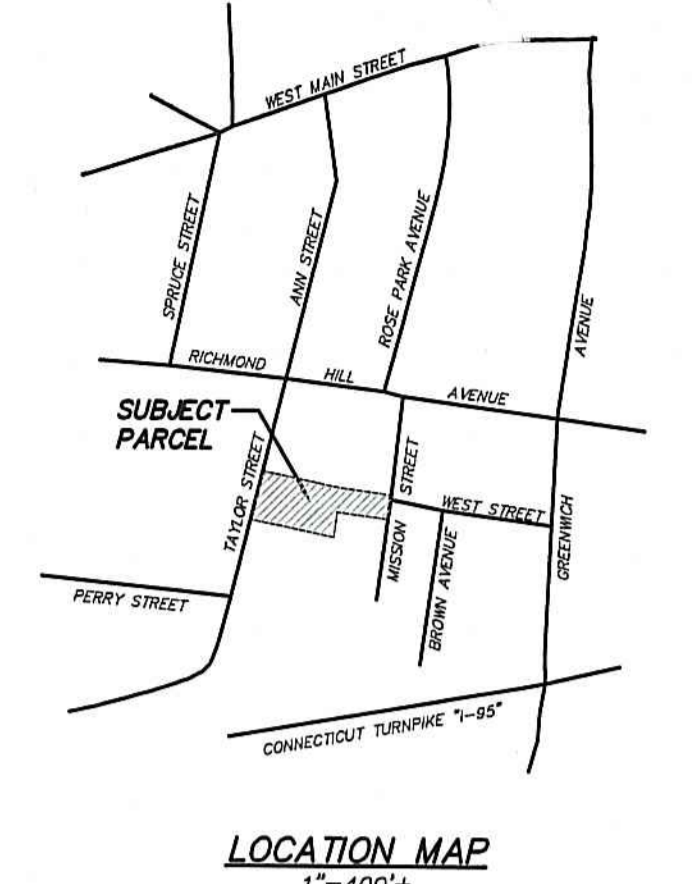
PROJECT	RESIDENTIAL DEVELOPMENT	
PREPARED FOR	G&T TAYLOR STREET LLC	
LOCATION	12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT	
2 OF 5	UTILITY PLAN	

REV.	DATE	DESCRIPTION
2	9-21-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION

REV. DATE DESCRIPTION
LEONARD C. D'ANDREA, CT. PE No. 14869
Leonard C. D'Andrea
ENGINEER DATE 9-21-23

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



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

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

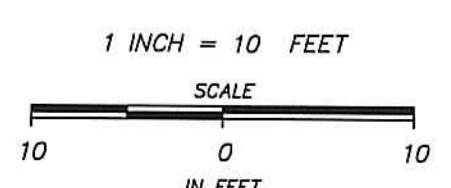
DRIVEWAY AND STREET SHALL BE
SWEEP CLEAN AS REQUIRED TO
MINIMIZE TRACKING OF MUD AND
DUST ONTO MISSION STREET.

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.
8. Sediment or debris shall be removed from the drainage pipes and structures as it accumulates during construction. It shall be disposed of in a manner which is consistent with the intent of this plan.
9. The contractor may provide alternate means of sediment control, but he may not eliminate placement of protection in the areas indicated hereon.
10. Sediment fencing shall be installed where required prior to commencing construction, and shall remain in place for the duration of the project. Fencing shall be Proper Silt Stop (TM) as manufactured by Amoco, or engineer approved equivalent.
11. The contractor shall re-grade, topsoil, and seed all disturbed areas immediately after construction has been completed.
12. Refer to Connecticut Guidelines for Soil Erosion and Sediment Control (2002) for additional details and specifications.
13. Additional protection measures shall be implemented should site conditions warrant them.
14. All designated trees shall be protected during the construction period, except those designated to be removed. Tree protection shall be in accordance with generally accepted standards. Refer to the Connecticut Guidelines for Soil Erosion and Sediment Control (2002) for details and specifications.

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.

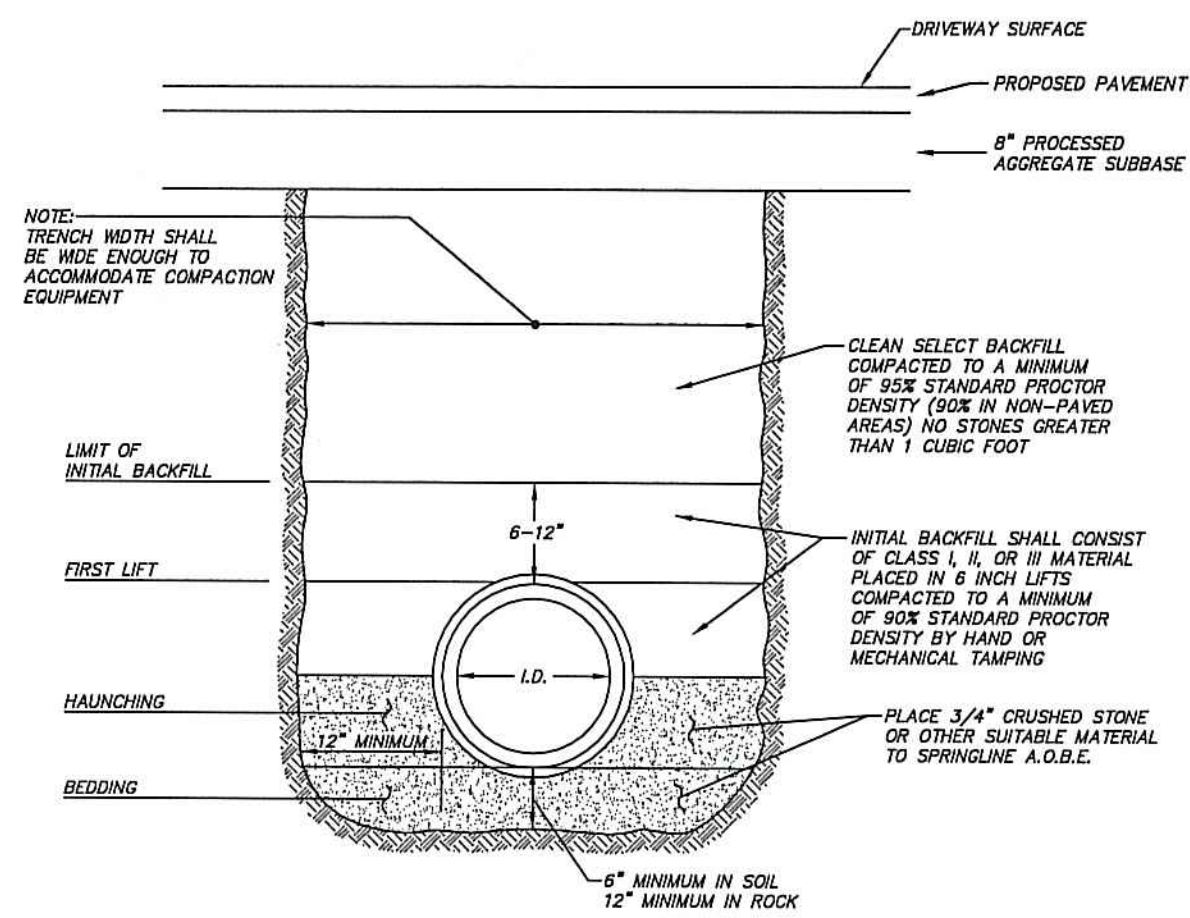


D'ANDREA SURVEYING & ENGINEERING, PC
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RIVERSIDE, CT 06878
6 NEIL LANE
TEL. 637-1778

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	

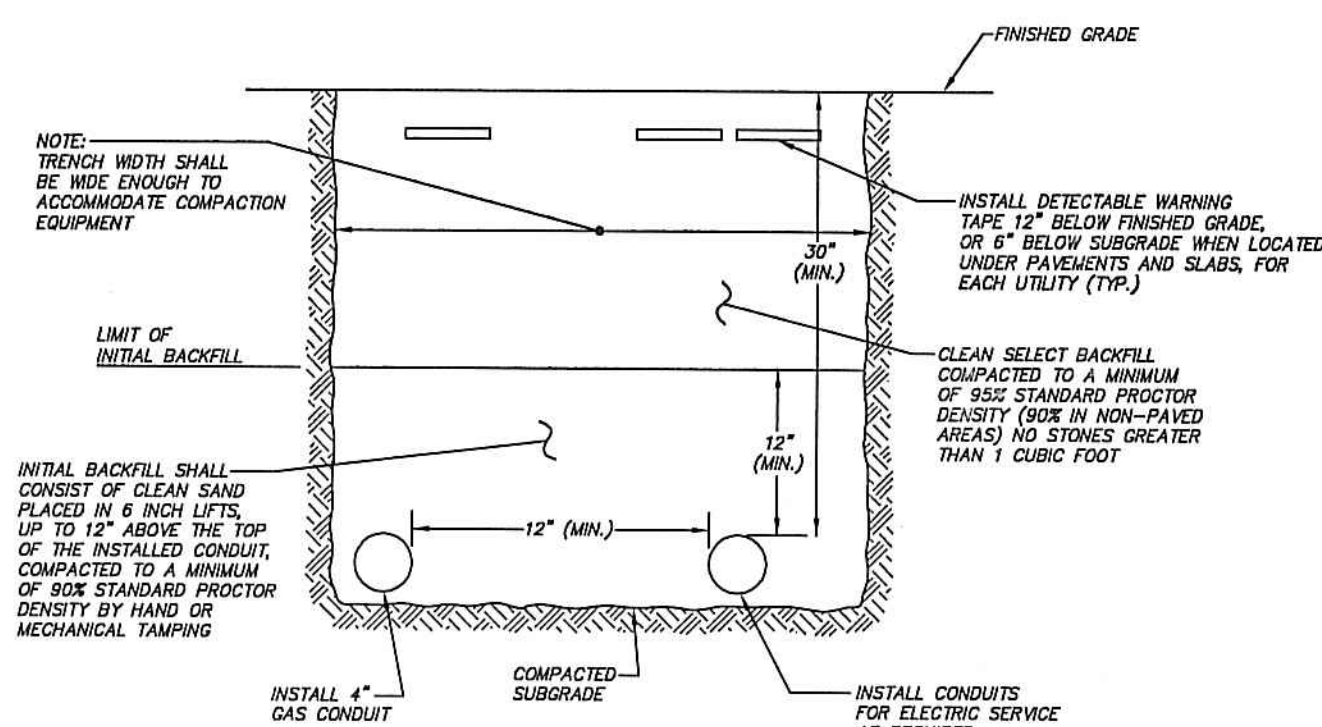
2	9-21-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION
REV.	DATE	DESCRIPTION
LEONARD C. D'ANDREA CT. PE No. 14869		
9-21-23		DATE
ENGINEER		

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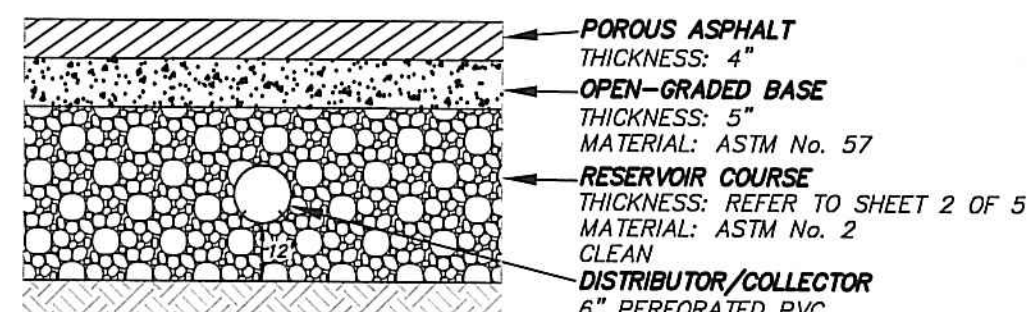
DETAIL FOR PVC SANITARY SEWER AND STORM DRAIN INSTALLATION
N.T.S.

- 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.



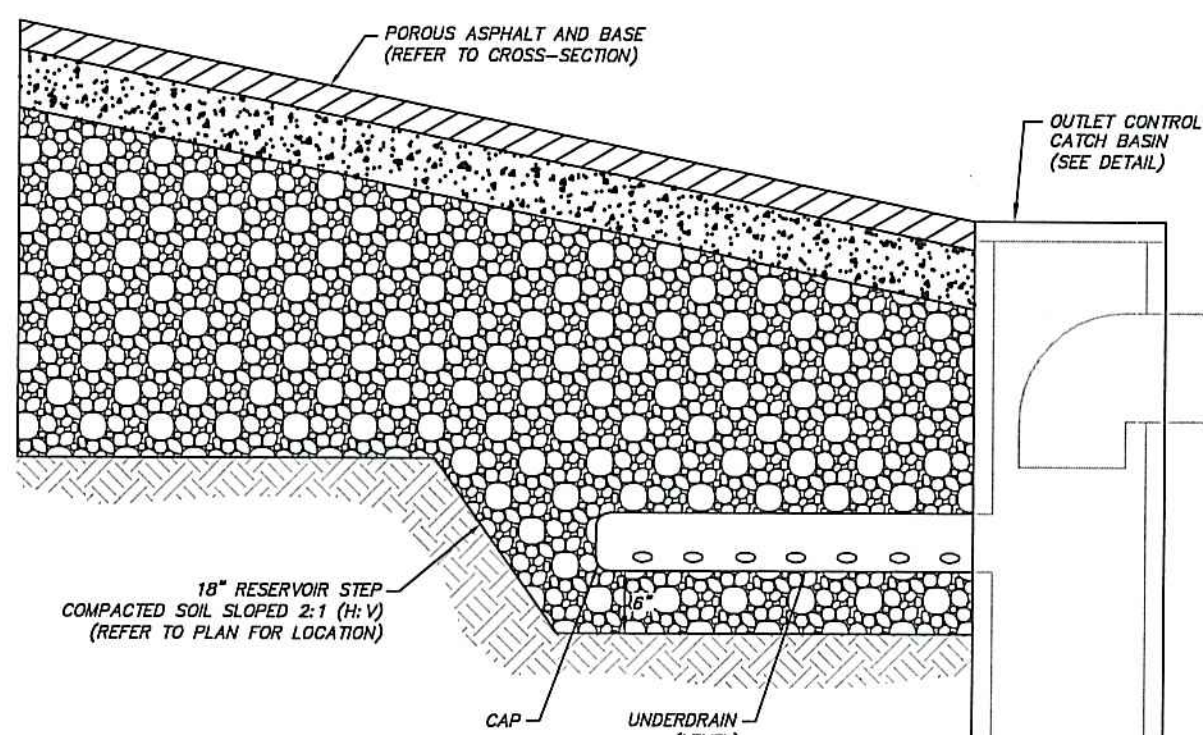
DETAIL FOR UNDERGROUND UTILITY TRENCH
N.T.S.

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



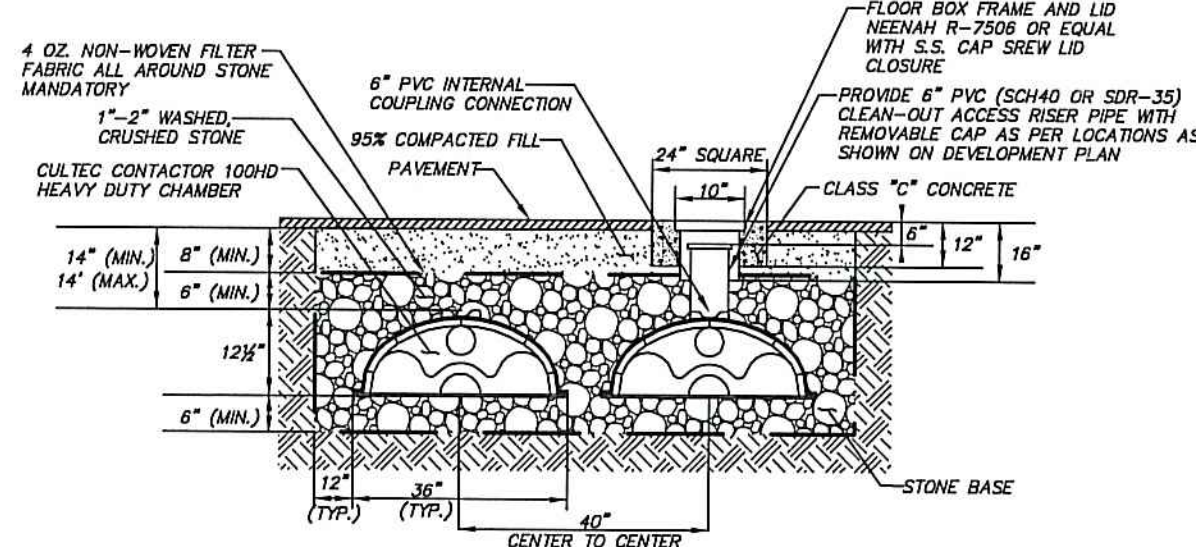
POROUS ASPHALT AND STONE RESERVOIR DETAIL
N.T.S.

- NOTES:
- 2" STONE MEETS ASTM No. 2 STANDARDS. 3/4" STONE MEETS ASTM No. 57 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 IMPERMEABLE 30 MIL POLYMER 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.



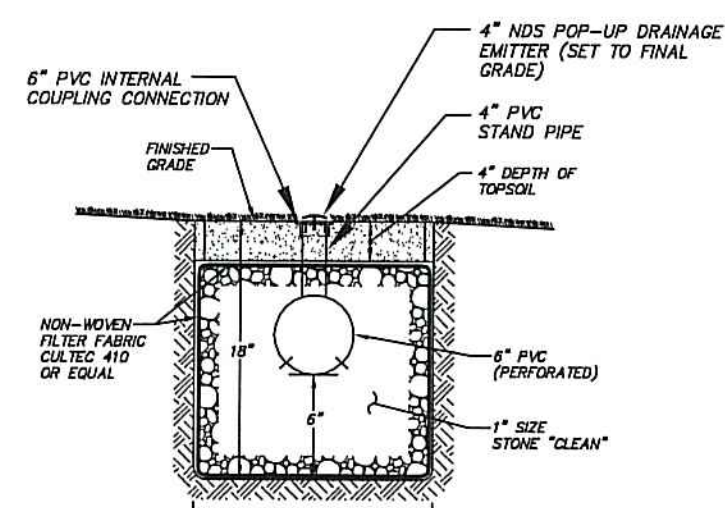
POROUS ASPHALT SYSTEM PROFILE
N.T.S.

- NOTE:
- 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.

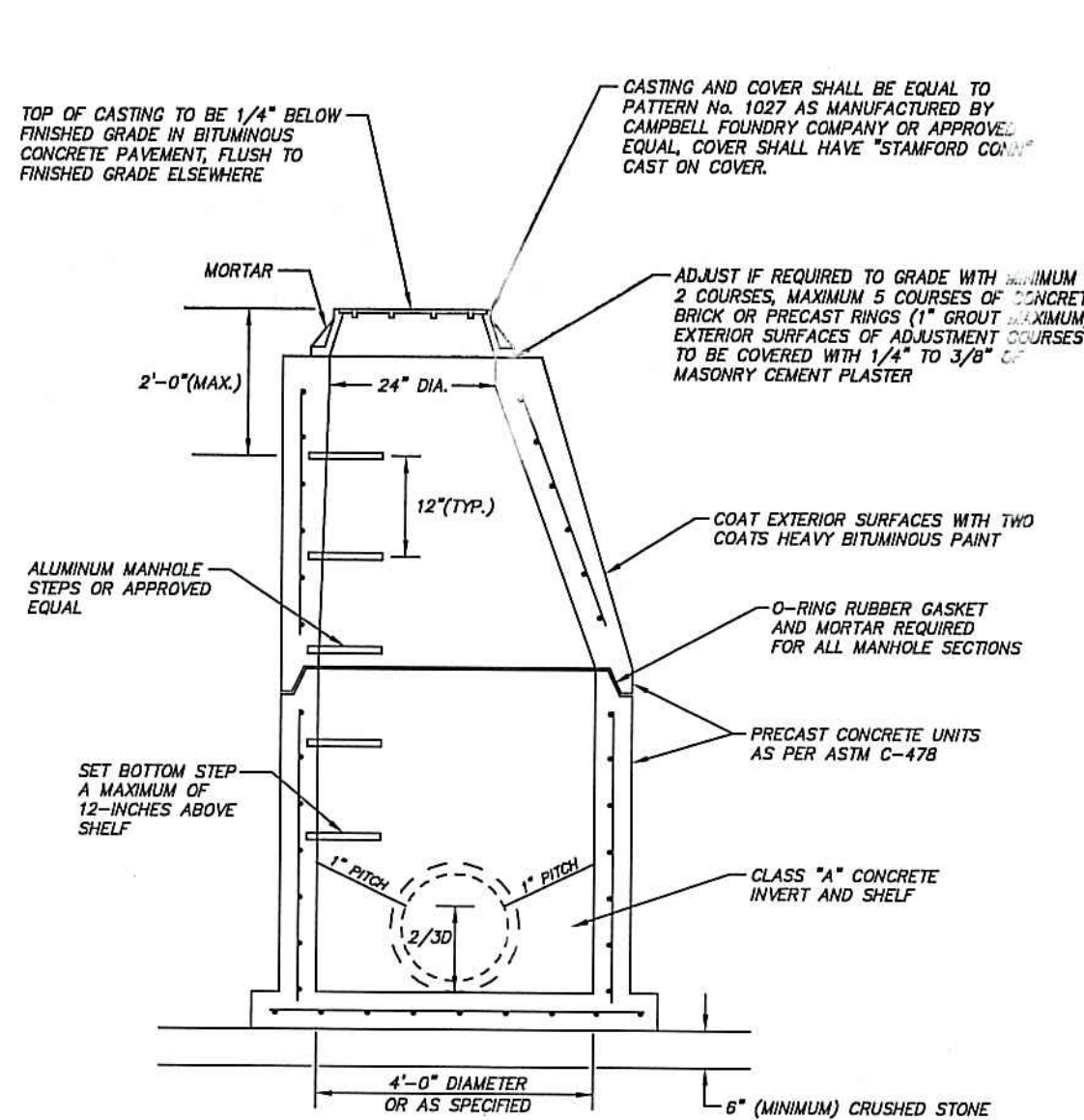


TYPICAL CROSS SECTION DETAIL CULTEC CHAMBER SYSTEM CONTACTOR 100HD PAVED (H-20) LOADING
N.T.S.

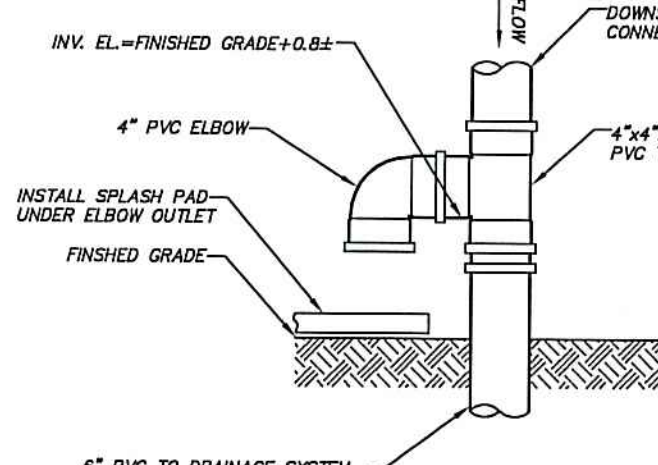
- NOTES:
- STORMWATER CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. (800) 428-5832 OR ENGINEER APPROVED EQUAL.
 - ALL CHAMBERS SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.
 - THE SOILS BENEATH THE INFILTRATION SYSTEM SHALL BE SCARIFIED OR TILLED TO IMPROVE INFILTRATION.



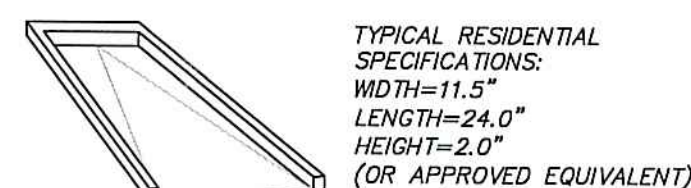
STORM WATER LEVEL SPREADER DETAIL
N.T.S.



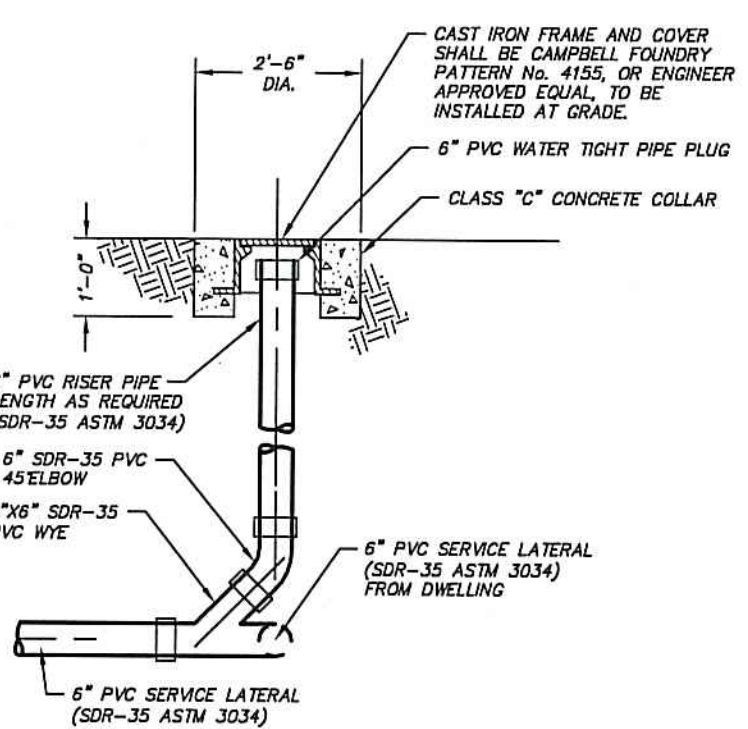
SANITARY SEWER MANHOLE DETAIL
N.T.S.



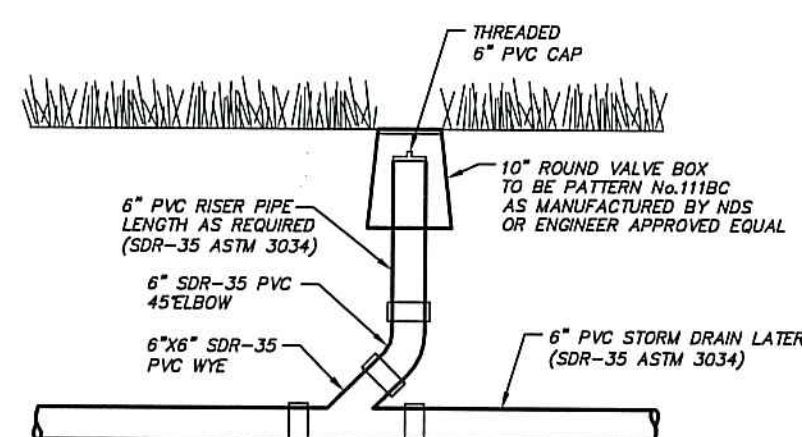
DOWNSPOUT OVERFLOW DETAIL
N.T.S.



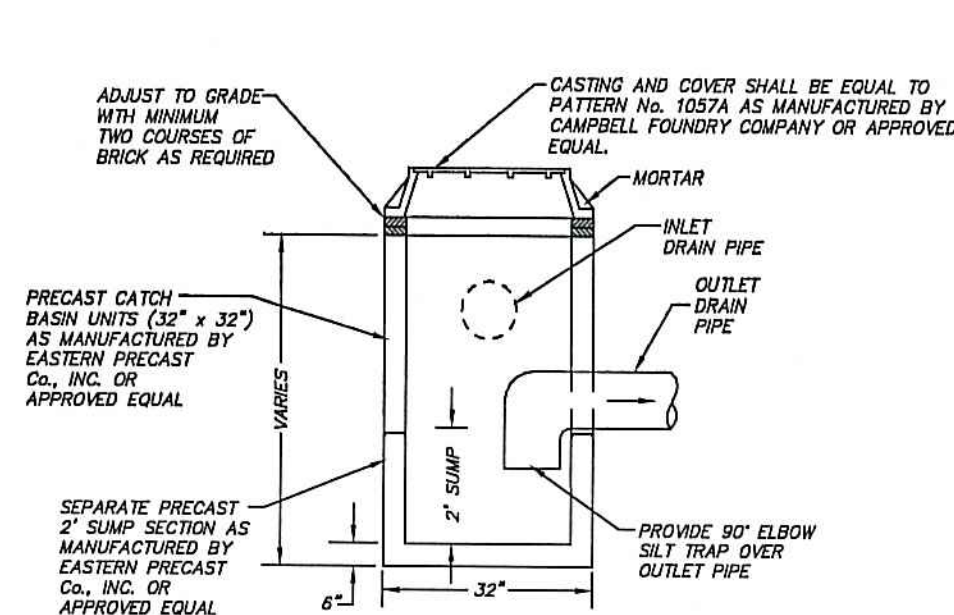
RESIDENTIAL SPLASH PAD DETAIL
N.T.S.



CLEAN OUT IN DRIVEWAY
N.T.S.

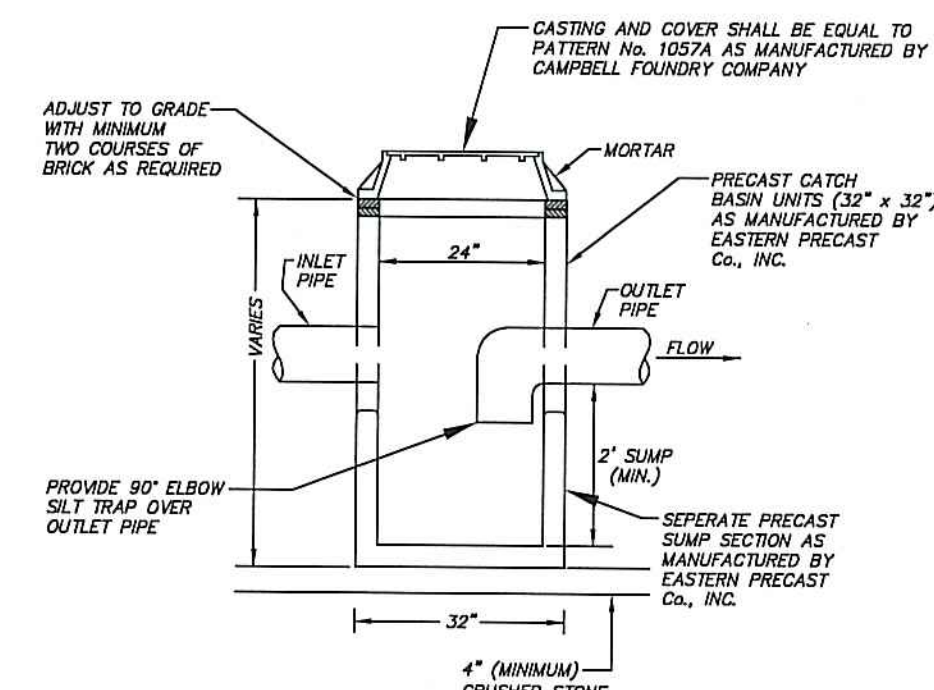


ROOF DRAIN CLEAN OUT TO GRADE DETAIL
N.T.S.



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

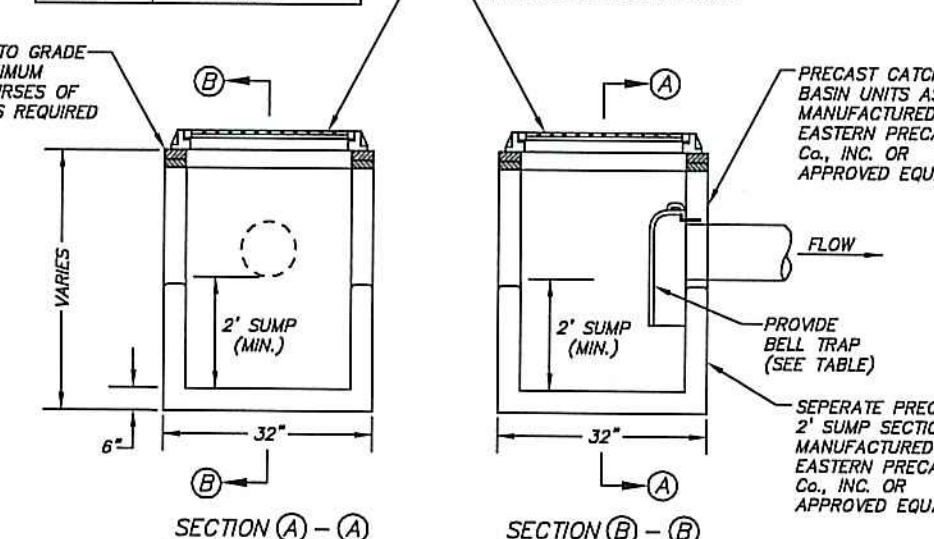
- NOTES:
- JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
 - CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION, NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.
 - REFER TO DEVELOPMENT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

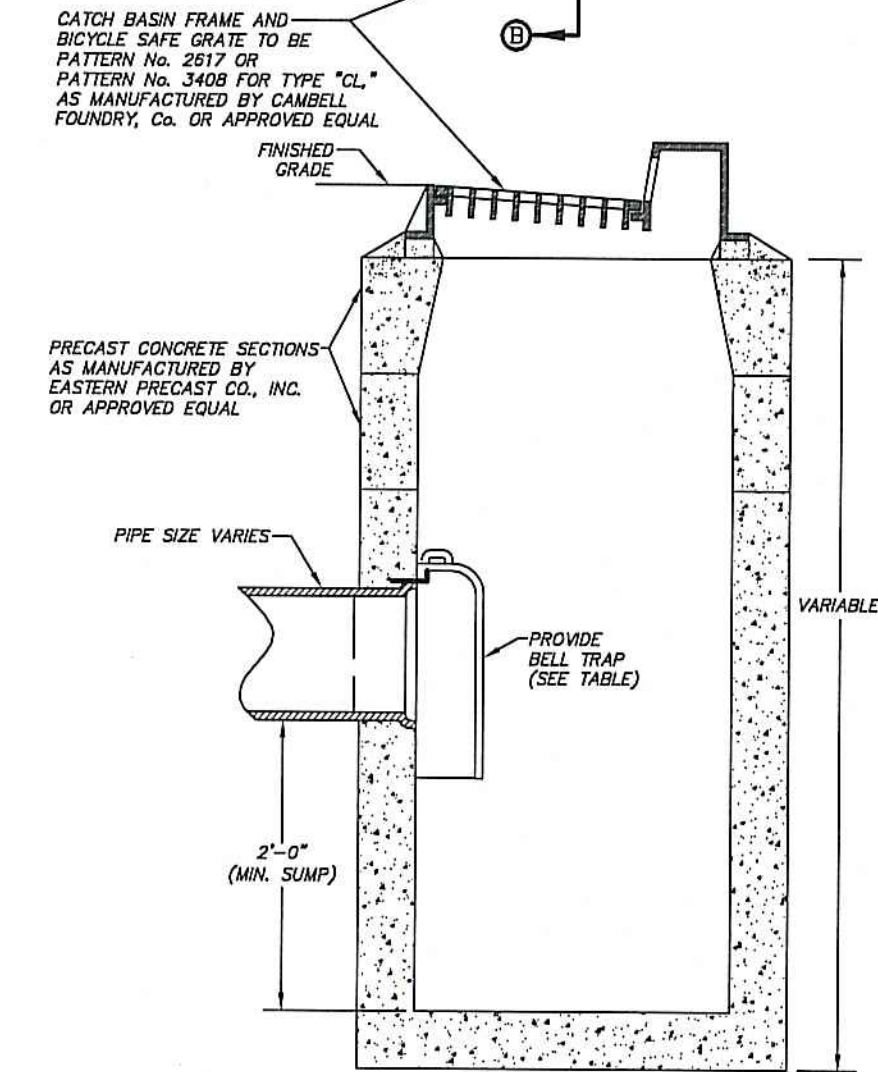
PIPE SIZE	CAMPBELL FOUNDRY PATTERN NUMBER
6"	2561
8"	2562
10"	2563
12"	2564



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.

PIPE SIZE	CAMPBELL FOUNDRY PATTERN NUMBER
6"	2561
8"	2562
10"	2563
12"	2564
15"	2565
18"	2566



SECTION "B-B" 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 ELEVATIONS OF ALL PIPES.

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LAND PLANNERS
ENGINEERS
P.O. BOX 549 RIVERSIDE, CT 06878
SURVEYORS 6 NEIL LANE TEL. 637-1779

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

REV.	DATE	DESCRIPTION
2	9-21-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION
REV. DATE	DESCRIPTION	
	9-21-23	LEONARD C. D'ANDREA CT. PE No. 14869
ENGINEER	DATE	

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SITE PLAN REVIEW SET

" RESIDENTIAL DEVELOPMENT "

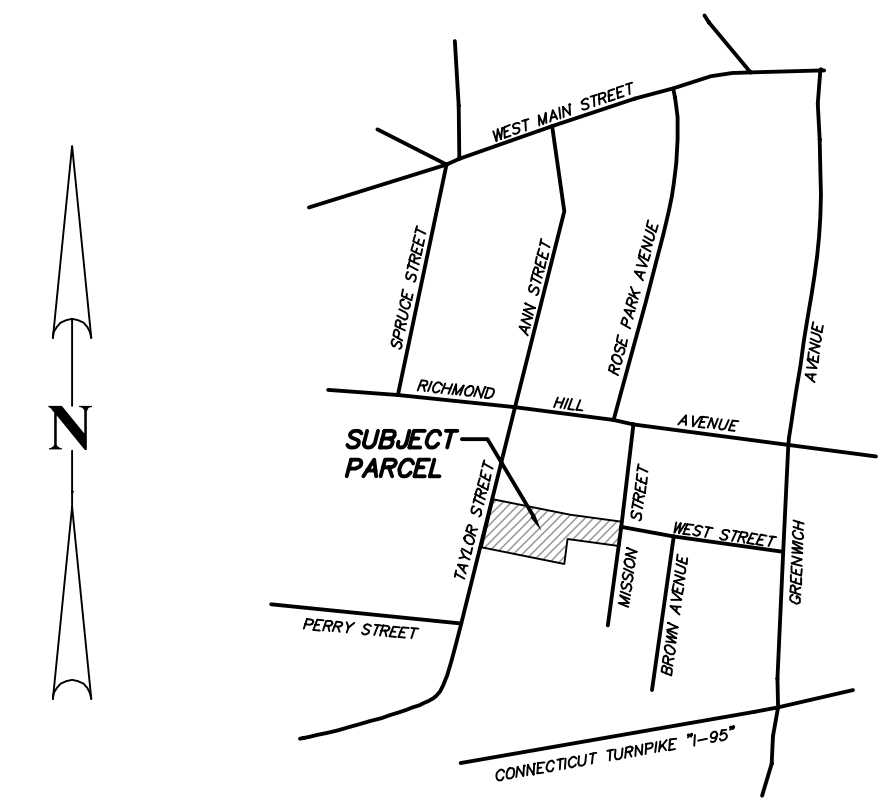
LOCATION

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



LOCATION MAP
1"=400'

SHEET INDEX

SHEET	TITLE	REVISION	DATE
—	TOPOGRAPHIC SURVEY	0	10-6-20
1 OF 1	EXISTING CONDITIONS PLAN	0	5-2-23
1 OF 5	DEVELOPMENT PLAN	2	9-22-23
2 OF 5	UTILITY PLAN	2	9-22-23
3 OF 5	SEDIMENTATION & EROSION CONTROL PLAN	2	9-22-23
4 OF 5	NOTES & DETAILS	2	9-22-23
5 OF 5	DETAILS	2	9-22-23

PARCEL ID 001-9860 PARCEL ID 004-1371

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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

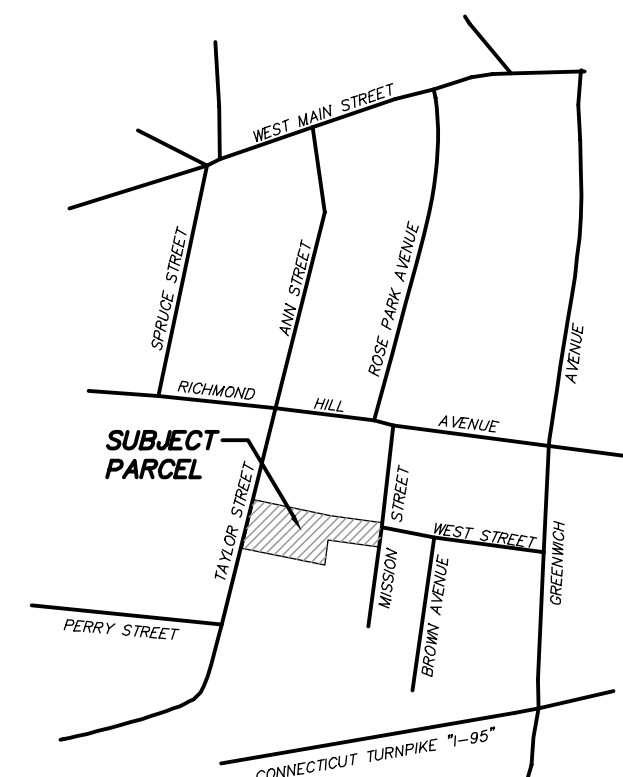
PLAN SET PREPARED BY:

D'ANDREA SURVEYING & ENGINEERING, P.C.
LEONARD C. D'ANDREA CT. PE No. 14869 9-22-23 DATE

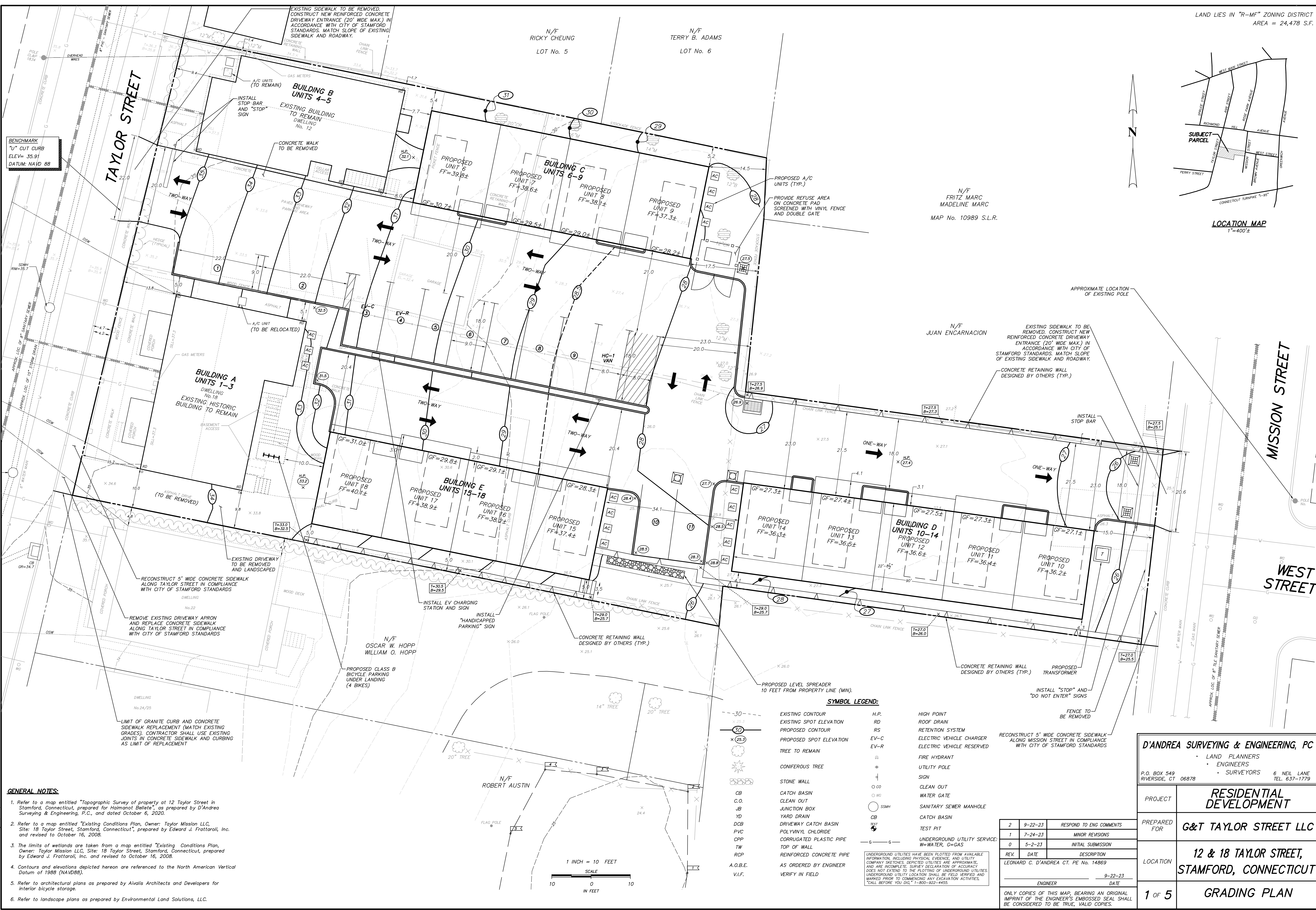
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0	5-2-23	INITIAL SUBMISSION

MISSOURI 2024 CS 02 REVISED (MMK)

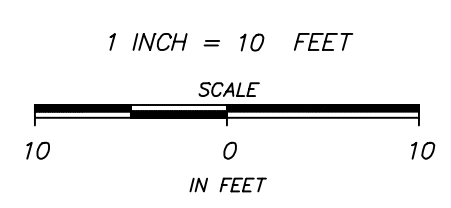


LOCATION MAP
1"=400'



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

- GENERAL NOTES:**
1. Refer to a map entitled "Topographic Survey of property at 12 Taylor Street in Stamford, Connecticut, prepared for Haimanot Bellete", 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. Frattaroli, 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. Frattaroli, 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 Aivalis Architects and Developers for interior bicycle storage.
 6. Refer to landscape plans as prepared by Environmental Land Solutions, LLC.



SYMBOL LEGEND:

---	EXISTING CONTOUR	H.P.	HIGH POINT
---	EXISTING SPOT ELEVATION	RD	ROOF DRAIN
---	PROPOSED CONTOUR	RS	RETENTION SYSTEM
---	PROPOSED SPOT ELEVATION	EV-C	ELECTRIC VEHICLE CHARGER
---	TREE TO REMAIN	EV-R	ELECTRIC VEHICLE RESEVED
---	CONIFEROUS TREE	⊕	FIRE HYDRANT
---	STONE WALL	⊕	UTILITY POLE
---	CATCH BASIN	⊕	SIGN
---	CLEAN OUT	⊕	CLEAN OUT
---	JUNCTION BOX	⊕	WATER GATE
---	YARD DRAIN	⊕	SANITARY SEWER MANHOLE
---	DRIVEWAY CATCH BASIN	⊕	CATCH BASIN
---	POLYVINYL CHLORIDE	⊕	TEST PIT
---	CORRUGATED PLASTIC PIPE	⊕	UNDERGROUND UTILITY SERVICE:
---	TOP OF WALL	W=	WATER, G=GAS
---	REINFORCED CONCRETE PIPE	---	
A.O.B.E.	AS ORDERED BY ENGINEER		
V.I.F.	VERIFY IN FIELD		

REV.	DATE	DESCRIPTION
2	9-22-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION

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

9-22-23

DATE

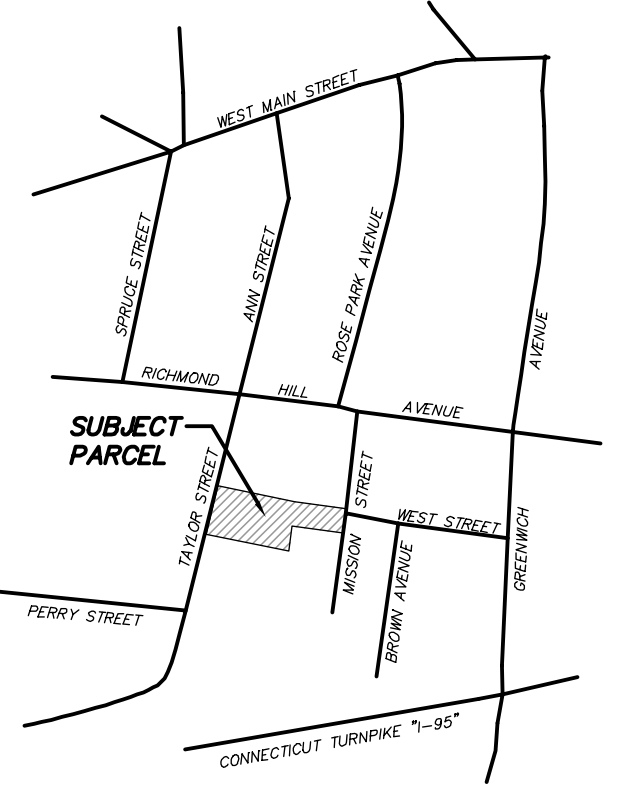
D'ANDREA SURVEYING & ENGINEERING, PC
LAND PLANNERS
ENGINEERS
SURVEYORS

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 5	GRADING PLAN

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LOCATION MAP
1"=400'

18 TAYLOR STREET, STAMFORD, CONNECTICUT
TEST PITS 1 THROUGH 3 CONDUCTED BY D'ANDREA SURVEYING & ENGINEERING, PC ON MARCH 26, 2016.
TEST PIT 4 CONDUCTED BY D'ANDREA SURVEYING & ENGINEERING, PC ON JULY 7, 2016.

Test Pit #1 - El=31.5 0" Topsoil 6" Light Brown Silty Loam 36" Light Brown Silty, Some Clay 97" Mottling @ 40" Water @ 90" No Lege	Test Pit #2 - El=25.6 0" Topsoil 6" Light Brown Silty Loam 24" Light Brown Silty Mixed w/ Grey Clay 82" Mottling @ 30" Water @ 30" No Lege	Test Pit #3 - El=26.3 0" Topsoil 7" Millings 30" Light Brown Fine Loam 48" Tan Fine w/ Some Clay 64" Sandy Gravel 92" Mottling @ 25" Water @ 52" No Lege	Test Pit #4 - El=32.8 0" Topsoil 7" Clean Fill, Brown, Silty Sand 24" Orange Brown Silty Sand 37" Tan Silty Natural Loam 72" Tan Silty Fine Soil Possible Mottling @ 57" No Water No Lege
--	--	--	---

TEST PIT DATA
12 & 18 Taylor Street, Stamford, Connecticut
Test Pits TP#5-8 by D'Andrea Surveying & Engineering, P.C., on August 14, 2023

Test Pit: TP#5 - El=30.9 0" Topsoil 7" Light Brown Silty Loam 39" Light Brown Silty w/ Mixed Clay 66" Orange Sandy Soil 86" Mottling @ 40" Water @ 72" No Lege	Test Pit: TP#6 - El=26.8 0" Topsoil 5" Brown Silty Loam 40" Light Brown Silty w/ Mixed Clay 64" Orange Sandy Gravel 85" Mottling @ 30" Water @ 40" No Lege	Test Pit: TP#7 - El=27.5 0" Misc. Fill 37" Light Brown Silty Loam 43" Light Brown Silty Loam w/ Clay 71" Orange Brown Sandy Gravel 85" Mottling @ 41" Water @ 94" No Lege	Test Pit: TP#8 - El=27.1 0" Misc. Fill 24" Orange Brown Silty Loam w/ Sand 61" Orange Brown Silty Sand 84" Mottling @ 55" Water @ 90" No Lege
---	---	--	---

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

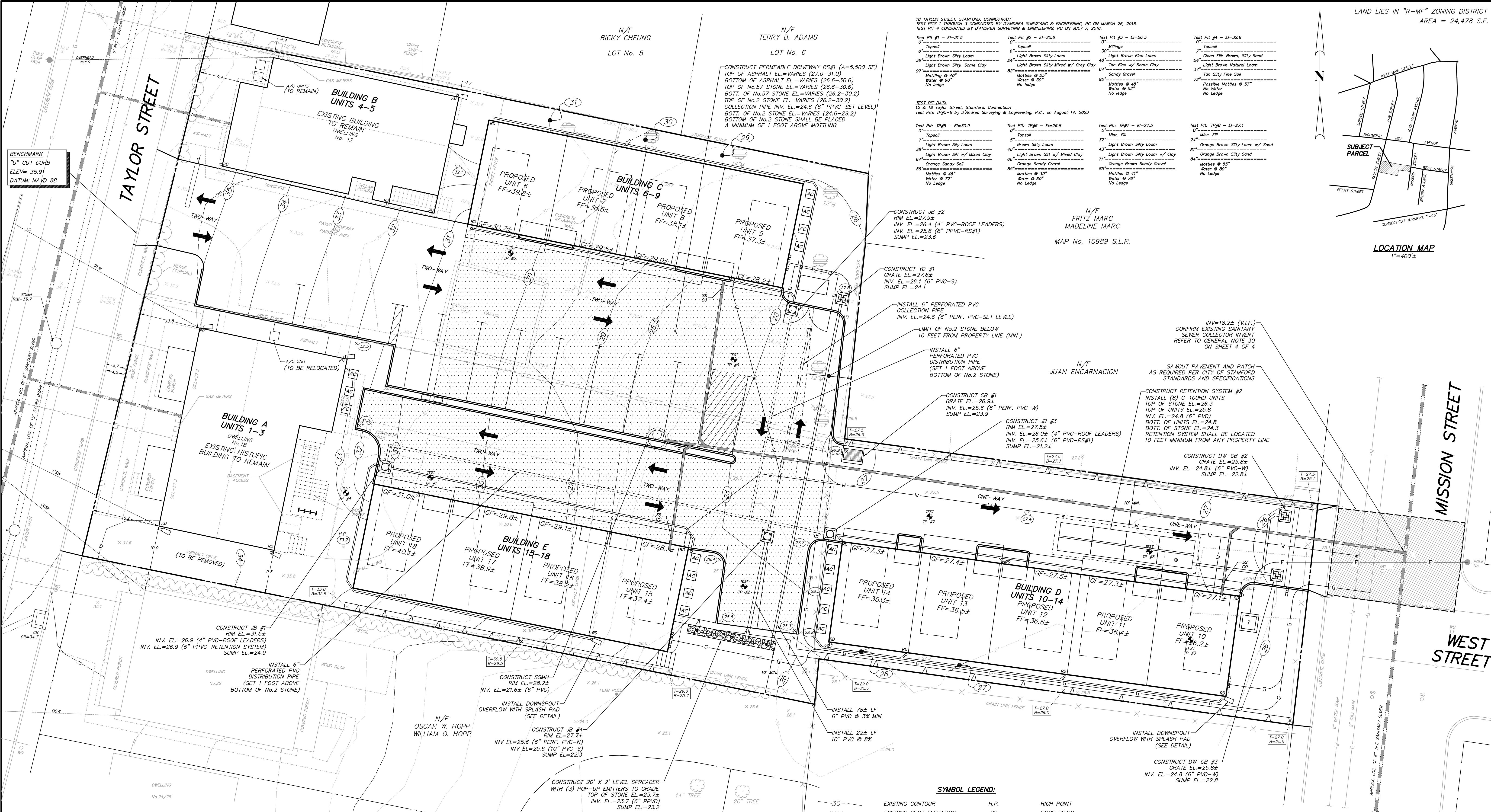


PHOTO RECORD
(CONTRACTOR TAKE NOTICE)

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

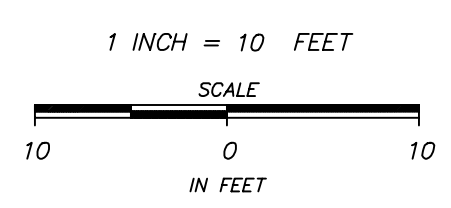
STAMFORD DRAINAGE MAINTENANCE REQUIREMENTS AND SCHEDULE:

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:

EXISTING CONTOUR	H.P.	HIGH POINT
EXISTING SPOT ELEVATION	RD	ROOF DRAIN
PROPOSED CONTOUR	RS	RETENTION SYSTEM
PROPOSED SPOT ELEVATION	EV-C	ELECTRIC VEHICLE CHARGER
TREE TO REMAIN	EV-R	ELECTRIC VEHICLE RESERVED
CONFEROUS TREE	⊙	FIRE HYDRANT
STONE WALL	⊙	UTILITY POLE
CATCH BASIN	⊙	SIGN
CLEAN OUT	⊙	CLEAN OUT
JUNCTION BOX	⊙	WATER GATE
YARD DRAIN	⊙	SANITARY SEWER MANHOLE
DRIVEWAY CATCH BASIN	⊙	CATCH BASIN
POLYVINYL CHLORIDE	⊙	TEST PIT
CORRUGATED PLASTIC PIPE	⊙	UNDERGROUND UTILITY SERVICE: W=WATER, G=GAS
TOP OF WALL	⊙	
REINFORCED CONCRETE PIPE	⊙	
AS ORDERED BY ENGINEER	A.O.B.E.	
VERIFY IN FIELD	V.I.F.	



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**

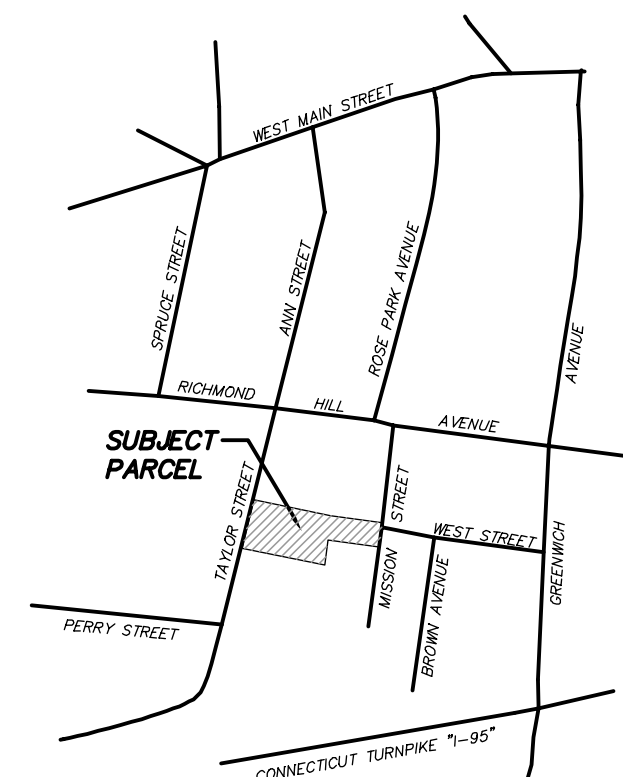
LOCATION: **12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT**

2 OF 5: **UTILITY PLAN**

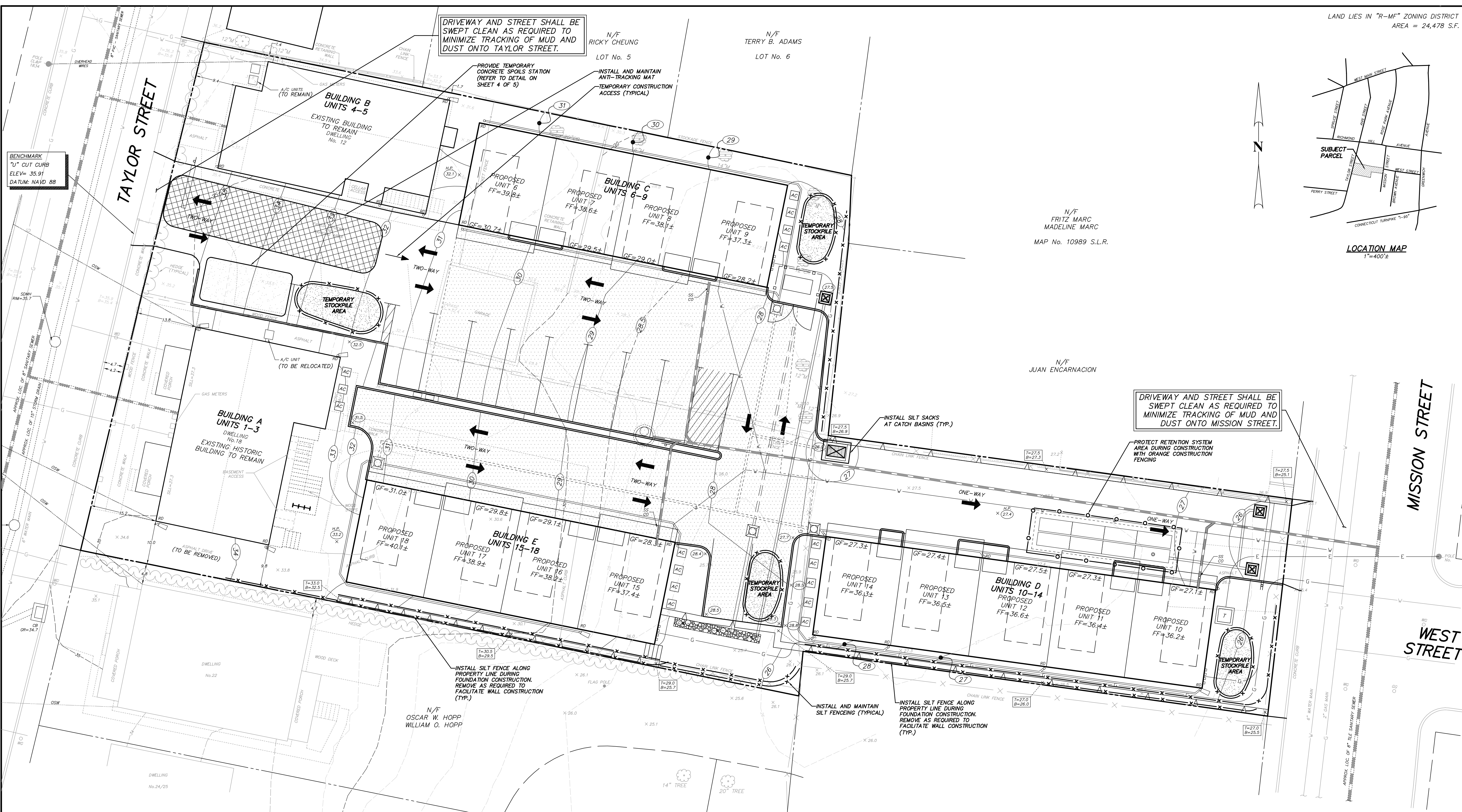
2	9-26-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION

REV. DATE DESCRIPTION
LEONARD C. D'ANDREA CT. PE No. 14869
9-26-23
DATE

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LOCATION MAP
1"=400'

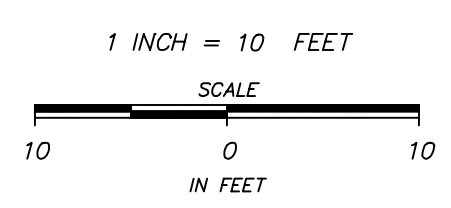


SEDIMENTATION AND EROSION CONTROL NOTES

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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PROJECT	RESIDENTIAL DEVELOPMENT	
PREPARED FOR	G&T TAYLOR STREET LLC	
LOCATION	12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT	
REV. DATE	DESCRIPTION	DATE
2	9-26-23	RESPOND TO ENG COMMENTS
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LEONARD C. D'ANDREA CT. PE No. 14869		
ENGINEER DATE		
9-26-23		
3 OF 5	SEDIMENTATION AND EROSION CONTROL PLAN	

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

GENERAL NOTES:

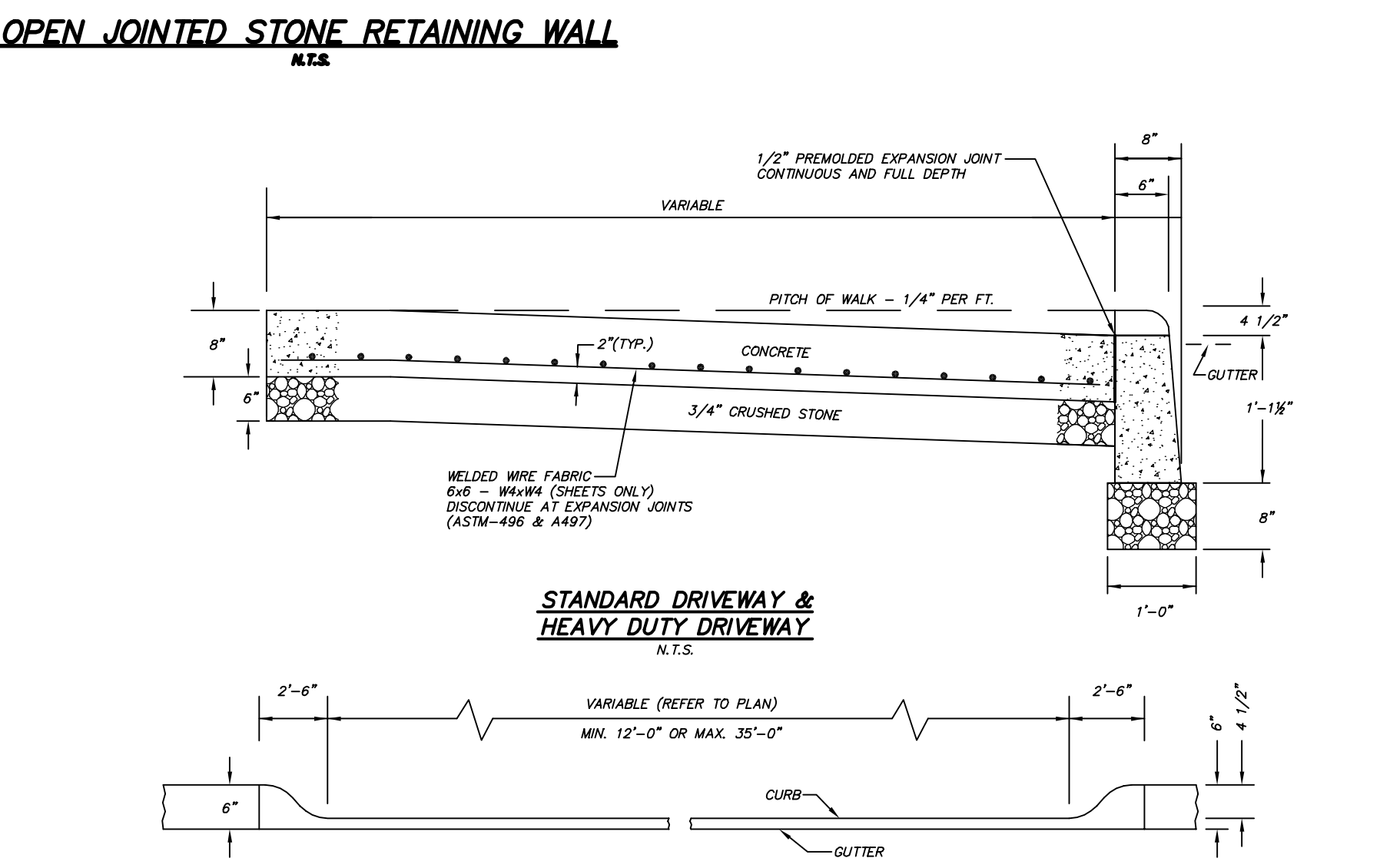
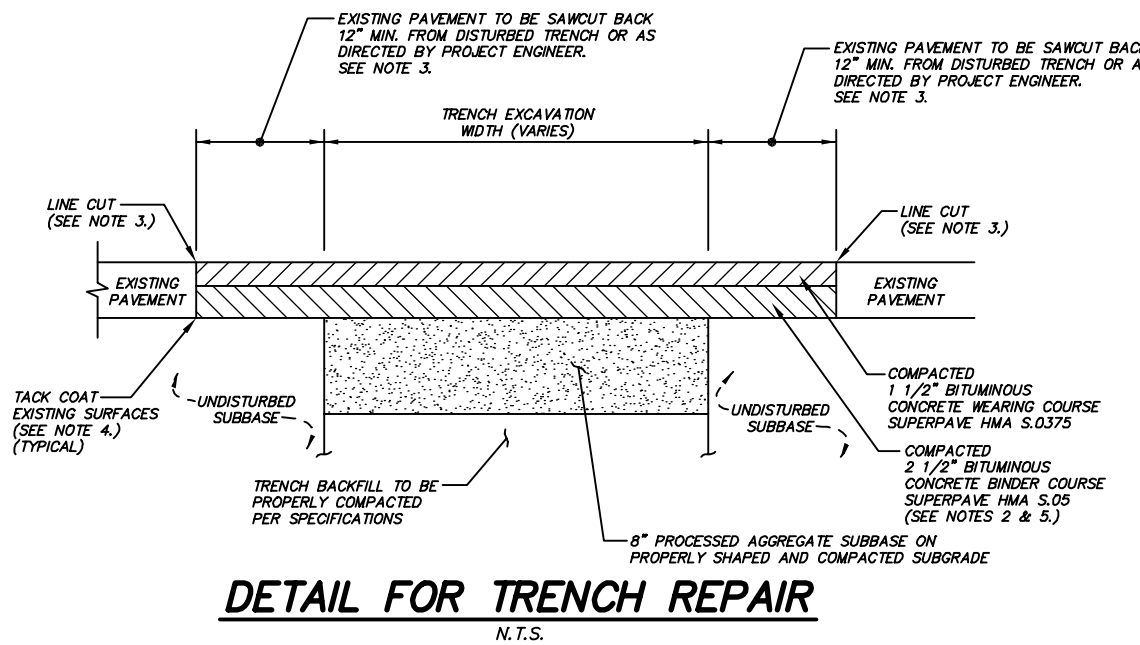
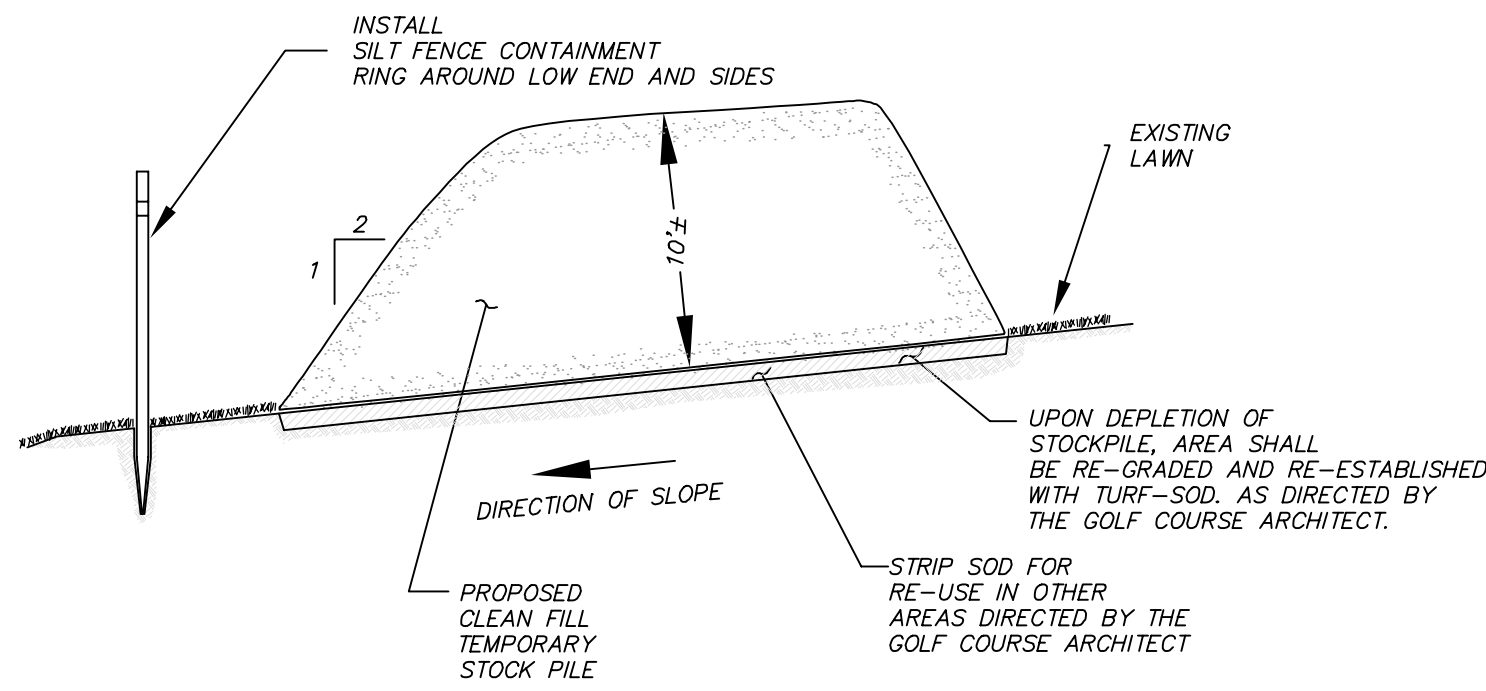
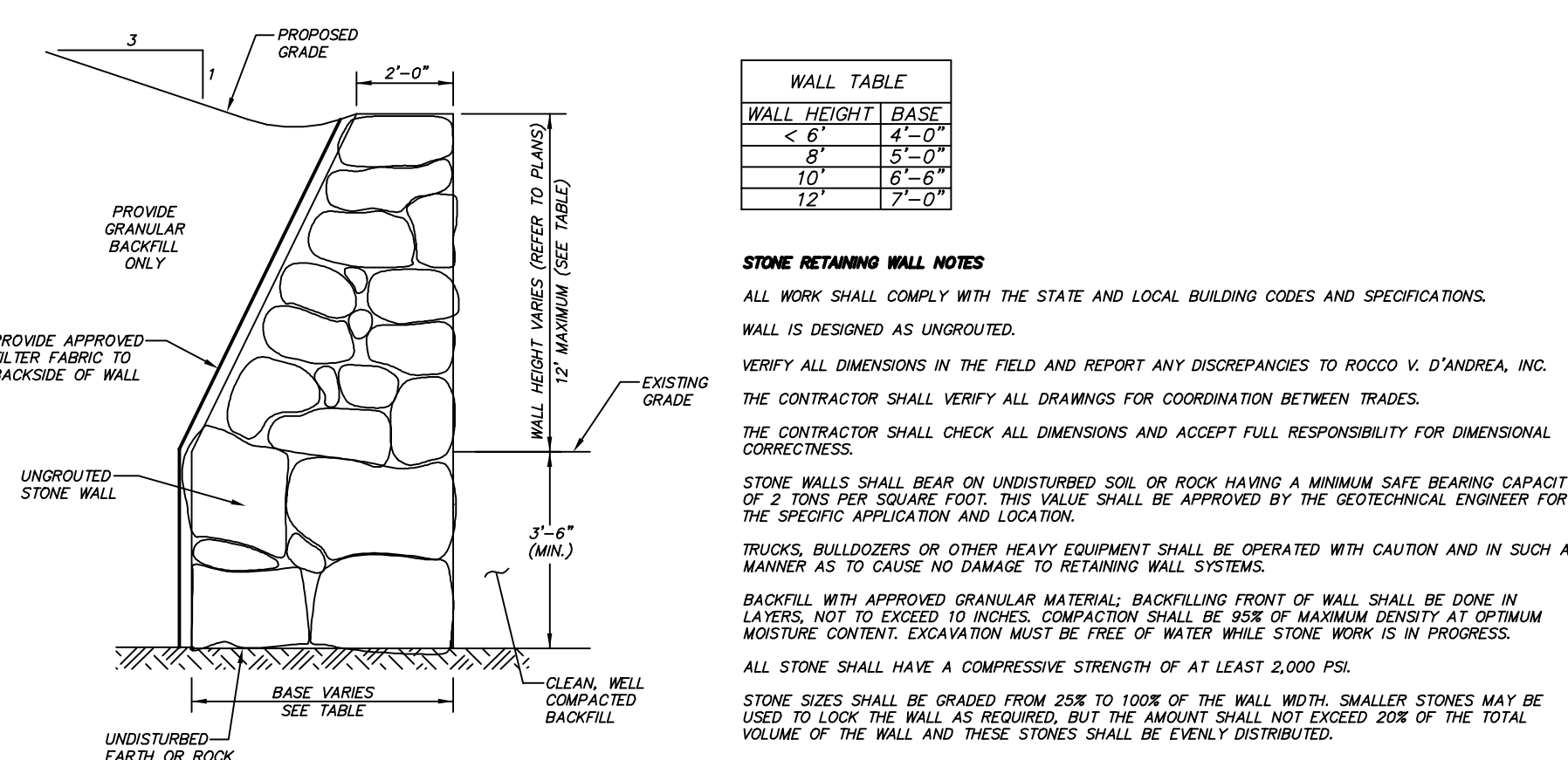
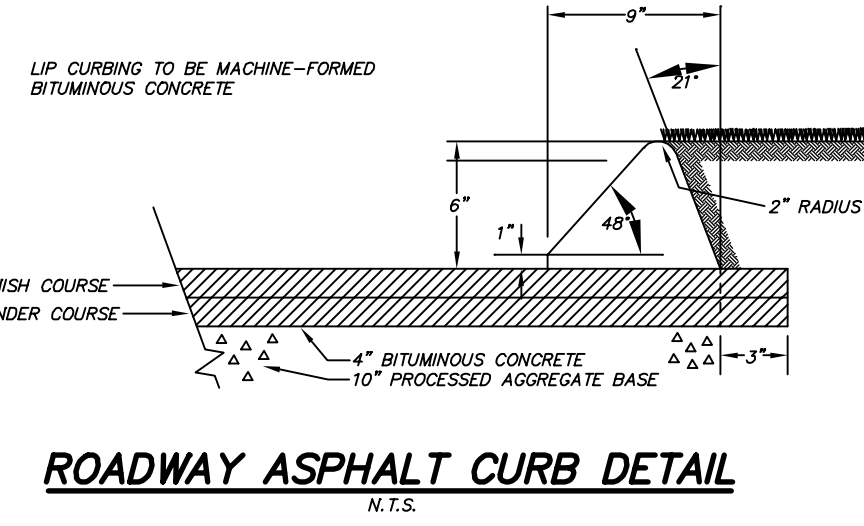
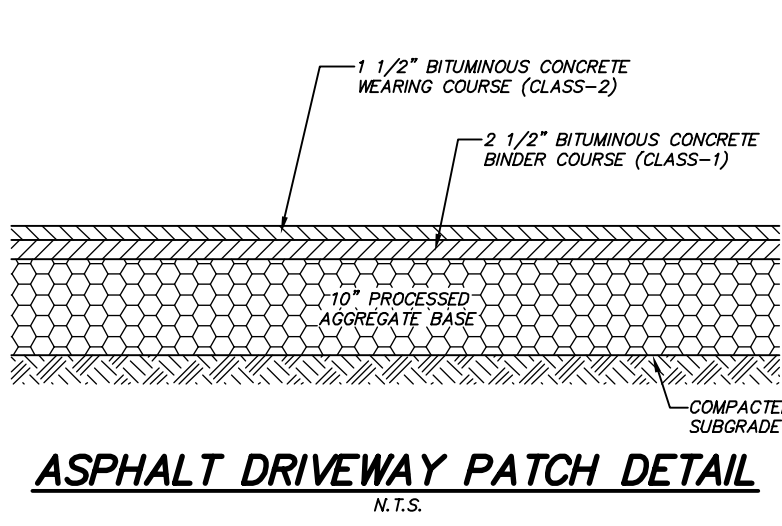
1. Refer to a map entitled "Existing Conditions" of property at 18 Taylor Street in Stamford, Connecticut, as prepared by D'Andrea Surveying & Engineering, P.C. and dated May 3, 2023.
2. The limits of wetlands are taken from a map entitled "Existing Conditions Plan, Owner: Taylor Mission LLC, Sites 18 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 (NAVD 88).
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. A Street Opening Permit is required for all work within the City of Stamford Right-of-Way.
7. The contractor shall be responsible for securing all required permits from the City of Stamford for completion of the project.
8. The locations and elevations of the proposed storm drainage system depicted hereon may be modified with the approval of the project engineer to meet field conditions.
9. All construction shall comply with applicable sections of the State of Connecticut, Local, and International Building codes, and those criteria shall take precedent over these plans.
10. Certification will be required by a Professional Engineer licensed in the State of Connecticut that work has been completed in compliance with the approved drawings. A Final Location Plan, prepared by a licensed Land Surveyor in the State of Connecticut, will be required for submission.
11. All work within the City of Stamford Right-of-Way shall be constructed to City of Stamford requirements, the State of Connecticut Basic Building Code, and the Connecticut Guidelines for Soil Erosion and Sedimentation Control.
12. THE ENGINEERING BUREAU OF THE CITY OF STAMFORD SHALL BE NOTIFIED THREE DAYS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AFFECTING THE CITY RIGHT-OF-WAY.
13. The project engineer shall be notified a minimum of three working days prior to the commencement of construction.
14. Appropriate measure shall be taken to control any sedimentation and erosion which may result during construction. Sedimentation and erosion controls shall be maintained and repaired as necessary throughout construction until the site is stabilized.
15. All material excavated during construction must be disposed of legally off site.
16. Significantly sized trees shall be preserved to the greatest extent feasible.
17. Pavement replacement shall be bituminous concrete, placed in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
18. Shoulders and disturbed areas shall receive four inches of topsoil; fine graded and seeded as soon as practical to prevent erosion.
19. Existing inverts on sanitary sewer lateral and utility services shall be field verified where appropriate, before commencing construction. The contractor shall excavate test pits wherever design conflicts may occur. The contractor shall notify the project engineer of the test pit schedule. Design conflicts if any, shall be brought to the immediate attention of the project engineer. Plate or backfill and patch test pits as directed by the project engineer.
20. Trees within the City of Stamford Right-of-Way, designated to be removed, shall be posted in accordance with the Tree Ordinance.
21. All retaining walls greater than three (3) feet are required to be designed and inspected during construction by a Professional Engineer licensed in the State of Connecticut. Certification of the retaining wall shall be required prior to the issuance of a Certificate of Occupancy and/or bond release.
22. Certification will be required by a professional engineer licensed in the State of Connecticut that work has been completed in compliance with the approved drawings.
23. A Final Location Plan will be required by a professional land surveyor licensed in the State of Connecticut.
24. Granite block or other decorative stone or brick, depressed curb, driveway apron, and curbing within the City of Stamford Right-of-Way shall require a waiver from the City of Stamford Engineering Bureau.
25. All PVC pipe shall conform to ASTM D-3034 "standard specification for type F5M-Fully Vinyl Chloride (PVC) sewer pipe and fitting", or engineer approved equivalent (SDR-35).
26. Bedding and backfill material shall conform to ASTM D2321 specification "standard recommendation for underground installations of flexible thermoplastic sewer pipe (PVC)".
27. The contractor shall provide all the equipment, tools, labor and materials necessary to satisfactorily clean and remove all visible obstructions, dirt, sand, silt, sludge, roots, gravel, stones, etc., from the designated drains and manholes.
28. Processed aggregate shall be in accordance with the City of Stamford standards and/or Connecticut State Highway specifications.
29. A 6" layer of crushed stone shall be placed under any exterior decks and/or open stairways.
30. Contractor shall coordinate with Project Engineer and Stamford WPCA to confirm invert of existing sewer collector prior to installation of private sewer line and adjust pipe slope as required. Confirm with Project Engineer and WPCA.
31. Refer to architectural plans as prepared by Aivalis Architects & Developers.

CITY OF STAMFORD NOTES:

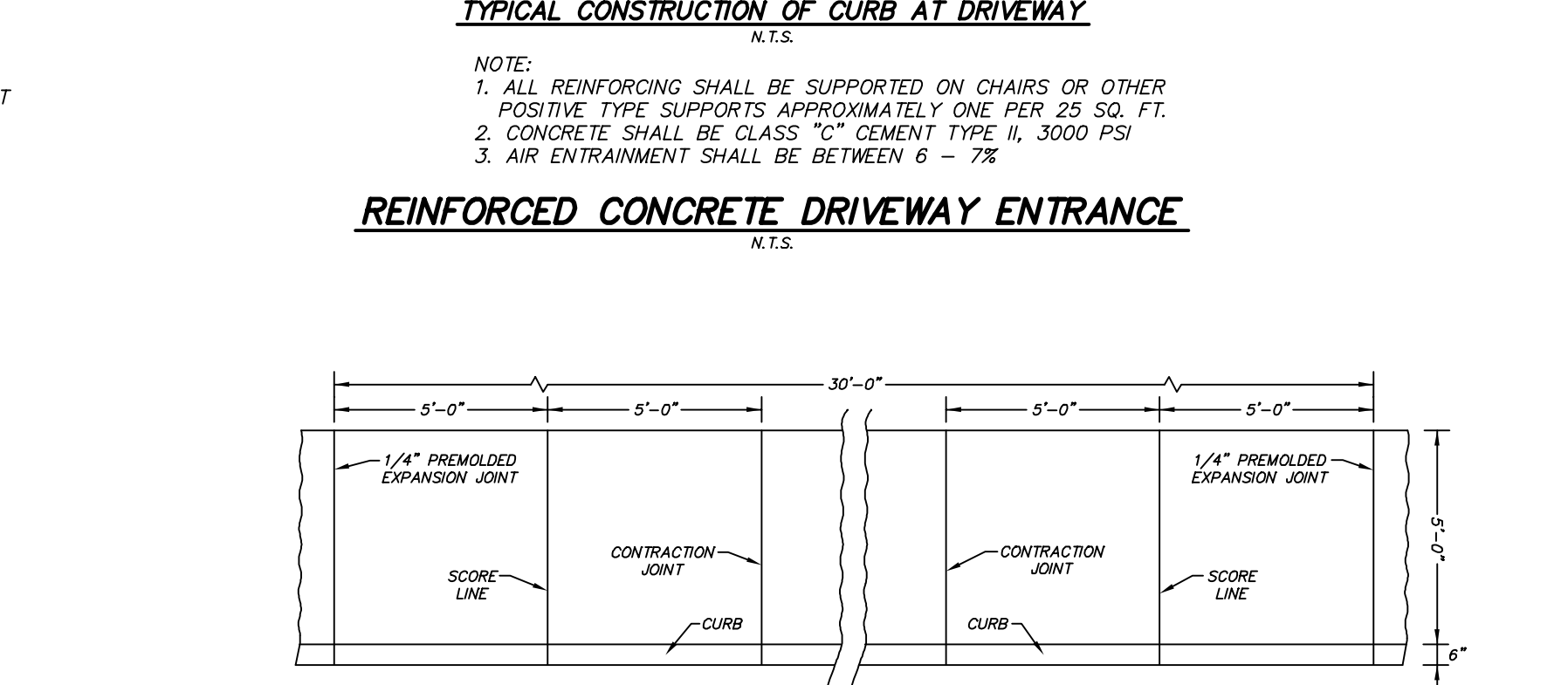
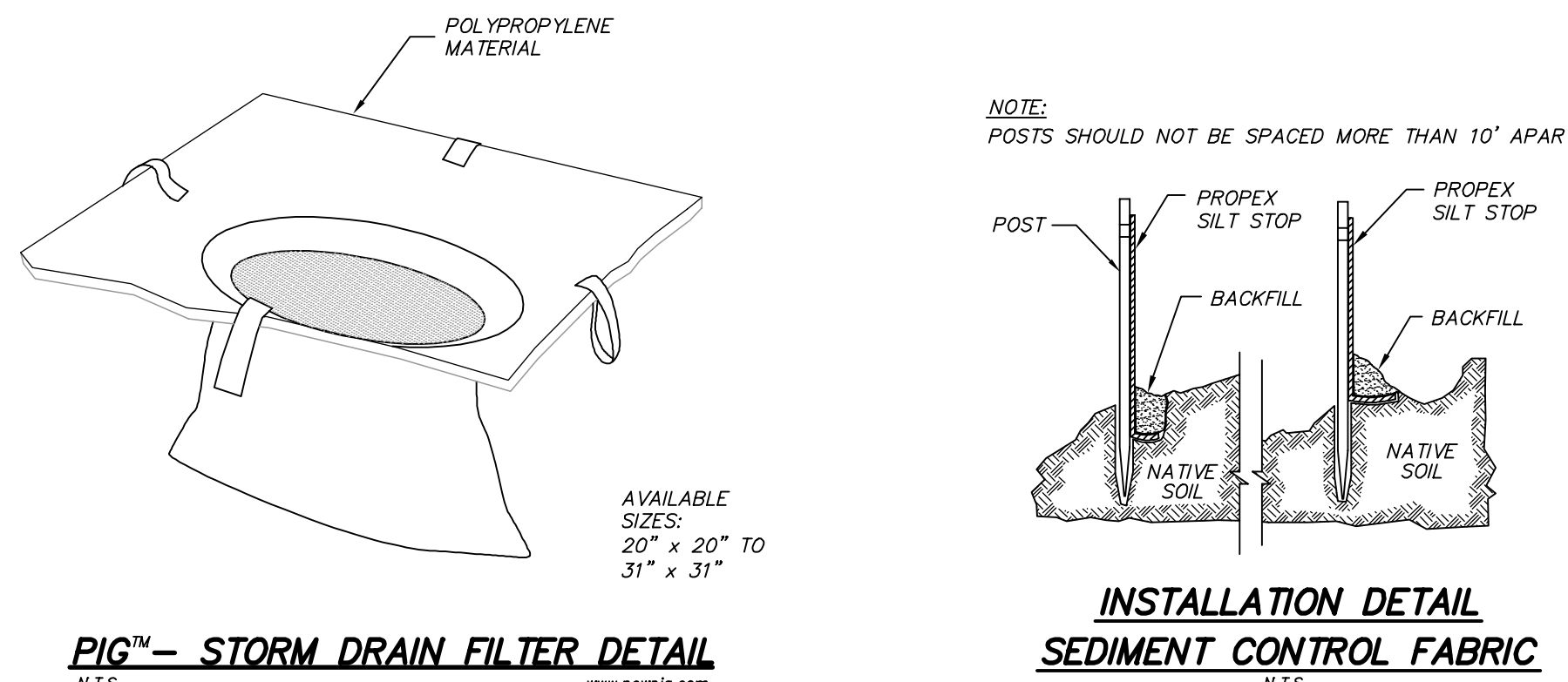
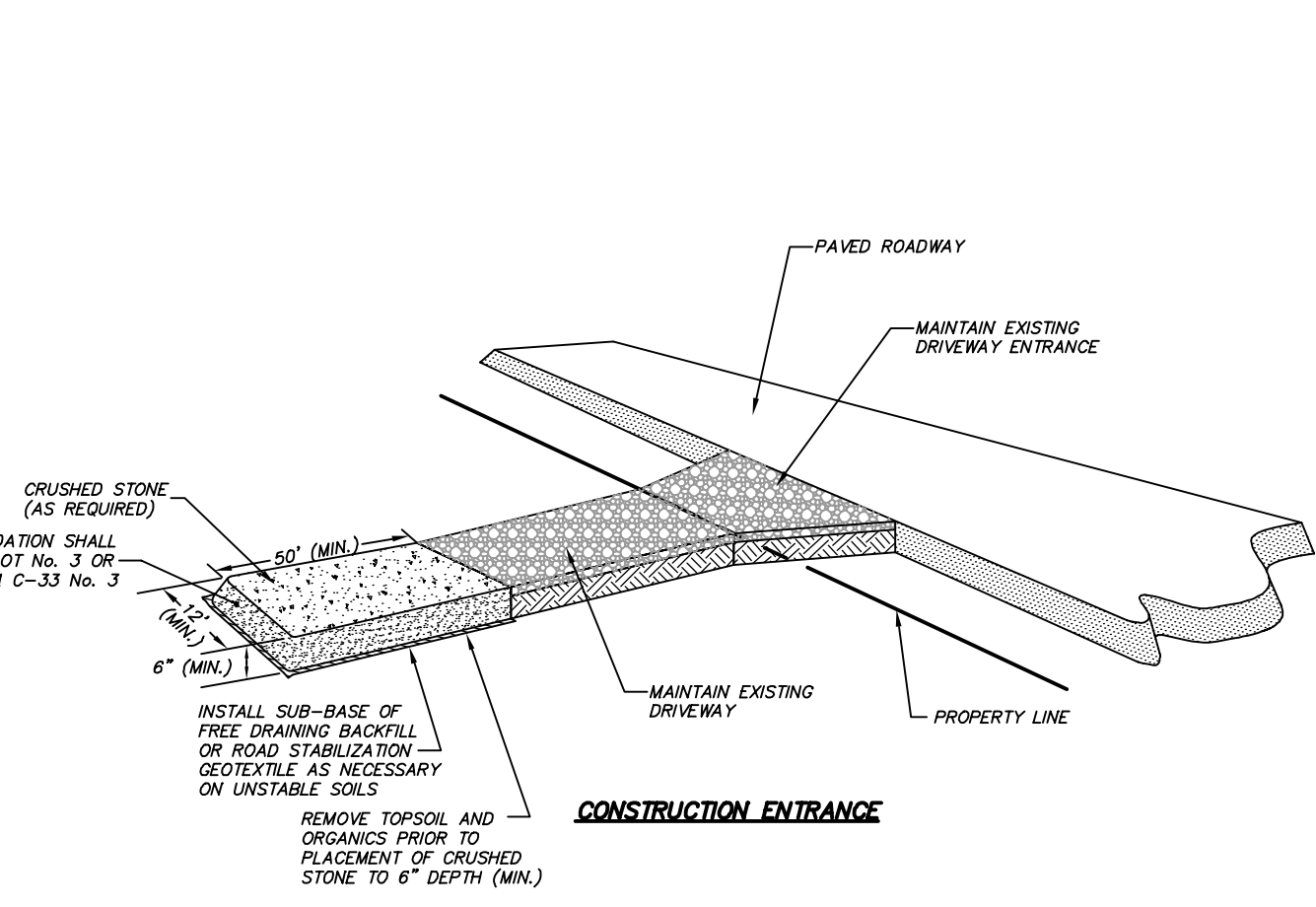
- 1) A Street Opening Permit is required for all work within the City of Stamford Right-of-Way.
- 2) All work within the City of Stamford Right-of-Way shall be constructed to City of Stamford requirements, the State of Connecticut Basic Building Code, and the Connecticut Guidelines for Soil Erosion and Sedimentation Control.
- 3) The City of Stamford Engineering Bureau shall be notified three days prior to the commencement of any construction within the City of Stamford Right-of-Way.
- 4) Trees within the City of Stamford Right-of-Way, designated to be removed, shall be posted in accordance with the Tree Ordinance.
- 5) Prior to any excavation the Contractor and/or Applicant/Owner, in accordance with Public Act 77-350, shall be required to contact "Call Before You Dig" at 1-800-922-4455 for mark out of underground utilities.
- 6) All retaining walls three (3) feet or higher measured from finished grade at the bottom of the wall to finished grade of the retaining wall supporting a surcharge or impounding Class I, II or III-A liquids are required to have a Building Permit. Retaining walls shall be designed and inspected during construction by a Professional Engineer licensed in the State of Connecticut. Prior to the issuance of a Certificate of Occupancy, retaining walls shall be certified by a Professional Engineer licensed in the State of Connecticut.
- 7) Certification will be required by a professional engineer licensed in the State of Connecticut that work has been completed in compliance with the approved drawings.
- 8) A Final Survey Map depicting "As-Built" site conditions shall be prepared by a professional land surveyor licensed in the State of Connecticut and submitted to the Engineering Bureau.
- 9) Connection to a city-owned storm sewer shall require the Waiver Covering Storm Sewer Connection to be filed with the City of Stamford Engineering Bureau.
- 10) Granite block or other decorative stone or brick, depressed curb, driveway apron, and curbing within the City of Stamford Right-of-Way shall require the Waiver Covering Granite Block Depressed Curb and Driveway Aprons to be filed with the City of Stamford Engineering Bureau.
- 11) Sedimentation and erosion controls shall be maintained and repaired as necessary throughout construction until the site is stabilized.
- 12) To obtain a Certificate of Occupancy, submittal must include all items outlined in the Checklist for Certificate of Occupancy (Appendix D of the City of Stamford Drainage Manual).

WATER POLLUTION CONTROL NOTES:

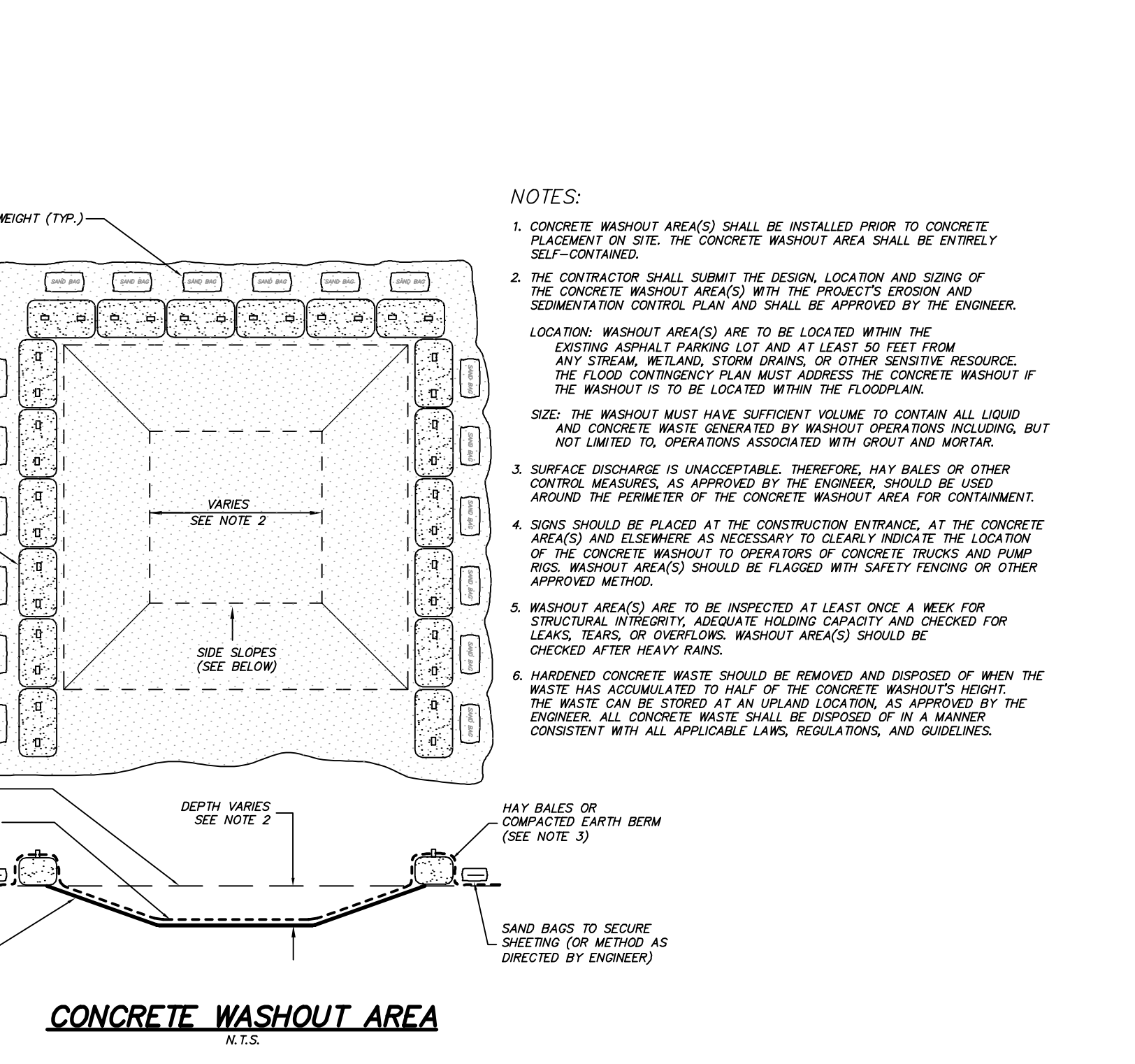
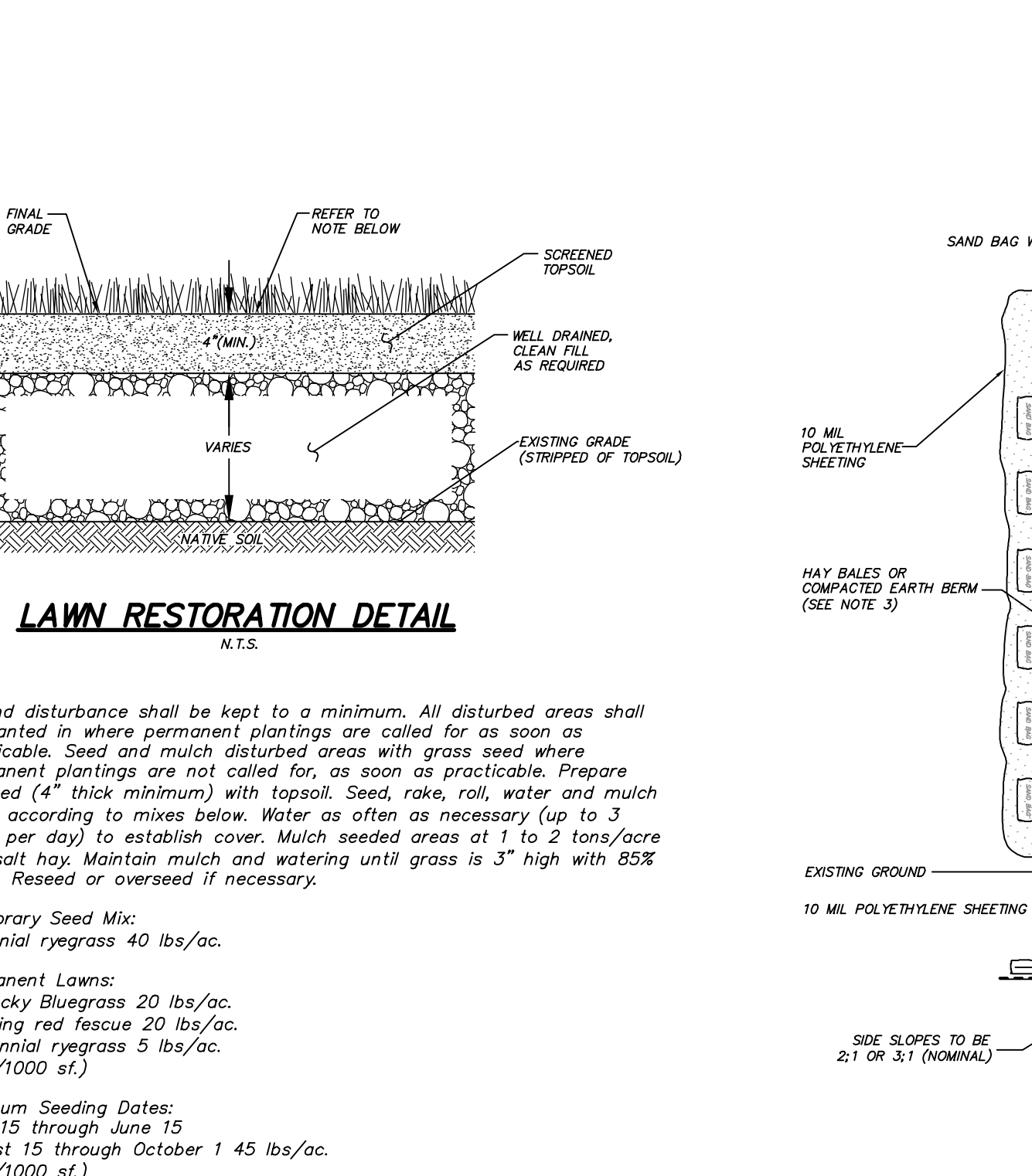
- a. Proposed sanitary tie-in connection must be an approved saddle connection to the public sewer line if a direct connection to the sewer collector in the street is required. A chimney connection may be required to ensure the private lateral slope does not exceed 2%, and it must meet either the City standard specification and/or the approved modular style chimney design requirements. Both saddle and/or chimney connections must be encased in concrete.
- b. Applicant and/or Contractor needs to schedule the tie-in activity with Stamford WPCAs Collection Systems Supervisor at least 3-days in advance for scheduling WPCA personnel to witness and photograph the sewer tie-in connection. Anytime between 7:30 a.m. and 2 p.m. (Mon. thru Fri.).
- c. The contractor is not to break into the public sewer line without WPCA being present.
- d. The sewer tie-in distance information from at least 2-permanent stations, i.e., telephone pole and number, distance from nearest manhole cover, corner of building with address number, etc., and depth of tie-in, along with a sketched drawing depicting these monuments and distances must be submitted for final approval.
- e. A connection charge may be assessed by the SWPCA in accordance with Section 200-41. Please be aware that the connection charge based on the new development and prior use of the site can be substantial. The connection charge becomes due at the time the CO is issued.
- f. Upon receipt of WPCAs approval, the owner/permit applicant must coordinate and schedule the reconnection activity of the new lateral to the existing stub lateral with the City Plumbing Inspector.
- g. Before connecting to the stub lateral, the owner/permit applicant must videotape this stub lateral to the public sanitary sewer line to ensure there are no obstructions and the lateral is in good operational condition. A copy of this video must be provided to WPCA for review and approval.



ANTI-TRACKING PAD DETAIL



LAWN RESTORATION DETAIL



CONCRETE CURB DETAIL

CONCRETE FOR THE SIDEWALK SHALL BE PLACED TO A UNIFORM DEPTH OF FIVE (5) INCHES UPON A SIX (6) INCH 3/4" CRUSHED STONE BASE. THE SURFACE EDGES OF EACH PANEL SHALL BE ROUNDED TO A RADIUS OF 3/32 INCH.

CONCRETE SHALL BE CLASS "C" CEMENT TYPE II (3,000 PSI MIN.) AIR ENTRAINMENT SHALL BE BETWEEN 6-7%.

A 1/2" THICK APPROVED PREMOULDED BITUMINOUS EXPANSION JOINT SHALL BE PLACED TRANSVERSELY EVERY 20 FT. MAX. AND BETWEEN NEW CONCRETE CURBS AND SIDEWALKS.

A 1/2" THICK APPROVED PREMOULDED BITUMINOUS EXPANSION JOINT SHALL BE UTILIZED BETWEEN ALL RIGID STRUCTURES (INCLUDING WALLS) AND NEW SIDEWALK WORK.

A MARKED OR SCORED CONTROL JOINT SHALL BE MADE AT FIVE FOOT INTERVALS BETWEEN BITUMINOUS JOINTS. CONTROL JOINTS SHALL BE 1/4" DEEP.

ADDITIONAL CONTROL JOINTS SHALL BE PLACED AS REQUIRED TO ELIMINATE ANY CONDITION WHICH WILL CAUSE STRESS VERTICES. (EXAMPLE AT CORNERS OF STRUCTURES)

ANY CHANGES REQUIRED BY LOCAL FIELD CONDITIONS SHALL BE MADE ONLY BY ORDER OF THE PROJECT ENGINEER OR THE CITY ENGINEER.

PLAN OF A SECTION OF CONCRETE SIDEWALK IN CITY RIGHT-OF-WAY

CONCRETE CURB DETAIL

1. ALL CURBING TO BE CAST-IN-PLACE WITHIN CITY RIGHT-OF-WAY.

2. APPROVED 1/2" PREMOULDED EXPANSION JOINT FILLER SHALL BE PLACED AT A MAXIMUM SPACING OF 10 FEET CONCORDING WITH EXPANSION JOINTS IN SIDEWALK.

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

DATE: 9-26-23

ENGINEER

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RESIDENTIAL DEVELOPMENT

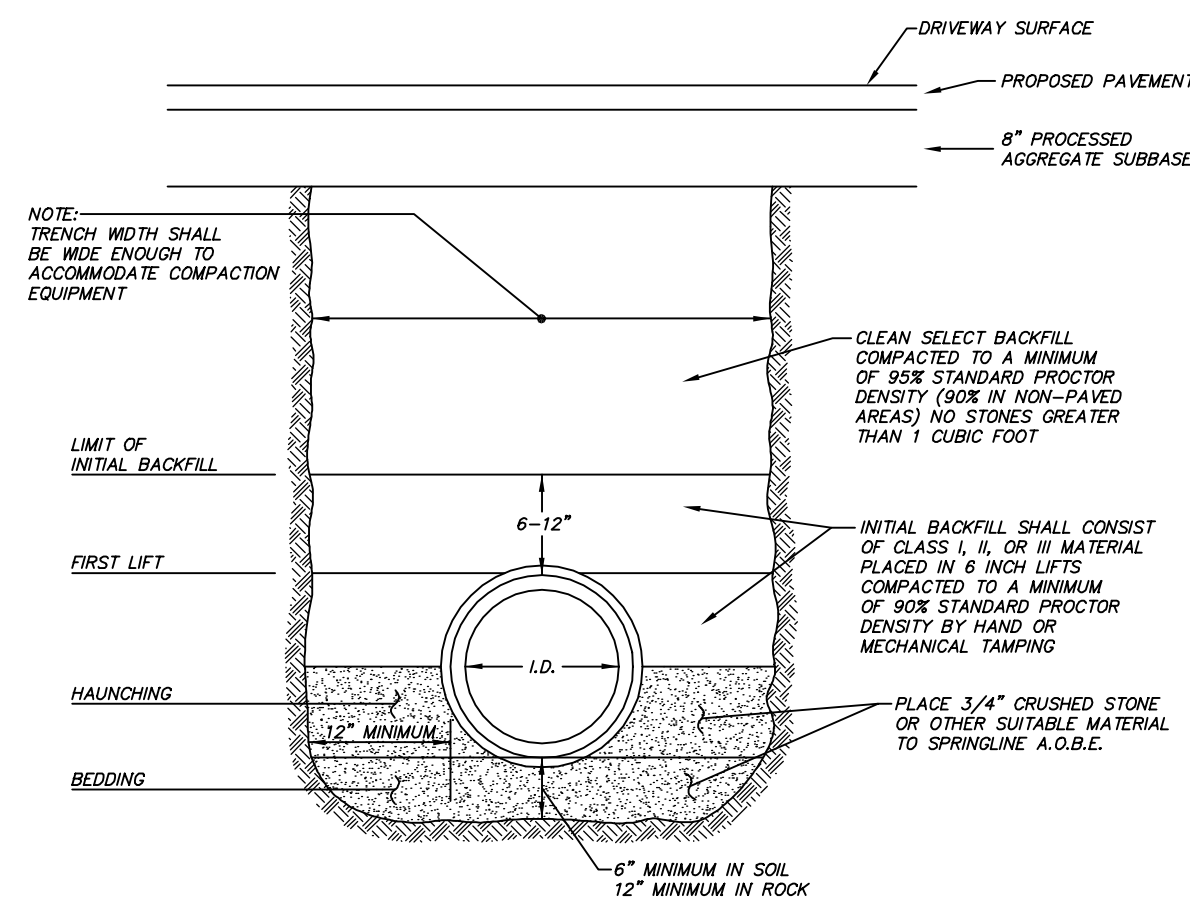
PROJECT

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

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

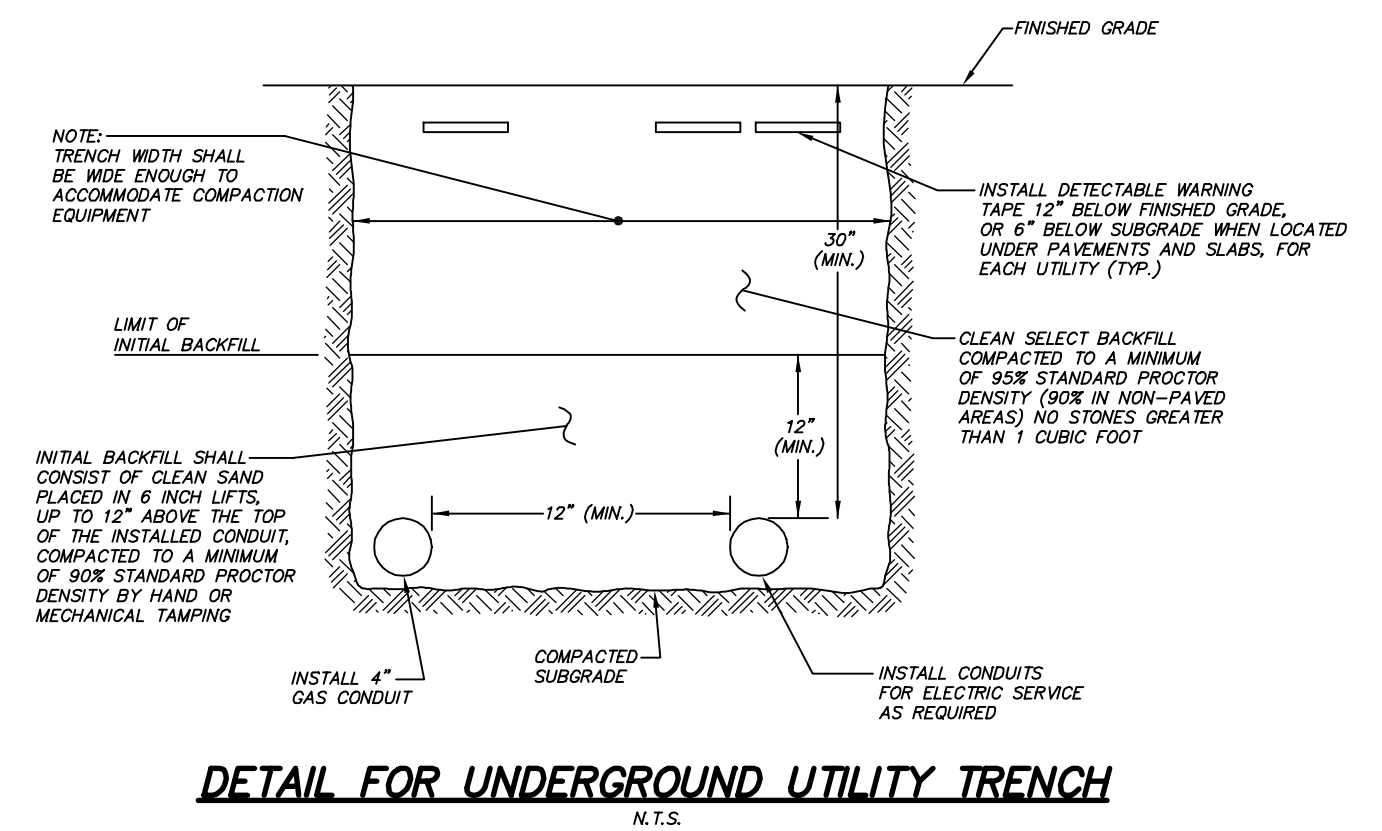
4 OF 5 **NOTES AND DETAILS**

DATE: 09/26/2023 10:02 AM



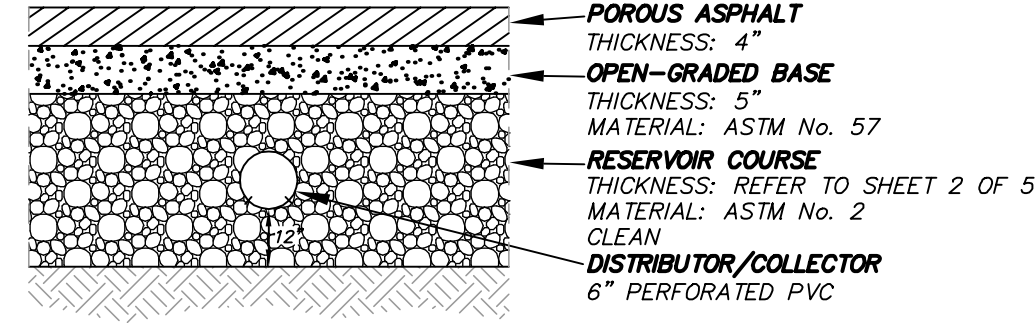
DETAIL FOR PVC SANITARY SEWER AND STORM DRAIN INSTALLATION
N.T.S.

- 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.



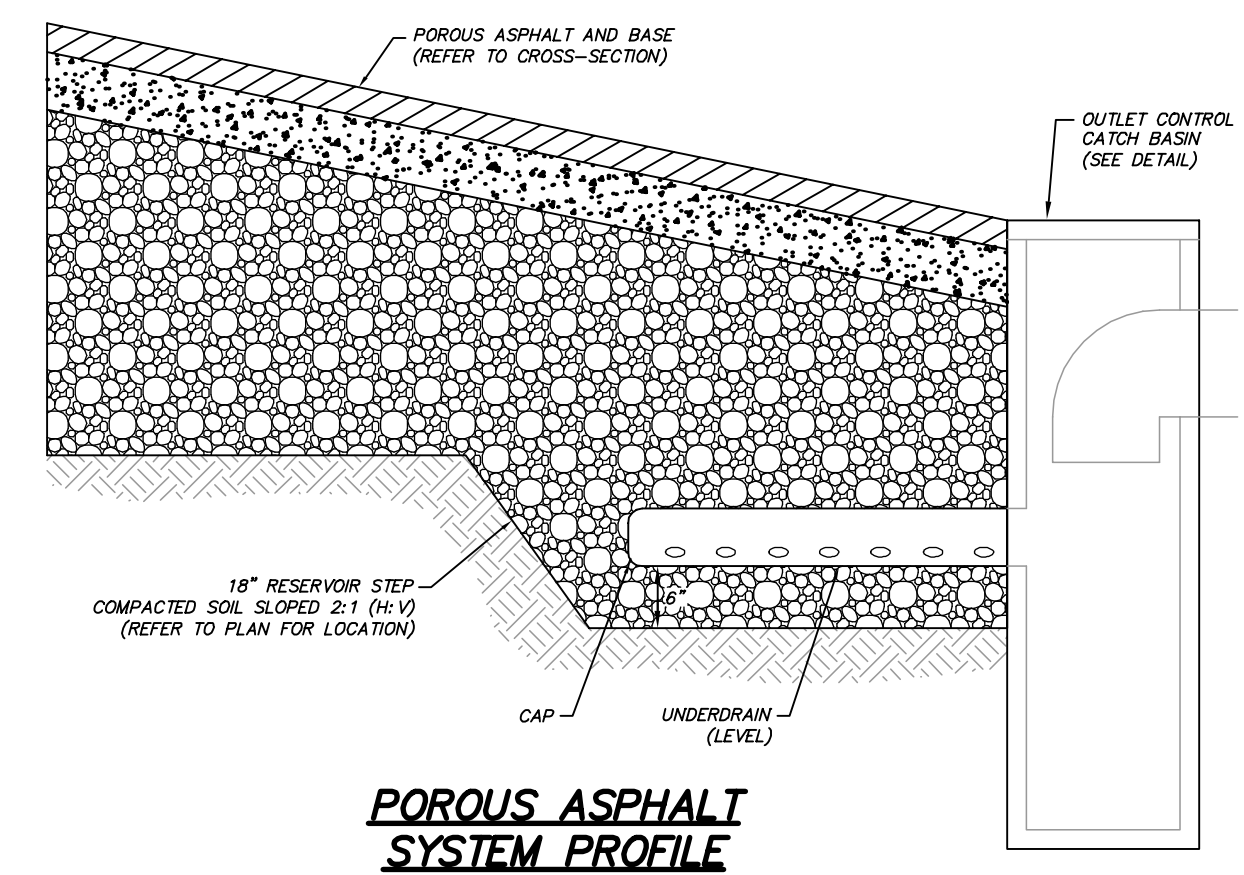
DETAIL FOR UNDERGROUND UTILITY TRENCH
N.T.S.

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



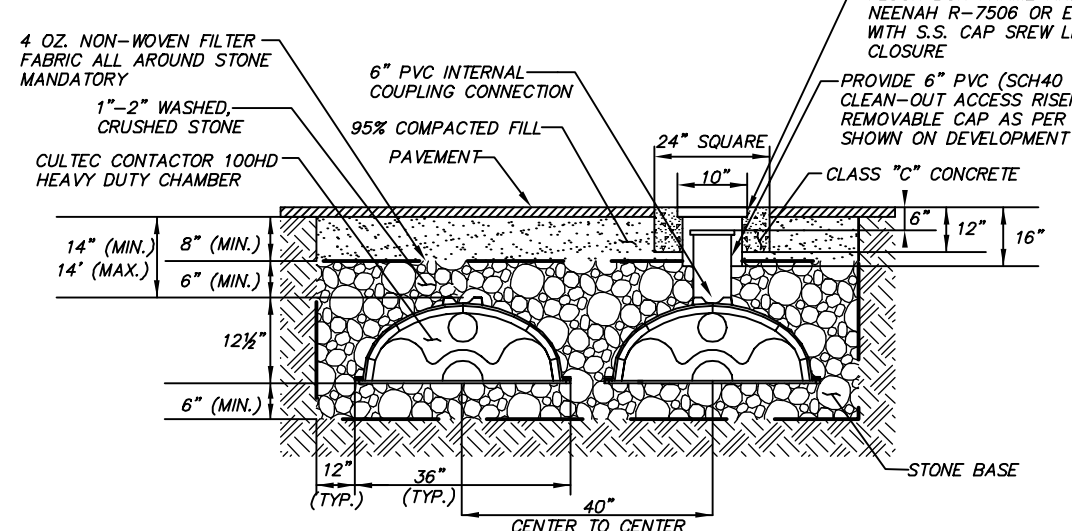
POROUS ASPHALT AND STONE RESERVOIR DETAIL
N.T.S.

- NOTES:
- 2" STONE MEETS ASTM No. 2 STANDARDS.
 - 3/4" STONE MEETS ASTM No. 57 STANDARDS.
 - WHERE THE SYSTEM IS LOCATED WITHIN 10 FEET OF A RETAINING WALL OR FOUNDATION, INSTALL UV-RESISTANT IMPERMEABLE 30 MIL POLYOLFIN 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 CLOSING.



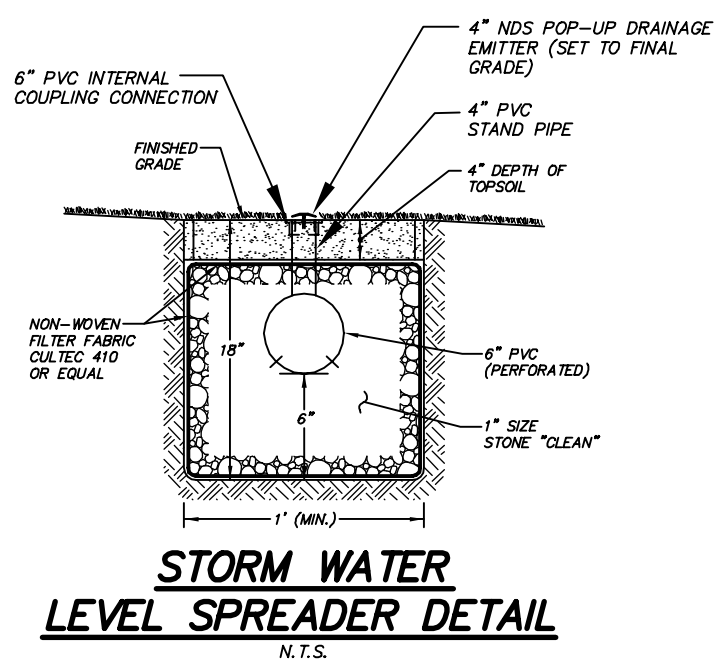
POROUS ASPHALT SYSTEM PROFILE
N.T.S.

- NOTE:
- 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.

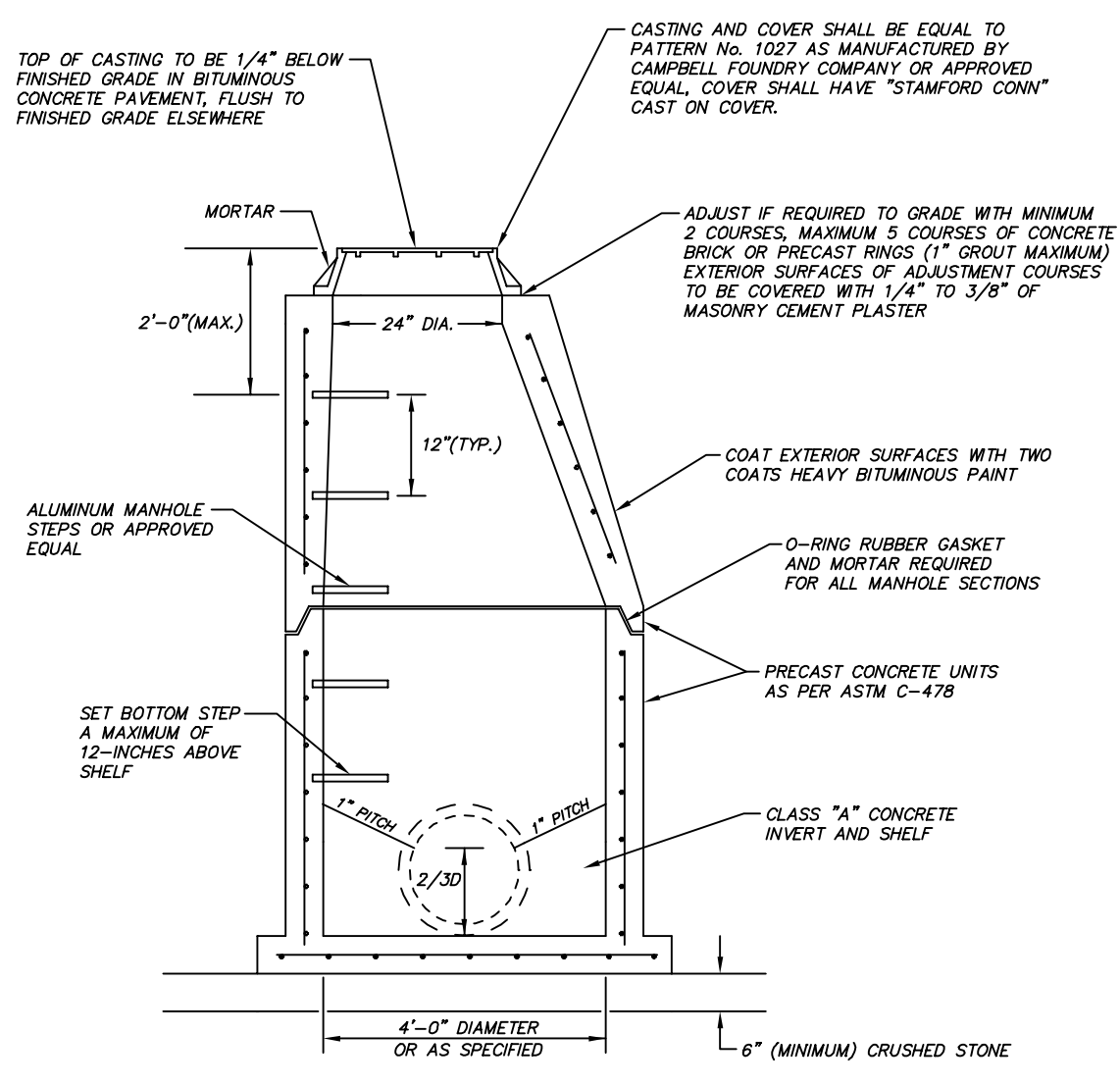


TYPICAL CROSS SECTION DETAIL CULTEC CHAMBER SYSTEM CONTACTOR 100HD PAVED (H-20) LOADING
N.T.S.

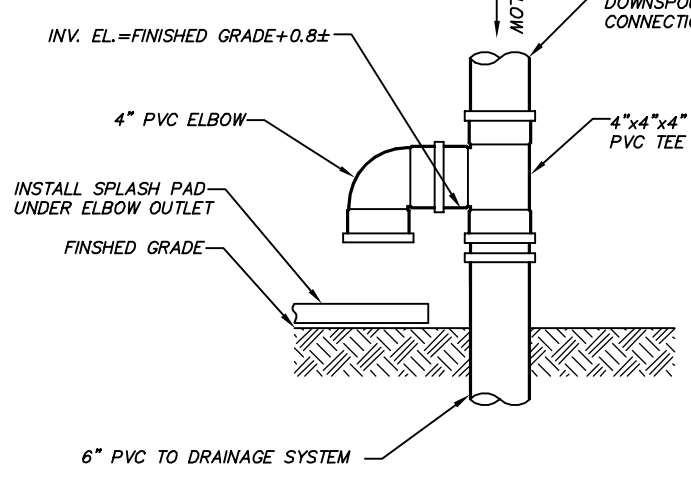
- NOTES:
- STORMWATER CHAMBERS SHALL BE MANUFACTURED BY CULTEC, INC. (800) 428-5832 OR ENGINEER APPROVED EQUAL.
 - ALL CHAMBERS SHALL BE INSTALLED ACCORDING TO MANUFACTURER SPECIFICATIONS.
 - THE SOILS BENEATH THE INFILTRATION SYSTEM SHALL BE SCARIFIED OR TILLED TO IMPROVE INFILTRATION.



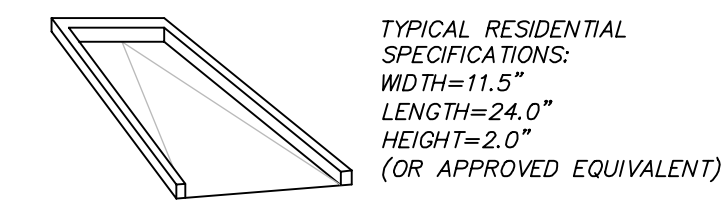
STORM WATER LEVEL SPREADER DETAIL
N.T.S.



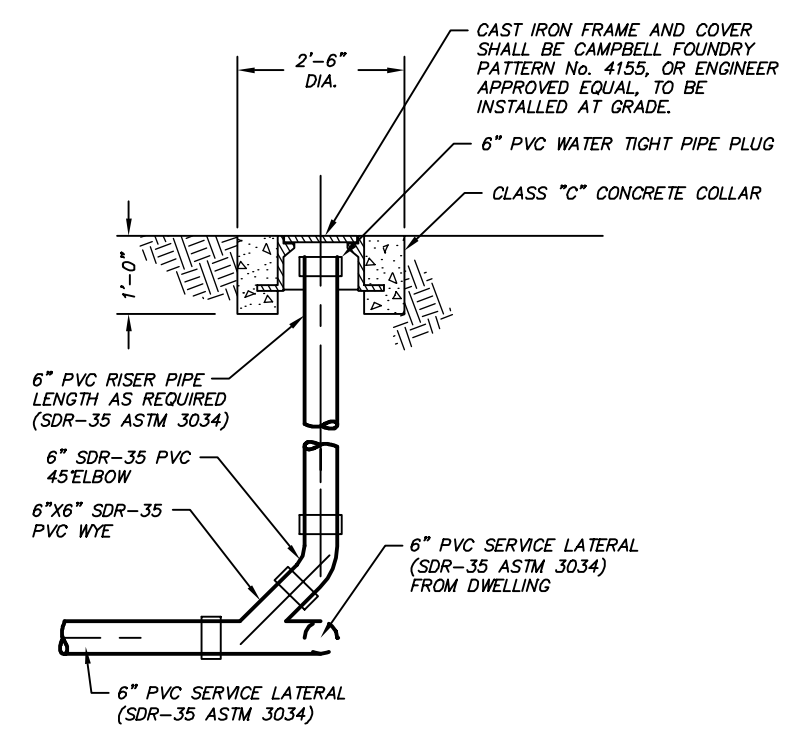
SANITARY SEWER MANHOLE DETAIL
N.T.S.



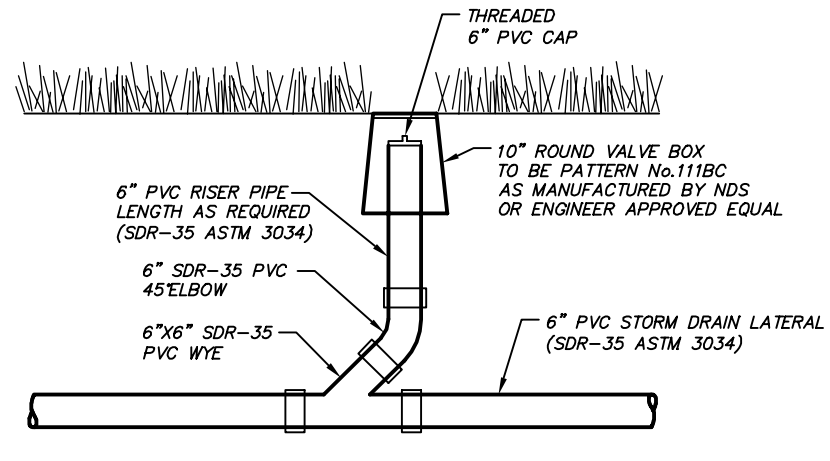
DOWNSPOUT OVERFLOW DETAIL
N.T.S.



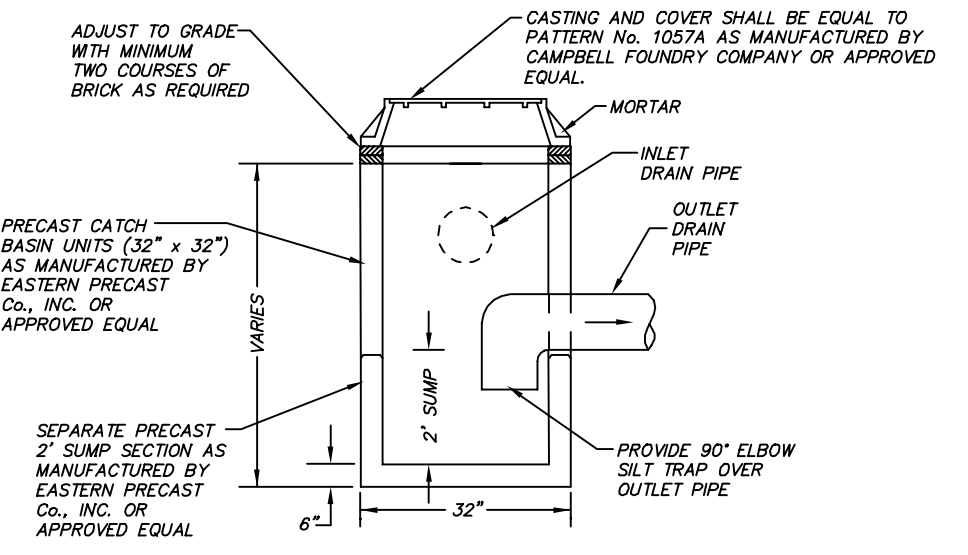
RESIDENTIAL SPLASH PAD DETAIL
N.T.S.



CLEAN OUT IN DRIVEWAY
N.T.S.

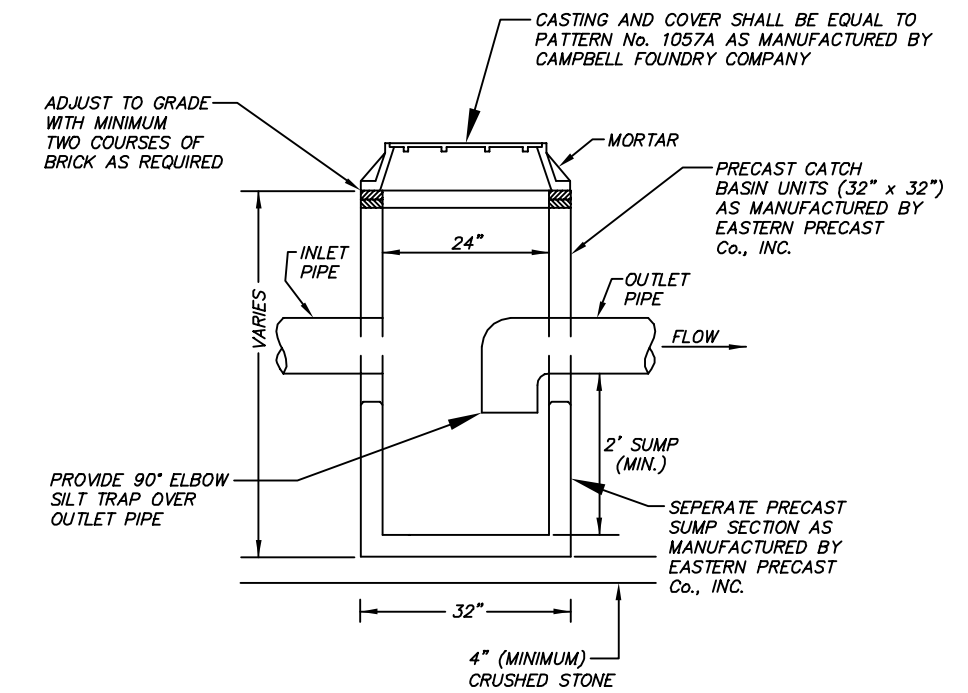


ROOF DRAIN CLEAN OUT TO GRADE DETAIL
N.T.S.



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

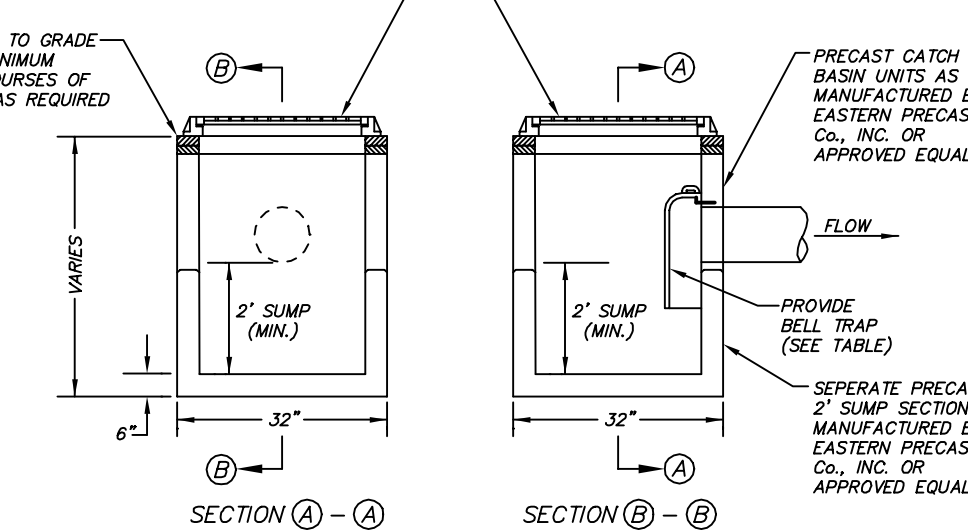
- NOTES:
- JUNCTION BOX SHALL HAVE A MINIMUM SUMP OF 2 FEET AS MEASURED FROM THE LOWEST PIPE INVERT ELEVATION TO THE INTERIOR BOTTOM OF THE STRUCTURE.
 - CONTRACTOR SHALL PURCHASE AND INSTALL A SEPARATE SUMP SECTION, NO OUTLET OR INLET PIPES SHALL PENETRATE THE BOTTOM SUMP SECTION.
 - REFER TO DEVELOPMENT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

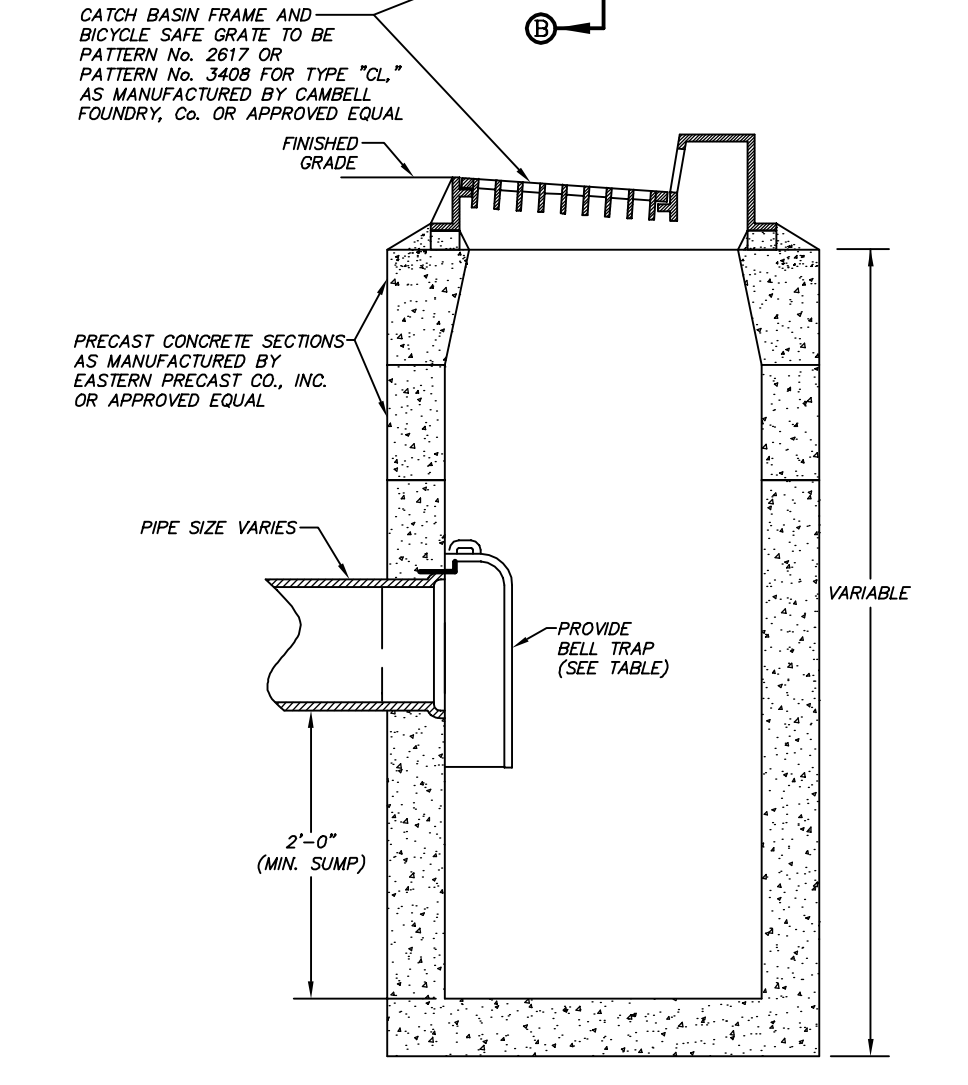
PIPE SIZE	CAMPBELL FOUNDRY PATTERN NUMBER
6"	2560
8"	2561
10"	2562
12"	2563



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.

PIPE SIZE	CAMPBELL FOUNDRY PATTERN NUMBER
6"	2563
8"	2563
10"	2563
12"	2563
15"	2564
18"	2565



SECTION "B-B" 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 ELEVATIONS OF ALL PIPES.

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SURVEYORS
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6 NEIL LANE
TEL. 637-1779

PROJECT	RESIDENTIAL DEVELOPMENT
PREPARED FOR	G&T TAYLOR STREET LLC
LOCATION	12 & 18 TAYLOR STREET, STAMFORD, CONNECTICUT
DATE	9-26-23
5 OF 5	DETAILS

REV.	DATE	DESCRIPTION
2	9-26-23	RESPOND TO ENG COMMENTS
1	7-24-23	MINOR REVISIONS
0	5-2-23	INITIAL SUBMISSION
LEONARD C. D'ANDREA CT. PE No. 14869		
ENGINEER	DATE	

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

DRAINAGE SUMMARY REPORT

For

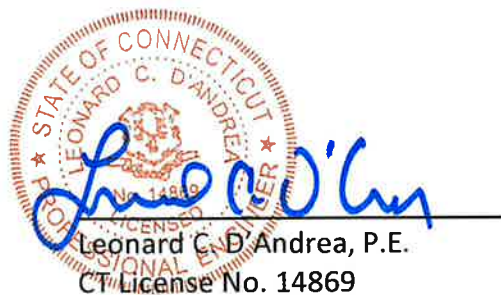
**12 & 18 Taylor Street
Stamford, Connecticut**

Prepared For

G&T Taylor Street LLC

May 2, 2023

Revised: September 21, 2023



**Leonard C. D'Andrea, P.E.
CT License No. 14869**

20PA_DSR_01

Table of Contents

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1.3. Construction Erosion and Sediment Control	3
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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 24,492 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 9,183 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	0.85	0.17	-0.68	-80%	1.14	0.23	-0.91	-80%	1.63	0.65	-0.98	-60%	1.98	1.05	-0.93	-47%	2.33	1.62	-0.71	-30%	2.67	2.30	-0.37	-14%	3.06	2.80	-0.26	-8%
B	0.12	0.03	-0.09	-75%	0.17	0.05	-0.12	-71%	0.27	0.09	-0.18	-67%	0.33	0.24	-0.09	-27%	0.40	0.27	-0.13	-33%	0.47	0.30	-0.17	-36%	0.55	0.35	-0.20	-36%

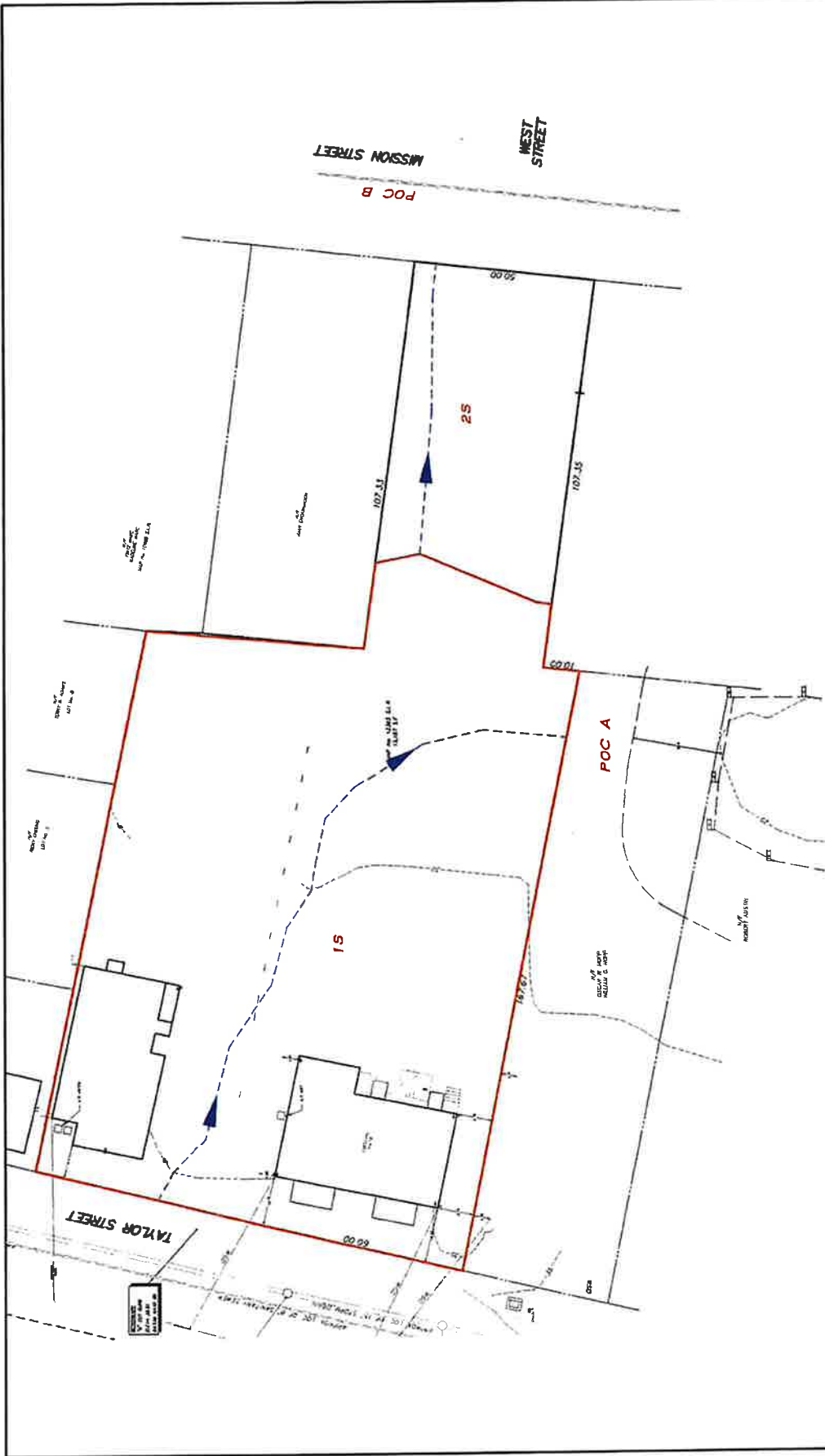
Table 1: Comparison of Existing and Proposed Peak Flow Rates for all Points of Concern.

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	2,531	1,576	-955	-38%	3,413	2,649	-764	-22%	4,941	4,465	-476	-10%	6,038	5,748	-290	-5%	7,149	7,039	-110	-2%	8,271	8,334	63	1%	9,563	9,819	256	3%
B	416	100	-316	-76%	590	195	-395	-67%	901	357	-544	-60%	1,129	472	-657	-58%	1,364	589	-775	-57%	1,603	707	-896	-56%	1,880	842	-1,038	-55%

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

Exhibits “A & B”

**Existing and Proposed
Watershed Maps**

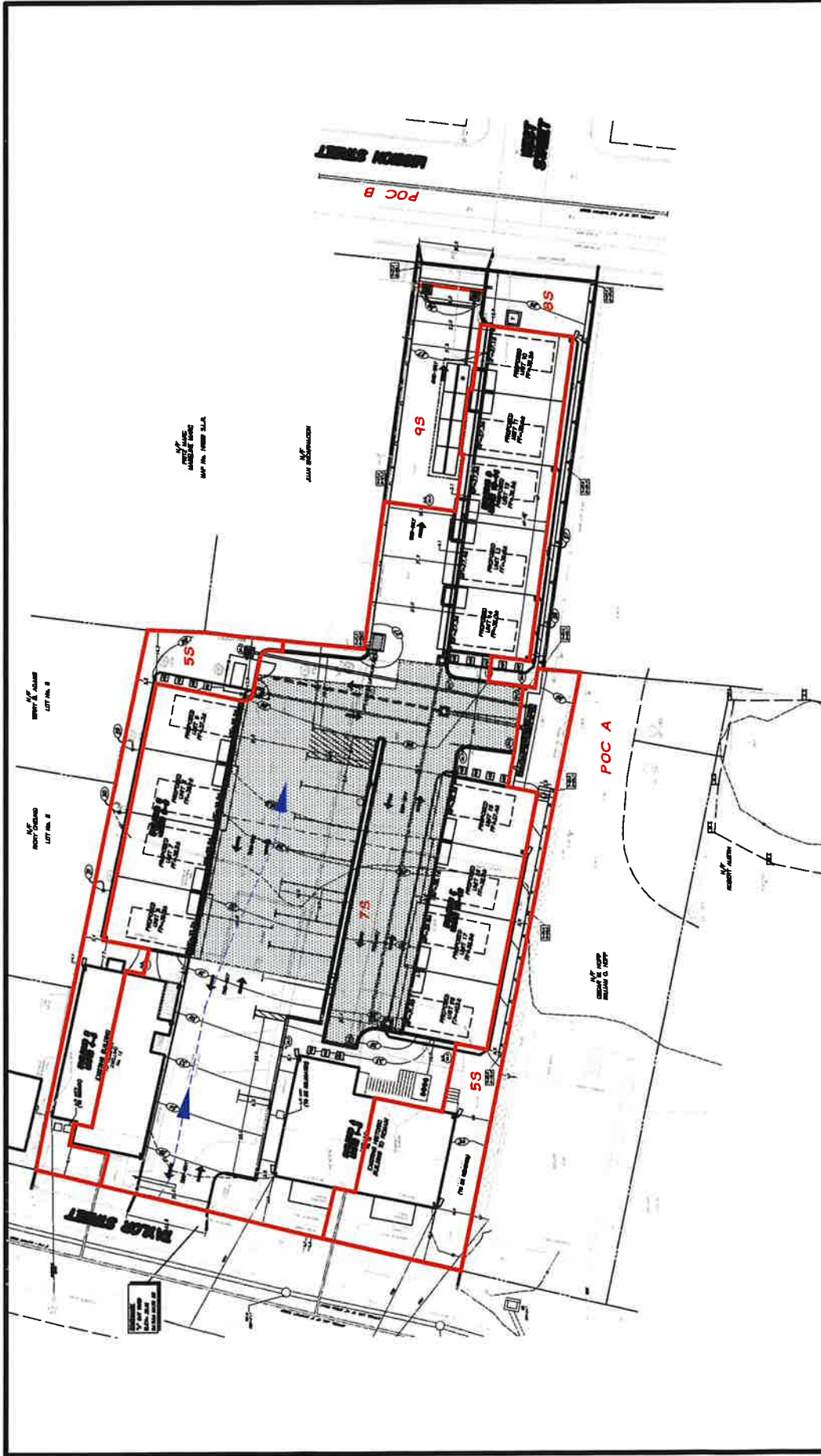


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EXHIBIT "A"
EXISTING CONDITIONS

1 INCH = 40 FEET

A graphic scale bar labeled 'SCALE' with markings for 0, 20, and 40 feet. Below the bar, the text 'IN FEET' is written.



20PA

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EXHIBIT "B"
PROPOSED CONDITIONS

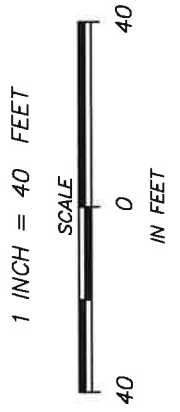
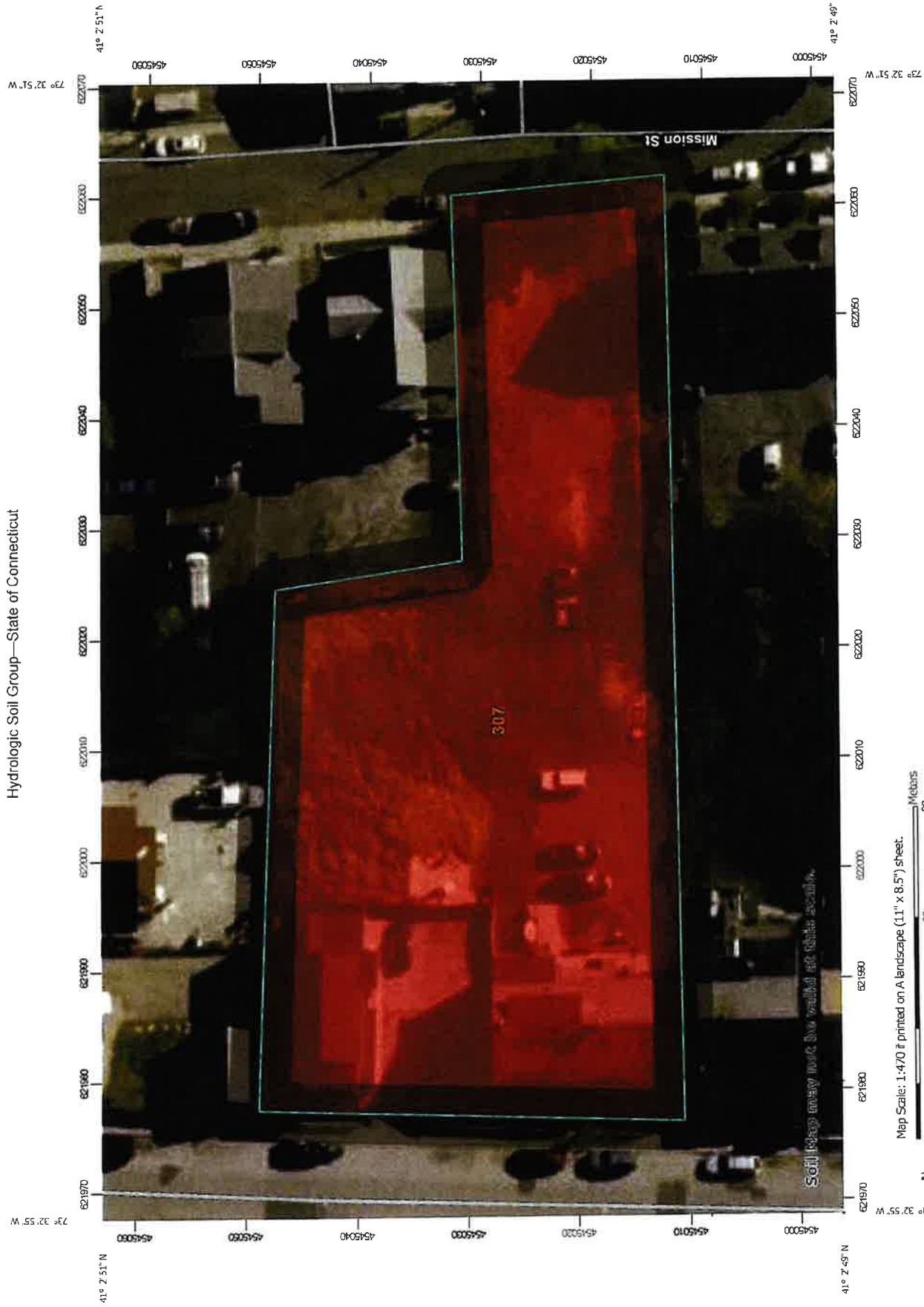


Exhibit “C”

USDA Soil Delineation Map

Hydrologic Soil Group—State of Connecticut



MAP LEGEND

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

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.

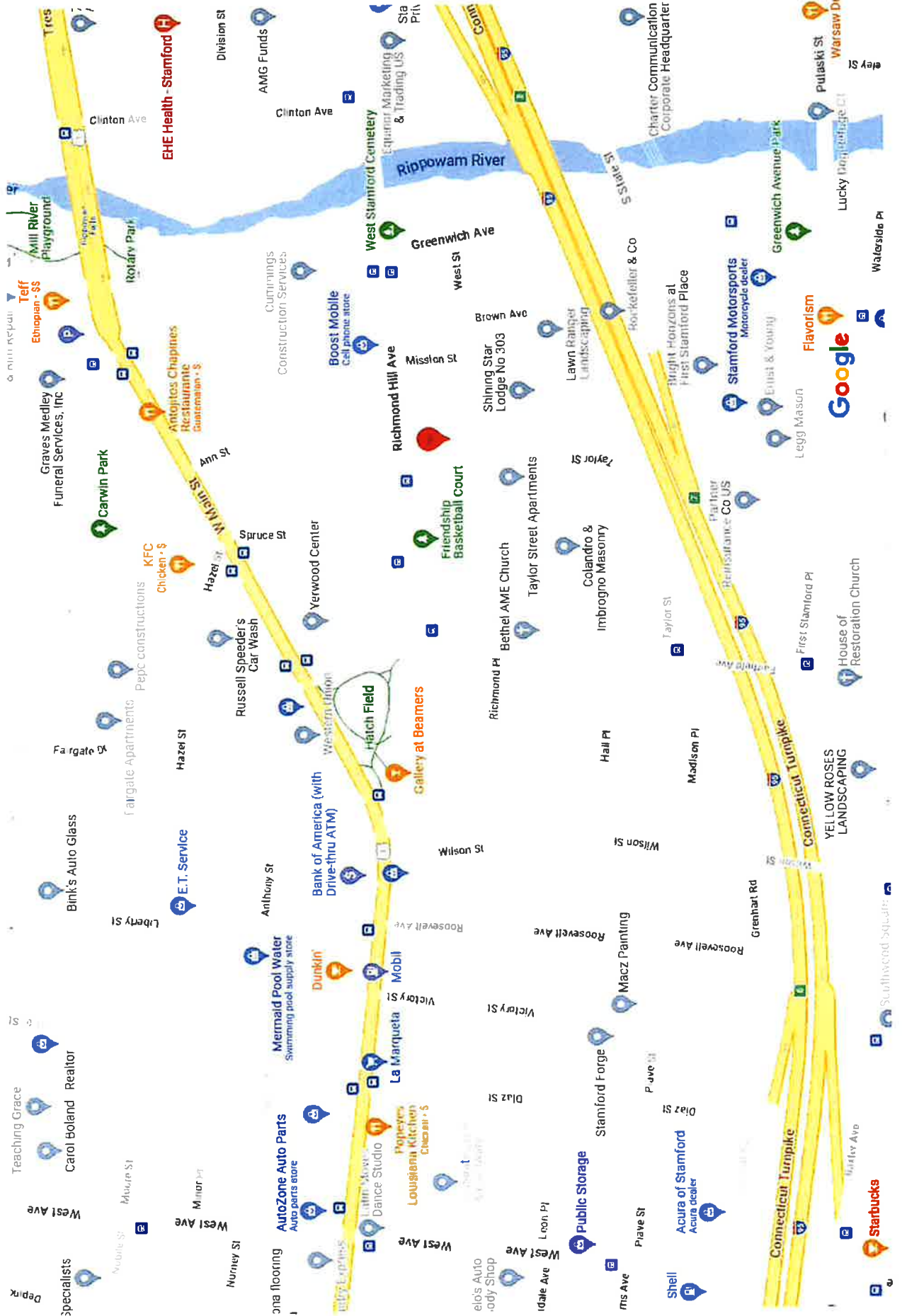
Rating Options

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Exhibit “D”
Site Vicinity Map

Google Maps 12 Taylor St



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

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

Where:

DV = Design Volume	=	2200 ft ³	
k = Infiltration Rate	=	0.09 inches/hr	Tan Fines
A = Bottom Area	=	5500 ft ²	

$$t_{\text{drawdown}} = 53.3 \text{ hours} \quad \text{Drawdown Requirement Satisfied}$$

Retention System #2: Cultec Drywells

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

Where:

DV = Design Volume	=	231 ft ³	
k = Infiltration Rate	=	0.52 inches/hr	Silty Loam
A = Bottom Area	=	270.83 ft ²	

$$t_{\text{drawdown}} = 19.7 \text{ hours} \quad \text{Drawdown Requirement Satisfied}$$

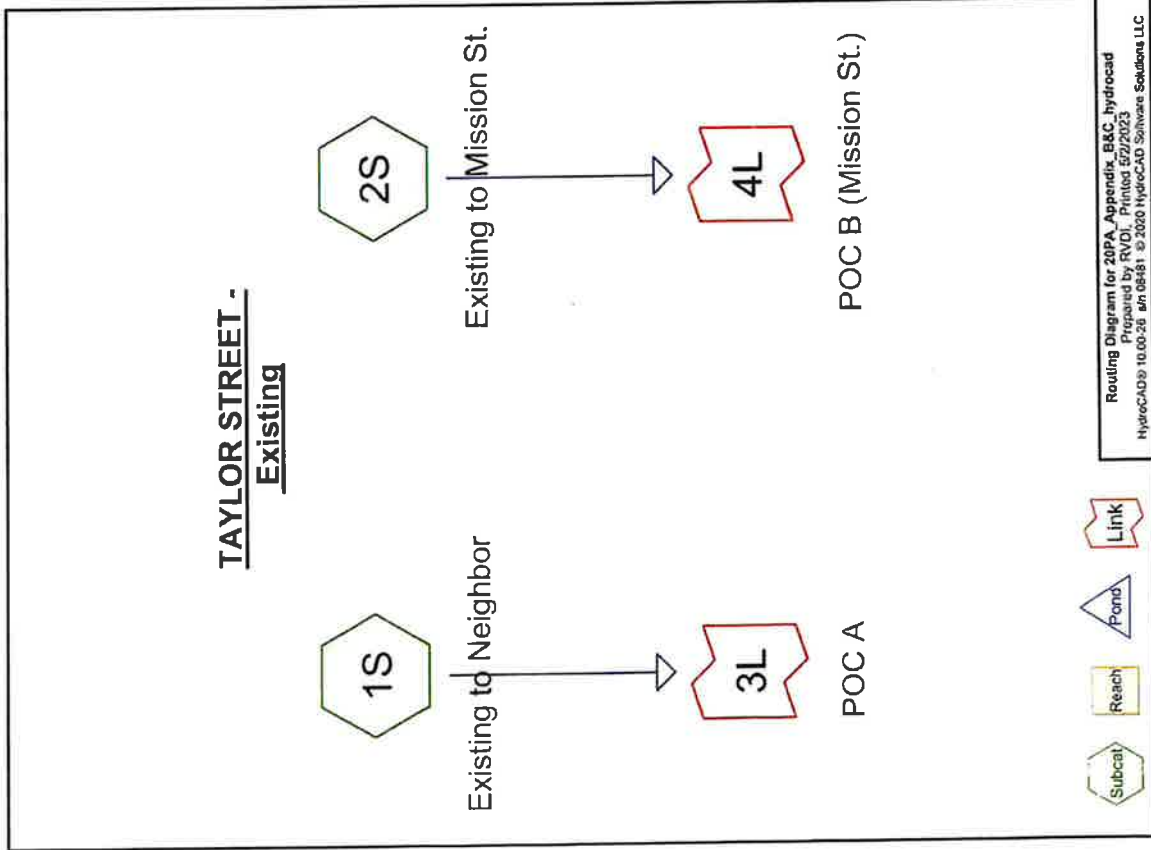
Appendix “B”

**HydroCAD Analysis –
Existing Conditions**

20PA_Appendix_B&C_hydrocad

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
15,790	80.0	>75% Grass cover, Good, HSG D (1S, 2S)
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)
24,495	86.4	TOTAL AREA



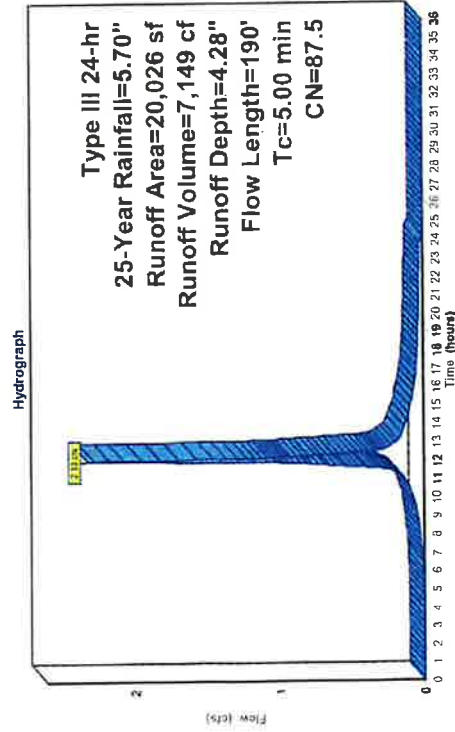
Summary for Subcatchment 1S: Existing to Neighbor

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 fps
2.77	190	Total	Increased to minimum		Tc = 5.00 min

Subcatchment 1S: Existing to Neighbor



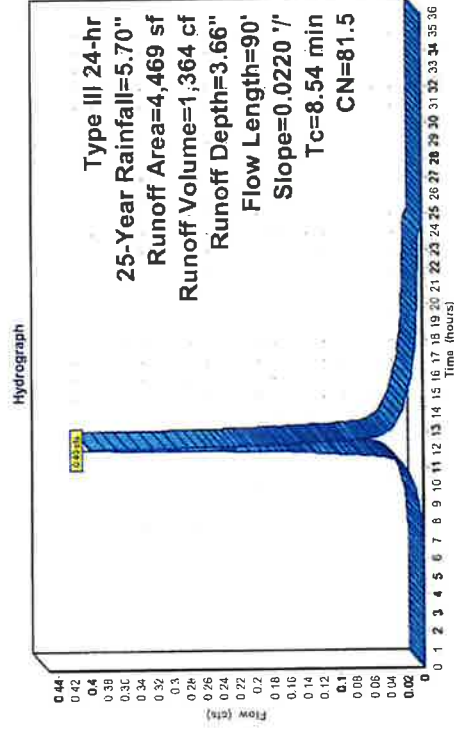
Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.40 cfs @ 12.12 hrs, Volume= 1,364 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107	91.90%	Pervious Area
362	8.10%	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"

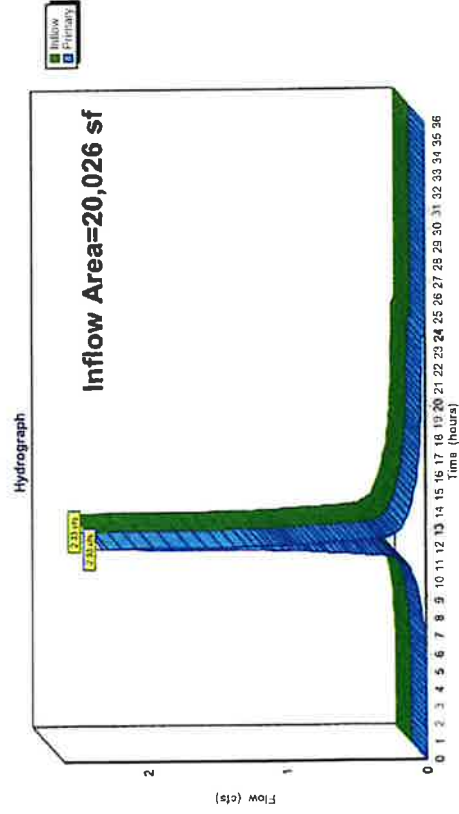
Subcatchment 2S: Existing to Mission St.



Summary for Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 4.28" for 25-Year event
 Inflow = 2.33 cfs @ 12.07 hrs, Volume= 7,149 cf
 Primary = 2.33 cfs @ 12.07 hrs, Volume= 7,149 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

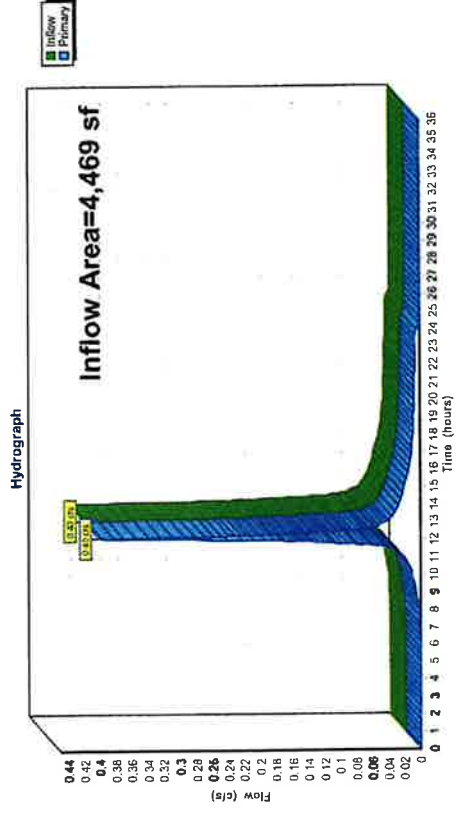
Link 3L: POC A



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

Inflow Area = 4,469 sf, 8.10% Impervious, Inflow Depth = 3.66" for 25-Year event
 Inflow = 0.40 cfs @ 12.12 hrs, Volume= 1,364 cf
 Primary = 0.40 cfs @ 12.12 hrs, Volume= 1,364 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.)



Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing to Neighbor Runoff Area=20,026 sf 41.66% impervious Runoff Depth=1.52"
 Flow Length=190' Tc=5.00 min CN=87.5 Runoff=0.85 cfs 2,531 cf

Subcatchment 2S: Existing to Mission St. Runoff Area=4,469 sf 8.10% impervious Runoff Depth=1.12"
 Flow Length=90' Slope=0.0220 1/ Slope=0.0220 1/ Tc=8.54 min CN=81.5 Runoff=0.12 cfs 416 cf

Link 3L: POC A
 Inflow=0.85 cfs 2,531 cf
 Primary=0.85 cfs 2,531 cf

Link 4L: POC B (Mission St.)
 Inflow=0.12 cfs 416 cf
 Primary=0.12 cfs 416 cf

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= 416 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% 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 Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 1.52" for 1-Year event
Inflow = 0.85 cfs @ 12.07 hrs, Volume= 2,531 cf
Primary = 0.85 cfs @ 12.07 hrs, Volume= 2,531 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 = 4,469 sf, 8.10% Impervious, Inflow Depth = 1.12" for 1-Year event
Inflow = 0.12 cfs @ 12.13 hrs, Volume= 416 cf
Primary = 0.12 cfs @ 12.13 hrs, Volume= 416 cf, Atten= 0%, Lag= 0.0 min

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

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing to Neighbor Runoff Area=20,026 sf 41.66% Impervious Runoff Depth=2.05"
Flow Length=190' Tc=5.00 min CN=87.5 Runoff=1.14 cfs 3,413 cf

Subcatchment 2S: Existing to Mission St. Runoff Area=4,469 sf 8.10% Impervious Runoff Depth=1.58"
Flow Length=90' Slope=0.0220 Tc=8.54 min CN=81.5 Runoff=0.17 cfs 590 cf

Link 3L: POC A Inflow=1.14 cfs 3,413 cf
Primary=1.14 cfs 3,413 cf

Link 4L: POC B (Mission St.) Inflow=0.17 cfs 590 cf
Primary=0.17 cfs 590 cf

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		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 = 0.17 cfs @ 12.12 hrs, Volume= 590 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% 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 Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 2.05" for 2-Year event
 Inflow = 1.14 cfs @ 12.07 hrs, Volume= 3,413 cf
 Primary = 1.14 cfs @ 12.07 hrs, Volume= 3,413 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 = 4,469 sf, 8.10% Impervious, Inflow Depth = 1.58" for 2-Year event
 Inflow = 0.17 cfs @ 12.12 hrs, Volume= 590 cf
 Primary = 0.17 cfs @ 12.12 hrs, Volume= 590 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing to Neighbor
 Flow Length=190' Tc=5.00 min CN=87.5 Runoff=1.63 cfs 4,941 cf

Subcatchment 1S: Existing to Neighbor
 Flow Length=190' Tc=5.00 min CN=87.5 Runoff=1.63 cfs 4,941 cf

Subcatchment 2S: Existing to Mission St.
 Flow Length=90' Slope=0.0220 7' Tc=8.54 min CN=81.5 Runoff=0.27 cfs 901 cf

Subcatchment 2S: Existing to Mission St.
 Flow Length=90' Slope=0.0220 7' Tc=8.54 min CN=81.5 Runoff=0.27 cfs 901 cf

Link 3L: POC A

Link 3L: POC A

Link 4L: POC B (Mission St.)

Link 4L: POC B (Mission St.)

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)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.50	70	0.0871	2.34	
1.71	30	0.1367	0.29	
0.56	90	0.0322	2.69	
2.77	190	Total, increased to minimum	Tc = 5.00 min	

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

Summary for Subcatchment 2S: Existing to Mission St.

Runoff = 0.27 cfs @ 12.12 hrs, Volume= 901 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% Impervious Area

Tc (min)	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 Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 2.96" for 5-Year event
 Inflow = 1.63 cfs @ 12.07 hrs, Volume= 4,941 cf
 Primary = 1.63 cfs @ 12.07 hrs, Volume= 4,941 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 = 4,469 sf, 8.10% Impervious, Inflow Depth = 2.42" for 5-Year event
 Inflow = 0.27 cfs @ 12.12 hrs, Volume= 901 cf
 Primary = 0.27 cfs @ 12.12 hrs, Volume= 901 cf, Atten= 0%, Lag= 0.0 min

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

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing to Neighbor Runoff Area=20,026 sf 41.66% Impervious Runoff Depth=3.62"
 Flow Length=190' Tc=5.00 min CN=87.5 Runoff=1.98 cfs 6,038 cf

Subcatchment 2S: Existing to Mission St. Runoff Area=4,469 sf 8.10% Impervious Runoff Depth=3.03"
 Flow Length=90' Slope=0.0220 1/8" Tc=8.54 min CN=81.5 Runoff=0.33 cfs 1,129 cf

Link 3L: POC A

Inflow=1.98 cfs 6,038 cf
 Primary=1.98 cfs 6,038 cf

Link 4L: POC B (Mission St.)

Inflow=0.33 cfs 1,129 cf
 Primary=0.33 cfs 1,129 cf

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	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 = 0.33 cfs @ 12.12 hrs, Volume= 1,129 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107	91.90%	Pervious Area
362	8.10%	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 Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 3.62" for 10-Year event
 Inflow = 1.98 cfs @ 12.07 hrs, Volume= 6,038 cf
 Primary = 1.98 cfs @ 12.07 hrs, Volume= 6,038 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 = 4,469 sf, 8.10% Impervious, Inflow Depth = 3.03" for 10-Year event
 Inflow = 0.33 cfs @ 12.12 hrs, Volume= 1,129 cf
 Primary = 0.33 cfs @ 12.12 hrs, Volume= 1,129 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = Inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Summary for Subcatchment 1S: Existing to Neighbor
 Runoff = 2.33 cfs @ 12.07 hrs, Volume= 7,149 cf, Depth= 4.28"

Subcatchment 1S: Existing to Neighbor
 Runoff Area=20,026 sf 41.66% Impervious Runoff Depth=4.28"
 Flow Length=190' Tc=5.00 min CN=87.5 Runoff=2.33 cfs 7,149 cf

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"

Subcatchment 2S: Existing to Mission St.
 Runoff Area=4,469 sf 8.10% Impervious Runoff Depth=3.66"
 Flow Length=90' Slope=0.0220 1' Tc=8.54 min CN=81.5 Runoff=0.40 cfs 1,364 cf

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 Ky= 15.0 fps

Link 3L: POC A
 Inflow=2.33 cfs 7,149 cf
 Primary=2.33 cfs 7,149 cf

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

Link 4L: POC B (Mission St.)
 Inflow=0.40 cfs 1,364 cf
 Primary=0.40 cfs 1,364 cf

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		
0.56	90	0.0322	2.69		
2.77	190	Total	Increased to minimum	Tc = 5.00 min	

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% Impervious Area

Summary for Subcatchment 2S: Existing to Mission St.
 Runoff = 0.40 cfs @ 12.12 hrs, Volume= 1,364 cf, Depth= 3.66"

Runoff = 0.40 cfs @ 12.07 hrs, Volume= 1,364 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"

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"

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

Area (sf)	CN	Description
362	98.0	Paved parking, HSG D
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% Impervious Area

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

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

Summary for Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 4.28" for 25-Year event
Inflow = 2.33 cfs @ 12.07 hrs, Volume= 7,149 cf
Primary = 2.33 cfs @ 12.07 hrs, Volume= 7,149 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 = 4,469 sf, 8.10% Impervious, Inflow Depth = 3.66" for 25-Year event
Inflow = 0.40 cfs @ 12.12 hrs, Volume= 1,364 cf
Primary = 0.40 cfs @ 12.12 hrs, Volume= 1,364 cf, Atten= 0%, Lag= 0.0 min

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

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing to Neighbor Runoff Area=20,026 sf 41.66% Impervious Runoff Depth=4.96"
Flow Length=190' Tc=5.00 min CN=87.5 Runoff=2.67 cfs 8,271 cf

Subcatchment 2S: Existing to Mission St. Runoff Area=4,469 sf 8.10% Impervious Runoff Depth=4.30"
Flow Length=90' Slope=0.0220 'y' Tc=8.54 min CN=81.5 Runoff=0.47 cfs 1,603 cf

Link 3L: POC A Inflow=2.67 cfs 8,271 cf
Primary=2.67 cfs 8,271 cf

Link 4L: POC B (Mission St.) Inflow=0.47 cfs 1,603 cf
Primary=0.47 cfs 1,603 cf

Summary for Subcatchment 1S: Existing to Neighbor

Runoff = 2.67 cfs @ 12.07 hrs, Volume= 8,271 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	0.0571	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 = 0.47 cfs @ 12.12 hrs, Volume= 1,603 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% 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 Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% Impervious, Inflow Depth = 4.96" for 50-Year event
 Inflow = 2.67 cfs @ 12.07 hrs, Volume= 8,271 cf
 Primary = 2.67 cfs @ 12.07 hrs, Volume= 8,271 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 = 4,469 sf, 8.10% Impervious, Inflow Depth = 4.30" for 50-Year event
 Inflow = 0.47 cfs @ 12.12 hrs, Volume= 1,603 cf
 Primary = 0.47 cfs @ 12.12 hrs, Volume= 1,603 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= 1,880 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
4,107	80.0	>75% Grass cover, Good, HSG D
4,469	81.5	Weighted Average
4,107		91.90% Pervious Area
362		8.10% 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"

Time span=0.00-36.00 hrs, dt=0.01 hrs, 3601 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment 1S: Existing to Neighbor
 Flow Length=190' Runoff Area=20,026 sf 41.66% impervious Runoff Depth=5.73"
 Flow Length=190' Tc=5.00 min CN=87.5 Runoff=3.06 cfs 9,563 cf

Subcatchment 2S: Existing to Mission St.
 Flow Length=90' Slope=0.0220 Tc=8.54 min CN=81.5 Runoff=0.55 cfs 1,880 cf

Link 3L: POC A
 Inflow=3.06 cfs 9,563 cf
 Primary=3.06 cfs 9,563 cf

Link 4L: POC B (Mission St.)
 Inflow=0.55 cfs 1,880 cf
 Primary=0.55 cfs 1,880 cf

Summary for Link 3L: POC A

Inflow Area = 20,026 sf, 41.66% impervious, Inflow Depth = 5.73" for 100-Year event
Inflow = 3.06 cfs @ 12.07 hrs, Volume= 9,563 cf
Primary = 3.06 cfs @ 12.07 hrs, Volume= 9,563 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 = 4,469 sf, 8.10% impervious, Inflow Depth = 5.05" for 100-Year event
Inflow = 0.55 cfs @ 12.12 hrs, Volume= 1,880 cf
Primary = 0.55 cfs @ 12.12 hrs, Volume= 1,880 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**

Summary for Subcatchment 5S: Free release to POC A

Runoff = 0.17 cfs @ 12.08 hrs, Volume= 503 cf, Depth= 1.35"

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	Adj	Description
0	98.0		Paved parking, HSG D
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UJ Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 1.05 cfs @ 12.07 hrs, Volume= 3,295 cf, Depth= 2.19"

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"

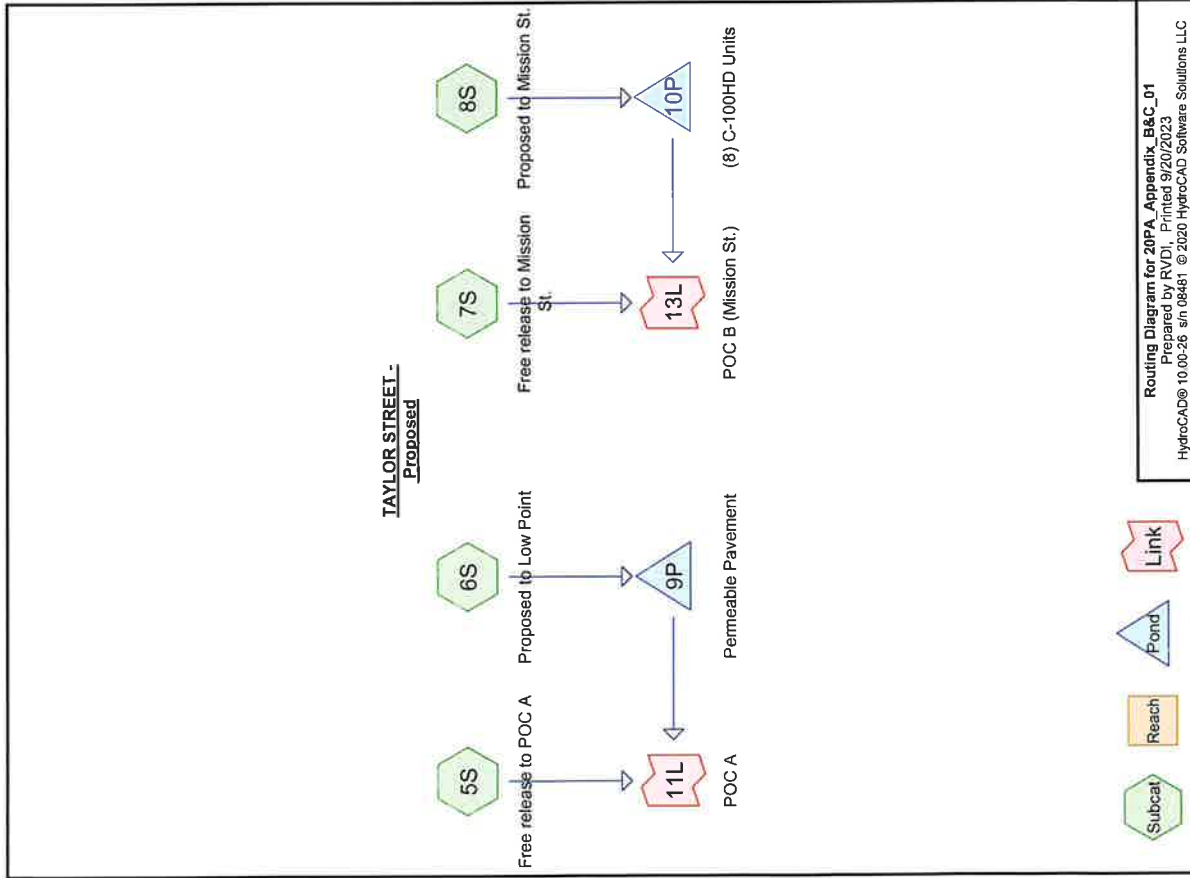
Area (sf)	CN	Description
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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= 100 cf, Depth= 1.14"

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 1-Year Rainfall=2.70"



Area (sf)	CN	Description		
108	98.0	Paved parking, HSG D		
951	80.0	>75% Grass cover, Good, HSG D		
0	98.0	Roofs, HSG D		
1,059	81.8	Weighted Average		
951		89.80% Pervious Area		
108		10.20% Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.07 cfs @ 12.07 hrs, Volume= 244 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		
0	98.0	Roofs, HSG D		
1,184	98.0	Weighted Average		
1,184		100.00% Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 2.19" for 1-Year event
 Inflow = 1.05 cfs @ 12.07 hrs, Volume= 3,295 cf
 Outflow = 0.05 cfs @ 14.55 hrs, Volume= 1,073 cf, Atten= 95%, Lag= 148.6 min
 Primary = 0.05 cfs @ 14.55 hrs, Volume= 1,073 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.71' @ 14.55 hrs Surf.Area= 5,500 sf Storage= 2,441 cf

Plug-Flow detention time= 447.1 min calculated for 1,073 cf (33% of inflow)
 Center-of-Mass det. time= 302.7 min (1,086.0 - 783.3)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
			3,960 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400
Device	Routing	Invert	Outlet Devices
#1	Primary	25.60'	10.0" Round 10" Culvert L= 22.0' Ke= 0.500 Inlet / Outlet invert= 25.60' / 23.70' S= 0.0864' / Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.05 cfs @ 14.55 hrs HW=25.71' TW=0.00' (Dynamic Tailwater)
L-1=10" Culvert (Inlet Controls 0.05 cfs @ 1.13 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 2.47" for 1-Year event
 Inflow = 0.07 cfs @ 12.07 hrs, Volume= 244 cf
 Outflow = 0.00 cfs @ 19.71 hrs, Volume= 13 cf, Atten= 99%, Lag= 458.6 min
 Primary = 0.00 cfs @ 19.71 hrs, Volume= 13 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.80' @ 19.71 hrs Surf.Area= 271 sf Storage= 231 cf

Plug-Flow detention time= 954.8 min calculated for 13 cf (5% of inflow)
 Center-of-Mass det. time= 542.6 min (1,301.8 - 759.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04"H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
			289 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads
Primary OutFlow	Max=0.00 cfs @ 19.71 hrs HW=25.80' TW=0.00' (Dynamic Tailwater) L-1=2 - 2'x2' catch basins (Weir Controls 0.00 cfs @ 0.09 fps)		

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 0.84" for 1-Year event
 Inflow = 0.17 cfs @ 12.08 hrs, Volume= 1,576 cf
 Primary = 0.17 cfs @ 12.08 hrs, Volume= 1,576 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 = 2,243 sf, 57.60% Impervious, Inflow Depth = 0.61" for 1-Year event
 Inflow = 0.03 cfs @ 12.08 hrs, Volume= 113 cf
 Primary = 0.03 cfs @ 12.08 hrs, Volume= 113 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 = 0.23 cfs @ 12.07 hrs, Volume= 692 cf, Depth= 1.85"

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
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UJ Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 1.31 cfs @ 12.07 hrs, Volume= 4,180 cf, Depth= 2.77"

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
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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

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

Runoff = 0.05 cfs @ 12.08 hrs, Volume= 142 cf, Depth= 1.60"

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		
108	98.0	Paved parking, HSG D		
951	80.0	>75% Grass cover, Good, HSG D		
0	98.0	Roofs, HSG D		
1,059	81.8	Weighted Average		
951	89.60%	Pervious Area		
108	10.20%	Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.09 cfs @ 12.07 hrs, Volume= 303 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		
0	98.0	Roofs, HSG D		
1,184	98.0	Weighted Average		
1,184	100.00%	Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 2.77" for 2-Year event
 Inflow = 1.31 cfs @ 12.07 hrs, Volume= 4,180 cf
 Outflow = 0.15 cfs @ 12.69 hrs, Volume= 1,957 cf, Atten= 89%, Lag= 36.9 min
 Primary = 0.15 cfs @ 12.69 hrs, Volume= 1,957 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.80' @ 12.69 hrs Surf.Area= 5,500 sf Storage= 2,629 cf

Plug-Flow detention time= 326.3 min calculated for 1,956 cf (47% of inflow)
 Center-of-Mass det. time= 206.0 min (983.2 - 777.1)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
			3,960 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400
Device	Routing	Invert	Outlet Devices
#1	Primary	25.60'	10.0" Round 10" Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864 ' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.15 cfs @ 12.69 hrs HW=25.80' TW=0.00' (Dynamic Tailwater)
L-1=10" Culvert (Inlet Controls 0.15 cfs @ 1.50 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 3.07" for 2-Year event
 Inflow = 0.09 cfs @ 12.07 hrs, Volume= 303 cf
 Outflow = 0.01 cfs @ 13.54 hrs, Volume= 72 cf, Atten= 94%, Lag= 88.1 min
 Primary = 0.01 cfs @ 13.54 hrs, Volume= 72 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.80' @ 13.54 hrs Surf.Area= 271 sf Storage= 231 cf

Plug-Flow detention time= 488.4 min calculated for 72 cf (24% of inflow)
 Center-of-Mass det. time= 269.7 min (1,024.6 - 754.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04'H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
			289 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads
Primary OutFlow Max=0.01 cfs @ 13.54 hrs HW=25.80' TW=0.00' (Dynamic Tailwater) L-1=2 - 2'x2' catch basins (Weir Controls 0.01 cfs @ 0.16 fps)			

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 1.41" for 2-Year event
 Inflow = 0.23 cfs @ 12.07 hrs, Volume= 2,649 cf
 Primary = 0.23 cfs @ 12.07 hrs, Volume= 2,649 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 = 2,243 sf, 57.60% Impervious, Inflow Depth = 1.14" for 2-Year event
 Inflow = 0.05 cfs @ 12.08 hrs, Volume= 214 cf
 Primary = 0.05 cfs @ 12.08 hrs, Volume= 214 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 = 0.34 cfs @ 12.07 hrs, Volume= 1,023 cf, Depth= 2.74"

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
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UJ Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 1.75 cfs @ 12.07 hrs, Volume= 5,665 cf, Depth= 3.76"

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 5-Year Rainfall=4.30"

Area (sf)	CN	Description
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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 = 0.07 cfs @ 12.07 hrs, Volume= 216 cf, Depth= 2.44"

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		
951	80.0	>75% Grass cover, Good, HSG D		
0	98.0	Roofs, HSG D		
1,059	81.8	Weighted Average		
951		89.80% Pervious Area		
108		10.20% Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.12 cfs @ 12.07 hrs, Volume= 401 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		
1,184	98.0	Paved parking, HSG D		
0	80.0	>75% Grass cover, Good, HSG D		
0	98.0	Roofs, HSG D		
1,184	98.0	Weighted Average		
1,184		100.00% Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 3.76" for 5-Year event
 Inflow = 1.75 cfs @ 12.07 hrs, Volume= 5,665 cf
 Outflow = 0.53 cfs @ 12.37 hrs, Volume= 3,442 cf, Atten= 70%, Lag= 17.9 min
 Primary = 0.53 cfs @ 12.37 hrs, Volume= 3,442 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.99' @ 12.37 hrs Surf.Area= 5,500 sf Storage= 3,058 cf

Plug-Flow detention time= 251.2 min calculated for 3,442 cf (61% of inflow)
 Center-of-Mass det. time= 147.3 min (916.9 - 769.6)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
			3,960 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400
Device	Routing	Invert	Outlet Devices
#1	Primary	25.60'	10.0" Round 10" Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864 7' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=0.53 cfs @ 12.37 hrs HW=25.99' TW=0.00' (Dynamic Tailwater)
L-1=10" Culvert (Inlet Controls 0.53 cfs @ 2.13 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 4.06" for 5-Year event
 Inflow = 0.12 cfs @ 12.07 hrs, Volume= 401 cf
 Outflow = 0.05 cfs @ 12.22 hrs, Volume= 170 cf, Atten= 55%, Lag= 9.0 min
 Primary = 0.05 cfs @ 12.22 hrs, Volume= 170 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.81' @ 12.22 hrs Surf.Area= 271 sf Storage= 232 cf

Plug-Flow detention time= 301.1 min calculated for 170 cf (42% of inflow)
 Center-of-Mass det. time= 155.1 min (904.8 - 749.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04"H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
			289 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads
Primary OutFlow	Max=0.05 cfs @ 12.22 hrs HW=25.81' TW=0.00' (Dynamic Tailwater) L-1=2 - 2'x2' catch basins (Weir Controls 0.05 cfs @ 0.33 fps)		

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 2.37" for 5-Year event
 Inflow = 0.65 cfs @ 12.32 hrs, Volume= 4,465 cf
 Primary = 0.65 cfs @ 12.32 hrs, Volume= 4,465 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 = 2,243 sf, 57.60% Impervious, Inflow Depth = 2.07" for 5-Year event
 Inflow = 0.09 cfs @ 12.22 hrs, Volume= 386 cf
 Primary = 0.09 cfs @ 12.22 hrs, Volume= 386 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 = 0.42 cfs @ 12.07 hrs, Volume= 1,262 cf, Depth= 3.38"

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
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UI Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 2.05 cfs @ 12.07 hrs, Volume= 6,710 cf, Depth= 4.45"

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
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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 = 0.09 cfs @ 12.07 hrs, Volume= 270 cf, Depth= 3.06"

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 10-Year Rainfall=5.00"

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
951	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
1,059	81.8	Weighted Average
951		89.80% Pervious Area
108		10.20% Impervious Area

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

Summary for Subcatchment 8S: Proposed to Mission St.
 Runoff = 0.14 cfs @ 12.07 hrs, Volume= 470 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
0	98.0	Roofs, HSG D
1,184	98.0	Weighted Average
1,184		100.00% Impervious Area

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

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 4.45" for 10-Year event
 Inflow = 2.05 cfs @ 12.07 hrs, Volume= 6,710 cf
 Outflow = 0.85 cfs @ 12.25 hrs, Volume= 4,486 cf, Atten= 58%, Lag= 10.8 min
 Primary = 0.85 cfs @ 12.25 hrs, Volume= 4,486 cf
 Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.11' @ 12.25 hrs Surf.Area= 5,500 sf Storage= 3,324 cf
 Plug-Flow detention time= 225.6 min calculated for 4,486 cf (67% of inflow)
 Center-of-Mass det. time= 128.8 min (894.4 - 765.6)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
			3,960 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400

Primary OutFlow Max=0.85 cfs @ 12.25 hrs HW=26.11' TW=0.00' (Dynamic Tailwater)
L-1=10" Culvert (Inlet Controls 0.85 cfs @ 2.43 fps)
 L=22.0' Round 10" Culvert L=22.0' Ke=0.500
 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864 7' Cc= 0.900
 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 4.76" for 10-Year event
 Inflow = 0.14 cfs @ 12.07 hrs, Volume= 470 cf
 Outflow = 0.16 cfs @ 12.10 hrs, Volume= 239 cf, Atten= 0%, Lag= 2.0 min
 Primary = 0.16 cfs @ 12.10 hrs, Volume= 239 cf
 Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.82' @ 12.10 hrs Surf.Area= 271 sf Storage= 233 cf
 Plug-Flow detention time= 254.8 min calculated for 239 cf (51% of inflow)
 Center-of-Mass det. time= 127.5 min (874.5 - 747.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04"H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
			289 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.14 cfs @ 12.10 hrs HW=25.82' TW=0.00' (Dynamic Tailwater)
L-1=2 - 2'x2' catch basins (Weir Controls 0.14 cfs @ 0.45 fps)

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 3.06" for 10-Year event
 Inflow = 1.05 cfs @ 12.19 hrs, Volume= 5,748 cf
 Primary = 1.05 cfs @ 12.19 hrs, Volume= 5,748 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 = 2,243 sf, 57.60% Impervious, Inflow Depth = 2.73" for 10-Year event
 Inflow = 0.24 cfs @ 12.10 hrs, Volume= 509 cf
 Primary = 0.24 cfs @ 12.10 hrs, Volume= 509 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 = 0.50 cfs @ 12.07 hrs, Volume= 1,506 cf, Depth= 4.03"
 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 25-Year Rainfall=5.70"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UJ Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 2.36 cfs @ 12.07 hrs, Volume= 7,756 cf, Depth= 5.15"
 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 25-Year Rainfall=5.70"

Area (sf)	CN	Description
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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 = 0.11 cfs @ 12.07 hrs, Volume= 326 cf, Depth= 3.69"
 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"

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400

Device Routing Invert Outlet Devices
 #1 Primary 25.60' **10.0" Round 10" Culvert** L= 22.0' Ke= 0.500
 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864 1/ Cc= 0.900
 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.32 cfs @ 12.17 hrs HW=26.27' TW=0.00' (Dynamic Tailwater)
L-1=10" Culvert (Inlet Controls 1.32 cfs @ 2.80 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 5.46" for 25-Year event
 Inflow = 0.16 cfs @ 12.07 hrs, Volume= 539 cf
 Outflow = 0.16 cfs @ 12.07 hrs, Volume= 308 cf, Atten= 0%, Lag= 0.2 min
 Primary = 0.16 cfs @ 12.07 hrs, Volume= 308 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.82' @ 12.07 hrs Surf.Area= 271 sf Storage= 233 cf

Plug-Flow detention time= 228.5 min calculated for 308 cf (57% of inflow)
 Center-of-Mass det. time= 112.2 min (857.2 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04"H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows

289 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device Routing	Invert	Outlet Devices
#1 Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.16 cfs @ 12.07 hrs HW=25.82' TW=0.00' (Dynamic Tailwater)
L-1=2 - 2'x2' catch basins (Weir Controls 0.16 cfs @ 0.47 fps)

Area (sf)	CN	Description
108	98.0	Paved parking, HSG D
951	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roots, HSG D
1,059	81.8	Weighted Average
951	89.80%	Pervious Area
108	10.20%	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= 539 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
0	98.0	Roots, HSG D
1,184	98.0	Weighted Average
1,184	100.00%	Impervious Area

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

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 5.15" for 25-Year event
 Inflow = 2.36 cfs @ 12.07 hrs, Volume= 7,756 cf
 Outflow = 1.32 cfs @ 12.17 hrs, Volume= 5,533 cf, Atten= 44%, Lag= 6.3 min
 Primary = 1.32 cfs @ 12.17 hrs, Volume= 5,533 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.27' @ 12.17 hrs Surf.Area= 11,000 sf Storage= 3,561 cf

Plug-Flow detention time= 208.2 min calculated for 5,533 cf (71% of inflow)
 Center-of-Mass det. time= 117.1 min (879.5 - 762.4)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids

3,960 cf Total Available Storage

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 3.74" for 25-Year event
 Inflow = 1.62 cfs @ 12.16 hrs, Volume= 7,039 cf
 Primary = 1.62 cfs @ 12.16 hrs, Volume= 7,039 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 = 2,243 sf, 57.60% Impervious, Inflow Depth = 3.39" for 25-Year event
 Inflow = 0.27 cfs @ 12.07 hrs, Volume= 634 cf
 Primary = 0.27 cfs @ 12.07 hrs, Volume= 634 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 = 0.57 cfs @ 12.07 hrs, Volume= 1,753 cf, Depth= 4.69"

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
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UJ Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 2.66 cfs @ 12.07 hrs, Volume= 8,805 cf, Depth= 5.84"

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 50-Year Rainfall=6.40"

Area (sf)	CN	Description
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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= 383 cf, Depth= 4.34"

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		
108	98.0	Paved parking, HSG D		
951	80.0	>75% Grass cover, Good, HSG D		
0	98.0	Roofs, HSG D		
1,059	81.8	Weighted Average		
951		89.80% Pervious Area		
108		10.20% Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.18 cfs @ 12.07 hrs, Volume= 608 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		
0	98.0	Roofs, HSG D		
1,184	98.0	Weighted Average		
1,184		100.00% Impervious Area		
Tc (min)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00				Direct Entry,

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 5.84" for 50-Year event
 Inflow = 2.66 cfs @ 12.07 hrs, Volume= 8,805 cf
 Outflow = 1.86 cfs @ 12.14 hrs, Volume= 6,581 cf, Atten= 30%, Lag= 4.4 min
 Primary = 1.86 cfs @ 12.14 hrs, Volume= 6,581 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.52' @ 12.14 hrs Surf.Area= 11,000 sf Storage= 3,696 cf

Plug-Flow detention time= 194.3 min calculated for 6,579 cf (75% of inflow)
 Center-of-Mass det. time= 108.7 min (868.4 - 759.6)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
			3,960 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400
Device	Routing	Invert	Outlet Devices
#1	Primary	25.60'	10.0" Round 10" Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864 7' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=1.86 cfs @ 12.14 hrs HW=26.52' TW=0.00' (Dynamic Tailwater)
1-1=10" Culvert (Inlet Controls 1.86 cfs @ 3.41 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 6.16" for 50-Year event
 Inflow = 0.18 cfs @ 12.07 hrs, Volume= 608 cf
 Outflow = 0.18 cfs @ 12.07 hrs, Volume= 377 cf, Atten= 0%, Lag= 0.2 min
 Primary = 0.18 cfs @ 12.07 hrs, Volume= 377 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.82' @ 12.07 hrs Surf.Area= 271 sf Storage= 233 cf

Plug-Flow detention time= 211.3 min calculated for 377 cf (62% of inflow)
 Center-of-Mass det. time= 102.6 min (845.9 - 743.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04"H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
			289 cf Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads
Primary OutFlow Max=0.18 cfs @ 12.07 hrs HW=25.82' TW=0.00' (Dynamic Tailwater) 1-1=2 - 2'x2' catch basins (Weir Controls 0.18 cfs @ 0.49 fps)			

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 4.43" for 50-Year event
 Inflow = 2.30 cfs @ 12.13 hrs, Volume= 8,334 cf
 Primary = 2.30 cfs @ 12.13 hrs, Volume= 8,334 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 = 2,243 sf, 57.60% Impervious, Inflow Depth = 4.07" for 50-Year event
 Inflow = 0.30 cfs @ 12.07 hrs, Volume= 760 cf
 Primary = 0.30 cfs @ 12.07 hrs, Volume= 760 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 = 0.66 cfs @ 12.07 hrs, Volume= 2,038 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 100-Year Rainfall=7.20"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UJ Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

Runoff = 3.00 cfs @ 12.07 hrs, Volume= 10,005 cf, Depth= 6.64"
 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 100-Year Rainfall=7.20"

Area (sf)	CN	Description
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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 = 0.15 cfs @ 12.07 hrs, Volume= 448 cf, Depth= 5.08"
 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
951	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
1,059	81.8	Weighted Average
951		89.80% Pervious Area
108		10.20% 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 = 0.20 cfs @ 12.07 hrs, Volume= 687 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
0	98.0	Roofs, HSG D
1,184	98.0	Weighted Average
1,184		100.00% Impervious Area

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

Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 6.64" for 100-Year event
 Inflow = 3.00 cfs @ 12.07 hrs, Volume= 10,005 cf
 Outflow = 2.26 cfs @ 12.13 hrs, Volume= 7,781 cf, Atten= 25%, Lag= 3.8 min
 Primary = 2.26 cfs @ 12.13 hrs, Volume= 7,781 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= 11,000 sf Storage= 3,826 cf
 Plug-Flow detention time= 182.4 min calculated for 7,781 cf (78% of inflow)
 Center-of-Mass det. time= 101.8 min (858.8 - 757.0)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,900 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
		3,960 cf	Total Available Storage

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400

Device	Routing	Invert	Outlet Devices
#1	Primary	25.60'	10.0" Round 10" Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864 1/ Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary OutFlow Max=2.26 cfs @ 12.13 hrs HW=26.76' TW=0.00' (Dynamic Tailwater)
1-1=10" Culvert (Inlet Controls 2.26 cfs @ 4.14 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 6.96" for 100-Year event
 Inflow = 0.20 cfs @ 12.07 hrs, Volume= 687 cf
 Outflow = 0.20 cfs @ 12.07 hrs, Volume= 456 cf, Atten= 0%, Lag= 0.1 min
 Primary = 0.20 cfs @ 12.07 hrs, Volume= 456 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.82' @ 12.07 hrs Surf.Area= 271 sf Storage= 233 cf
 Plug-Flow detention time= 197.0 min calculated for 456 cf (66% of inflow)
 Center-of-Mass det. time= 95.1 min (836.7 - 741.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33"W x 32.50"L x 2.04"H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
		289 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.20 cfs @ 12.07 hrs HW=25.82' TW=0.00' (Dynamic Tailwater)
1-1=2 - 2'x2' catch basins (Weir Controls 0.20 cfs @ 0.51 fps)

Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% Impervious, Inflow Depth > 5.22" for 100-Year event
Inflow = 2.80 cfs @ 12.12 hrs, Volume= 9,819 cf
Primary = 2.80 cfs @ 12.12 hrs, Volume= 9,819 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.)

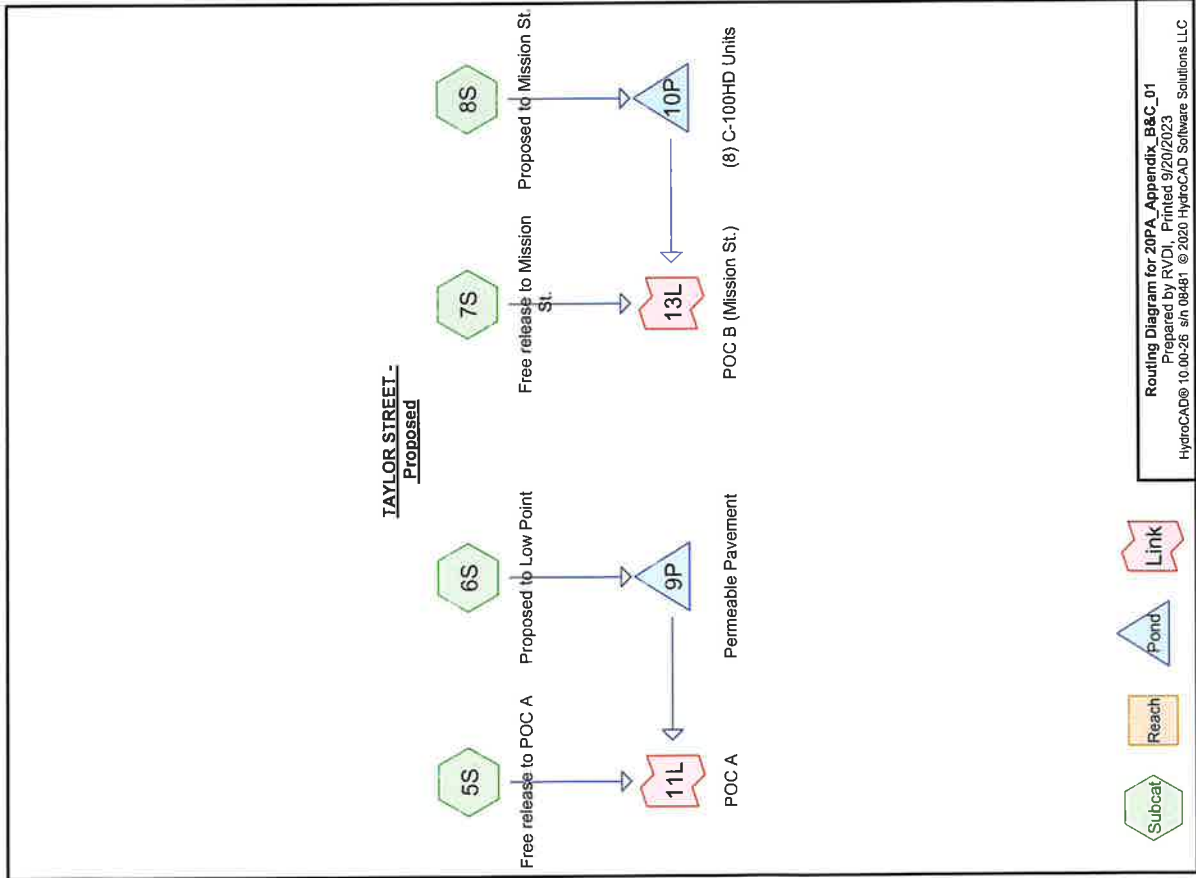
Inflow Area = 2,243 sf, 57.60% Impervious, Inflow Depth = 4.84" for 100-Year event
Inflow = 0.35 cfs @ 12.07 hrs, Volume= 905 cf
Primary = 0.35 cfs @ 12.07 hrs, Volume= 905 cf, Atten= 0%, Lag= 0.0 min

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

20PA_Appendix B&C_01

Area Listing (selected nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
6,819	80.0	>75% Grass cover, Good, HSG D (5S, 6S, 7S)
8,759	98.0	Paved parking, HSG D (6S, 7S, 8S)
8,985	98.0	Roofs, HSG D (5S, 6S)
244	98.0	Unconnected pavement, HSG D (5S, 6S)
24,807	93.1	TOTAL AREA



Summary for Subcatchment 5S: Free release to POC A

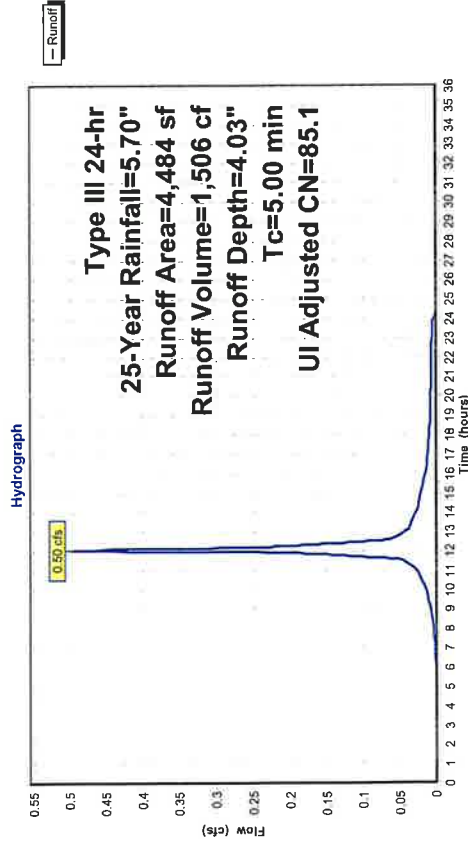
Runoff = 0.50 cfs @ 12.07 hrs, Volume= 1,506 cf, Depth= 4.03"

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 25-Year Rainfall=5.70"

Area (sf)	CN	Adj	Description
0	98.0		Paved parking, HSG D
3,170	80.0		>75% Grass cover, Good, HSG D
1,214	98.0		Roofs, HSG D
100	98.0		Unconnected pavement, HSG D
4,484	85.3	85.1	Weighted Average, UI Adjusted
3,170			70.70% Pervious Area
1,314			29.30% 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 6S: Proposed to Low Point

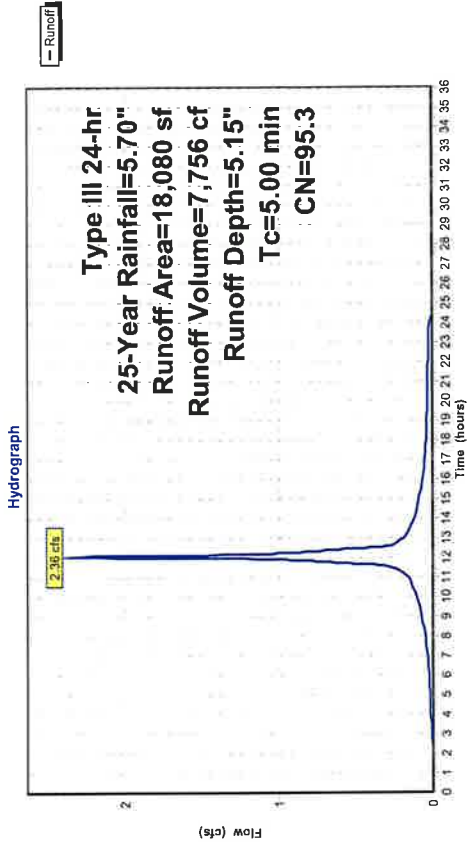
Runoff = 2.36 cfs @ 12.07 hrs, Volume= 7,756 cf, Depth= 5.15"

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 25-Year Rainfall=5.70"

Area (sf)	CN	Description
7,467	98.0	Paved parking, HSG D
2,698	80.0	>75% Grass cover, Good, HSG D
7,771	98.0	Roofs, HSG D
144	98.0	Unconnected pavement, HSG D
18,080	95.3	Weighted Average
2,698		14.92% Pervious Area
15,382		85.08% Impervious Area
144		0.94% Unconnected

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

Subcatchment 6S: Proposed to Low Point



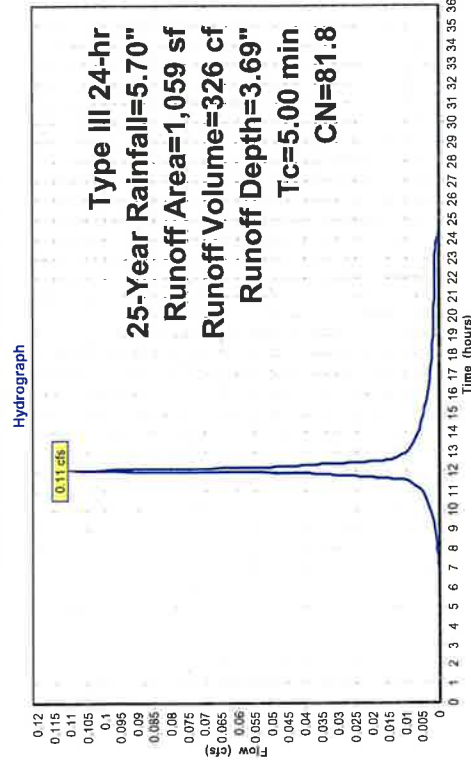
Summary for Subcatchment 7S: Free release to Mission St.

Runoff = 0.11 cfs @ 12.07 hrs, Volume= 326 cf, Depth= 3.69"
 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
951	80.0	>75% Grass cover, Good, HSG D
0	98.0	Roofs, HSG D
1,059	81.8	Weighted Average
951	89.80%	Pervious Area
108	10.20%	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.



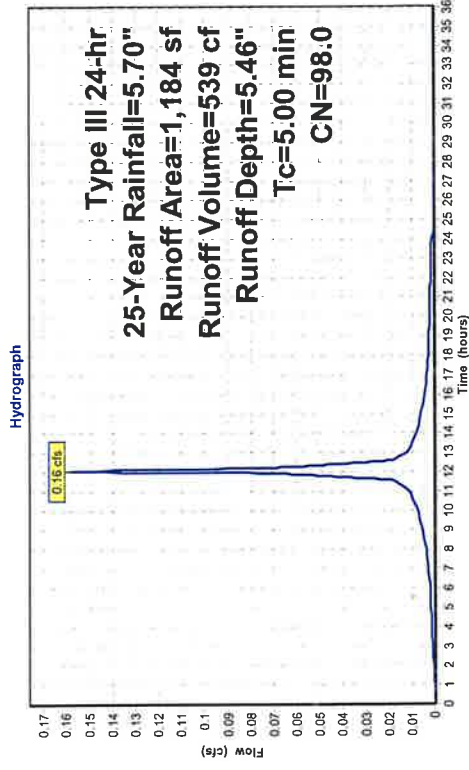
Summary for Subcatchment 8S: Proposed to Mission St.

Runoff = 0.16 cfs @ 12.07 hrs, Volume= 539 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
0	98.0	Roofs, HSG D
1,184	98.0	Weighted Average
1,184	100.00%	Impervious Area

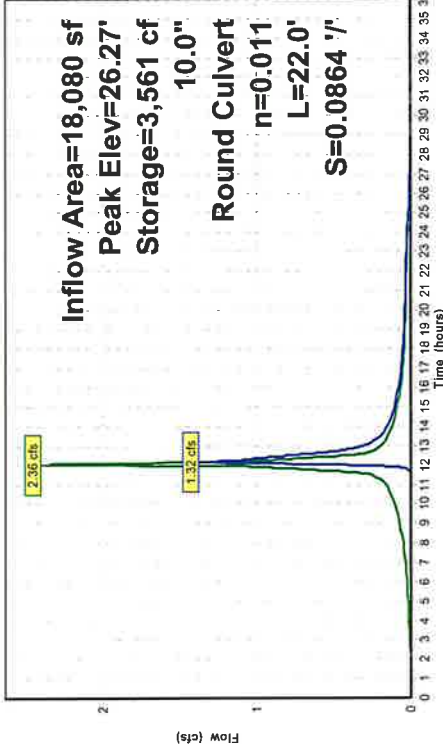
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.00					Direct Entry,

Subcatchment 8S: Proposed to Mission St.



Pond 9P: Permeable Pavement

Hydrograph



Summary for Pond 9P: Permeable Pavement

Inflow Area = 18,080 sf, 85.08% Impervious, Inflow Depth = 5.15" for 25-Year event
 Inflow = 2.36 cfs @ 12.07 hrs, Volume= 7,756 cf
 Outflow = 1.32 cfs @ 12.17 hrs, Volume= 5,533 cf, Atten= 44%, Lag= 6.3 min
 Primary = 1.32 cfs @ 12.17 hrs, Volume= 5,533 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 26.27' @ 12.17 hrs Surf.Area= 11,000 sf Storage= 3,561 cf

Plug-Flow detention time= 208.2 min calculated for 5,533 cf (71% of inflow)
 Center-of-Mass det. time= 117.1 min (879.5 - 762.4)

Volume	Invert	Avail.Storage	Storage Description
#1	24.60'	3,520 cf	No.2 Stone (Prismatic) Listed below (Recalc) 8,800 cf Overall x 40.0% Voids
#2	26.20'	440 cf	No.57 Stone (Prismatic) Listed below (Recalc) 4,400 cf Overall x 10.0% Voids
			3,960 cf Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
24.60	5,500	0	0
26.20	5,500	8,800	8,800

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
26.20	5,500	0	0
27.00	5,500	4,400	4,400

Device	Routing	Invert	Outlet Devices
#1	Primary	25.60'	10.0" Round 10" Culvert L= 22.0' Ke= 0.500 Inlet / Outlet Invert= 25.60' / 23.70' S= 0.0864' Cc= 0.900 n= 0.011 PVC, smooth interior, Flow Area= 0.55 sf

Primary Outflow Max=1.32 cfs @ 12.17 hrs HW=26.27' TW=0.00' (Dynamic Tailwater)
1-10" Culvert (Inlet Controls 1.32 cfs @ 2.80 fps)

Summary for Pond 10P: (8) C-100HD Units

Inflow Area = 1,184 sf, 100.00% Impervious, Inflow Depth = 5.46" for 25-Year event
 Inflow = 0.16 cfs @ 12.07 hrs, Volume= 539 cf
 Outflow = 0.16 cfs @ 12.07 hrs, Volume= 308 cf, Atten= 0%, Lag= 0.2 min
 Primary = 0.16 cfs @ 12.07 hrs, Volume= 308 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs
 Peak Elev= 25.82' @ 12.07 hrs Surf.Area= 271 sf Storage= 233 cf

Plug-Flow detention time= 228.5 min calculated for 308 cf (57% of inflow)
 Center-of-Mass det. time= 112.2 min (857.2 - 745.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	24.30'	176 cf	8.33'W x 32.50'L x 2.04'H Field A 553 cf Overall - 114 cf Embedded = 439 cf x 40.0% Voids
#2A	24.80'	114 cf	Cultec C-100HD x 8 Inside #1 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap Row Length Adjustment= +0.50' x 1.86 sf x 2 rows
		289 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	25.80'	24.0" x 24.0" Horiz. 2 - 2'x2' catch basins X 2.00 C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.16 cfs @ 12.07 hrs HW=25.82' TW=0.00' (Dynamic Tailwater)
 ↑ **1=2 - 2'x2' catch basins** (Weir Controls 0.16 cfs @ 0.47 fps)

Pond 10P: (8) C-100HD Units - Chamber Wizard Field A

Chamber Model = Cultec C-100HD (Cultec Contactor® 100HD)
 Effective Size= 32.1"W x 12.0"H => 1.86 sf x 7.50'L = 14.0 cf
 Overall Size= 36.0"W x 12.5"H x 8.00'L with 0.50' Overlap
 Row Length Adjustment= +0.50' x 1.86 sf x 2 rows

36.0" Wide + 4.0" Spacing = 40.0" C-C Row Spacing

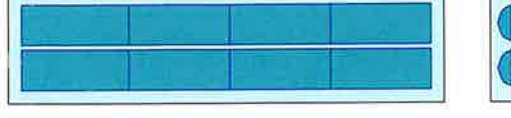
4 Chambers/Row x 7.50' Long +0.50' Row Adjustment = 30.50' Row Length +12.0" End Stone x 2 = 32.50' Base Length

2 Rows x 36.0" Wide + 4.0" Spacing x 1 + 12.0" Side Stone x 2 = 8.33' Base Width
 6.0" Base + 12.5" Chamber Height + 6.0" Cover = 2.04' Field Height

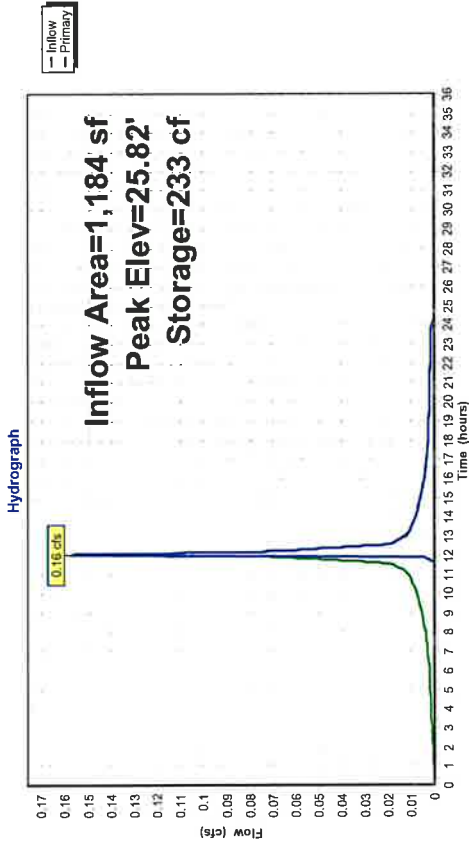
8 Chambers x 14.0 cf +0.50' Row Adjustment x 1.86 sf x 2 Rows = 113.6 cf Chamber Storage
 553.0 cf Field - 113.6 cf Chambers = 439.4 cf Stone x 40.0% Voids = 175.8 cf Stone Storage

Chamber Storage + Stone Storage = 289.3 cf = 0.007 af
 Overall Storage Efficiency = 52.3%
 Overall System Size = 32.50' x 8.33' x 2.04'

8 Chambers
 20.5 cy Field
 16.3 cy Stone



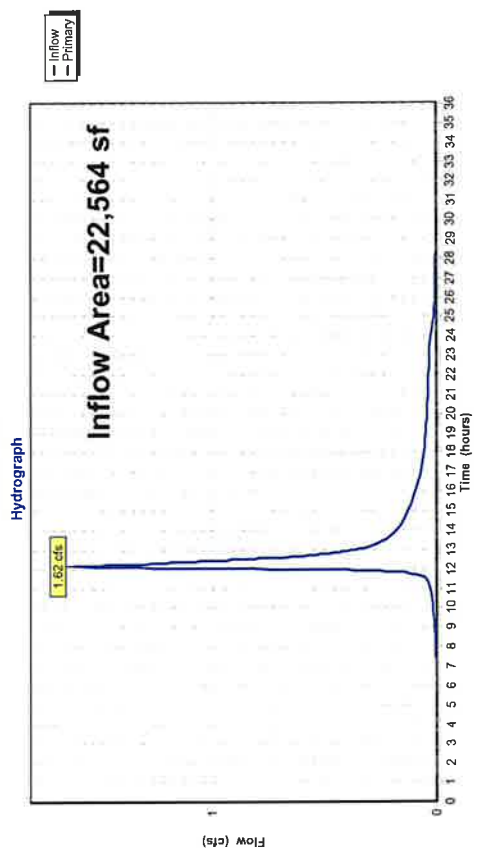
Pond 10P: (8) C-100HD Units



Summary for Link 11L: POC A

Inflow Area = 22,564 sf, 73.99% impervious, Inflow Depth > 3.74" for 25-Year event
 Inflow = 1.62 cfs @ 12.16 hrs, Volume= 7,039 cf
 Primary = 1.62 cfs @ 12.16 hrs, Volume= 7,039 cf, Atten= 0%, Lag= 0.0 min
 Primary outflow = inflow, Time Span= 0.00-36.00 hrs, dt= 0.01 hrs

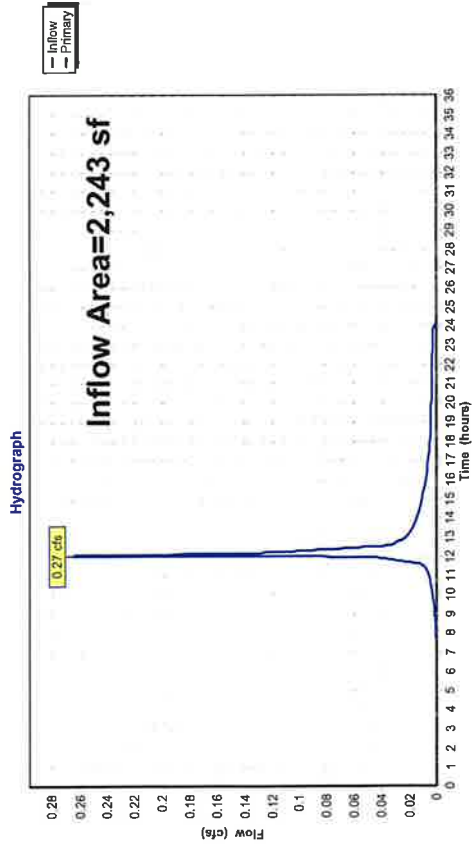
Link 11L: POC A



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

Inflow Area = 2,243 sf, 57.60% Impervious, Inflow Depth = 3.39" for 25-Year event
Inflow = 0.27 cfs @ 12.07 hrs, Volume= 634 cf
Primary = 0.27 cfs @ 12.07 hrs, Volume= 634 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.)



Stage-Area-Storage for Pond 9P: Permeable Pavement

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
24.60	0	25.64	2,288	26.68	3,784
24.62	44	25.66	2,332	26.70	3,795
24.64	88	25.68	2,376	26.72	3,806
24.66	132	25.70	2,420	26.74	3,817
24.68	176	25.72	2,464	26.76	3,828
24.70	220	25.74	2,508	26.78	3,839
24.72	264	25.76	2,552	26.80	3,850
24.74	308	25.78	2,596	26.82	3,861
24.76	352	25.80	2,640	26.84	3,872
24.78	396	25.82	2,684	26.86	3,883
24.80	440	25.84	2,728	26.88	3,894
24.82	484	25.86	2,772	26.90	3,905
24.84	528	25.88	2,816	26.92	3,916
24.86	572	25.90	2,860	26.94	3,927
24.88	616	25.92	2,904	26.96	3,938
24.90	660	25.94	2,948	26.98	3,949
24.92	704	25.96	2,992	27.00	3,960
24.94	748	25.98	3,036		
24.96	792	26.00	3,080		
24.98	836	26.02	3,124		
25.00	880	26.04	3,168		
25.02	924	26.06	3,212		
25.04	968	26.08	3,256		
25.06	1,012	26.10	3,300		
25.08	1,056	26.12	3,344		
25.10	1,100	26.14	3,388		
25.12	1,144	26.16	3,432		
25.14	1,188	26.18	3,476		
25.16	1,232	26.20	3,520		
25.18	1,276	26.22	3,531		
25.20	1,320	26.24	3,542		
25.22	1,364	26.26	3,553		
25.24	1,408	26.28	3,564		
25.26	1,452	26.30	3,575		
25.28	1,496	26.32	3,586		
25.30	1,540	26.34	3,597		
25.32	1,584	26.36	3,608		
25.34	1,628	26.38	3,619		
25.36	1,672	26.40	3,630		
25.38	1,716	26.42	3,641		
25.40	1,760	26.44	3,652		
25.42	1,804	26.46	3,663		
25.44	1,848	26.48	3,674		
25.46	1,892	26.50	3,685		
25.48	1,936	26.52	3,696		
25.50	1,980	26.54	3,707		
25.52	2,024	26.56	3,718		
25.54	2,068	26.58	3,729		
25.56	2,112	26.60	3,740		
25.58	2,156	26.62	3,751		
25.60	2,200	26.64	3,762		
25.62	2,244	26.66	3,773		

OUTLET

Stage-Area-Storage for Pond 10P: (8) C-100HD Units

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
24.30	0	25.34	160
24.32	2	25.36	164
24.34	4	25.38	167
24.36	6	25.40	171
24.38	9	25.42	174
24.40	11	25.44	178
24.42	13	25.46	181
24.44	15	25.48	185
24.46	17	25.50	188
24.48	19	25.52	192
24.50	22	25.54	195
24.52	24	25.56	198
24.54	26	25.58	201
24.56	28	25.60	205
24.58	30	25.62	208
24.60	33	25.64	211
24.62	35	25.66	213
24.64	37	25.68	216
24.66	39	25.70	219
24.68	41	25.72	221
24.70	43	25.74	224
24.72	46	25.76	226
24.74	48	25.78	228
24.76	50	25.80	231
24.78	52	25.82	233
24.80	54	25.84	235
24.82	58	25.86	237
24.84	62	25.88	239
24.86	66	25.90	241
24.88	71	25.92	244
24.90	75	25.94	246
24.92	79	25.96	248
24.94	83	25.98	250
24.96	86	26.00	252
24.98	90	26.02	254
25.00	94	26.04	257
25.02	98	26.06	259
25.04	102	26.08	261
25.06	106	26.10	263
25.08	110	26.12	265
25.10	114	26.14	267
25.12	118	26.16	270
25.14	122	26.18	272
25.16	126	26.20	274
25.18	130	26.22	276
25.20	134	26.24	278
25.22	137	26.26	280
25.24	141	26.28	283
25.26	145	26.30	285
25.28	149	26.32	287
25.30	152	26.34	289
25.32	156		

OUTLET

Appendix “D”

Pipe Conveyance And Inlet Capacity Calculations

Project ID: 20PA_Appendix_D_Conveyance_&_Outlet_Protection_01.xlsx

Date: 9/21/2023

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	4,484	1,314	85.3	0.50
6S	18,080	15,382	95.3	2.36
7S	1,059	108	81.8	0.11
8S	1,184	1,184	98.0	0.16
9P	-	-	-	1.32
10P	-	-	-	0.16

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	1.3%	30% 6S	0.71	0.74
3	10	0.011	8.0%	9P	1.32	7.34

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.

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	WS-6S	2.36	0	2.36	N/A	0.032	0.26	8.25	20.00	41.2%	2.36	0.00
CB-2	On Grade	50% WA-8S	0.08	0	0.08	0.080	0.022	0.04	1.66	9.00	18.4%	0.08	0.00
CB-3	On Grade	50% WS-8S	0.08	0	0.08	0.080	0.022	0.04	1.66	9.00	18.4%	0.08	0.00

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

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	9/21/2023
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?	24,492 ft ²
3. What is the total area of land disturbance for this project?	20,600 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?	17,988 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>	17,988 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: 9/21/23 Engineer's Seal: 

Appendix “F”
Soil Results Forms

SOIL EVALUATION TEST RESULTS

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 #:	1	Ground Elevation:	31.5
Elevation	31.5	Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches
	31.0	Topsoil	0
	28.5	Light Brown Silty Loam	6
	23.4	Light Brown Silty Clay	36
			97

Elevation	28.2	Mottling (Seasonally High Groundwater)	Depth in Inches
	24.0	Groundwater	40
N/A		Ledge	90
			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 (NHIDES, 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. Kivijarvi
 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, 16 & 18 Taylor Street Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	2	Ground Elevation:	25.6
Elevation	25.6	Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches
		Topsoil	0
	25.1	Light Brown Silty Loam	6
	23.6	Light Brown Silt with Grey Clay	24
	18.8		82

Elevation	Depth in Inches
23.5	Mottling (Seasonally High Groundwater)
23.1	Groundwater
N/A	Ledge

* 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, 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: _____

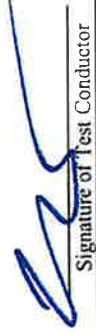
**A percolation test, performed in accordance with the guidelines of the Connecticut State Health Code or otherwise, is not an acceptable test for saturated hydraulic conductivity. Percolation tests overestimate the saturated hydraulic conductivity rate.

* 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. Kivijarvi
 Name of Test Conductor



Signature of Test Conductor

5-2-2023
 Date

Soil Evaluation

5/2/2023

Page 3

Project Name: Residential Development
 Project Address: 12, 16 & 18 Taylor Street

Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	3	Ground Elevation:	26.3
Elevation	26.3	Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches
	23.8	Millings	0
	22.3	Light Brown Fine Loam	30
	21.0	Tan Fine Sand with Clay	48
	18.6	Sandy Gravel	64
			92

Elevation	Depth in Inches
22.3	Mottling (Seasonally High Groundwater) 48
22.0	Groundwater 52
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.

**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.

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: _____

TEST CERTIFICATION

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

Matthew M. Kivijarvi
 Name of Test Conductor

5-2-2023
 Date

Signature of Test Conductor

Soil Evaluation

5/2/2023

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 #:	4	Ground Elevation:	32.8
		Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches
Elevation	32.8		0
		Topsoil	
	32.2		7
		Clean Fill: Brown Silty Sand	
	30.8		24
		Light Brown Natural Loam	
	29.7		37
		Tan Silty Fine Soil	
	26.8		72

Elevation		Depth in Inches
28.1	Mottling (Seasonally High Groundwater)	57
N/A	Groundwater	N/A
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, 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.

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

TEST CERTIFICATION

Matthew M. Kiviariy
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 Boring #:	5	Ground Elevation:	30.9
Elevation			30.9
	Soil Texture (Percent Sand, Silt and Clay)		Depth Range in Inches
	Topsoil		0
	Light Brown Silty Loam		7
	Light Brown Silt w/ Mixed Clay		39
	Orange Sandy Soil		64
			86

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
27.1	46
24.9	72
N/A	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 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

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

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
Elevation	Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches	0
26.8	Topsoil		
26.4	Brown Silty Loam		5
23.5	Light Brown Silt w/ Mixed Clay		40
21.3	Orange Sandy Gravel		66
19.7			85

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
23.6	Mottling (Seasonally High Groundwater)
21.8	Groundwater
N/A	Ledge

** 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. Kiviary
 Name of Test Conductor


 Signature of Test Conductor

9-20-2023
 Date

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

Soil Evaluation

9/20/2023

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		Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches
27.5		Misc. Fill	0
24.4		Light Brown Silty Loam	37
23.9		Light Brown Silty Loam w/ Clay	43
21.6		Orange Brown Sandy Gravel	71
20.4			85

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
24.1	Mottling (Seasonally High Groundwater) 41
21.2	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 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

Soil Evaluation

9/20/2023

Project Name: Residential Development
 Project Address: 12 & 18 Taylor Street

Engineering Firm's Name: D'Andrea Surveying & Engineering, P.C.
 Engineer's Name: Leonard C. D'Andrea

Test Pit or Soil Boring #:	8	Ground Elevation:	27.1
Elevation	Soil Texture (Percent Sand, Silt and Clay)	Depth Range in Inches	
27.1	Misc. Fill		0
25.1	Orange Brown Silty Loam w/ Sand		24
22.0	Orange Brown Silty Sand		61
20.1			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)
20.8	Groundwater
N/A	Ledge


** 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.

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

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

Matthew M. Kivijarvi _____
 Name of Test Conductor

 _____
 Signature of Test Conductor

9-20-2023 _____
 Date

18 TAYLOR STREET STAMFORD CT BUILDING A

JIA HUA
ARCHITECT

NUMBER	DATE	REVISED BY	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

REVISION TABLE	NUMBER	DATE	REVISED BY	DESCRIPTION

TAYLOR STREET BUILDING A RESTORATION & RENOVATION

PROPOSED ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A200



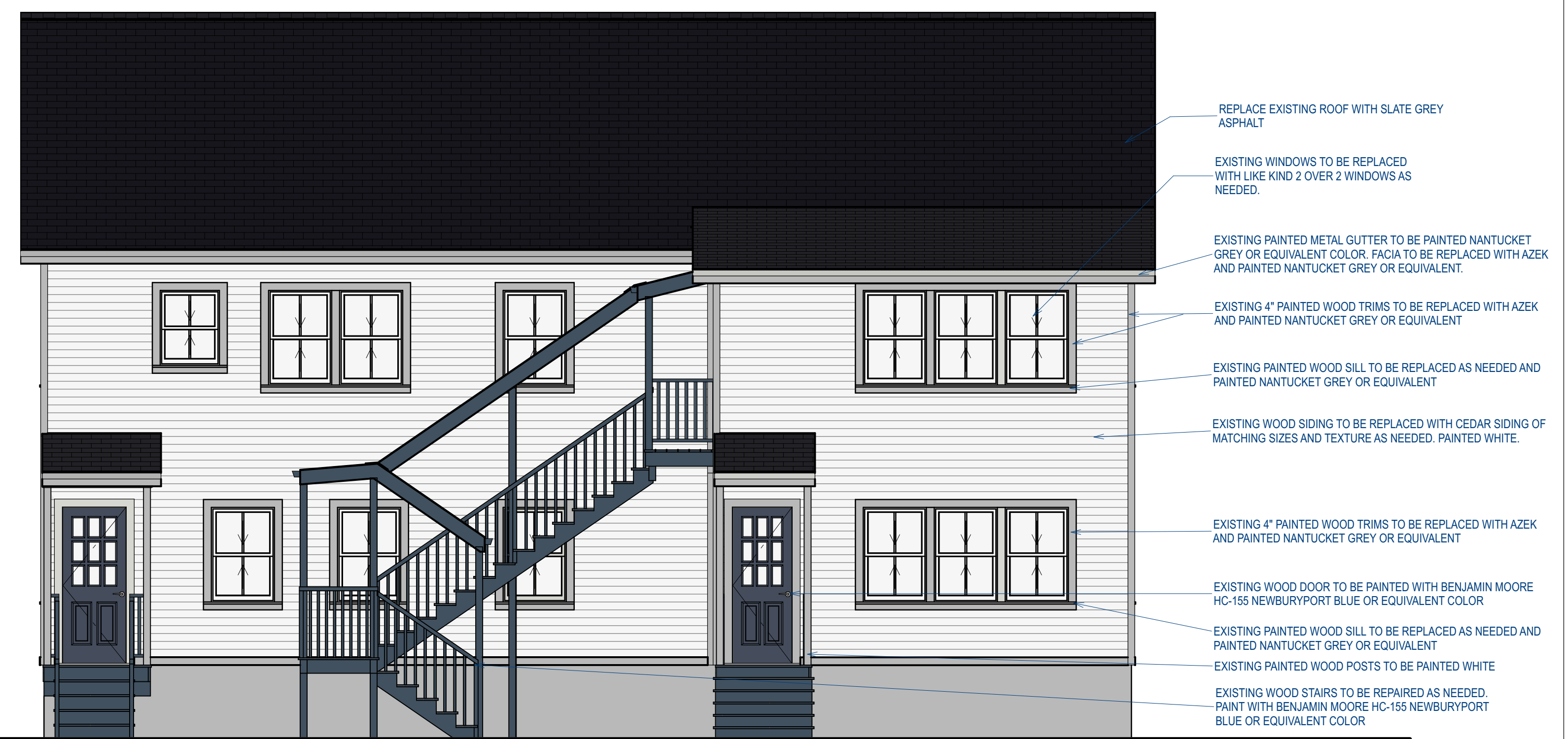
LEFT ELEVATION



FRONT ELEVATION



RIGHT ELEVATION



BACK ELEVATION



PROPOSED BACK RENDERING

NUMBER	DATE	REVISION TABLE	REVISOR	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	DESCRIPTION

TAYLOR STREET BUILDING A RESTORATION & RENOVATION

PROPOSED RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

NTS

SHEET:

A301

18 TAYLOR STREET STAMFORD CT BUILDING C & E NEW CONSTRUCTION

JIA HUA
ARCHITECT

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING C & E
NEW
CONSTRUCTION

Project Overview

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

SHEET:

A000

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET BUILDING C & E
NEW CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

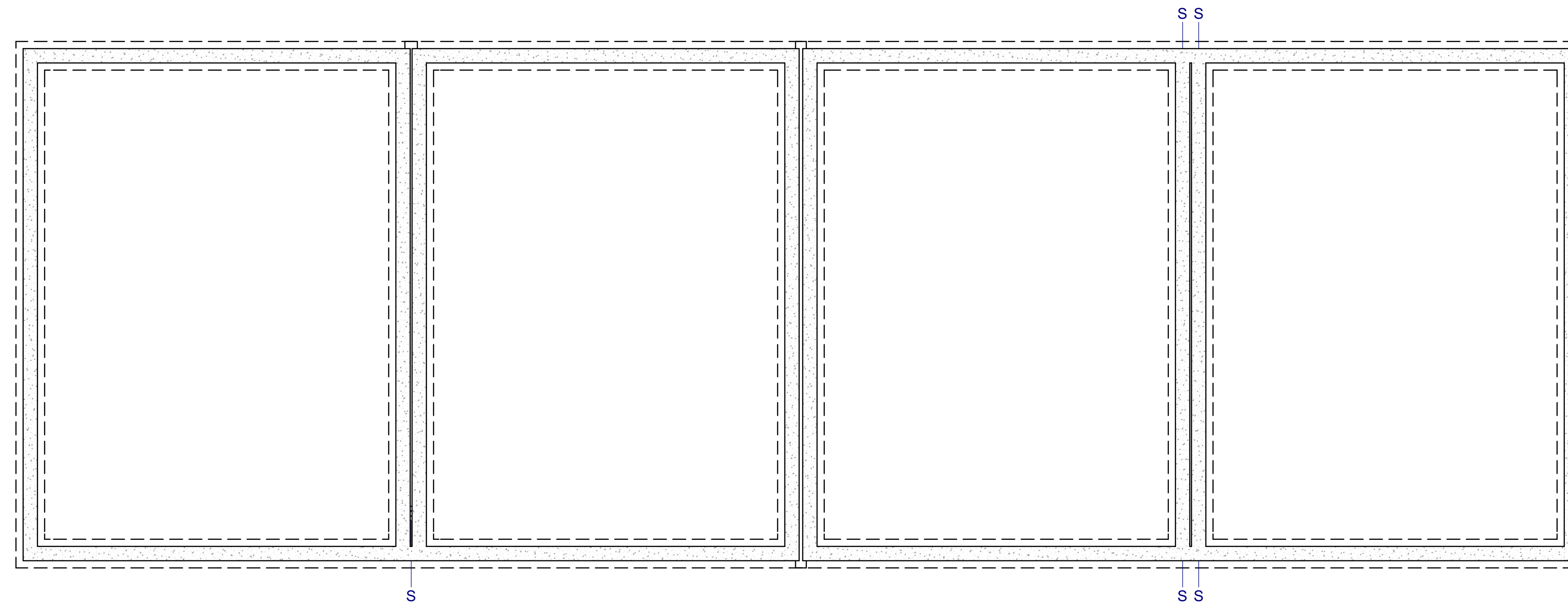
9/22/2023

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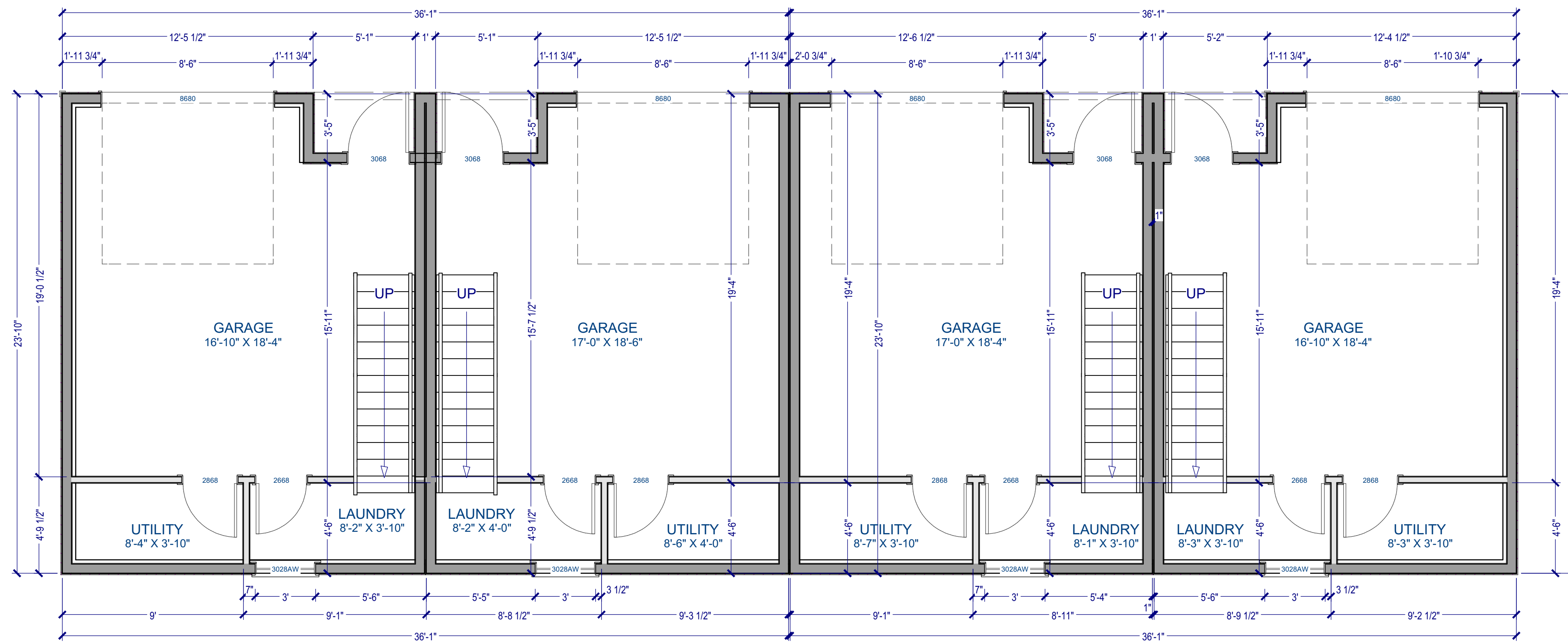
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SHEET:

A100



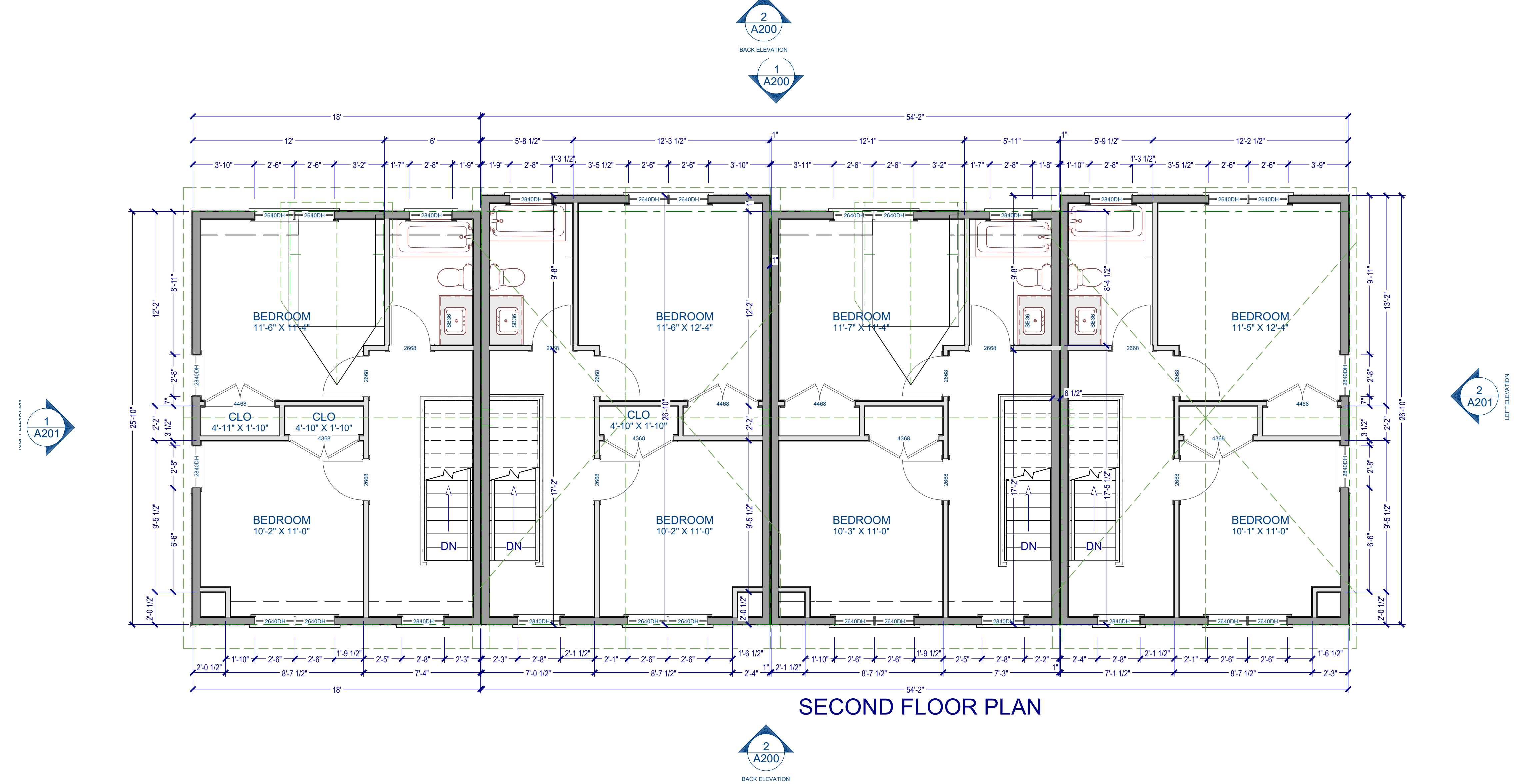
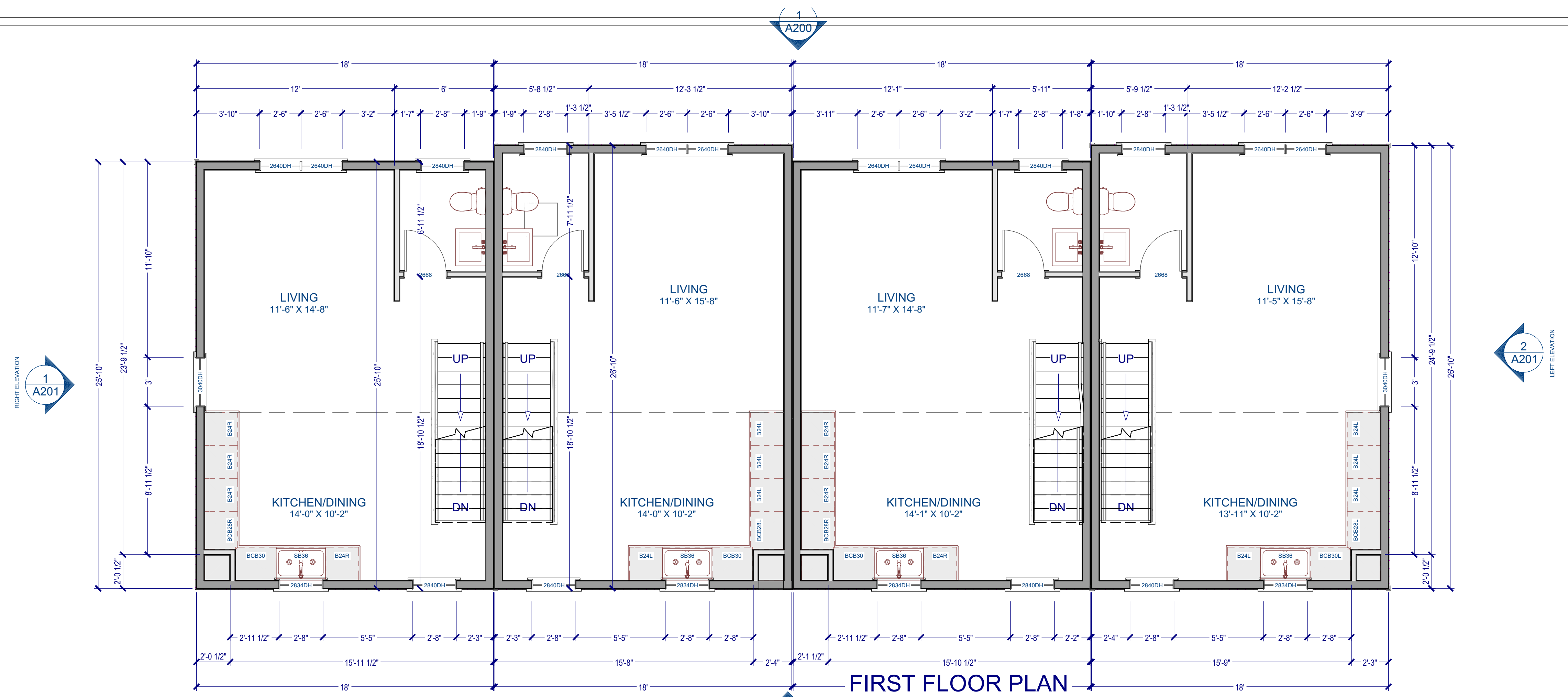
FOUNDATION PLAN

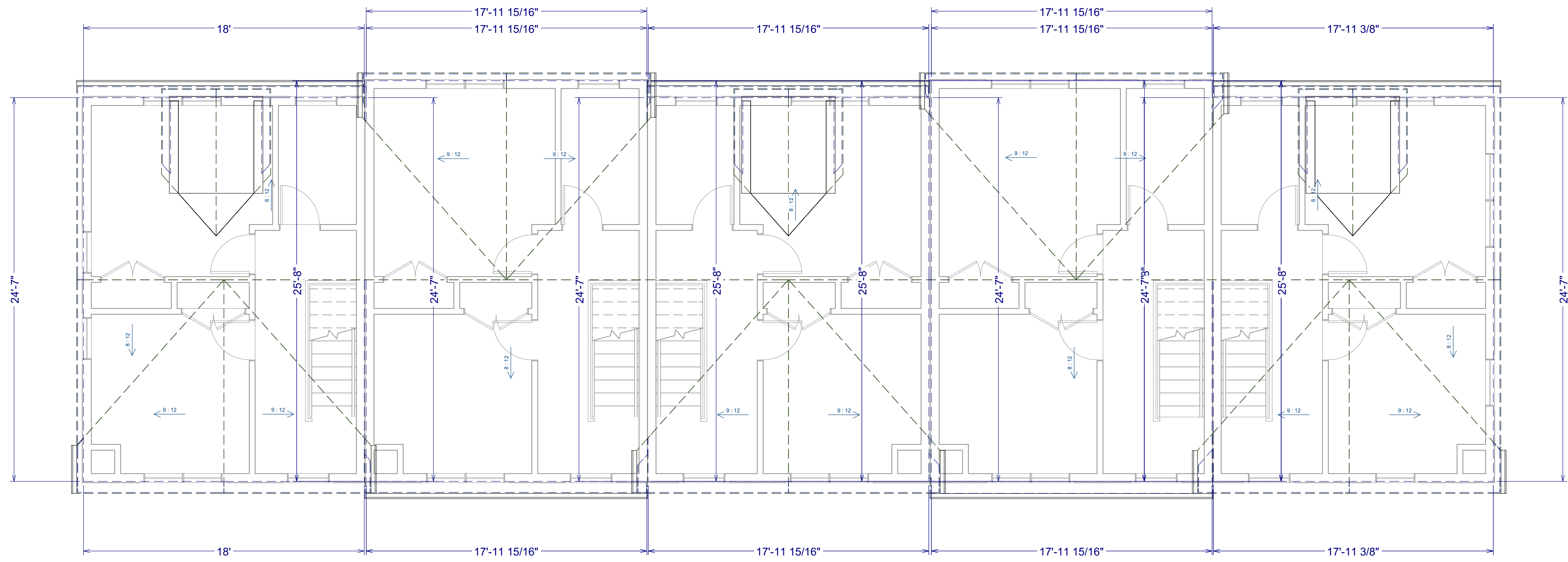


GARAGE FLOOR PLAN



REVISION TABLE	NUMBER	DATE	REVISION BY	DESCRIPTION





ATTIC PLAN

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A102



JIA HUA ARCHITECT

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING C & E
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A200

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING C & E
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

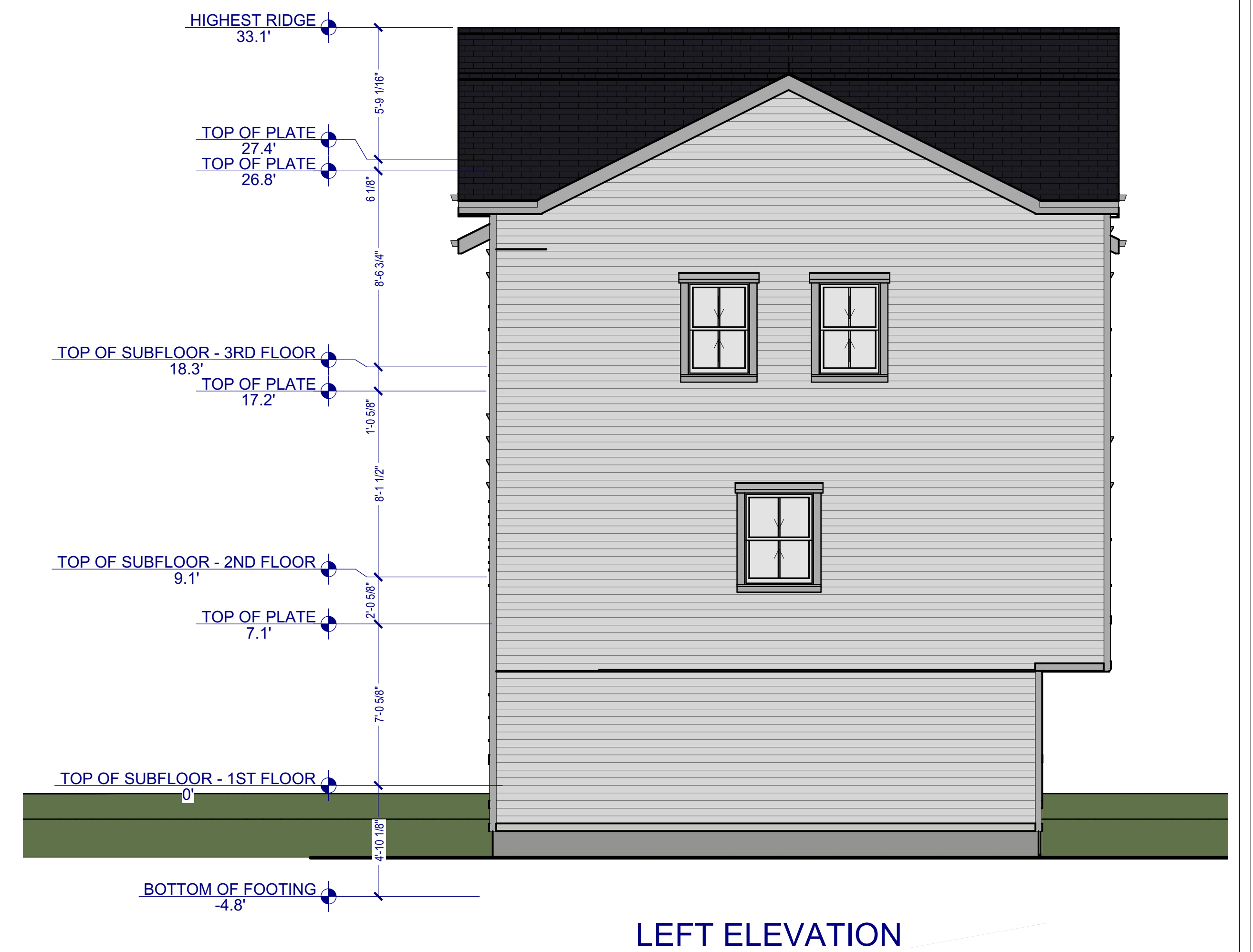
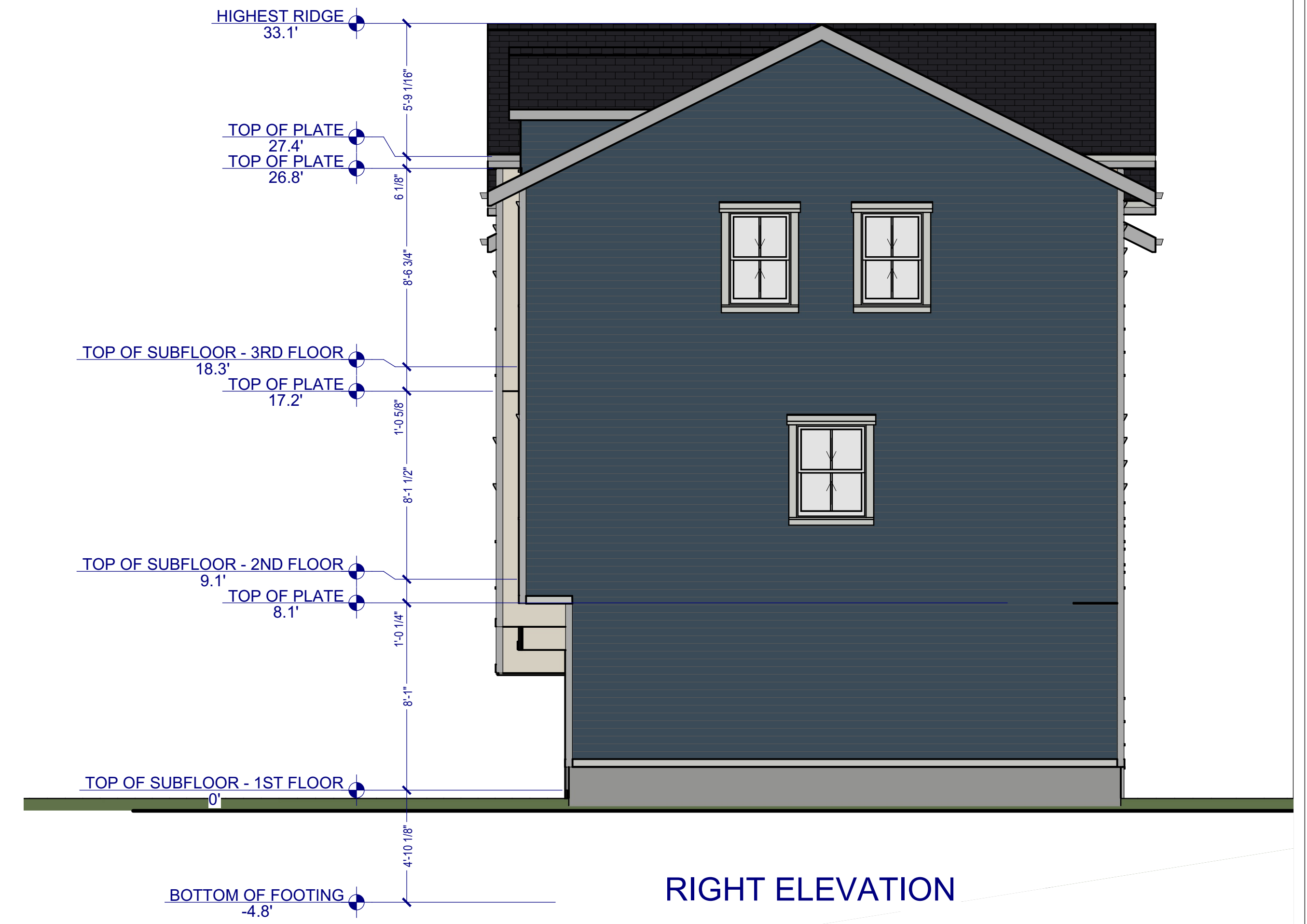
9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A201





JIA HUA
ARCHITECT

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING C & E
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A300



JIA HUA
ARCHITECT

NUMBER	DATE	REVISED BY	DESCRIPTION

TAYLOR STREET
BUILDING C & E
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A301

18 TAYLOR STREET STAMFORD CT BUILDING D NEW CONSTRUCTION

JIA HUA
ARCHITECT

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

TAYLOR STREET
BUILDING D
NEW
CONSTRUCTION

Project Overview

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

SHEET:

A000

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET BUILDING D
NEW CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

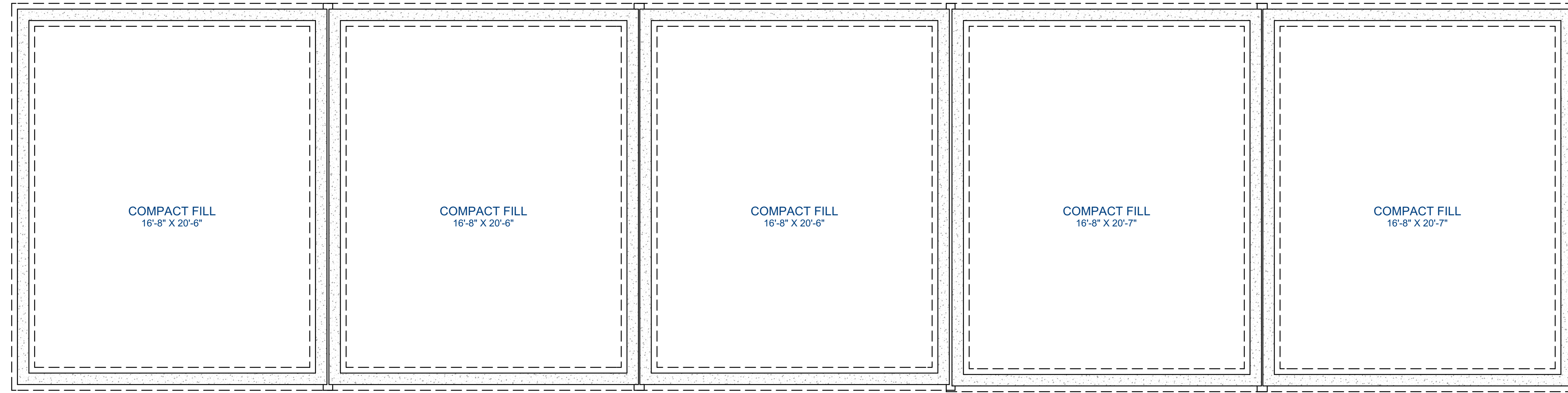
9/22/2023

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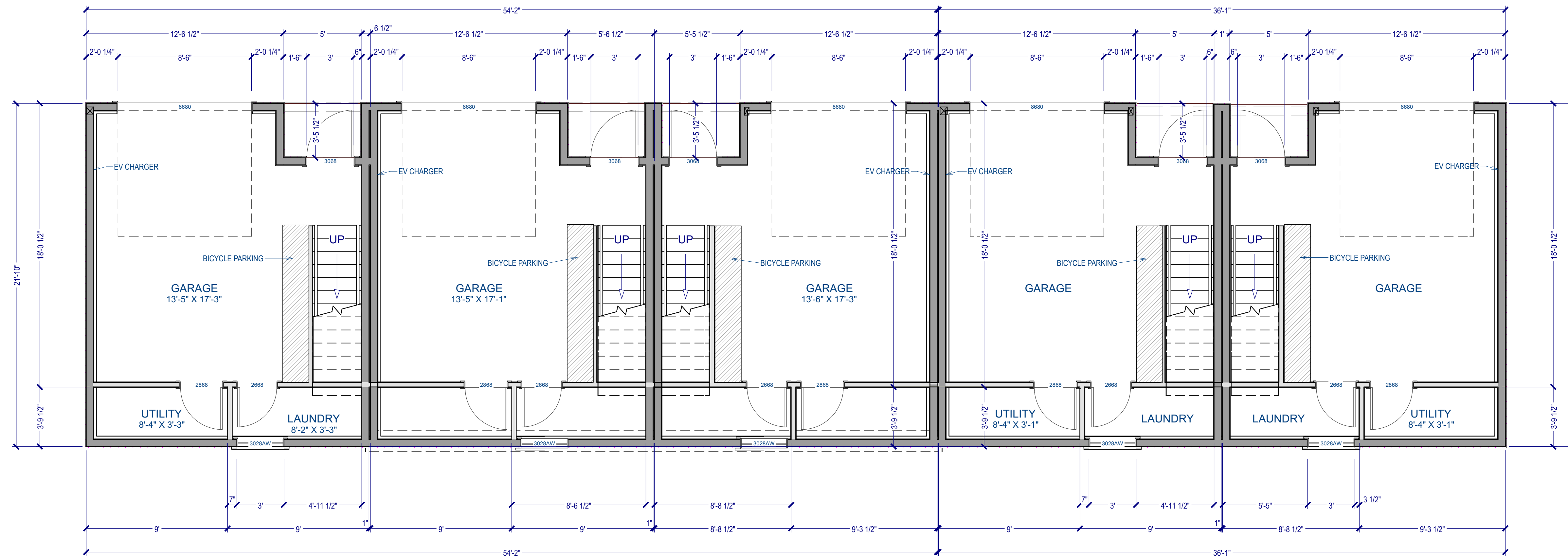
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SHEET:

A100



FOUNDATION PLAN



GARAGE FLOOR PLAN



NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING D
NEW
CONSTRUCTION

FLOOR PLANS

DRAWINGS PROVIDED BY:

DATE:

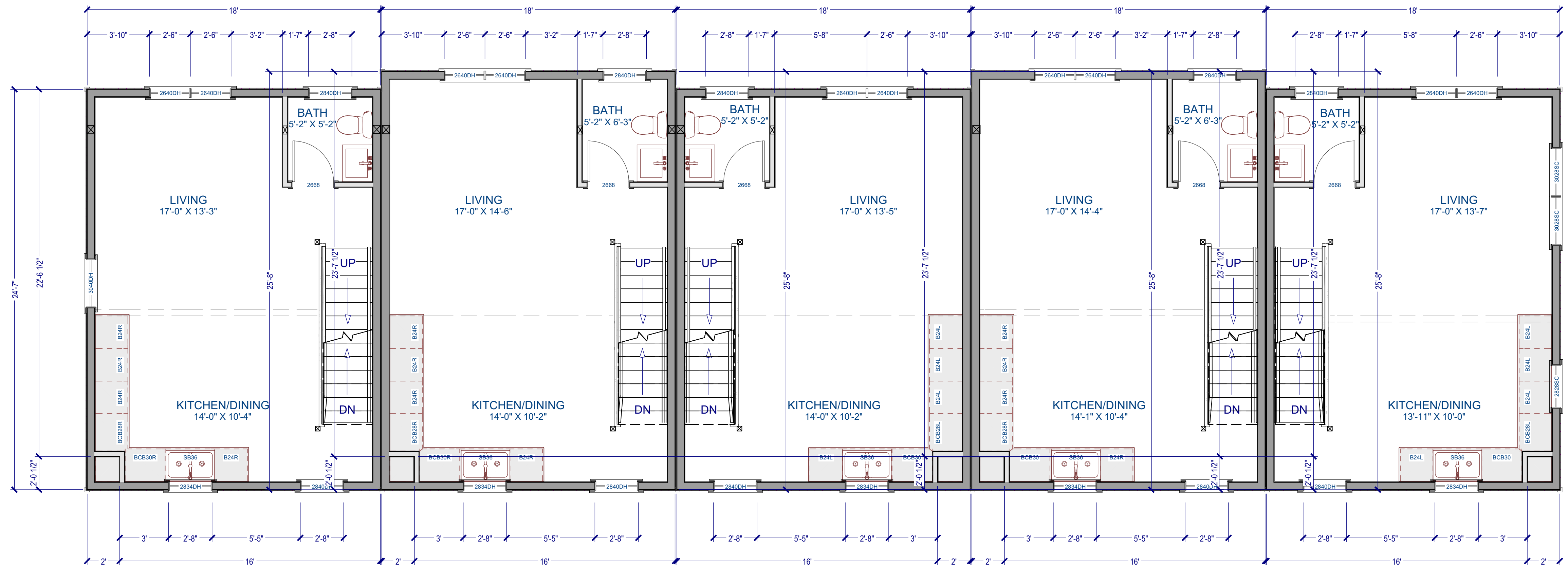
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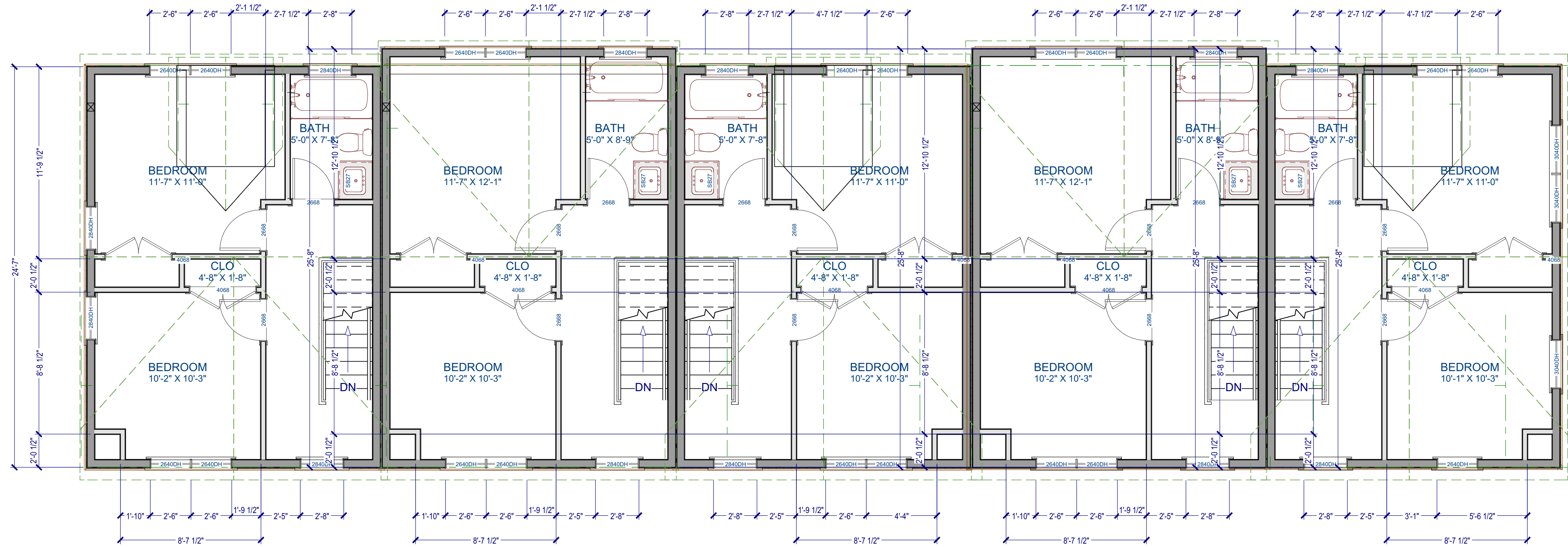
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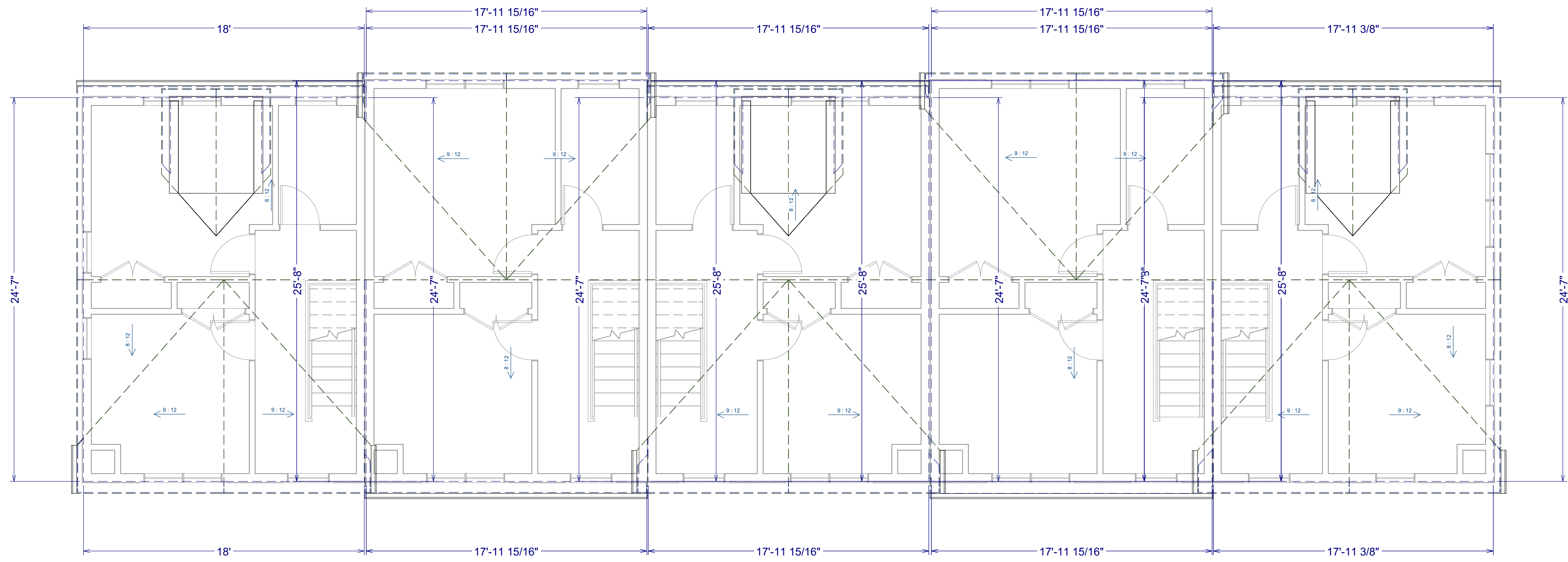
A101



FIRST FLOOR PLAN



SECOND FLOOR PLAN



ATTIC PLAN

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A102

NUMBER	DATE	REVISION BY	DESCRIPTION

TAYLOR STREET
BUILDING D
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A200



NUMBER	DATE	REVISED BY	DESCRIPTION

TAYLOR STREET
BUILDING D
NEW
CONSTRUCTION

ELEVATIONS

DRAWINGS PROVIDED BY:

DATE:

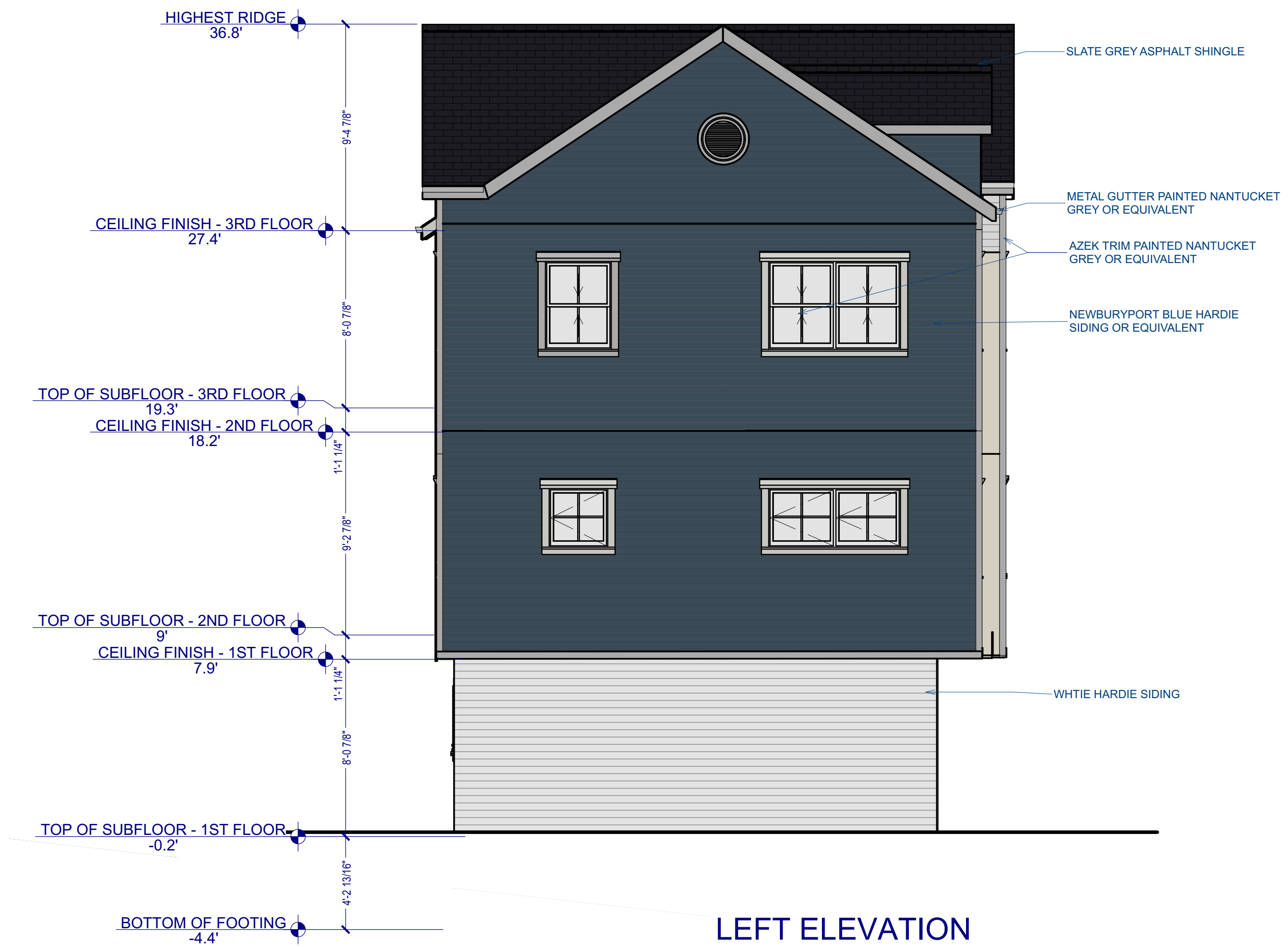
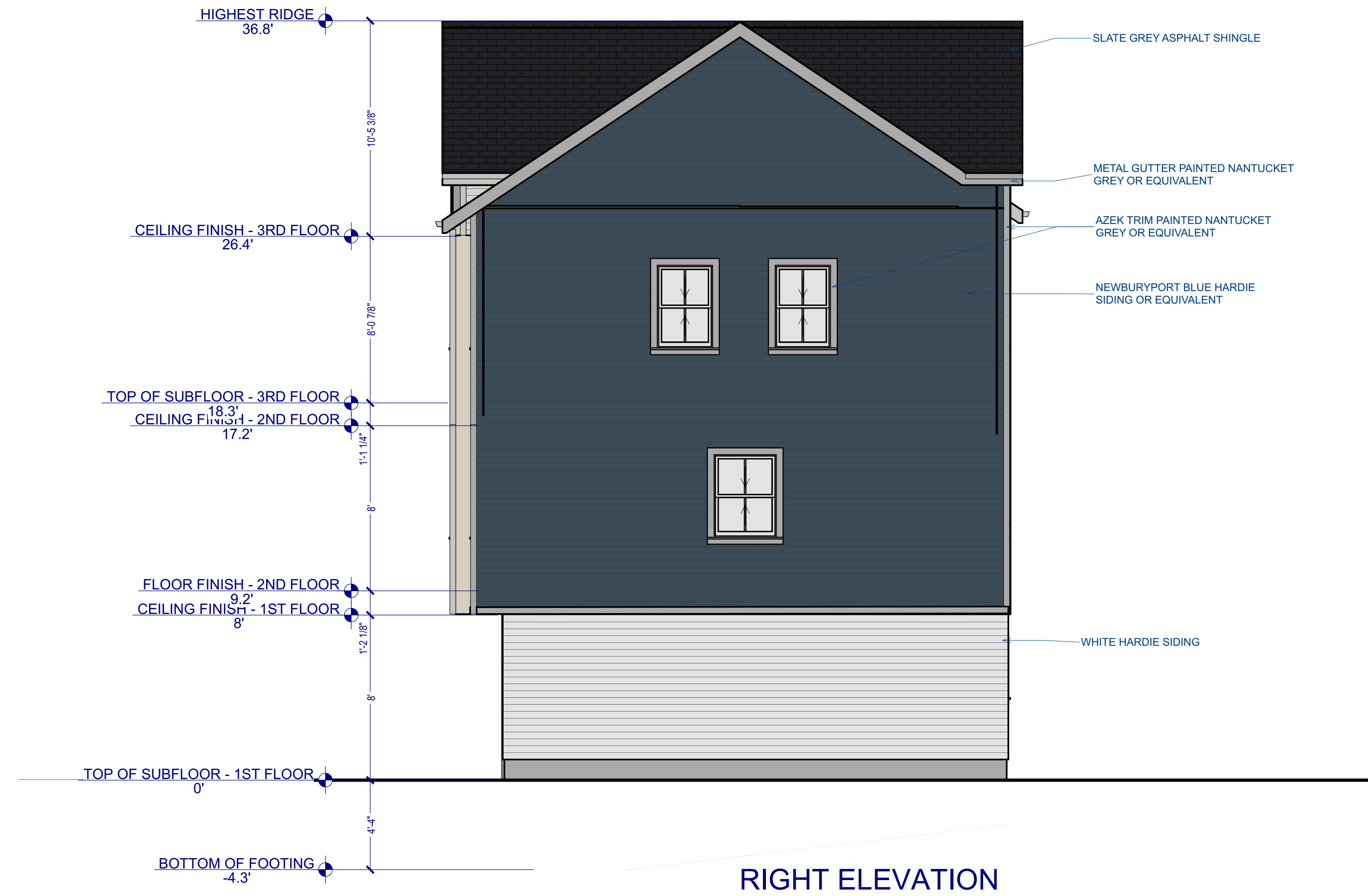
9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A201





JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	DESCRIPTION

TAYLOR STREET
BUILDING D
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A300



JIA HUA
ARCHITECT

NUMBER	DATE	REVISION	TABLE	REVISOR	BY	DESCRIPTION

TAYLOR STREET
BUILDING D
NEW
CONSTRUCTION

RENDERING

DRAWINGS PROVIDED BY:

DATE:

9/22/2023

SCALE:

1/4"=1'-0"

SHEET:

A301

**D'ANDREA SURVEYING &
ENGINEERING, PC**

LAND PLANNERS • ENGINEERS • SURVEYORS

SIX NEIL LANE • P.O. BOX 549
RIVERSIDE, CONNECTICUT 06878
TELEPHONE: 203 637-1779
FAX: 203 637-1770
EMAIL: info@rvdi.com

September 21, 2023

Susan Kisken, PE
City of Stamford Engineering Bureau
Government Center
888 Washington Boulevard
Stamford CT 06904

**Re: 12 & 18 Taylor Street – G&T Taylor Street LLC
Zoning Application No. 223.36**

Dear Ms. Kisken,

In response to your comments on August 7, 2023, we have modified our Development Plan set and Drainage Summary Report. We have enclosed one copy of the following for your further review for the above-referenced project:

- Development Plan, Sheet 1 of 1, revised September 26, 2023;
- Drainage Summary Report, revised September 26, 2023.

The following responses are enumerated to your comments in your August 7, 2023 letter:

- 1) Site grading has been reviewed and additional grading has been added to existing dwellings.
- 2) All existing and proposed utilities have been added to the Utility Plan, Sheet 2 of 5.
- 3) City of Stamford concrete driveway apron, depressed concrete curb and standard concrete curb details have been added to the detail sheets.
- 4) Additional deep test pits have been performed in the area of the proposed infiltration systems.
- 5) All infiltration systems have been relocated a minimum of 10 feet from any property line and have been labeled accordingly.
- 6) All roof drainage for the existing buildings to remain discharge to the surface. Runoff from portions of the existing buildings will be collected by the proposed drainage systems.
- 7) N/A; Retention System #1 has been removed.
- 8) Reduction of impervious areas has been considered.
- 9) The Water Quality Standard is not required per the DCIA Tracking Spreadsheet.
- 10) Retention System #2 has been moved further away from the proposed building.
- 11) A concrete washdown area has been added. Refer to the Sedimentation and Erosion Control Plan.
- 12) The City of Stamford trench repair detail has been added to the detail sheets.
- 13) The Porous Asphalt Detail references have been updated.
- 14) Since the Water Quality Standard 1 is not required, the LID plan has been removed from the project set.
- 15) The drainage model has been reviewed and tributary areas and overflows have been updated.
- 16) A minimum TC of 5 minutes has been set for the default calculations in the HydroCAD model; any TC below 5 minutes will be increased to 5 minutes by default.

- 17) Infiltration system #1 has been removed in favor of a larger permeable driveway.
- 18) Infiltration System #2 has been raised 1-foot above mottling.
- 19) Only storage a minimum of 1-foot above mottling has been considered as storage. The bottom of the permeable pavement system will be 1-foot minimum above mottling throughout the site.
- 20) The curb cut on the southerly side of Building A has been eliminated.
- 21) Inlet analysis calculations have been provided.
- 22) Runoff volume to POC A has been reduced.
- 23) Acknowledged.

We thank you for your continued review and should you have any additional questions, please contact us.

Sincerely,

D'Andrea Surveying & Engineering, PC



Matthew M. Kivijarv, EIT

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cc: G&T Taylor Street LLC