T5047-001
November 22, 2021

Mr. Peter Stith, Principal Planner, Chair
Site Plan Review Technical Advisory Committee
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: Site Review Permit Application
Proposed Multifamily Development, 2454 Lafayette Road, Portsmouth, NH

Dear Peter:

On behalf of 2422 Lafayette Road Associates, LLC (owner), and Torrington Properties Inc (applicant), we are pleased to submit one (1) set of hard copies of the following information to support a request for a Site Review Permit for the above referenced project:

- One (1) full size & one (1) half size copy of the Site Plan Set, last revised November 22, 2021;
- TAC Comment Response Report, dated November 22, 2021;
- Parking Conditional Use Permit Request, dated October 18, 2021;
- Density Bonus Conditional Use Permit Request, last revised November 22, 2021;
- Development Site Conditional Use Permit Request, last revised November 22, 2021;
- Drainage Analysis Memorandum, dated October 18, 2021;
- Community Space Exhibit, last revised November 22, 2021;
- Truck Turning Exhibit, dated October 18, 2021;
- Traffic Impact Memorandum, dated September 20, 2021;
- Green Building Statement, dated October 18, 2021;
- Site Review Checklist, dated October 18, 2021;
- Building Perspectives, dated October 18, 2021;
- Building Renderings, dated November 22, 2021

The proposed project is located at 2454 Lafayette Road on properties identified as Map 273 Lot 3 on the City of Portsmouth Tax Maps and is located in the Gateway Neighborhood Mixed Use Corridor, G1 District. The existing parcel is approximately 18.7 acres and is bound by an access drive for Water County to the north, Water Country property to the east, Route One (Lafayette Road) to the south and Constitution Avenue to the west.

The proposed project consists of the demolition of the former Cinemagic movie theater and the construction of a 5-story, 95-unit multifamily condominium building located in the northern corner of the site. Also, the previously approved 5,000 SF restaurant pad proposed for this area will not be constructed. The project will include associated site improvements such as paving, utilities, lighting, landscaping and community space. The proposed project is providing 21,897 SF of community spaces (14.6% of the total project area) which meets the

10% of total lot area required as part of the Development Site Standards for the G1 District. The community space calculation is depicted in the enclosed Community Space Exhibit.

The proposed project will be designating 20% of the units as workforce housing units which will meet the Density Bonus Incentives of section 10.5B70 of the City of Portsmouth Zoning Ordinance to be eligible for a Conditional Use Permit. The proposed project will require the following site related approvals from the Planning Board:

- Site Plan Review Permit
- Conditional Use Permit for Density Bonus Incentives
- Conditional Use Permit for the use of Development Site Standards
- Amended Conditional Use Permit for Parking

To date the applicant has attending the following meetings with the local land-use boards related to the Site Plan:

- August 19, 2021 – Planning Board Conceptual Consultation
- September 14, 2021 – Technical Advisory Committee Work Session
- September 16, 2021 – Planning Board Design Review
- November 2, 2021 – Technical Advisory Committee Meeting

The enclosed information which has been prepared to address comments and feedback received to date from these land-use boards.

We respectfully request to be placed on the TAC meeting agenda for December 7, 2021. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,

TIGHE & BOND, INC.

Patrick M. Crimmins, PE
Senior Project Manager

Neil A. Hansen, PE
Project Engineer

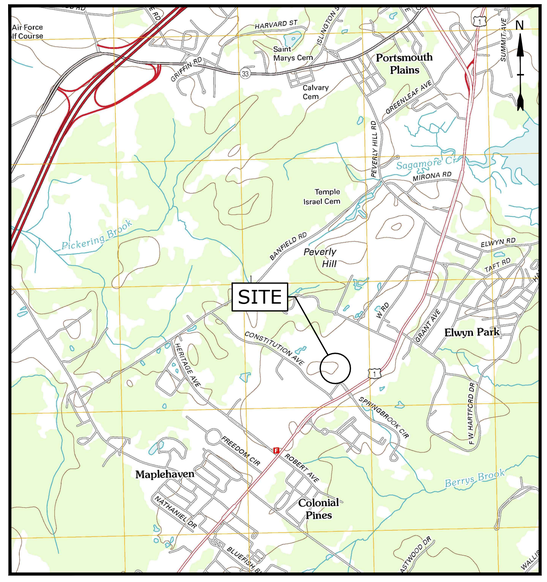
Cc: 2422 Lafayette Road Associates, LLC (via e-mail)
Torrington Properties Inc (via e-mail)
Gregg Mikolaities, August Consulting, PLLC (via e-mail)
John Bosen, Bosen & Associates, PLLC (via e-mail)

PROPOSED MULTI-FAMILY DEVELOPMENT
PORTSMOUTH GREEN
2454 LAFAYETTE ROAD
PORTSMOUTH, NEW HAMPSHIRE

AUGUST 5, 2021

LAST REVISED: NOVEMBER 22, 2021

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER SHEET	11/22/2021
C-101	OVERALL EXISTING CONDITIONS PLAN	11/22/2021
C-101.1	EXISTING CONDITIONS AND DEMOLITION PLAN	11/22/2021
C-102	OVERALL SITE PLAN	11/22/2021
C-102.1	SITE PLAN	11/22/2021
C-103.1	GRADING, DRAINAGE AND EROSION CONTROL PLAN	11/22/2021
C-104	UTILITIES PLAN	11/22/2021
C-105	PHOTOMETRICS PLAN	11/22/2021
L-100	LANDSCAPE PLAN	11/22/2021
L-101	LANDSCAPE SCHEDULE & DETAILS	11/22/2021
C-201	MULTIUSE PATH EXISTING CONDITIONS AND DEMOLITION PLAN	11/22/2021
C-202	MULTIUSE PATH SITE PLAN	11/22/2021
C-203	MULTIUSE PATH GRADING, DRAINAGE AND EROSION CONTROL PLAN	11/22/2021
C-501	EROSION CONTROL NOTES AND DETAILS SHEET	11/22/2021
C-502	DETAILS SHEET	11/22/2021
C-503	DETAILS SHEET	11/22/2021
C-504	DETAILS SHEET	11/22/2021
C-505	DETAILS SHEET	11/22/2021
C-506	DETAILS SHEET	11/22/2021
C-507	DETAILS SHEET	11/22/2021
A-201	NORTH/SOUTH ELEVATIONS	11/22/2021
A-202	WEST ELEVATION	11/22/2021
A-203	EAST ELEVATION	11/22/2021
A-601	1ST FLOOR	11/22/2021
A-602	2ND FLOOR	11/22/2021
A-603	3RD TO 4TH FLOOR	11/22/2021
A-604	5TH FLOOR	11/22/2021



LOCATION MAP
SCALE: 1" = 2,000'

LIST OF PERMITS		
LOCAL	STATUS	DATE
SITE PLAN REVIEW PERMIT		
CONDITIONAL USE PERMIT - PARKING		
CONDITIONAL USE PERMIT - DEVELOPMENT SITE		
CONDITIONAL USE PERMIT - DENSITY BONUS INCENTIVES		
STATE		
NHDES - SEWER CONNECTION PERMIT		
NHDOT - DRIVEWAY PERMIT		

PREPARED BY:
Tighe&Bond
177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
603-433-8818

OWNERS:
2422 LAFAYETTE ROAD ASSOCIATES, LLC
C/O WATERSTONE RETAIL DEVELOPMENT
322 RESERVOIR STREET, 2ND FLOOR
NEEDHAM, MASSACHUSETTS 02494

APPLICANT:
TORRINGTON PROERTIES INC
11 ELKINS STREET, SUITE 420
BOSTON, MASSACHUSETTS 02127

SURVEYOR:
DOUCET SURVEY, LLC
102 KENT PLACE
NEWMARKET, NH 03857

ARCHITECT:
EMBARC STUDIO
580 HARRISON AVENUE, SUITE 2W
BOSTON, MASSACHUSETTS 02118

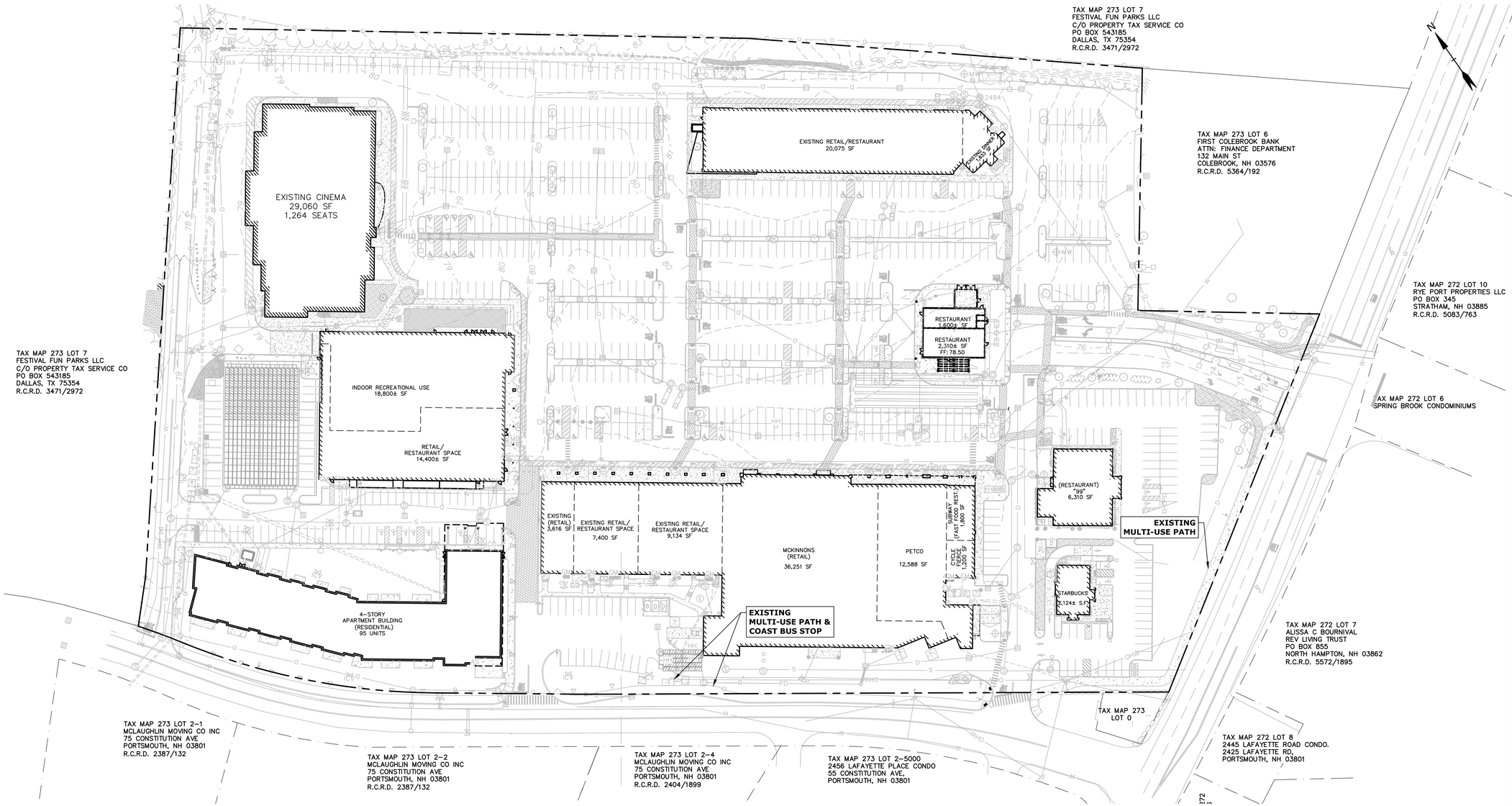
STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08630 LICENSED PROFESSIONAL ENGINEER

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
11/22/21

TAC RESUBMISSION
COMPLETE SET 27 SHEETS

T & B PROJECT NO: T-5047-001

Last Saved: 11/22/2021
Plotted: Nov 22, 2021 - 4:00pm By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings, Figures\AutoCAD\Sheet\T5047-001-C-COVER.dwg



EXISTING CONDITIONS PLAN NOTES:

1. **EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY PERFORMED BY DOUCET SURVEY INC. SEE REFERENCE PLANS.**
2. **HORIZONTAL DATUM BASED ON REFERENCE PLAN #5.**
3. **VERTICAL DATUM BASED ON REFERENCE PLAN #5.**

REFERENCE PLANS:

1. **"STANDARD BOUNDARY SURVEY MAP 273 - LOT 3 FOR LAYFAYETTE PLAZA, LLC" DATED FEBRUARY 2004 BY AMBIT ENGINEERING, INC. R.C.R.D. PLAN D-34306.**
2. **"CONDOMINIUM SITE PLAN OF PORTSMOUTH GREEN CONDOMINIUM FOR 2422 LAFAYETTE ROAD ASSOCIATES, LLC C/O WATERSTONE RETAIL, TAX MAP 273 LOT 3, 2454 LAFAYETTE ROAD (US ROUTE 1) PORTSMOUTH, NEW HAMPSHIRE" DATED OCTOBER 2016 BY DOUCET SURVEY, INC. TO BE RECORDED IN THE R.C.R.D.**
3. **"SOUTHGATE PLAZA RESIDENTIAL DEVELOPMENT, 2454 LAFAYETTE ROAD PORTSMOUTH NEW HAMPSHIRE SITE PLANS" DATED JANUARY 19, 2016 (REVISED SEPTEMBER 26, 2016) BY TIGHE & BOND CONSULTING ENGINEERS.**
4. **"PROPOSED EASEMENT PLAN" FOR 2422 LAFAYETTE ROAD ASSOCIATES, LLC C/O WATERSTONE RETAIL. DATED OCTOBER 26, 2016 BY DOUCET SURVEY, INC.**
5. **"TOPOGRAPHIC WORKSHEET OF PORTSMOUTH GREEN" FOR TIGHE & BOND, TAX MAP 273 LOT 3, 2454 LAFAYETTE ROAD (US ROUTE 1) PORTSMOUTH, NEW HAMPSHIRE" DATED DECEMBER 2017 BY DOUCET SURVEY, INC.**
6. **"AS-BUILT CONDOMINIUM SITE PLAN FOR 2422 LAFAYETTE ROAD ASSOCIATES, LLC OF PORTSMOUTH GREEN CONDOMINIUM, TAX MAP 273 LOT 3, 2454 LAFAYETTE ROAD (US ROUTE 1) PORTSMOUTH, NEW HAMPSHIRE" DATED AUGUST 25, 2020 BY DOUCET SURVEY, INC.**

Tighe&Bond

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – BRADLEE MEZQUITA No. 08630 LICENSED 11/22/21

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – PATRICK CRIMMINS No. 12378 LICENSED 11/22/21

0 60' 120'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
E	11/22/2021	TAC Resubmission
D	10/27/2021	Revised Site Data Table
C	10/18/2021	TAC Submission
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

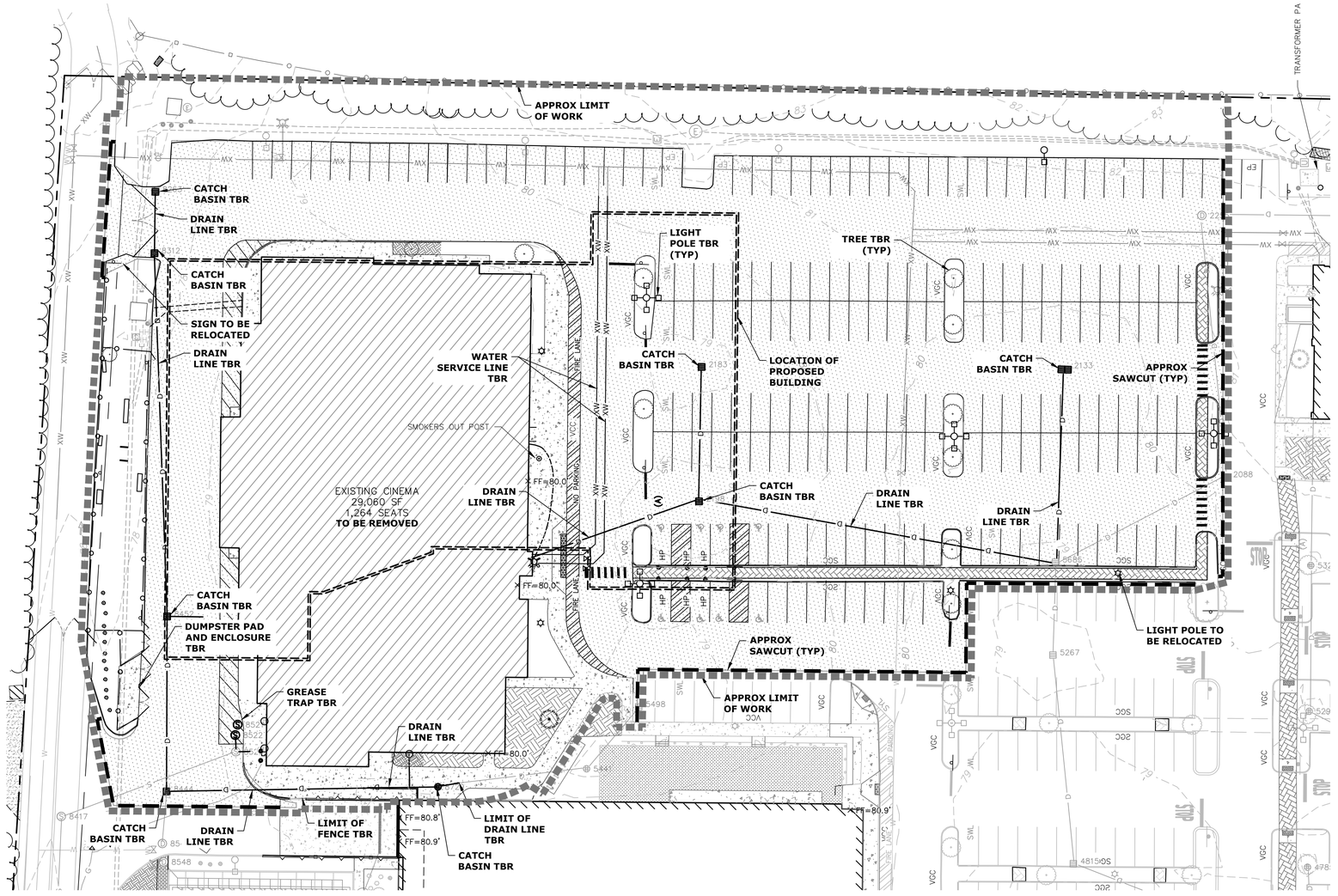
PROJECT NO:	T-5047-001
DATE:	August 5, 2021
FILE:	T5047-001-C-DSGN.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

OVERALL EXISTING CONDITIONS PLAN

SCALE: AS SHOWN

C-101

Last Saved: 11/17/2021
Plotted: Mon Nov 22, 2021 - 8:30am By: NAHansen
Tighe & Bond:J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-DSGN.dwg



LEGEND

- APPROXIMATE LIMIT OF PROPOSED SAW CUT
- LIMIT OF WORK
- PROPOSED SILT SOCK
- APPROXIMATE LIMIT OF PAVEMENT TO BE REMOVED
- PROPOSED CONSTRUCTION EXIT
- BUILDING TO BE REMOVED
- LOCATION OF PROPOSED BUILDING
- INLET PROTECTION SILT SACK
- TBR — TO BE REMOVED
- BLDG — BUILDING
- TYP — TYPICAL
- COORD — COORDINATE

DEMOLITION NOTES:

1. THE LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR THE ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES.
3. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES.
4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY.
5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE PERMIT APPROVALS.
8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS.
10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK.
11. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY IS ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY OF ANY SUCH UTILITY FOUND AND SHALL MAINTAIN THESE UTILITIES UNTIL PERMANENT SOLUTION IS IN PLACE.
12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT REMOVAL PRIOR TO BID.
13. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SHOWN UNLESS SPECIFICALLY IDENTIFIED TO REMAIN. ITEMS TO BE REMOVED INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, UNDER GROUND PIPING, POLES, STAIRS, SIGNS, FENCES, RAMPS, WALLS, BOLLARDS, BUILDING SLABS, FOUNDATION, TREES AND LANDSCAPING.
14. COORDINATE ALL WORK WITHIN THE PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
15. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS.
16. CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS.
17. PROVIDE INLET PROTECTION BARRIERS AT ALL CATCH BASINS/CURB INLETS WITHIN CONSTRUCTION LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. INLET PROTECTION BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT. INLET PROTECTION BARRIERS SHALL BE "HIGH FLOW SILT SACK" BY ACF ENVIRONMENTAL OR EQUAL. INSPECT BARRIERS WEEKLY AND AFTER EACH RAIN EVENT OF 0.25 INCHES OR GREATER. CONTRACTOR SHALL COMPLETE A MAINTENANCE INSPECTION REPORT AFTER EACH INSPECTION. SEDIMENT DEPOSITS SHALL BE REMOVED AFTER EACH STORM EVENT OR MORE OFTEN IF THE FABRIC BECOMES CLOGGED OR SEDIMENT HAS ACCUMULATED TO 1/3 THE DESIGN DEPTH OF THE BARRIER.
18. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE, BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION ACTIVITIES.
20. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING, SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE.
21. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

Tighe&Bond

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – BRADLEE MEZQUITA No. 08630 LICENSED
11/22/21

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
11/22/21

0 30' 60'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
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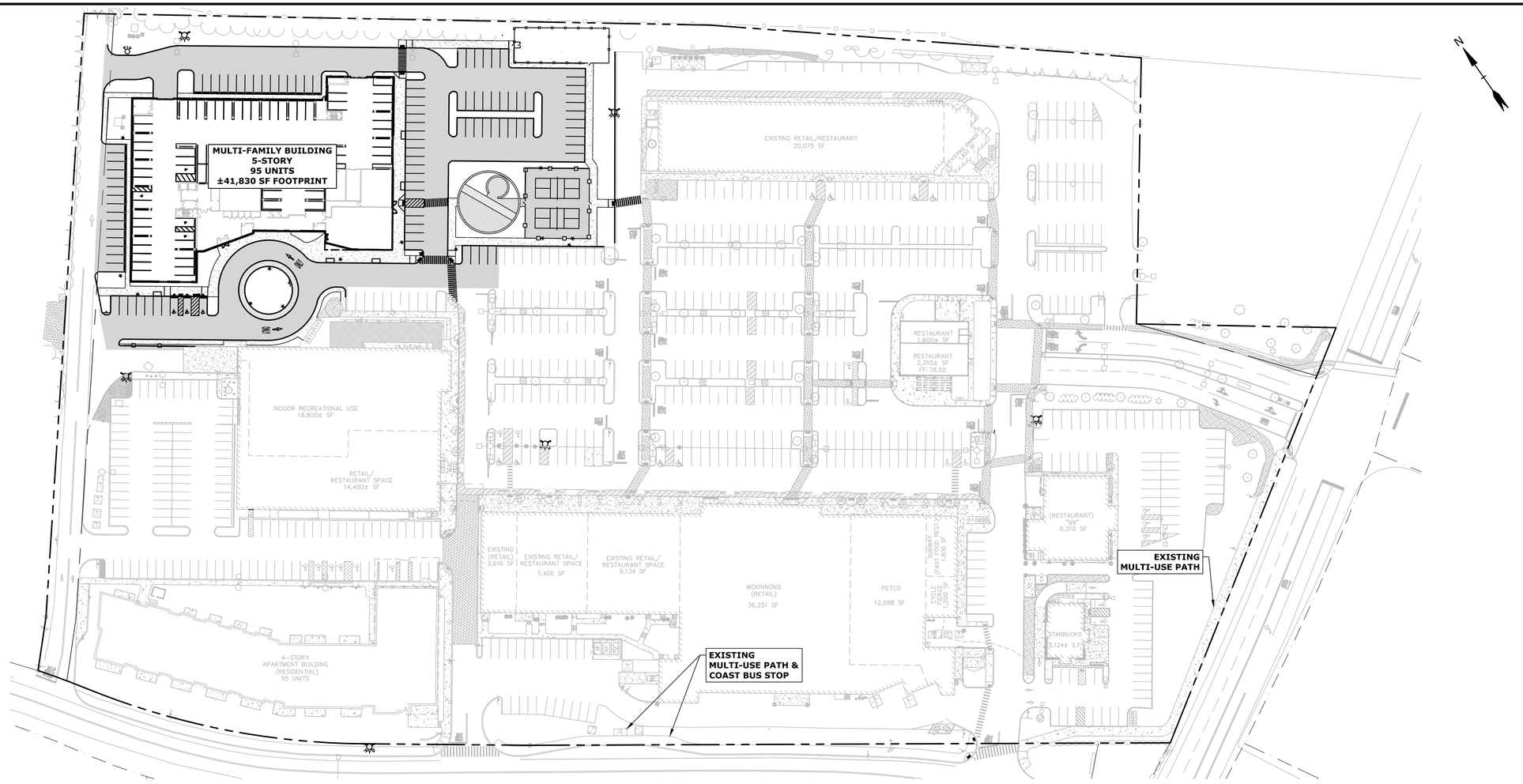
DATE:	August 5, 2021
FILE:	T5047-001-C-DSGN.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.1

Last Saved: 11/17/2021
Plotted: Mon Nov 22, 2021 - 9:27am By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-DSGN.dwg



LEGEND

	PROPERTY LINE
	PROPOSED PROPERTY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED BUILDING
	PROPOSED PAVEMENT SECTION
	PROPOSED CONCRETE SIDEWALK
	PROPOSED BRICK SIDEWALK
•	PROPOSED BOLLARD
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB

SITE DATA:

LOCATION: TAX MAP 273, LOT 3

OWNER: 2422 LAFAYETTE ROAD ASSOCIATES, LLC
C/O WATERSTONE RETAIL
322 RESERVOIR STREET
NEEDHAM, MA 02494

ZONING DISTRICT: GATEWAY CORRIDOR (G1)
PROPOSED USE: SHOPPING CENTER/RESIDENTIAL
PROPOSED LOT SIZE: ±18.71 ACRES (±814,896 SF)

BUILDING PLACEMENT & LOT STANDARDS

APARTMENT BUILDING STANDARDS:	REQUIRED	PROPOSED
MINIMUM LOT DEPTH:	NR	NR
MINIMUM STREET FRONTAGE:	50 FT	±450 FT
FRONT BUILDING SETBACK:	10 FT MIN, 30 FT MAX	± 419 FT(1)
MINIMUM SIDE BUILDING SETBACK:	15 FT	± 57 FT
MINIMUM REAR BUILDING SETBACK:	20 FT	± 52 FT
MINIMUM OPEN SPACE COVERAGE:	20%	±21.7%
FRONT LOT LINE BUILDOUT:	75%	0%(4)
BUILDING DESIGN STANDARDS:		
MAXIMUM BUILDING HEIGHT:	4 STORIES	5 STORIES(2)
	50 FT	<60 FT(2)
MINIMUM STREET FACING FACADE HEIGHT:	24 FT	>24 FT
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	<36 IN
MAXIMUM BUILDING FOOTPRINT:	NR	
MAXIMUM FACADE MODULATION LENGTH:	50 FT	<50 FT
MINIMUM STREET FACING FACADE GLAZING:	20% GROUND FLOOR	>20%
DEVELOPMENT SITE STANDARDS:(3)		
MINIMUM DEVELOPMENT SITE AREA:	20,000 SF	±814,896 SF
MINIMUM SITE WIDTH:	100 FT	±721 FT
MINIMUM SITE DEPTH:	100 FT	±1,137 FT
MINIMUM PERIMETER BUFFER FROM RESIDENTIAL, MIXED RESIDENTIAL, OR CD4-L1 DISTRICTS:	75 FT	N/A
MAXIMUM DEVELOPMENT BLOCK DIMENSIONS:		
BLOCK LENGTH:	800 FT	±1,137 FT(4)
BLOCK PERIMETER:	2,200 FT	±3,780 FT(4)
MAXIMUM BUILDING COVERAGE:	70%	25.4%
MINIMUM OPEN SPACE COVERAGE:	20%	±21.7%
FRONT LOT LINE BUILDOUT:	75%	0%(4)
DENSITY THRESHOLDS AND BONUSES:		
DWELLING UNITS PER ACRE:	16 UNITS	10.2 UNITS
DWELLING UNITS PER BUILDING:	36 UNITS	95 UNITS(1)(2)
PLUS 1-STORY, MAX 10 FT	5 STORIES	5 STORIES(2)
	60 FT	<60 FT(2)

(1) - MODIFICATION OF STANDARDS ALLOWED AS PART OF CONDITIONAL USE PERMIT PER 10.5B74.30.
(2) - ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B72 FOR PROVIDING 20% WORK FORCE HOUSING AND PUBLIC REALM IMPROVEMENTS.
(3) - USE OF DEVELOPMENT SITE STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B40.
(4) - EXISTING NON-CONFORMING CONDITION, MODIFICATION OF STANDARDS ALLOWED AS PART OF CONDITIONAL USE PERMIT PER 10.5B74.30.

PARKING REQUIREMENTS

PARKING CALCULATIONS:

RETAIL:	1 SPACE PER 300 GFA
RESTAURANT:	1 SPACE PER 100 GFA
INDOOR RECREATION:	1 SPACE PER 4 PERSONS
RESIDENTIAL:	0.5 SPACES PER UNIT <500 SF
	1 SPACE PER UNIT 500 SF - 750 SF
	1.3 SPACES PER UNIT >750 SF

LOADING CALCULATIONS:

RETAIL:	0 SPACES FOR 0 - 10,000 SF
	1 SPACE FOR 10,001 - 25,000 SF
	2 SPACES FOR 25,001 - 60,000 SF
OTHER NON-RESIDENTIAL:	0 SPACES FOR 0 - 10,000 SF
	1 SPACE FOR 10,001 SF - 40,000 SF

SHOPPING CENTER:				LOADING SPACES:	
RETAIL:	AREA (SF):	MINIMUM	PROVIDED	MINIMUM	PROVIDED
PETCO	±12,588			1	1
CYCLE FIERCE	±1,200			0	1
EXISTING RETAIL/RESTAURANT	±20,075			0	1
EXISTING RETAIL/RESTAURANT (MUSE)	±3,616			0	1
EXISTING RETAIL/RESTAURANT (SHIO JAPANESE)	±7,400			0	1
PROPOSED RESTAURANT (OLD BIG LOTS)	±14,400			1	1
INDOOR RECREATIONAL (PINZ)	±18,800			1	1
SUBWAY	±1,800			0	0
THE 99	±6,310			0	1
McKINNON'S	±36,251			2	3
RETAIL	±9,134			0	1
DINER	±1,833			0	1
PROPOSED RESTAURANT	±1,600			1	0
PROPOSED RESTAURANT	±2,310			0	0
STARBUCKS	±2,124			0	1
TOTAL SHOPPING CENTER	±139,441	406 SPACES(1)		8	15
RESIDENTIAL:					
PROPOSED DWELLING UNITS	95 UNITS				
EXISTING DWELLING UNITS	95 UNITS				
VISITOR PARKING					
TOTAL:		654 SPACES(1)	795 SPACES	9	15

(1) - PER PARKING DEMAND ANALYSIS PERFORMED BY TIGHE & BOND DATED OCTOBER 18, 2021

	REQUIRED	PROVIDED
ACCESSIBLE SPACES (2% OF TOTAL):	15	32
VAN ACCESSIBLE SPACES (1 PER 6 ACCESSIBLE SPACES):	2	24
PARKING STALL SIZE:	8.5 FT X 19 FT	8.5 FT X 19 FT
DRIVE AISLE:	24 FT	24 FT, 26 FT

BIKE SPACES REQUIRED:

	REQUIRED	PROVIDED
SHOPPING CENTER:		
1 BIKE SPACE / 10 PARKING SPACES MAXIMUM OF 30 SPACES	30 SPACES	42 SPACES
RESIDENTIAL:		
EXISTING 95 DWELLING UNITS	19 SPACES	30 SPACES
PROPOSED 95 DWELLING UNITS	19 SPACES	20 SPACES

Tighe&Bond

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – BRADLEE MEZQUITA No. 08630 LICENSED
11/22/21

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – PATRICK CRIMMINS No. 12378 LICENSED
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0 60' 120'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
E	11/22/2021	TAC Resubmission
D	10/27/2021	Revised Site Data Table
C	10/18/2021	TAC Submission
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

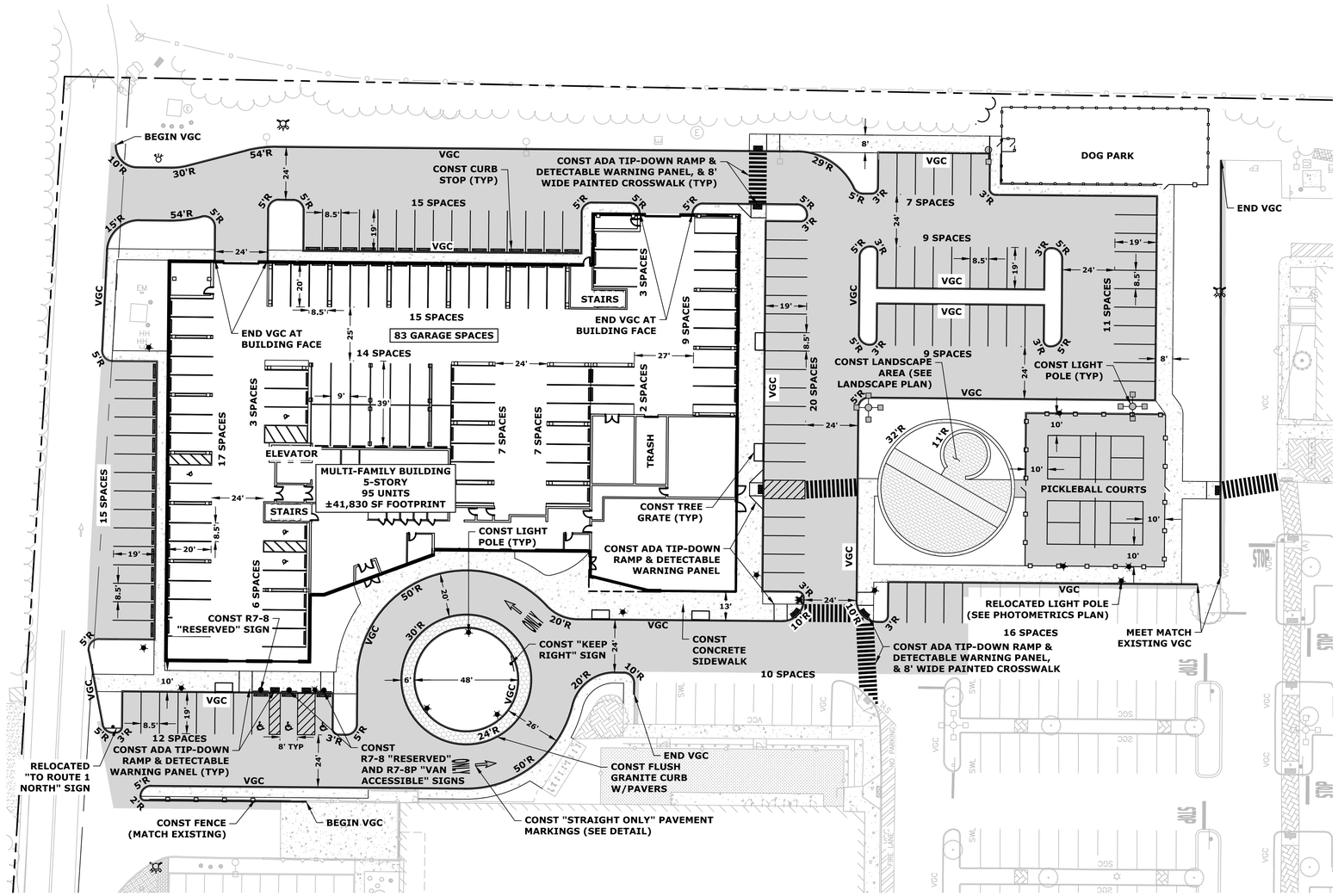
PROJECT NO:	T-5047-001
DATE:	August 5, 2021
FILE:	T5047-001-C-DSGN.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Last Saved: 11/17/2021
Plotted: Nov 22, 2021-8:32am By: NAHansen
Tighe & Bond: J:\1T\5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-DSGN.dwg



LEGEND

	PROPERTY LINE
	PROPOSED PROPERTY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED BUILDING
	PROPOSED PAVEMENT SECTION
	PROPOSED CONCRETE SIDEWALK
	PROPOSED BRICK SIDEWALK
•	PROPOSED BOLLARD
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB

SITE NOTES:

1. STRIPE PARKING AREAS AS SHOWN, INCLUDING PARKING SPACES, STOP BARS, ADA SYMBOLS, PAINTED ISLANDS, CROSS WALKS, ARROWS, LEGENDS AND CENTERLINES SHALL BE THERMOPLASTIC MATERIAL. THERMOPLASTIC MATERIAL SHALL MEET THE REQUIREMENTS OF AASHTO AASHTO M249. (ALL MARKINGS EXCEPT CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING WHITE TRAFFIC PAINT. CENTERLINE AND MEDIAN ISLANDS TO BE CONSTRUCTED USING YELLOW TRAFFIC PAINT. ALL TRAFFIC PAINT SHALL MEET THE REQUIREMENTS OF AASHTO M248 TYPE "F").
2. ALL PAVEMENT MARKINGS AND SIGNS TO CONFORM TO "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS", AND THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS, LATEST EDITIONS.
3. SEE DETAILS FOR PARKING STALL MARKINGS, ADA SYMBOLS, SIGNS AND SIGN POSTS.
4. CENTERLINES SHALL BE FOUR (4) INCH WIDE YELLOW LINES. STOP BARS SHALL BE EIGHTEEN (18) INCHES WIDE.
5. PAINTED ISLANDS SHALL BE FOUR (4) INCH WIDE DIAGONAL LINES AT 3'-0" O.C. BORDERED BY FOUR (4) INCH WIDE LINES.
6. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND GRADES.
7. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE.
8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.
9. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE CITY OF PORTSMOUTH.
10. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
11. SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING.
12. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
13. CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED. COORDINATE WITH BUILDING CONTRACTOR.
14. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW.
15. COORDINATE ALL WORK ADJACENT TO BUILDING WITH BUILDING CONTRACTOR.
16. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
17. ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS.
18. THE APPLICANT SHALL HAVE A SITE SURVEY CONDUCTED BY A RADIO COMMUNICATIONS CARRIER APPROVED BY THE CITY'S COMMUNICATIONS DIVISION. THE RADIO COMMUNICATIONS CARRIER MUST BE FAMILIAR AND CONVERSANT WITH THE POLICE AND RADIO CONFIGURATION. IF THE SITE SURVEY INDICATES IT IS NECESSARY TO INSTALL A SIGNAL REPEATER EITHER ON OR NEAR THE PROPOSED PROJECT, THOSE COSTS SHALL BE THE RESPONSIBILITY OF THE PROPERTY OWNER. THE OWNER SHALL COORDINATE WITH THE SUPERVISOR OF RADIO COMMUNICATIONS FOR THE CITY.
19. PROPERTY MANAGEMENT SHALL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PRIVATE SIDEWALKS, DRIVEWAYS, AND PARKING AREAS. SNOW SHALL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF WHEN NECESSARY TO MAINTAIN ADEQUATE SNOW STORAGE AREAS.
20. THE APPLICANT SHALL PREPARE A CONSTRUCTION MANAGEMENT AND MITIGATION PLAN (CMMP) FOR REVIEW AND APPROVAL BY THE CITY'S LEGAL AND PLANNING DEPARTMENTS.

PROJECT AREA DATA:

PROPOSED PROJECT AREA: ±3.45 ACRES (±150,350 SF)

DEVELOPMENT STANDARDS (MIXED USE):	REQUIRED	PROPOSED
MINIMUM OPEN SPACE COVERAGE:	20% 30,070 SF	±33.16% 49,855 SF
COMMUNITY SPACE:	10% 15,035 SF	±14.6% 21,897 SF

SITE RECORDING NOTES:

1. THIS SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS.
2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR.
3. THIS IS NOT A BOUNDARY SURVEY AND SHALL NOT BE USED AS SUCH.

Tighe&Bond

STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08630 LICENSED PROFESSIONAL ENGINEER – 11/22/21

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 11/22/21

0 30' 60'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

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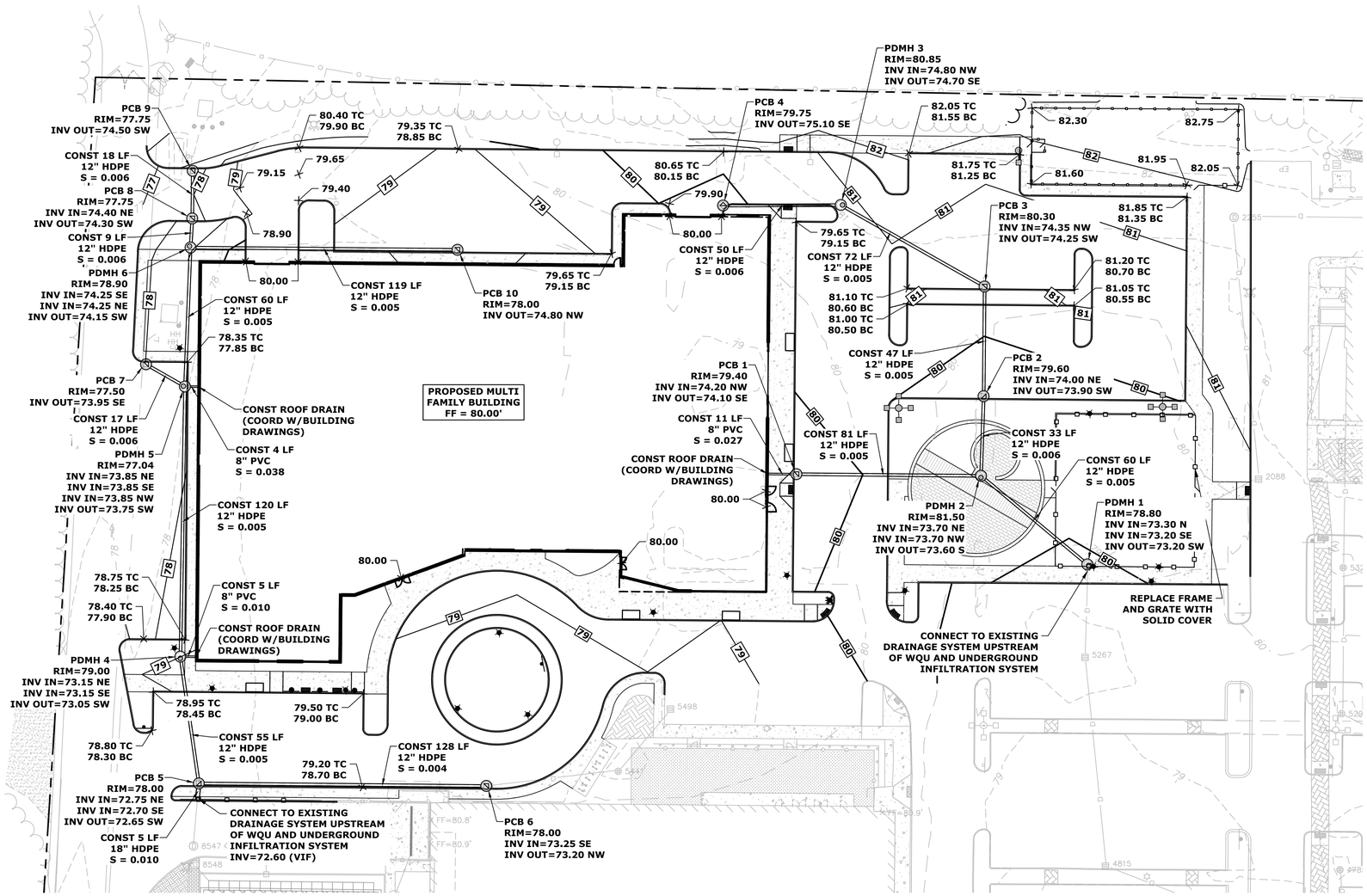
APPROVED BY:	BLM

SITE PLAN

SCALE: AS SHOWN

C-102.1

Last Saved: 11/17/2021
Last Saved By: NAHansen
Plotted On: Nov 22, 2021 - 8:33am By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-DSGN.dwg



LEGEND

- PROPOSED MAJOR CONTOUR LINE
- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
- PROPOSED CATCHBASIN
- PROPOSED DOUBLE GRATE CATCHBASIN
- PROPOSED DRAIN MANHOLE
- PROPOSED YARD DRAIN

BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
TC	TOP OF CURB
BC	BOTTOM OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL

GRADING AND DRAINAGE NOTES:

1. COMPACTION REQUIREMENTS:

BELOW PAVED OR CONCRETE AREAS	95%
TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.

2. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL) OR RCP CLASS IV, UNLESS OTHERWISE SPECIFIED.
3. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION.
4. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
5. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS ADJACENT TO THE BUILDING.
6. CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION.
7. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
9. ALL STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE NHDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, LATEST EDITION.
10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS.
11. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS OF ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION.
12. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
13. SEE EXISTING CONDITIONS PLAN FOR BENCH MARK INFORMATION.

EROSION CONTROL NOTES:

1. INSTALL EROSION CONTROL BARRIERS AS SHOWN AS FIRST ORDER OF WORK.
2. SEE GENERAL EROSION CONTROL NOTES ON "EROSION CONTROL NOTES & DETAILS SHEET".
3. PROVIDE INLET PROTECTION AROUND ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AS WELL AS CATCH BASINS/CURB INLETS THAT RECEIVE RUNOFF FROM CONSTRUCTION ACTIVITIES. MAINTAIN FOR THE DURATION OF THE PROJECT.
4. INSTALL STABILIZED CONSTRUCTION EXIT(S).
5. INSPECT INLET PROTECTION AND PERIMETER EROSION CONTROL MEASURES DAILY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
6. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER AND MULCH.
7. CONSTRUCT EROSION CONTROL BLANKET ON ALL SLOPES STEEPER THAN 3:1.
8. PRIOR TO ANY WORK OR SOIL DISTURBANCE COMMENCING ON THE SUBJECT PROPERTY, INCLUDING MOVING OF EARTH, THE APPLICANT SHALL INSTALL ALL EROSION AND SILTATION MITIGATION AND CONTROL MEASURES AS REQUIRED BY STATE AND LOCAL PERMITS AND APPROVALS.
9. CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES SHALL INCLUDE, BUT ARE NOT LIMITED TO, SPRINKLING WATER ON UNSTABLE SOILS SUBJECT TO ARID CONDITIONS.
10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
11. ALL CATCH BASIN SUMPS AND PIPING SHALL BE THOROUGHLY CLEANED TO REMOVE ALL SEDIMENT AND DEBRIS AFTER THE PROJECT HAS BEEN FULLY PAVED.
12. TEMPORARY SOIL STOCKPILE SHALL BE SURROUNDED WITH PERIMETER CONTROLS AND SHALL BE STABILIZED BY TEMPORARY EROSION CONTROL SEEDING. STOCKPILE AREAS TO BE LOCATED AS FAR AS POSSIBLE FROM THE DELINEATED EDGE OF WETLANDS.
13. SAFETY FENCING SHALL BE PROVIDED AROUND STOCKPILES OVER 10 FT.
14. CONCRETE TRUCKS WILL BE REQUIRED TO WASH OUT (IF NECESSARY) SHOOTS ONLY WITHIN AREAS WHERE CONCRETE HAS BEEN PLACED. NO OTHER WASH OUT WILL BE ALLOWED.

Tighe&Bond

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STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – PATRICK CRIMMINS No. 12378 LICENSED 11/22/21

0 30' 60'
GRAPHIC SCALE

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Torrington Properties, Inc.

Portsmouth, New Hampshire

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GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.1

Last Saved: 11/17/2021
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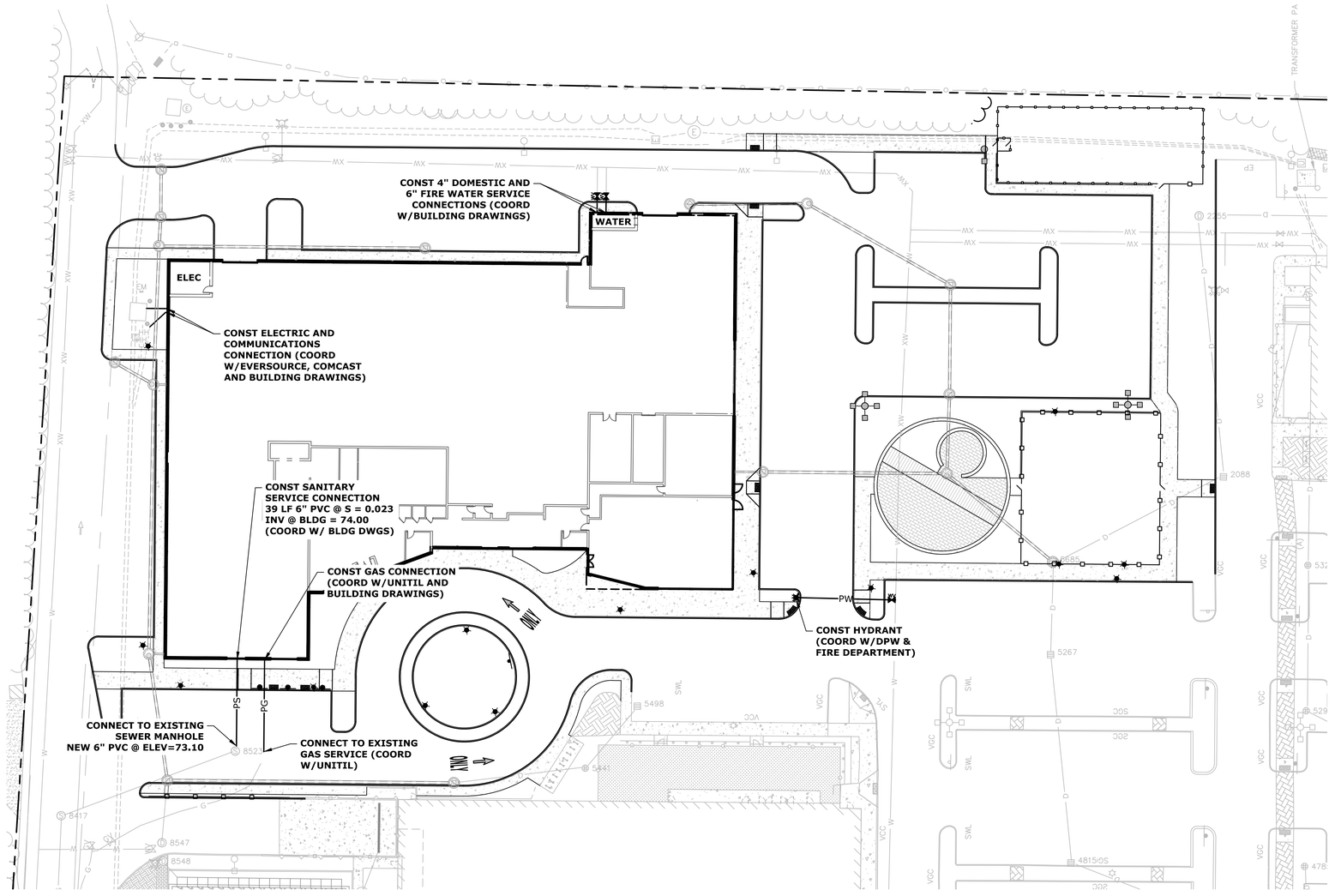
Tighe & Bond: J:\TYT5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings, Figures\AutoCAD\Sheet\T5047-001-C-DSGN.dwg



LEGEND

	MATCH LINE
	EXISTING STORM DRAIN
SS	EXISTING SANITARY SEWER
SS	EXISTING SANITARY SEWER TO BE REMOVED
T T	EXISTING UNDERGROUND TELECOMMUNICATION
W	EXISTING WATER
G	EXISTING GAS
E	EXISTING UNDERGROUND ELECTRIC
OHW	EXISTING OVERHEAD UTILITY
	PROPOSED STORM DRAIN
	PROPOSED SANITARY SEWER
PW	PROPOSED WATER
PG	PROPOSED GAS
PE	PROPOSED UNDERGROUND ELECTRIC
COM	PROPOSED UNDERGROUND TELECOMMUNICATION
	EXISTING CATCHBASIN
	EXISTING DRAIN MANHOLE
	EXISTING SEWER MANHOLE
	EXISTING HYDRANT
WV	EXISTING WATER VALVE
	EXISTING ELECTRIC MANHOLE
	EXISTING TELEPHONE MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED DRAIN MANHOLE
	PROPOSED SEWER MANHOLE
	PROPOSED WATER VALVE
	PROPOSED HYDRANT
	PROPOSED GAS VALVE
	PROPOSED LIGHT POLE BASE
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
VIF	VERIFY IN FIELD

UTILITY NOTES:

1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER.
2. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY.
   - NATURAL GAS - UNITIL
   - WATER/SEWER - CITY OF PORTSMOUTH
   - ELECTRIC - EVERSOURCE
   - COMMUNICATIONS - COMCAST/FAIRPOINT/FIRST LIGHT
3. SEE EXISTING CONDITIONS PLAN FOR BENCHMARK INFORMATION.
4. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES.
5. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE.
6. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE CITY OF PORTSMOUTH WATER DEPARTMENT.
7. ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED.
8. COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAYS WITH THE CITY OF PORTSMOUTH.
9. CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION.
10. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO CITY OF PORTSMOUTH STANDARDS.
11. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES.
12. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, LATEST EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES.
13. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES.
14. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
15. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES.
16. THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT.
17. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL.
18. CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES.
19. A 10-FOOT MINIMUM EDGE TO EDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS.
20. THE CONTRACTOR SHALL CONTACT "DIG-SAFE" 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL HAVE THE "DIG-SAFE" NUMBER ON SITE AT ALL TIMES.
21. CONTRACTOR TO SUBMIT AS-BUILT PLANS ON REPRODUCIBLE MYLARS AND IN DIGITAL FORMAT (.DWG FILES) TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LICENSED LAND SURVEYOR.
22. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN
23. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE CITY OF PORTSMOUTH.
24. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE CITY OF PORTSMOUTH.
25. ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAT 4' OF COVER IN UNPAVED AREAS SHALL BE INSULATED.
26. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY.
27. CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.
28. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER.
29. EACH OF THE NEW BUILDINGS SHALL INCLUDE A SEPARATE KNOX BOX. EACH NEW TENANT SHALL HAVE A SEPARATE FIRE ALARM SYSTEM AND SHALL COMPLY WITH ANY APPLICABLE NFPA CODES AND STANDARDS. KNOX BOX LOCATIONS AND FIRE ALARM SYSTEMS SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH FIRE DEPARTMENT.
30. ALL WATER MAIN PIPE AND FITTINGS SHALL BE POLYWRAPPED AND THREE (3) BRASS WEDGES SHALL BE INSTALLED AT ALL NON-CONDUCTIVE PIPE JOINTS.
31. SHOP DRAWINGS SUBMITTALS SHALL BE SENT TO ENGINEER OF RECORD AND TO 3RD PARTY INSPECTOR AND PORTSMOUTH DPW FOR REVIEW/APPROVAL. ENGINEER OF RECORD SHALL INDICATE CONFORMANCE TO PLANS OR NOTE THE DEVIATION PRIOR TO SENDING TO 3RD PARTY INSPECTOR AND DPW.

Tighe&Bond

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UTILITIES PLAN

SCALE: AS SHOWN

C-104

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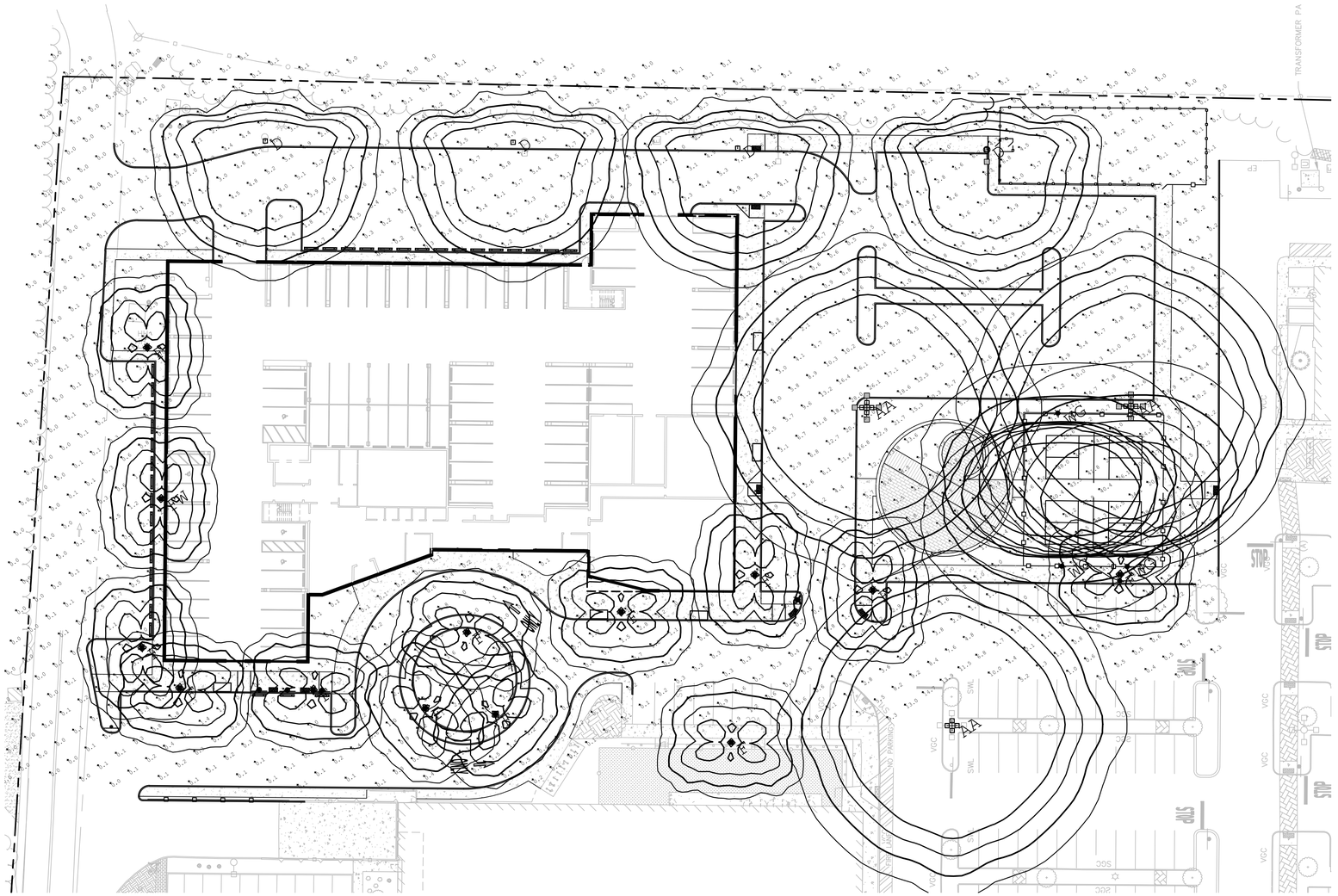

Luminaire Schedule				
Symbol	Qty	Label	Arrangement	Description
	6	AA	4 @ 90 DEGREES	4-SVL22-IV-400PSMH-FG/ 20' POLE 1' PED
	4	D	SINGLE	SVL22-IV-400PSMH-FG-HS/ 20' POLE 1' PED
	20	F	SINGLE	LCK1-YK-PG5-100PSMH/ 11' POLE ON 1' PED
	1	FW	SINGLE	LCK1-YK-PG5-100PSMH/ WALL MTD 12' AFG
	3	WG	Single	WGE-450-4000K-FT / 20' POLE 1' BASE

StatArea_1
NEW PARKING SPACES
Illuminance (Fc)
Average = 1.35
Maximum = 6.7
Minimum = 0.1
Avg/Min Ratio = 13.50
Max/Min Ratio = 67.00

StatArea_2
PICKLEBALL COURTS
Illuminance (Fc)
Average = 27.99
Maximum = 49.2
Minimum = 1.7
Avg/Min Ratio = 16.46
Max/Min Ratio = 28.94

LIGHTING DESIGN:
CHARRON INC.
40 LONDONDERRY TURNPIKE
HOOKSETT, NH 03106
(603) 624-4827

Tighe&Bond

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PHOTOMETRICS PLAN

SCALE: AS SHOWN

C-105

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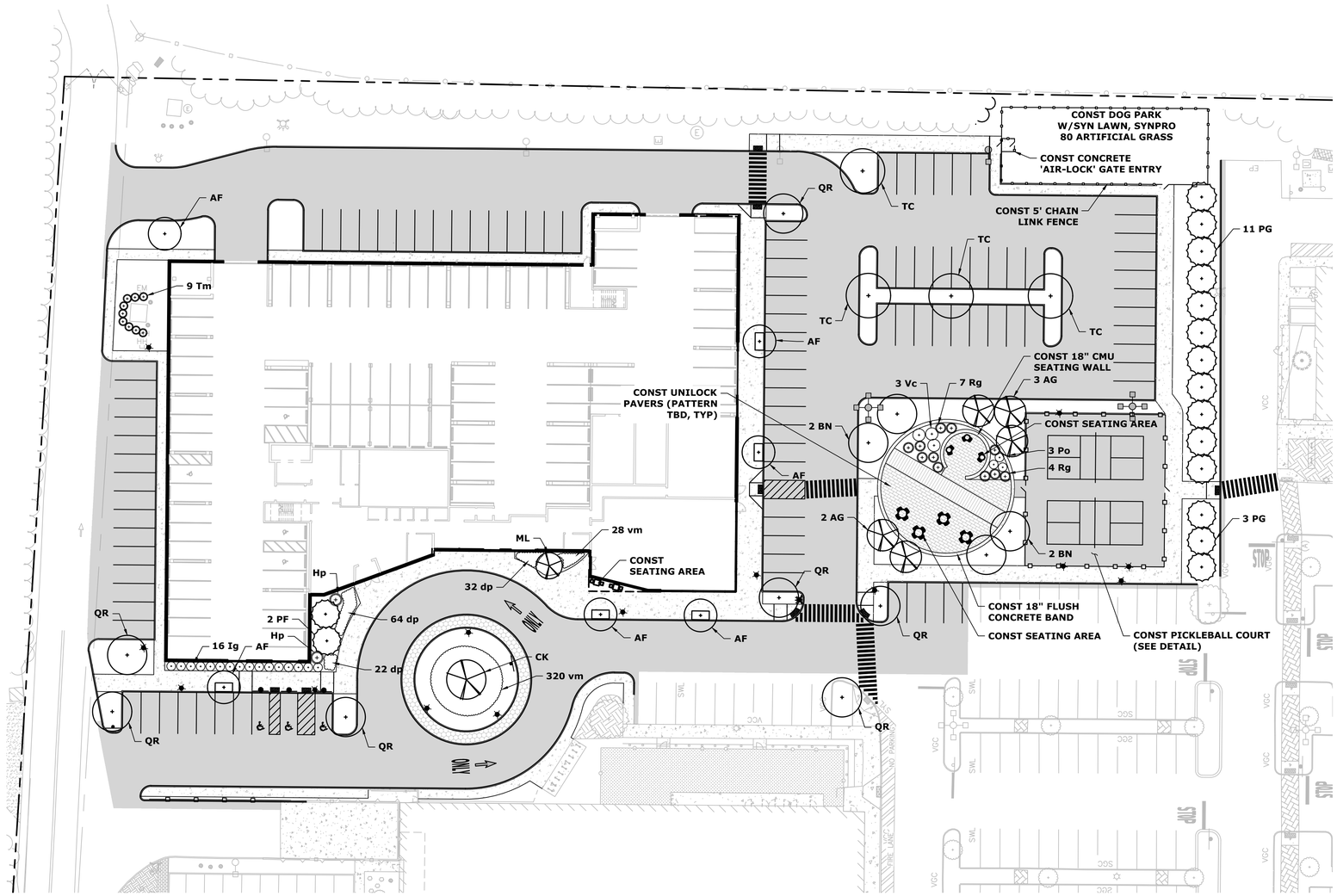

LEGEND

- PROPOSED LIGHT POLE BASE
- PROPOSED DECIDUOUS TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED EVERGREEN TREE
- PROPOSED EVERGREEN SHRUB
- PROPOSED SHRUB
- PROPOSED GROUND COVER

LANDSCAPE NOTES:

1. THE CONTRACTOR SHALL FURNISH AND PLANT ALL PLANTS IN QUANTITIES AS SHOWN ON THIS PLAN. NO SUBSTITUTIONS WILL BE PERMITTED UNLESS APPROVED BY OWNER. ALL PLANTS SHALL BE NURSERY GROWN.
2. ALL PLANTS SHALL BE NURSERY GROWN AND PLANTS AND WORKMANSHIP SHALL CONFORM TO THE AMERICAN ASSOCIATION OF NURSERYMEN STANDARDS, INCLUDING BUT NOT LIMITED TO SIZE, HEALTH, SHAPE, ETC., AND SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO ARRIVAL ON-SITE AND AFTER PLANTING.
3. PLANT STOCK SHALL BE GROWN WITHIN THE HARDINESS ZONES 4 THRU 7 ESTABLISHED BY THE PLANT HARDINESS ZONE MAP, MISCELLANEOUS PUBLICATIONS NO. 814, AGRICULTURAL RESEARCH SERVICE, UNITED STATES DEPARTMENT AGRICULTURE, LATEST REVISION.
4. PLANT MATERIAL SHALL BARE THE SAME RELATIONSHIP TO FINISHED GRADE AS TO THE ORIGINAL PLANTING GRADE PRIOR TO DIGGING.
5. THE NUMBER OF EACH INDIVIDUAL PLANT TYPE AND SIZE PROVIDED IN THE PLANT LIST OR ON THE PLAN IS FOR THE CONTRACTOR'S CONVENIENCE ONLY. IF A DISCREPANCY EXISTS BETWEEN THE NUMBER OF PLANTS ON THE LABEL AND THE NUMBER OF SYMBOLS SHOWN ON THE DRAWINGS, THE GREATER NUMBER SHALL APPLY.
6. NO SUBSTITUTION OF PLANT MATERIALS WILL BE ALLOWED WITHOUT THE PRIOR WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE.
7. THE CONTRACTOR SHALL LOCATE, VERIFY AND MARK ALL EXISTING AND NEWLY INSTALLED UNDERGROUND UTILITIES PRIOR TO ANY LAWN WORK OR PLANTING, ANY CONFLICTS WHICH MIGHT OCCUR BETWEEN PLANTING AND UTILITIES SHALL IMMEDIATELY BE REPORTED TO THE OWNER SO THAT ALTERNATE PLANTING LOCATIONS CAN BE DETERMINED.
8. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED, SHALL RECEIVE 6" OF LOAM AND SEED. NO FILL SHALL BE PLACED IN ANY WETLAND AREA.
9. LANDSCAPING SHALL BE LOCATED WITHIN 150 FT OF EXTERIOR HOSE ATTACHMENT OR SHALL BE PROVIDED WITH AN IRRIGATION SYSTEM.
10. SEE PLANTING DETAILS AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
11. TREE STAKES SHALL REMAIN IN PLACE FOR NO LESS THAN 6 MONTHS AND NO MORE THAN 1 YEAR.
12. PLANTING SHALL BE COMPLETED FROM APRIL 15TH THROUGH OCTOBER 1ST. NO PLANTING DURING JULY AND AUGUST UNLESS SPECIAL PROVISIONS ARE MADE FOR DROUGHT.
13. PARKING AREA PLANTED ISLANDS TO HAVE MINIMUM OF 1'-0" TOPSOIL PLACED TO WITHIN 3 INCHES OF THE TOP OF CURB ELEVATION. REMOVE ALL CONSTRUCTION DEBRIS BEFORE PLACING TOPSOIL.
14. TREES SHALL BE PRUNED IN ACCORDANCE WITH THE LATEST EDITION OF ANSI A300 'TREES, SHRUBS AND OTHER WOOD PLANT MAINTENANCE STANDARD PRACTICES.
15. ALL PLANTS SHALL BE WATERED THOROUGHLY TWICE DURING THE FIRST 24 HOUR PERIOD AFTER PLANTING. ALL PLANTS SHALL BE WATERED WEEKLY, OR MORE OFTEN, IF NECESSARY DURING THE FIRST GROWING SEASON. LANDSCAPE CONTRACTOR SHALL COORDINATE WATERING SCHEDULE WITH OWNER DURING THE ONE (1) YEAR GUARANTEE PERIOD.
16. EXISTING TREES AND SHRUBS SHOWN ON THE PLAN ARE TO REMAIN UNDISTURBED. ALL EXISTING TREES AND SHRUBS SHOWN TO REMAIN ARE TO BE PROTECTED WITH A 4-FOOT SNOW FENCE PLACED AT THE DRIP LINE OF THE BRANCHES OR AT 8 FEET MINIMUM FROM THE TREE TRUNK. ANY EXISTING TREE OR SHRUB SHOWN TO REMAIN, WHICH IS REMOVED DURING CONSTRUCTION, SHALL BE REPLACED BY A TREE OF COMPARABLE SIZE AND SPECIES TREE OR SHRUB.
17. THE CONTRACTOR SHALL GUARANTEE ALL PLANTINGS TO BE IN GOOD HEALTHY, FLOURISHING AND ACCEPTABLE CONDITION FOR A PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF ACCEPTANCE OF SUBSTANTIAL COMPLETION. ALL GRASSES, TREES AND SHRUBS THAT, IN THE OPINION OF THE LANDSCAPE ARCHITECT, SHOW LESS THAN 80% HEALTHY GROWTH AT THE END OF ONE YEAR PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
18. UPON EXPIRATION OF THE CONTRACTOR'S ONE YEAR GUARANTEE PERIOD, THE OWNER SHALL BE RESPONSIBLE FOR LANDSCAPE MAINTENANCE INCLUDING WATERING DURING PERIODS OF DROUGHT
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLANTING AND LAWNS AGAINST DAMAGE FROM ONGOING CONSTRUCTION. THIS PROTECTION SHALL BEGIN AT THE TIME THE PLANT IS INSTALLED AND CONTINUE UNTIL THE FORMAL ACCEPTANCE OF ALL THE PLANTINGS.
20. PRE-PURCHASE PLANT MATERIAL AND ARRANGE FOR DELIVERY TO MEET PROJECT SCHEDULE AS REQUIRED IT MAY BE NECESSARY TO PRE-DIG CERTAIN SPECIES WELL IN ADVANCE OF ACTUAL PLANTING DATES.

Tighe&Bond

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – BRADLEE MEZQUITA No. 08630 LICENSED
11/22/21

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – PATRICK CRIMMINS No. 12378 LICENSED
11/22/21

0 30' 60'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
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D	10/27/2021	Revised Site Data Table
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PROJECT NO:	T-5047-001
DATE:	August 5, 2021
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DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

LANDSCAPE PLAN

SCALE: AS SHOWN

L-100

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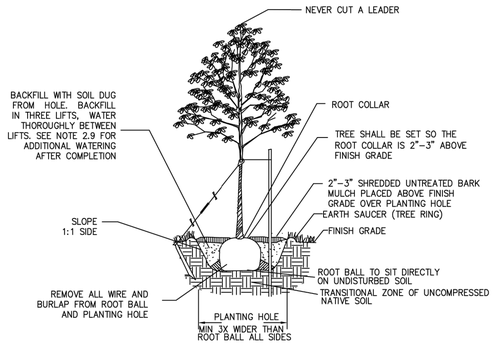
PLANT SCHEDULE

Symbol	Quantity	*Botanical Name*	Common Name	Size	Spacing
TREES					
AF	6	*Acer freemanii 'Autumn Blaze'*	Autumn Blaze Maple	2.5-3" Cal.	
AG	5	*Amelanchier grandiflora 'Autumn Brilliance'*	Apple Serviceberry	8'-10' Ht, Multi	
BN	4	*Betula nigra 'Heritage'*	Heritage River Birch	2.5-3" Cal.	
CK	1	*Cornus kousa*	Kousa Dogwood	3.5-4" Cal.	
ML	1	*Magnolias loebneri 'Dr Merrill'*	Merril Star Magnolia	10'-12' Ht, Multi	
PF	2	*Picea pungens 'Fat Albert'*	Fat Albert Spruce	7'-8' Ht	
PG	14	*Picea glauca*	White Spruce	8'-10' Ht	
QR	7	*Quercus rubra*	Northern Red Oak	4-5" Cal.	
TC	4	*Tilia cordata 'Greenspire'*	Greenspire Littleleaft Linden	2.5-3" Cal.	
SHRUBS					
Hp	2	*Hydrangea paniculata 'pinky winky*	Pinky Winky Hydrangea	3 Gal	
Ig	16	*Ilex glabra 'Shamrock'*	Shamrock Inkberry	5 Gal	
Po	3	*Physocarpus opulifolius 'Coppertina'*	Coppertina Ninebark	7 Gal	
Rg	11	*Rhus aromatica 'Gro-Low'*	Fro-Low Fragrant Sumac	3 Gal	
Tm	9	*Taxus media 'Nigra'*	Dark Spreading Yew	2'-2.5' BB	
Vc	3	*Viburnum carlesii 'Cayuga'*	Cayuga Mayflower	3'-4' BB	
PERENNIALS					
dp	118	*Dennstaedtia punctilobula*	Hay Scented Fern	1 Gal	18" oc
vm	348	*Vinca minor 'Bowles'*	Foamflower	4" Pot	18" oc



TREE PLANTING DETAIL
N.T.S.

PART 1 – GENERAL:

1.1 THE BASE OF THE CITY OF PORTSMOUTH TREE PLANTING REQUIREMENTS IS THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPLANTING. ANSI A300 PART 6 LAYS OUT TERMS AND BASIC STANDARDS AS SET FORTH BY INDUSTRY BUT IT IS NOT THE "END ALL" FOR THE CITY OF PORTSMOUTH. THE FOLLOWING ARE THE CITY OF PORTSMOUTH, NH TREE PLANTING REQUIREMENTS THAT ARE IN ADDITION TO OR THAT GO BEYOND THE ANSI A300 PART 6.

PART 2 – EXECUTION:

2.1 ALL PLANTING HOLES SHALL BE DUG BY HAND – NO MACHINES. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE NEW PLANTING PITS, PLANTING BEDS WITH GRANITE CURBING, AND PLANTING SITES WITH SILVA CELLS ARE BEING CREATED. IF A MACHINE IS USED TO DIG IN ANY OF THESE SITUATIONS AND PLANTING DEPTH NEEDS TO BE RAISED THE MATERIAL IN THE BOTTOM OF THE PLANTING HOLE MUST BE FIRMED WITH MACHINE TO PREVENT SINKING OF THE ROOT BALL.

2.2 ALL WIRE AND BURLAP SHALL BE REMOVED FROM THE ROOT BALL AND PLANTING HOLE.

2.3 THE ROOT BALL OF THE TREE SHALL BE WORKED SO THAT THE ROOT COLLAR OF THE TREE IS VISIBLE AND NO GIRDLING ROOTS ARE PRESENT.

2.4 THE ROOT COLLAR OF THE TREE SHALL BE 2"–3" ABOVE GRADE OF PLANTING HOLE FOR FINISHING DEPTH.

2.5 ALL PLANTINGS SHALL BE BACKFILLED WITH SOIL FROM THE SITE AND AMENDED NO MORE THAN 20% WITH ORGANIC COMPOST. THE ONLY EXCEPTIONS ARE NEW CONSTRUCTION WHERE ENGINEERED SOIL IS BEING USED IN CONJUNCTION WITH SILVA CELLS AND WHERE NEW PLANTING BEDS ARE BEING CREATED.

2.6 ALL PLANTINGS SHALL BE BACKFILLED IN THREE LIFTS AND ALL LIFTS SHALL BE WATERED SO THE PLANTING WILL BE SET AND FREE OF AIR POCKETS – NO EXCEPTIONS.

2.7 AN EARTH BERM SHALL BE PLACED AROUND THE PERIMETER OF THE PLANTING HOLE EXCEPT WHERE CURBED PLANTING BEDS OR PITS ARE BEING USED.

2.8 2"–3" OF MULCH SHALL BE PLACED OVER THE PLANTING AREA.

2.9 AT THE TIME OF PLANTING IS COMPLETE THE PLANTING SHALL RECEIVE ADDITIONAL WATER TO ENSURE COMPLETE HYDRATION OF THE ROOTS, BACKFILL MATERIAL AND MULCH LAYER.

2.10 STAKES AND GUYS SHALL BE USED WHERE APPROPRIATE AND/OR NECESSARY. GUY MATERIAL SHALL BE NON–DAMAGING TO THE TREE.

2.11 ALL PLANTING STOCK SHALL BE SPECIMEN QUALITY, FREE OF DEFECTS, AND DISEASE OR INJURY. THE CITY OF PORTSMOUTH, NH RESERVES THE RIGHT TO REFUSE/REJECT ANY PLANT MATERIAL OR PLANTING ACTION THAT FAILS TO MEET THE STANDARDS SET FORTH IN THE ANSI A300 PART 6 STANDARD PRACTICES FOR PLANTING AND TRANSPORTATION AND/OR THE CITY OF PORTSMOUTH, NH PLANTING REQUIREMENTS.

Tighe&Bond

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11/22/21

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – PATRICK CRIMMINS No. 12378 LICENSED
11/22/21

0 30' 60'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

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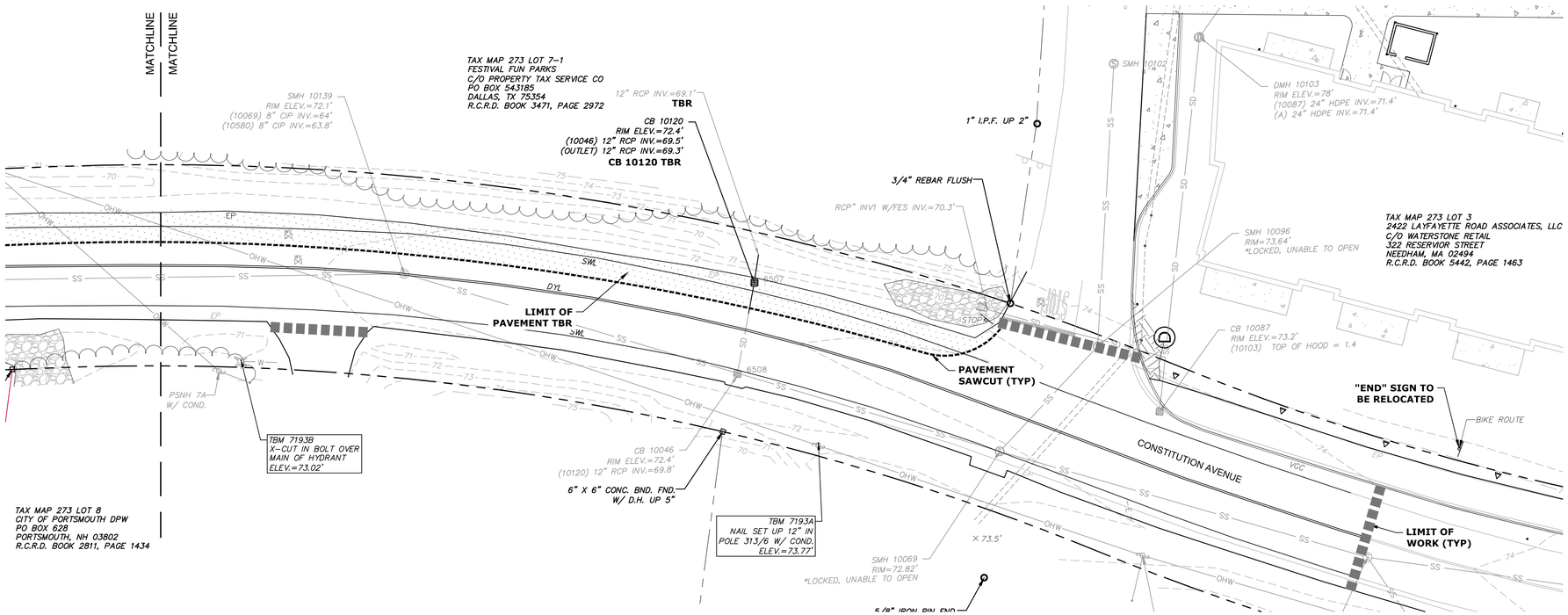
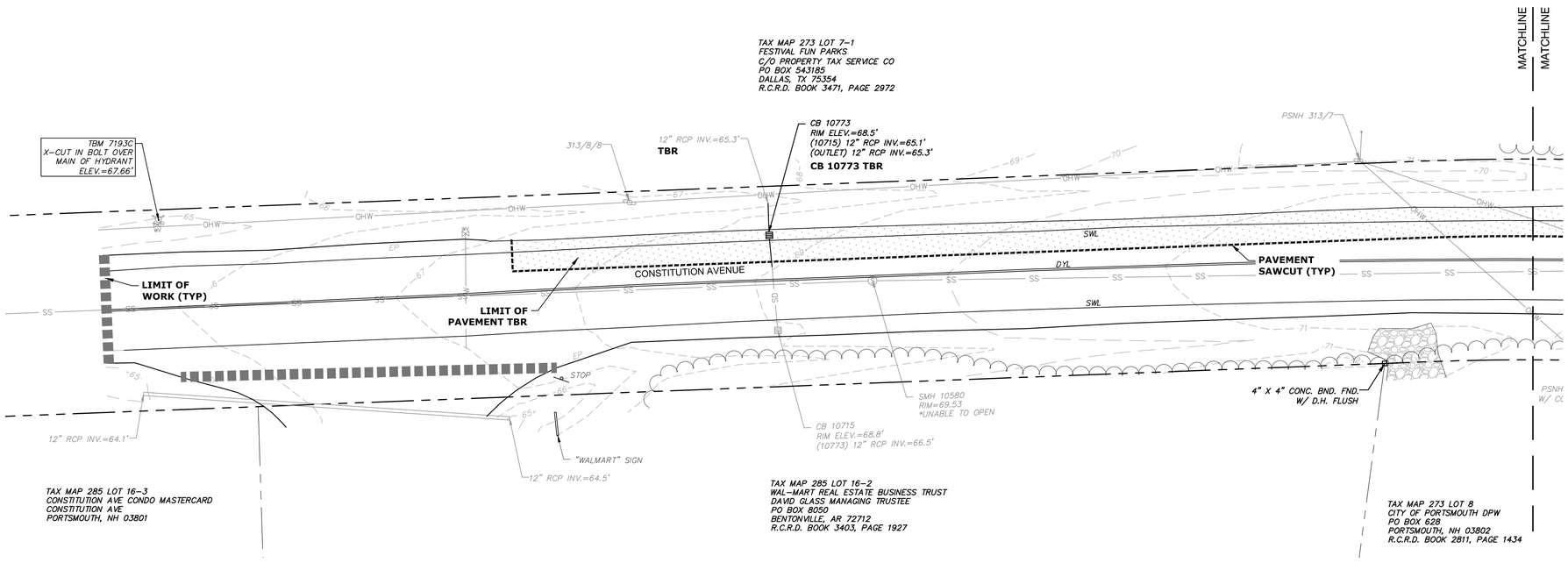
LANDSCAPE SCHEDULE & DETAILS

SCALE: AS SHOWN

L-101





SEE SHEET C-101.1 FOR
EXISTING CONDITIONS AND
DEMOLITION NOTES & LEGEND

Tighe&Bond

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STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – PATRICK CRIMMINS No. 12378 LICENSED 11/22/21

0 20' 40'
GRAPHIC SCALE

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MULTI-USE PATH
EXISTING CONDITIONS AND
DEMOLITION PLAN

SCALE: AS SHOWN

C-201

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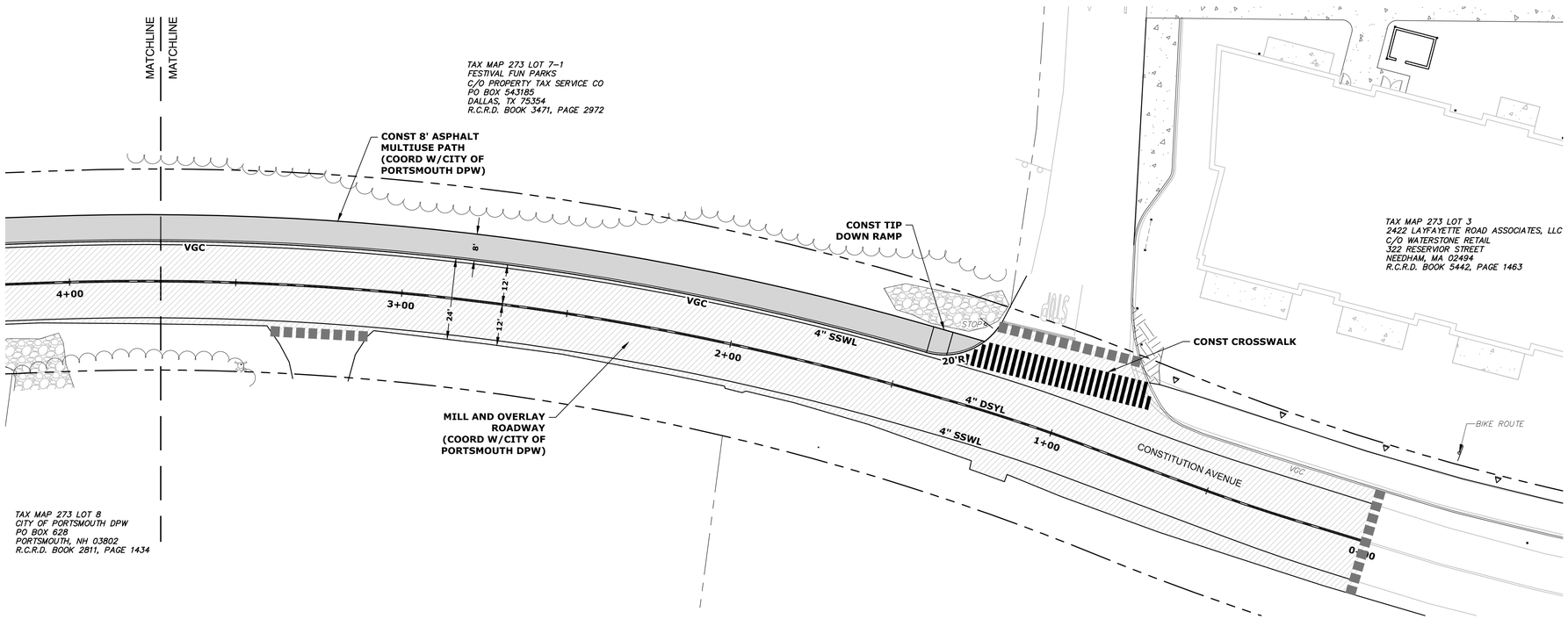

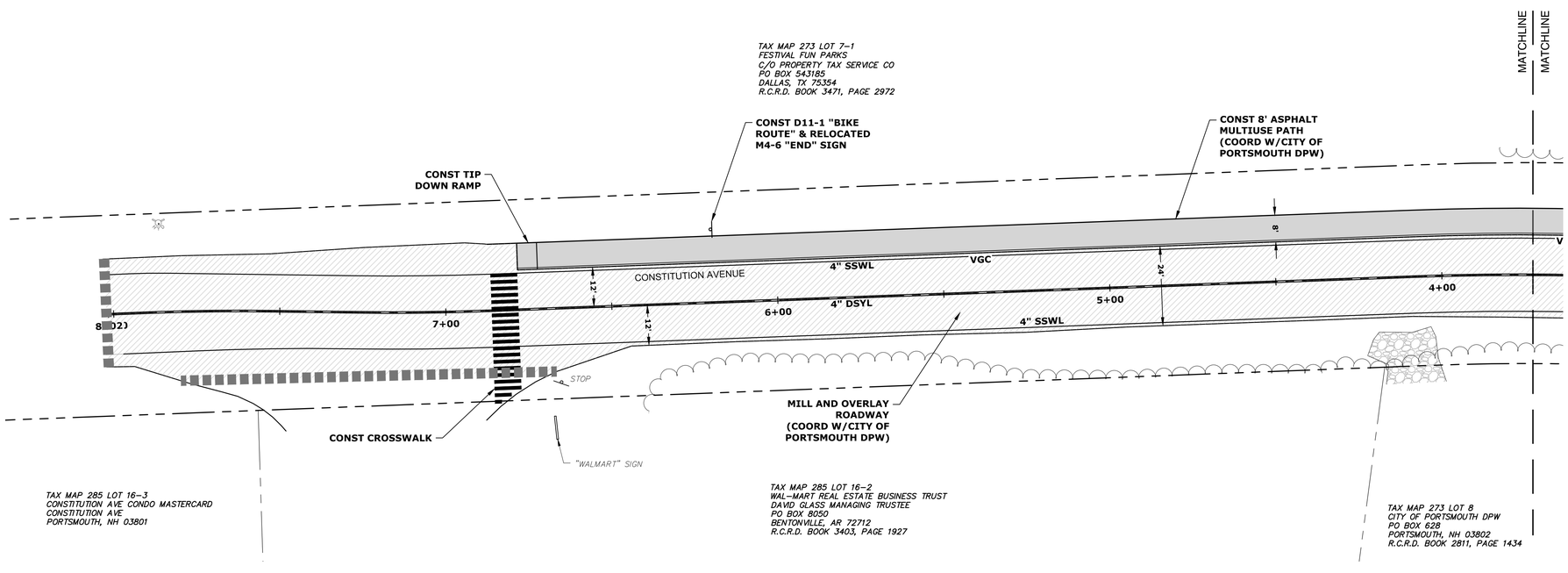

SEE SHEET C-102.1 FOR SITE NOTES & LEGEND

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0 20' 40'
GRAPHIC SCALE

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MULTI-USE PATH SITE PLAN

SCALE: AS SHOWN

C-202

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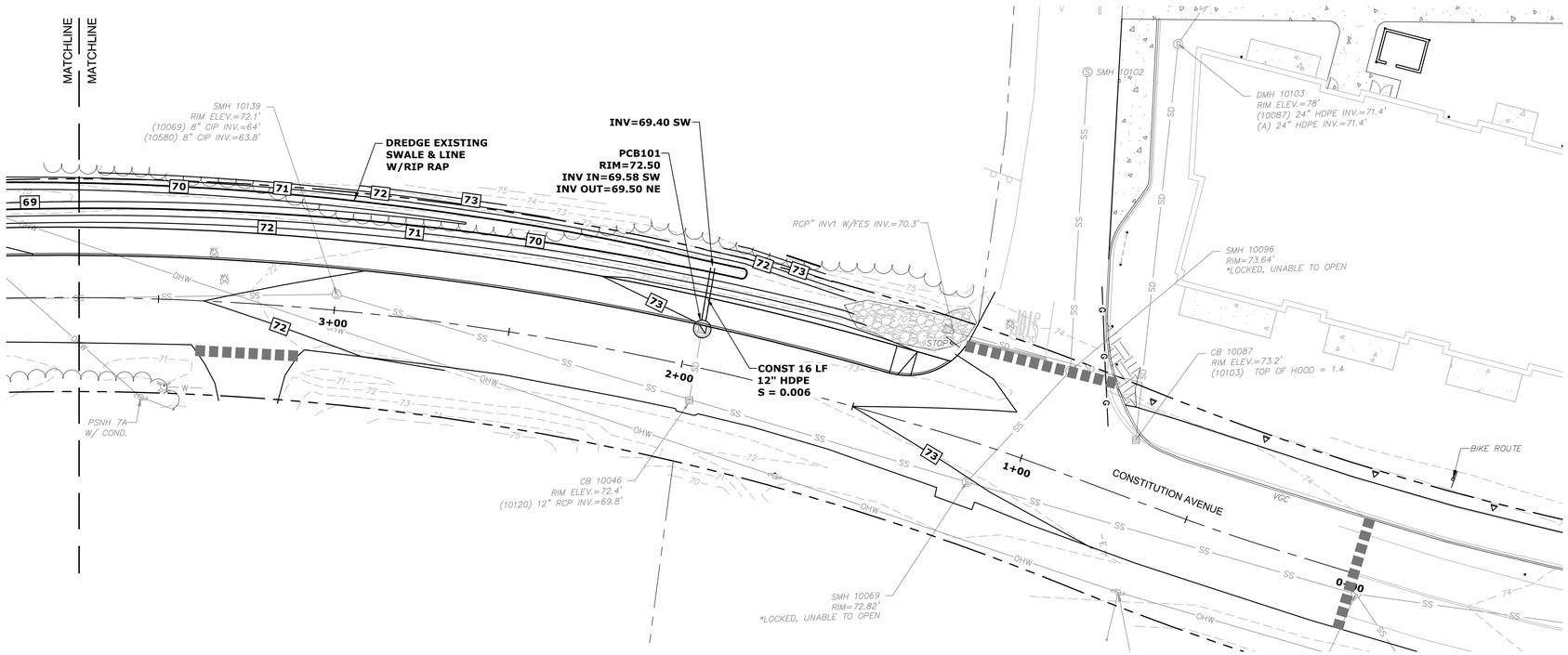

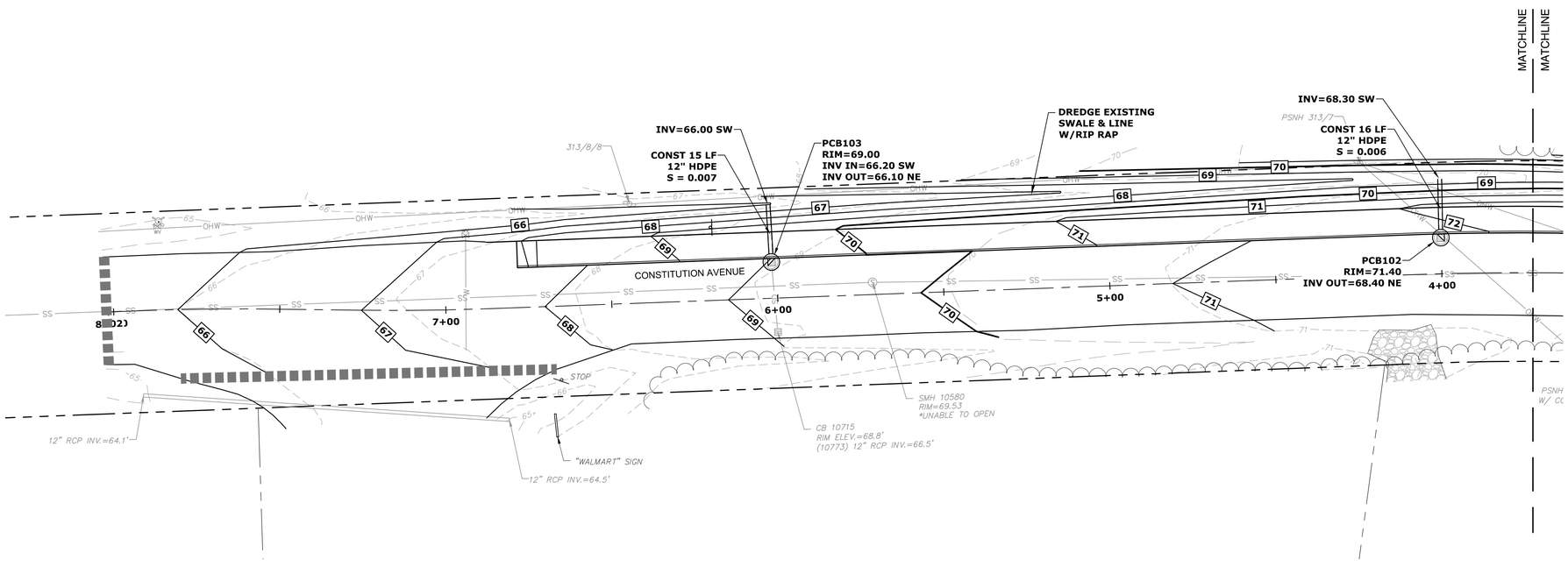

SEE SHEET C-103.1 FOR GRADING, DRAINAGE & EROSION CONTROL NOTES & LEGEND

Tighe&Bond

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0 20' 40'
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MULTI-USE PATH GRADING, DRAINAGE & EROSION CONTROL PLAN

SCALE: AS SHOWN

C-203

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GENERAL PROJECT INFORMATION

PROJECT OWNER: 2422 LAFAYETTE ROAD ASSOC LLC
C/O WATERSTONE RETAIL
322 RESERVOIR STREET
NEEDHAM, MA 02494

PROJECT NAME: PORTSMOUTH GREEN - MULTI-FAMILY DEVELOPMENT

PROJECT ADDRESS: 2454 LAFAYETTE ROAD
PORTSMOUTH, NH 03801

PROJECT MAP / LOT: MAP 273 / LOT 3
PROJECT LATITUDE: 43.036120 N
PROJECT LONGITUDE: -70.784829 W

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF DEMOLITION OF THE EXISTING CINEMA AND THE CONSTRUCTION OF A PROPOSED MULTI-FAMILY RESIDENTIAL BUILDING.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 3.5 ACRES.

SOIL CHARACTERISTICS

BASED ON THE NRCS WEB SOIL SURVEY FOR ROCKINGHAM COUNTY - NEW HAMPSHIRE THE SOILS ON SITE CONSIST OF MOSTLY URBAN SOILS WHICH HAVE UNKNOWN DRAINAGE PROPERTIES.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF WILL BE COLLECTED IN A CLOSED DRAINAGE SYSTEM WHICH ULTIMATELY DISCHARGES TO THE LITTLE HARBOR.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS:
   - NEW CONSTRUCTION
   - CONTROL OF DUST
   - NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
   - CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
2. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM.
3. CLEAR AND DISPOSE OF DEBRIS.
4. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
5. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
6. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
7. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
8. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
9. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
10. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

SPECIAL CONSTRUCTION NOTES:

1. THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE.
2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
3. LIMIT THE LENGTH OF EXPOSURE OF UNSTABILIZED SOIL TO 45 DAYS OR LESS.

EROSION CONTROL NOTES:

1. ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.
2. PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL.
3. CONTRACTOR SHALL INSTALL TEMPORARY EROSION CONTROL BARRIERS, INCLUDING HAY BALE, SILT FENCES, MULCH BERMS, INLET PROTECTION AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. INLET PROTECTION SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASIN INLETS WITHIN THE WORK LIMITS AND BE MAINTAINED FOR THE DURATION OF THE PROJECT.
5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL NON-PAVED AREAS HAVE BEEN STABILIZED.
6. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
7. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND FERTILIZER.
8. INSPECT ALL INLET PROTECTION AND PERIMETER CONTROLS WEEKLY AND AFTER EACH RAIN STORM OF 0.25 INCH OR GREATER. REPAIR/MODIFY PROTECTION AS NECESSARY TO MAXIMIZE EFFICIENCY OF FILTER. REPLACE ALL FILTERS WHEN SEDIMENT IS 1/3 THE FILTER HEIGHT.
9. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

STABILIZATION:

1. AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED:
   - A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   - B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   - C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED;
   - D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
2. WINTER STABILIZATION PRACTICES:
   - A. ALL PROPOSED VEGETATED AREAS THAT DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS;
   - B. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS;
   - C. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT;
3. STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE:
   - A. TEMPORARY SEEDING;
   - B. MULCHING.
4. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE ESTABLISHED.
5. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY NOVEMBER 15.

DUST CONTROL:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION PERIOD.
2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY MULCHING.
3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

STOCKPILES:

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND CULVERTS.
2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION.
3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

OFF SITE VEHICLE TRACKING:

1. THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

VEGETATION:

1. TEMPORARY GRASS COVER:
   - A. SEEDBED PREPARATION:
     - a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
   - B. SEEDING:
     - a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
     - b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND SEED;
     - c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
   - C. MAINTENANCE:
     - a. TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
2. VEGETATIVE PRACTICE:
   - A. FOR PERMANENT MEASURES AND PLANTINGS:
     - a. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5;
     - b. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20 FERTILIZER;
     - c. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH;
     - d. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
     - e. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE;
     - f. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
     - g. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED;
     - h. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:

SEED MIX	APPLICATION RATE
CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
REDTOP	2 LBS/ACRE

   IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW.
3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL):
   - A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

CONCRETE WASHOUT AREA:

1. THE FOLLOWING ARE THE ONLY NON-STORMWATER DISCHARGES ALLOWED. ALL OTHER NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE:
   - A. THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES AT THEIR OWN PLANT OR DISPATCH FACILITY;
   - B. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
   - C. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
   - D. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN MATERIALS NEED TO BE REMOVED.

ALLOWABLE NON-STORMWATER DISCHARGES:

1. FIRE-FIGHTING ACTIVITIES;
2. FIRE HYDRANT FLUSHING;
3. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED;
4. WATER USED TO CONTROL DUST;
5. POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
6. ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED;
7. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
8. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION;
9. UNCONTAMINATED GROUND WATER OR SPRING WATER;
10. FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
11. UNCONTAMINATED EXCAVATION DEWATERING;
12. LANDSCAPE IRRIGATION.

WASTE DISPOSAL:

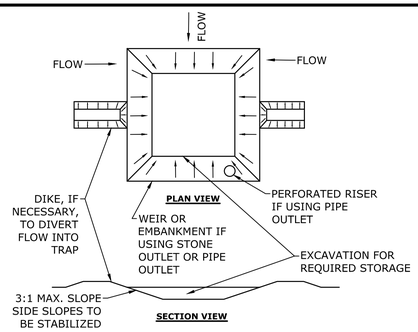
1. WASTE MATERIAL:
   - A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   - B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   - C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT.
2. HAZARDOUS WASTE:
   - A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER;
   - B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
3. SANITARY WASTE:
   - A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

SPILL PREVENTION:

1. CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY LOCAL, STATE AND FEDERAL AGENCIES. AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW.
2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF:
   - A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:
     - a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON SITE;
     - b. ALL MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE;
     - c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE FOLLOWED;
     - d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
     - e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
     - f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
   - B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
     - g. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
     - h. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
     - i. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL.
   - C. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:
     - a. PETROLEUM PRODUCTS:
       - a.1. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
       - a.2. PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
     - b. FERTILIZERS:
       - b.1. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
       - b.2. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
       - b.3. STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.
     - c. PAINTS:
       - c.1. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
       - c.2. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
       - c.3. EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.
   - D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
     - a. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES;
     - b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE;
     - c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;
     - d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE;
     - e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED;
     - f. THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR.
   - E. VEHICLE FUELING AND MAINTENANCE PRACTICE:
     - a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPTMENT/VEHICAL FUELING AND MAINTENANCE AT AN OFF-SITE FACILITY;
     - b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY;
     - c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
     - d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA;
     - e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE;
     - f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

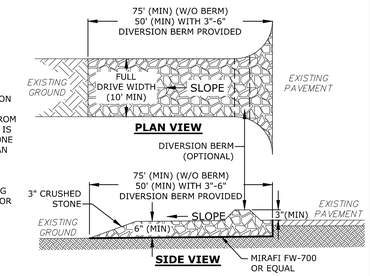
EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

1. THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A SWPPP. THE SWPPP SHALL BE PREPARED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF THIS PROJECT:
   - A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY THE CONTRACTOR AT LEAST ONCE A WEEK OR WITHIN 24 HOURS OF A STORM 0.25 INCHES OR GREATER;
   - B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
   - C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES;
   - D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.



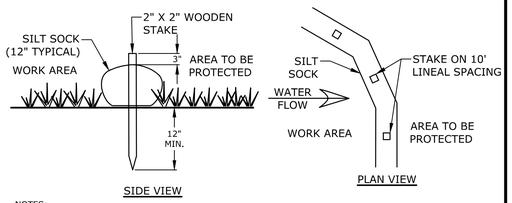
NOTES:
1. THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.
2. THE MAXIMUM CONTRIBUTING AREA TO A SINGLE TRAP SHALL BE LESS THAN 5 ACRES.
3. THE MINIMUM VOLUME OF THE TRAP SHALL BE 3,600 CUBIC FEET OF STORAGE FOR EACH ACRE OF DRAINAGE AREA.
4. TRAP OUTLET SHALL BE MINIMUM OF ONE FOOT BELOW THE CREST OF THE TRAP.
5. TRAP SHALL DISCHARGE TO A STABILIZED AREA.
6. TRAP SHALL BE CLEANED WHEN 50 PERCENT OF THE ORIGINAL VOLUME IS FILLED.
7. MATERIALS REMOVED FROM THE TRAP SHALL BE PROPERLY DISPOSED OF AND STABILIZED.
8. SEDIMENT TRAPS MUST BE USED AS NEEDED TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.

SEDIMENT TRAP
NO SCALE



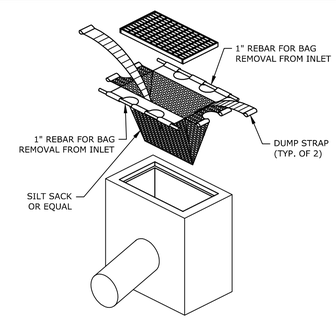
NOTES:
1. THE EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OF SEDIMENT FROM THE SITE. WHEN WASHING IS REQUIRED, IT SHALL BE DONE SO RUNOFF DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

STABILIZED CONSTRUCTION EXIT
NO SCALE



NOTES:
1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL.
2. SILT SOCK SHALL BE FILLED WITH FILTERMEDIA BY FILTREXX OR APPROVED EQUAL.
3. WHERE TWO SILT SOCKS ARE JOINED, A MINIMUM OF 2 FEET OF OVERLAP SHALL BE MAINTAINED.
4. SILT SOCKS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
5. CONTRACTOR TO INSTALL SILT SOCK IN J-HOOK OR SMILE CONFIGURATION TO LIMIT CONCENTRATION OF STORMWATER RUNOFF AT A SINGLE DISCHARGE POINT.

SILT SOCK
NO SCALE



NOTES:
1. INLET PROTECTION BARRIER SHALL BE SILT SACK BY ACF ENVIRONMENTAL OR APPROVED EQUAL.
2. INLET PROTECTION BARRIER SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS LOCATED WITHIN THE LIMIT OF WORK.
3. SILT SACK SHALL BE INSPECTED REGULARLY AND MAINTAIN IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

INLET PROTECTION BARRIER
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08630 LICENSED PROFESSIONAL ENGINEER
11/22/21

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
11/22/21

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
E	11/22/2021	TAC Resubmission
D	10/27/2021	Revised Site Data Table
C	10/18/2021	TAC Submission
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

PROJECT NO:	T-5047-001
DATE:	August 5, 2021
FILE:	T5047-001-C-DTLS.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

EROSION CONTROL NOTES

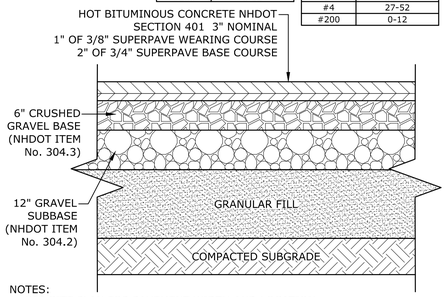
SCALE: AS SHOWN

C-501

Last Saved:11/22/2021
Plotted On:Nov 22, 2021-8:25am By: NAHansen
Tighe & Bond :J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings, Figures\AutoCAD\Sheet\T5047-001-C-DTLS.dwg

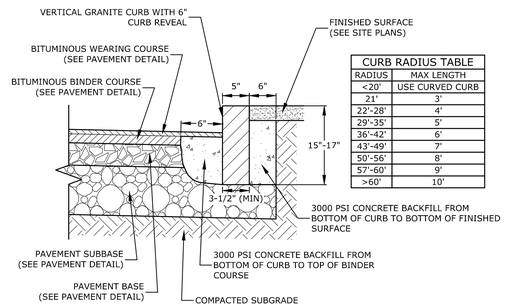
NHDOT ITEM No. 304.2 (GRAVEL)	
SIEVE SIZE	% PASSING
6"	100
#4	25-70
#200	0-12

NHDOT ITEM No. 304.3 (CRUSHED GRAVEL)	
SIEVE SIZE	% PASSING
3"	100
2"	95-100
1"	55-85
#4	27-52
#200	0-12



NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.
5. CONTRACTOR SHALL CONFIRM THIS PAVEMENT SECTION WITH THE PROJECT'S GEOTECHINCAL ENGINEEER PRIOR TO CONSTRUCTION.

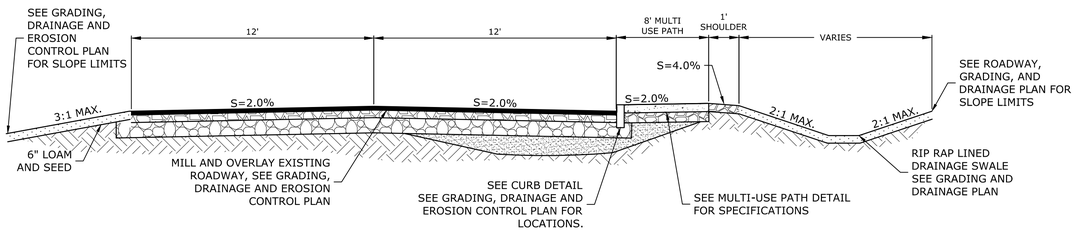
ON-SITE PAVEMENT SECTION
NO SCALE



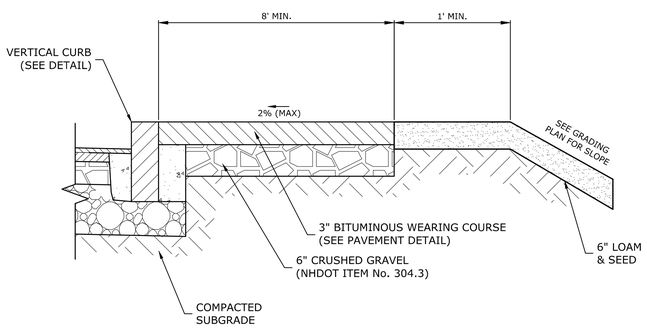
CURB RADIUS TABLE	
RADIUS	MAX LENGTH
<20'	USE CURVED CURB
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
>60'	10'

NOTES:
1. SEE SITE PLAN(S) FOR LIMITS OF VERTICAL GRANITE CURB (VGC).
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3'
4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'
5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).
6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS.
7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED.

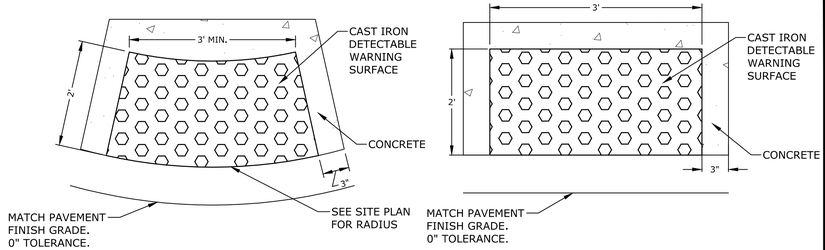
VERTICAL GRANITE CURB
NO SCALE



CONSTITUTION AVE TYPICAL CROSS SECTION
STA 0+00 TO 7+00
NO SCALE

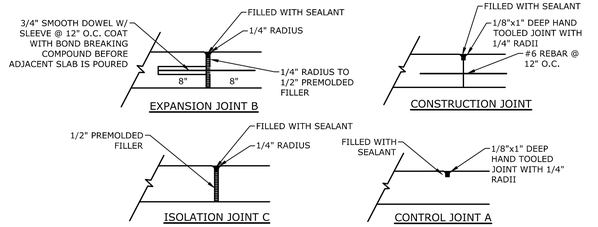


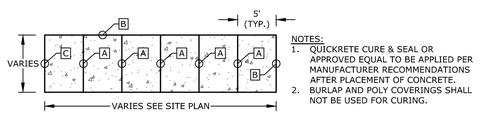
MULTI-USE PATH
NO SCALE



NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

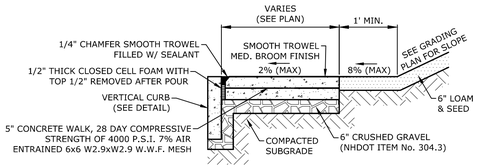
DETECTABLE WARNING SURFACE
NO SCALE



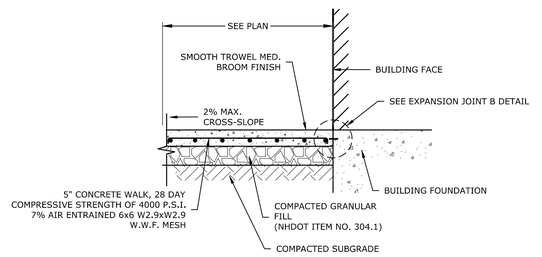


NOTES:
1. QUICKRETE CURE & SEAL OR APPROVED EQUAL TO BE APPLIED PER MANUFACTURER RECOMMENDATIONS AFTER PLACEMENT OF CONCRETE.
2. BURLAP AND POLY COVERINGS SHALL NOT BE USED FOR CURING.

PLAN VIEW



SECTION VIEW



CONCRETE SIDEWALK SECTION VIEW @ BUILDING

CONCRETE SIDEWALK
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08630 LICENSED PROFESSIONAL ENGINEER – 11/22/21

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER – 11/22/21

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

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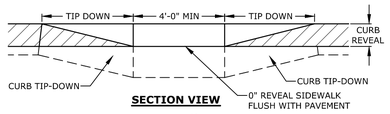
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

DETAILS

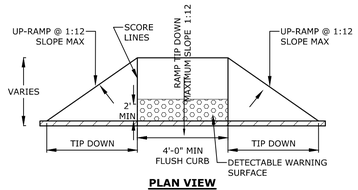
SCALE: AS SHOWN

C-502

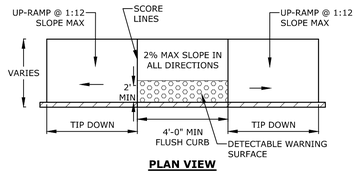
Last Saved: 11/22/2021
Plotted On: Nov 22, 2021 - 8:26am By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-DTLS.dwg



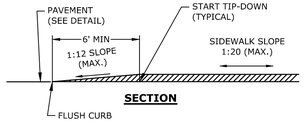
SECTION VIEW



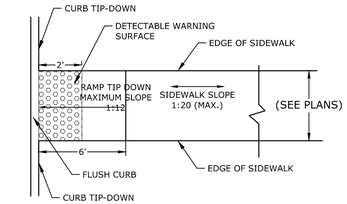
PLAN VIEW



PLAN VIEW



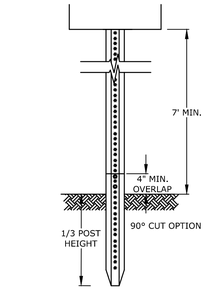
SECTION



PLAN

NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. A 9" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
3. DETECTABLE WARNING PANEL SHALL BE CAST IRON WITH BLACK COATING

CONCRETE SIDEWALK TIP-DOWN
RAMPS WITH DETECTABLE WARNING PANEL
NO SCALE

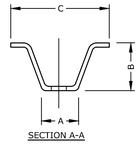


* IN LEDGE DRILL & GROUT TO A MIN OF 2'

SIGN POST TO COMPLY WITH ALL ASPECTS OF NHDOT SECTION 615.

LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER, 1" C-C FULL LENGTH
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASSTM A-576 (GRADE 1070 - 1080)
FINISH: SHALL BE GALVANIZED IN ACCORDANCE WITH AASHTO M111.

WT.	A	B	C
3 LBS	1 3/4" OR 1 5/16"	1 3/4" OR 1 5/8"	3 1/4"
4 LBS	1 5/8"	1 3/4"	3 1/4"



SECTION A-A

NOTES:
1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1-76 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT OF 91 LBS. OR GREATER PER LINEAR YARD.
2. AFTER FABRICATION, ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A 123.
3. ALL SIGN POSTS SHALL HAVE "BREAKAWAY" FEATURES THAT MEET AASHTO REQUIREMENTS CONTAINED IN "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS-1985." THE "BREAKAWAY" FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGNS SHOWN IN THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
4. TYPE A POSTS - 3 LB/FT TYPE B POSTS - 4 LB/FT.
5. ALL SIGNS TO BE CONSTRUCTED PER THE LATEST EDITION OF THE FHWA STANDARD HIGHWAY SIGNS MANUAL AND INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
6. MEET REQUIREMENTS OF SECTION 615 SIGNS OF NHDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 2010 EDITION, AS AMENDED.

SIGN POST
NO SCALE

R1-1
30" X 30"
WHITE ON RED

R5-1
30" X 30"
WHITE ON RED

R7-6
12" X 18"
RED ON WHITE

R7-8
12" X 18"
BLUE AND GREEN ON WHITE

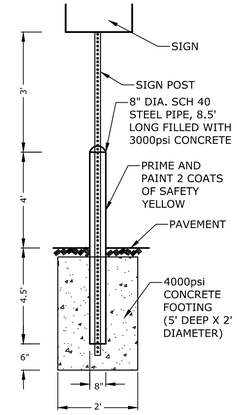
R7-8P
18" X 9"
GREEN ON WHITE

R4-7A
12"X18"
BLACK ON WHITE

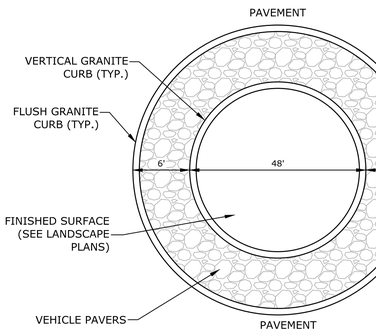
D11-1
24" X 18"
WHITE ON GREEN

M4-6
12" X 6"
WHITE ON GREEN

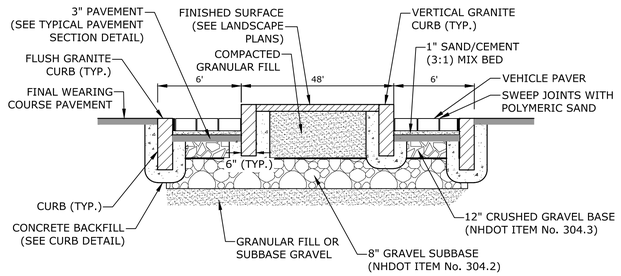
SIGN LEGEND & SIGN POST
NO SCALE



BOLLARD MOUNTED
SIGN DETAIL
NO SCALE



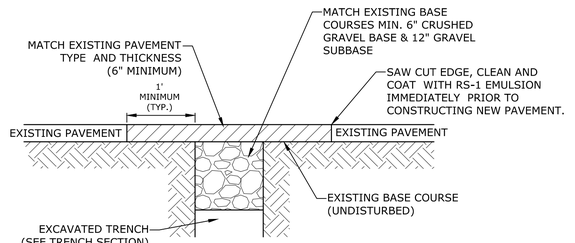
DROP OFF PLAN VIEW



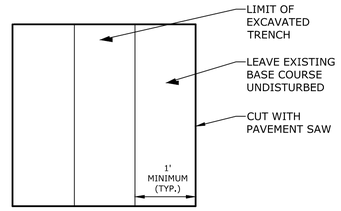
DROP OFF CENTER SECTION

NOTES:
1. BEDDING MATERIAL SHALL BE A SAND/CEMENT MIX THAT IS 3 PARTS SAND AND 1 PART CEMENT. SAND SHALL CONFORM WITH ASTM C33 AND CEMENT SHALL BE PORTLAND CEMENT TYPE I/TYPE II.

DROP OFF CENTER
NO SCALE



SECTION



PLAN

NOTE:
COORDINATE AND OBTAIN APPROVAL FOR ALL TRENCHING AND PATCHING WITHIN CITY RIGHT OF WAY WITH CITY OF PORTSMOUTH DPW PRIOR TO COMMENCING WORK.

ROADWAY TRENCH PATCH
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – BRADLEE MEZQUITA No. 08630 LICENSED
11/22/21

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
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APPROVED BY:	BLM

DETAILS

SCALE: AS SHOWN

C-503

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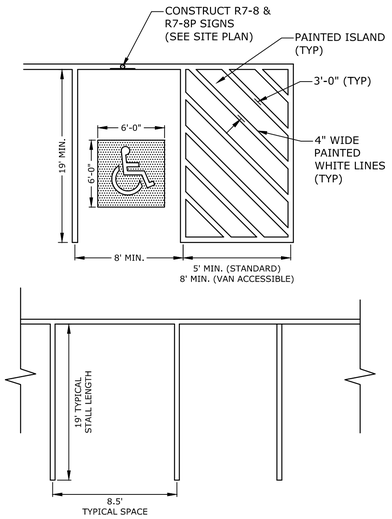
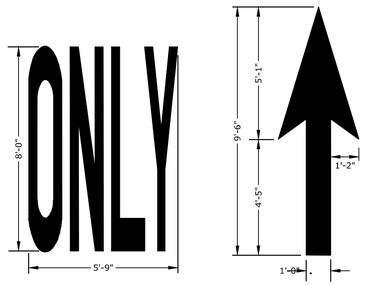
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_ Figures\AutoCAD\Sheet\T5047-001-C-DTLS.dwg



NOTE:
1. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.
2. SYMBOLS & PARKING STALLS SHALL CONFORM TO THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
3. FINISH PAVEMENT GRADES AT ALL HANDICAP ACCESSIBLE STALLS AND PAINTED ACCESS AISLES SHALL NOT EXCEED 2% IN ANY DIRECTION.

STALL STRIPING
NO SCALE

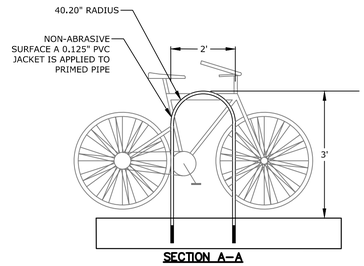


ONLY LEGEND

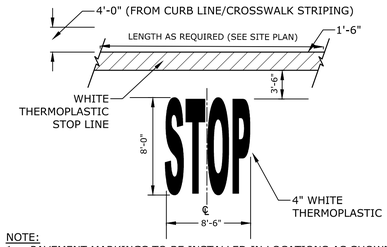
THROUGH (STRAIGHT) ARROW

NOTES:
1. ALL WORDS AND SYMBOLS SHALL BE RETROREFLECTIVE WHITE AND SHALL CONFORM TO THE LATEST VERSION OF THE MUTCD.
2. ALL PAINT SHALL BE FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.

DIRECTIONAL PAVEMENT MARKING DETAILS
NO SCALE

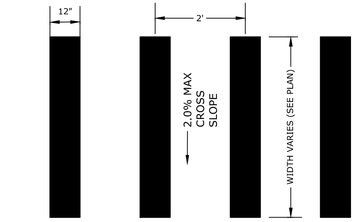


SECTION A–A



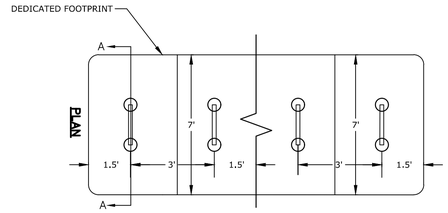
NOTE:
1. PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN ON SITE PLAN.
2. STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

STOP BAR AND LEGEND
NO SCALE

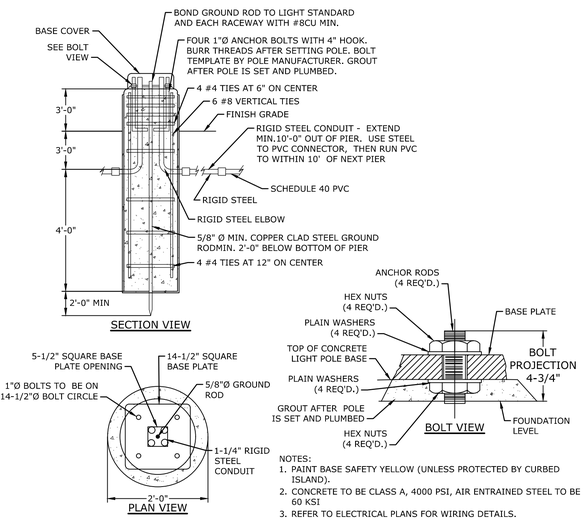


NOTE:
STRIPING SHALL BE CONSTRUCTED USING WHITE THERMO PLASTIC, REFLECTERIZED PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505

CROSSWALK STRIPING
NO SCALE

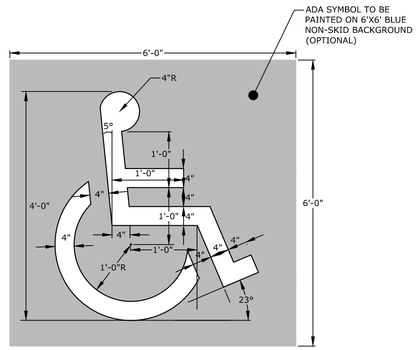


BIKE RACK
NO SCALE



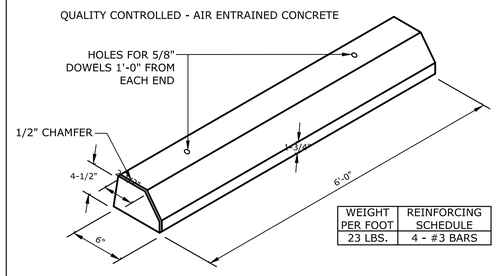
NOTES:
1. PAINT BASE SAFETY YELLOW (UNLESS PROTECTED BY CURBED ISLAND).
2. CONCRETE TO BE CLASS A, 4000 PSI, AIR ENTRAINED STEEL TO BE 60 KSI
3. REFER TO ELECTRICAL PLANS FOR WIRING DETAILS.
4. LIGHT POLE BASE DETAIL FOR BIDDING PURPOSES ONLY. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL, TO INCLUDE PERFORMANCE SPECIFICATIONS, CALCULATIONS AND NH LICENSED STRUCTURAL ENGINEER'S STAMP FOR LIGHT POLE FOUNDATION.

TYPICAL LIGHT POLE BASE
NO SCALE



NOTES:
1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING WHITE THERMOPLASTIC, REFLECTORIZED PAVEMENT PARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505.
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

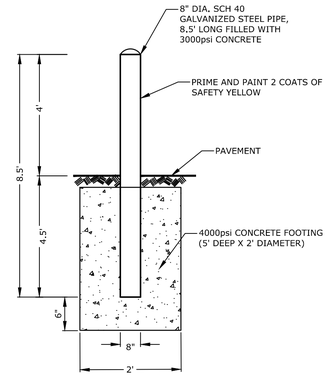
ACCESSIBLE SYMBOL
NO SCALE



WEIGHT PER FOOT	REINFORCING SCHEDULE
23 LBS.	4 - #3 BARS

NOTE:
1. CURBING TO BE PINNED THROUGH ASPHALT PAVEMENT.

CONCRETE WHEEL STOP
NO SCALE



BOLLARD DETAIL
NO SCALE

Tighe&Bond

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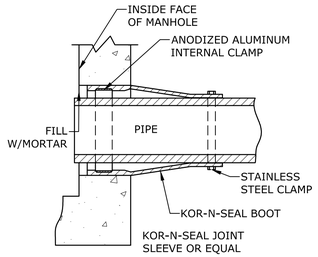
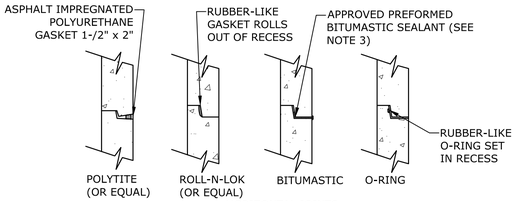


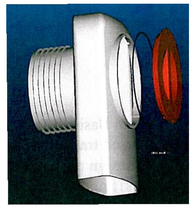
PIPE TO MANHOLE JOINTS

NOTES:
1. HORIZONTAL JOINTS BETWEEN THE SECTIONS OF PRECAST CONCRETE BARRELS SHALL BE PER CITY OF PORTSMOUTH DPW STANDARD AND SHALL BE SEALED FOR WATERTIGHTNESS USING A DOUBLE ROW ELASTOMERIC OR MASTIC-LIKE GASKET.
2. PIPE TO MANHOLE JOINTS SHALL BE PER CITY OF PORTSMOUTH STANDARD.
3. FOR BITUMASTIC TYPE JOINTS THE AMOUNT OF SEALANT SHALL BE SUFFICIENT TO FILL AT LEAST 75% OF THE JOINT CAVITY.
4. ALL GASKETS, SEALANTS, MORTAR, ETC. SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS' WRITTEN INSTRUCTIONS.



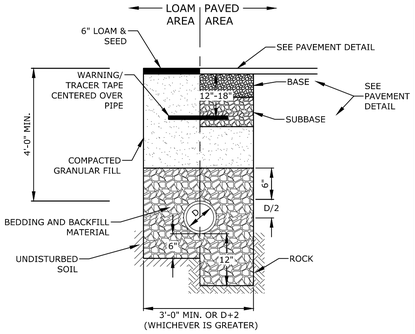
HORIZONTAL JOINTS

MANHOLE JOINTS
NO SCALE



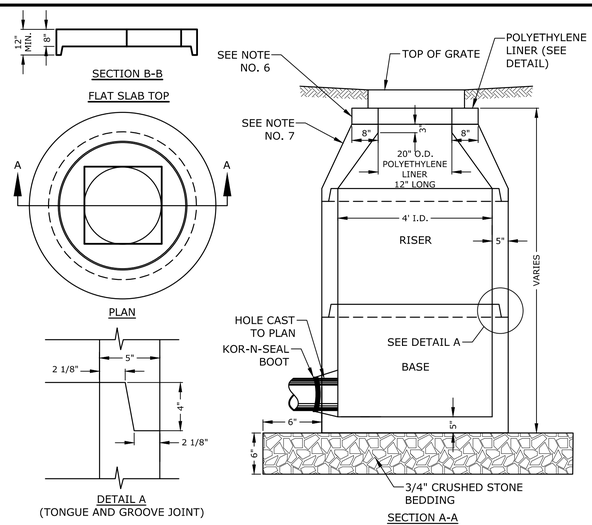
NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)
2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP
NO SCALE



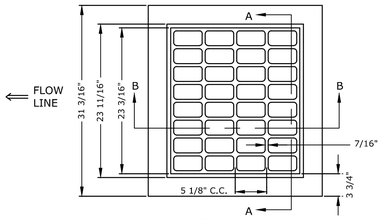
NOTE:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.
3. DRAIN LINE SHALL BE INSULATED WHERE THERE IS LESS THAN 6' OF COVER IN PAVED AREAS AND LESS THAN 4' OF COVER IN NON-PAVED AREAS.

STORM DRAIN TRENCH
NO SCALE

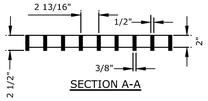


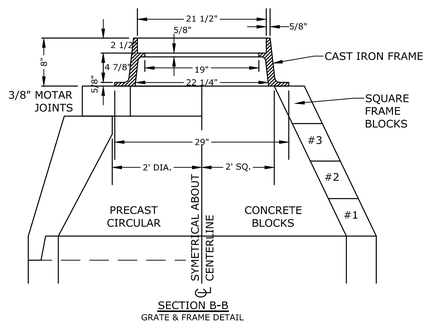
NOTES:
1. ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
5. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
6. FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2 COURSES MAX.).
7. CONE SECTIONS MAY BE EITHER CONCENTRIC OR ECCENTRIC, OR FLAT SLAB TOPS MAY BE USED WHERE PIPE WOULD OTHERWISE ENTER INTO THE CONE SECTION OF THE STRUCTURE AND WHERE PERMITTED.
8. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
9. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
10. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
11. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.

4' DIAMETER CATCHBASIN
NO SCALE

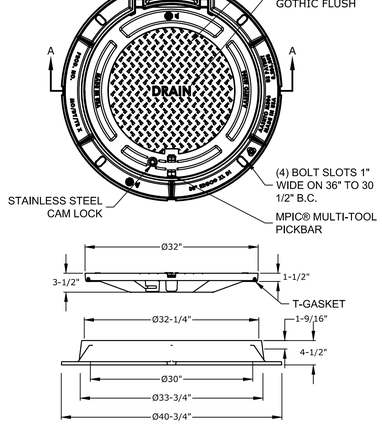


NOTE:
1. GRATE TO BE CAST IRON (NHDOT TYPE B)
2. FRAME AND GRATE TO BE MANUFACTURED IN THE USA





CATCH BASIN FRAME & GRATE
NO SCALE

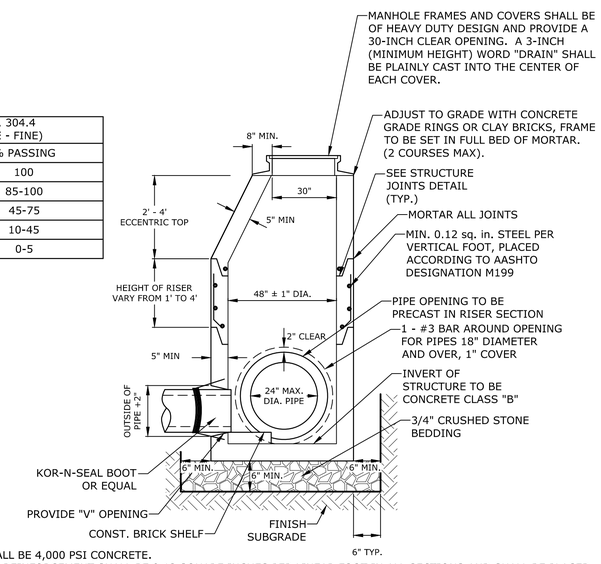


SECTION A-A

NOTES:
1. MANHOLE FRAME AND COVER SHALL BE 32" HINGED ERGO XL BY EJ CO.
2. ALL DIMENSIONS ARE NOMINAL.
3. FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED:
   A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING.
   B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS.
   C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.
4. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN HE CENTER OF THE COVER.

DRAIN MANHOLE FRAME & COVER
NO SCALE

NHDOT ITEM No. 304.4 (CRUSHED STONE - FINE)	
SIEVE SIZE	% PASSING
2"	100
1-1/2"	85-100
3/4"	45-75
#4	10-45
#200	0-5



NOTES:
1. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE AND THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
5. CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
6. THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT.
7. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
8. OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
9. PRECAST SECTIONS SHALL HAVE A TONGUE AND GROOVE JOINT 4" HIGH AT AN 11° ANGLE CENTERED IN THE WIDTH OF THE WALL AND SHALL BE ASSEMBLED USING AN APPROVED FLEXIBLE SEALANT IN JOINTS.
10. ALL STRUCTURES WITH MULTIPLE PIPES SHALL HAVE A MINIMUM OF 12" OF INSIDE SURFACE BETWEEN HOLES, NO MORE THAN 75% OF A HORIZNTAL CROSS SECTION SHALL BE HOLES, AND THERE SHALL BE NO HOLES CLOSER THAN 3" TO JOINTS.

4' DIAMETER DRAIN MANHOLE
NO SCALE

Tighe&Bond

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
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PROJECT NO:	T-5047-001
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DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

DETAILS

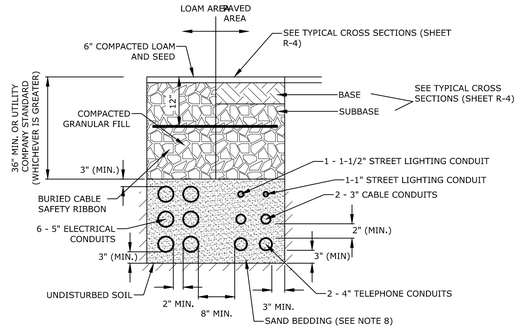
SCALE: AS SHOWN

C-505

Last Saved: 11/22/2021
Plotted On: Nov 22, 2021-8:26am By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-DTLS.dwg

GRANULAR FILL (GRAVEL)	
SIEVE SIZE	% PASSING
3"	95-100
#4	25-70

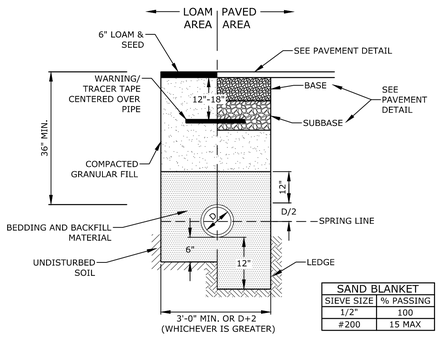
SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX



AASHTO #67 STONE (#4 to 3/4")	
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

NOTE:
1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING.
2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE STRING TO THE CONDUIT.
5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER.
6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE.
7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS.
8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

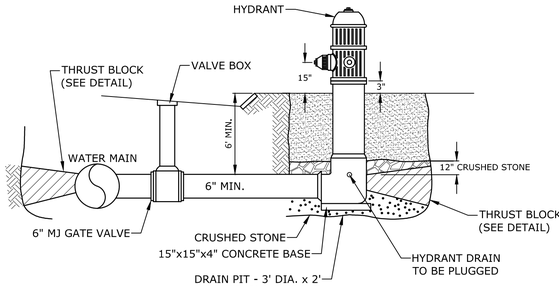
ELECTRICAL AND COMMUNICATION CONDUIT
NO SCALE



SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX

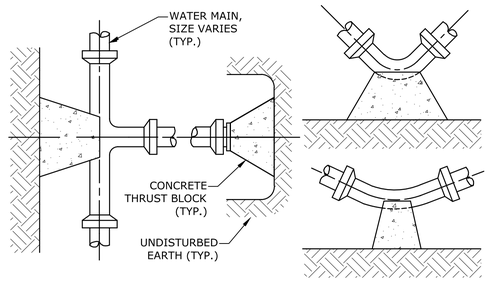
NOTE:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. GAS LINE SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY/TOWN OF ????.

GAS TRENCH
NO SCALE



NOTE:
1. HYDRANT TO BE KENNEDY TYPE K-81, RIGHT OPEN (NO EQUAL). COORDINATE WITH CITY OF PORTSMOUTH WATER DEPARTMENT AND CITY OF PORTSMOUTH FIRE DEPARTMENT.
2. PAINT HYDRANT IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AFTER INSTALLATION AND TESTING.

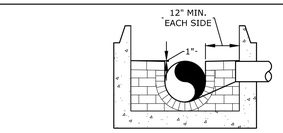
FIRE HYDRANT
NO SCALE



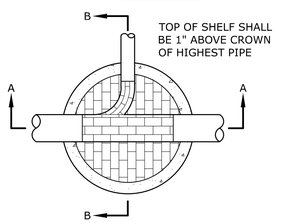
TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL				
REACTION TYPE	PIPE SIZE				
	4"	6"	8"	10"	12"
A 90°	0.89	2.19	3.82	11.14	17.24
B 180°	0.65	1.55	2.78	8.38	12.00
C 45°	0.48	1.19	2.12	6.02	9.32
D 22-1/2°	0.25	0.60	1.06	3.08	4.74
E 11-1/4°	0.13	0.30	0.54	1.54	2.38

NOTES:
1. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL, WHERE TRENCH WALL HAS BEEN DISTURBED, EXCAVATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL. NO JOINTS SHALL BE COVERED WITH CONCRETE.
2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE SUBSTITUTED FOR END BLOCKINGS.
5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.

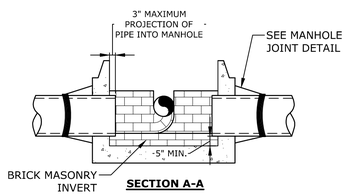
THRUST BLOCKING DETAIL
NO SCALE



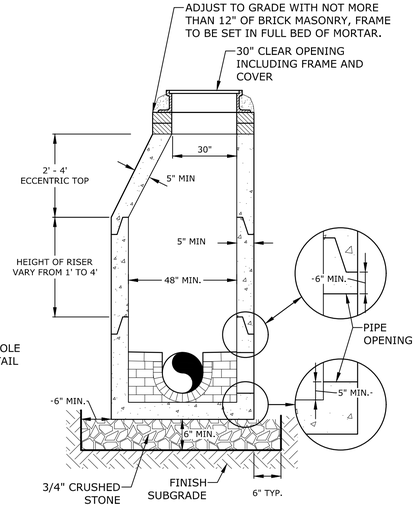
SECTION B-B



PLAN



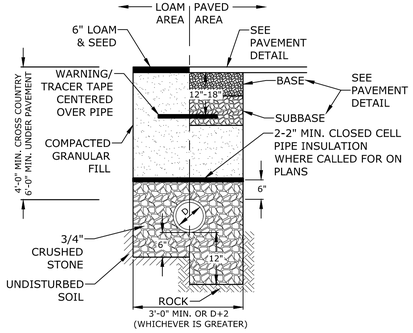
SECTION A-A



TYPICAL SECTION

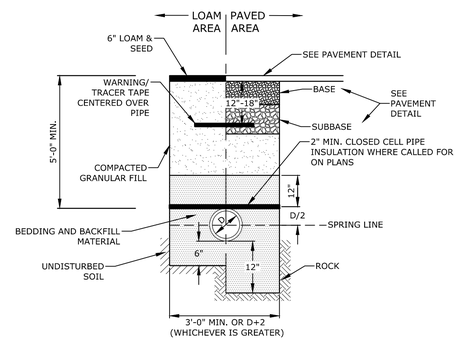
NOTES:
1. INVERT AND SHELF TO BE PLACED AFTER EACH LEAKAGE TEST.
2. CARE SHALL BE TAKEN TO INSURE THAT THE BRICK INVERT IS A SMOOTH CONTINUATION OF THE SEWER INVERT.
3. INVERT BRICKS SHALL BE LAID ON EDGE.
4. TWO (2) COATS OF BITUMINOUS WATERPROOF COATING SHALL BE APPLIED TO ENTIRE EXTERIOR OF MANHOLE.
5. FRAMES AND COVERS: MANHOLE FRAMES AND COVERS WITHIN CITY RIGHT OF WAY SHALL BE CITY STANDARD HINGE COVERS MANUFACTURED BY EJ. FRAMES AND COVERS WILL BE PURCHASED FROM THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS. ALL OTHER MANHOLE FRAMES AND COVERS SHALL BE OF HEAVY DUTY DESIGN AND PROVIDE A 30-INCH CLEAR OPENING. A 3-INCH (MINIMUM HEIGHT) WORD "SEWER" SHALL BE PLAINLY CAST INTO THE CENTER OF EACH COVER.
6. HORIZONTAL JOINTS SHALL BE SEALED FOR WATER TIGHTNESS USING A DOUBLE ROW OF ELASTOMERIC OR MASTIC-LIKE SEALANT.
7. BARREL AND CONE SECTIONS SHALL BE PRECAST REINFORCED CONCRETE DESIGNED FOR H20 LOADING, AND CONFORMING TO ASTM C478-06.

SEWER MANHOLE
NO SCALE



NOTE:
1. CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK. CRUSHED STONE SHALL ALSO COMPLETELY ENCASE THE PIPE AND COVER THE PIPE TO A GRADE 6" OVER THE TOP OF THE PIPE FOR THE ENTIRE WIDTH OF THE TRENCH.
2. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

SEWER SERVICE TRENCH
NO SCALE



SAND BLANKET	
SIEVE SIZE	% PASSING
1/2"	100
#200	15 MAX

GRANULAR FILL (GRAVEL)	
SIEVE SIZE	% PASSING
3"	95-100
#4	25-70

AASHTO #67 STONE (#4 to 3/4")	
SIEVE SIZE	% PASSING
1"	100
3/4"	90-100
3/8"	20-55
#4	0-10
#8	0-5

NOTE:
1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES AND THE CITY OF PORTSMOUTH.

WATER TRENCH
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – BRADLEE MEZQUITA No. 08630 LICENSED PROFESSIONAL ENGINEER – 11/22/21

STATE OF NEW HAMPSHIRE – PATRICK CRIMMINS No. 12378 LICENSED PROFESSIONAL ENGINEER
11/22/21

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
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PROJECT NO:	T-5047-001
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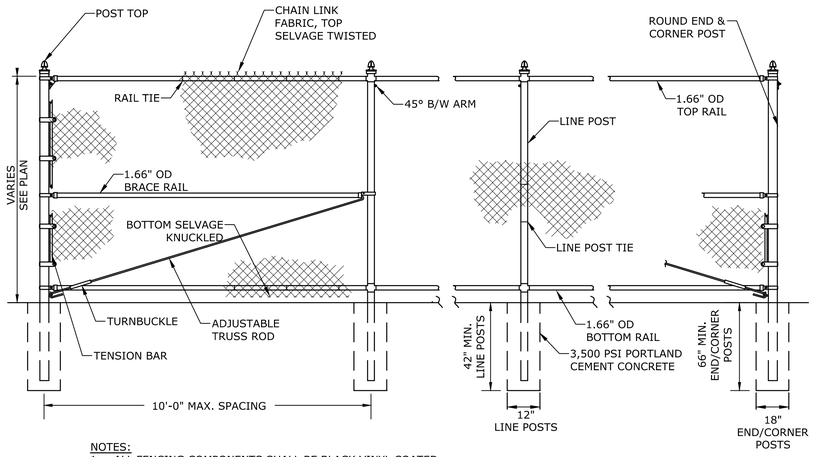
FILE:	T5047-001-C-DTLS.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

DETAILS

SCALE: AS SHOWN

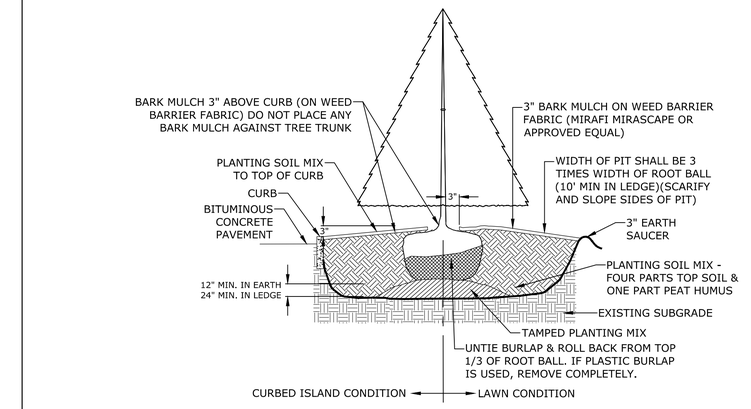
C-506

Last Saved: 11/22/2021
Plotted On: Nov 22, 2021 - 8:26am By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings, Figures\AutoCAD\Sheet\T5047-001-C-DTLS.dwg



NOTES:
1. ALL FENCING COMPONENTS SHALL BE BLACK VINYL COATED.
2. CHAIN LINK FABRIC SHALL BE MADE OF 9 GAUGE STEEL WIRE, 1" MESH SIZE, AND HOT DIPPED GALVANIZED PRIOR TO WEAVING. ONE EDGE OF THE FABRIC SHALL BE FINISHED WITH A SELVAGE TWIST AND THE OTHER WITH A SELVAGE KNUCKLE.
3. ALL POSTS SHALL BE PLUMB IN ALL DIRECTIONS.
4. LINE & TERMINAL POSTS, BRACE TUBES, TOP RAILS, BOTTOM RAILS, & GATE POSTS SHALL ALL BE SCHEDULE 40 PIPE. REFERENCED DIAMETER IS NOMINAL.
5. GATE FRAME SHALL BE WELDED, USE OF CORNER FITTINGS WILL NOT BE PERMITTED.
6. FOOTING DIMENSIONS ARE PROTOTYPICAL AND NEED TO BE CONFIRMED BY MANUFACTURER FOR CURRENT SITE CONDITIONS.

CHAIN LINK FENCE
NO SCALE

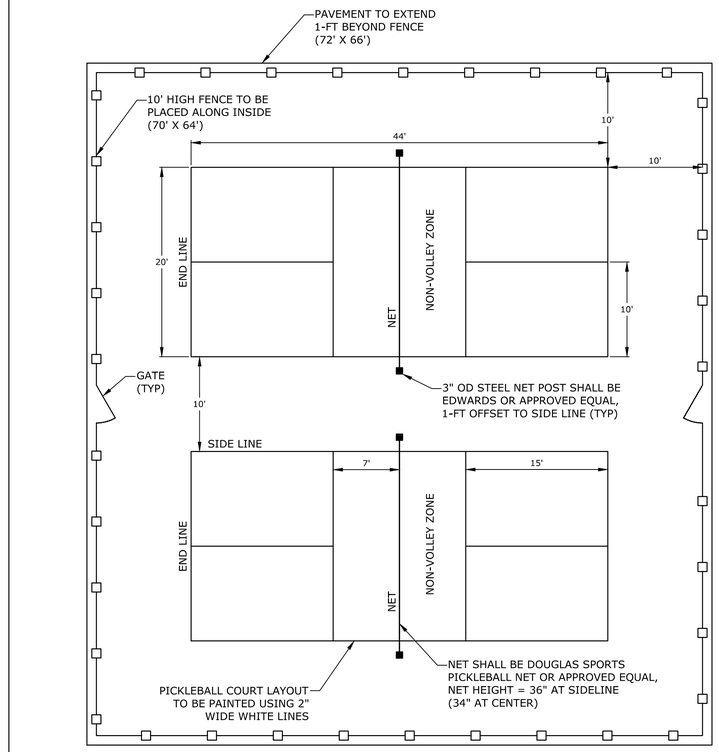


NOTE: PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED IN NURSERY, OR WITHIN 2" ABOVE.

EVERGREEN TREE PLANTING
NO SCALE

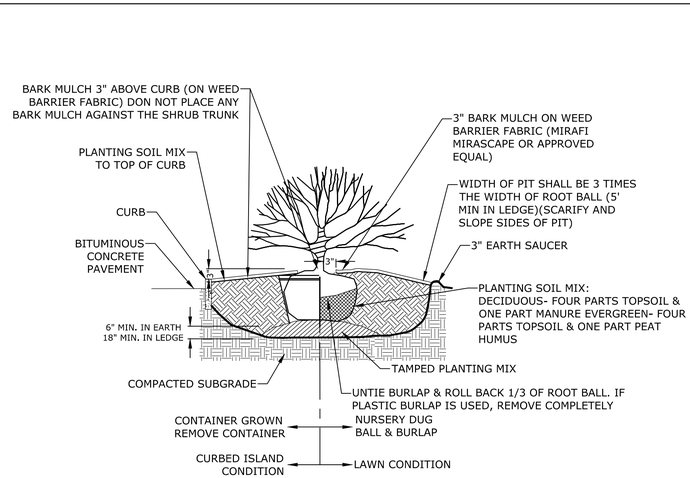
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL.
4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS.
5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES.
6. AT LEAST WEEKLY REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT AREA
NO SCALE



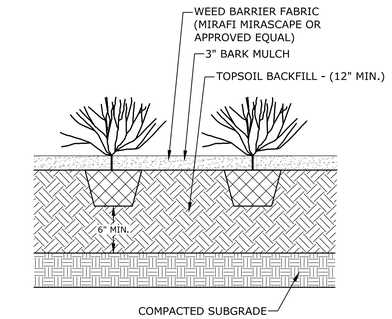
NOTES:
1. COURTS SHALL BE SURFACED AND STRIPED WITH PREMIER SPORTS SURFACE MANUFACTURED BY CALIFORNIA SPORTS SURFACES.
2. COURT SURFACE SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

PICKLEBALL COURT TYPICAL LAYOUT
NO SCALE



NOTE: PLANT AT SAME DEPTH AS PREVIOUSLY PLANTED, OR WITHIN 2" ABOVE.

SHRUB PLANTING
NO SCALE



PERENNIAL PLANTING
NO SCALE

Tighe&Bond

STATE OF NEW HAMPSHIRE – PROFESSIONAL ENGINEER – BRADLEE MEZQUITA No. 08630 LICENSED
11/22/21

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DETAILS

SCALE: AS SHOWN

C-507

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Plotted On: Nov 22, 2021 - 8:26am By: NAHansen
Tighe & Bond: J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings, Figures\AutoCAD\Sheet\T5047-001-C-DTLS.dwg

1 NORTH ELEVATION
3/32" = 1'-0"

2 SOUTH ELEVATION
3/32" = 1'-0"

ARCHITECT
EMBARC
580 HARRISON AVE, SUITE 2W
BOSTON, MA 02118
O: 617.765.8000
www.embarcdesign.com

OWNER

TORRINGTON PROPERTIES, INC

CONSULTANTS

2454 LAFAYETTE ROAD
PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE

DRAWING INFORMATION

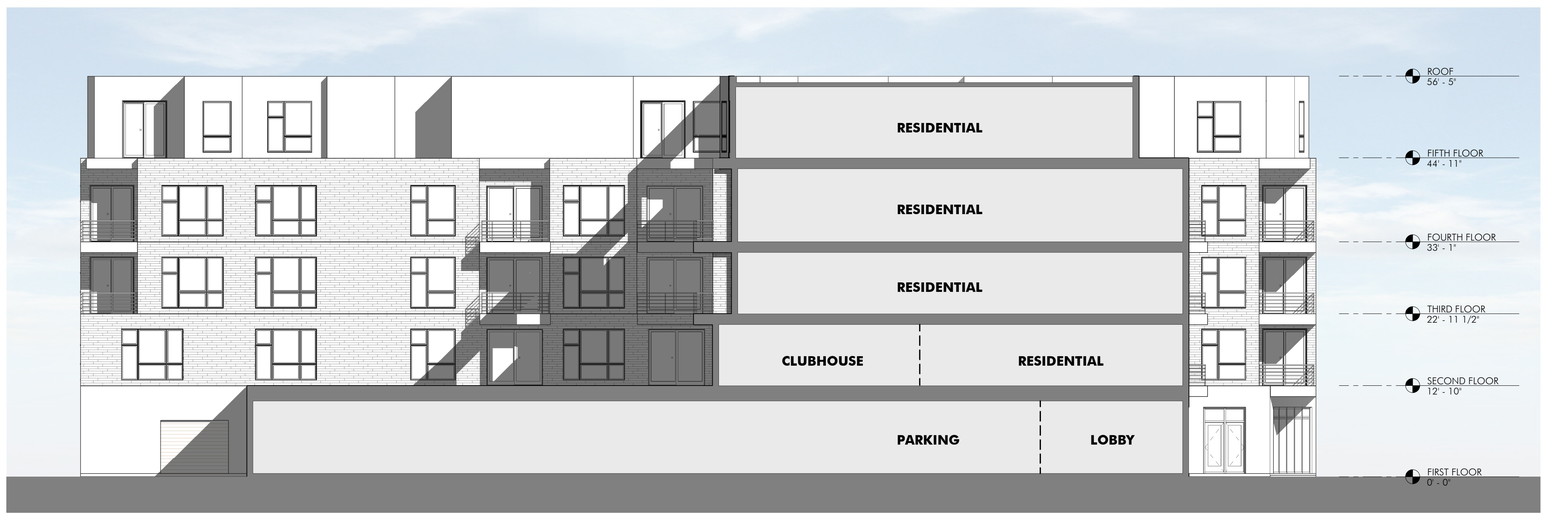
ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	3/32" = 1'-0"

DRAWING TITLE
NORTH/SOUTH ELEVATION

DRAWING NUMBER
A201

C:\Local Revit\21035_Constitution Ave_091321_CLifted.SLH.rvt
11/22/2021 3:58:50 PM

1 WEST ELEVATION
3/32" = 1'-0"



2 WEST SECTION
3/32" = 1'-0"

ARCHITECT
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580 HARRISON AVE, SUITE 2W
BOSTON, MA 02118
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OWNER

TORRINGTON PROPERTIES, INC

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PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE

DRAWING INFORMATION

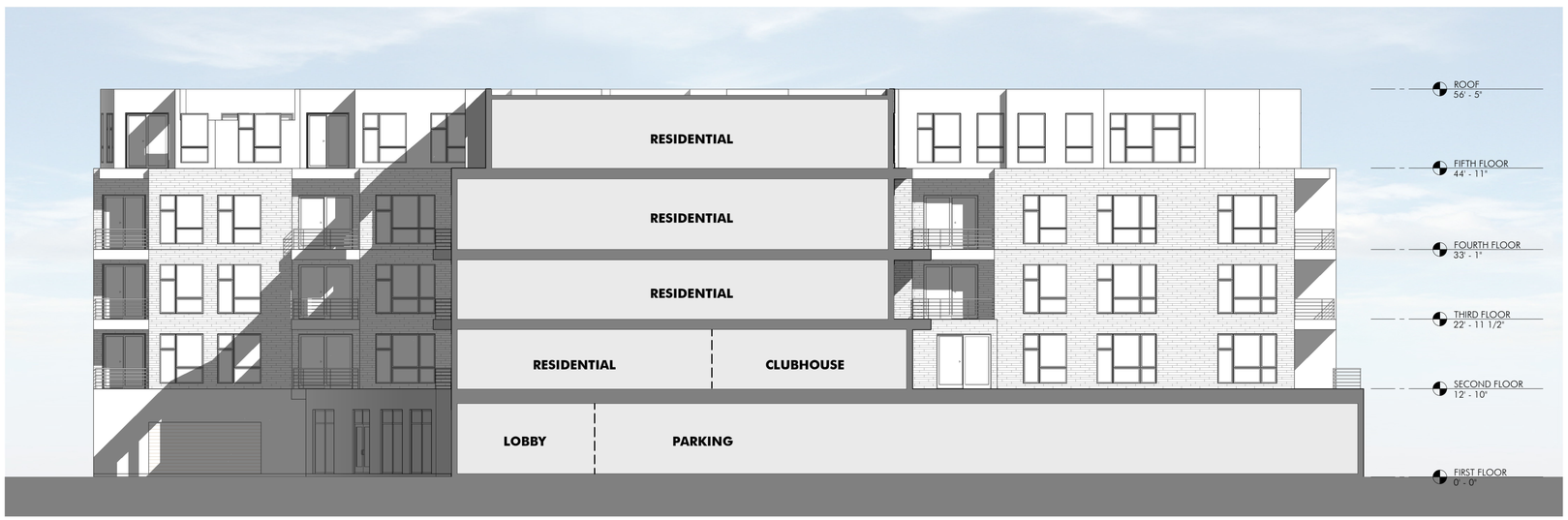
ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	3/32" = 1'-0"

DRAWING TITLE
WEST ELEVATION

DRAWING NUMBER
A202

C:\Local Revit\21035_Constitution Ave_091321_CLAdeLSLH.rvt
11/22/2021 3:59:06 PM

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



2 EAST SECTION
3/32" = 1'-0"

ARCHITECT
EMBARC
580 HARRISON AVE, SUITE 2W
BOSTON, MA 02118
O: 617.765.8000
www.embarcdesign.com

OWNER

TORRINGTON PROPERTIES, INC

CONSULTANTS

2454 LAFAYETTE ROAD
PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE

DRAWING INFORMATION

ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	3/32" = 1'-0"

DRAWING TITLE
EAST ELEVATION

DRAWING NUMBER
A203

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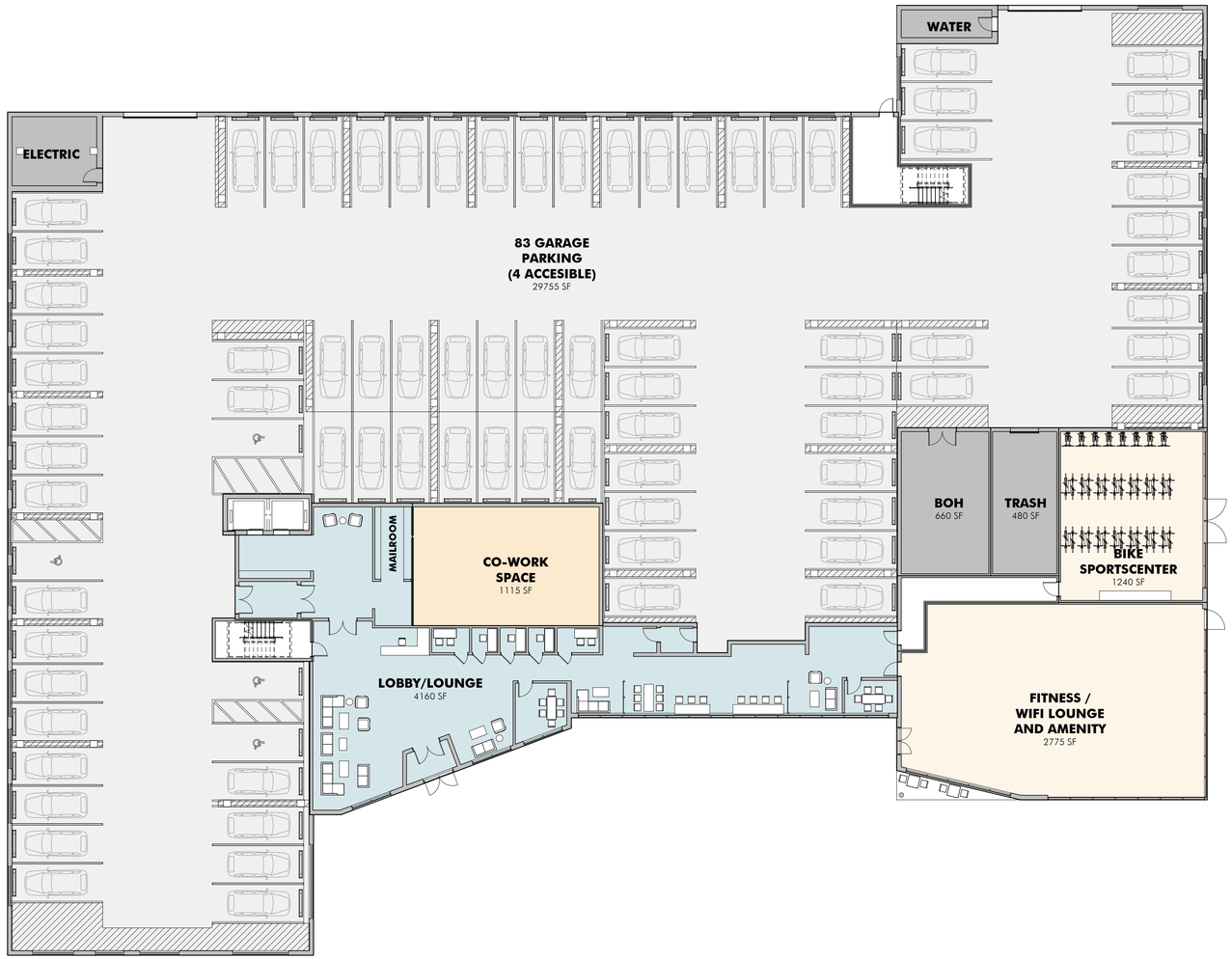

ARCHITECT
EMBARC
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BOSTON, MA 02118
O: 617.765.8000
www.embarcdesign.com

OWNER

TORRINGTON PROPERTIES, INC

CONSULTANTS

2454 LAFAYETTE ROAD
PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE

DRAWING INFORMATION

ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	1/16" = 1'-0"

DRAWING TITLE
1ST FLOOR

DRAWING NUMBER
A601

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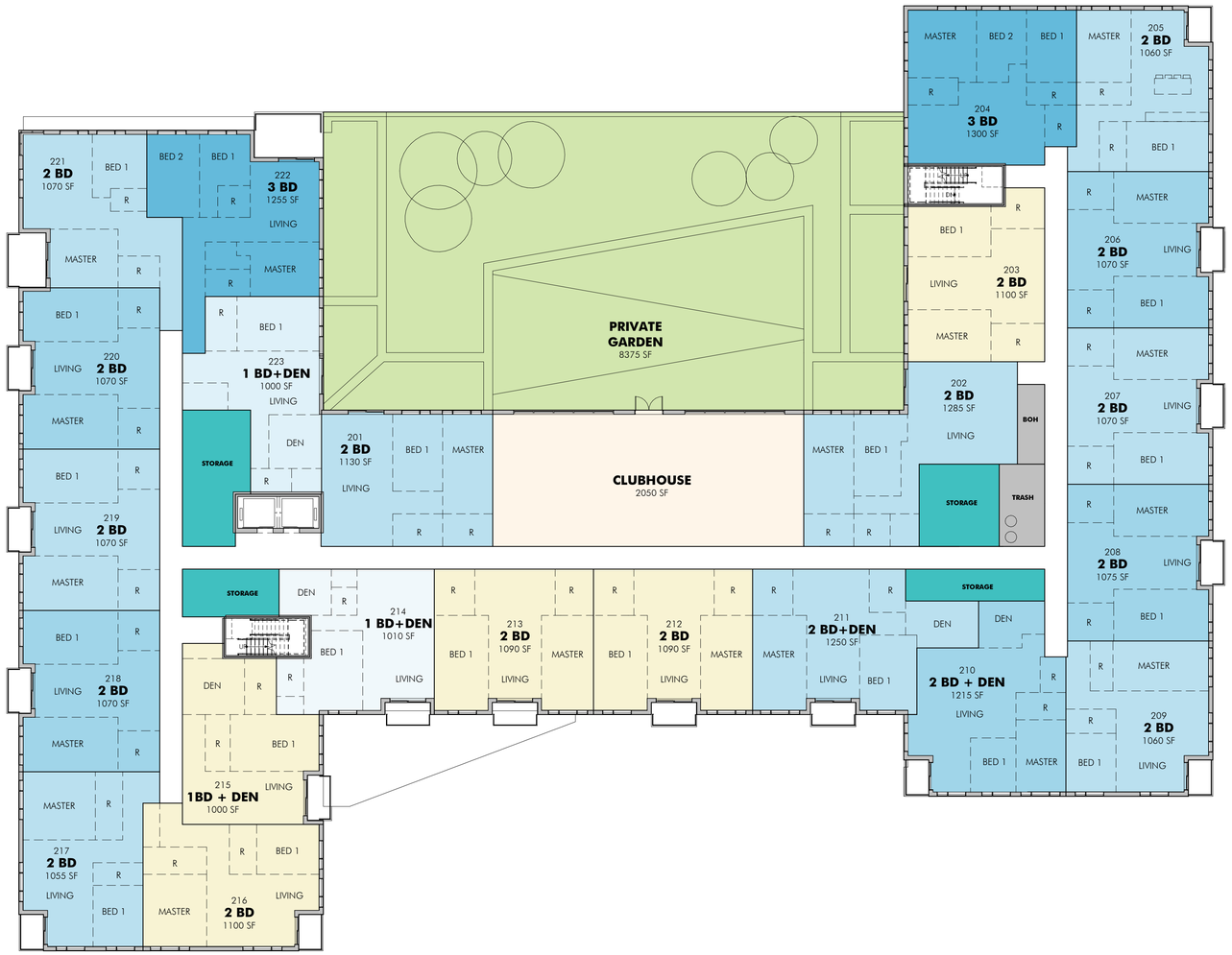

WORKFORCE HOUSING	
UNITS	AREA S.F.
UNIT 203	1,110
UNIT 212	1,090
UNIT 213	1,090
UNIT 215	1,000
UNIT 216	1,100

ARCHITECT
EMBARC
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BOSTON, MA 02118
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www.embarcdesign.com

OWNER

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CONSULTANTS

2454 LAFAYETTE ROAD
PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE
	TRC SUBMISSION	11/22/2021

DRAWING INFORMATION

ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	As indicated

DRAWING TITLE
2ND FLOOR

DRAWING NUMBER
A602

WORKFORCE HOUSING	
UNITS	AREA S.F.
UNIT 304	1,010
UNIT 306	1,260
UNIT 312	1,215
UNIT 315	1,090
UNIT 318	1,110
UNIT 404	1,010
UNIT 412	1,215
UNIT 415	1,090
UNIT 418	1,110

ARCHITECT
EMBARC
580 HARRISON AVE, SUITE 2W
BOSTON, MA 02118
O: 617.765.8000
www.embarcdesign.com

OWNER

TORRINGTON PROPERTIES, INC

CONSULTANTS

2454 LAFAYETTE ROAD
PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE
	TRC SUBMISSION	11/22/2021

DRAWING INFORMATION

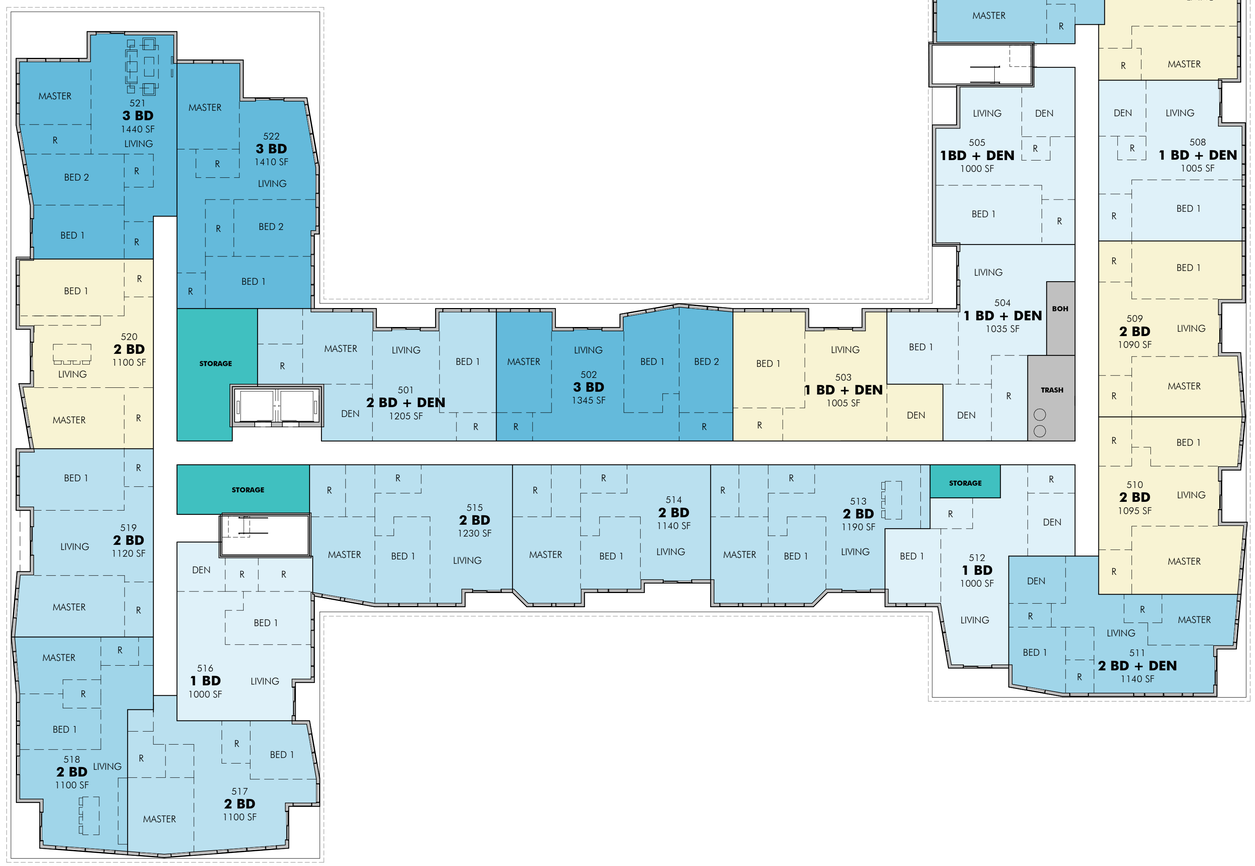
ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	As indicated

DRAWING TITLE

3RD TO 4TH FLOOR

DRAWING NUMBER

A603



WORKFORCE HOUSING	
UNITS	AREA S.F.
UNIT 503	1,005
UNIT 507	1,090
UNIT 509	1,090
UNIT 510	1,090
UNIT 520	1,100

1 BD+DEN	4 UNITS
2 BD	12 UNITS
2 BD+DEN	2 UNITS
3 BD	1 UNIT
95 UNITS TOTAL	19 UNITS

ARCHITECT
EMBARC
580 HARRISON AVE, SUITE 2W
BOSTON, MA 02118
O: 617.765.8000
www.embarcdesign.com

OWNER

TORRINGTON PROPERTIES, INC

CONSULTANTS

2454 LAFAYETTE ROAD
PORTSMOUTH, NH

TAC SUBMISSION

REVISIONS

MARK	ISSUE	DATE
	TRC SUBMISSION	11/22/2021

DRAWING INFORMATION

ISSUE:	TAC SUBMISSION
DATE:	10/18/21
PROJECT #:	21035
SCALE:	As indicated

DRAWING TITLE
5TH FLOOR

DRAWING NUMBER
A604

Portsmouth Green - City of Portsmouth TAC COMMENT RESPONSE Date: November 22, 2021

City of Portsmouth TAC, November 2, 2021:			
	TAC Comment	**Applicant Response**	**Sheet**
TAC Comments from 11/1 Correspondence:			
1	The City requests a multi-use path on Constitution from back entrance of development to Banfield Road.	The applicant has agreed to design and construct a multi-use path on Constitution Ave from back entrance of development to 199 Constitution Ave as part of this project. The applicant has also agreed to prepare, and provide to the City, design plans for the remainder of the multi-use path from 199 Constitution Ave to Banfield Road subsequent to Planning Board approval.	C-201, C-202 & C-203
2	The dog park should include a detail showing the interior gates, surface material and drainage system.	Additional details have been added to the dog park showing the interior gates, surface material, and detailed grading.	C-102.1, C-103 & L-100
3	Given the location, the pickle-ball courts should include night court lighting.	Dedicated light for the pickleball courts has been added to the photometrics plan.	C-105
4	The roundabout details should match the lines and dimensions shown on the site plan.	Additional dimensions have been added to the site plan to clarify the dimensions of the roundabout and to conform with the detail.	C-102.1
5	The side entrance to the proposed bicycle center should be modified to be a stronger design element thereby activating this elevation as a primary façade of the building.	The side entrance to the proposed bicycle center has been revised to further activate the façade of the building.	Building Renderings
6	The proposed community spaces should be shown on a plan. Please provide a matrix showing type, area, and location.	The Community Space Exhibit has been revised to include separate community space types and square footages of each type.	Community Space Exhibit
7	The proposed workforce housing units should be identified (using a table and note) on the plan by the location, size, and number of bedrooms.	The proposed workforce housing units have been identified on the plan by the location, size, and number of bedrooms.	A-602, A-603 & A-604

T5047-001
October 18, 2021

Mr. Peter Britz, Interim Planning Director
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Conditional Use Permit Request**
2454 Lafayette Road (Portsmouth Green)

Dear Peter:

On behalf of 2422 Lafayette Road Associates, LLC (owner), and Torrington Properties Inc (applicant), we are pleased to submit the following information relative to a request for a Conditional Use Permit (CUP) to provide less than the minimum number of off-street parking spaces for the above-referenced project:

- One (1) copy of the Parking Demand Analysis, dated October 18, 2021;
- One (1) check in the amount of $200 for the CUP application fee

Portsmouth Green, formerly Southgate Plaza, (Project) received a CUP for parking on August 20, 2019 for a new tenant, PINZ, to occupy a portion of the vacant retail space that was formerly Big Lots. A current proposal associated with the Project is related to another change of use. The proposed change of use consists of the demolition of the former Cinemagic movie theater and the construction of a 5-story, 95-unit multifamily condominium building located in the northern corner of the site. Also, a previously approved 5,000 SF restaurant pad that had been proposed and approved for this area will not be constructed.

Due to the change in use for the PINZ, the parking calculations needed to be updated on the Site Plan based on the current Zoning Ordinance. The minimum parking required for the 2016 site approval was based on a previous version of the Zoning Ordinance that included a minimum parking requirement for a Shopping Center Use. While Shopping Center is still a defined Use in the current Zoning Ordinance, the Ordinance no longer has a minimum parking requirement listed for a Shopping Center Use. As such, the minimum parking requirement must be calculated based on each individual commercial use on the property. With this approach the overall site would no longer meet the minimum off-street parking requirement. Therefore, a CUP for parking was applied for and granted on August 20, 2019. With this proposed change of use consisting of the demolition of the movie theater and the construction of a 5-story, 95-unit multifamily condominium building the parking demand analysis included in the existing CUP needs to be updated and the CUP approval amended.

Pursuant Section 10.1112.14, the applicant is respectfully requesting that a CUP be granted by the Planning Board to allow the Project to provide less than the minimum off-street parking spaces required by Section 10.1112.30 or Section 10.1112.61:

- Section 10.1112.141 – The enclosed Parking Demand Analysis has been provided as required by this section. The Parking Demand Analysis demonstrates the off-street parking provided by the Project is sufficient for its Uses.

- Section 10.1112.142 – This section indicates an application for a CUP shall identify permanent evidence-based measures to reduce parking demand. As described in the

enclosed Parking Demand Analysis, the Project provides measures that promotes alternative modes of transportation such as walking, bicycling, and public transportation.

We trust the enclosed information is sufficient to support a Request for a CUP. As per Section 10.1112.141 the City's Technical Advisory Committee (TAC) shall review the Parking Demand Analysis prior to submission to the Planning Board. We respectfully request to be placed on the TAC meeting agenda for November 2, 2021. If you have any questions, please feel free to contact me by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,

TIGHE & BOND, INC.

Patrick M. Crimmins, PE
Senior Project Manager

Neil A. Hansen, PE
Project Engineer

Copy: 2422 Lafayette Road Associates, LLC (via e-mail)
Torrington Properties Inc (via e-mail)
Gregg Mikolaities, August Consulting, PLLC (via e-mail)
John Bosen, Bosen & Associates, PLLC (via e-mail)

Portsmouth Green – Parking Demand Analysis

TO: City of Portsmouth Planning Board

FROM: Patrick M. Crimmins, PE
Neil A. Hansen, PE

COPY: Torrington Properties, Inc.

DATE: October 18, 2021

Tighe & Bond, Inc. (Tighe & Bond) has prepared this Parking Demand Analysis to summarize the parking demand related to Portsmouth Green (the "Project"), a redevelopment of the former Southgate Plaza, located at 2454 Lafayette Road (Route 1) in Portsmouth, New Hampshire.

Project Background

The Project previously received Site Plan Review approval in April 2016 for the construction of the Veridian Residences, a 4-story 95-unit multi-family residential building in the rear of the site, and two (2) new commercial pads in the existing Portsmouth Green parking area. The Veridian building was completed in Fall 2017. In December 2018, Amended Site Plan approval was granted by the Planning Board for amendments related to the front commercial pads. Construction for the front pads was completed in 2020. The most recent land use approval associated with the Project was the conversion of the former Big Lots space, to a PINZ indoor entertainment use. That change in use required two (2) Special Exceptions which were granted by the Zoning Board of Adjustment on June 18, 2019 and a CUP to provide less than the minimum number of off-street parking spaces which was approved on August 20, 2019. PINZ was opened in Summer 2020.

Parking Demand Calculations for Prior Approved Site Plan

Before the change of use for PINZ, the Project was approved under a prior Zoning Ordinance. Minimum parking requirements for the prior approval were calculated based on two uses, Residential and Shopping Center. The project exceeded the minimum off-street parking requirements for the Residential and Shopping Center Uses in the prior Gateway Planned Development (GPD) regulations under which the Project was approved.

Due to the change in use for PINZ, the parking calculations needed to be updated on the Site Plan based on the current Zoning Ordinance. At the time of the change of use the Shopping Center Use no longer had a minimum parking requirement listed in the Table of Off-Street Parking Requirements for Non-Residential Uses in Section 10.1112.32 of the current Zoning Ordinance, so the minimum parking requirement was to be calculated based on each individual commercial use on the property. With this approach the overall site no longer met the minimum parking space requirement based on Section 10.1112 of the current Zoning Ordinance and therefore applied for and was granted a Conditional Use Permit (CUP) which is enclosed as an attachment.

1.1 Parking Demand Calculations for Change of Use

The current proposal associated with the Project is related to a change of use. The proposed change of use consists of the demolition of the former Cinemagic movie theater and the construction of a 5-story, 95-unit multifamily condominium building located in the northern corner of the site. Also, the previously approved 5,000 SF restaurant pad proposed for this area will not be constructed. Using the Table of Off-Street Parking Requirements for Non-Residential Uses in Section 10.1112.32 of the current Zoning Ordinance, the overall site would

not meet the minimum parking space requirement based on Section 10.1112 of the current Zoning Ordinance as 1,075 spaces would be required as shown in the enclosed attachment.

To demonstrate that the provided number of off-street parking spaces is sufficient for the overall development, a parking demand analysis was performed utilizing the Institute of Transportation Engineers Parking Generation Manual, 5th Edition (ITE Manual). To estimate peak parking demand for the Project, land use codes described in the ITE Parking Generation Manual were researched and the following Land Use Codes (LUC) we used to perform parking generation calculations:

- **LUC 221: Multi-family Housing Mid-Rise** - ITE description for LUC 221 is a "mid-rise multi-family housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and with between 3 and 10 levels (floors) of residence".

  Based on the ITE description, LUC 221 was used to generate the peak parking demand for a the 4-story and 5-story multi-family buildings with a total of 190 dwelling units.

- **LUC 820: Shopping Center** – ITE description for LUC 820 is "A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands". This description nearly mimics the definition of Shopping Center in the City's Zoning Ordinance.

  The ITE Parking Generation Manual also provides additional data for the Shopping Centers studied for LUC 820 parking generation rates. The additional data indicates "The parking demand database includes data from strip, neighborhood, community, town center, and regional shopping centers. Some of the centers contain non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities". The Project's commercial tenants consist of retail, restaurant, health clubs, and indoor recreation facilities.

  Based on the ITE description and additional data, LUC 820 was used to generate the peak parking demand for the Project's commercial uses.

The following table summarizes the peak parking demand generated by the Project utilizing the ITE Manual:

ITE Parking Generation for Portsmouth Green Development						
ITE Code	**ITE - Use**	**Units**	**Average Parked Cars Mon. - Thur.**	**Average Parked Cars Friday**	**Average Parked Cars Saturday**	**Average Parked Cars Sunday**
820	Shopping Center	139,441 SF	272	364	406	**264**
221	Multifamily Housing (Mid Rise)	190 Dwelling Units	249	N/A	232	**390**
Total Parking Spaces Needed			**654**			
Total Parking Spaces Provided			**795**			

As depicted above the off-street parking provided by the Project exceeds peak parking demand.

Mode Share

The Project was designed under the GPD regulations of the prior Zoning Ordinance. The GPD regulations promoted sustainability by requiring that the Project demonstrate it was LEED Certifiable. As such, the Project has incorporated measures that promote alternative modes of transportation such as walking, bicycling, and public transportation that will further reduce parking demand. The following are examples of mode share incorporated by the Project:

- Bicycle storage facilities – The Project provides facilities for 108 bicycle parking spaces on-site which promotes the use of bicycles as an alternative mode of transportation to/from the Project.
- Multi-use path – The Project constructed a 10-foot wide, 1,500 LF multi-use path along the site's Constitution Avenue and Lafayette Road (Route 1) frontages. The multi-use path promotes the use of bicycles and walking as alternative modes of transportation to/from the Project. The multi-use path ultimately will become part of a larger network of pedestrian and bicycle facilities along Route 1 as part of the future NHDOT Route 1 Corridor Improvement Project. Based on a Public Advisory Committee Meeting conducted by NHDOT on July 11, 2019, the Route 1 Corridor Improvement Project is anticipated to begin design this year with the start of construction occurring in 2025.
- COAST Bus Stop – The Project constructed a new COAST bus stop along Constitution Avenue which includes a new bus shelter and vehicle pull off along the new multi-use path described above. This COAST Bus stop promotes the use of public transportation as an alternative mode of transportation to/from the Project.

Conclusions

Based on parking generation calculations that were performed utilizing the ITE Parking Generation Manual, the peak parking demand of 654 spaces was generated which is less than the 795 off-street parking spaces provided by the Project. The existing CUP was granted for a peak parking demand of 638 spaces and 760 off-street parking spaces provided. This proposal will result in a peak parking demand of 16 additional spaces, with 35 additional spaces being provided. In addition, the Project promotes alternative modes of transportation such as walking, bicycling, and public transportation by incorporating 108 bicycle storage spaces on-site, a 10-foot wide multi-use path along both frontages of Constitution Avenue and Lafayette Road (Route 1) and a COAST bus stop. The integration of these mode share facilities will help further reduce the off-street parking demand for the Project.

Attachments

Parking Generation Data

Current Site Plan with Change of Use

Prior Approved Site Plan

Minimum Parking Requirement per City Zoning Ordinance

Conditional Use Permit for Parking, dated August 20, 2019

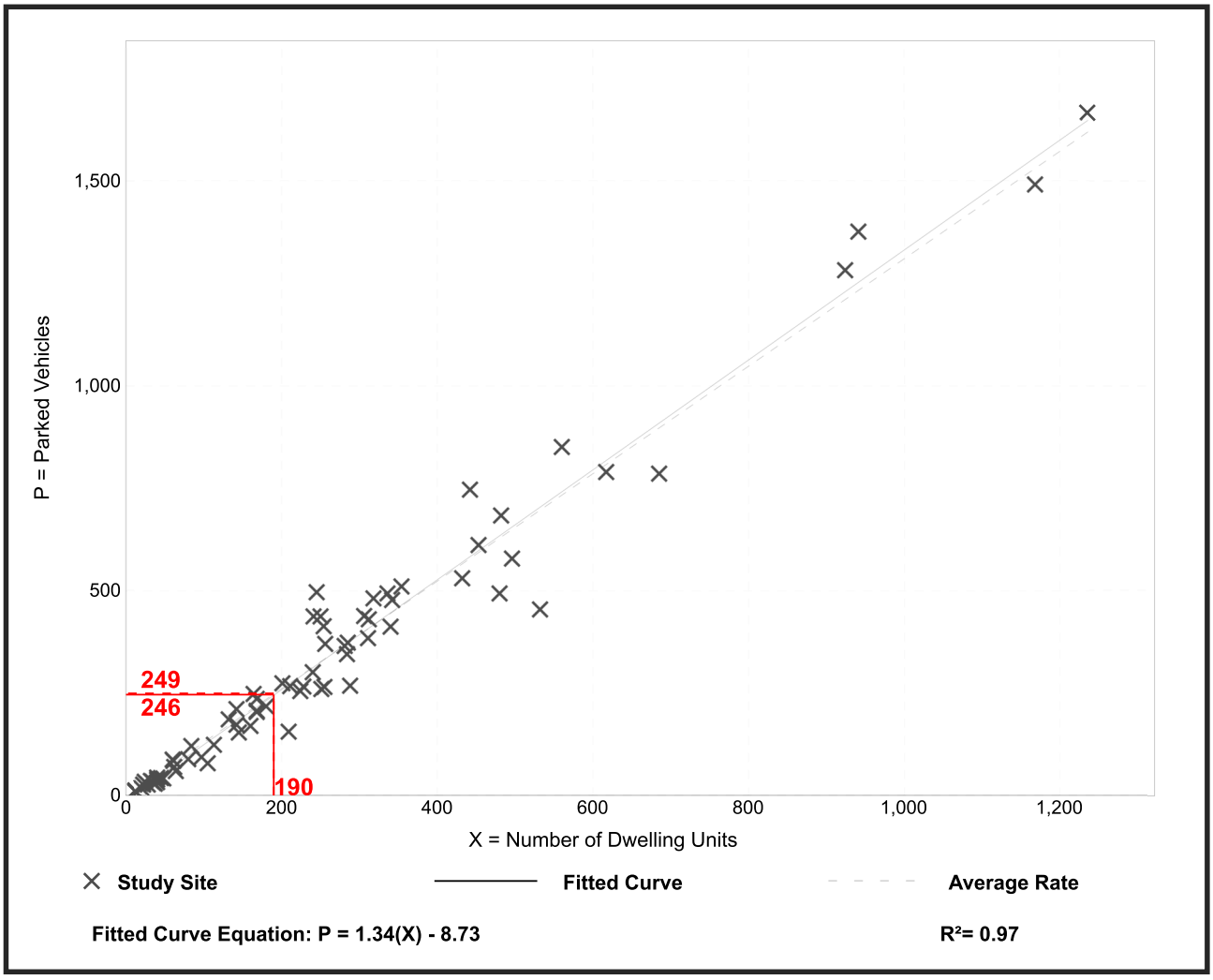
Multifamily Housing (Mid-Rise)
(221)

Peak Period Parking Demand vs: **Dwelling Units**
On a: **Weekday (Monday - Friday)**
Setting/Location: **General Urban/Suburban (no nearby rail transit)**
Peak Period of Parking Demand: **10:00 p.m. - 5:00 a.m.**
Number of Studies: 73
Avg. Num. of Dwelling Units: 261

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.31	0.75 - 2.03	1.13 / 1.47	1.26 - 1.36	0.22 (17%)

Data Plot and Equation



Parking Generation Manual, 5th Edition ● Institute of Transportation Engineers

Multifamily Housing (Mid-Rise)
(221)

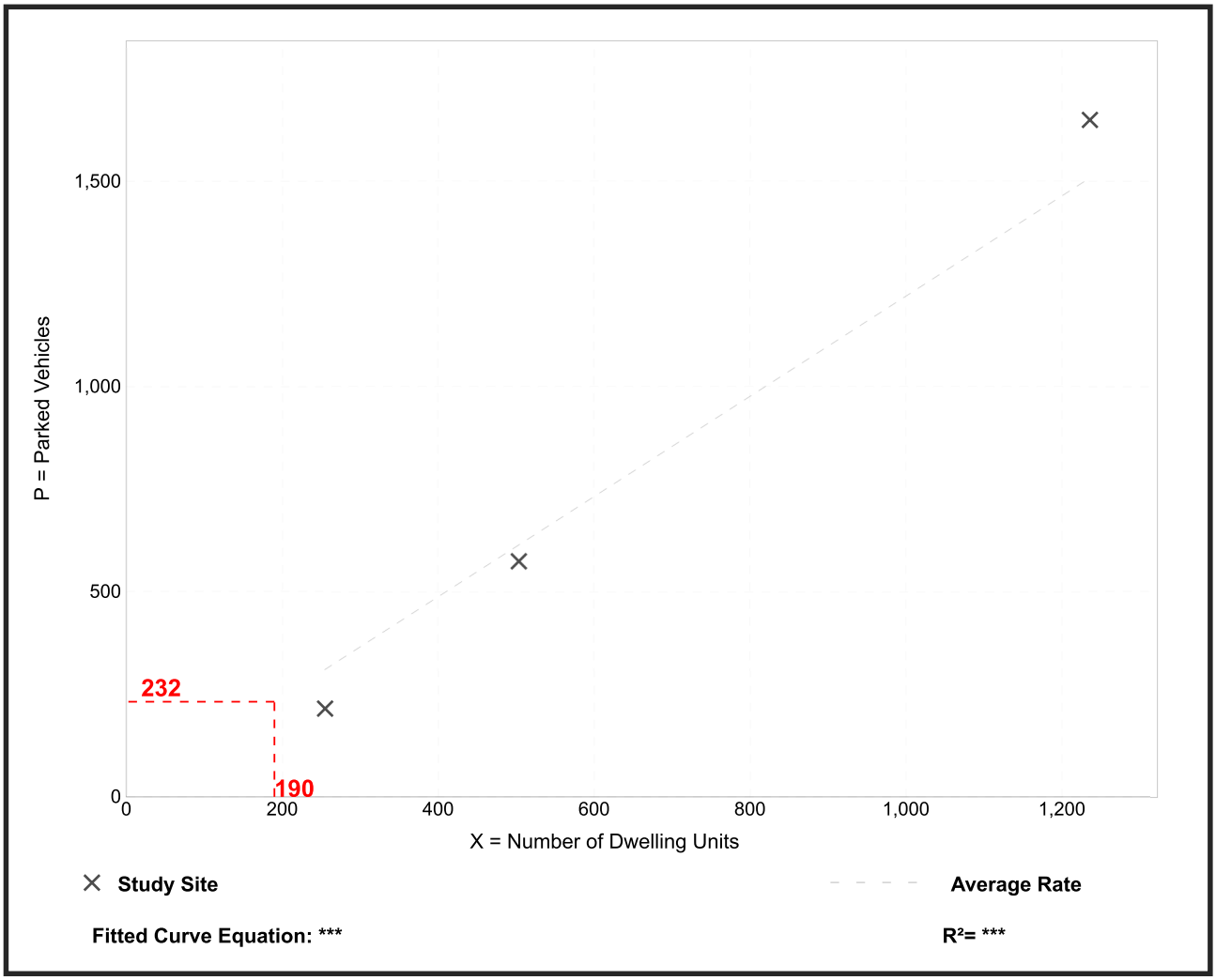
Peak Period Parking Demand vs: **Dwelling Units**
On a: **Saturday**
Setting/Location: **General Urban/Suburban (no nearby rail transit)**
Peak Period of Parking Demand: **11:00 p.m. - 7:00 a.m.**
Number of Studies: 3
Avg. Num. of Dwelling Units: 665

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.22	0.84 - 1.33	0.94 / 1.33	***	0.20 (16%)

Data Plot and Equation

Caution – Small Sample Size



Parking Generation Manual, 5th Edition ● Institute of Transportation Engineers

Multifamily Housing (Mid-Rise)
(221)

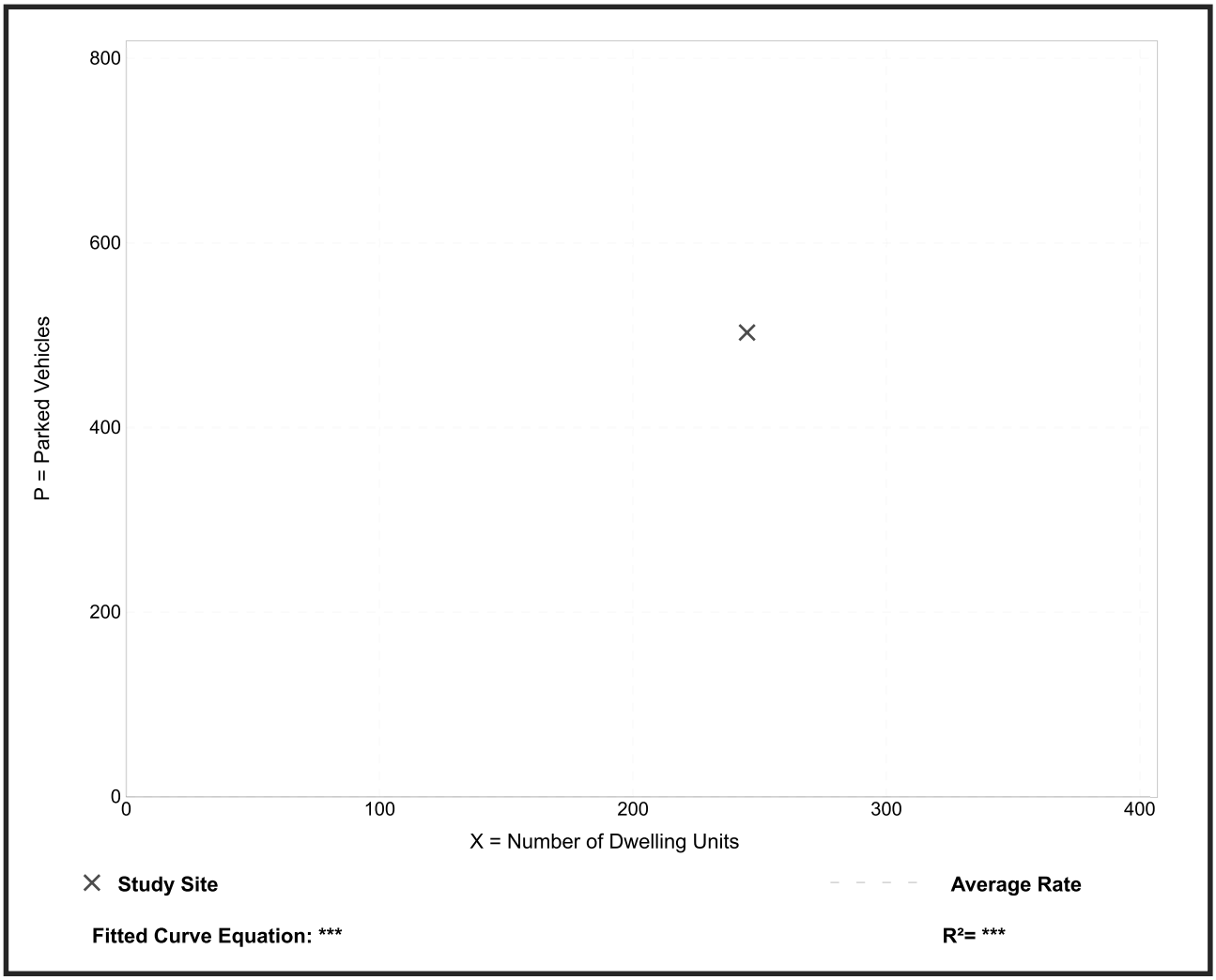
Peak Period Parking Demand vs: **Dwelling Units**
On a: **Sunday**
Setting/Location: **General Urban/Suburban (no nearby rail transit)**
Peak Period of Parking Demand: **11:00 p.m. - 7:00 a.m.**
Number of Studies: 1
Avg. Num. of Dwelling Units: 245

Peak Period Parking Demand per Dwelling Unit

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.05	2.05 - 2.05	*** / ***	***	***

Data Plot and Equation

Caution – Small Sample Size



Parking Generation Manual, 5th Edition ● Institute of Transportation Engineers

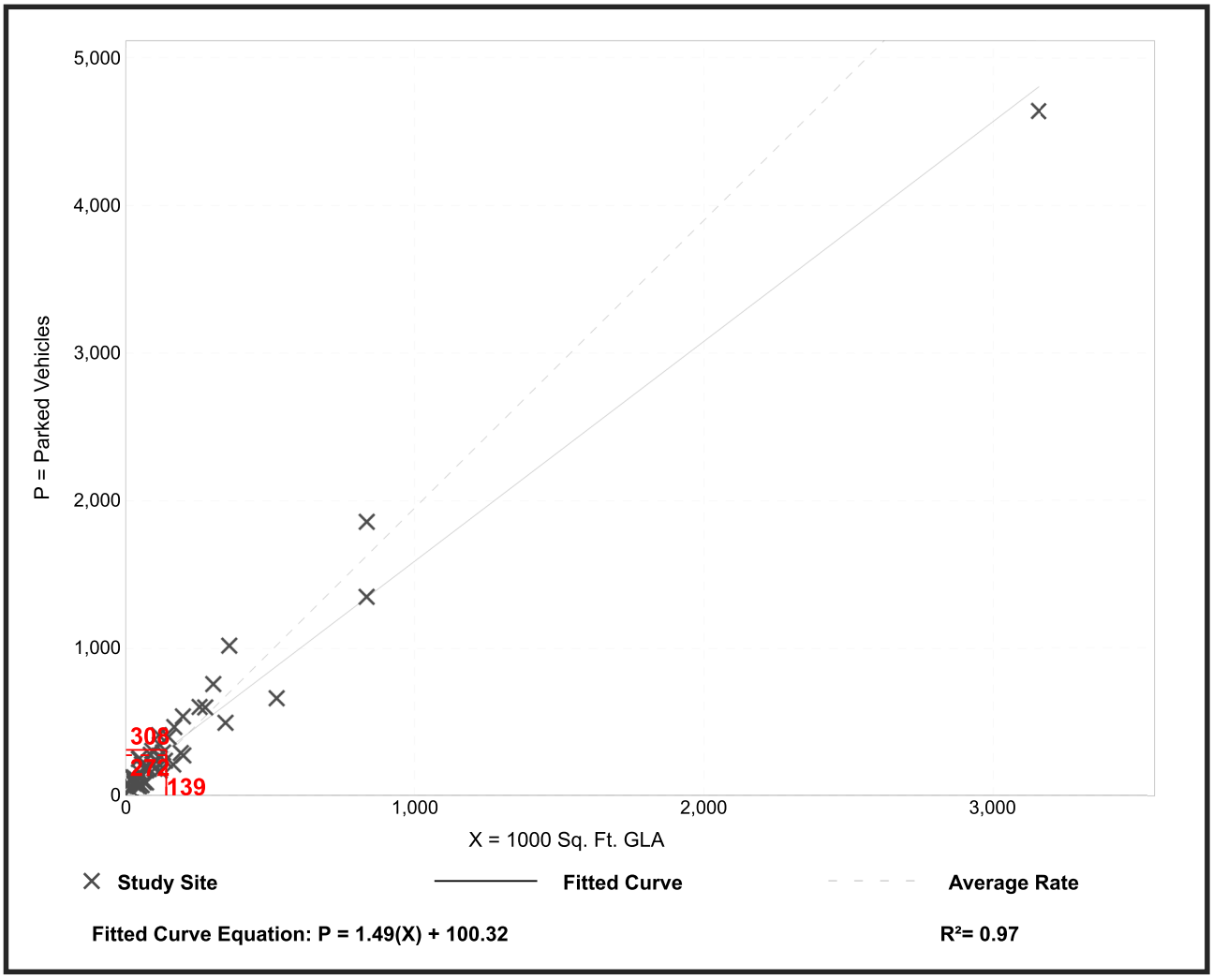
Shopping Center - Non-December
(820)

Peak Period Parking Demand vs: **1000 Sq. Ft. GLA**
On a: **Weekday (Monday - Thursday)**
Setting/Location: **General Urban/Suburban**
Peak Period of Parking Demand: **12:00 - 6:00 p.m.**
Number of Studies: 46
Avg. 1000 Sq. Ft. GLA: 218

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.95	1.27 - 7.98	1.99 / 3.68	1.73 - 2.17	0.75 (38%)

Data Plot and Equation



Parking Generation Manual, 5th Edition ● Institute of Transportation Engineers

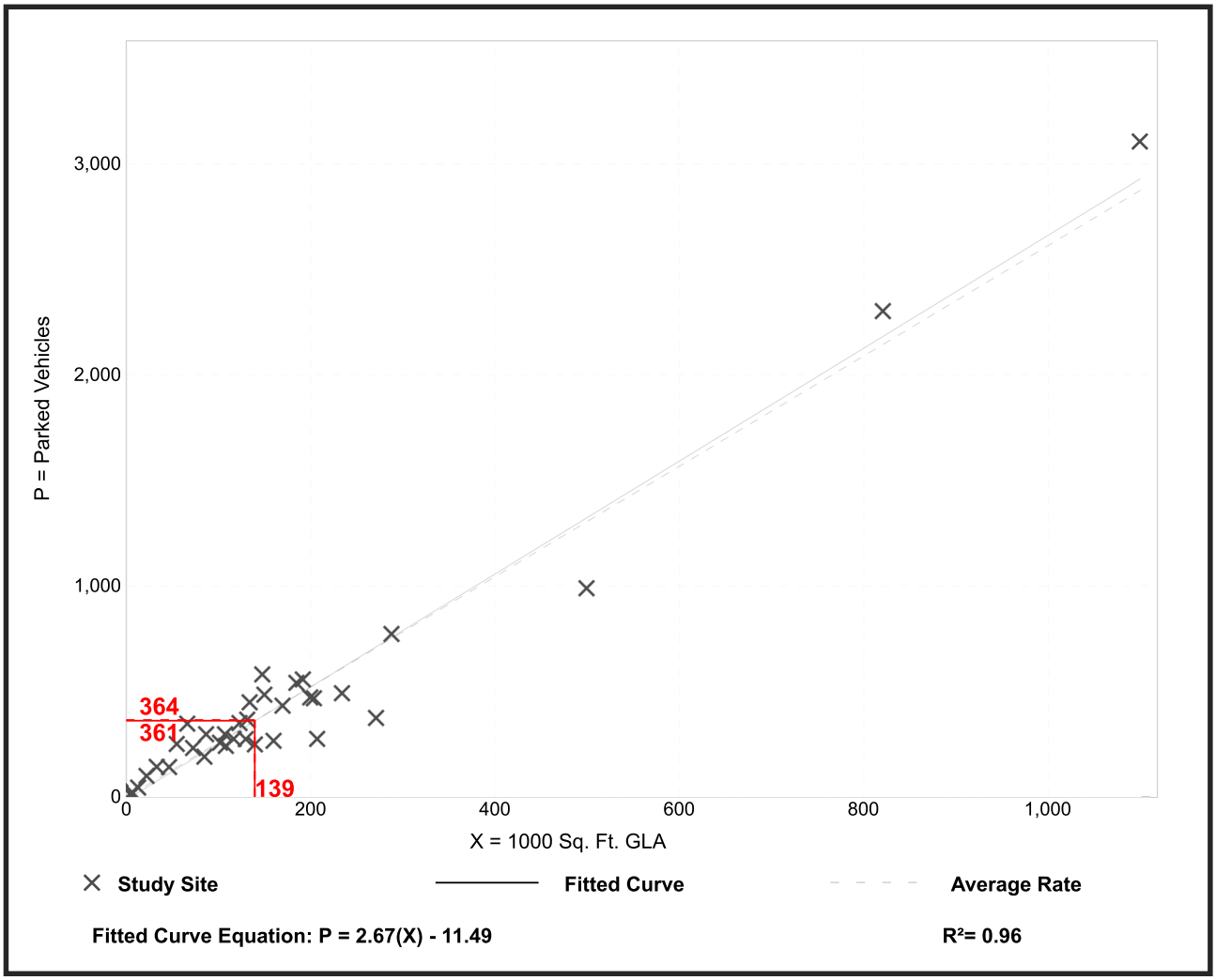
Shopping Center - Non-December
(820)

Peak Period Parking Demand vs: **1000 Sq. Ft. GLA**
On a: **Friday**
Setting/Location: **General Urban/Suburban**
Peak Period of Parking Demand: **12:00 - 6:00 p.m.**
Number of Studies: 37
Avg. 1000 Sq. Ft. GLA: 174

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.61	1.34 - 5.25	2.37 / 3.78	2.39 - 2.83	0.67 (26%)

Data Plot and Equation



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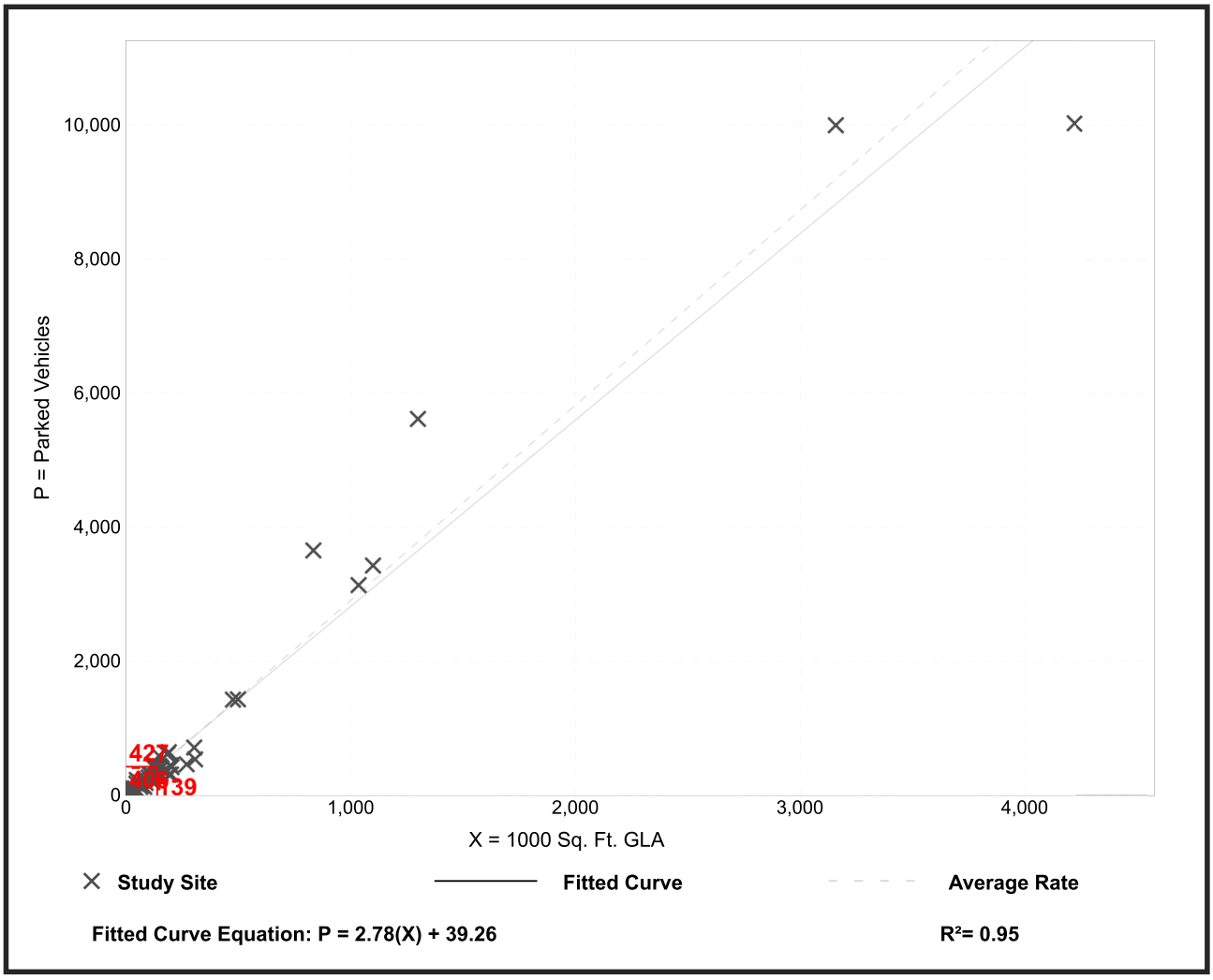
Shopping Center - Non-December
(820)

Peak Period Parking Demand vs: **1000 Sq. Ft. GLA**
On a: **Saturday**
Setting/Location: **General Urban/Suburban**
Peak Period of Parking Demand: **11:00 a.m. - 5:00 p.m.**
Number of Studies: 58
Avg. 1000 Sq. Ft. GLA: 313

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
2.91	1.15 - 4.72	2.27 / 3.74	2.72 - 3.10	0.74 (25%)

Data Plot and Equation



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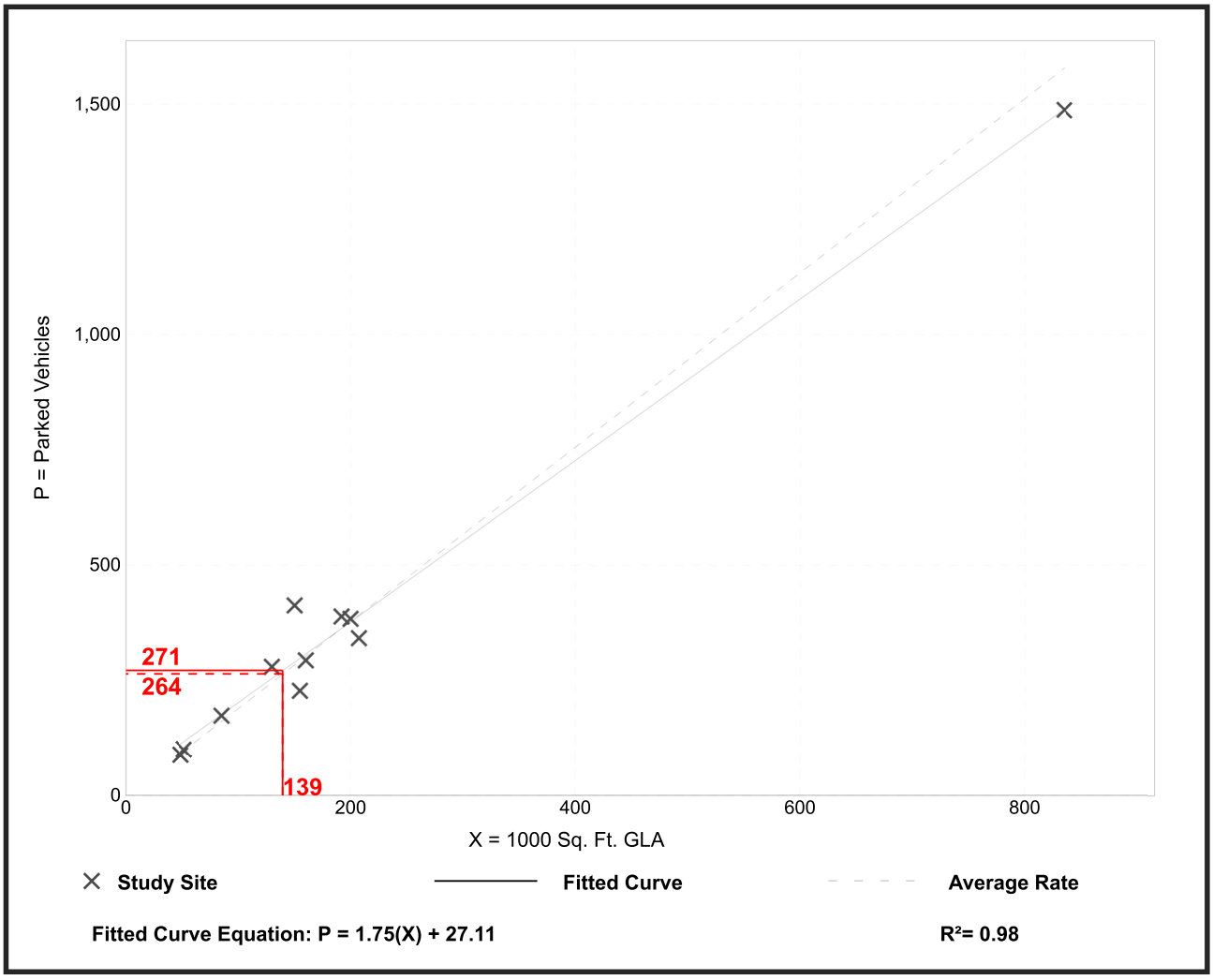
Shopping Center - Non-December
(820)

Peak Period Parking Demand vs: **1000 Sq. Ft. GLA**
On a: **Sunday**
Setting/Location: **General Urban/Suburban**
Peak Period of Parking Demand: **12:00 - 3:00 p.m.**
Number of Studies: 11
Avg. 1000 Sq. Ft. GLA: 201

Peak Period Parking Demand per 1000 Sq. Ft. GLA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.89	1.47 - 2.75	1.81 / 2.27	***	0.30 (16%)

Data Plot and Equation



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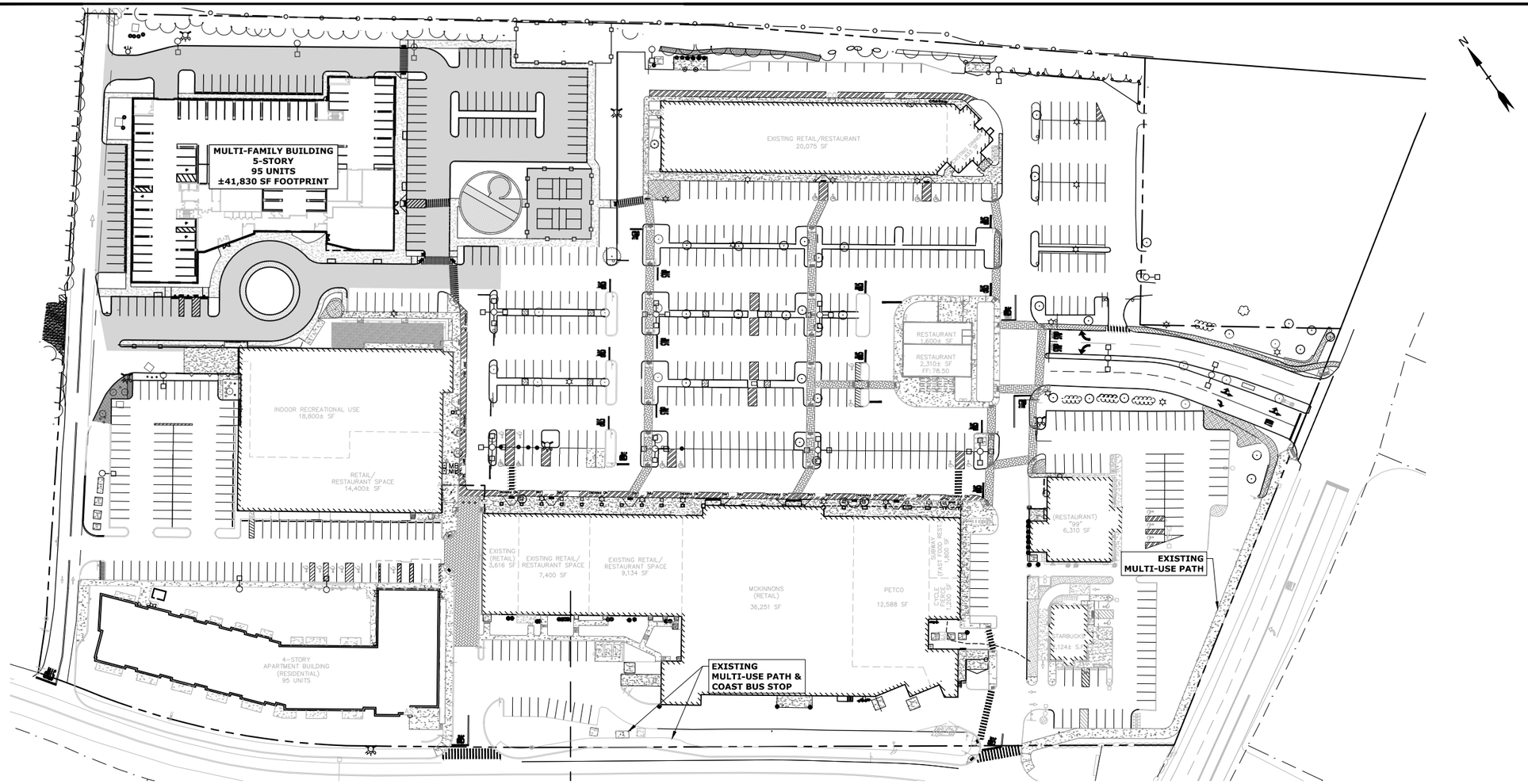


Tighe&Bond

0 60' 120'
GRAPHIC SCALE

LEGEND

	PROPERTY LINE
	PROPOSED PROPERTY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED BUILDING
	PROPOSED PAVEMENT SECTION
	PROPOSED CONCRETE SIDEWALK
	PROPOSED BRICK SIDEWALK
•	PROPOSED BOLLARD
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
30'R	PROPOSED CURB RADIUS
VGC	PROPOSED VERTICAL GRANITE CURB
SGC	PROPOSED SLOPED GRANITE CURB

SITE DATA:

LOCATION: TAX MAP 273, LOT 3

OWNER: 2422 LAFAYETTE ROAD ASSOCIATES, LLC
C/O WATERSTONE RETAIL
322 RESERVOIR STREET
NEEDHAM, MA 02494

ZONING DISTRICT: GATEWAY CORRIDOR (G1)

PROPOSED USE: SHOPPING CENTER/RESIDENTIAL

PROPOSED LOT SIZE: ±18.71 ACRES (±814,896 SF)

DEVELOPMENT SITE STANDARDS(1)

DEVELOPMENT STANDARDS (MIXED USE):	REQUIRED	PROPOSED
MINIMUM DEVELOPMENT SITE AREA	20,000 SF	±814,896 SF
MINIMUM SITE WIDTH:	100 FT	±721 FT
MINIMUM SITE DEPTH:	100 FT	±1,137 FT
MINIMUM PERIMETER BUFFER FROM RESIDENTIAL, MIXED RESIDENTIAL, OR CD4-L1 DISTRICTS:	75 FT	N/A
MAXIMUM DEVELOPMENT BLOCK DIMENSIONS:		
BLOCK LENGTH:	800 FT	±1,137 FT(2)
BLOCK PERIMETER:	2,200 LF	±3,780 LF(2)
MAXIMUM BUILDING COVERAGE:	70%	25.4%
MINIMUM OPEN SPACE COVERAGE:	20%	±21.7%
FRONT LOT LINE BUILDOUT:	75%	0%(2)
BUILDING DESIGN STANDARDS:		
MAXIMUM BUILDING HEIGHT:	5 STORIES(4) 60 FT(4)	5 STORIES <60 FT
MINIMUM STREET FACING FACADE HEIGHT:	24 FT	>24 FT
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	<36 IN
MAXIMUM BUILDING FOOTPRINT:	NR	
MAXIMUM FACADE MODULATION LENGTH:	50 FT	<50 FT
MINIMUM STREET FACING FACADE GLAZING:	20% GROUND FLOOR	>20%
DENSITY THRESHOLDS AND BONUSES:		
DWELLING UNITS PER ACRE:	20 UNITS	10.4 UNITS
DWELLING UNITS PER BUILDING:	36 UNITS	95 UNITS(3)
PLUS 1-STORY, MAX 10 FT	5 STORIES(4) 60 FT(4)	5 STORIES <60 FT

(1) - USE OF DEVELOPMENT SITE STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B41.10 WITH APPROVAL FROM THE PLANNING BOARD.
(2) - EXISTING NON-CONFORMING CONDITION, MODIFICATION OF STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B74.30 FOR THE DEVELOPMENT TO PROVIDE WORKFORCE HOUSING.
(3) - MODIFICATION OF STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B74.30 FOR THE DEVELOPMENT TO PROVIDE WORKFORCE HOUSING.
(4) - ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B73.10 FOR PROVIDING 20% WORKFORCE HOUSING.

PARKING REQUIREMENTS

PARKING CALCULATIONS:

RETAIL:	1 SPACE PER 300 GFA
RESTAURANT:	1 SPACE PER 100 GFA
INDOOR RECREATION:	1 SPACE PER 4 PERSONS
RESIDENTIAL:	0.5 SPACES PER UNIT <500 SF 1 SPACE PER UNIT 500 SF - 750 SF 1.3 SPACES PER UNIT >750 SF

LOADING CALCULATIONS:

RETAIL:	0 SPACES FOR 0 - 10,000 SF 1 SPACE FOR 10,001 - 25,000 SF 2 SPACES FOR 25,001 - 60,000 SF
OTHER NON-RESIDENTIAL:	0 SPACES FOR 0 - 10,000 SF 1 SPACE FOR 10,001 SF - 40,000 SF

SHOPPING CENTER:				LOADING SPACES:	
RETAIL:	AREA (SF):	MINIMUM	PROVIDED	MINIMUM	PROVIDED
PETCO	±12,588			1	1
CYCLE FIERCE	±1,200			0	1
EXISTING RETAIL/RESTAURANT	±20,075			0	1
EXISTING RETAIL/RESTAURANT (MUSE)	±3,616			0	1
EXISTING RETAIL/RESTAURANT (SHIO JAPANESE)	±7,400			0	1
PROPOSED RESTAURANT (OLD BIG LOTS)	±14,400			1	1
INDOOR RECREATIONAL (PINZ)	±18,800			1	1
SUBWAY	±1,800			0	0
THE 99	±6,310			0	1
McKINNON'S	±36,251			2	3
RETAIL	±9,134			0	1
DINER	±1,833			0	1
PROPOSED RESTAURANT	±1,600			1	0
PROPOSED RESTAURANT	±2,310			0	0
STARBUCKS	±2,124			0	1
TOTAL SHOPPING CENTER	±139,441	406 SPACES(1)		8	15
RESIDENTIAL:					
PROPOSED DWELLING UNITS	95 UNITS				
EXISTING DWELLING UNITS	95 UNITS				
VISITOR PARKING					
TOTAL:		654 SPACES(1)	795 SPACES	9	15

(1) - PER PARKING DEMAND ANALYSIS PERFORMED BY TIGHE & BOND DATED OCTOBER 18, 2021

	REQUIRED	PROVIDED
ACCESSIBLE SPACES (2% OF TOTAL):	15	32
VAN ACCESSIBLE SPACES (1 PER 6 ACCESSIBLE SPACES):	2	24
PARKING STALL SIZE:	8.5 FT X 19 FT	8.5 FT X 19 FT
DRIVE AISLE:	24 FT	24 FT, 26 FT

BIKE SPACES REQUIRED:

	REQUIRED	PROVIDED
SHOPPING CENTER:		
1 BIKE SPACE / 10 PARKING SPACES MAXIMUM OF 30 SPACES	30 SPACES	42 SPACES
RESIDENTIAL:		
EXISTING 95 DWELLING UNITS	19 SPACES	30 SPACES
PROPOSED 95 DWELLING UNITS	19 SPACES	20 SPACES

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
C	10/18/2021	TAC Submission
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

PROJECT NO:	T-5047-001
DATE:	August 5, 2021
FILE:	T5047-001-C-DSGN.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

OVERALL SITE PLAN

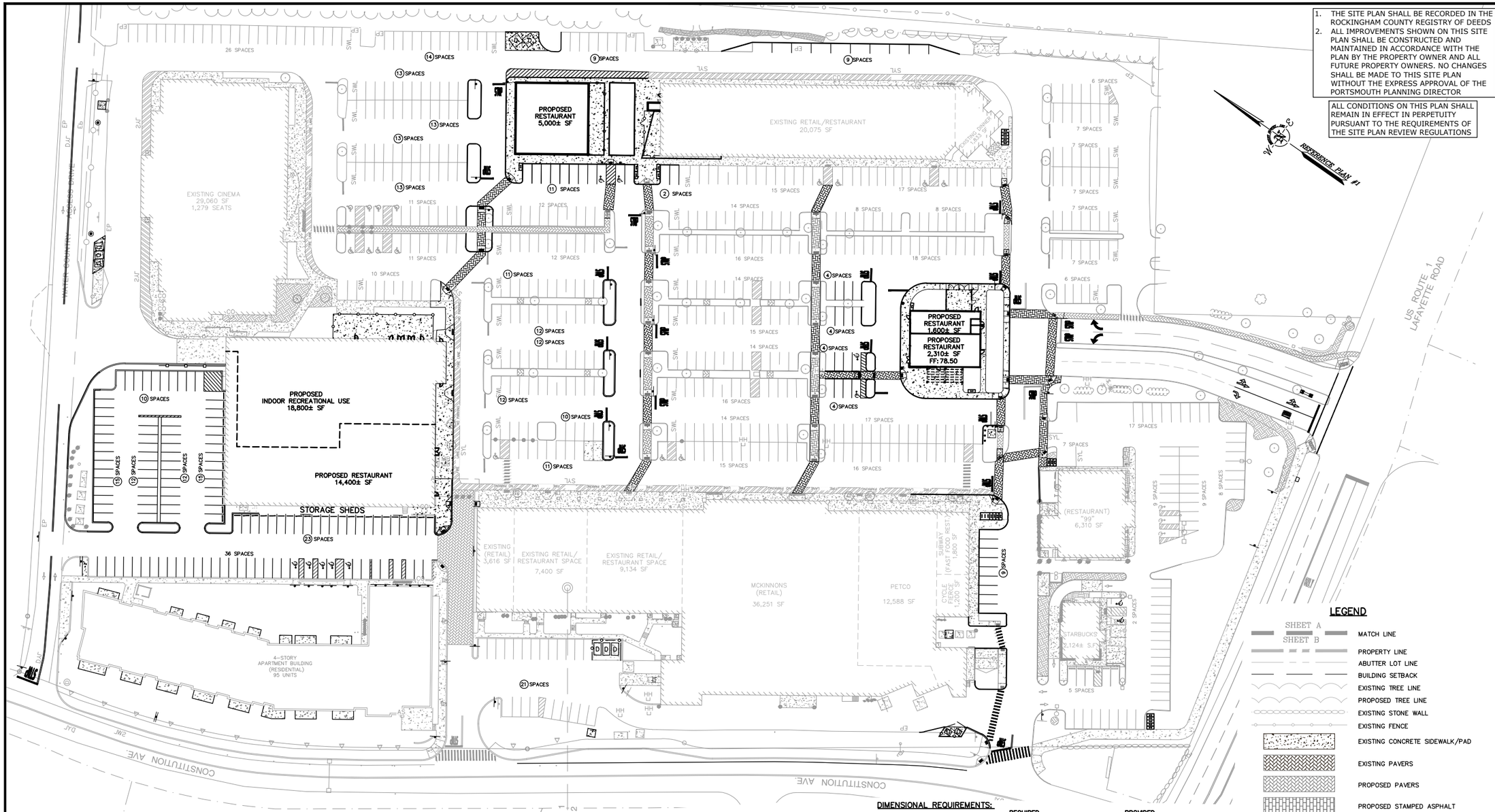
SCALE: AS SHOWN

C-102

Last Saved: 10/15/2021
Plotted: Oct 15, 2021-10:58am By: NAHansen
Tighe & Bond:J:\t\t5047 torrington properties\001 constitution ave, portsmouth nh\drawings_figures\autocad\sheet\T5047-001-C-DSGN.dwg

1. THE SITE PLAN SHALL BE RECORDED IN THE ROCKINGHAM COUNTY REGISTRY OF DEEDS
2. ALL IMPROVEMENTS SHOWN ON THIS SITE PLAN SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE PLAN BY THE PROPERTY OWNER AND ALL FUTURE PROPERTY OWNERS. NO CHANGES SHALL BE MADE TO THIS SITE PLAN WITHOUT THE EXPRESS APPROVAL OF THE PORTSMOUTH PLANNING DIRECTOR

ALL CONDITIONS ON THIS PLAN SHALL REMAIN IN EFFECT IN PERPETUITY PURSUANT TO THE REQUIREMENTS OF THE SITE PLAN REVIEW REGULATIONS



LOADING CALCULATIONS:

RETAIL: 0 SPACES FOR 0 – 10,000 SF
1 SPACE FOR 10,001 – 25,000 SF
2 SPACES FOR 25,001 – 60,000 SF

OTHER NON-RESIDENTIAL: 0 SPACES FOR 0 – 10,000 SF
1 SPACE FOR 10,001 SF – 40,000 SF

PARKING CALCULATIONS:

SHOPPING CENTER: TENANT:	AREA (SF):	MIN REQ.'D	PROVIDED	LOADING SPACES: MIN REQ'D	PROVIDED
PETCO	±12,588			1	1
CYCLE FIERCE	±1,200			0	1
EXISTING RETAIL/RESTAURANT	±20,075			0	1
EXISTING RETAIL/RESTAURANT (FORMERLY LA BELLA)	±3,616			0	1
EXISTING RETAIL/RESTAURANT (SHIO JAPANESE)	±7,400			0	1
PROPOSED RESTAURANT (OLD BIG LOTS)	±14,400			1	1
PROPOSED INDOOR RECREATIONAL (OLD BIG LOTS)	±18,800			1	1
SUBWAY	±1,800			0	0
THE 99	±6,310			0	1
McKINNON'S	±36,251			2	3
RETAIL	±9,134			0	1
DINER	±1,833			0	1
CINEMA	±29,060			1	1
PROPOSED RESTAURANT	±5,000			2	1
PROPOSED RESTAURANT	±1,600			1	0
PROPOSED RESTAURANT	±2,310			0	0
STARBUCKS	±2,124			0	1
TOTAL SHOPPING CENTER	±173,501	522		8	15
RESIDENTIAL:					
DWELLING UNITS–FLOORS 1–4	95 UNITS	116			
TOTAL:		638 (1)	760	9	15

(1) – PER PARKING DEMAND ANALYSIS PERFORMED BY TIGHE & BOND DATED JULY 18, 2019

SITE DATA

LOCATION: 2454 LAFAYETTE ROAD, PORTSMOUTH, NEW HAMPSHIRE, MAP 273 LOT 3

ZONING DISTRICT: GATEWAY PLANNED DEVELOPMENT (GPD) IN GATEWAY DISTRICT (GW)

PERMITTED USE: SHOPPING CENTER/RESIDENTIAL

PARKING REQUIREMENTS:

	REQUIRED	MAX. ALLOWED	PROVIDED
TOTAL PARKING SPACES:	617	861	760*
ACCESSIBLE SPACES (2% OF TOTAL):	14		25
VAN ACCESSIBLE SPACES (1 PER 8 ACCESSIBLE SPACES):	3		16
PARKING STALL SIZE:	8.5 FT X 19 FT		9.0 FT X 19 FT
DRIVE AISLE:	24 FT		24 FT, 26 FT

* VARIANCE GRANTED BY BOARD OF ADJUSTMENT ON JULY 24, 2012 FOR UP TO 848 SPACES

LOADING REQUIREMENTS:

	REQUIRED	PROVIDED
TOTAL LOADING SPACES:	9	16
LOADING BERTH SIZE:		
FIRST REQUIRED BERTH:	12 FT X 20 FT	12 FT X 20 FT
ADDITIONAL REQUIRED BERTH:	12 FT X 45 FT	12 FT X 45 FT

DIMENSIONAL REQUIREMENTS:

	REQUIRED	PROVIDED
DEVELOPMENT INTENSITY:		
MAXIMUM FLOOR RATIO:	1.0	0.34 RESIDENTIAL = 104,528 SF NON-RESIDENTIAL = 173,501 SF (RATIO = 278,029 SF/ 814,896 SF)
MINIMUM LOT AREA PER DWELLING UNIT:	237,500 SF (95 UNITS X 2,500 SF/UNIT)	814,896 SF
RESIDENTIAL AREA RATIO:	30% –70%	38%
LOT REQUIREMENTS:		
MINIMUM CONTINUOUS STREET FRONTAGE:	100 FT	±450 FT
MAXIMUM BUILDING COVERAGE	75%	±22.6%
MINIMUM OPEN SPACE:	20%	±20.0%
MINIMUM PERCENT OF LOT FRONTAGE OPEN SPACE OR BUILDING:	60%	±84%
MINIMUM FRONT YARD FROM CENTERLINE OF LAFAYETTE:	70 FT	±151 FT
MAXIMUM FRONT YARD FROM CENTERLINE OF LAFAYETTE:	90 FT	±151 FT(1)
MAXIMUM BUILDING HEIGHT:	45 FT (1.5 x 30FT)	51'–7"(2)
SITE DESIGN STANDARDS:		
PEDESTRIAN ORIENTED SPACE:	9,874 SF (1% OF TOTAL LOT AREA + 1% OF NON-RESIDENTIAL GFA)	34,760 SF
PARKING SETBACKS:	50 FT	±21.9 FT(1)(2)
BICYCLE PARKING:	15% OF OFF-STREET PARKING 678 SPACES*0.15=102 SPACES	108 SPACES
PEDESTRIAN WALKWAY THROUGHOUT SITE:	8 FT	8 FT
WALKWAYS:	150 FT APART IN PARKING LOTS	

(1) EXISTING NON-CONFORMING
(2) WAIVER GRANTED ON APRIL 21, 2016

LEGEND

SHEET A / SHEET B	MATCH LINE
	PROPERTY LINE
	ABUTTER LOT LINE
	BUILDING SETBACK
	EXISTING TREE LINE
	PROPOSED TREE LINE
	EXISTING STONE WALL
	EXISTING FENCE
	EXISTING CONCRETE SIDEWALK/PAD
	EXISTING PAVERS
	PROPOSED PAVERS
	PROPOSED STAMPED ASPHALT
	PROPOSED CONCRETE SIDEWALK/PAD
	PROPOSED BITUMINOUS CONCRETE
	EXISTING SIGN
	PROPOSED SIGN
	EXISTING LIGHT
	LIGHT POLE BASE
	EXISTING BOLLARD
	PROPOSED BOLLARD
	EXISTING TRAFFIC SIGNAL
	PROPOSED EDGE OF PAVEMENT
VGC	VERTICAL GRANITE CURBING
SGC	SLOPED GRANITE CURBING
MCC	MONOLITHIC CONCRETE CURB
CCB	CAPE COD BERM
3'R	RADIUS
DYCL	DOUBLE YELLOW CENTERLINE
SSWL	SINGLE SOLID WHITE LINE
SDWL	SINGLE DASHED WHITE LINE
(15) SPACES	PROPOSED PARKING SPACES
15 SPACES	EXISTING PARKING SPACES

Tighe&Bond
Consulting Engineers
www.tighebond.com

Waterstone Retail Development

Southgate Plaza Redevelopment

Portsmouth, New Hampshire

Mark	Date	Description
F	7/18/19	Conditional Use Approval Request
E	6/7/19	Administrative Approval
D	1/3/19	Final Planning Board Approval Plans
C	12/10/18	PB Submission
B	12/4/18	Rev. per TAC Comments
A	11/19/18	TAC Submission

PROJECT NO:	W1725
FILE:	W-1725-4-DSGN.dwg
DRAWN BY:	NAH/CML
CHECKED:	PMC
APPROVED BY:	BLM/PMC

PLAZA OVERALL SITE PLAN

SCALE: AS SHOWN

C-3

FILENAME: J:\W\W1725 WATERSTONE PORTSMOUTH, NH\ SOUTHGATE PLAZA\DWG-CAD\DESIGN\W-1725-4-DSGN.DWG
SAVE DATE: 7/18/2019 5:19 PM
PLOT DATE: 7/18/2019 5:20 PM

	MINIMUM PARKING REQUIRED PER CITY ZONING ORDINANCE					
	Type of Use	Weekday		Weekend		Nighttime (Midnight– 6:00 AM)
		Daytime (8:00 AM – 5:00 PM)	Evening (6:00 PM– Midnight)	Daytime (8:00 AM– 5:00 PM)	Evening (6:00 PM– Midnight)	
	Residential	60%	100%	80%	100%	100%
	Retail/Service	60%	90%	100%	70%	5%
	Restaurant	70%	100%	80%	100%	10%
	Entertainment	40%	100%	80%	100%	10%
	Other Institutional	40%	100%	80%	100%	10%
Use	**Required Spaces per Section 10.1112.30**	**Required Shared Spaces per Section 10.1112.61**				
EXISTING RETAIL (PETCO)	42	26	38	42	30	3
EXISTING RETAIL (CYCLE FIERCE)	4	3	4	4	3	1
EXISTING RESTAURANT	40	28	40	32	40	4
EXISTING RETAIL	11	7	10	11	8	1
EXISTING HEATH CLUB / YOGA STUDIO (PURE BARRE)	7	5	7	7	5	1
EXISTING PERSONAL SERVICE (SALON No. 5)	5	3	5	5	4	1
EXISTING HEATH CLUB / YOGA STUDIO (ORANGE THEORY)	10	6	9	10	7	1
EXISTING RESTAURANT (PEACHEAVE)	22	16	22	18	22	3
EXISTING RETAIL (LINDA TAYLOR)	4	3	4	4	3	1
EXISTING PERSONAL SERVICE (LASH OUT BEAUTY)	4	3	4	4	3	1
EXISTING PERSONAL SERVICE (HAND & STONE)	9	6	9	9	7	1
EXISTING RETAIL (MUSE)	13	8	12	13	10	1
EXISTING RESTAURANT (SHIO)	74	52	74	60	74	8
PROPOSED RESTAURANT (former Big Lots)	144	101	144	116	144	15
PROPOSED INDOOR RECREATIONAL (PINZ)	112	45	112	90	112	12
EXISTING RESTAURANT (SUBWAY)	18	13	18	15	18	2
EXISTING RESTAURANT (THE 99)	64	45	64	52	64	7
EXISTING RETAIL (McKINNON'S)	121	73	109	121	85	7
EXISTING RETAIL	9	6	9	9	7	1
EXISTING RETAIL	23	14	21	23	17	2
EXISTING RESTAURANT (DINER)	19	14	19	16	19	2
PROPOSED RESTAURANT	16	12	16	13	16	2
EXISTING RESTAURANT (CHIPOTLE)	24	17	24	20	24	3
EXISTING RESTAURANT (STARBUCKS)	22	16	22	18	22	3
PROPOSED RESIDENTIAL UNITS >750 SF	124	75	124	100	124	124
EXISTING RESIDENTIAL UNITS < 500 SF	1	1	1	1	1	1
EXISTING RESIDENTIAL UNITS 500 - 750 SF	26	16	26	21	26	26
EXISTING RESIDENTIAL UNITS >750 SF	89	54	89	72	89	89
SPACES FOR RESIDENTIAL VISITORS	39	24	39	32	39	39
	Total Required Shared Spaces:	**692**	**1075**	**938**	**1023**	**362**
	Total Provided:	**795**				

CITY OF PORTSMOUTH
Planning Department
1 Junkins Avenue
Portsmouth, New
Hampshire 03801
(603) 610-7216

PLANNING BOARD

August 20, 2019

Neal Shalom
2422 Lafayette Road Associates, LLC
322 Reservoir Street
Needham, MA 02494

RE: Conditional Use Permit application for property located at 2454 Lafayette Road

Dear Property Owner:

The Planning Board, at its regularly scheduled meeting of Thursday, August 15, 2019, considered your application for a Conditional Use Permit in accordance with Section 10.1112.14 of the Zoning Ordinance to provide less than the required minimum number of off-street parking spaces. Said property is shown on Assessor Map 273 Lot 3 and lies within the Gateway Neighborhood Mixed Use Corridor District. As a result of said consideration, the Board voted to grant the request as follows:

1) To accept the findings of the applicant's parking demand analysis and to find that the provision of 760 off-street parking spaces provided will be adequate and appropriate for the proposed uses of the property.

2) To grant a conditional use permit pursuant to Section 10.112.14 of the Portsmouth Zoning Ordinance to provide less than the required minimum number of off-street parking spaces with the following stipulation:

2.1) The owner shall coordinate with new tenant, Pinz, to advertise COAST bus schedules and bus stop location.

The Board's decision may be appealed up to thirty (30) days after the vote. Any action taken by the applicant pursuant to the Board's decision during this appeal period shall be at the applicant's risk. Please contact the Planning Department for more details about the appeals process.

Unless otherwise indicated above, applicant is responsible for applying for and securing a building permit from the Inspection Department prior to starting any project work. All stipulations of approval must be completed prior to issuance of a building permit unless otherwise indicated above.

This approval shall expire unless a building permit is obtained within a period of one year from the date granted, unless otherwise stated in the conditions of approval. The Planning Board may, for good cause shown, extend such period by as much as one year if such extension is requested and acted upon prior to the expiration date. No other extensions may be requested.

The minutes and audio recording of this meeting are available by contacting the Planning

Department.

Very truly yours,

Dexter R. Legg, Chairman of the Planning Board

cc: Robert Marsilia, Chief Building Inspector
Rosann Maurice-Lentz, City Assessor

Bernard W. Pelech, Bosen & Associates, Inc.
Craig Langton, PE, Project Engineer, Tighe & Bond

T5047-001
November 22, 2021

Mr. Dexter Legg, Chair
City of Portsmouth Planning Board
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Conditional Use Permit Request for Density Bonus Incentives**
Proposed Multifamily Development, 2454 Lafayette Road, Portsmouth, NH

Dear Chairman Legg:

On behalf of 2422 Lafayette Road Associates, LLC (owner), and Torrington Properties Inc (applicant), this letter is to request that a Conditional Use Permit (CUP) be granted by the Planning Board to allow for increased housing density and for increased building height as allowed by Section 10.5B72 of the Zoning Ordinance.

PROJECT SUMMARY

Existing Conditions

The proposed project (Project) is located at 2454 Lafayette Road on property identified as Map 273 Lot 3 on the City of Portsmouth Tax Maps and is located in the Gateway Neighborhood Mixed Use Corridor, G1 District. The existing parcel is bound by Lafayette Road to south, Constitution Avenue to the west, Water Country Access Drive to the north and Water Country to the east. The overall existing site has been developed with several buildings of mixed retail, commercial, restaurant, and residential uses, with associated parking areas and stormwater management and treatment systems.

Proposed Redevelopment

The Project is in the location of the former Cinemagic movie theater and consists of the construction of a 5-story, 95-unit multifamily condominium building located in the northern corner of the Portsmouth Green Plaza, with ground floor parking, upper floor residential units, and associated site improvements. The proposed ±41,800 SF footprint will be located in the area of the existing 29,000 SF, 1,264 seat movie theater that will be demolished. Also, the previously approved 5,000 SF restaurant pad proposed for this area will not be constructed.

CONDITIONAL USE PERMIT

Under Section 10.5B72 Density Bonus Incentives "A conditional use permit may be granted by the Planning Board for increased housing density or for increased building height. Such conditional use permit shall be contingent upon satisfying the requirements of Section 10.5B73". The Project is requesting a CUP for increased dwelling units per building allowed under Section 10.5B72.10 and increased building height allowed under Section 10.5B72.30. In order to be eligible for multiple bonus incentives outlined in Section 10.5B72 a development shall include workforce housing according to the requirements of 10.5B73.10 and shall also provide public realm improvements according to the requirements of 10.5B73.20.

Conditional Use Permit Criteria

Based on the above described and enclosed materials, the following addresses how the Project warrants the granting of a Conditional Use Permit for Density Bonus Incentives by satisfying

the following requirements for approval in Section 10.5B73.10 and 10.5B73.20 of the Zoning Ordinance:

10.5B73.10 Workforce Housing Requirement: At least 20% of the dwelling units in the development, but no less than three units, shall be workforce housing units for sale or rent complying with the following criteria:

1) For sale units shall be at least the average gross floor area of the proposed units in the building or 1,000 sq. ft., whichever is greater.

All the proposed dwelling units will be for sale units. All the workforce housing units will be at least the average gross floor area of each unit type within in the building or 1,000 sq. ft. The workforce housing units have been identified on the floor plans included as part of the submission.

2) Rental units shall be at least the average gross floor area of the proposed units in the building or 800 sq. ft., whichever is greater.

All the proposed dwelling units will be for sale units.

3) The workforce housing units shall be distributed throughout the building wherever dwelling units are located.

All the workforce housing units shall be distributed throughout the building. The workforce housing units have been identified on the floor plans included as part of the submission.

10.5B73.20 Public Realm Improvements: All public realm improvements used for a density bonus shall be recommended in plans adopted by the City of Portsmouth including but not limited to the Master Plan, Bicycle and Pedestrian Plan, and Capital Improvement Program. Eligible improvements include the following:

1) Design and construction of an off-road trail or path that is at least equal to the linear public street frontage of the site and expands the Portsmouth Bicycle and Pedestrian Network consistent with the Portsmouth Bicycle and Pedestrian Plan. The trail or path shall be located on or adjacent to the project's building lot or development site, except as provided in (4) below.

A previously approved development on the lot designed, permitted and constructed a multi-use path along the entire frontage of the lot from the main entrance on Lafayette Road and down Constitution Avenue to the end of the lot. That multi-use path construction included the construction of a COAST bus stop on Constitution Avenue. As this work was part of a previous approval, public realm improvement cannot feasibly be provided on the same lot as the development. The applicant has prepared a design for an extension of the previously constructed multi-use path bringing it approximately 700 linear feet further down Constitution Avenue to the driveway of 199 Constitution Avenue. This extension of the multi-use path is consistent with the Portsmouth Bicycle and Pedestrian Plan. The design of the extension of the multi-use path has been included in the Site Plan Set as part of the submission. Additionally, the applicant has agreed to prepare design plans to the City of Portsmouth for the further extension of the multi-use path to Banfield Road.

4) The Planning Board may allow a proposed public realm improvement to be located on a different lot than the development it if finds that all of the following criteria will be met:

(a) An appropriate public realm improvement cannot feasibly be provided on the same lot as the development.

A discussed, the entire frontage of the lot has been previously developed with public realm improvements. As this work has already been completed, public realm improvement cannot feasibly be provided on the same lot as the development.

(b) The proposed public realm improvement is within the same Zoning District as the development.

This extension of the multi-use path is consistent with the Portsmouth Bicycle and Pedestrian Plan and is within the same Zoning District as the development.

APPROVAL OF DENSITY BONUS INCENTIVES

Per Section 10.5B74.10 Required Information: In order to be eligible for bonus incentives as described in 10.5B72, the following submissions must be included with an application for a Conditional Use Permit:

10.5B74.11 Workforce Housing:

1) A description of the workforce housing units, identifying quantity, location, and type;

All the proposed dwelling units will be for sale units. As required by Section 10.5B73.10 20% of the proposed dwelling units will be designated as workforce housing units. All the workforce housing units will be at least the average gross floor area of each unit type, or 1,000 sq. ft., and will be distributed throughout the building.

2) Documentation that the proposed units qualify as workforce housing units as defined by this Ordinance;

Documentation that the proposed units qualify as workforce housing units as defined by this Ordinance will be prepared in coordination with the City's legal department.

3) Proposed covenant or other legally binding documents that provide enforceable restrictions as to price and occupancy to ensure long-term availability and affordability of the units.

Workforce housing covenants that provide enforceable restrictions as to price and occupancy to ensure long-term availability and affordability of the units will be prepared in coordination with the City's legal department.

10.5B74.12 Public Realm Improvements:

1) A written description of the intended site development or District improvements, the relevant City plan, the public benefit provided, provision for design, construction, management and maintenance if required, and plans showing the location and type, size and extent of each of the eligible improvements.

The applicant has prepared a design for an extension of the previously constructed multi-use path bringing it approximately 700 linear feet further down Constitution Avenue to the driveway of 199 Constitution Avenue. This extension of the multi-use path is consistent with the Portsmouth Bicycle and Pedestrian Plan. Additionally, the

applicant has agreed to prepare design plans to the City of Portsmouth for the further extension of the multi-use path to Banfield Road.

2) A specific time frame for the completion of all required on-site and off-site improvements shall be incorporated as a condition of approval of the Planning Board.

The design of the 700 foot extension of the Constitution Avenue multi-use path has been completed and is included in the Site Plan Set as part of the overall site work and approval process for the Project.

3) A list of all permits and approvals required in connection with any proposed public realm improvements with the application. These approvals shall be obtained prior to approval of the development, unless authorized by the Planning Board.

The applicant will only need site design approval from the Planning Board in connection with the proposed public realm improvements.

10.5B74.13 Any requests by the applicant for the Planning Board to modify specific standards and requirements set forth in this Section 10.5B70 as allowed under Section 10.5B74.30 and a detailed justification for the requested modification.

The applicant is requesting additional modifications to specific standards and requirements set forth in this Section 10.5B70. A detailed justification for the requested modification is in the section below.

MODIFICATION OF STANDARDS

As allowed by Section 10.5B74.30 of the Zoning Ordinance, and in granting a conditional use permit, the Planning Board may modify specific standards and requirements set forth in Section 10.5B20, 10.5B30, 10.5B40 and 10.5B70 provided that the Planning Board finds such modification will promote design flexibility and overall project quality. As part of the granting of a CUP for Density Bonus Incentives the applicant is respectfully requesting the modification of the standards under 10.5B30, 10.5B40 and 10.5B70. The standards requested to be modified includes:

- **Sections 10.5B33.20, Front Lot Line Build Out & 10.5B34.40, Front Building Setback**

  Section 10.5B53.10 states that new buildings that are constructed on a lot or development site that includes one or more non-conforming buildings that existed prior to the effective date of Article 5B, shall comply with the standards for development sites as required by Section 10.5B40 except if the minimum front lot line buildout has not been met, new buildings must be placed within the minimum and maximum front building setback from the lot line. The development site includes one or more non-conforming buildings that existed prior to the effective date of Article 5B and minimum front lot line buildout has not been met. As such, the Project building is required to meet the Building Placement and Orientation standards in Section 10.5B33.

  Sections 10.5B33.20, Front Lot Line Build Out

  The Project will need to modify the standards of Section 10.5B33.20, Front Lot Line Build Out and Section 10.5B34.40, Front Building Setback. Section 10.5B33.20 requires that all buildings must have a front lot line build out of at least 50% for residential and community building types, and 75% for commercial and mixed-use buildings types. As the site is existing non-conforming it is required to meet the 75%

front lot line build out for commercial and mixed-use buildings types. As the Project building is being located in the rear of the site, the standard of Section 10.5B33.20 will need to be modified to allow for 0% front lot line build out, where 75% is required.

10.5B34.40, Front Building Setback

Section 10.5B34.40 requires a front building setback from the lot line of 10 ft minimum and 30 ft maximum. The Project building is being located in rear of the site in the location of an existing movie theater. As the remainder of the site has been previously developed there is not an alternate location on the development site to locate the Project building. The standard of Section 10.5B34.40 will need to be modified to allow for ±400 ft setback from the Constitution Avenue lot line, where a maximum of 30 ft is allowed.

- **Section 10.5B72.10, Dwelling Units Per Building**

  The Planning Board may, by conditional use permit, allow up to a maximum of 36 dwelling units per building. The applicant is requesting additional relief as allowed by Section 10.5B74.30 to allow 95 dwelling units per building. Having a 95-unit building is consistent with the existing use of the site as the Veridian apartment building contains 95 dwelling units. Additionally, the development is permitted to have 16 units per acre by right. With the lot size of 18.71 acres the applicant is permitted 299 dwelling units on the lot. Including the existing residential building, the lot would have 190 total dwelling units which equates to 10.15 units per acre. Due to the available area to be redeveloped, splitting the proposed 95 dwelling units into separate buildings does not allow for the creation of meaningful community space, or adequate parking to support the units.

CONCLUSION

We trust the above described and enclosed materials address the criteria to grant a Conditional Use Permit for Density Bonus Incentives for the proposed project. The proposed project meets requirements of the Zoning Ordinance for the granting of a CUP and the proposed project achieves the goals of City's Master Plan to encourage walkable mixed-use development, improve access to indoor and outdoor recreation facilities throughout the city, ensure that new development complements and enhances its surroundings, and to adapt housing stock to accommodate changing demographics and to accommodate the housing needs of low and moderate income residents.

The applicant respectfully requests a Conditional Use Permit for the use of the Density Bonus Incentives with the additional Modification of Standards be granted. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,
TIGHE & BOND, INC.

Patrick M. Crimmins, PE
Senior Project Manager

Neil A. Hansen, PE
Project Engineer

Copy: 2422 Lafayette Road Associates, LLC (via e-mail)
Torrington Properties Inc (via e-mail)
Gregg Mikolaities, August Consulting, PLLC (via e-mail)
John Bosen, Bosen & Associates, PLLC (via e-mail)

T5047-001
November 22, 2021

Mr. Dexter Legg, Chair
City of Portsmouth Planning Board
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: **Conditional Use Permit Request for Development Site Standards**
Proposed Multifamily Development, 2454 Lafayette Road, Portsmouth, NH

Dear Chairman Legg:

On behalf of 2422 Lafayette Road Associates, LLC (owner), and Torrington Properties Inc (applicant), this letter is to request that a Conditional Use Permit (CUP) be granted by the Planning Board to allow for the use of the Development Site Standards, Section 10.5B40 of the Zoning Ordinance.

PROJECT SUMMARY

Existing Conditions

The proposed project (Project) is located at 2454 Lafayette Road on property identified as Map 273 Lot 3 on the City of Portsmouth Tax Maps and is located in the Gateway Neighborhood Mixed Use Corridor, G1 District. The existing parcel is bound by Lafayette Road to south, Constitution Avenue to the west, Water Country Access Drive to the north and Water Country to the east. The overall existing site has been developed with several buildings of mixed retail, commercial, restaurant, and residential uses, with associated parking areas and stormwater management and treatment systems.

Proposed Redevelopment

The Project is in the location of the former Cinemagic movie theater and consists of the construction of a 5-story, 95-unit multifamily condominium building located in the northern corner of the Portsmouth Green Plaza, with ground floor parking, upper floor residential units, and associated site improvements. The proposed ±41,800 SF footprint will be located in the area of the existing 29,000 SF, 1,264 seat movie theater that will be demolished. Also, the previously approved 5,000 SF restaurant pad proposed for this area will not be constructed.

CONDITIONAL USE PERMIT

Under Section 10.5B41.10 Development Site Standards are "allowed by Conditional Use Permit approval from the Planning Board, a development site is any lot or group of contiguous lots owned or controlled by the same person or entity, assembled for the purpose of a single development and including more than one principal building or building type". Portsmouth Green meets the definition of a Development Site, as such a CUP to allow the use of the Development Site Standards is being requested for this proposed project.

Conditional Use Permit Criteria

Based on the above described and enclosed materials, the following addresses how the Project warrants the granting of a Conditional Use Permit for a Development Site by satisfying the following four (4) criteria for approval in Section 10.5B43.10 of the Zoning Ordinance:

(1) The development project is consistent with the Portsmouth Master Plan.

The Project along with the existing site as a whole is consistent with several goals identified in the Master Plan.

- Goal 1.2 is to encourage walkable mixed-use development along existing commercial corridors. As the site has been developed over the years, it has been designed to promote alternative modes of transportation such as walking, bicycling, and public transportation by incorporating bicycle storage spaces on-site, a multi-use path along both frontages of Constitution Avenue and Lafayette Road (Route 1) and a COAST bus stop.
- Goal 1.4 is to improve access to indoor and outdoor recreation facilities throughout the city. Action 1.4.1 under goal 1.4 says in part, that new recreational facilities should be added where appropriate. As part of the Project, pickleball courts are proposed to be included in the community space area. As the popularity of the game has increased over the last couple of years so has the demand for spaces to play. The addition of these courts will be a benefit to residents of the City and of the proposed development.
- Goal 2.1 is to ensure that new development complements and enhances its surroundings. The site already has a successful residential component, and the addition of more residents to the development site will further ensure the continued success of the commercial, retail and restaurants uses currently on site.
- Goal 3.1 and Goal 3.2 are to adapt housing stock to accommodate changing demographics and to accommodate the housing needs of low and moderate income residents. The Project will add an additional 95 residential units to the local housing stock. The Project will also be designating 20% of the units as workforce housing which will accommodate of residents across income levels.

(2) The development project has been designed to allow uses that are appropriate for its context and consistent with City's planning goals and objectives for the area.

The Project has been designed to be consistent with the existing uses already on the site. Residential buildings are an allowed use with the zone and the addition of housing stock and workforce housing is consistent with goals laid out in the City's Master Plan as described in criteria item 1.

(3) The project includes measures to mitigate or eliminate anticipated impacts on traffic safety and circulation, demand on municipal services, stormwater runoff, natural resources, and adjacent neighborhood character.

The Project will have a negligible or reduced impact on traffic due to the removal of the existing movie theater. The Project will generate fewer vehicle trips during the weekday PM and Saturday peak hour periods, with only a negligible increase during the weekday AM peak hour period.

The development site has been previously designed to mitigate stormwater runoff with the use of several filtration and infiltration stormwater treatment practices. The Project will use the existing stormwater treatment infrastructure and will result in a decrease in impervious surfaces on site.

The Project will also maintain the existing character of the neighborhood as the proposed use already exists on site.

(4) The project is consistent with the purpose and intent set forth in Section 10.5B11.

Section 10.5B11.10 states that *"The purpose of Article 5B is to implement and support the goals of the City's Master Plan and Housing Policy to encourage walkable mixed-use development and continued economic vitality in the City's primary gateway areas, ensure that new development complements and enhances its surroundings, provide housing stock that is suited for changing demographics, and accommodate the housing needs of the City's current and future workforce."*

The Project meets the standards outlined in Section 10.5B11.20 which are to:

a. ***Promote development that is consistent with the goals of the Master Plan to create vibrant, authentic, diverse, connected and resilient neighborhoods;*** Criteria 1 details that the proposed project is consistent with the goals of the Master Plan.

b. ***Encourage high quality housing for a variety of household types and income ranges.*** Designating that 20% of the proposed units will be sold at workforce housing rates will ensure that the Project will provide high quality housing for a variety of income ranges.

c. ***Guide the physical character of development by providing a menu of building and site development types that are based on established community design principles;*** As an existing mixed-use development, this project has the benefit of being located on a site that already has a variety of building types an uses which will complement and enhance this project.

d. ***Create quality places by allowing for whole site development with meaningful public spaces and neighborhood centers.*** The Project will enhance the whole-site development approach that has been previously used when developing this site, and will add meaningful public space to the site where none currently exists. This public space will include pickleball courts, a seating and gathering area, and a dog park.

MODIFICATION OF STANDARDS

As allowed by Section 10.5B74.30 of the Zoning Ordinance, and in granting a conditional use permit, the Planning Board may modify specific standards and requirements set forth in Section 10.5B20, 10.5B30, 10.5B40 and 10.5B70 provided that the Planning Board finds such modification will promote design flexibility and overall project quality. As part of the granting of a CUP for the use of the Development Site Standards the applicant is respectfully requesting the modification of the standards under 10.5B40. The standards requested to be modified include:

- **Section 10.5B42.20, Maximum Development Block Dimensions**

  Under 10.5B40 are the Development Standards for a Mixed-Use Development listed in 10.5B42.20. Due to the existing site not meeting the standards for the maximum development block dimensions, The Project will need to modify the maximum block length and maximum block perimeter. The Development Standards allow for a maximum block length of 800 ft where a block length of ±1,137 ft currently exists, and they allow for a maximum block perimeter of 2,200 linear ft where ±3,780 linear ft currently exist.

CONCLUSION

We trust the above described and enclosed materials address the criteria to grant a Conditional Use Permit for the proposed project. The proposed project meets requirements of the Zoning Ordinance for the granting of a CUP and the proposed project achieves the goals of City's Master Plan to encourage walkable mixed-use development, improve access to indoor and outdoor recreation facilities throughout the city, ensure that new development complements and enhances its surroundings, and to adapt housing stock to accommodate changing demographics and to accommodate the housing needs of low and moderate income residents.

The applicant respectfully requests a Conditional Use Permit for the use of the Development Site Standards with the additional Modification of Standards be granted. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at pmcrimmins@tighebond.com.

Sincerely,

TIGHE & BOND, INC.

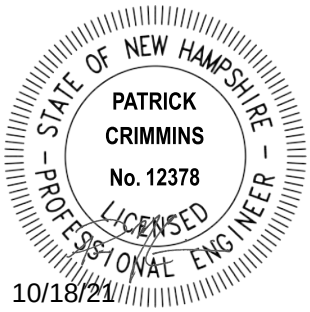
Patrick M. Crimmins, PE
Senior Project Manager

Neil A. Hansen, PE
Project Engineer

Copy: 2422 Lafayette Road Associates, LLC (via e-mail)
Torrington Properties Inc (via e-mail)
Gregg Mikolaities, August Consulting, PLLC (via e-mail)
John Bosen, Bosen & Associates, PLLC (via e-mail)

J:\T\T5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Report_Evaluation\Applications\City of Portsmouth\20211018 TAC Submission\T5047-001 Development Site CUP.docx

Drainage Analysis



TO: City of Portsmouth Technical Advisory Committee (TAC)

FROM: Neil A. Hansen, PE
Patrick M. Crimmins, PE

COPY: Torrington Properties, Inc.

DATE: October 18, 2021

1.0 Project Summary

This Drainage Analysis Memorandum was completed to review the proposed revisions to the stormwater management system that will result from the proposed redevelopment of the northern corner of the Portsmouth Green Plaza located at 2454 Lafayette Road, Portsmouth, New Hampshire.

The overall existing site has been developed with several buildings of mixed retail, commercial, restaurant, and residential uses, with associated parking areas and stormwater management and treatment systems. The site is approximately 18.7 acres and is bound by an access drive for Water County to the north, Water Country property to the east, Route One (Lafayette Road) to the south and Constitution Avenue to the west.

1.1 Project Description

The proposed project is in the location of the former Cinemagic movie theater and consists of the construction of a 5-story, 95-unit multifamily condominium building located in the northern corner of the Portsmouth Green Plaza. Also, the previously approved 5,000 SF restaurant pad proposed for this area will not be constructed.

Under previously approved and constructed projects various Best Management Practices (BMP's) for stormwater management and treatment were designed permitted and constructed. These BMP's include an underground infiltration system, three (3) water quality inlets and twelve (12) tree box filters located in the front parking area and an underground infiltration system and one (1) water quality inlet located in the rear of the site.

This project is anticipated to disturb approximately 3.45 acres. The proposed project will result in a decrease of approximately 3,764 SF of impervious area from the previously approved post development design.

2.0 Drainage Analysis

2.1 Calculation Methods

The design storms analyzed in this study are the 2-year, 10-year, 25-year and 50-year 24-hour duration storm events. The stormwater modeling system, HydroCAD 10.0 was utilized to predict the peak runoff rates from these storm events. The peak discharge rates were determined by analyzing Type III 24-hour storm events. The rainfall data for these storm events was obtained from the data published by the Northeast Regional Climate Center at Cornell University.

The time of concentration was computed using the TR-55 Method, which provides a means of determining the time for an entire watershed to contribute runoff to a specific location via sheet flows, shallow concentrated flow and channel flow. Runoff curve numbers were

calculated by estimating the coverage areas and then summing the curve number for the coverage area as a percent of the entire watershed.

References

1. HydroCAD Stormwater Modeling System, by HydroCAD Software Solutions LLC, Chocorua, New Hampshire.
2. New Hampshire Stormwater Management Manual, Volume 2, Post-Construction Best Management Practices Selection and Design, December 2008.
3. "Extreme Precipitation in New York & New England." Extreme Precipitation in New York & New England by Northeast Regional Climate Center (NRCC), 26 June 2012.

2.2 Pre- and Post-Development Calculations

The pre- and post-development watershed areas have been analyzed at the same four (4) Points of Analysis for the overall project. These Points of Analysis were held constant, while their contributing sub watershed areas were adjusted between the pre- and post-development conditions. These adjustments were made to reflect the differences between the existing and the proposed conditions drainage patterns. The overall areas analyzed as part of this report were held constant. Table 2.2.1 compares pre- and post-development peak runoff rates during each design storm event.

2.2.1 Peak Rate Comparisons

Table 2.2.1 summarizes and compares the pre- and post-development peak runoff rates for the 2-year, 10-year, 25-year and 50-year storm events.

Table 2.2.1 - Comparison of Pre- and Post-Development Flows (cfs)

	2-Year Storm	10-Year Storm	25-Year Storm	50-Year Storm
Pre-Development Watershed				
PA1	17.01	32.01	41.37	61.24
PA2	0.05	0.32	0.60	0.89
PA3	0.25	0.51	0.73	0.93
PA4	1.96	5.07	12.16	20.82
Post-Development Watershed				
PA1	16.74	31.31	40.60	59.73
PA2	0.05	0.31	0.59	0.89
PA3	0.18	0.36	0.52	0.66
PA4	20.14	12.07	5.05	1.96

As depicted in Table 2.2.1, post-development peak runoff rates are less than the pre-development condition for all Points of Analysis.

2.3 Stormwater Treatment

The stormwater management system was previously designed and constructed to provide stormwater treatment as required by the City of Portsmouth Site Review Regulations and NHDES AoT Regulations (Env-Wq 1500). Per NHDES AoT Regulation Env-Wq 1503.21(1) (5) modifications to a previously approved project are allowed if "No change is made to a stormwater management system that: a. Adds, removes, or relocates any treatment practice, pretreatment practice, groundwater recharge practice, or detention structure; or b. Increases the peak inflow rate to any treatment practice, pretreatment practice, groundwater

recharge practice, or detention structure during the 2-year 24-hour storm". The proposed project will be using the existing treatment and pre-treatment systems described in Section 1.1. Table 2.3.1 summarizes and compares the 2-year storm event pre- and post-development peak runoff rates for runoff flowing to each treatment system to demonstrate compliance with NHDES regulations.

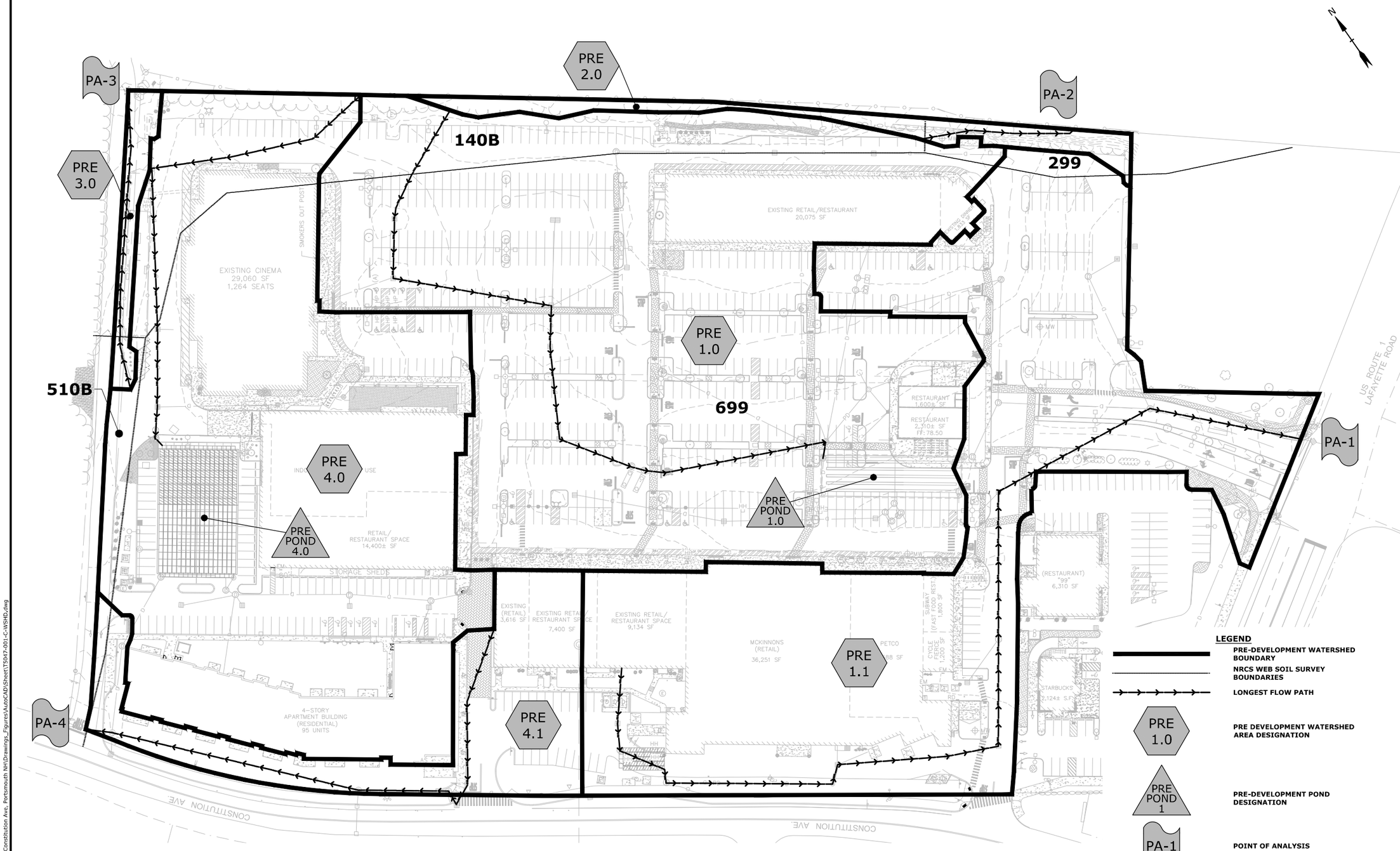
Table 2.3.1 - Comparison of Pre- and Post-Development Flows (cfs)

	2-Year Storm
Pre-Development	
Pond 1.0	17.66
Pond 4.0	13.56
Post-Development	
Pond 1.0	17.12
Pond 4.0	13.18

As depicted in Table 2.3.1, post-development peak runoff rates are less than the pre-development condition for each treatment system.

3.0 Conclusion

The proposed project will result in a reduction in post-development peak runoff rates from the pre-development condition. The impervious area be reduced by the proposed project. The project will require notifying NHDES of the modifications being made as required by Env-Wq 1503.21.



LEGEND

- **PRE-DEVELOPMENT WATERSHED BOUNDARY**
- **NRCS WEB SOIL SURVEY BOUNDARIES**
- **LONGEST FLOW PATH**
- PRE 1.0 — **PRE DEVELOPMENT WATERSHED AREA DESIGNATION**
- PRE POND 1 — **PRE-DEVELOPMENT POND DESIGNATION**
- PA-1 — **POINT OF ANALYSIS**

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
140B	CHATFIELD-HOLLIS-CANTON COMPLEX, 3 TO 8 PERCENT SLOPES	B
299	UDORTHENTS	N/A
510B	HOOSIC GRAVELLY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	A
699	URBAN LAND	N/A

Tighe&Bond

0 50' 100'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
C	10/18/2021	TAC Submission
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

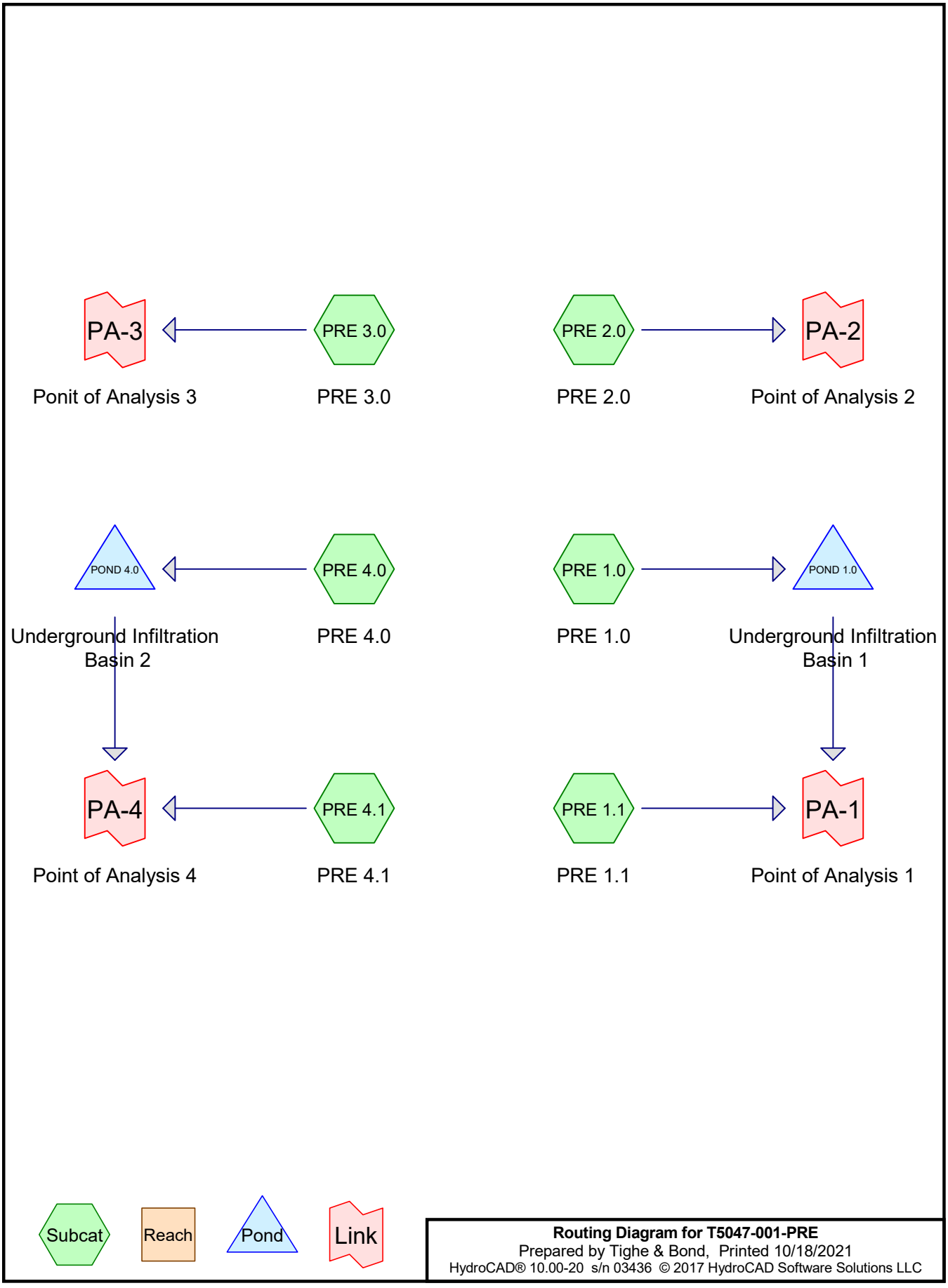
PROJECT NO:	T-5047-001
DATE:	August 5, 2021
FILE:	T5047-001-C-WSHD.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

PRE DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-801

Last Saved: 10/14/2021
Printed: Oct 15, 2021-10:16am By: NAHansen
Tighe & Bond: J:\TYT5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-WSHD.dwg



Routing Diagram for T5047-001-PRE
Prepared by Tighe & Bond, Printed 10/18/2021

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.038	39	>75% Grass cover, Good, HSG A (PRE 3.0, PRE 4.0)
2.342	61	>75% Grass cover, Good, HSG B (PRE 1.0, PRE 1.1, PRE 2.0, PRE 3.0, PRE 4.0, PRE 4.1)
0.149	98	Paved parking, HSG A (PRE 3.0, PRE 4.0, PRE 4.1)
9.769	98	Paved parking, HSG B (PRE 1.0, PRE 1.1, PRE 3.0, PRE 4.0, PRE 4.1)
4.332	98	Roofs, HSG B (PRE 1.0, PRE 1.1, PRE 4.0, PRE 4.1)
0.307	55	Woods, Good, HSG B (PRE 1.0, PRE 2.0, PRE 4.0)
16.938	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.188	HSG A	PRE 3.0, PRE 4.0, PRE 4.1
16.750	HSG B	PRE 1.0, PRE 1.1, PRE 2.0, PRE 3.0, PRE 4.0, PRE 4.1
0.000	HSG C	
0.000	HSG D	
0.000	Other	
16.938		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 PRE 1.0: PRE 1.0 Runoff Area=266,042 sf 89.96% Impervious Runoff Depth>2.58"
Flow Length=800' Tc=5.8 min CN=94 Runoff=17.66 cfs 1.314 af

Subcatchment PRE 1.1: PRE 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>2.39"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=12.51 cfs 0.907 af

Subcatchment PRE 2.0: PRE 2.0 Runoff Area=12,433 sf 0.00% Impervious Runoff Depth>0.32"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.05 cfs 0.008 af

Subcatchment PRE 3.0: PRE 3.0 Runoff Area=6,909 sf 49.82% Impervious Runoff Depth>1.30"
Flow Length=454' Tc=4.6 min CN=78 Runoff=0.25 cfs 0.017 af

Subcatchment PRE 4.0: PRE 4.0 Runoff Area=208,187 sf 87.10% Impervious Runoff Depth>2.48"
Flow Length=528' Tc=5.5 min CN=93 Runoff=13.56 cfs 0.989 af

Subcatchment PRE 4.1: PRE 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>1.71"
Flow Length=769' Tc=7.8 min CN=84 Runoff=1.96 cfs 0.150 af

Pond POND 1.0: Underground Infiltration Peak Elev=72.07' Storage=12,567 cf Inflow=17.66 cfs 1.314 af
Discarded=0.95 cfs 0.777 af Primary=7.60 cfs 0.536 af Outflow=8.55 cfs 1.313 af

Pond POND 4.0: Underground Infiltration Peak Elev=71.78' Storage=13,529 cf Inflow=13.56 cfs 0.989 af
Discarded=1.76 cfs 0.989 af Primary=0.00 cfs 0.000 af Outflow=1.76 cfs 0.989 af

Link PA-1: Point of Analysis 1 Inflow=17.01 cfs 1.443 af
Primary=17.01 cfs 1.443 af

Link PA-2: Point of Analysis 2 Inflow=0.05 cfs 0.008 af
Primary=0.05 cfs 0.008 af

Link PA-3: Ponit of Analysis 3 Inflow=0.25 cfs 0.017 af
Primary=0.25 cfs 0.017 af

Link PA-4: Point of Analysis 4 Inflow=1.96 cfs 0.150 af
Primary=1.96 cfs 0.150 af

Total Runoff Area = 16.938 ac Runoff Volume = 3.384 af Average Runoff Depth = 2.40"
15.87% Pervious = 2.688 ac 84.13% Impervious = 14.250 ac

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 PRE 1.0: PRE 1.0 Runoff Area=266,042 sf 89.96% Impervious Runoff Depth>4.22"
Flow Length=800' Tc=5.8 min CN=94 Runoff=28.05 cfs 2.146 af

Subcatchment PRE 1.1: PRE 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>4.00"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=20.41 cfs 1.519 af

Subcatchment PRE 2.0: PRE 2.0 Runoff Area=12,433 sf 0.00% Impervious Runoff Depth>1.06"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.32 cfs 0.025 af

Subcatchment PRE 3.0: PRE 3.0 Runoff Area=6,909 sf 49.82% Impervious Runoff Depth>2.63"
Flow Length=454' Tc=4.6 min CN=78 Runoff=0.51 cfs 0.035 af

Subcatchment PRE 4.0: PRE 4.0 Runoff Area=208,187 sf 87.10% Impervious Runoff Depth>4.11"
Flow Length=528' Tc=5.5 min CN=93 Runoff=21.82 cfs 1.636 af

Subcatchment PRE 4.1: PRE 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>3.18"
Flow Length=769' Tc=7.8 min CN=84 Runoff=3.62 cfs 0.278 af

Pond POND 1.0: Underground Infiltration Peak Elev=73.45' Storage=19,008 cf Inflow=28.05 cfs 2.146 af
Discarded=0.95 cfs 1.031 af Primary=14.17 cfs 1.115 af Outflow=15.12 cfs 2.146 af

Pond POND 4.0: Underground Infiltration Peak Elev=72.86' Storage=22,215 cf Inflow=21.82 cfs 1.636 af
Discarded=1.76 cfs 1.416 af Primary=3.78 cfs 0.220 af Outflow=5.54 cfs 1.636 af

Link PA-1: Point of Analysis 1 Inflow=32.01 cfs 2.634 af
Primary=32.01 cfs 2.634 af

Link PA-2: Point of Analysis 2 Inflow=0.32 cfs 0.025 af
Primary=0.32 cfs 0.025 af

Link PA-3: Ponit of Analysis 3 Inflow=0.51 cfs 0.035 af
Primary=0.51 cfs 0.035 af

Link PA-4: Point of Analysis 4 Inflow=5.07 cfs 0.498 af
Primary=5.07 cfs 0.498 af

Total Runoff Area = 16.938 ac Runoff Volume = 5.639 af Average Runoff Depth = 3.99"
15.87% Pervious = 2.688 ac 84.13% Impervious = 14.250 ac

Summary for Subcatchment PRE 1.0: PRE 1.0

Runoff = 28.05 cfs @ 12.08 hrs, Volume= 2.146 af, Depth> 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
26,042	98	Roofs, HSG B
3,134	55	Woods, Good, HSG B
23,577	61	>75% Grass cover, Good, HSG B
213,289	98	Paved parking, HSG B
266,042	94	Weighted Average
26,711		10.04% Pervious Area
239,331		89.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.9	6	0.0300	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 3.24"
0.1	18	0.0300	2.60		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
1.0	138	0.0142	2.42		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.3	59	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.9	166	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.1	36	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	93	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.3	78	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.0	8	0.5000	42.03	74.28	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	18	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.6	167	0.0060	4.60	8.14	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	13	0.0010	2.28	7.15	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior

5.8 800 Total

Summary for Subcatchment PRE 1.1: PRE 1.1

Runoff = 20.41 cfs @ 12.08 hrs, Volume= 1.519 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
61,623	98	Roofs, HSG B
30,457	61	>75% Grass cover, Good, HSG B
106,509	98	Paved parking, HSG B
198,589	92	Weighted Average
30,457		15.34% Pervious Area
168,132		84.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.20		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.24"
0.5	110	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.4	71	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.8	157	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.6	130	0.0050	3.72	4.57	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.4	126	0.0055	4.78	8.44	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
2.2	1,152	0.0150	8.82	27.71	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
5.6	1,796	Total			

Summary for Subcatchment PRE 2.0: PRE 2.0

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.32 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
8,301	55	Woods, Good, HSG B
4,132	61	>75% Grass cover, Good, HSG B
12,433	57	Weighted Average
12,433		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.24"
0.2	29	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.0	9	0.2200	7.55		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	37	0.1091	5.32		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	33	0.0610	3.98		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.5	76	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	90	0.0900	4.83		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.9	294	Total			

Summary for Subcatchment PRE 3.0: PRE 3.0

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.51 cfs @ 12.07 hrs, Volume= 0.035 af, Depth> 2.63"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
403	39	>75% Grass cover, Good, HSG A
821	98	Paved parking, HSG A
3,064	61	>75% Grass cover, Good, HSG B
2,621	98	Paved parking, HSG B
6,909	78	Weighted Average
3,467		50.18% Pervious Area
3,442		49.82% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	75	0.0060	0.81		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.24"
3.1	379	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
4.6	454	Total			

Summary for Subcatchment PRE 4.0: PRE 4.0

Runoff = 21.82 cfs @ 12.08 hrs, Volume= 1.636 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
1,271	39	>75% Grass cover, Good, HSG A
4,452	98	Paved parking, HSG A
91,769	98	Roofs, HSG B
1,949	55	Woods, Good, HSG B
23,639	61	>75% Grass cover, Good, HSG B
85,107	98	Paved parking, HSG B
208,187	93	Weighted Average
26,859		12.90% Pervious Area
181,328		87.10% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0400	0.18		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.24"
1.2	200	0.0200	2.87		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
1.6	300	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
5.5	528	Total			

Summary for Subcatchment PRE 4.1: PRE 4.1

Runoff = 3.62 cfs @ 12.11 hrs, Volume= 0.278 af, Depth> 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
1,234	98	Paved parking, HSG A
9,247	98	Roofs, HSG B
17,142	61	>75% Grass cover, Good, HSG B
18,017	98	Paved parking, HSG B
45,640	84	Weighted Average
17,142		37.56% Pervious Area
28,498		62.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	100	0.0100	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.24"
0.0	5	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	75	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.4	84	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
2.6	325	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.5	75	0.0030	2.69	2.11	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
2.3	105	0.0025	0.75		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.8	769	Total			

Summary for Pond POND 1.0: Underground Infiltration Basin 1

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=69)

Inflow Area = 6.107 ac, 89.96% Impervious, Inflow Depth > 4.22" for 10-YR event
Inflow = 28.05 cfs @ 12.08 hrs, Volume= 2.146 af
Outflow = 15.12 cfs @ 12.21 hrs, Volume= 2.146 af, Atten= 46%, Lag= 7.8 min
Discarded = 0.95 cfs @ 9.96 hrs, Volume= 1.031 af
Primary = 14.17 cfs @ 12.21 hrs, Volume= 1.115 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 73.45' @ 12.21 hrs Surf.Area= 5,874 sf Storage= 19,008 cf
Flood Elev= 75.65' Surf.Area= 5,874 sf Storage= 25,909 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 22.7 min (796.0 - 773.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	68.65'	10,139 cf	**44.50'W x 132.00'L x 7.00'H Field A** 41,118 cf Overall - 15,770 cf Embedded = 25,348 cf x 40.0% Voids
#2A	69.65'	15,770 cf	**CMP Round- 60** x 36 Inside #1 Effective Size= 60.0"W x 60.0"H => 19.59 sf x 20.00'L = 391.8 cf Overall Size= 60.0"W x 60.0"H x 20.00'L 6 Rows of 6 Chambers 42.50' Header x 19.59 sf x 2 = 1,665.2 cf Inside
		25,909 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	69.65'	**24.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.65' / 69.55' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	69.65'	**12.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	71.30'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	74.25'	**8.0' long x 1.85' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Discarded	68.65'	**7.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.95 cfs @ 9.96 hrs HW=68.73' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.95 cfs)

Primary OutFlow Max=14.13 cfs @ 12.21 hrs HW=73.44' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 14.13 cfs of 25.27 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 6.86 cfs @ 8.73 fps)
  ├**3=Orifice/Grate** (Orifice Controls 7.27 cfs @ 5.93 fps)
  └**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond POND 4.0: Underground Infiltration Basin 2

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=1)

Inflow Area = 4.779 ac, 87.10% Impervious, Inflow Depth > 4.11" for 10-YR event
Inflow = 21.82 cfs @ 12.08 hrs, Volume= 1.636 af
Outflow = 5.54 cfs @ 12.45 hrs, Volume= 1.636 af, Atten= 75%, Lag= 22.0 min
Discarded = 1.76 cfs @ 11.52 hrs, Volume= 1.416 af
Primary = 3.78 cfs @ 12.45 hrs, Volume= 0.220 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 72.86' @ 12.45 hrs Surf.Area= 10,872 sf Storage= 22,215 cf
Flood Elev= 75.50' Surf.Area= 10,872 sf Storage= 30,208 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 64.6 min (842.5 - 777.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	69.50'	16,102 cf	**83.25'W x 130.60'L x 5.00'H Field A** 54,362 cf Overall - 14,106 cf Embedded = 40,256 cf x 40.0% Voids
#2A	71.00'	14,106 cf	**ADS_StormTech SC-740** x 306 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 17 rows
		30,208 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	71.95'	**24.0" Round Culvert** L= 205.0' CPP, end-section conforming to fill, Ke= 0.500

Inlet / Outlet Invert= 71.95' / 70.90' S= 0.0051 '/' Cc= 0.900
n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2 Discarded 69.50' **7.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.76 cfs @ 11.52 hrs HW=69.57' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 1.76 cfs)

Primary OutFlow Max=3.77 cfs @ 12.45 hrs HW=72.86' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Barrel Controls 3.77 cfs @ 3.98 fps)

Summary for Link PA-1: Point of Analysis 1

Inflow Area = 10.666 ac, 87.70% Impervious, Inflow Depth > 2.96" for 10-YR event
Inflow = 32.01 cfs @ 12.10 hrs, Volume= 2.634 af
Primary = 32.01 cfs @ 12.10 hrs, Volume= 2.634 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Summary for Link PA-2: Point of Analysis 2

Inflow Area = 0.285 ac, 0.00% Impervious, Inflow Depth > 1.06" for 10-YR event
Inflow = 0.32 cfs @ 12.08 hrs, Volume= 0.025 af
Primary = 0.32 cfs @ 12.08 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Summary for Link PA-3: Ponit of Analysis 3

Inflow Area = 0.159 ac, 49.82% Impervious, Inflow Depth > 2.63" for 10-YR event
Inflow = 0.51 cfs @ 12.07 hrs, Volume= 0.035 af
Primary = 0.51 cfs @ 12.07 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Summary for Link PA-4: Point of Analysis 4

Inflow Area = 5.827 ac, 82.66% Impervious, Inflow Depth > 1.03" for 10-YR event
Inflow = 5.07 cfs @ 12.40 hrs, Volume= 0.498 af
Primary = 5.07 cfs @ 12.40 hrs, Volume= 0.498 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 PRE 1.0: PRE 1.0 Runoff Area=266,042 sf 89.96% Impervious Runoff Depth>5.52"
Flow Length=800' Tc=5.8 min CN=94 Runoff=36.18 cfs 2.810 af

Subcatchment PRE 1.1: PRE 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>5.29"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=26.58 cfs 2.011 af

Subcatchment PRE 2.0: PRE 2.0 Runoff Area=12,433 sf 0.00% Impervious Runoff Depth>1.82"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.60 cfs 0.043 af

Subcatchment PRE 3.0: PRE 3.0 Runoff Area=6,909 sf 49.82% Impervious Runoff Depth>3.78"
Flow Length=454' Tc=4.6 min CN=78 Runoff=0.73 cfs 0.050 af

Subcatchment PRE 4.0: PRE 4.0 Runoff Area=208,187 sf 87.10% Impervious Runoff Depth>5.41"
Flow Length=528' Tc=5.5 min CN=93 Runoff=28.27 cfs 2.153 af

Subcatchment PRE 4.1: PRE 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>4.41"
Flow Length=769' Tc=7.8 min CN=84 Runoff=4.96 cfs 0.385 af

Pond POND 1.0: Underground Infiltration Peak Elev=74.56' Storage=23,305 cf Inflow=36.18 cfs 2.810 af
Discarded=0.95 cfs 1.184 af Primary=21.87 cfs 1.626 af Outflow=22.82 cfs 2.810 af

Pond POND 4.0: Underground Infiltration Peak Elev=73.51' Storage=25,919 cf Inflow=28.27 cfs 2.153 af
Discarded=1.76 cfs 1.646 af Primary=9.52 cfs 0.507 af Outflow=11.28 cfs 2.153 af

Link PA-1: Point of Analysis 1 Inflow=41.37 cfs 3.637 af
Primary=41.37 cfs 3.637 af

Link PA-2: Point of Analysis 2 Inflow=0.60 cfs 0.043 af
Primary=0.60 cfs 0.043 af

Link PA-3: Ponit of Analysis 3 Inflow=0.73 cfs 0.050 af
Primary=0.73 cfs 0.050 af

Link PA-4: Point of Analysis 4 Inflow=12.16 cfs 0.892 af
Primary=12.16 cfs 0.892 af

Total Runoff Area = 16.938 ac Runoff Volume = 7.452 af Average Runoff Depth = 5.28"
15.87% Pervious = 2.688 ac 84.13% Impervious = 14.250 ac

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 PRE 1.0: PRE 1.0 Runoff Area=266,042 sf 89.96% Impervious Runoff Depth>6.74"
Flow Length=800' Tc=5.8 min CN=94 Runoff=43.70 cfs 3.431 af

Subcatchment PRE 1.1: PRE 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>6.51"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=32.28 cfs 2.471 af

Subcatchment PRE 2.0: PRE 2.0 Runoff Area=12,433 sf 0.00% Impervious Runoff Depth>2.62"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.89 cfs 0.062 af

Subcatchment PRE 3.0: PRE 3.0 Runoff Area=6,909 sf 49.82% Impervious Runoff Depth>4.89"
Flow Length=454' Tc=4.6 min CN=78 Runoff=0.93 cfs 0.065 af

Subcatchment PRE 4.0: PRE 4.0 Runoff Area=208,187 sf 87.10% Impervious Runoff Depth>6.62"
Flow Length=528' Tc=5.5 min CN=93 Runoff=34.24 cfs 2.638 af

Subcatchment PRE 4.1: PRE 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>5.57"
Flow Length=769' Tc=7.8 min CN=84 Runoff=6.20 cfs 0.487 af

Pond POND 1.0: Underground Infiltration Peak Elev=75.35' Storage=25,214 cf Inflow=43.70 cfs 3.431 af
Discarded=0.95 cfs 1.304 af Primary=32.81 cfs 2.126 af Outflow=33.76 cfs 3.430 af

Pond POND 4.0: Underground Infiltration Peak Elev=74.28' Storage=29,236 cf Inflow=34.24 cfs 2.638 af
Discarded=1.76 cfs 1.834 af Primary=15.96 cfs 0.804 af Outflow=17.73 cfs 2.638 af

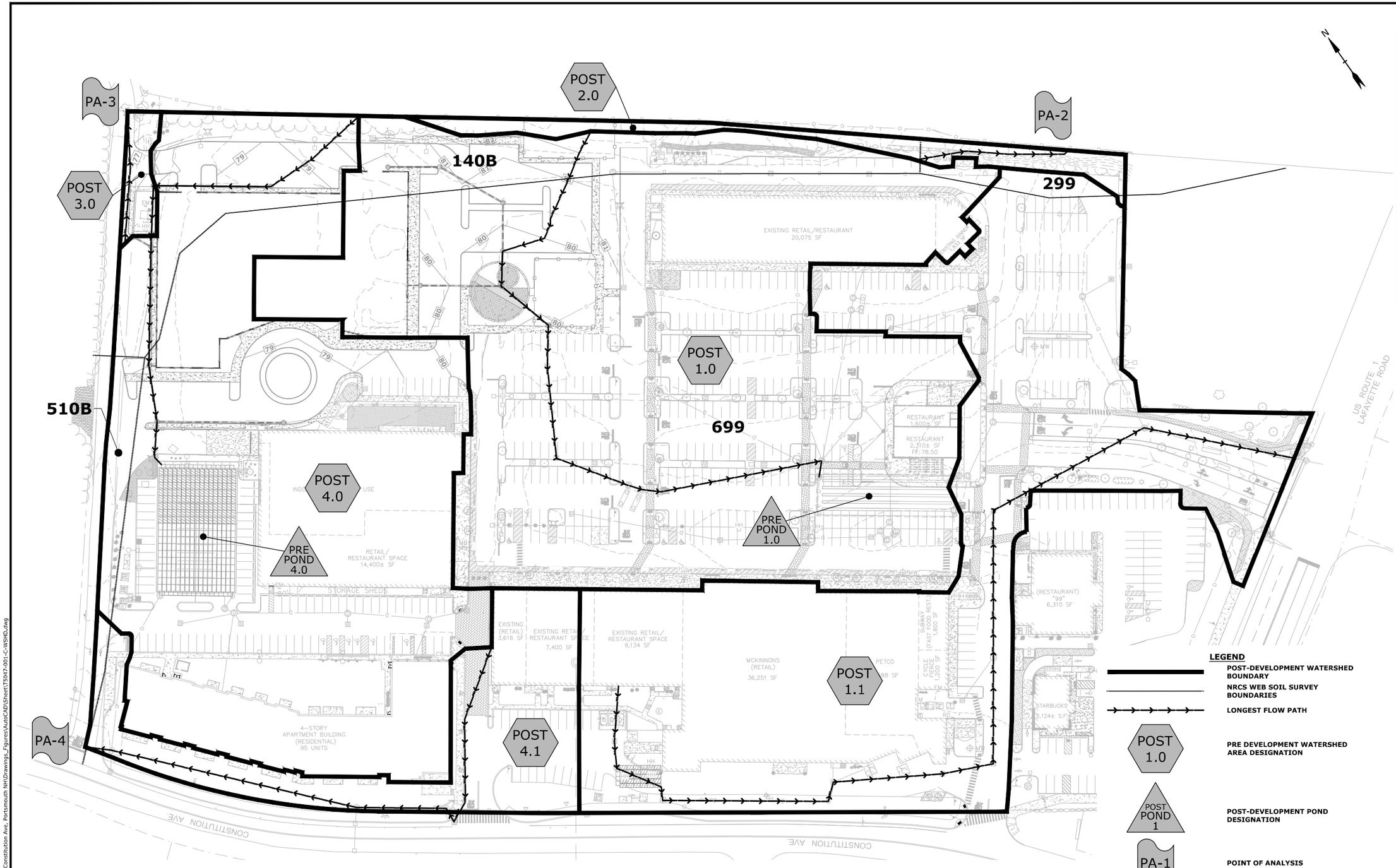
Link PA-1: Point of Analysis 1 Inflow=61.24 cfs 4.598 af
Primary=61.24 cfs 4.598 af

Link PA-2: Point of Analysis 2 Inflow=0.89 cfs 0.062 af
Primary=0.89 cfs 0.062 af

Link PA-3: Ponit of Analysis 3 Inflow=0.93 cfs 0.065 af
Primary=0.93 cfs 0.065 af

Link PA-4: Point of Analysis 4 Inflow=20.82 cfs 1.291 af
Primary=20.82 cfs 1.291 af

Total Runoff Area = 16.938 ac Runoff Volume = 9.153 af Average Runoff Depth = 6.49"
15.87% Pervious = 2.688 ac 84.13% Impervious = 14.250 ac



LEGEND

- POST-DEVELOPMENT WATERSHED BOUNDARY
- NRCS WEB SOIL SURVEY BOUNDARIES
- LONGEST FLOW PATH
- POST 1.0 — PRE DEVELOPMENT WATERSHED AREA DESIGNATION
- POST POND 1 — POST-DEVELOPMENT POND DESIGNATION
- PA-1 — POINT OF ANALYSIS

WEB SOIL SURVEY HYDROLOGIC SOIL GROUP (HSG) LEGEND

SYMBOL	SOIL TYPE, SLOPE RATING	HSG
140B	CHATFIELD-HOLLIS-CANTON COMPLEX, 3 TO 8 PERCENT SLOPES	B
299	UDORTHENTS	N/A
510B	HOOSIC GRAVELLY FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	A
699	URBAN LAND	N/A

Tighe&Bond

0 50' 100'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
C	10/18/2021	TAC Submission
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

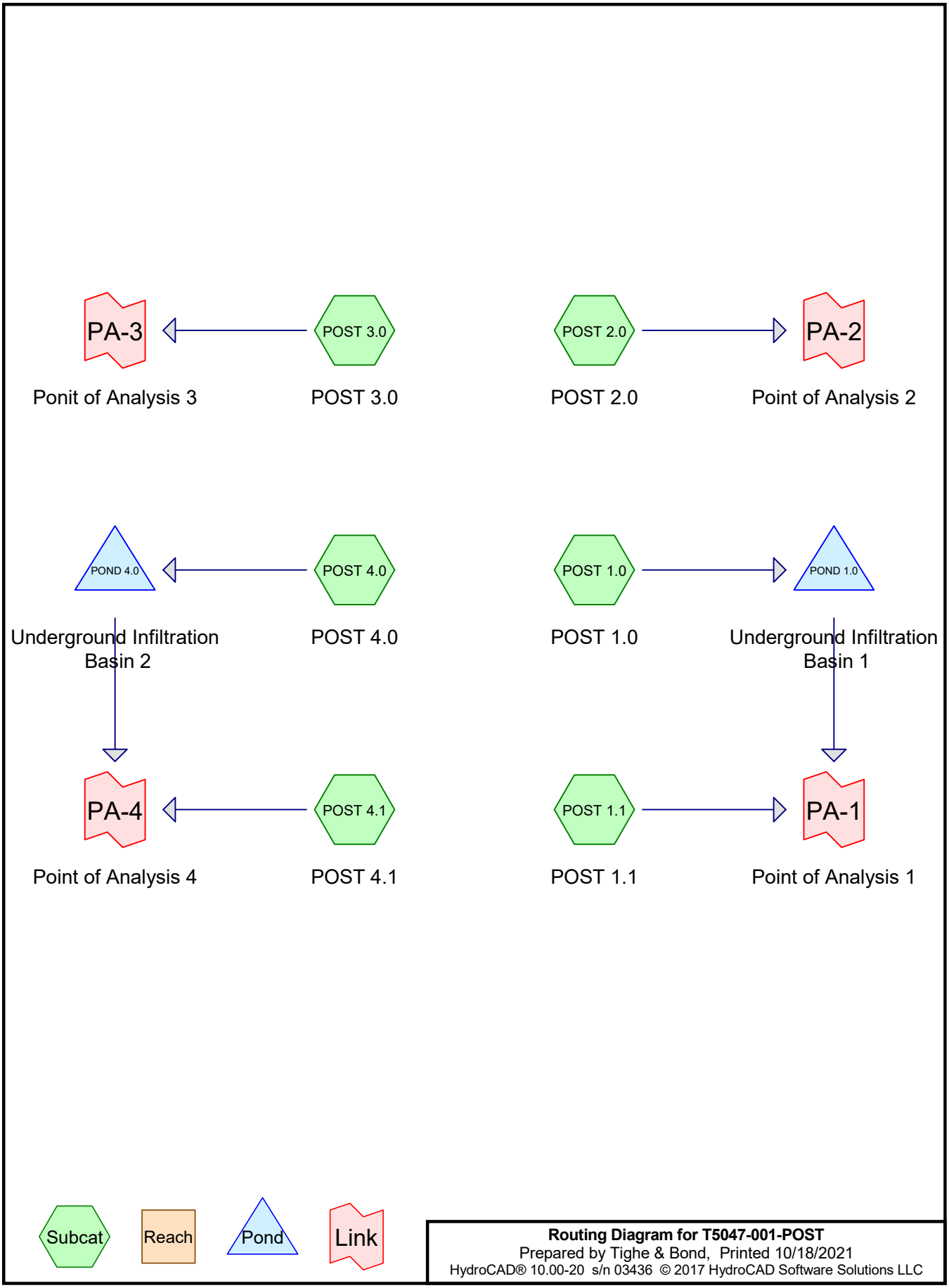
PROJECT NO:	T-5047-001
DATE:	August 5, 2021
FILE:	T5047-001-C-WSHD.DWG
DRAWN BY:	NAH
CHECKED BY:	NAH/PMC
APPROVED BY:	BLM

POST DEVELOPMENT WATERSHED PLAN

SCALE: AS SHOWN

C-802

Last Saved: 10/14/2021
Plotted: Oct 15, 2021-10:15am By: NAHansen
Tighe & Bond: J:\TYT5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-WSHD.dwg



Routing Diagram for T5047-001-POST
Prepared by Tighe & Bond, Printed 10/18/2021

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.037	39	>75% Grass cover, Good, HSG A (POST 4.0)
2.452	61	>75% Grass cover, Good, HSG B (POST 1.0, POST 1.1, POST 2.0, POST 3.0, POST 4.0, POST 4.1)
0.151	98	Paved parking, HSG A (POST 4.0, POST 4.1)
9.403	98	Paved parking, HSG B (POST 1.0, POST 1.1, POST 3.0, POST 4.0, POST 4.1)
4.611	98	Roofs, HSG B (POST 1.0, POST 1.1, POST 4.0, POST 4.1)
0.283	55	Woods, Good, HSG B (POST 1.0, POST 2.0, POST 4.0)
16.938	**92**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.188	HSG A	POST 4.0, POST 4.1
16.750	HSG B	POST 1.0, POST 1.1, POST 2.0, POST 3.0, POST 4.0, POST 4.1
0.000	HSG C	
0.000	HSG D	
0.000	Other	
16.938		**TOTAL AREA**

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 POST 1.0: POST 1.0 Runoff Area=268,201 sf 88.24% Impervious Runoff Depth>2.58"
Flow Length=681' Tc=6.9 min CN=94 Runoff=17.12 cfs 1.324 af

Subcatchment POST 1.1: POST 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>2.39"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=12.51 cfs 0.907 af

Subcatchment POST 2.0: POST 2.0 Runoff Area=12,353 sf 0.00% Impervious Runoff Depth>0.32"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.05 cfs 0.008 af

Subcatchment POST 3.0: POST 3.0 Runoff Area=4,404 sf 48.18% Impervious Runoff Depth>1.37"
Flow Length=139' Tc=2.0 min CN=79 Runoff=0.18 cfs 0.012 af

Subcatchment POST 4.0: POST 4.0 Runoff Area=208,613 sf 87.05% Impervious Runoff Depth>2.48"
Flow Length=535' Tc=6.4 min CN=93 Runoff=13.18 cfs 0.991 af

Subcatchment POST 4.1: POST 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>1.71"
Flow Length=769' Tc=7.8 min CN=84 Runoff=1.96 cfs 0.150 af

Pond POND 1.0: Underground Infiltration Peak Elev=72.08' Storage=12,602 cf Inflow=17.12 cfs 1.324 af
Discarded=0.95 cfs 0.781 af Primary=7.65 cfs 0.543 af Outflow=8.60 cfs 1.324 af

Pond POND 4.0: Underground Infiltration Peak Elev=71.78' Storage=13,557 cf Inflow=13.18 cfs 0.991 af
Discarded=1.76 cfs 0.991 af Primary=0.00 cfs 0.000 af Outflow=1.76 cfs 0.991 af

Link PA-1: Point of Analysis 1 Inflow=16.74 cfs 1.450 af
Primary=16.74 cfs 1.450 af

Link PA-2: Point of Analysis 2 Inflow=0.05 cfs 0.008 af
Primary=0.05 cfs 0.008 af

Link PA-3: Ponit of Analysis 3 Inflow=0.18 cfs 0.012 af
Primary=0.18 cfs 0.012 af

Link PA-4: Point of Analysis 4 Inflow=1.96 cfs 0.150 af
Primary=1.96 cfs 0.150 af

Total Runoff Area = 16.938 ac Runoff Volume = 3.390 af Average Runoff Depth = 2.40"
16.37% Pervious = 2.773 ac 83.63% Impervious = 14.165 ac

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 POST 1.0: POST 1.0 Runoff Area=268,201 sf 88.24% Impervious Runoff Depth>4.22"
Flow Length=681' Tc=6.9 min CN=94 Runoff=27.21 cfs 2.163 af

Subcatchment POST 1.1: POST 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>4.00"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=20.41 cfs 1.519 af

Subcatchment POST 2.0: POST 2.0 Runoff Area=12,353 sf 0.00% Impervious Runoff Depth>1.06"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.31 cfs 0.025 af

Subcatchment POST 3.0: POST 3.0 Runoff Area=4,404 sf 48.18% Impervious Runoff Depth>2.72"
Flow Length=139' Tc=2.0 min CN=79 Runoff=0.36 cfs 0.023 af

Subcatchment POST 4.0: POST 4.0 Runoff Area=208,613 sf 87.05% Impervious Runoff Depth>4.11"
Flow Length=535' Tc=6.4 min CN=93 Runoff=21.22 cfs 1.639 af

Subcatchment POST 4.1: POST 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>3.18"
Flow Length=769' Tc=7.8 min CN=84 Runoff=3.62 cfs 0.278 af

Pond POND 1.0: Underground Infiltration Peak Elev=73.45' Storage=18,982 cf Inflow=27.21 cfs 2.163 af
Discarded=0.95 cfs 1.034 af Primary=14.15 cfs 1.129 af Outflow=15.10 cfs 2.163 af

Pond POND 4.0: Underground Infiltration Peak Elev=72.87' Storage=22,243 cf Inflow=21.22 cfs 1.639 af
Discarded=1.76 cfs 1.417 af Primary=3.81 cfs 0.222 af Outflow=5.57 cfs 1.639 af

Link PA-1: Point of Analysis 1 Inflow=31.31 cfs 2.648 af
Primary=31.31 cfs 2.648 af

Link PA-2: Point of Analysis 2 Inflow=0.31 cfs 0.025 af
Primary=0.31 cfs 0.025 af

Link PA-3: Ponit of Analysis 3 Inflow=0.36 cfs 0.023 af
Primary=0.36 cfs 0.023 af

Link PA-4: Point of Analysis 4 Inflow=5.05 cfs 0.500 af
Primary=5.05 cfs 0.500 af

Total Runoff Area = 16.938 ac Runoff Volume = 5.647 af Average Runoff Depth = 4.00"
16.37% Pervious = 2.773 ac 83.63% Impervious = 14.165 ac

Summary for Subcatchment POST 1.0: POST 1.0

Runoff = 27.21 cfs @ 12.10 hrs, Volume= 2.163 af, Depth> 4.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
43,904	98	Roofs, HSG B
2,171	55	Woods, Good, HSG B
29,357	61	>75% Grass cover, Good, HSG B
192,769	98	Paved parking, HSG B
268,201	94	Weighted Average
31,528		11.76% Pervious Area
236,673		88.24% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.9	32	0.0200	0.14		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.24"
0.9	135	0.0150	2.49		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.5	101	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.1	36	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.4	93	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.3	78	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.0	8	0.5000	42.03	74.28	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	18	0.0050	4.20	7.43	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.6	167	0.0060	4.60	8.14	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.013 Corrugated PE, smooth interior
0.1	13	0.0010	2.28	7.15	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013 Corrugated PE, smooth interior
6.9	681	Total			

Summary for Subcatchment POST 1.1: POST 1.1

Runoff = 20.41 cfs @ 12.08 hrs, Volume= 1.519 af, Depth> 4.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
61,623	98	Roofs, HSG B
30,457	61	>75% Grass cover, Good, HSG B
106,509	98	Paved parking, HSG B
198,589	92	Weighted Average
30,457		15.34% Pervious Area
168,132		84.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.7	50	0.0200	1.20		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.24"
0.5	110	0.0050	4.03	4.95	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.012 Concrete pipe, finished
0.4	71	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.8	157	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013
0.6	130	0.0050	3.72	4.57	**Pipe Channel,** 15.0" Round Area= 1.2 sf Perim= 3.9' r= 0.31' n= 0.013 Corrugated PE, smooth interior
0.4	126	0.0055	4.78	8.44	**Pipe Channel,** 18.0" Round Area= 1.8 sf Perim= 4.7' r= 0.38' n= 0.012 Concrete pipe, finished
2.2	1,152	0.0150	8.82	27.71	**Pipe Channel,** 24.0" Round Area= 3.1 sf Perim= 6.3' r= 0.50' n= 0.013
5.6	1,796	Total			

Summary for Subcatchment POST 2.0: POST 2.0

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.31 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 1.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
8,221	55	Woods, Good, HSG B
4,132	61	>75% Grass cover, Good, HSG B
12,353	57	Weighted Average
12,353		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	20	0.0200	0.12		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.24"
0.2	29	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.0	9	0.2200	7.55		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	37	0.1091	5.32		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.1	33	0.0610	3.98		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.5	76	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.3	90	0.0900	4.83		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
3.9	294	Total			

Summary for Subcatchment POST 3.0: POST 3.0

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.36 cfs @ 12.04 hrs, Volume= 0.023 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
2,282	61	>75% Grass cover, Good, HSG B
2,122	98	Paved parking, HSG B
4,404	79	Weighted Average
2,282		51.82% Pervious Area
2,122		48.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.5	75	0.0060	0.81		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.24"
0.5	64	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.0	139	Total			

Summary for Subcatchment POST 4.0: POST 4.0

Runoff = 21.22 cfs @ 12.09 hrs, Volume= 1.639 af, Depth> 4.11"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
1,614	39	>75% Grass cover, Good, HSG A
5,333	98	Paved parking, HSG A
86,084	98	Roofs, HSG B
1,949	55	Woods, Good, HSG B
23,448	61	>75% Grass cover, Good, HSG B
90,185	98	Paved parking, HSG B
208,613	93	Weighted Average
27,011		12.95% Pervious Area
181,602		87.05% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.6	41	0.0400	0.19		**Sheet Flow,** Grass: Short n= 0.150 P2= 3.24"
0.6	76	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
2.2	418	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
6.4	535	Total			

Summary for Subcatchment POST 4.1: POST 4.1

Runoff = 3.62 cfs @ 12.11 hrs, Volume= 0.278 af, Depth> 3.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Type III 24-hr 10-YR Rainfall=4.91"

Area (sf)	CN	Description
1,234	98	Paved parking, HSG A
9,247	98	Roofs, HSG B
17,142	61	>75% Grass cover, Good, HSG B
18,017	98	Paved parking, HSG B
45,640	84	Weighted Average
17,142		37.56% Pervious Area
28,498		62.44% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.6	100	0.0100	1.05		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 3.24"
0.0	5	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
0.4	75	0.0050	3.21	2.52	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.013 Corrugated PE, smooth interior
0.4	84	0.0050	3.47	2.73	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
2.6	325	0.0200	2.12		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
0.5	75	0.0030	2.69	2.11	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Concrete pipe, finished
2.3	105	0.0025	0.75		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
7.8	769	Total			

Summary for Pond POND 1.0: Underground Infiltration Basin 1

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=69)

Inflow Area = 6.157 ac, 88.24% Impervious, Inflow Depth > 4.22" for 10-YR event
Inflow = 27.21 cfs @ 12.10 hrs, Volume= 2.163 af
Outflow = 15.10 cfs @ 12.23 hrs, Volume= 2.163 af, Atten= 44%, Lag= 8.3 min
Discarded = 0.95 cfs @ 9.96 hrs, Volume= 1.034 af
Primary = 14.15 cfs @ 12.23 hrs, Volume= 1.129 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 73.45' @ 12.23 hrs Surf.Area= 5,874 sf Storage= 18,982 cf
Flood Elev= 75.65' Surf.Area= 5,874 sf Storage= 25,909 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 22.5 min (796.8 - 774.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	68.65'	10,139 cf	**44.50'W x 132.00'L x 7.00'H Field A** 41,118 cf Overall - 15,770 cf Embedded = 25,348 cf x 40.0% Voids
#2A	69.65'	15,770 cf	**CMP Round- 60** x 36 Inside #1 Effective Size= 60.0"W x 60.0"H => 19.59 sf x 20.00'L = 391.8 cf Overall Size= 60.0"W x 60.0"H x 20.00'L 6 Rows of 6 Chambers 42.50' Header x 19.59 sf x 2 = 1,665.2 cf Inside
		25,909 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	69.65'	**24.0" Round Culvert** L= 30.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.65' / 69.55' S= 0.0033 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#2	Device 1	69.65'	**12.0" Vert. Orifice/Grate** C= 0.600
#3	Device 1	71.30'	**15.0" Vert. Orifice/Grate** C= 0.600
#4	Device 1	74.25'	**8.0' long x 1.85' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Discarded	68.65'	**7.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.95 cfs @ 9.96 hrs HW=68.73' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.95 cfs)

Primary OutFlow Max=14.14 cfs @ 12.23 hrs HW=73.44' TW=0.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 14.14 cfs of 25.27 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 6.86 cfs @ 8.73 fps)
  ├**3=Orifice/Grate** (Orifice Controls 7.27 cfs @ 5.93 fps)
  └**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond POND 4.0: Underground Infiltration Basin 2

Inflow Area = 4.789 ac, 87.05% Impervious, Inflow Depth > 4.11" for 10-YR event
Inflow = 21.22 cfs @ 12.09 hrs, Volume= 1.639 af
Outflow = 5.57 cfs @ 12.46 hrs, Volume= 1.639 af, Atten= 74%, Lag= 22.1 min
Discarded = 1.76 cfs @ 11.52 hrs, Volume= 1.417 af
Primary = 3.81 cfs @ 12.46 hrs, Volume= 0.222 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs
Peak Elev= 72.87' @ 12.46 hrs Surf.Area= 10,872 sf Storage= 22,243 cf
Flood Elev= 75.50' Surf.Area= 10,872 sf Storage= 30,208 cf

Plug-Flow detention time= 64.7 min calculated for 1.636 af (100% of inflow)
Center-of-Mass det. time= 64.6 min (843.2 - 778.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	69.50'	16,102 cf	**83.25'W x 130.60'L x 5.00'H Field A** 54,362 cf Overall - 14,106 cf Embedded = 40,256 cf x 40.0% Voids
#2A	71.00'	14,106 cf	**ADS_StormTech SC-740** x 306 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 17 rows
		30,208 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	71.95'	**24.0" Round Culvert** L= 205.0' CPP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 71.95' / 70.90' S= 0.0051 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

#2 Discarded 69.50' **7.000 in/hr Exfiltration over Surface area** Phase-In= 0.01'

Discarded OutFlow Max=1.76 cfs @ 11.52 hrs HW=69.56' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 1.76 cfs)

Primary OutFlow Max=3.79 cfs @ 12.46 hrs HW=72.86' TW=0.00' (Dynamic Tailwater)
↑—**1=Culvert** (Barrel Controls 3.79 cfs @ 3.99 fps)

Summary for Link PA-1: Point of Analysis 1

Inflow Area = 10.716 ac, 86.72% Impervious, Inflow Depth > 2.96" for 10-YR event
Inflow = 31.31 cfs @ 12.10 hrs, Volume= 2.648 af
Primary = 31.31 cfs @ 12.10 hrs, Volume= 2.648 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Summary for Link PA-2: Point of Analysis 2

Inflow Area = 0.284 ac, 0.00% Impervious, Inflow Depth > 1.06" for 10-YR event
Inflow = 0.31 cfs @ 12.08 hrs, Volume= 0.025 af
Primary = 0.31 cfs @ 12.08 hrs, Volume= 0.025 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Summary for Link PA-3: Ponit of Analysis 3

Inflow Area = 0.101 ac, 48.18% Impervious, Inflow Depth > 2.72" for 10-YR event
Inflow = 0.36 cfs @ 12.04 hrs, Volume= 0.023 af
Primary = 0.36 cfs @ 12.04 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Summary for Link PA-4: Point of Analysis 4

Inflow Area = 5.837 ac, 82.63% Impervious, Inflow Depth > 1.03" for 10-YR event
Inflow = 5.05 cfs @ 12.41 hrs, Volume= 0.500 af
Primary = 5.05 cfs @ 12.41 hrs, Volume= 0.500 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.04 hrs

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 POST 1.0: POST 1.0 Runoff Area=268,201 sf 88.24% Impervious Runoff Depth>5.52"
Flow Length=681' Tc=6.9 min CN=94 Runoff=35.09 cfs 2.832 af

Subcatchment POST 1.1: POST 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>5.29"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=26.58 cfs 2.011 af

Subcatchment POST 2.0: POST 2.0 Runoff Area=12,353 sf 0.00% Impervious Runoff Depth>1.82"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.59 cfs 0.043 af

Subcatchment POST 3.0: POST 3.0 Runoff Area=4,404 sf 48.18% Impervious Runoff Depth>3.89"
Flow Length=139' Tc=2.0 min CN=79 Runoff=0.52 cfs 0.033 af

Subcatchment POST 4.0: POST 4.0 Runoff Area=208,613 sf 87.05% Impervious Runoff Depth>5.41"
Flow Length=535' Tc=6.4 min CN=93 Runoff=27.50 cfs 2.157 af

Subcatchment POST 4.1: POST 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>4.41"
Flow Length=769' Tc=7.8 min CN=84 Runoff=4.96 cfs 0.385 af

Pond POND 1.0: Underground Infiltration Peak Elev=74.58' Storage=23,363 cf Inflow=35.09 cfs 2.832 af
Discarded=0.95 cfs 1.187 af Primary=22.36 cfs 1.645 af Outflow=23.32 cfs 2.832 af

Pond POND 4.0: Underground Infiltration Peak Elev=73.52' Storage=25,943 cf Inflow=27.50 cfs 2.157 af
Discarded=1.76 cfs 1.647 af Primary=9.57 cfs 0.510 af Outflow=11.33 cfs 2.157 af

Link PA-1: Point of Analysis 1 Inflow=40.60 cfs 3.655 af
Primary=40.60 cfs 3.655 af

Link PA-2: Point of Analysis 2 Inflow=0.59 cfs 0.043 af
Primary=0.59 cfs 0.043 af

Link PA-3: Ponit of Analysis 3 Inflow=0.52 cfs 0.033 af
Primary=0.52 cfs 0.033 af

Link PA-4: Point of Analysis 4 Inflow=12.07 cfs 0.895 af
Primary=12.07 cfs 0.895 af

Total Runoff Area = 16.938 ac Runoff Volume = 7.461 af Average Runoff Depth = 5.29"
16.37% Pervious = 2.773 ac 83.63% Impervious = 14.165 ac

Time span=0.00-24.00 hrs, dt=0.04 hrs, 601 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 POST 1.0: POST 1.0 Runoff Area=268,201 sf 88.24% Impervious Runoff Depth>6.74"
Flow Length=681' Tc=6.9 min CN=94 Runoff=42.39 cfs 3.458 af

Subcatchment POST 1.1: POST 1.1 Runoff Area=198,589 sf 84.66% Impervious Runoff Depth>6.51"
Flow Length=1,796' Tc=5.6 min CN=92 Runoff=32.28 cfs 2.471 af

Subcatchment POST 2.0: POST 2.0 Runoff Area=12,353 sf 0.00% Impervious Runoff Depth>2.62"
Flow Length=294' Tc=3.9 min CN=57 Runoff=0.89 cfs 0.062 af

Subcatchment POST 3.0: POST 3.0 Runoff Area=4,404 sf 48.18% Impervious Runoff Depth>5.01"
Flow Length=139' Tc=2.0 min CN=79 Runoff=0.66 cfs 0.042 af

Subcatchment POST 4.0: POST 4.0 Runoff Area=208,613 sf 87.05% Impervious Runoff Depth>6.62"
Flow Length=535' Tc=6.4 min CN=93 Runoff=33.31 cfs 2.643 af

Subcatchment POST 4.1: POST 4.1 Runoff Area=45,640 sf 62.44% Impervious Runoff Depth>5.57"
Flow Length=769' Tc=7.8 min CN=84 Runoff=6.20 cfs 0.487 af

Pond POND 1.0: Underground Infiltration Peak Elev=75.17' Storage=24,789 cf Inflow=42.39 cfs 3.458 af
Discarded=0.95 cfs 1.308 af Primary=32.19 cfs 2.150 af Outflow=33.15 cfs 3.458 af

Pond POND 4.0: Underground Infiltration Peak Elev=74.26' Storage=29,170 cf Inflow=33.31 cfs 2.643 af
Discarded=1.76 cfs 1.835 af Primary=15.87 cfs 0.808 af Outflow=17.63 cfs 2.643 af

Link PA-1: Point of Analysis 1 Inflow=59.73 cfs 4.621 af
Primary=59.73 cfs 4.621 af

Link PA-2: Point of Analysis 2 Inflow=0.89 cfs 0.062 af
Primary=0.89 cfs 0.062 af

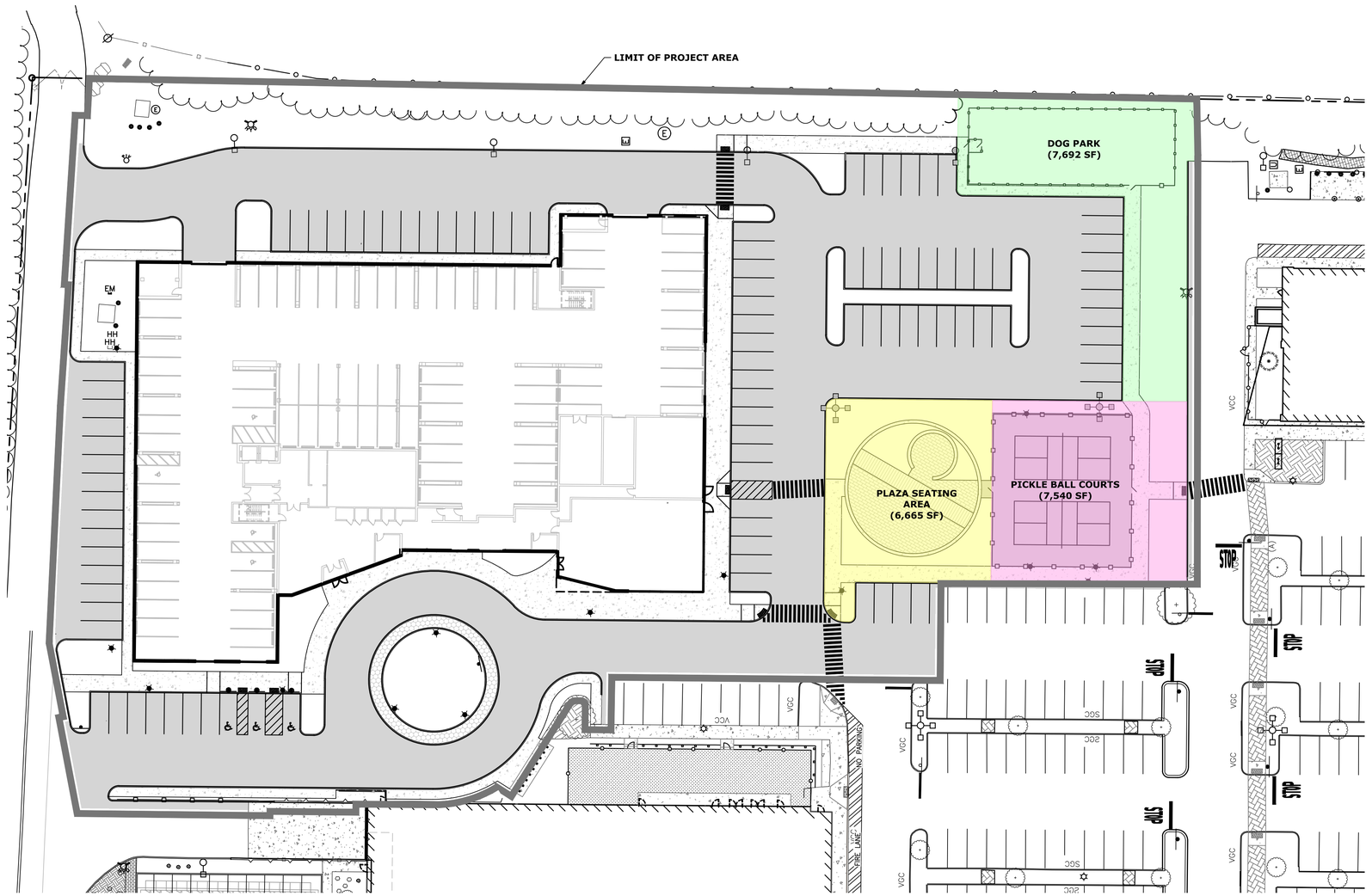
Link PA-3: Ponit of Analysis 3 Inflow=0.66 cfs 0.042 af
Primary=0.66 cfs 0.042 af

Link PA-4: Point of Analysis 4 Inflow=20.14 cfs 1.294 af
Primary=20.14 cfs 1.294 af

Total Runoff Area = 16.938 ac Runoff Volume = 9.163 af Average Runoff Depth = 6.49"
16.37% Pervious = 2.773 ac 83.63% Impervious = 14.165 ac

PROPOSED MULTI-FAMILY DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE

COMMUNITY SPACE EXHIBIT



COMMUNITY OPEN SPACE:		REQUIRED	PROVIDED
	DOG PARK COMMUNITY SPACE		7,692 SF
	PICKLEBALL COURTS COMMUNITY SPACE		7,540 SF
	PLAZA SEATING AREA COMMUNITY SPACE		6,665 SF
TOTAL PROJECT AREA: 150,350 SF COMMUNITY SPACE (10% OF TOTAL)		15,035 SF 10%	21,897 SF 14.6%

N

0 30' 60'

GRAPHIC SCALE

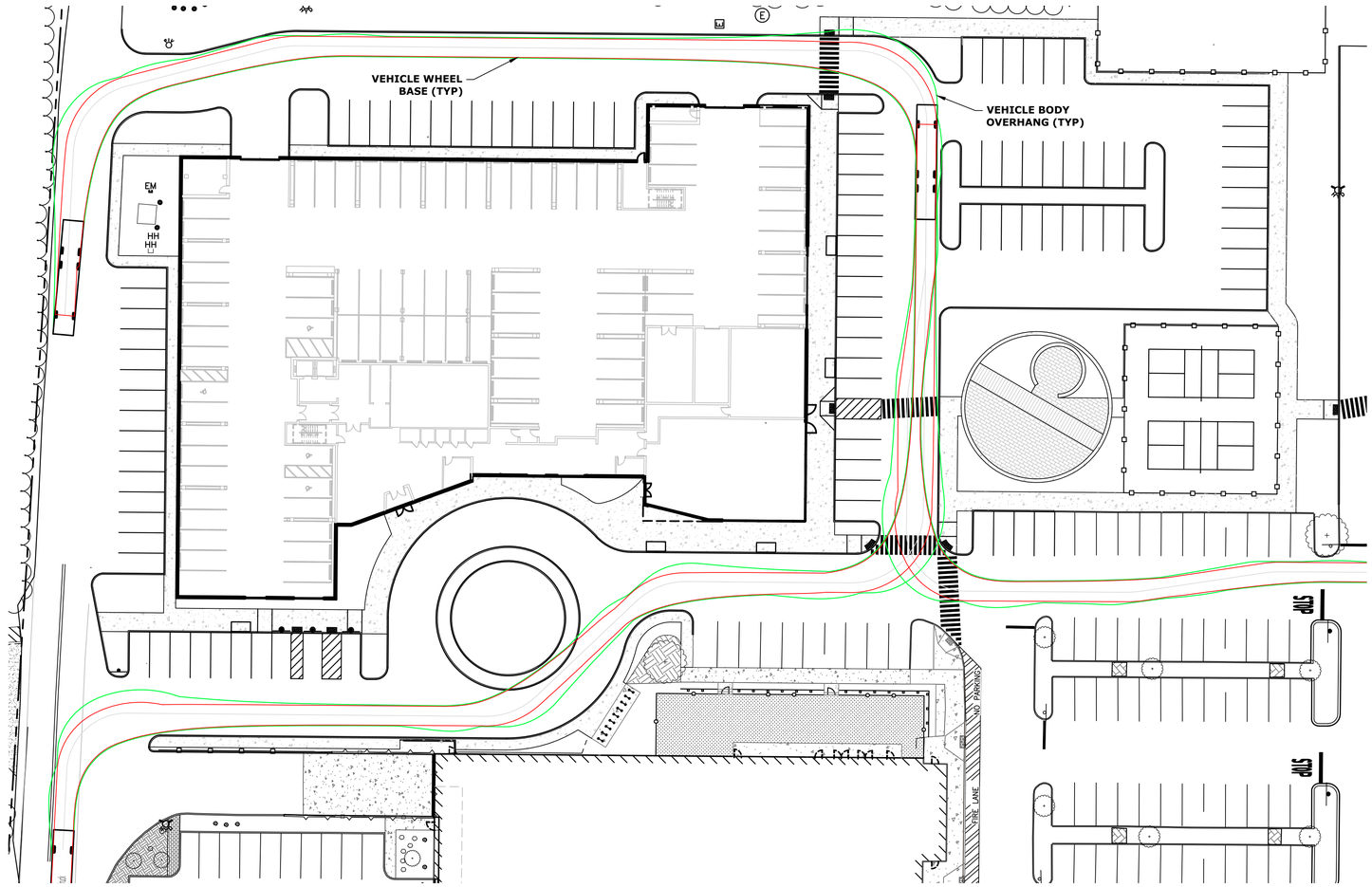
Tighe&Bond

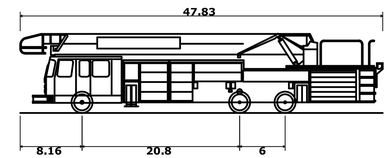
November 22, 2021
T5047-001-C-EXHIBIT.dwg

Last Save Date: November 17, 2021 10:55 AM By: NAHANSEN
Plot Date: Wednesday, November 17, 2021 Plotted By: Neil A. Hansen
Tbdi File Location: J:\T\5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-EXHIBIT.dwg Layout Tab: COMMUNITY

PROPOSED MULTI-FAMILY DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE

FIRE TRUCK TURNING EXHIBIT 1 of 2



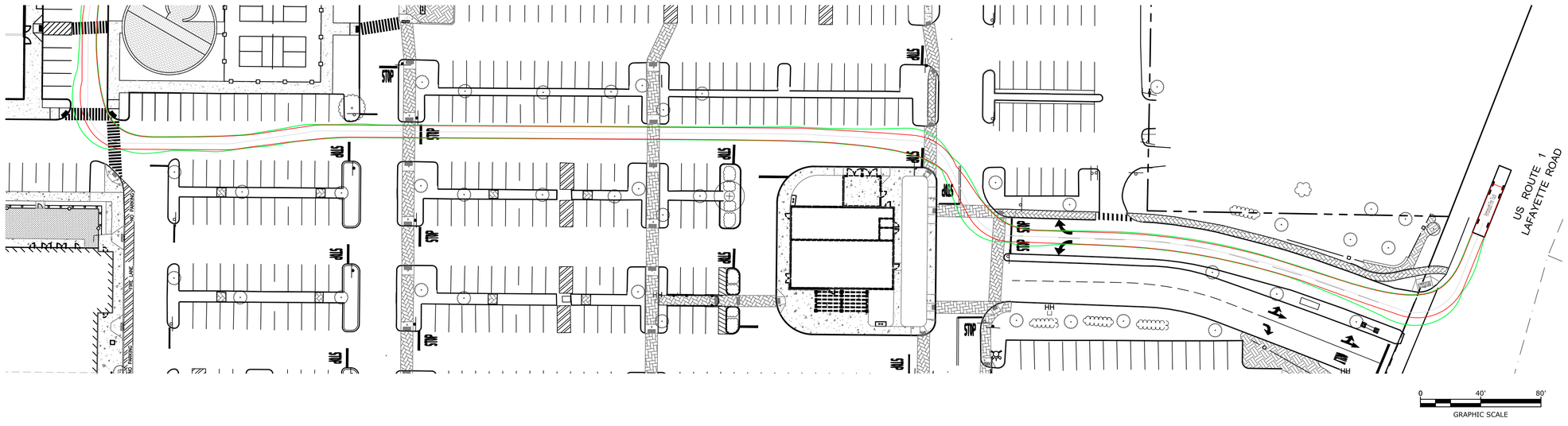


Portsmouth Fire Truck	
Overall Length	47.830ft
Overall Width	8.500ft
Overall Body Height	10.432ft
Min Body Ground Clearance	0.862ft
Track Width	8.000ft
Lock-to-lock time	6.00s
Max Steering Angle (Virtual)	38.00°

LEGEND

VEHICLE OVERHANG

VEHICLE WHEEL BASE



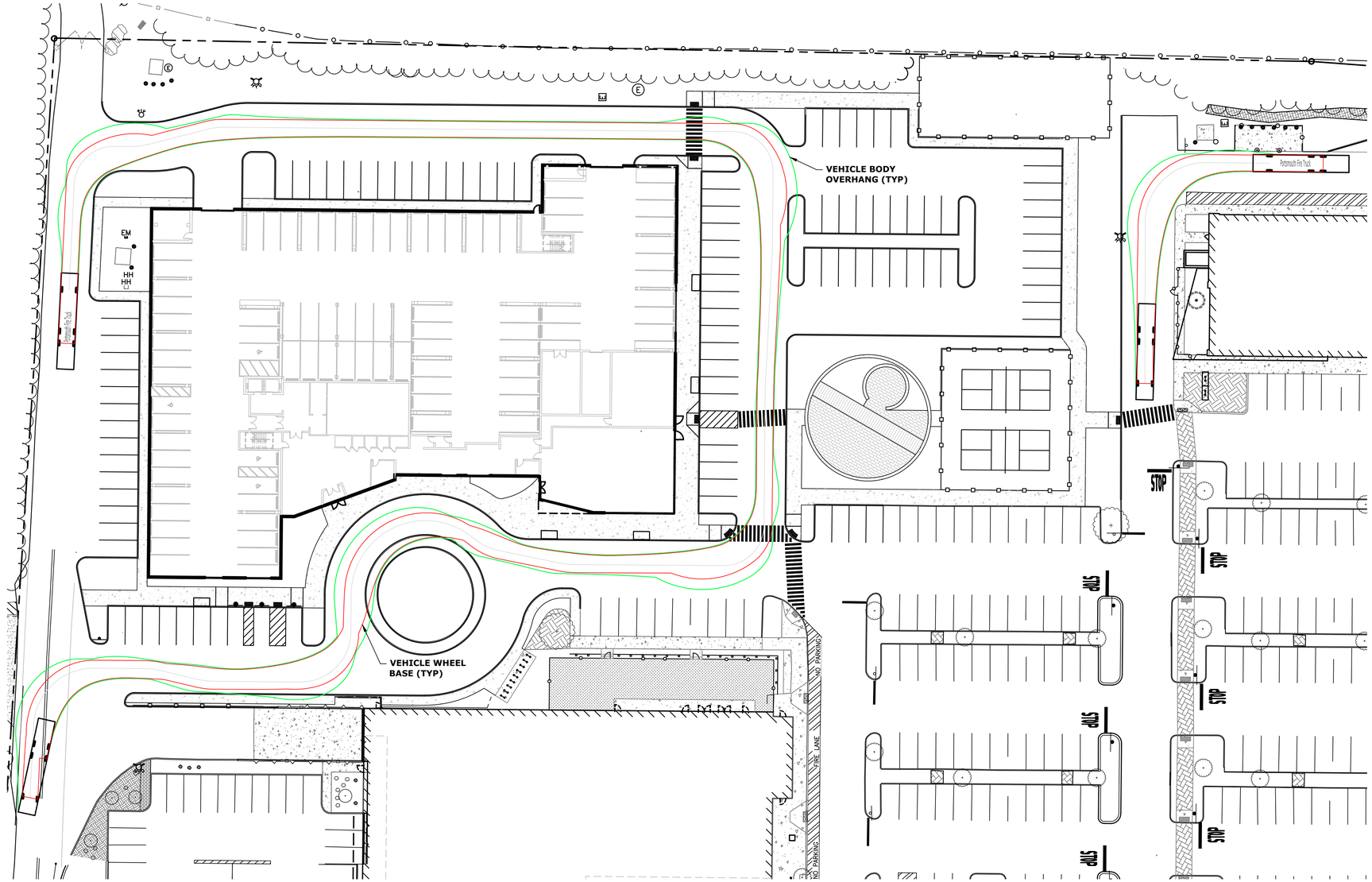
Tighe&Bond

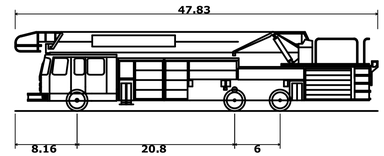
October 18, 2021
T5047-001-C-EXHIBIT.dwg

Last Save Date: October 14, 2021 1:58 PM By: NAHANSEN
Plot Date: Friday, October 15, 2021 Plotted By: Neil A. Hansen
TNB File Location: J:\T\T5047 Torrington Properties\000 Constitution Ave, Portsmouth NH\Drawings, Figures\AutoCAD\Sheet\T5047-001-C-EXHIBIT.dwg Layout Tab: FIRE 1

PROPOSED MULTI-FAMILY DEVELOPMENT
PORTSMOUTH, NEW HAMPSHIRE

FIRE TRUCK TURNING EXHIBIT 2 of 2





Portsmouth Fire Truck	
Overall Length	47.830ft
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LEGEND

VEHICLE OVERHANG

VEHICLE WHEEL BASE

N

0 30' 60'

GRAPHIC SCALE

Tighe&Bond

October 18, 2021
T5047-001-C-EXHIBIT.dwg

Last Save Date: October 14, 2021 1:58 PM By: NAHANSEN
Plot Date: Friday, October 15, 2021 Plotted By: Neil A. Hansen
Path/File Location: J:\T\5047 Torrington Properties\001 Constitution Ave, Portsmouth NH\Drawings_Figures\AutoCAD\Sheet\T5047-001-C-EXHIBIT.dwg Layout Tab: FIRE 2

Stephen G. Pernaw & Company, Inc.
P.O. Box 1721 • Concord, NH 03302
tel: (603) 731-8500 • fax: (866) 929-6094 • sgp@ pernaw.com
Transportation: Engineering • Planning • Design

M E M O R A N D U M

Ref: 2147A

To: Gregg Mikolaities, P.E.
August Consulting, PLLC

From: Stephen G. Pernaw, P.E., PTOE

Subject: Proposed Multifamily Development
Portsmouth, New Hampshire

Date: September 20, 2021

On March 12, 2009 our office published the report entitled *"Traffic Evaluation-Proposed Southgate Plaza Expansion"* that addressed the traffic impacts associated with the redevelopment of that site, including Addendum One dated 5/29/2012 which addressed the impacts associated with the movie theater. The current development proposal calls for razing the multiplex movie theater at the rear of the site, and replacing it with a five-story, 100-unit multifamily condominium building. The purpose of this memorandum is to compare the trip generating characteristics of the former and proposed uses.

The following trip generation estimates are based upon the ITE trip generation rates and equations, using various independent variables associated with the multiplex movie theater (gross floor area, number of seats, number of screens) and the condominium building (number of dwelling units).

Table 1 on the following page clearly demonstrates that the proposed residential development will generate fewer vehicle-trips during the weekday PM and Saturday midday peak hour periods than the former movie theater. If we can be of further assistance in this matter, please advise.

Attachments

Table 1

Trip Generation Comparison / Summary
(Former Cinemagic Theater vs. 100 Residential Apartments)

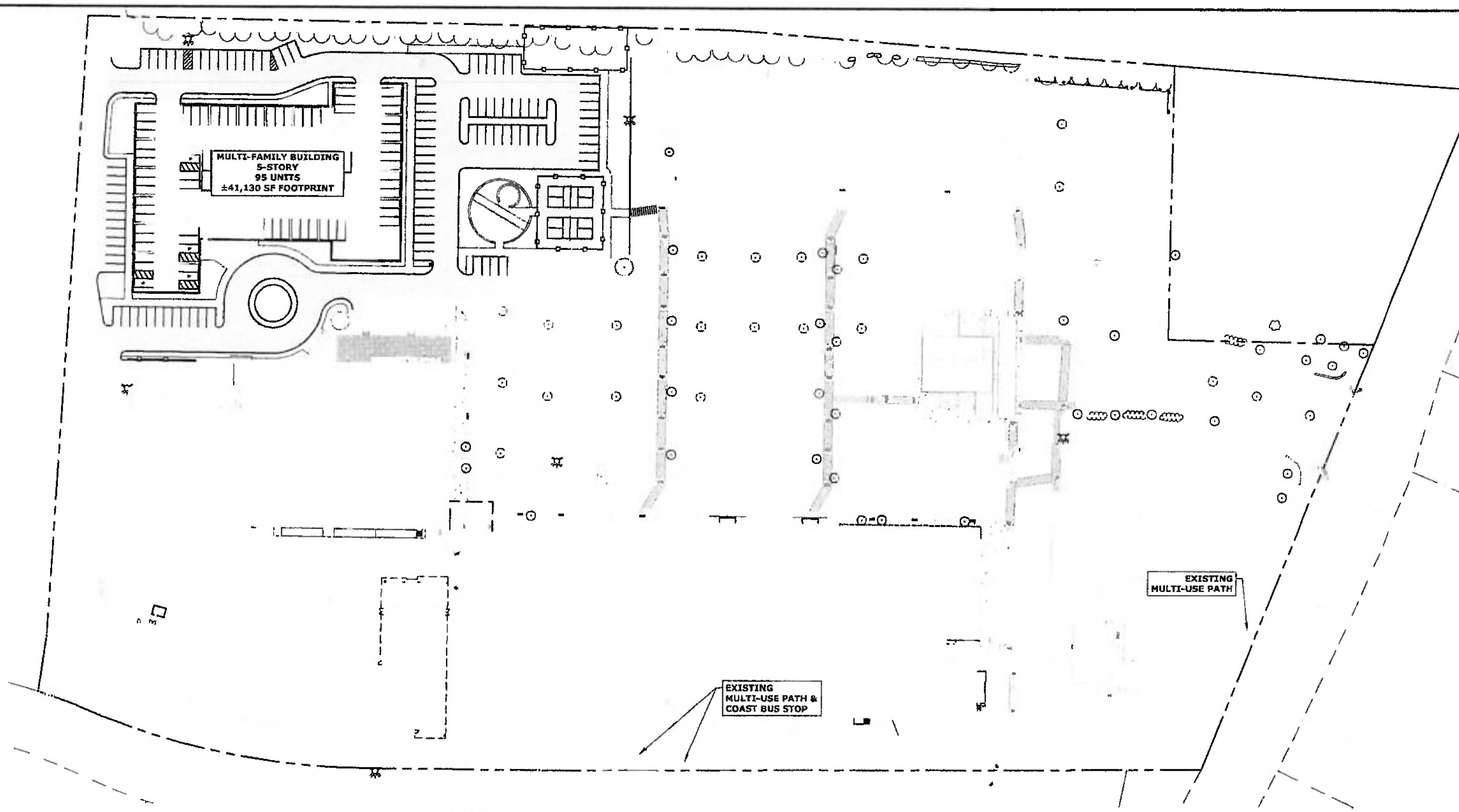
	Former Cinemagic Theater [1]					
	Estimate A GFA Method (28,270 sf)	Estimate B Screen Method (9 screens)	Estimate C Seat Method (1264 seats)	**ITE Average Estimate**	**Proposed Apartments [2]**	**Conclusions**
Weekday (24 Hour)						
Entering	-	-	-	NA	272 veh	
Exiting	-	-	-	NA	272 veh	
Total	-	-	-	NA	544 trips	
AM Peak Hour						
Entering	0 veh	0 veh	0 veh	0 veh	9 veh	Apartments will generate +34 **more** AM trips
Exiting	0 veh	0 veh	0 veh	0 veh	25 veh	
Total	0 trips	0 trips	0 trips	0 trips	34 trips	
PM Peak Hour						
Entering	NA	63 veh	36 veh	50 veh	27 veh	Apartments will generate -69 **fewer** PM trips
Exiting	NA	61 veh	65 veh	63 veh	17 veh	
Total	NA	124 trips	101 trips	113 trips	44 trips	
Friday PM Peak Hour						
Entering	86 veh	121 veh	76 veh	94 veh	NA	
Exiting	53 veh	84 veh	50 veh	62 veh	NA	
Total	139 trips	205 trips	126 trips	156 trips	NA	
Saturday Total						
Entering	-	-	-	NA	246 veh	
Exiting	-	-	-	NA	246 veh	
Total	-	-	-	NA	492 trips	
Saturday Peak Hour						
Entering	100 veh	130 veh	82 veh	104 veh	24 veh	Apartments will generate -93 **fewer** SAT peak trips
Exiting	33 veh	50 veh	32 veh	38 veh	25 veh	
Total	133 trips	180 trips	114 trips	142 trips	49 trips	

[1] ITE Land Use Code 445 - Multiplex Movie Theater

[2] ITE Land Use Code 221- Multifamily Housing (Mid-Rise) (100 Dwelling Units)

A T T A C H M E N T S

Attachment 1



SITE DATA:

LOCATION: TAX MAP 273, LOT 3

OWNER: 2422 LAFAYETTE ROAD ASSOCIATES, LLC
C/O WATERSTONE RETAIL
322 RESERVOIR STREET
NEEDHAM, MA 02494

ZONING DISTRICT: GATEWAY CORRIDOR (G1)

PROPOSED USE: SHOPPING CENTER/RESIDENTIAL

PROPOSED LOT SIZE: ±18.71 ACRES (±814,896 SF)

DEVELOPMENT SITE STANDARDS(1)

DEVELOPMENT STANDARDS (MIXED USE):	REQUIRED	PROPOSED
MINIMUM DEVELOPMENT SITE AREA	20,000 SF	±814,896 SF
MINIMUM SITE WIDTH:	100 FT	±721 FT
MINIMUM SITE DEPTH:	100 FT	±1,137 FT
MINIMUM PERIMETER BUFFER FROM RESIDENTIAL, MIXED RESIDENTIAL, OR CD4-L1 DISTRICTS:	75 FT	N/A
MAXIMUM DEVELOPMENT BLOCK DIMENSIONS:		
BLOCK LENGTH:	800 FT	±1,137 FT(2)
BLOCK PERIMETER:	2,200 LF	±3,780 LF(2)
MAXIMUM BUILDING COVERAGE:	70%	25.4%
MINIMUM OPEN SPACE COVERAGE:	20%	±21.7%
FRONT LOT LINE BUILDOUT:	75%	0%(2)
BUILDING DESIGN STANDARDS:		
MAXIMUM BUILDING HEIGHT:	5 STORIES(4) 60 FT(4)	5 STORIES <60 FT
MINIMUM STREET FACING FACADE HEIGHT:	24 FT	>24 FT
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	<36 IN
MAXIMUM BUILDING FOOTPRINT:	NR	
MAXIMUM FACADE MODULATION LENGTH:	50 FT	<50 FT
MINIMUM STREET FACING FACADE GLAZING:	20% GROUND FLOOR	>20%
DENSITY THRESHOLDS AND BONUSES:		
DWELLING UNITS PER ACRE:	20 UNITS	10.4 UNITS
DWELLING UNITS PER BUILDING:	36 UNITS	95 UNITS(3)
PLUS 1-STORY, MAX 10 FT	5 STORIES(4) 60 FT(4)	5 STORIES <60 FT

(1) - USE OF DEVELOPMENT SITE STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B41.10 WITH APPROVAL FROM THE PLANNING BOARD.
(2) - EXISTING NON-CONFORMING CONDITION, MODIFICATION OF STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B74.30 FOR THE DEVELOPMENT TO PROVIDE WORKFORCE HOUSING.
(3) - MODIFICATION OF STANDARDS ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B74.30 FOR THE DEVELOPMENT TO PROVIDE WORKFORCE HOUSING.
(4) - ALLOWED BY CONDITIONAL USE PERMIT PER 10.5B73.10 FOR PROVIDING 20% WORKFORCE HOUSING.

LEGEND

PROPERTY LINE
PROPOSED PROPERTY LINE
PROPOSED EDGE OF PAVEMENT
PROPOSED CURB
PROPOSED BUILDING
PROPOSED PAVEMENT SECTION
PROPOSED CONCRETE SIDEWALK
PROPOSED BRICK SIDEWALK
• PROPOSED BOLLARD
BLDG BUILDING
TYP TYPICAL
COORD COORDINATE
30'R PROPOSED CURB RADIUS
VGC PROPOSED VERTICAL GRANITE CURB
SGC PROPOSED SLOPED GRANITE CURB

PARKING REQUIREMENTS

PARKING CALCULATIONS:

RETAIL:	1 SPACE PER 300 GFA
RESTAURANT:	1 SPACE PER 100 GFA
INDOOR RECREATION:	1 SPACE PER 4 PERSONS
RESIDENTIAL:	0.5 SPACES PER UNIT <500 SF 1 SPACE PER UNIT 500 SF - 750 SF 1.3 SPACES PER UNIT >750 SF

LOADING CALCULATIONS:

RETAIL:	0 SPACES FOR 0 - 10,000 SF 1 SPACE FOR 10,001 - 25,000 SF 2 SPACES FOR 25,001 - 60,000 SF
OTHER NON-RESIDENTIAL:	0 SPACES FOR 0 - 10,000 SF 1 SPACE FOR 10,001 SF - 40,000 SF

SHOPPING CENTER:	AREA (SF):	MINIMUM	PROVIDED	LOADING SPACES: MINIMUM	LOADING SPACES: PROVIDED
RETAIL:					
PETCO	±12,588			1	1
CYCLE FIERCE	±1,200			0	1
EXISTING RETAIL/RESTAURANT	±20,075			0	1
EXISTING RETAIL/RESTAURANT (MUSE)	±3,618			0	1
EXISTING RETAIL/RESTAURANT (SHIO JAPANESE)	±7,400			0	1
PROPOSED RESTAURANT (OLD BIG LOTS)	±14,400			1	1
INDOOR RECREATIONAL (PINZ)	±18,800			1	1
SUBWAY	±1,800			0	0
THE 99	±6,310			0	1
McKINNON'S	±36,251			2	3
RETAIL	±9,134			0	1
DINER	±1,833			0	1
PROPOSED RESTAURANT	±1,800			1	0
PROPOSED RESTAURANT	±3,310			0	0
STARBUCKS	±7,124			0	1
TOTAL SHOPPING CENTER	±139,441	496 SPACES		8	15
RESIDENTIAL:					
PROPOSED DWELLING UNITS	95 UNITS				
EXISTING DWELLING UNITS	95 UNITS				
VISITOR PARKING					
TOTAL:		654 (1)	813	9	15

(1) - PER PARKING DEMAND ANALYSIS PERFORMED BY TIGHE & BOND DATED JULY 18, 2021

	REQUIRED	PROVIDED
ACCESSIBLE SPACES (2% OF TOTAL):	15	32
VAN ACCESSIBLE SPACES (1 PER 6 ACCESSIBLE SPACES):	2	24
PARKING STALL SIZE:	8.5 FT X 19 FT	8.5 FT X 19 FT
DRIVE AISLE:	24 FT	24 FT, 26 FT

BIKE SPACES REQUIRED:

	REQUIRED	PROVIDED
SHOPPING CENTER: 1 BIKE SPACE / 10 PARKING SPACES MAXIMUM OF 30 SPACES	30 SPACES	42 SPACES
RESIDENTIAL:		
EXISTING 95 DWELLING UNITS	19 SPACES	30 SPACES
PROPOSED 95 DWELLING UNITS	19 SPACES	20 SPACES

Tighe&Bond

0 60' 120'
GRAPHIC SCALE

Multi-Family Development

Torrington Properties, Inc.

Portsmouth, New Hampshire

MARK	DATE	DESCRIPTION
B	9/2/2021	Design Review - TAC WS
A	8/5/2021	PB Conceptual Consultation

PROJECT NO:	T-5047-001
DATE	August 5, 2021
FILE	T5047-001-C-DSGN.DWG
DRAWN BY:	NAH
CHECKED BY	NAH/PMC
APPROVED BY:	BLM

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Trip Generation Summary

Alternative: Former Cinemagic Theater
Phase:
Project: 2147A

Open Date: 9/10/2021
Analysis Date: 9/10/2021

ITE	Land Use		Weekday PM Peak Hour of Adjacent Street Traffic			Friday PM Peak Hour of Adjacent Street Traffic			Saturday Peak Hour of Generator		
		*	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit	Total
445	THEATERMULTI 3		36	65	101	76	50	126	82	32	114
	1264 Seats										
445	THEATERMULTI 2		63	61	124	121	84	205	130	50	180
	9 Movie Screens										
445	THEATERMULTI 1				0	86	53	139	100	33	133
	28.27 1000 Sq. Ft. GFA										
Unadjusted Volume			99	126	225	283	187	470	312	115	427
Internal Capture Trips			0	0	0	0	0	0	0	0	0
Pass-By Trips			0	0	0	0	0	0	0	0	0
Volume Added to Adjacent Streets			99	126	225	283	187	470	312	115	427

Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Friday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Saturday Peak Hour of Generator Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition
TRIP GENERATION 10, TRAFFICWARE, LLC

Trip Generation Summary

Alternative: Proposed Apartments
Phase:
Project: 2147A

Open Date: 9/10/2021
Analysis Date: 9/10/2021

ITE	Land Use	*	Weekday Average Daily Trips Enter	Exit	Total	*	Weekday AM Peak Hour of Adjacent Street Traffic Enter	Exit	Total	*	Weekday PM Peak Hour of Adjacent Street Traffic Enter	Exit	Total
221	MID-RISE 1		272	271	543		9	25	34		27	17	44
	100 Dwelling Units												
Unadjusted Volume			272	271	543		9	25	34		27	17	44
Internal Capture Trips			0	0	0		0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0		0	0	0
Volume Added to Adjacent Streets			272	271	543		9	25	34		27	17	44

Total Weekday Average Daily Trips Internal Capture = 0 Percent
Total Weekday AM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent
Total Weekday PM Peak Hour of Adjacent Street Traffic Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition
TRIP GENERATION 10, TRAFFICWARE, LLC

Trip Generation Summary

Alternative: Proposed Apartments
Phase:
Project: 2147A

Open Date: 9/10/2021
Analysis Date: 9/10/2021

ITE	Land Use		Saturday Average Daily Trips				Saturday Peak Hour of Generator			
		*	Enter	Exit	Total	*	Enter	Exit	Total
221	MID-RISE 1		246	245	491		24	25	49
	100 Dwelling Units								
Unadjusted Volume			246	245	491		24	25	49
Internal Capture Trips			0	0	0		0	0	0
Pass-By Trips			0	0	0		0	0	0
Volume Added to Adjacent Streets			246	245	491		24	25	49

Total Saturday Average Daily Trips Internal Capture = 0 Percent
Total Saturday Peak Hour of Generator Internal Capture = 0 Percent

* - Custom rate used for selected time period.

Source: Institute of Transportation Engineers, Trip Generation Manual 10th Edition

October 18, 2021

Portsmouth Planning Board
Multi-Family Development at Portsmouth Green
Portsmouth, NH 03801

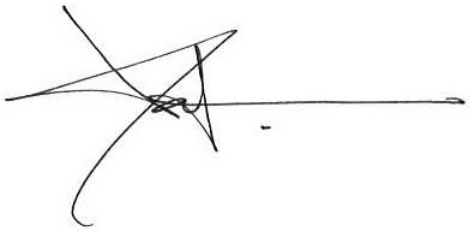
Green Building Statement

- Site/Landscape: Currently the site consists of an existing movie theater surrounded by parking and drive aisles. All of the existing site area is improved and includes predominantly impervious sufrcaes The proposed project will feature a planting buffer on 3 sides with an enlarged plaza with additional plantings (trees and shrubs) at the front entrance.
- Exterior Wall Systems: The exterior wall systems will meet or exceed the 2015 IECC standards for energy efficiency and will include a continuous air barrier and continuous insulation on the metal framed floors as well as insulation within the stud cavities. The exterior cladding materials will include a combination of masonry, metal panel rain screen systems and cementitious panel products that utilize an air space outboard of the insulation layer for efficient moisture management.
- Window Systems: All window systems in the project will meet or exceed 2015 IECC standards for u-value, shading coefficient and solar heat gain coefficient, including a thermally-broken frame and insulated, high-performance, low-E glazing to reduce thermal transfer. Large window expanses provide plenty of natural daylight to all building occupants.
- Roofing Systems: The roofing system will include a light-colored, reflective "cool roof" over continuous, sloped rigid insulation that meets or exceeds code requirements.
- HVAC Systems: The dwelling units will be provided with individualized systems providing either heating and cooling or both. System may include electric heat pumps or a hydronic gas fired heating system with gas fired domestic hot water heaters.

EMBARC | 580 Harrison Avenue – Suite 2W- Boston MA 02118 | 617.766.8330 | www.embarcdesign.com

- **Plumbing Systems:** All plumbing fixtures in the proposed project will be low-flow fixtures. Individual EnergyStar rated instantaneous hot water heaters will be used for domestic hot water and heating.
- **Lighting Systems:** Interior lighting systems will use LED fixtures throughout the building, including the use of occupancy sensors. Exterior lighting design will include energy-efficient LED cutoff fixtures to minimize light pollution.
- **Appliances:** All appliances for the project will be EnergyStar rated.

Sincerely,



Dartagnan Brown | Founder + CEO

EMBARC | 580 Harrison Avenue – Suite 2W- Boston MA 02118 | 617.766.8330 | www.embarcdesign.com

VERIDIAN **VIEW**

ROAD **VIEW**


PORTSMOUTH GREEN
McKinnon's
petco
DOUGH
DINER
BUFF+FEL
ATHLETA
CHIPOTLE
PASEK
DINER

PARKING **VIEW**


70 CONSTITUTION AVE


FITNESS