Tighe&Bond
Engineers | Environmental Specialists

C0960-006
September 3, 2019

Ms. Juliet Walker, Planning Director
City of Portsmouth Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

Re: Request for TAC Work Session as Non-Agenda Item
Proposed Multi-Family Development, 105 Bartlett Street

Dear Juliet:

On behalf of Clipper Traders, LLC, Portsmouth Lumber & Hardware, LLC & Iron Horse Properties, LLC owners, and Bartlett Street Lender, LLC, applicant, we are pleased to submit the following information for above referenced project to support a request to meet with the Technical Advisory Committee (TAC) as a non-agenda item at their next scheduled Work Session:

- Four (4) full size and six (6) half size copies of the Site Plan Set dated September 3, 2019;
- Ten (10) copies of the Owner Authorization Letters dated August 30, 2019;
- Ten (10) copies of the Applicant Authorization Letter dated September 3, 2019;
- Ten (10) copies of the Community Space Exhibit, dated September 3, 2019;
- Ten (10) copies of the Trip Generation Update Memorandum, prepared by Stephen G. Pernaw & Company Inc., dated August 20, 2019

The proposed project consists of constructing three (3) 4-story apartment buildings with a total of 232 apartments with basement level parking and five (5) rowhouse buildings with a total of 40 units and associated site improvements which includes community space. As currently designed, the project will designate 39.8% of the proposed property as Community Space which will allow for the future construction of the North Mill Pond Trail project.

The proposed project will require Site Plan Review and Subdivision Permit approvals from the Planning Board. The applicant would like to solicit feedback from City staff on the project prior to submitting the formal applications for these permits. The applicant respectfully requests to meet with TAC at their next scheduled Work Session on September 10, 2019. 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

Cc: Clipper Traders, LLC
Bartlett Street Lenders, LLC

Agent Letter of Authorization

I, Jeff Johnston, of Bartlett Street Lender, LLC (Applicant) hereby give Tighe & Bond (site/civil Engineer) permission to be my agent in all site design and permitting matters for the proposed development project located at 105 Bartlett Street in Portsmouth, New Hampshire on parcels of land identified as Tax Map 164 Lot 1 & Lot 4-2 and Tax Map 157 Lot 1, Lot 2 & Lot 2-1. This authorization shall include any required signatures for local, state and federal permit applications.

Signature	Jeffrey Johnston Print Name	9/3/19 Date
Witness	Alyson Copeland Print Name	9/3/19 Date

PROPOSED MULTI-FAMILY DEVELOPMENT

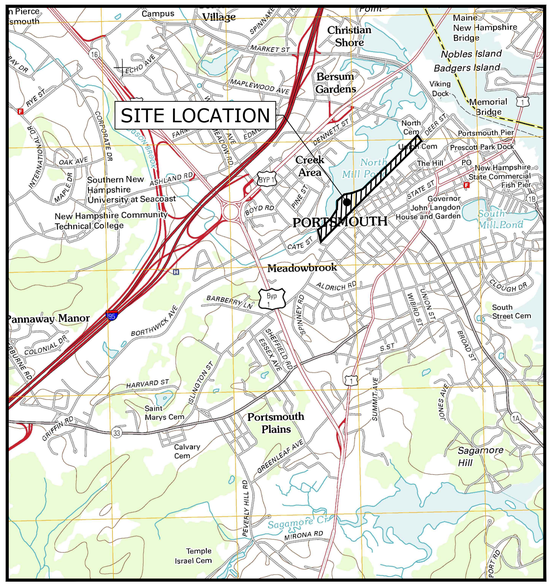
105 BARTLETT STREET

PORTSMOUTH, NEW HAMPSHIRE

PROJECT NO: C-0960-006

SEPTEMBER 3, 2019

LIST OF DRAWINGS		
SHEET NO.	SHEET TITLE	LAST REVISED
	COVER	09/03/2019
C-101	OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN	09/03/2019
C-101.1	EXISTING CONDITIONS AND DEMOLITION PLAN	09/03/2019
C-101.2	EXISTING CONDITIONS AND DEMOLITION PLAN	09/03/2019
C-101.3	EXISTING CONDITIONS AND DEMOLITION PLAN	09/03/2019
C-101.4	EXISTING CONDITIONS AND DEMOLITION PLAN	09/03/2019
C-102	OVERALL SITE PLAN	09/03/2019
C-102.1	SITE PLAN	09/03/2019
C-102.2	SITE PLAN	09/03/2019
C-102.3	SITE PLAN	09/03/2019
C-102.4	SITE PLAN	09/03/2019
C-103.1	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	09/03/2019
C-103.2	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	09/03/2019
C-103.3	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	09/03/2019
C-103.4	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	09/03/2019
C-104.1	UTILITIES PLAN	09/03/2019
C-104.2	UTILITIES PLAN	09/03/2019
C-104.3	UTILITIES PLAN	09/03/2019
C-501	EROSION CONTROL NOTES AND DETAILS SHEET	09/03/2019
C-502	DETAILS SHEET	09/03/2019
C-503	DETAILS SHEET	09/03/2019
C-504	DETAILS SHEET	09/03/2019
C-505	DETAILS SHEET	09/03/2019



LOCATION MAP
SCALE: 1" = 2000'

OWNER(S)

TAX MAP 157 LOT 1
CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801

TAX MAP 157 LOT 2
PORTSMOUTH HARDWARE & LUMBER, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801

TAX MAP 157 LOT 2-1
CLIPPER TRADERS, LLC,
PORTSMOUTH HARDWARE & LUMBER, LLC,
& IRON HORSE PROPERTIES, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801

TAX MAP 164 LOT 1
PORTSMOUTH LUMBER & HARDWARE, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801

TAX MAP 164 LOT 4-2
IRON HORSE PROPERTIES, LLC
105 BARTLETT STREET
PORTSMOUTH, NH 03801

PREPARED BY:

Tighe&Bond
Engineers | Environmental Specialists

177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
603.433.8818

APPLICANT

BARTLETT STREET LENDER, LLC
C/O CATHARTES
100 SUMMER STREET, SUITE 1600
BOSTON, MA 02110

TAC WORK SESSION SUBMISSION
COMPLETE SET 23 SHEETS

LEGEND

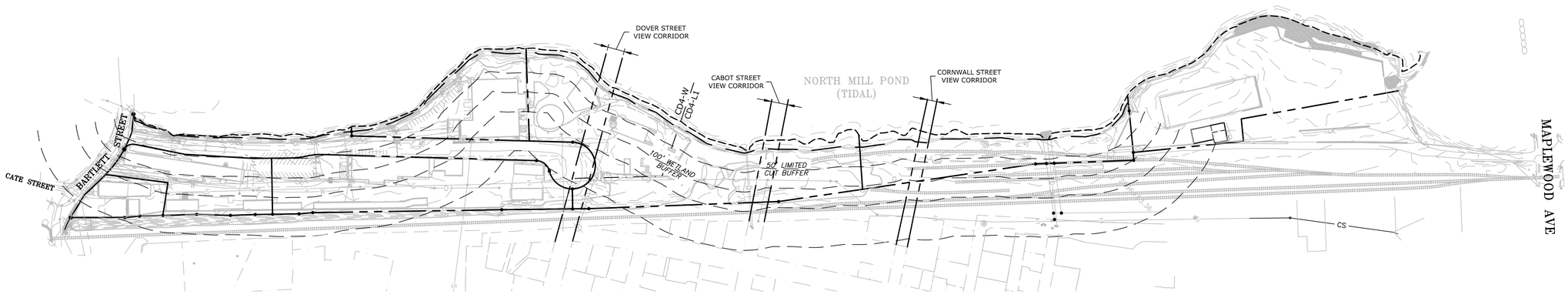
- BUILDING
- BUILDING OVERHANG
- BUILDING NO. 50 — BUILDING HATCH/TEXT
- CURB
- EDGE OF PAVEMENT
- RETAINING WALL
- STONE WALL
- CHAIN LINK FENCE
- FENCE LINE
- TREELINE
- PAVEMENT MARKING
- TRAFFIC SIGN
- 200 — MAJOR CONTOURS
- MINOR CONTOURS
- D — STORM DRAIN LINE
- S — SANITARY SEWER LINE
- W — WATER LINE
- E — UNDERGROUND ELECTRIC LINE
- OE — OVERHEAD ELECTRIC LINE
- G — UNDERGROUND GAS LINE
- DRAIN MANHOLE
- CATCH BASIN
- SEWER MANHOLE
- HYDRANT
- WGV — WATER GATE VALVE
- UTILITY POLE
- TELEPHONE STRUCTURE
- GGV — GAS GATE VALVE
- BOLLARD
- GAS SHUTOFF
- WATER SHUTOFF

EXISTING CONDITIONS PLAN NOTES:

1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY BY AMBIT ENGINEERING, INC., DATED 3/5/2018.
2. WETLAND DELINEATION BY STEVEN D. RIKER, CWS, ON 8/8/2017, AND FIELD LOCATED BY AMBIT ENGINEERING, INC. ON 8/9/2017

REFERENCE PLANS:

1. "PROPOSED SUBDIVISION PLANS, CLIPPER TRADERS, LLC" PREPARED BY AMBIT ENGINEERING, INC., DATED DECEMBER 14, 2018.



Tighe&Bond
Engineers | Environmental Specialists

0 150' 300'
GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-SITE.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

OVERALL EXISTING CONDITIONS PLAN

SCALE: AS SHOWN

C-101

Last Saved: 9/3/2019
Plotted: Tue, Sep 03, 2019 - 1:39pm By: NAHanson
Tighe & Bond J:\C\C0960 Catharles\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

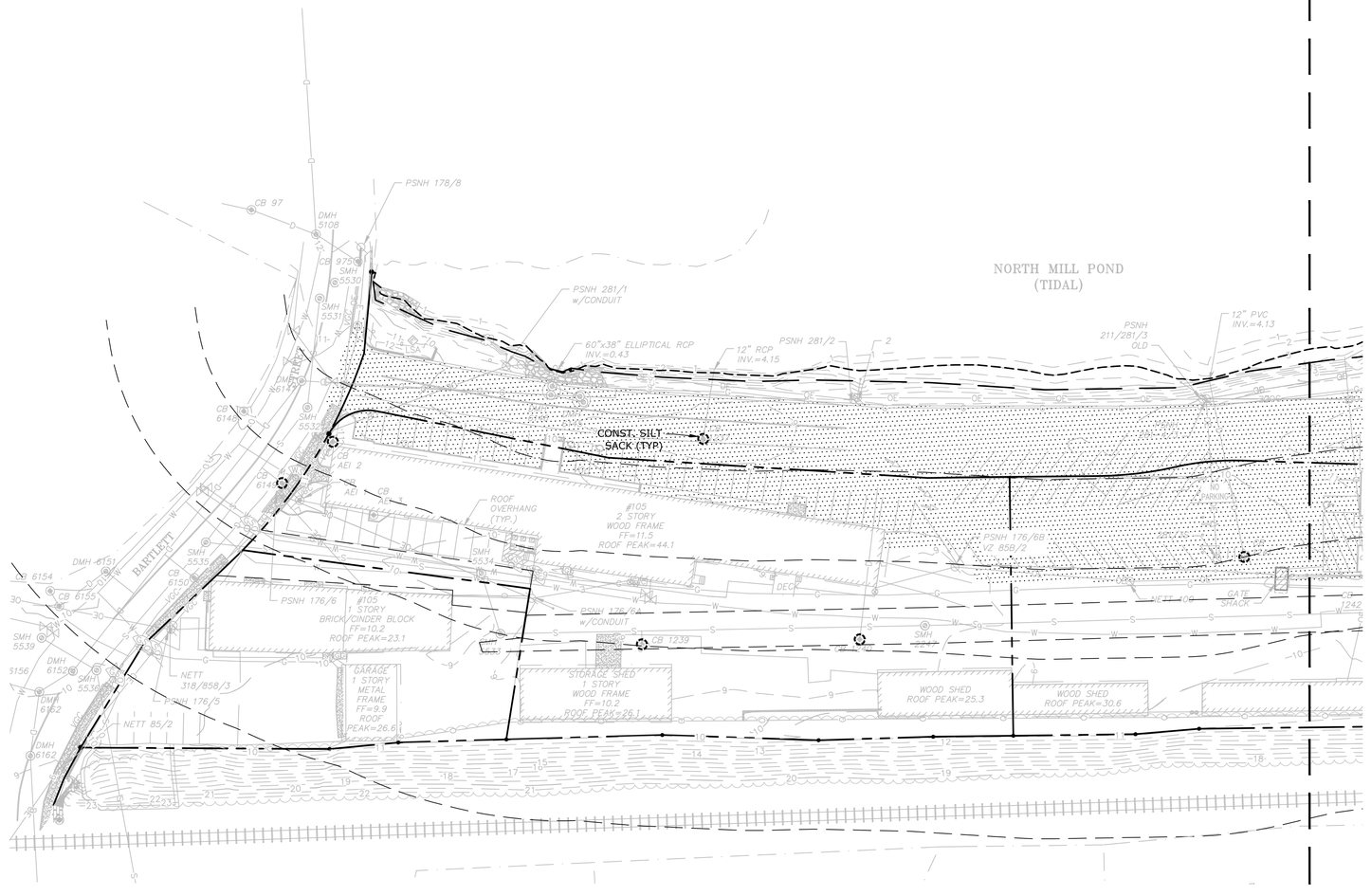
DEMOLITION NOTES:

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.

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



0 40' 80'
GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-SITE.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.1

Tighe&Bond
Engineers | Environmental Specialists

Last Saved: 9/3/2019
Plotted: Tuesday, September 03, 2019 1:39pm By: NAHansen
Tighe & Bond: J:\CC\C0960 Catharines\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

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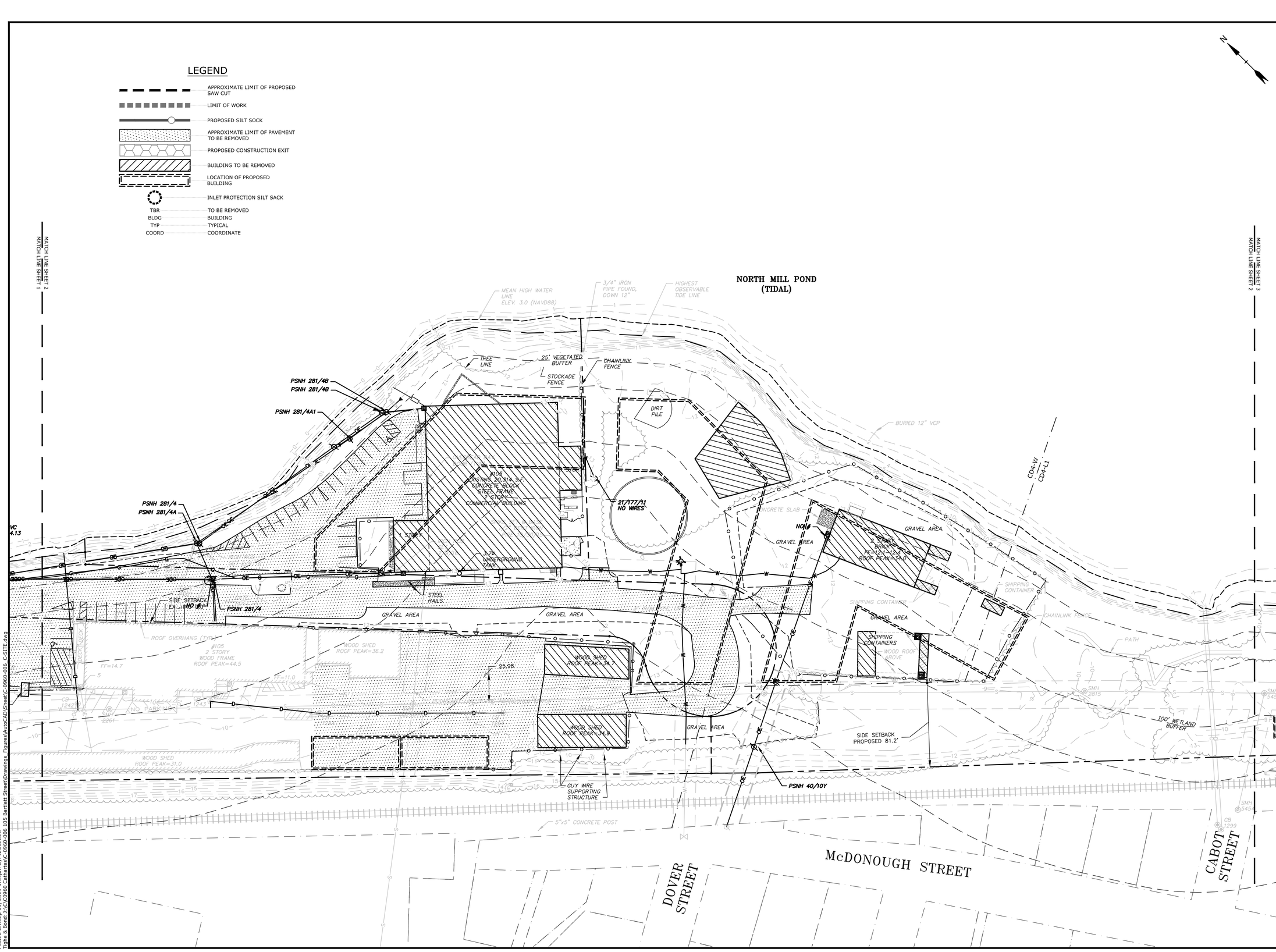
- LOCATION OF PROPOSED BUILDING
- INLET PROTECTION SILT SACK
- TBR — TO BE REMOVED
- BLDG — BUILDING
- TYP — TYPICAL
- COORD — COORDINATE

MATCH LINE SHEET 2
MATCH LINE SHEET 1

MATCH LINE SHEET 3
MATCH LINE SHEET 2



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GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

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EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.2

Last Saved: 9/3/2019
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TBR	TO BE REMOVED
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE

MATCH LINE SHEET 3
MATCH LINE SHEET 2

MATCH LINE SHEET 4
MATCH LINE SHEET 3

NORTH MILL POND
(TIDAL)

CONST. OUTLET PIPE W/HEADWALL

PROPOSED STORMWATER TREATMENT UNIT

RIPRAP

CONCRETE HEADWALL

36" CPP

6' CHAINLINK FENCE

SALT PILE

GATE

CRASH GATE

BOLLARD (TYP.)

STACKED RR TIES

DIRT PILE

50' LIMITED CUT BUFFER

IRON ROD SET 12/14/18

SMH 5453

SMH 2817

SMH 2816

SMH 2821

SMH 2298

RAILROAD JUNCTION SWITCH

LANGDON STREET

BREWSTER STREET

CORNWALL STREET

N

0 40' 80'
GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

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EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.3

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Plotted: Tuesday, 09/03/2019 1:39pm By: NAHansen
Tighe & Bond: J:\CC\0960 Catharres\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

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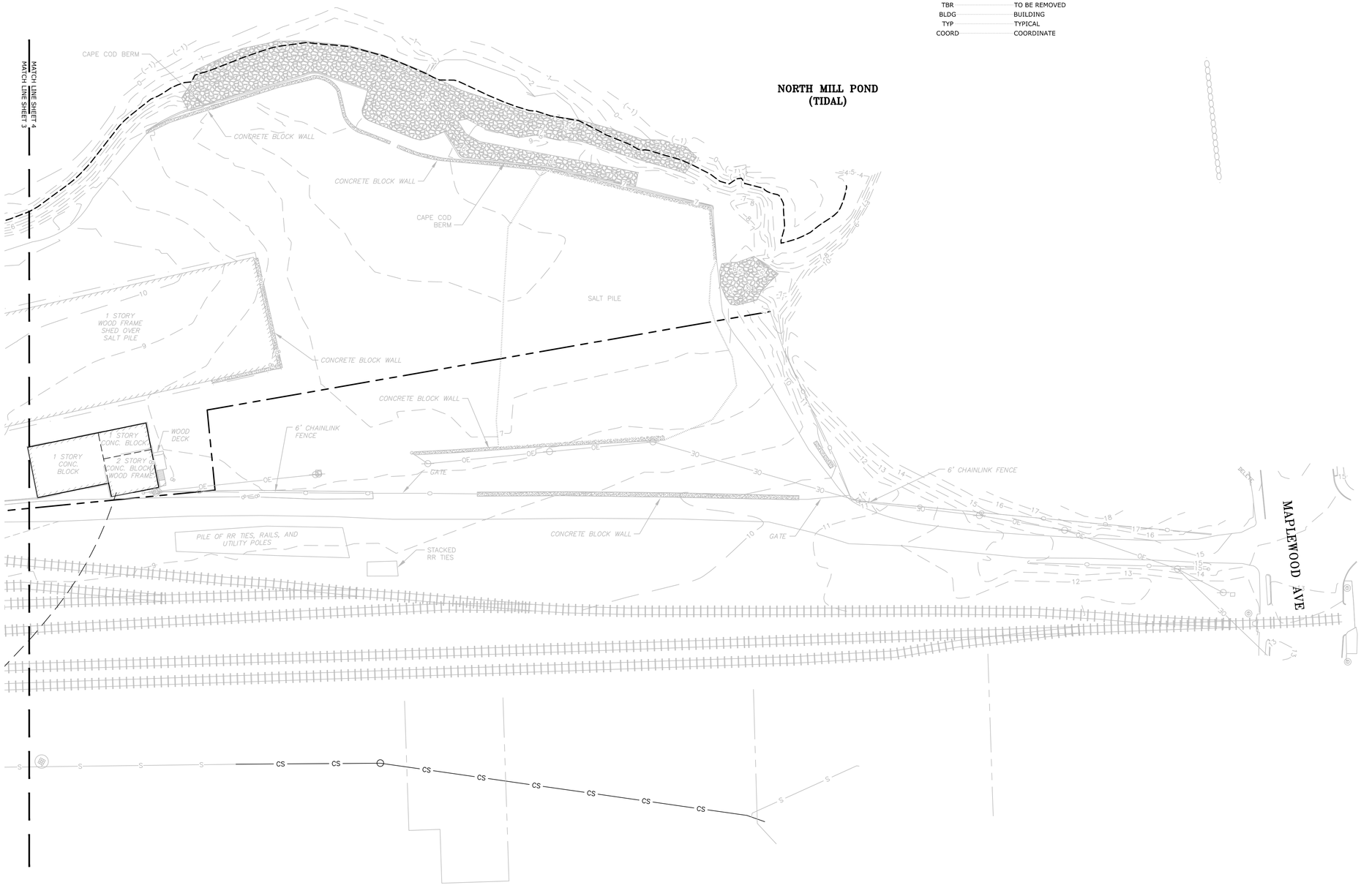

N

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GRAPHIC SCALE

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Proposed Multi-Family Development

Bartlett Street Lender, LLC

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EXISTING CONDITIONS AND DEMOLITION PLAN

SCALE: AS SHOWN

C-101.4

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Tighe & Bond: J:\CC\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

SITE DATA:

PROJECT LOCATION: TAX MAP 157, LOT 1
TAX MAP 157, LOT 2
TAX MAP 157, LOT 2-1
TAX MAP 164, LOT 1
TAX MAP 164, LOT 4-2

105 BARTLETT STREET
PORTSMOUTH, NEW HAMPSHIRE

SITE ZONING DISTRICT: CHARACTER DISTRICT 4 (CD4-W)
CHARACTER DISTRICT 4 (CD4-L1)
WEST END INCENTIVE OVERLAY DISTRICT

ALLOWED USE ON SITE: PROFESSIONAL OFFICE, BUSINESS OFFICE, RETAIL SALES, RESTAURANT, MULTIFAMILY DWELLING

DEVELOPMENT STANDARDS

BUILDING PLACEMENT (PRINCIPAL BUILDING):	REQUIRED (CD4-W)	PROPOSED (CD4-W)	REQUIRED (CD4-L1)	PROPOSED (CD4-L1)
MAX PRINCIPAL FRONT YARD:	10 FT	159 FT (I)	15 FT	605 FT (I)
SIDE YARD:	NR		5 FT TO 20 FT	55 FT (II)
MINIMUM REAR YARD:	5 FT	>447 FT	5 FT	447 FT
FRONT LOT LINE BUILDOUT:	50% MIN	0% (III)	60% MIN, 80% MAX	0% (III)
BUILDING AND LOT OCCUPATION:	**REQUIRED (CD4-W)**	**PROPOSED (CD4-W)**	**REQUIRED (CD4-L1)**	**PROPOSED (CD4-L1)**
MAXIMUM BUILDING BLOCK LENGTH:	200 FT		100 FT (1)	90 FT
MAXIMUM FAÇADE MODULATION LENGTH:	80 FT		50 FT	TBD
MAXIMUM ENTRANCE SPACING:	50 FT		NR	TBD
MAXIMUM BUILDING COVERAGE:	80%(2)	±21.2%	80%(2)	±21.2%
MAXIMUM BUILDING FOOTPRINT:	20,000 SF(4)	19,975 SF	3,500 SF (3)	1,800 SF
MINIMUM LOT AREA:	5,000 SF	307,824 SF	3,000 SF	307,824 SF
MINIMUM LOT AREA PER DWELLING UNIT:	NR(5)		NR(5)	
MINIMUM OPEN SPACE:	15%	34.3%(6)	25%	34.3%(6)
MAXIMUM GROUND FLOOR GFA PER USE:	15,000 SF		NR	

(1) - MAXIMUM BLOCK LENGTH ALLOWED IN WEST END INCENTIVE OVERLAY DISTRICT FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(2) - MAXIMUM BUILDING COVERAGE ALLOWED IN THE WEST END INCENTIVE OVERLAY DISTRICT FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(3) - ADDITIONAL 1,000 SF OF GFA (INCREASED FROM 2,500 SF) ALLOWED FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(4) - ADDITIONAL 5000 SF OF GFA (INCREASED FROM 15,000 SF) ALLOWED FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(5) - NO MINIMUM LOT AREA PER DWELLING UNIT REQUIRED IN THE WEST END INCENTIVE OVERLAY DISTRICT FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(6) - ONLY INCLUDES 50' SETBACK FROM NORTH MILL POND.

BUILDING FORM (PRINCIPAL BUILDING):	REQUIRED (CD4-W)	PROPOSED (CD4-W)	REQUIRED (CD4-L1)	PROPOSED (CD4-L1)
BUILDING HEIGHT:	4 STORIES (1) 50' MAX (2)	4 STORY, 50' (BLDG A, B, & C) (IV)	2 STORIES (1) 30' MAX (2)	2 STORY, 30' (ROWHOUSES)
MAXIMUM FINISHED FLOOR SURFACE OF GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	TBD	36 IN	TBD
MINIMUM GROUND STORY HEIGHT:	9 FT(3)	12 FT	9 FT(3)	11 FT
MINIMUM SECOND STORY HEIGHT:	N/A		N/A	
FAÇADE GLAZING:				
SHOPFRONT FAÇADE:	70% MIN	TBD	70% MIN	TBD
OTHER FAÇADE TYPES:	20% TO 50%	TBD	20% TO 40%	TBD
ALLOWED ROOF TYPES:	FLAT, GABLE, HIP, GAMBREL, OR MANSARD	FLAT	FLAT, GABLE, HIP, GAMBREL, OR MANSARD	FLAT
ROOF PITCH, IF ANY:				
GABLE	6:12 - 12:12		6:12 - 12:12	
HIP	3:12 MIN		3:12 MIN	
MANSARD/GAMBREL	6:12 - 30:12		6:12 - 30:12	
ALLOWED BUILDING TYPES:	APARTMENT BUILDING	APARTMENT BUILDING	ROWHOUSE	ROWHOUSE
ALLOWED FACADE TYPES:		TBD		TBD

(1) - ADDITIONAL 1 STORY (INCREASED FROM 1 AND 3 RESPECTIVELY) ALLOWED FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(2) - ADDITIONAL 10' OF BUILDING HEIGHT (INCREASED FROM 20' AND 40' RESPECTIVELY) ALLOWED FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
(3) - MINIMUM GROUND STORY HEIGHT ALLOWED IN WEST END INCENTIVE OVERLAY DISTRICT FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.

COMMUNITY SPACE:	67,734 SF	134,650 SF
	20%	39.8%

OFF-STREET PARKING REQUIREMENTS:

PARKING SPACES REQUIRED:

DWELLING UNITS:		
500 SF TO 750 SF 1.0 SPACES PER UNIT	BUILDING A, 48 UNITS	48 SPACES
	BUILDING B, 44 UNITS	44 SPACES
	BUILDING C, 48 UNITS	48 SPACES
	ROWHOUSES, 40 UNITS	40 SPACES
TOTAL MINIMUM PARKING SPACES REQUIRED =		180 SPACES
OVER 750 SF 1.3 SPACES PER UNIT	BUILDING A, 32 UNITS	42 SPACES
	BUILDING B, 28 UNITS	37 SPACES
	BUILDING C, 32 UNITS	42 SPACES
TOTAL MINIMUM PARKING SPACES REQUIRED =		121 SPACES
VISITORS:		
1 SPACE FOR EVERY 5 DWELLING UNITS	272 UNITS	54 SPACES
TOTAL MINIMUM PARKING SPACES REQUIRED =		355 SPACES

TOTAL PARKING SPACES PROVIDED:
TOTAL PARKING SPACES PROVIDED = 189 SPACES (SURFACE PARKING)
54 SPACES (BUILDING A, UNDERGROUND)
58 SPACES (BUILDING B, UNDERGROUND)
54 SPACES (BUILDING C, UNDERGROUND)
355 SPACES

	REQUIRED	PROPOSED
PARKING STALL LAYOUT:	8.5' X 19'	8.5' X 19'
DRIVE AISLE WIDTH:	24 FT	24 FT
BIKE SPACES REQUIRED:		
1 BIKE SPACE / 5 DWELLING UNITS	51 SPACES	30 SPACES (1)

(1) - MAXIMUM OF 30 BICYCLE SPACES PER 10.1116.11

POTENTIAL VARIANCES:

REQUIREMENT:	SECTION:
(I) - MAX PRINCIPAL FRONT YARD:	10.5A41.10B / 10.5A41.10A
(II) - SIDE YARD (IN CD4-L1 ONLY):	10.5A41.10A
(III) - FRONT LOT LINE BUILD OUT:	10.5A41.10B / 10.5A41.10A
(IV) - BUILDING HEIGHT (IN CD4-L1 ONLY):	10.5A41.10A
(V) - PARKING IN FRONT OF BUILDING:	10.5A44.31

POTENTIAL SUBDIVISION WAIVERS:

REQUIREMENT:	SECTION:
(I) - CUL-DE-SACS:	VI, ITEM 3, PARAGRAPH I

SITE NOTES:

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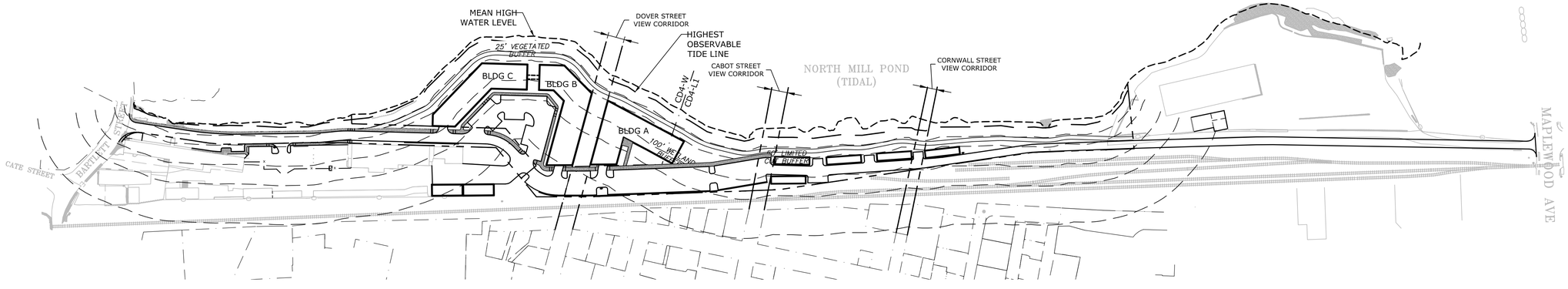

0 5' 10'
GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-SITE.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

OVERALL SITE PLAN

SCALE: AS SHOWN

C-102

Tighe&Bond
Engineers | Environmental Specialists

Last Saved: 9/3/2019
Plotted: Tuesday, 09/03/2019 2:55pm By: NAHansen
Tighe & Bond J:\CC\C0960 Gatharles\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

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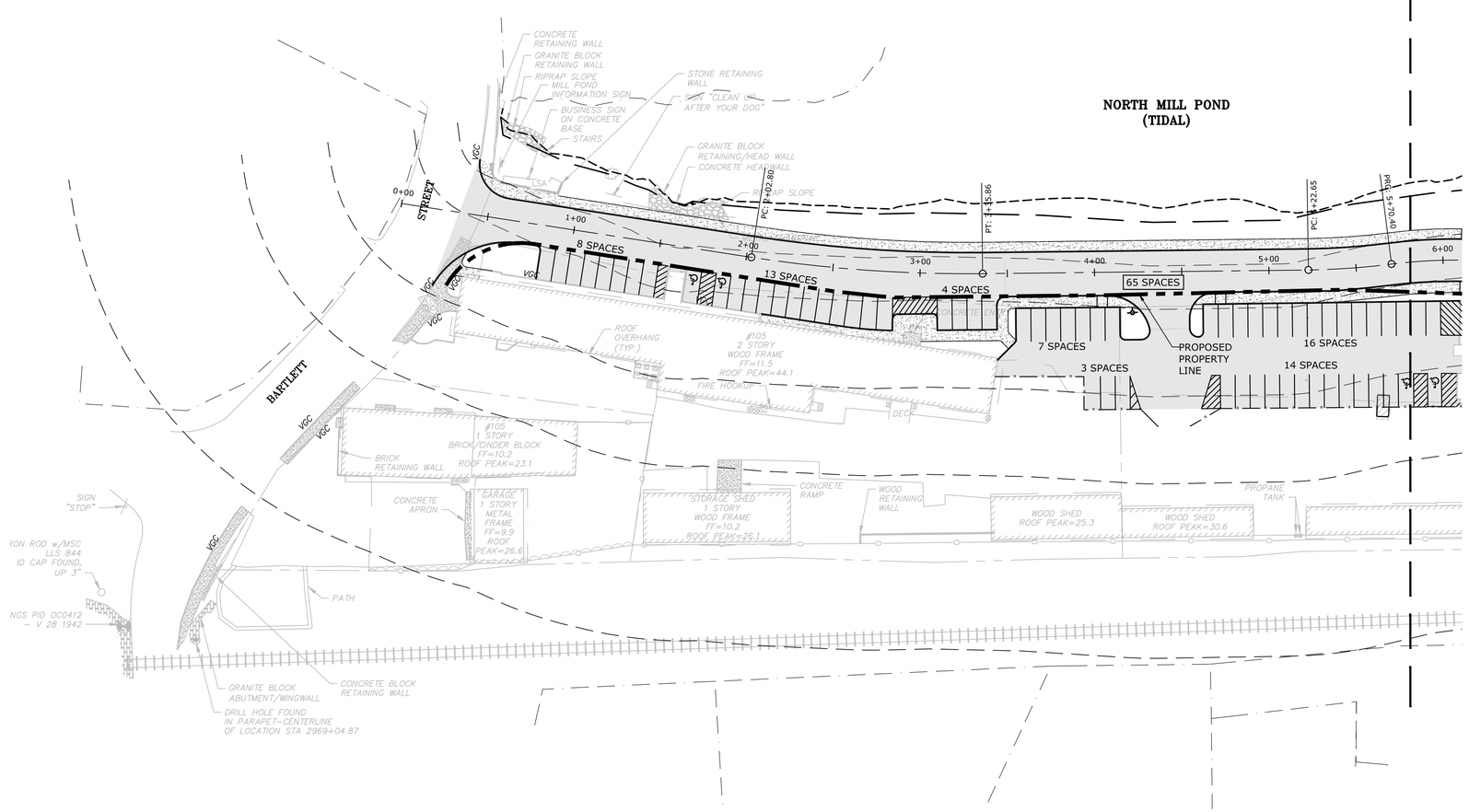

0 40' 80'
GRAPHIC SCALE

Tighe&Bond
Engineers | Environmental Specialists

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-SITE.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

SITE PLAN

SCALE: AS SHOWN

C-102.1

Last Saved: 9/3/2019
Printed: Dec 03, 2019-2:55pm By: NAhanson
Tighe & Bond J:\C\C0960 Catharine\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

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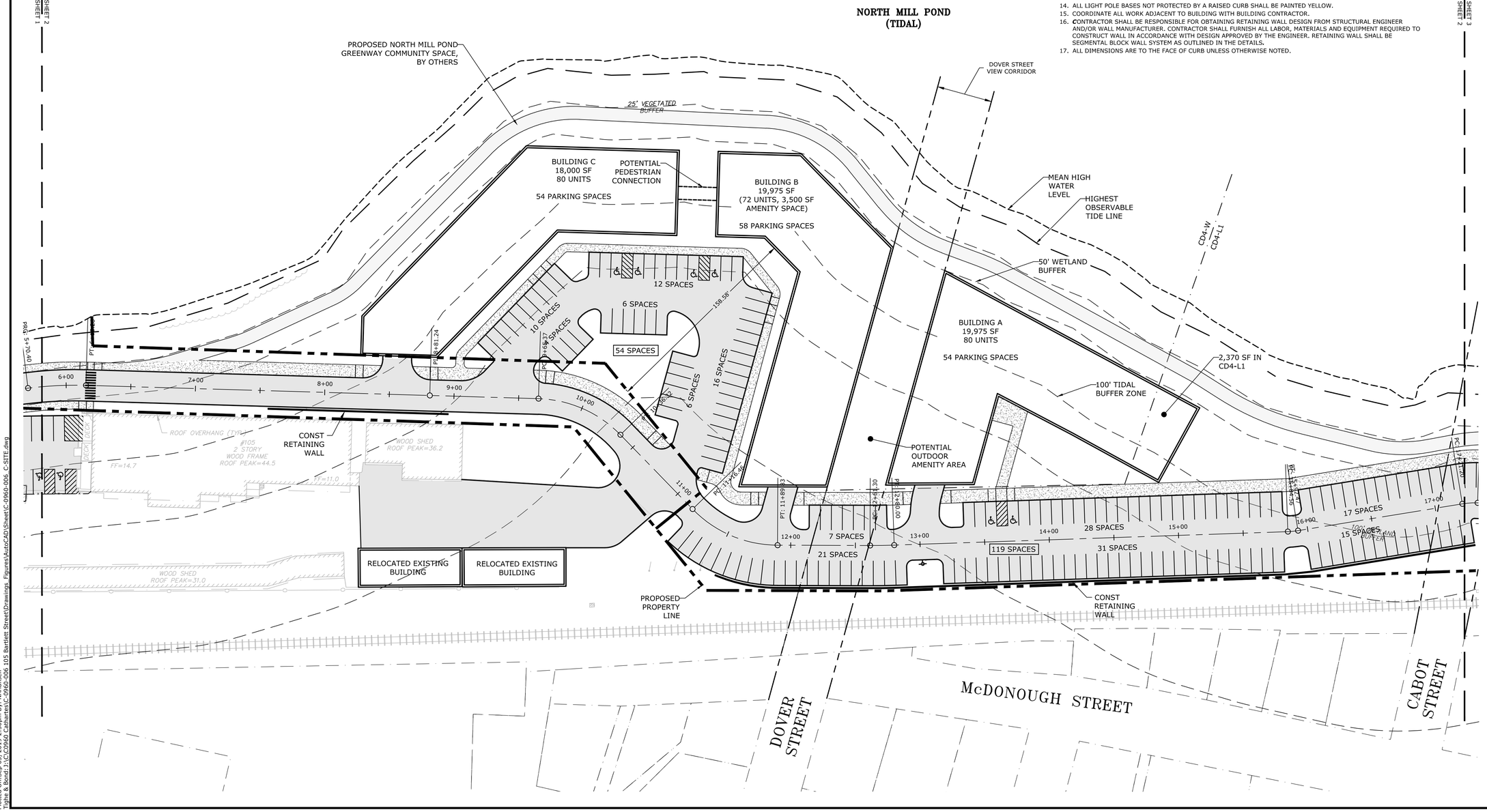

MATCH LINE SHEET 2
MATCH LINE SHEET 1

MATCH LINE SHEET 3
MATCH LINE SHEET 2

0 40' 80'
GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

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Portsmouth,
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CHECKED:	PMC
APPROVED:	BML

SITE PLAN

SCALE: AS SHOWN

C-102.2

Last Saved: 9/3/2019
Last Saved By: NAHanson
Plotted On: Sep 03, 2019 - 2:56pm By: NAHanson
Tighe & Bond: J:\C\C0960 Catharines\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

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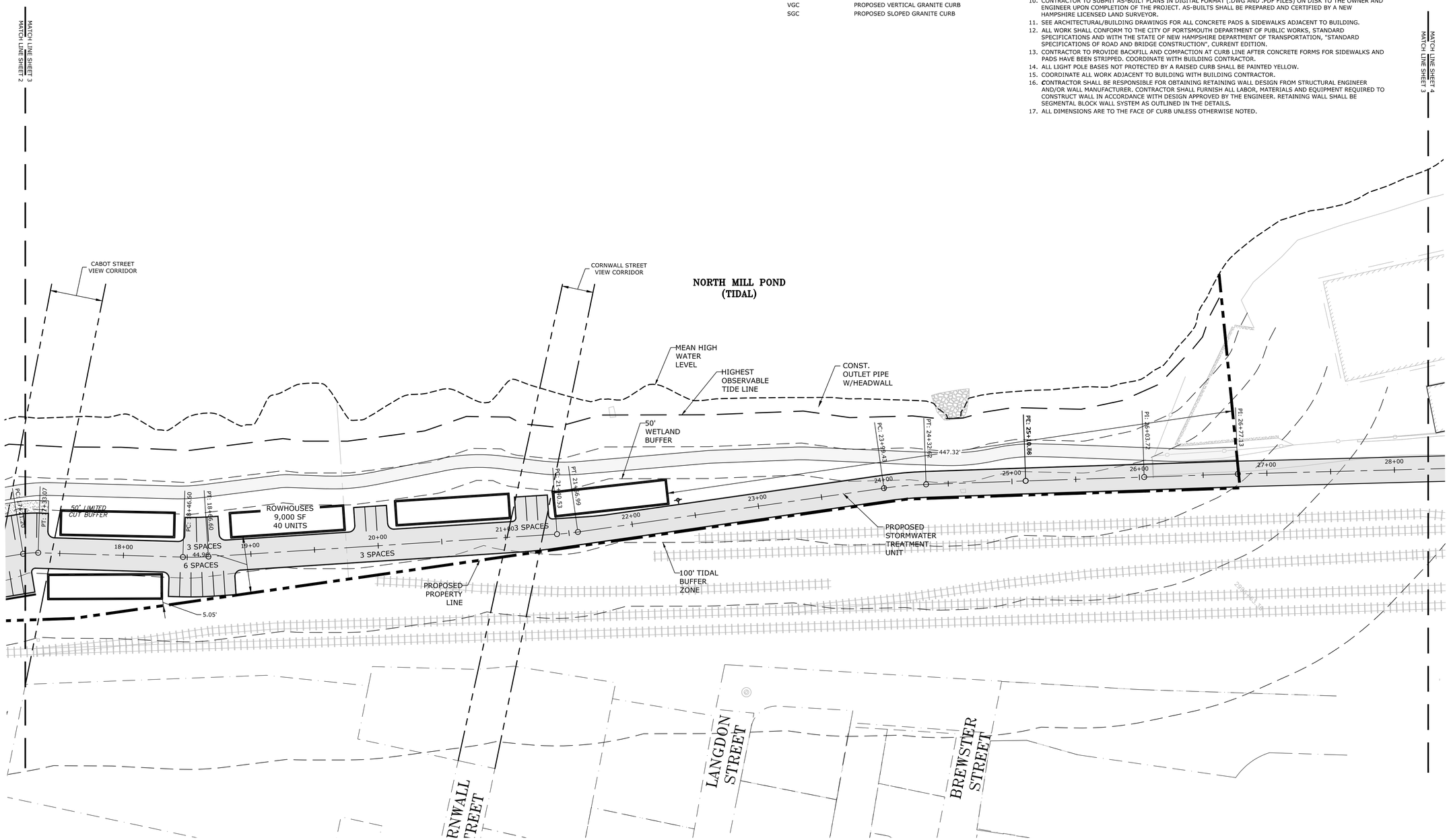

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GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

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DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

SITE PLAN

SCALE: AS SHOWN

C-102.3

Last Saved: 9/3/2019
Plotted: 9/3/2019 3:00pm By: MArnson
Tighe & Bond: J:\C\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

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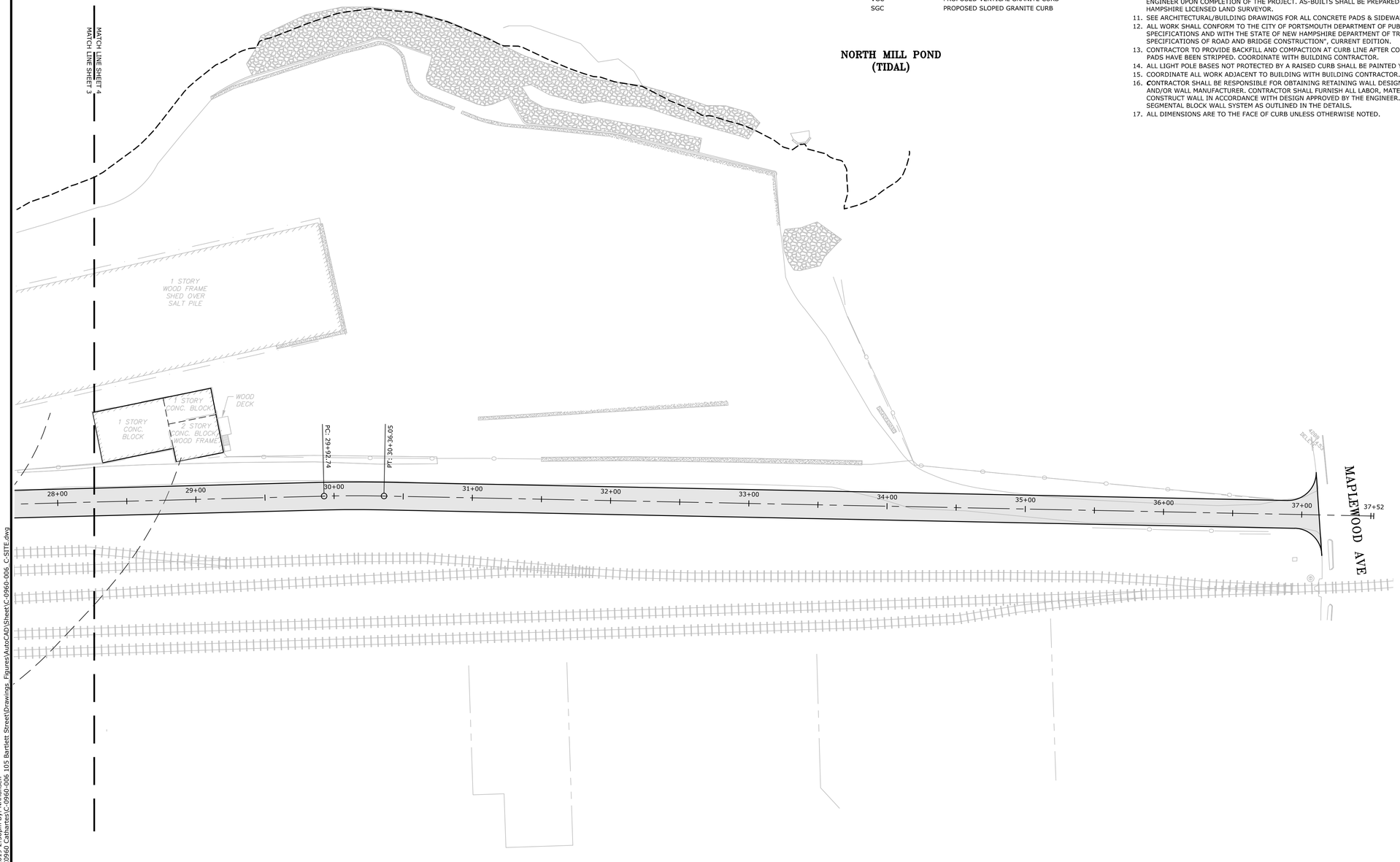
17. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.



0 40' 80'

GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-SITE.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

SITE PLAN

SCALE: AS SHOWN

C-102.4

Last Saved: 9/3/2019
Printed On: 9/3/2019 2:56pm By: MAhanson
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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), 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.

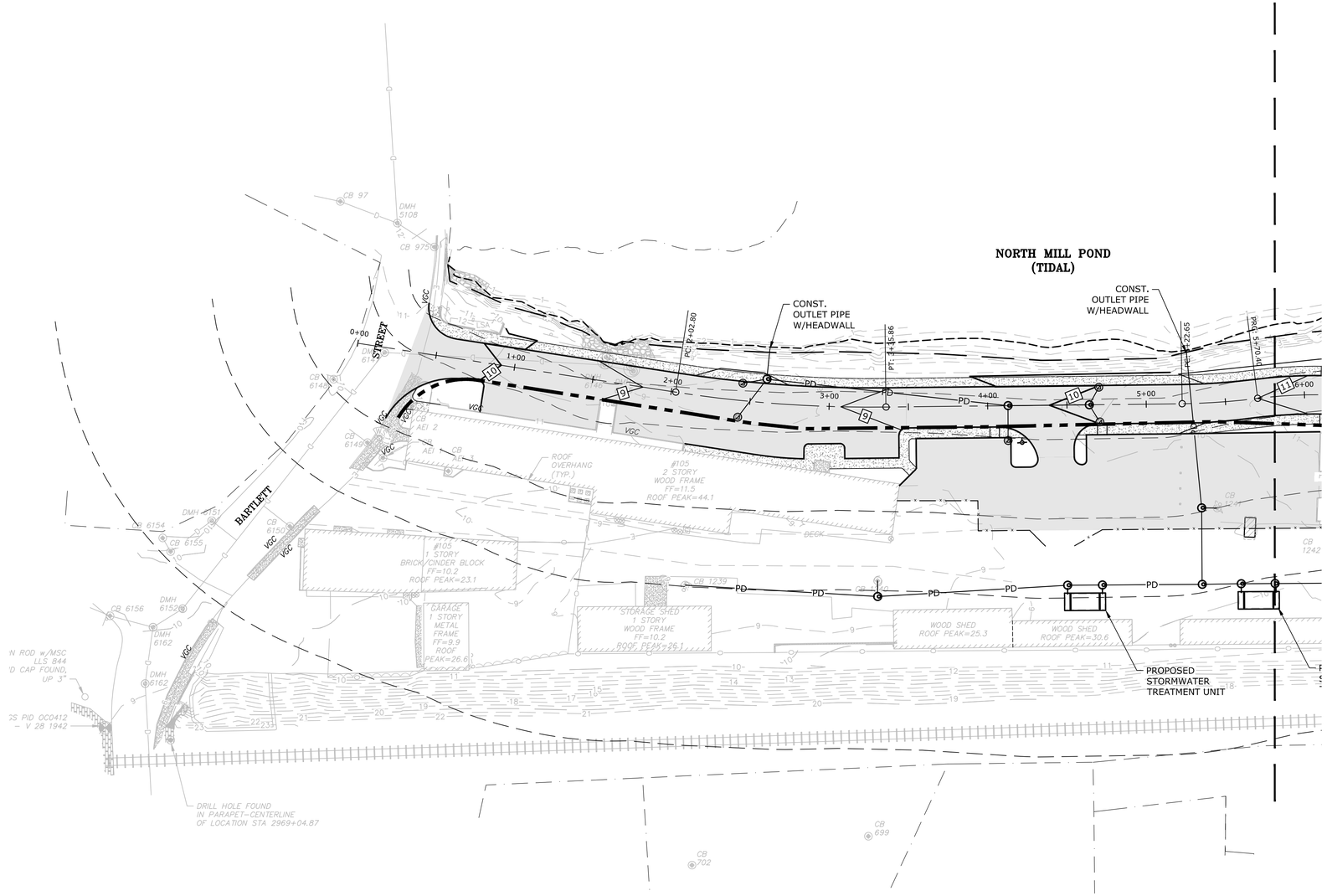
EROSION CONTROL NOTES:

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.

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



MATCH LINE SHEET 2
MATCH LINE SHEET 1

0 40' 80'
GRAPHIC SCALE

Tighe&Bond
Engineers | Environmental Specialists

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

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GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.1

Last Saved: 9/3/2019
Printed: Dec 03, 2019-1:40pm By: NAhanson
Tighe & Bond:):\C\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

LEGEND

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

BLDG	BUILDING
TYP	TYPICAL
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TC	TOP OF CURB
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TW	TOP OF WALL
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MATCH LINE SHEET 2
MATCH LINE SHEET 1

MATCH LINE SHEET 3
MATCH LINE SHEET 2

NORTH MILL POND
(TIDAL)

85' VEGETATED BUFFER

CONST. OUTLET PIPE W/HEADWALL

BURIED 12" VCP

PROPOSED F.F. = 17.50'

16.50 TC
16.00 BC

15.80

15.15

15.35

PROPOSED STORMWATER TREATMENT UNIT

CONST. OUTLET PIPE W/HEADWALL

12.65 TC
12.15 BC

8.50

14.25 TC
13.75 BC

13.25

PROPOSED F.F. = 17.50'

PROPOSED STORMWATER TREATMENT UNIT

PROPOSED F.F. = 17.00'

ROOF OVERHANG (TYP.)

#105
2 STORY
WOOD FRAME
ROOF PEAK=44.5

FF=14.7

FF=11.0

WOOD SHED
ROOF PEAK=36.2

WOOD SHED
ROOF PEAK=31.0

DECK

PROPOSED STORMWATER TREATMENT UNIT

100' WETLAND BUFFER

DOVER STREET

McDONOUGH STREET

CABOT STREET

0 40' 80'
GRAPHIC SCALE

Proposed Multi-Family Development

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105 Bartlett Street
Portsmouth,
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APPROVED:	BML

GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.2

Last Saved: 9/3/2019
Plotted: Tuesday, 09/03/2019 3:09pm By: MAHanson
Tighe & Bond: J:\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

LEGEND

5	PROPOSED MAJOR CONTOUR LINE
5	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

MATCH LINE SHEET 3
MATCH LINE SHEET 2

MATCH LINE SHEET 4
MATCH LINE SHEET 3

NORTH MILL POND
(TIDAL)

50' LIMITED CUT BUFFER

PC: 17+33.07
PT: 17+43.07
PC: 18+46.60
PT: 18+56.60

PD
PD
PD

18+00
19+00
20+00
21+00
22+00
23+00
24+00
25+00
26+00
27+00
28+00

PC: 21+40.53
PT: 21+56.99

CONST. OUTLET PIPE W/HEADWALL

RIPRAP

36" CPP

CONCRETE HEADWALL

PC: 23+58.43
PT: 24+32.62
PC: 25+10.56
PI: 26+03.22
PI: 26+77.13

PROPOSED STORMWATER TREATMENT UNIT

RNWALL TREET

LANGDON STREET

BREWSTER STREET

0 40' 80'
GRAPHIC SCALE

Proposed Multi-Family Development

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GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

C-103.3

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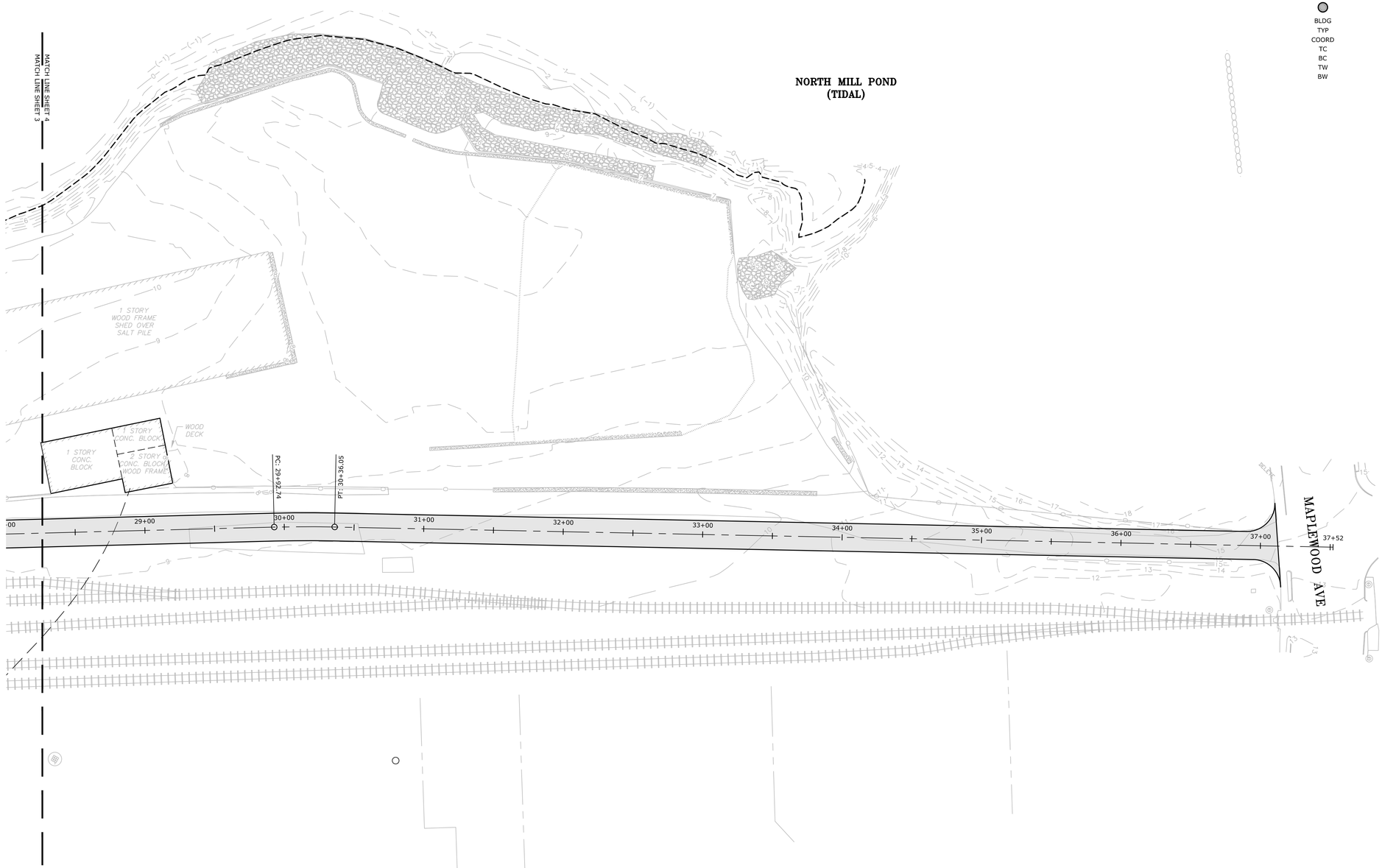

LEGEND

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- PROPOSED MINOR CONTOUR LINE
- PROPOSED DRAIN LINE (TYP)
- PROPOSED SILT SOCK
- INLET PROTECTION SILT SACK
- PROPOSED CATCHBASIN
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- 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

0 40' 80'
GRAPHIC SCALE

Tighe&Bond
Engineers | Environmental Specialists

Proposed Multi-Family Development

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GRADING, DRAINAGE, AND EROSION CONTROL PLAN

SCALE: AS SHOWN

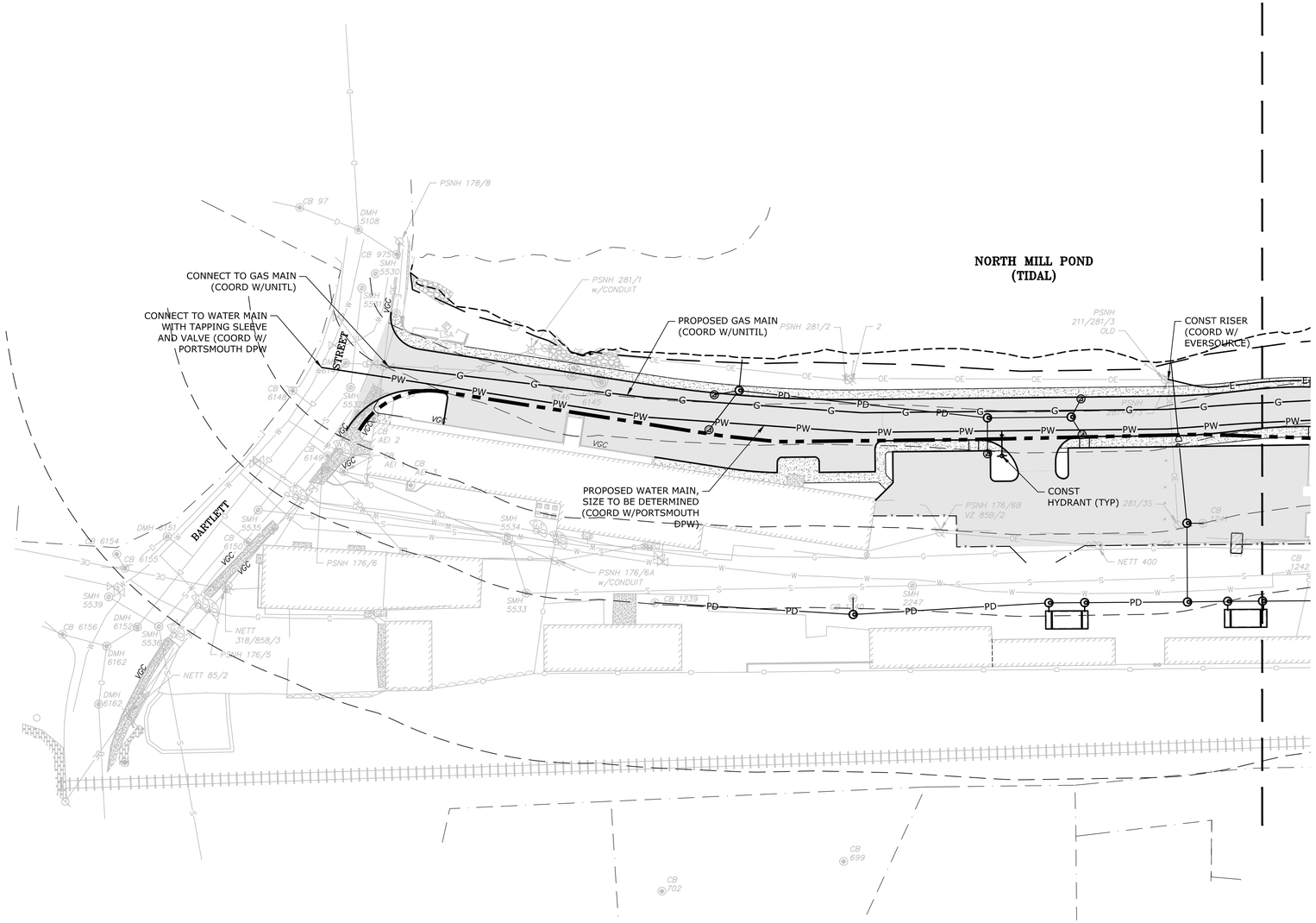
C-103.4

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 - CONSOLIDATED COMMUNICATIONS & COMCAST
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 _____ 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 OR PROFESSIONAL ENGINEER.
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. CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING.

LEGEND

	MATCH LINE
D	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
G	PROPOSED GAS
E	PROPOSED UNDERGROUND ELECTRIC
COM	PROPOSED UNDERGROUND TELECOMMUNICATION
	EXISTING CATCHBASIN
D	EXISTING DRAIN MANHOLE
S	EXISTING SEWER MANHOLE
	EXISTING HYDRANT
WV	EXISTING WATER VALVE
	EXISTING ELECTRIC MANHOLE
T	EXISTING TELEPHONE MANHOLE
	PROPOSED CATCHBASIN
	PROPOSED DRAIN MANHOLE
	PROPOSED SEWER MANHOLE
WV	PROPOSED WATER VALVE
	PROPOSED HYDRANT
	PROPOSED GAS VALVE
E	PROPOSED ELECTRIC MANHOLE
	PROPOSED LIGHT POLE BASE
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
VIF	VERIFY IN FIELD



Tighe&Bond
Engineers | Environmental Specialists

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
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UTILITIES PLAN

SCALE: AS SHOWN

C-104.1

Last Saved: 9/3/2019
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Tighe & Bond:):\C\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

LEGEND

	MATCH LINE
D	EXISTING STORM DRAIN
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SS	EXISTING SANITARY SEWER TO BE REMOVED
T T	EXISTING UNDERGROUND TELECOMMUNICATION
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	PROPOSED STORM DRAIN
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	PROPOSED CATCHBASIN
D	PROPOSED DRAIN MANHOLE
S	PROPOSED SEWER MANHOLE
WV	PROPOSED WATER VALVE
	PROPOSED HYDRANT
GV	PROPOSED GAS VALVE
E	PROPOSED ELECTRIC MANHOLE
	PROPOSED LIGHT POLE BASE
BLDG	BUILDING
TYP	TYPICAL
COORD	COORDINATE
VIF	VERIFY IN FIELD

MATCH LINE SHEET 2
MATCH LINE SHEET 1

MATCH LINE SHEET 3
MATCH LINE SHEET 2

N

NORTH MILL POND
(TIDAL)

25' VEGETATED BUFFER

BURIED 12" VCP

SANITARY SEWER CONNECTION (COORD W/PORTSMOUTH DPW)

FIRE AND DOMESTIC WATER SERVICE CONNECTIONS

NATURAL GAS SERVICE CONNECTION

ELECTRIC AND COMMUNICATION SERVICE CONNECTIONS

RECONNECT EXISTING ELECTRIC SERVICE

CONST ELECTRIC CONDUIT (COORD W/EVERSOURCE)

SANITARY SEWER CONNECTION (COORD W/PORTSMOUTH DPW)

FIRE AND DOMESTIC WATER SERVICE CONNECTIONS

NATURAL GAS SERVICE CONNECTION

ELECTRIC AND COMMUNICATION SERVICE CONNECTIONS

SANITARY SEWER CONNECTION (COORD W/PORTSMOUTH DPW)

ELECTRIC AND COMMUNICATION SERVICE CONNECTIONS

NATURAL GAS SERVICE CONNECTION

FIRE AND DOMESTIC WATER SERVICE CONNECTIONS

CONST ELECTRIC CONDUIT (COORD W/EVERSOURCE)

SANITARY SEWER CONNECTION (COORD W/PORTSMOUTH DPW)

CONST HYDRANT (TYP)

CONST GAS MAIN (COORD W/UNITIL)

CONST WATER MAIN (COORD W/PORTSMOUTH DPW)

25' VEGETATED BUFFER

DOVER STREET

McDONOUGH STREET

CABOT STREET

CB 1242
CB 1243
CB 1244
CB 1264
CB 1299
SMH 5451
SMH 5452
SMH 5453
SMH 5454

0 40' 80'
GRAPHIC SCALE

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Engineers | Environmental Specialists

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UTILITIES PLAN

SCALE: AS SHOWN

C-104.2

Last Saved: 9/3/2019
Plotted: 9/3/2019 1:41pm By: MAhansen
Tighe & Bond:J:\C\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

MATCH LINE SHEET 3
MATCH LINE SHEET 2

LEGEND

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

NORTH MILL POND
(TIDAL)

FIRE AND DOMESTIC WATER SERVICE CONNECTIONS (TYP)

NATURAL GAS SERVICE CONNECTION (TYP)

ELECTRIC AND COMMUNICATION SERVICE CONNECTIONS (TYP)

CONST HYDRANT (TYP)

50' LIMITED CUT BUFFER

SANITARY SEWER CONNECTION (TYP)

STUB AND CAP WATER MAIN W/VALVE (COORD W/PORTSMOUTH DPW)

RIPRAP

36" CPP

CONCRETE HEADWALL

SMH 2816

SMH 2821

SMH 2298

LANGDON STREET

BREWSTER STREET

0 40' 80'
GRAPHIC SCALE

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-SITE.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

UTILITIES PLAN

SCALE: AS SHOWN

C-104.3

Tighe&Bond
Engineers | Environmental Specialists

Last Saved: 9/3/2019
Plotted: Sep 03, 2019-1:41pm By: NAHanson
Tighe & Bond:):\C\C0960 Cabarets\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-SITE.dwg

GENERAL PROJECT INFORMATION

PROJECT APPLICANT: BARTLETT STREET LENDER, LLC; CARE OF CATHARTES, 100 SUMMER STREET, SUITE 1600, BOSTON, MA 02110

PROJECT NAME: PROPOSED MULTI-FAMILY DEVELOPMENT

PROJECT ADDRESS: 105 BARTLETT STREET, PORTSMOUTH, NH 03801

PROJECT LATITUDE/LONGITUDE: 43°-04'-20" N / 70°-46'-15" W

PROJECT MAP/LOT: MAP 157 / LOT 1; MAP 157 / LOT 2; MAP 157 / LOT 2-1; MAP 164 / LOT 1; MAP 164 / LOT 4-2

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF THE CONSTRUCTION OF A THREE (3) BUILDING MULTI-FAMILY DEVELOPMENT (APPROXIMATELY 250 UNITS) WITH ASSOCIATED SITE IMPROVEMENTS.

DISTURBED AREA

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY _____ ACRES.

SOIL CHARACTERISTICS

BASED ON THE _______________ CONDUCTED BY ______________ ON ______________ THE SOILS ON SITE CONSIST OF _____________ WHICH ARE __________ DRAINED SOILS WITH A HYDROLOGIC SOIL GROUP RATING OF _______.

NAME OF RECEIVING WATERS

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA ___________ WHICH ULTIMATELY FLOWS TO ________________.

CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:

1. CUT AND CLEAR TREES.
2. 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
3. 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.
4. CLEAR AND DISPOSE OF DEBRIS.
5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
6. GRADE AND GRAVEL ROADWAYS AND PARKING AREAS - ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. 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.

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 BALES, SILT FENCES, MULCH BERMS, SILT SACKS AND SILT SOCKS AS SHOWN IN THESE DRAWINGS AS THE FIRST ORDER OF WORK.
4. SILT SACK 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.;
   E. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, 2016, ITEM 304.2 HAVE BEEN 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. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
5. 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.
6. 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 OCTOBER 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:

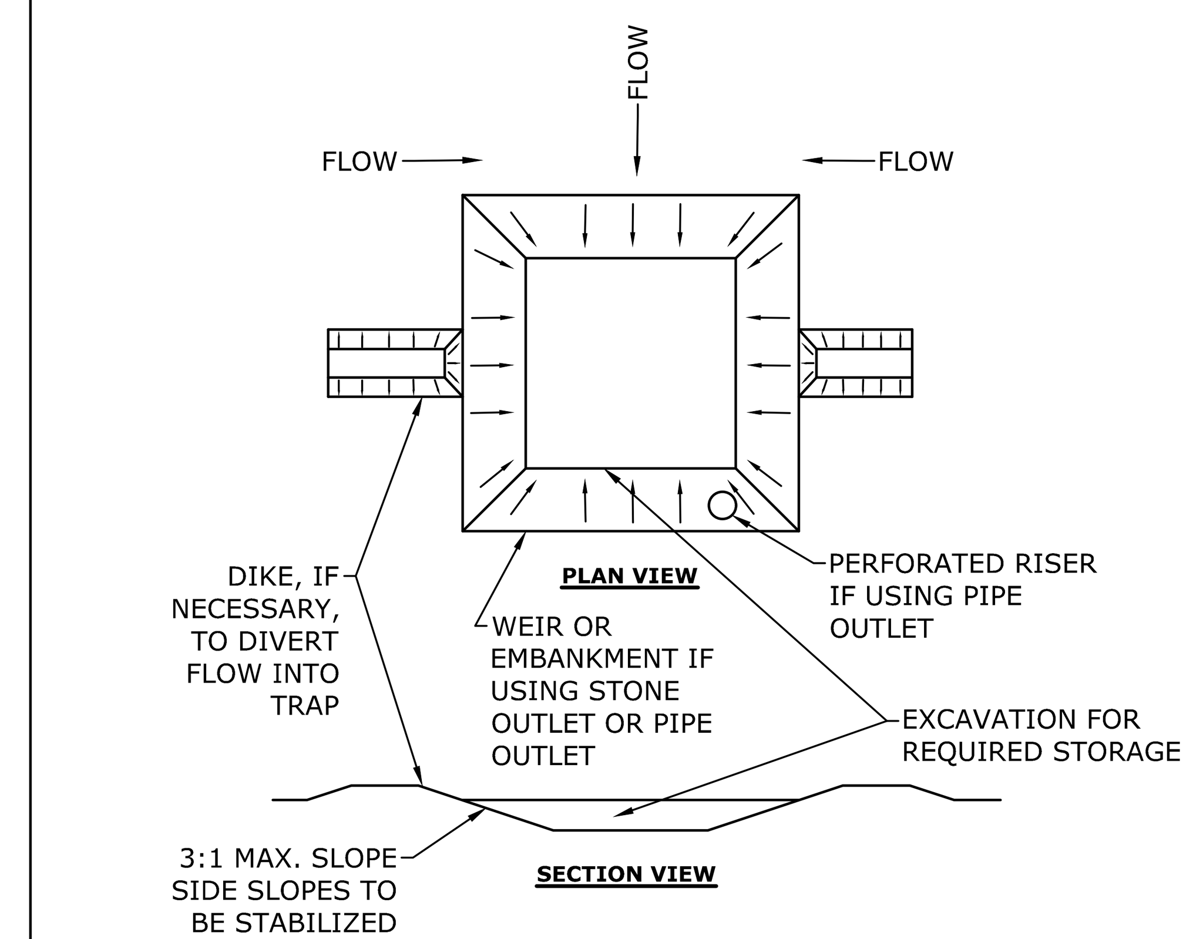
1. WASTE MATERIAL:
   A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
   B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE;
   C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING 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 REGULATED 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, ON AN IMPERVIOUS SURFACE;
      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.
      g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF REGULATED SUBSTANCES.
   B. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
      a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
      b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION;
      c. 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:
         i. ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
         ii. 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.
         iii. SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;
         iv. INSPECT FUEL STORAGE AREAS WEEKLY;
         v. WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS;
         vi. COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS;
         vii. SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
         viii. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:
            (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED SUBSTANCES CLOSED AND SEALED;
            (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS;
            (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
            (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES;
            (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE.
         ix. FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT. HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF
      b. FERTILIZERS:
         i. FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS;
         ii. ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORMWATER;
         iii. 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:
         i. ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE;
         ii. EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM;
         iii. 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 EQUIPMENT/VEHICLE 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.

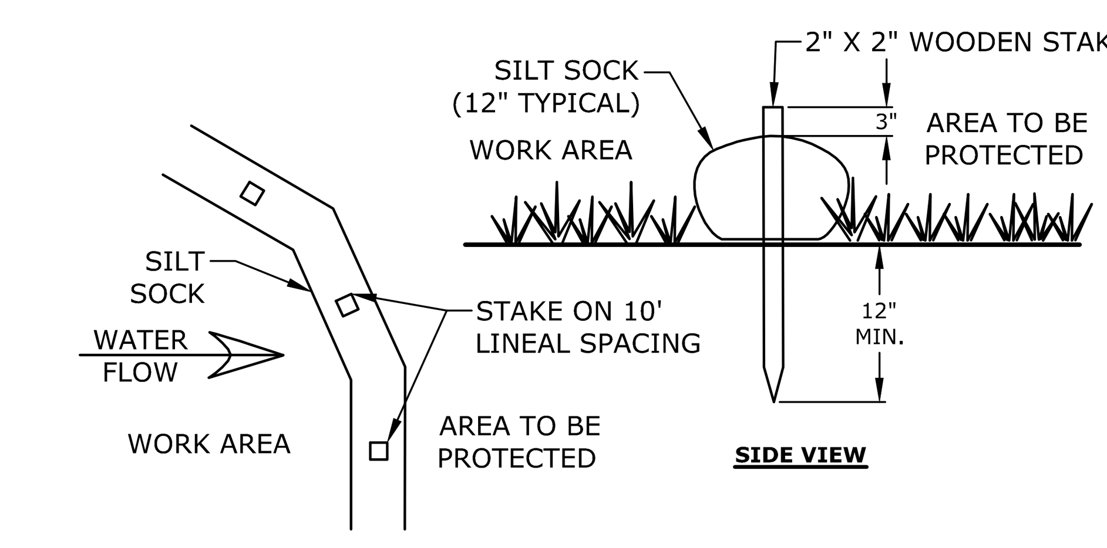


NOTES:

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

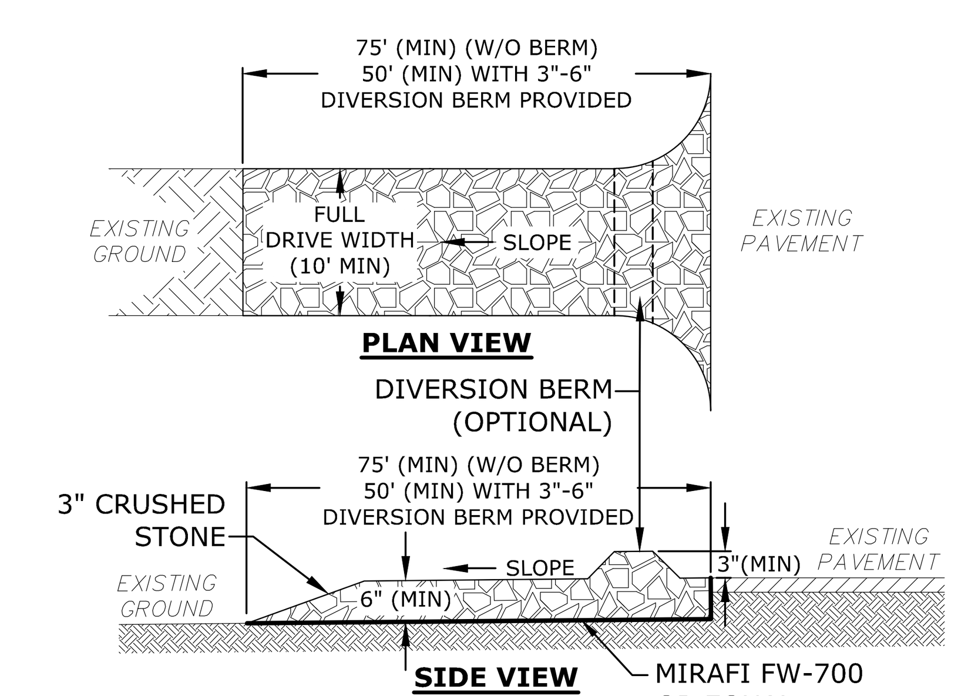


NOTES:

1. SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR APPROVED EQUAL
2. INSTALL SILT SOCK IN ACCORDANCE WITH...

SILT SOCK

NO SCALE



NOTES:

1. THE ENTRANCE 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

Tighe&Bond

Engineers | Environmental Specialists

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

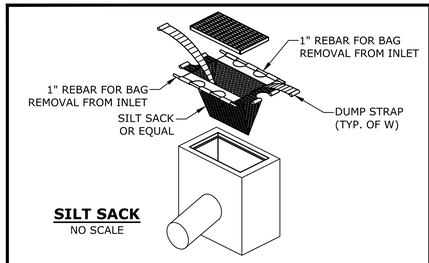
PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-DTLS.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

EROSION CONTROL NOTES AND DETAILS SHEET

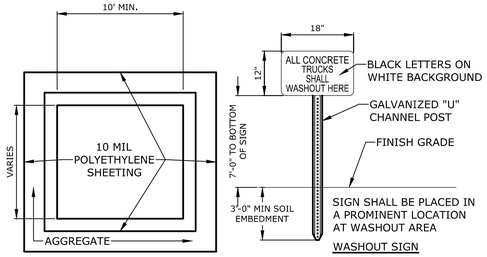
SCALE: AS SHOWN

C-501

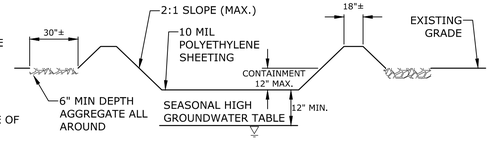
Last Saved: 8/30/2019
Plotted On:Aug 30, 2019-3:37pm By: BCurcio
Tighe & Bond:J:\C\C0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-DTLS.dwg



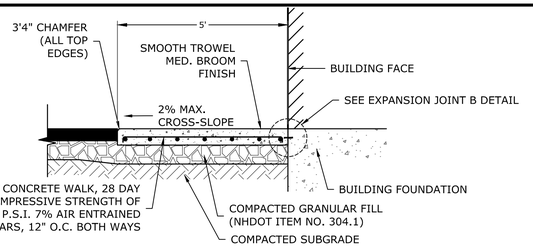
SILT SACK
NO SCALE



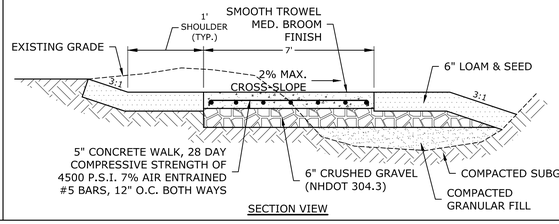
NOTES:
1. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
3. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% 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.



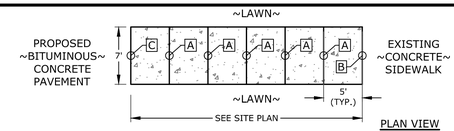
CONCRETE WASHOUT AREA
NO SCALE



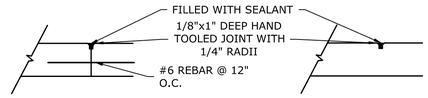
CONCRETE PAD SECTION VIEW @ BUILDING ENTRANCE



SECTION VIEW

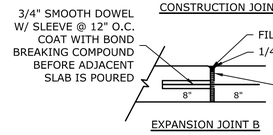


PLAN VIEW

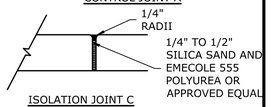


CONSTRUCTION JOINT

CONTROL JOINT A



EXPANSION JOINT B



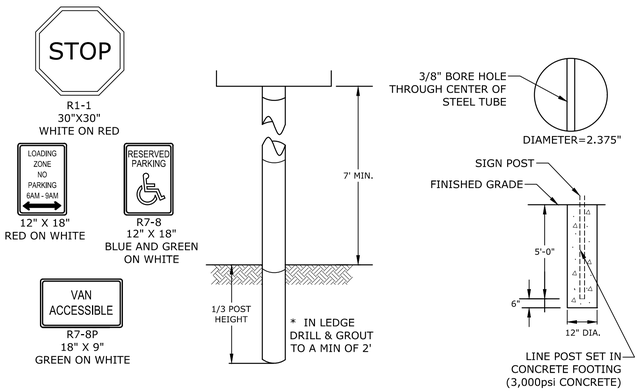
ISOLATION JOINT C

NOTES:
1. SEE SITE PLAN FOR SIDEWALK WIDTH AND LOCATIONS.
2. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR WALK AND SIDE SLOPE GRADES.

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

CONCRETE SIDEWALK
NO SCALE



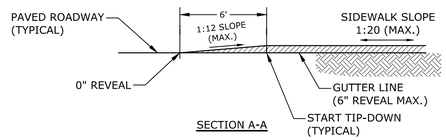
NOTES:
ALL SIGNS TO BE INSTALLED AS INDICATED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
POST: SCHEDULE 40 GALVANIZED STEEL PIPE (OUTSIDE DIA. = 2.375").
FINISH: POST TO BE POWDER COATED GLOSS BLACK
LENGTH: AS REQUIRED
WEIGHT PER LINEAR FOOT: 2.50 LBS (MIN.)
HOLES: 3/8" DIAMETER (AS REQUIRED)
STEEL: SHALL CONFORM TO ASTM A-499 (GRADE 60) OR ASTM A-576 (GRADE 1070-1080)

SIGN LEGEND & SIGN POST
NO SCALE

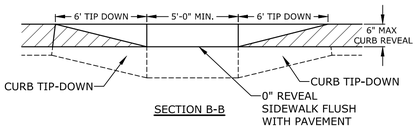
NOTES:
1. RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT AND LOCAL AND STATE REQUIREMENTS.
2. A 6" COMPACTED CRUSHED GRAVEL BASE (NHDOT ITEM No. 304.3) SHALL BE PROVIDED BENEATH RAMPS.
3. DETECTABLE WARNING PANEL SHALL BE CAST IRON SET IN CONCRETE (SEE DETAIL.)
4. PROVIDE DETECTABLE WARNING SURFACES ANYTIME THAT A CURB RAMP, BLENDED TRANSITION, OR LANDING CONNECTS TO A STREET.
5. LOCATE THE DETECTABLE WARNING SURFACES AT THE BACK OF THE CURB ALONG THE EDGE OF THE LANDING.
6. THE MAXIMUM RUNNING SLOPE OF ANY SIDEWALK CURB RAMP IS 12:1, THE MAXIMUM CROSS SLOPE IS 2%. THE SLOPE OF THE LANDING SHALL NOT EXCEED 2% IN ANY DIRECTION.
7. TRANSITIONS SHALL BE FLUSH AND FREE OF ABRUPT CHANGES. ROADWAY SHOULDER SLOPES ADJOINING SIDEWALK CURB RAMPS SHALL BE A MAXIMUM OF 5% (FULL WIDTH) FOR A DISTANCE OF 2 FT. FROM THE ROADWAY CURBLINE.
8. THE BOTTOM OF THE SIDEWALK CURB RAMP OR LANDING, EXCLUSIVE OF THE FLARED SIDES, SHALL BE WHOLLY CONTAINED WITHIN THE CROSSWALK MARKINGS.
9. DETECTABLE WARNING PANELS SHALL BE A MINIMUM OF 2 FEET IN DEPTH. THE ROWS OF TRUNCATED DOMES SHALL BE ALIGNED PERPENDICULAR TO THE GRADE BREAK BETWEEN THE RAMP, BLENDED TRANSITION, OR LANDING AND THE STREET.
10. THE TEXTURE OF THE DETECTABLE WARNING FEATURE MUST CONTRAST VISUALLY WITH THE SURROUNDING SURFACES (EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT).

CONCRETE WHEELCHAIR ACCESSIBLE RAMP
NO SCALE

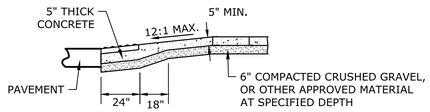
NHDOT ITEM No. 304.3 (CRUSHED GRAVEL)	
SIEVE SIZE	% PASSING
3"	100
2"	95-100
1"	55-85
#4	27-52
#200	0-12



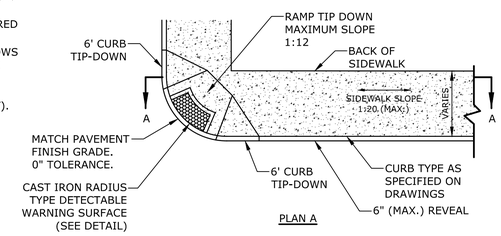
SECTION A-A



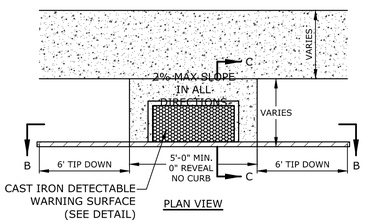
SECTION B-B



SECTION C-C



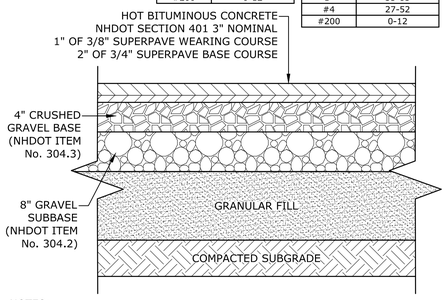
PLAN A



PLAN VIEW

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

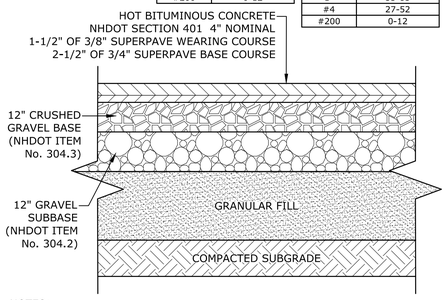


NOTES:
1. SEE SITE PLAN FOR PAVEMENT WIDTH AND LOCATION.
2. SEE GRADING, DRAINAGE AND EROSION CONTROL PLAN FOR PAVEMENT SLOPE AND CROSS-SLOPE.
3. A TACK COAT SHALL BE PLACED ON TOP OF BINDER COURSE PAVEMENT PRIOR TO PLACING WEARING COURSE.
4. REFER TO CITY SPECIFICATIONS FOR ASPHALT MIX DESIGN.

ON-SITE PAVEMENT SECTION
NO SCALE

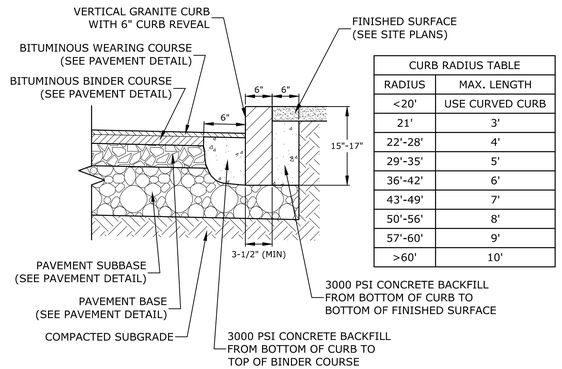
NHDOT ITEM No. 304.2 (GRAVEL)	
SIEVE SIZE	% PASSING
6"	100
#4	25-70
#200	0-12

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.

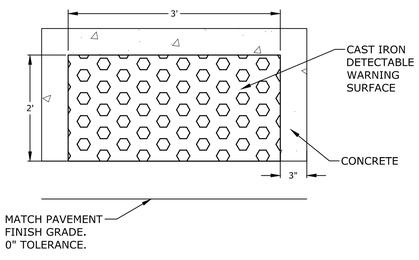
CITY RIGHT-OF-WAY PAVEMENT SECTION
NO SCALE



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



NOTES:
1. DETECTABLE WARNING SURFACE SHALL BE 2' X 3' CAST IRON PANEL SET IN CONCRETE.
2. DETECTABLE WARNING SURFACE SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

CAST IRON DETECTABLE WARNING SURFACE
NO SCALE

Tighe&Bond
Engineers | Environmental Specialists

105 Bartlett Street

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

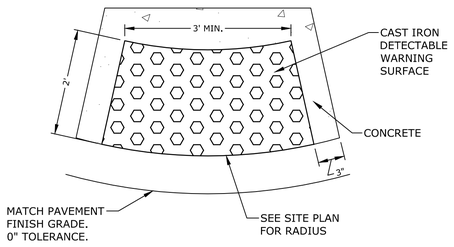
PROJECT NO:	C-0960-006
DATE:	July 24, 2019
FILE:	C-0960-006_C-DTLS.DWG
DRAWN BY:	NAH, CJK
CHECKED:	PMC
APPROVED:	BML

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN

C-502

Last Saved: 8/30/2019
Plotted: 8/30/2019 9:18am By: BCurcio
Tighe & Bond:\\CC0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-DTLS.dwg

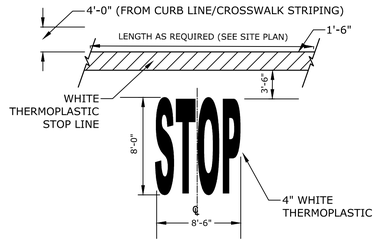


NOTES:

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

RADIUS TYPE CAST IRON DETECTABLE WARNING SURFACE

NO SCALE

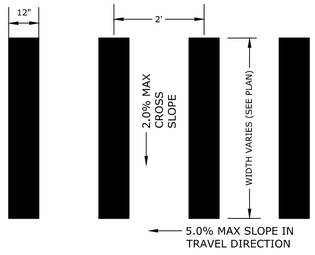


NOTE:

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

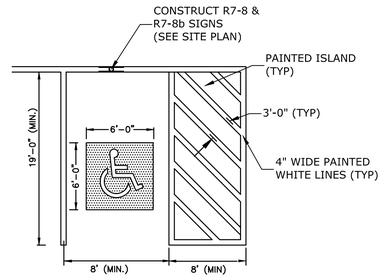
NO SCALE



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

CROSSWALK STRIPING

NO SCALE

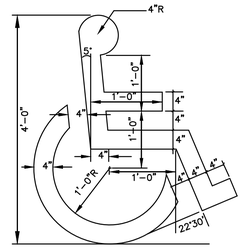


NOTES:

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 AMERICAN W/DISABILITIES ACT.

ACCESSIBLE PARKING STALL

NO SCALE

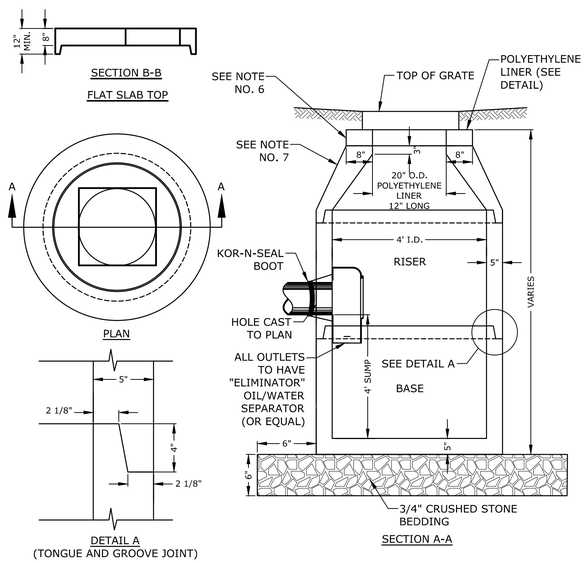


NOTES:

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

ACCESSIBLE SYMBOL

NO SCALE



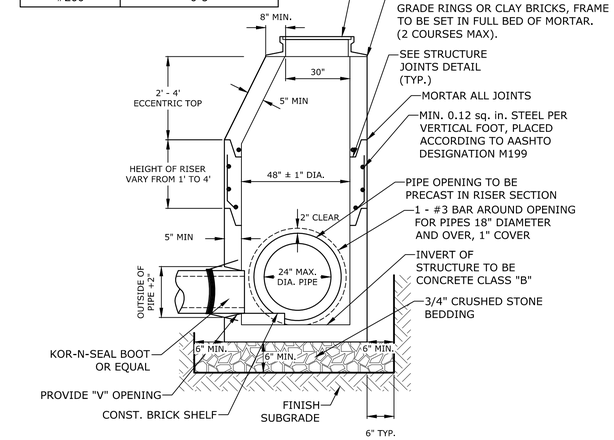
NOTES:

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.
12. "ELIMINATOR" OIL/WATER SEPARATOR SHALL BE INSTALLED TIGHT TO INSIDE OF CATCHBASIN.

4' DIAMETER CATCHBASIN

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

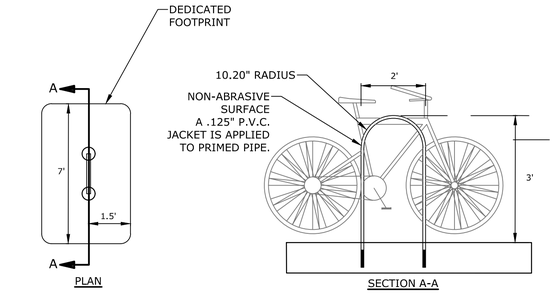


NOTES:

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.

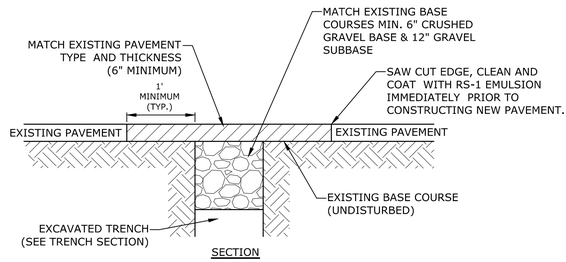
4' DIAMETER DRAIN MANHOLE

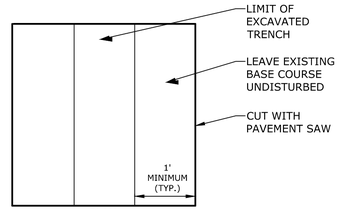
NO SCALE



BIKE RACK

NO SCALE





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
Engineers | Environmental Specialists

105 Bartlett Street

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	July 24, 2019
FILE:	C-0960-006_C-DTLS.DWG
DRAWN BY:	NAH, CJK
CHECKED:	PMC
APPROVED:	BML

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN

C-503

Last Saved: 8/30/2019
Plotted: 08/30/2019 9:18am By: BCurcio
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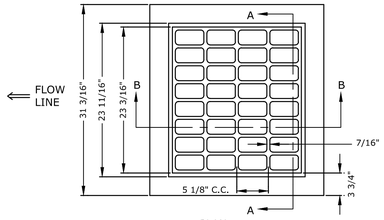
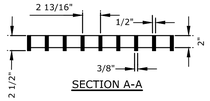
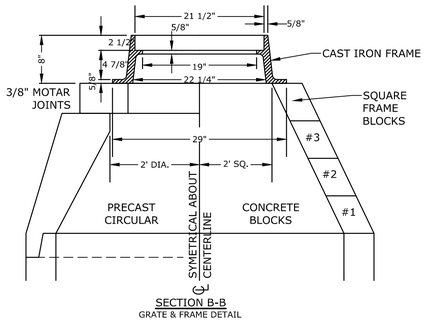


PLAN

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

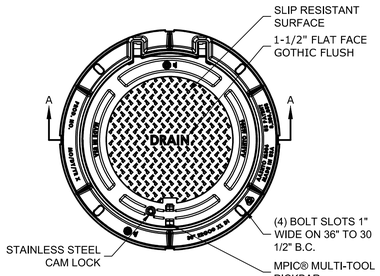


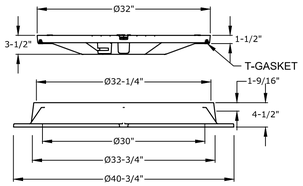
SECTION A-A



SECTION B-B
GRATE & FRAME DETAIL

CATCH BASIN FRAME & GRATE
NO SCALE

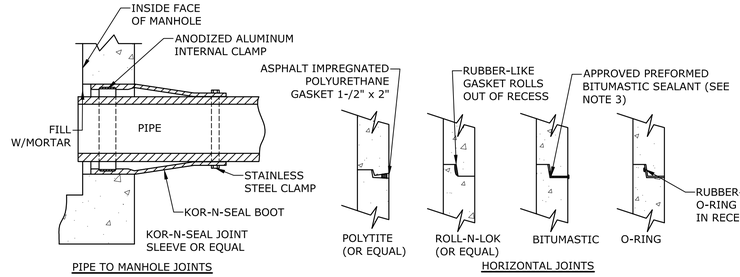




SECTION A-A

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

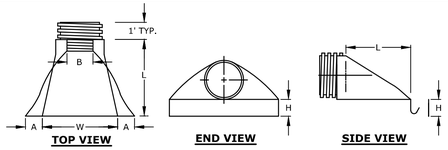


PIPE TO MANHOLE JOINTS

HORIZONTAL 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.

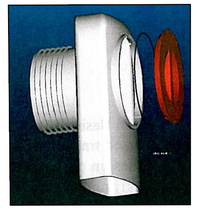
MANHOLE JOINTS
NO SCALE



TOP VIEW **END VIEW** **SIDE VIEW**

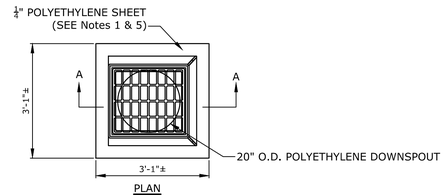
PIPE Ø	DIMENSION (INCHES)					
	PART NO.	A(1±)	B MAX	H(1±)	L(1/2±)	W(2±)
12" & 15"	1210 NP	6.5	10	6.5	25	29
18"	1810 NP	7.5	15	6.5	32	35
24"	2410 NP	7.5	18	6.5	36	45
36"	3610 NP	10.5	NA	7.0	53	68

HDPE END SECTION DIMENSIONS
NO SCALE

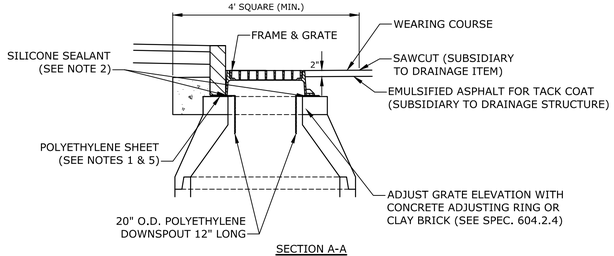


NOTES:
1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP MANUFACTURED BY KLEANSTREAM (NO EQUAL)
2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

"ELIMINATOR" OIL FLOATING DEBRIS TRAP
NO SCALE



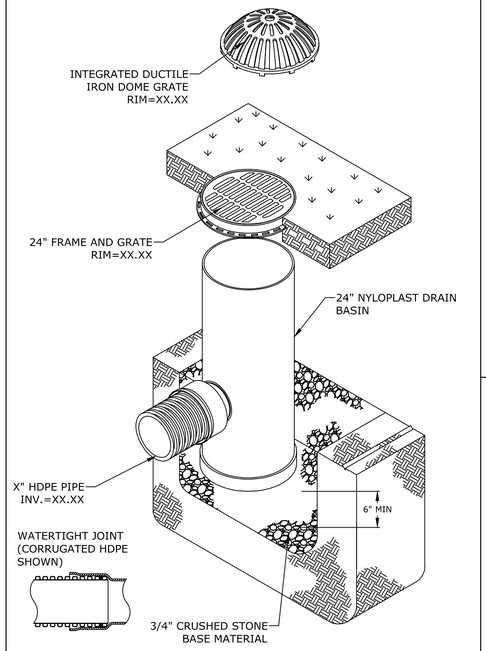
PLAN



SECTION A-A

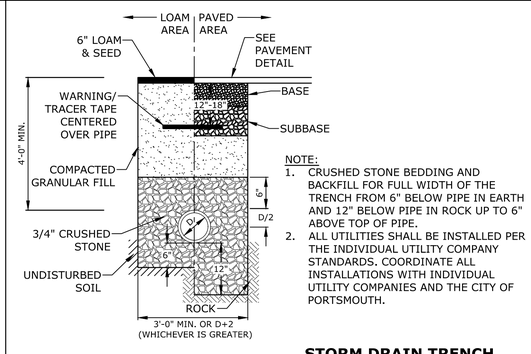
NOTES:
1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
3. PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF THE GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
4. USE ON DRAINAGE STRUCTURES 4' MIN. DIAMETER ONLY.
5. TRIM POLYETHYLENE SHEET A MAXIMUM OF 4" OUTSIDE THE FLANGE ON THE FRAME FOR THE CATCH BASIN BEFORE PLACING CONCRETE (EXCEPT AS SHOWN WHEN USED WITH 3-FLANGE FRAME AND CURB).
6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 6" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
7. PLACED ONLY IN DRAINAGE STRUCTURES IN PAVEMENT.
8. SEE NHDOT DR-04, "DI-DB, UNDERDRAIN FLUSHING BASIN AND POLYETHYLENE LINER DETAILS", FOR ADDITIONAL INFORMATION.
9. CATCHBASINS WITHIN CITY RIGHT OF WAY SHALL HAVE A POLYETHYLENE LINER

POLYETHYLENE LINER
NO SCALE



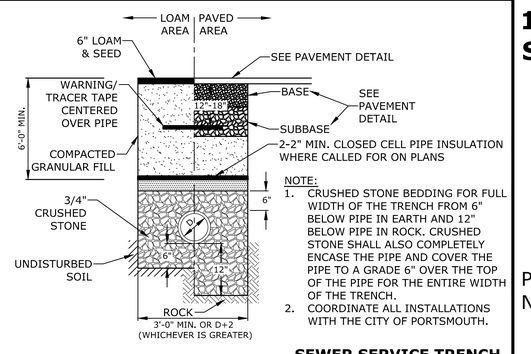
NOTES:
1. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
2. FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05
3. SEE GRADING, DRAINAGE, AND EROSION CONTROL PLAN FOR LOCATIONS.

YARD DRAIN
NO SCALE



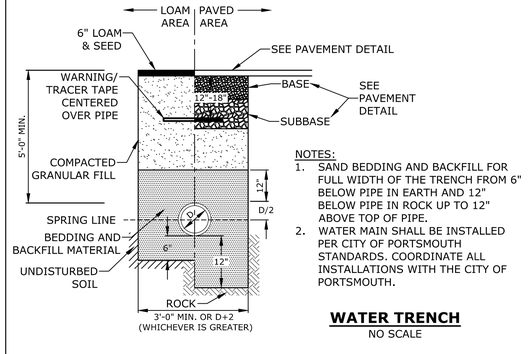
NOTE:
1. CRUSHED STONE BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 6" ABOVE TOP OF PIPE.
2. ALL UTILITIES SHALL BE INSTALLED PER THE INDIVIDUAL UTILITY COMPANY STANDARDS. COORDINATE ALL INSTALLATIONS WITH INDIVIDUAL UTILITY COMPANIES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

STORM DRAIN TRENCH
NO SCALE



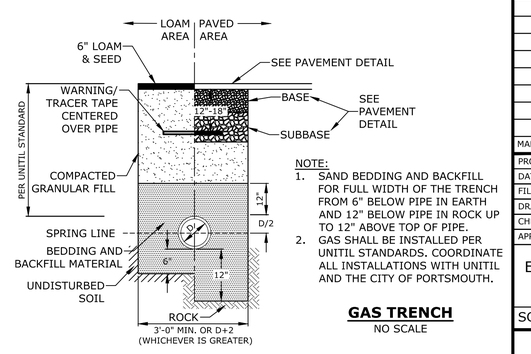
NOTE:
1. CRUSHED STONE BEDDING FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK. CRUSHED STONE SHALL ALSO COMPLETELY ENCASE THE PIPE AND COVER THE PIPE TO A GRADE 6" OVER THE TOP OF THE PIPE FOR THE ENTIRE WIDTH OF THE TRENCH.
2. COORDINATE ALL INSTALLATIONS WITH THE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

SEWER SERVICE TRENCH
NO SCALE



NOTES:
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. WATER MAIN SHALL BE INSTALLED PER CITY OF PORTSMOUTH STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE CITY OF PORTSMOUTH.

WATER TRENCH
NO SCALE



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 SHALL BE INSTALLED PER UNITIL STANDARDS. COORDINATE ALL INSTALLATIONS WITH UNITIL AND THE CITY OF PORTSMOUTH.

GAS TRENCH
NO SCALE

Tighe&Bond
Engineers | Environmental Specialists

105 Bartlett Street

Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

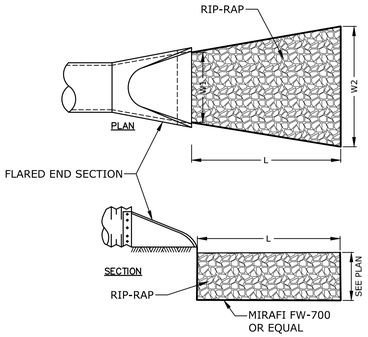
PROJECT NO:	C-0960-006
DATE:	July 24, 2019
FILE:	C-0960-006_C-DTLS.DWG
DRAWN BY:	NAH, CJK
CHECKED:	PMC
APPROVED:	BML

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN

C-504

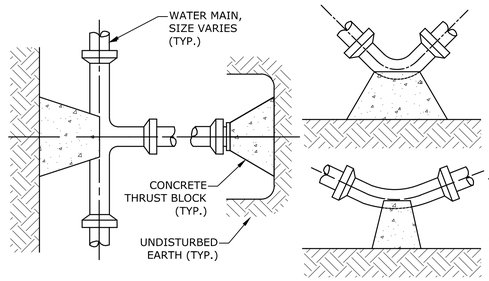
Last Saved: 8/30/2019
Last Plotted: 8/30/2019 9:9-9-21am By: BCurcio
Tighe & Bond J:\C\C0960 Catharine\C-0960-006 105 Bartlett Street\Drawings_Figures\AutoCAD\Sheet\C-0960-006_C-DTLS.dwg



NOTES:

1. STONE SIZE AND MAT DIMENSIONS DETAILED ON PLANS.
2. STONE SHALL CONSIST OF SUB-ANGULAR FIELD STONE OR ROUGH UNHEWN QUARRY STONE OF APPROXIMATELY RECTANGULAR SHAPE. FLAT OR ROUND ROCKS ARE NOT ACCEPTABLE. THE STONE SHALL BE HARD AND OF SUCH QUALITY THAT IT WILL NOT DISINTEGRATE ON EXPOSURE TO WATER OR WEATHERING, BE CHEMICALLY STABLE AND IT SHALL BE SUITABLE IN ALL OTHER RESPECTS FOR THE PURPOSE INTENDED. THE BULK SPECIFIC GRAVITY (SATURATED SURFACE-DRY BASIS) OF THE INDIVIDUAL STONES SHALL BE AT LEAST 2.5.
3. THE STONE SHALL BE COMPOSED OF A WELL-GRADED MIXTURE DOWN TO THE ONE-INCH SIZE PARTICLE SUCH THAT 50 PERCENT OF THE MIXTURE BY WEIGHT SHALL BE LARGER THAN THE D50 SIZE SPECIFIED. A WELL-GRADED MIXTURE IS DEFINED AS A MIXTURE COMPOSED PRIMARILY OF THE LARGER STONE SIZE BUT WITH A SUFFICIENT MIXTURE OF OTHER SIZES TO FILL THE PROGRESSIVELY SMALLER VOIDS BETWEEN THE STONES. THE DIAMETER OF THE LARGEST STONE SIZE IN SUCH A MIXTURE SHALL BE 1.5 TIMES THE D50 SIZE.

RIPRAP APRON
NO SCALE

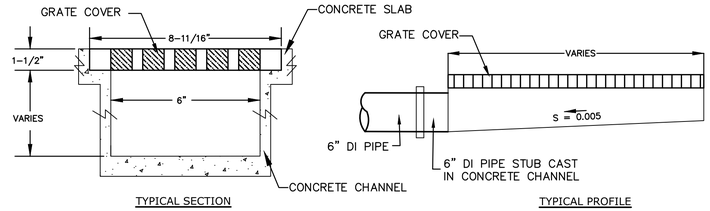


TEST PRESSURE = 200psi	SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL				
REACTION TYPE	PIPE SIZE				
	4"	6"	8"	10"	12"
A 90°	0.89	2.19	3.82	11.14	17.24
B 180°	0.65	1.55	2.78	8.38	12.00
C 45°	0.48	1.19	2.12	6.02	9.32
D 22-1/2°	0.25	0.60	1.06	3.08	4.74
E 11-1/4°	0.13	0.30	0.54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

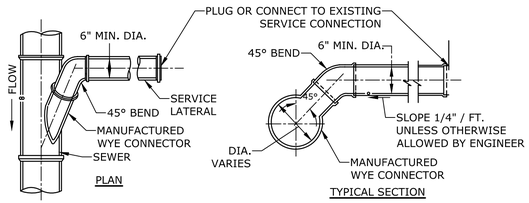
THRUST BLOCKING DETAIL
NO SCALE



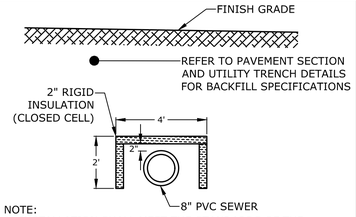
NOTES:

1. TRENCH DRAIN FRAME AND GRATE SHALL BE MULTIDRAIN ECONODRAIN SERIES #6 OR EQUAL WITH ADA COMPLIANT GRATE.
2. CONCRETE CHANNEL TO BE CAST AS PART OF STAIR SLAB (COORDINATE WITH BUILDING DRAWINGS).

TRENCH DRAIN DETAIL
NOT TO SCALE

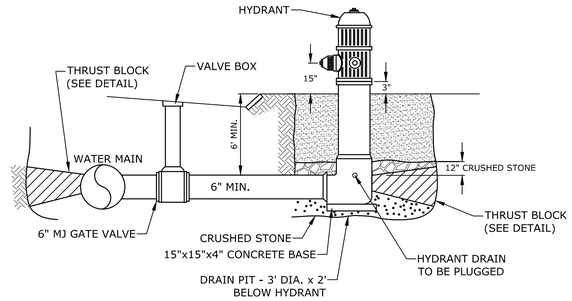


STANDARD SERVICE LATERAL CONNECTION
NO SCALE



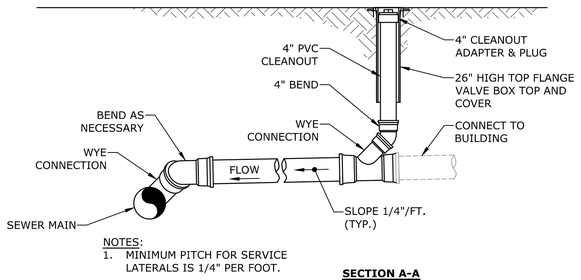
NOTE:
1. INSTALLATION SHALL MEET THE STANDARDS OF THE CITY OF PORTSMOUTH.

SEWER INSULATION DETAIL
NO SCALE



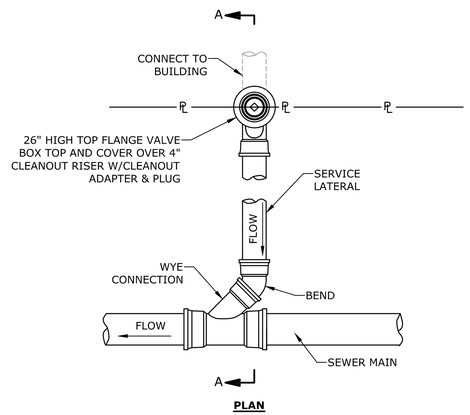
NOTE:
1. HYDRANT TO BE KENNEDY TYPE K-81, RIGHT OPEN (NO EQUAL). COORDINATE WITH CITY OF PORTSMOUTH WATER DEPARTMENT AND CITY OF PORTSMOUTH FIRE DEPARTMENT.
2. PAINT HYDRANT IN ACCORDANCE WITH CITY STANDARD SPECIFICATIONS AFTER INSTALLATION AND TESTING.

FIRE HYDRANT
NO SCALE



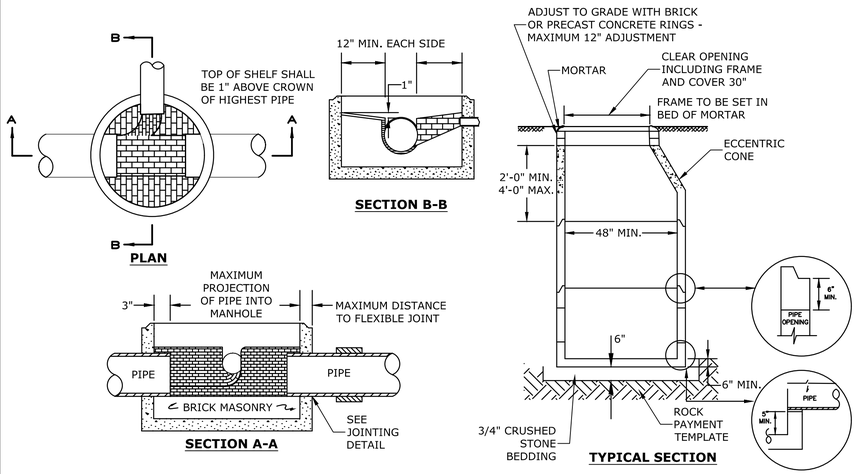
NOTES:
1. MINIMUM PITCH FOR SERVICE LATERALS IS 1/4" PER FOOT.

SECTION A-A



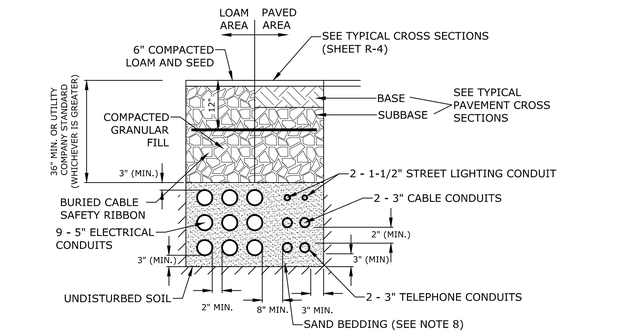
PLAN

SANITARY SERVICE LATERAL WITH CLEANOUT
NO SCALE



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. BITUMINOUS WATERPROOF COATING TO 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



NOTES:

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

Tighe&Bond
Engineers | Environmental Specialists

Proposed Multi-Family Development

Bartlett Street Lender, LLC

105 Bartlett Street
Portsmouth,
New Hampshire

MARK	DATE	DESCRIPTION

PROJECT NO:	C-0960-006
DATE:	September 3, 2019
FILE:	C-0960-006_C-DTLS.DWG
DRAWN BY:	NAH
CHECKED:	PMC
APPROVED:	BML

EROSION CONTROL NOTES AND DETAILS SHEET

SCALE: AS SHOWN

C-505

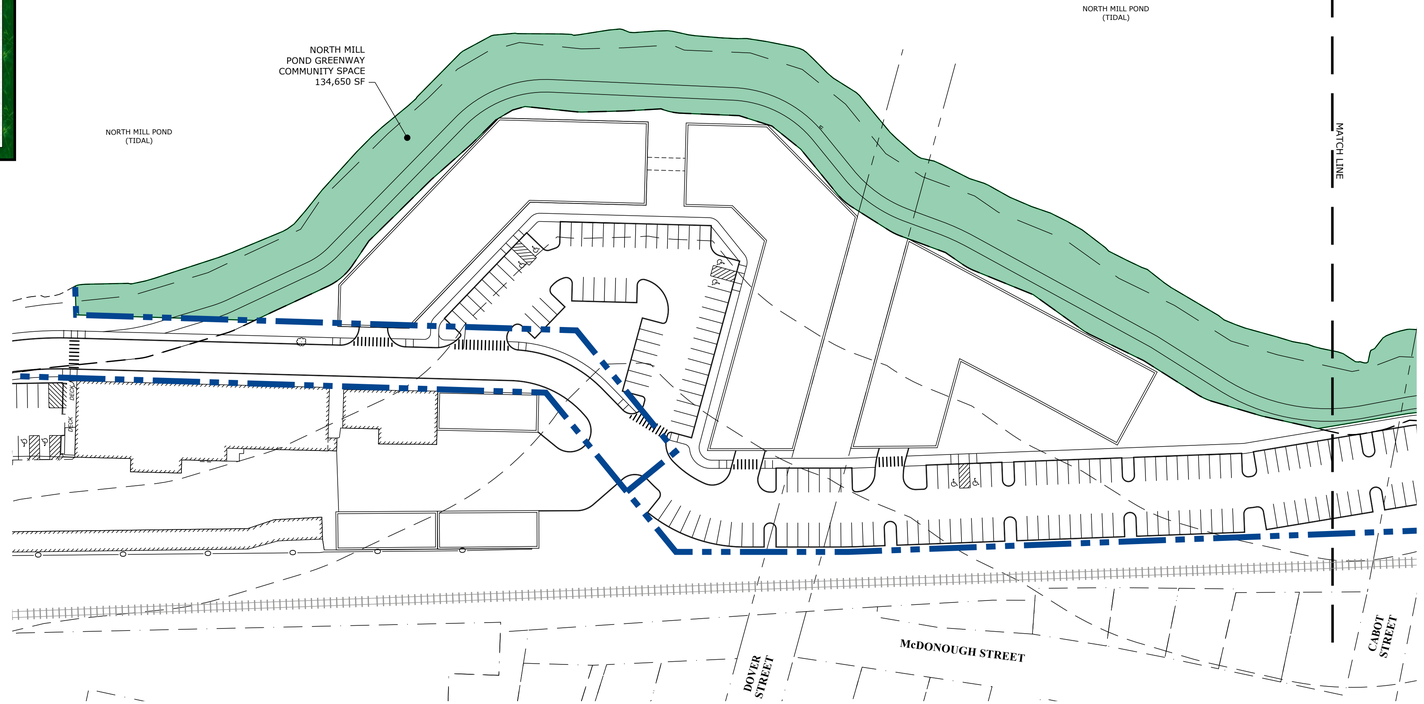
Last Saved: 8/30/2019
Plotted: Friday, 08/30/2019 - 2:41pm By: BCurcio
Tighe & Bond:\\CC0960 Cathartes\C-0960-006 105 Bartlett Street\Drawings, Figures\AutoCAD\Sheet\C-0960-006_C-DTLS.dwg

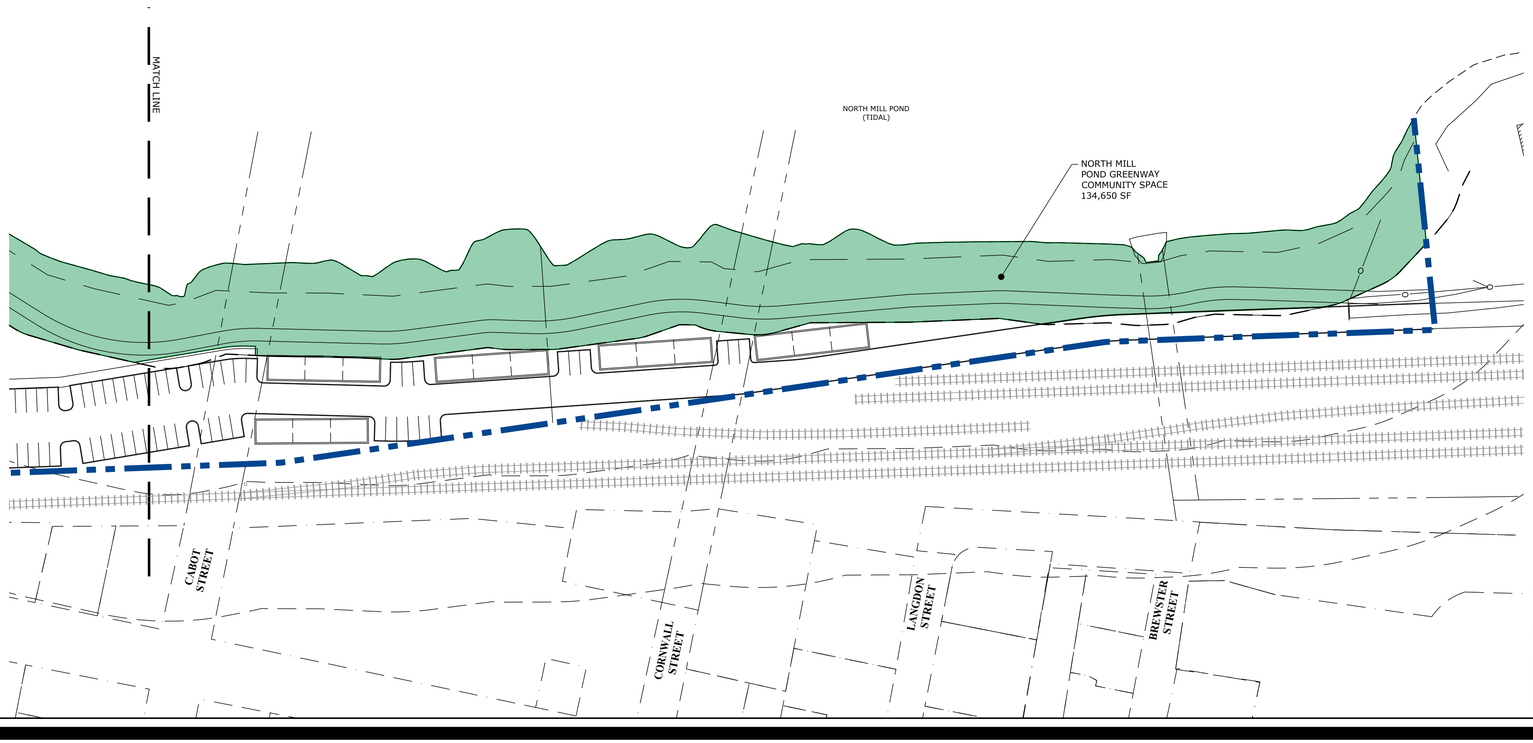
PROPOSED DEVELOPMENT
105 BARTLETT STREET
PORTSMOUTH, NH

COMMUNITY SPACE PLAN

COMMUNITY OPEN SPACE:

	REQUIRED	PROVIDED
NORTH MILL POND GREENWAY COMMUNITY SPACE	67,734 SF (20%)	134,650 SF (39.8%)





N

0 60' 120'

GRAPHIC SCALE

Tighe&Bond
Engineers | Environmental Specialists
177 Corporate Drive
Portsmouth, New Hampshire 03801
(603) 433-8818

September 3, 2019
C-0960-006_C-CONSTRAINTS_CLR.dwg

C-0960-006_C-CONSTRAINTS_CLR.dwg Date Plotted: Sep 03, 2019 - 3:04pm Plotted By: BJL

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: 1955A

To: Jeff Johnston
Cathartes

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

Subject: Trip Generation Update

Date: August 20, 2019

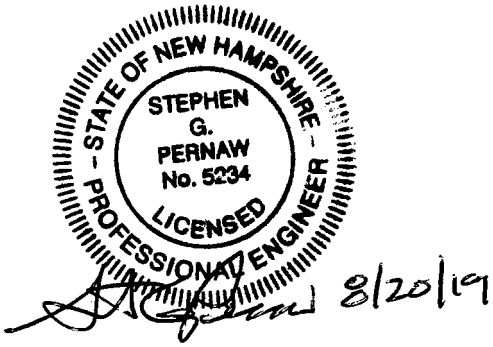
As you know, our office prepared the *"Traffic Impact & Site Access Study – Proposed Residential Subdivision"* report dated June 18, 2019 for the 120-unit multi-family low/mid-rise residential development located on the south side of North Mill Pond in Portsmouth, New Hampshire. The development proposal has changed and it now involves razing the Great Rhythm Brewing Company and the Play All Day Doggy Daycare facility and increasing the number of dwellings to 269 units. The purpose of this memorandum is to compare the trip generating characteristics of the former and current development proposals.

The updated trip generation analysis indicates that the 269 dwellings will generate approximately 95 (AM) and 122 (PM) vehicle-trips during the peak hour periods (see Attachment 1). Driveway counts conducted at the brewery/dog daycare parking lot in October 2018 revealed that these two uses generated 68 (AM) and 85 (PM) vehicle-trips (see Attachment 2) on a typical weekday. The previous development proposal was expected to generate approximately 41 (AM) and 53 (PM) vehicle trips (see Attachment 3).

Table 1 (Page 2) combines these findings and demonstrates that the current development proposal will generate -14 (AM) and -16 (PM) fewer vehicle-trips during the peak hour periods than the previous development proposal. Accordingly, the traffic projections contained in the previous traffic study are now considered to be conservative on the "high side." This means that the study findings and conclusions remain valid for the new development proposal.

cc: Doug Pinciaro, Clipper Traders, LLC
Ed Hayes, Ricci Lumber

Attachments



Stephen G. Pernaw & Company, Inc.

Table 1 — Trip Generation Update

	Current Development Proposal						
	239 Mid-Rise Units [1]	30 Low-Rise Units [2]	Subtotal	Less Brewery & Dog Daycare [3]	Net Trips Generated	Previous Development Proposal [4]	Net Change
Weekday AM Peak Hour							
Entering	21 veh	3 veh	24 veh	-34 veh	-10 veh	11 veh	-21 veh
Exiting	59 veh	12 veh	71 veh	-34 veh	37 veh	30 veh	7 veh
Total	80 trips	15 trips	95 trips	-68 trips	27 trips	41 trips	-14 trips
Weekday PM Peak Hour							
Entering	62 veh	13 veh	75 veh	-43 veh	32 veh	32 veh	0 veh
Exiting	40 veh	7 veh	47 veh	-42 veh	5 veh	21 veh	-16 veh
Total	102 trips	20 trips	122 trips	-85 trips	37 trips	53 trips	-16 trips

[1] ITE Land Use Code 221 - Multifamily Housing (Mid-Rise) - See Attachment 1

[2] ITE Land Use Code 220 - Multifamily Housing (Low-Rise) - See Attachment 1

[3] October 2018 Driveway Counts (See Attachment 2)

[4] "Traffic Impact and Site Access Study-Proposed Residential Subdivision" Table 1, by Stephen G. Pernaw & Co., Inc. dated June 18, 2018 (See Attachment 3)

Trip Generation Summary

Alternative: Alternative 1
Phase:
Project: 1955A

Open Date: 8/19/2019
Analysis Date: 8/19/2019

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
220	LOW-RISE 1			93	93	186		3	12	15		13	7	20
	30	Dwelling Units												
221	MID-RISE 1			651	650	1301		21	59	80		62	40	102
	239	Dwelling Units												
Unadjusted Volume				744	743	1487		24	71	95		75	47	122
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				744	743	1487		24	71	95		75	47	122

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

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Transportation: Engineering • Planning • Design

MEMORANDUM

Ref: 1821A

To: Juliet T. H. Walker, AICP
Planning Director
City of Portsmouth Planning Department

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

Subject: Clipper Traders – Supplemental Traffic Counts
Portsmouth, New Hampshire

Date: October 9, 2018

On October 2, 2018 the Technical Advisory Committee requested that traffic counts be conducted at the Great Rhythm Brewing Company & Play All Day dog day care center parking lot to determine when the busiest traffic periods occur. These traffic counts were conducted on Thursday, October 4, 2018 during the morning and evening commuter periods:

Hourly Volumes

	Arrivals	Departures	Trips
7:00 - 8:00	32	29	61
8:00 - 9:00	35	33	68
2-Hour Total	67	62	129
3:00 - 4:00	22	14	36
4:00 - 5:00	34	37	71
5:00 - 6:00	38	41	79
3-Hour Total	94	92	186

AM Peak Hour Volumes

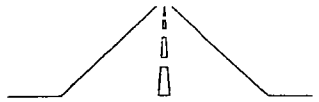
7:30 - 8:30	34	34	**68**
8:00 - 9:00	35	33	68

PM Peak Hour Volumes

4:15 - 5:15	43	42	**85**

The highest hourly traffic volume that was generated by this parking lot occurred from 4:15 to 5:15 PM with 43 arrivals and 42 departures (85 vehicle-trips).

cc: John Chagnon, P.E. – Ambit Engineering, Inc.
Doug Pinciaro, Clipper Traders, LLC
Ed Hayes, Ricci Lumber
Eric Eby, P.E. – City of Portsmouth
Elizabeth Oltman, P.E. – The Engineering Corporation



TRIP GENERATION

To estimate the quantity of vehicle trips that will be produced by the proposed residential development, Pernaw & Company, Inc. considered the standardized trip-generation rates and equations published by the Institute of Transportation Engineers (ITE) [1]. Based upon ITE Land Use Code LUC 221 – Multi-Family Housing (Mid-Rise) the overall development is expected to generate approximately 41 vehicle-trips during the weekday AM peak hour and 53 vehicle-trips during the weekday PM peak hour, on an average weekday basis. These results are based upon consideration of both the trip "rate" and "equation" method, and 120 dwelling units as the independent variable. The following table summarizes the anticipated trip-generating characteristics of the proposed residential development.

Table 1 — Trip Generation Summary - Clipper Traders

		120 Dwelling Units [1]
Weekday Total [2]		
	Entering	326 veh
	Exiting	326 veh
	Total	652 trips
Weekday AM Peak Hour [2]		
	Entering	11 veh
	Exiting	30 veh
	Total	41 trips
Weekday PM Peak Hour [2]		
	Entering	32 veh
	Exiting	21 veh
	Total	53 trips

[1] ITE LUC 221 Multi-Family Housing (Mid-Rise)
[2] Trip Equation Method
[3] Trip Rate Method

All vehicle-trips associated with the proposed residential development will be "primary" trips, or new trips to the area. Appendix F contains the trip generation computations for the proposed residential development, along with a diagram that summarizes the distribution of the primary trips at the various study area intersections.

[1] Institute of Transportation Engineers, *Trip Generation*, tenth edition (Washington, D.C., 2017).