

C0960-006 February 6, 2020

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

Re: Request for Preliminary Conceptual Consultation & Design Review Phases Proposed Multi-Family Development, 105 Bartlett Street, Portsmouth, NH

Dear Chairman Legg:

On behalf of Iron Horse Properties, LLC, we are pleased to submit the following information to support a request for a Preliminary Conceptual Consultation and a request for Design Review with the Planning Board for the above referenced project:

- Design Review Site Plan Set dated February 6, 2020
- Subdivision Exhibit dated December 18, 2020

The proposed project consists of constructing two (2) multi-family apartment buildings with basement level parking, one (1) mixed used building with first floor office and amenity space, and upper story apartments. The project will include a total of 174 dwelling units. The project will include associated site improvements that consist of a private road with cul-de-sac, parking, utilities, stormwater management, landscaping and lighting. The project will also include community space along the North Mill Pond. The land from North Mill Pond's mean high water (MHW) line to the 50ft wetland buffer will be designated as community space for the City's North Mill Pond Trail project. In addition, the project will construct a greenway park between the proposed buildings and North Mill Pond trail.

As per Section 2.4.2.1 of the Site Plan Regulations, the proposed project is required to meet with the Planning Board for Preliminary Conceptual Consultation Phase. Thus, the applicant respectfully requests to be placed on the February 20, 2020 Planning Board meeting agenda for the Preliminary Conceptual Consultation Phase. In addition, the applicant is seeking to meet with the Planning Board for Design Review Phase. As such, the applicant also respectfully requests a vote from the Planning Board at the February 20, 2020 meeting to accept a request for Design Review Phase so that public hearing can be scheduled for the March 19, 2020 Planning Board meeting. If you have any questions or need any additional information, please contact Patrick Crimmins by phone at (603) 433-8818 or by email at <a href="mailto:pmcrimmins@tighebond.com">pmcrimmins@tighebond.com</a>.

Sincerely,

**TIGHE & BOND, INC.** 

Patrick M. Crimmins, PE Senior Project Manager

Cc: Clipper Traders, LLC
Iron Horse Properties, LLC

Portsmouth Lumber & Hardware, LLC

Neil A. Hansen, PE Project Engineer

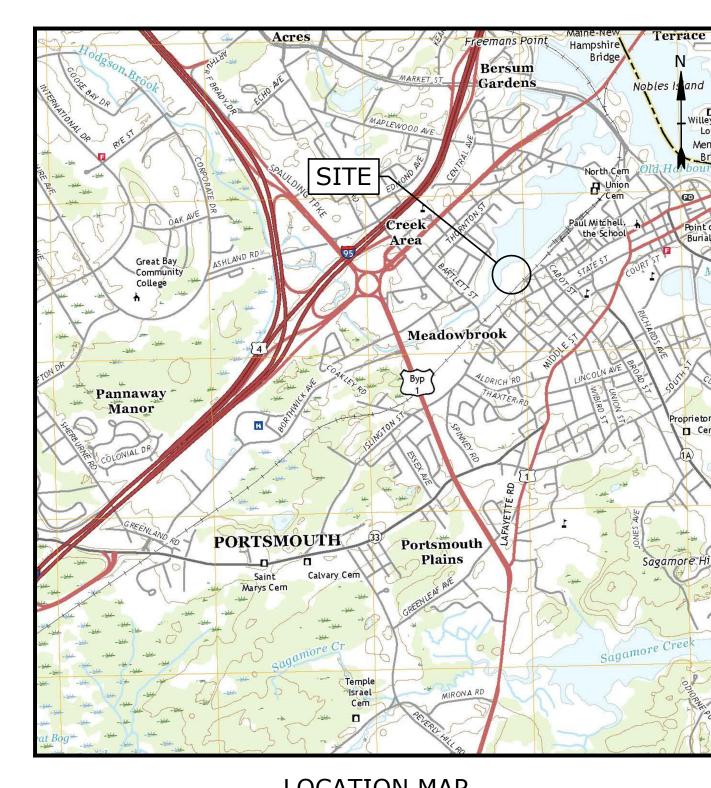
# PROPOSED MULTI-FAMILY DEVELOPMENT

# 105 BARTLETT STREET PORTSMOUTH, NEW HAMPSHIRE

JANUARY 2, 2020 LAST REVISED: FEBRUARY 6, 2020

LIST OF DRAWINGS			
SHEET NO.	SHEET TITLE	LAST REVISED	
	COVER SHEET	02/06/2020	
C-101	OVERALL EXISTING CONDITIONS AND DEMOLITION PLAN	02/06/2020	
C-101.1	EXISTING CONDITIONS AND DEMOLITION PLAN	02/06/2020	
C-101.2	EXISTING CONDITIONS AND DEMOLITION PLAN	02/06/2020	
C-102	OVERALL SITE PLAN	02/06/2020	
C-102.1	SITE PLAN	02/06/2020	
C-102.2	SITE PLAN	02/06/2020	
C-102.3	SITE PLAN	02/06/2020	
C-103.1	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	02/06/2020	
C-103.2	GRADING, DRAINAGE, AND EROSION CONTROL PLAN	02/06/2020	
C-104.1	UTILITIES PLAN	02/06/2020	
C-104.2	UTILITIES PLAN	02/06/2020	
C-501	EROSION CONTROL NOTES AND DETAILS SHEET	02/06/2020	
C-502	DETAILS SHEET	02/06/2020	
C-503	DETAILS SHEET	02/06/2020	
C-504	DETAILS SHEET	02/06/2020	
C-505	DETAILS SHEET	02/06/2020	

LIST OF PERMITS		
LOCAL	STATUS	DATE
SITE PLAN REVIEW PERMIT		
LOT LINE REVISION PERMIT		
CONDITIONAL USE PERMIT - SHARED PARKING		
CONDITIONAL USE PERMIT - WETLAND BUFFER		
STATE		
NHDES - ALTERATION OF TERRAIN PERMIT		
NHDES - WETLAND PERMIT		
NHDES - SHORELAND PERMIT		
NHDES - SEWER CONNECTION PERMIT		
FEDERAL		-
EPA - NPDES CGP		



LOCATION MAP

SCALE: 1" = 2000'

# PREPARED BY:

# Tighe&Bond

177 CORPORATE DRIVE
PORTSMOUTH, NEW HAMPSHIRE 03801
603-433-8818

OWNERS:
TAX MAP 157, LOT 1
CLIPPER TRADERS, LLC
105 BARTLETT STREET
PORTSMOUTH, NEW HAMPSHIRE 03801

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

PORTSMOUTH, NH 03801

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

# APPLICANT:

IRON HORSE PROPERTIES, LLC 105 BARTLETT STREET PORTSMOUTH, NEW HAMPSHIRE 03801

TAX MAP 164, LOT 1 & 2

PORTSMOUTH HARDWARE

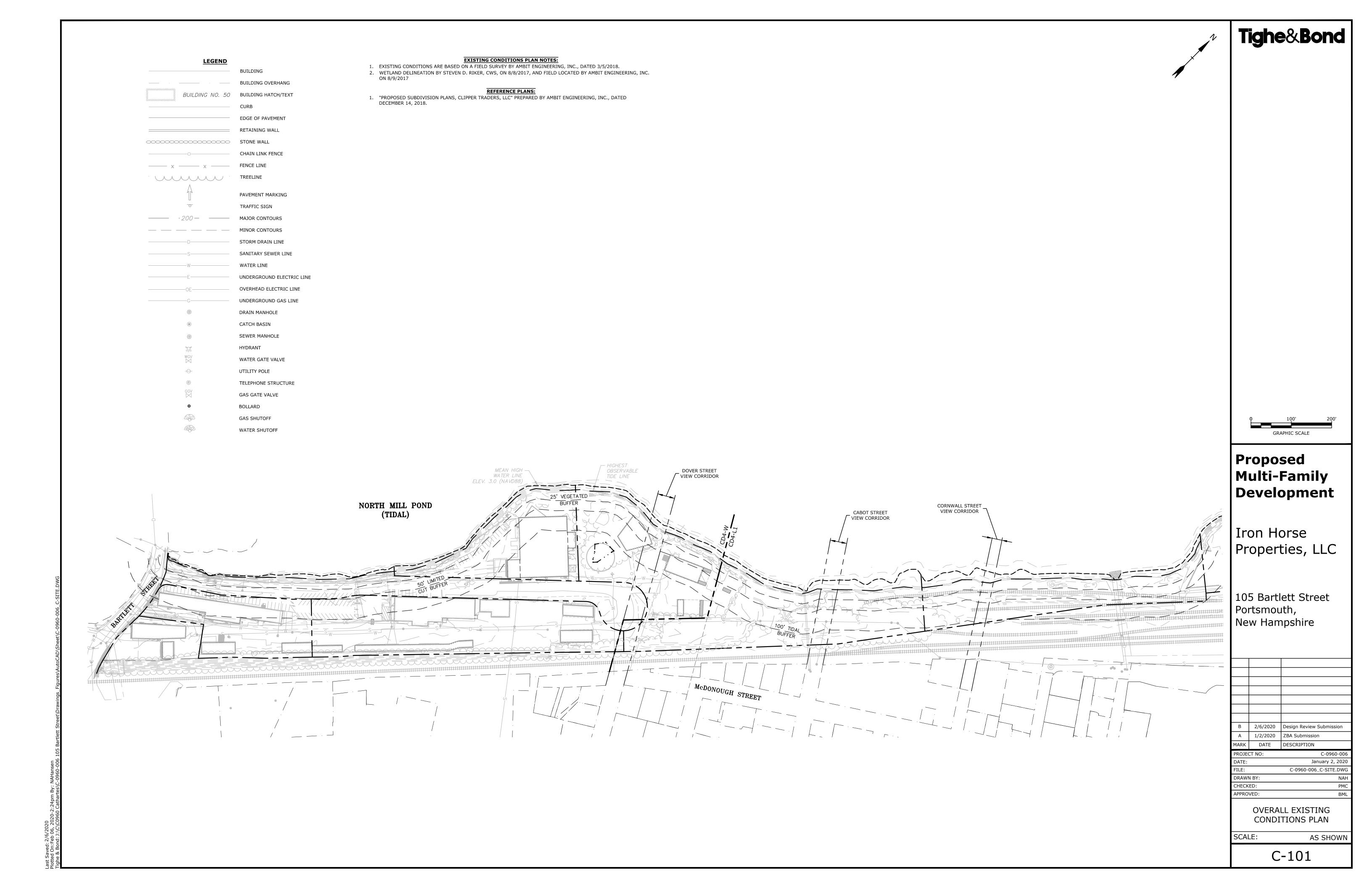
& LUMBER, LLC

105 BARTLETT STREET

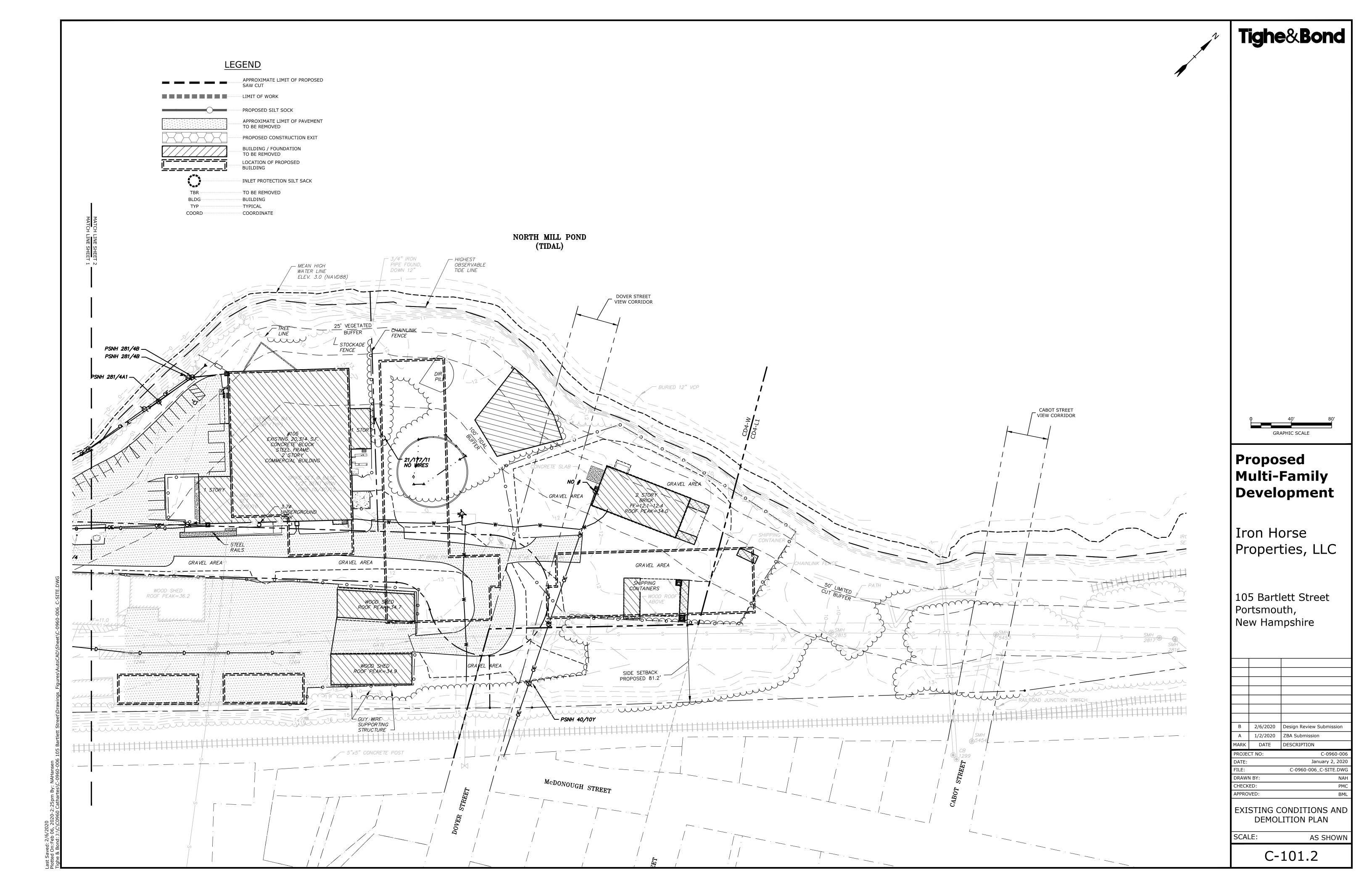
PORTSMOUTH, NH 03801

DESIGN REVIEW SUBMISSION COMPLETE SET 17 SHEETS

**T&B PROJECT NO: C0960-006** 



### **DEMOLITION NOTES:** LEGEND 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. APPROXIMATE LIMIT OF PROPOSED 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. LIMIT OF WORK 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. PROPOSED SILT SOCK 4. COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE APPROXIMATE LIMIT OF PAVEMENT 5. ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE TO BE REMOVED REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST PROPOSED CONSTRUCTION EXIT 6. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL BUILDING / FOUNDATION AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN. TO BE REMOVED 7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE LOCATION OF PROPOSED 8. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE BUILDING <u>'-----</u> THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION. INLET PROTECTION SILT SACK 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. TO BE REMOVED 10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL --BUILDING REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK. TYPICAL 11. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE COORD .... ---COORDINATE 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 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 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 ÞSNH 2≀ ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER. 19. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION 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. - PSNH 178/8 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. **GRAPHIC SCALE** Proposed NORTH MILL POND (TIDAL) **Multi-Family** - PSNH 281/1 HIGHEST *OBSERVABLE* w/CONDUIT - MEAN HIGH **Development** WATER LINE INV.=4.13 ELEV. 3.0 (NAVD88) 211/281/3 Iron Horse Properties, LLC 105 Bartlett Street CONST. SILT SACK (TYP) WOOD FRAME Portsmouth, ROOF PEAK=44.5 ROOF PEAK=44.1 New Hampshire BRICK/CINDER BLOCK FF=10.2 ROOF PEAK=23.1 WOOD SHED ROOF PEAK=25.3 WOOD SHED ROOF PEAK=31. WOOD SHED ROOF PEAK=30.6 1/2/2020 MARK DATE DESCRIPTION PROJECT NO: C-0960-00 January 2, 202 C-0960-006\_C-SITE.DW DRAWN BY: CHECKED: APPROVED: **EXISTING CONDITIONS AND** DEMOLITION PLAN SCALE: AS SHOWN C-101.1



SITE DATA: PROJECT LOCATION: TAX MAP 157, LOT 1 TAX MAP 157, LOT 2 TAX MAP 164, LOT 1 TAX MAP 164, LOT 4 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	0 FT	15 FT	N/A
MINIMUM SIDE YARD:	15 FT <sup>(1)</sup>	<6 FT <sup>(2)</sup>	15 FT <sup>(1)</sup>	86 FT
MINIMUM REAR YARD:	5 FT	269 FT	5 FT	269 FT
FRONT LOT LINE BUILDOUT:	50% MIN	69%	60% MIN, 80% MAX	N/A
BUILDING AND LOT OCCUPATION:	REQUIRED (CD4-W)	PROPOSED (CD4-W)	REQUIRED (CD4-L1)	PROPOSED (CD4-L1)
			(2)	
MAXIMUM BUILDING BLOCK LENGTH:	200 FT	196 FT	100 FT <sup>(3)</sup>	34 FT
MAXIMUM FAÇADE MODULATION LENGTH:	80 FT	<80 FT	50 FT	<50 FT
MAXIMUM ENTRANCE SPACING:	50 FT	<50 FT	NR	NR
MAXIMUM BUILDING COVERAGE:	80% <sup>(4)</sup>	±24.0%	80% <sup>(4)</sup>	±1.3%
MAXIMUM BUILDING FOOTPRINT:	20,000 SF <sup>(5)</sup>	20,000 SF	3,500 SF <sup>(6)</sup>	2,852 SF
MINIMUM LOT AREA:	5,000 SF	220,768 SF	3,000 SF	220,768 SF
THINITION LOT / INCL/ II				
MINIMUM LOT AREA PER DWELLING UNIT:	NR <sup>(7)</sup>		NR <sup>(7)</sup>	
		48%	NR <sup>(7)</sup> 25%	48%

- (1) PER 10.516.20, MINIMUM SIDE YARD SETBACK ADJOINING A RAILROAD RIGHT OF WAY SHALL BE 15FT
- (2) VARIANCE GRANTED BY ZONING BOARD OF ADJUSTMENT ON JANUARY 22, 2020 (3) - MAXIMUM BLOCK LENGTH ALLOWED IN WEST END INCENTIVE OVERLAY DISTRICT FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS
- (4) 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. (5) - ADDITIONAL 5,000 SF OF GFA (INCREASED FROM 15,000 SF) ALLOWED FOR PROVIDING AT LEAST 20% OF THE SITE TO BE ASSIGNED AS COMMUNITY SPACE.
- (6) 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. (7) - 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.

BUILDING FORM (PRINCIPAL BUILDING): BUILDING HEIGHT:	REQUIRED (CD4-W) 4 STORIES (1) 50' MAX (2)	PROPOSED (CD4-W) 54 STORY, 50' (BLDG B & C)	REQUIRED (CD4-L1) 2 STORIES <sup>(1)</sup> 30' MAX <sup>(2)</sup>	PROPOSED (CD4-L1) 2 STORY, 30' (BLDG A)
MAXIMUM FINISHED FLOOR SURFACE OF		,		,
GROUND FLOOR ABOVE SIDEWALK GRADE:	36 IN	<36 IN	36 IN	<36 IN
MINIMUM GROUND STORY HEIGHT:	9 FT <sup>(3)</sup>	12 FT	9 FT <sup>(3)</sup>	11 FT
MINIMUM SECOND STORY HEIGHT:	N/A		N/A	
FAÇADE GLAZING:				
SHOPFRONT FAÇADE:	70% MIN	>70%	70% MIN	>70%
OTHER FAÇADE TYPES:	20% TO 50%		20% TO 40%	
ALLOWED ROOF TYPES:	FLAT, GABLE, HIP,		FLAT, GABLE, HIP,	
	GAMBREL, OR MANSARD	FLAT	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		
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.

55,192 SF

25%

COMMUNITY SPACE:

20%

I) - MINIMUM SIDE YARD SETBACK FROM RAILROAD:

44,154 SF

10.516.20

### OFF-STREET PARKING REQUIREMENTS:

<u> </u>	STREET FARRING REQUIRES	ILIVI J.	
ARK	KING SPACES REQUIRED:		
	DWELLING UNITS:		
	0 SF TO 500 SF 0.5 SPACES PER UNIT	BUILDING A, 1 UNITS	0.5 SPACES
		BUILDING B, 1 UNITS	0.5 SPACES
		BUILDING C, 3 UNITS	1.5 SPACES
	TOTAL MINIMUM PARKING SPACES REQUIR	ED =	3 SPACES
	500 SF TO 750 SF 1.0 SPACES PER UNIT	BUILDING A, 24 UNITS	24 SPACES
		BUILDING B, 41 UNITS	41 SPACES
		BUILDING C, 26 UNITS	26 SPACES
	TOTAL MINIMUM PARKING SPACES REQUIR	ED =	91 SPACES
	OVER 750 SF 1.3 SPACES PER UNIT	BUILDING A, 21 UNITS	27.3 SPACES
		BUILDING B, 36 UNITS	46.8 SPACES
		BUILDING C, 21 UNITS	27.3 SPACES
	TOTAL MINIMUM PARKING SPACES REQUIR	ED =	102 SPACES
	05		
)FFI		10.000.05	
	1 SPACE PER 350 SF	10,300 SF	22 CD4 CEC
	MINUS 25% FOR WEST END INCENTIVE		23 SPACES

TOTAL MINIMUM PARKING SPACES REQUIRED = 254 SPACES TOTAL PARKING SPACES PROVIDED:
TOTAL PARKING SPACES PROVIDED = 134 SPACES (SURFACE PARKING) 66 SPACES (BUILDING A, UNDERGROUND)

35 SPACES

44 SPACES (BUILDING B, UNDERGROUND)

(1) - CONDITIONAL USE PERMIT REQUIRED FOR SHARED PARKING

1 SPACE FOR EVERY 5 DWELLING UNITS 174 UNITS

PARKING STALL LAYOUT: DRIVE AISLE WIDTH:	<u>REQUIRED</u> 8.5' X 19' 24 FT	<u>PROPOSEI</u> 8.5' X 19' 24 FT
BIKE SPACES REQUIRED: 1 BIKE SPACE / 5 DWELLING UNITS, MAXIMUM OF 30 SPACES	30 SPACES	30 SPACE

# **LEGEND**

	PROPERTY LINE
	PROPOSED PROPERTY LINE
	PROPOSED EDGE OF PAVEMENT
	PROPOSED CURB
	PROPOSED BUILDING
	PROPOSED PAVEMENT SECTION
4	PROPOSED CONCRETE SIDEWALK

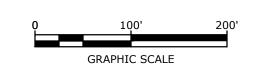
COORD

PROPOSED CONCRETE SIDEWALK

PROPOSED BOLLARD BLDG BUILDING TYP TYPICAL

30'R PROPOSED CURB RADIUS VGC PROPOSED VERTICAL GRANITE CURB SGC PROPOSED SLOPED GRANITE CURB

COORDINATE



# Proposed Multi-Family Development

Iron Horse Properties, LLC

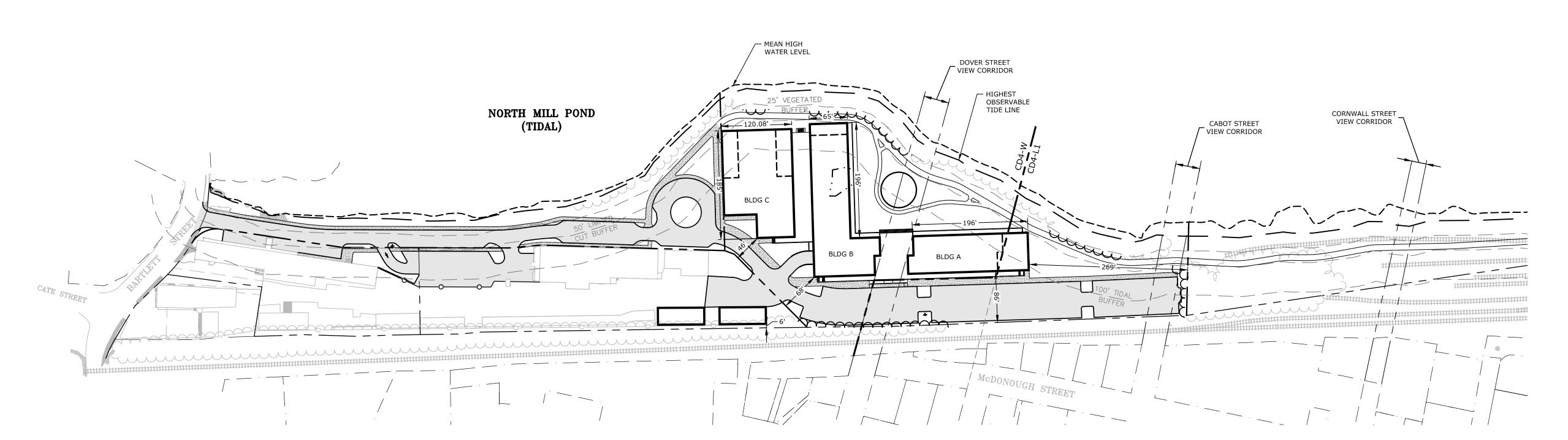
105 Bartlett Street Portsmouth, New Hampshire

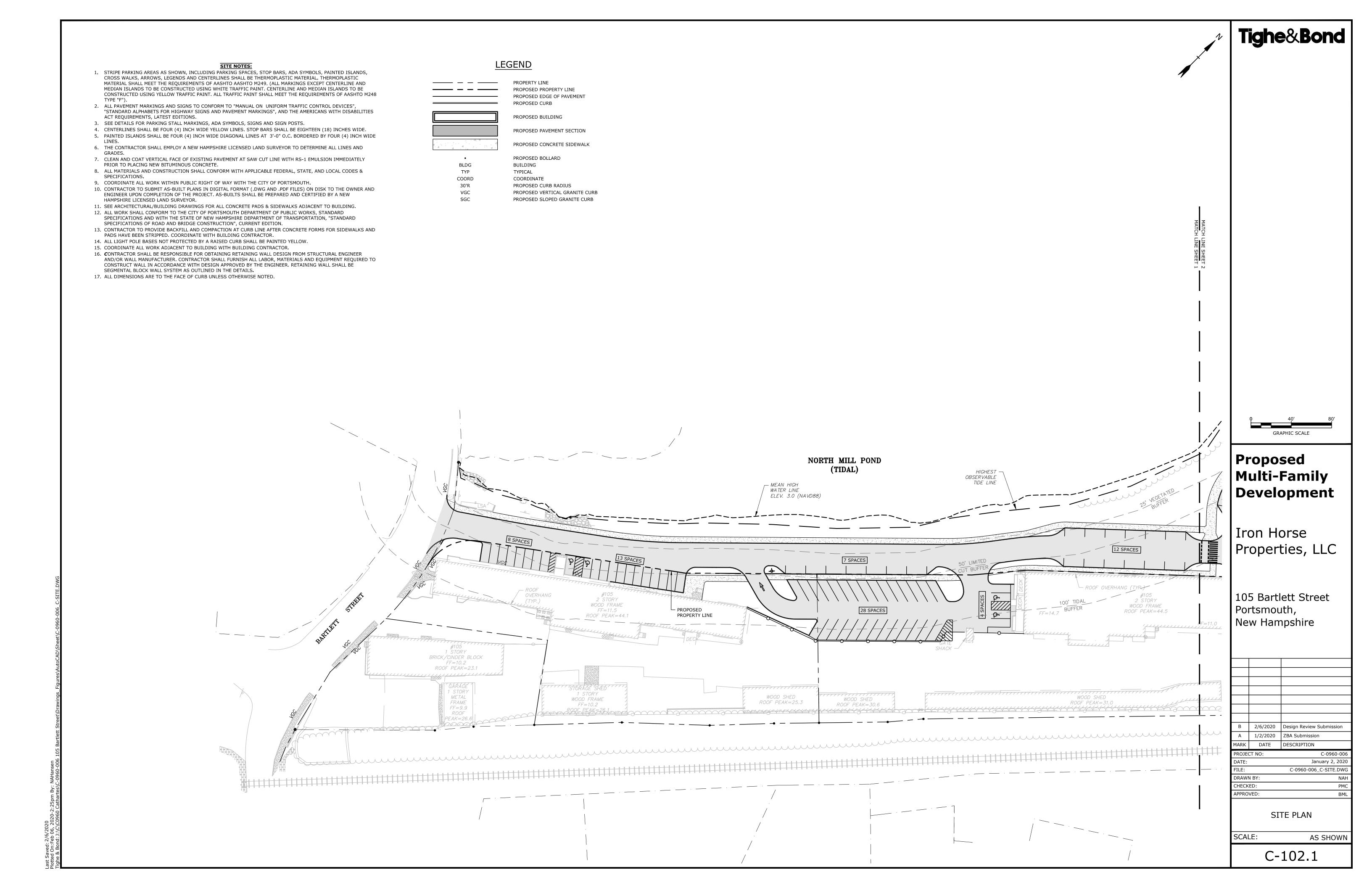
В	2/6/2020	Design Review Submission
Α	1/2/2020	ZBA Submission
MARK	DATE	DESCRIPTION
PROJE	CT NO:	C-0960-006
DATE:		January 2, 2020
FTI F.		C-0960-006 C-SITE DWG

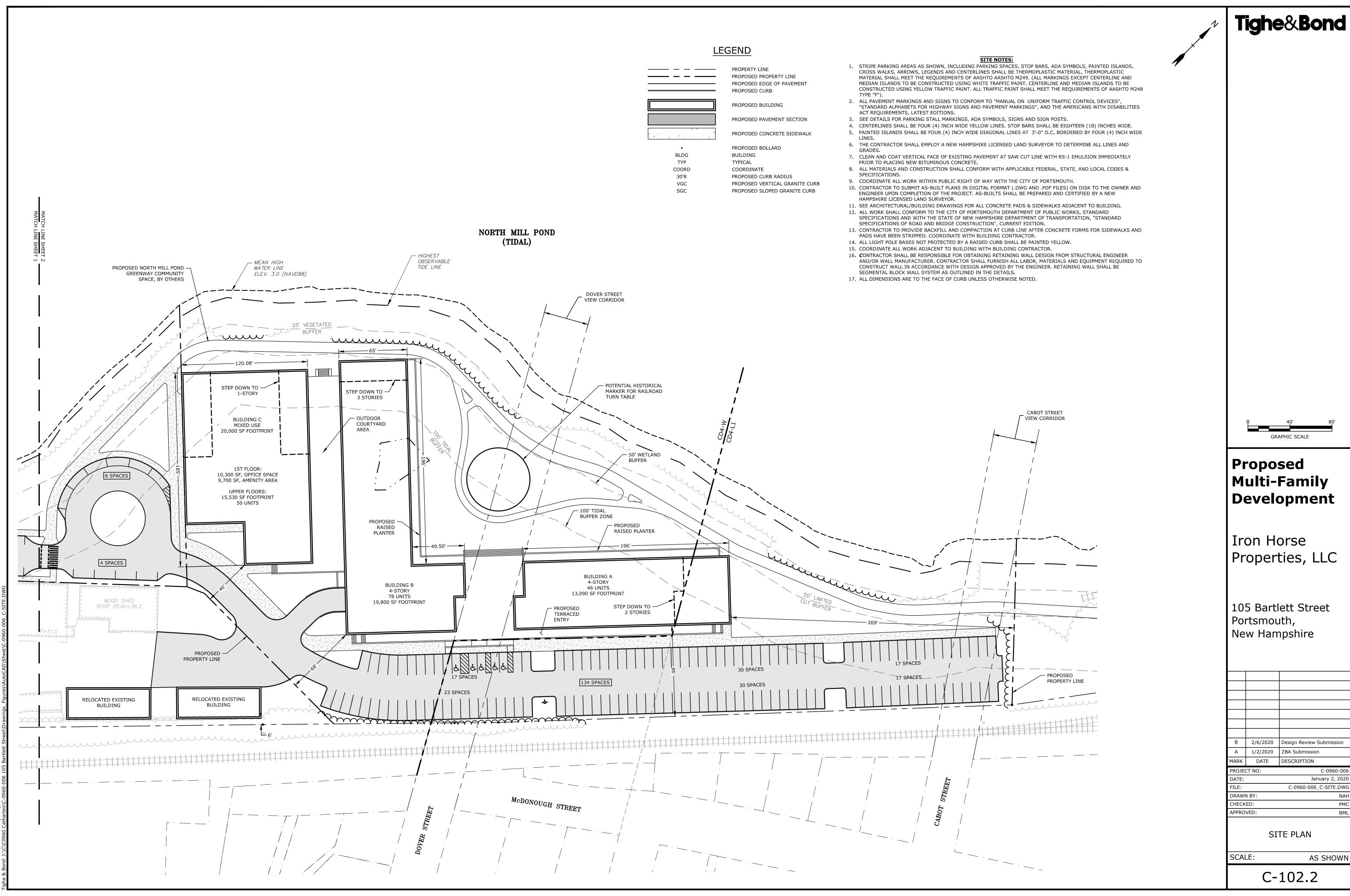
OVERALL SITE PLAN

SCALE: AS SHOWN

DRAWN BY: CHECKED: APPROVED:

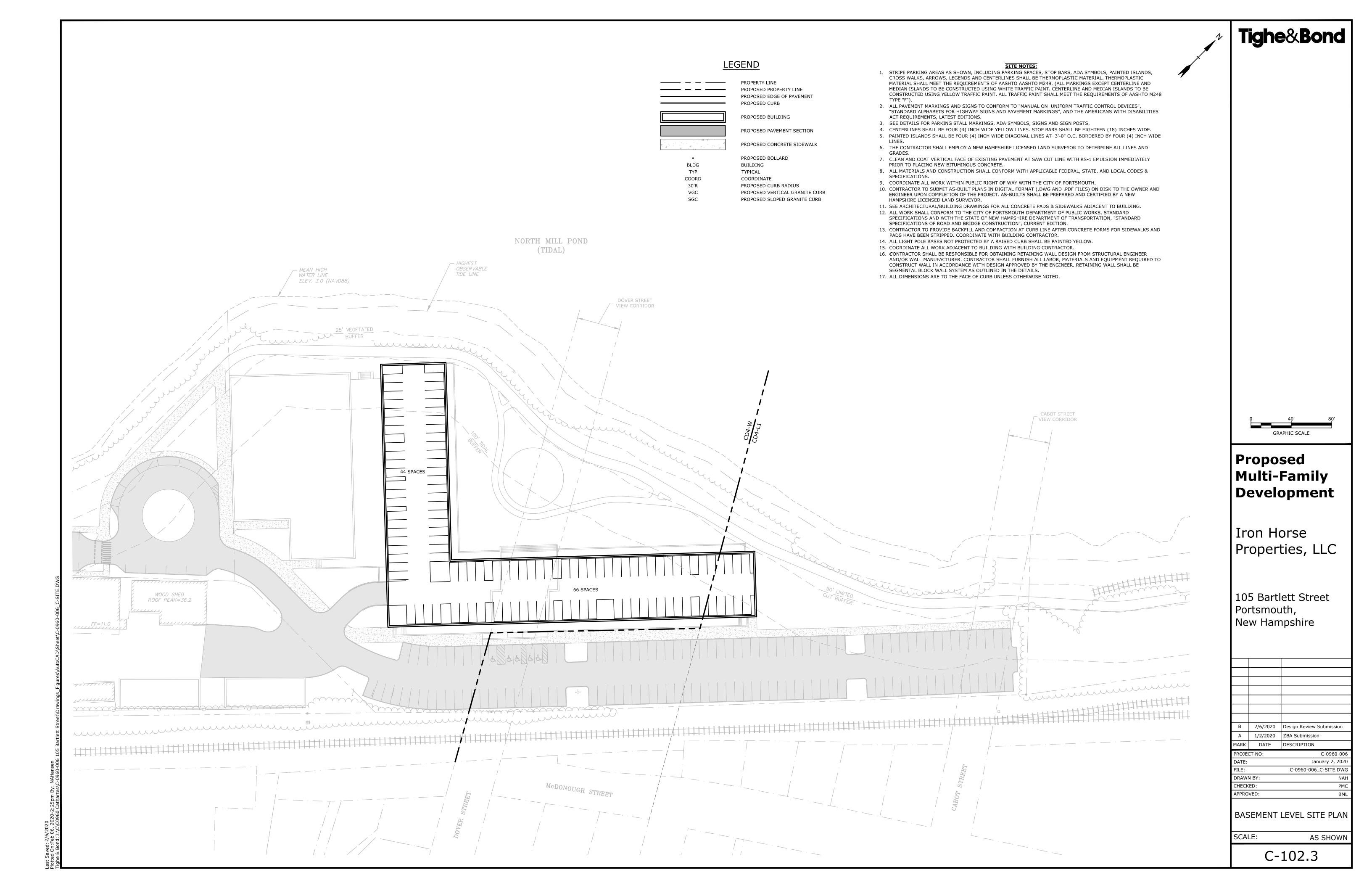


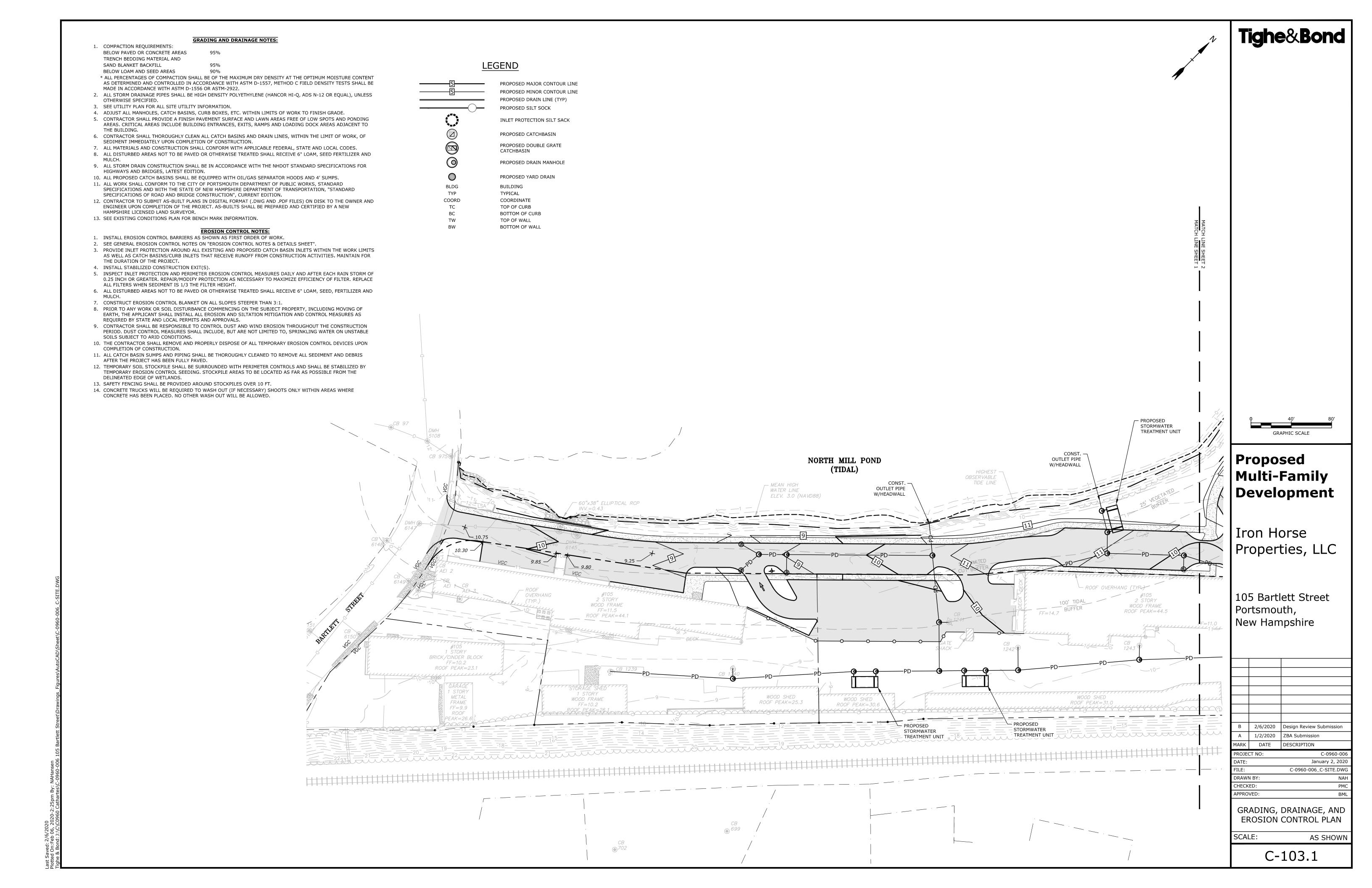


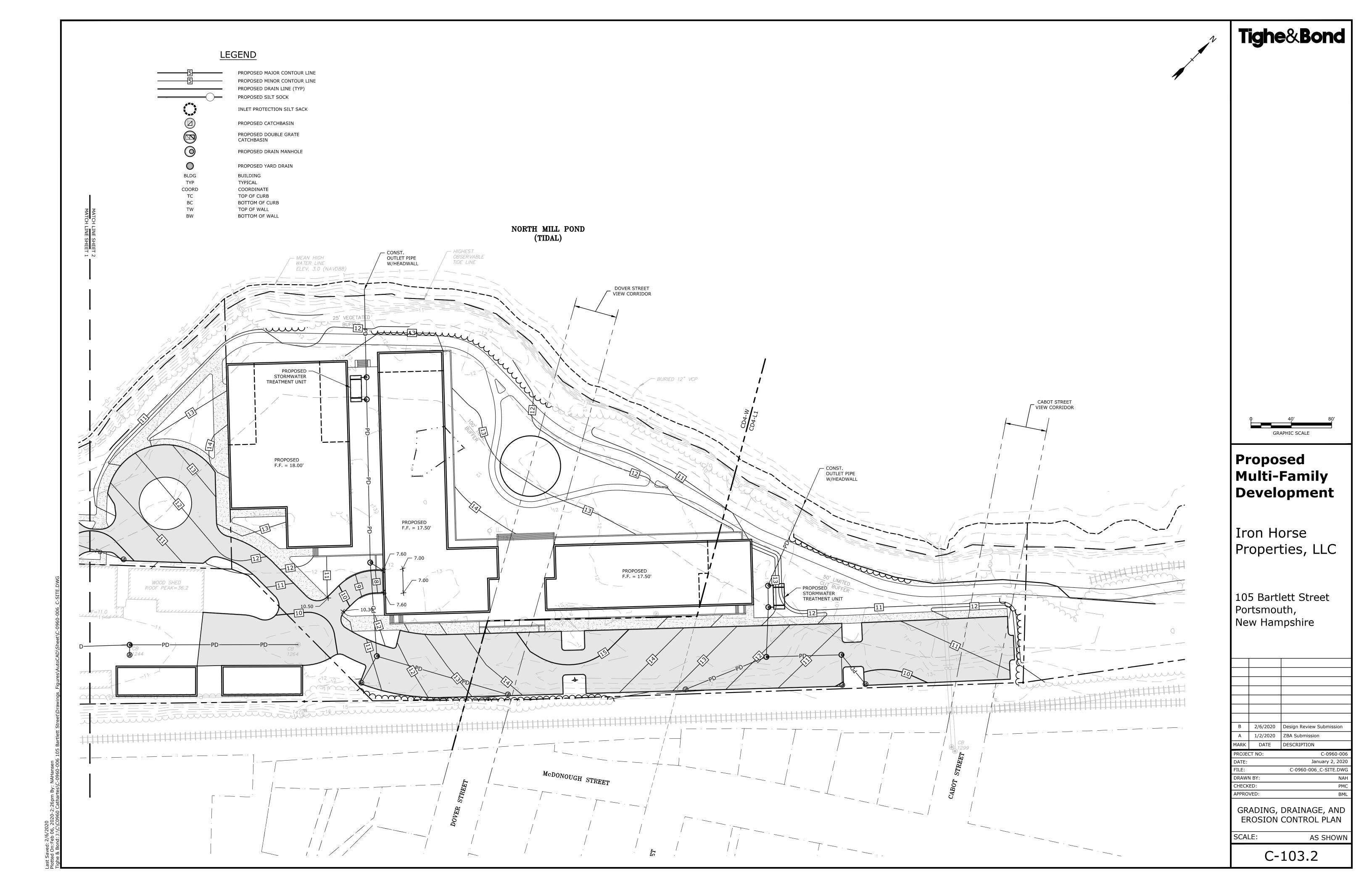


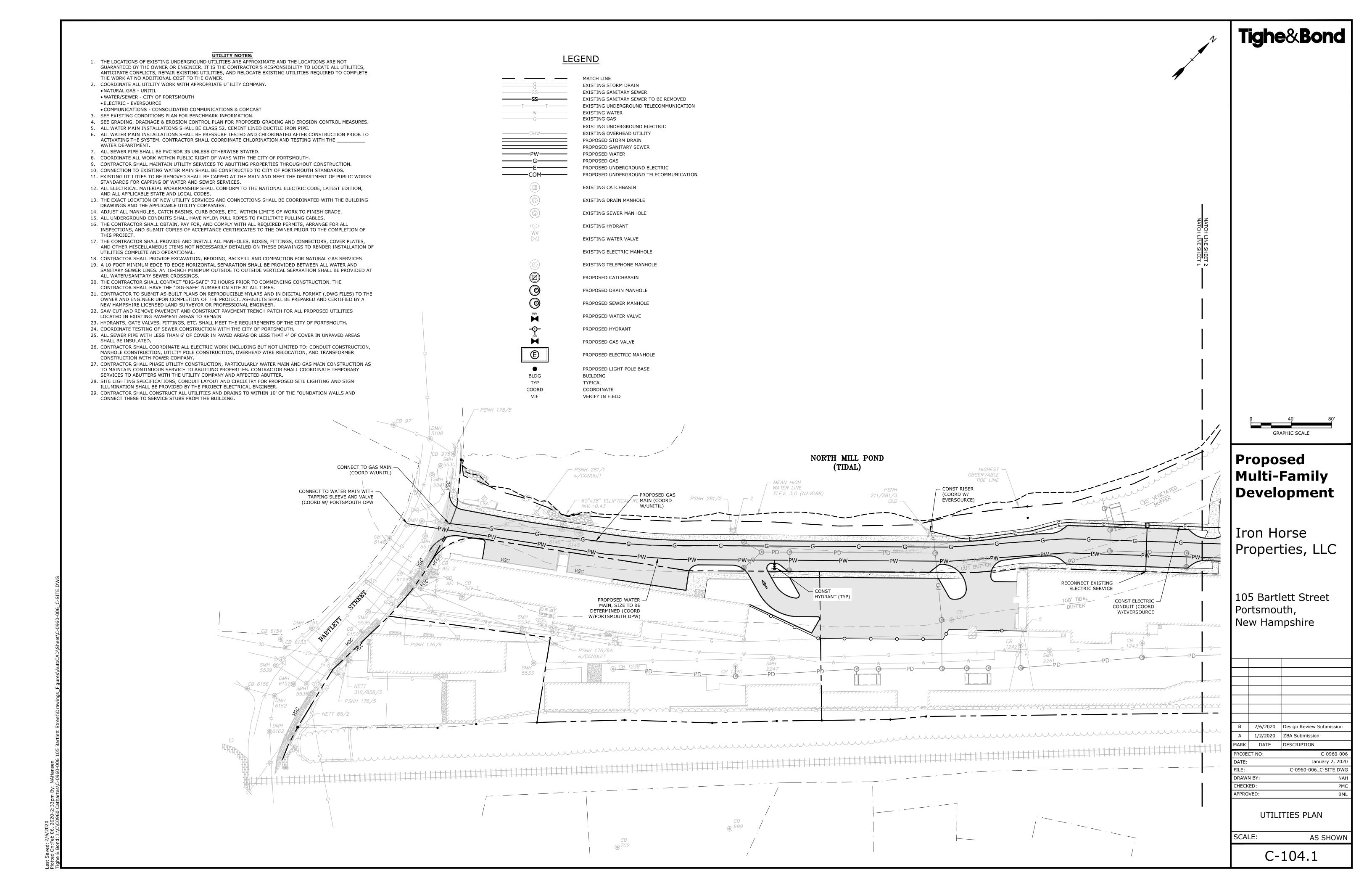
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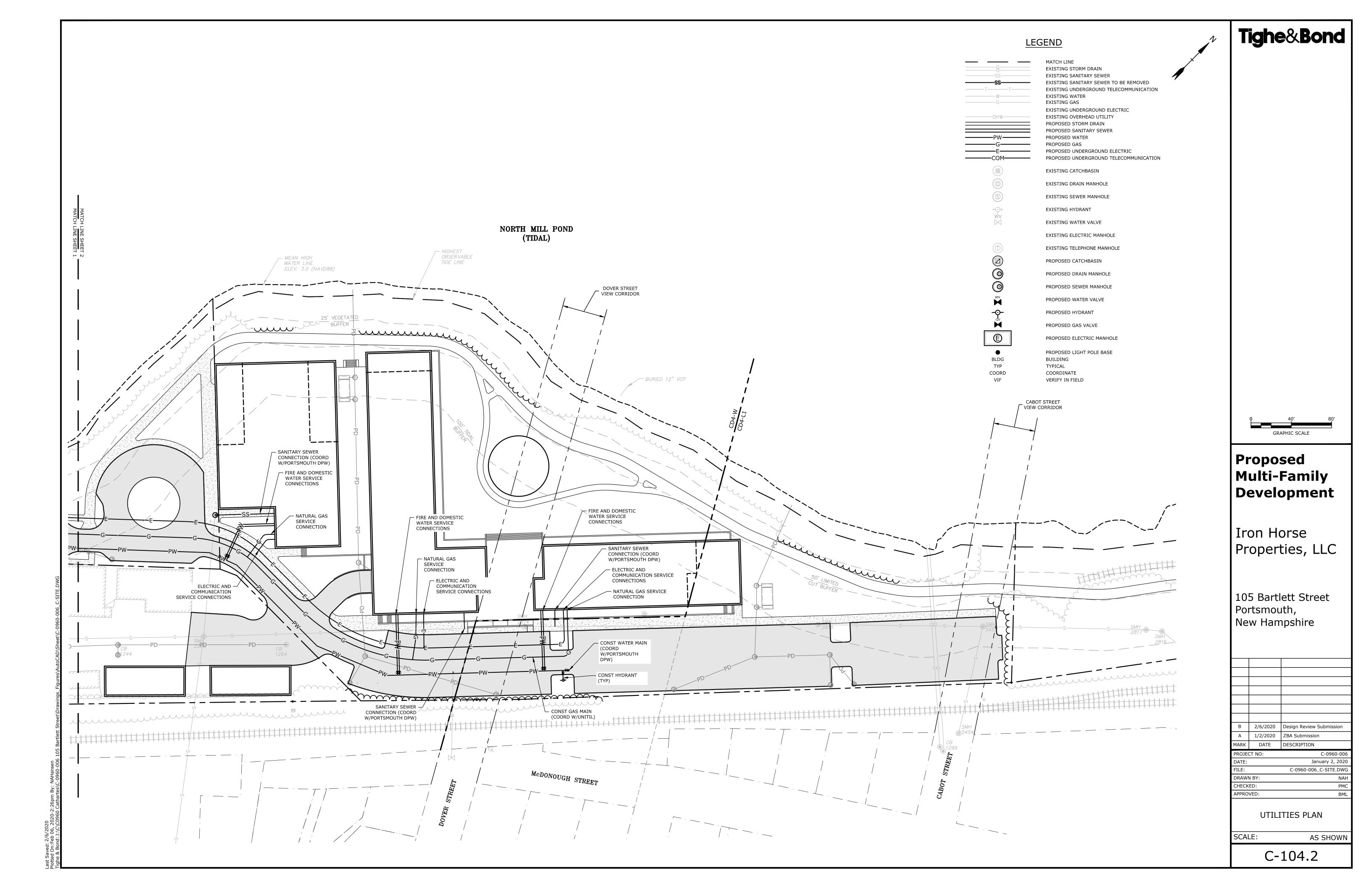
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THE PROJECT CONSISTS OF THE CONSTRUCTION OF A THREE (3) BUILDING MULTI-FAMILY DEVELOPMENT (APPROXIMATELY 250 UNITS) WITH ASSOCIATED SITE IMPROVEMENTS.

THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY \_\_\_\_\_ ACRES.

### **SOIL CHARACTERISTICS**

BASED ON THE  $\_$ THE SOILS \_ CONDUCTED BY DRAINED SOILS WITH A HYDROLOGIC ON SITE CONSIST OF WHICH ARE \_ SOIL GROUP RATING OF

### **NAME OF RECEIVING WATERS**

THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA  $_{ extstyle ex$ ULTIMATELY FLOWS TO .

### **CONSTRUCTION SEQUENCE OF MAJOR ACTIVITIES:**

- 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

CUT AND CLEAR TREES.

- CONTROL OF DUST
- NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS CONSTRUCTION DURING LATE WINTER AND EARLY SPRING
- ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF
- CLEAR AND DISPOSE OF DEBRIS.
- CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
- GRADE AND GRAVEL ROADWAYS AND PARKING AREAS ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
- SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED.
- FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
- INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
- COMPLETE PERMANENT SEEDING AND LANDSCAPING.
- 13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

### SPECIAL CONSTRUCTION NOTES: THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE

- 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:**

- ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE <u>STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION</u> PREPARED BY THE NHDES PRIOR TO ANY WORK OR SOIL DISTURBANCE, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR
- EROSION CONTROL MEASURES AS REQUIRED IN THE PROJECT MANUAL. 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.
- 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
- 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. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION
- CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
- ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND
- 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. CONSTRUCT EROSION CONTROL BLANKETS ON ALL SLOPES STEEPER THAN 3:1.

- 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.; 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. 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; 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; 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 9. UNCONTAMINATED GROUND WATER OR SPRING WATER; 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; STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE 12. LANDSCAPE IRRIGATION. 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.
- ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE.
- 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.
- 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.

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE CONSTRUCTION
- 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.

- 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.

- 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
  - 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;
  - THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED 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

## **ALLOWABLE NON-STORMWATER DISCHARGES:**

MATERIALS NEED TO BE REMOVED.

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

# **WASTE DISPOSAL:**

- 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

PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.

- DISPOSAL BY THE SUPERINTENDENT. 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

- **SPILL PREVENTION:**
- 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:

UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE;

- 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,
- 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:

USE;

- 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;

WELLS, AND 400 FEET FROM PUBLIC WELLS;

viii. THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE:

- 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
- 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.
- (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;
- 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

(5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS

- HTTPS://WWW.DES.NH.GOV/ORGANIZATION/COMMISSIONER/PIP/FACTSHEETS/DWGB/DOCUMENTS/DWGB-22-6.PDF
- 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: ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR
- 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;
- 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; THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL BE

d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR

- 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;

THE SPILL PREVENTION AND CLEANUP COORDINATOR.

**EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES** 

AND REPAIR ACTIVITIES;

c. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY;

- 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; CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.
- 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
- D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT.

FLOW — **→**—FLOW PERFORATED RISER DIKE, IF-**PLAN VIEW** IF USING PIPE NECESSARY, WEIR OR OUTLET TO DIVERT EMBANKMENT IF FLOW INTO USING STONE -EXCAVATION FOR **OUTLET OR PIPE** REQUIRED STORAGE OUTLET

3:1 MAX. SLOPE

SIDE SLOPES TO

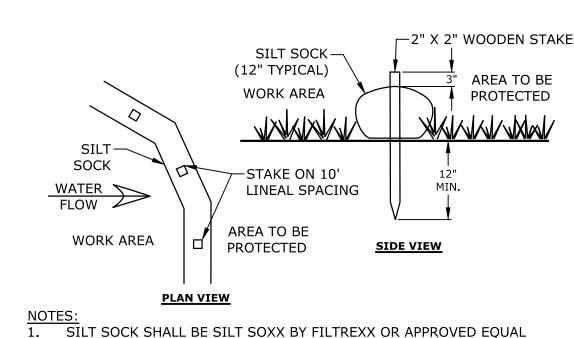
BE STABILIZED

THE TRAP SHALL BE INSTALLED AS CLOSE TO THE DISTURBED AREA AS POSSIBLE.

SECTION VIEW

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

# SEDIMENT TRAP



# SILT SOCK

75' (MIN) (W/O BERM

50' (MIN) WITH 3"-6"

DIVERSION BERM PROVIDED

3" CRUSHED

STONE-

EXISTING

DRIVE WIDTH SLOPE

≨6" (MIN)\%

**PLAN VIEW** 

DIVERSION BERM-

75' (MIN) (W/O BERM)

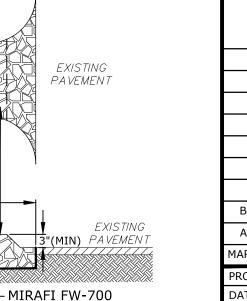
50' (MIN) WITH 3"-6"

DIVERSION BERM PROVIDED

(OPTIONAL)

2. INSTALL SILT SOCK IN ACCORDANCE WITH...

105 Bartlett Street Portsmouth, New Hampshire



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

SIDE VIEW

OR EQUAL

# STABILIZED CONSTRUCTION EXIT

ENTERING STORM DRAINS, DITCHES, OR WATERWAYS

Proposed **Multi-Family** Development Iron Horse

Properties, LLC

2/6/2020 Design Review Submission A 1/2/2020 ZBA Submission MARK DATE DESCRIPTION ROJECT NO: C-0960-00

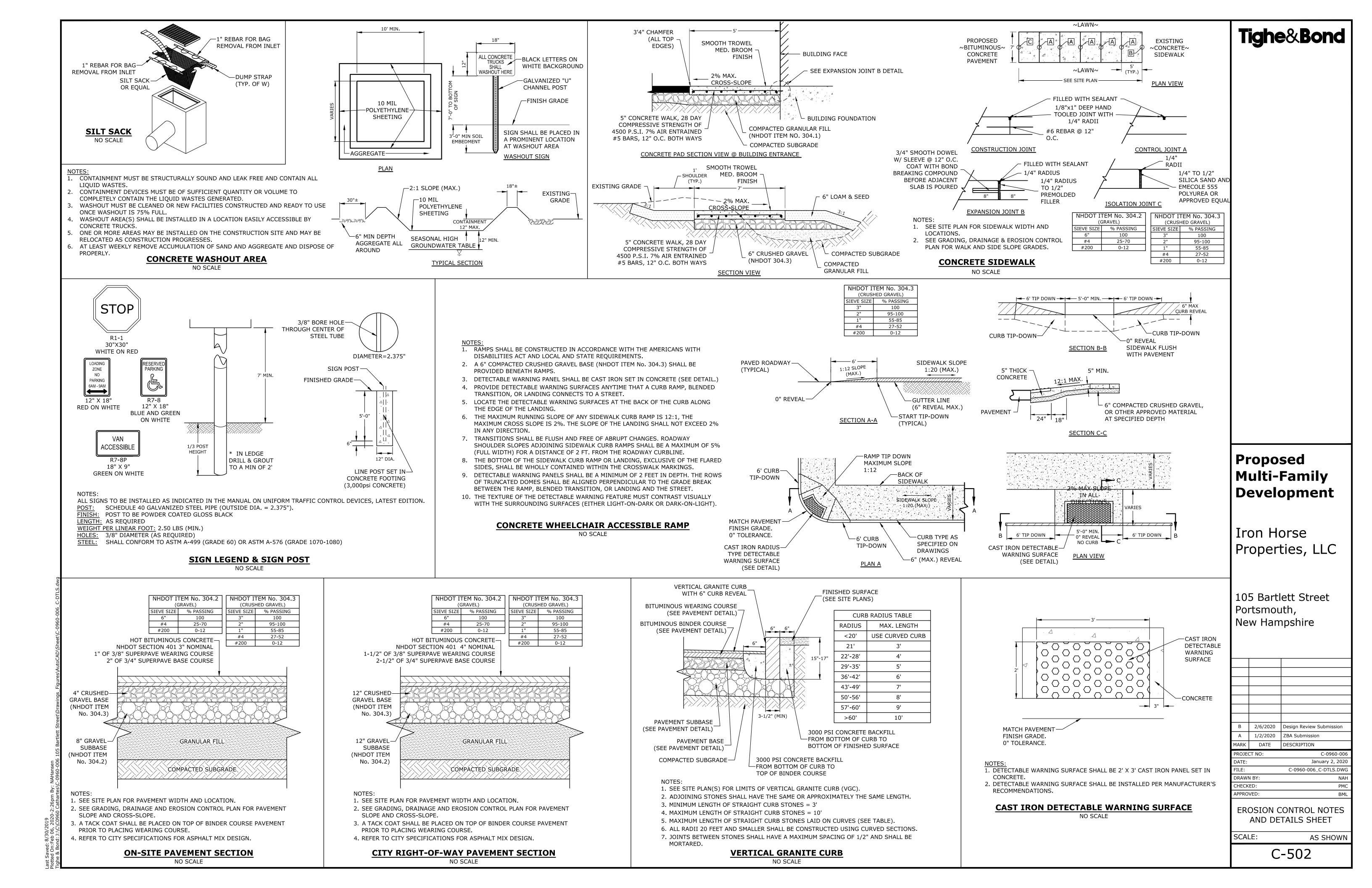
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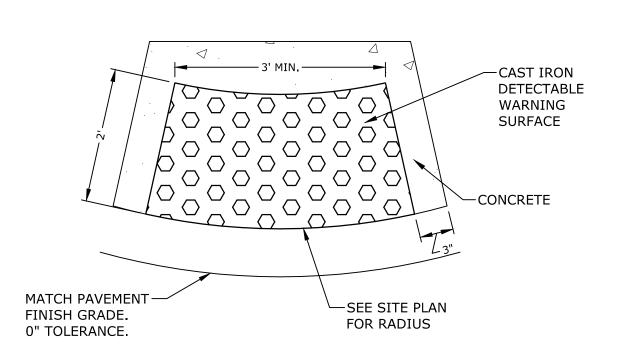
**EROSION CONTROL NOTES** 

January 2, 202

AS SHOWN

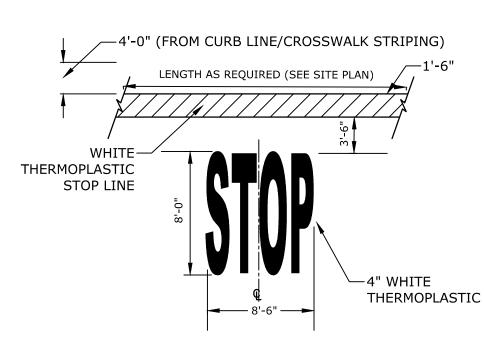
AND DETAILS SHEET SCALE:





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

### RADIUS TYPE CAST IRON **DETECTABLE WARNING SURFACE** NO SCALE

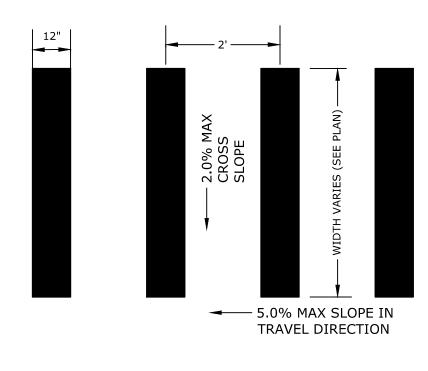


# PAVEMENT MARKINGS TO BE INSTALLED IN LOCATIONS AS SHOWN

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**

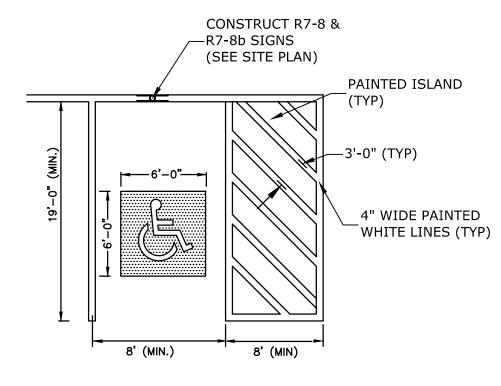
NO SCALE



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

### **CROSSWALK STRIPING**

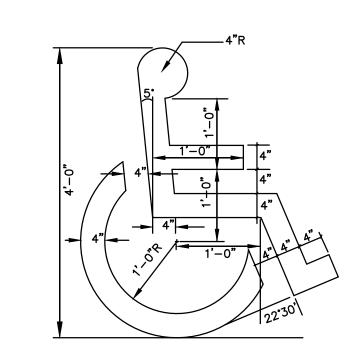
NO SCALE



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 REOUIREMENTS OF THE AMERICAN W/DISABILITIES ACT.

### **ACCESSIBLE PARKING STALL**

NO SCALE

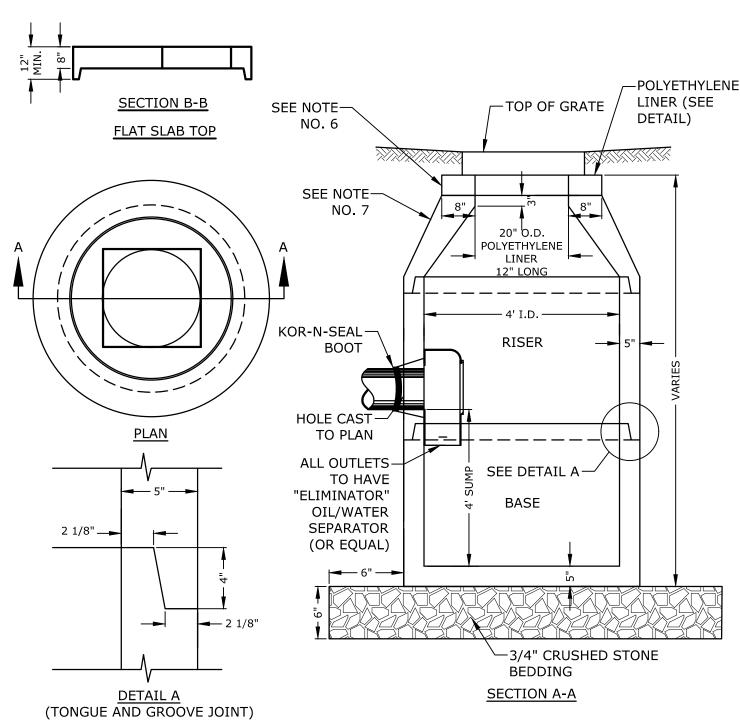


. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING WHITE THERMOPLASTIC, REFLECTORIZED PAVEMENT PARKING MATERAL MEETING THE REQUIREMENTS OF ASTM D 4505. 2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST

ADA, STATE AND LOCAL REQUIREMENTS.

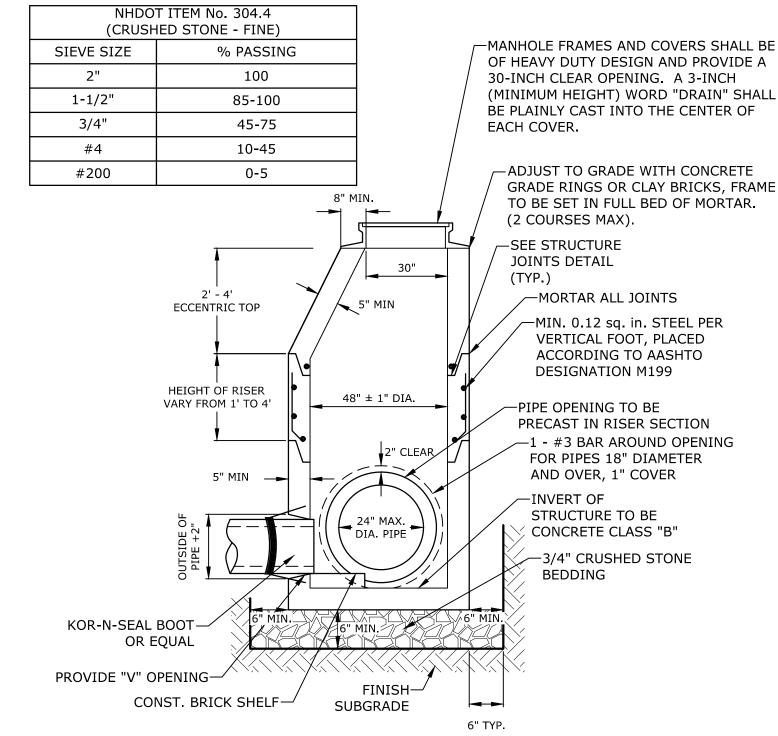
### ACCESSIBLE SYMBOL

NO SCALE



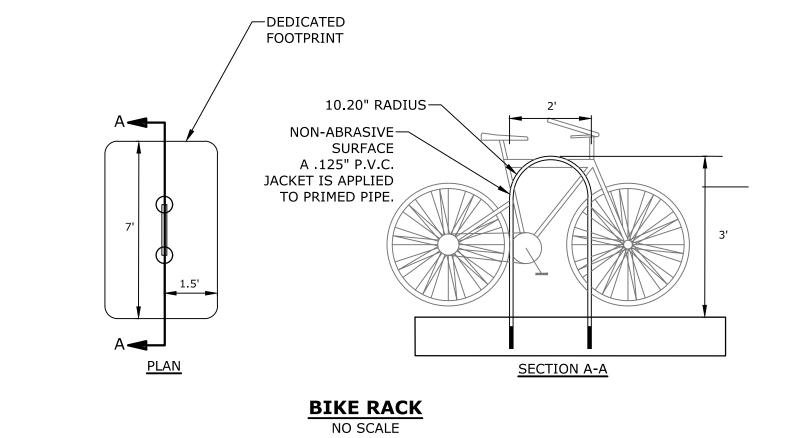
- ALL SECTIONS SHALL BE CONCRETE CLASS AA(4000 psi).
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ.IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
- THE TONGUE AND GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
- RISERS OF 1', 2', 3' & 4' CAN BE USED TO REACH DESIRED DEPTH.
- THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
- FITTING FRAME TO GRADE MAY BE DONE WITH PREFABRICATED ADJUSTMENT RINGS OR CLAY BRICKS (2
- COURSES MAX.). 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. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- 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.

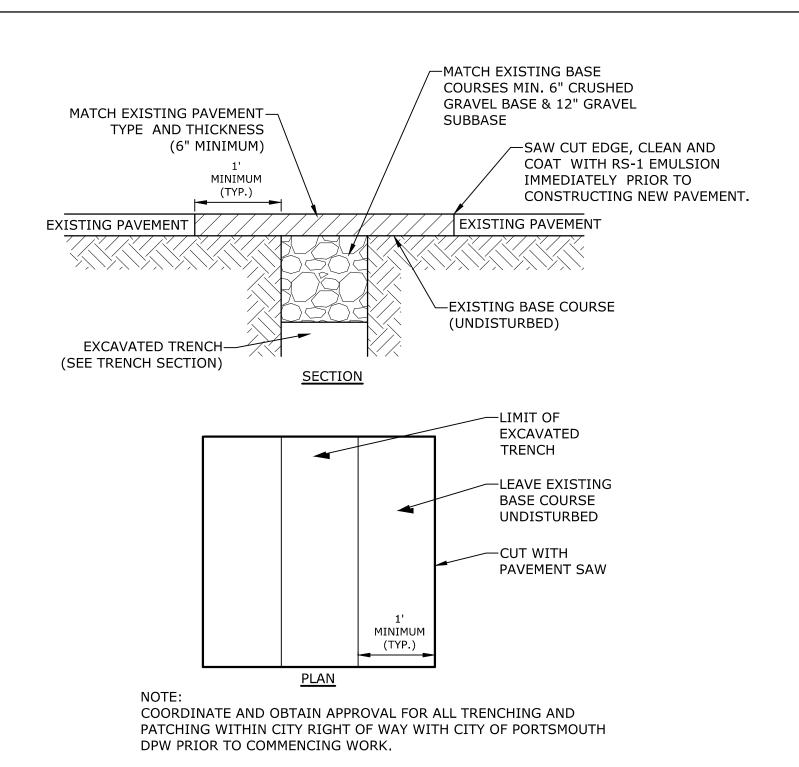
# 4' DIAMETER CATCHBASIN NO SCALE



- 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.
- CONSTRUCT CRUSHED STONE BEDDING AND BACKFILL UNDER (6" MINIMUM THICKNESS)
- THE TONGUE AND GROOVE JOINT SHALL BE SEALED WITH ONE STRIP OF BUTYL RUBBER SEALANT. PIPE ELEVATIONS SHOWN ON PLANS SHALL BE FIELD VERIFIED PRIOR TO PRECASTING.
- OUTSIDE EDGES OF PIPES SHALL PROJECT NO MORE THAN 3" BEYOND INSIDE WALL OF STRUCTURE.
- 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





**ROADWAY TRENCH PATCH** 

NO SCALE

# Proposed Multi-Family Development

Tighe&Bond

Iron Horse Properties, LLC

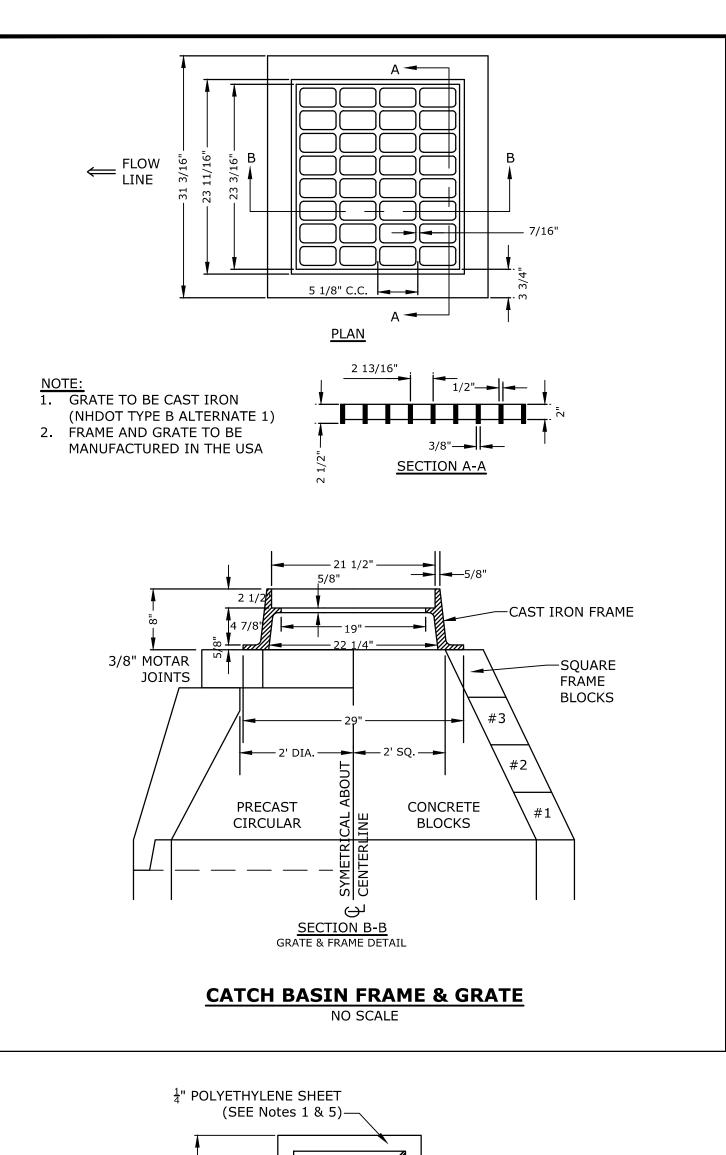
105 Bartlett Street Portsmouth, New Hampshire

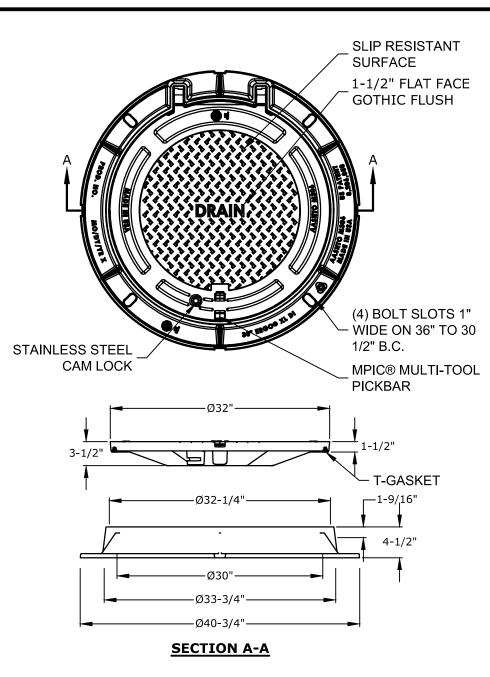
В	2/6/2020	Design Review Submission
Α	1/2/2020	ZBA Submission
MARK	DATE	DESCRIPTION
PROJECT NO:		C-0960-006
DATE:		January 2, 2020
FILE:		C-0960-006_C-DTLS.DWG
DRAWN BY:		NAH
CHECK	ED:	PMC

**EROSION CONTROL NOTES** AND DETAILS SHEET

SCALE: AS SHOWN

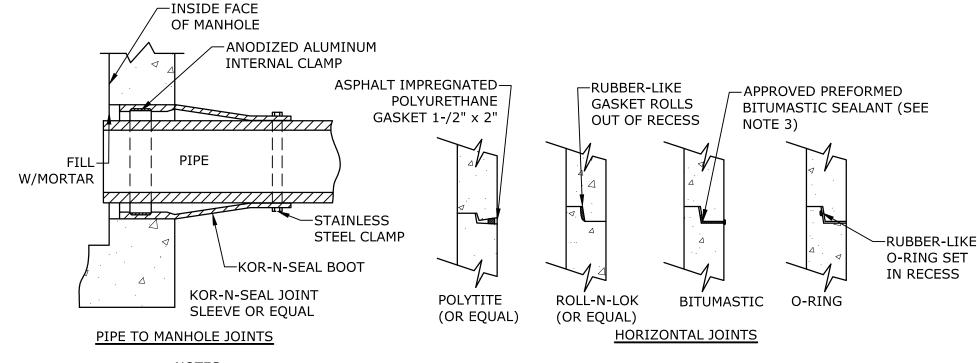
APPROVED:





- 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.

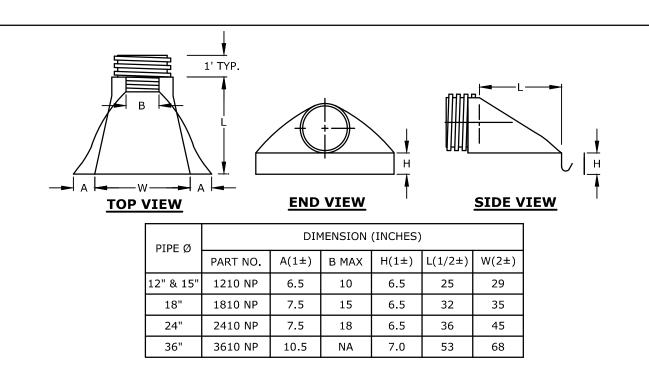
### DRAIN MANHOLE FRAME & COVER **NO SCALE**



- 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



HDPE END SECTION DIMENSIONS

NO SCALE

✓ LOAM | PAVED 
✓ ➤

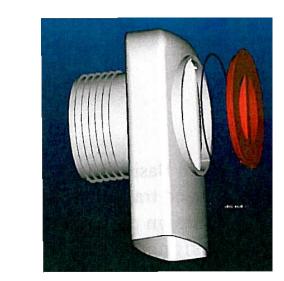
AREA AREA

6" LOAM-

& SEED

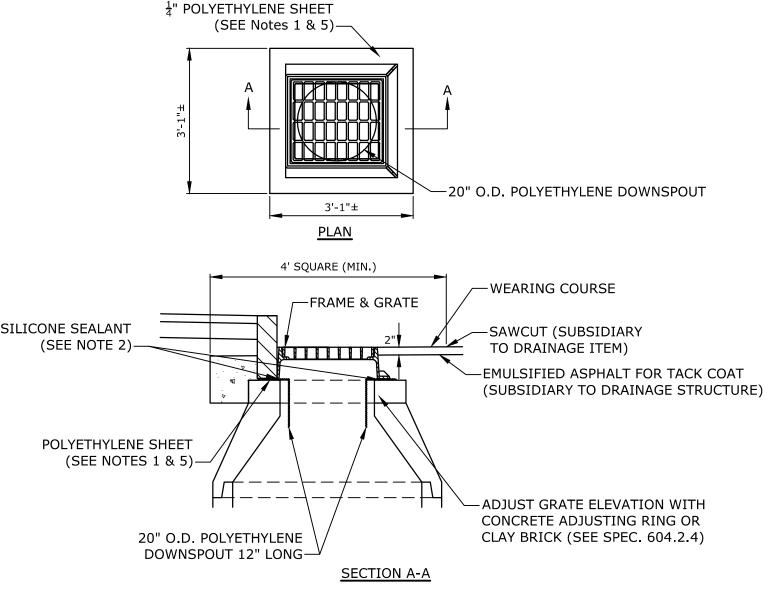
WARNING/-

RACER TAPE



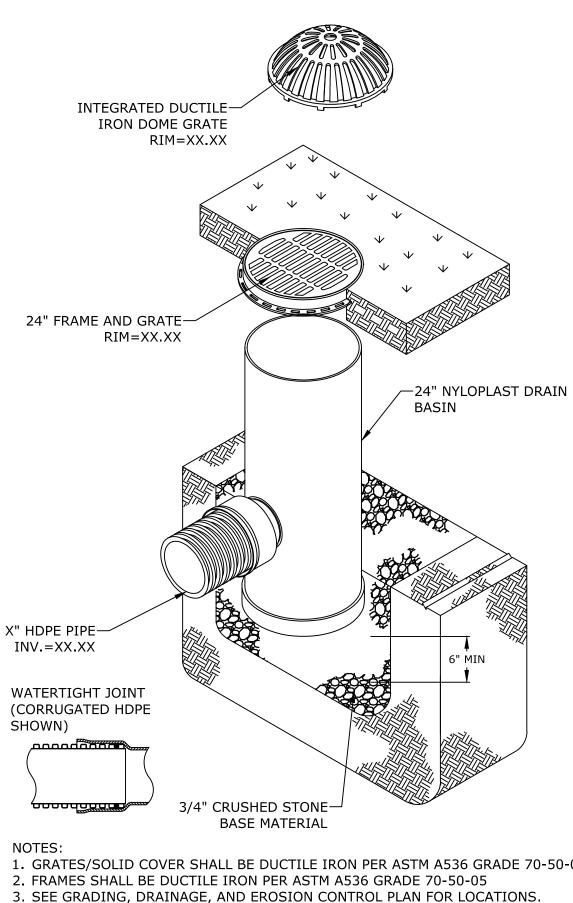
- 1. ALL CATCH BASIN OUTLETS TO HAVE "ELIMINATOR" OIL AND FLOATING DEBRIS TRAP
- MANUFACTURED BY KLEANSTREAM (NO EQUAL)
- 2. INSTALL DEBRIS TRAP TIGHT TO INSIDE OF STRUCTURE.
- 3. 1/4" HOLE SHALL BE DRILLED IN TOP OF DEBRIS TRAP

# "ELIMINATOR" OIL FLOATING DEBRIS TRAP



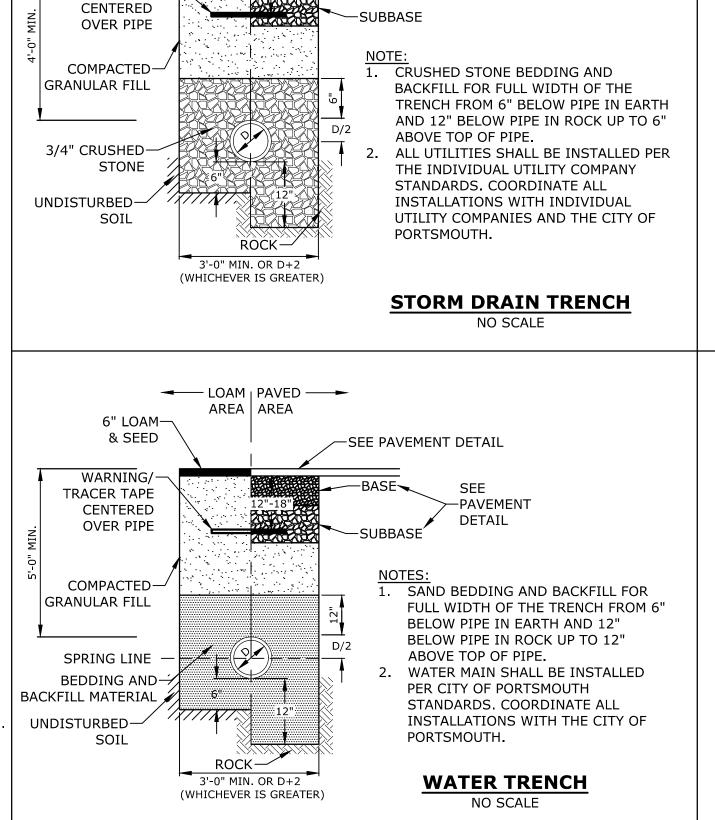
- 1. POLYETHYLENE LINER (ITEM 604.0007) SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
- 2. PLACE A CONTINUOUS BEAD OF AN APPROVED SILICONE SEALANT (SUBSIDIARY TO ITEM 604.0007) BETWEEN FRAME AND POLYETHYLENE SHEET.
- 3. PLACE CLASS AA CONCRETE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

### POLYETHYLENE LINER **NO SCALE**



l. GRATES/SOLID COVER SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.

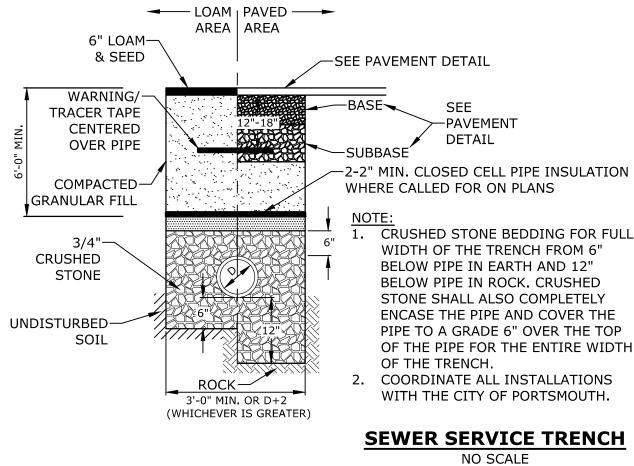
YARD DRAIN NO SCALE



**PAVEMENT** 

-BASE

DETAIL

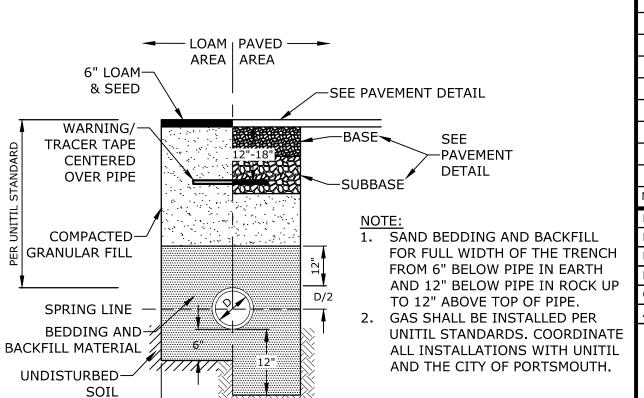


# Proposed **Multi-Family Development**

Iron Horse Properties, LLC

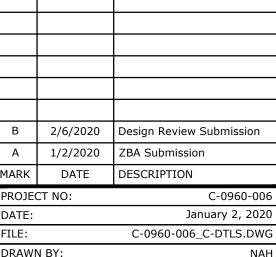
Tighe&Bond

105 Bartlett Street Portsmouth, New Hampshire



3'-0" MIN. OR D+2

(WHICHEVER IS GREATER)



EROSION CONTROL NOTES AND DETAILS SHEET

C-504

HECKED:

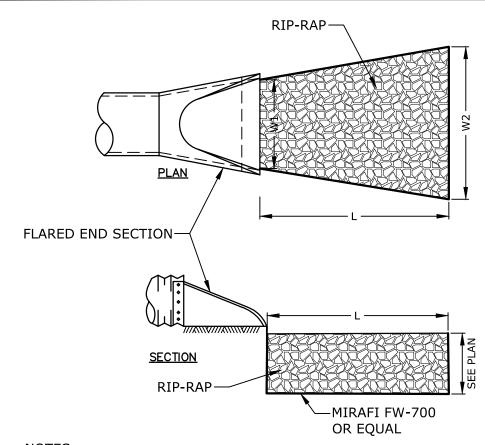
SCALE:

**GAS TRENCH** 

NO SCALE

PPROVED:

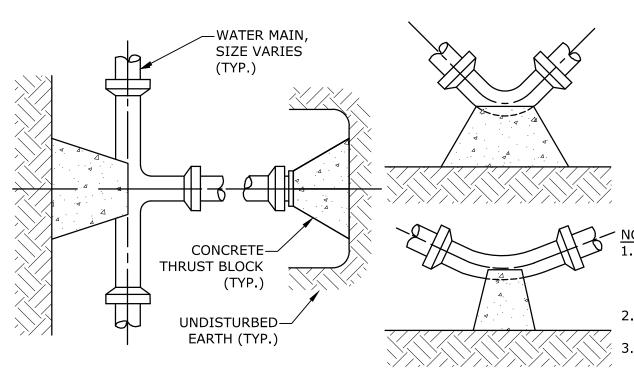
AS SHOWN



### 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.
- 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



THRUST BLOCKING DETAIL

NO SCALE

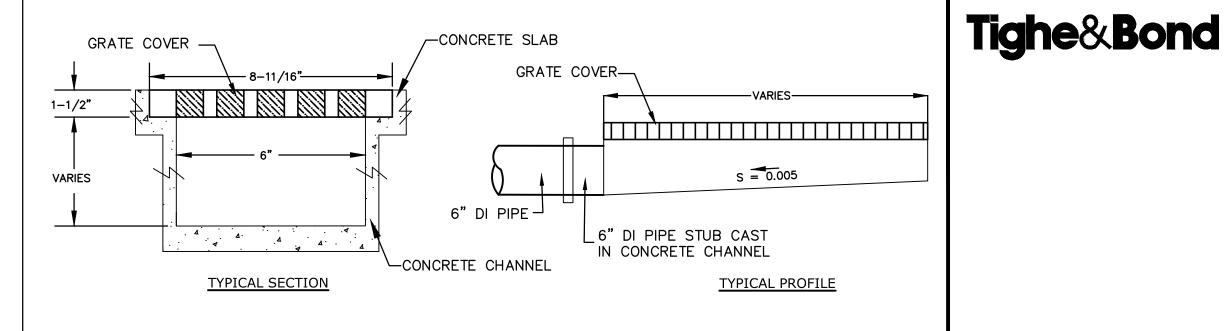
1	REACTION			PIPE SIZE		
j	TYPE	4"	6"	8"	10"	12"
5	A 90°	0.89	2.19	3.82	11.14	17.24
)	B 180°	0.65	1.55	2.78	8.38	12.00
-	C 45°	0.48	1.19	2.12	6.02	9.32
1	D 22-1/2°	0.25	0.60	1.06	3.08	4.74
	E 11-1/4°	0.13	0.30	0.54	1.54	2.38
-	D 22-1/2°	0.25	0.60	1.06	3.08	4.74

SQUARE FEET OF CONCRETE THRUST BLOCKING BEARING ON

UNDISTURBED MATERIAL

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.

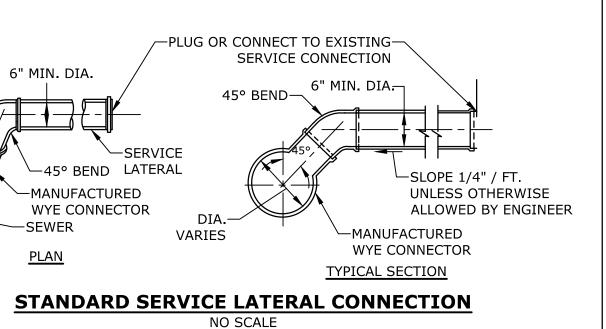
- 2. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF
- 3. PLACE BOARD IN FRONT OF ALL PLUGS BEFORE POURING THRUST BLOCKS.
- 4. WHERE M.J. PIPE IS USED, M.J. PLUG WITH RETAINER GLAND MAY BE
- SUBSTITUTED FOR END BLOCKINGS. 5. INSTALLATION AND STANDARD DIMENSIONAL REQUIREMENTS SHALL BE WITH CITY OF PORTSMOUTH WATER DEPARTMENT STANDARDS.



- 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).

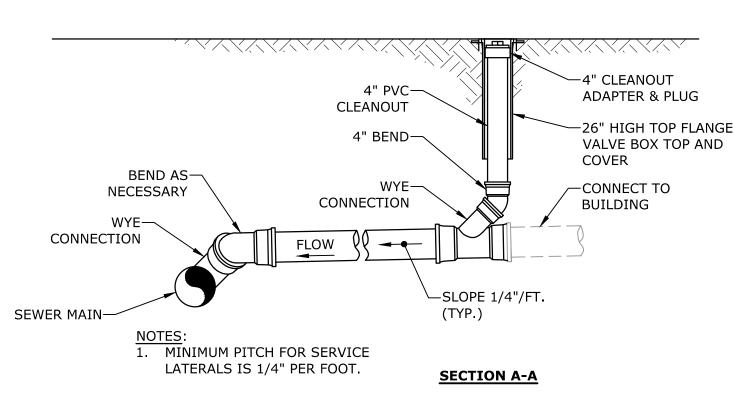
### TRENCH DRAIN DETAIL

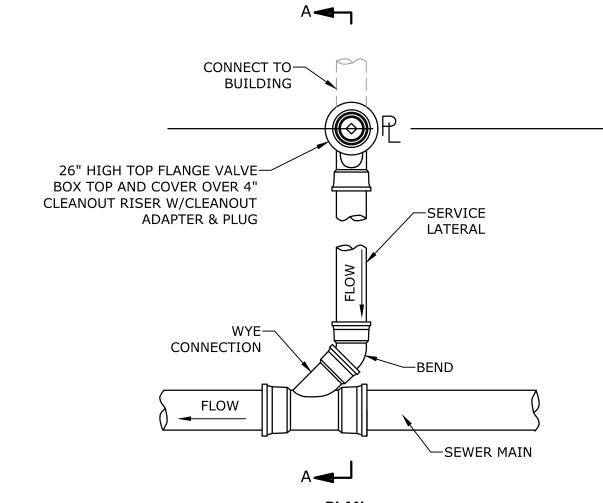
NOT TO SCALE



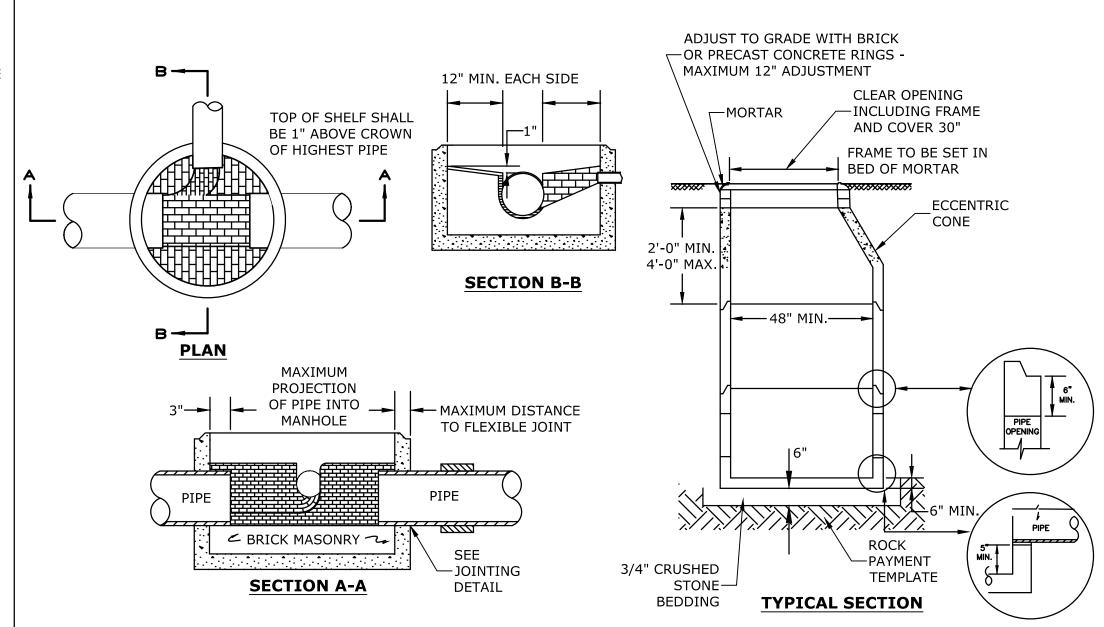
-FINISH GRADE -REFER TO PAVEMENT SECTION AND UTILITY TRENCH DETAILS FOR BACKFILL SPECIFICATIONS 2" RIGID-INSULATION (CLOSED CELL) -8" PVC SEWER 1. INSTALLATION SHALL MEET THE STANDARDS OF THE CITY OF PORTSMOUTH.

**SEWER INSULATION DETAIL NO SCALE** 





SANITARY SERVICE LATERAL WITH CLEANOUT NO SCALE

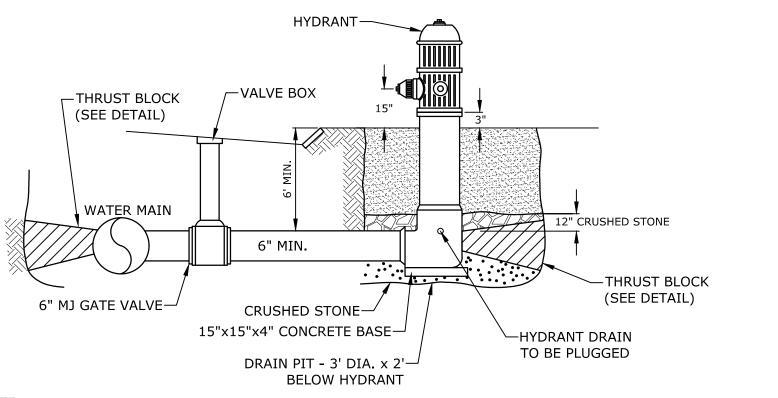


C478-06.

- 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

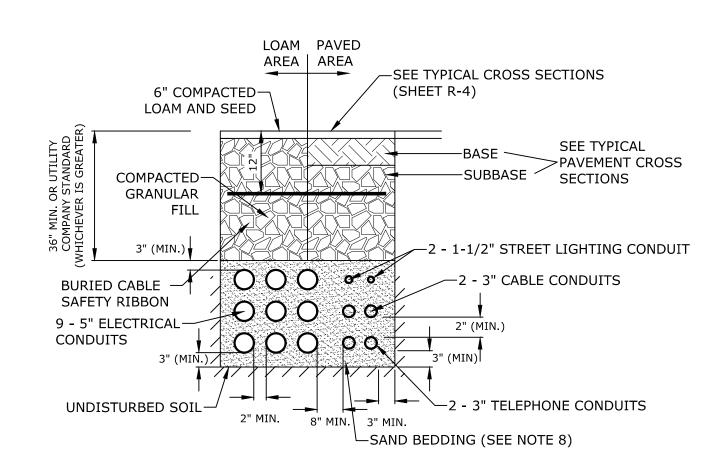
## **SEWER MANHOLE**

NO SCALE



- 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



- 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.
- DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN.
- NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS.
- 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.
- 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.
- 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
- ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH
- 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**

# Proposed **Multi-Family Development**

Iron Horse Properties, LLC

105 Bartlett Street Portsmouth, New Hampshire

В	2/6/2020	Design Review Submission
Α	1/2/2020	ZBA Submission
1ARK	DATE	DESCRIPTION
PRO1F	T NO:	C-0960-006

DATE: January 2, 202 C-0960-006\_C-DTLS.DW DRAWN BY: CHECKED:

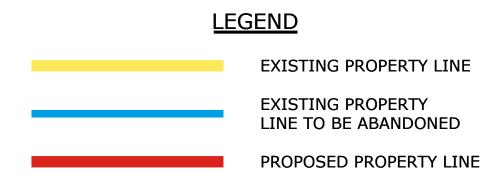
**EROSION CONTROL NOTES** AND DETAILS SHEET

SCALE: AS SHOWN

APPROVED:

BARTLETT STREET LENDER, LLC PORTSMOUTH, NH

PROPOSED SUBDIVISION PLAN



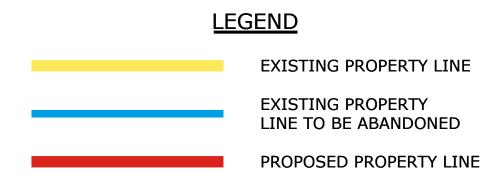


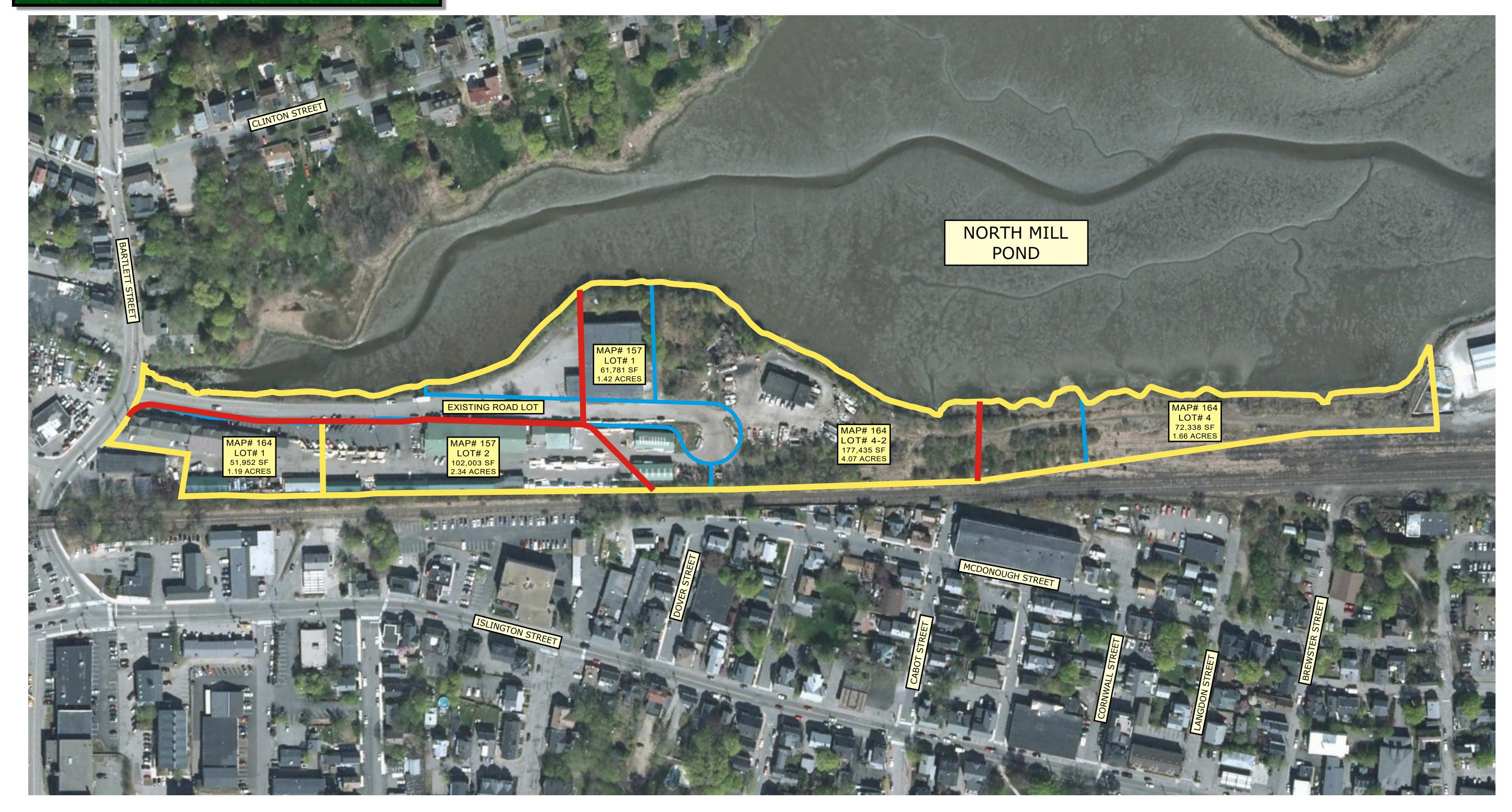


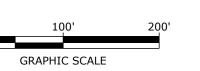
Tighe&Bond
Engineers | Environmental Specialists
177 Corporate Drive
Portsmouth, New Hampshire 03801
(603) 433-8818
December 18, 2019

BARTLETT STREET LENDER, LLC PORTSMOUTH, NH

PROPOSED SUBDIVISION PLAN





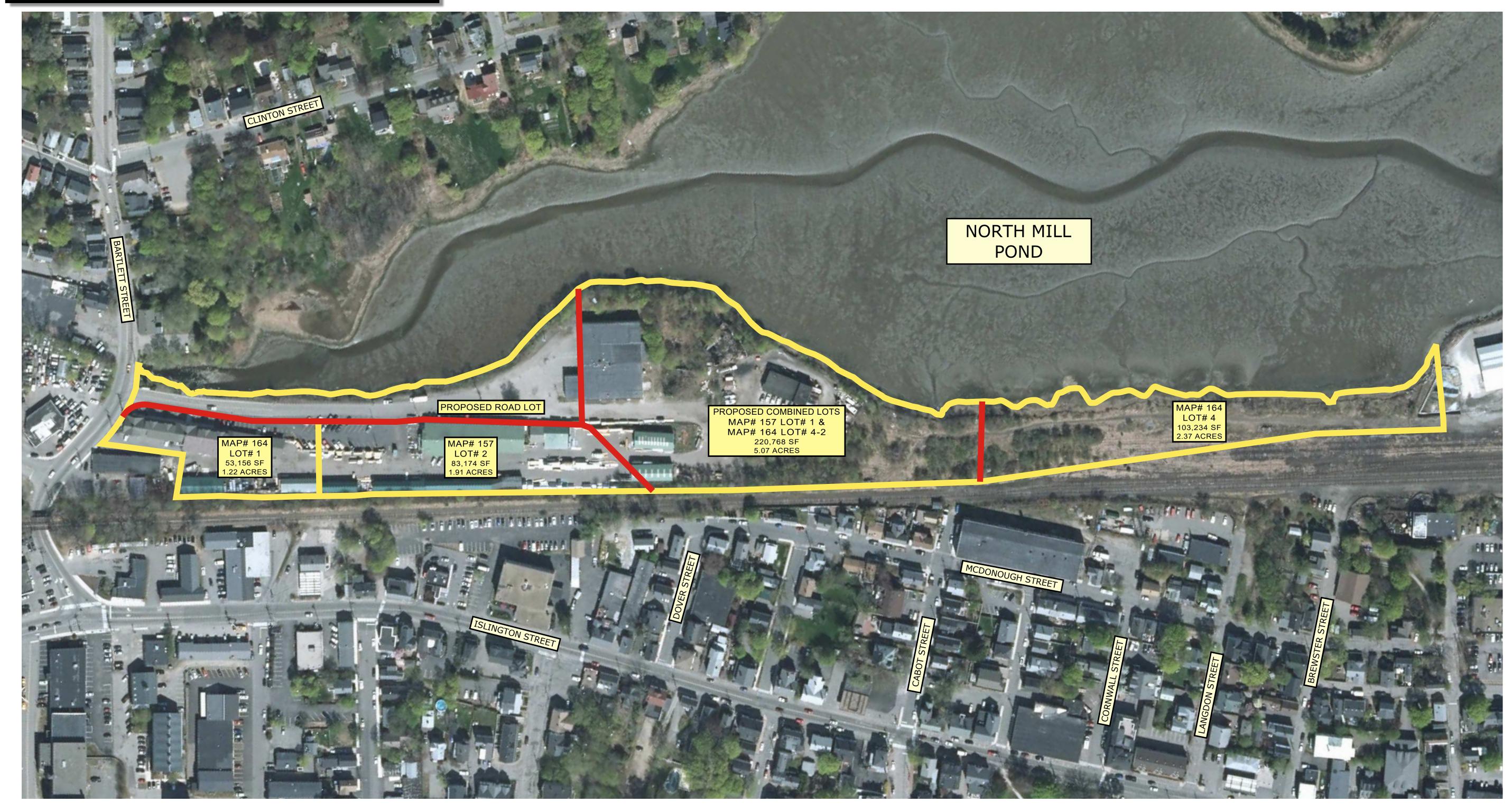


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