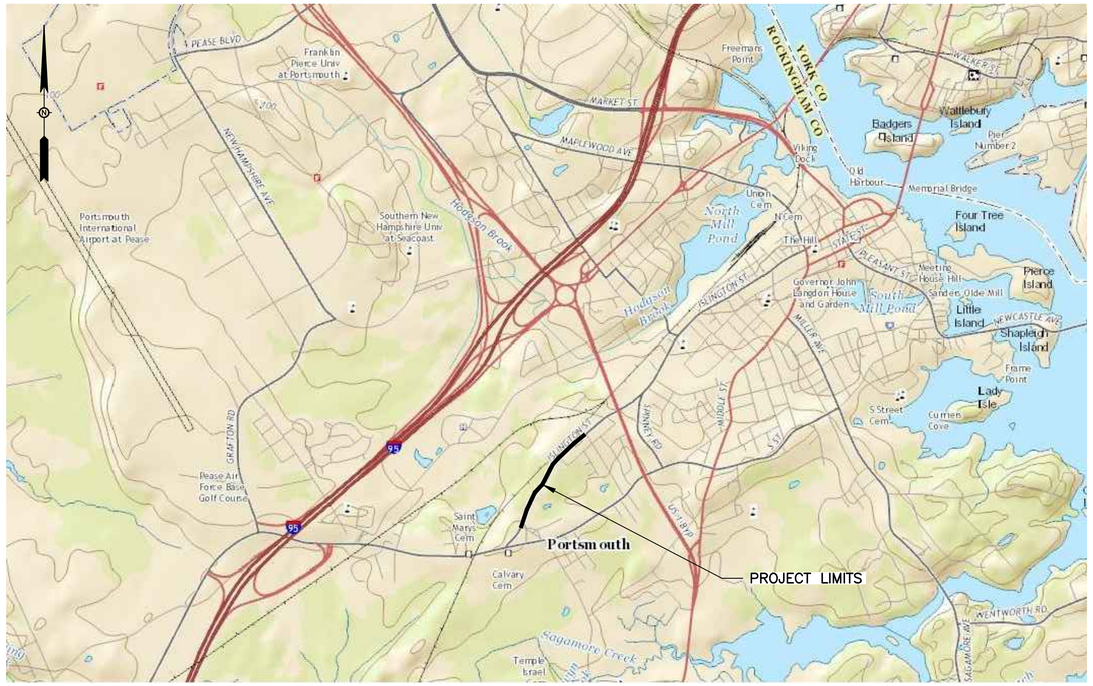
Outer Islington Street
Portsmouth, New Hampshire
ROADWAY IMPROVEMENT PLANS
FALL 2016

PREPARED FOR: DEPARTMENT OF PUBLIC WORKS
CITY OF PORTSMOUTH
680 PEVERLY HILL ROAD
PORTSMOUTH, NH 03801

PREPARED BY: SEAPORT ENGINEERING, LLC
PORTSMOUTH, NH 03801
WWW.SEAPORTENG.COM
603-498-8449

SURVEY BY: JAMES VERRA and ASSOCIATES, INC.
101 SHATTUCK WAY, SUITE 8
NEWINGTON, NH 03801

GEOTECHNICAL BY: JOHN TURNER CONSULTING
19 DOVER STREET
DOVER, NH 03820



INDEX	SHEET NO.	LATEST REV.
GENERAL NOTES	G-1	9/12/2016
ROADWAY LAYOUT PLANS	C-1	9/12/2016
UTILITIES PLAN and PROFILE	C-2	9/12/2016
EROSION AND SEDIMENT CONTROL PLAN and DETAILS	C-3	9/12/2016
DETAILS SHEETS	C-4 TO C-7	9/12/2016

ISSUED FOR BID

9/12/2016

SURVEY NOTES:

1. THESE PLANS ARE BASED ON A FIELD SURVEY CONDUCTED 12/2015 BY JAMES VERRA AND ASSOCIATES, INC.
2. THE RELATIVE ERROR OF CLOSURE WAS LESS THAN 1 FOOT IN 15,000 FEET.
3. ON SITE CONTROL ESTABLISHED USING SURVEY GRADE GPS UNITS.
   HORIZONTAL DATUM: NAD 1983 (2011)(EPOCH 2010.0000)
   HORIZONTAL POSITION VIA NGS "CORS" NETWORK.
   STATIONS USED: MASA, NHCO, NHUN, P776 & ZBW1.

   VERTICAL DATUM: NAVD 1988
   PRIMARY BM: CITY CONTROL POINT "ALBA"
4. THE LOCATION OF ALL UNDERGROUND UTILITIES SHOWN HEREON ARE APPROXIMATE AND ARE BASED UPON THE FIELD LOCATION OF ALL VISIBLE STRUCTURES (IE CATCH BASINS, MANHOLES, WATER GATES ETC.) AND INFORMATION COMPILED FROM PLANS PROVIDED BY UTILITY COMPANIES AND GOVERNMENTAL AGENCIES. ALL CONTRACTORS SHOULD NOTIFY, IN WRITING, SAID AGENCIES PRIOR TO ANY EXCAVATION WORK AND CALL DIG-SAFE @ 1-888-DIG-SAFE.
5. WETLANDS DELINEATION 12/2015 BY MICHAEL CUOMO, NHCWS# 4, 6 YORK POND RD, YORK, ME 03909. WETLANDS FLAGS SURVEY LOCATED BY JAMES VERRA AND ASSOC., INC.
6. ENGINEER OR CONTRACTOR TO VERIFY SITE BENCHMARKS BY LEVELING BETWEEN 2 BENCHMARKS PRIOR TO THE SETTING OR ESTABLISHMENT OF ANY GRADES/ELEVATIONS. DISCREPANCIES ARE TO BE REPORTED TO JAMES VERRA AND ASSOC., INC.
7. ISLINGTON STREET FROM THE CURRENT INTERSECTION WITH BARTLETT STREET TO GREENLAND ROAD AT THE PORTSMOUTH PLAINS WAS LAID OUT AS 3 RODS (49.5') WIDE IN 1793. A PORTION OF THE ROAD WAS RELOCATED IN 1933 PER FEDERAL AID PROJECT NRM 152-C. THE RIGHT OF WAY SHOWN HEREON IS BASED ON MONUMENTATION FOUND AND DIFFERS SLIGHTLY FROM THE RECORD LAYOUT. MONUMENTS FOUND THAT WERE SUBSTANTIALLY OUT OF CONFORMITY WITH THE RECORD LAYOUT WERE REJECTED AND NOT HELD.

DEMOLITION NOTES:

1. LOCATIONS OF UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT GUARANTEED. CONTRACTOR SHALL LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR AND/OR RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
2. MATERIAL TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE NOTED. DISPOSAL SHALL BE IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL REGULATIONS.
3. ANY DAMAGE BY THE CONTRACTOR DURING DEMOLITION AND/OR CONSTRUCTION SHALL BE REPAIRS OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
4. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND FEES NECESSARY TO COMPLETE THE WORK.
5. CONTRACTOR SHALL REMOVE TREES AND BRUSH AS INDICATED AND AS REQUIRED FOR COMPLETION OF THE WORK. ALL STUBS SHALL BE REMOVED AND SURFACES GRUBBED WITHIN THE LIMITS OF WORK.
6. ALL WORK WITHIN THE PUBLIC RIGHT OF WAY SHALL BE COORDINATED WITH THE CITY OF PORTSMOUTH.
7. CONTRACTOR SHALL PROTECT ALL FIELD STONE WALLS, FENCES, MAILBOXES, STRUCTURES, ETC. THROUGHOUT THE COMPLETION OF THE WORK.
8. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION WORK. THIS INCLUDES SILT FENCE / SILT SOCK AND INLET PROTECTION BARRIERS.
9. CONTRACTOR SHALL SAWCUT PAVEMENT AT EDGES OF TRENCHES FOR CLEAN VERTICAL EDGES.
10. CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS ACCESS TO RESIDENTIAL PROPERTIES THROUGHOUT THE CONSTRUCTION PERIOD.
11. PAVEMENT RECLAMATION LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL RECLAMATION MAY BE REQUIRED. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT RECLAMATION.
12. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXISTING STRUCTURES, CONCRETE PADS, PAVEMENT, PIPES AND HEADWALLS WITHIN THE LIMITS OF CONSTRUCTION.
13. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE UTILITIES. WORK ASSOCIATED WITH UTILITIES, BUT NOT LIMITED TO, RELOCATION OF UTILITY POLES.
14. CONTRACTOR SHALL NOTIFY DIG-SAFE 72 HOURS PRIOR TO ANY WORK STARTING. CONTRACTOR REQUIRED TO MAINTAIN AN ACTIVE DIG-SAFE PERMIT THROUGHOUT THE DURATION OF CONSTRUCTION.

GRADING NOTES:

1. CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CONTRACTOR SHALL PAY CLOSE ATTENTION TO DRIVEWAY ENTRANCES.
2. EXISTING MANHOLES AND CATCHBASINS WITHIN LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADES.
3. ALL WATER SHUT OFF VALVES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE ADJUSTED TO FINISH GRADES.
4. CONTRACTOR SHALL CLEAN ALL STRUCTURES WITHIN THE CONSTRUCTION LIMITS IMMEDIATELY UPON COMPLETION OF THE WORK. ALL SEDIMENT AND DEBRIS SHALL BE DISPOSED OF PER FEDERAL, STATE AND LOCAL REGULATIONS.
5. STORM DRAIN PIPING, UNLESS OTHERWISE NOTED, SHALL BE HIGH DENSITY POLTYETHYLENE (HANCOR HI-Q, ADS N-12 OR APPROVED EQUAL).
6. PROPOSED CATCHBASINS SHALL BE EQUIPPED WITH OIL/WATER SEPARATOR HOODS AND 2' SUMPS.
7. ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND MULCH.
8. CONTRACTOR SHALL PROVIDE THE FOLLOWING MINIMUM REQUIREMENTS FOR COMPACTION:

BELOW PAVEMENT AND CONCRETE AREAS	95%
TRENCH BEDDING AND BACKFILL	95%
BELOW LOAM AND SEED AREAS	90%

   COMPACTION PERCENTAGES SHALL BE THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D-1557, METHOD C. FIELD DENSITY TESTS SHALL BE CONDUCTED IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922.
9. STORM DRAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION (NHDOT) AND CITY OF PORTSMOUTH DPW STANDARD SPECIFICATIONS.
10. CONTRACTOR SHALL GRADE SLOPES TO THE LINES AND GRADES SHOWN ON THE PLANS. SLOPES STEEPER THAN 2:1 SHALL INCLUDE 6" RIP-RAP STONE FOR A DEPTH OF 18". SLOPES FROM 4:1 TO 2:1, CONTRACTOR SHALL PROVIDE A SLOPE STABILIZATION BLANKET.

SITE NOTES:

1. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE SPECIFIED.
2. ALL WORK SHALL CONFORM TO THE CITY OF PORTSMOUTH DEPARTMENT OF PUBLIC WORKS STANDARD SPECIFICATIONS.
3. CONTRACTOR SHALL PROVIDE AS-BUILT PLANS (MYLAR AND .DWG FORMAT AUTOCAD FILES) TO THE CITY OF PORTSMOUTH UPON COMPLETION OF THE PROJECT. AS-BUILT SHALL BE PREPARED AND CERTIFIED BY A LAND SURVEYOR OR PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.
4. MATERIALS AND CONSTRUCTION SHALL COMPLY TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND SPECIFICATIONS.
5. CONTRACTOR SHALL PROVIDE A LICENSED ENGINEER OR SURVEYOR TO DETERMINE ALL LINES AND GRADE.
6. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL VERTICAL AN HORIZONTAL CONTROL FOR THE PROJECT.
7. PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM CONTROL DEVICES'. "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS".
8. CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY OF PORTSMOUTH FOR APPROVAL.
9. CONTRACTOR SHALL BE FAMILIAR WITH ALL AMERICAN WITH DISABILITY ACT (ADA) REQUIREMENTS FOR ACCESSIBILITY.
10. PAVEMENT MARKINGS SUCH AS CROSSWALKS, STOP BARS, LEGENDS AND SYMBOLS SHALL BE THERMOPLASTIC PER AASHTO M249. CENTERLINE AND EDGE STRIPING SHALL BE TRAFFIC PAINT PER AASHTO M248 TYPE 'F'. TRAFFIC PAINT COLOR AS INDICATED IN THE PLANS.

UTILITY NOTES:

1. CONTRACTOR SHALL IDENTIFY AND RECORD SWING TIES TO ALL EXISTING UTILITY STRUCTURES, INCLUDING, BUT NOT LIMITED TO WATER SHUT OFF VALVES, MANHOLES, FIRE HYDRANTS.
2. CONTRACTOR SHALL UTILITY WORK WITH THE APPROPRIATE UTILITY COMPANY.
   ELECTRIC – EVERSOURCE
   TELEPHONE – FAIRPOINT OR VERIZON
   WATER/SEWER – CITY OF PORTSMOUTH
3. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND NOT GUARANTEED. CONTRACTOR SHALL LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR AND/OR RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK.
4. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS, ARRANGE ALL INSPECTIONS, AND SUBMIT CERTIFICATES OF ACCEPTANCE TO THE OWNER PRIOR TO COMPLETION OF THE PROJECT.
5. CONTRACTOR SHALL NOTIFY DIG-SAFE 72 HOURS PRIOR TO ANY WORK STARTING. CONTRACTOR REQUIRED TO MAINTAIN AN ACTIVE DIG-SAFE PERMIT THROUGHOUT THE DURATION OF CONSTRUCTION.
6. CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, CATCHBASINS, FRAMES, GRATES & COVERS, AND OTHER MISCELLANEOUS ITEMS NOTE NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER INSTALLATION OF THE UTILITY COMPLETE AND OPERATIONAL.
7. CONTRACTOR SHALL AS-BUILT PROPOSED STORM WATER DRAINAGE SYSTEM, TO INCLUDE ELEVATIONS OF RIM AND ALL INVERTS.
8. ALL HYDRANTS AND VALVES SHALL BE INSPECTED AND MUST MEET CITY OF PORTSMOUTH STANDARDS.

LEGEND:

EXISTING	PROPOSED	
		PROPERTY LINE
		RIGHT-OF-WAY
		BUILDING
EOP		EDGE OF PAVEMENT
	VGC	CURB
		SIDEWALK
		ADA RAMP
		ADA SYMBOL
		SIGN
M	M	MAILBOX
	SWL	SINGLE WHITE LINE
	DYCL	DOUBLE YELLOW CENTERLINE
		RETAINING WALL
		LOOSE STONE WALL
X X X X		FENCE
		GUARDRAIL
		SHRUB
		TREE
		TEMPORARY BENCHMARK
53	53	1' CONTOUR
		WETLANDS
A 14		WETLANDS BOUNDARY
D	PD PD	DRAINAGE
W W	PW PW	WATER
S S	PS PS	SEWER – GRAVITY
	FM FM	SEWER – FORCED MAIN
UT		UNDERGROUND TELE.
OHW		OVERHEAD WIRES
GAS GAS		GAS
		FIRE HYDRANT
		UTILITY POLE
		UTILITY POLE w/ LIGHT
		CATCHBASIN
T D S		MANHOLE
		WATER SHUT OFF
		WATER VALVE
		LEDGE
		EROSION CONTROL
		SAWCUT
		LIMITS OF RECLAIM
	B1	BORING LOCATION

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: NONE
PROJECT NO.: CoP-002

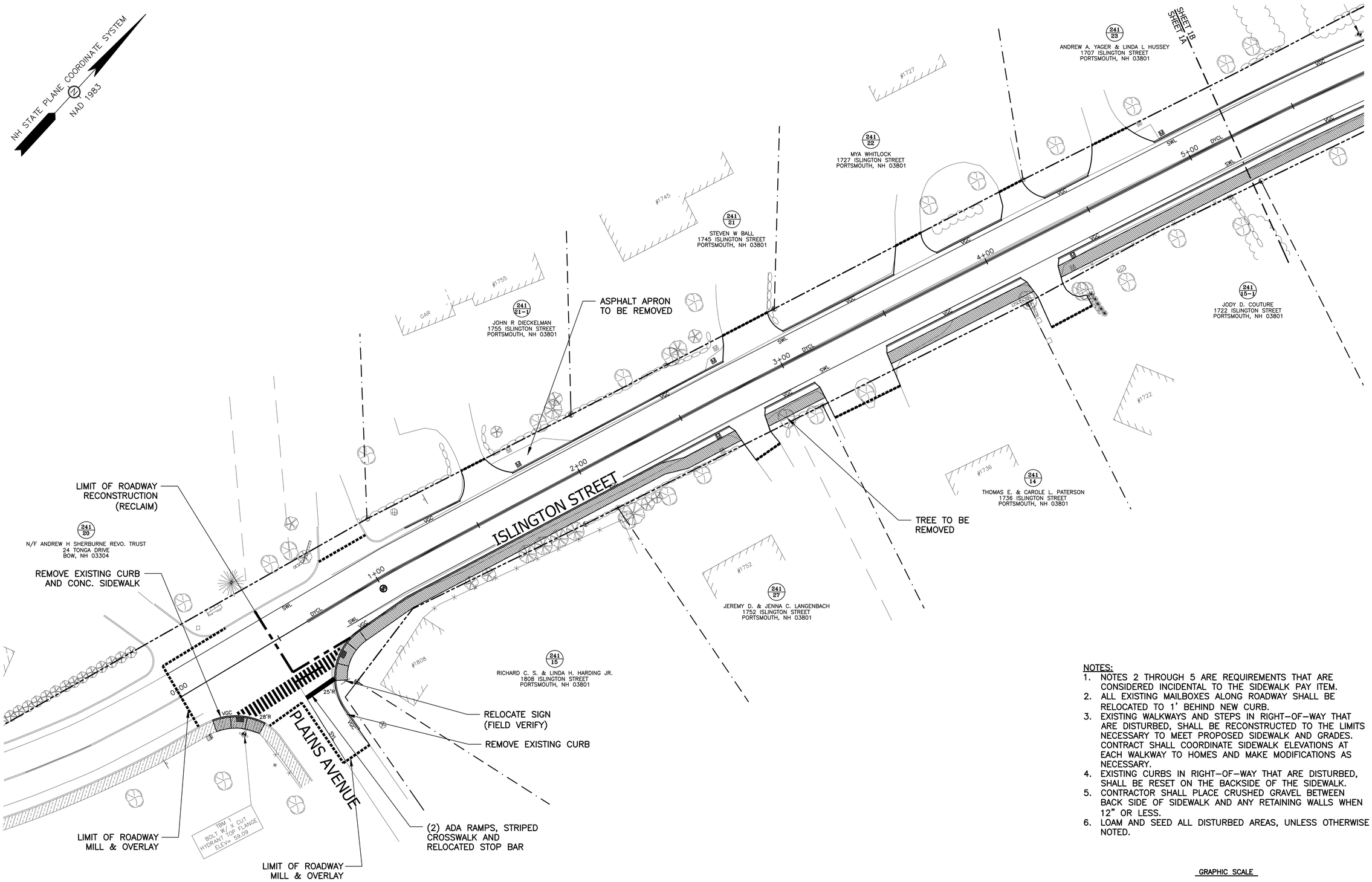
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design
Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: GENERAL NOTES AND LEGEND

G-1



NOTES:

1. NOTES 2 THROUGH 5 ARE REQUIREMENTS THAT ARE CONSIDERED INCIDENTAL TO THE SIDEWALK PAY ITEM.
2. ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
3. EXISTING WALKWAYS AND STEPS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACT SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
4. EXISTING CURBS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
5. CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.

GRAPHIC SCALE

10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	8/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

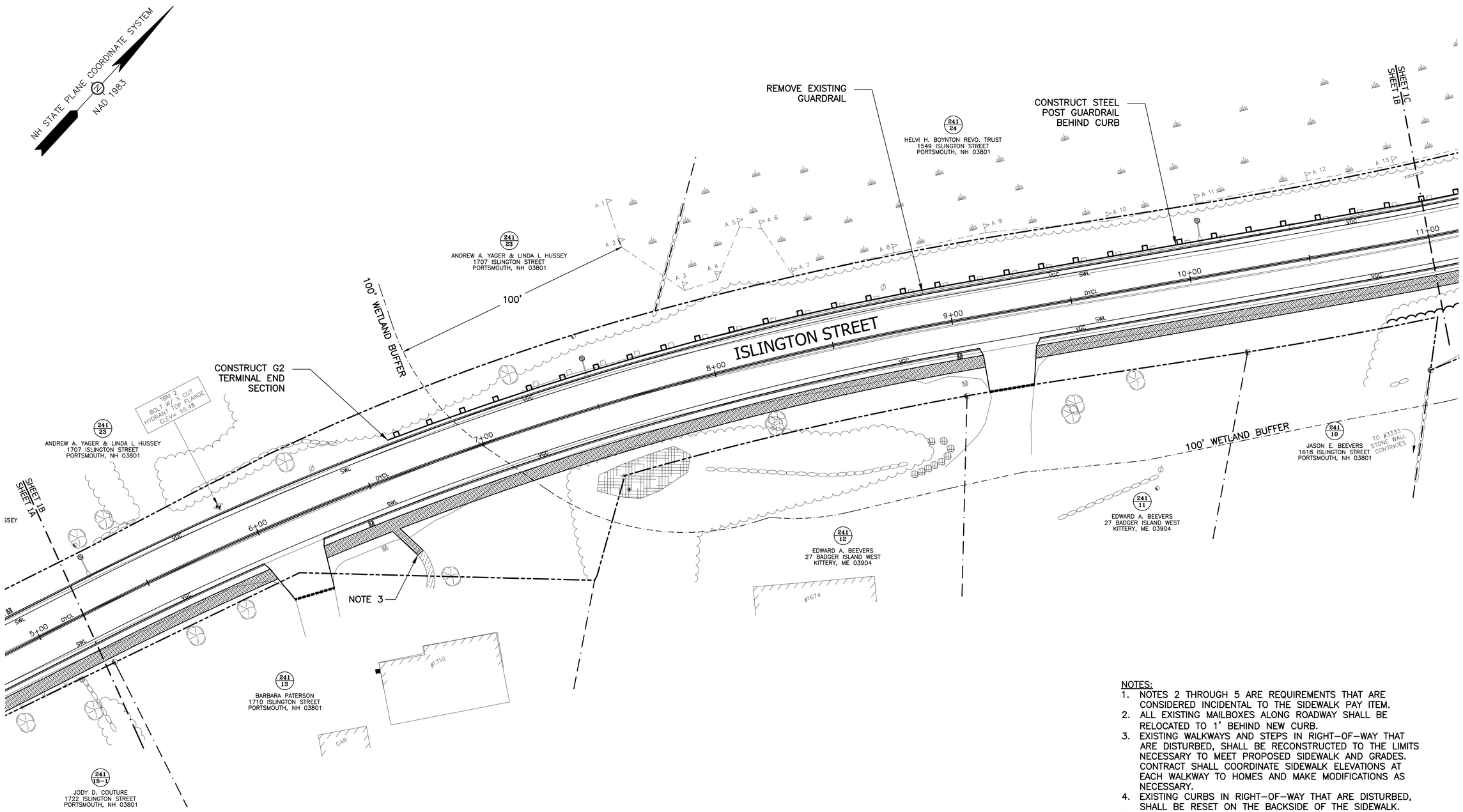
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

Seaport
Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: ROADWAY LAYOUT PLAN

C-1A



NOTES:

1. NOTES 2 THROUGH 5 ARE REQUIREMENTS THAT ARE CONSIDERED INCIDENTAL TO THE SIDEWALK PAY ITEM.
2. ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
3. EXISTING WALKWAYS AND STEPS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACT SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
4. EXISTING CURBS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
5. CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.

GRAPHIC SCALE

10 0 20 40 60 80 FEET

5 0 5 10 15 20 25 METERS

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

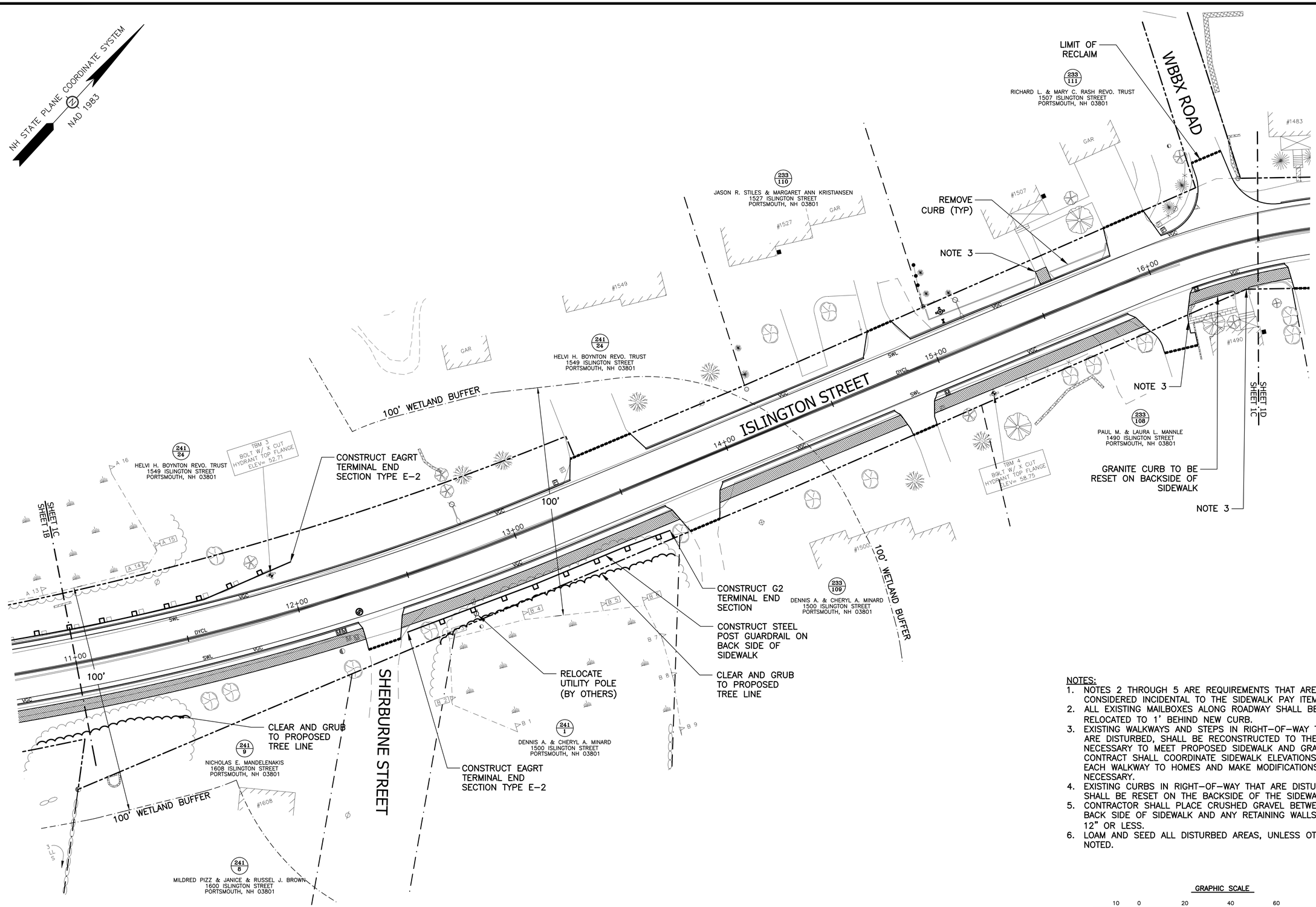
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: ROADWAY LAYOUT PLANS

C-1B



NOTES:

1. NOTES 2 THROUGH 5 ARE REQUIREMENTS THAT ARE CONSIDERED INCIDENTAL TO THE SIDEWALK PAY ITEM.
2. ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
3. EXISTING WALKWAYS AND STEPS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACT SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
4. EXISTING CURBS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
5. CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.

GRAPHIC SCALE

10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

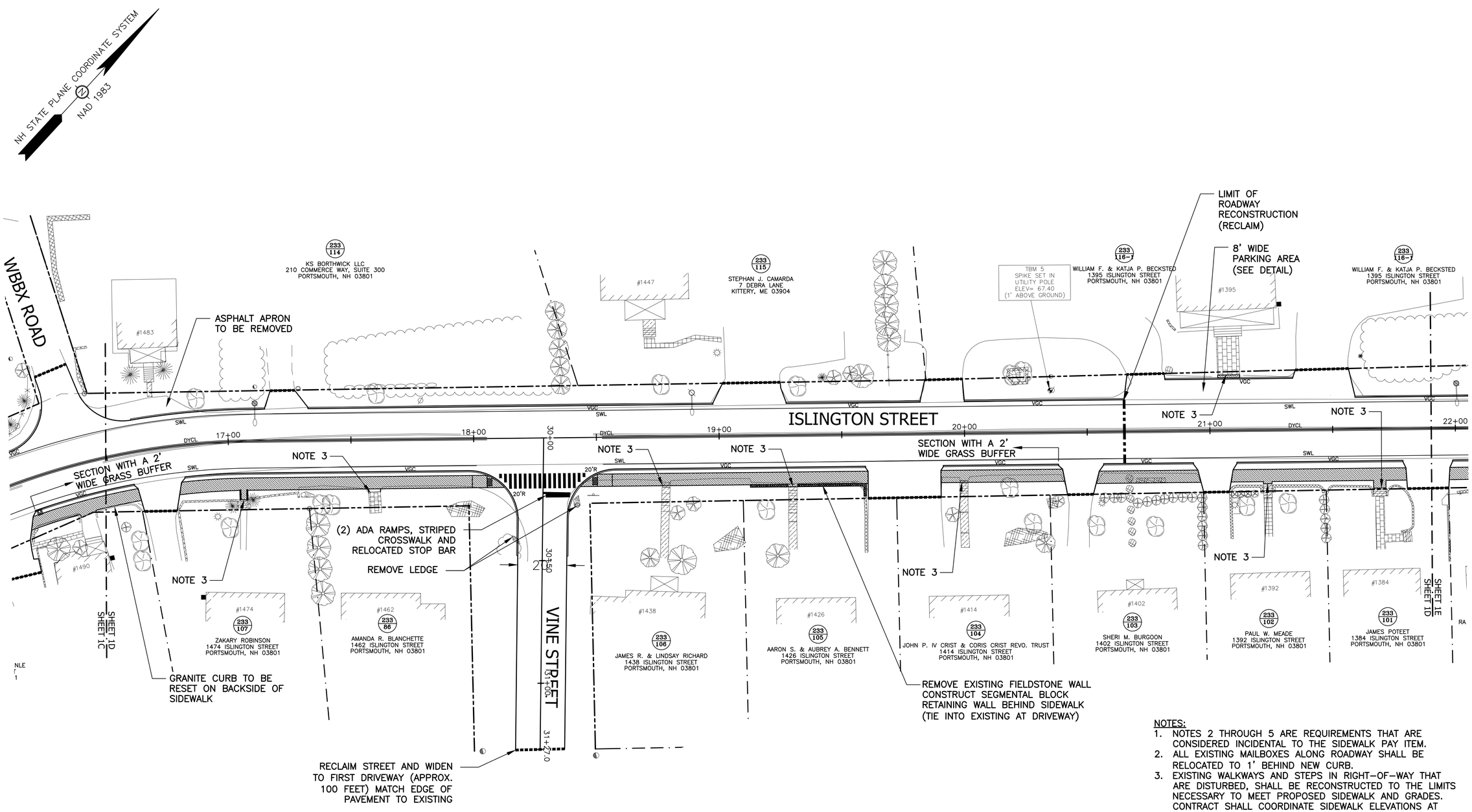
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: ROADWAY LAYOUT PLANS

C-1C



NOTES:

1. NOTES 2 THROUGH 5 ARE REQUIREMENTS THAT ARE CONSIDERED INCIDENTAL TO THE SIDEWALK PAY ITEM.
2. ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
3. EXISTING WALKWAYS AND STEPS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACT SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
4. EXISTING CURBS IN RIGHT-OF-WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
5. CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

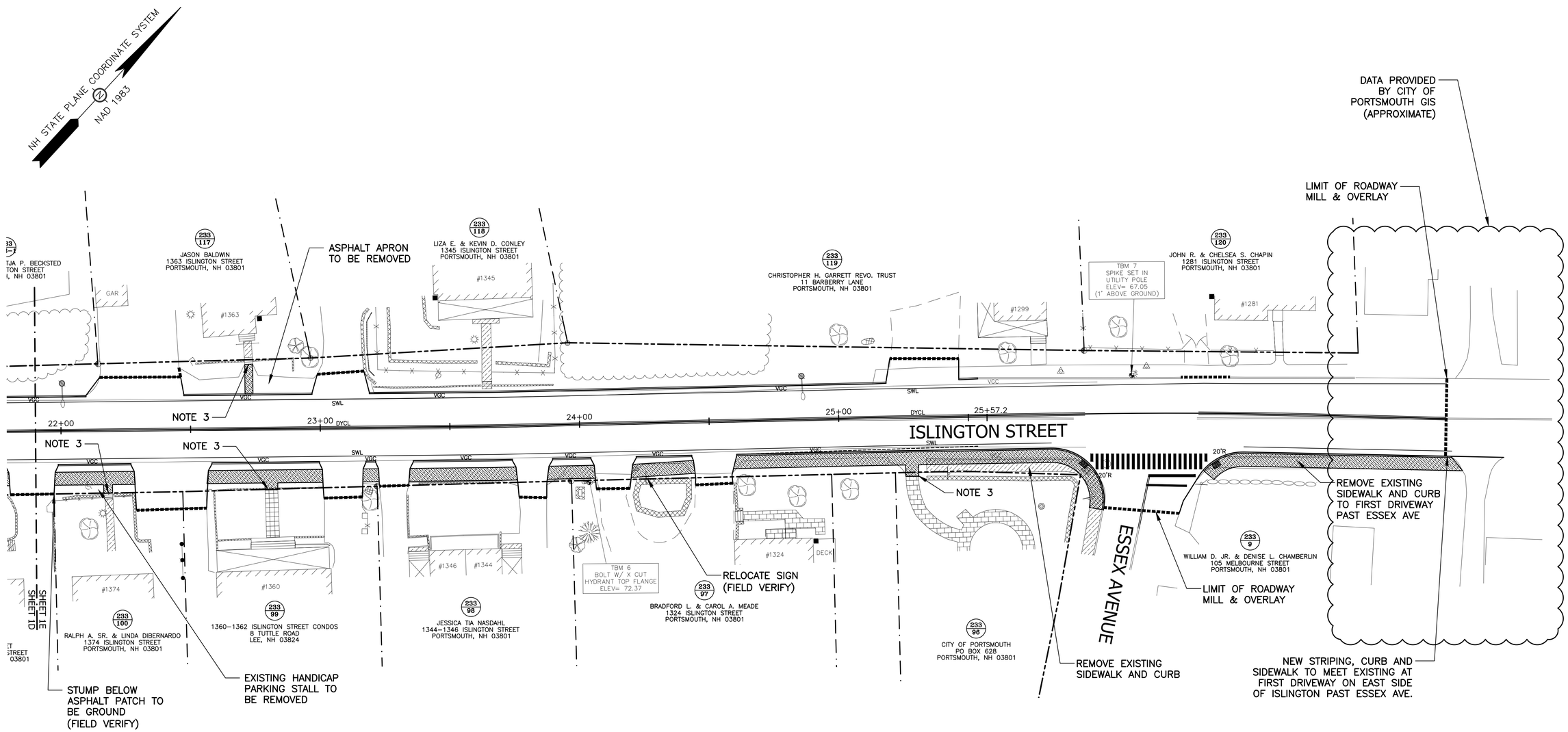
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: ROADWAY LAYOUT PLANS

C-1D



NOTES:

1. NOTES 2 THROUGH 5 ARE REQUIREMENTS THAT ARE CONSIDERED INCIDENTAL TO THE SIDEWALK PAY ITEM.
2. ALL EXISTING MAILBOXES ALONG ROADWAY SHALL BE RELOCATED TO 1' BEHIND NEW CURB.
3. EXISTING WALKWAYS AND STEPS IN RIGHT–OF–WAY THAT ARE DISTURBED, SHALL BE RECONSTRUCTED TO THE LIMITS NECESSARY TO MEET PROPOSED SIDEWALK AND GRADES. CONTRACT SHALL COORDINATE SIDEWALK ELEVATIONS AT EACH WALKWAY TO HOMES AND MAKE MODIFICATIONS AS NECESSARY.
4. EXISTING CURBS IN RIGHT–OF–WAY THAT ARE DISTURBED, SHALL BE RESET ON THE BACKSIDE OF THE SIDEWALK.
5. CONTRACTOR SHALL PLACE CRUSHED GRAVEL BETWEEN BACK SIDE OF SIDEWALK AND ANY RETAINING WALLS WHEN 12" OR LESS.
6. LOAM AND SEED ALL DISTURBED AREAS, UNLESS OTHERWISE NOTED.

GRAPHIC SCALE

10 0 20 40 60 80 FEET
5 0 5 10 15 20 25 METERS

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

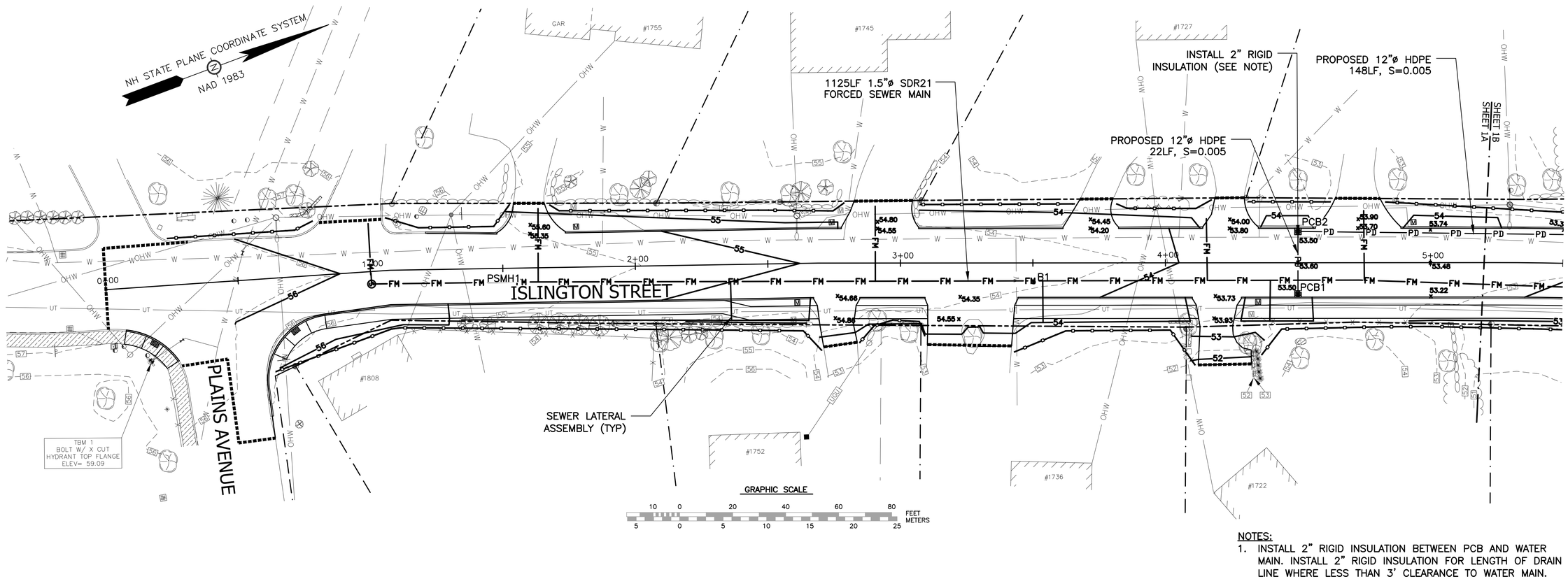
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

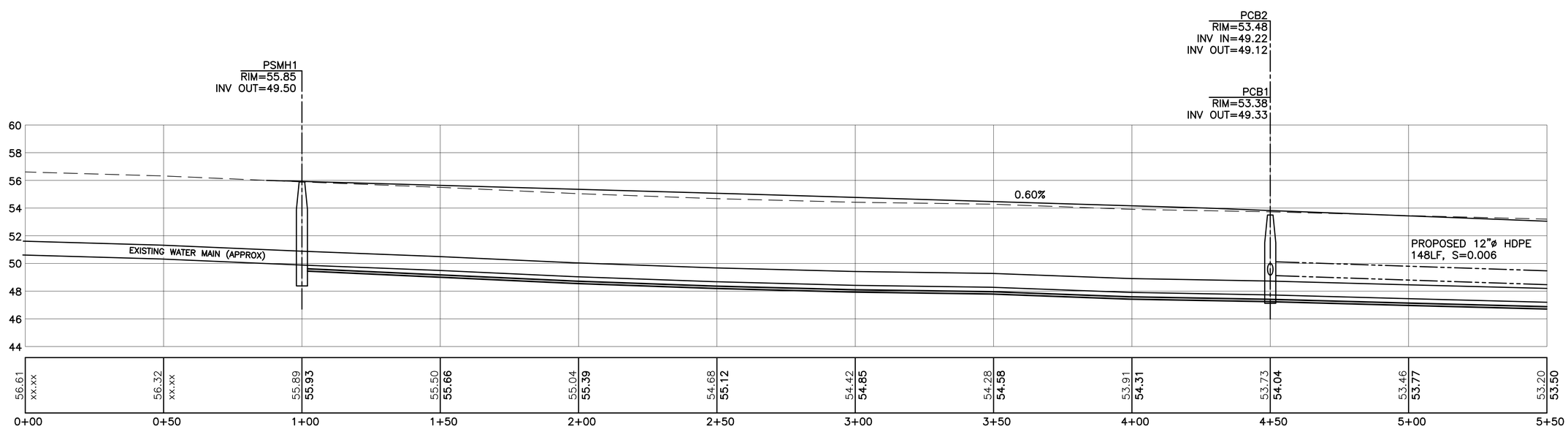
TITLE: ROADWAY LAYOUT PLANS

C-1E



NOTES:

1. INSTALL 2" RIGID INSULATION BETWEEN PCB AND WATER MAIN. INSTALL 2" RIGID INSULATION FOR LENGTH OF DRAIN LINE WHERE LESS THAN 3' CLEARANCE TO WATER MAIN.



NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

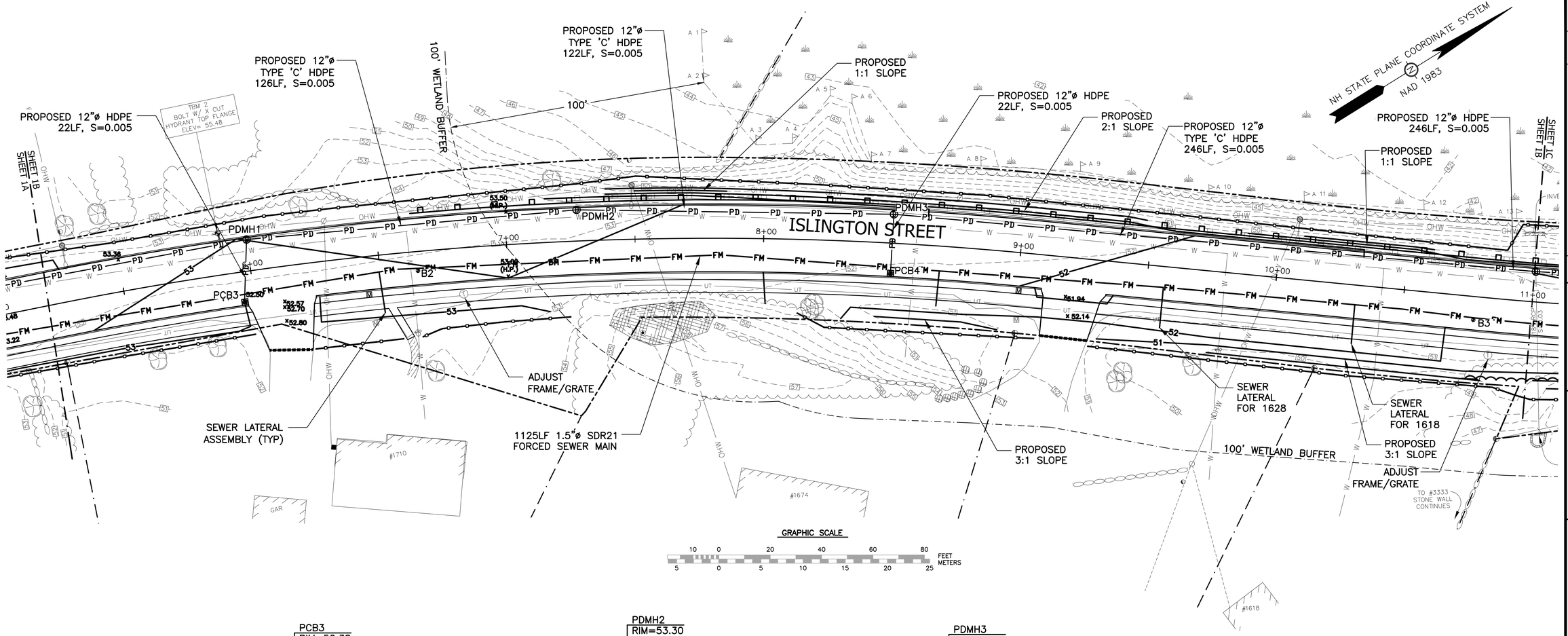
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

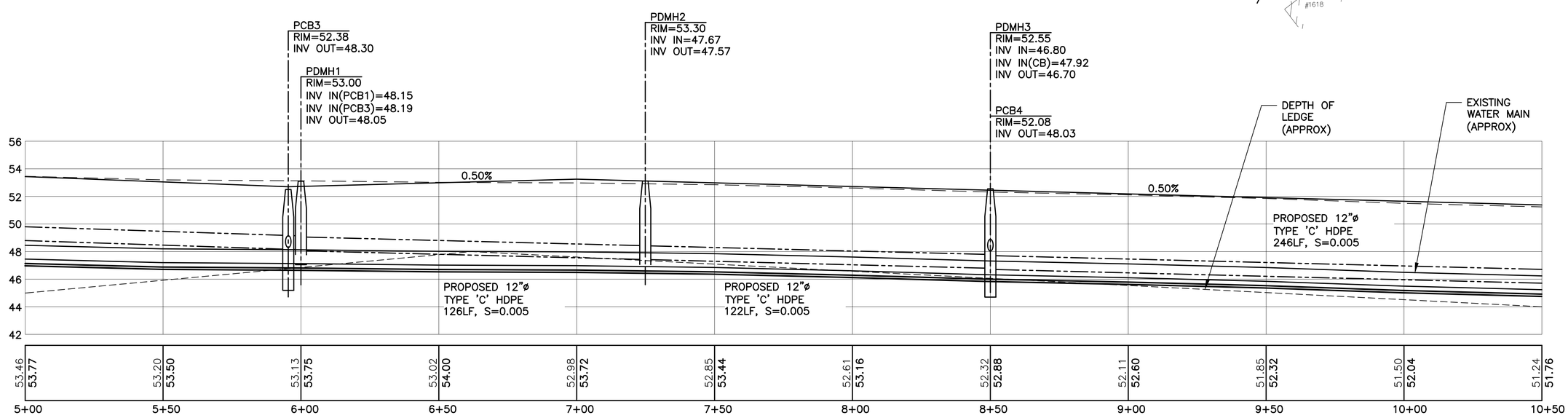
FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

Seaport
Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: UTILITIES PLAN and PROFILE

C-2A





NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

MARC R. BATCHELDER, PE
ENGINEER OF RECORD

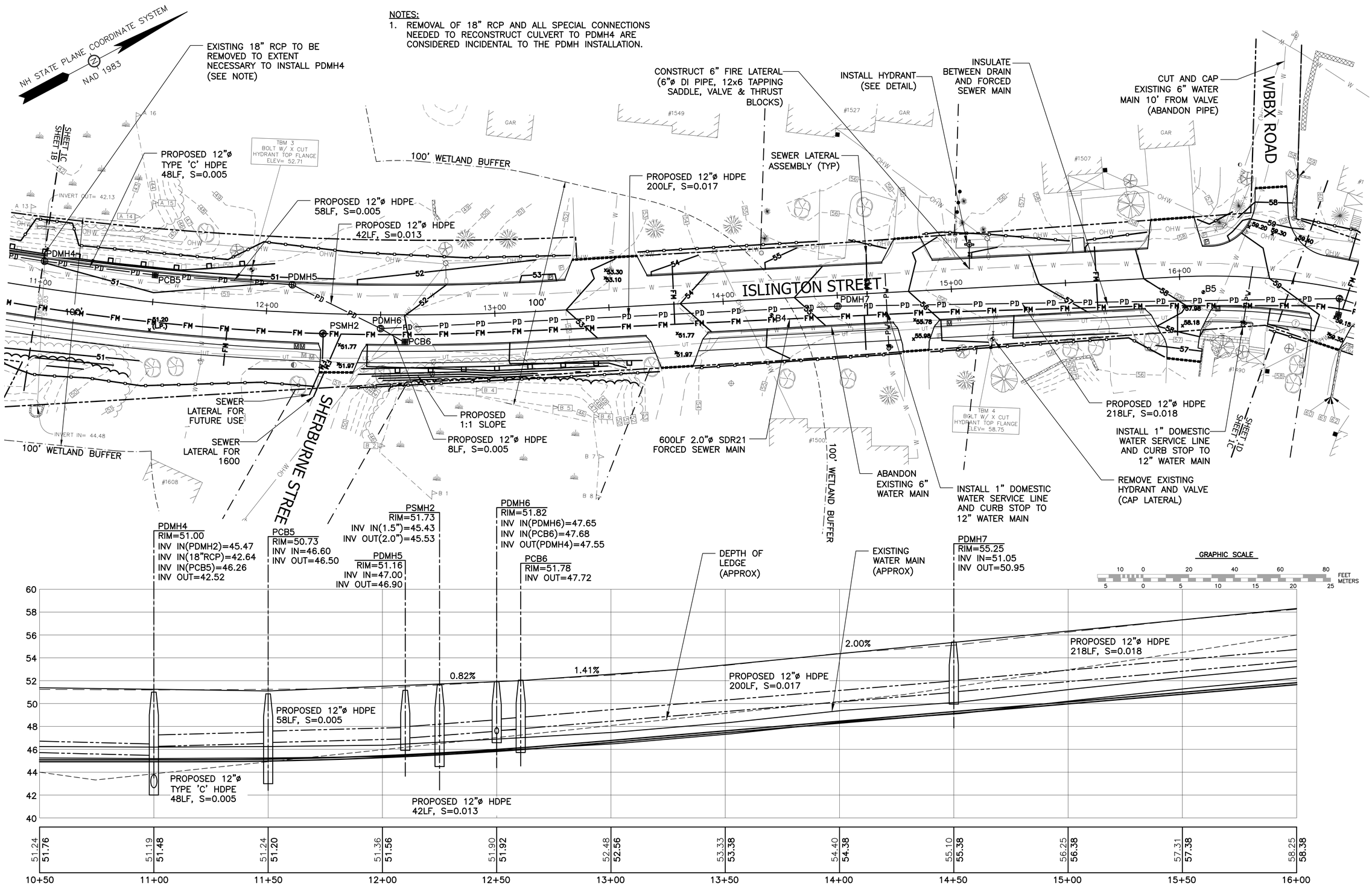
FOR: Outer Islington St
Sidewalk Design
Portsmouth, NH
03801

Seaport
Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: UTILITIES PLAN and PROFILE

C-2B

NOTES:
1. REMOVAL OF 18" RCP AND ALL SPECIAL CONNECTIONS NEEDED TO RECONSTRUCT CULVERT TO PDMH4 ARE CONSIDERED INCIDENTAL TO THE PDMH INSTALLATION.



NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

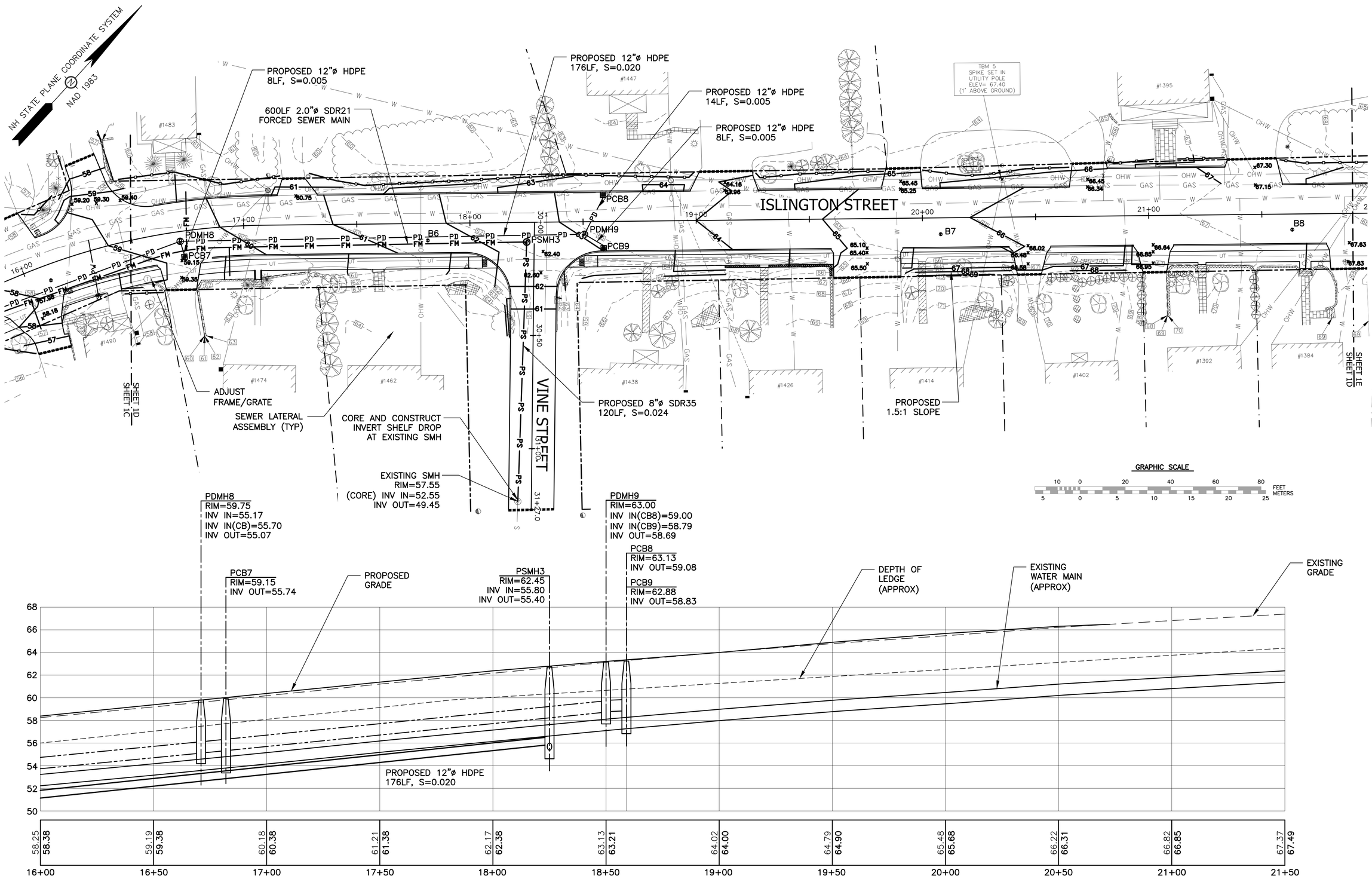
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: UTILITIES PLAN and PROFILE

C-2C



NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

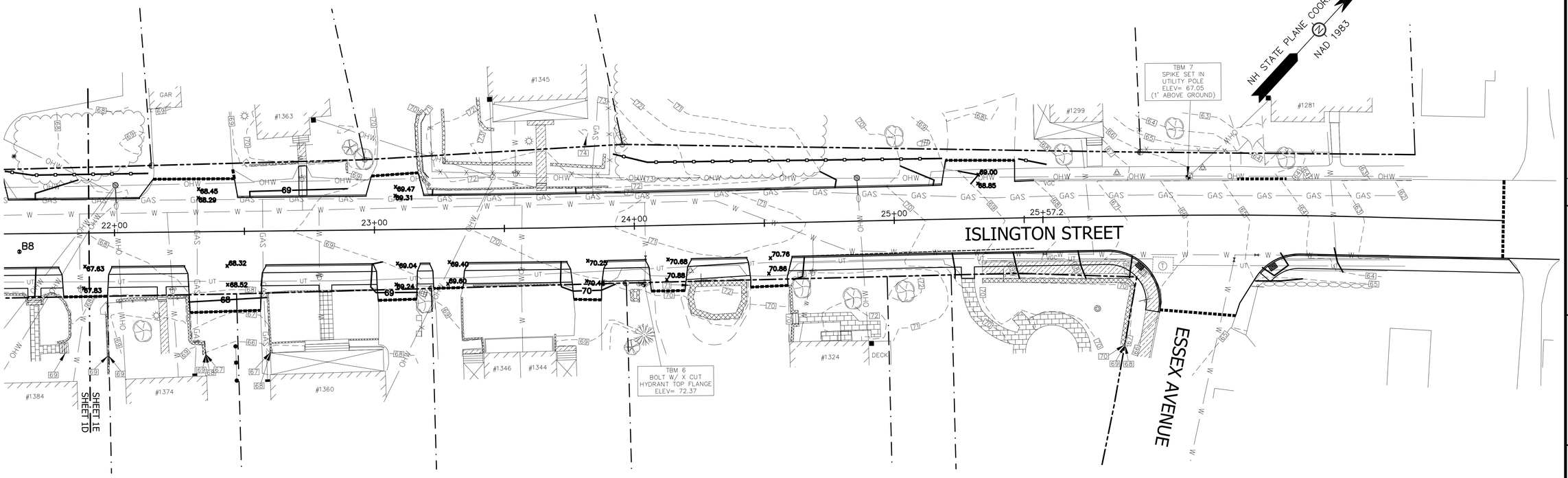
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

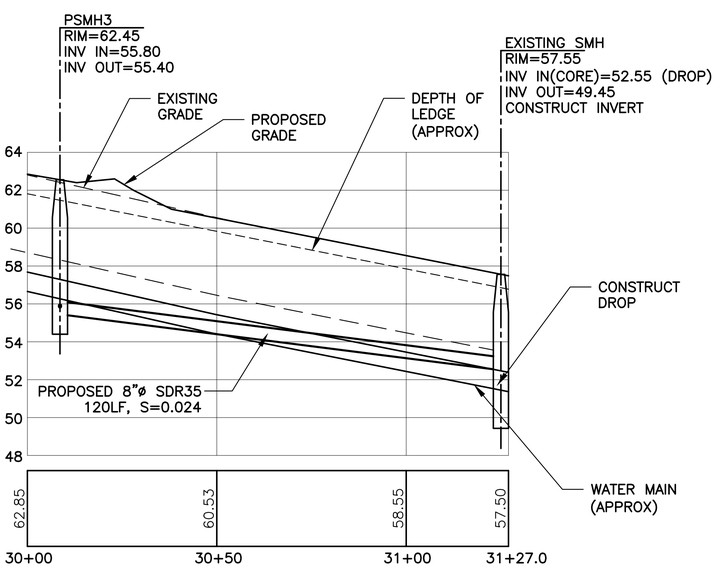
FOR: Outer Islington St Sidewalk Design
Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: UTILITIES PLAN and PROFILE

C-2D





VINE STREET PROFILE

GRAPHIC SCALE

10 0 20 40 60 80 FEET

5 0 5 10 15 20 25 METERS

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: 1:20
PROJECT NO.: CoP-002

MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: UTILITIES PLAN and PROFILE

C-2E

PROJECT NAME AND LOCATION:
OUTER ISLINGTON STREET ROADWAY IMPROVEMENTS
PORTSMOUTH, NEW HAMPSHIRE

DESCRIPTION:
THE PROJECT CONSISTS OF RECLAIMING THE EXISTING ASPHALT PAVEMENT SURFACE, REGRADING THE BASE MATERIALS AND RESURFACING. INCLUDES INSTALLATION OF DRAINAGE SYSTEM, CURBING AND SIDEWALKS.

CONSTRUCTION SEQUENCE:
1. INSTALL ALL EROSION CONTROL MEASURES.
2. REMOVE TREES AND VEGETATION.
3. INSTALLATION OF NEW STORMWATER DRAINAGE SYSTEM.
4. RECLAIM EXISTING ASPHALT PAVEMENT.
5. GRADE AND COMPACT BASE MATERIALS.
6. PLACE BASE COURSE OF ROADWAY PAVEMENT.
7. INSTALL NEW CURBING, SIDEWALKS AND RETAINING WALLS.
8. FINISH GRADE BEHIND CURB, SIDEWALKS AND RETAINING WALLS.
9. PLACE SEED AND MULCH ON LOAMED AREAS.
10. PLACE WEARING COURSE OF PAVEMENT.
11. INSTALL ALL ROADWAY STRIPING AND SIGNS.
12. WHEN CONSTRUCTION ACTIVITY IS COMPLETE AND SITE IS STABILIZED, REMOVE EROSION CONTROL MEASURES.

EROSION AND SEDIMENT CONTROLS AND STABILIZATION PRACTICES:
THE EROSION CONTROL PROCEDURES SHALL CONFORM TO SECTION 645 OF THE "STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION" OF THE NHDOT, AND "STORM WATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE".

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. THE SMALLEST PRACTICAL AREA OF LAND SHOULD BE EXPOSED AT ANY ONE TIME DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:
- BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
- A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
- A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN INSTALLED; OR
- EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.

ANY DISTURBED AREAS WHICH ARE TO BE LEFT TEMPORARILY, AND WHICH WILL BE REGRADED LATER DURING CONSTRUCTION SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

DUST CONTROL: IF TEMPORARY STABILIZATION PRACTICES, SUCH AS TEMPORARY VEGETATION AND MULCHING, DO NOT ADEQUATELY REDUCE DUST GENERATION, APPLICATION OF WATER OR CALCIUM CHLORIDE SHALL BE APPLIED IN ACCORDANCE WITH BEST MANAGEMENT PRACTICES.

ALL EROSION CONTROLS SHALL BE INSPECTED WEEKLY DURING THE LIFE OF THE PROJECT AND AFTER EACH STORM OF 0.5" OR GREATER. ALL DAMAGED SILT FENCES SHALL BE REPAIRED. SEDIMENT DEPOSITS SHALL PERIODICALLY BE REMOVED AND DISPOSED IN A SECURED LOCATION.

AVOID THE USE OF FUTURE OPEN SPACES (LOAM AND SEED AREAS) WHEREVER POSSIBLE DURING CONSTRUCTION. CONSTRUCTION TRAFFIC SHALL USE THE ROADBEDS OF FUTURE ACCESS DRIVES AND PARKING AREAS.

TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNTS NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS. CONSTRUCT SILT FENCE AROUND TOPSOIL STOCKPILE.

ALL FILLS SHALL BE PLACED AND COMPACTED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS.

DISTURBED AREAS SHALL BE SEEDED WITHIN 72 HOURS FOLLOWING FINISHED GRADING.

AT NO TIME SHALL ANY DISTURBED AREA REMAIN UNSTABILIZED FOR LONGER THAN 72 HOURS. ALL AREAS WHERE CONSTRUCTION IS NOT COMPLETE WITHIN THIRTY DAYS OF THE INITIAL DISTURBANCE SHALL BE MACHINE HAY MULCHED AND SEEDED WITH RYE GRASS TO PREVENT EROSION.

INSTALLATION PROCEDURES OF EROSION AND SEDIMENT CONTROLS:
A. VEGETATIVE PRACTICE

FOR PERMANENT MEASURES AND PLANTINGS FROM EARLY SPRING TO SEPTEMBER 30:

LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF 2 TONS PER ACRE.

FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 500 POUNDS PER ACRE OF 10-20-20 FERTILIZER.

SEED SHALL BE SOWN AT THE RATES SHOWN IN THE TABLE BELOW. 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. HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AT A RATE OF 1.5 TO 2 TONS PER ACRE, AND SHALL BE HELD IN PLACE USING APPROPRIATE TECHNIQUES FROM THE EROSION AND SEDIMENT CONTROL HANDBOOK.

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 SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED.

A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE:

GENERAL COVER	SEEDING RATE
CREEPING RED FESCUE	100 LBS/ACRE
KENTUCKY BLUEGRASS	100 LBS/ACRE

SLOPE SEED (USED ON ALL SLOPES GREATER THAN OR EQUAL TO 3:1)

CREEPING RED FESCUE	20 LBS/ACRE
TALL FESCUE	20 LBS/ACRE
BIRDSFOOT TREFOIL	2 LBS/ACRE

IN NO CASE SHALL THE WEED CONTENT EXCEED ONE PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH APPLICABLE STATE AND FEDERAL SEED LAWS.

FOR TEMPORARY PROTECTION OF DISTURBED AREAS:
MULCHING AND SEEDING SHALL BE APPLIED AT THE FOLLOWING RATES:

PERENNIAL RYE:	0.7 LBS/1,000 S.F.
MULCH:	1.5 TONS/ACRE

B. MULCHING

IN ORDER TO BE EFFECTIVE, MULCHING MUST BE IN PLACE PRIOR TO MAJOR STORM EVENTS. THERE ARE TWO TYPES OF STANDARDS:
APPLY MULCH PRIOR TO ANY STORM EVENT:
THIS IS APPLICABLE WHEN WORKING WITHIN 100 FEET OF WETLANDS. IT WILL BE NECESSARY TO CLOSELY MONITOR WEATHER FORECASTS FOR ADEQUATE WARNING TO SIGNIFICANT STORMS.
REQUIRED MULCHING WITHIN SPECIFIED TIME PERIOD:
THE TIME PERIOD CAN RANGE FROM 14 TO 21 DAYS OF INACTIVITY IN AN AREA, THE LENGTH OF TIME VARYING WITH SITE CONDITIONS. JUDGEMENT SHALL BE USED TO EVALUATE THE INTERACTION OF SITE CONDITIONS AND THE POTENTIAL FOR IMPACT ON ADJACENT AREAS TO CHOOSE AN APPROPRIATE TIME RESTRICTION.
WHEN MULCH IS TO BE APPLIED TO PROVIDE PROTECTION OVER WINTER MONTHS, IT SHALL BE AT A RATE OF 6,000 POUNDS OF HAY OR STRAW PER ACRE. A TACKIFIER SHALL BE ADDED TO THE MULCH.

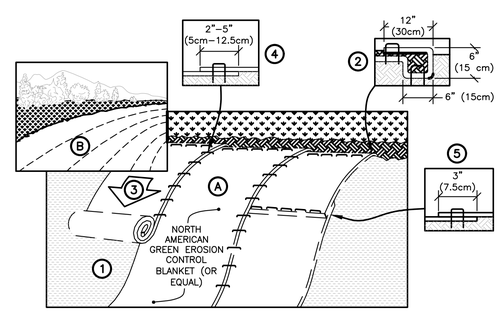
C. WINTER NOTES

ALL PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, 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% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

AFTER NOVEMBER 15TH, 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.

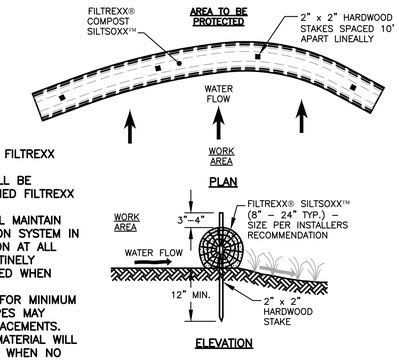
MAINTENANCE AND PROTECTION:
1. THE CONTRACTOR SHALL MAINTAIN ALL LOAM & SEED AREAS UNTIL FINAL ACCEPTANCE AT THE COMPLETION OF THE CONTRACT. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REMOVAL OF STONES AND OTHER FOREIGN OBJECTS OVER 1/2 INCHES IN DIAMETER WHICH MAY APPEAR AND THE FIRST TWO (2) CUTTINGS OF GRASS NO CLOSER THEN TEN (10) DAYS APART. THE FIRST CUTTING SHALL BE ACCOMPLISHED WHEN THE GRASS IS FROM 2 1/2 TO 3 INCHES HIGH. ALL BARE AND DEAD SPOTS WHICH BECOME APPARENT SHALL BE PROPERLY PREPARED, LIMED AND FERTILIZED, AND RESEEDED BY THE CONTRACTOR AT HIS EXPENSE AS MANY TIMES AS NECESSARY TO SECURE GOOD GROWTH. THE ENTIRE AREA SHALL BE MAINTAINED, WATERED AND CUT UNTIL ACCEPTANCE OF THE LAWN BY THE OWNER'S REPRESENTATIVE.
2. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES ARE NECESSARY TO PROTECT THE GRASS WHILE IT IS DEVELOPING.
3. TO BE ACCEPTABLE, SEEDED AREAS SHALL CONSIST OF A UNIFORM STAND OF AT LEAST 90 PERCENT ESTABLISHED PERMANENT GRASS SPECIES, WITH UNIFORM COUNT OF AT LEAST 100 PLANTS PER SQUARE FOOT.
4. SEEDED AREAS WILL BE FERTILIZED AND RESEEDED AS NECESSARY TO INSURE VEGETATIVE ESTABLISHMENT.
5. THE SWALES WILL BE CHECKED WEEKLY AND REPAIRED WHEN NECESSARY UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
6. THE SILT FENCE BARRIER SHALL BE CHECKED AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL.
7. SILT FENCING SHALL BE REMOVED ONCE VEGETATION IS ESTABLISHED, AND DISTURBED AREAS RESULTING FROM SILT FENCE REMOVAL SHALL BE PERMANENTLY SEEDED.



NOTES:
1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP'S), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECEP'S IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP'S EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP'S WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP'S BACK OVER SEED AND COMPACTED SOIL. SECURE RECP'S OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP'S.
3. ROLL THE RECP'S (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP'S WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP'S MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM™, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP'S MUST BE STAPLED WITH APPROXIMATELY 2"-5" OVERLAP DEPENDING ON RECP'S TYPE.
5. CONSECUTIVE RECP'S SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP'S WIDTH.

NOTE: IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTH GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP'S.

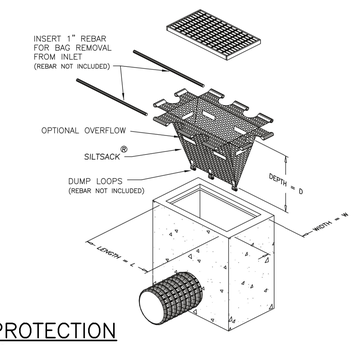
SLOPE STABILIZATION BLANKET
SCALE: N.T.S



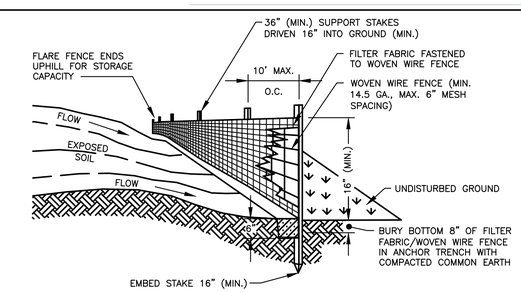
NOTES:
1. ALL MATERIAL TO MEET FILTREXX SPECIFICATIONS.
2. FILLTREXX SYSTEM SHALL BE INSTALLED BY A CERTIFIED FILTREXX INSTALLER.
3. THE CONTRACTOR SHALL MAINTAIN THE COMPOST FILTRATION SYSTEM IN A FUNCTIONAL CONDITION AT ALL TIMES. IT WILL BE ROUTINELY INSPECTED AND REPAIRED WHEN REQUIRED.
4. SILTSOXX DEPICTED IS FOR MINIMUM SLOPES, GREATER SLOPES MAY REQUIRE ADDITIONAL PLACEMENTS.
5. THE COMPOST FILTER MATERIAL WILL BE DISPERSED ON SITE WHEN NO LONGER REQUIRED, AS DETERMINED BY THE ENGINEER.

SEDIMENTATION FENCE / LOG
SCALE: N.T.S

NOTES:
1. SILT SACK SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS AND INLETS WITHIN THE LIMITS OF CONSTRUCTION SHOWN ON THE PLANS.
2. INSTALL AND MAINTAIN PER MANUFACTURERS REQUIREMENTS.



DRAINAGE INLET PROTECTION
SCALE: N.T.S



NOTES:
1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES, AS IN THE NEW HAMPSHIRE STORMWATER MANAGEMENT AND EROSION CONTROL HANDBOOK BEST MANAGEMENT PRACTICE FOR SILT FENCE.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 6 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MID-SECTION, AND BOTTOM.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 12 INCHES, FOLDED, AND STAPLED.
6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 16 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED TO PREVENT BULGES IN THE SILT FENCE DUE TO DEPOSITION OF SEDIMENT.
8. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
9. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
10. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
11. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY, AND VEGETATED.

SILT FENCE
SCALE: N.T.S

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: VARIES
PROJECT NO.: CoP-002

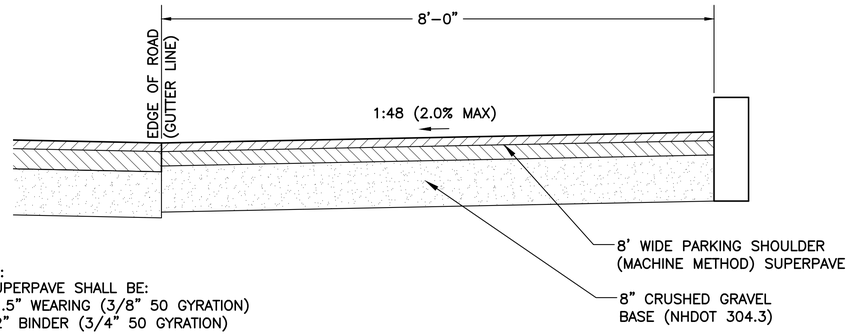
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design
Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: EROSION CONTROL NOTES AND DETAILS

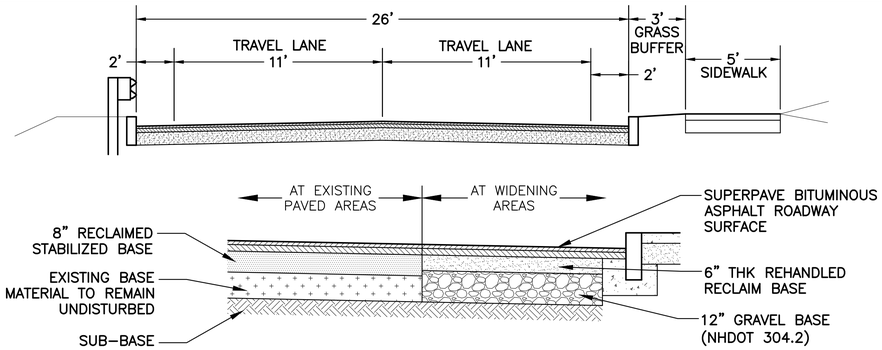
C-3



NOTES:
1. SUPERPAVE SHALL BE:
   1.5" WEARING (3/8" 50 GYRATION)
   2" BINDER (3/4" 50 GYRATION)

PARKING SHOULDER DETAIL

SCALE: N.T.S

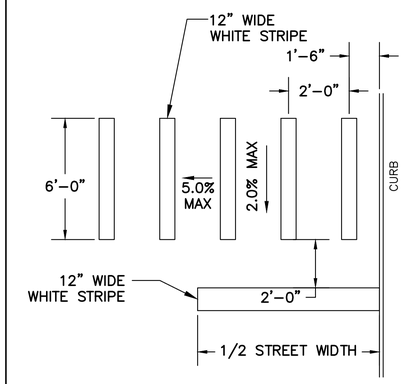


NOTES:
1. RECLAIMED STABILIZED BASE SHALL COMPLY WITH NHDOT ITEM 306.
2. RECLAIM MATERIAL TO BE TESTED TO DETERMINE IF ADDITIONAL 1.5" STONE WILL BE ADDED. IN THE EVENT ADDITIONAL CRUSHED STONE IS REQUIRED, CONTRACTOR SHALL SPREAD STONE TO THE REQUIRED THICKNESS AND RECLAIM MATERIAL A SECOND TIME TO MIX ADDED STONE TO A DEPTH OF 8".
3. AT WIDENED AREAS, CRUSHED GRAVEL (NHDOT 304.3) SHALL BE USED IF REHANDLED RECLAIM QUANTITY IS NOT AVAILABLE.

PAVEMENT THICKNESS:
ISLINGTON ST. PAVEMENT:
1.5" WEARING (3/8" 50 GYRATION)
3.5" BINDER (3/4" 50 GYRATION)
VINE ST. PAVEMENT:
1.5" WEARING (3/8" 50 GYRATION)
2.5" BINDER (3/4" 50 GYRATION)

TYPICAL ROADWAY SECTION

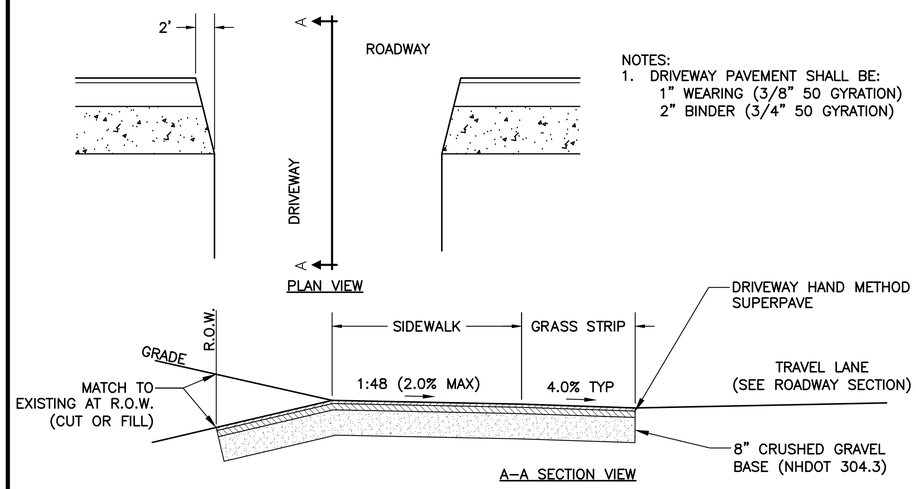
SCALE: N.T.S



NOTES:
1. STRIPING SHALL BE THERMO PLASTIC RETROREFLECTIVE PAVEMENT MARKING PER ASTM D 4505.

STOP BAR AND CROSSWALK

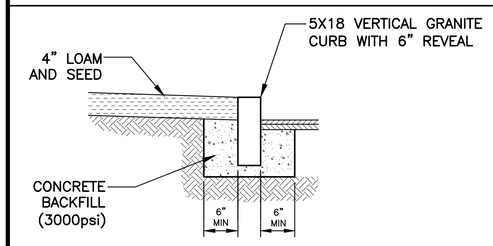
SCALE: N.T.S



NOTES:
1. DRIVEWAY PAVEMENT SHALL BE:
   1" WEARING (3/8" 50 GYRATION)
   2" BINDER (3/4" 50 GYRATION)

TYPICAL DRIVEWAY SECTION

SCALE: N.T.S

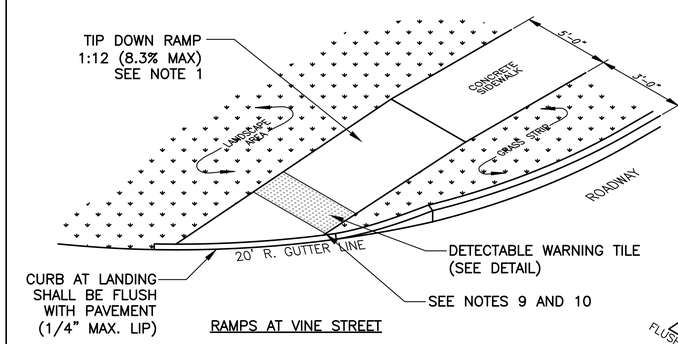


RADIUS	MAX. LENGTH
<20'	USE CURVED CURB
21'–25'	3'
26'–30'	4'
31'–35'	5'
36'–40'	6'
41'–50'	7'
51'–56'	8'
56'–60'	9'
OVER 60'	10'

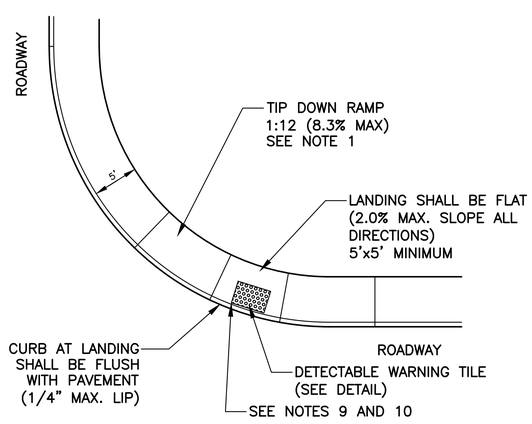
NOTES:
1. CURB TO BE SET TO LINE AND GRADE SPECIFIED.
2. ALL RADII 20 FEET AND SMALLER SHALL USE CURVED SECTIONS.
3. CURB AT FLUSH SECTION OF SIDEWALK SHALL BE SET TO 1:48 (2.0% MAX.) SLOPE. CONTRACTOR TO VERIFY WITH SMART LEVEL.
4. VERTICAL GRANITE JOINTS SHALL BE MORTARED.
5. SEE CHART FOR MAX / MIN STONE LENGTHS.

VERTICAL GRANITE CURB

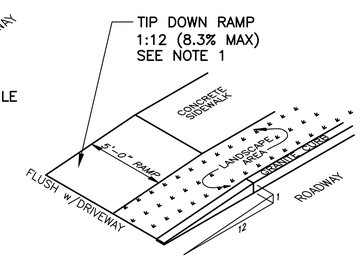
SCALE: N.T.S



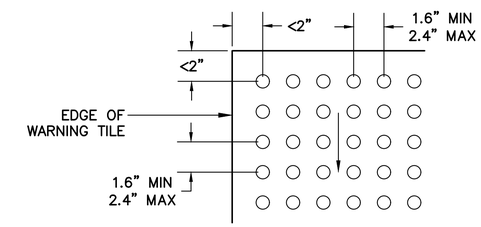
RAMPS AT VINE STREET



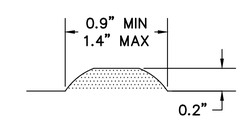
RAMPS AT PLAINS AVENUE



RAMPS AT DRIVEWAYS



DETECTABLE WARNING TILE



DOME SECTION

NOTES:
1. TIP DOWN RAMPS SHALL HAVE A MAXIMUM SLOPE OF 8.3% FOR A DISTANCE OF 6'. IF RAMP IS GREATER THAN 6', A MAXIMUM SLOPE OF 5.0% ALLOWED.
2. MAXIMUM ALLOWABLE CROSS SLOPE IS 2.0% FOR SIDEWALK AND CURB.
6. THERE SHALL BE NO CHANGE IN ELEVATION (LIP) OR GAPS IN THE SIDEWALK RAMPS GREATER THAN 1/4".
7. AREAS OF CHANGE IN DIRECTION SHALL HAVE A MAXIMUM SLOPE OF 2.0% IN ALL DIRECTIONS.
8. DIAGONAL CURB RAMPS SHALL HAVE A FLAT (2.0% MAX.) LANDING AT THE TOP AND BOTTOM.
9. ON RAMPS PERPENDICULAR WITH CURB LINE, PATTERN SHALL BE IN LINE WITH DIRECTION OF TRAVEL. RAMPS ON A RADIUS, PATTERN SHALL BE IN LINE WITH DIRECTION OF TRAVEL TO THE EXTENT POSSIBLE.
10. WARNING TILE SHALL BE PLACED SO THAT THE EDGE CLOSEST TO THE CURB IS BETWEEN 6"–8" FROM CURB LINE.
11. WARNING TILE SHALL SPAN THE FULL WIDTH OF THE RAMP AND A MINIMUM OF 24" DEEP.
12. TRUNCATED DOME TILE SHALL BE CAST IRON, NEENAH FOUNDRY OR APPROVED EQUAL.

SIDEWALK RAMPS

SCALE: N.T.S

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: VARIES
PROJECT NO.: CoP-002

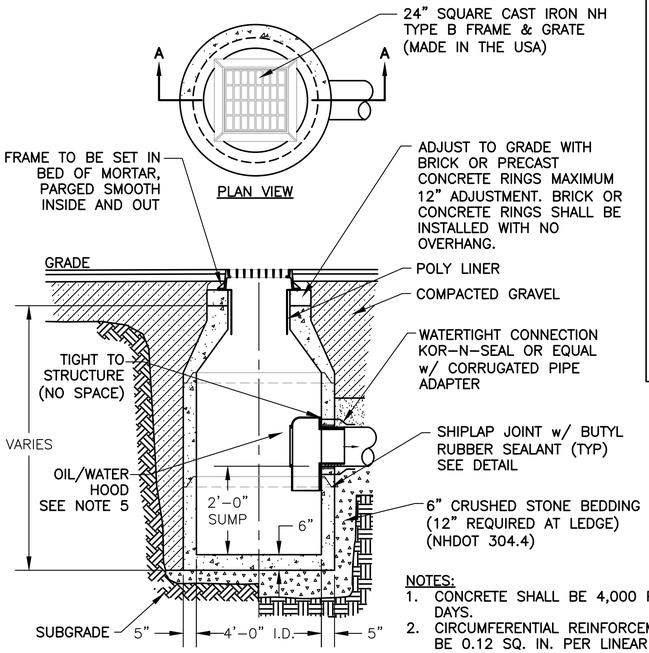
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

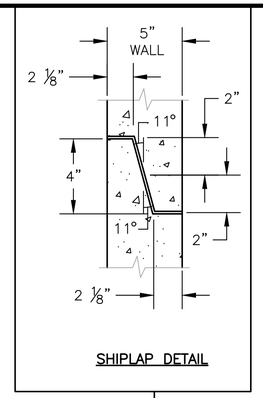
TITLE: DETAILS

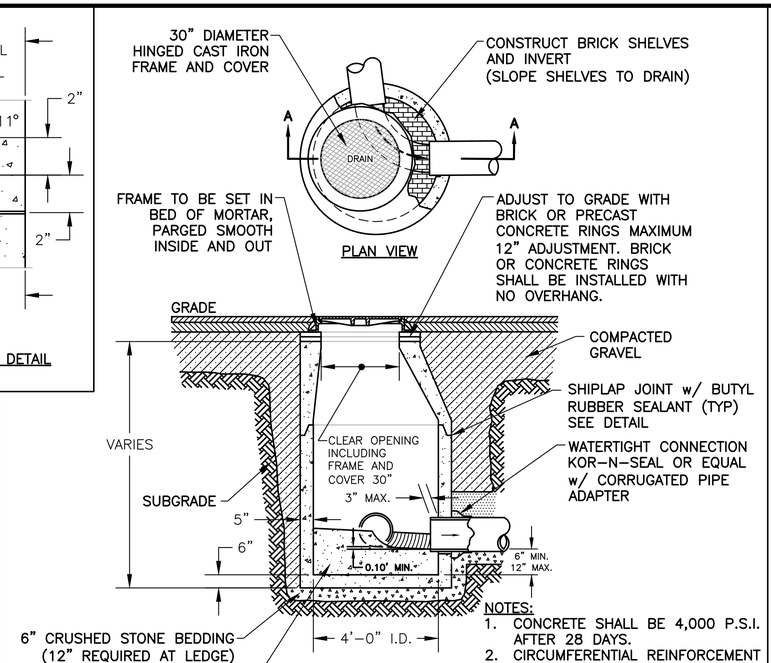
C-4



NOTES:
1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS & SHALL BE PLACED IN THE CENTER THIRD OF WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT.
4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.
5. ALL CATCHBASINS OUTLETS SHALL HAVE 'ELIMINATOR' OIL AND FLOATING DEBRIS TRAP BY KLEANSTREAM (NO EQUAL).

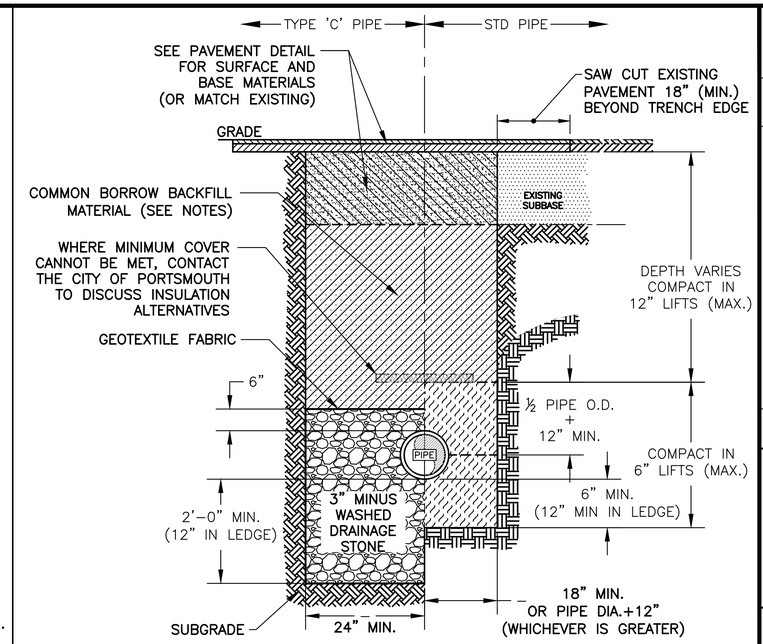
CATCH BASIN
SCALE: N.T.S





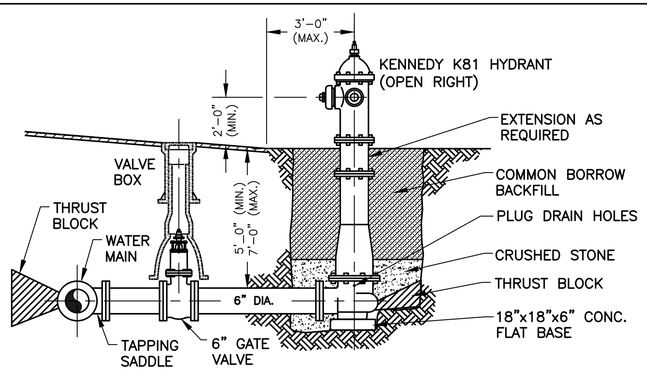
NOTES:
1. CONCRETE SHALL BE 4,000 P.S.I. AFTER 28 DAYS.
2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQ. IN. PER LINEAR FT. IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER THIRD OF THE WALL.
3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQ. IN. PER LINEAR FT..
4. EACH CASTING TO HAVE LIFTING HOLES CAST IN.

DRAIN MANHOLE
SCALE: N.T.S



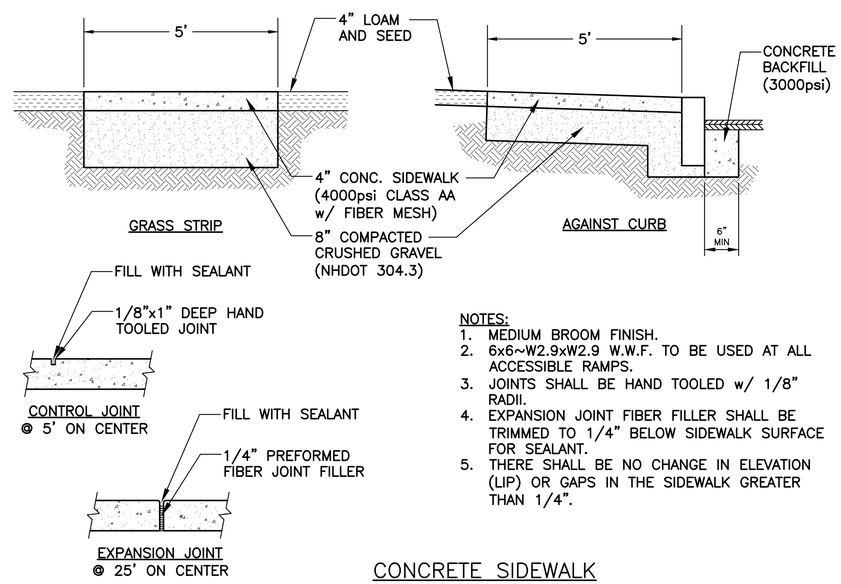
NOTES:
1. SUITABLE MATERIAL FOR TRENCH BACKFILL SHALL BE THE NATURAL MATERIAL EXCAVATED DURING CONSTRUCTION, BUT SHALL EXCLUDE DEBRIS, PIECES OF PAVEMENT, ORGANIC MATTER, TOP SOIL, ALL WET OR SOFT MUCK, PEAT OR CLAY, ALL EXCAVATED LEDGE MATERIAL, AND ALL ROCKS OVER SIX INCHES IN LARGEST DIMENSION, OR ANY MATERIALS DEEMED TO BE UNACCEPTABLE BY THE ENGINEER.
2. SEE UTILITY PLAN FOR LOCATIONS OF TYPE 'C' DRAIN PIPE.
3. GEOTEXTILE FABRIC SHALL OVERLAP A MINIMUM OF 12" AT ALL SEAMS.
4. TYPE 'C' DRAIN PIPE SHALL BE PERFORATED. CONTRACTOR TO SUBMIT PIPE PERFORATION PATTERN FOR APPROVAL.
5. GEOTEXTILE FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.
6. BEDDING MATERIAL SHALL BE CRUSHED STONE (NHDOT 304.4) TO DEPTHS ABOVE AND BELOW PIPE SHOWN.

UTILITY TRENCH
SCALE: N.T.S



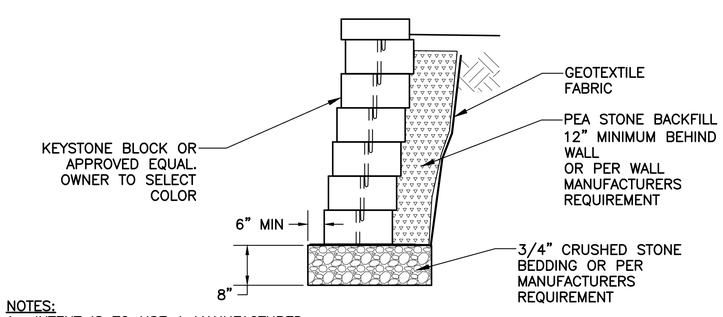
NOTES:
1. HYDRANT TO BE KENNEDY TYPE K-81, RIGHT OPEN (NO EQUAL). COORDINATE WITH CITY OF PORTSMOUTH WATER AND FIRE DEPARTMENT.
2. HYDRANT SHALL BE PAINTED IN ACCORDANCE WITH CITY OF PORTSMOUTH STANDARDS.
3. AREA AROUND HYDRANT SHALL BE GRADED TO ALLOW SURFACE WATER TO DRAIN AWAY.
4. CONTRACTOR SHALL INSTALL AN INDICATOR ATTACHED TO THE HYDRANT IN ACCORDANCE TO CITY OF PORTSMOUTH STANDARDS.
5. HYDRANT LATERAL SHALL BE POLY WRAPPED, 6" (MIN.) OF SAND FOR BEDDING AND COVER, WARNING TAPE 18" ABOVE PIPE.

FIRE HYDRANT
SCALE: N.T.S



NOTES:
1. MEDIUM BROOM FINISH.
2. 6x6~W2.9xW2.9 W.W.F. TO BE USED AT ALL ACCESSIBLE RAMPS.
3. JOINTS SHALL BE HAND TOOLED w/ 1/8" RADII.
4. EXPANSION JOINT FIBER FILLER SHALL BE TRIMMED TO 1/4" BELOW SIDEWALK SURFACE FOR SEALANT.
5. THERE SHALL BE NO CHANGE IN ELEVATION (LIP) OR GAPS IN THE SIDEWALK GREATER THAN 1/4".

CONCRETE SIDEWALK
SCALE: N.T.S



NOTES:
1. INTENT IS TO USE A MANUFACTURED PROPRIETARY WALL SYSTEM. CONTRACTOR SHALL SUPPLY A WALL DESIGN BY THE MANUFACTURER PRIOR TO CONSTRUCTION
2. GEOTEXTILE FABRIC SHALL BE MIRAFI 140N OR APPROVED EQUAL.

INTERLOCKING SMALL BLOCK WALL
SCALE: N.T.S

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: VARIES
PROJECT NO.: CoP-002

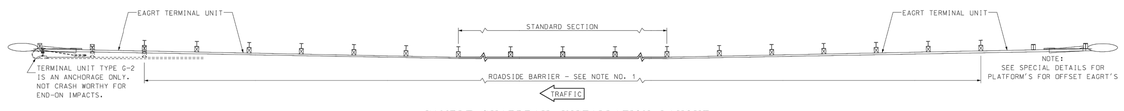
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

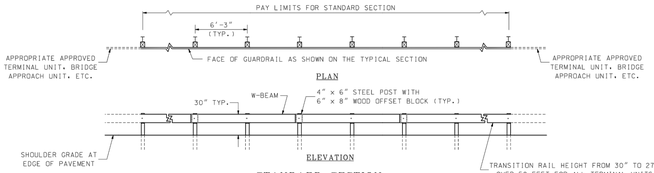
Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: DETAILS

C-5

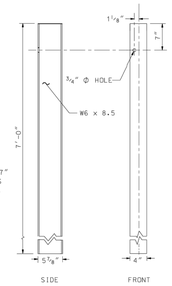


SAMPLE GUARDRAIL INSTALLATION LAYOUT



STANDARD SECTION

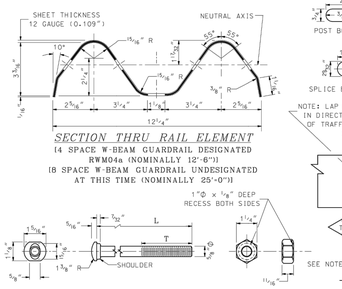
ITEM CODE: 606.120 - BEAM GUARDRAIL (STANDARD SECTION-STEEL POSTS)
PAID: LINEAR FOOT
USE: STRONG STEEL POST W-BEAM WITH SPLICE ON POST IS APPROPRIATE FOR REPAIRS OF EXISTING STRONG POST W-BEAM. SPLICE ON POST GUARDRAIL RUNS OF LIMITED LENGTH OR SPECIFIC LOCATIONS WHERE USE OF 31" MID-SPLICE STEEL POST W-BEAM GUARDRAIL WOULD NOT BE PRACTICAL. OTHERWISE, 31" MID-SPLICE STEEL POST W-BEAM GUARDRAIL IS TO BE USED



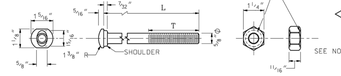
STRUCTURAL SHAPE STEEL POST

GENERAL NOTES

1. THE DEFINITION OF ROADSIDE BARRIER IS PER THE LATEST ADOPTED EDITION OF THE AASHTO ROADSIDE DESIGN GUIDE. EXCLUDED FROM THIS IS THE GATING PORTION OF A GUARDRAIL TERMINAL UNIT OR CRASH CUSHION AS WELL AS THE ENTIRE G-2 TERMINAL UNIT.
2. ITEMS IN BRACKETS [ ] ARE *STANDARD ELEMENTS* DESCRIBED IN AASHTO'S "A GUIDE TO STANDARDIZED HIGHWAY BARRIER HARDWARE".
3. ONLY USE RECTANGULAR PLATE WASHERS [FWR03] WHERE SHOWN ON THE OTHER STANDARD SHEETS OR AS REQUIRED BY THE MANUFACTURERS FOR THEIR PROPRIETARY PRODUCTS.
4. USE 12'-6" LENGTH RAIL ELEMENTS IN RAIL CURVES OF LESS THAN 100' RADIUS.
5. ESTABLISH RAIL HEIGHT AS FOLLOWS:
   A) SET THE HEIGHT OF RAIL FROM THE EDGE OF THE PAVEMENT (EP) WHEN THE FACE OF RAIL IS AT THE EDGE OF PAVEMENT.
   B) SET THE HEIGHT OF RAIL FROM THE GROUND AT THE FACE OF RAIL WHEN:
      I) THE FACE OF RAIL IS OFFSET FROM THE EP AND THE CROSS SLOPE FROM THE EP TO THE FACE OF RAIL IS 10:1 OR FLATTER OR
      II) THE FACE OF RAIL IS AT THE BACK OF A CURBED SIDEWALK AND THE CURB IS AT THE EDGE OF PAVEMENT
   C) WHEN SITUATIONS OTHER THAN THOSE DESCRIBED IN A OR B ABOVE ARE ENCOUNTERED, ESTABLISH RAIL HEIGHT THROUGH AN ENGINEERING REVIEW TO ENSURE APPROPRIATE SYSTEM PERFORMANCE.
6. USE OF POSTS SHORTER THAN 7'. BUT NOT LESS THAN 6'-0" LONG, IS ONLY ALLOWED UNDER THE FOLLOWING CONDITIONS:
   A) WHERE THERE IS A MINIMUM DISTANCE OF 1' FROM THE BACK OF THE GUARDRAIL POST ALONG A 10:1 OR FLATTER SLOPE TO THE SLOPE BREAK OF A 4:1 OR FLATTER SLOPE OR
   B) WHERE THERE IS A MINIMUM DISTANCE OF 2' FROM THE BACK OF THE GUARDRAIL POST ALONG A 10:1 OR FLATTER SLOPE TO THE SLOPE BREAK OF A STEEPER THAN 4:1 STABLE SOIL OR STONE LINED SLOPE. THE TERM STABLE INCLUDES NOT SHOWING SIGNS OF SLOPE MOVEMENT (SUCH AS DEPRESSIONS, CRACKS PARALLEL TO THE ROADWAY, ETC.) OR ACTIVE EROSION.
7. THE FHWA HAS LISTED OFFSET BLOCKS ON THEIR WEBSITE THAT ARE ELIGIBLE FOR FEDERAL PARTICIPATION PER NCHRP 350 TEST LEVEL 3 CRITERIA. OTHERS MAY BE ADDED UNDER MASH AT TEST LEVEL 3 OR HIGHER IN THE FUTURE. SOME OF THESE OFFSET BLOCKS HAVE OR MAY HAVE DIMENSIONS THAT VARY MORE THAN WOULD BE CONSIDERED WITHIN THE NORMAL CONTEXT OF NOMINAL DIMENSIONS. IN ORDER TO USE ANY OFFSET BLOCKS THAT HAVE OTHER THAN THE NOMINAL DIMENSIONS AS SHOWN ON THE PLANS, THE FOLLOWING APPLIES:
   A) THE FACE OF RAIL SHALL REMAIN AT THE EDGE OF PAVEMENT OR AT THE INDICATED LOCATION AS SHOWN ON THE PLANS, AND
   B) THE DISTANCE FROM THE BACK OF THE POST TO THE BREAK IN THE SLOPE SHALL NOT BE LESS THAN WHAT IS SHOWN ON THE PLANS BUT IT MAY BE MORE.
   C) ALL OTHER REQUIREMENTS OF THE PERTINENT SPECIFICATIONS AND DETAILS REMAIN IN FORCE.

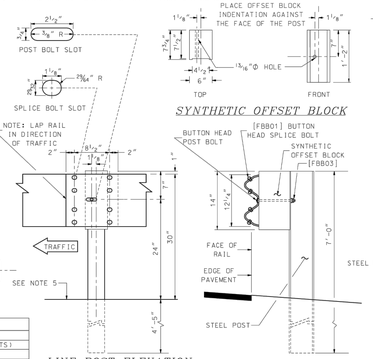


SECTION THRU RAIL ELEMENT
(4 SPACE W-BEAM GUARDRAIL DESIGNATED RWM04a (NOMINALLY 12'-6"))
(8 SPACE W-BEAM GUARDRAIL UNDESIGNATED AT THIS TIME (NOMINALLY 25'-0"))

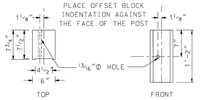


DESIGNATOR	L	T	INTENDED USE
FBB01	1"+	FULL LENGTH THREAD	RAIL SPLICE BOLTS
FBB02	2"	1 3/4" MIN. THREAD LENGTH	POST BOLT (STEEL POSTS)
FBB03	9 1/2"	4" MIN. THREAD LENGTH	POST BOLT

5/8" BUTTON HEAD BOLT AND RECESSED NUT
(FBB01-03)

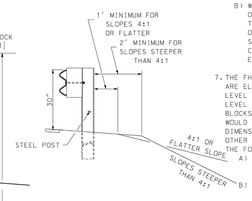


LINE POST ELEVATION VIEW AT BEAM SPLICE



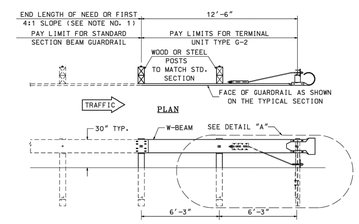
SYNTHETIC OFFSET BLOCK

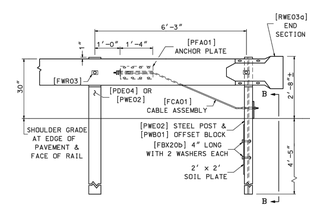
TYPICAL SIDE VIEW
(SHOWN WITH FASTENERS)



CLARIFICATION DETAIL FOR GENERAL NOTE 6

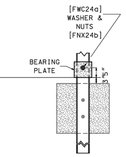
STEEL POST BEAM GUARDRAIL
SCALE: N.T.S



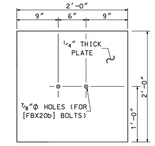


DETAIL "A"

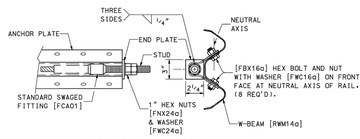
TERMINAL UNIT TYPE G-2



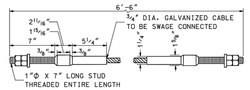
VIEW B-B



SOIL PLATE
(2 REQ'D-POSTS A)



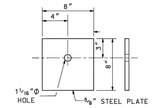
ANCHOR PLATE ASSEMBLY DETAILS



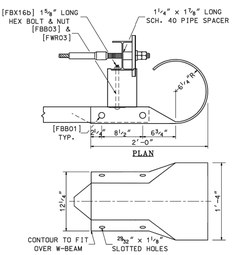
NOTE: TIGHTEN CABLE ASSEMBLY TO TAUT TENSION & DOUBLE-NUT BOTH ENDS

CABLE ASSEMBLY
(FCA01)

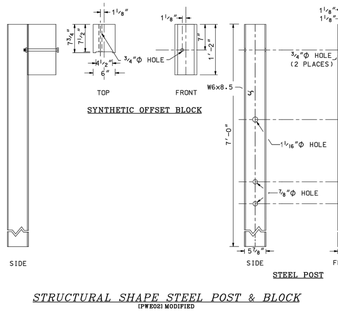
1" HEX NUT & WASHER
[FNX24a] AND [FWC24a]



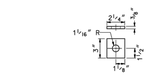
BEARING PLATE
[FPB01]



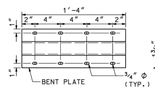
ELEVATION
END SECTION
(RWE03a)



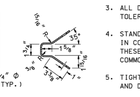
STRUCTURAL SHAPE STEEL POST & BLOCK
(PWE02) MODIFIED



END PLATE
[FPA01]



ANCHOR PLATE
[FPA01]

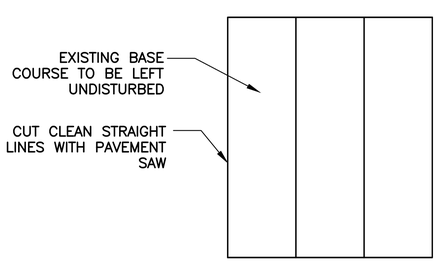


GENERAL NOTES

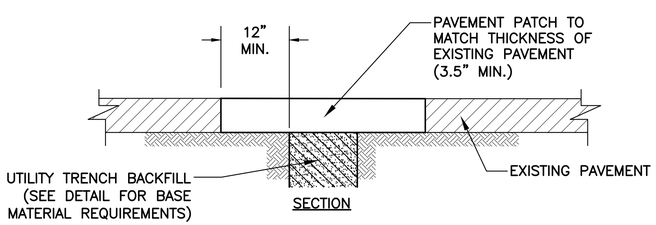
1. THE LENGTH OF NEED IS THE TOTAL LENGTH OF A LONGITUDINAL BARRIER NEEDED TO SHIELD AN AREA OF CONCERN. TO DETERMINE THE LENGTH OF NEED, REFER TO *THE ROADSIDE DESIGN GUIDE* - AASHTO, LATEST ADOPTED VERSION. THE G-2 UNIT SHALL TERMINATE IN A 4:1 OR FLATTER SLOPE.
2. DESIGNATIONS PROVIDED IN BRACKETS [ ] REFERENCE STANDARD ELEMENTS DETAILED IN *A GUIDE TO STANDARDIZED HIGHWAY BARRIER RAIL HARDWARE* - LATEST ADOPTED VERSION, AASHTO-AGC-ARTBA JOINT COOPERATIVE COMMITTEE.
3. ALL DIMENSIONS SUBJECT TO MANUFACTURER'S TOLERANCES.
4. STANDARDS NO. GR-1 (OR GR-2), SHALL BE USED IN CONJUNCTION WITH THIS STANDARD. SEE THESE STANDARDS FOR ADDITIONAL DETAILS OF COMMON HARDWARE.
5. TIGHTEN CABLE ASSEMBLY TO TAUT TENSION AND DOUBLE-NUT BOTH ENDS.
6. DIMENSIONS OF PLASTIC AND SYNTHETIC BLOCKOUTS ARE AS SHOWN ON MANUFACTURER'S DRAWINGS.

TERMINAL END UNIT TYPE G-2
SCALE: N.T.S

NOTES:
1. TEMPORARY ASPHALT PLACED FOR UTILITY TRENCHES ARE SUBSIDIARY TO THE PIPE INSTALLATION PAY ITEM.



PLAN



SECTION

UTILITY TRENCH
SCALE: N.T.S

NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: VARIES
PROJECT NO.: CoP-002

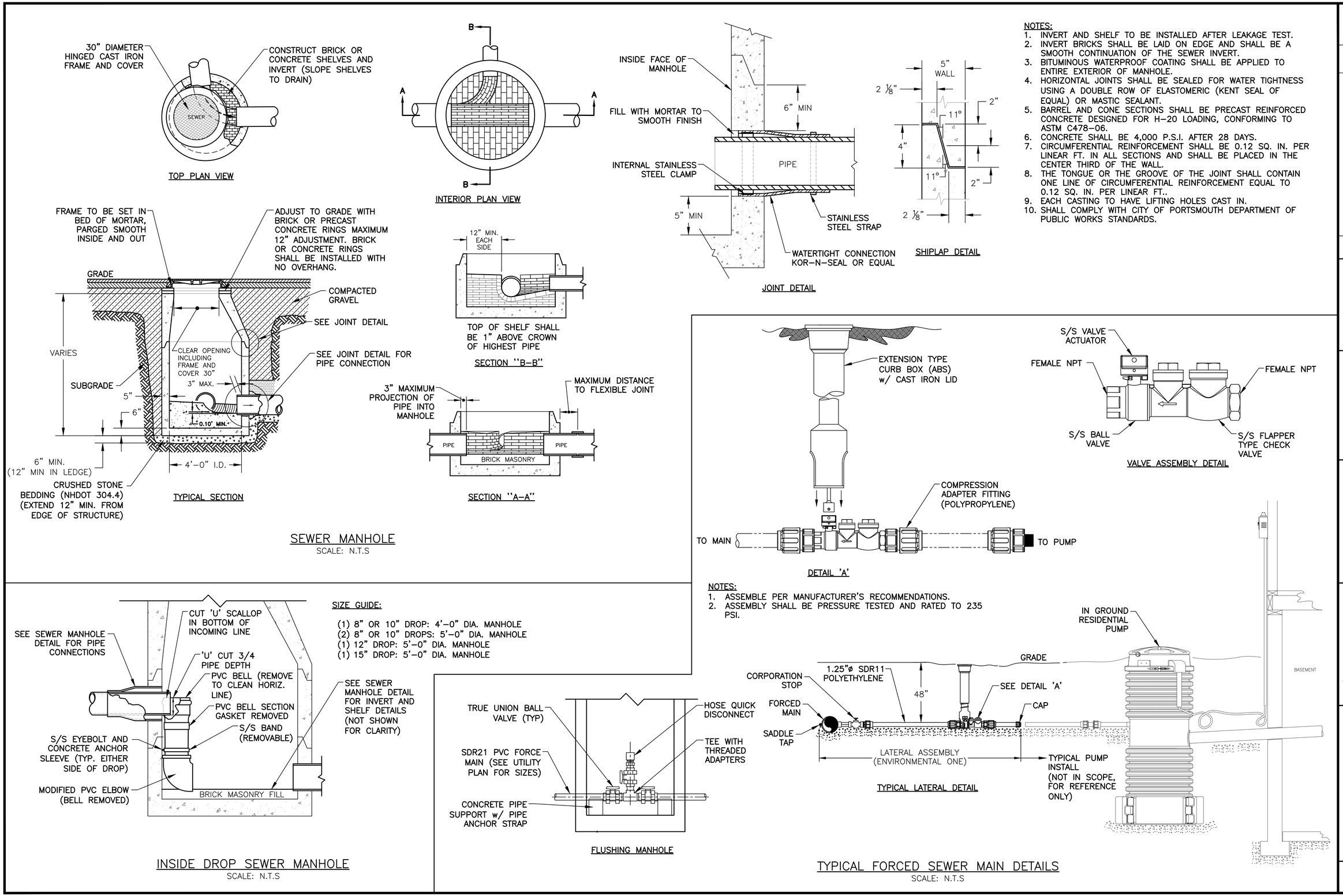
MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: DETAILS

C-6



NO.	DESCRIPTION	APP'D	DATE
C	FOR BID	MRB	9/12/16
B	CITY FINAL REVIEW	MRB	9/2/16
A	90% PROGRESS	MRB	4/25/16

REVISIONS

DATE: FEBRUARY 2, 2016
SCALE: VARIES
PROJECT NO.: CoP-002

MARC R. BATCHELDER, PE
ENGINEER OF RECORD

FOR: Outer Islington St Sidewalk Design Portsmouth, NH 03801

Seaport Engineering, LLC
PORTSMOUTH, NH
(603) 498-8449
www.seaporteng.com

TITLE: SEWER DETAILS

C-7