



**Civil
Site Planning
Environmental
Engineering**

133 Court Street
Portsmouth, NH
03801-4413

June 25, 2019

Juliet Walker, Planning Director
City of Portsmouth Municipal Complex
Planning Department
1 Junkins Avenue
Portsmouth, New Hampshire 03801

**Re: Application for Conditional Use Permit and Administrative Site Plan Review
Assessor's Map 240, Lot 1
225 Borthwick Avenue
Altus Project #P4892**

Dear Ms. Walker:

On behalf of Liberty Mutual Insurance, Altus Engineering, Inc. (Altus) is pleased to submit an application package for an Inland Wetlands Conditional Use Permit and an Administrative Site Review Application to renovate the existing parking lot. The parking lot currently provides handicap accessible spaces and visitor parking. The existing parking lot will be regraded to reduce the pavement slope and to make all the spaces accessible. All the work will occur within the limits of the interior of the existing paved travelled way. No wetlands will be disturbed. No natural or vegetated wetland buffers will be impacted.

Enclosed please find the following for the Conservation Commission and Planning Board's consideration:

- Application fee check
- 22 copies of the on-line City of Portsmouth Application
- Letter of Authorization from Liberty Mutual to Altus Engineering, Inc and Specialty Engineering, Group, LLC
- 22 sets of Liberty Mutual Insurance Hardscape Improvements Plans (2 full sized, 20 reduced)
- Conditional Use Permit Application materials
 - Partial Wetland Delineation Report by Joseph Noel dated December 22, 2018 (22 copies)
 - Conditional Use Permit Inland Wetland Protection District Memorandum of Support, dated June 2019 (22 copies)
 - 22 copies of the Conditional Use Permit Application Plan (2 full sized, 20 reduced)
- CD with pdf copies of the application package

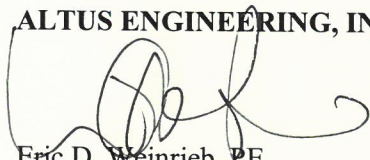
Juliet Walker, Planning Director
June 25, 2019
Page 2

Liberty Mutual is repairing their driveway and parking field in front of the main entrance. All the work is within the limits of the existing perimeter curbing. There are two manmade ponds that are landscape features but have been identified as City jurisdictional wetlands.

As always, Altus looks forward to working with the Planning Department on this renovation project. Please call me if you have any questions or need any additional information.

Sincerely,

ALTUS ENGINEERING, INC.

A handwritten signature in black ink, appearing to read "Eric D. Weinrieb", with a stylized flourish extending to the right.

Eric D. Weinrieb, PE
President

wde/4892-CityApp Cover Letter

Enclosure

Ecopy: Ken Martenson, Liberty Mutual
Rich Talkowski, STR-SEG

**Liberty Mutual Insurance
225 Borthwick Avenue**

Assessor's Parcel 231-58

**Conditional Use Permit
Inland Wetland Protection District
Memorandum of Support**

June 2019

Liberty Mutual Insurance is proposing to rehabilitate their parking lot at 225 Borthwick Avenue in Portsmouth. The project is not an expansion of use. It is an improvement to the function and safety. The existing parking lot currently provides handicap accessible and visitor parking for the office building. The renovated parking lot will eliminate the visitor parking and create additional handicap accessible spaces for the facility. In order to complete the work, the paved surfaces will need to be regraded to provide compliant grades, aisles, ramps, and access ways.

The majority of the parking lot and driveway infrastructure are within the 100-foot buffer to the manmade ponds. The parking lot was previously by the Planning Board when it was originally constructed. All of the work will occur within the limits of the existing pavement.

The runoff from the work area discharges via a closed drainage system into the existing manmade pond. There will be no changes in runoff. Temporary erosion control measures will be implemented to ensure that there is no degradation to the ponds during construction.

**Conditional Use Permit
Criteria for Approval**

1. The land is reasonably suited to the use, activity or alteration.

The land area under consideration for impact is not in a natural state. It is an existing paved surface. The driveway and parking field will be slightly regraded and repaved. Thus, the existing use and future use remain the same.

2. There is no alternative location outside the wetland buffer that is feasible and reasonable for the proposed use, activity or alteration.

It is not viable to eliminate the driveway and parking lot that services the office building. The building has been on the site since 1972 and predates the Inland Wetlands Protection

District Ordinance. This is not a new use or new disturbance but rather a pedestrian and vehicular safety enhancement for the facility.

3. *There will be no adverse impact on the wetland functional values of the site or surrounding properties.*

The project neither increases nor decreases the impact to the existing lawn buffer. The primary buffer from the manmade ponds is lawn. We will not be making any changes to the vegetated portions. Thus, there will be no adverse impacts to the wetlands from the project.

4. *Alteration of the natural vegetative state or managed woodland will occur only to the extent necessary to achieve construction goals.*

There will be no impacts to the natural vegetative state. All of the impacts will be within the existing paved surfaces. The buffer is a previously disturbed lawn.

5. *The proposal is the alternative with the least adverse impact to areas and environments under the jurisdiction of this section.*

The proposed does not encroach into the lawn – buffer any further than it does today. It is the least impacting alternative to improve pedestrian and vehicular safety at the site.

JOSEPH W. NOEL
P.O. BOX 174
SOUTH BERWICK, MAINE 03908
(207) 384-5587

CERTIFIED SOIL SCIENTIST

*

WETLAND SCIENTIST

*

LICENSED SITE EVALUATOR

December 22, 2018

Mr. Eric D. Weinrieb, P.E.
Altus Engineering, Inc.
133 Court Street
Portsmouth, New Hampshire 03801

RE: Partial Wetland Delineation, Liberty Mutual, Borthwick Avenue,
Portsmouth, New Hampshire, JWN #18-145

Dear Eric:

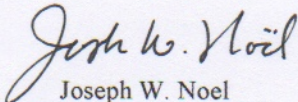
On December 3, 2018 and December 7, 2018, site visits were conducted at the above-referenced property. The purpose was to identify and flag a portion of the wetland boundaries represented by two ponds. Limits were designated in red on the plan provided for the fieldwork.

To determine the wetland boundary, the methodologies in the U.S. Army Corps of Engineers document *Corps of Engineers Wetlands Delineation Manual* (1987) along with the required *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region*, (Version 2.0) were used. Wetlands are usually identified based on soils, vegetation, and wetland hydrology. Except in special cases, all three factors (hydric soils, hydrophytic vegetation, and wetland hydrology) must be present for an area to classify as wetland. Since all three factors were not present where the delineation was requested (i.e., lack of vegetation and the constructed ponds would alter the soil conditions), professional judgment and an emphasis on wetland hydrology was used to determine the boundary.

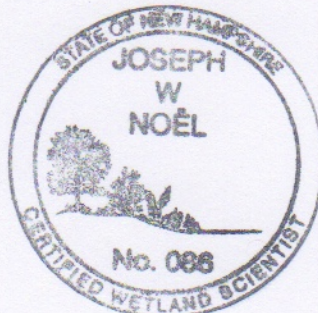
The wetland boundary/edge of the ponds was field delineated with sequentially numbered pink wire flags (1-19 and A1-7). These flags were to be located by Doucet Survey, Inc. and placed on the project plans. These ponded areas appear to be man-made (from on-site observations only – no review of past project plans/wetland permitting has been conducted by the undersigned). The surface water (edge of pond) was delineated in the grass in several areas. This is most likely due to the unusually wet fall season. The northern pond that is between the front parking lot and Borthwick Avenue was completely delineated and the pond on the southern side of the parking lot was only delineated on the edge that will be affected by the reconstruction project.

Please feel free to call with any questions or if you need additional information.

Sincerely,


Joseph W. Noel

NH Certified Wetland Scientist #086
NH Certified Soil Scientist #017



NOTES:

PLAN INTENT: THE PURPOSE OF THIS PLAN IS TO PROVIDE INFORMATION TO OBTAIN A CONDITIONAL USE PERMIT FOR THE PARKING AREA REHABILITATION AT LIBERTY MUTUAL - PORTSMOUTH NH TO INCREASE SAFETY AND ACCESSIBILITY.

1. TOTAL AREA OF WETLANDS ON-SITE: $\pm 109,100$ S.F.
2. TOTAL AREA OF WETLAND BUFFER ON-SITE: $\pm 235,500$ S.F.
3. AREA OF WETLAND BUFFER TO BE DISTURBED: $16,900$ S.F. ± 400 S.F.
4. NO WETLANDS WILL BE DISTURBED AS PART OF THIS PROJECT.

PLAN REFERENCES:

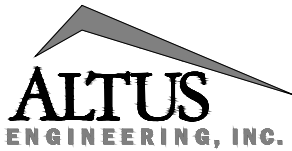
1. "LIGHTING AND LAYOUT PLAN" BY MSC AMES, LAST REV. DATED 6/26/06, "PLAN ISSUED 9/26/06" IS STAMPED ON PLAN.
2. "LIBERTY MUTUAL INSURANCE, HARDSCAPE IMPROVEMENTS, 225 BORTHWICK AVENUE, PORTSMOUTH, NH", BY STR/SEG SPECIALTY ENGINEERING GROUP, LLC, DATED 5/21/19, LATEST REV. 5/27/19.
3. WETLANDS DELINEATION BY JOSEPH W. NOEL ON DECEMBER 3, 2018 AND DECEMBER 7, 2018 AS DEPICTED ON "TOPOGRAPHIC PLAN FOR SPECIALTY ENGINEERING GROUP, LLC OF LIBERTY MUTUAL, BORTHWICK AVENUE, PORTSMOUTH, NH" BY DOUCET SURVEY, INC., DATED JANUARY 2019.

CITY OF PORTSMOUTH, PLANNING BOARD

CHAIRMAN	DATE

S T R
S E G

SPECIALTY ENGINEERING GROUP LLC
N89w16785 APPLETON AVENUE, SUITE 201
MENOMONEE FALLS, WI 53051
TEL: 262 253 4700 | www.str-seg.com



133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com

SCOPE DOCUMENT

Site plan has been generated from survey and is provided to aid in orientation and general bidding information. Contractor is responsible to field verify existing conditions and all measurements.

Grading plan is provided to illustrate design intent for bidding purposes. Contractor shall verify all grades and may make adjustments to ensure positive drainage as part of his responsibility to avoid areas of standing water on finish pavements.

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PROJECT

HARDSCAPE IMPROVEMENTS
LM - Portsmouth
225 Borthwick Avenue,
Portsmouth, NH

Liberty Mutual Insurance
175 Berkeley Street
Boston, MA 02166

CLIENT PROJECT NUMBER

STR PROJECT NUMBER
14643

DRAWING DATES

NUMBER	DATE	COMMENTS
1	06/25/19	ISSUED FOR COND. USE PERMIT

DRAWING TITLE

**CONDITIONAL USE
PERMIT SITE PLAN**

SHEET NUMBER

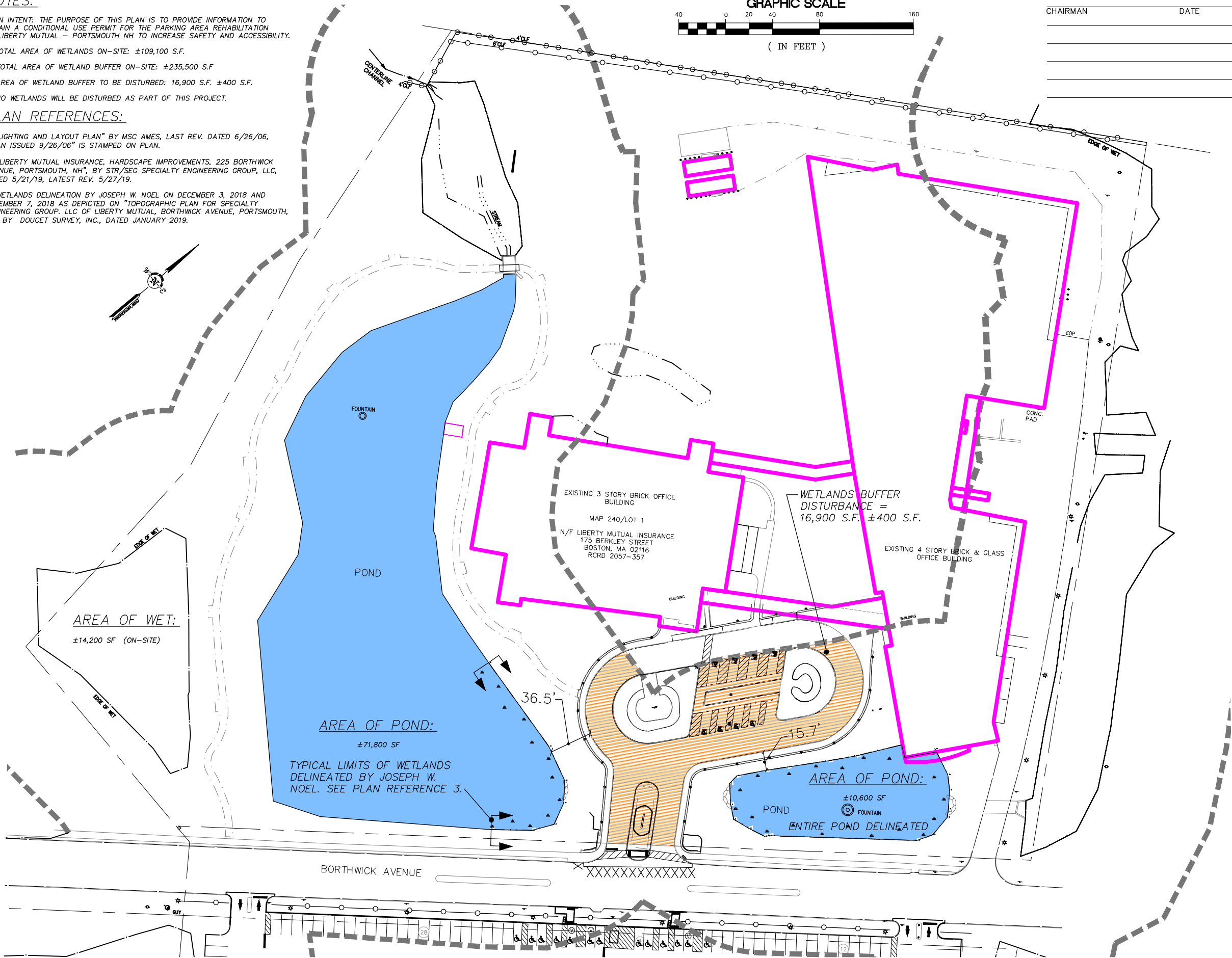
CUP1.0

Actual Size to read at scale
1 IN 2 IN

GRAPHIC SCALE



(IN FEET)



Liberty Mutual Insurance

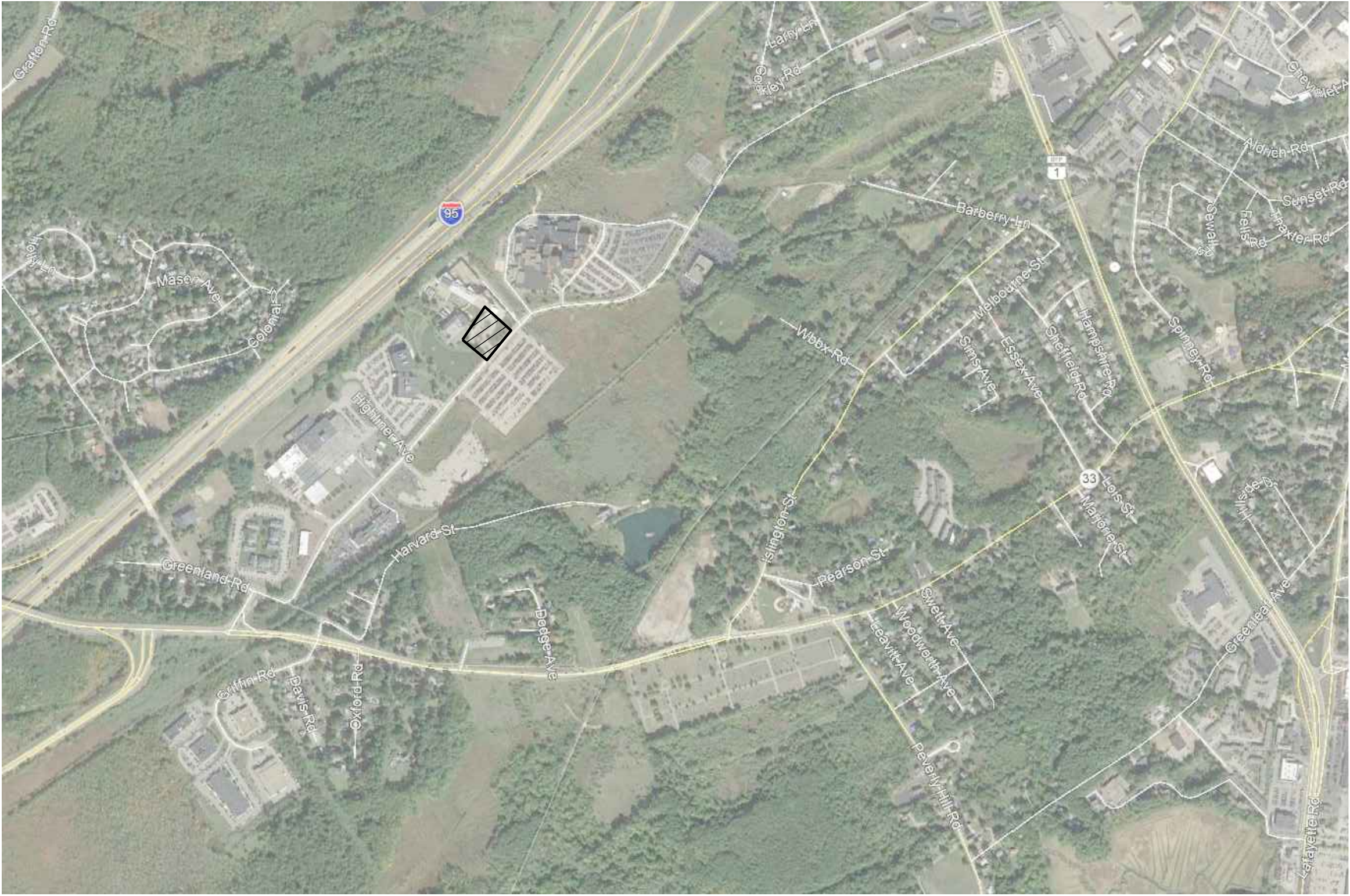
Hardscape Improvements
225 Borthwick Avenue,
Portsmouth, NH

STR
SEG

SPECIALTY ENGINEERING GROUP LLC
N89w16785 APPLETON AVENUE, SUITE 201
MENOMONEE FALLS, WI 53051
TEL: 262 253 4700 | www.str-seg.com

ALTUS
ENGINEERING, INC.

133 COURT STREET PORTSMOUTH, NH 03801
(603) 433-2335 www.ALTUS-ENG.com



SITE LOCATION MAP



BIRD EYE VIEW

SCOPE DOCUMENT

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PROJECT

HARDSCAPE IMPROVEMENTS
LM - Portsmouth
225 Borthwick Avenue,
Portsmouth, NH

Liberty Mutual Insurance
175 Berkeley Street
Boston, MA 02166

CLIENT PROJECT NUMBER

•

STR PROJECT NUMBER

14643

DRAWING DATES

NUMBER	DATE	COMMENTS
• 1	05/21/19	ISSUED FOR BID AND PERMITTING
• 2	5/27/19	ISSUED FOR PERMITTING

DRAWING TITLE

COVER SHEET

SHEET NUMBER

H0.0

Actual Size to read at scale
1 IN 2 IN

SHEET INDEX

COVER SHEET	H0.0
TOPOGRAPHIC PLAN	
OVERALL SITE PLAN	H1.0
PROPOSED SITE PLAN	H1.1
STRIPING PLAN	H1.2
PROPOSED GRADING PLANS	H1.3-H1.4
DETAILS	H1.5

Site plan has been generated from survey and is provided to aid in orientation and general bidding information. Contractor is responsible to field verify existing conditions and all measurements.

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PROJECT

HARDSCAPE IMPROVEMENTS

LM - Portsmouth
225 Borthwick Avenue
Portsmouth, NH

Liberty Mutual Insurance
175 Berkeley Street
Boston, MA 02166

CLIENT PROJECT NUMBER

STR PROJECT NUMBER

14643

DRAWING DATES

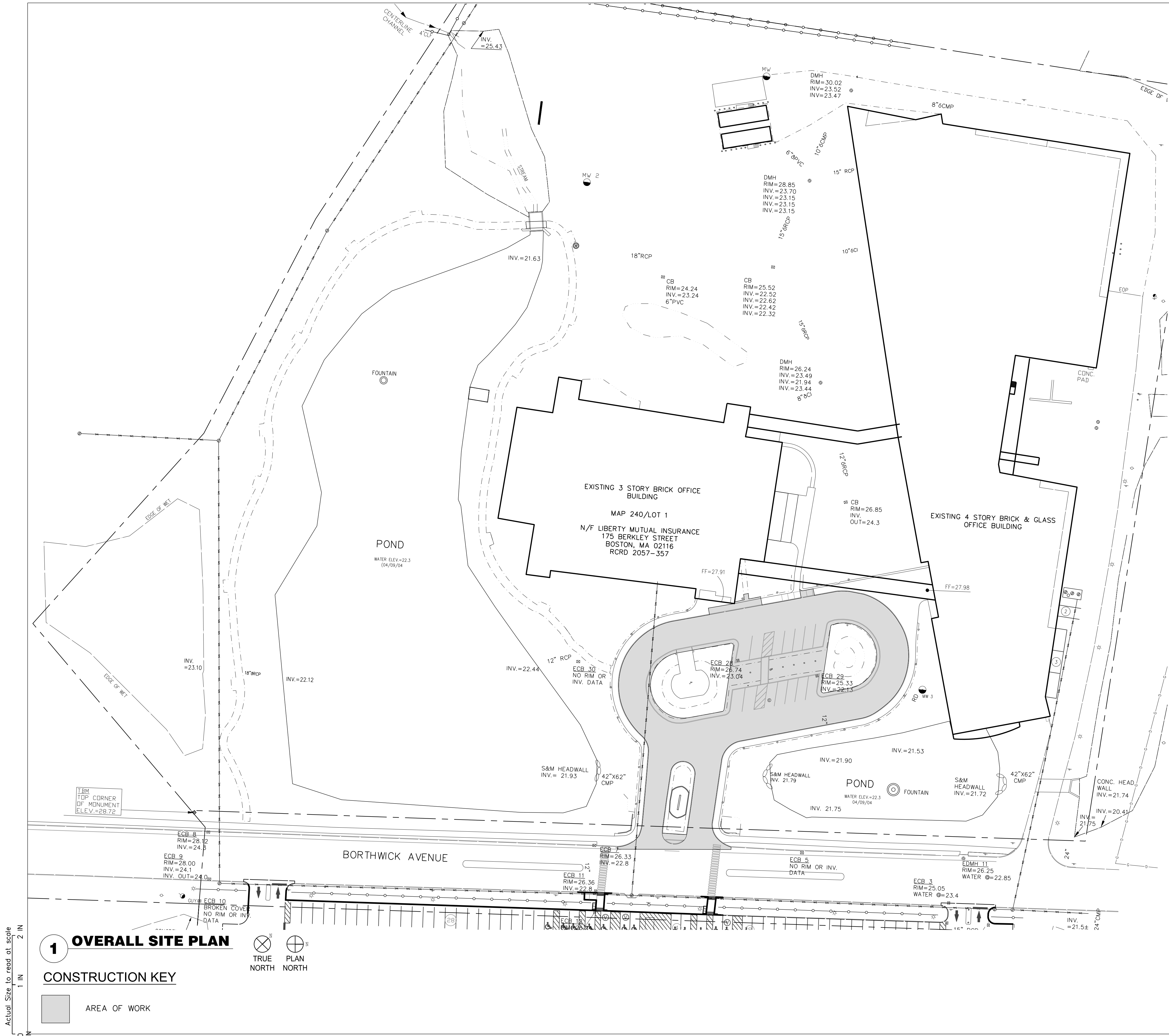
NUMBER	DATE	COMMENTS
• 1	05/21/19	ISSUED FOR BID AND PERMITTING
• 2	5/27/19	ISSUED FOR PERMITTING

DRAWING TITLE

OVERALL SITE PLAN

SHEET NUMBER

H1.0



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PROJECT

LM - Portsmouth
225 Borthwick Avenue
Portsmouth, NH

Liberty Mutual Insurance
175 Berkeley Street
Boston, MA 02166

CLIENT PROJECT NUMBER

● **What is the purpose of the study?**

14643

DRAWING DATES

NUMBER	DATE	COMMENTS
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- 1 05/21/19 ISSUED FOR BID AND PERMITTING
- 2 5/27/19 ISSUED FOR PERMITTING

DRAWING TITLE

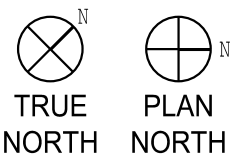
PROPOSED SITE PLAN

SHEET NUMBER

SHEET NUMBER



















H1.1

CITY OF PORTSMOUTH CONTACT
DAVID DESFOSSES
PHONE: (603) 766-1411
EMAIL: djdesfos@pw.cityofportsmouth.com





SCALE:
0' 5' 10' 20' 40'


KEY


-  - AREA BOUNDARY LINE
-  - BENCH MARK
-  - CORE
-  - MAIL BOX
-  - FLAG POLE
-  - IRON PIN
-  - SIGN
-  - BOLLARD
-  - LIGHT POLE
-  - UTILITY POLE
-  - SANITARY SEWER MH
-  - STORM SEWER MH/CB
-  - RIP RAP
-  - HYDRANT
-  - VALVE
-  - DETECTABLE WARNING TILE
-  - CONIFEROUS TREE
-  - DECIDUOUS TREE


CONSTRUCTION KEY


-  4.5" ASPHALT RECONSTRUCTION
EXISTING AGGREGATE BASE


 4.5" ASPHALT PATCHING AT RIGHT OF WAY
EXISTING AGGREGATE BASE


 6" CONCRETE
EXISTING AGGREGATE BASE


 5" CONCRETE REPLACEMENT
EXISTING AGGREGATE BASE


 GRANITE COBBLE INFILL
EXISTING AGGREGATE BASE


 CONTRACTOR TO BACKFILL TO 4" BELOW FINISH GRADE WITH
CLAY AND/OR TOPSOIL. LANDSCAPE RESTORATION BY OTHERS

 GRANITE CURB (REPLACEMENT OR NEW)

 GRANITE CURB RE-SET

 REPLACEMENT OF 20 RANDOM PIECES OF DETERIORATED GRANITE
CURB SECTIONS WITH GRANITE CURB SECTIONS SALVAGED FROM
INTERIOR ISLANDS. REPLACEMENT PIECES AT EXTERIOR CURBING TO
BE DETERMINED IN FIELD. DISPOSE OF ALL SECTIONS NOT NEEDED.
RE-POINT ALL REMAINING PERIMETER CURBING MORTAR JOINTS.

 CONCRETE CONTROL JOINTS. SAWCUT IN ADA PARKING
AREA AND HAND TOOLED AT EXTERIOR SIDEWALK

 SAWCUT

CONSTRUCTION NOTES

- ALL WORK PERFORMED IN CITY RIGHT OF WAY TO BE APPROVED AND/OR PERMITTED BY CITY OF PORTSMOUTH. CONTACT CITY ENGINEER DAVID DEFOSSES.
 - PLAN SHEET NOT TO BE USED FOR STRIPING AND SIGNAGE. REFER TO STRIPING SHEET.
 - SALVAGE GRANITE CURB PIECES AT INTERIOR CURBS AS NECESSARY TO ACCOMMODATE GRANITE CURB REPLACEMENTS AT PERIMETER CURB THAT ABUTS SIDEWALK.
- CLARIFICATION: INTERIOR CURB REFERS ENTRANCE MEDIAN AND ADA PARKING ISLAND.
PERIMETER CURB REFERS TO CURB THAT ABUTS SIDEWALK ALONG DRIVE LANE.
- ① REMOVE GRANITE CURBING AT DEPRESSED CONCRETE WALK RAMP. DO NOT REPLACE. ASPHALT PAVING WILL ABUT CONCRETE WALK AT RAMPS, NEW AND EXISTING.
INTENT: TO ELIMINATE A COMPONENT (GRANITE CURB) THAT CAN DETERIORATE, ESPECIALLY AT THE JOINTS, CAUSING POTENTIAL UNSAFE CONDITION(S) FOR PEDESTRIAN TRAFFIC.
 - ② PROVIDE ADA COMPLIANT CURB RAMP
 - ③ PROVIDE NEW GRANITE CURB TO PROVIDE 6' LONG TAPER FROM FLUSH MATCH AT ASPHALT TO 5.5" CURB FACE
 - ④ REMOVE AND RESET 8' GRANITE CURB TAPER APPROXIMATELY 4'-10" TO WEST.
 - ⑤ DOWELED EXPANSION JOINT
 - ⑥ REPLACE SQUARE FRAME AND GRATE WITH ROUND PEDESTRIAN/ ADA COMPLAINT FRAME AND GRATE (SEE GRADING PLAN FOR NOTES REGARDING ADJUSTMENT BRICK REPAIRS)
 - ⑦ PROVIDE INLET EROSION CONTROL/PROTECTION (3 INLETS) PER CITY STANDARDS
 - ⑧ REPLACE 2 CONCRETE PANELS (5'x11')
 - ⑨ NEENAH FOUNDRY STEEL TRUNCATED DOMES, 2 (2'x2.5') FULL WIDTH OF WALK OR PER CITY STANDARDS
 - ⑩ REMOVE AND SALVAGE BRICKS. OWNER TO RESET.
 - ⑪ OTHERS TO REMOVE SHRUBS AND ROOTS.
 - ⑫ GRANITE COBBLE INFILL

Actual Size to read at scale

SCOPE DOCUMENT

Site plan has been generated from survey and is provided to aid in orientation and general bidding information. Contractor is responsible to field verify existing conditions and all measurements.

Grading plan is provided to illustrate design intent for bidding purposes. Contractor shall verify all grades and may make adjustments to ensure positive drainage as part of his responsibility to avoid areas of standing water on finish pavements.

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PROJECT

**HARDSCAPE
IMPROVEMENTS**
LM - Portsmouth
225 Borthwick Avenue,
Portsmouth, NH

Liberty Mutual Insurance
175 Berkeley Street
Boston, MA 02166

CLIENT PROJECT NUMBER

•
**STR PROJECT NUMBER
14643**

DRAWING DATES

NUMBER	DATE	COMMENTS
• 1	05/21/19	ISSUED FOR BID AND PERMITTING
• 2	5/27/19	ISSUED FOR PERMITTING

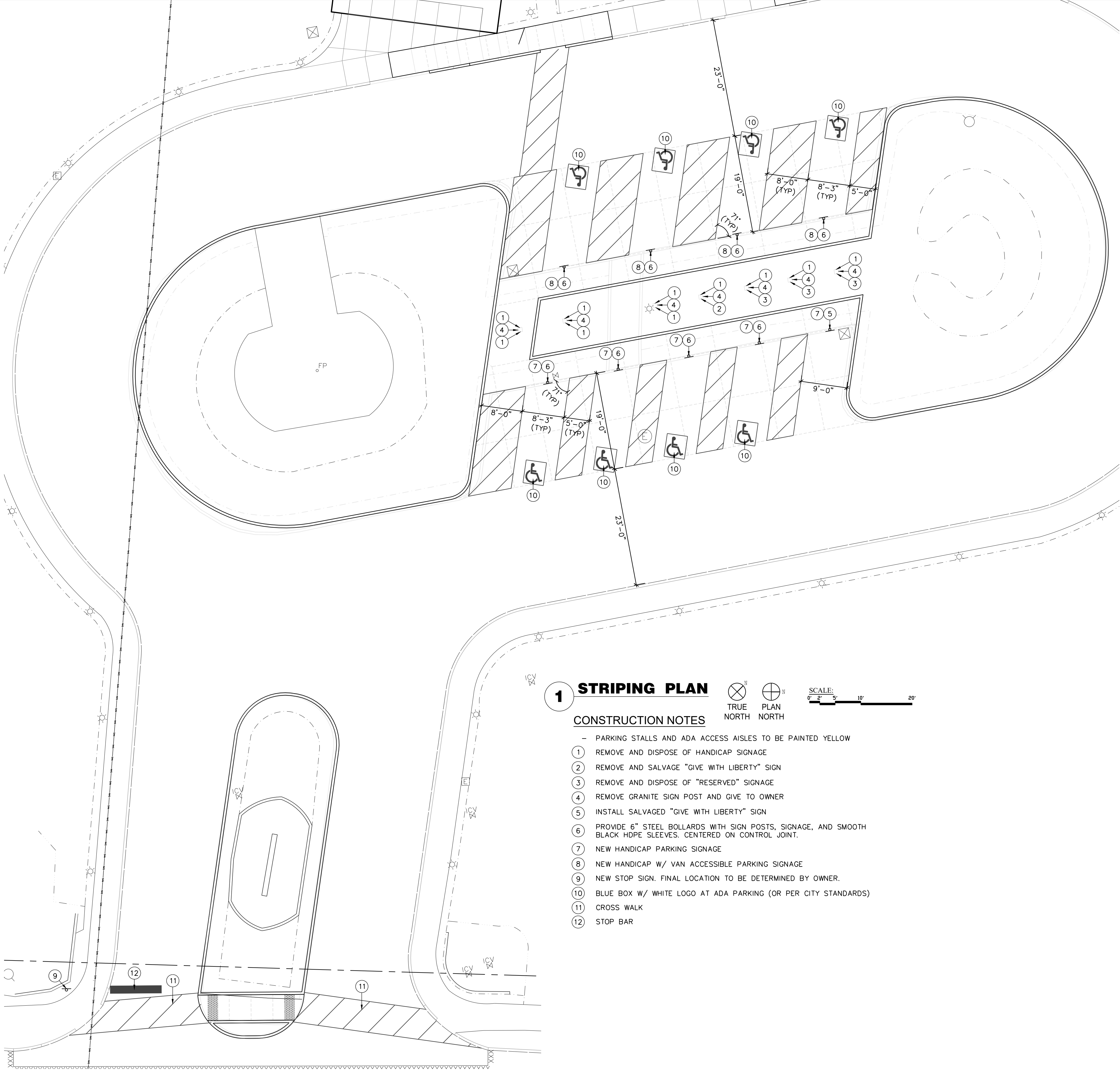
DRAWING TITLE

STRIPING PLAN

SHEET NUMBER

H1.2

Actual Size to read at scale
1 IN 2 IN



1 STRIPING PLAN

CONSTRUCTION NOTES

- PARKING STALLS AND ADA ACCESS AISLES TO BE PAINTED YELLOW
- ① REMOVE AND DISPOSE OF HANDICAP SIGNAGE
- ② REMOVE AND SALVAGE "GIVE WITH LIBERTY" SIGN
- ③ REMOVE AND DISPOSE OF "RESERVED" SIGNAGE
- ④ REMOVE GRANITE SIGN POST AND GIVE TO OWNER
- ⑤ INSTALL SALVAGED "GIVE WITH LIBERTY" SIGN
- ⑥ PROVIDE 6" STEEL BOLLARDS WITH SIGN POSTS, SIGNAGE, AND SMOOTH BLACK HDPE SLEEVES. CENTERED ON CONTROL JOINT.
- ⑦ NEW HANDICAP PARKING SIGNAGE
- ⑧ NEW HANDICAP W/ VAN ACCESSIBLE PARKING SIGNAGE
- ⑨ NEW STOP SIGN. FINAL LOCATION TO BE DETERMINED BY OWNER.
- ⑩ BLUE BOX W/ WHITE LOGO AT ADA PARKING (OR PER CITY STANDARDS)
- ⑪ CROSS WALK
- ⑫ STOP BAR

SCOPE DOCUMENT

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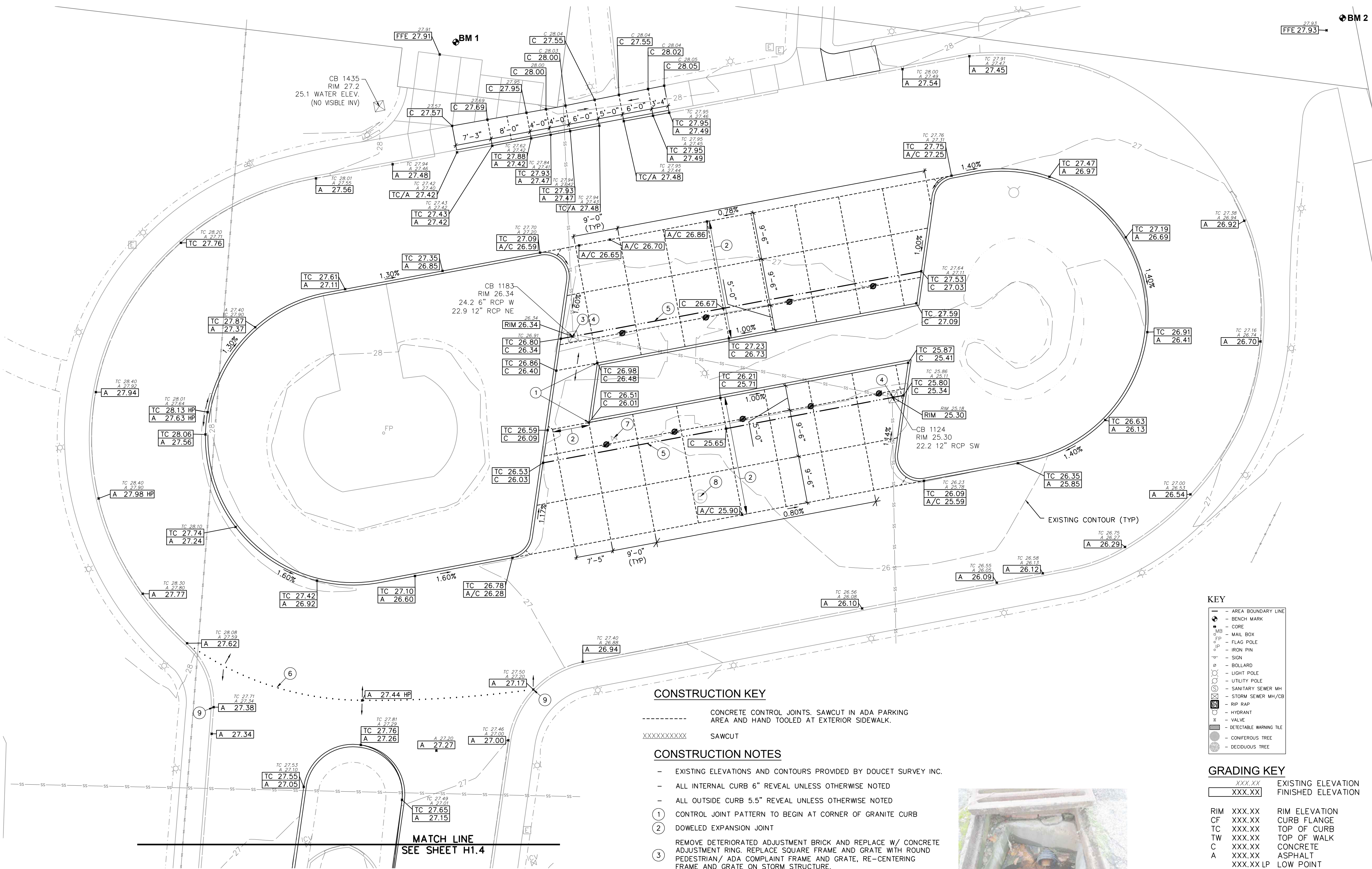
• 1	05/21/19	ISSUED FOR BID AND PERMITTING
• 2	5/27/19	ISSUED FOR PERMITTING

DRAWING TITLE

GRADING PLAN

SHEET NUMBER

H1.3



CONSTRUCTION KEY

CONCRETE CONTROL JOINTS. SAWCUT IN ADA PARKING AREA AND HAND TOOLED AT EXTERIOR SIDEWALK.

XXXXXXXXXX SAWCUT

CONSTRUCTION NOTES

- EXISTING ELEVATIONS AND CONTOURS PROVIDED BY DOUCET SURVEY INC.
- ALL INTERNAL CURB 6" REVEAL UNLESS OTHERWISE NOTED
- ALL OUTSIDE CURB 5.5" REVEAL UNLESS OTHERWISE NOTED
- ① CONTROL JOINT PATTERN TO BEGIN AT CORNER OF GRANITE CURB
- ② DOWELED EXPANSION JOINT
- ③ REMOVE DETERIORATED ADJUSTMENT BRICK AND REPLACE W/ CONCRETE ADJUSTMENT RING. REPLACE SQUARE FRAME AND GRATE WITH ROUND PEDESTRIAN/ ADA COMPLAINT FRAME AND GRATE, RE-CENTERING FRAME AND GRATE ON STORM STRUCTURE.
INTENT: TO RE-CENTER FRAME ON EXISTING STRUCTURE WITHOUT CONCERN ABOUT ALIGNMENT WITH CURBS AND/OR SIDEWALK. (SEE PHOTO)
- ④ REMOVE DETERIORATED ADJUSTMENT BRICK AND REPLACE W/ TWO CONCRETE ADJUSTMENT RINGS. REPLACE SQUARE FRAME AND GRATE WITH ROUND PEDESTRIAN/ ADA COMPLAINT FRAME AND GRATE, RE-CENTERING FRAME AND GRATE ON STORM STRUCTURE.
INTENT: TO RE-CENTER FRAME ON EXISTING STRUCTURE WITHOUT CONCERN ABOUT ALIGNMENT WITH CURBS AND/OR SIDEWALK.
- ⑤ SWALE LINE OFFSET FROM CONTROL JOINT
- ⑥ PROPOSED CROWN IN PAVEMENT
- ⑦ ADJUST WATER VALVE BOX AS NECESSARY
- ⑧ ADJUST ELECTRIC MANHOLE RIM AS NECESSARY
- ⑨ 4" REVEAL. TRANSITION BACK TO 5.5" REVEAL



PHOTO FOR NOTE 3

KEY

- AREA BOUNDARY LINE
- BENCH MARK
- CORE
- MAIL BOX
- FLAG POLE
- IRON PIN
- SIGN
- BOLLARD
- LIGHT POLE
- UTILITY POLE
- SANITARY SEWER MH
- STORM SEWER MH/CB
- RIP RAP
- HYDRANT
- VALVE
- DETECTABLE WARNING TILE
- CONIFEROUS TREE
- DECIDUOUS TREE

GRADING KEY

XXX.XX EXISTING ELEVATION
XXX.XX FINISHED ELEVATION

RIM XXX.XX	RIM ELEVATION
CF XXX.XX	CURB FLANGE
TC XXX.XX	TOP OF CURB
TW XXX.XX	TOP OF WALK
C XXX.XX	CONCRETE
A XXX.XX	ASPHALT
XXX.XX LP	LOW POINT
XXX.XX HP	HIGH POINT
FFE XXX.XX	FINISH FLOOR ELEVATION
• BM 1	BENCH MARK
• CP 1	CONTROL POINT

SITE BENCH MARK:

BM 1: TOP OF EXTERIOR CONCRETE AT ☐ OF GLASS PANEL TO THE LEFT OF DOUBLE ENTRANCE DOORS.

ELEVATION =27.91

BM 2: TOP OF EXTERIOR CONCRETE AT ☐ OF GLASS PANEL TO THE LEFT OF ENTRANCE TURN STYLE.

ELEVATION =27.93

SCOPE DOCUMENT

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PROJECT

**HARDSCAPE
IMPROVEMENTS**
LM - Portsmouth
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CLIENT PROJECT NUMBER

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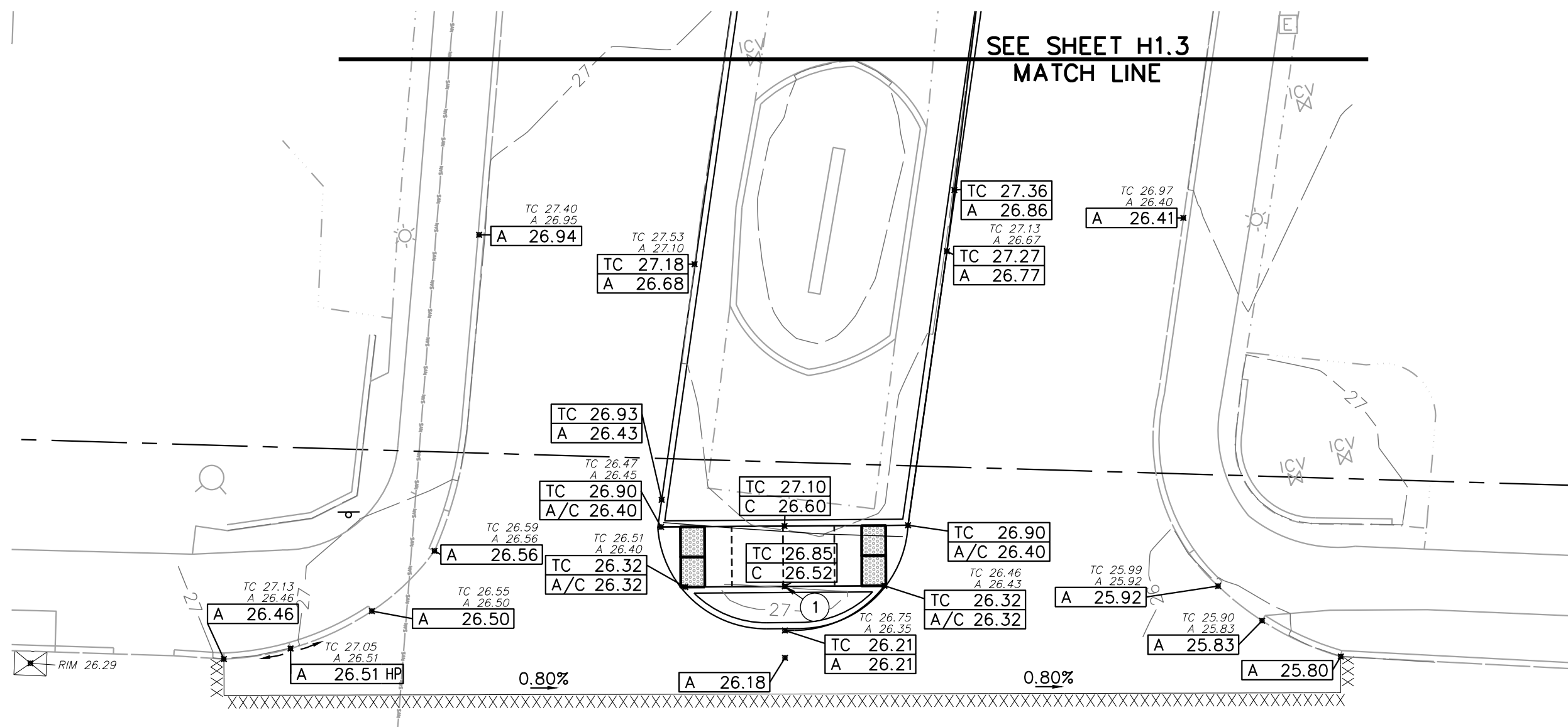
- 1 05/21/19 ISSUED FOR BID AND PERMITTING
- 2 5/27/19 ISSUED FOR PERMITTING

DRAWING TITLE

GRADING PLAN

SHEET NUMBER

H1.4



1 GRADING PLAN

CONSTRUCTION KEY

- CONCRETE CONTROL JOINTS. SAWCUT IN ADA PARKING AREA AND HAND TOOLED AT EXTERIOR SIDEWALK.
- XXXXXXXXXX SAWCUT

CONSTRUCTION NOTES

- EXISTING ELEVATIONS AND CONTOURS PROVIDED BY DOUCET SURVEY INC.
- ALL INTERNAL CURB 6" REVEAL UNLESS OTHERWISE NOTED
- ALL OUTSIDE CURB 5.5" REVEAL UNLESS OTHERWISE NOTED
- ① 4" REVEAL. TRANSITION BACK TO 0" REVEAL

KEY

---	AREA BOUNDARY LINE
+	BENCH MARK
•	CORE
MB	MAIL BOX
FP	FLAG POLE
IP	IRON PIN
S	SIGN
B	BOLLARD
L	LIGHT POLE
U	UTILITY POLE
SS	SANITARY SEWER MH
SS	STORM SEWER MH/CB
R	RIP RAP
H	HYDRANT
V	VALVE
D	DETECTABLE WARNING TILE
CT	CONIFEROUS TREE
DT	DECIDUOUS TREE

GRADING KEY

EXISTING ELEVATION	FINISHED ELEVATION
XXX.XX	XXX.XX

RIM	XXX.XX	RIM ELEVATION
CF	XXX.XX	CURB FLANGE
TC	XXX.XX	TOP OF CURB
TW	XXX.XX	TOP OF WALK
C	XXX.XX	CONCRETE
A	XXX.XX	ASPHALT
LP	XXX.XX	LOW POINT
HP	XXX.XX	HIGH POINT
FFE	XXX.XX	FINISH FLOOR ELEVATION
BM 1		BENCH MARK
CP 1		CONTROL POINT

SITE BENCH MARK:

- BM 1:** TOP OF EXTERIOR CONCRETE AT C OF GLASS PANEL TO THE LEFT OF DOUBLE ENTRANCE DOORS.
ELEVATION = 27.91
- BM 2:** TOP OF EXTERIOR CONCRETE AT C OF GLASS PANEL TO THE LEFT OF ENTRANCE TURN STYLE.
ELEVATION = 27.93



NOTES:

- MILL EXISTING ASPHALT PAVEMENT TO PROVIDE INTERLOCK JOINTS PER CITY OF PORTSMOUTH

DOWELED EXPANSION JOINT
 EPOXY COATED SMOOTH DOWELS
 6" CONCRETE
 1/8" WIDE SAW-CUT CONTROL JOINTS
 1-1/2" DEEP
 EXISTING AGGREGATE BASE

NOTES:

- INSTALL FULL DEPTH EXPANSION JOINTS WHERE INDICATED, WITH #4x12" SMOOTH EPOXY DOWEL BARS, 24" ON CENTER
- PANEL SIZE PER PLAN
- FINISH TO HAVE SAWCUT JOINTS AND MEDIUM BROOM FINISH
- AT NEW CONCRETE INSTALLATIONS, AND EXISTING CONCRETE THAT IS BEING REPLACED; WHERE 4" OF CRUSHED AGGREGATE BASE COURSE (CABC) IS NOT PRESENT, EXPOSED AND INSTALL 4" MIN. THICKNESS DENSE GRADED AGGREGATE BASE COURSE (DGAB) - WORK SHALL BE AN ADDITION TO CONTRACT
- INSTALL JOINT SEALANT OVER ALL EXPANSION JOINTS

Diagram illustrating the components and dimensions of a stop sign assembly:

- RAIN CAP**: The octagonal sign face.
- STOP SIGN**: The octagonal sign face.
- 2-3/8" DIA., 10GA. ROUND GALVANIZED STEEL PIPE**: The vertical support post.
- EXISTING CONCRETE (OR LANDSCAPE)**: The base material where the post is installed.
- Dimensions**:
 - 96"**: The height from the top of the sign to the top of the concrete base.
 - 36"**: The height of the concrete base.

NOTES:

- PANEL SIZE TO BE NO GREATER THAN 6'-0" x 6'-0"
- FINISH TO HAVE HAND TOOLED JOINTS AND MEDIUM BROOM FINISH
- AT NEW CONCRETE INSTALLATIONS, AND EXISTING CONCRETE THAT IS BEING REPLACED; WHERE 4" OF CRUSHED AGGREGATE BASE COURSE (CABC) IS NOT PRESENT, EXCAVATE FOR AND INSTALL 4" MIN. THICKNESS DENSE GRADED AGGREGATE BASE COURSE (DGAB) - WORK SHALL BE AN ADDITION TO CONTRACT

RAIN CAP

HANDICAP OR GIVE WITH LIBERTY SIGNAGE
- SECURE TO POST WITH GALVANIZED PIPE CLAMPS

HANDICAP VAN ACCESSIBLE SIGN WHERE INDICATED ON STRIPING PLAN
- SECURE TO POST WITH GALVANIZED PIPE CLAMPS

1/4" WEEP HOLE IN GALVANIZED POST

2-3/8" DIA., 10GA., ROUND GALVANIZED STEEL PIPE

SMOOTH HDPE BOLLARD COVER, BLACK

2 COATS OF PAINT PRIOR TO HDPE COVER

FILL 6" STEEL PIPE WITH CONCRETE

1/4" WEEP HOLE IN HDPE COVER

PLACE HDPE COVER IN A BED OF SEALANT

POLYETHYLENE EXPANSION MATERIAL

CONCRETE WALK

AGGREGATE BASE COURSE

CONCRETE (3,000 PSI MIN)

EXISTING SUB-BASE

60" MIN.

48"

24" MIN.

36"

3" MIN.

12" MIN.

NOTES:

- BOLLARD EXPOSED ABOVE CONCRETE FOOTING TO BE PAINTED PRIOR TO INSTALLATION OF COVER
- ALL FASTENERS (NUTS, BOLTS, WASHERS) TO BE STAINLESS STEEL

NOTES:

- BOLLARD EXPOSED ABOVE CONCRETE FOOTING TO BE PAINTED PRIOR TO INSTALLATION OF COVER
- ALL FASTENERS (NUTS, BOLTS, WASHERS) TO BE STAINLESS STEEL

Diagram illustrating the cross-section of a concrete curb and base layers. The curb is labeled "GRANITE CURB STRAIGHT OR CURVED" and has a height of "5" (MIN)". The base consists of a "WEARING COURSE", "BINDER COURSE", and "3,000 psi CONCRETE". The concrete base has a thickness of "6" (MIN)". The total width of the base is "12" (MIN)" on each side of the curb, totaling "24" (MIN)". The curb is set back from the edge by "4%" and "4%" slopes. The base is labeled "NHDOT ITEM #304.3 - CRUSHED GRAVEL".

AT LANDSCAPE RESTORATION AREAS,
CONTRACTOR TO BACKFILL WITH CLAY AND/OR
"OPSOIL TO MINUS 4" FROM TOP OF CURB.
OTHERS TO COMPLETE LANDSCAPE RESTORATION

NOTES

1. SEE PLANS FOR CURB LOCATION.
2. SEE PLANS FOR PAVEMENT CROSS SECTION.
3. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
4. MINIMUM LENGTH OF CURB STONES = 4'.
5. MAXIMUM LENGTH OF CURB STONES = 10'.
6. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART.
7. CURB ENDS TO ROUNDED AND BATTERED FACES TO BE CUT WHEN CALL FOR ON THE PLANS.
8. CURB SHALL BE INSTALLED PRIOR TO PLACEMENT OF TOP PAVEMENT COURSE.
9. JOINTS BETWEEN CURB STONES SHALL BE MORTARED.

RADIUS	MAX. LENGTH
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

A cross-sectional diagram of a road curb and infill structure. The diagram shows a concrete curb on the right, with a granite cobble infill area to its left. Above the curb is a 6-inch aggregate base, and above that is asphalt patching at the roadway. The infill area is filled with granite cobbles. A concrete walk is shown on the far right, adjacent to the curb. Labels with leader lines point to the following components from top to bottom: ASPHALT PATCHING AT ROADWAY, GRANITE CURB, GRANITE COBBLE INFILL, GRANITE CURB, 6" AGGREGATE BASE, and CONCRETE WALK.

- ASPHALT PATCHING AT ROADWAY
- GRANITE CURB
- GRANITE COBBLE INFILL
- GRANITE CURB
- 6" AGGREGATE BASE
- CONCRETE WALK

FLUSH MATCH WITH ASPHALT

8.3% MAX

1.40% MAX

GRANITE CURB TAPER

REMOVE AND SALVAGE BRICKS. OWNER TO RESET.

REMOVAL LIMITS TO BE DETERMINED IN FIELD

SLOPE

~6'-0"

SLOPE

8.3% MAX

Diagram illustrating the cross-section of a curb and backfill assembly:

- GRANITE CURB**: STRAIGHT OR CURVED, 5" (MIN) high.
- WEARING COURSE**: 4" thick.
- BINDER COURSE**: 6" thick.
- 00 psi CONCRETE**: 12" (MIN) thick.
- NHDOT ITEM #304.3 - CRUSHED GRAVEL**: 12" (MIN) thick.
- AT LANDSCAPE RESTORATION AREAS, CONTRACTOR TO BACKFILL WITH CLAY AND/OR TOPSOIL TO MINUS 4" FROM TOP OF CURB. OTHERS TO COMPLETE LANDSCAPE RESTORATION**.
- SLOPES**: 4% and 4 1/2%.
- BACKFILL**: 18" (MIN) thick.
- Base Dimensions**: 12" (MIN) and 12" (MIN).

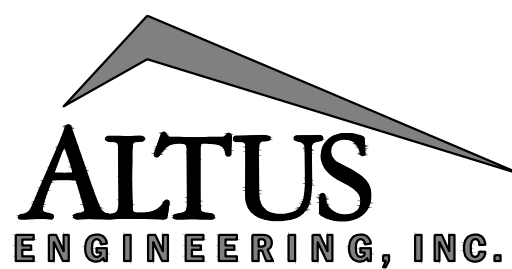
NOTES

1. SEE PLANS FOR CURB LOCATION.
2. SEE PLANS FOR PAVEMENT CROSS SECTION.
3. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.
4. MINIMUM LENGTH OF CURB STONES = 4'.
5. MAXIMUM LENGTH OF CURB STONES = 10'.
6. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES - SEE CHART.
7. CURB ENDS TO ROUNDED AND BATTERED FACES TO BE CUT WHEN CALL FOR ON THE PLANS.
8. CURB SHALL BE INSTALLED PRIOR TO PLACEMENT OF TOP PAVEMENT COURSE.
9. JOINTS BETWEEN CURB STONES SHALL BE MORTARED.

RADIUS	MAX. LENGTH
21'	3'
22'-28'	4'
29'-35'	5'
36'-42'	6'
43'-49'	7'
50'-56'	8'
57'-60'	9'
OVER 60'	10'

STR
SEG

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133 COURT STREET
(603) 433-2335

SCOPE DOCUMENT

Site plan has been generated from survey and is provided to aid in orientation and general bidding information. Contractor is responsible to field verify existing conditions and all measurements.

Grading plan is provided to illustrate design intent for bidding purposes. Contractor shall verify all grades and may make adjustments to ensure positive drainage as part of his responsibility to avoid areas of standing water on finish pavements.

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PROJECT

HARDSCAPE IMPROVEMENTS

LM - Portsmouth
225 Borthwick Avenue,
Portsmouth, NH

Liberty Mutual Insurance
175 Berkeley Street
Boston, MA 02166

CLIENT PROJECT NUMBER

STR PROJECT NUMBER

14643

DRAWING DATES

NUMBER	DATE	COMMENTS
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- 1 05/21/19 ISSUED FOR BID AND PERMITTING
- 2 5/27/19 ISSUED FOR PERMITTING

DRAWING TITLE

DRAWING TITLE

DETAILS

SHEET NUMBER

SHEET NUMBER

H1.5

Actual Size to read at scale

1 IN 2 IN