

# TOWN OF BOXFORD

# BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT SPOFFORD POND SCHOOL



STEVE CLIFFORD, DIRECTOR OF FACILITIES **BOXFORD PUBLIC SCHOOLS** 28 MIDDLETON ROAD BOXFORD, MA 01921 978-887-0771 ext. 225

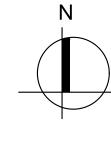


JAMES PEARSON, PE, TECHNICAL SPECIALIST 55 WALKERS BROOK DRIVE READING, MA 01867 978-532-1900



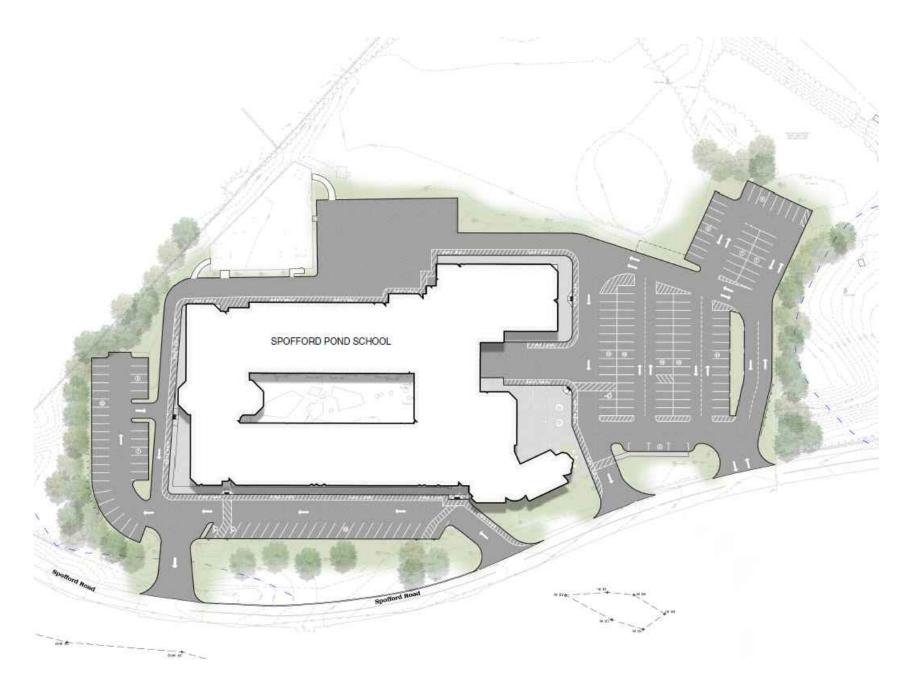
# Locus Map





SPOFFORD POND SCHOOL

31 SPOFFORD ROAD, BOXFORD, MA 01921



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-PERMITTING ONLY-- NOT FOR CONSTRUCTION -

NOVEMBER 1, 2021

LANDSCAPE ARCHITECTURAL, CIVIL, ENVIRONMENTAL, ELECTRICAL AND **UTILITY DESIGN:** 55 Walkers Brook Drive, Suite 100 Reading, MA 018667 (978) 532 1900 www.westonandsampson.com

# **ZONING**

SCHOOL: SPOFFORD POND SCHOOL SITE ADDRESS: 31 SPOFFORD ROAD

PARCEL MAP/LOT

O - OFFICIAL OR OPEN SPACE DISTRICT

**ZONING DISTRICT** POND WATERSHED OVERLAY DISTRICT **OVERLY DISTRICT** 

Description	Required	Proposed		
Minimum Lot Dimensions				
Area (Acres)	N/A	N/A		
Frontage on street	N/A	N/A		
Minimum Required Yard Dimens	ions/Setbacks			
Front Yard (1)	50	N/A		
Side Yard	N/A	N/A		
Rear Yard	N/A	N/A		
Max. Bldg. Height				
Stories	3	N/A		
Feet	35	N/A		
Coverage (2)				
Building Coverage % of lot area	25%	N/A		
Accessory Buildings or Structures				
Min. Bldg. Separation	20	N/A		
Side/rear setbacks	20	N/A		

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#### **GENERAL NOTES**

- 1. TOPOGRAPHIC AND EXISTING CONDITIONS INFORMATION COMPILED BY WESTON & SAMPSON, OCTOBER 2020.
- 2. REFER TO EXISTING CONDITIONS LEGEND. ANY QUANTITIES SHOWN ON THE PLANS ARE FOR BIDDING PURPOSES ONLY. ALL BIDDERS ARE REQUIRED TO INSPECT THE PROJECT SITE IN ITS ENTIRETY PRIOR TO SUBMITTING THEIR BID, AND BECOME FAMILIAR WITH ALL CONDITIONS AS THEY MAY AFFECT THEIR BID. CONTRACTOR AND SUB-CONTRACTOR SHALL BE FAMILIAR WITH ALL DRAWINGS AND SPECIFICATIONS PRIOR TO COMMENCING THE CONSTRUCTION.
- 3. LOCATIONS OF ANY UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF SUCH UTILITIES, PROTECTING ALL EXISTING UTILITIES AND REPAIRING ANY DAMAGE DONE DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE COORDINATION WITH UTILITY COMPANIES AND PUBLIC AGENCIES AND FOR OBTAINING ALL REQUIRED PERMITS AND PAYING ALL REQUIRED FEES. IN ACCORDANCE WITH M.G.L. CHAPTER 82, SECTION 40, INCLUDING AMENDMENTS, CONTRACTORS SHALL NOTIFY ALL UTILITY COMPANIES AND GOVERNMENT AGENCIES IN WRITING PRIOR TO EXCAVATION. CONTRACTOR SHALL ALSO CALL "DIG SAFE" AT (888) 344-7233 NO LESS THAN 72 HOURS, (EXCLUSIVE OF WEEKENDS AND HOLIDAYS), PRIOR TO SUCH EXCAVATION. DOCUMENTATION OF REQUESTS SHALL BE PROVIDED TO PROJECT REPRESENTATIVE PRIOR TO EXCAVATION WORK.
- 4. ANY DISCREPANCIES OR CONFLICTS BETWEEN THE DRAWINGS AND EXISTING CONDITIONS, EXISTING CONDITIONS TO REMAIN, TEMPORARY CONSTRUCTION, PERMANENT CONSTRUCTION AND WORK OF ADJACENT CONTRACTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. ITEMS ENCOUNTERED IN AREAS OF EXCAVATION THAT ARE NOT INDICATED ON THE DRAWINGS, BUT ARE VISIBLE ON SURFACE, SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND SHALL BE REMOVED AT NO ADDITIONAL COST TO THE OWNER.
- 5. ANY ALTERATIONS TO THESE DRAWINGS MADE IN THE FIELD DURING CONSTRUCTION SHALL BE RECORDED BY THE GENERAL CONTRACTOR ON "AS-BUILT" DRAWINGS.
- 6. ALL AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS OUTSIDE THE PROJECT LIMITS, SHALL BE RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR AT NO ADDITIONAL COST AND TO THE SATISFACTION OF THE OWNER.
- 7. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NEEDED TO PROTECT HIS EMPLOYEES, AS WELL AS PUBLIC USERS FROM INJURY DURING THE ENTIRE CONSTRUCTION PERIOD AT NO EXPENSE TO THE OWNER USING ALL NECESSARY SAFEGUARDS, INCLUDING BUT NOT LIMITED TO, THE ERECTION OF TEMPORARY WALKS, STRUCTURES, PROTECTIVE BARRIERS, COVERING, OR FENCES AS NEEDED.
- 8. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH THE NAME OF THE OSHA "COMPETENT PERSON" PRIOR TO CONSTRUCTION
- 9. FILLING OF EXCAVATED AREAS SHALL NOT TAKE PLACE WITHOUT THE PRESENCE OR PERMISSION OF THE OWNER'S REPRESENTATIVE.
- 10. ALL EXISTING DRAINAGE FACILITIES TO REMAIN SHALL BE MAINTAINED FREE OF DEBRIS, SOIL, SEDIMENT, AND FOREIGN MATERIAL AND OPERATIONAL THROUGHOUT THE LIFE OF THE CONTRACT. REMOVE ALL SOIL, SEDIMENT, DEBRIS AND FOREIGN MATERIAL FROM ALL DRAINAGE STRUCTURES.
- 11. CONTRACTOR'S STAGING AREA MUST BE WITHIN THE CONTRACT LIMIT LINE AND/OR IN AREAS APPROVED BY OWNER. ANY OTHER AREAS THAT THE CONTRACTOR MAY WISH TO USE FOR STAGING MUST BE COORDINATED WITH THE OWNER.
- 12. THE CONTRACTOR SHALL KEEP ALL STREETS AND WALKS THAT ARE NOT RESTRICTED FROM PUBLIC USE DURING CONSTRUCTION BROOM CLEAN AT ALL TIMES. THE CONTRACTOR SHALL USE ACCEPTABLE METHODS AND MATERIALS TO MAINTAIN ADEQUATE DUST CONTROL THROUGHOUT CONSTRUCTION.
- 13. ALL WORK TO BE PERFORMED IN ACCORDANCE WITH TOWN OF BOXFORD ORDINANCES.

#### **EROSION AND SEDIMENT CONTROL NOTES**

- 1. ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE PUT INTO PLACE PRIOR TO BEGINNING ANY CONSTRUCTION OR DEMOLITION. INCLUDING BUT NOT LIMITED TO, DRAINAGE INLETS, MANHOLES AND CATCH BASINS WITHIN THE LIMIT OF WORK AND DRAINAGE STRUCTURES OUTSIDE THE LIMIT OF WORK THAT ARE IMPACTED BY THE WORK FOR THE ENTIRE DURATION OF CONSTRUCTION. REFER TO SPECIFICATIONS AND DETAILS FOR TYPE OF EROSION AND SEDIMENT CONTROL.
- 2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONTINUAL MAINTENANCE OF ALL CONTROL DEVICES THROUGHOUT THE DURATION OF THE PROJECT.
- 3. CONTRACTOR SHALL MEET ALL OF THE STATE OF MASSACHUSETTS D.E.P. REGULATIONS FOR SEDIMENT AND EROSION CONTROL AT NO ADDITIONAL COST TO THE OWNER.
- 4. EXCAVATED MATERIAL STOCKPILED ON THE SITE SHALL BE SURROUNDED BY A RING OF UNBROKEN SEDIMENT AND EROSION CONTROL FENCE. THE LIMITS OF ALL GRADING AND DISTURBANCE SHALL BE KEPT TO A MINIMUM WITHIN THE APPROVED AREA OF CONSTRUCTION. ALL AREAS OUTSIDE OF THE LIMIT OF CONTRACT SHALL REMAIN TOTALLY UNDISTURBED UNLESS OTHERWISE APPROVED BY OWNER'S REPRESENTATIVE.
- 5. EROSION CONTROL BARRIERS TO BE INSTALLED AT THE TOE OF SLOPES. SEE SITE PLAN, NOTES, DETAILS AND SPECIFICATIONS.

# **DEMOLITION & SITE PREPARATION NOTES**

- 1. THE CONTRACTOR SHALL INCLUDE IN THE BID THE COST OF REMOVING ANY EXISTING SITE FEATURES AND APPURTENANCES NECESSARY TO ACCOMPLISH THE CONSTRUCTION OF THE PROPOSED SITE IMPROVEMENTS. THE CONTRACTOR SHALL ALSO INCLUDE IN THE BID THE COST NECESSARY TO RESTORE SUCH ITEMS IF THEY ARE SCHEDULED TO REMAIN AS PART OF THE FINAL SITE IMPROVEMENTS. REFER TO PLANS TO DETERMINE EXCAVATION, DEMOLITION AND TO DETERMINE THE LOCATION OF THE PROPOSED SITE IMPROVEMENTS.
- 2. THE OWNER RESERVES THE RIGHT TO REVIEW ALL MATERIALS DESIGNATED FOR REMOVAL AND TO RETAIN OWNERSHIP OF SUCH MATERIALS.
- 3. UNLESS SPECIFICALLY NOTED TO BE REMOVED AND STOCKPILED (R&S) OR REUSED AND RELOCATED (R&R), ALL SITE FEATURES CALLED TO BE REMOVED AND DEMOLISHED (R&D) SHALL BE REMOVED WITH THEIR FOOTINGS, ATTACHMENTS, BASE MATERIAL, ETC. TRANSPORTED FROM THE SITE TO BE DISPOSED OF IN A LAWFUL MANNER AT AN ACCEPTABLE DISPOSAL SITE AND AT NO ADDITIONAL COST TO THE OWNER.
- 4. ALL EXISTING SITE FEATURES TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD. ANY FEATURES DAMAGED DURING CONSTRUCTION OPERATIONS SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE AT NO ADDITIONAL COST TO THE OWNER.
- 5. DURING EARTHWORK OPERATIONS, CONTRACTOR SHALL TAKE CARE TO NOT DISTURB EXISTING MATERIALS TO REMAIN, OUTSIDE THE LIMITS OF EXCAVATION AND BACKFILL AND SHALL TAKE WHATEVER MEASURES NECESSARY, AT THE CONTRACTOR'S EXPENSE, TO PREVENT ANY EXCAVATED MATERIAL FROM COLLAPSING. ALL BACKFILL MATERIALS SHALL BE PLACED AND COMPACTED AS SPECIFIED TO THE SUBGRADE REQUIRED FOR THE INSTALLATION OF THE REMAINDER OF THE CONTRACT WORK.
- 6. IT SHALL BE THE CONTRACTOR'S OPTION, WITH CONCURRENCE OF THE OWNER'S REPRESENTATIVE, TO REUSE EXISTING GRAVEL PAVEMENT BASE COURSE IF IT MEETS THE REQUIREMENTS OF THE SPECIFICATIONS FOR GRAVEL BORROW

### LAYOUT & MATERIALS NOTES

- 1. COORDINATE ALL LAYOUT ACTIVITIES WITH THE SCOPE OF WORK CALLED FOR BY DEMOLITION, MATERIALS, GRADING AND UTILITIES OPERATIONS ENCOMPASSED BY THIS CONTRACT. SET, PROTECT AND REPLACE REFERENCE STAKES AS NECESSARY OR AS REQUIRED BY THE OWNER'S REPRESENTATIVE.
- 2. THE LAYOUT OF SITE AMENITIES MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO INSTALLATION.
- 3. ALL PROPOSED SITE FEATURES SHALL BE LAID OUT AND STAKED FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF INSTALLATION. ANY REQUIRED ADJUSTMENTS TO THE LAYOUT SHALL BE UNDERTAKEN AS DIRECTED, AT NO ADDITIONAL COST TO THE OWNER.
- 4. ALL PROPOSED PAVEMENTS SHALL MEET THE LINE AND GRADE OF EXISTING ADJACENT PAVEMENT SURFACES AND SHALL BE TREATED WITH AN RS-1 TACK COAT AT POINT OF CONNECTION. ALL PATHWAY WIDTHS SHALL BE AS NOTED ON THE LAYOUT AND MATERIALS PLAN.
- 5. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS OF ALL PROPOSED GATES.
- 7. ALL LAYOUT LINES, OFFSETS, OR REFERENCES TO LOCATING OBJECTS ARE EITHER PARALLEL OR PERPENDICULAR UNLESS OTHERWISE DESIGNATED WITH ANGLE OFFSETS NOTED.
- 8. REFER TO DETAIL DRAWINGS FOR CONSTRUCTION DETAILS.
- 9. ONLY CLEAN FILL SHALL BE USED. CLEAN FILL SHALL BE CLEAR FROM TRASH, DEBRIS, ASPHALT, BRICK, CONCRETE, METAL, WOOD, RECYCLED CONSTRUCTION MATERIALS, OR OTHER DELETERIOUS MATERIALS.
- 10. TO FACILITATE LAYOUT OF PROPOSED SITE FEATURES AND FACILITIES, LAYOUT INFORMATION FOR CERTAIN FUTURE WORK, WHICH IS NOT INCLUDED WITHIN THE SCOPE OF THIS CONTRACT HAS BEEN PROVIDED ON THE LAYOUT AND MATERIALS PLAN FOR INFORMATION ONLY.

#### GRADING & DRAINAGE NOTES

- 1. ALL WORK RELATING TO INSTALLATION, RENOVATION OR MODIFICATION OF WATER, UTILITY STORMWATER DRAINAGE AND/OR SEPTIC UTILITIES SHALL BE PERFORMED IN ACCORDANCE WITH THE STANDARDS OF THE TOWN, AND STATE OF MASSACHUSETTS.
- 2. THE CONTRACTOR SHALL VERIFY ALL GRADES ON THE GROUND AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE OWNER'S REPRESENTATIVE.
- 3. ALL GRADING IS TO BE SMOOTH AND CONTINUOUS WHERE PROPOSED SURFACE MEETS EXISTING SURFACE, BLEND THE TWO PAVEMENTS AND ELIMINATE ROUGH SPOTS AND ABRUPT GRADE CHANGES AND MEET LINE AND GRADE OF EXISTING CONDITIONS WITH NEW IMPROVEMENTS.
- 4. CONTRACTOR SHALL ENSURE ALL AREAS ARE PROPERLY PITCH TO DRAIN, WITH NO SURFACE WATER PONDING OR PUDDLING.
- 5. ALL NEW WALKWAYS MUST CONFORM TO CURRENT AMERICANS WITH DISABILITIES ACT (ADA), AND MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (MAAB) REGULATIONS: WALKWAYS SHALL MAINTAIN A CROSS PITCH OF NOT MORE THAN ONE AND A HALF (1.5%) PERCENT AND THE RUNNING SLOPE (PARALLEL TO THE DIRECTION OF TRAVEL) BETWEEN 1% MIN. AND 4.5% MAX. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO CONTINUING WORK.
- 6. ALL UTILITY GRATES, COVERS OR OTHER SURFACE ELEMENTS INTENDED TO BE EXPOSED AT GRADE SHALL BE FLUSH WITH THE ADJACENT FINISHED GRADE AND ADJUSTED TO PROVIDE A SMOOTH TRANSITION AT ALL EDGES.
- 7. THE CONTRACTOR SHALL CONFIRM AND/OR SET SUBGRADE ELEVATIONS TO ALLOW FOR POSITIVE DRAINAGE AND PROVIDE EROSION CONTROL DEVICES, STRUCTURES, MATERIALS AND CONSTRUCTION METHODS TO DIRECT SILT MIGRATION AWAY FROM DRAINAGE AND OTHER UTILITY SYSTEMS, PUBLIC/PRIVATE STREETS AND WORK AREAS. CLEAN BASINS REGULARLY AND AT THE END OF THE PROJECT.
- 8. EXCAVATION REQUIRED WITHIN PROXIMITY OF KNOWN EXISTING UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO ADDITIONAL COST TO THE OWNER.
- 9. WHERE NEW EARTHWORK MEETS EXISTING EARTHWORK, CONTRACTOR SHALL BLEND NEW EARTHWORK SMOOTHLY INTO EXISTING, PROVIDING VERTICAL CURVES OR ROUNDS AT ALL TOP AND BOTTOM OF SLOPES.
- 10. WHERE A SPECIFIC LIMIT OF WORK LINE IS NOT OBVIOUS OR IMPLIED, BLEND GRADES TO EXISTING CONDITIONS WITHIN 5 FEET OF PROPOSED CONTOURS.
- 11. RESTORE ALL DISTURBED AREAS AND LIMITS OF ALL REMOVALS TO LOAM AND SEED (L&S) UNLESS OTHERWISE NOTED.
- 12. SEE EARTHWORK SECTION OF SPECIFICATIONS FOR EXCAVATION AND FILLING PROCEDURES.

# PLANTING NOTES

- 1. THE DEPTH OF THE TOPSOIL LOAM FOR ALL PROPOSED LAWN AREAS SHALL BE 6" MINIMUM. ALL DISTURBED AREAS SHALL BE RESTORED WITH LOAM AND SEED UNLESS OTHERWISE NOTED.
- 2. ALL REFERENCES TO LOAM AND SEED REFER TO HYDROMULCH SEEDED LAWN.
- 3. ANY DISCREPANCIES BETWEEN THE PLANS AND THE PLANTING SCHEDULE, CONTRACTOR SHALL OWN THE LARGER QUANTITY AND SIZE AT NO ADDITIONAL COST TO THE OWNER.

#### **ABBREVIATIONS**

**PROPOSED** 

# GENERAL

ADJ	ADJUST
BIT. CONC.	BITUMINOUS CONCRETE
CEM. CONC.	CEMENT CONCRETE
В	BASELINE
N.T.S.	NOT TO SCALE
B.M.	BENCH MARK
ABAN	ABANDON
GRAN. CURB	GRANITE CURB
EXIST. (OR EX.)	EXISTING
FDN	FOUNDATION
F.L. (OR F)	FLOW LINE
P	PROPERTY LINE
PVMT	PAVEMENT
RC	REINFORCED CONCRETE
REM	REMOVE
RET	RETAIN
R.O.W.	RIGHT-OF-WAY
R&R	REMOVE AND RELOCATE
R,R&R	REMOVE, RELOCATED AND RESET
R&S	REMOVE AND SALVAGE
R&D	REMOVE AND DISPOSE
P&P	PRESERVE AND PROTECT
SB	STONE BOUND
NIC	NOT IN CONTRACT
H.C.	HANDICAP
WCR	WHEELCHAIR RAMP
НМА	HOT MIX ASPHALT
G.C.	GENERAL CONTRACTOR
E.C.	ELECTRICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR

# <u>UTILITIES</u>

GICI	GUTTER INLET W/ CURB INLET
CBCI	CATCH BASIN W/ CURB INLET
СВ	CATCH BASIN
C.I.T.	CHANGE IN TYPE
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
CI	CURB INLET
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
DI	DUCTILE IRON PIPE
Gl	GUTTER INLET
HYD	HYDRANT
INV.	INVERT ELEVATION
UP	UTILITY POLE
SMH	SEWER MANHOLE
WG	WATER GATE
DS	DOWN SPOUT
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PVC	POLYVINYL CHLORIDE
RCP	REINFORCED CONCRETE PIPE
DMH	DRAIN MANHOLE
LB	LEACHING BASIN
Cl	CAST IRON
OCS	OUTLET CONTROL STRUCTURE
OGT	OIL AND GRIT TRAP
VC	VITRIFIED CLAY PIPE
LP	LIGHT POLE
SWTU	STORM WATER TREATMENT UNIT
HH	HANDHOLE

#### ALIGNMENT/GRADING

BW	BOTTOM OF WALL
BC	BOTTOM OF CURB
Pl	POINT OF INTERSECTION
PC	POINT OF CURVATURE
PT	POINT OF TANGENCY
PRC	POINT OF REVERSE CURVATURE
PCC	POINT OF COMPOUND CURVATURE
PVI	POINT OF VERTICAL INTERSECTION
PVC	POINT OF VERTICAL CURVATURE
PVT	POINT OF VERTICAL TANGENCY
ELEV	ELEVATION
CC	CENTER OF CURVE
H.P.	HIGH POINT
L.P.	LOW POINT
R	RADIUS OF CURVATURE
STA	STATION
S.S.D.	STOPPING SIGHT DISTANCE
TC	TOP OF CURB
TW	TOP OF WALL
CL.	CENTER LINE

# BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT

SPOFFORD POND SCHOOL 31 SPOFFORD ROAD BOXFORD, MA 01921

Weston & Sampson

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Revisions:

No. Date Description

1 10/08/21 PER PEER REVIEW

2 11/01/21 PER PEER REVIEW

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JULY 23, 2021

Drawn By: CTK

Reviewed By: JIP

Approved By: JIP

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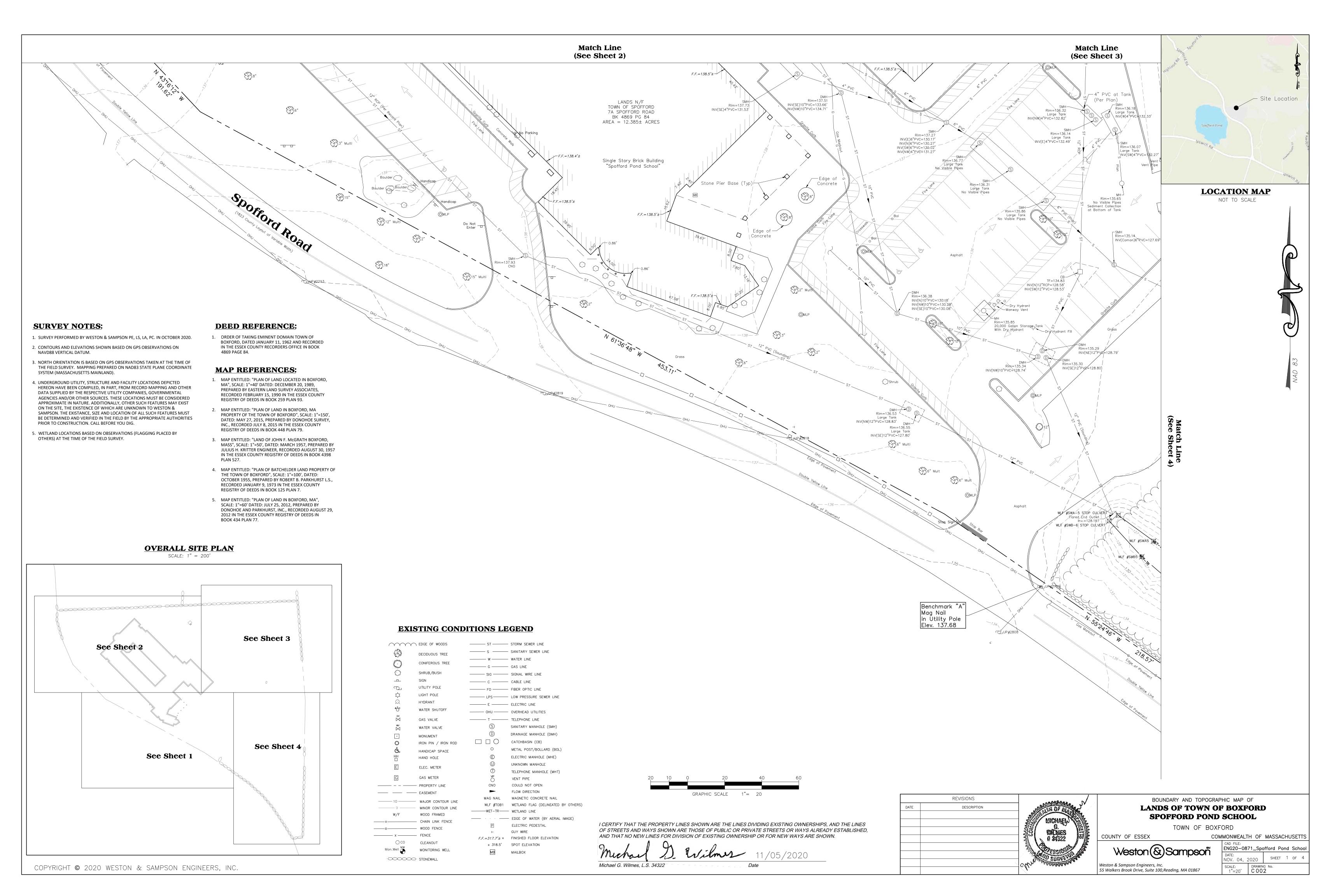
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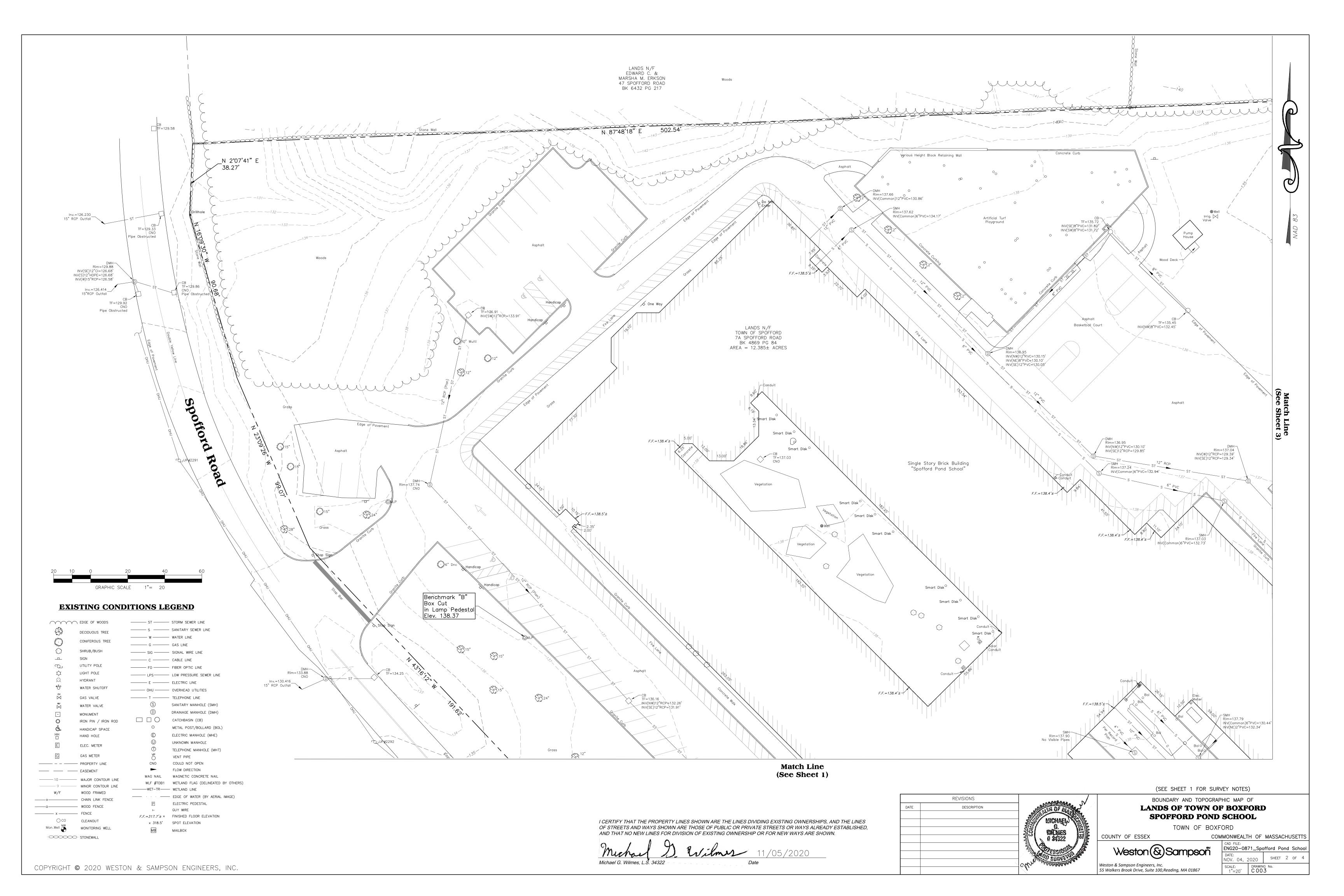
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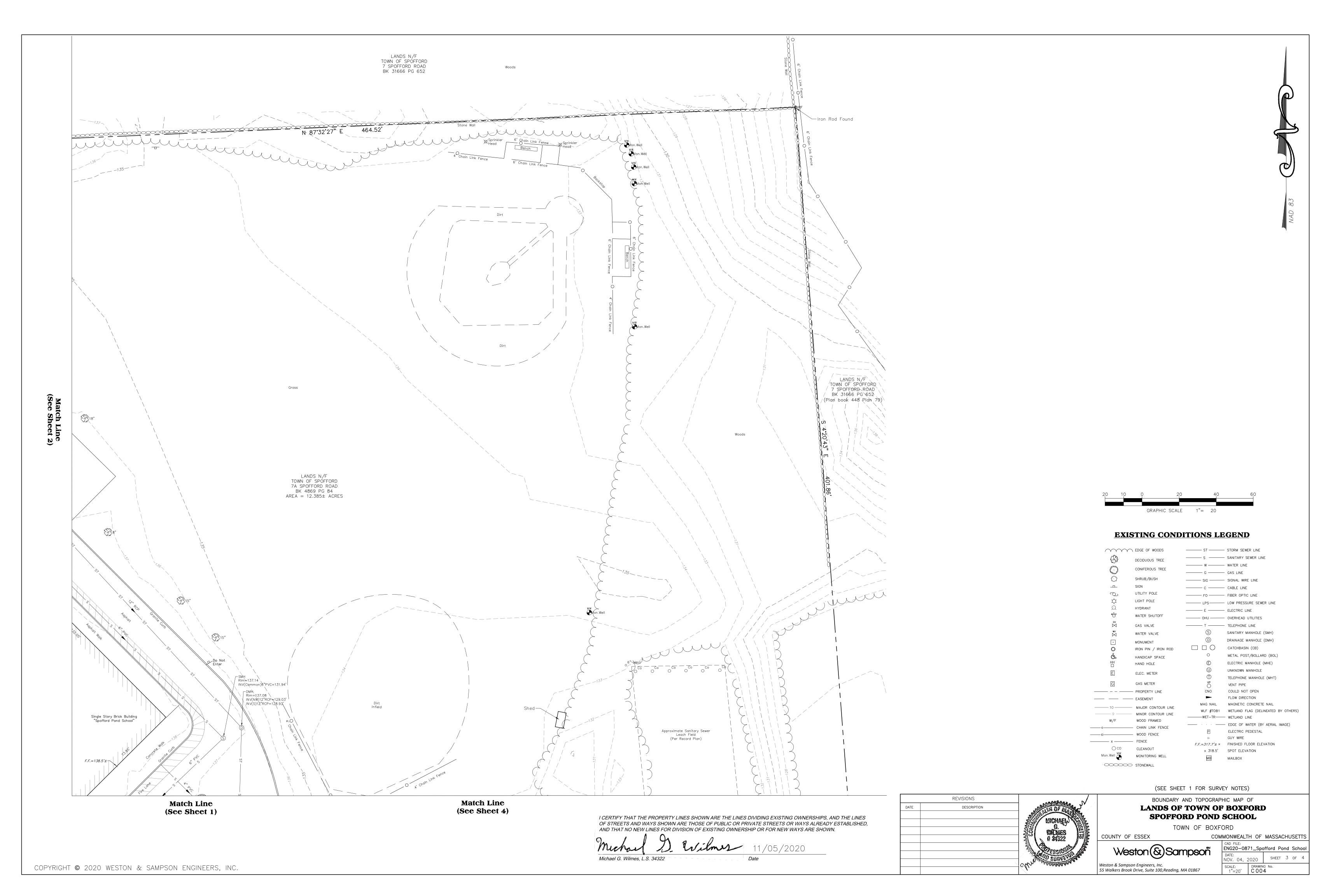
LEGEND, GENERAL NOTES & SYMBOLS

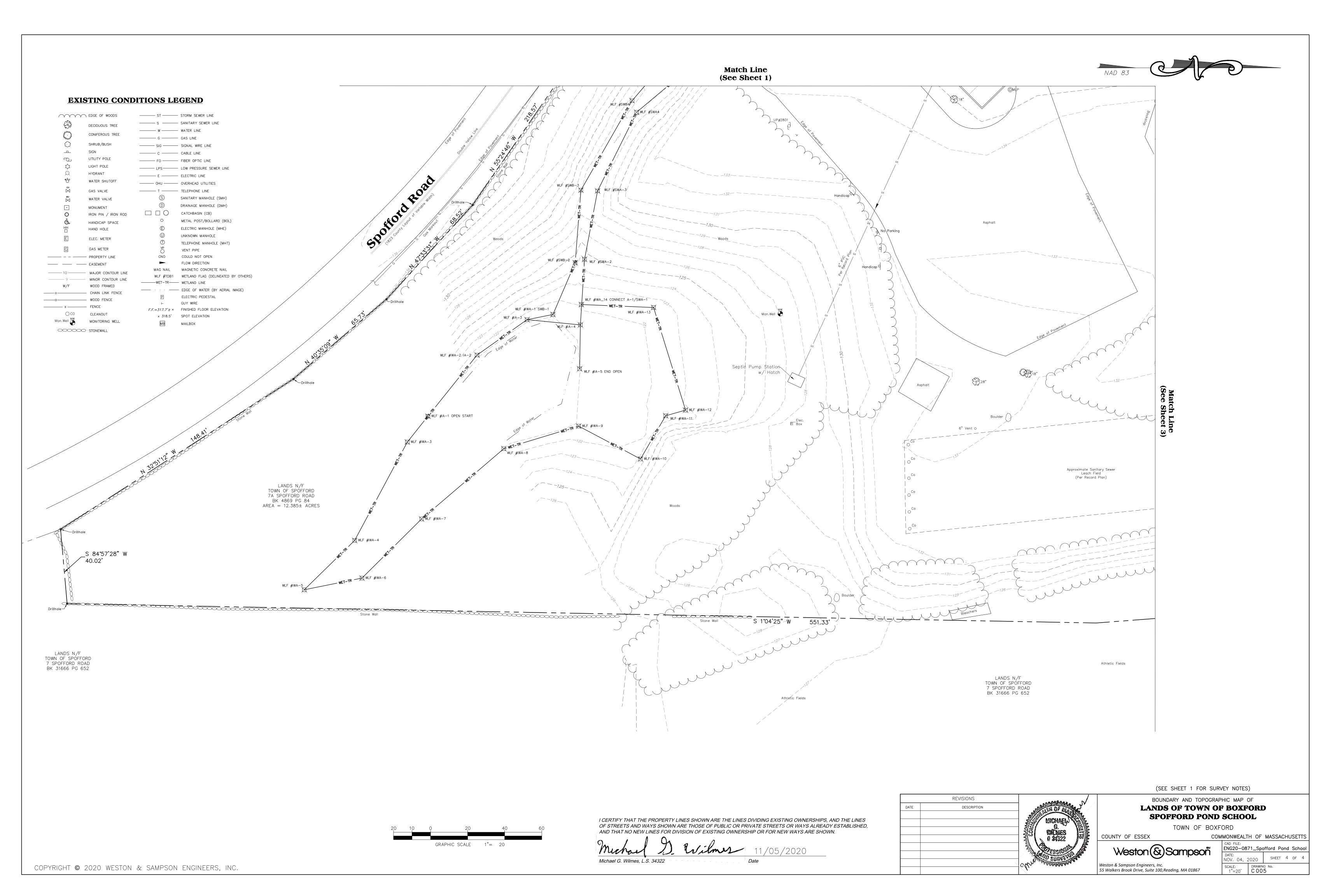
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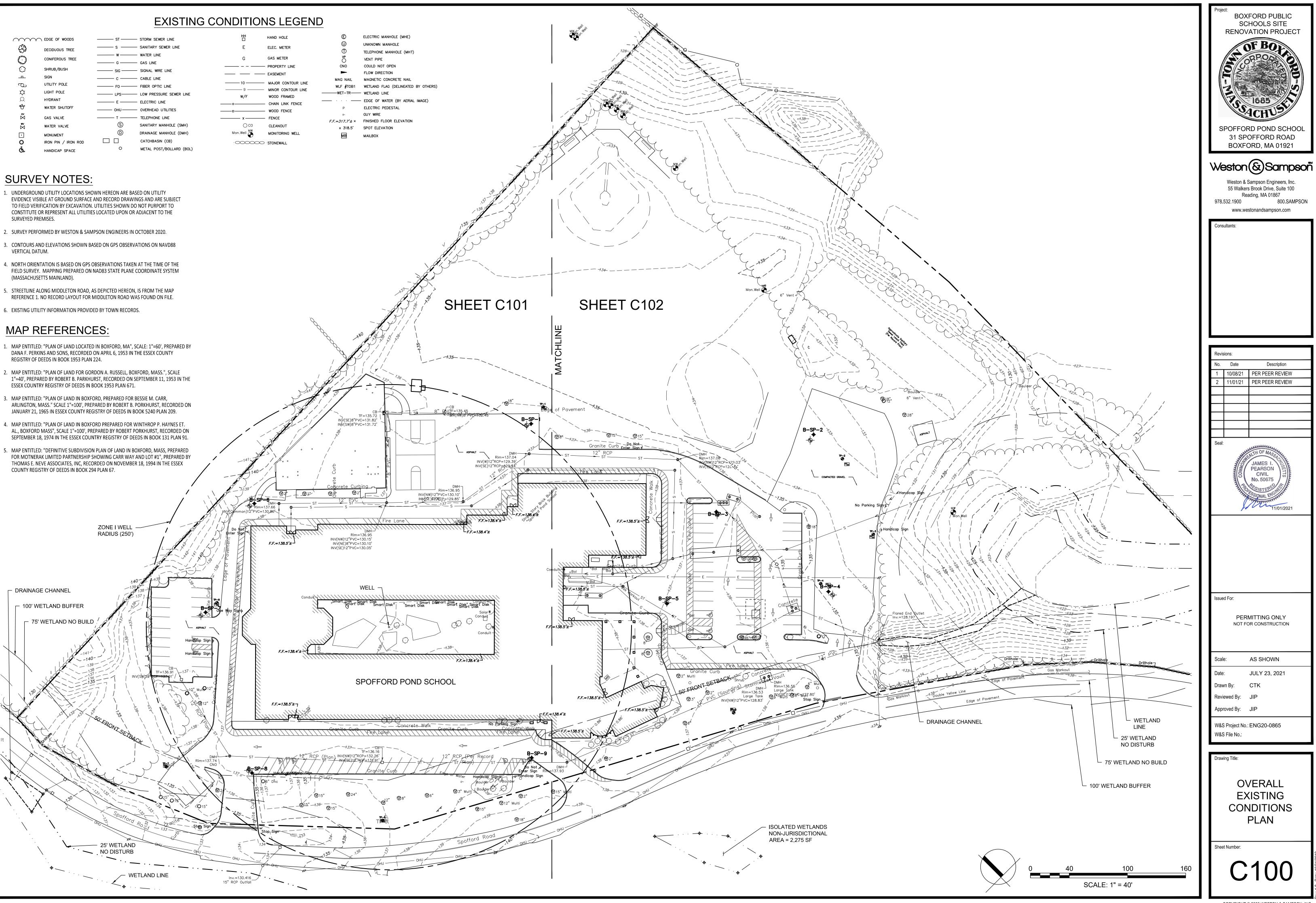
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BOXFORD PUBLIC

SCHOOLS SITE

RENOVATION PROJECT

SPOFFORD POND SCHOOL

31 SPOFFORD ROAD

BOXFORD, MA 01921

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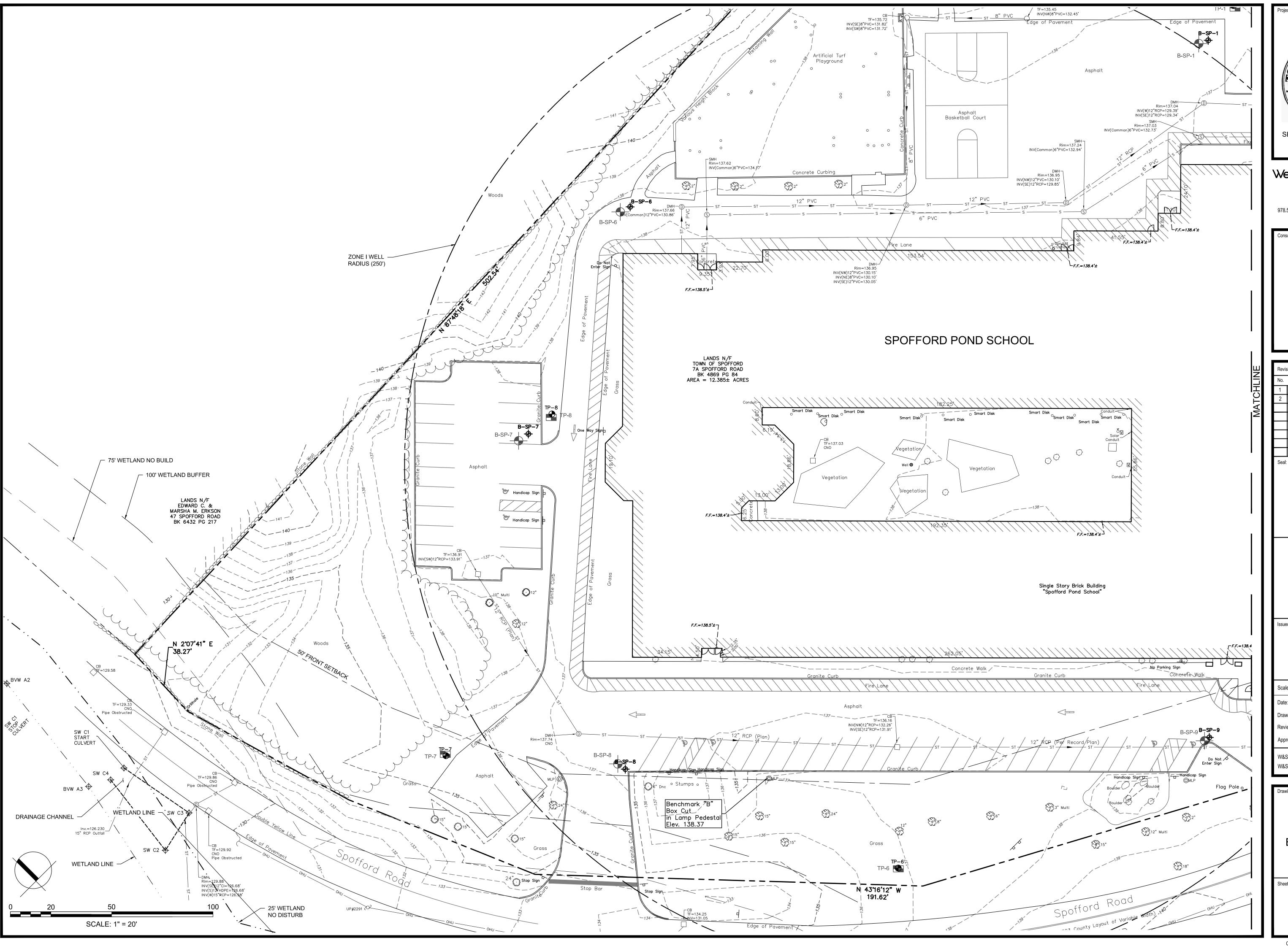
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**OVERALL** 

**EXISTING** 

CONDITIONS

PLAN



**BOXFORD PUBLIC** SCHOOLS SITE RENOVATION PROJECT SPOFFORD POND SCHOOL 31 SPOFFORD ROAD BOXFORD, MA 01921

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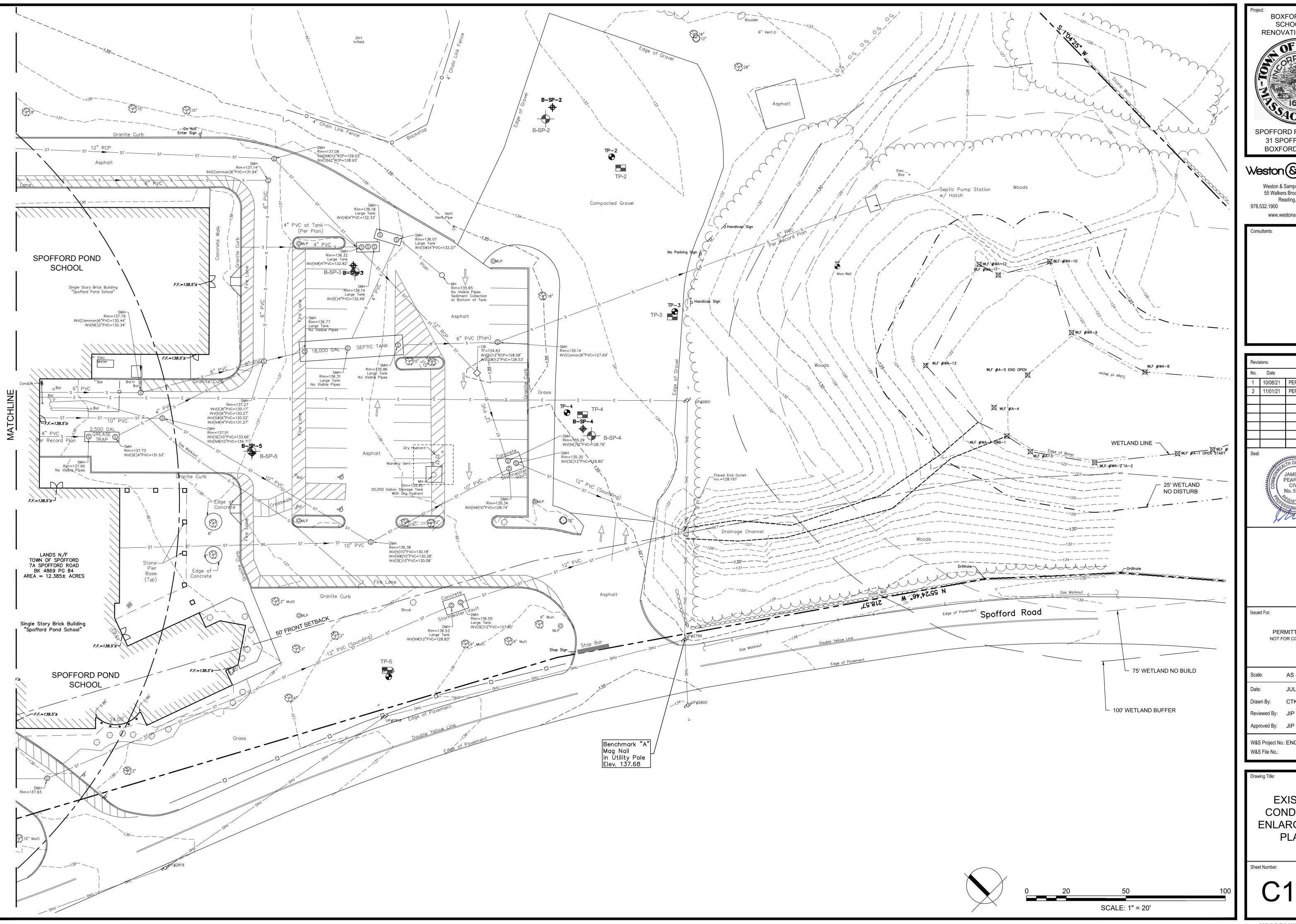
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**EXISTING** CONDITIONS **ENLARGEMENT** PLAN I

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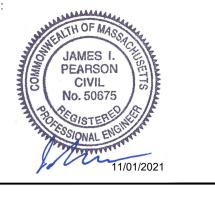


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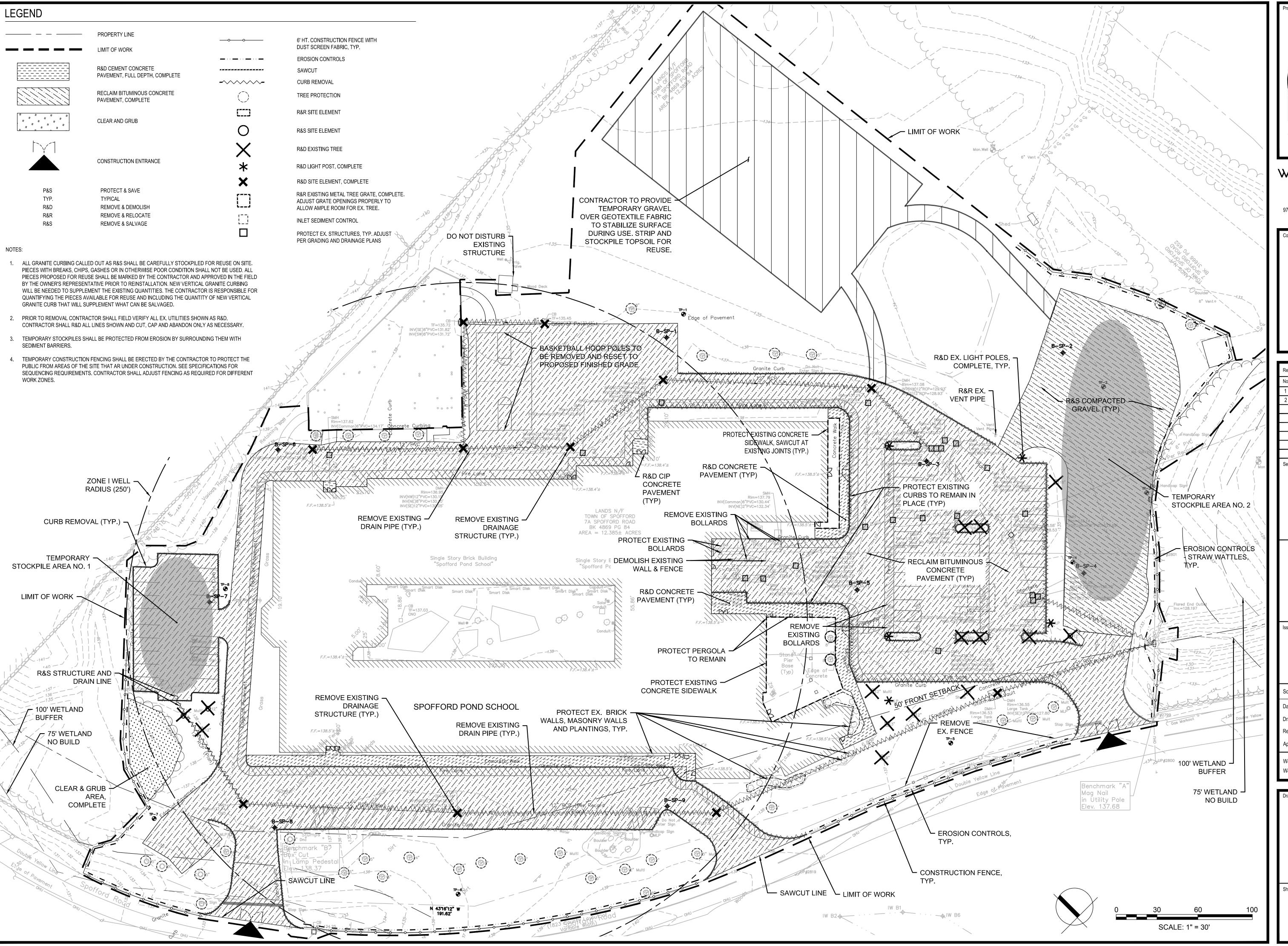
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**EXISTING** CONDITIONS **ENLARGEMENT** PLAN II



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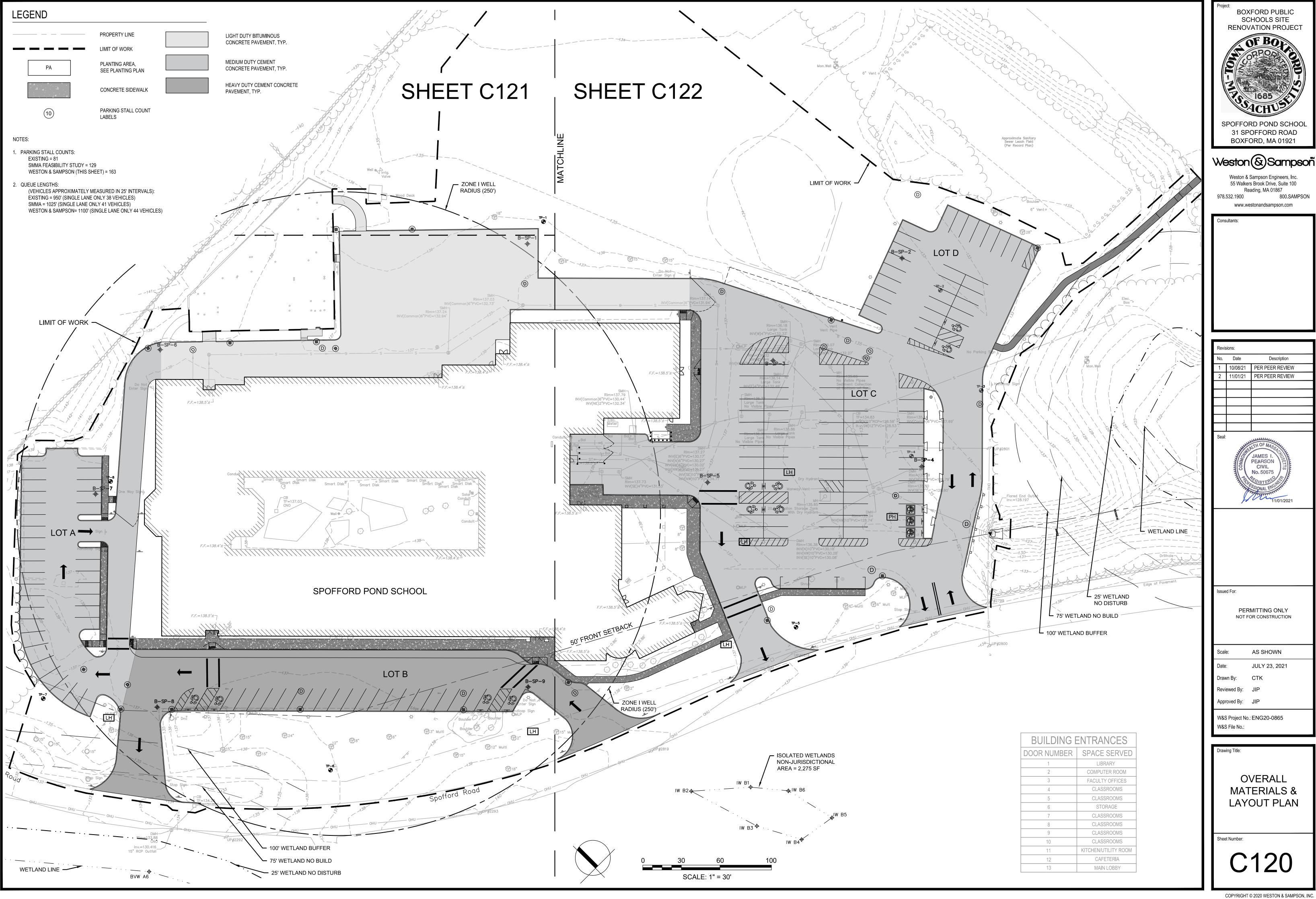
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& EROSION
CONTROL PLAN

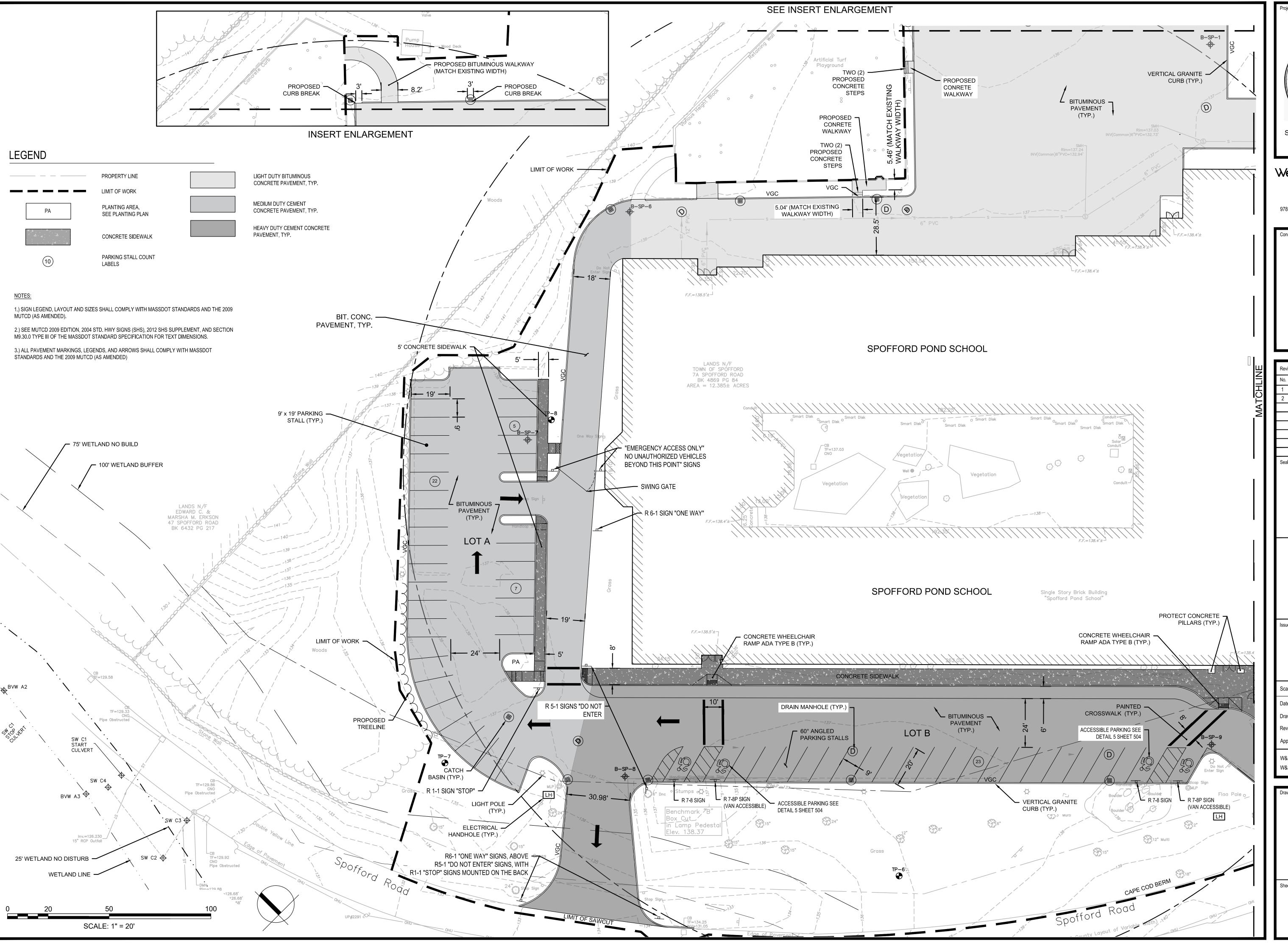
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11/01/2021

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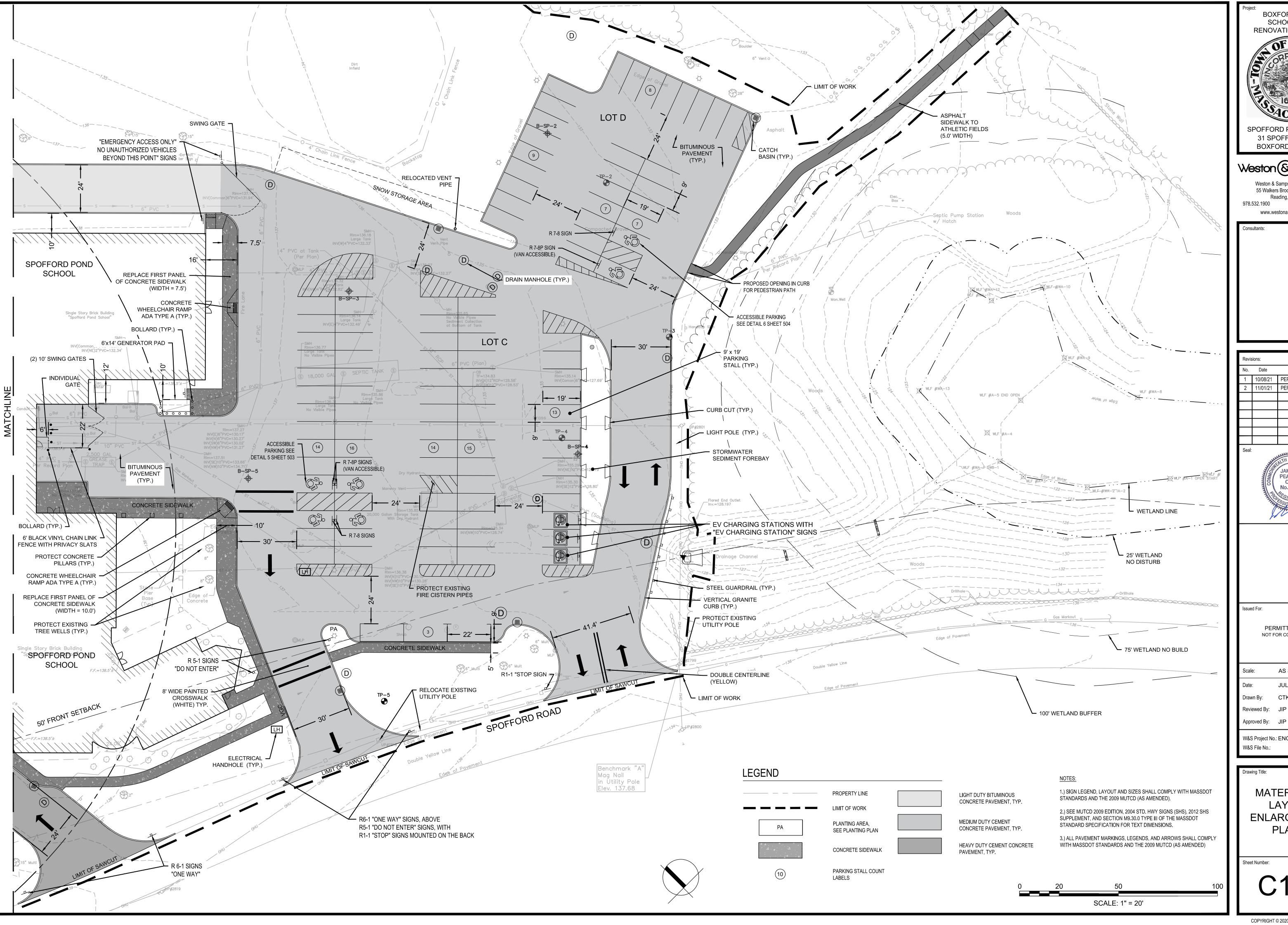
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MATERIALS & LAYOUT ENLARGEMENT PLAN I

Sheet Number:

C121



**BOXFORD PUBLIC** SCHOOLS SITE RENOVATION PROJECT SPOFFORD POND SCHOOL 31 SPOFFORD ROAD BOXFORD, MA 01921

Weston & Sampson

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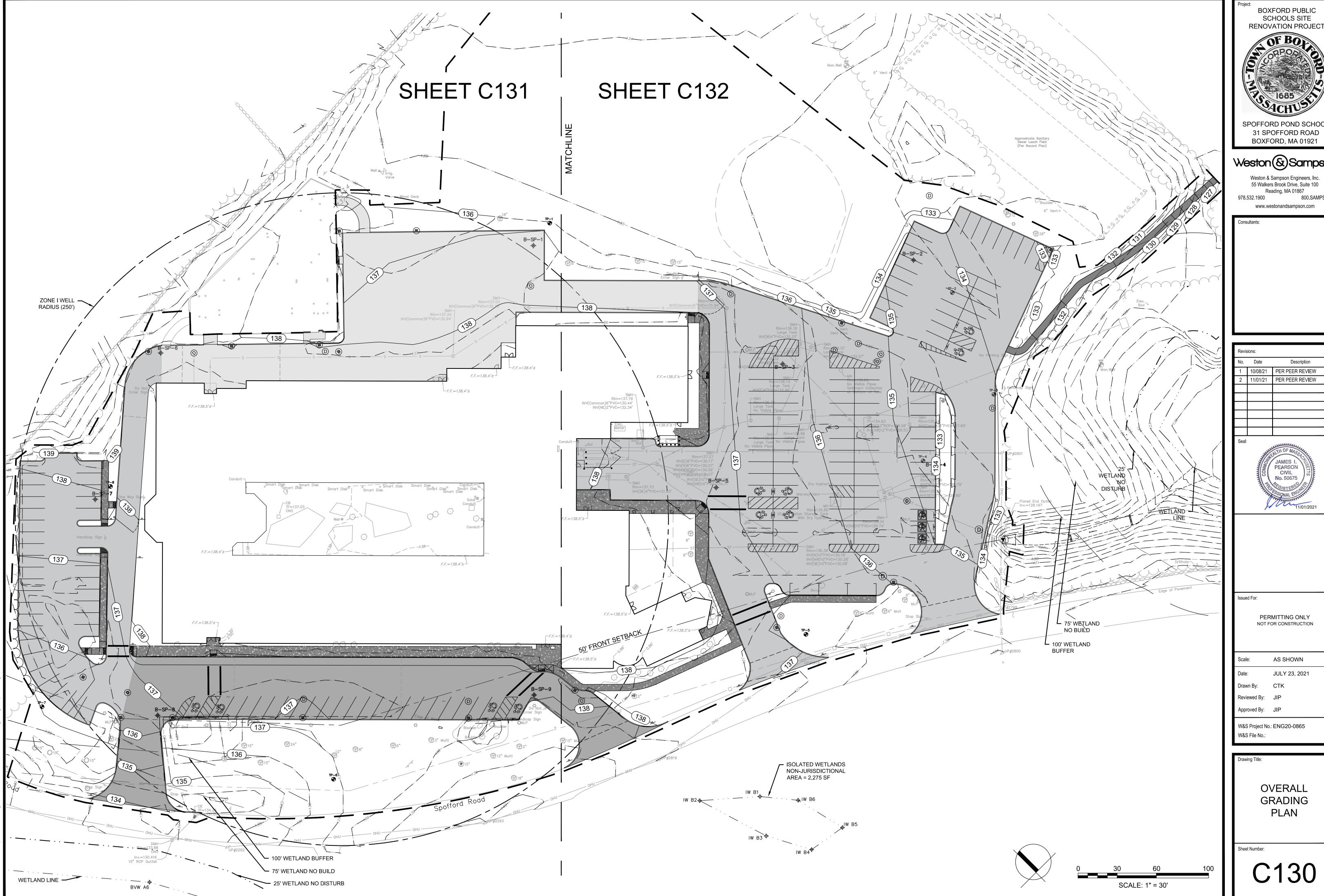
Description 10/08/21 PER PEER REVIEW 11/01/21 PER PEER REVIEW

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AS SHOWN JULY 23, 2021

W&S Project No.: ENG20-0865 W&S File No.:

MATERIALS & LAYOUT **ENLARGEMENT** PLAN II

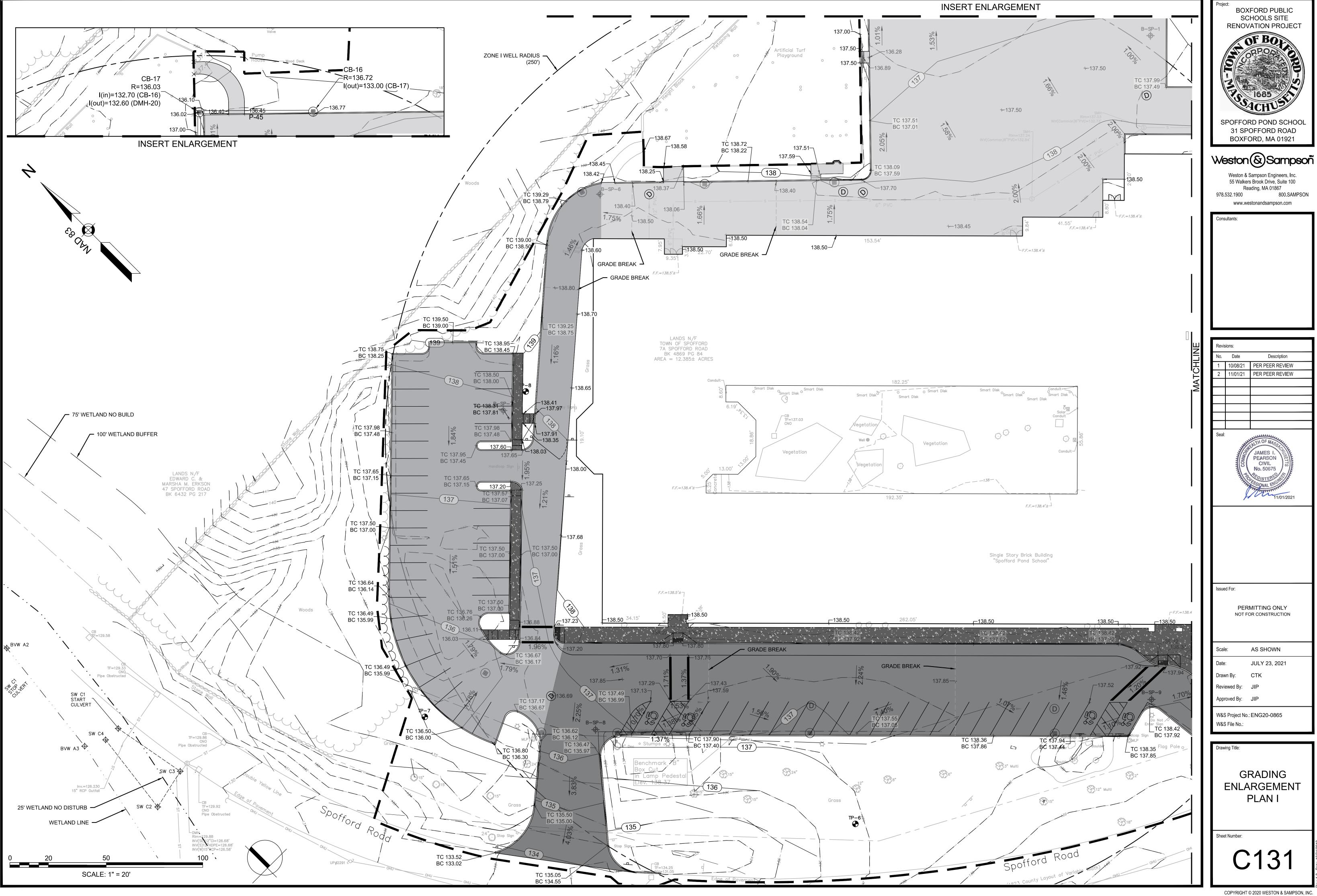


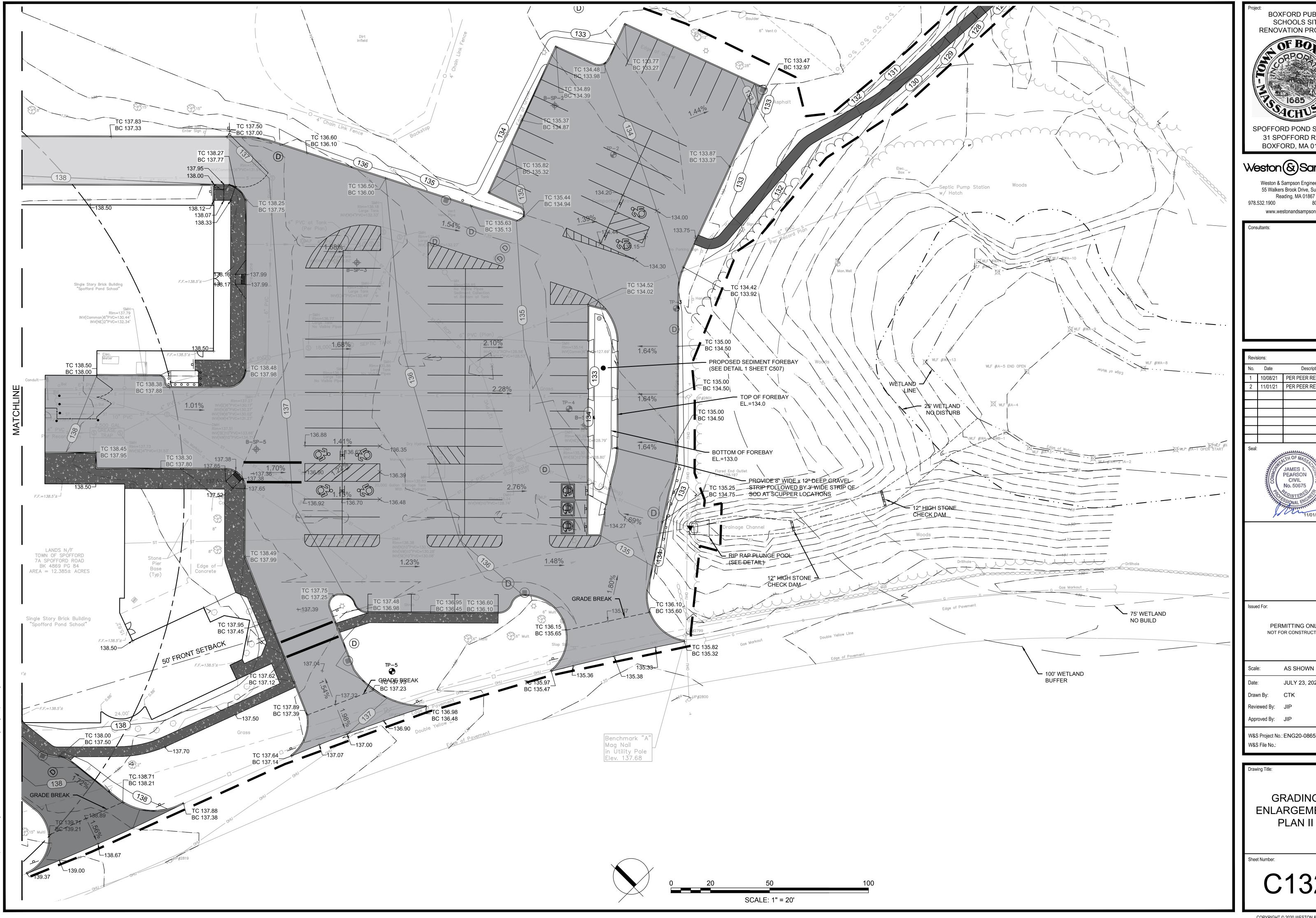
BOXFORD PUBLIC
SCHOOLS SITE
RENOVATION PROJECT

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1 10/08/21 PER PEER REVIEW 2 11/01/21 PER PEER REVIEW



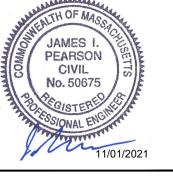


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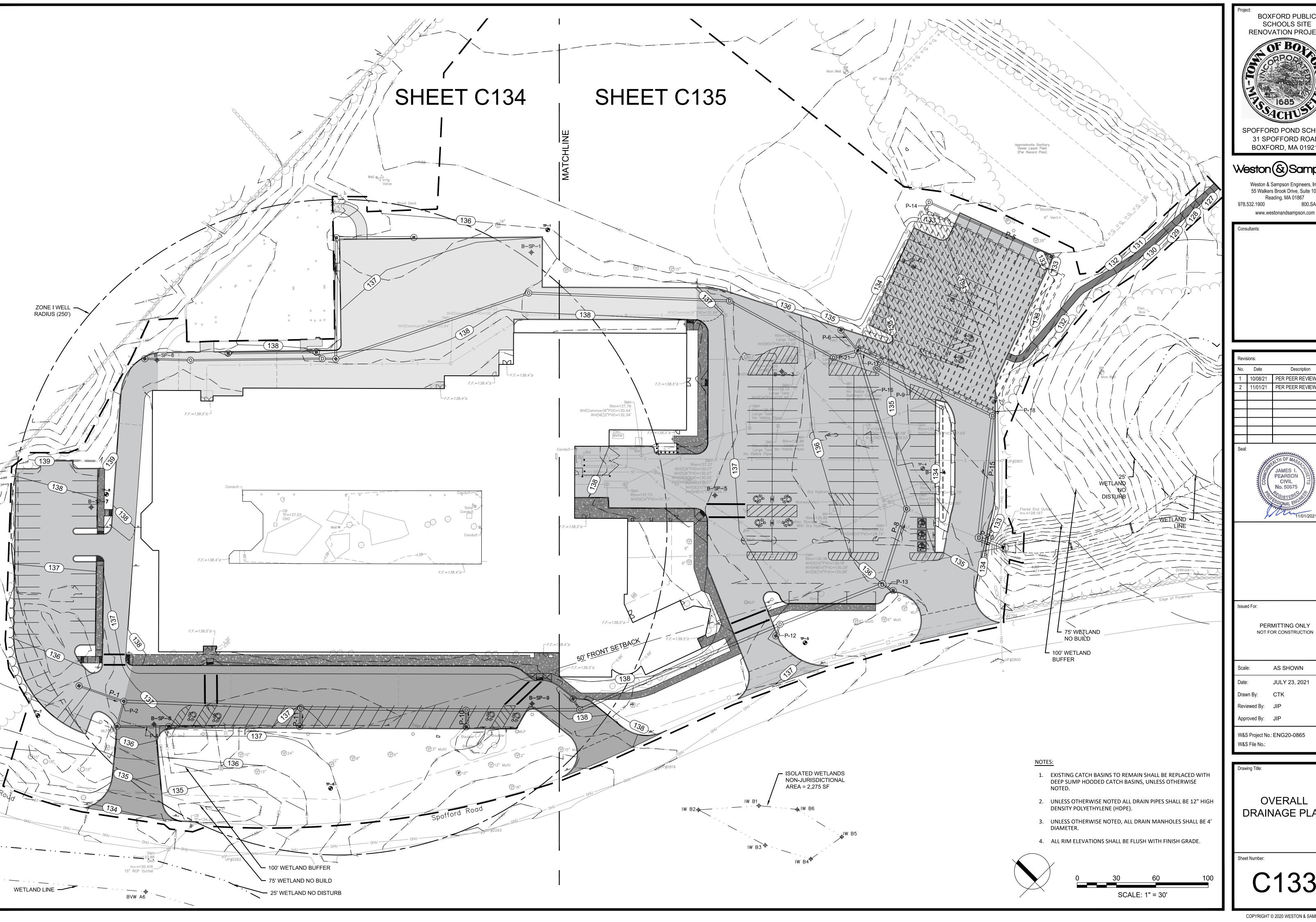


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JULY 23, 2021

W&S Project No.: ENG20-0865

GRADING **ENLARGEMENT** PLAN II



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RENOVATION PROJECT 31 SPOFFORD ROAD BOXFORD, MA 01921

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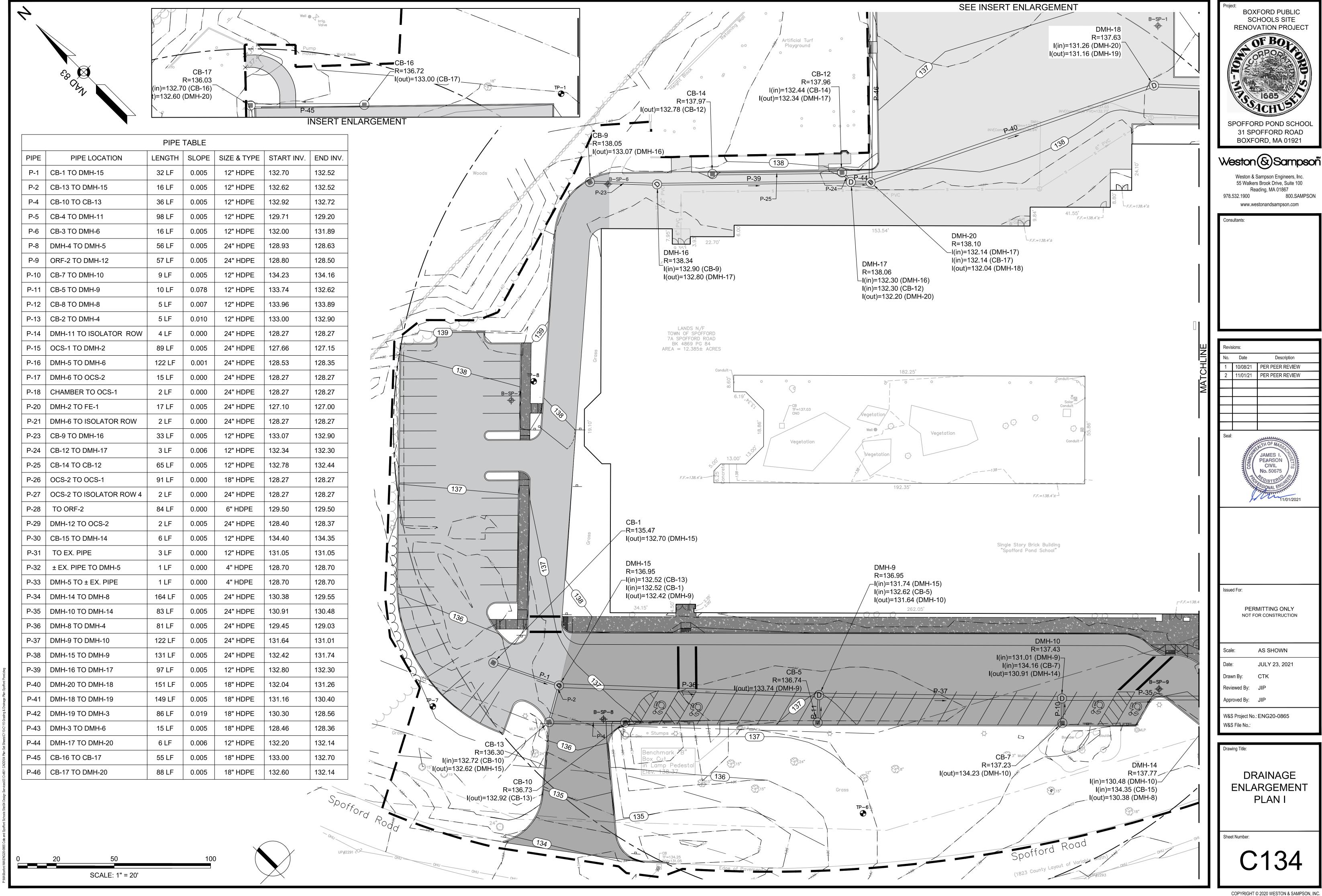
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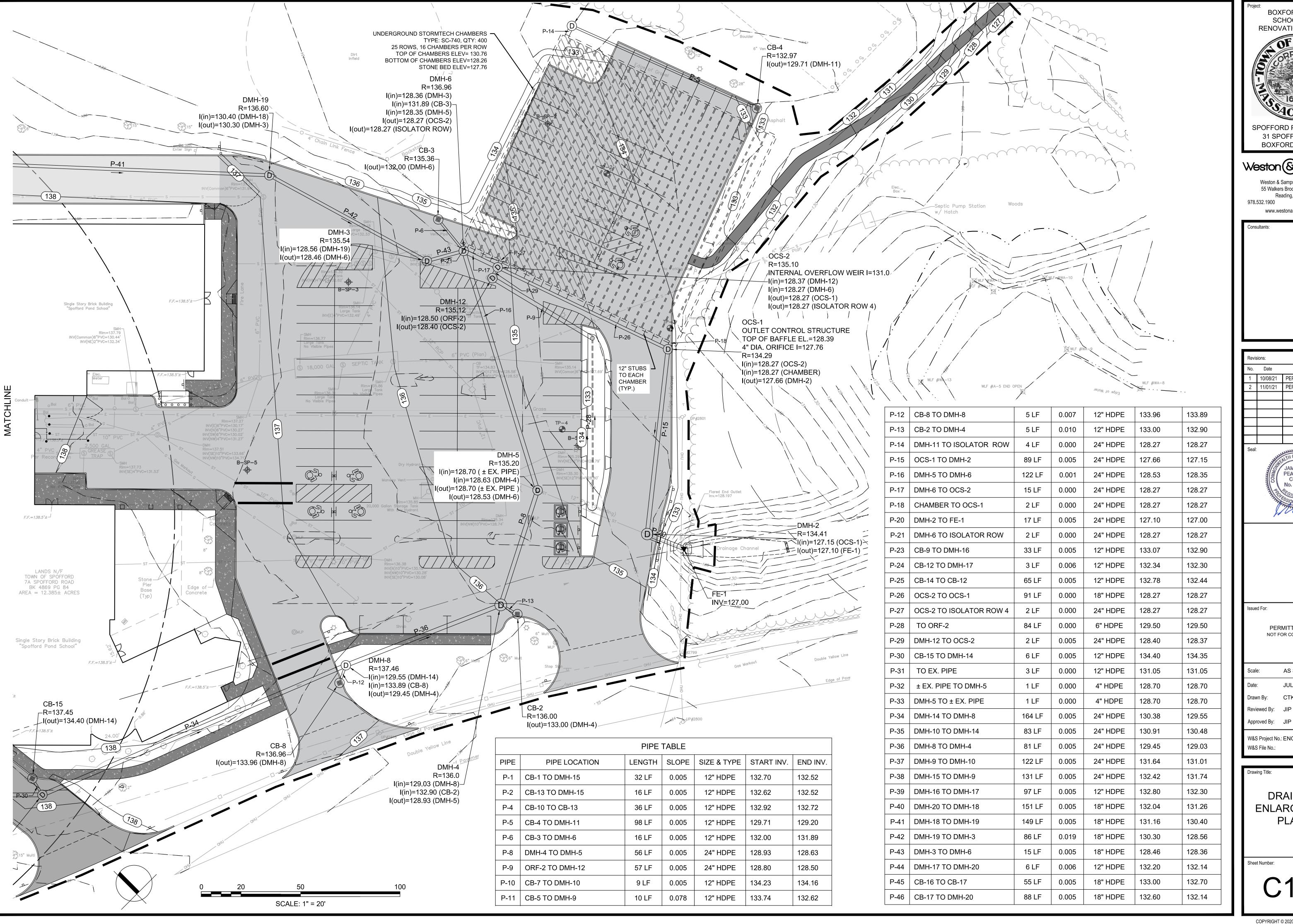
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Approved By: JIP

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OVERALL DRAINAGE PLAN





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**PEARSON** 

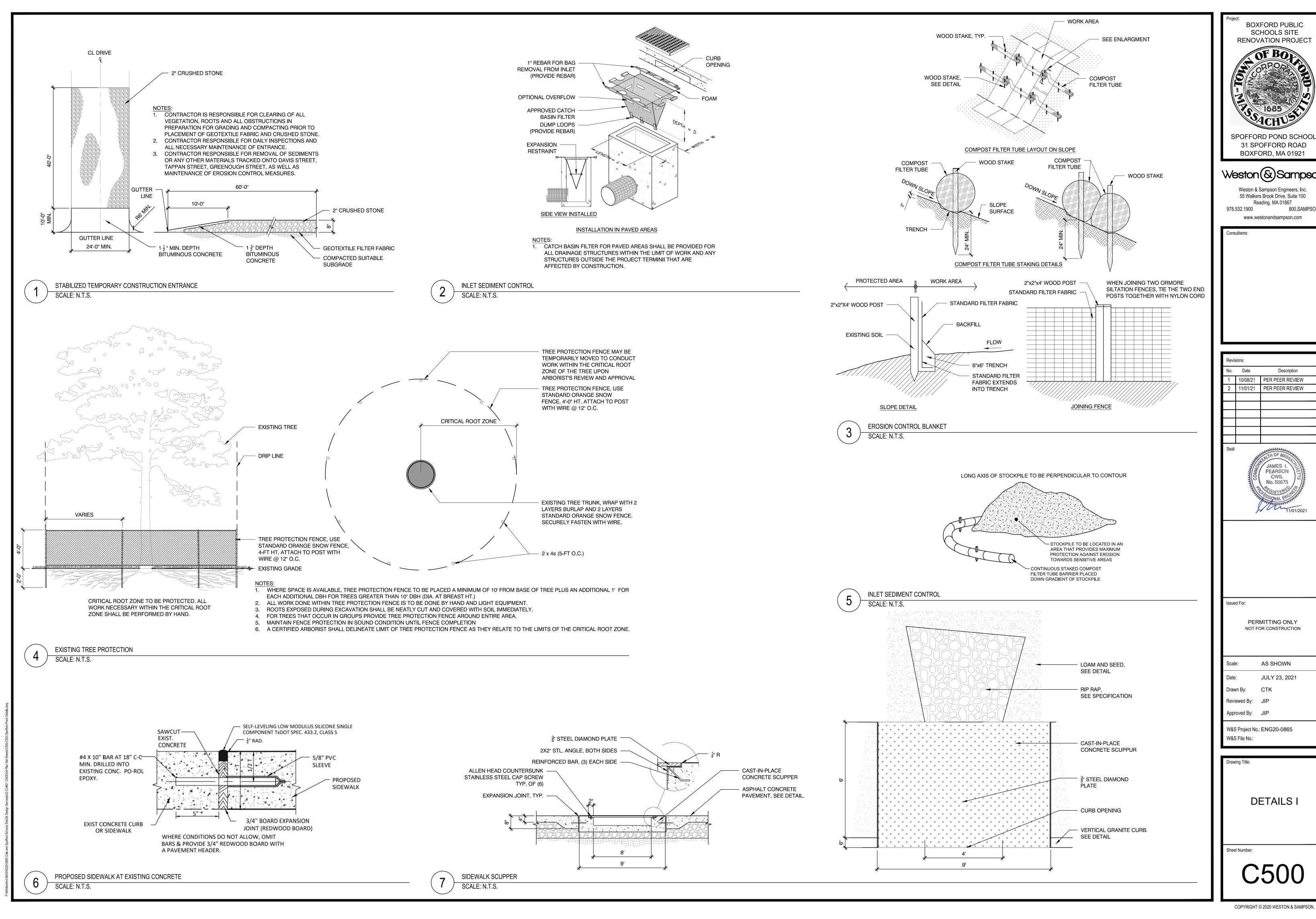
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W&S Project No.: ENG20-0865 W&S File No.:

Drawing Title:

DRAINAGE **ENLARGEMENT** PLAN II



10/08/21 PER PEER REVIEW 2 | 11/01/21 | PER PEER REVIEW JAMES I. PEARSON CIVIL PERMITTING ONLY NOT FOR CONSTRUCTION AS SHOWN JULY 23, 2021 Reviewed By: JIP Approved By: JIP W&S Project No.: ENG20-0865

Description

BOXFORD PUBLIC SCHOOLS SITE

RENOVATION PROJECT

31 SPOFFORD ROAD

BOXFORD, MA 01921

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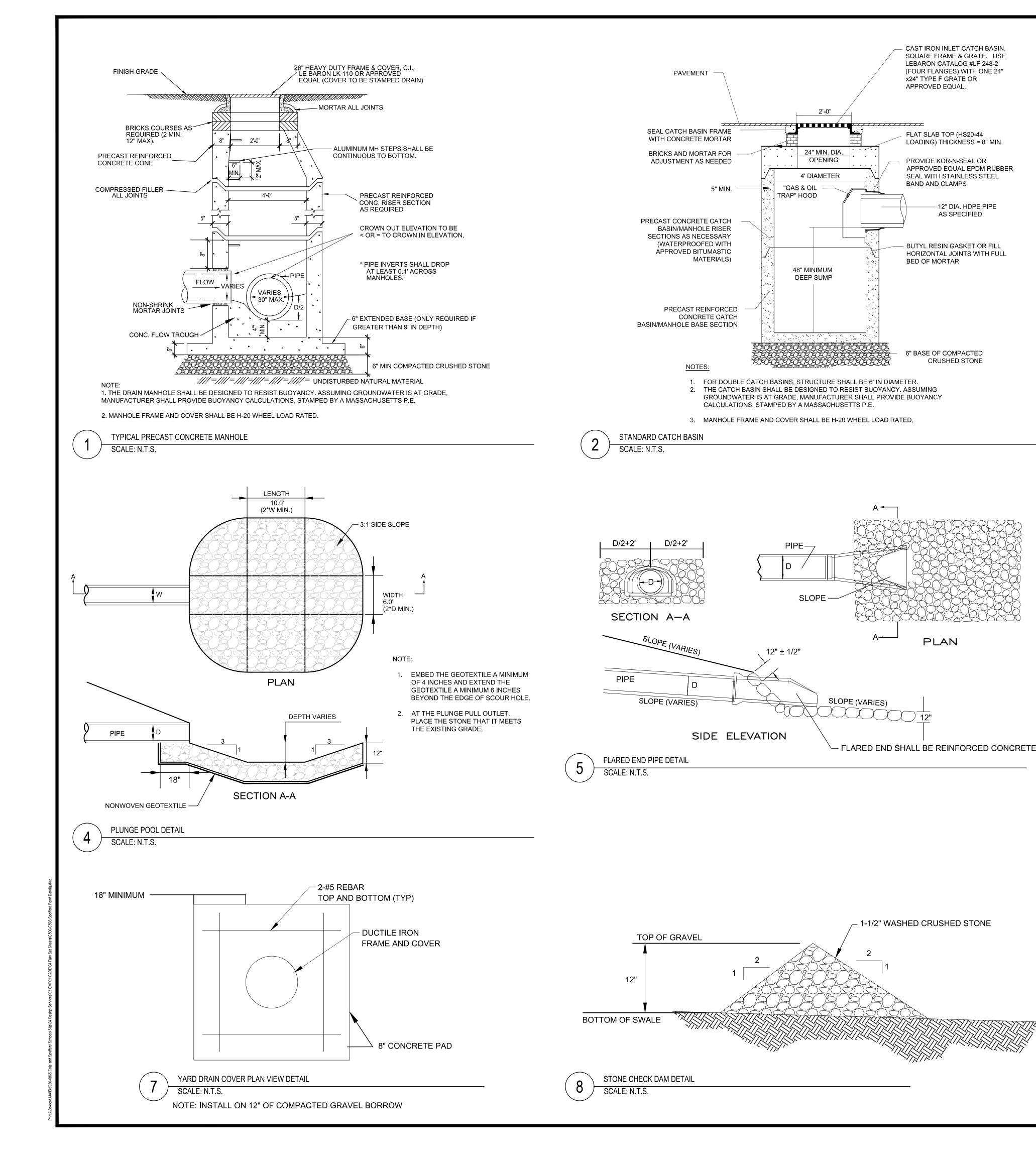
Reading, MA 01867

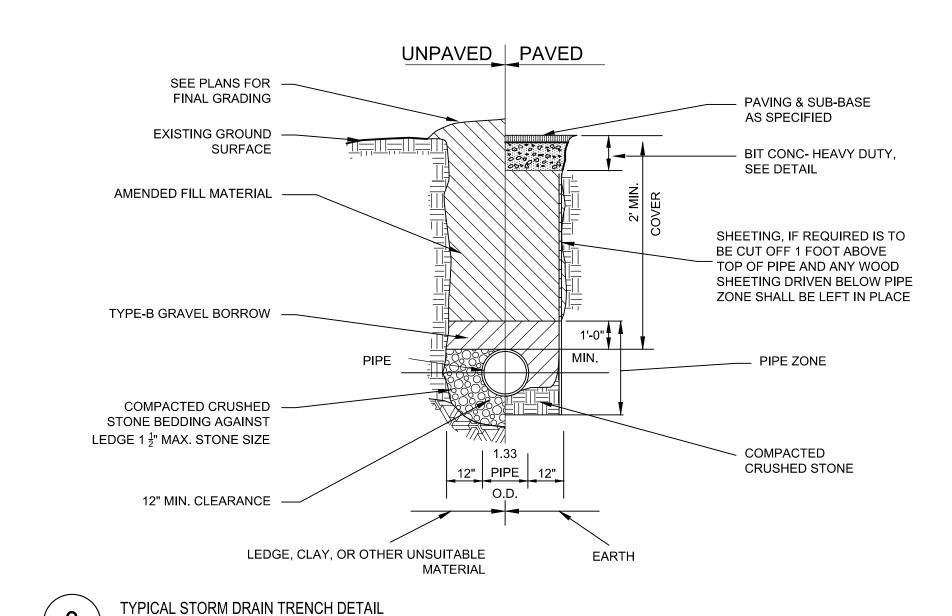
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**DETAILS I** 



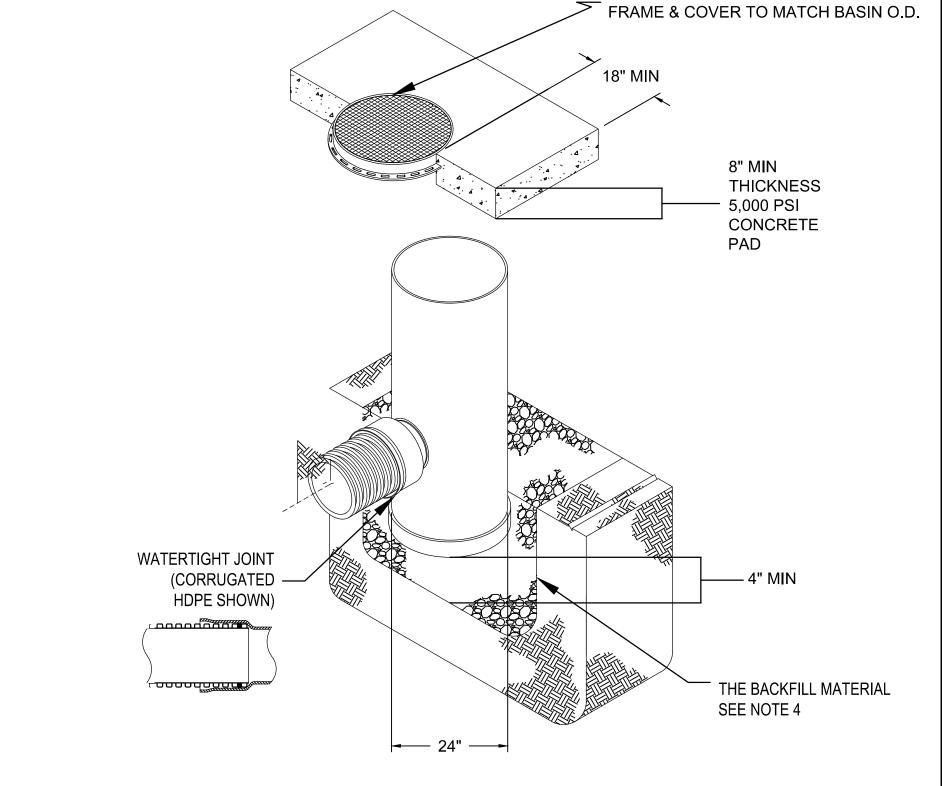


12" DIA. HDPE PIPE

AS SPECIFIED

CRUSHED STONE

PLAN

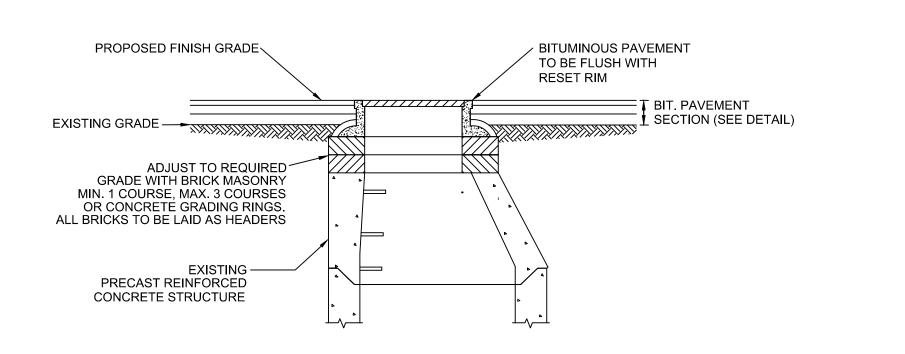


INTEGRATED DUCTILE IRON

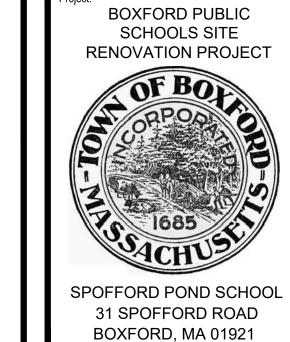
- 1. 24" SOLID COVERS SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05 AND SHALL MEET H-20 WHEEL LOAD RATING.
- 2. 24" FRAMES SHALL BE DUCTILE IRON PER ASTM A536 GRADE 70-50-05.
- 3. YARD DRAIN, COVER AND FRAME SHALL BE AS MANUFACTURED BY NYLOPLAST, OR
- APPROVED EQUAL. 4. SHALL BE 12-INCHES OF CRUSHED STONE ALL AROUND MEETING THE REQUIREMENTS SPECIFIED IN SECTION 31 23 00 - EARTHWORKS.



SCALE: N.T.S.



ADJUSTMENT OF MANHOLE COVER FOR GRADE CHANGES SCALE: N.T.S.



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Consultants:

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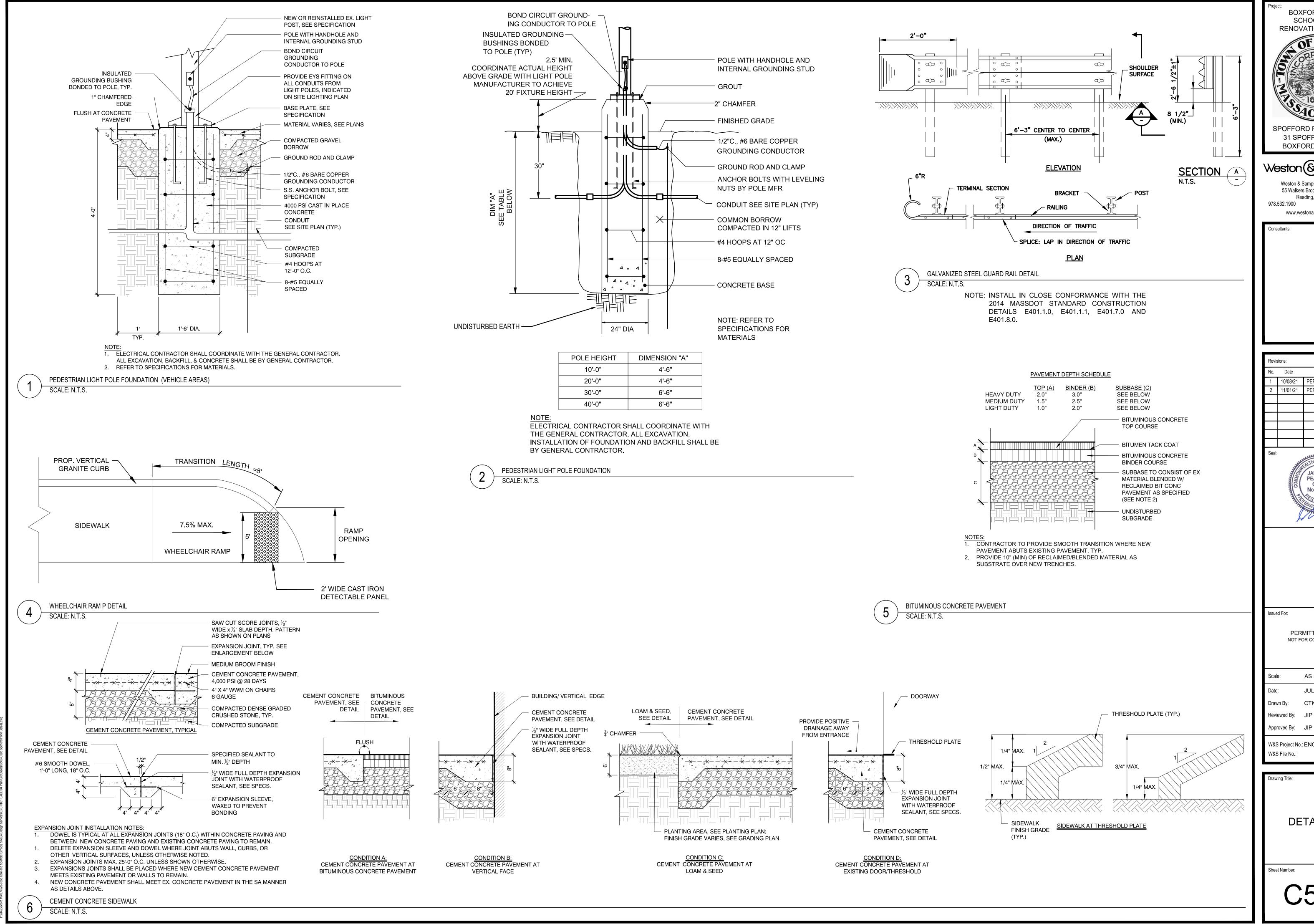
AS SHOWN JULY 23, 2021 Drawn By: Reviewed By: JIP

Issued For:

W&S Project No.: ENG20-0865 W&S File No.:

Approved By: JIP

**DETAILS II** 



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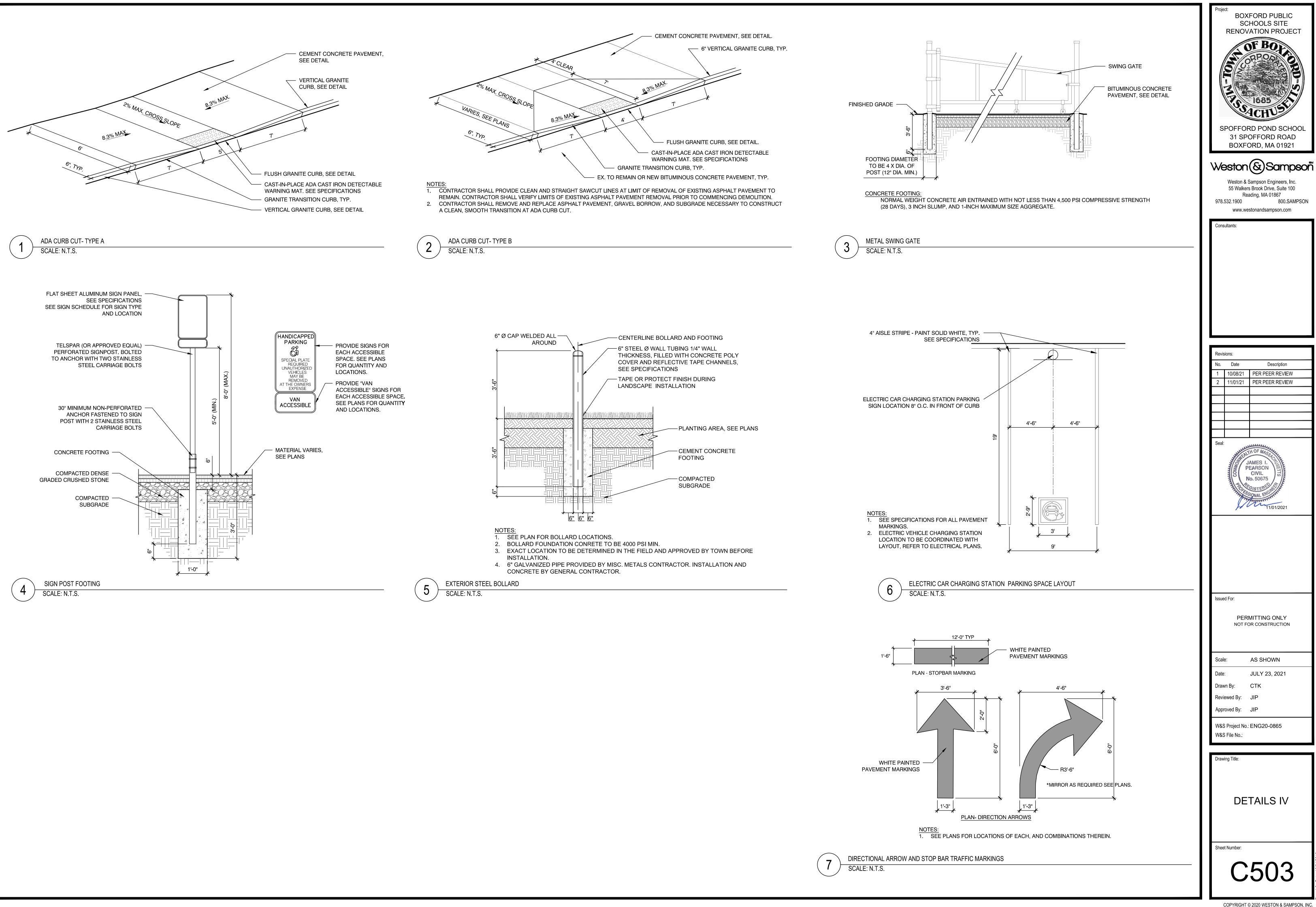
> JAMES I. PEARSON

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W&S Project No.: ENG20-0865 W&S File No.:

**DETAILS III** 



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**DETAILS IV** 

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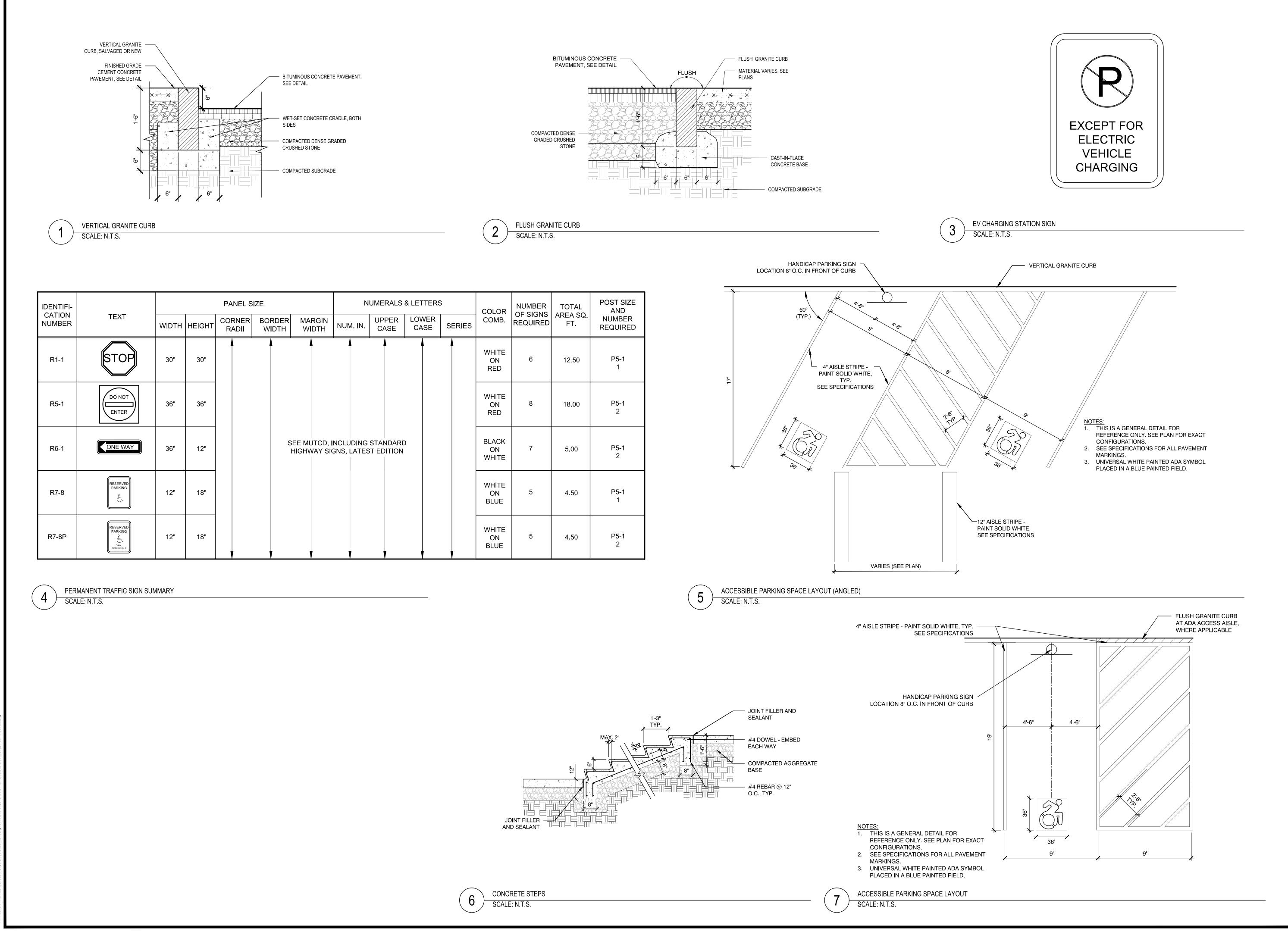
Description

JAMES I. PEARSON

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AS SHOWN

JULY 23, 2021



BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT

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55 Walkers Brook Drive, Suite 100
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Consultants:

Revisions:

No. Date Description

1 10/08/21 PER PEER REVIEW

2 11/01/21 PER PEER REVIEW



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Scale: AS SHOWN

Date: JULY 23, 2021

Drawn By: CTK

Reviewed By: JIP

W&S Project No.: ENG20-0865 W&S File No.:

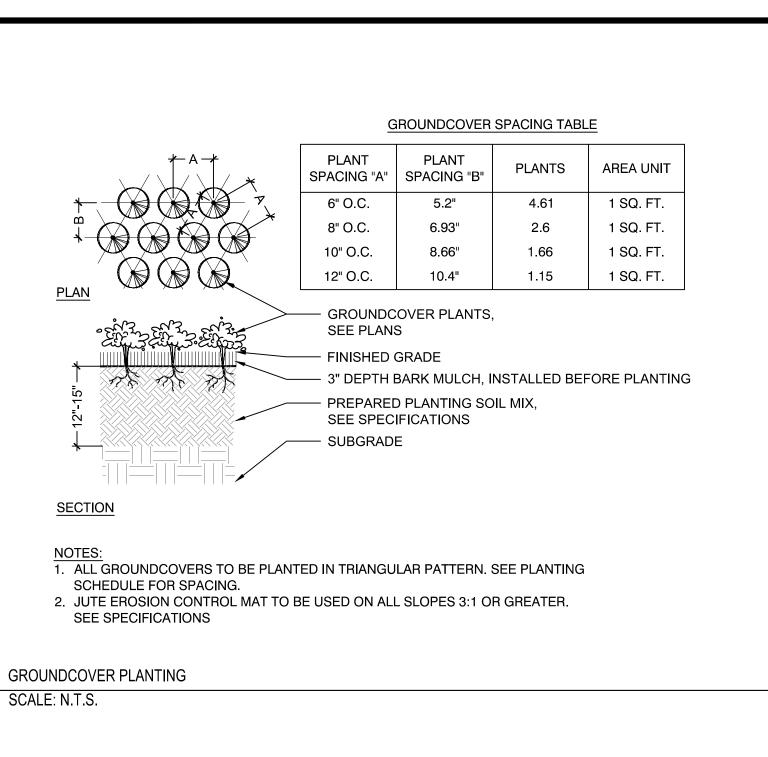
Approved By: JIP

Drawing Title

DETAILS V

Sheet Number:

C504



- 3/4" FLAT BRAIDED NYLON CORDING

- 2"x3" STAKES (3 PER TREE REQUIRED)

DECIDUOUS TREE, SEE PLANS

GUYING: 3/4" WIDE FLAT BRAIDED NYLON OR APPROVED ARBOR

TIES CORDING TIED IN FIGURE EIGHT, SECURED AT 1/3 TREE HT.

- 2"x3" STAKES DRIVE STAKES A MIN. OF 18" FIRMLY INTO SUBGRADE PRIOR TO BACKFILLING; PROVIDE TWO STAKES PER TREE, EQ. SPACED

SPECIFIED PLANTING MIX - WATER THOROUGHLY & TAMP LIGHTLY

COMPACTED SUBGRADE, PLANT TREE DIRECTLY ON SUITABLE WELL-DRAINED, EXIST. SUBGRADE - IF CONDITIONS ARE UNSUITABLE, NOTIFY OWNERS REPRESENTATIVE & SUSPEND

- GEOSYNTHETIC DEMARCATION LAYER, TYP. SEE SPECIFICATIONS

- UNTIE & FOLD BACK BURLAP & FASTENINGS TO 2/3 BALL HEIGHT. CUT & REMOVE WIRE BASKETS COMPLETELY FROM SIDES.

UNLESS ON SLOPE - THEN STAKE ON UPHILL SIDE OF TREE.

— TRUNK FLARE JUNCTION - PLANT 1-2" ABOVE FIN. GRADE

— TEMPORARY MOUNDED SOIL SAUCER, TYP.

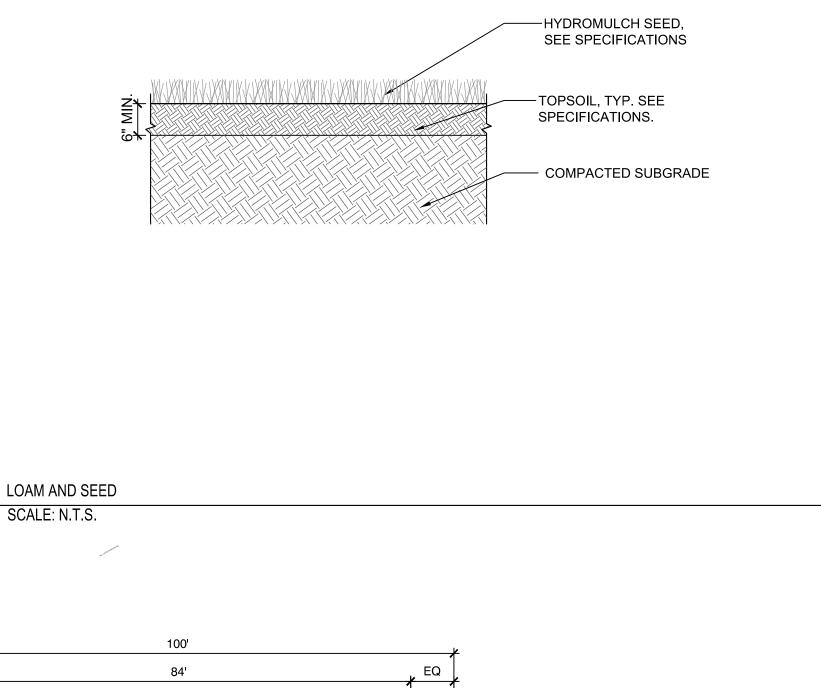
PLANTING UNTIL RESOLVED

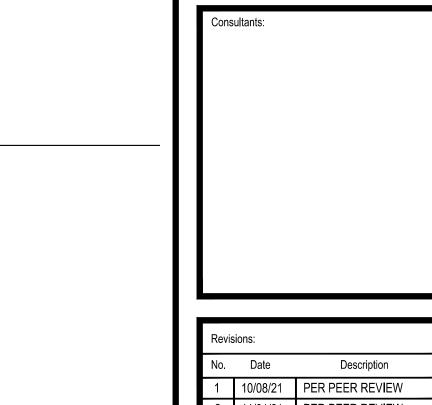
DURING BACKFILLING TO REMOVE AIR POCKETS

ABOVE FINISH GRADE. TIES SHALL BE SET LOOSE.

TIED IN FIGURE EIGHT

TREE ROOT BALL





١.			
	Revis	sions:	
	No.	Date	Description
	1	10/08/21	PER PEER REVIEW
	2	11/01/21	PER PEER REVIEW
	Seal:		

BOXFORD PUBLIC SCHOOLS SITE **RENOVATION PROJECT** 

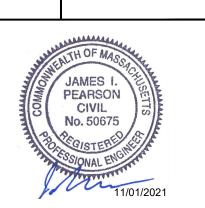
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W&S Project No.: ENG20-0865 W&S File No.:

EX. SALVAGED FENCE

& FENCE TO BE RESET

CEMENT CONCRETE FOOTING, SEE DETAIL.

FENCE POST FOOTING, TYP.

SEE DETAIL

11

<, | | · 4 5

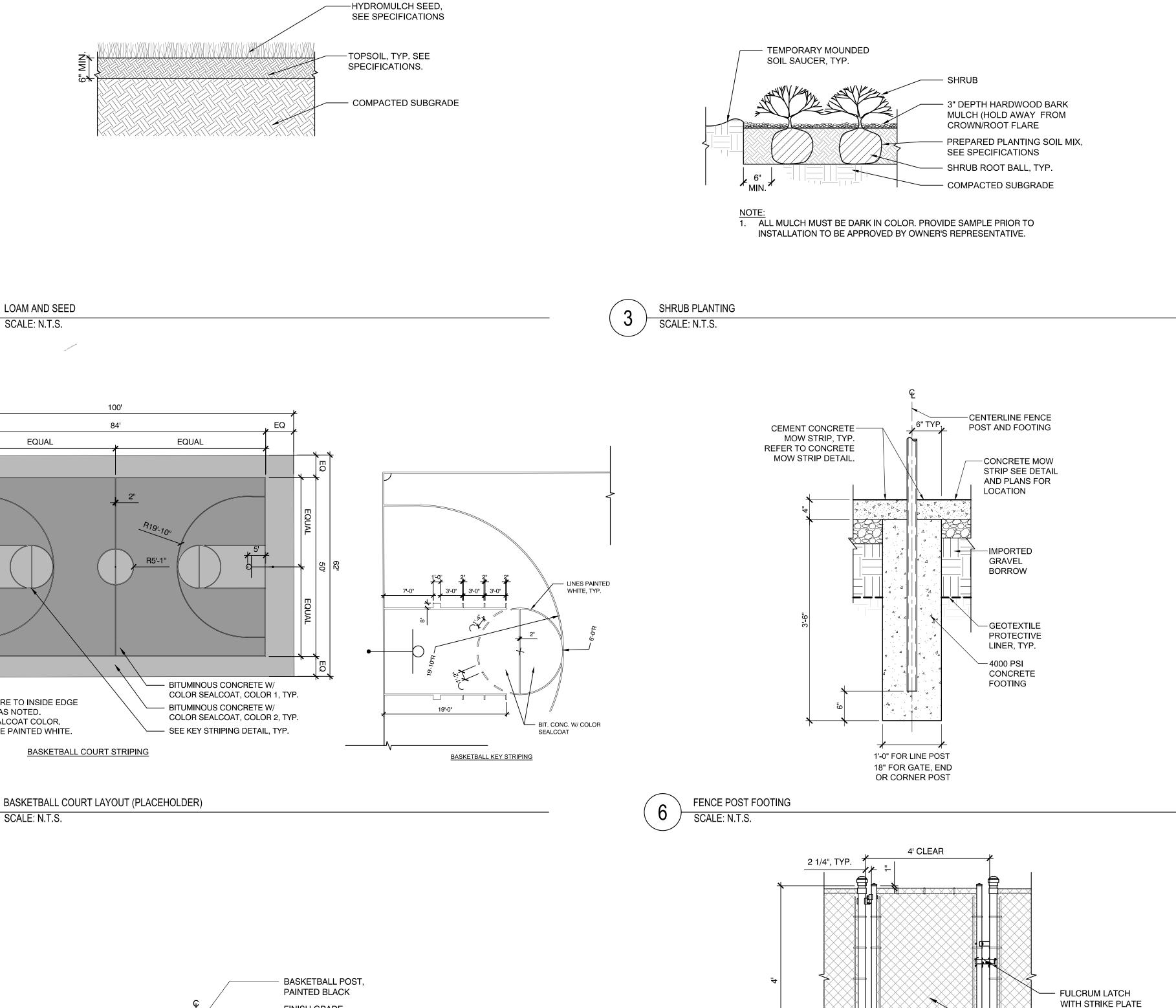
1'-6"

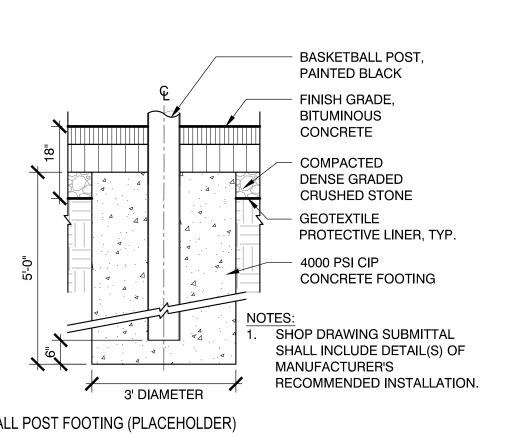
GATE POST AND FOOTING

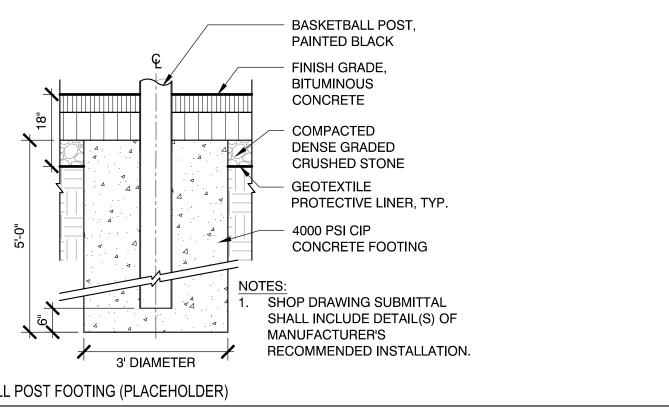
SCALE: N.T.S.

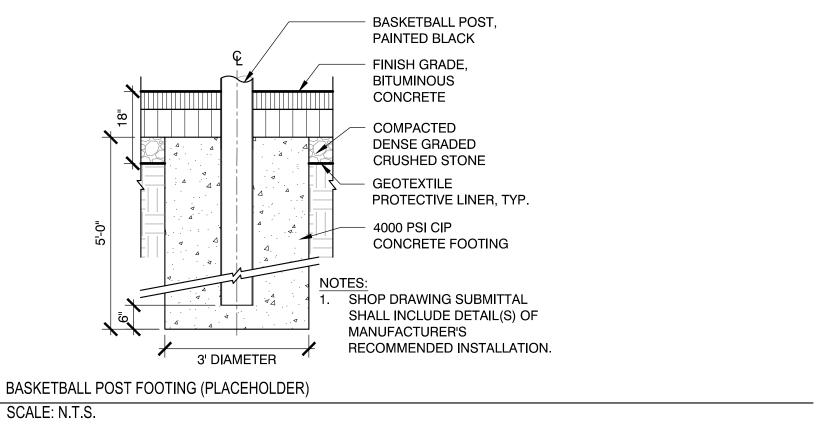
**DETAILS VI** 

Sheet Number:









2X ROOTBALL

TREE PLANTING AND STAKING

SCALE: N.T.S.

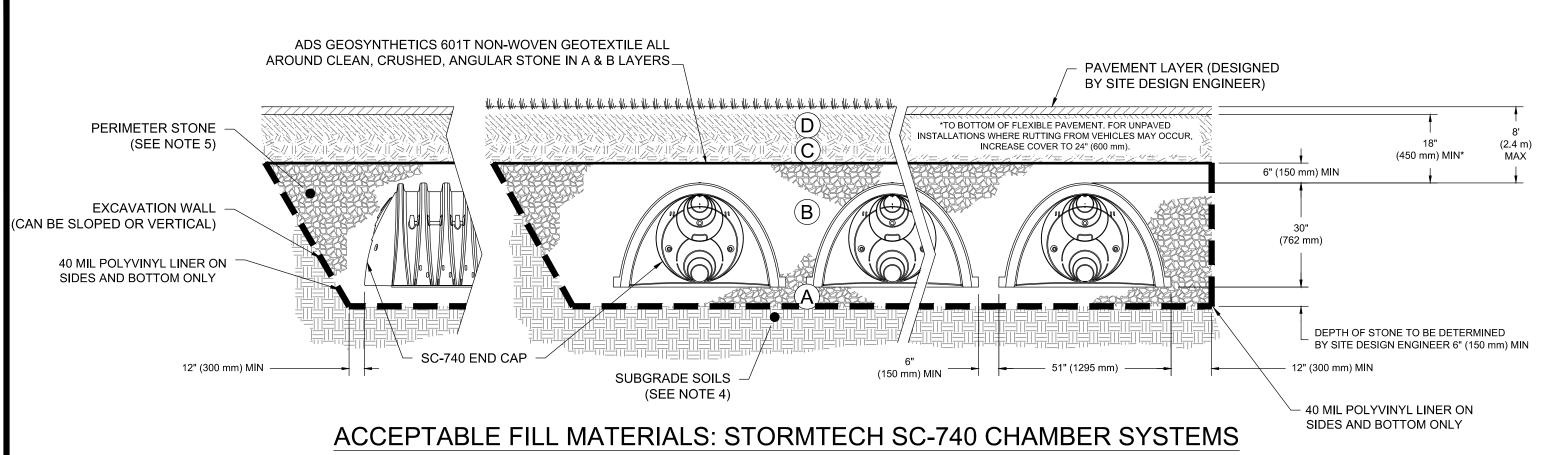
**EQUAL** 

ALL DIMENSIONS ARE TO INSIDE EDGE

OF LINES EXCEPT AS NOTED.

SEE PLAN FOR SEALCOAT COLOR.

ALL LINES SHALL BE PAINTED WHITE.



	MATERIAL LOCATION	DESCRIPTION	AASHTO MATERIAL CLASSIFICATIONS	COMPACTION / DENSITY REQUIREMENT
D	FINAL FILL: FILL MATERIAL FOR LAYER 'D' STARTS FROM THE TOP OF THE 'C' LAYER TO THE BOTTOM OF FLEXIBLE PAVEMENT OR UNPAVED FINISHED GRADE ABOVE. NOTE THAT PAVEMENT SUBBASE MAY BE PART OF THE 'D' LAYER	ANY SOIL/ROCK MATERIALS, NATIVE SOILS, OR PER ENGINEER'S PLANS. CHECK PLANS FOR PAVEMENT SUBGRADE REQUIREMENTS.	N/A	PREPARE PER SITE DESIGN ENGINEER'S PLANS. PAVED INSTALLATIONS MAY HAVE STRINGENT MATERIAL AND PREPARATION REQUIREMENTS.
С	INITIAL FILL: FILL MATERIAL FOR LAYER 'C' STARTS FROM THE TOP OF THE EMBEDMENT STONE ('B' LAYER) TO 18" (450 mm) ABOVE THE TOP OF THE CHAMBER. NOTE THAT PAVEMENT SUBBASE MAY BE A PART OF THE 'C' LAYER.	GRANULAR WELL-GRADED SOIL/AGGREGATE MIXTURES, <35% FINES OR PROCESSED AGGREGATE. MOST PAVEMENT SUBBASE MATERIALS CAN BE USED IN LIEU OF THIS LAYER.	OR	BEGIN COMPACTIONS AFTER 12" (300 mm) OF MATERIAL OVER THE CHAMBERS IS REACHED. COMPACT ADDITIONAL LAYERS IN 6" (150 mm) MAX LIFTS TO A MIN. 95% PROCTOR DENSITY FOR WELL GRADED MATERIAL AND 95% RELATIVE DENSITY FOR PROCESSED AGGREGATE MATERIALS. ROLLER GROSS VEHICLE WEIGHT NOT TO EXCEED 12,000 lbs (53 kN). DYNAMIC FORCE NOT TO EXCEED 20,000 lbs (89 kN).
В	EMBEDMENT STONE: FILL SURROUNDING THE CHAMBERS FROM THE FOUNDATION STONE ('A' LAYER) TO THE 'C' LAYER ABOVE.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	NO COMPACTION REQUIRED.
А	FOUNDATION STONE: FILL BELOW CHAMBERS FROM THE SUBGRADE UP TO THE FOOT (BOTTOM) OF THE CHAMBER.	CLEAN, CRUSHED, ANGULAR STONE	AASHTO M43 <sup>1</sup> 3, 357, 4, 467, 5, 56, 57	PLATE COMPACT OR ROLL TO ACHIEVE A FLAT SURFACE. <sup>2,3</sup>

- 1. THE LISTED AASHTO DESIGNATIONS ARE FOR GRADATIONS ONLY. THE STONE MUST ALSO BE CLEAN, CRUSHED, ANGULAR. FOR EXAMPLE, A SPECIFICATION FOR #4 STONE WOULD STATE: "CLEAN, CRUSHED, ANGULAR NO. 4 (AASHTO M43) STONE".
- STORMTECH COMPACTION REQUIREMENTS ARE MET FOR 'A' LOCATION MATERIALS WHEN PLACED AND COMPACTED IN 6" (150 mm) (MAX) LIFTS USING TWO FULL COVERAGES WITH A VIBRATORY COMPACTOR. 3. WHERE INFILTRATION SURFACES MAY BE COMPROMISED BY COMPACTION, FOR STANDARD DESIGN LOAD CONDITIONS, A FLAT SURFACE MAY BE ACHIEVED BY RAKING OR DRAGGING WITHOUT COMPACTION EQUIPMENT. FOR SPECIAL LOAD DESIGNS, CONTACT STORMTECH FOR COMPACTION REQUIREMENTS

# **NOTES:**

- SC-740 CHAMBERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F2418 "STANDARD SPECIFICATION FOR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS' OR ASTM F2922 "STANDARD SPECIFICATION FOR POLYETHYLENE (PE) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- SC-740 CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
- "ACCEPTABLE FILL MATERIALS" TABLE ABOVE PROVIDES MATERIAL LOCATIONS, DESCRIPTIONS, GRADATIONS, AND COMPACTION REQUIREMENTS FOR FOUNDATION, EMBEDMENT, AND FILL MATERIALS.
- THE SITE DESIGN ENGINEER IS RESPONSIBLE FOR ASSESSING THE BEARING RESISTANCE (ALLOWABLE BEARING CAPACITY) OF THE SUBGRADE SOILS AND THE DEPTH OF FOUNDATION STONE WITH CONSIDERATION FOR THE RANGE OF EXPECTED SOIL MOISTURE CONDITIONS.
- PERIMETER STONE MUST BE EXTENDED HORIZONTALLY TO THE EXCAVATION WALL FOR BOTH VERTICAL AND SLOPED EXCAVATION WALLS.
- ONCE LAYER 'C' IS PLACED, ANY SOIL/MATERIAL CAN BE PLACED IN LAYER 'D' UP TO THE FINISHED GRADE. MOST PAVEMENT SUBBASE SOILS CAN BE USED TO REPLACE THE MATERIAL REQUIREMENTS OF LAYER 'C' OR 'D' AT THE SITE DESIGN ENGINEER'S DISCRETION.

#### INSPECTION & MAINTENANCE

- STEP 1) INSPECT ISOLATOR ROW FOR SEDIMENT
  - A. INSPECTION PORTS (IF PRESENT)
  - A.1. REMOVE/OPEN LID ON NYLOPLAST INLINE DRAIN
  - A.2. REMOVE AND CLEAN FLEXSTORM FILTER IF INSTALLED A.3. USING A FLASHLIGHT AND STADIA ROD, MEASURE DEPTH OF SEDIMENT AND RECORD ON
  - MAINTENANCE LOG
  - A.4. LOWER A CAMERA INTO ISOLATOR ROW FOR VISUAL INSPECTION OF SEDIMENT LEVELS (OPTIONAL)

  - A.5. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3. B. ALL ISOLATOR ROWS
  - B.1. REMOVE COVER FROM STRUCTURE AT UPSTREAM END OF ISOLATOR ROW B.2. USING A FLASHLIGHT, INSPECT DOWN THE ISOLATOR ROW THROUGH OUTLET PIPE
  - i) MIRRORS ON POLES OR CAMERAS MAY BE USED TO AVOID A CONFINED SPACE ENTRY
  - ii) FOLLOW OSHA REGULATIONS FOR CONFINED SPACE ENTRY IF ENTERING MANHOLE B.3. IF SEDIMENT IS AT, OR ABOVE, 3" (80 mm) PROCEED TO STEP 2. IF NOT, PROCEED TO STEP 3.
- STEP 2) CLEAN OUT ISOLATOR ROW USING THE JETVAC PROCESS
  - A. A FIXED CULVERT CLEANING NOZZLE WITH REAR FACING SPREAD OF 45" (1.1 m) OR MORE IS

REPLACE ALL COVERS, GRATES, FILTERS, AND LIDS; RECORD OBSERVATIONS AND ACTIONS.

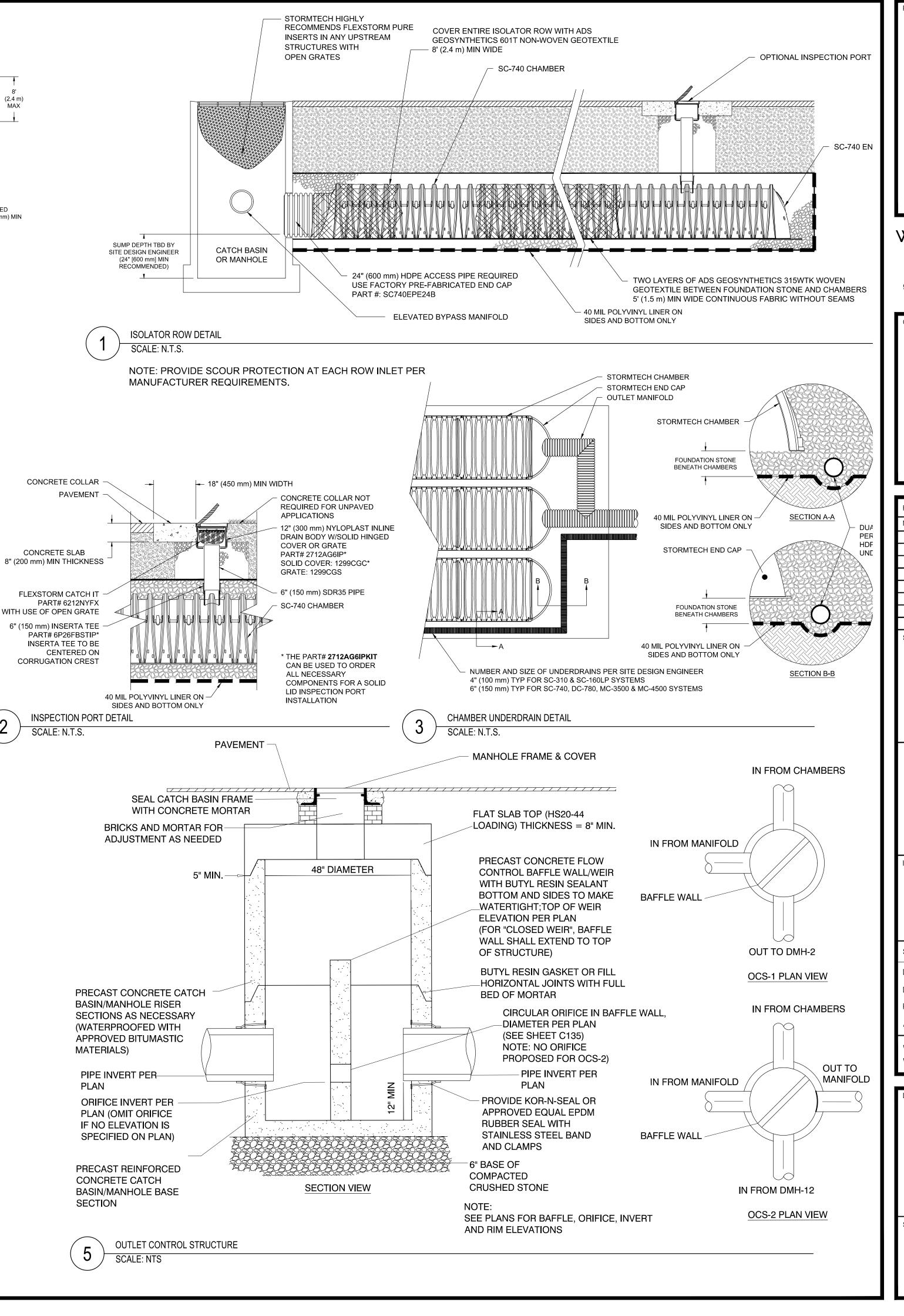
- PREFERRED B. APPLY MULTIPLE PASSES OF JETVAC UNTIL BACKFLUSH WATER IS CLEAN
- C. VACUUM STRUCTURE SUMP AS REQUIRED
- INSPECT AND CLEAN BASINS AND MANHOLES UPSTREAM OF THE STORMTECH SYSTEM.

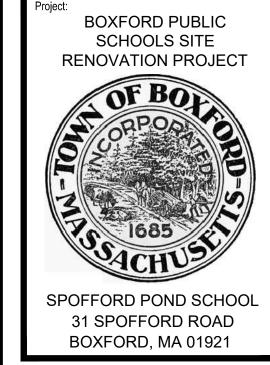
#### **NOTES**

- 1. INSPECT EVERY 6 MONTHS DURING THE FIRST YEAR OF OPERATION. ADJUST THE INSPECTION INTERVAL BASED ON PREVIOUS OBSERVATIONS OF SEDIMENT ACCUMULATION AND HIGH WATER ELEVATIONS.
- 2. CONDUCT JETTING AND VACTORING ANNUALLY OR WHEN INSPECTION SHOWS THAT MAINTENANCE IS NECESSARY.

INFILTRATION CHAMBERS CROSS SECTION (MC-3500)

SCALE: N.T.S





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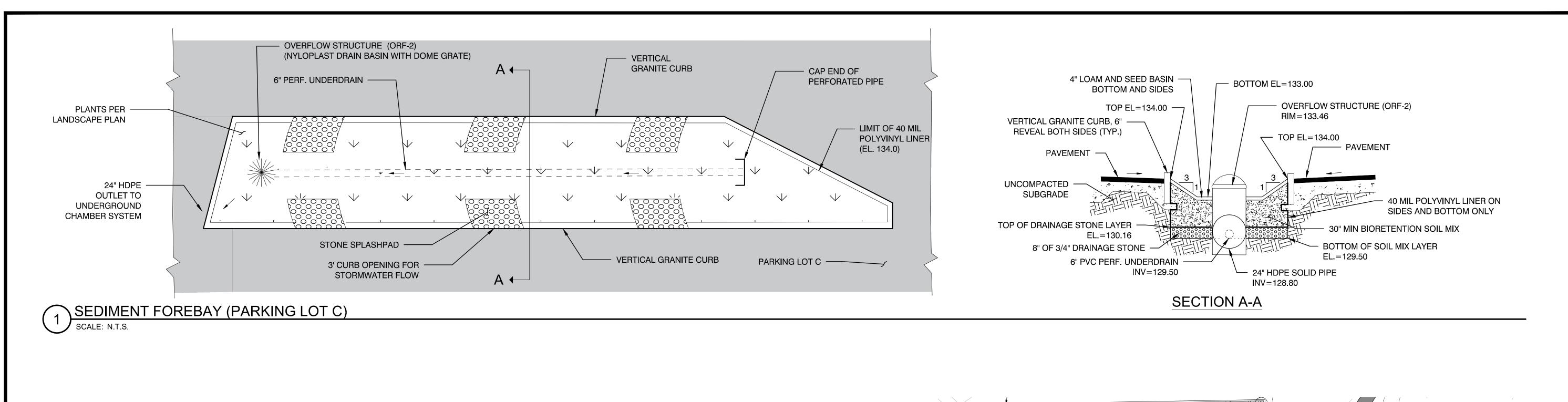
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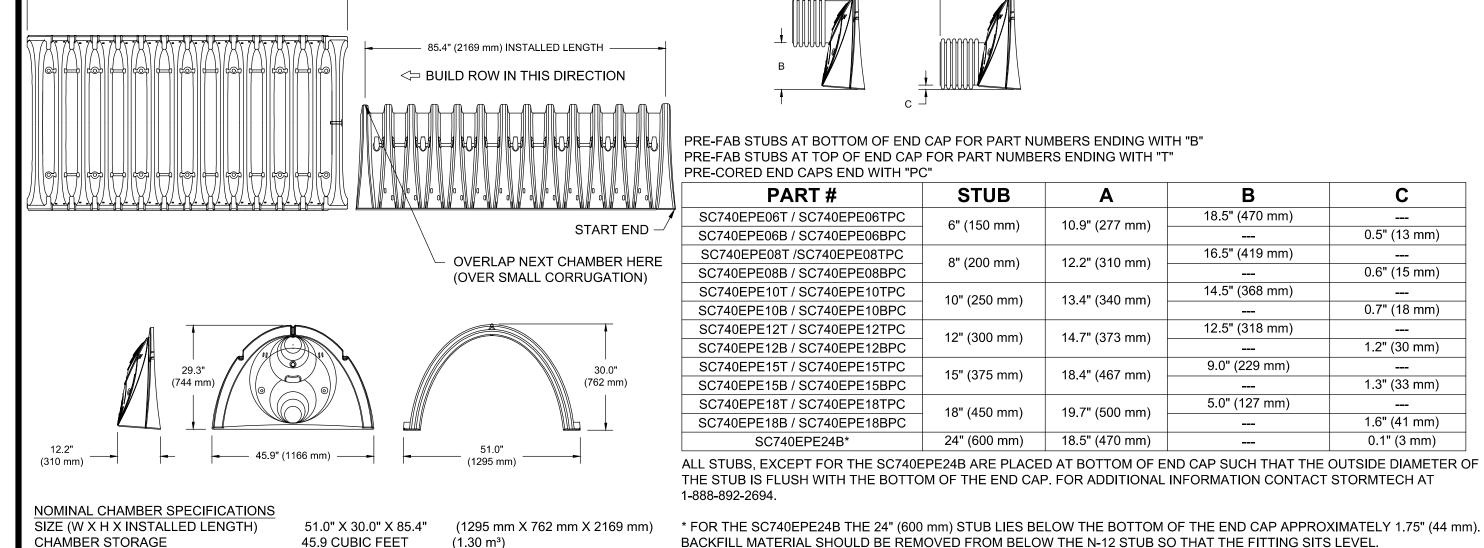
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**DETAILS VII** 

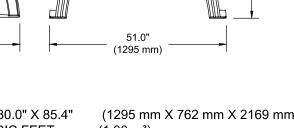




74.9 CUBIC FEET

75.0 lbs.

— 90.7" (2304 mm) ACTUAL LENGTH ————



(2.12 m<sup>3</sup>)

(33.6 kg)

PRE-FAB STUBS AT BOTTOM OF END CAP FOR PART NUMBERS ENDING WITH "B" PRE-FAB STUBS AT TOP OF END CAP FOR PART NUMBERS ENDING WITH "T"

PART#	STUB	Α	В	С	
SC740EPE06T / SC740EPE06TPC	6" (150 mm)	10.9" (277 mm)	18.5" (470 mm)		
SC740EPE06B / SC740EPE06BPC	0 (130 11111)	10.9 (277 111111)		0.5" (13 mm)	
SC740EPE08T /SC740EPE08TPC	011 (200 mans)	12.2" (310 mm)	16.5" (419 mm)		
SC740EPE08B / SC740EPE08BPC	8" (200 mm)	12.2 (310111111)		0.6" (15 mm)	
SC740EPE10T / SC740EPE10TPC	10" (250 mm)	13.4" (340 mm)	14.5" (368 mm)		
SC740EPE10B / SC740EPE10BPC		13.4 (340 11111)		0.7" (18 mm)	
SC740EPE12T / SC740EPE12TPC	40!! (200)	14.7" (373 mm)	12.5" (318 mm)		
SC740EPE12B / SC740EPE12BPC	12 (300 11111)	12" (300 mm) 14.7" (373 mm)		1.2" (30 mm)	
SC740EPE15T / SC740EPE15TPC	15" (275 mm)	18.4" (467 mm)	9.0" (229 mm)		
SC740EPE15B / SC740EPE15BPC	15" (375 mm)	10.4 (407 111111)		1.3" (33 mm)	
SC740EPE18T / SC740EPE18TPC	1011 (450 mags)	101 (450 2222) 10 71 (500 2222)	10.7" (500 mm)	5.0" (127 mm)	
SC740EPE18B / SC740EPE18BPC	18" (450 mm)	19.7" (500 mm)		1.6" (41 mm)	
SC740EPE24B*	24" (600 mm)	18.5" (470 mm)		0.1" (3 mm)	

THE STUB IS FLUSH WITH THE BOTTOM OF THE END CAP. FOR ADDITIONAL INFORMATION CONTACT STORMTECH AT 1-888-892-2694.

\* FOR THE SC740EPE24B THE 24" (600 mm) STUB LIES BELOW THE BOTTOM OF THE END CAP APPROXIMATELY 1.75" (44 mm). BACKFILL MATERIAL SHOULD BE REMOVED FROM BELOW THE N-12 STUB SO THAT THE FITTING SITS LEVEL.

NOTE: ALL DIMENSIONS ARE NOMINAL

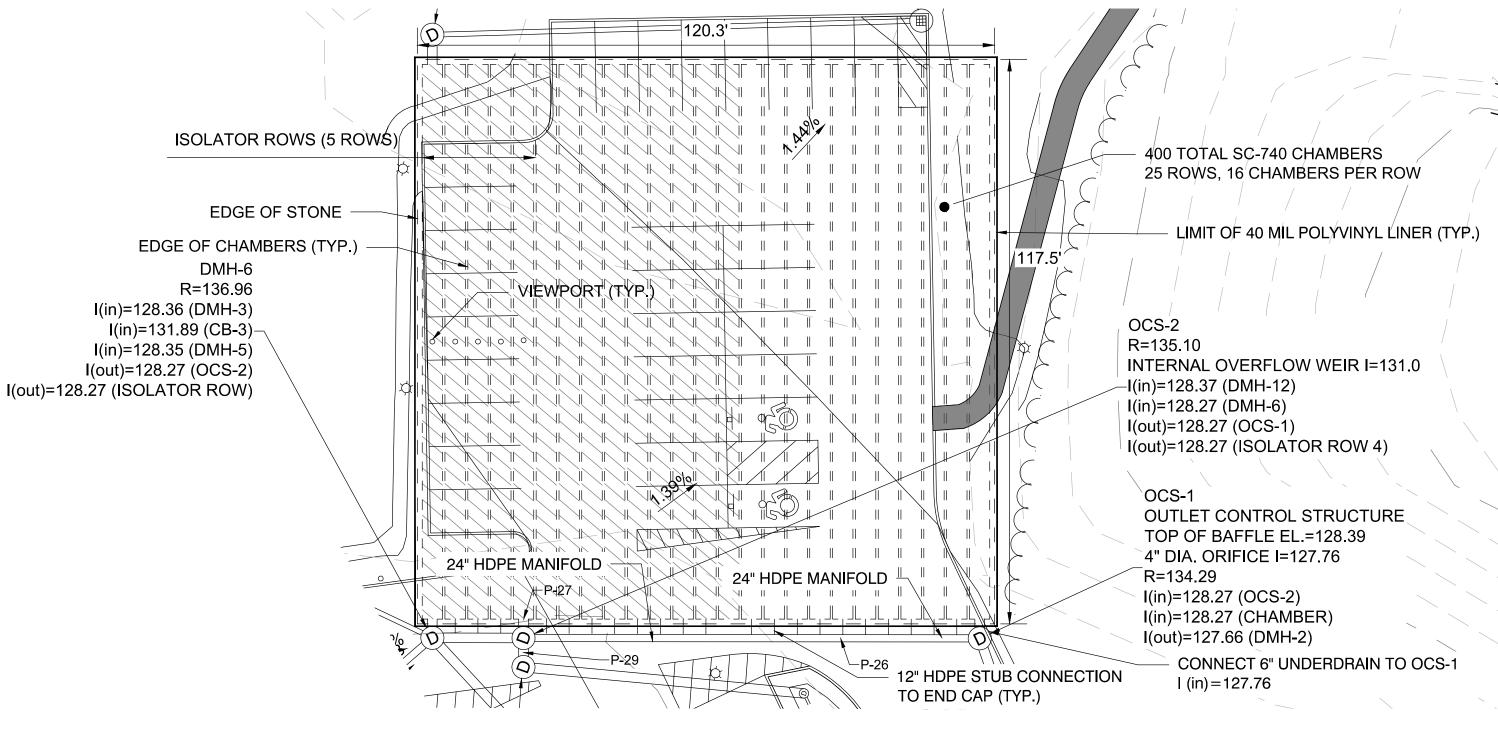


\*ASSUMES 6" (152 mm) STONE ABOVE, BELOW, AND BETWEEN CHAMBERS

MINIMUM INSTALLED STORAGE\*

WEIGHT

\UNDERGROUND STORMTECH SYSTEM LAYOUT (PARKING LOT C)

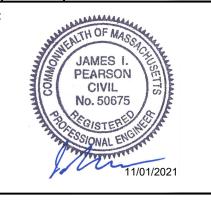


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Description 10/08/21 PER PEER REVIEW 2 11/01/21 PER PEER REVIEW



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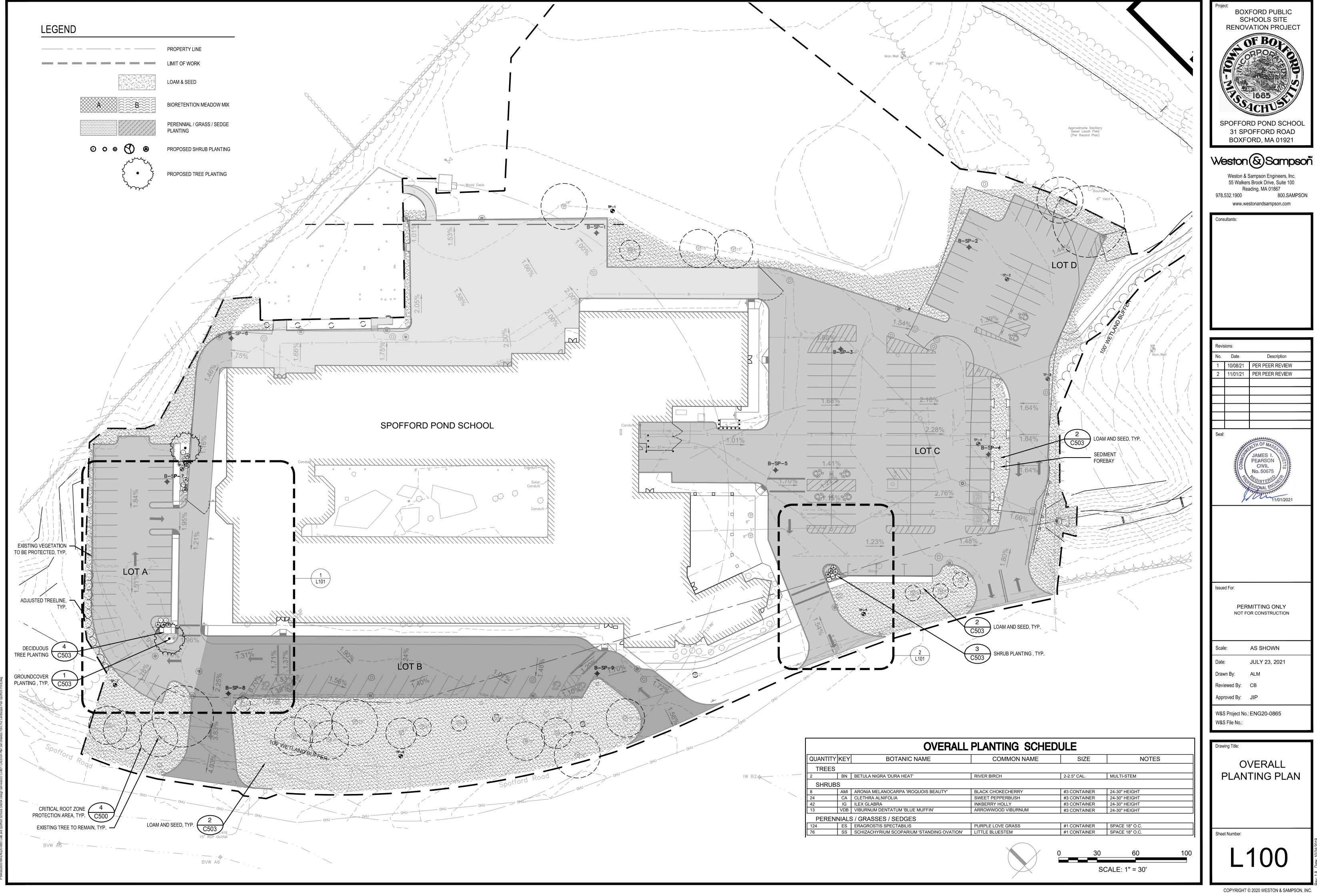
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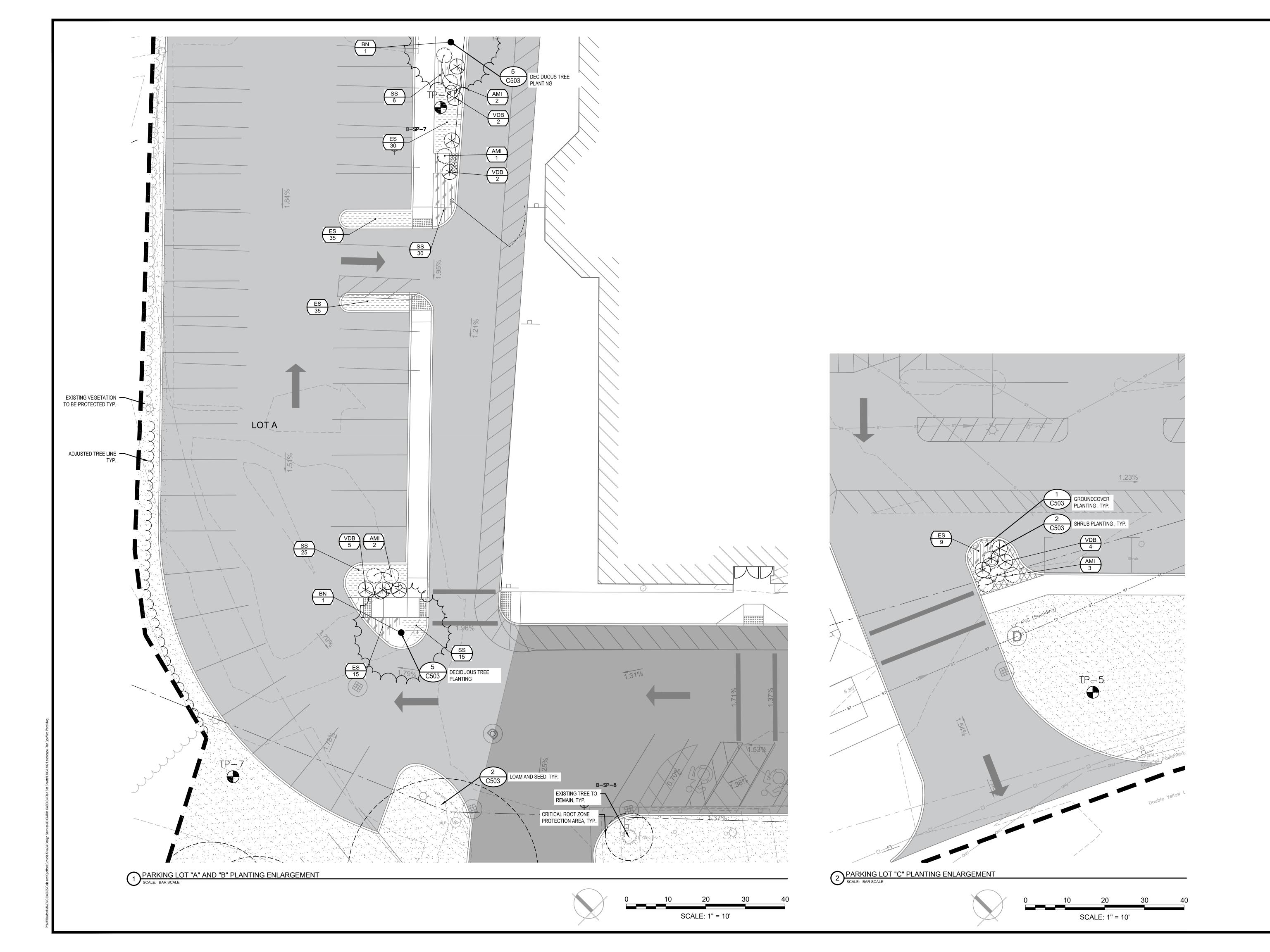
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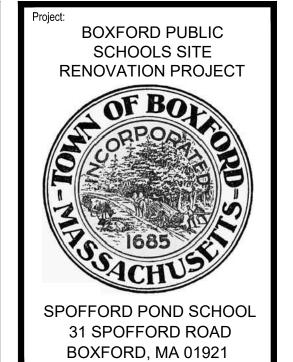
JULY 23, 2021 Drawn By: Reviewed By: JIP Approved By: JIP

W&S Project No.: ENG20-0865 W&S File No.:

**DETAILS VIII** 







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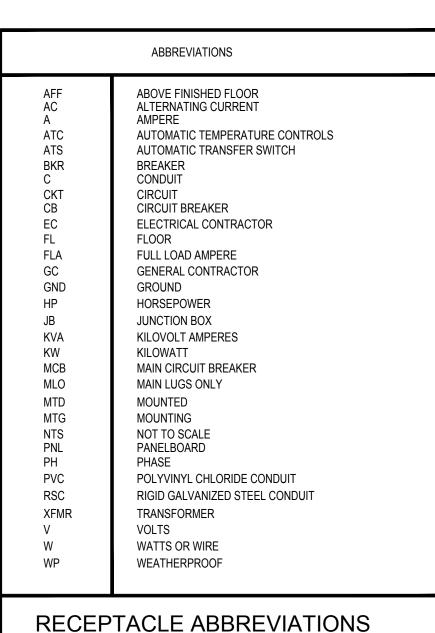
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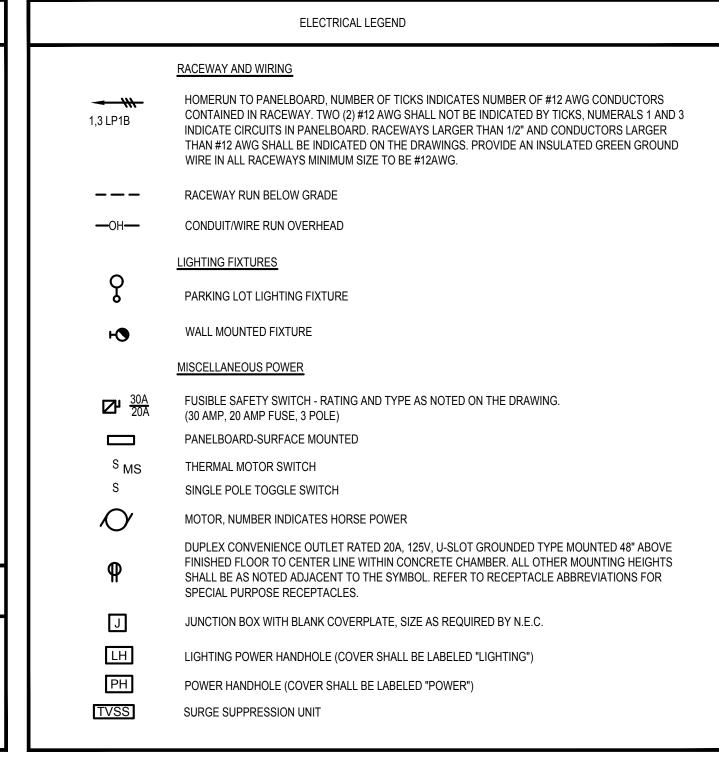
AS SHOWN JULY 23, 2021

Approved By: JIP

W&S Project No.: ENG20-0865

Drawing Title: **PLANTING** ENLARGEMENT **PLANS** 





# **DEMOLITION NOTES**

- 1. THE ELECTRICAL CONTRACTOR WILL WORK IN CONJUNCTION WITH THE GENERAL CONTRACTOR TO DEMOLISH THE EXISTING ELECTRICAL SYSTEM. THE ELECTRICAL CONTRACTOR IS TO DEACTIVATE, DISCONNECT AND REMOVE THOSE SYSTEMS WHICH WILL BE DEMOLISHED. THE ELECTRICAL CONTRACTOR WILL REMOVE AND DISPOSE OF ALL ELECTRICAL SYSTEM MATERIALS INCLUDING DEVICES, FIXTURES, RACEWAYS, CABLE, MOTOR CONTROLS AND APPURTENANCES. SYSTEMS REQUIRING TOTAL AND/OR PARTIAL DEMOLITION SHALL CONSIST OF BUT NOT BE LIMITED TO THE FOLLOWING:
- A. NORMAL AND EMERGENCY POWER BRANCH CIRCUIT SYSTEM

GROUND FAULT CIRCUIT INTERUPTER, PERSONAL

FOR WET LOCATION WITH AN ATTACHMENT PLUG

WEATHERPROOF RECEPTACLE WITH COVERPLATE LISTED

B. NORMAL LIGHTING SYSTEM

PROTECTION

INSERTED.

- C. EMERGENCY AND EXIT LIGHTING SYSTEM
- D. COMMUNICATIONS SYSTEM
- E. FIRE ALARM SYSTEM F. SECURITY SYSTEM
- 2. EXISTING SYSTEMS THAT ARE TO REMAIN AND BE PROTECTED DURING DEMOLITION/CONSTRUCTION INCLUDE
- A. POWER DISTRIBUTION SYSTEM
- B. EXTERIOR LIGHTING SYSTEM
- C. HVAC SYSTEM AND POWER WIRING
- 3. SYSTEMS WHICH PASS THROUGH THE AREA BEING DEMOLISHED BUT CONTINUE TO AREAS NOT WITHIN THE DEMOLITION SCOPE ARE TO REMAIN. THE ELECTRICAL CONTRACTOR IS TO IDENTIFY (SPRAY PAINT OR EQUIVALENT) AND PROTECT THOSE SYSTEMS WHICH ARE ACTIVE AND ARE TO REMAIN.
- 4. ALL EXISTING CAST IN PLACE RECEPTACLE, PULL, JUNCTION AND OTHER DEVICE BOXES WHICH CANNOT BE REMOVED OR EFFECTIVELY COVERED ARE TO BE PROVIDED WITH FINISHED PLATES AS APPROVED BY THE ARCHITECT.
- 5. ALL CONDUIT AND WIRE WHICH IS NO LONGER IN USE IS TO BE REMOVED. CONDUIT AND WIRE IS TO BE REMOVED BACK TO ITS SOURCE OR NEAREST DEVICE WHICH IS SCHEDULED TO REMAIN. COORDINATE THE REMOVAL OF ALL COMMUNICATIONS CONDUIT AND WIRE WITH THE COMMUNICATIONS CONTRACTOR. FIRE ALARM CABLING IS TO BE RETURNED TO THE NEAREST DEVICE SCHEDULED TO REMAIN, CONTROL PANEL, TERMINAL CABINET, ETC. UNDER NO CIRCUMSTANCES ARE ABANDONED CONDUIT AND WIRE OR SYSTEM COMPONENTS TO REMAIN.
- 6. MAKE ANY NECESSARY RE-CIRCUITING, EXTENSIONS OF EXISTING CIRCUITS AND RELOCATIONS REQUIRED TO PROPERLY RE-ENERGIZE REMAINING EXISTING SERVICES OR EQUIPMENT THAT MAY BE INTERFERED WITH BY NEW CONSTRUCTION, REMOVALS OR RELOCATIONS. ALL SHUTDOWNS TO RELOCATE ACTIVE FEEDERS OR BRANCH CIRCUITS WILL BE PERFORMED ON OFF HOURS AS MUTUALLY AGREED TO WITH THE OWNER.
- 7. PRIOR TO REMOVAL OF EQUIPMENT, CONFIRM THAT FEEDER AND BRANCH CIRCUITS ARE NO LONGER ACTIVE. SHOULD IT BE DISCOVERED THE FEEDER OR BRANCH CIRCUITS ARE ACTIVE, NOTIFY THE ARCHITECT IMMEDIATELY FOR DIRECTION.
- 8. ELECTRICAL CONTRACTOR IS TO REMOVE ALL LAMPS, BALLASTS AND OTHER ELECTRICAL COMPONENTS CLASSIFIED AS HAZARDOUS MATERIALS. ELECTRICAL CONTRACTOR IS TO OBTAIN THE SERVICES OF A LICENSED HAZARDOUS MATERIALS CONTRACTOR TO DISPOSE OF THE MATERIALS. PROVIDE WRITTEN DOCUMENTATION TO THE OWNER'S REPRESENTATIVE FROM THE HAZARDOUS MATERIALS CONTRACTOR.
- 9. ELECTRICAL DEMOLITION ABBREVIATIONS:
- "EX" DENOTES EXISTING EQUIPMENT TO REMAIN

"RL" DENOTES EXISTING EQUIPMENT TO BE DISCONNECTED AND RELOCATED. ALL EXISTING CONDUIT AND WIRE SHALL BE REMOVED BACK TO ITS SOURCE AND ALL DEVICES ASSOCIATED WITH THE EQUIPMENT SHALL BE REMOVED OR ALL CONDUIT AND WIRE SHALL BE INTERCEPTED AND EXTENDED AS REQUIRED. ALL NEW CONDUIT AND WIRE SHALL MATCH EXISTING IN STYLE AND SIZE. ALL EXISTING ELECTRICAL DEVICES ASSOCIATED WITH THE EXISTING EQUIPMENT SHALL BE REMOVED AND NEW DEVICES AS SHOWN SHALL BE PROVIDED.

"NL" DENOTES NEW LOCATION OF RELOCATED EXISTING EQUIPMENT.

"RE" DENOTES EXISTING EQUIPMENT TO BE DISCONNECTED AND REMOVED ALL EXISTING CONDUIT AND WIRE SHALL BE REMOVED BACK TO ITS SOURCE AND ALL DEVICES ASSOCIATED WITH THE EQUIPMENT SHALL BE REMOVED.

#### **GENERAL NOTES**

- 1. DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION, MOUNTING HEIGHTS, SIZE OF EQUIPMENT AND ROUTING OF RACEWAYS 30. CONDUIT AND TUBING SHALL BE SUPPORTED ON GALVANIZED WALL BRACKETS. TRAPEZE HANGERS OR PIPE STRAPS SECURED BY SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
- 2. ALL STRAIGHT FEEDER, BRANCH CIRCUIT AND AUXILIARY SYSTEM CONDUIT RUNS SHALL BE PROVIDED WITH SUFFICIENT PULL BOXES TO LIMIT THE MAXIMUM LENGTH OF ANY SINGLE CABLE PULL TO 150 FEET. EXACT SIZES OF PULL BOXES AND LOCATIONS TO BE DETERMINED IN THE FIELD BY THE ELECTRICAL CONTRACTOR.
- 3. FURNISH ALL REQUIRED ACCESS PANELS AS REQUIRED TO SUIT FIELD CONDITIONS FOR THE PROPER OPERATION AND MAINTENANCE OF THE ELECTRICAL SYSTEM. THE EXACT SIZES AND PHYSICAL LOCATIONS SHALL BE TO SUIT ACCESSIBILITY AND CONSTRUCTION CONDITIONS. ALL ACCESS PANELS PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL MATCH EXACTLY THE ACCESS PANELS FURNISHED AND INSTALLED BY THE GENERAL CONTRACTOR. THE ACCESS PANELS WILL BE INSTALLED BY THE TRADE CONTRACTOR.
- UNDER THE APPROPRIATE SECTION OF THE SPECIFICATIONS FOR THE SURFACE IN WHICH THE PANELS ARE LOCATED. 4. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE MECHANICAL CONTRACTOR AS APPLICABLE AS TO THE EXACT LOCATION

SHALL BE COORDINATED WITH THE RESPECTIVE CONTRACTORS BEFORE THE START OF CONSTRUCTION IN THE FIELD.

- 5. SLEEVES ARE TO BE UTILIZED FOR PASSAGE OF CONDUITS THROUGH FLOORS OR WALLS. CONDUITS AND BOXES ARE TO BE SUPPORTED BY THE USE OF PRESET FASTENERS INSTALLED IN FLOORS, WALLS OR COLUMNS. CONDUITS AND BOXES ARE TO BE INSTALLED CONCEALED IN MASONRY WALLS AND ABOVE HUNG CEILINGS. ALL SLEEVES ARE TO BE SEALED WITH APPROVED FIRE STOPPING
- 6. COMBINED HOMERUNS OF TWO (2) OR THREE (3) CIRCUITS MAY BE UTILIZED. HOWEVER, THE NEUTRAL CONDUCTOR IS TO BE INCREASED
- TO #10AWG. COMBINED HOMERUNS ARE TO BE LIMITED TO 20A, LIGHTING AND POWER CIRCUITS. 7. INSTALLATION OF BACK TO BACK DEVICES ARE TO BE AVOIDED. ALLOW ONE WALL FRAMING MEMBER BETWEEN EACH BACK TO BACK
- 8. WORK SHALL CONFORM TO THE MASSACHUSETTS ELECTRICAL CODE, MASSACHUSETTS BUILDING CODE, NFPA AND REQUIREMENTS OF
- LOCAL AUTHORITIES HAVING JURISDICTION.
- 9. THE WORD "CONTRACTOR" AS USED IN THE "ELECTRICAL WORK" SHALL MEAN THE ELECTRICAL SUBCONTRACTOR.
- 10. CONTRACTOR SHALL PAY FOR ALL PERMITS, INSURANCE AND TESTS, AND SHALL PROVIDE LABOR AND MATERIAL TO COMPLETE THE
- 11. EXCEPT AS OTHERWISE NOTED. THE ELECTRICAL WORK SHALL INCLUDE DEMOLITION. PANELBOARDS. CIRCUIT BREAKERS, FEEDERS. WIRING, RACEWAYS, LIGHTING FIXTURES, DEVICES, SAFETY SWITCHES, TRANSFORMERS AND CONNECTION NECESSARY TO OPERATE
- 12. AUTOMATIC TEMPERATURE CONTROLS SHALL BE PROVIDED AND INSTALLED BY THE MECHANICAL SUBCONTRACTOR. STARTERS, VFD'S AND OTHER CONTROL DEVICES FOR EQUIPMENT SHALL BE FURNISHED BY THE MECHANICAL SUBCONTRACTOR FOR INSTALLATION AND

13. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY LIGHTING AND POWER AND THE GENERAL CONTRACTOR SHALL PAY ALL ENERGY

- 14. DURING CONSTRUCTION, THE ELECTRICAL CONTRACTOR SHALL KEEP HIS PORTION OF THE WORK NEAT, CLEAN AND ORDERLY.
- 15. ALL SYSTEMS SHALL BE TESTED FOR SHORT CIRCUIT AND GROUNDS PRIOR TO ENERGIZING AND ANY DEFECTS SHALL BE CORRECTED.
- 16. ALL CUTTING AND PATCHING REQUIRED FOR ELECTRICAL WORK SHALL BE INCLUDED AS PART OF THIS SECTION.
- 17. COMPLETE SHOP DRAWINGS SHALL BE SUBMITTED FOR ELECTRICAL EQUIPMENT. WHERE SPECIFIED ELECTRICAL EQUIPMENT IS SUBSTITUTED, THE ELECTRICAL CONTRACTOR SHALL SUBMIT COMPLETE SPECIFICATIONS ON THE SUBSTITUTE AS WELL AS THE ITEM
- 18. MATERIALS SHALL BE SPECIFICATION GRADE AND UL LISTED.

CHARGES FOR TEMPORARY POWER AND LIGHTING.

- 19. WHERE MATERIAL IS CALLED OUT IN THE LEGEND BY MANUFACTURER, TYPE OR CATALOG NUMBER, SUCH DESIGNATIONS ARE TO ESTABLISH STANDARDS OR DESIRED QUALITY. ACCEPTANCE OR REJECTIONS OF PROPOSED SUBSTITUTIONS SHALL BE SUBJECT TO THE
- 20. WORK SHALL BE COORDINATED WITH THAT OF OTHER TRADES TO ELIMINATE INTERFERENCES.
- 21.ELECTRICAL WORK SHALL BE GUARANTEED FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL COMPLETION.
- 22. WORK SHALL BE GROUNDED IN ACCORDANCE WITH CODE REQUIREMENTS. COMPLETE EQUIPMENT (INSULATED GREEN WIRE) GROUNDING SYSTEM SHALL BE INSTALLED.
- 23. WIRE SHALL BE TYPE "THHN-THWN" INSULATED FOR 600 VOLTS, MINIMUM SIZE #12 AWG COPPER UNLESS SPECIFICALLY NOTED

#### 24. WIRING METHODS:

- a. EXTERIOR UNDERGROUND FEEDERS SHALL BE PVC SCHEDULE 80 FOR DIRECT BURIED AND PVC SCHEDULE 40 FOR CONCRETE
- b. EXTERIOR ABOVE GRADE FEEDERS SHALL BE RGS CONDUIT.
- c. INTERIOR FEEDERS EXPOSED OR BURIED IN CONCRETE WALLS/SLABS SHALL BE RGS CONDUIT.
- d. INTERIOR BRANCH CIRCUITS FOR HVAC AND PLUMBING EQUIPMENT SHALL BE RGS. e. LIGHTING FIXTURE CONNECTIONS SHALL BE MC CABLE.
- f. EMERGENCY, CRITICAL AND LIFE/SAFETY BRANCH LIGHTING CIRCUITRY SHALL BE EMT CONDUIT.
- g. EQUIPMENT CONNECTIONS SHALL BE LIQUID TIGHT FLEXIBLE METAL CONDUIT
- 27.NO CONDUIT OR WIRE SHALL BE RUN IN OR BELOW SLAB WITHOUT ENGINEER APPROVAL OR NOTED OTHERWISE ON THE PLANS.
- 28. CONNECTORS FOR RIGID CONDUIT SHALL BE MADE WITH THREADED COUPLINGS.
- 29. CONNECTORS FOR FLEXIBLE LIQUID TIGHT CONDUIT SHALL BE STEEL COMPRESSION TYPE WITH INSULATED THROATS OR STEEL SET

- MEANS OF TOGGLE BOLTS OR INSERTS IN WOOD CONSTRUCTION.
- 31.BOXES SHALL BE GALVANIZED STEEL AND SHALL BE SIZED TO ACCOMMODATE THE EQUIPMENT OR APPARATUS TO BE INSTALLED. WHERE BOXES OF A STANDARD MAKE ARE NOT AVAILABLE, SPECIAL BOXES SHALL BE MANUFACTURED. FIXTURES SUPPORTED ON THE CEILING OR ON THE WALL SHALL HAVE SUITABLE FIXTURE SUPPORT FOR THE SPECIFIC FIXTURE.
- 32.PANELBOARDS SHALL BE DEAD FRONT, THERMAL MAGNETIC BOLT-ON CIRCUIT BREAKER TYPE, DESIGNED FOR SURFACE OR FLUSH MOUNTING AS INDICATED ON PLAN, AND HAVING CONNECTIONS TO 120/208 OR 277/480 VOLT, 3 PHASE, 4 WIRE SERVICE. ALL BUS BARS SHALL BE COPPER. CABINETS SHALL BE MADE OF CODE GAUGE GALVANIZED SHEET STEEL, WITH A MINIMUM OF 4 INCH GUTTERS, DOOR

IN DOOR CONSTRUCTION, LOCKED DOOR, AND FLUSH HINGES. TYPEWRITTEN INDEX SHALL BE MOUNTED ON DOOR INSIDE TRANSPARENT

- OF THEIR RESPECTIVE EQUIPMENT; THE POWER WIRING, CONTROL WIRING AND ALL ELECTRICAL CONNECTIONS AND CONDUIT TURN-UPS

  33. PANELBOARDS, DISCONNECT SWITCHES, AND CONTROLLERS SHALL HAVE NAMEPLATES OF BLACK LAMINATED PLASTIC WITH ENGRAVED WHITE LETTERS, SECURED WITH SELF-TAPPING SCREWS.
  - 34. CONNECTIONS AT MOTORS SHALL BE MADE WITH 18" LENGTH OF 1/2 INCH FLEXIBLE LIQUID TIGHT CONDUIT.

COVER INDICATING LOAD SERVED. PANELS SHALL INCLUDE SEPARATE EQUIPMENT GROUND BUS.

- 35. CONTRACTOR SHALL PHASE BALANCE PANELBOARDS IN THE FIELD. LOAD ON EACH PHASE SHALL BE BALANCED WITHIN 10% OF EACH
- 36. WALL PLATES SHALL BE PROVIDED FOR EACH SWITCH AND RECEPTACLE. PROVIDE WALL PLATES WITH STAINLESS STEEL FINISH FOR ALL DEVICES IN FINISHED AREAS. FOR DEVICES IN UNFINISHED AREAS, PROVIDE CAST IRON OR ALLOY OF SUITABLE TYPE TO MATCH
- 37. TOGGLE SWITCHES SHALL BE OF THE SINGLE POLE A.C. QUIET TOGGLE TYPE FOR MOUNTING IN A SINGLE-GANG SPACING. TOGGLE SWITCHES SHALL BE FULLY RATED 20 AMPERES AT 120/277 VOLT.
- 38.DUPLEX WALL RECEPTACLES SHALL BE 2 POLE, 3 WIRE, GROUNDING TYPE 20 AMPERE, 125 VOLT WITH METAL PLASTER EARS. RECEPTACLES SHALL BE NEMA STANDARD CONFIGURATION 5-20R.
- 39.FUSED OR UNFUSED SAFETY SWITCHES SHALL BE TOTALLY ENCLOSED, HEAVY DUTY TYPE. SWITCHES SHALL HAVE VOLTAGE, HORSEPOWER AND AMPERE RATING SUITABLE FOR THE APPLICATION. PROVIDE NUMBER OF POLES AS REQUIRED. SWITCHES LOCATED EXTERIOR TO THE BUILDING OR IN DAMP/WET LOCATIONS SHALL BE IN A NEMA 3R ENCLOSURE.
- 40.FUSES SHALL BE DUAL ELEMENT, TIME DELAY TYPE, AS MANUFACURED BY BUSSMAN, RELIANCE OR APPROVED EQUAL.
- 41. FURNISH AND INSTALL SLEEVES IN FLOORS, BEAMS, WALLS, ETC. REQUIRED FOR INSTALLING THIS WORK.
- 42.CONDUIT PASSING THROUGH FIRE RATED WALLS AND FLOORS SHALL BE PROVIDED WITH ALL NECESSARY MATERIALS TO ENSURE THAT THE FIRE RATED INTEGRITY IS MAINTAINED.
- 43.FEEDER TAPS WILL NOT BE ALLOWED IN PANELBOARD GUTTERS.

AS EXISTING PANEL AND CIRCUIT BREAKERS.

OPERATIONAL SYSTEM

- 44.CONDUIT RUNS AS SHOWN ON THE PLANS ARE DIAGRAMMATIC ONLY; EXACT LOCATION AND METHOD OF SUPPORT SHALL BE DETERMINED IN THE FIELD.
- 45. CONTRACTOR SHALL CHECK EXISTING CONDITIONS TO DETERMINE EXACT EXTENT OF WORK TO BE PERFORMED PRIOR TO BIDDING. DIMENSIONS RELEVANT TO EXISTING WORK SHALL BE VERIFIED IN THE FIELD.
- 46.IN AREAS NOT AFFECTED BY THIS RENOVATION, THIS SUBCONTRACTOR SHALL MAINTAIN CONTINUITY OF ELECTRIC SERVICE.
- 47. WHERE CONNECTIONS ARE MADE IN EXISTING PANELS, THE PANEL INDEX SHALL BE REVISED TO INDICATE THE NEW LOADS SERVED. NEW CIRCUIT BREAKERS ADDED TO EXISTING PANELS SHALL BE THE SAME FRAME SIZE, VOLTAGE RATING AND INTERRUPTING CAPACITY
- 48.THE CONTRACTOR SHALL PROVIDE ALL REQUIRED POWER SUPPLIES, APPURTENANCES, FINAL CONNECTIONS, TESTING AND WORK REQUIRED FOR ADDITIONS TO THE EXISTING FIRE ALARM SYSTEM. PAY ALL COSTS ARISING THERE FROM, FOR A COMPLETE AND
- 49.ELECTRICAL SHUTDOWN SHALL BE AT A TIME AND DATE APPROVED BY THE OWNER.
- 50.PROVIDE AS-BUILT "CADD" DRAWINGS AT THE COMPLETION OF THE PROJECT.
- 51.ELECTRICAL CONTRACTOR SHALL LABEL ALL ELECTRICAL DEVICES INCLUDING BUT NOT LIMITED TO RECEPTACLES, DISCONNECT
- SWITCHES, PANELBOARDS, THERMAL MOTOR SWITCHES, CONTROL PANELS, JUNCTION BOXES, ETC. a. RECEPTACLES - PANEL NAME AND CIRCUIT DESIGNATION
- b. DISCONNECTS PANEL NAME. CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
- c. THERMAL MOTOR SWITCHES PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING.
- d. ENCLOSED CIRCUIT BREAKERS PANEL NAME, CIRCUIT DESIGNATION AND EQUIPMENT SERVING. e. PANELBOARDS - PANEL NAME, VOLTAGE, AMPERAGE, PHASE AS WELL AS PANEL AND CIRCUIT IT IS FED FROM.
- f. CONTROL PANEL PANEL NAME AND CIRCUIT DESIGNATION
- g. JUNCTION BOXES PANEL NAME AND CIRCUIT DESIGNATION

MEANING AND INTENT OF DRAWINGS SHALL BE FINAL.

52. ADDRESS QUESTIONS TO THE ENGINEER IN WRITING BEFORE AWARD OF CONTRACT, OTHERWISE ENGINEER INTERPERTATION OF

#### LIGHTING FIXTURE SCHEDULE LAMP VOLTAGE LOAD CATALOG NUMBER MOUNTING TYPE MANUFACTURER REMARKS TYPE 9994 LUMENS LED SINGLE FIXTURE POLE MOUNTED SITE LIGHTING CREE LIGHTING POLE 208 90W NOTE 1 ARE-EDG-3ME-DA-08-E-UL-BZ-525 4000K 70CRI LED DUAL FIXTURE POLE MOUNTED SITE LIGHTING ARE-EDG-3ME-DA-08-E-UL-BZ-525 NOTE 1 CREE LIGHTING 208 180W 9994 LUMENS 70CDI

NOTE:

1. PROVIDE 20' POLE ALUMINUM TAPPERED POLE

**BOXFORD PUBLIC** SCHOOLS SITE RENOVATION PROJECT SPOFFORD POND SCHOOL

Weston & Sampson Engineers, Inc

31 SPOFFORD ROAD

BOXFORD, MA 01921

55 Walkers Brook Drive, Suite 100 Reading, MA 01867

www.westonandsampson.com

Consultants:

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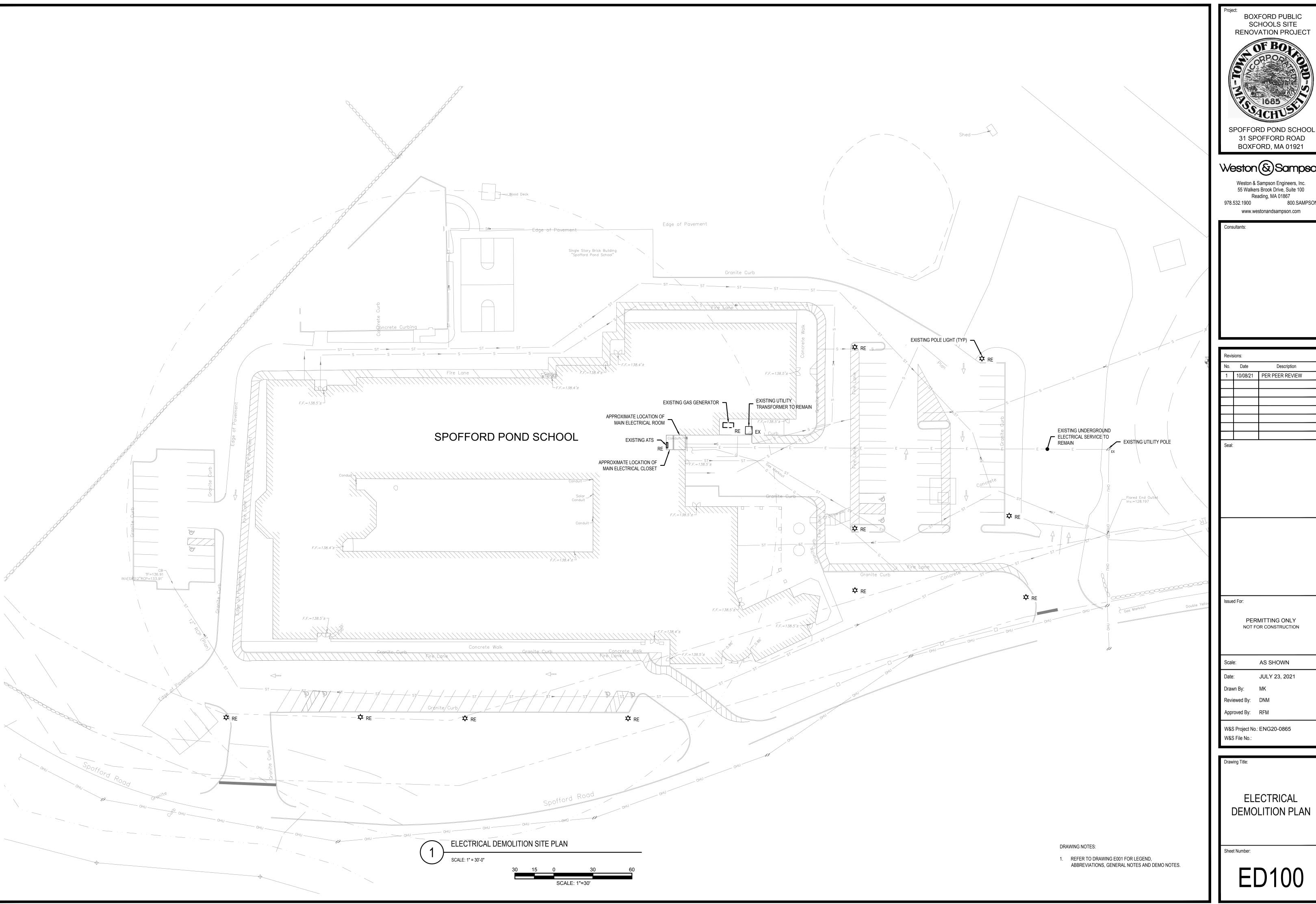
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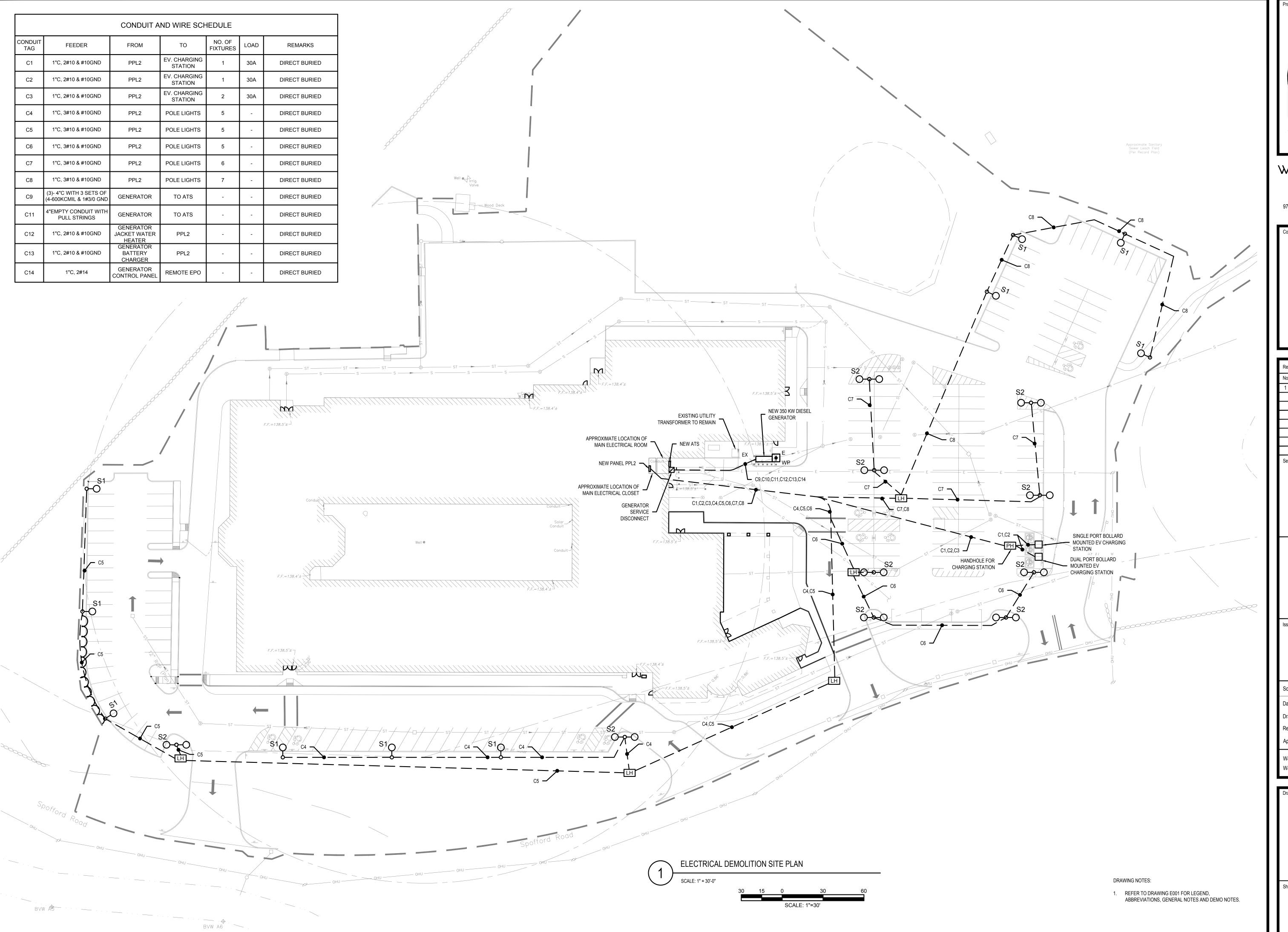
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W&S Project No.: ENG20-0865 W&S File No.:

**ELECTRICAL** LEGEND, GENERAL ABBREVIATIONS

Sheet Number:





BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT

SPOFFORD POND SCHOOL 31 SPOFFORD ROAD BOXFORD, MA 01921

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Consultants:

Revisions:

No. Date Description

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proved By: RFM

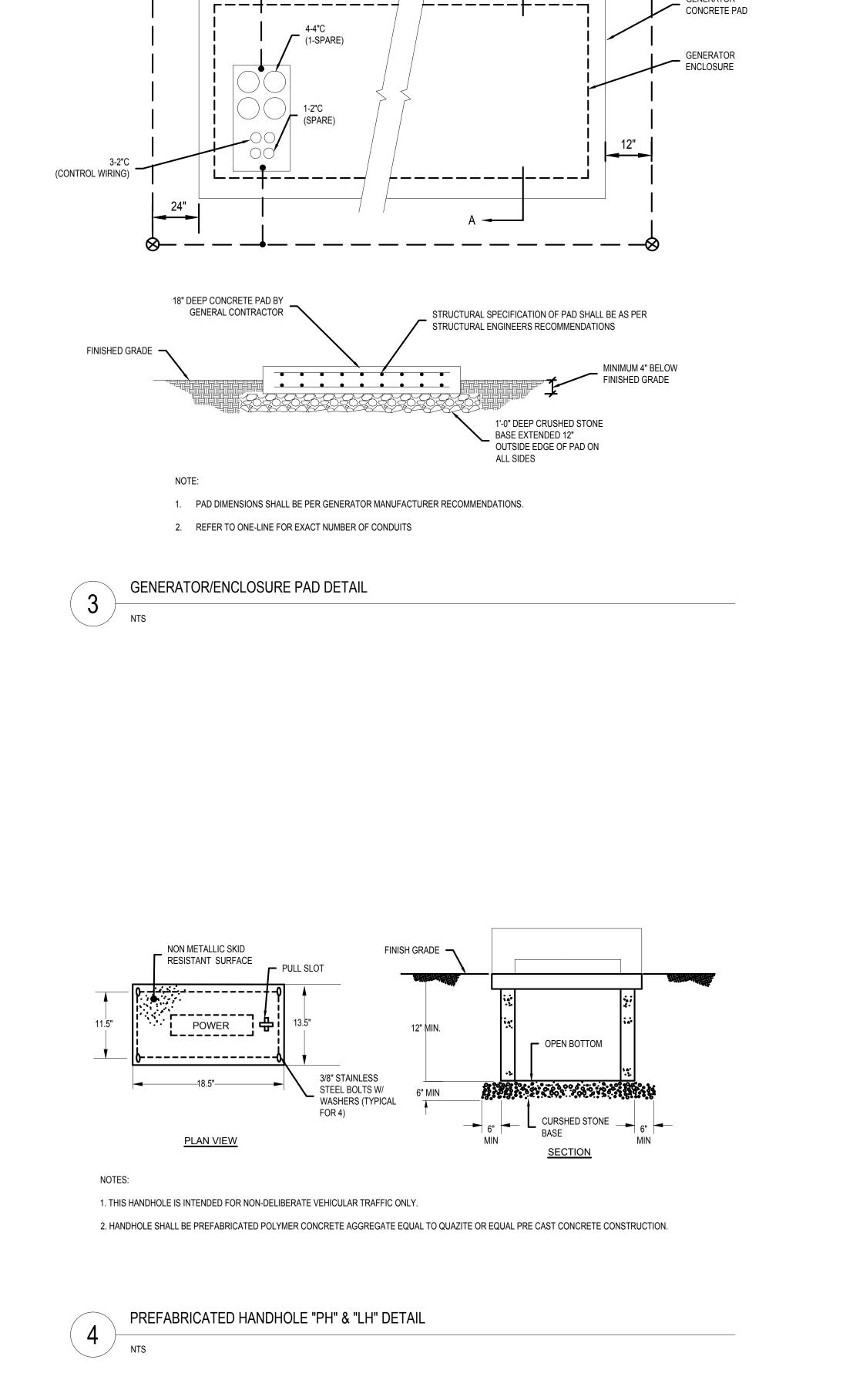
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Drawing Title:

ELECTRICAL SITE PLAN

Sheet Number:

E100



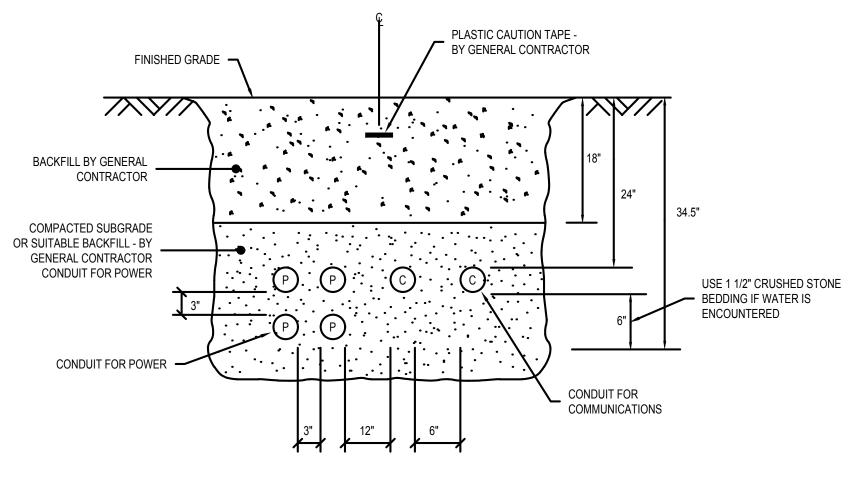
#4/0 BARE COPPER WIRE

CONNECTING GROUND RODS

3/4" X 8' COPPERWELD GROUND

GENERATOR

ROD WITH CLAMP (TYPICAL FOR 4)





BOND CIRCUIT GROUND-ING CONDUCTOR TO POLE -

INSULATED GROUNDING

BUSHINGS BONDED

TO POLE (TYP)

CURB/ROAD EDGE SET BACK

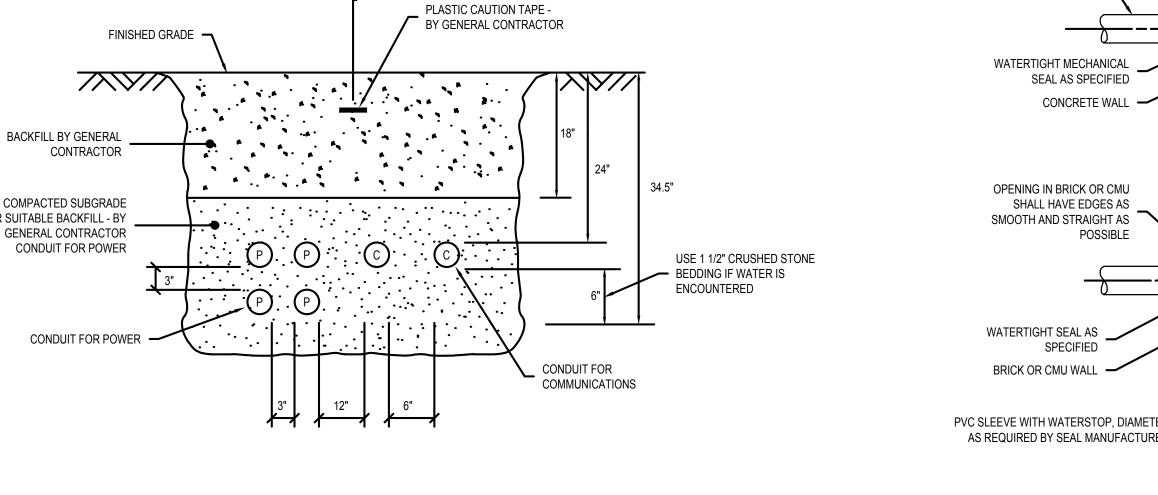
UNDISTURBED

EARTH ———

TYPICAL LIGHT POLE BASE DETAIL

24" DIA

REFER TO CIVIL PLANS



POLE WITH HANDHOLE AND

FINISHED GRADE

NUTS BY POLE MFR

SELECT COMMON FILL

− #4 HOOPS AT 12" OC

- 8-#5 EQUALLY SPACED

— CONCRETE BASE

NOTE: REFER TO

MATERIALS

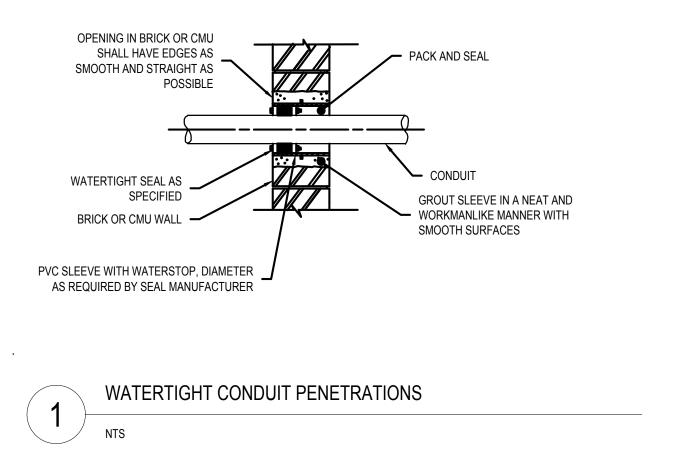
SPECIFICATIONS FOR

INTERNAL GROUNDING STUD

ANCHOR BOLTS WITH LEVELING

CONDUIT SEE SITE PLAN (TYP)

COMPACTED IN 12" LIFTS

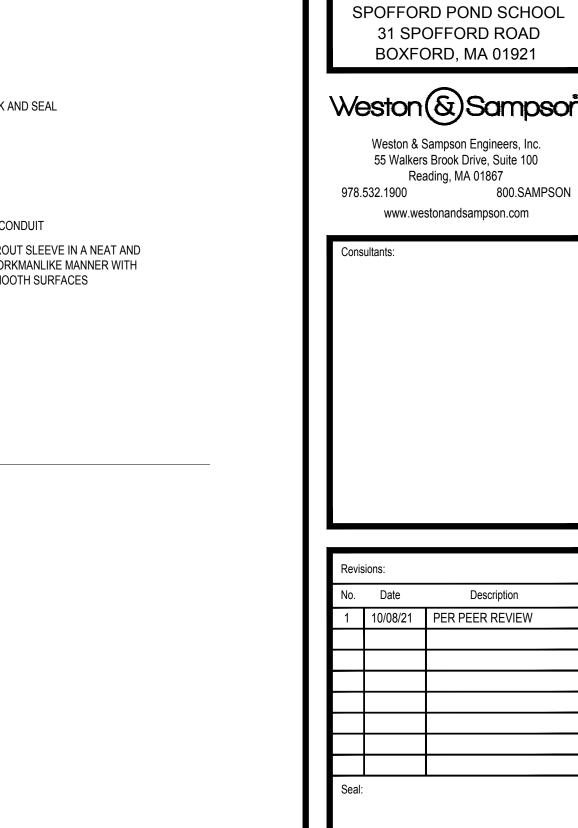


SEAL AS SPECIFIED CONCRETE WALL

PVC SLEEVE, DIAMETER AS

PACK AND SEAL OPENING

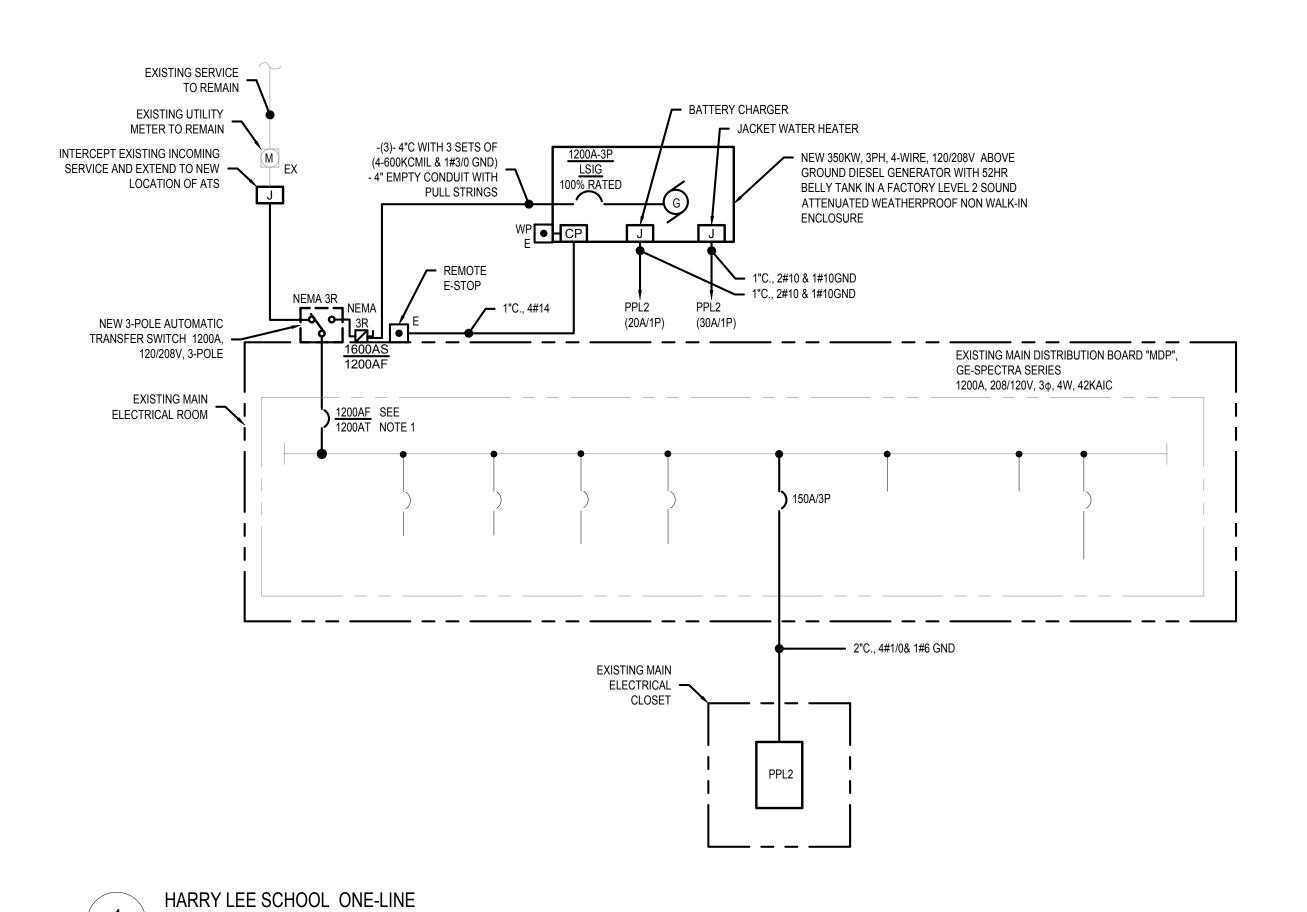
REQUIRED BY SEAL MANUFACTURER



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Date: Draw Revie Appro	n By: ewed By: oved By:	JULY 23, 2021 MK DNM			

BOXFORD PUBLIC SCHOOLS SITE RENOVATION PROJECT

ELECTRICAL DETAILS



NOTES:

 CONTRACTOR SHALL REMOVE AND REPLACE THE EXISTING SRPK1200 TRIP PLUG IN EXISTING SKHA36AT1200 AMP BREAKER WITH A NEW TRIP PLUG # SRPK1200A60.

# PANELBOARD SCHEDULE

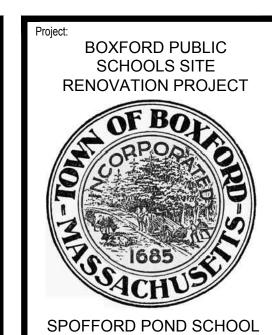
DESIGNATION: PPL2 S.C. RATING: 22,000 A RMS SYSTEM REMARKS:

LOCATION: EXISTING ELECTRICAL CLOSET SERVICE: 120/208V,3Ø,4W

RATING: 200 AMPS MOUNTING: SURFACE

MAIN: 150 AMP MCB

CKT.	LOAD DESIGNATION	BREAK	BREAKER		PHASE		BREAKER		LOAD	CKT.
NO.		TRIP	POLE	АВС		c [	POLE	TRIP	DESIGNATION	NO.
1	EV CHARGING STATION	40	<b>-</b> ₽	+		H	秱	40	EV-CHARGING STATION	2
3	-	-	<b>─</b>	$\blacksquare$	$\overline{}$	H	8	-	-	4
5	GENERATOR JACKET WATER HEATER	30	~	H	H	H	ک	40	EV-CHARGING STATION	6
7	BATTERY CHARGER	20	<b>─</b>	+	F	H	کم	-	-	8
9	SITE LIGHTS	20	<b>─</b> ─	H	$\overline{}$	H	<del>ام</del>	20	SITE LIGHTS	10
11	-	-	<b>─</b>	$\blacksquare$	$\blacksquare$	H	<b>₽</b>	-	-	12
13	-	-	<b>─</b>	+		H	S	-	-	14
15	SITE LIGHTS	20	<u></u>	${\mathbb H}$	$\vdash$	H	<b>♣</b>	20	SITE LIGHTS	16
17	-	-	<b>─</b>	H	$\vdash$	H	<b>♣</b>	-	-	18
19	-	-	<u></u>	+		H	Ş	-	-	20
21	SITE LIGHTS	20	<u></u>	${\sf H}$	$\leftarrow$	H	<b>♣</b>	20	SITE LIGHTS	22
23	-	-	<b>─</b> �	$\blacksquare$	$\vdash$	H	<b>♣</b>	-	-	24
25	-	-	<b>₽</b>	+		H	گ	-	-	26
27	SPARE	20	<b>─</b> �	H	lack	H	<del>چ</del>	20	SPARE	28
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33	SPARE	20	8			H	ې	20	SPARE	34
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37	SPARE	20	6			H	þ	20	SPARE	38
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