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Consultants:

### Weston & Sampson





Revisions: Rev Date Description

> Seal: BRUCE W. CIVIL No. 35752

Brun W. alan CONSTRUCTION

> **DOCUMENTS** 02.24.2016

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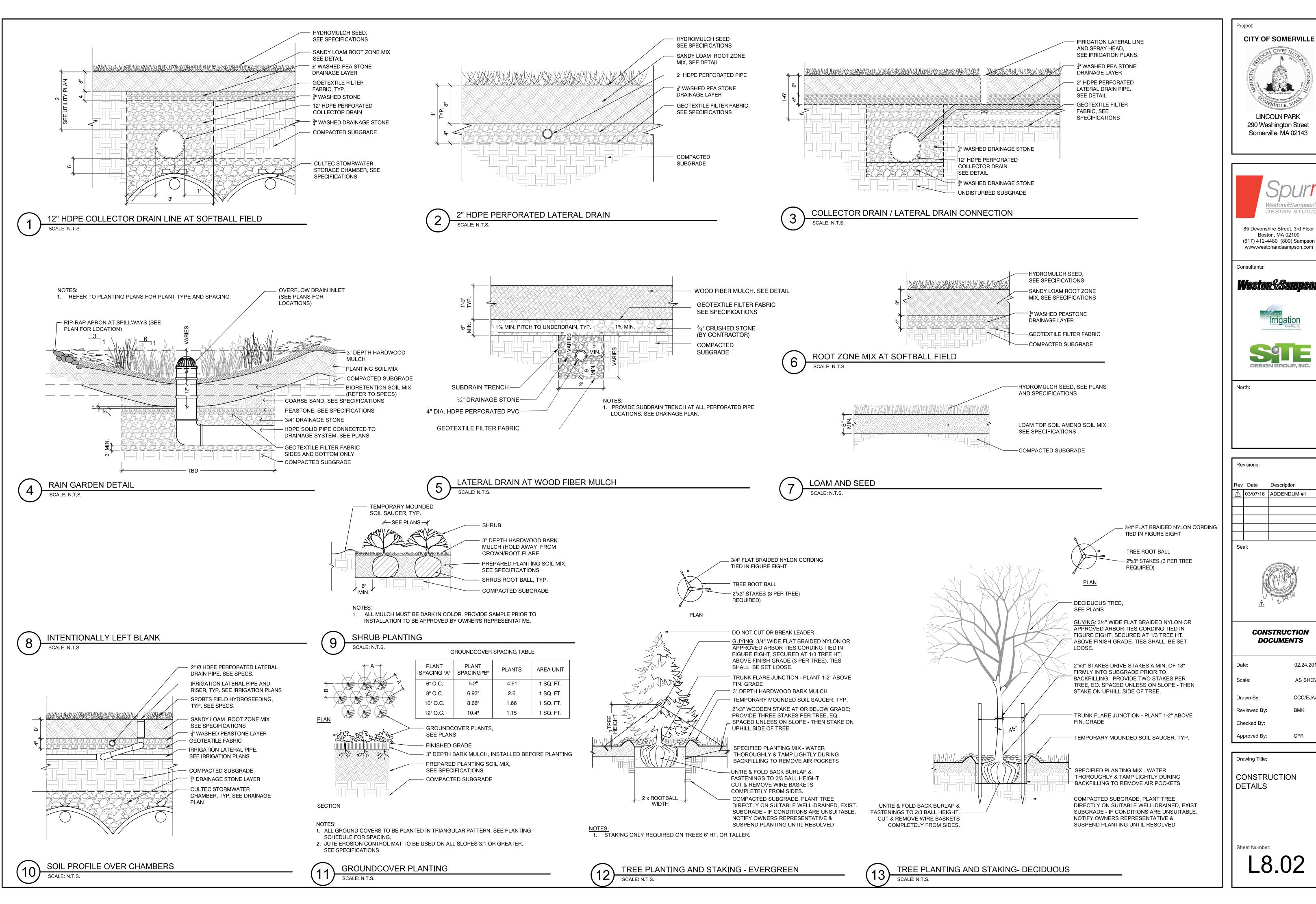
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CONSTRUCTION **DETAILS** 

Sheet Number:



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	Rev	Date	Description
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**CONSTRUCTION DOCUMENTS** 

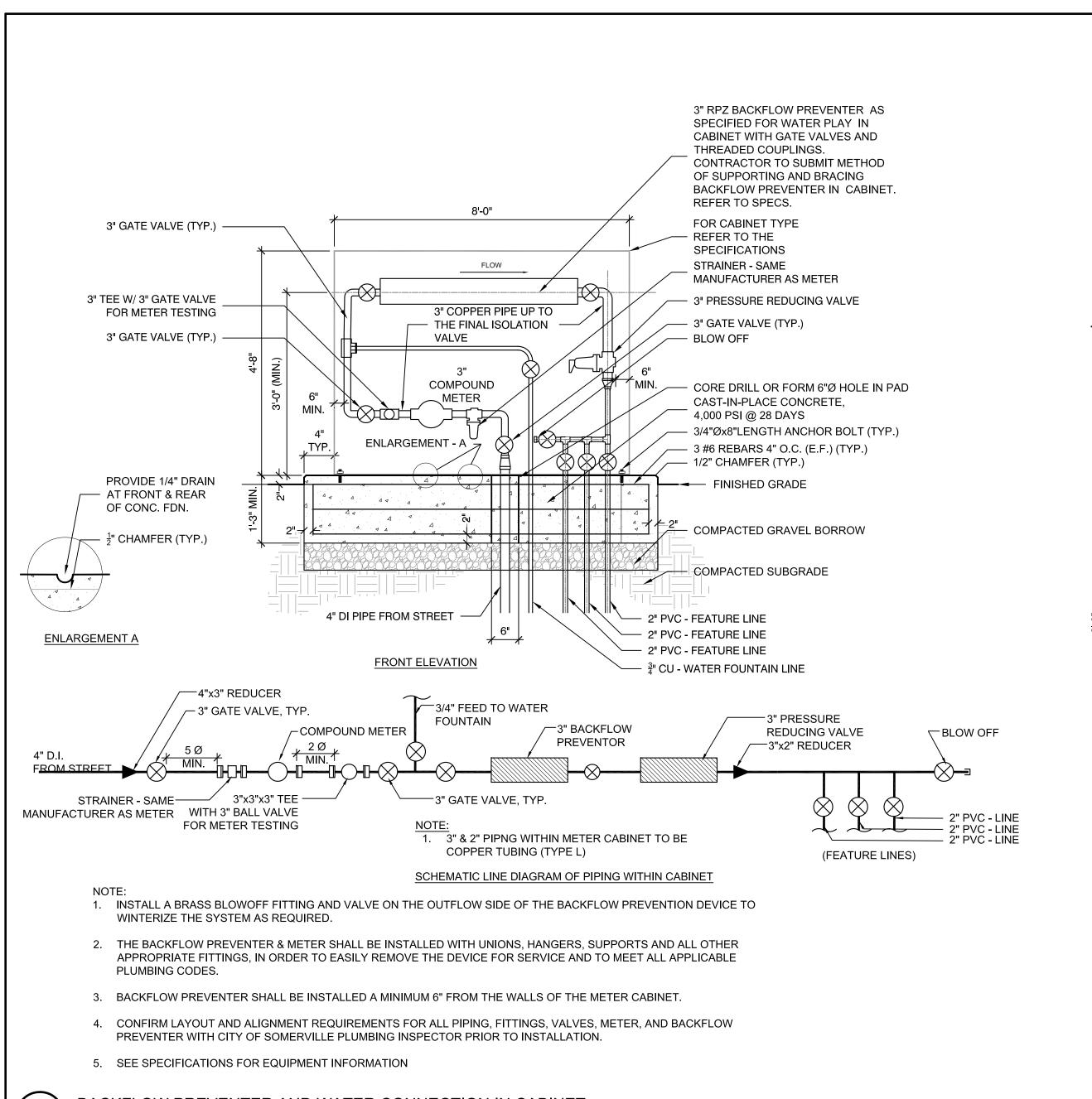
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### BACKFLOW PREVENTER AND WATER CONNECTION IN CABINET SCALE: N.T.S.

REQUIRED LENGTH OF RESTRAINED JOINTS FROM FITTINGS (FEET)

PIPE S	SIZE	90° BEND	45° BEND OR WYE BRANCH	22 1/2° BEND	11 1/4° BEND	PLUG, CAP OR IN-LINE VALVE	TEE (BRANCH)
6"	l	25 (30.5)	10.5 (12.5)	5 (6)	2.5 (3)	43 (64)	34 (51)
8"	l	33 (40)	13.5 (16.5)	6.5 (8)	3 (4)	55 (82)	47 (70)
10	II	40 (48.5)	16.5 (20)	8 (9.5)	4 (5)	67 (100)	58 (87)
12	11	47 (56.5)	19.5 (23.5)	9.5 (11.5)	4.5 (5.5)	79 (118)	70 (105)
16	II	59.5 (72)	24.5 (30)	12 (14.5)	6 (7)	101 (152)	92 (139)
20	II	72 (86.5)	30 (36)	14.5 (17)	7 (8.5)	123 (184)	114 (171)
24	11	84 (100)	35 (41)	16.5 (20)	8 (10)	144 (216)	134 (202)
30	11	100 (120)	41 (50)	20 (24)	10 (12)	174 (261)	165 (247)

- 1. RESTRAINED LENGTHS LISTED IN PARENTHESES ARE FOR PIPE WRAPPED IN POLYETHYLENE. THE OTHER ASSOCIATED LENGTHS ARE FOR PLAIN UNWRAPPED DUCTILE IRON PIPE.
- 2. THE CONTRACTOR SHALL USE THIS TABLE IN CONJUNCTION WITH THE APPROPRIATE PIPE SPECIFICATION SECTION.



SOMERVILLE STANDARD 16"x18"

BELOW FINISHED GRADE

- DUCTILE IRON STANDPIPE

BRASS HANDLE

- 3/4" BRASS PIPE

HANDLE IS DOWN

SERVICE

BALL VALVE WITH PITOMETER

HANDLE BALL VALVE MUST BE SET SO VALVE IS IN OFF POSITION WHEN

MASONRY BLOCK FOUNDATION

3/4" CORPORATION STOP MUST BE LEFT

FOR DI WATER SERVICE. USE COPPER

TEE FITTING FOR COPPER WATER

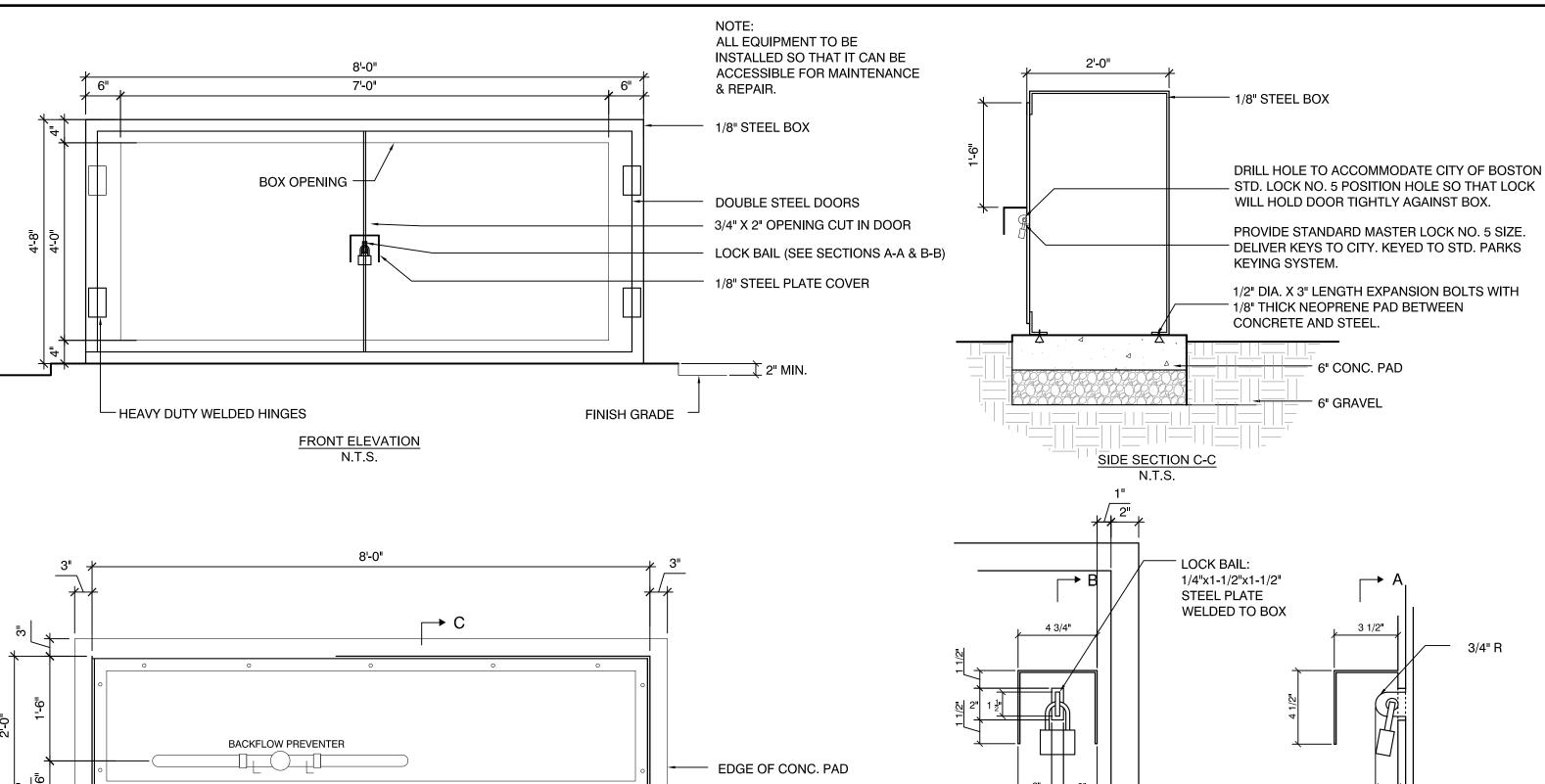
DI OR COPPER WATER SERVICE

12" MIN. DIAMETER

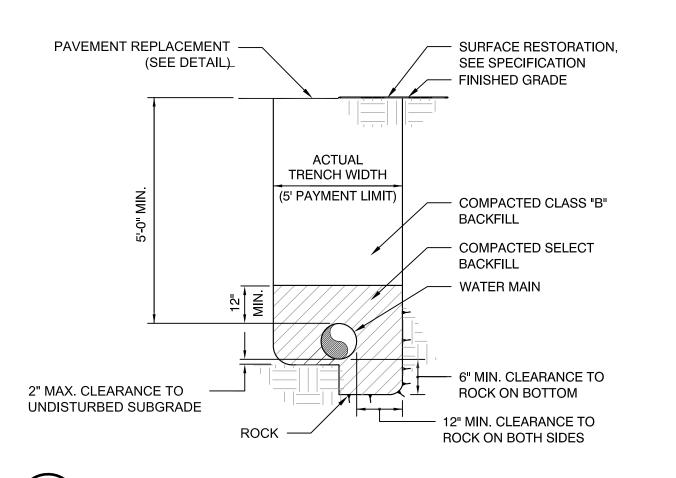
GATE VALVE FRAME AND COVER

COMPRESSED AIR CONNECTION FOR

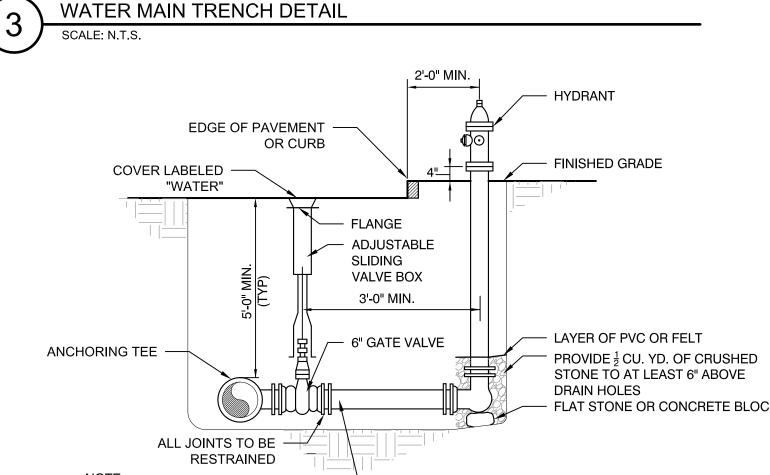
WINTERIZATION WATER BLOW. MOUNT 3"



1/2" EXPANSION BOLTS

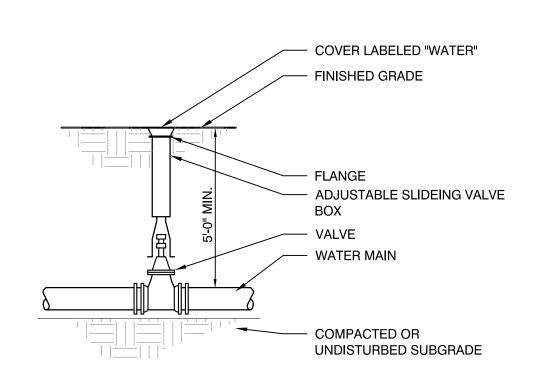


WATER CABINET



 FLAT STONE OR CONCRETE BLOCK - 6" D.I. WATER MAIN USE TWO 6" BENDS OR OFFSET ON LATERAL TO ACHIEVE REQUIRED HYDRANT ELEVATION IF NECESSARY

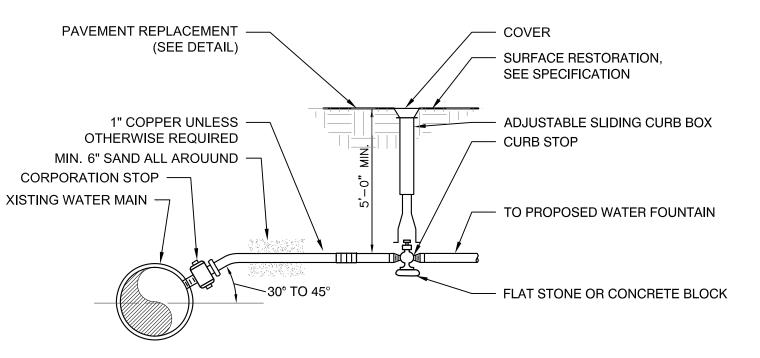
WATER HYDRANT AND VALVE DETAIL SCALE: N.T.S.



SECTION B-B N.T.S.

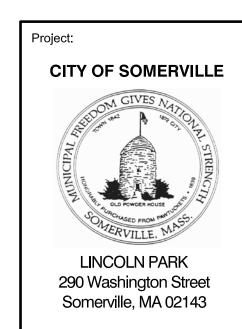
WATER VALVE AND BOX DETAIL

SECTION A-A N.T.S.



NOTE: PROVIDE SADDLE FOR ALL AC AND PVC MAINS AND ALL 2" OR LARGER STOPS

WATER SERVICE DETAIL SCALE: N.T.S.





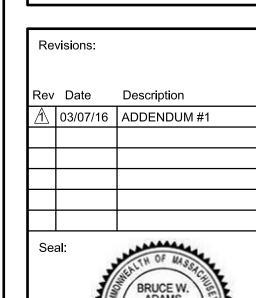
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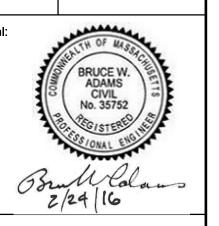






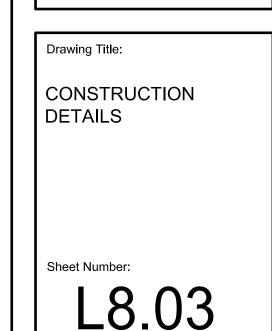
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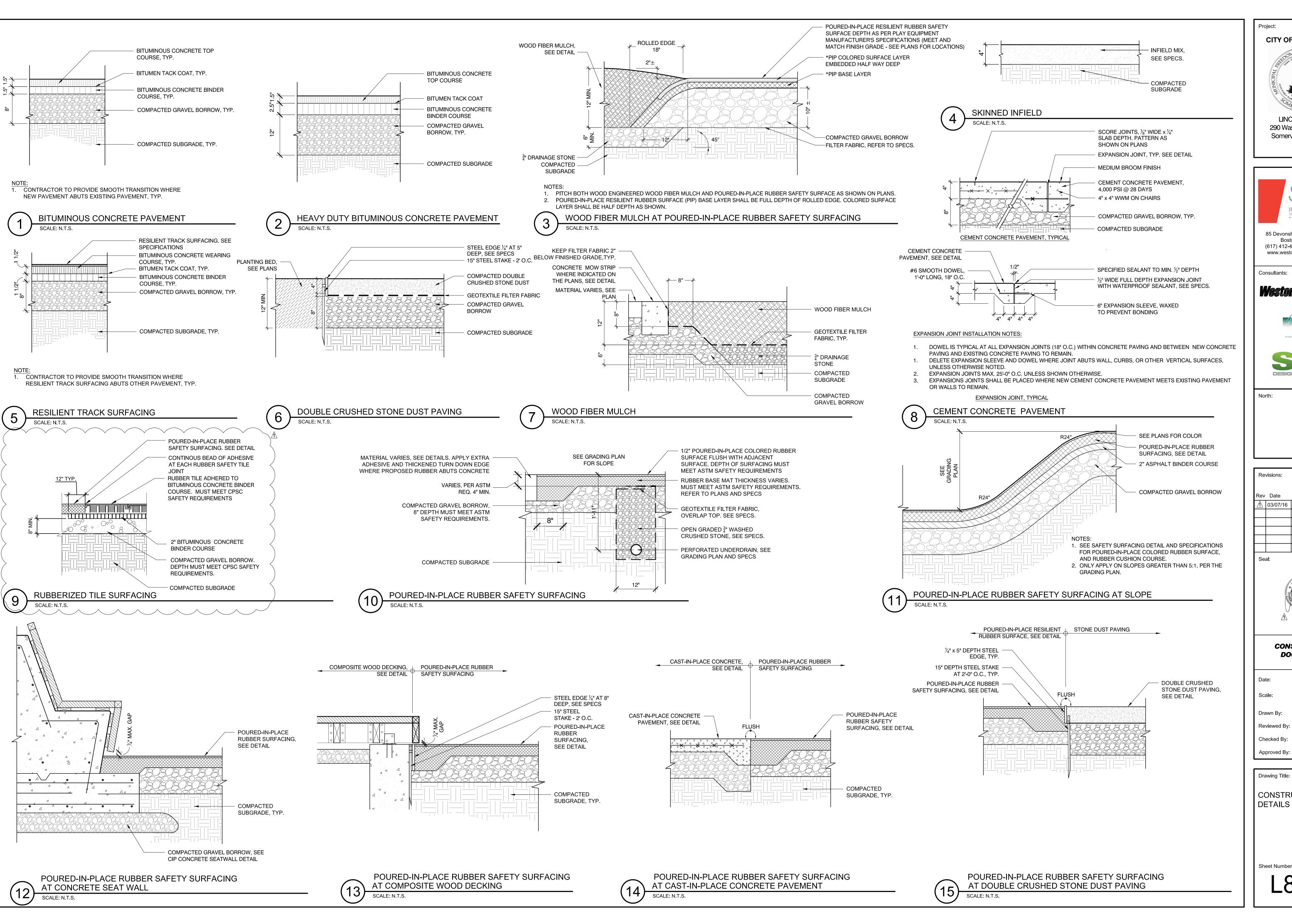
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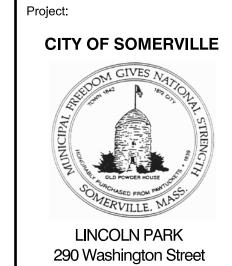


WATER- RESTRAINED JOINTS TABLE SCALE: N.T.S.

ON

OFF







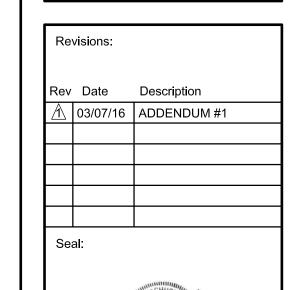
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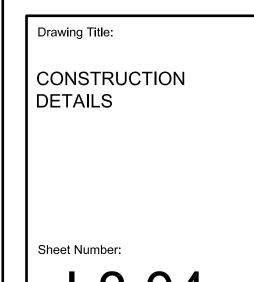


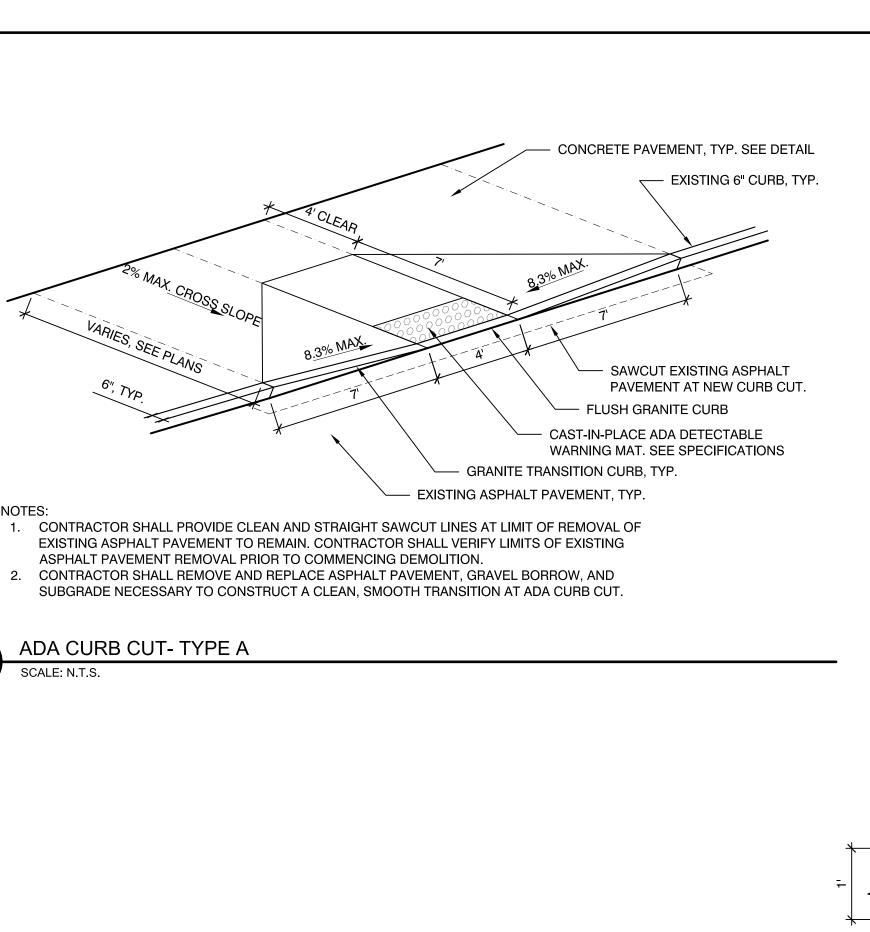


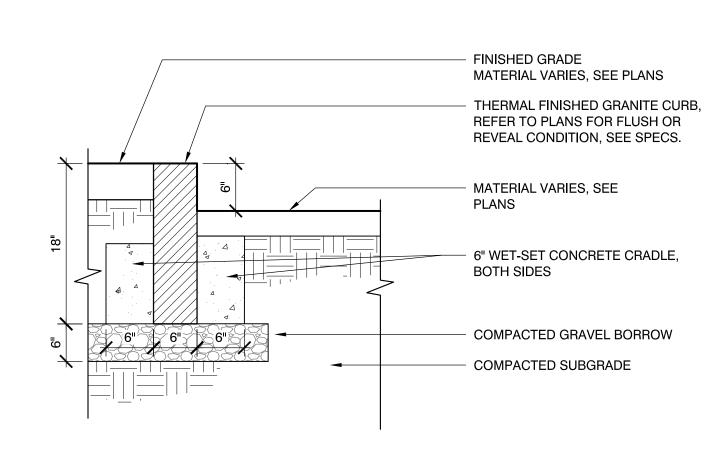


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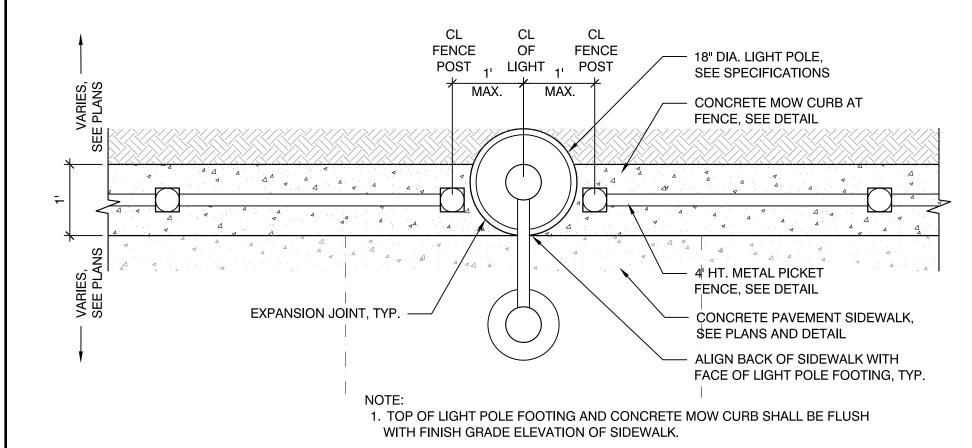
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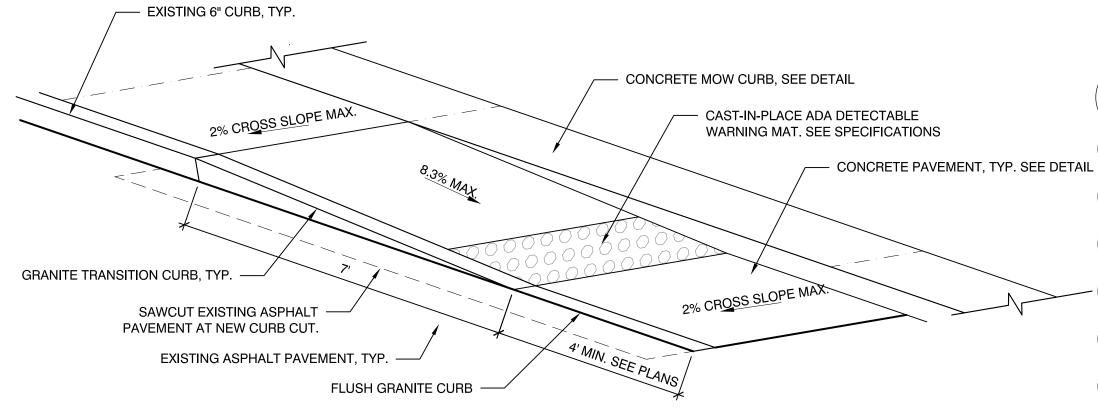






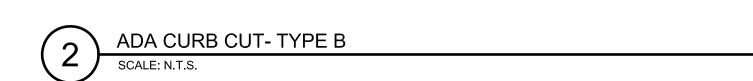






1. CONTRACTOR SHALL PROVIDE CLEAN AND STRAIGHT SAWCUT LINES AT LIMIT OF REMOVAL OF EXISTING ASPHALT PAVEMENT TO REMAIN. CONTRACTOR SHALL VERIFY LIMITS OF EXISTING ASPHALT PAVEMENT REMOVAL PRIOR TO COMMENCING DEMOLITION.

2. CONTRACTOR SHALL REMOVE AND REPLACE ASPHALT PAVEMENT, GRAVEL BORROW, AND SUBGRADE NECESSARY TO CONSTRUCT A CLEAN, SMOOTH TRANSITION AT ADA CURB CUT.



EXPANSION JOINT WITH 12"

CAST IN PLACE CONCRETE,

4,000 PSI AT 28 DAYS, MIN.

COMPACTED GRAVEL

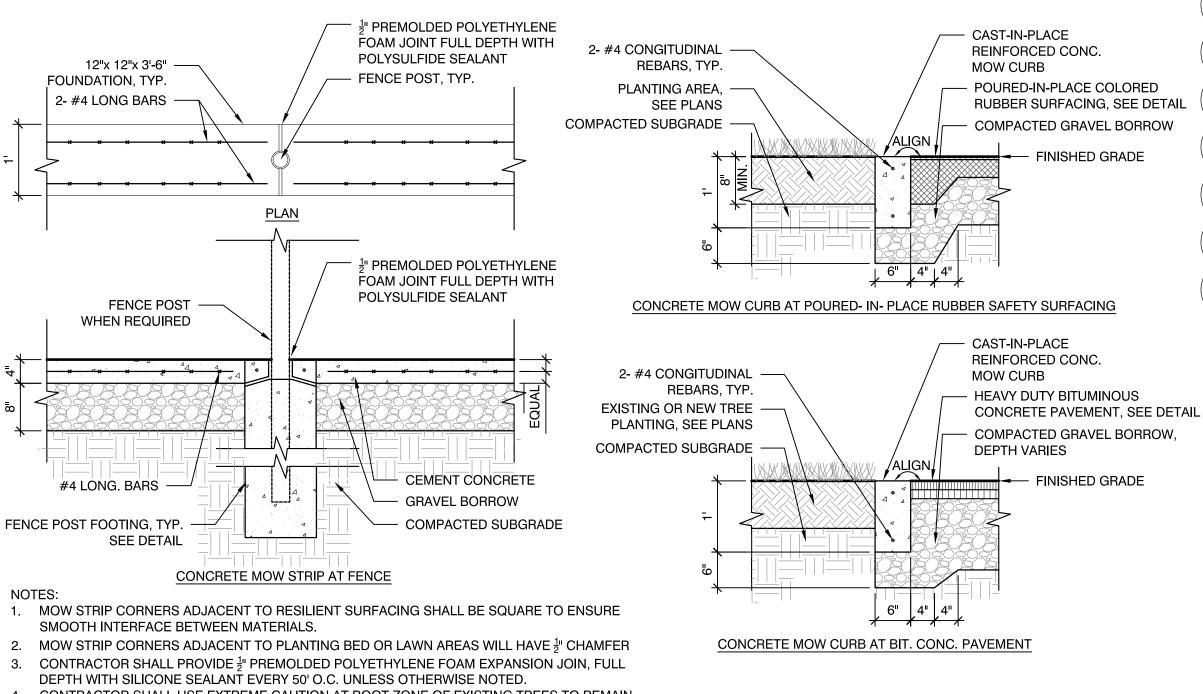
STEEL DOWELS 24" O.C.

CONCRETE PAVING, SEE

DETAIL

2X4 KEY

BORROW



TYP.

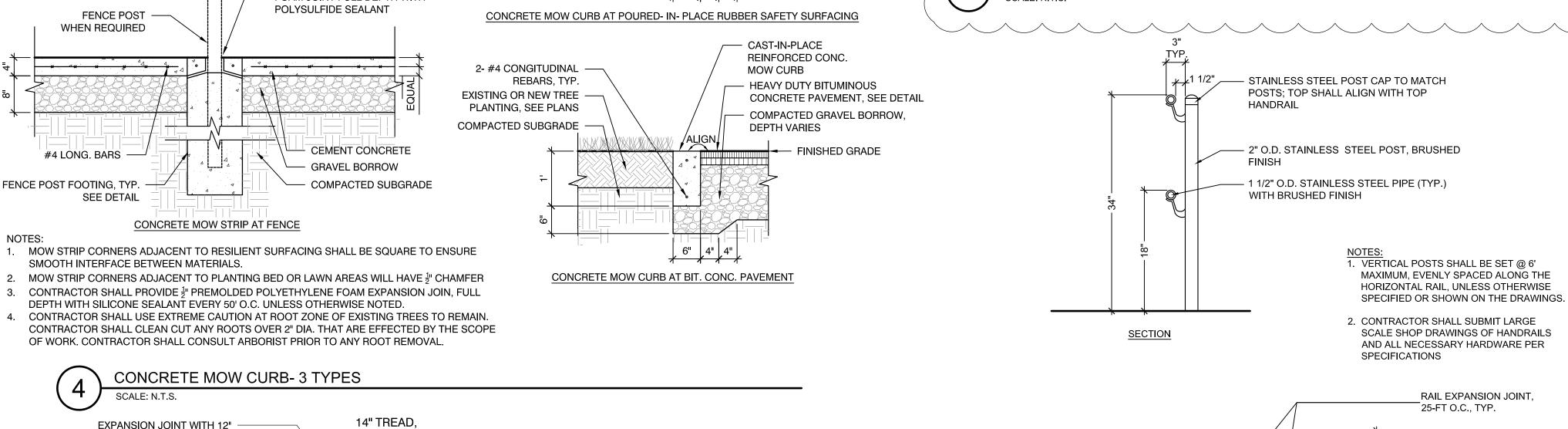
2 RISER CONC. STAIR SINGLE FOOTING

**ETYP** 

**COMPACTED OR** 

UNDISTURBED

SUBGRADE



DRAIN PIPE, WRAP

END IN FILTER

FRABIC

CONCRETE

DRAIN INLET —

36" Ø HDPE SOLID PIPE,

OPEN AT -

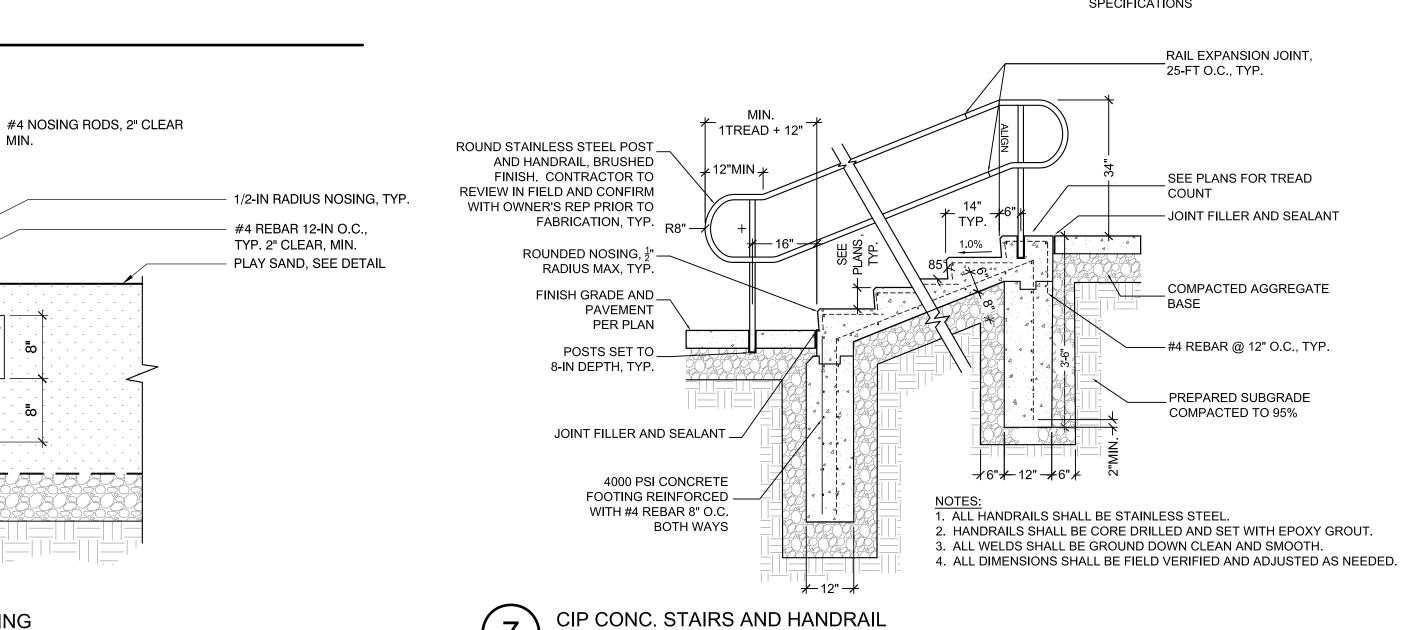
BOTTOM

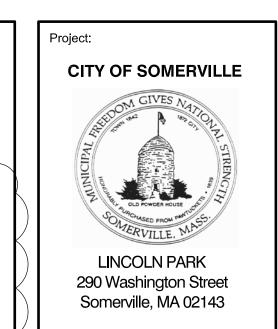
 $\frac{3}{4}$ " DRAINAGE

STONE

DRINKING FOUNTAIN DRAIN

4' X 8' CEMENT







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DRAINLINE, WRAP END IN FILTER

SEE UTILITY PLAN

- COMPACTED SUBGRADE

- TO  $\frac{3}{4}$ " COPPER SERVICE LINE.

**FABRIC** 





Revisions: Rev Date Description 1 03/07/16 ADDENDUM #1



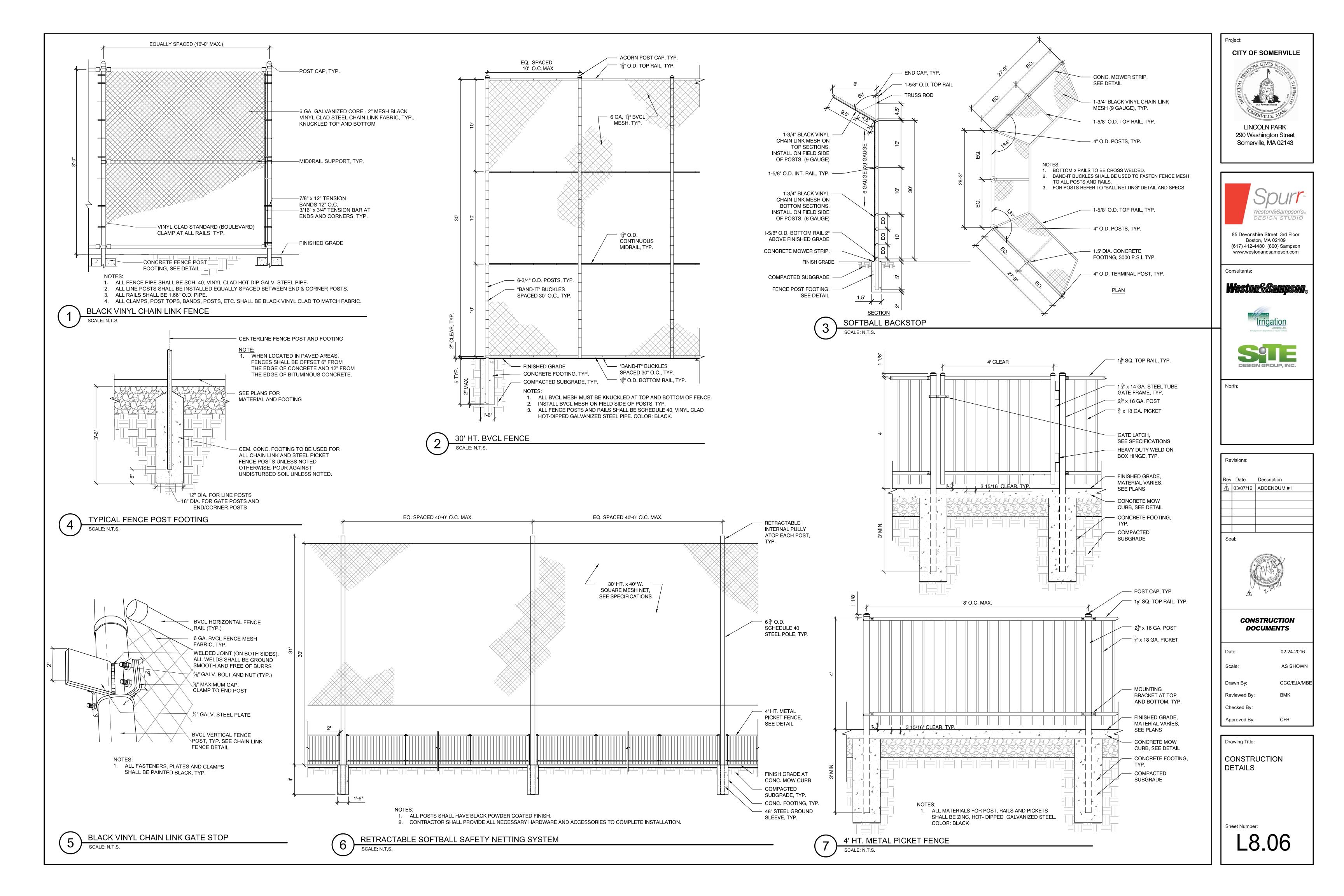
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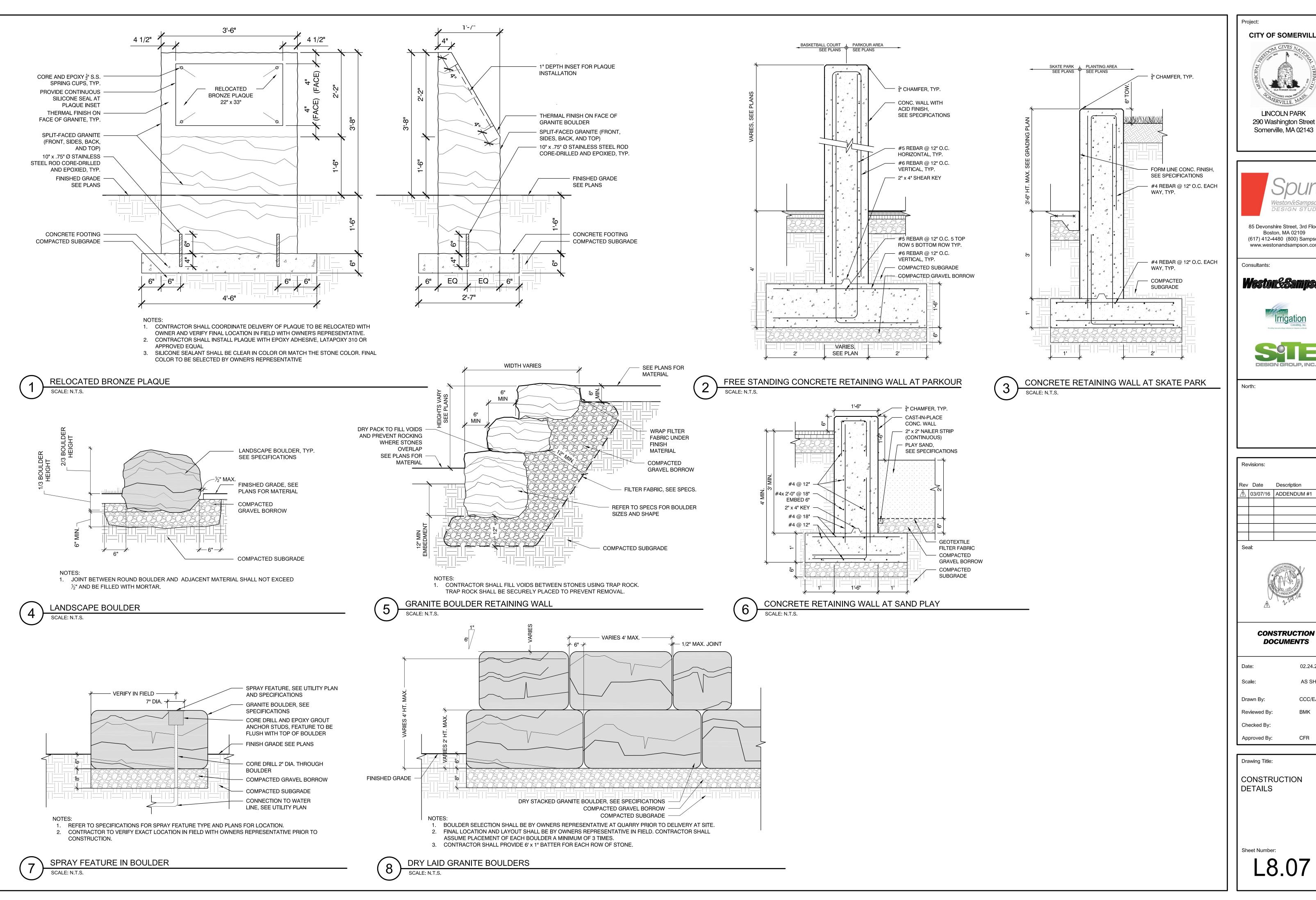
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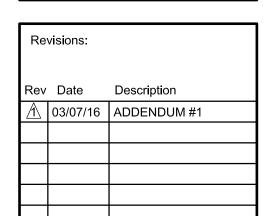


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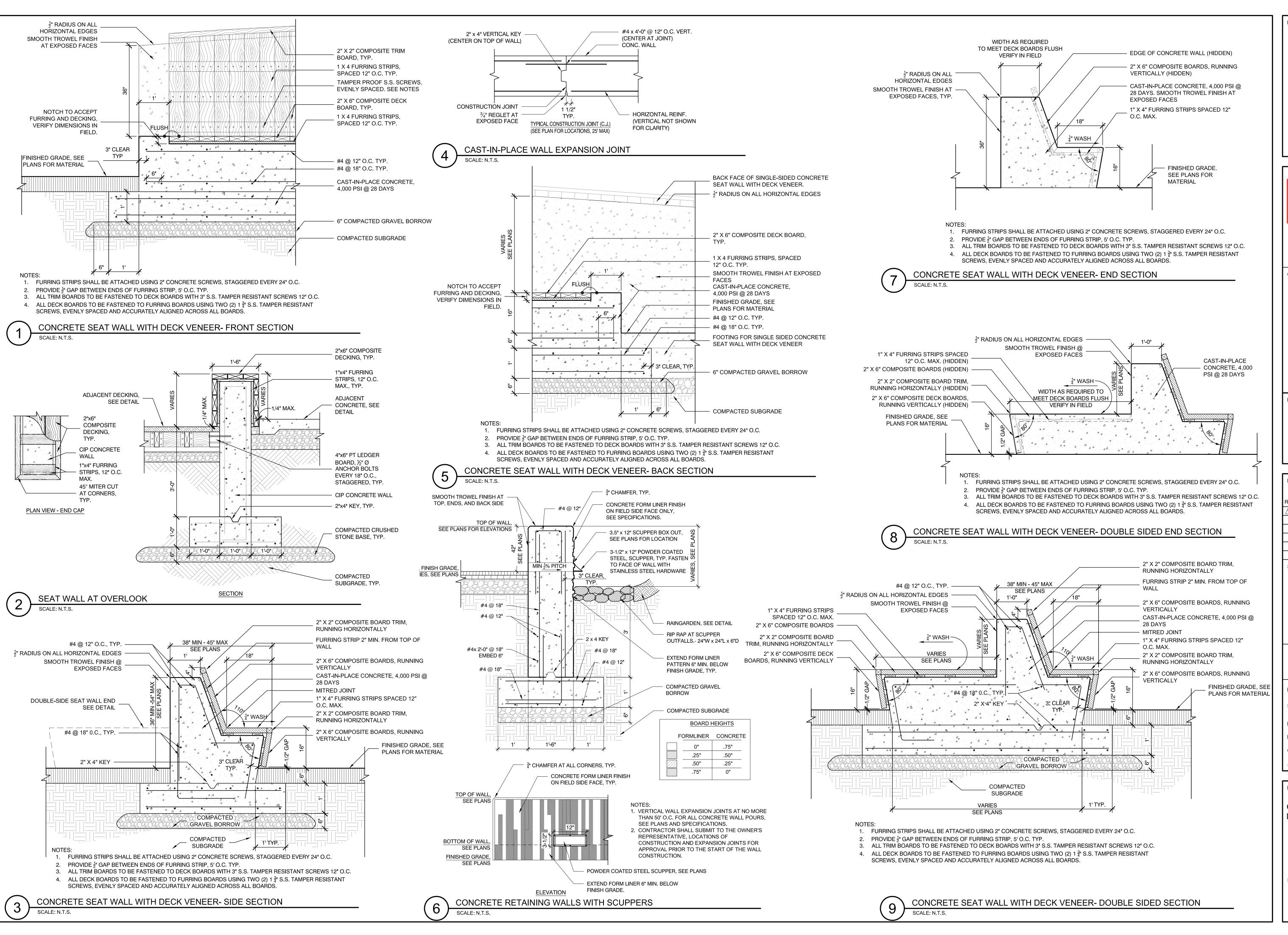


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GIVES NATIONAL STRENCY

SOLD PROVED HOUSE

LINCOLN PARK
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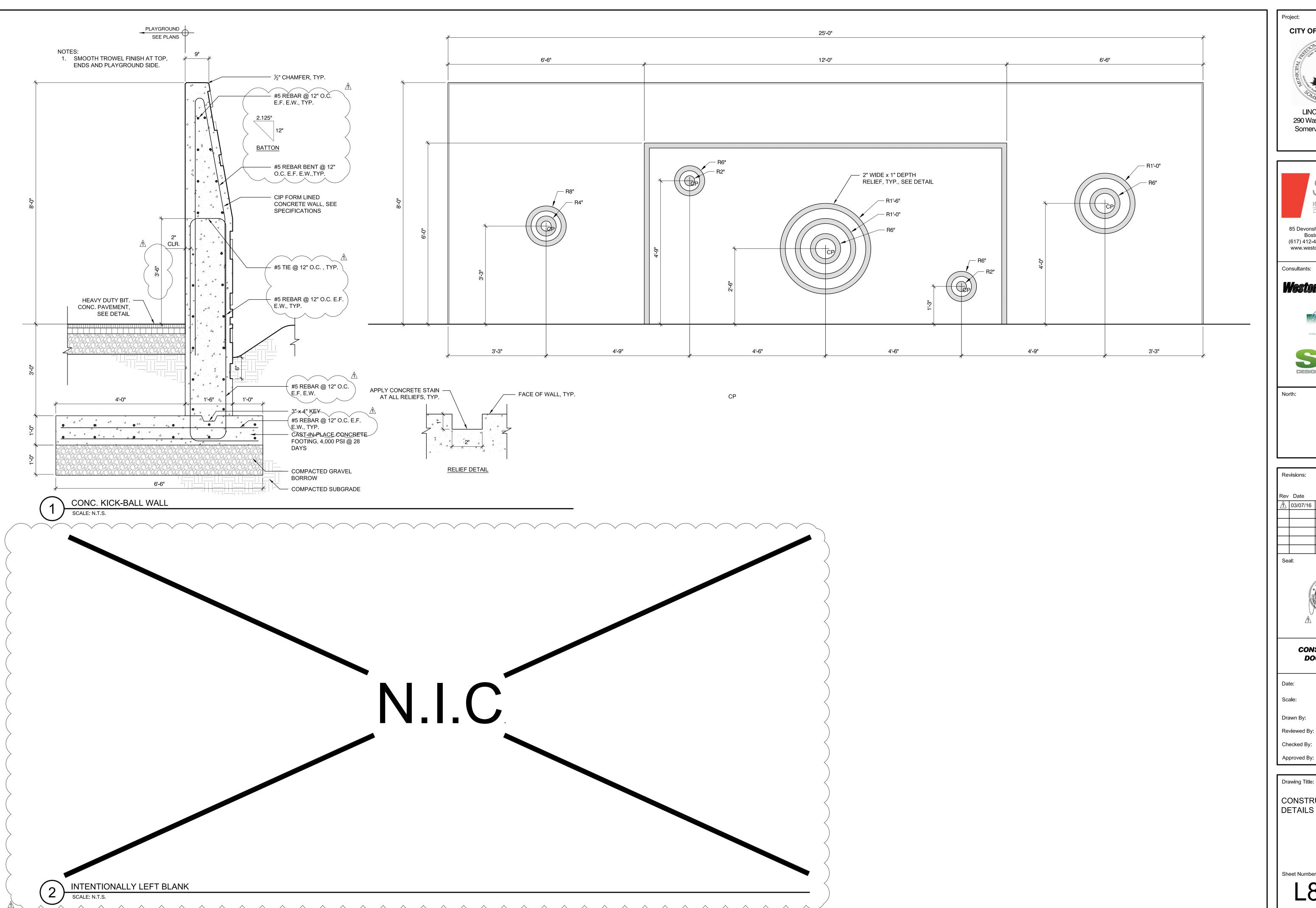
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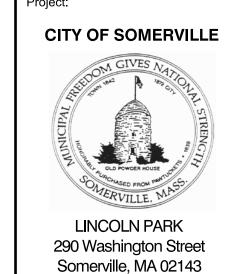
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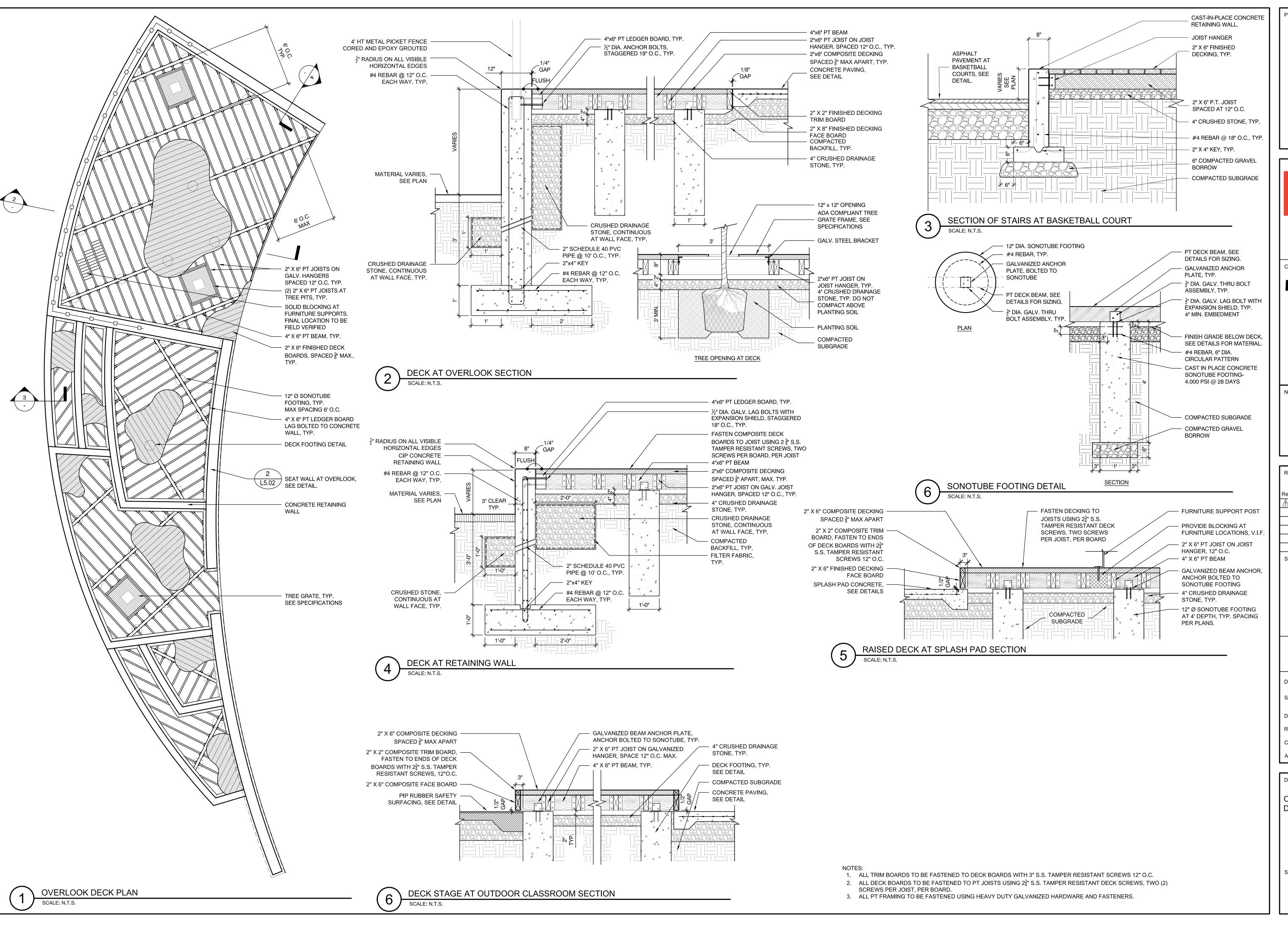
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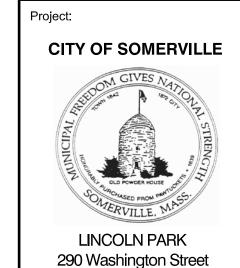
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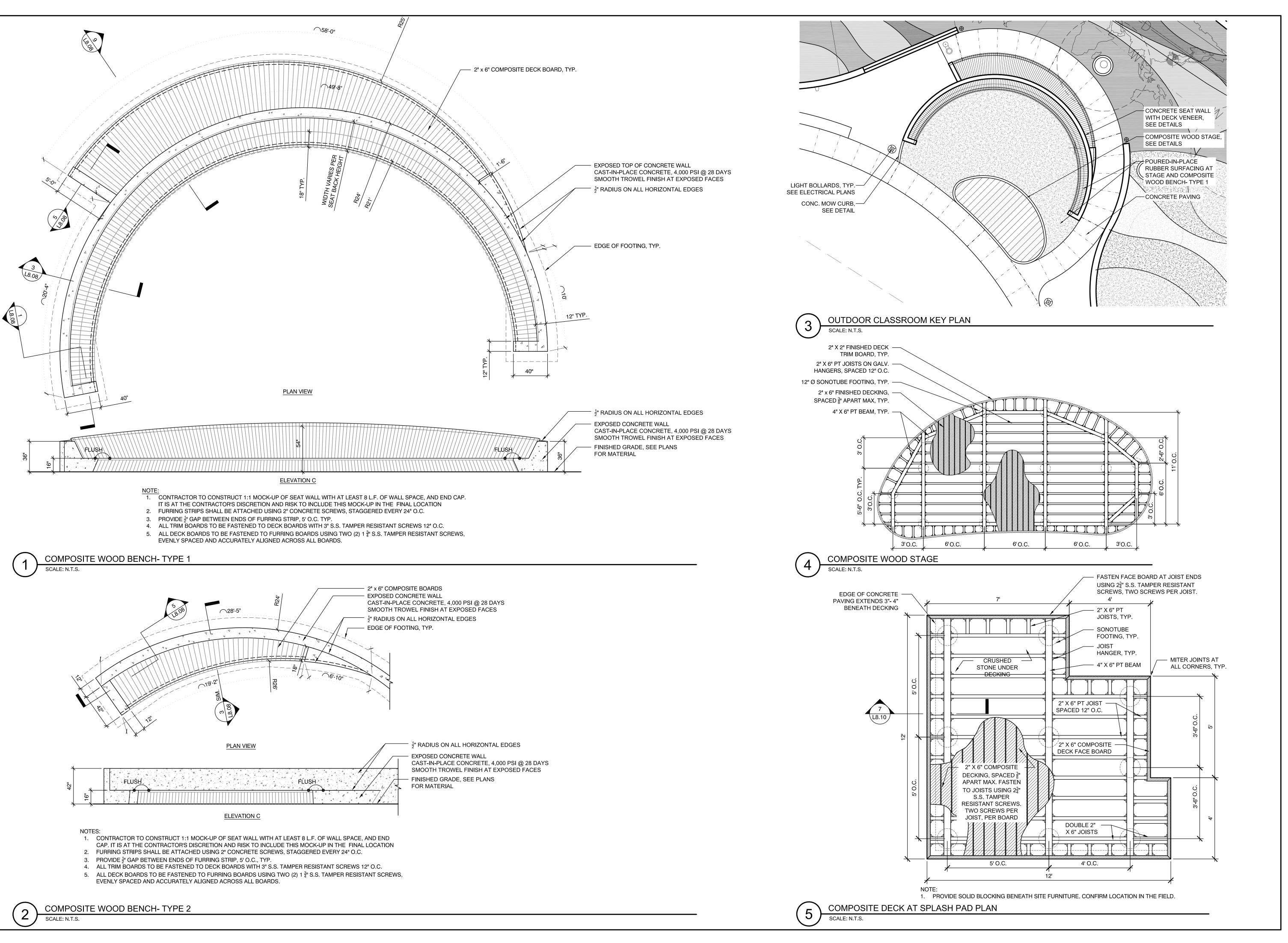
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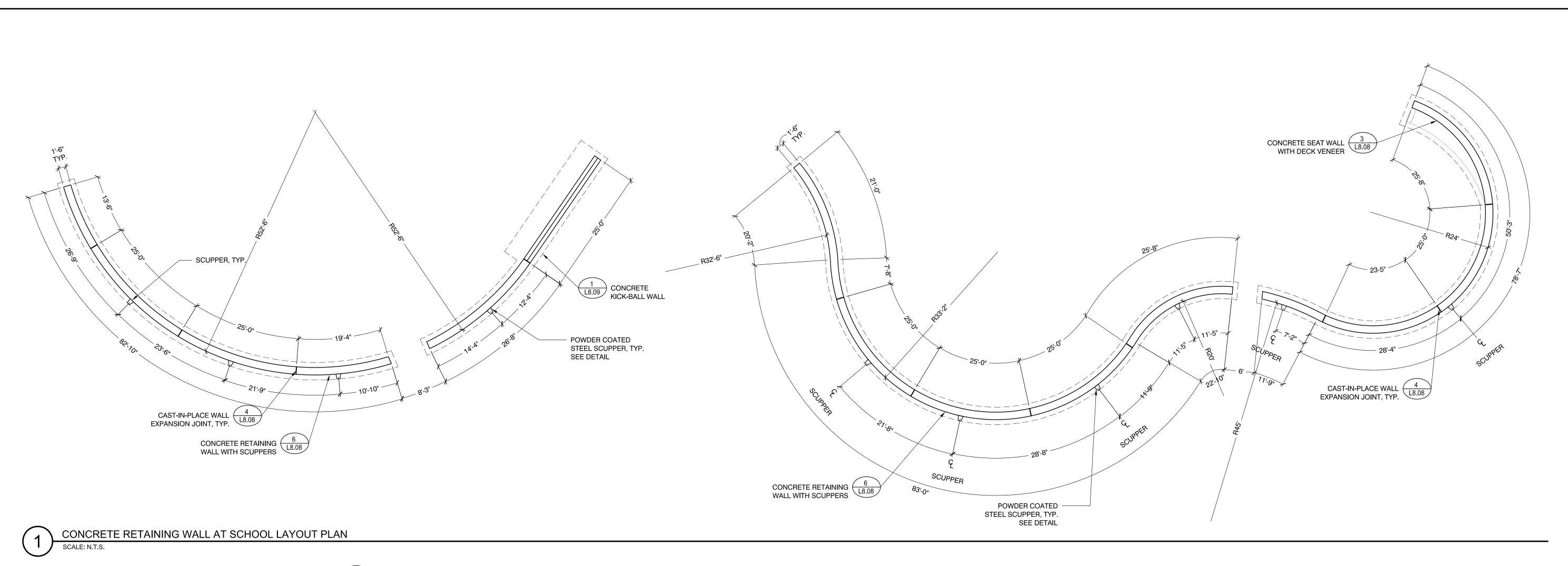
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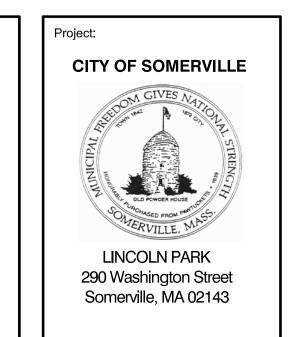
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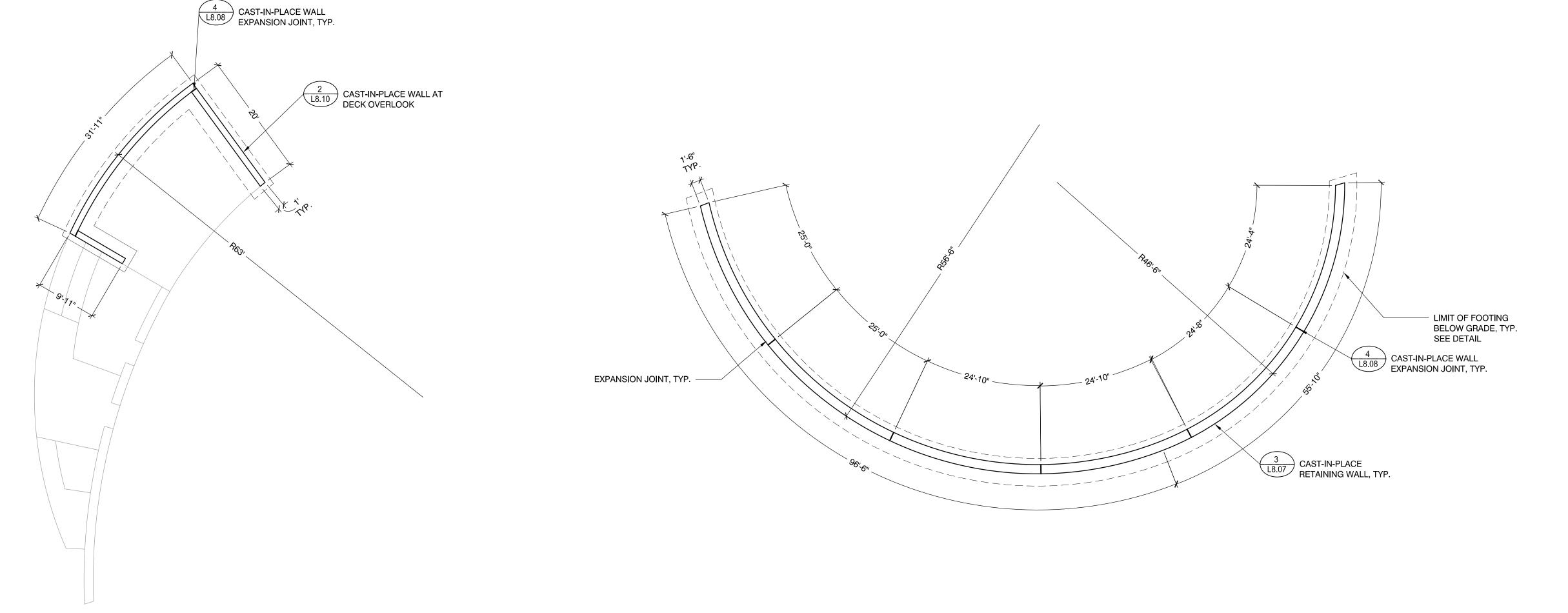
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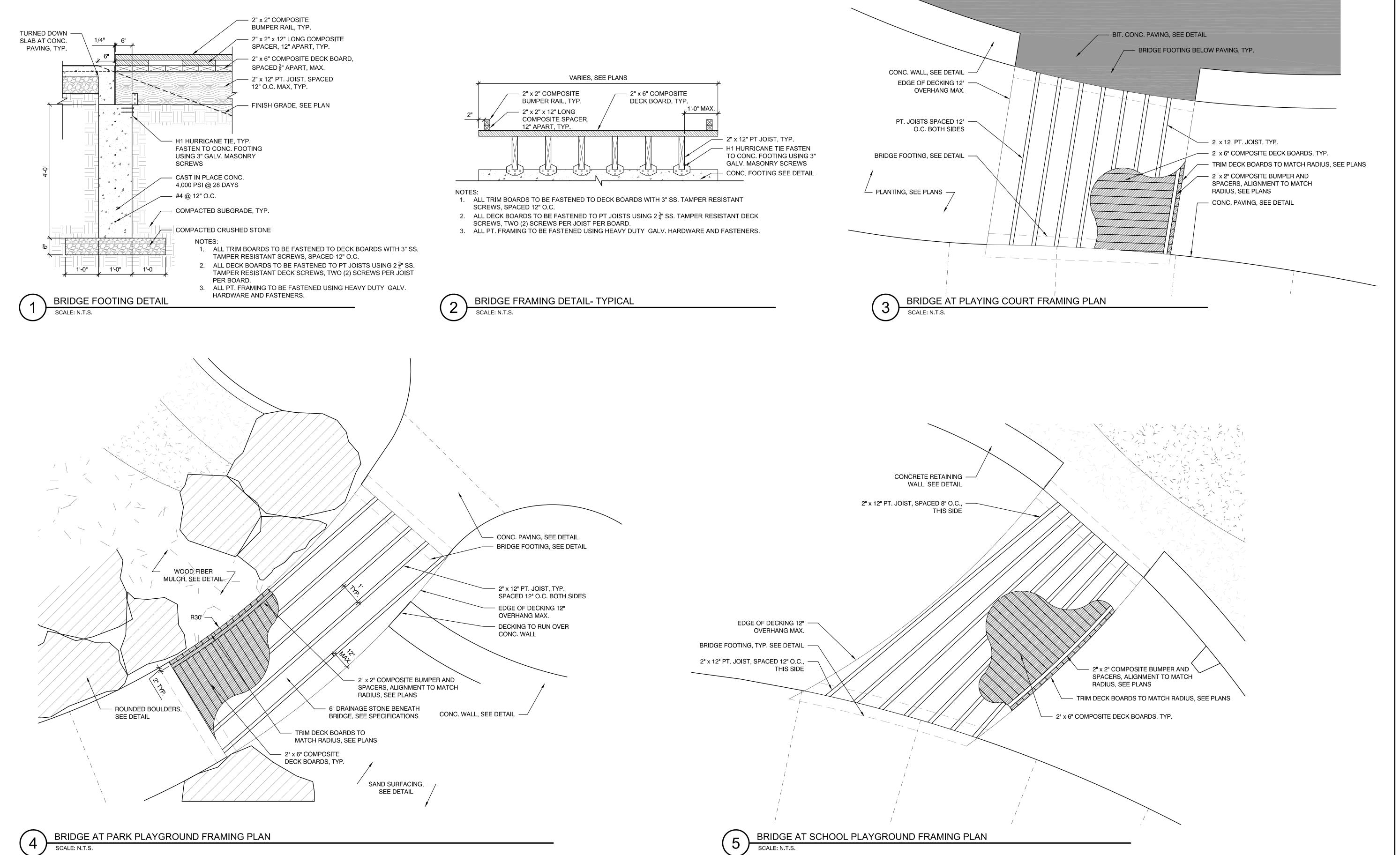
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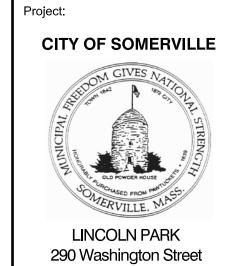
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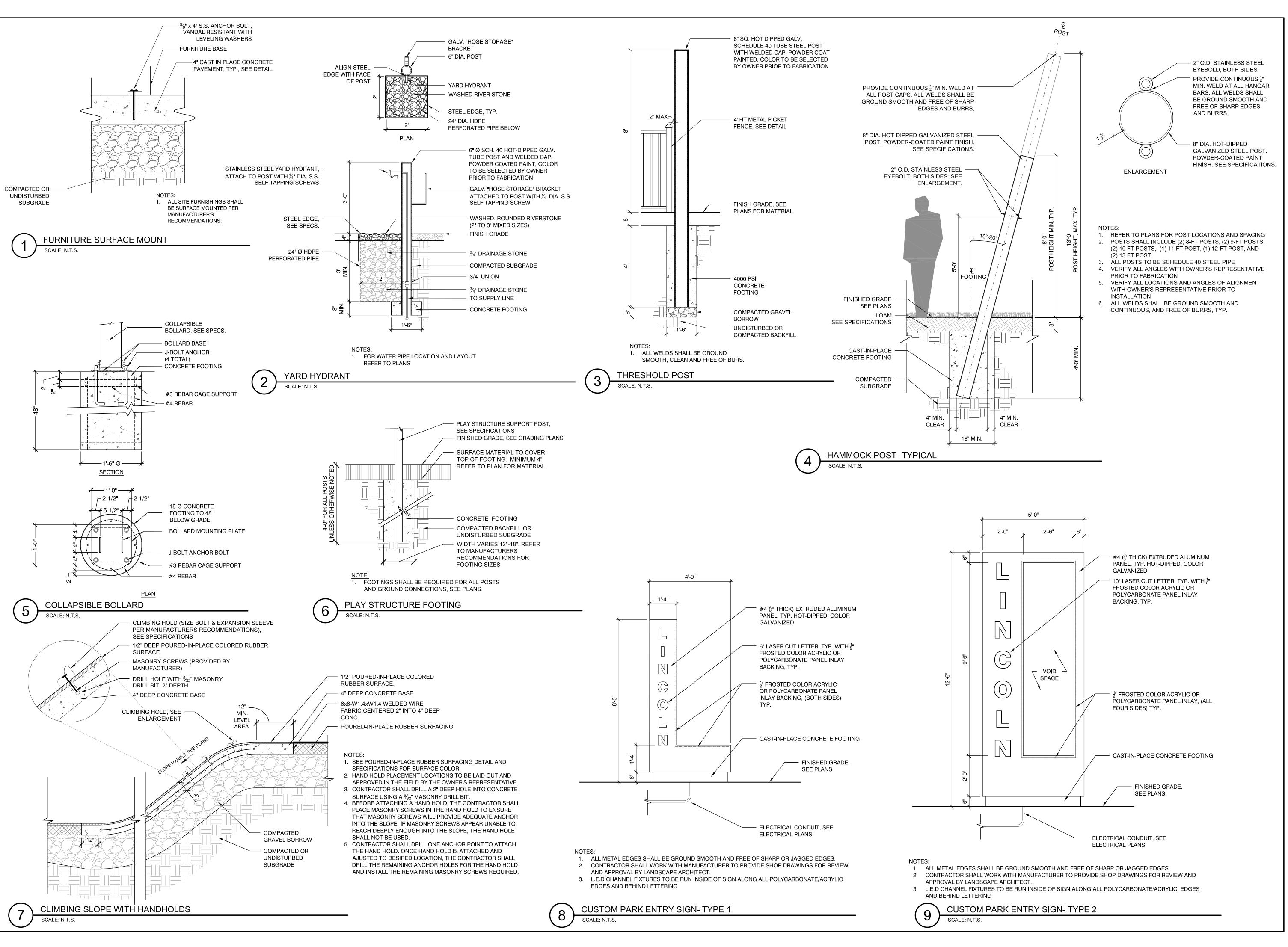
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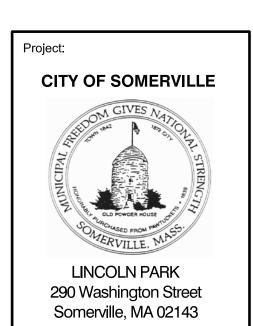
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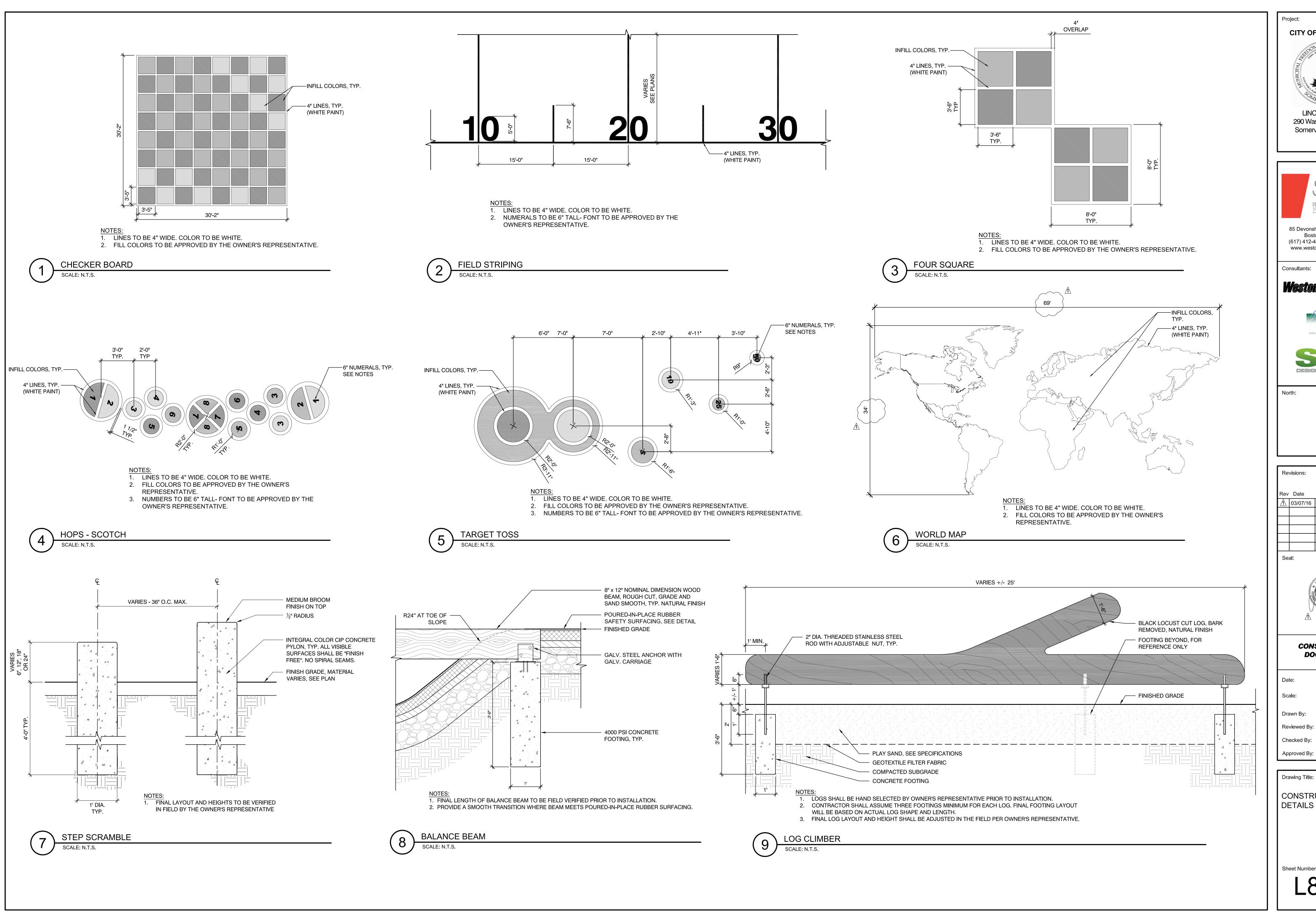
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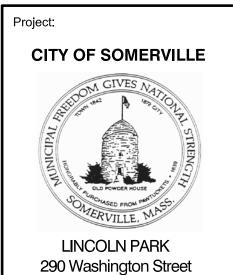
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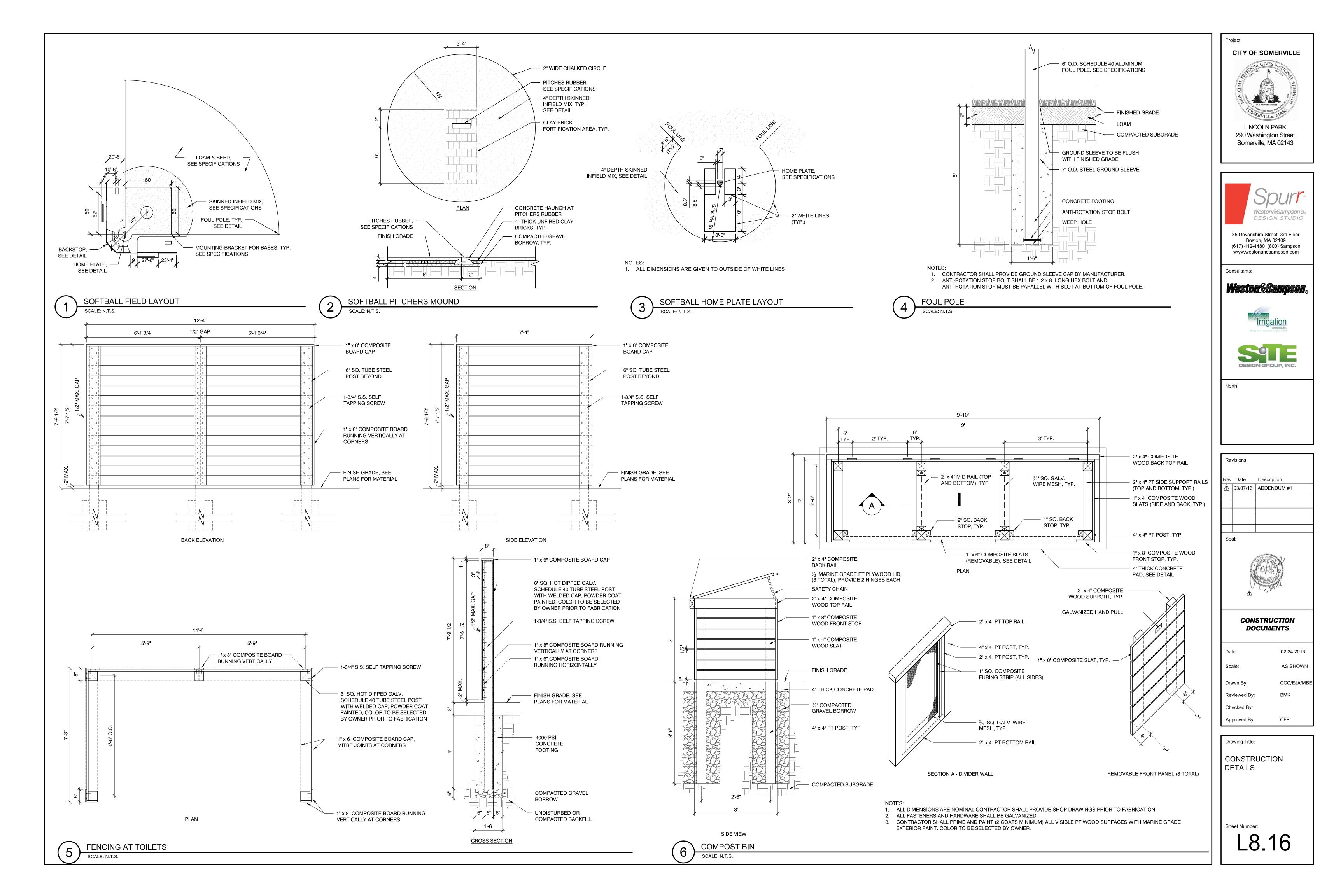
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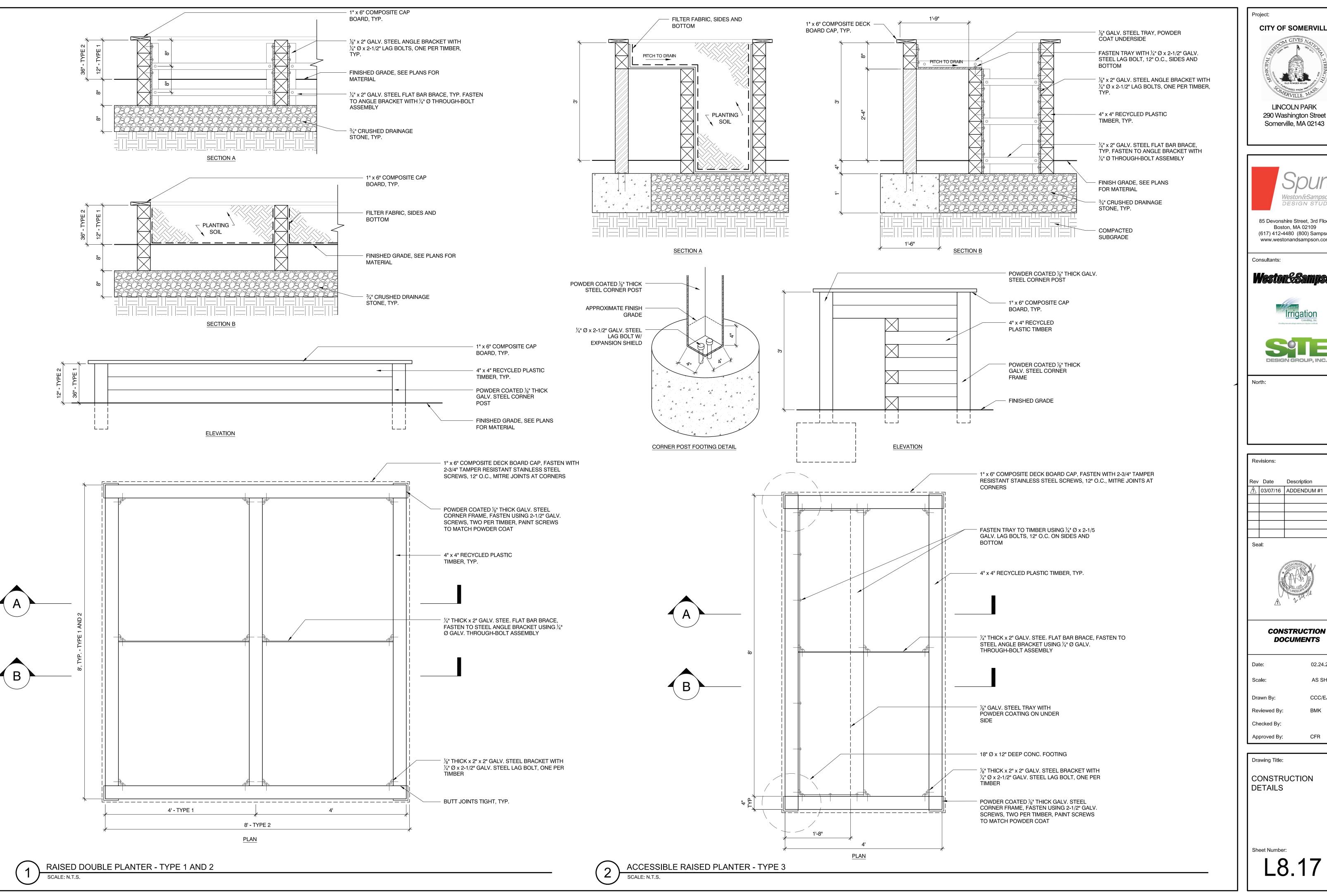
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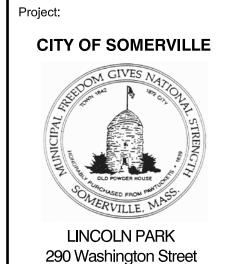
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#### <u> 1.0 - GENERAL</u> 1.01 THE STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ALL OTHER CONTRACT DRAWINGS AND SPECIFICATIONS. REFER TO CIVIL, ARCHITECTURAL, MECHANICAL, PLUMBING, AND ELECTRICAL DRAWINGS FOR LOCATION, DIMENSIONS, AND DETAILS OF OPENINGS, SLEEVES, EMBEDMENTS, INSERTS, PADS, CURBS, DEPRESSIONS, ANCHOR BOLTS, AND OTHER PROJECT REQUIREMENTS NOT SHOWN ON STRUCTURAL DRAWINGS. 1.02 THE CONTRACTOR IS RESPONSIBLE FOR CHECKING, COORDINATING AND VERIFYING ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCY TO THE ARCHITECT AND ENGINEER. 1.03 THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING IN THE FIELD THE EXISTENCE AND LOCATION OF OVERHEAD, BURIED AND/OR EMBEDDED UTILITIES, AND DETERMINING LOCATIONS OF ALL EMBEDDED MECHANICAL, ELECTRICAL AND PLUMBING SYSTEMS AFFECTED BY THE WORK OF THIS CONTRACT. 1.04 ALL WORK IS TO CONFORM WITH THE FOLLOWING CODES AND STANDARDS: (A) "780 CMR: MASSACHUSETTS AMENDMENTS" - 8TH EDITION (MSBC) (B) INTERNATIONAL BUILDING CODE, (IBC 2009) (C) "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE" - AMERICAN CONCRETE INSTITUTE (ACI 318-05) (D) "MANUAL OF STEEL CONSTRUCTION" - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC 360) (E) "STRUCTURAL WELDING CODE - STEEL" - AMERICAN WELDING SOCIETY (AWS D1.1-92) F) "SEISMIC PROVISION FOR STRUCTURAL STEEL BUILDINGS" -AMERICAN INSTITUTE OF STEEL CONSTRUCTION, (AISC) (G) "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES" - AMERICAN SOCIETY OF CIVIL ENGINEERS, (ASCE 7-05)

### FOR ADDITIONAL CODES AND STANDARDS REFER TO SPECIFICATIONS.

1.06 DETAILS AND NOTES SHOWN ON STRUCTURAL DRAWINGS SHALL BE APPLICABLE TO ALL PARTS OF THE STRUCTURAL WORK EXCEPT WHERE SPECIFICALLY REQUIRED OTHERWISE BY CONTRACT DOCUMENTS. CONDITIONS NOT SPECIFICALLY SHOWN SHALL BE SIMILAR TO THOSE SHOWN FOR LIKE CONDITIONS AS DETERMINED BY THE ENGINEER.

1.05 THE CONTRACTOR SHALL NOTIFY THE ARCHITECT AND ENGINEER OF UNANTICIPATED CONDITIONS THAT MAY BE UNCOVERED DURING

- 1.07 TESTING AND INSPECTION OF STRUCTURAL WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COSTS FOR TESTING AND INSPECTIONS WILL BE PAID BY THE CONTRACTOR. PROVIDE TEST RESULTS TO THE ENGINEER IN A TIMELY MANNER.
- THE CONTRACTOR SHALL DESIGN AND PROVIDE ALL REQUIRED SHORING AND TEMPORARY BRACING TO RESIST FORCES ON THE STRUCTURE THROUGHOUT THE CONSTRUCTION PERIOD.
- 1.09 LAYOUT AND DESIGN OF PARK ELEMENTS BY PARKOUR GENERATIONS AMERICA, SOMERVILLE, MA. WESTON & SAMPSON PROVIDED STRUCTURAL CONSULTING FOR PARK ELEMENTS.
- 1.10 REFER TO SHEET L3.03 SITE AMENITIES PLAN FOR SIGNAGE.

DEMOLITION AND CONSTRUCTION.

- 1.11 CONTRACTOR SHALL EXCAVATE DOWN TO THE BOTTOM OF FOOTING ELEVATIONS AND SHALL REMOVE UNSUITABLE ORGANICS AND/OR SOFT SOILD AND REPLACE WITH STRUCTURAL BACKFILL. EXCAVATED SOILS SHALL BE INSPECTED BY THE ENGINEER. STRUCTURAL BACKFILL SHALL BE TESTED TO 95% COMPACTION BY A QUALIFIED SOILS TESTING LABRATORY. ASSUMED ALLOWABLE BEARING PRESSURE IS 2000 PSF.
- 1.12 UTILITIES ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO SHEET L1.00. FOOTINGS SHALL SET SUFFICIENTLY BELOW EXISTING UTILITES USING STEPS AS REQUIRED, SO THAT EXISTING PIPES MAY EXTEND THROUGH A CAST-IN-PLACE STEEL SLEEVE.

#### 2.0 - CAST IN PLACE CONCRETE

- 2.01 CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-05) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301-99).
- 2.02 CONCRETE SHALL BE CONTROLLED CONCRETE, PROPORTIONED, MIXED AND PLACED IN THE PRESENCE OF A REPRESENTATIVE OF AN APPROVED TESTING AGENCY.
- 2.03 UNLESS NOTED OTHERWISE, CONCRETE SHALL BE NORMAL WEIGHT AND HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH AS FOLLOWS:

(A) ALL STRUCTURAL CONCRETE: 4500 PSI (B) EXTERIOR WALKS AND SLABS: 4500 PSI

SUBMIT MIX DESIGNS FOR APPROVAL

- 2.04 CONCRETE EXPOSED TO WEATHER (FREEZE-THAW CONDITIONS) IN THE FINISHED PROJECT SHALL BE AIR ENTRAINED PER ACI SPECIFICATIONS.
- SMOOTH FINISH FORM FACING PANELS SHALL PROVIDE CONTINUOUS, TRUE, AND SMOOTH CONCRETE SURFACES. FURNISH IN LARGEST PRACTICAL SIZES TO MINIMIZE THE NUMBER OF JOINTS. PANELS SHALL BE PLYWOOD, STEEL, OR OTHER APPROVED MATERIAL. PLYWOOD SHALL BE MEDIUM-DENSITY OVERLAY, CLASS 1 OR BETTER, MILL RELEASE AGENT TREATED, AND EDGE SEALED OR APPROVED EQUAL.
- 2.06 FORM RELEASE AGENTS SHALL NOT BOND TO, STAIN, OR OTHERWISE ADVERSELY AFFECT CONCRETE SURFACES.
- 2.07 FORM TIES SHALL BE FACTORY FABRICATED, REMOVABLE OR SNAP OFF GLASS-FIBER REINFORCED PLASTIC DESIGNED TO RESIST LATERAL PRESSURE OF FRESH CONCRETE ON FORMS AND TO PREVENT SPALLING OF CONCRETE ON REMOVAL.
- 2.08 SUBMIT FORMWORK MATERIAL AND LAYOUT FOR APPROVAL SHOP DRAWINGS SHALL INDICATE FORM TIE AND PANEL JOINT LOCATIONS.
- 2.09 A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN ADJACENT CONCRETE PLACEMENTS.
- 2.10 GRIND ALL VERTICAL AND HORIZONTAL EDGES AND CORNERS EXPOSED TO VIEW TO A 1/8" RADIUS UNLESS NOTED OTHERWISE. DO NOT CHAMFER
- 2.11 ALL CONCRETE SHALL BE WATER CURED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.
- 2.12 A MINIMUM OF 7 DAYS AFTER PLACEMENT, CONCRETE SURFACES SHALL BE GIVEN MURIATIC ACID FINISH. REFER TO LANDSCAPE DRAWINGS AND SPECIFICATIONS.
- 2.13 NON-SHRINK, NON-METALLIC, GROUT SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 7,500 PSI (ASTM C942) AND A MINIMUM BOND STRENGTH OF 2,000 PSI AT 28-DAYS (ASTM C882). GROUT MAY BE EXTENDED WITH COARSE AGGREGATE PER THE MANUFACTURER'S

#### 3.0 - CAST IN PLACE CONCRETE REINFORCEMENT

- 3.01 REINFORCEMENT DETAILING, FABRICATION, AND ERECTION SHALL CONFORM TO "ACI DETAILING MANUAL" SP-66, "CRSI MANUAL OF STANDARD PRACTICE".
- 3.02 STEEL REINFORCEMENT, UNLESS NOTED OTHERWISE, SHALL CONFORM TO THE FOLLOWING:

(A) BARS, TIES, AND STIRRUPS ASTM A615 GRADE 60 (B) WELDED WIRE FABRIC ASTM A185, FLAT SHEETS

- 3.03 REINFORCING STEEL SHALL BE UNCOATED AND DEFORMED.
- MINIMUM CONCRETE PROTECTIVE COVERING FOR REINFORCEMENT, UNLESS REQUIRED FOR FIRE PROTECTION OR NOTED OTHERWISE, SHALL
  - (A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:\_\_\_\_3" (B) CONCRETE EXPOSED TO EARTH OR WEATHER:

SHALL BE SUPPORTED BY CHAIRS AND/OR CARRYING BARS PRIOR TO CONCRETE PLACEMENT.

- (1) NO. 6 THRU NO. 18 BARS\_\_\_
  - (2) NO. 5 BAR, W31 OR D31 WIRE AND SMALLER\_\_\_2"
- 3.05 REINFORCING STEEL SHALL BE CONTINUOUS THROUGH ALL CONSTRUCTION JOINTS, CORNERS, AND INTERSECTIONS UNLESS OTHERWISE NOTED. REINFORCING SHALL BE LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS, UNLESS OTHERWISE NOTED.
- 3.06 FOR REINFORCING STEEL SPLICE LAP LENGTHS REFER ACI STANDARDS.
- MECHANICAL SPLICES SHALL BE PERMITTED SUBJECT TO APPROVAL BY THE ENGINEER. MECHANICAL SPLICES SHALL DEVELOP AT LEAST 125 PERCENT OF THE SPECIFIED YIELD STRENGTH OF THE BAR. NO WELDED CONNECTIONS ARE PERMITTED.
- WELDED WIRE FABRIC SHALL BE LAPPED (1) SQUARE PLUS (2) INCHES WHERE REQUIRED AND SHALL BE WIRED TOGETHER AT ALL LAPS. WWF
- 3.09 REINFORCEMENT SHALL NOT BE TACK WELDED.
- NOTIFY THE TESTING LAB AND ENGINEER A MINIMUM OF 48 HOURS PRIOR TO SCHEDULED CONCRETE PLACEMENT IN ORDER TO ACCOMMODATE INSPECTION OF REINFORCEMENT AND CONCRETE TESTING. NO CONCRETE SHALL BE PLACED WITHIN 48 HOURS OF SUCH
- 3.11 WHERE REINFORCEMENT IS NOT SHOWN ON DRAWINGS, PROVIDE REINFORCEMENT IN ACCORDANCE WITH APPLICABLE DETAILS AS DETERMINED BY THE ARCHITECT AND ENGINEER. IN NO CASE SHALL REINFORCEMENT BE LESS THAN THE MINIMUM REINFORCEMENT PERMITTED BY THE CODES, NOR LESS THAN THE FOLLOWING:

(A) STRUCTURAL SLABS: .0020 GROSS CONCRETE AREA IN EACH DIRECTION (B) CONCRETE WALLS: .0025 x GROSS CONCRETE AREA IN EACH DIRECTION

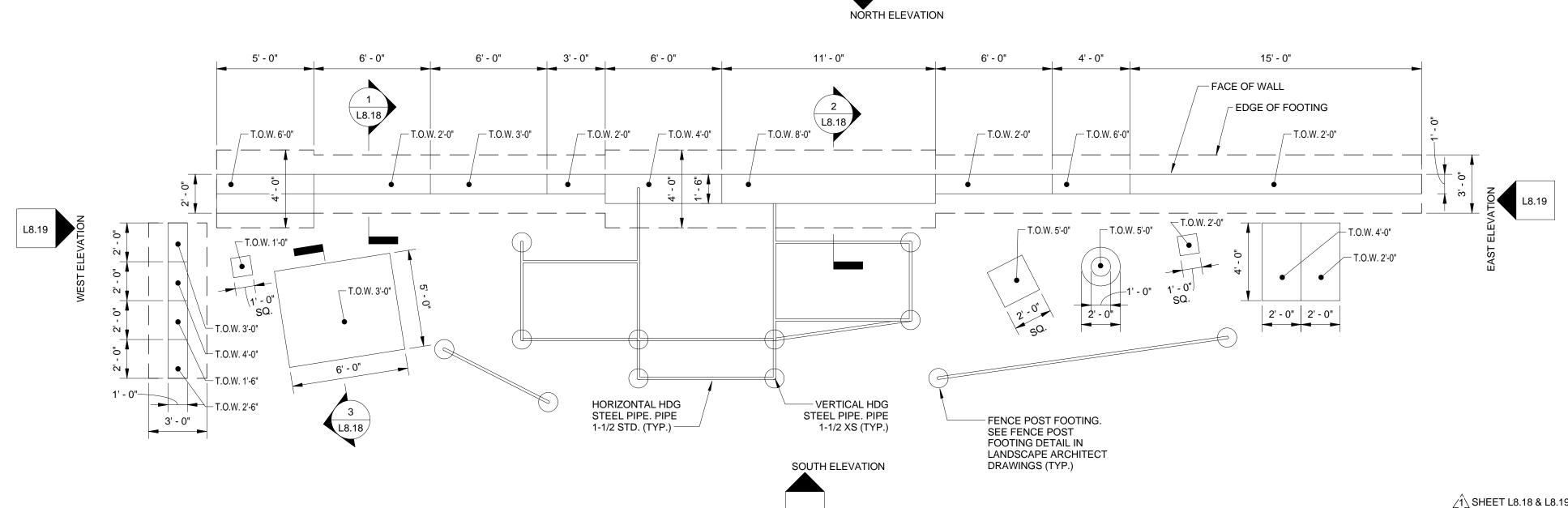
- 3.12 WHERE REINFORCEMENT IS REQUIRED IN SECTION, REINFORCEMENT IS CONSIDERED TYPICAL WHEREVER THE SECTIONS APPLIES.
- 3.13 DOWELS SHALL MATCH BAR SIZE, NUMBER AND SPACING, UNLESS NOTED OTHERWISE
- 3.14 SUBMIT REINFORCING SHOP DRAWINGS FOR APPROVAL
- 4.0 POST INSTALLED CONCRETE ANCHORS AND REINFORCING DOWELS
- 4.01 ADHESIVE ANCHORS AND REINFORCING DOWELS SHALL BE HILTI HIT-HY-200 ADHESIVE ANCHORING SYSTEM OR APPROVED EQUAL.
- 4.02 EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT TZ EXPANSION ANCHORS OR APPROVED EQUAL
- 4.03 INSTALL ANCHORS IN STRICT CONFORMANCE WITH THE MANUFACTURER'S REQUIREMENTS
- 4.04 HOLES SHALL BE THOROUGHLY CLEANED AND DRY PRIOR TO INSTALLING ANCHORS.
- 4.05 ANCHORS INSTALLED OVERHEAD SHALL BE PROOF TESTED BY THE MANUFACTURER'S FIELD ENGINEER OR OTHER APPROVED AGENCY. PROOF TEST A MINIMUM OF 25% OF THE ANCHORS OR (2) TOTAL, WHICHEVER IS GREATER.

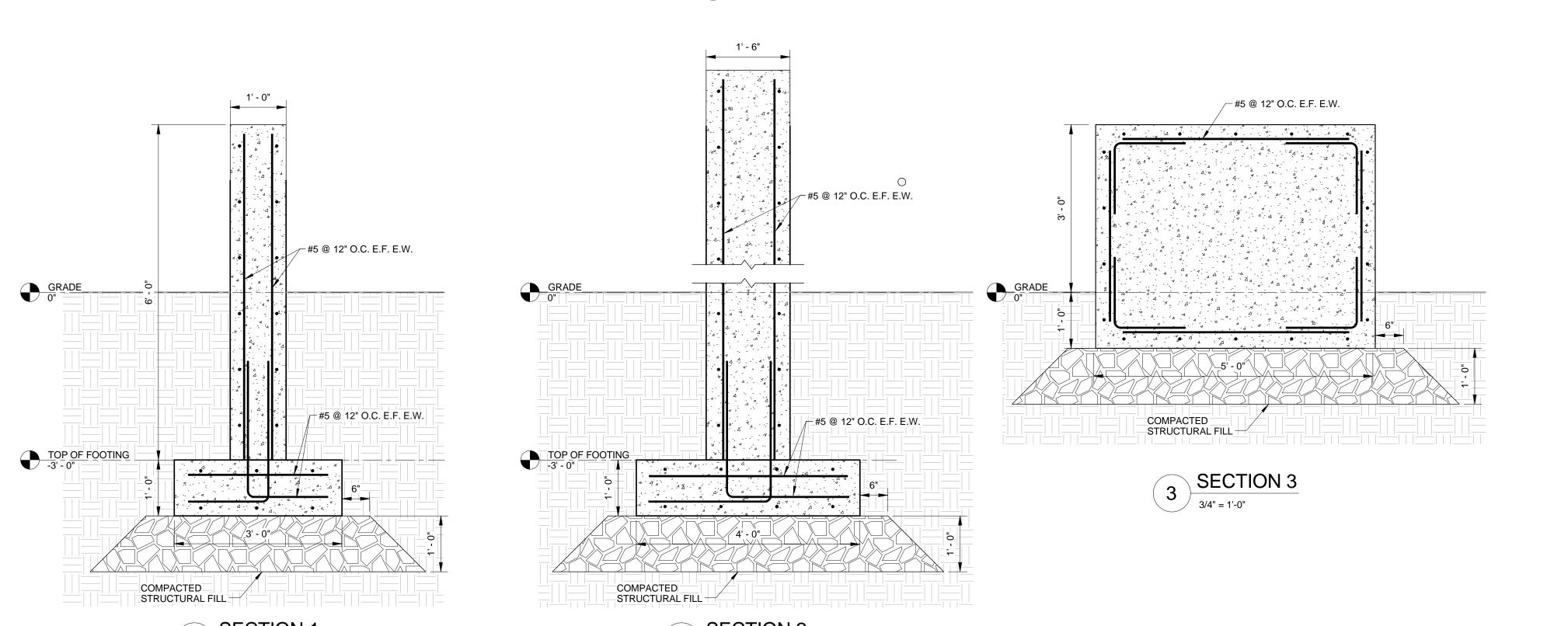
#### 6.0 - STRUCTURAL STEEL

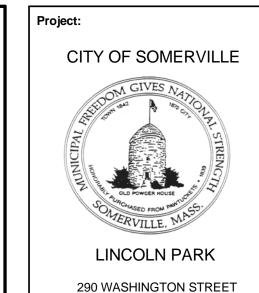
- 6.01 STRUCTURAL STEEL DESIGN, FABRICATION AND ERECTION SHALL CONFORM TO THE AISC "MANUAL OF STEEL CONSTRUCTION", STEEL BUILDING AND BRIDGES" (AISC MARCH 18, 2005).
- 6.02 STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING:
- (A) ANGLES, PLATES AND BARS: ASTM A572 OR ASTM A36.
- (B) STRUCTURAL PIPE:\_\_\_\_\_ASTM A53 GR B. ALL WELDED CONNECTIONS SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO A.W.S. SPECIFICATIONS AMENDED TO DATE. ELECTRODES SHALL BE E70XX.
- 6.04 BOLTS SHALL CONFORM TO ASTM A325 AND BE INSTALLED SNUG-TIGHT UNLESS NOTED OTHERWISE
- 6.05 STRUCTURAL STEEL FRAMING SHALL BE WITHIN TOLERANCE BEFORE CONNECTIONS ARE FINALLY BOLTED OR WELDED.
- 6.06 FIELD CUTTING OF STRUCTURAL STEEL OR ANY FIELD MODIFICATIONS OF STRUCTURAL STEEL SHALL NOT BE MADE WITHOUT PRIOR WRITTEN APPROVAL BY THE ENGINEER FOR EACH SPECIFIC USE.
- STRUCTURAL STEEL SHAPES AND PLATES SHALL BE HOT-DIPPED GALVANIZED (HDG) PER ASTM A123 U.N.O. FASTENERS SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153 U.N.O. HOT-DIPPED GALVANIZING SHALL ALSO CONFORM TO ASTM A385. THE GALVANIZER

6.08 PROVIDE FIELD TOUCH-UP AND REPAIR OF GALVANIZING AS REQUIRED PER ASTM A780 USING AN INORGANIC ZINC-RICH PRIMER

- SHALL SUBMIT A CERTIFICATE OF CONFORMANCE FOR RECORD. MASK AREAS TO BE FIELD WELDED.
- 6.09 WELDS SHALL BE 1/4" FILLET WELDS MINIMUM UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- 6.10 PIPE TO PIPE CONNECTION SHALL BE FULL PENETRATION WELDS.
- 6.11 GRIND WELDS SMOOTH.
- 6.12 FIELD WELDING SHALL BE INSPECTED BY AN APPROVED TESTING AND INSPECTION AGENCY.
- 6.13 SUBMIT SHOP DRAWINGS AND PRODUCT DATA FOR APPROVAL PRIOR TO FABRICATION.



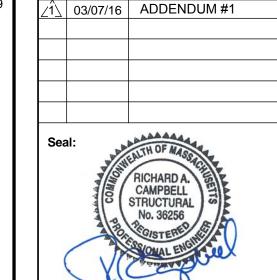




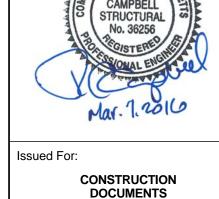
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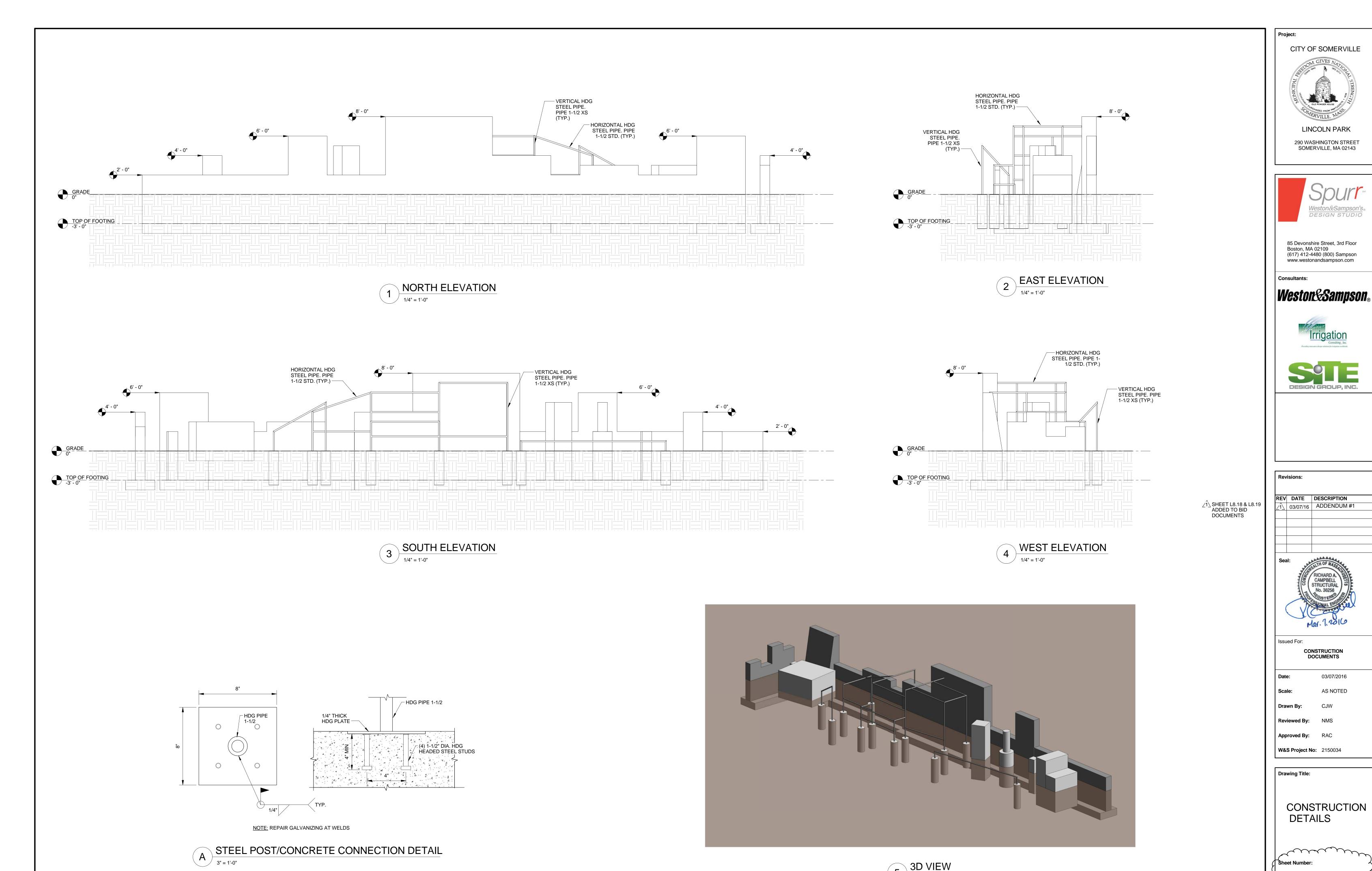


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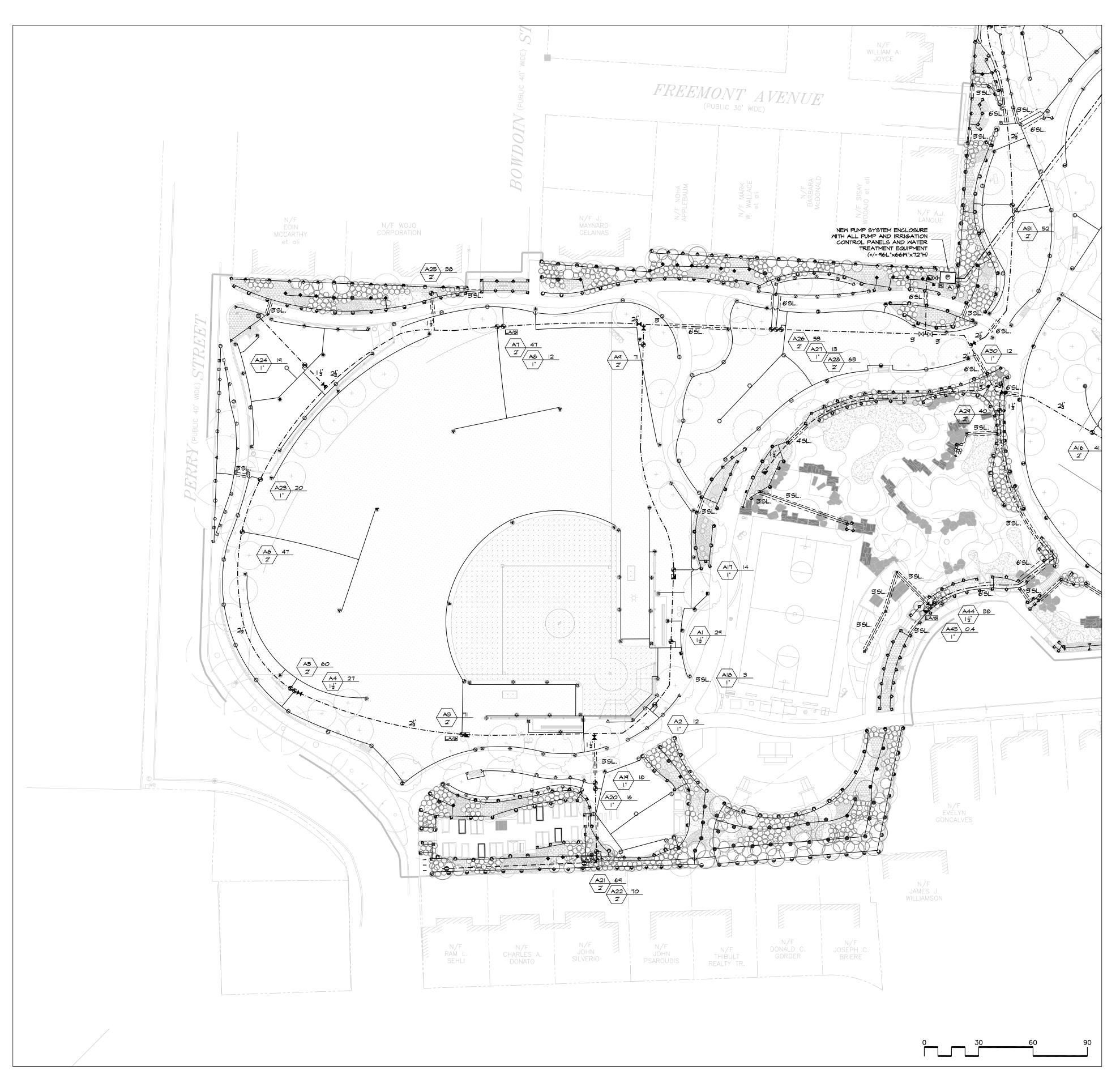
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Drawing Title:

CONSTRUCTION DETAILS



WESTON & SAMPSON COPYWRIGHT 2016



IRRIGATION LE	GEND			
SYMBOL	PSI	SPACING	DESCRIPTION	
Q H F				
	60	60'		
	60	55'	LARGE ROTARY SPRINKLER WITH	
<b></b>	60	50'	CHECK VALVE (STANDARD NOZZLES)	
	60	45'		
	50	35'		
	50	25'	SMALL ROTARY SPRINKLER WITH	
	50	18'	CHECK VALVE (STANDARD NOZZLES)	
<ul><li>Q H F</li><li>⊗ ⊗ ⊕</li></ul>	40	25'	MP3000 ROTARY NOZZLE ON 6-INCH SPRAY SPRINKLER	
	40	18'	MP2000 ROTARY NOZZLE ON 6-INCH SPRAY SPRINKLER	
	40	12'	MP1000 ROTARY NOZZLE ON 6-INCH SPRAY SPRINKLER	
Q H V F				
$ \Psi  \otimes  \Lambda $	30	15'		
$\ominus$ $\ominus$ $\bigcirc$	30	12'		
	30	10'	6-INCH POP UP SPRAY SPRINKLER	
$  \Leftrightarrow   \Leftrightarrow      $	30	ව'	W/ CHECK VALVE AND PRESS. REG.	
	30	5'		
Φ	30	4'x30'		
a H Ta V F				
	30	15'		
	30	12'		
	30	10'		
$\Diamond$ $\Diamond$ $\Diamond$ $\Diamond$	30	8'	12-INCH POP UP SPRAY SPRINKLER	
	30	5'	W/ CHECK VALVE AND PRESS. REG.	
•	30	4'x30'		
•	30	4'x 5'		
) or	20		DEED DOID THE CTAVE CEE DETAIL C	
<u> </u>	30	_	DEEP DRIP TREE STAKE, SEE DETAILS	
•			CTRIC ZONE VALVE DESIGNATOR FOR FLOW AND SIZES)	
$\bowtie$	150	LATION GA	ATE VALVE (3 INCH)	
H	150	LATION GA	ATE VALVE (2-1/2 INCH AND SMALLER)	
			PLING VALVE	
_			CTRIC ZONE VALVE W/ DISK FILTER (DRIP)	
			DESIGNATOR FOR FLOW AND SIZES)	
			PVC LATERAL PIPING CATED, ALL UNLABELED PIPE TO BE I INCH)	
			RN PUMP DISCHARGE PIPE, CLASS 200 PVC NCH PVC CONDUITS (POWER WIRE AND DATA CABLE)	
			BACK-UP SUPPLY PIPE, CLASS 200 PVC	
			NCH PYC CONDUITS (POMER MIRE)	
			PVC IRRIGATION MAINLINE PIPING - SIZE AS LABELED	
====	INS <sup>-</sup>	CLASS-160 PVC PIPE SLEEVE (SIZE AS INDICATED) INSTALL SCH-40 PVC WIRE CONDUIT ADJACENT TO ALL MAINLINE PIPE SLEEVES, MINIMUM WIRE CONDUIT SIZE TO BE 2-INCH, UNLESS OTHERWISE NOTED. SEE SLEEVING DETAIL.		
R	AUT	OMATIC R	AIN SENSOR	
$\langle \overline{A} \rangle$			ONTROLLER	
		SE BIB		
P	PUM	1P SKID AN	ND CONTROLS	
LA/G	LIG	HTNING AR	RRESTOR/GROUND	
VALVE DESIGN	NATIO	N:		
	STA	ATION NO.		
A 25	FLC	PM .		
\  " /				

CITY OF SOMERVILLE



290 Washington Street Somerville, MA 02143



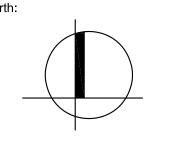
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# Rev Date Description ↑ 03/07/16 ADDENDUM #1

### CONSTRUCTION **DOCUMENTS**

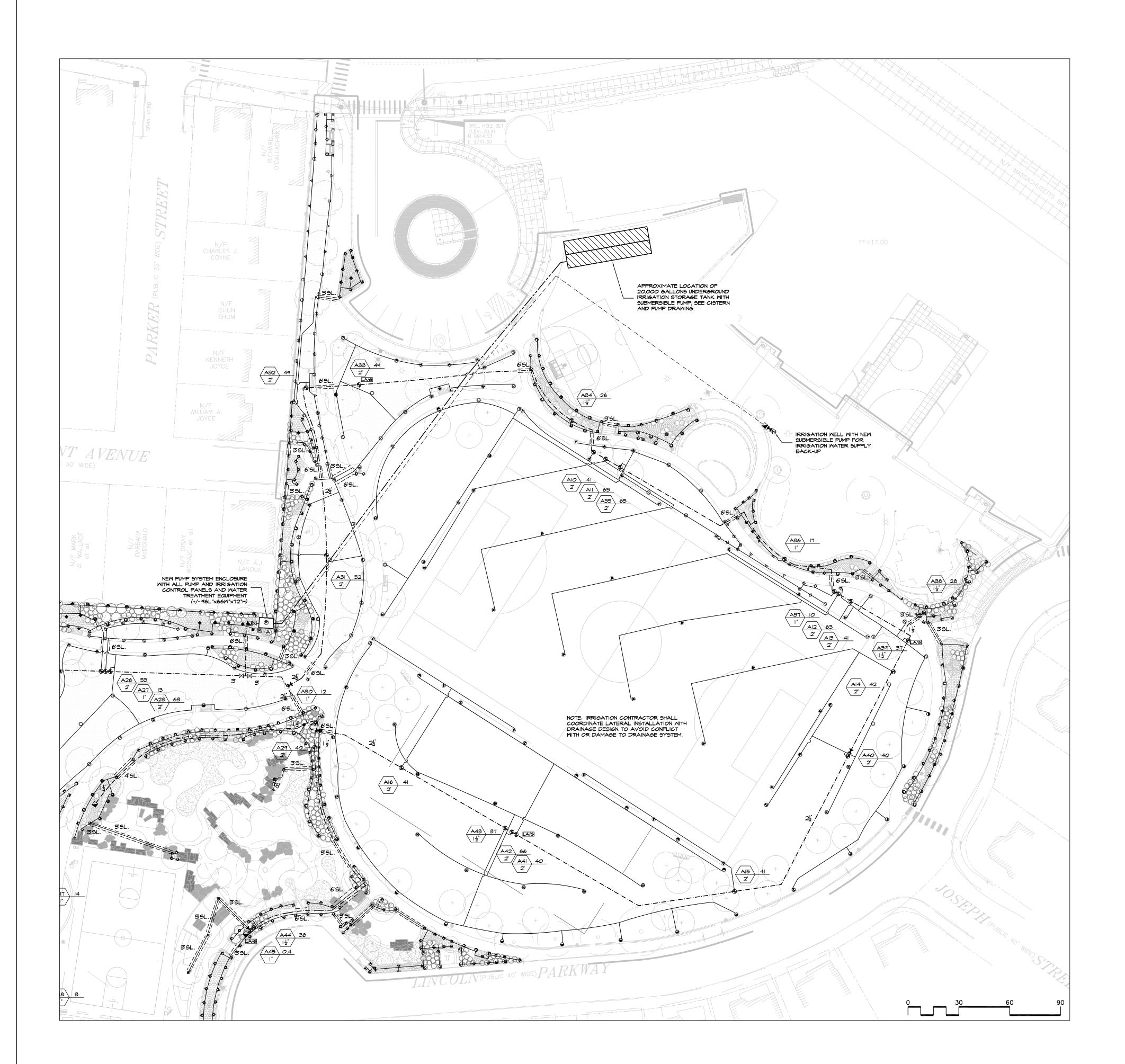
Date:	02.24.201
Scale:	1" = 30'
Drawn By:	JW
Reviewed By:	JB
Checked By:	JB
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### **IRRIGATION PLAN**

Sheet Number:

**I-1.01** 



#### IRRIGATION NOTES

- COORDINATE FINAL LOCATION OF ALL SPRINKLERS AND NOZZLE SELECTION W/ FINAL APPROVED LANDSCAPE. 2. ALL PIPE AND VALVE LOCATIONS ARE DIAGRAMMATIC, CONTRACTOR SHALL
- ALL VALVES AND VALVE BOXES SHALL BE PLACED, WHERE POSSIBLE, IN PLANTED AREAS UNDER MULCH.
- INSTALL ALL PIPING AS FAR FROM TREES AND ROOT BALLS AS POSSIBLE WHILE MAINTAINING SPRINKLER SPACING.
- ALL CONTROL WIRE SHALL BE THROUGH TWO-WIRE COMMUNICATION CABLE. QUICK COUPLING VALVES SHALL BE INSTALLED ON I INCH PVC SMING JOINTS
- WITH BRASS INSERTS AND STABILIZERS. (SEE DETAIL) ALL SPRAY AND ROTARY SPRINKLERS SHALL BE INSTALLED ON SWING PIPE
- ASSEMBLIES, MIN. LENGTH TO BE 6 INCHES, 18 INCH MAXIMUM. ALL LARGE ROTARY SPRINKLERS SHALL BE INSTALLED ON I-INCH PVC PREFABRICATED UNITIZED SWING JOINT ASSEMBLIES WITH INTEGRAL O-RINGS.
- IRRIGATION SYSTEM IS DESIGNED TO PROVIDE 75 GPM MAX FROM CISTERN. SYSTEM TO PRODUCE 75-PSI DYNAMIC PRESSURE AT IRRIGATION CONTRACTORS POINT OF CONNECTION. CONTRACTOR SHALL TEST DYNAMIC PRESSURE BEFORE STARTING WORK,
- REPORT ANY DEVIATION FROM PRESSURE REQUIRED TO OWNER'S REP. BEFORE 10. INSTALL CONTROLLER IN PUMP ENCLOSURE AS DIRECTED BY OWNER'S REP.,
- HARD WIRE TO 120 YOLT, DEDICATED 20 AMP CIRCUIT, BUILDING POWER SUPPLY. ROUTE COMMUNICATION CABLE TO CONTROLLER VIA 1-1/2 INCH CONDUIT.
- INSTALL RAIN SENSOR ON EXTERIOR ENCLOSURE WALL WHERE DIRECTED BY OWNER'S REP. EXTERIOR RAIN SENSOR WIRING SHALL BE CONTAINED IN 1/2 INCH METALLIC CONDUIT, SECURED TO OUTSIDE OF BUILDING WALL.
- 12. ALL ABOYE GROUND WIRING, INSIDE AND OUTSIDE OF BUILDING, SHALL BE
- INSTALLED IN SCHEDULE 40 PVC CONDUIT.

  13. COORDINATE LOCATION OF ALL EXISTING AND FUTURE UTILITIES ON SITE AND CONTACT PROPER AUTHORITIES AND UTILITY COMPANIES BEFORE THE START OF
- 14. SPRAY SPRINKLERS FOR TURF SHALL HAVE 4 INCH POP UP HEIGHT,
- GROUNDCOVER AND SHRUB SPRINKLERS SHALL HAVE 12 INCH POP UP HEIGHT. 15. CONTRACTOR MUST PROVIDE PRODUCT SUBMITTALS AS PER THE WRITTEN SPECIFICATIONS TO THE OWNER'S REPRESENTATIVE FOR APPROVAL PRIOR TO ORDERING MATERIAL AND BEGINNING WORK.
- 16. ONCE APPROVED SUBMITTALS HAVE BEEN RETURNED TO THE CONTRACTOR, WORK MAY BEGIN. THE OWNER'S REPRESENTATIVE MUST BE NOTIFIED A MINIMUM OF 7-DAYS IN ADVANCE OF THE START OF WORK TO COORDINATE ON-SITE
- SUPERVISION AND ADMINISTRATION. SEE IRRIGATION DETAILS AND SPECIFICATIONS FOR ADDITIONAL NECESSARY INFORMATION.

LATERAL PIPE S	ATERAL PIPE SCHEDULE		
FLOW	PIPE SIZE / TYPE		
0-12 GPM	I INCH 100 PSI POLYETHYLENE OR CLASS-200 PVC		
12-22 GPM	I-I/4 INCH IOO PSI POLYETHYLENE OR CLASS-200 PVC		
23-35 GPM	I-I/2 INCH CLASS-200 PVC		
36-55 GPM	2 INCH CLASS-200 PVC		
56-85 GPM	35 GPM 2-1/2 INCH CLASS-200 PVC		
86-120 GPM	3 INCH CLASS-200 PVC		
121-200 GPM	4 INCH CLASS-200 PVC		

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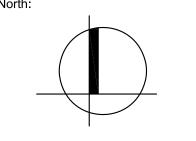
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Revisions:				
Rev	Date	Description		
$\bigcirc$	03/07/16	ADDENDUM #1		



#### CONSTRUCTION **DOCUMENTS**

02.24.2016

Drawn By: Checked By:

Approved By:

Drawing Title:

### **IRRIGATION PLAN**

Sheet Number:

**I-1.02**