

SITE PREP & EROSION CONTROL:

1. EXCAVATION WITHIN THE CONDUCTED IN THE WINTER ACCORDANCE WITH THE ORI CONSERVATION COMMISSION WITHIN THE ALEWIFE RESERVATION SHALL BE THE WINTER MONTHS STARTING IN OCTOBER IN WITH THE ORDER OF CONDITIONS ISSUED BY THE

2. PROR TO THE START OF CONSTRUCTION, ALL LIMITS OF WORK FOR THE STORMWATER WETLAND AREA SHALL BE STAKED OUT BY THE CONTRACTOR FOR REVIEW BY THE ENGINEER. ALL SEDIMENT AND EROSION CONTROL DEVICES INCLUDING BUT NOT LIMITED TO: SILT FENCE. STRAW BALES, AND TURBIDITY CURTAINS SHALL BE PROVIDED. THIS WORK SHALL BE REVIEWED BY THE ENGINEER AND THE CONSERVATION COMMISSION PRIOR TO STARTING CONSTRUCTION.

3. PRIOR TO EXCAVATION OF THE LOW—FLOW OUTLET CHANNEL FROM THE DETENTION BASIN, A SAND BAG DIKE SHALL BE PLACED WITHIN THE SILT CURTAIN TO PREVENT FLOW FROM THE LITTLE RIVER FROM ENTERING THE WORK AREA. THIS WORK SHALL BE REVIEWED BY THE ENGINEER BEFORE EXCAVATION OF THE OUTLET CHANNEL MAY BEGIN.

5. WETLAND FLAG NUMBERS 1 THROUGH 14 WERE PLACED BY TBG IN OCTOBER 2003 AND MAPPED USING GPS DATA. 4. EXISTING SURVEY CONDITIONS ARE FROM A TOPOGRAPHIC SURVEY PREPARED BY HARRY R. FELDMAN INC, DATED OCTOBER 21, 2003.

REFER TO MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) EROSION AND SEDIMENT CONTROL GUIDELINES (1997 OR MOST RECENT).

7. CONTRACTOR SHALL ARRANGE A SITE VISIT WITH THE CAMBRIDGE CONSERVATION COMMISSION AFTER THE INSTALLATION OF EROSION CONTROL IS COMPLETE AND PRIOR TO COMMENCEMENT OF WORK. NO WORK SHALL BE COMPLETED UNTIL THE CONSERVATION COMMISSION OR ITS AGENT APPROVES THE EROSION CONTROL INSTALLATION.

 $8.\ \mbox{UNLESS}$ NOTED, ALL AREAS WITHIN LIMIT OF WORK LINE TO BE CLEARED AND GRUBBED.

9. STRIP AND REMOVE TOP SIX (6) INCHES OF TOPSOIL FROM ALL AREAS WITHIN LIMIT OF WORK LINE.

10. STRIP AND STOCKPILE NEXT TWELVE (12) INCHES OF SUBSOIL FROM AREAS SHOWN ON PLAN.

11. STOCKPILE LOCATIONS TO BE APPROVED BY ENGINEER. STOCKPILE HEIGHTS AND VOLUMES SHALL BE AS OUTLINED IN SPEC 01568, SEDIMENTATION AND EROSION CONTROL.

12. NO WORK SHALL BE PERFORMED BEYOND THE LIMIT OF WORK LINE WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.

13. ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER

14. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS OR ABUTTING PROPERTY.

S. USE ALL AVAILABLE MEANS TO MINIMIZE THE AMOUNT OF SOIL ROSIGN CAUSED BY THE WORK OF THE PROJECT. THIS INCLUDES SPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION CONTROL SYICES INDICATED. REPAIRS TO SOIL EROSION CONTROL DEVICES HALL BE COMPLETED WITHIN 2 DAYS FROM NOTIFICATION.

16. PROVIDE AND MAINTAIN EROSION CONTROL DEVICES WHERE SHOWN ON PLANS. THE DEVICES ARE TO REMAIN IN PLACE UNTIL PAVEMENT AND STORMWATER STRUCTURES ARE CONSTRUCTED AND UNTIL A PERMANENT GROUND COVER IS ESTABLISHED.

17. EROSION CONTROL DEVICES SHALL BE CHECKED DAILY AND AFTER EACH RAINFALL TO ENSURE WORKING ORDER.

18. INSTALL A SILT FENCE AROUND ALL STOCKPILED SOIL

19. SEED ALL DISTURBED AREAS (INCLUDING STOCKPILES) EXPOSED FOR MORE THAN 14 DAYS WITH COVER CROP SEED MIX.

LAYOUT AND MATERIALS:

1. ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED. UNLESS OTHERWISE INDICATED.

2. ALL LINE AND GRADE WORK PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A REGISTERED ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR. CIVIL

3. STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE WITHIN THE LIMITS OF WORK AND AS APPROVED BY THE ENGINEER.

4. CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD AND REPORT ANY DISCREPANCIES IN THE SITE SURVEY TO THE ENGINEER PRIOR TO STARTING WORK.

5. ALL LAYOUTS FOR WALKS AND PATHS SHALL BE ADEQUATELY STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.

GRADING & DRAINAGE:

. PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL UTILITY COMPANIES IN ACCORDANCE WITH THE DIG SAFE' NOTIFICATION PROCEDURES PROMOTED BY RESPECTIVE ITILITY COMPANIES. THE DIG SAFE' TELEPHONE NUMBER FOR MASSACHUSETTS IS 1-B88-344-7233.

2. CONTRACTOR SHALL VERIFY ALL EXISTING GRADES IN THE FIELD AND SHALL REPORT ANY DISCREPANCIES BETWEEN EXISTING AND PROPOSED CONDITION TO THE ENGINEER. ALL GRADES ARE BASED ON THE NATIONAL GEODETIC VERTICAL DATUM (NGVD).

3. PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-PIEHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONTINUING

4. WHERE NEW PAVING OR EARTHWORK MEETS EXISTING PAVING OR EARTHWORK, SMOOTHLY BLEND LINE AND GRADE OF EXISTING WITH NEW, PROVIDE VERTICAL CURVES OR ROUNDINGS AT TOP AND BOTTOM OF ALL SLOPES.

5. EXCAVATION REQUIRED WITHIN PROXIMITY OF UTILITY LINES SHALL BE DONE BY HAND. CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING UTILITY LINES OR STRUCTURES INCURRED DURING CONSTRUCTION OPERATIONS AT NO COST TO THE UTILITY COMPANIES OR THE OWNER.

6. ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS, ADJACENT WETLANDS, AND ABUTTING PROPERTY.

7. MAXIMUM CROSSPITCH OF ALL PATHS IS 1.6%, ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE ENGINEER

8. ALL GRADING SHALL COMPLY WITH THE RULES AND REGULATIONS OF THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) AND THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAAG), LATEST EDITION. IN CASE OF CONFLICT BETWEEN REGULATIONS, THE GUIDELINE PROVIDING GREATER ACCESS SHALL APPLY.

9. COMPLY WITH ALL ORDER OF CONDITIONS ISSUED BY THE CAMBRIDGE CONSERVATION COMMISSION ON JULY 2004.

10. ROLL EDGES OF PLANTING SOIL FOR TALL TURF LAWN AND MEADOWS WHERE ADJACENT TO WALKS AND DRIVES.

PLANTING:

1. IF DISCREPANCIES EXIST BETWEEN THE NUMBER OF PLANTS DRAWN ON THE PLANTING PLAN AND THE NUMBER OF PLANTS IN THE PLANT SCHEDULE, THE PLANTING PLAN SHALL GOVERN.

2. ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NUSSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.

4. ALL NEW PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER-GROWN, UNLESS OTHERWISE NOTED ON THE PLANT SCHEDULE. 3. ALL PLANT MATERIAL SHALL BE NURSERY GROWN. NO FIELD — COLLECTED SPECIMENS WILL BE ALLOWED.

5. THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.

6. ANY PROPOSED SUBSTITUTIONS OF PLANT SPECIES SHALL BE MADE WITH PLANTS OF EQUIVALENT OVERALL FORM, HEIGHT, BRANCHING HABIT, FLOWER, LEAF, COLOR, FRUIT AND CULTURE, AND ONLY AFTER WRITTEN APPROVAL OF THE ENGINEER.

7. ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE ENGINEER AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.

8. CONTRACTOR SHALL LOCATE AND VERIFY ALL EXISTING UTILITY LINES PRIOR TO PLANTING AND SHALL REPORT ANY CONFLICTS TO THE ENGINEER. NO TREES SHALL BE PLANTED CLOSER THAN TEN FEET (10") TO ANY UNDERGROUND WATER AND DRAINAGE LINES OR STRUCTURES.

9. STAKE LOCATION OF ALL PROPOSED PLANTING FOR APPROVAL BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF PLANTING.

11. NEW SHRUBS AND GROUNDCOVER SHALL BEAR THE SAME RELATIONSHIP TO GRADE AS IT BORE TO PREVIOUS GRADE. TREES SHALL BEAR SAME RELATIONSHIP TO GRADE AS THEY BORE TO PREVIOUS GRADE IN NURSERY OR HIGHER TO PREVENT COVERING ROOT FLARE. 유.6 NO TREES OR SHRUBS SHALL BE PLANTED BEFORE ACCEPTANCE ROUGH GRADING BY ENGINEER.

12. PREPARE ALL SHRUB PLANTING BEDS TO A MINIMUM DEPTH OF TWENTY FOUR INCHES (24°) WITH PLANTING SOIL.

13. ALL PLANT BEDS TO RECEIVE TWO INCHES (2") TO THREE INCHES (3") OF BARK MULCH AS PER DRAWINGS. 14. ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.

15. SEED AND/OR HYDROMULCH ALL DISTURBED AREAS WITH APPROVED SEED MIX.

16. ALL AREAS TO BE SEEDED SHALL RECEIVE A MINIMUM OF TWELVE INCHES (12") OF PLANTING SOIL, MEASURED AFTER COMPACTION, PRIOR TO SEEDING.

17. CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED, STOLEN, DEAD, DECLINING OR LOST MATERIAL UNTIL COMPLETION OF MAINTENANCE AND GUARANTEE PERIOD.

S E A Consultants Inc.
Science/Engineering/Architecture



GROUP, INC. 8 Commercial St. Salem, MA 01970

CAM Š

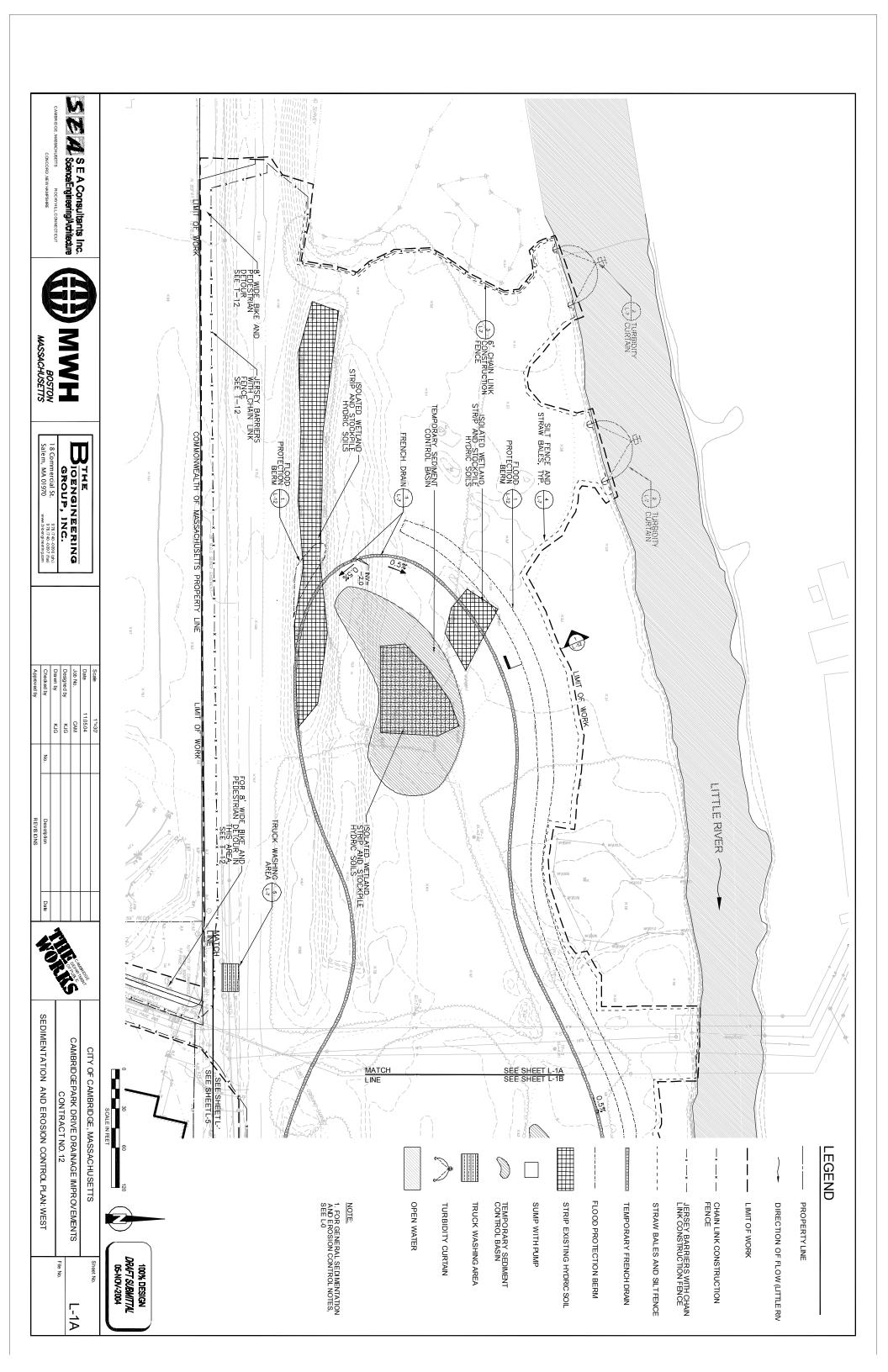
CAMBRID GEPARK DRIVE DRAINAGE IMPROVEMENTS CITY OF CAMBRIDGE, MASSACHUSETTS CONTRACT NO. 12

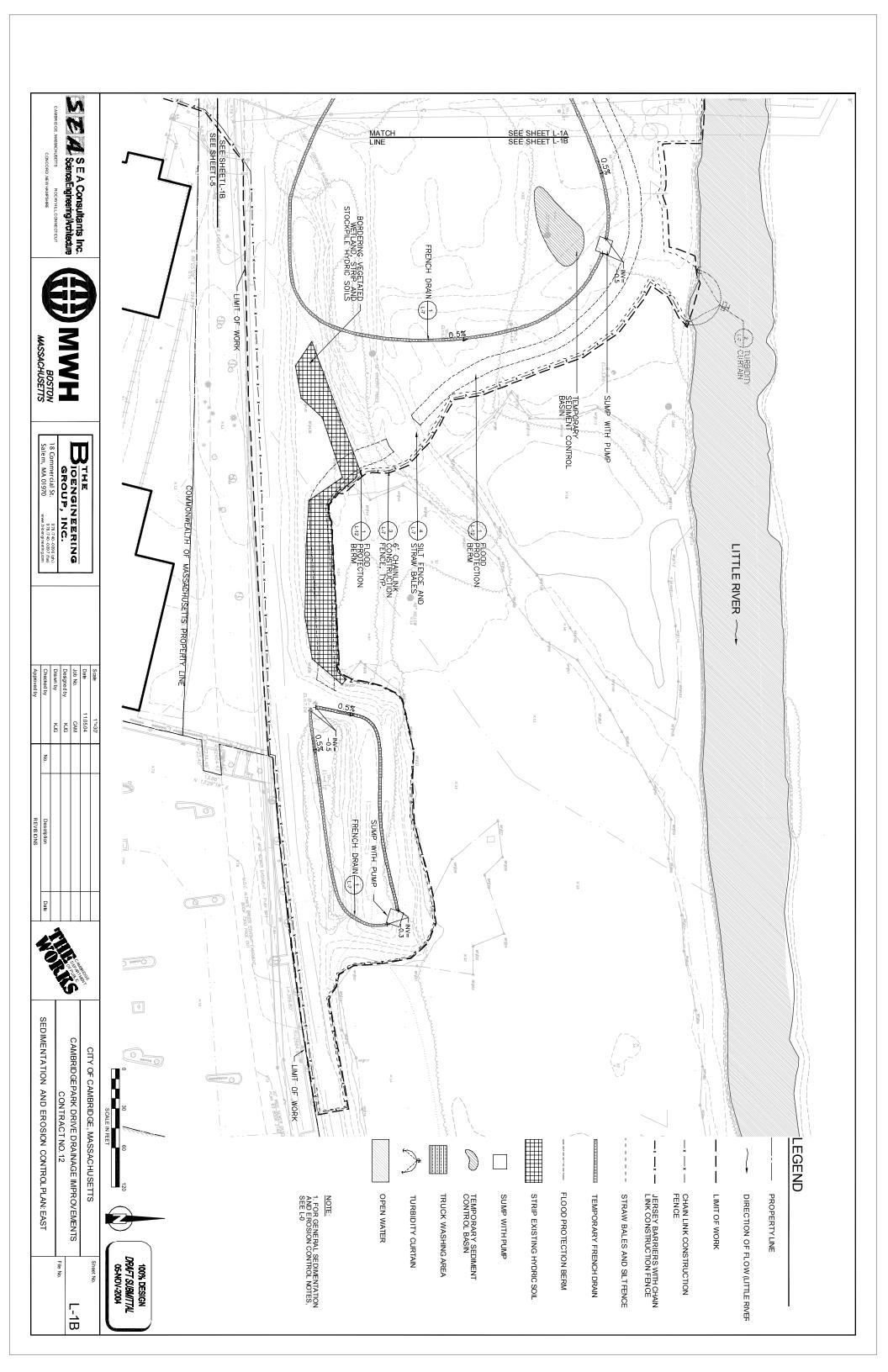
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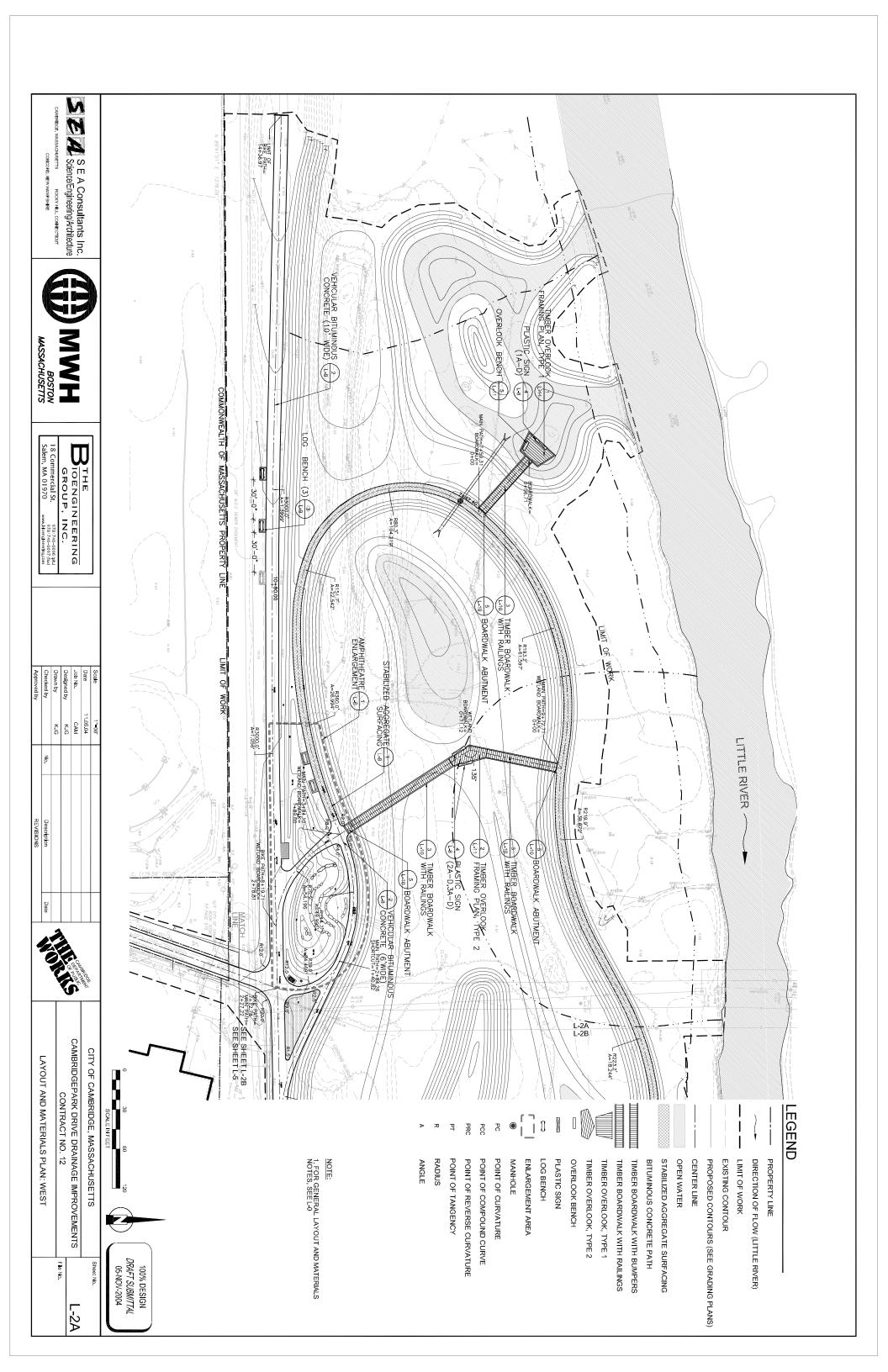
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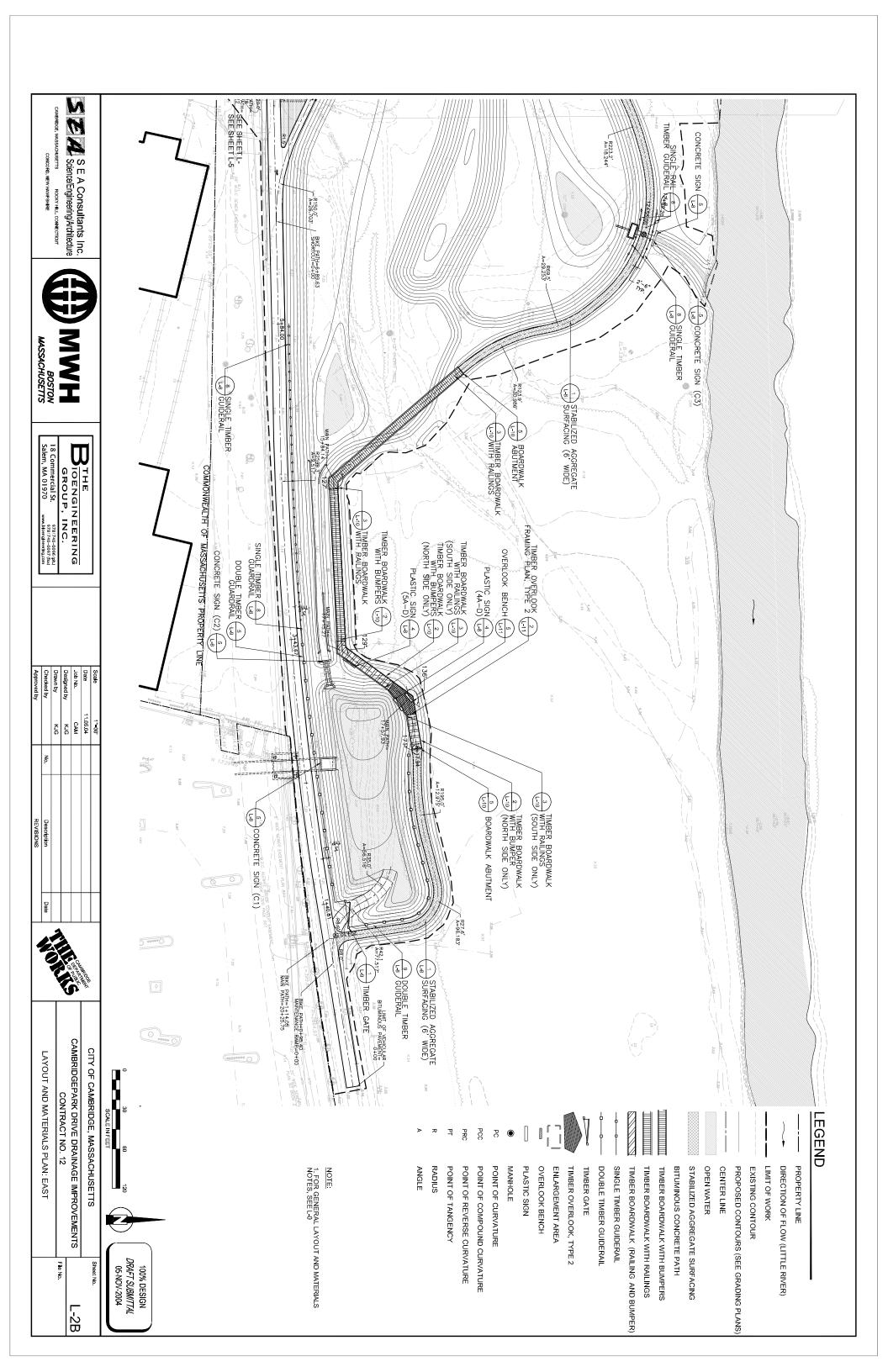
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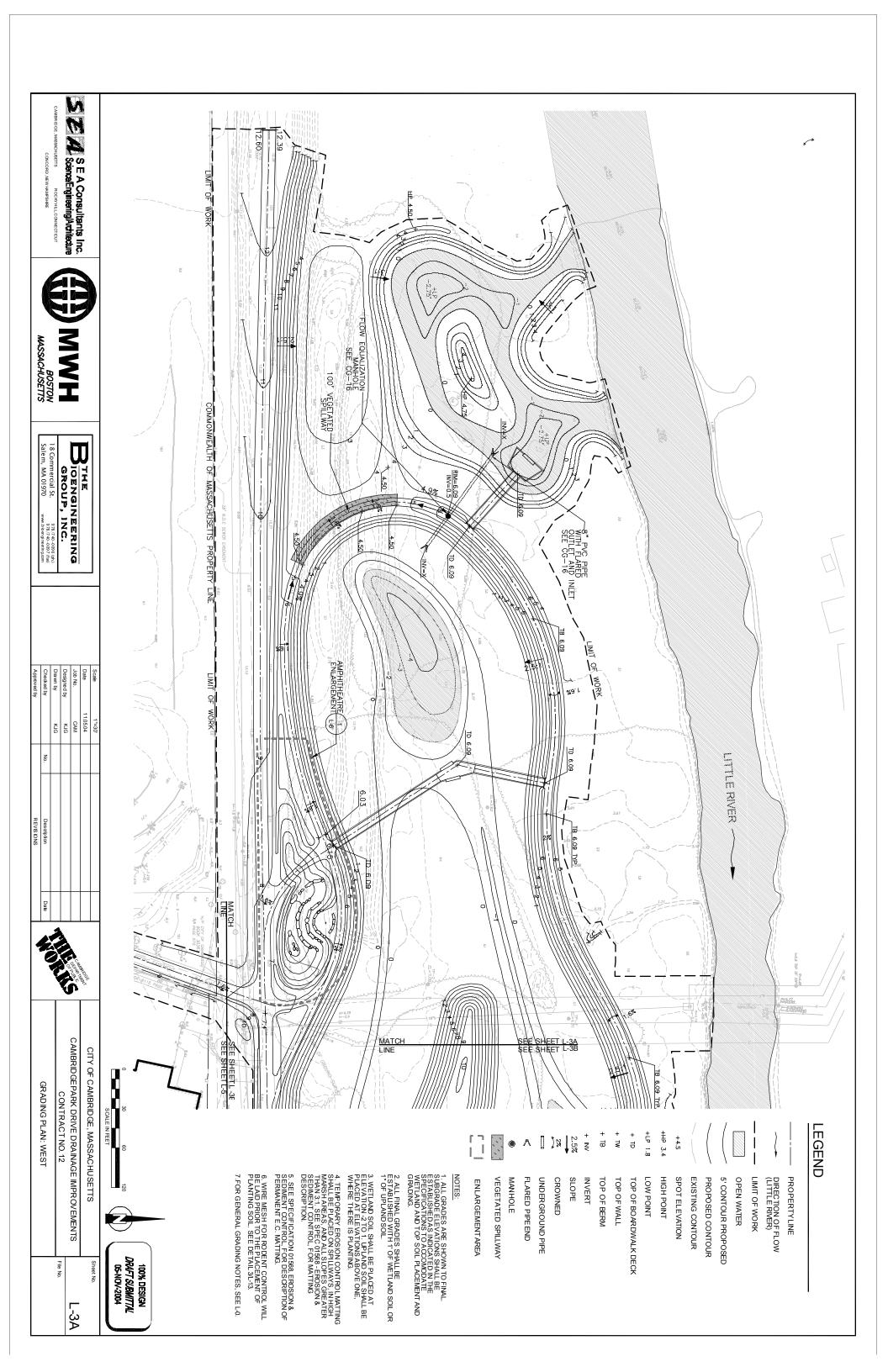
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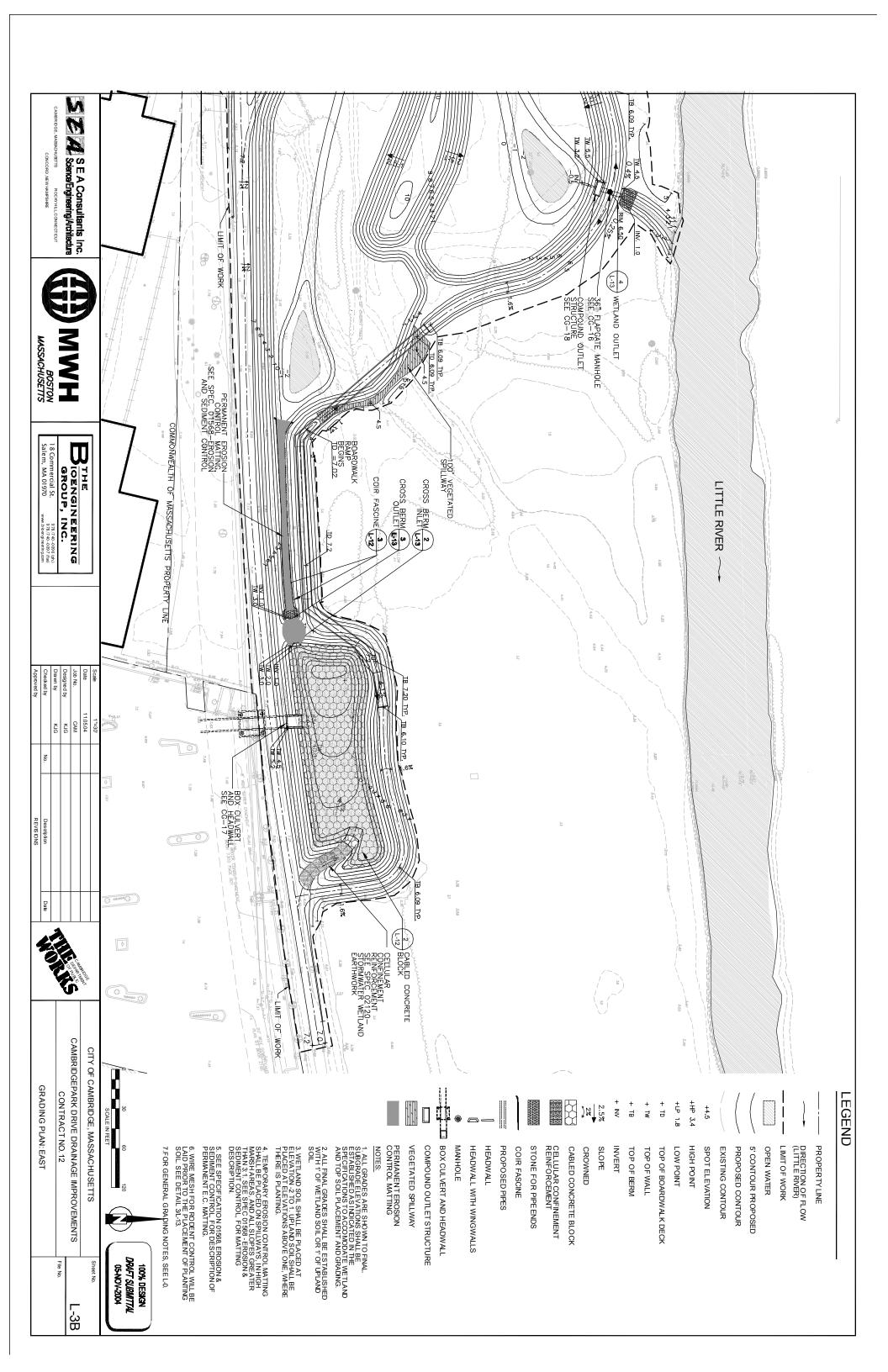


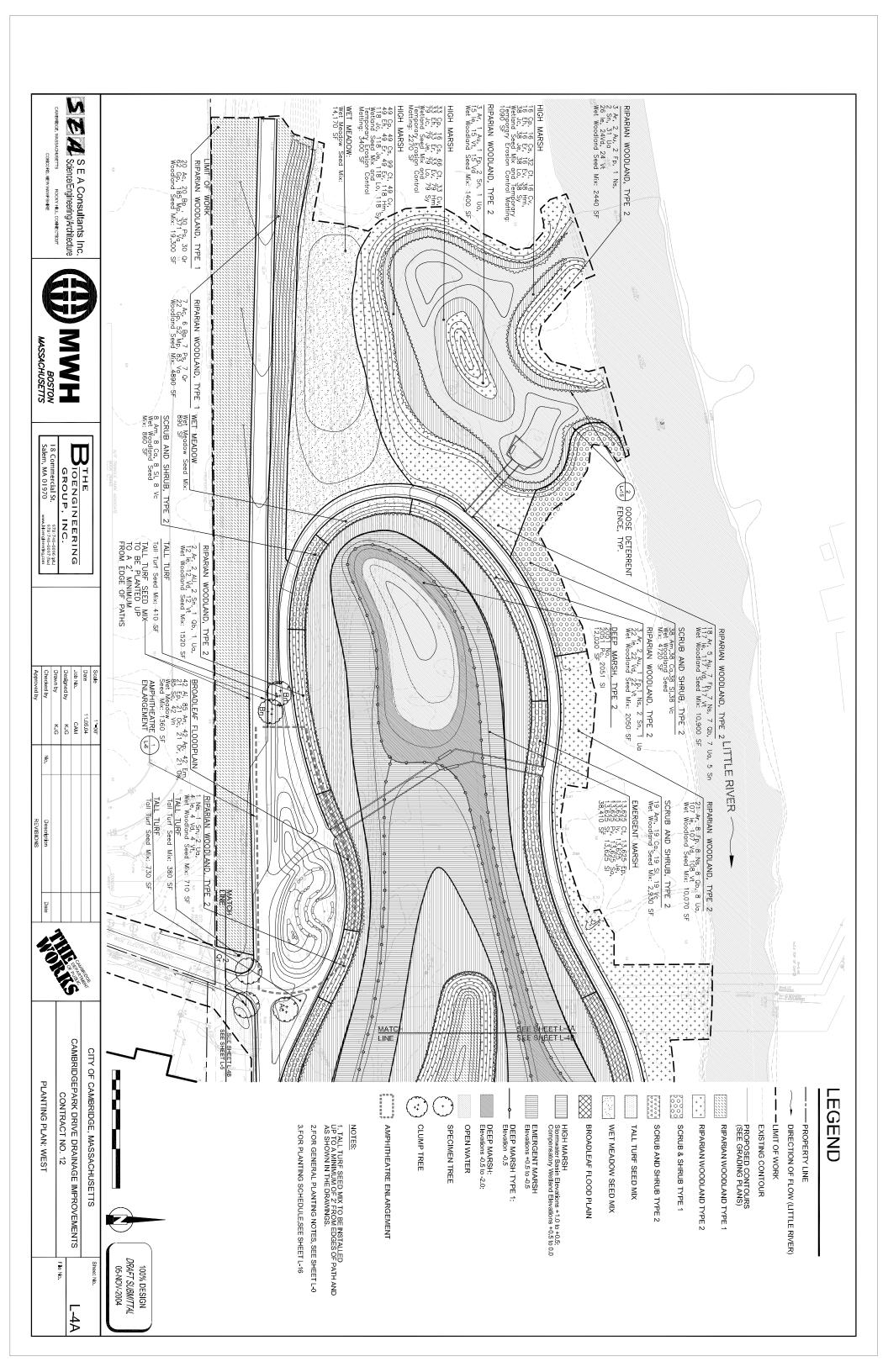


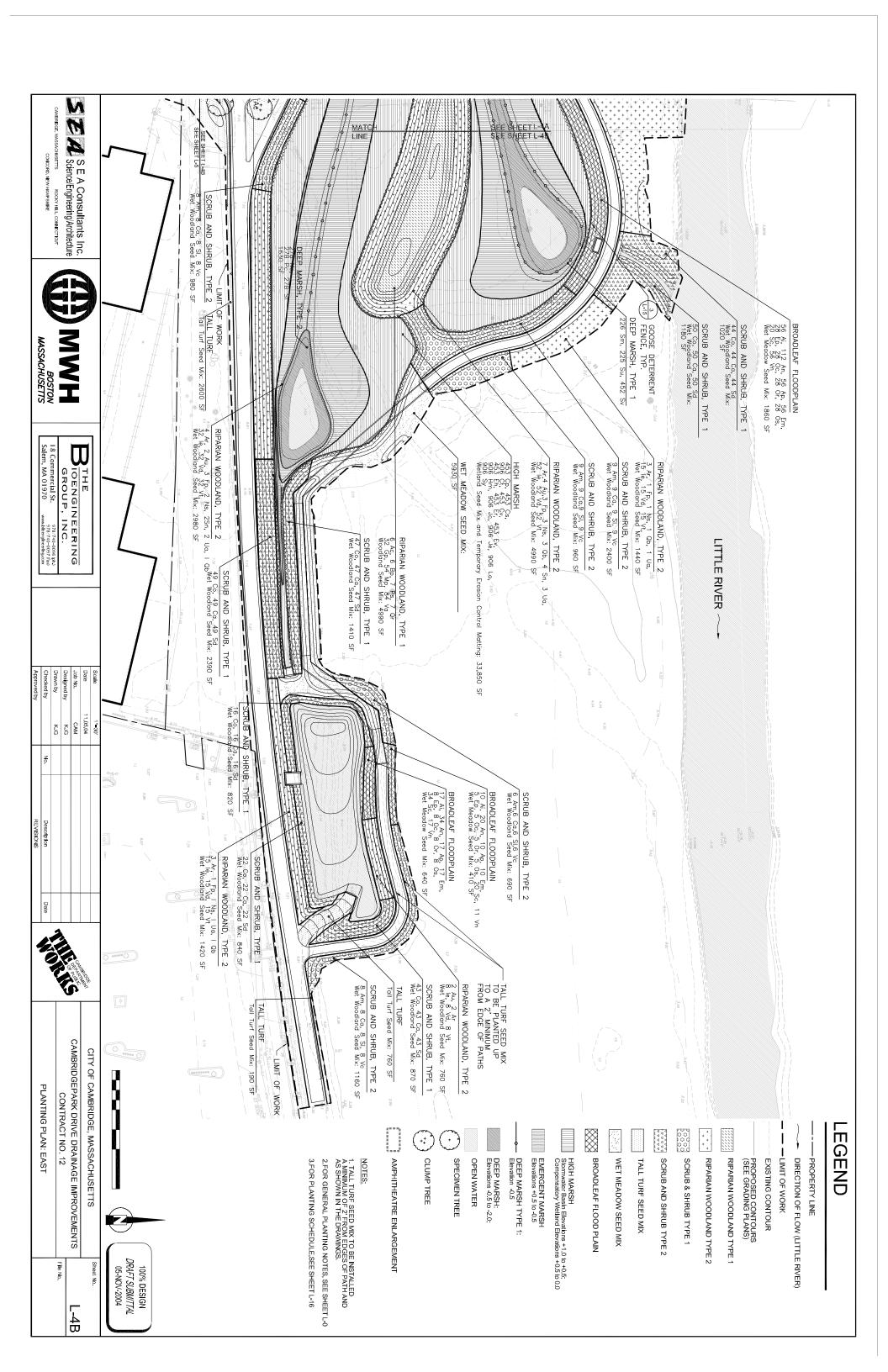


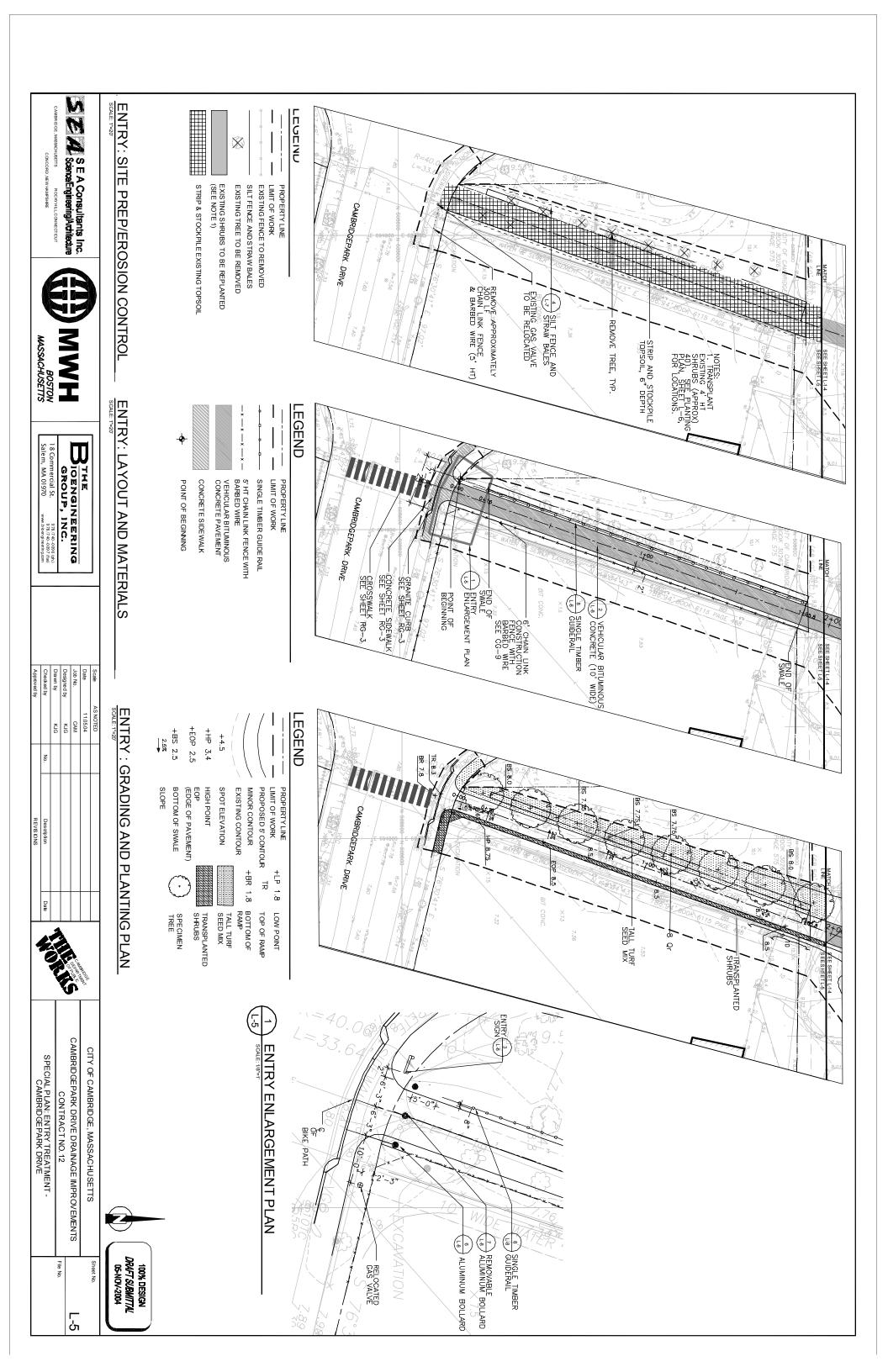


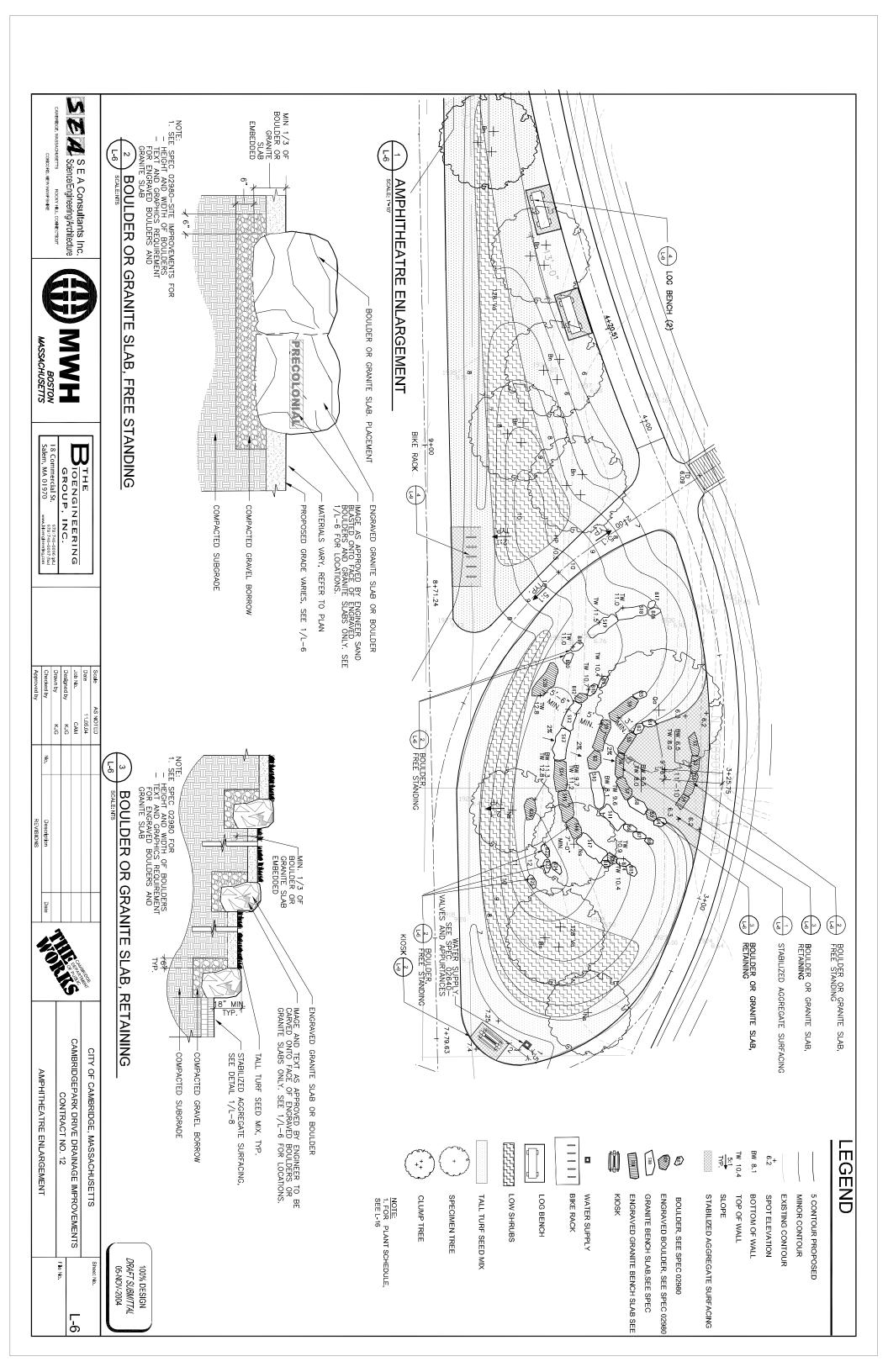


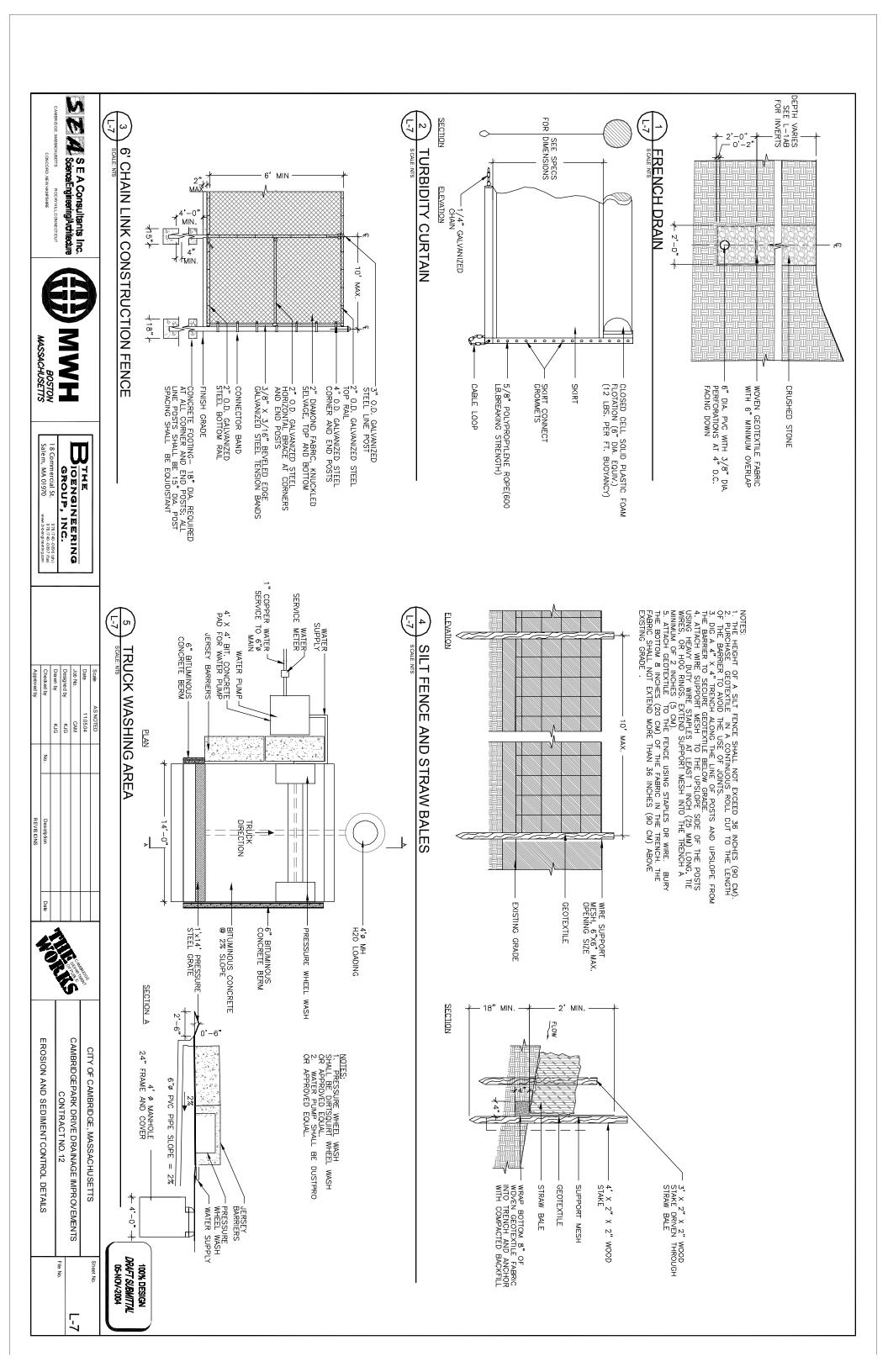


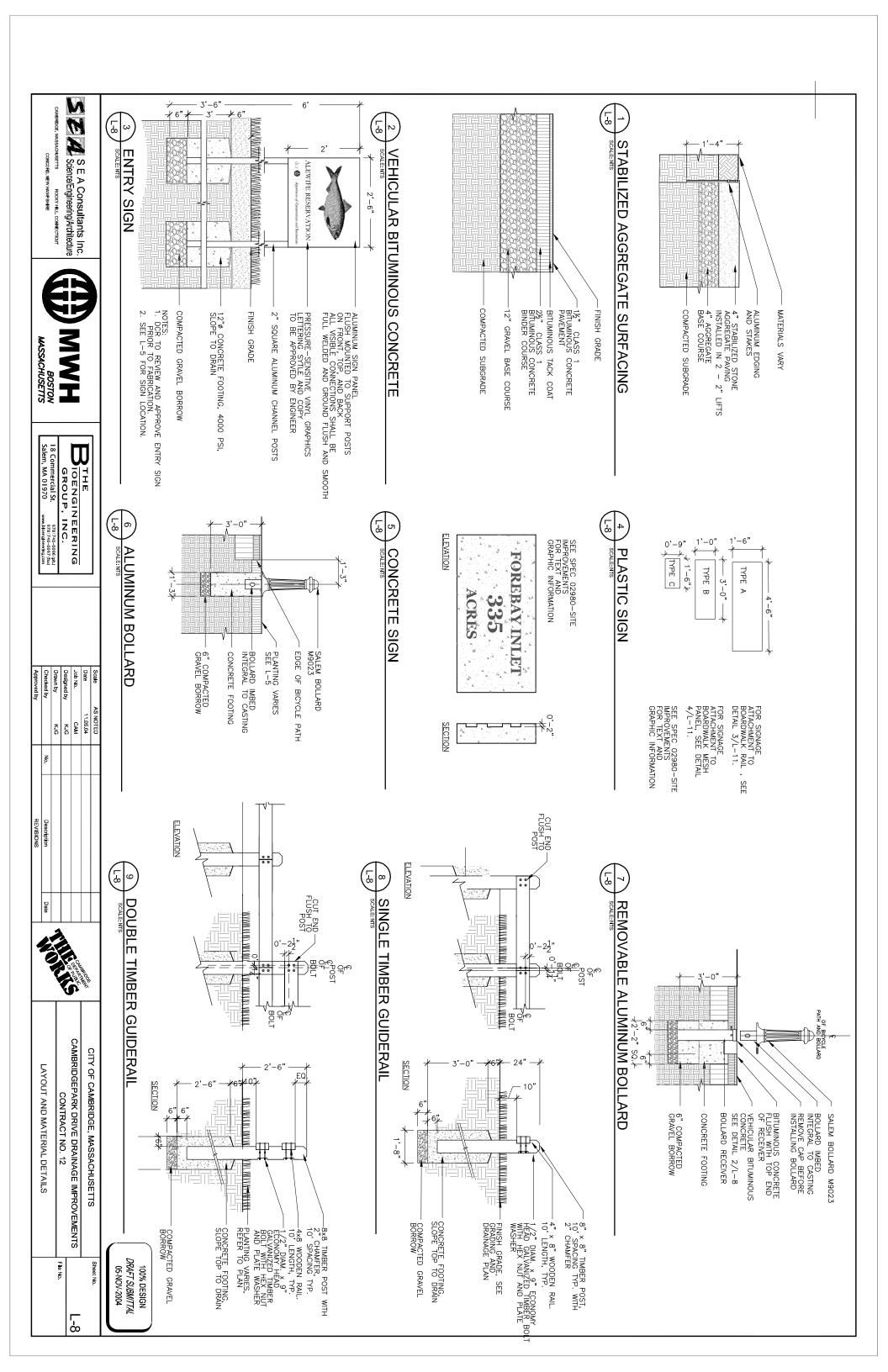


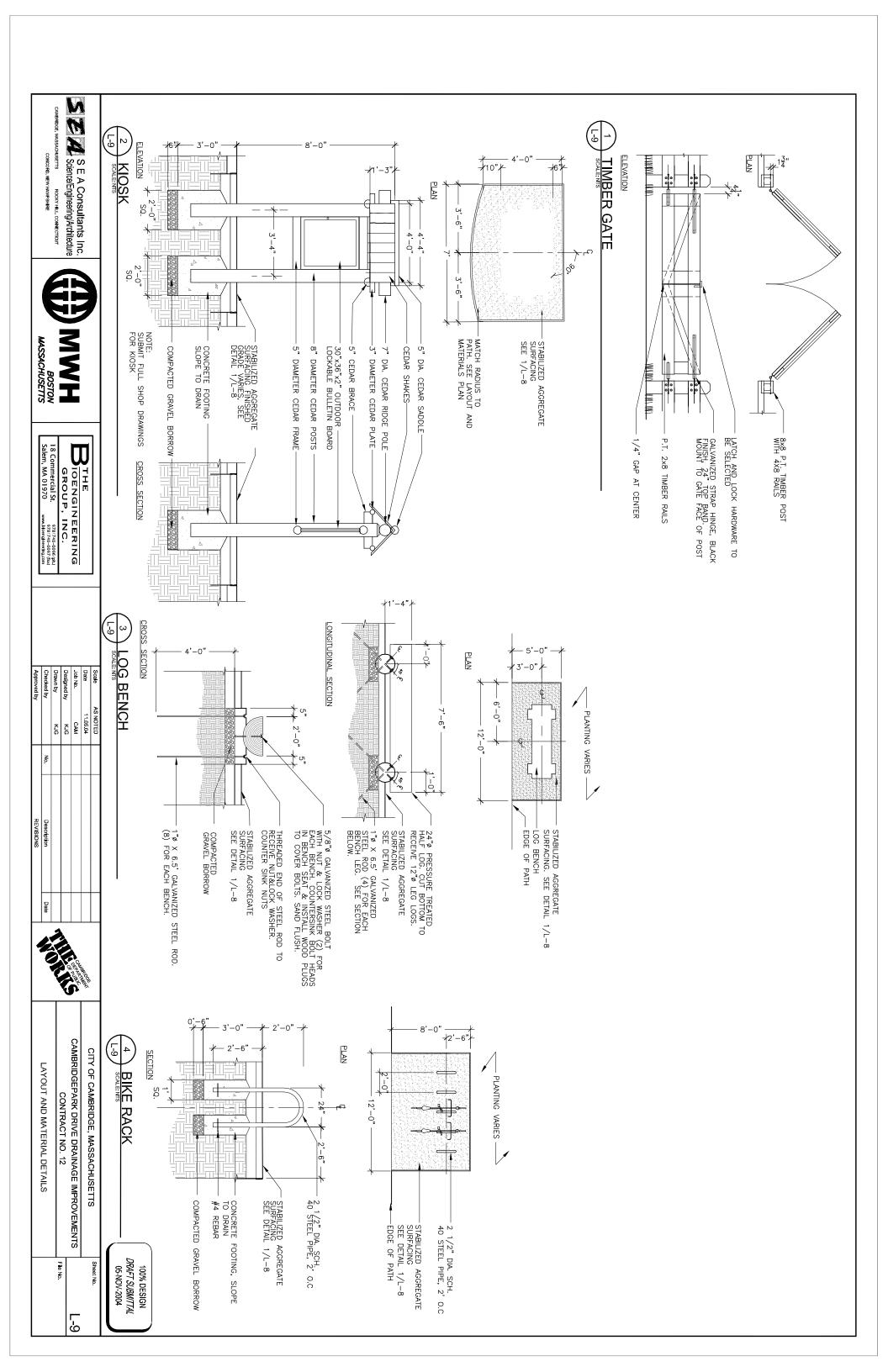


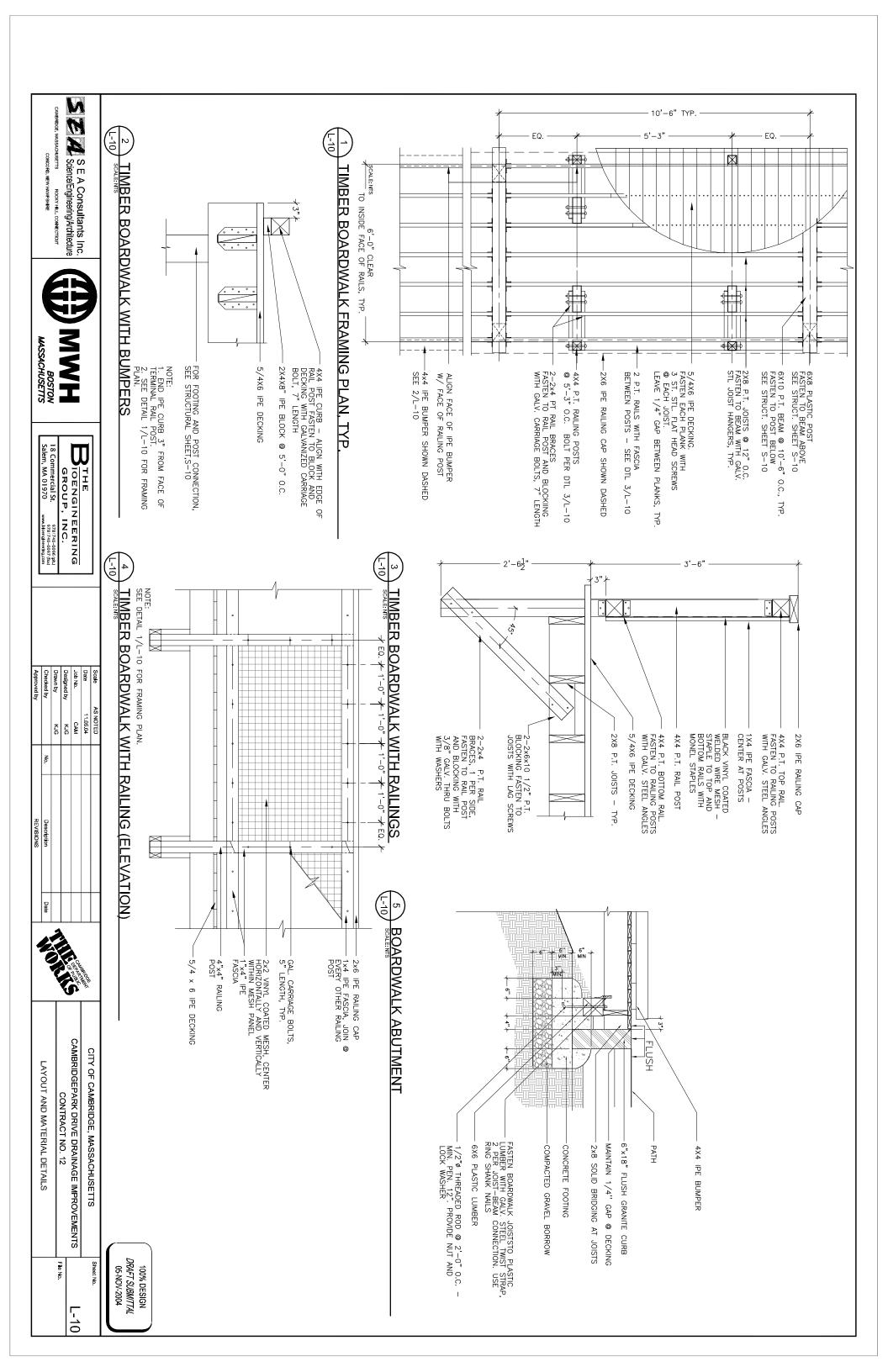


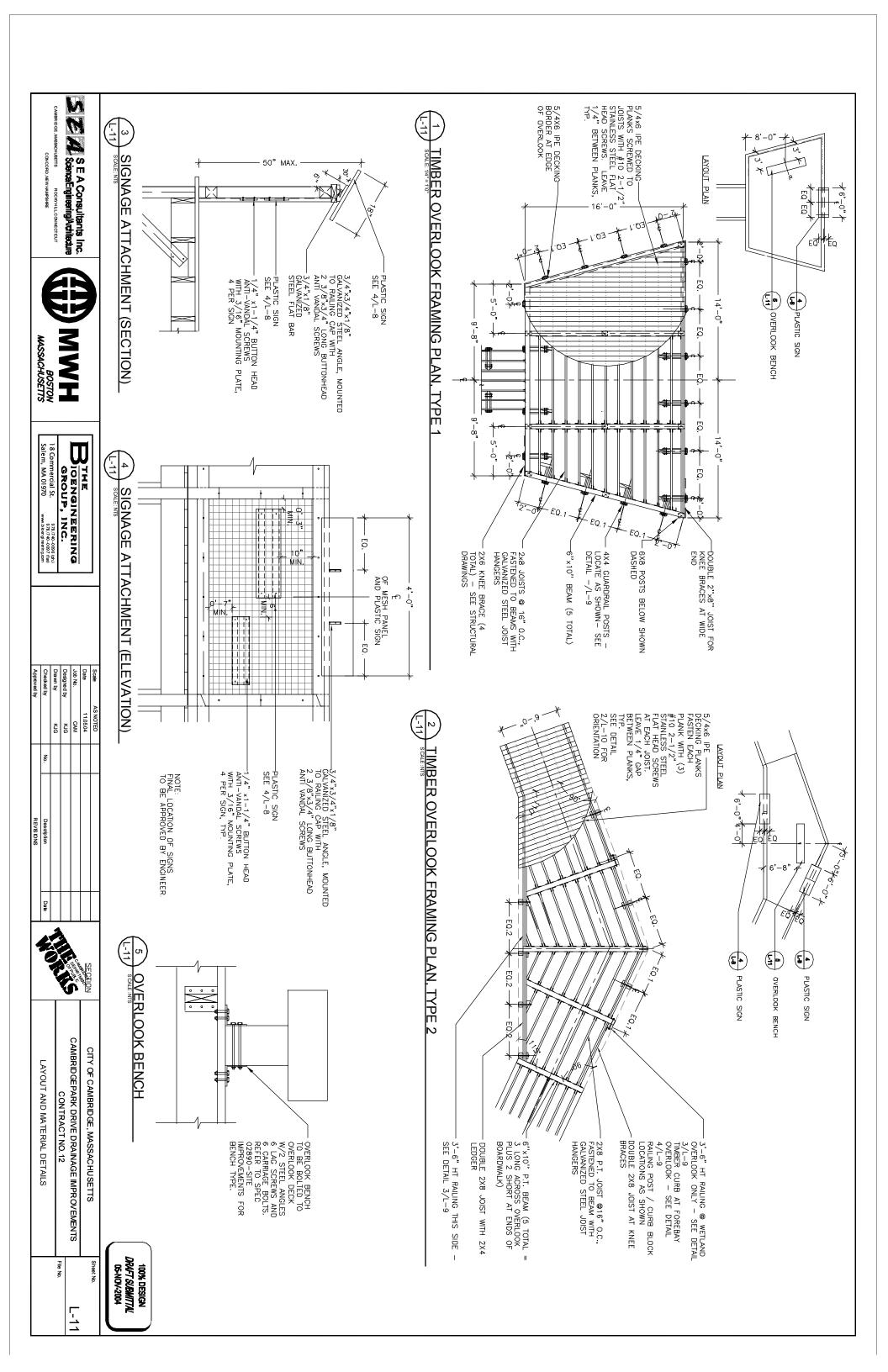


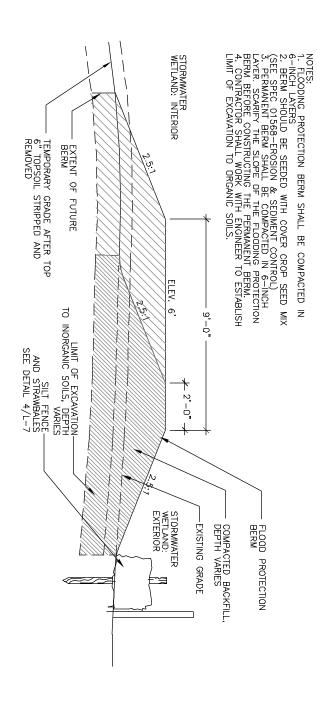


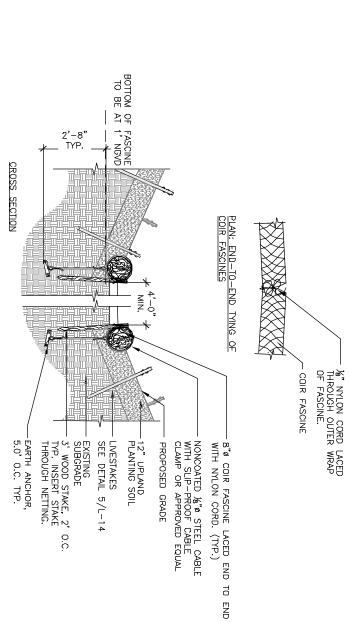






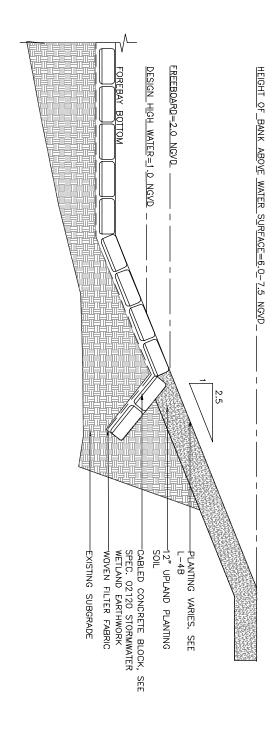


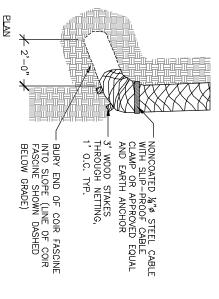


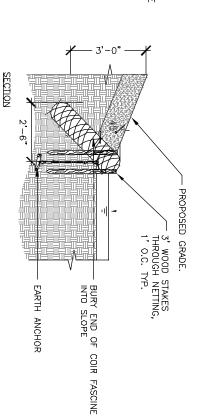


FLOOD PROTECTION BERM

COIR FASCINE







(4) COIR END TREATMENT



Job No.

Designed by

Drawn by

1.05.04 K G SAM

S E A Consultants Inc.
ScienceEngineeringArchitecture

GROUP, INC.

BOSTON MASSACHUSETTS

18 Commercial St. Salem, MA 01970

CABLED CONCRETE BLOCK

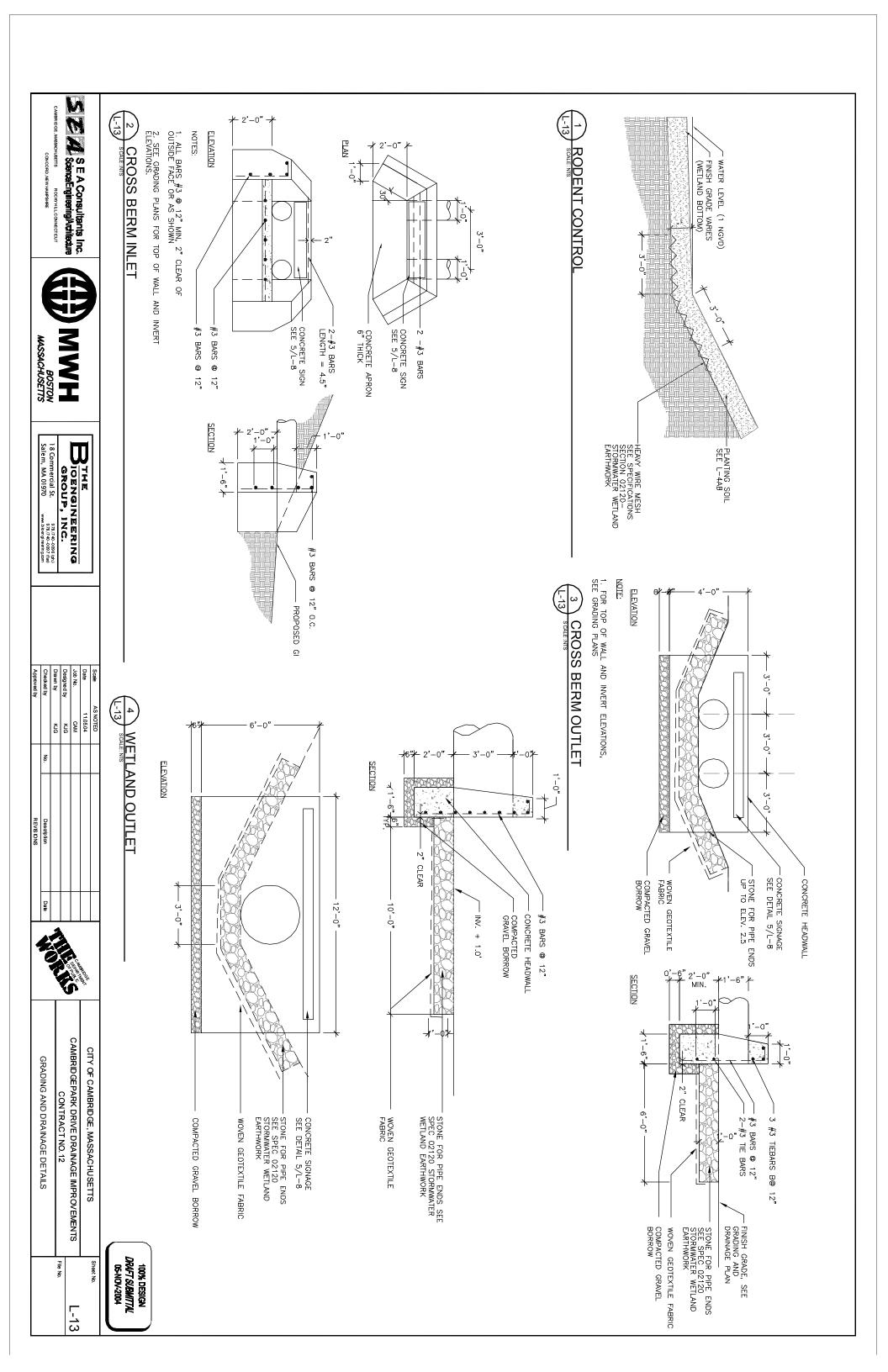


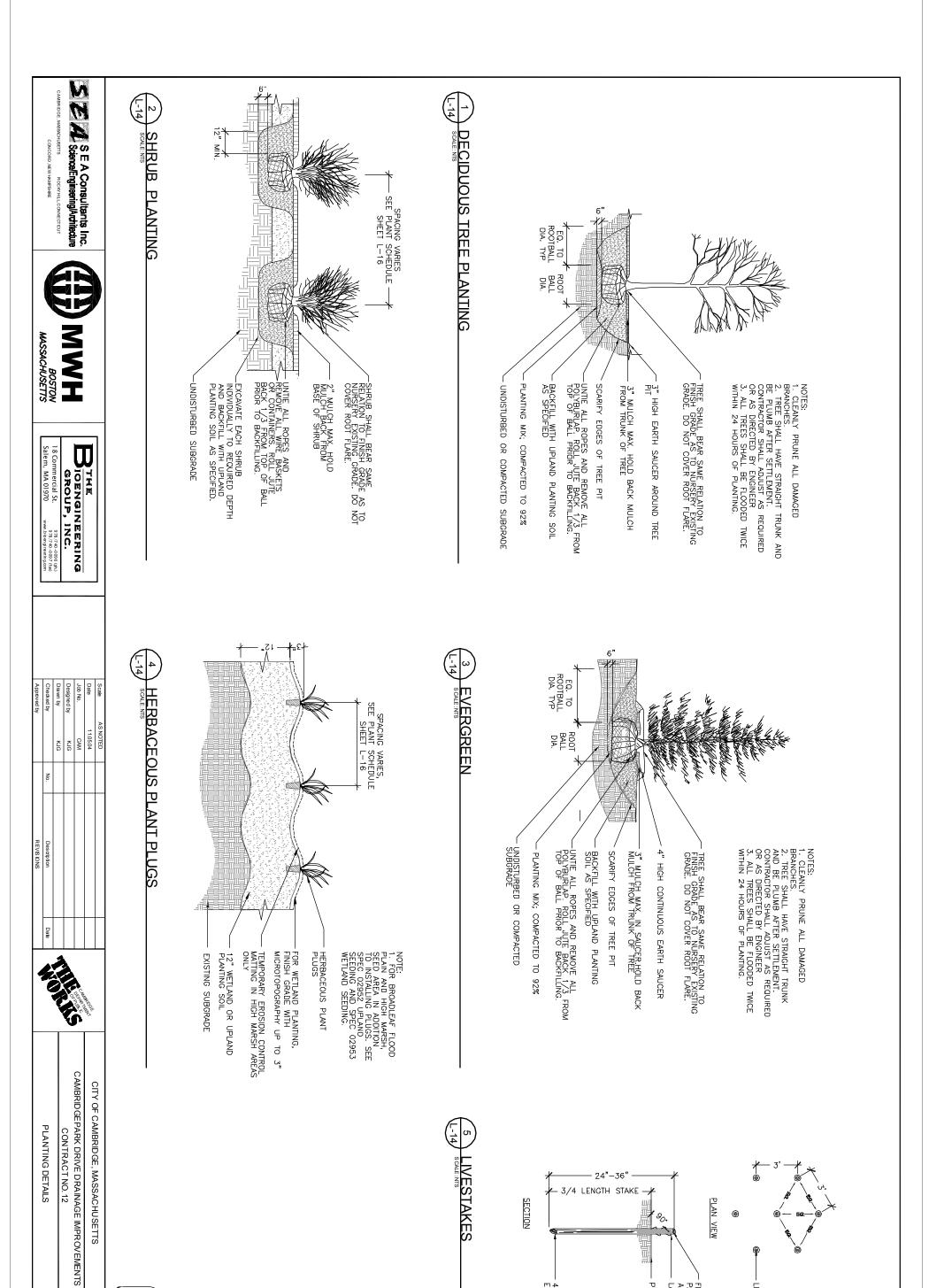
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GRADING AND DRAINAGE DETAILS
CONTRACT NO. 12
CAMBRIDGEPARK DRIVE DRAINAGE IMPROVEMENTS
CITY OF CAMBRIDGE, MASSACHUSETTS

DRAFT SUBMITTAL 05-NOV-2004 100% DESIGN

L-12





— FLAT TOP END.
PAINTED BY COLOR
ACCORDING TO SPECIES
LATERAL BUD

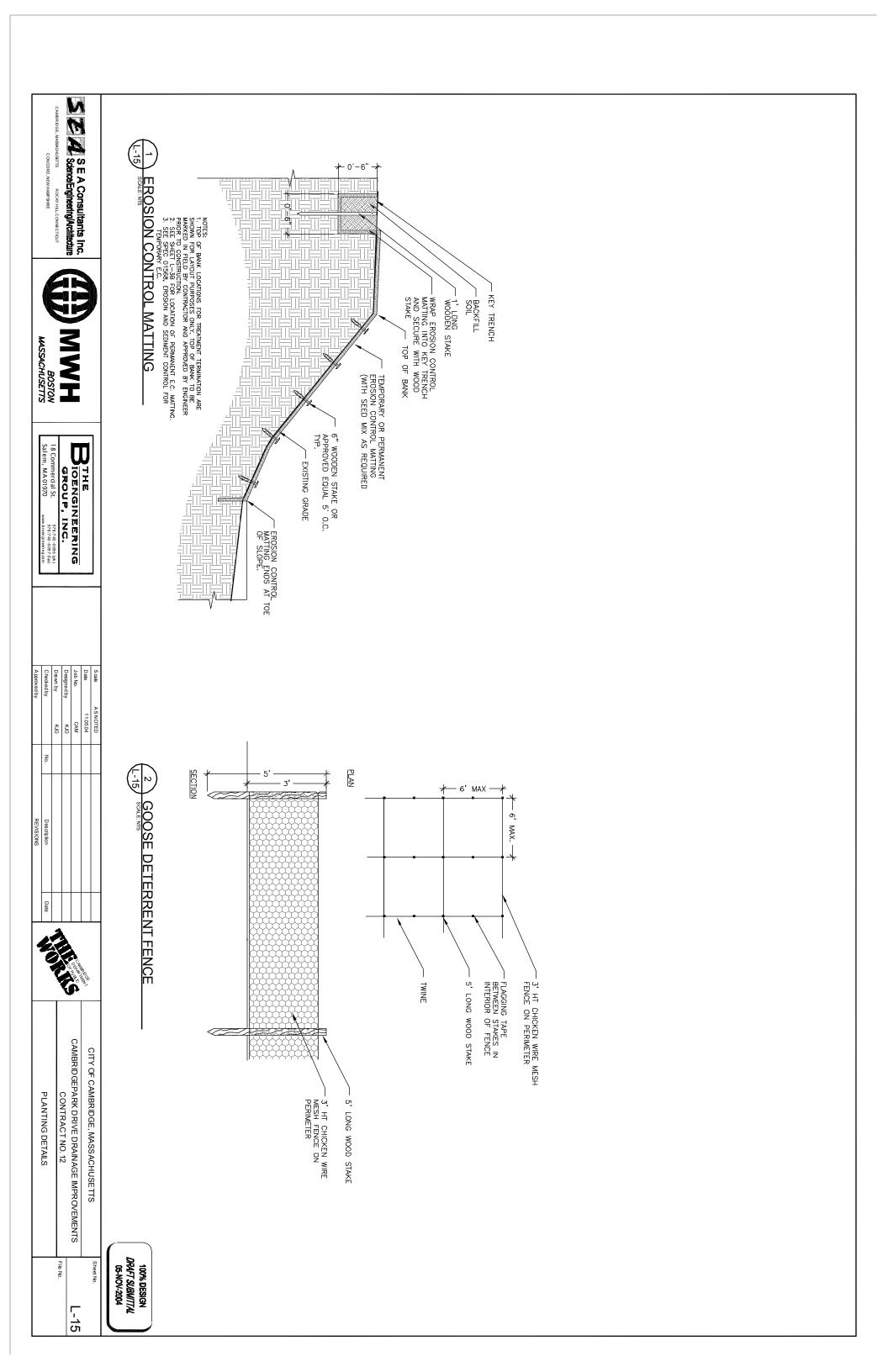
PROPOSED GRADE

45' TAPERED BUTT END

100% DESIGN
DRAFT SUBMITTAL
05-NOV-2004

File No.

· LIVE STAKE, TYP.



WOODLAND
TYPE 2
WET
WOODLAND
SEED MIX SEE L-4A-L4B WET WOODLAND SEED MIX SCRUB/SHRUB TYPE 2 WOODLAND SEED MIX SCRUB/SHRUB TYPE 1 SEE L-4A - L-4B WOODLAND SEED MIX RIPARIAN WOODLAND TYPE 1 SEE SHEET L-6 THEATRE
TALL TURF
SEED MIX SEE SHEET L-5 TALL TURF SEED MIX TOTAL PLANTING AREA TOTAL PLANTING AREA 14,700 sf 39,410 sf 29,180 sf 8,530 sf 5000 sfELEVATION: ESTIMATED NUMBER 6.8 ELEVATION ELEVATION: 134 134 22 ELEVATION: 4 49 23 364 364 364 118 118 118 302 500 303 10 8'-14' 27 27 27 301 22 93 247 494 20 19 0 SYMBOL SYMBOL Ua ଷ ଅ ଓ ď g Q Sn S 균 ≤ M G 오망망 B ₹ S S S Am Ф ۷a ୍ଷ Gaylussacia baccata

Myrica pennsylvanica

Vaccinium angustifolium Pinus strobus Quercus rubrum Quercus alba Nyssa sylvatica Amelanchier canav Betula populifolia SCIENTIFIC NAME SCIENTIFIC NAME Cornus amomum llex verticillata Quercus bicolor Ulmus americana Salix nigra Nyssa sylvatica Betula Nigra Salix discolor Cephalanthus occidentalis Viburnum trilobum Viburnum dentatum Fraxinus pennsylvanica Vaccinium angustifolium /accinium corymbosum canadensis Black Huckleberry
Northern Bayberry
Lowbush Blueberry Sweet Pepperbush Meadowsweet Red maple Red maple Hazel alder Red Oak Gray Birch White Pine Red Oak Tupelo Silky Dogwood Buttonbush Cranberry viburnum Black willow Tupelo COMMON NAME River Birch White Oak Pussy Willow Arrowwood viburnum Common winterberry Swamp white oak American elm Green ash Low Bush Blueberry COMMON NAME Serviceberry Livestakes #3 Cont. #2 Cont #2 Cont #2 Cont #2 Cont Livestakes #3 Cont. 2" cal #3 #3 2" cal. 2" cal 2" cal 2" cal 2" cal 2" Cal 2, 8, ht nt cal 4," cal. 3<u>.</u> 10' ht SIZE SIZE Cont. Cont. 10° O.C. min B&B Clump, 3–5 Stems
10° O.C. min Alternate with clump variety
10° O.C. min B&B Clumn 10' 0.C. min 10' 0.C. min 10' 0.C. min 10' 0.C. min 3' O.C. 10' 0.C. min 10' 0.C. min 10' 0.C. min 3' O.C. min 3' O.C. min 10' 0.C. min 10' 0.C. min SEE L-6 3' 0.C. 3' 0.C. 3' 0.C. SPACING SEE L-6 SPACING 2' O.C. 25 0.0. 3 3 3 3 3. 3. 3. 핔. Plant in groups of 3, 5 or 7 plants of the same species, typ.

in B&B Clump, 3-5 Stems
in B&B Clump, 3-5 Stems
in B&B В&В Plant i plants typ. В&В В&В B&B B&B Plant in masses of 5-15 plants of the same species typ. Plant in masses of 5-15 plants of the same species В&В COMMENTS B&B Clump, COMMENTS Dormant Installation Only Dormant Installation Only Dormant Installation Only Plant in groups of 3, 5 or plants of the same species, s of the same species masses of 5-15 the same species 3-5 Stems

EMERGENT MARSH

38,410 sf

ELEVATION:

0.5'-0'

δ

Carex stricta

5,522 5,522 5,522 5,522

Iris versicolor

Eleocharis palustris

Spike Rush Blue Flag Iris

2" plug
2" plug
2" plug
2" plug
2" plug
2" plug

8, 8, 8, 0.0.

Plant in masses of 5-15 plants of the same species, typ.

ussock Sedge

Soft Rush

Arrow Arum

PLANT TOTAL

11,777

1413 1413 1413 1413 589 589 589

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Hibiscus moscheutos

Marsh Hibiscus Virginia Wild Rye

2" plug

plug plug

2' O.C. 2' O.C.

Juncus canadensis

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Elymus virginicus

Elymus riparius Elymus hystrix

1413

Sy G

Scirpus cyperinus

Leersia oryzoides Juncus effusus

Rice cut grass

Grass

Soft Rush Canada Rush

Ьe င

NO SEED MIX

SEE L-4A - L-4B

ENTRY WAY

TOTAL PLANTING AREA

ESTIMATED NUMBER

ō

SYMBOL SCIENTIFIC NAME

COMMON NAME

SIZE

SPACING

COMMENTS

BROADLEAF FLOODPLAIN

4,270 sf

124 248 124

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Aster novae angliae

New England Aster Swamp Milkweed

2" plug 2" plug 2" plug 2" plug

Eupatorium maculatum

Spotted Joe Pye Weed

Eupatorium perfoliatum

Asclepias incarnata

HABITAT TYPE/ SEED MIX

TOTAL PLANTING AREA

ESTIMATED NUMBER ELEVATION:

SYMBOL

SCIENTIFIC NAME

COMMON NAME

SIZE

SPACING

COMMENTS

Plant in masses of 5-15 plants of the same species, typ.

SEE L-4A - L-4B

WETLAND SEED MIX AND BIONET

IIGH MARSH

40,610 sf

0.5 1.0

589 589

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Common Fox Sedge Marsh Marigold

2" plug 2" plug 2" plug

Caltha palustris

1178

589

Carex vulpinodea Carex stricta Carex stipata

Bottlebrush Grass

Foxtail Sedge

Tussock Sedge

Riverbank Wild Rye

2" plug
2" plug
2" plug
2" plug
2" plug
2" plug

2' 0.0. 2' 0.0. 2' 0.0. 2' 0.0. 2' 0.0. 2' 0.0. 2' 0.0. 2' 0.0.

PLANT TOTAL

1240

124 248

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Verbena hastata

Blue Vervain

Solidago canadensis

Onoclea sensibilis Osmunda regalis Osmunda cinamomea

Royal Fern

Cinnamon Fern

2" plug 2" plug 2" plug

2' 0.C. 2' 0.C. 2' 0.C. 2' 0.C. 2' 0.C. 2' 0.C. 2' 0.C.

Sensitive Fern

2" plug

2" plug

2' O.C. 2' o.c.

Plant in masses of 5-15 plants of the same species, typ.

Canada Goldenrod

62 62 22

Approved by	Checked by	Drawn by	Designed by	Job No.	Date	Scale	
,		KJG	, KJG	CAM	11 05 04	AS NOTED	
	No.						
REVISIONS	Description						
	Date						

DEEP MARSH TYPE 2

13,650 sf

ELEVATION:

NO SEED MIX

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Pontenderia

odorata a cordata

Saggittaria

Northern Arrowhead

CKerelweed

#SP4 cont.
#SP4 cont.
#SP4 cont.

18" O.C. 18" O.C. 18" O.C.

Plant in masses of 5-15 plants of the same species, typ.

Water Lily

SEE L-4A - L-4B

PLANT TOTAL

903

DEEP MARSH TYPE 1

1,355 lf

PLANT TOTAL

44,176

5,522 5,522 5,522 5,522

ş St Sa P G < 유

Scirpus validus Scirpus atrovirens

Soft Stem Bulrush

Green Bulrush

_esser Bur-reed

2" plug

8" o.c.

8" O.C.

2" plug

2" plug

8" O.C. 8" O.C. Sparganium americanum

Peltandra virginica Juncus effusus

NO SEED MIX

0.5 226 452 226

Sm Sv Sn

Scirpus acutus

Scirpus validus
Sparganium americanum

Hard Stem Bulrush
Soft Stem Bulrush
Lesser Bur-reed

#SP4 cont.
#SP4 cont.
#SP4 cont.

18" O.C. 18" O.C. 18" O.C.

Plant in single row, alternating species in groups of 10-20.

SEE L-4A - L-4B

SEE L-4A - L-4B

PLANT TOTAL

M

S E A Consultants Inc.
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IOENGINEERING GROUP, INC.

BOSTON MASSACHUSETTS

18 Commercial St. Salem, MA 01970

ROCKY HILL, CONNECTICUT

ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM, (NGVD)

REVISIONS	Description					
	Date					

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CONTRA	
CAMBRIDGEPARK DRI	Selection of the select
CITY OF CAMBRIDG	ARIDOCK I

CONTRACT NO. 12	CAMBRIDGEPARK DRIVE DRAINAGE IMPROVEME	CITY OF CAMBRIDGE, MASSACHUSETTS
	E IMPROVEN	JSETTS

DETAILS: PLANTING ENTS

100% DESIGN DRAFT SUBMITTAL File No. 05-NOV-2004

L-16