

SITE PREP & EROSION CONTROL:

- EXCAVATION WITHIN THE ALEWIFE RESERVATION SHALL BE CONDUCTED IN THE WINTER MONTHS STARTING IN OCTOBER IN ACCORDANCE WITH THE ORDER OF CONDITIONS ISSUED BY THE CITY OF CAMBRIDGE CONSERVATION COMMISSION. SEE APPENDIX TO SPECIFICATIONS.
- PRIOR TO THE START OF CONSTRUCTION, ALL LIMITS OF WORK FOR THE STORMWATER WETLAND AREA SHALL BE SURVEYED BY A REGISTERED MA RLS AND STAKED OUT BY THE CONTRACTOR FOR REVIEW BY THE CITY'S REPRESENTATIVE WETLAND SCIENTIST. 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 WETLAND SCIENTIST AND THE CONSERVATION COMMISSION PRIOR TO STARTING CONSTRUCTION. ALL WETLAND FLAGGING SHALL BE REESTABLISHED, SEE SPEC SECTION 01568.
- PRIOR TO EXCAVATION OF THE LOW-FLOW OUTLET CHANNEL FROM THE STORMWATER WETLAND BASIN, A SAND BAG DIKE OR PORTADAM 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 CITY'S REPRESENTATIVE ENGINEER BEFORE EXCAVATION OF THE OUTLET CHANNEL MAY BEGIN.
- EXISTING SURVEY CONDITIONS ARE FROM A TOPOGRAPHIC SURVEY PREPARED BY HARRY R. FELDMAN INC, DATED OCTOBER 21, 2003.
- WETLAND FLAG NUMBERS 1 THROUGH 14 WERE PLACED BY THE BIOENGINEERING GROUP, INC. IN OCTOBER 2003 AND MAPPED USING GPS DATA.
- REFER TO MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) EROSION AND SEDIMENT CONTROL GUIDELINES (1997 OR MOST RECENT).
- 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, OTHER THAN THAT REQUIRED TO STAKE, GRUB, AND GRADE, AND INSTALL THE EROSION CONTROL MEASURES, SHALL BE STARTED UNTIL THE CONSERVATION COMMISSION OR ITS AGENT APPROVES THE EROSION CONTROL INSTALLATION.
- CONTRACTOR SHALL SUBMIT FOR APPROVAL A CLEARING AND GRUBBING SEQUENCING PLAN FOR COORDINATION WITH THE IMPLEMENTATION OF THE EROSION CONTROL AND SEDIMENTATION PLAN IN THE WETLAND BASIN AREA.
- STRIP, REMOVE AND DISPOSE OF THE TOP SIX (6) INCHES OF TOPSOIL FROM ALL AREAS WITHIN LIMIT OF WORK LINE.
- STRIP AND STOCKPILE NEXT TWELVE (12) INCHES OF HYDRIC SUBSOIL FROM AREAS SHOWN ON PLAN.
- STOCKPILE LOCATIONS TO BE APPROVED BY CITY'S REPRESENTATIVE ENGINEER. STOCKPILE HEIGHTS AND VOLUMES SHALL BE AS OUTLINED IN SPEC SECTION 01568.
- NO WORK SHALL BE PERFORMED BEYOND THE LIMIT OF WORK LINE WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
- ANY AREA OUTSIDE THE LIMIT OF WORK THAT IS DISTURBED SHALL BE RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.
- ALL POINTS OF CONSTRUCTION EGRESS OR INGRESS SHALL BE MAINTAINED TO PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC ROADS OR ABUTTING PROPERTY.
- CONTRACTOR SHALL USE ALL AVAILABLE MEANS TO MINIMIZE THE AMOUNT OF SOIL EROSION CAUSED BY THE WORK OF THE PROJECT. THIS INCLUDES RESPONSIBILITY FOR MAINTENANCE OF ALL SOIL EROSION CONTROL DEVICES INDICATED. REPAIRS TO SOIL EROSION CONTROL DEVICES SHALL BE COMPLETED WITHIN 24 HOURS FOR SIGNIFICANT REPAIRS AND 48 HOURS FOR ALL OTHER REPAIRS. SEE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR CLARIFICATION ON SIGNIFICANT REPAIRS.
- 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. SEE SPECIFICATION SECTION 01568 FOR ESTABLISHMENT CRITERIA.
- EROSION CONTROL DEVICES SHALL BE CHECKED, MAINTAINED AND/OR REPLACED, AS NECESSARY, DAILY AND AFTER EACH RAINFALL TO ENSURE WORKING ORDER.
- INSTALL A SILT FENCE AROUND ALL STOCKPILED SOIL.
- SEED OR HYDROMULCH ALL DISTURBED AREAS (INCLUDING STOCKPILES) EXPOSED FOR MORE THAN 14 DAYS WITH COVER CROP SEED MIX. SEE SPECIFICATION SECTION 01568.
- CONTRACTOR SHALL CONDUCT A SETTLING TEST ON WATER IN DEWATERING SUMPS (L-1B). IF COLLOIDAL CONDITIONS ARE OBSERVED, FLOC LOGS, OR EQUIVALENT APPROVED BY ENGINEER, SHALL BE PLACED AT OUTLET OF FRENCH DRAIN AND AROUND PERIMETER OF SUMP TO TREAT INCOMING WATER AND ENHANCE SETTLING OF SEDIMENT.
- ALL EROSION AND SEDIMENT CONTROL PROCEDURES SHALL BE IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLAN FOR THE SITE.
- CONTRACTOR SHALL COMPLY WITH THE MASSACHUSETTS EROSION AND SEDIMENT CONTROL MANUAL AND/OR THE CONSTRUCTION CONTROL GENERAL PERMIT, WHICHEVER IS MORE STRINGENT.
- SEE SPEC SECTION 01568 FOR DUST CONTROL.

LAYOUT AND MATERIALS:

- ALL LINES AND DIMENSIONS ARE PARALLEL OR PERPENDICULAR TO THE LINES FROM WHICH THEY ARE MEASURED UNLESS OTHERWISE INDICATED.
- ALL LINE AND GRADE WORK PER DRAWINGS AND SPECIFICATIONS SHALL BE LAID OUT BY A MA REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY THE CONTRACTOR.
- STORAGE AREAS FOR CONTRACTOR'S EQUIPMENT AND MATERIALS SHALL BE WITHIN THE LIMITS OF WORK AND AS APPROVED BY THE ENGINEER.
- ALL LAYOUTS FOR WALKS AND PATHS SHALL BE ADEQUATELY STAKED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR TO RE-ESTABLISH WETLAND FLAGS AS SET FORTH IN DRAWING EC-1. SUCH WORK TO BE PERFORMED BY A MA REGISTERED CIVIL ENGINEER OR SURVEYOR ENGAGED BY CONTRACTOR. CONTRACTOR SHALL INSTALL TEMPORARY ORANGE FENCING ALONG LIMITS OF WORK ADJACENT TO WETLANDS. FENCE TO BE REMOVED ON COMPLETION OF WORK.

GRADING & DRAINAGE:

- PRIOR TO COMMENCING ANY EXCAVATION WORK, THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES IN ACCORDANCE WITH THE "DIG SAFE" NOTIFICATION PROCEDURES PROMOTED BY RESPECTIVE UTILITY COMPANIES. THE "DIG SAFE" TELEPHONE NUMBER FOR MASSACHUSETTS IS 1-888-344-7233.
- 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).
- PITCH EVENLY BETWEEN SPOT GRADES. ALL PAVED AREAS MUST PITCH TO DRAIN AT A MINIMUM SLOPE OF ONE-EIGHTH INCH (1/8") PER FOOT. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE ENGINEER PRIOR TO CONTINUING WORK.
- 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.
- 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.
- 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.
- MAXIMUM CROSSPITCH OF ALL PATHS IS 1.5%. ANY DISCREPANCIES NOT ALLOWING THIS TO OCCUR SHALL BE REPORTED TO THE ENGINEER.
- 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.
- COMPLY WITH ALL ORDER OF CONDITIONS ISSUED BY THE CAMBRIDGE CONSERVATION COMMISSION. SEE APPENDIX TO SPECIFICATIONS.
- ROLL EDGES OF PLANTING SOIL FOR TALL TURF LAWN AND MEADOWS WHERE ADJACENT TO WALKS AND DRIVES.

PLANTING:

- 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.
- ALL NEW PLANT MATERIAL SHALL CONFORM TO THE MINIMUM GUIDELINES ESTABLISHED FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSEYMEN, INC. IN ADDITION, ALL NEW PLANT MATERIAL FOR THE PROJECT SHALL BE OF SPECIMEN QUALITY.
- ALL PLANT MATERIAL SHALL BE NURSERY GROWN. NO FIELD - COLLECTED SPECIMENS SHALL BE ALLOWED.
- ALL NEW PLANTS SHALL BE BALLED AND BURLAPPED OR CONTAINER GROWN, UNLESS OTHERWISE NOTED ON THE PLANT SCHEDULE.
- THE CONTRACTOR SHALL SUPPLY ALL NEW PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING SHOWN ON THE DRAWINGS.
- 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 CITY'S REPRESENTATIVE WETLAND SCIENTIST.
- ALL NEW PLANTS SHALL BE TAGGED AND APPROVED BY THE ENGINEER AT THE NURSERY PRIOR TO DIGGING OR DELIVERY TO THE SITE.
- 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.
- STAKE LOCATION OF ALL PROPOSED PLANTING ZONES FOR APPROVAL BY THE ENGINEER PRIOR TO THE COMMENCEMENT OF PLANTING.
- NO TREES OR SHRUBS SHALL BE PLANTED BEFORE ACCEPTANCE OF ROUGH GRADING BY ENGINEER.
- NEW SHRUBS AND GROUND COVER 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.
- ALL EXISTING TREES TO REMAIN SHALL BE PROPERLY PROTECTED DURING CONSTRUCTION. PROTECTION TECHNIQUES SHALL BE REVIEWED AND APPROVED BY THE ENGINEER.
- SEED AND/OR HYDROMULCH ALL DISTURBED AREAS WITH APPROVED SEED MIX.
- ALL AREAS TO BE SEEDED SHALL RECEIVE A MINIMUM OF TWELVE INCHES (12") OF PLANTING SOIL, MEASURED AFTER COMPACTION, PRIOR TO SEEDING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ALL DAMAGED, STOLEN, DEAD, DECLINING OR LOST MATERIAL UNTIL COMPLETION OF MAINTENANCE AND GUARANTEE PERIOD.

CONFORMED SET

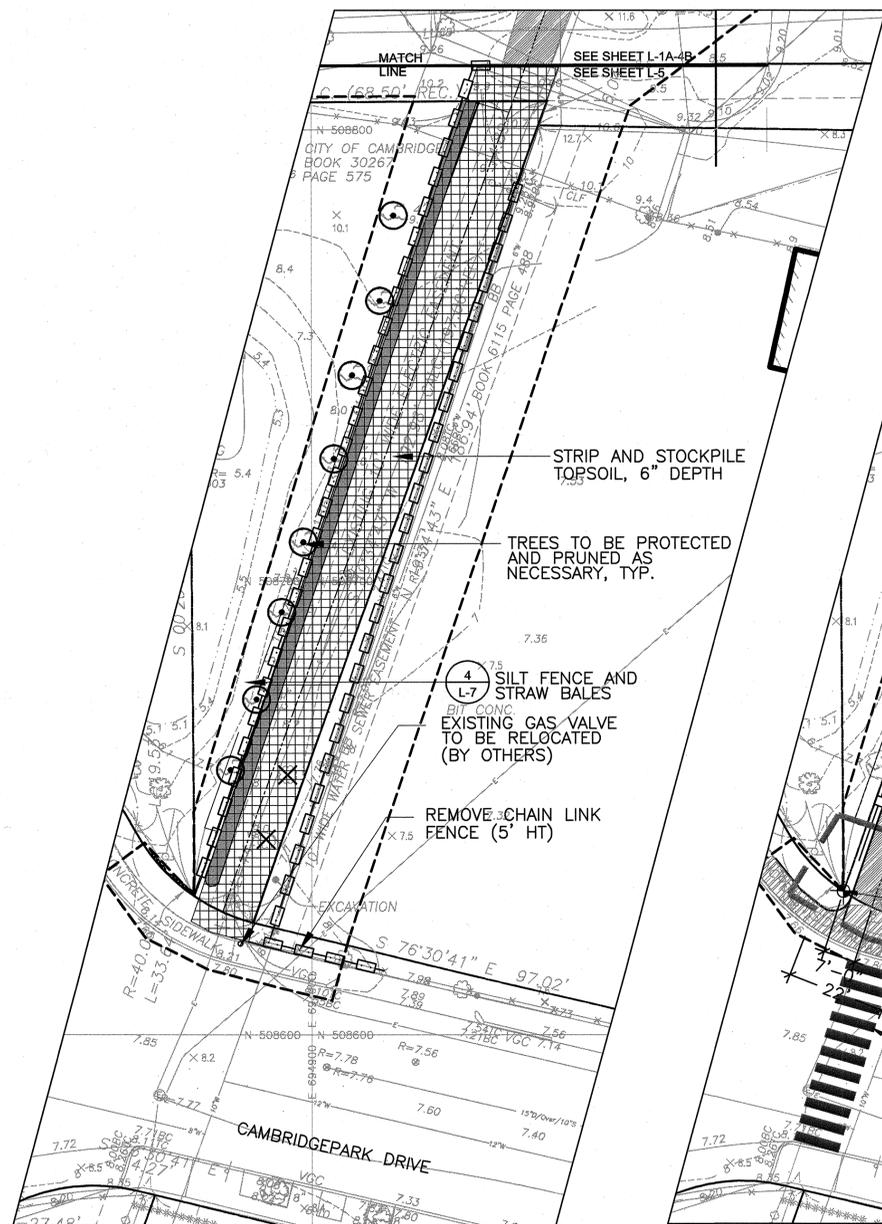


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Job No.	CAM			
Designed by	EJW			
Drawn by	MKO			
Checked by	RWG	No.	Description	Date
Approved by	RWG		REVISIONS	



CITY OF CAMBRIDGE, MASSACHUSETTS	
CAMBRIDGE PARK DRIVE AREA DRAINAGE IMPROVEMENTS	
CONTRACT NO. 12	
STORMWATER TREATMENT AND MITIGATION AREA	
GENERAL NOTES	

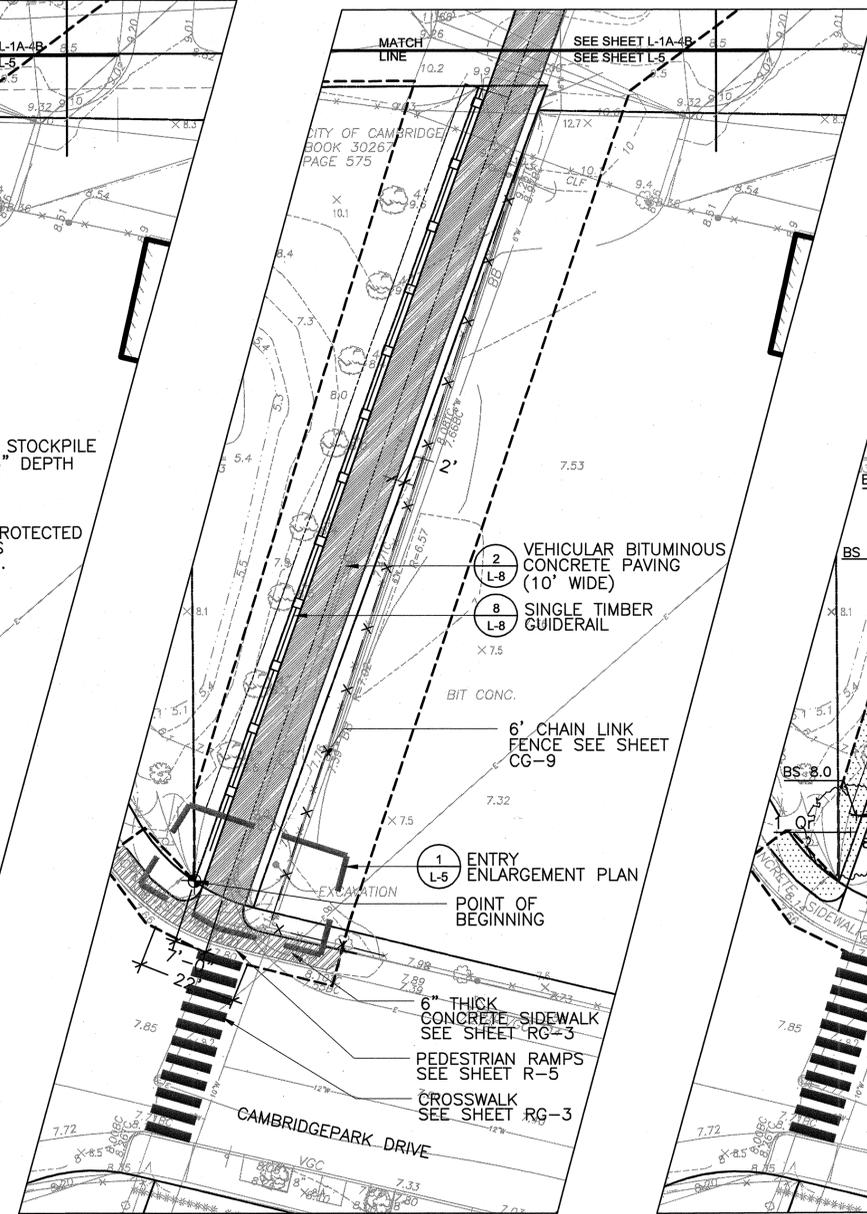
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LEGEND

- PROPERTY LINE
- - - - - LIMIT OF WORK
- x-x-x-x- EXISTING FENCE TO BE REMOVED
- o-o-o-o- SILT FENCE AND STRAW BALES
- ⊙ EXISTING TREE TO BE PROTECTED AND PRUNED AS NECESSARY
- █ EXISTING SHRUBS TO BE REPLANTED (SEE NOTE 1)
- ▒ STRIP & STOCKPILE EXISTING TOPSOIL

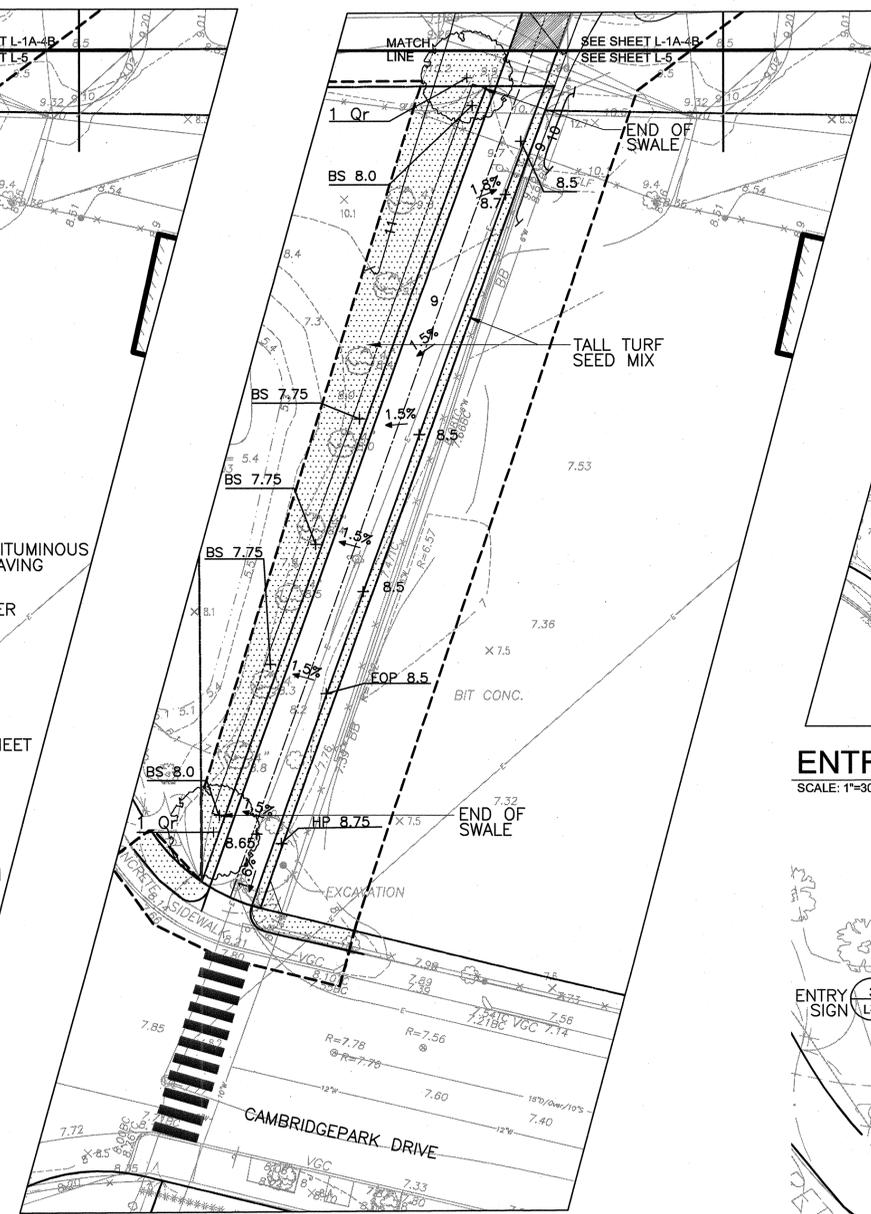
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SCALE: 1"=20'



LEGEND

- PROPERTY LINE
- - - - - LIMIT OF WORK
- o-o-o-o- SINGLE TIMBER GUIDERAIL
- x-x-x-x- 6' HT CHAIN LINK FENCE
- █ VEHICULAR BITUMINOUS CONCRETE PAVEMENT
- ▒ CONCRETE SIDEWALK
- ⊙ POINT OF BEGINNING

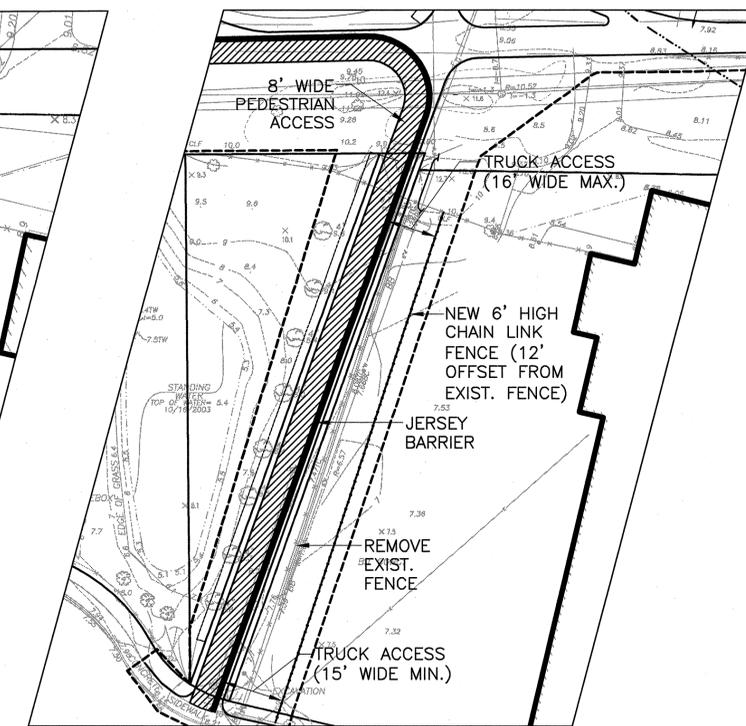
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SCALE: 1"=20'



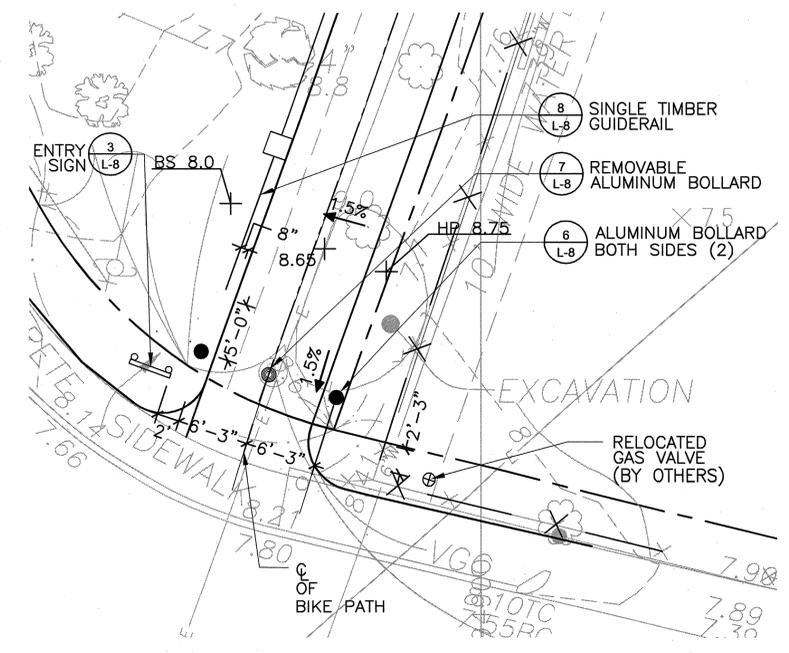
LEGEND

- PROPERTY LINE
- - - - - LIMIT OF WORK
- ~ ~ ~ PROPOSED MAJOR CONTOUR
- ~ ~ ~ PROPOSED MINOR CONTOUR
- EXISTING CONTOUR
- SPOT ELEVATION
- +4.5
- +HP 3.4
- +EOP 2.5
- +BS 2.5
- 2.5% SLOPE
- +LP 1.8 LOW POINT
- TR TOP OF RAMP
- +BR 1.8 BOTTOM OF RAMP
- █ TALL TURF SEED MIX
- ⊙ SPECIMEN TREE

ENTRY : GRADING AND PLANTING PLAN
SCALE: 1"=20'



ENTRY : ACCESS TO SITE FOR CONSTRUCTION
SCALE: 1"=30'

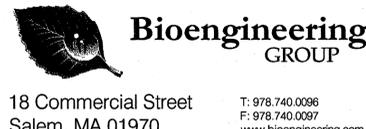


1 ENTRY ENLARGEMENT PLAN
SCALE: 1/8"=1'

NOTES:

1. UTILITY POLES TO BE RELOCATED BY OTHERS.
2. CONTRACTOR TO SET REPLACEMENT FENCE ON PROPERTY LINE.

CONFORMED SET

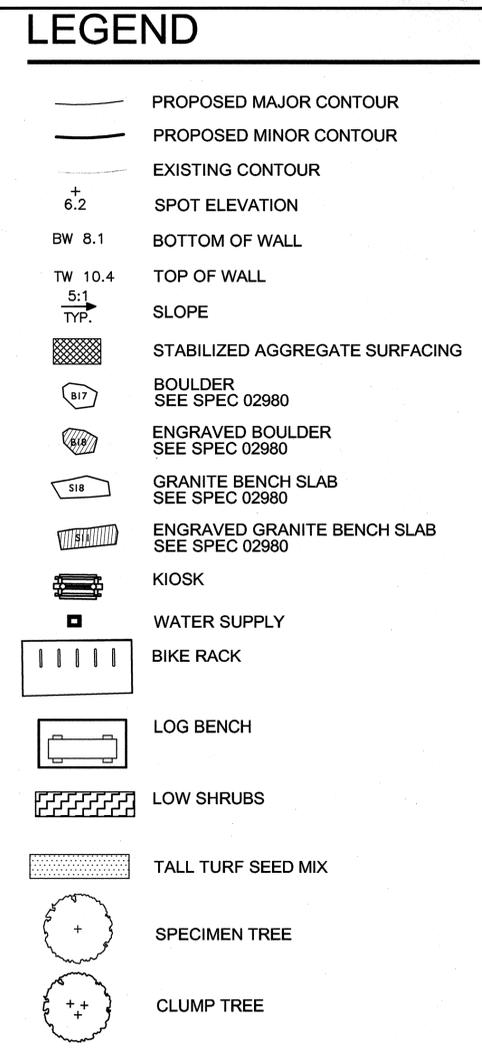
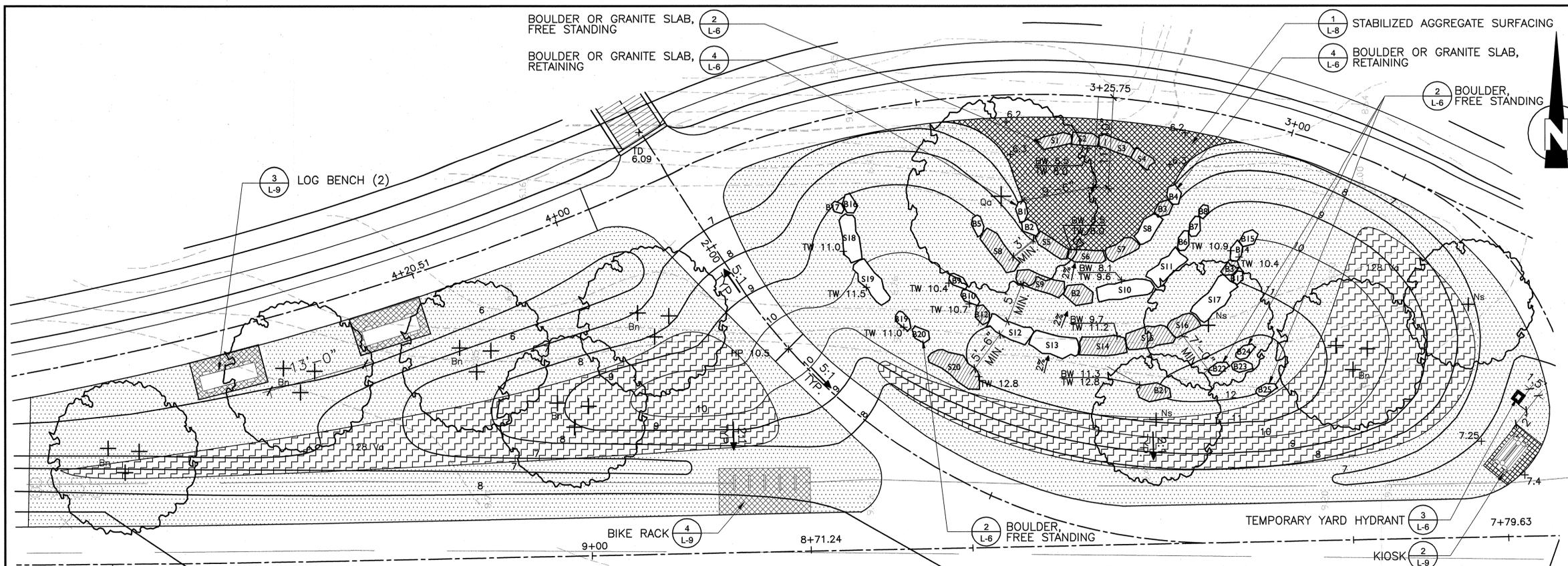


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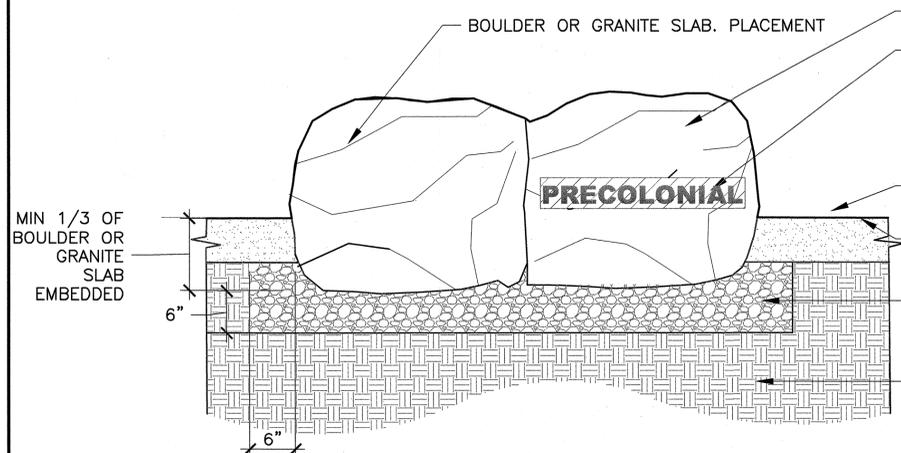
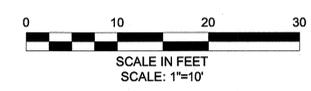
CITY OF CAMBRIDGE, MASSACHUSETTS
CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS
CONTRACT NO. 12
STORMWATER TREATMENT AREA AND MITIGATION AREA
SPECIAL PLAN: ENTRY TREATMENT - CAMBRIDGEPARK DRIVE

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1 AMPHITHEATRE ENLARGEMENT

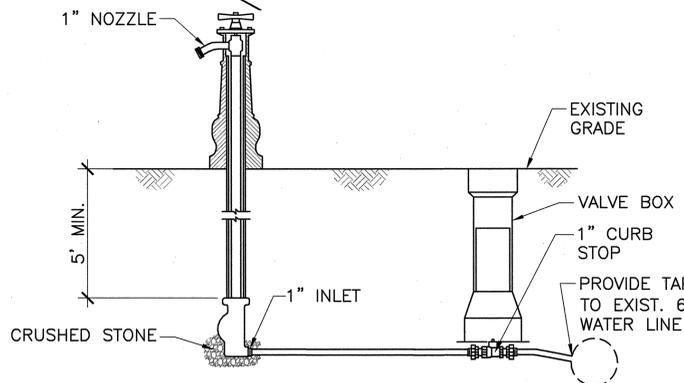
SCALE: 1"=10'



NOTE:
1. SEE SPEC 02980-SITE IMPROVEMENTS FOR HEIGHT AND WIDTH OF BOULDERS AND TEXT AND GRAPHICS REQUIREMENT FOR ENGRAVED BOULDERS AND GRANITE SLAB.

2 BOULDER OR GRANITE SLAB, FREE STANDING

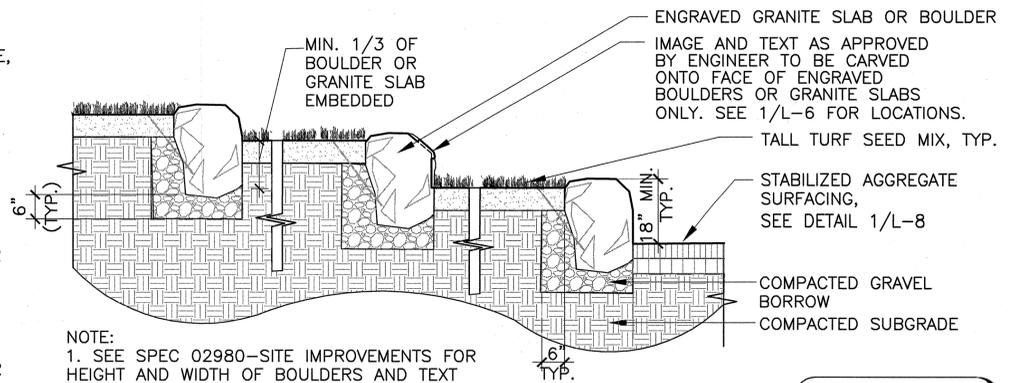
SCALE: NTS



- NOTES:
- YARD HYDRANTS SHALL BE TOTAL ECLIPSE #1 YARD HYDRANTS AS MANUFACTURED BY JOHN C. KUPFERLE FOUNDRY CO., ST. LOUIS, MO.
 - YARD HYDRANTS SHALL BE SELF-DRAINING, NON-FREEZING, COMPRESSION TYPE, INLET CONNECTION SHALL BE 1", OUTLET SHALL BE 1".
 - YARD HYDRANTS SHALL HAVE A STEEL PIPE RISER WITH A CAST IRON CASING GUARD. PRINCIPAL INTERIOR OPERATING PARTS SHALL BE BRASS AND REMOVABLE FROM YARD HYDRANT FOR SERVICING WITHOUT EXCAVATION.
 - YARD HYDRANTS SHALL BE SET IN 4 CUBIC FEET OF CRUSHED STONE TO ALLOW FOR PROPER DRAINAGE. RECOMMENDATIONS OF THE AWWA SHOULD BE FOLLOWED WHEN INSTALLING THE YARD HYDRANT.
 - THE CONTRACTOR SHALL PROVIDE A 3/4" WATER METER AND A 1" RPZ-TYPE BACKFLOW PREVENTER. THESE SHALL BE HOUSED IN AN INSULATED, LOCKING, FIBERGLASS, ABOVE-GROUND METER ENCLOSURE, MODEL LB2ST BY HOT BOX OR EQUAL. THE ENCLOSURE SHALL BE MOUNTED TO AN ADEQUATELY SIZED SLAB OR FOOTER TO PREVENT TAMPING OR REMOVAL. OPENINGS SHALL BE PROVIDED IN THE SLAB WITHIN THE ENCLOSURE TO ALLOW THE WATER SERVICE TO ENTER AND EXIT FROM BELOW GRADE INSIDE THE ENCLOSURE.
 - UPON COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE ENTIRE YARD HYDRANT ASSEMBLY AND CLOSE THE CORPORATION AT THE WATER MAIN. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION AND REMOVAL AND SHUT-DOWN DURING WINTER PERIODS (NO LATER THAN NOVEMBER 1) OF THE YARD HYDRANT ASSEMBLY WITH THE CAMBRIDGE WATER DEPARTMENT.

3 TEMPORARY YARD HYDRANT

SCALE: NTS



NOTE:
1. SEE SPEC 02980-SITE IMPROVEMENTS FOR HEIGHT AND WIDTH OF BOULDERS AND TEXT AND GRAPHICS REQUIREMENT FOR ENGRAVED BOULDERS AND GRANITE SLAB.

4 BOULDER OR GRANITE SLAB, RETAINING

SCALE: NTS

CONFORMED SET

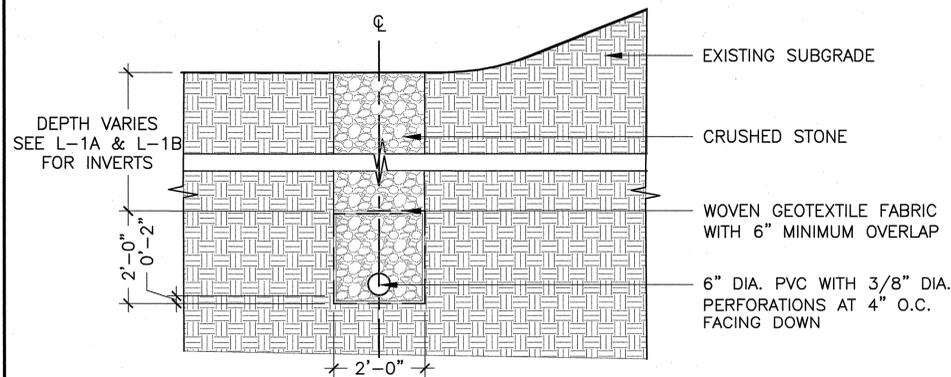


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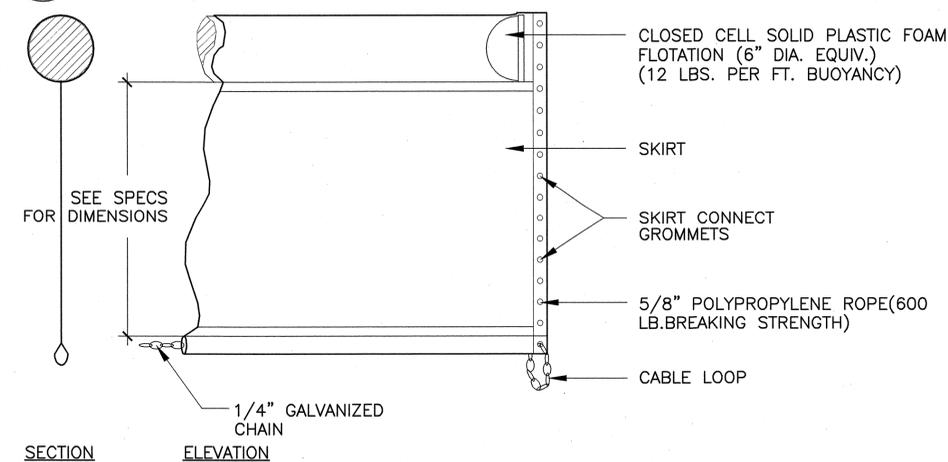


CITY OF CAMBRIDGE, MASSACHUSETTS
CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS
CONTRACT NO. 12
STORMWATER TREATMENT AREA AND MITIGATION AREA
AMPHITHEATRE ENLARGEMENT

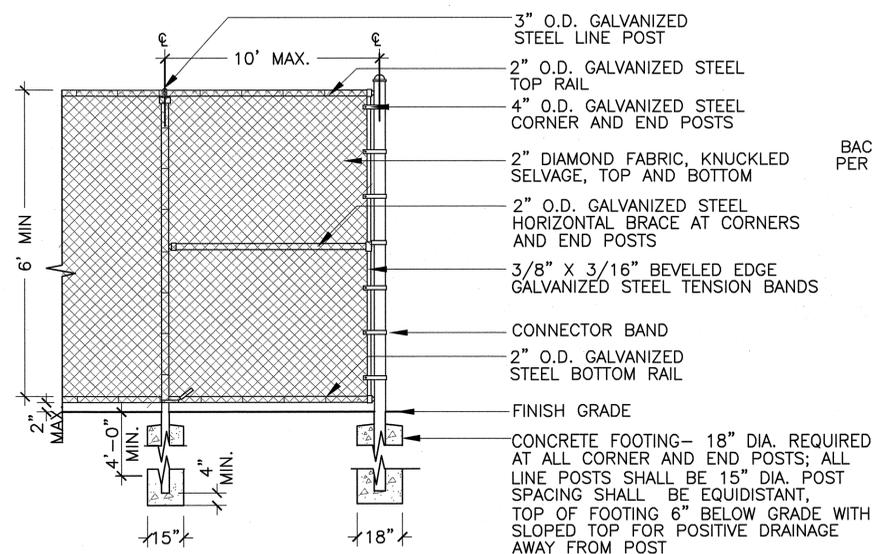
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1 FRENCH DRAIN
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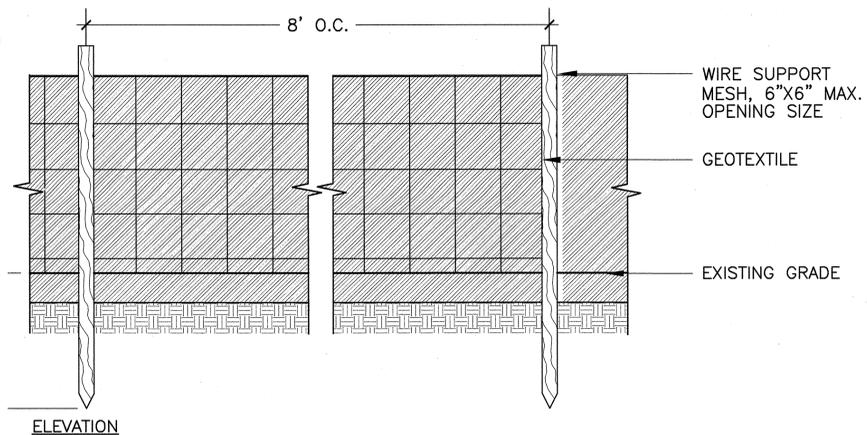


2 TURBIDITY CURTAIN
SCALE: NTS

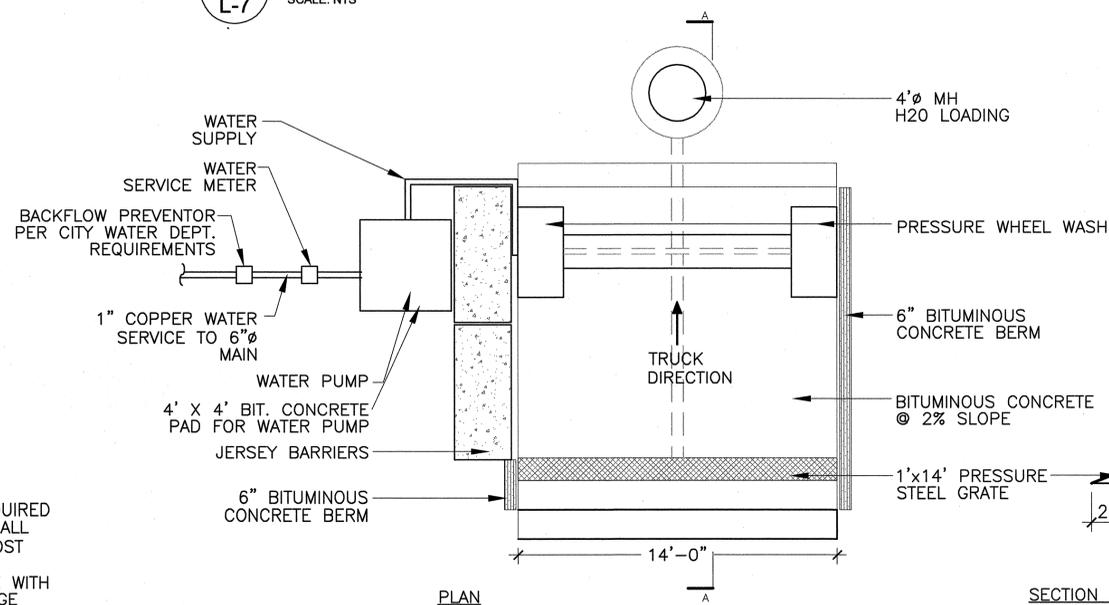
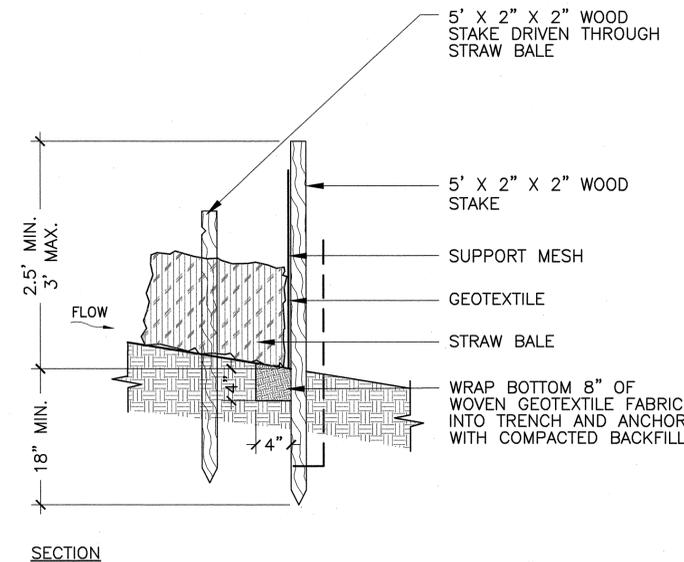


3 CHAIN LINK CONSTRUCTION FENCE
SCALE: NTS

NOTES:
1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES.
2. PURCHASE GEOTEXTILE IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
3. DIG A 4" X 4" TRENCH ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER TO SECURE GEOTEXTILE BELOW GRADE.
4. ATTACH WIRE SUPPORT MESH TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES, OR HOG RINGS. EXTEND SUPPORT MESH INTO THE TRENCH A MINIMUM OF 2 INCHES.
5. ATTACH GEOTEXTILE TO THE FENCE USING STAPLES OR WIRE. BURY THE BOTTOM 8 INCHES OF THE FABRIC IN THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE EXISTING GRADE.

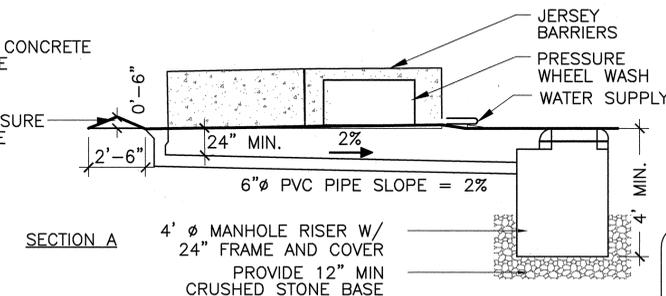


4 SILT FENCE AND STRAW BALES
SCALE: NTS



5 TRUCK WASHING AREA
SCALE: NTS

NOTES:
1. PRESSURE WHEEL WASH SHALL BE DIRTSQUIT WHEEL WASH OR APPROVED EQUAL.
2. WATER PUMP SHALL BE DUSTPRO OR APPROVED EQUAL.
3. INSTALL 2' OF CRUSHED STONE AROUND ALL SIDES OF TRUCK WASHING AREA.



CONFORMED SET

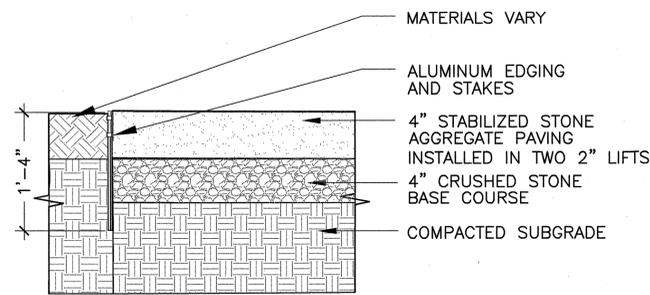


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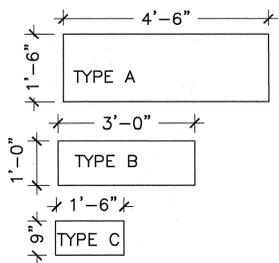


CITY OF CAMBRIDGE, MASSACHUSETTS
CAMBRIDGE PARK DRIVE AREA DRAINAGE IMPROVEMENTS
CONTRACT NO. 12
STORMWATER TREATMENT AREA AND MITIGATION AREA
EROSION AND SEDIMENT DETAILS

Sheet No. L-7
File No.

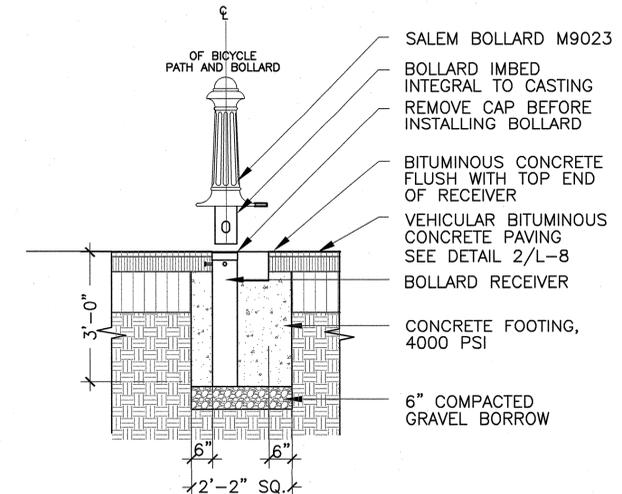


1 STABILIZED AGGREGATE SURFACING
SCALE: NTS

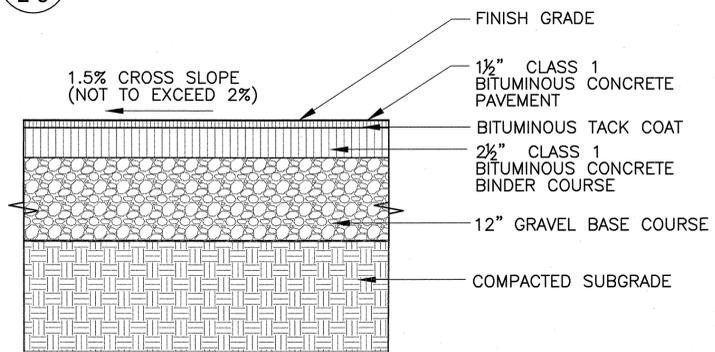


4 PLASTIC SIGN
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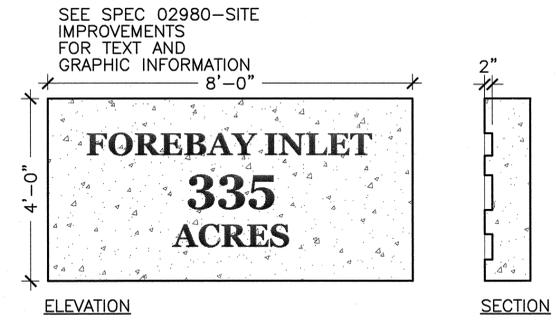
FOR SIGNAGE ATTACHMENT TO BOARDWALK RAIL, SEE DETAIL 3/L-11.
FOR SIGNAGE ATTACHMENT TO BOARDWALK MESH PANEL, SEE DETAIL 4/L-11.
SEE SPEC 02980-SITE IMPROVEMENTS FOR TEXT AND GRAPHIC INFORMATION



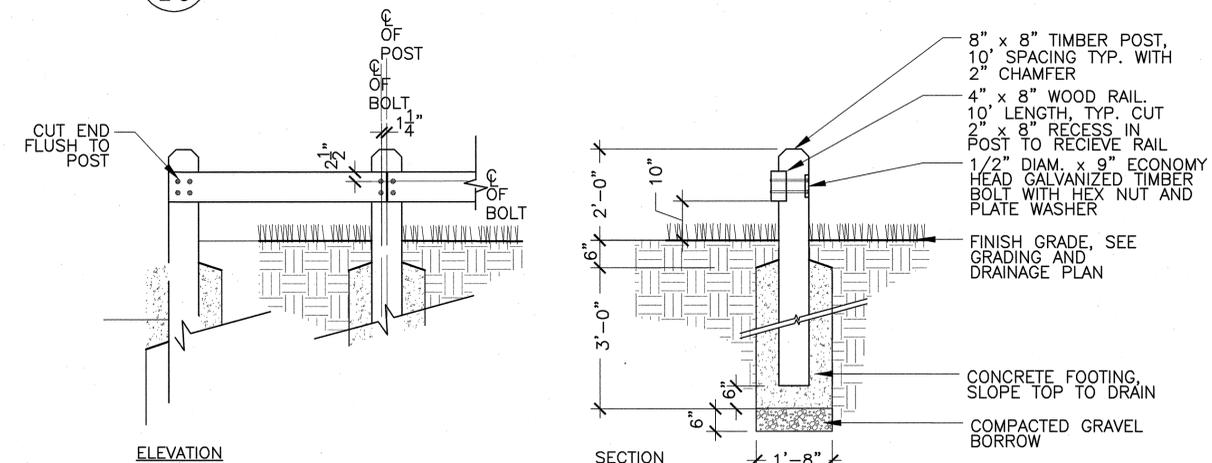
7 REMOVABLE ALUMINUM BOLLARD
SCALE: NTS



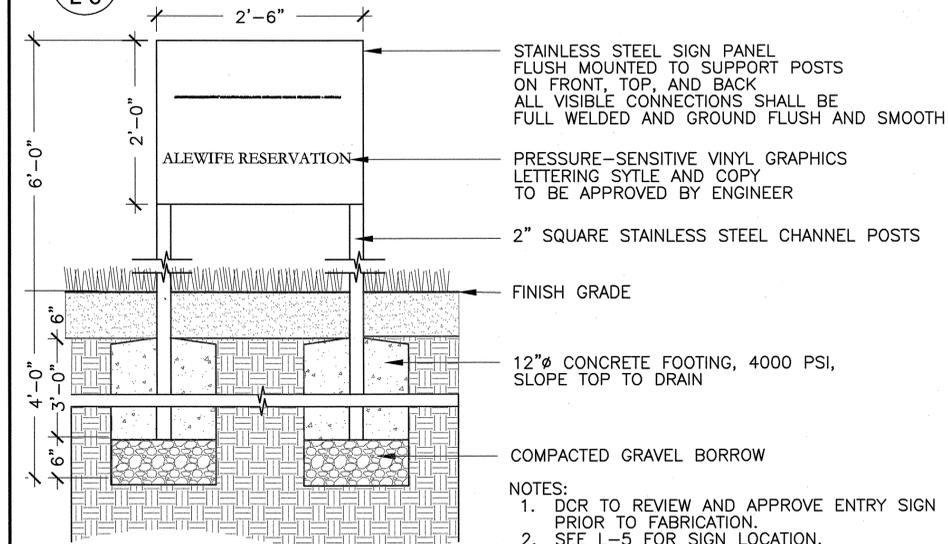
2 VEHICULAR BITUMINOUS CONCRETE PAVING
SCALE: NTS



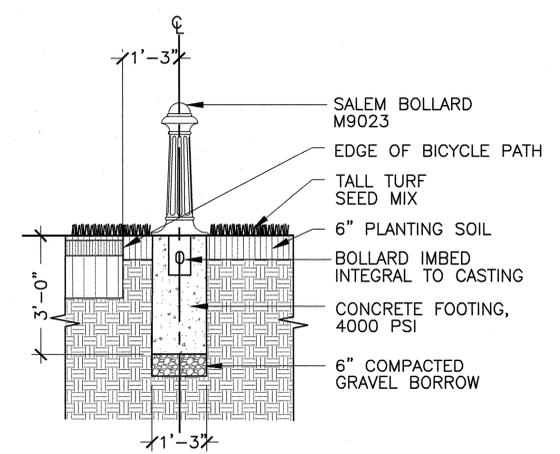
5 CONCRETE SIGN
SCALE: NTS



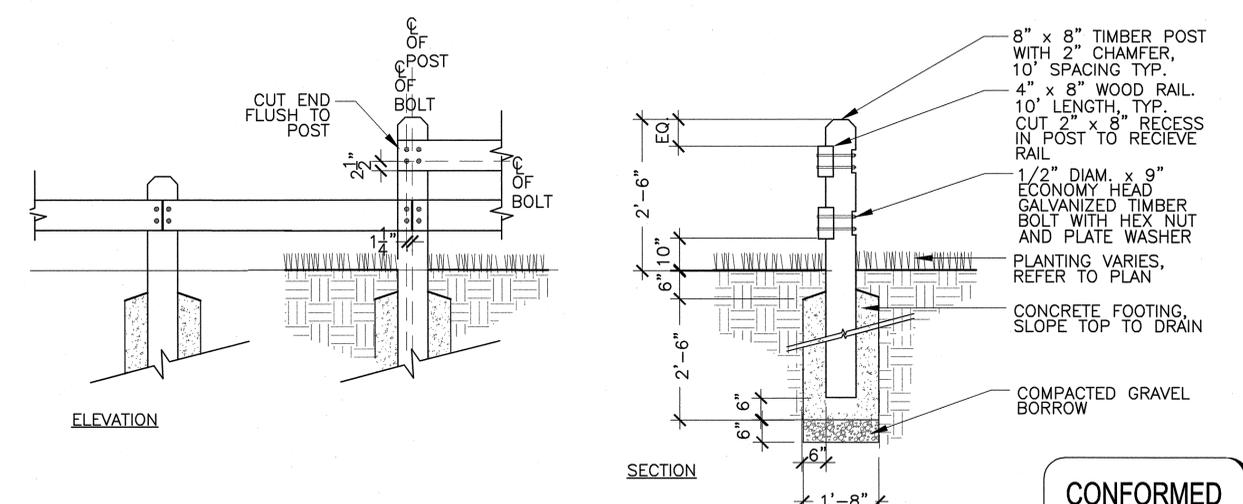
8 SINGLE TIMBER GUIDERAIL
SCALE: NTS



3 ENTRY SIGN
SCALE: NTS

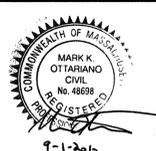


6 ALUMINUM BOLLARD
SCALE: NTS



9 DOUBLE TIMBER GUIDERAIL
SCALE: NTS

CONFORMED SET

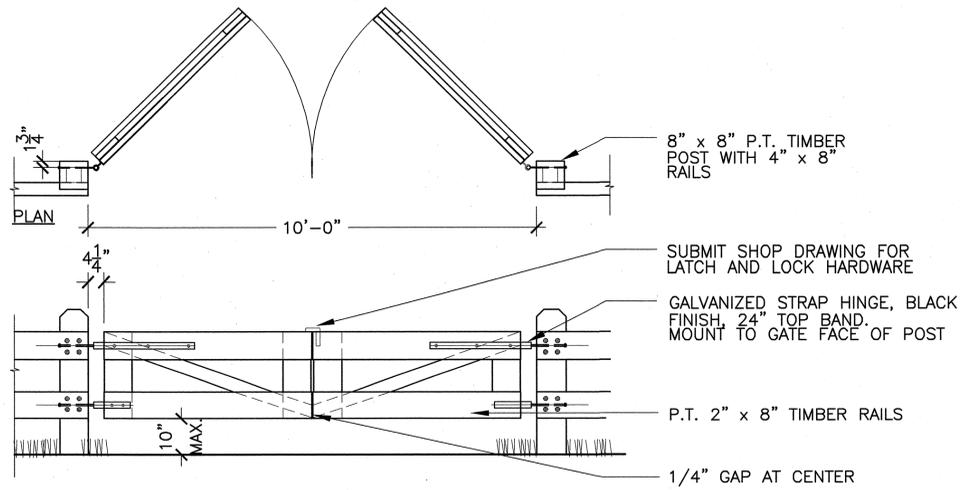


Scale	AS NOTED
Date	SEPTEMBER 1, 2010
Job No.	CAM
Designed by	EJW
Drawn by	MKO
Checked by	RWG/KB
Approved by	RWG



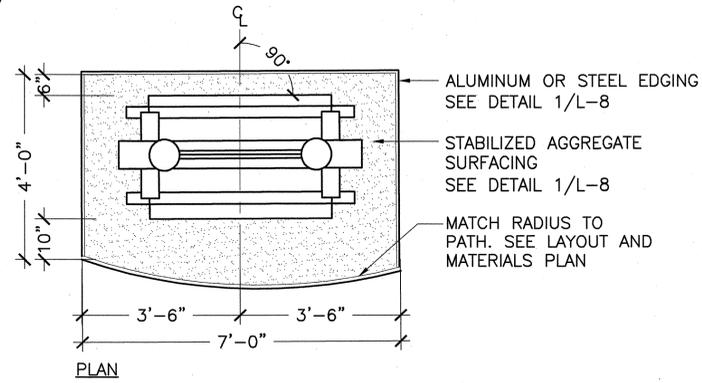
CITY OF CAMBRIDGE, MASSACHUSETTS
CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS
CONTRACT NO. 12
STORMWATER TREATMENT AREA AND MITIGATION AREA
LAYOUT AND MATERIAL DETAILS I

Sheet No. **L-8**
File No.

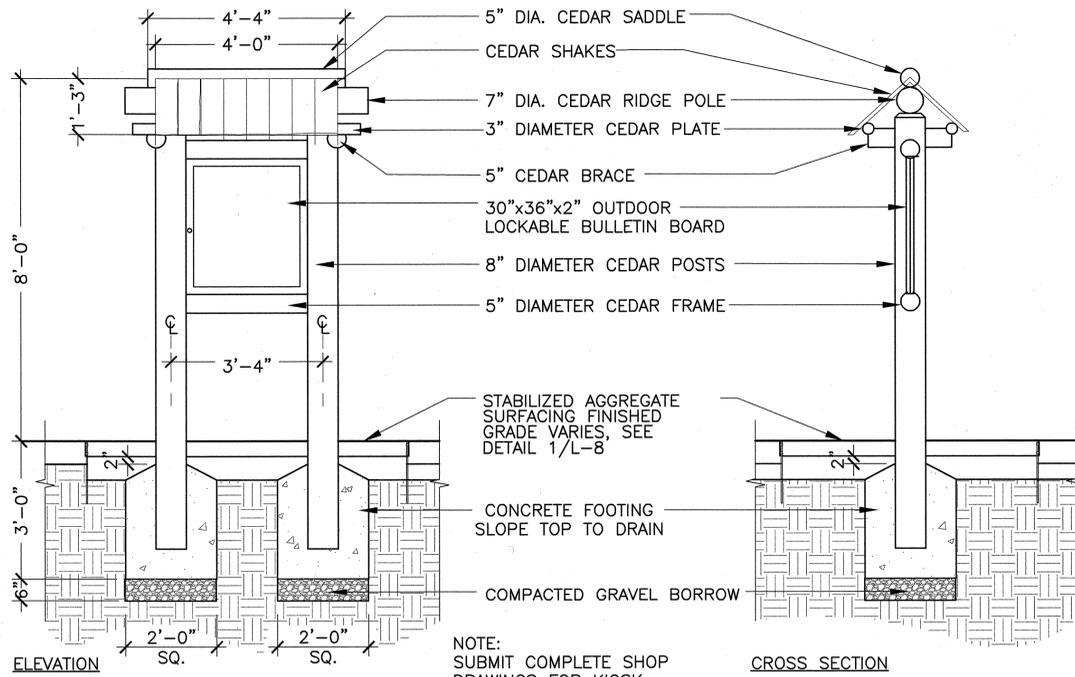


ELEVATION

1
L-9
TIMBER GATE
SCALE: NTS



PLAN

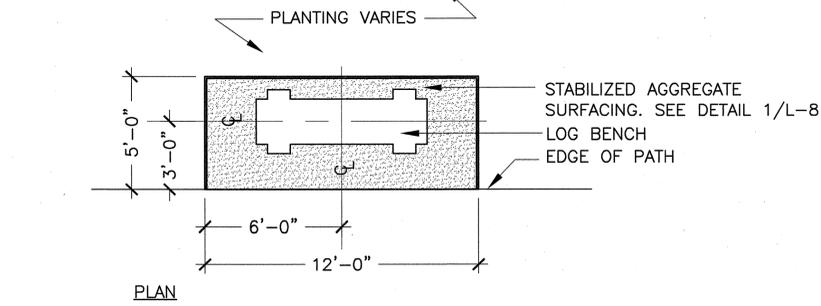


ELEVATION

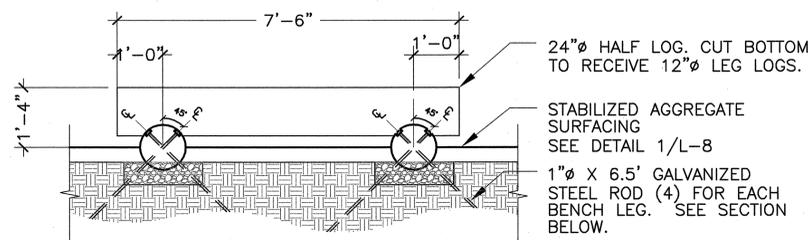
CROSS SECTION

2
L-9
KIOSK
SCALE: NTS

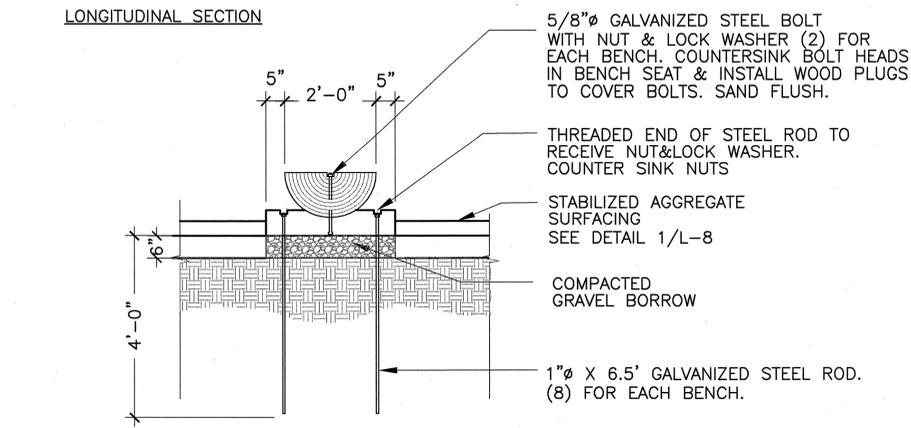
NOTE:
SUBMIT COMPLETE SHOP
DRAWINGS FOR KIOSK.



PLAN

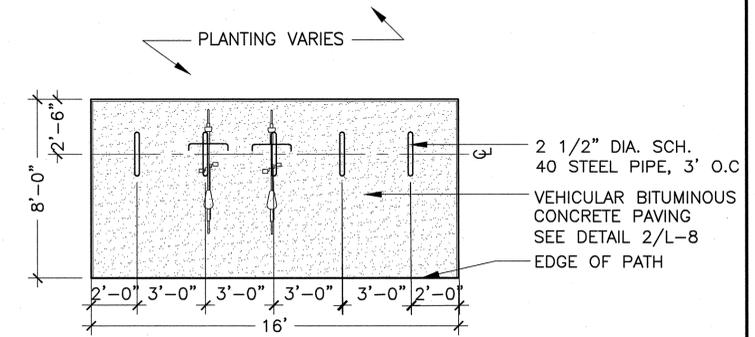


LONGITUDINAL SECTION

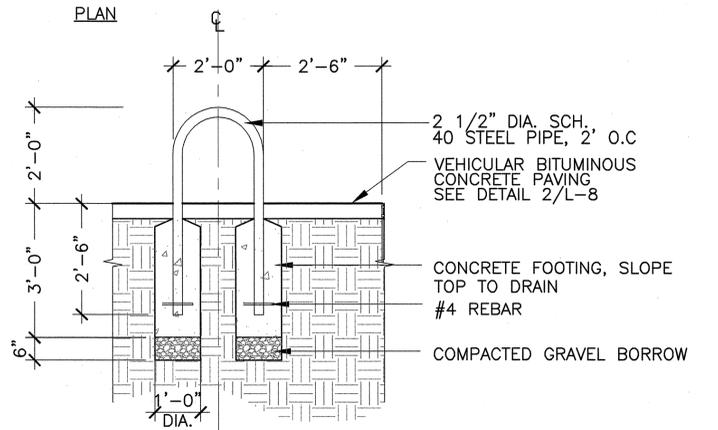


CROSS SECTION

3
L-9
LOG BENCH
SCALE: NTS

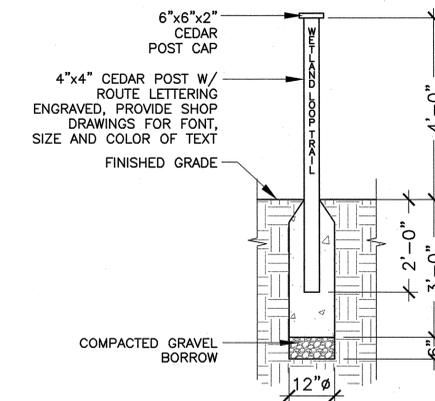


PLAN



SECTION

4
L-9
BIKE RACK
SCALE: NTS



5
L-9
POLE SIGN
SCALE: NTS

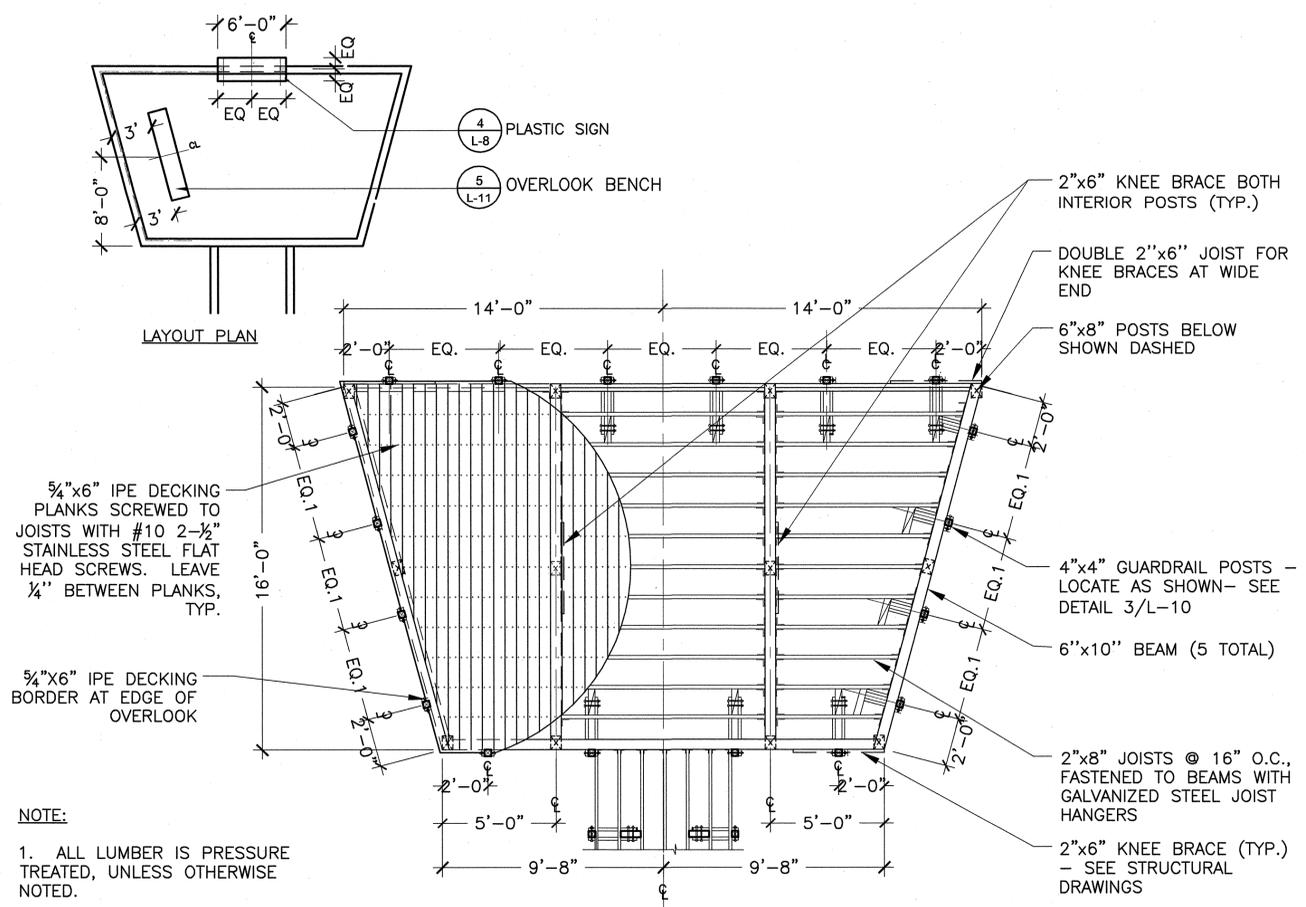
CONFORMED SET



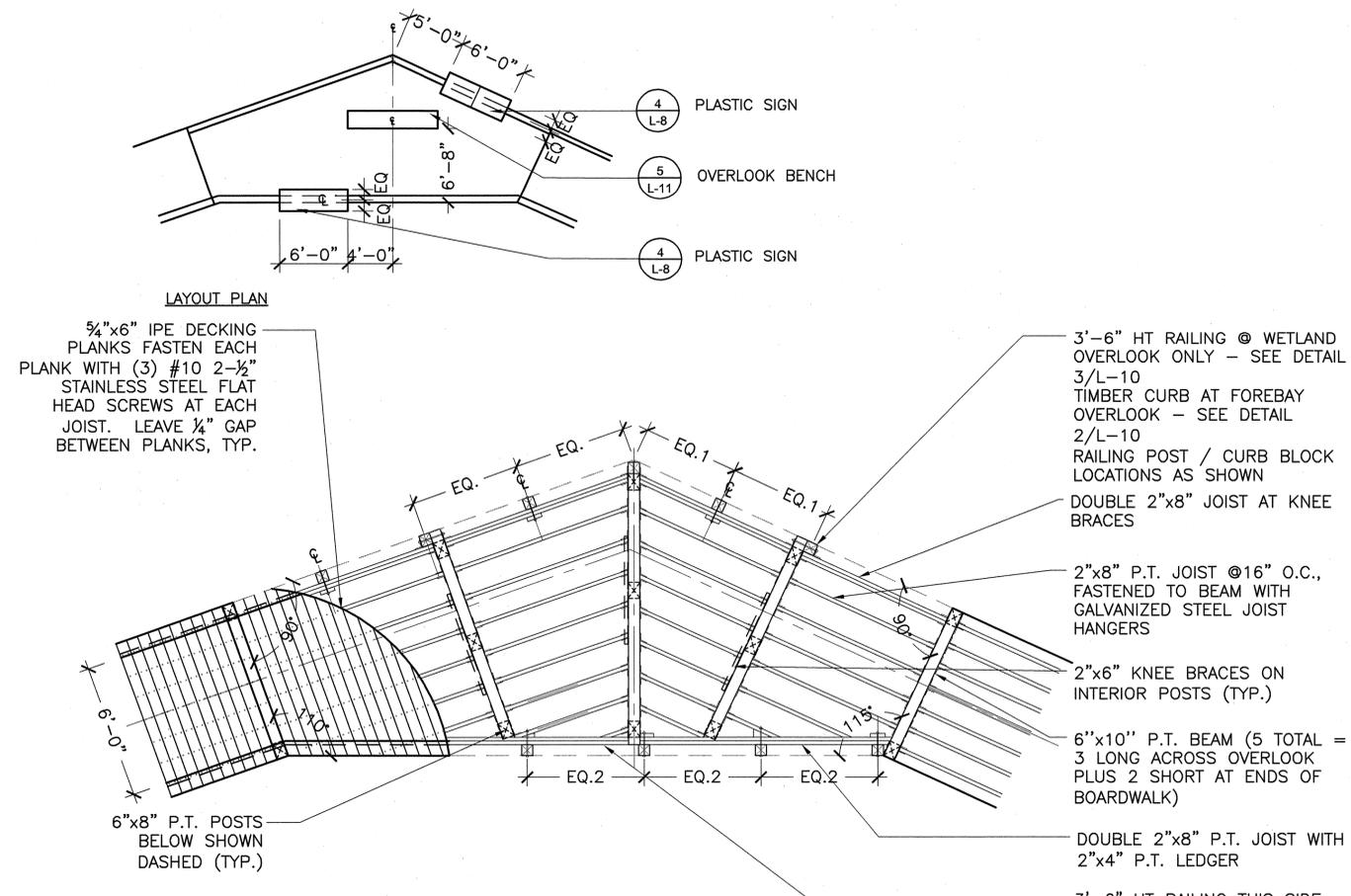
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Date	SEPTEMBER 1, 2010			
Job No.	CAM			
Designed by	EJW			
Drawn by	MKO			
Checked by	RWG/KB	No.	Description	Date
Approved by	RWG		REVISIONS	



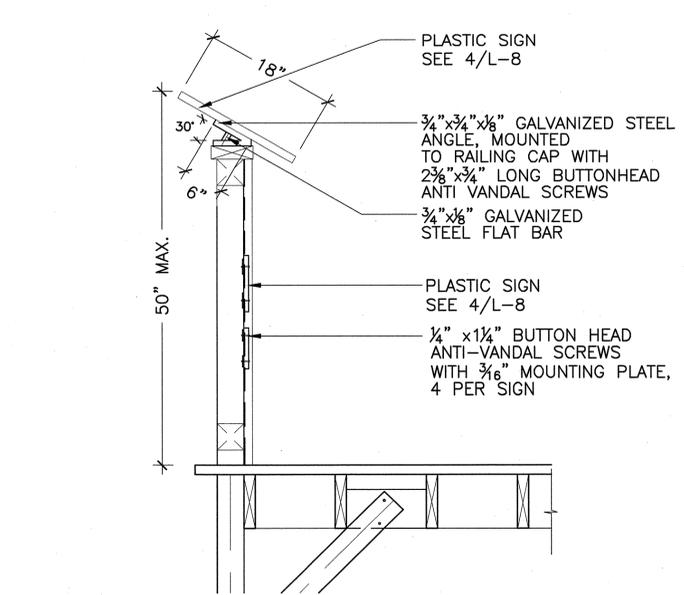
CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet No.
CAMBRIDGE PARK DRIVE AREA DRAINAGE IMPROVEMENTS	L-9
CONTRACT NO. 12	File No.
STORMWATER TREATMENT AREA AND MITIGATION AREA LAYOUT AND MATERIAL DETAILS II	



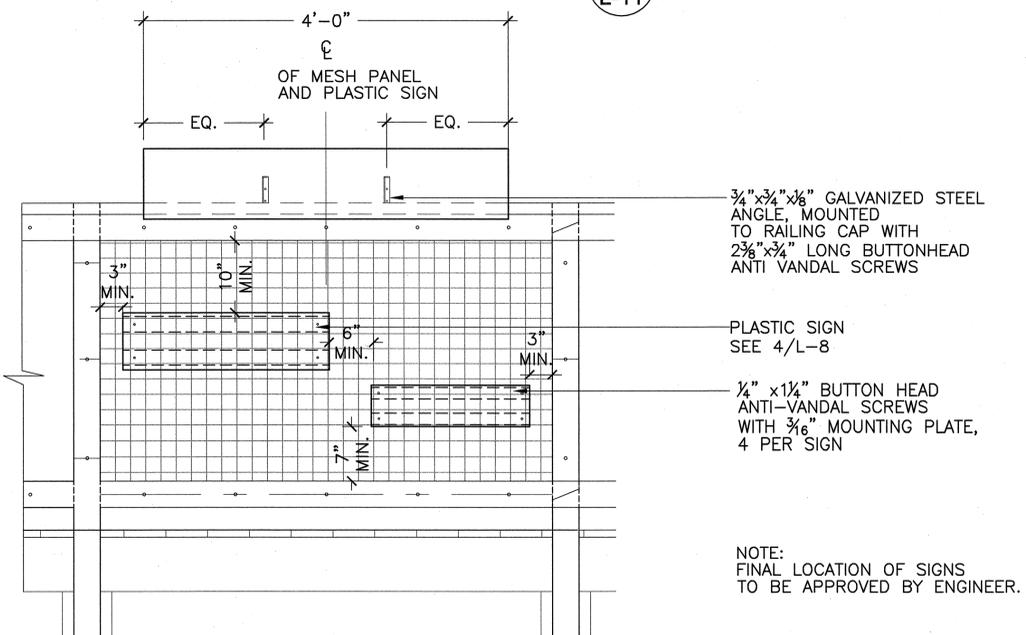
1 **TIMBER OVERLOOK FRAMING PLAN, TYPE 1**
SCALE: 1/4" = 1'-0"



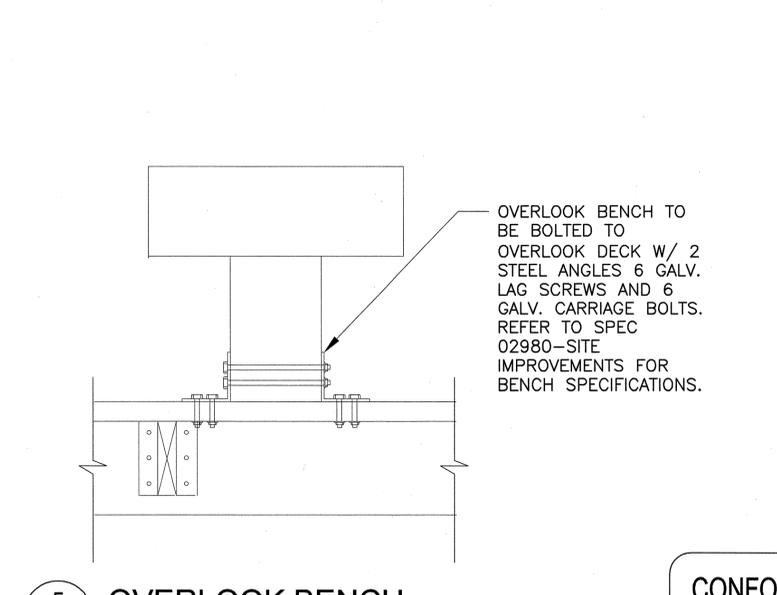
2 **TIMBER OVERLOOK FRAMING PLAN, TYPE 2**
SCALE: NTS



3 **SIGNAGE ATTACHMENT (SECTION)**
SCALE: NTS



4 **SIGNAGE ATTACHMENT (ELEVATION)**
SCALE: NTS



5 **OVERLOOK BENCH**
SCALE: NTS

CONFORMED SET

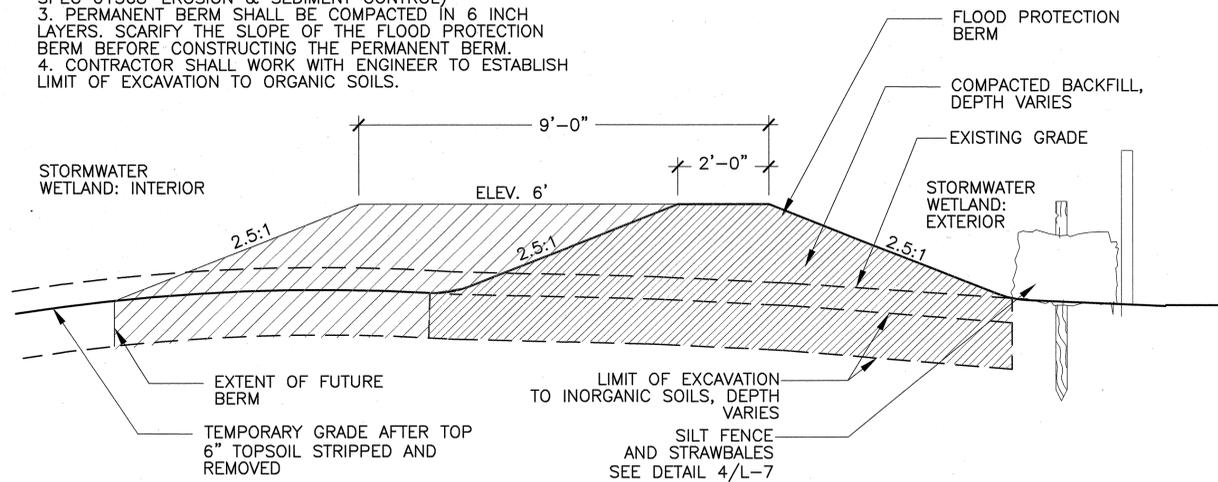


Scale	AS NOTED		
Date	SEPTEMBER 1, 2010		
Job No.	CAM		
Designed by	EJW		
Drawn by	MKO		
Checked by	RWG/KB	No.	Description
Approved by	RWG		REVISIONS



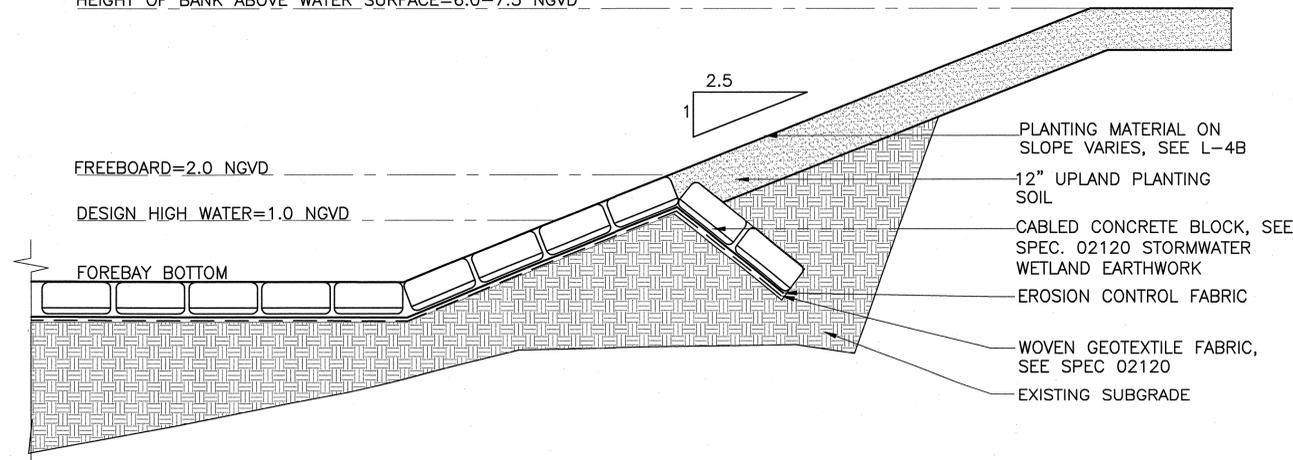
CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet No.
CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS	L-11
CONTRACT NO. 12	File No.
STORMWATER TREATMENT AREA AND MITIGATION AREA LAYOUT AND MATERIAL DETAILS IV	

- NOTES:
 1. FLOOD PROTECTION BERM SHALL BE COMPACTED IN 6 INCH LAYERS
 2. BERM TO BE SEEDED WITH COVER CROP SEED MIX (SEE SPEC 01568-EROSION & SEDIMENT CONTROL)
 3. PERMANENT BERM SHALL BE COMPACTED IN 6 INCH LAYERS. SCARIFY THE SLOPE OF THE FLOOD PROTECTION BERM BEFORE CONSTRUCTING THE PERMANENT BERM.
 4. CONTRACTOR SHALL WORK WITH ENGINEER TO ESTABLISH LIMIT OF EXCAVATION TO ORGANIC SOILS.

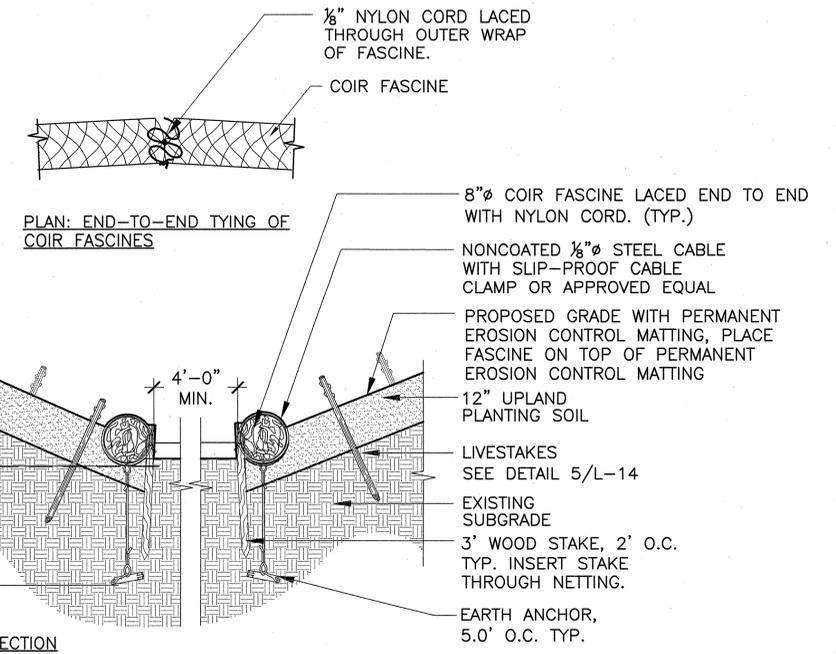


1 FLOOD PROTECTION BERM
 SCALE: NTS

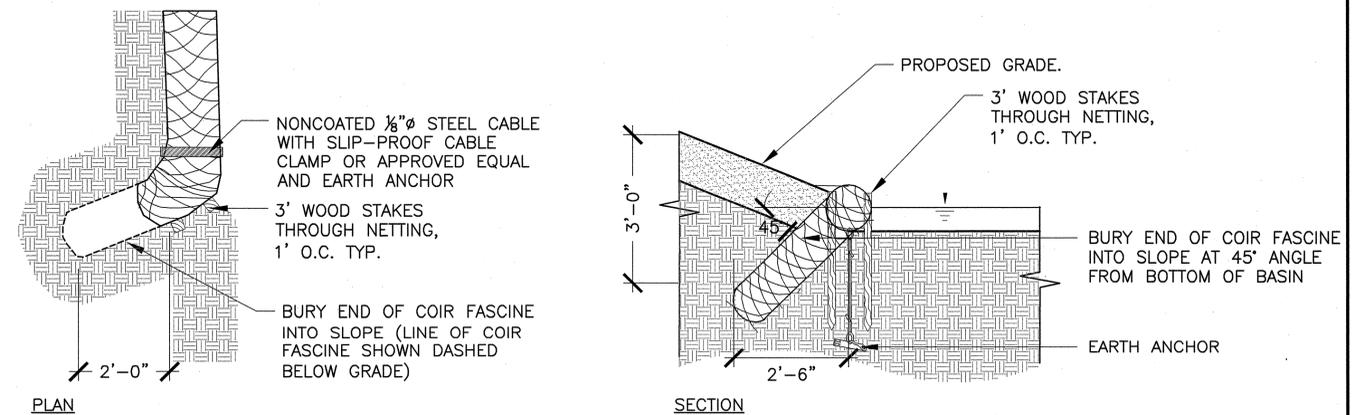
HEIGHT OF BANK ABOVE WATER SURFACE=6.0-7.5 NGVD



2 CABLED CONCRETE BLOCK
 SCALE: NTS



3 COIR FASCINE
 SCALE: NTS



4 COIR END TREATMENT
 SCALE: NTS

CONFORMED SET

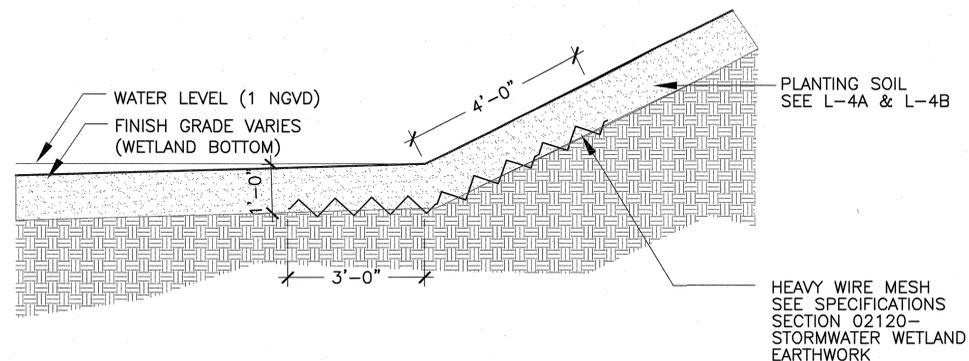


Scale	AS NOTED			
Date	SEPTEMBER 1, 2010			
Job No.	CAM			
Designed by	EJW			
Drawn by	MKO			
Checked by	RWG/KB	No.	Description	Date
Approved by	RWG		REVISIONS	

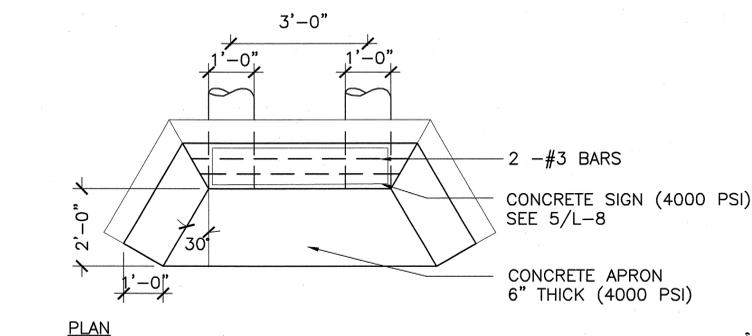


CITY OF CAMBRIDGE, MASSACHUSETTS
 CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS
 CONTRACT NO. 12
 STORMWATER TREATMENT AREA AND MITIGATION AREA
 GRADING AND DRAINAGE DETAILS I

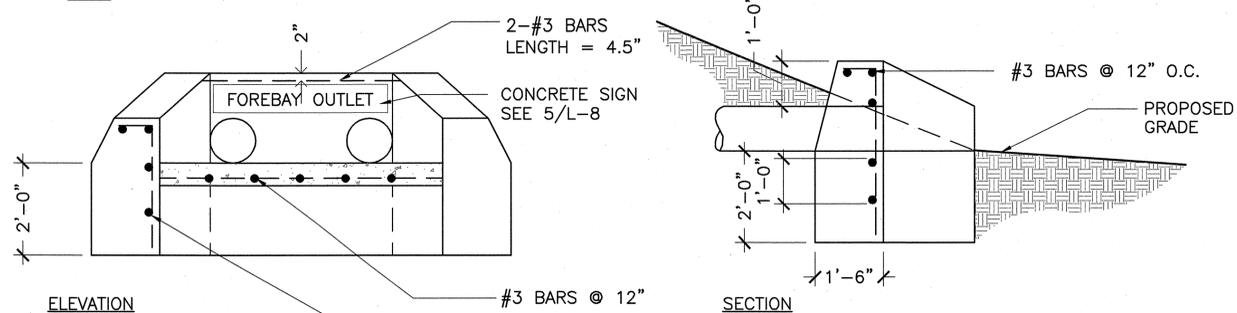
Sheet No.
 L-12
 File No.



1 RODENT CONTROL
SCALE: NTS
L-13



PLAN



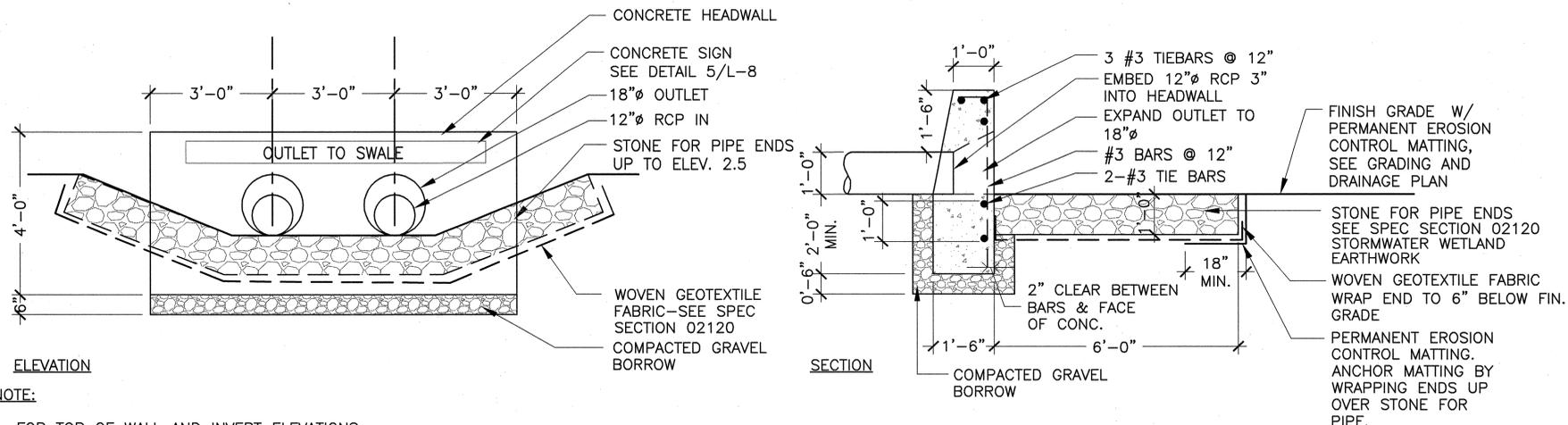
ELEVATION

SECTION

NOTES:

- ALL BARS #3 @ 12" MIN, 2" CLEAR OF OUTSIDE FACE OR AS SHOWN
- SEE GRADING PLANS FOR TOP OF WALL AND INVERT ELEVATIONS.

2 CROSS BERM INLET
SCALE: NTS
L-13



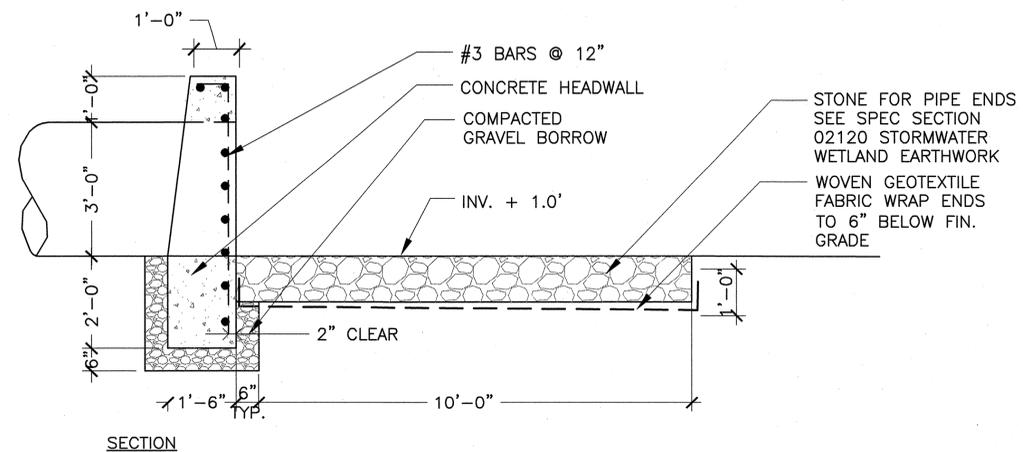
ELEVATION

SECTION

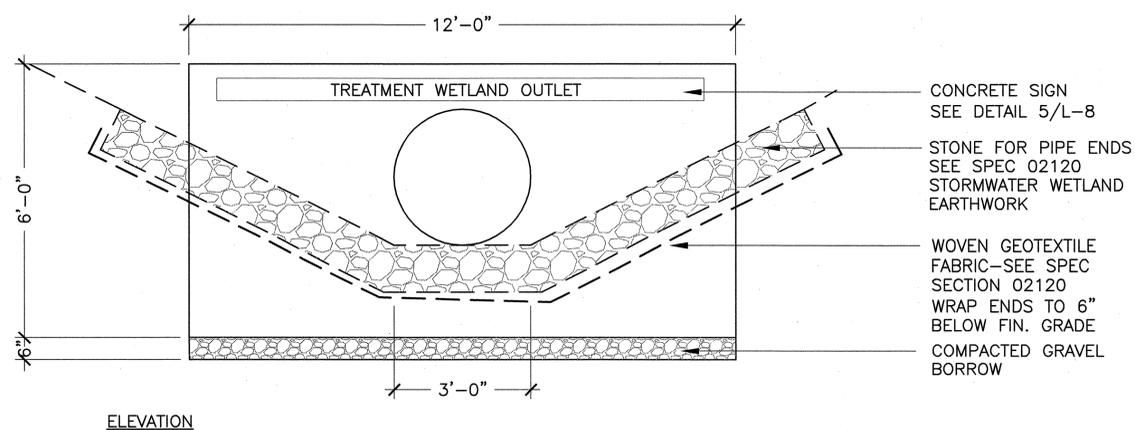
NOTE:

- FOR TOP OF WALL AND INVERT ELEVATIONS, SEE GRADING PLANS

3 CROSS BERM OUTLET
SCALE: NTS
L-13



SECTION



ELEVATION

4 WETLAND OUTLET
SCALE: NTS
L-13

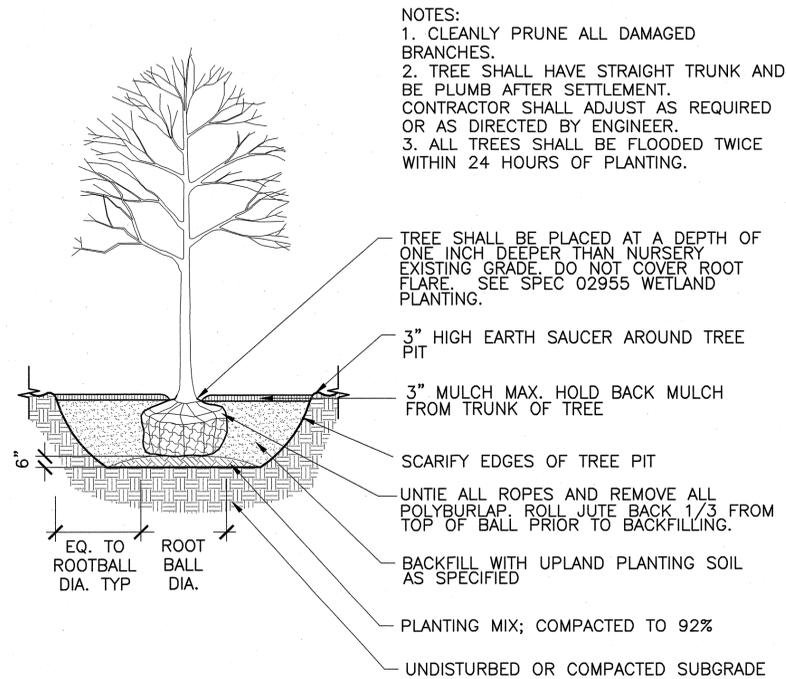
CONFORMED SET



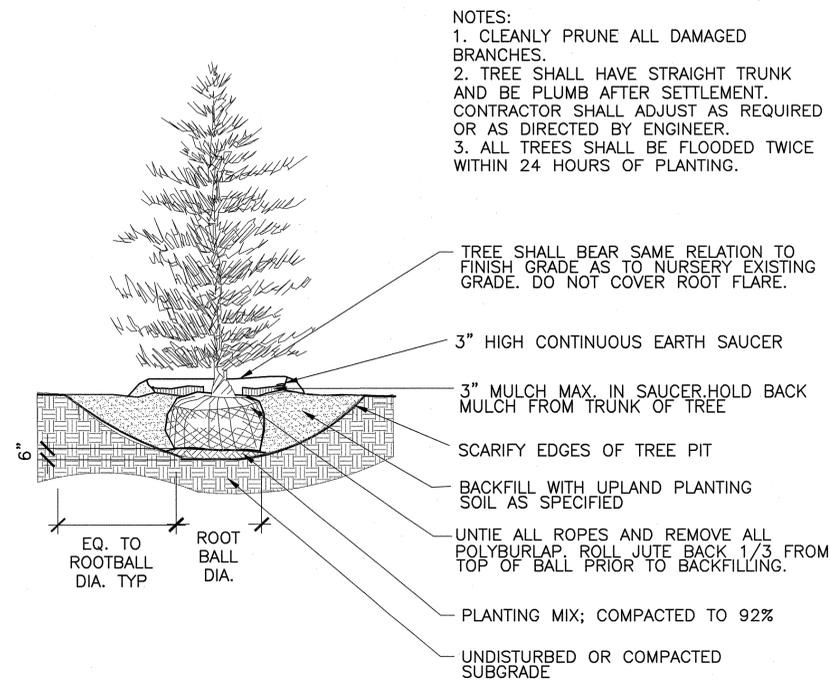
Scale	AS NOTED		
Date	SEPTEMBER 1, 2010		
Job No.	CAM		
Designed by	EJW		
Drawn by	MKO		
Checked by	RWG/KB	No.	Description
Approved by	RWG		REVISIONS



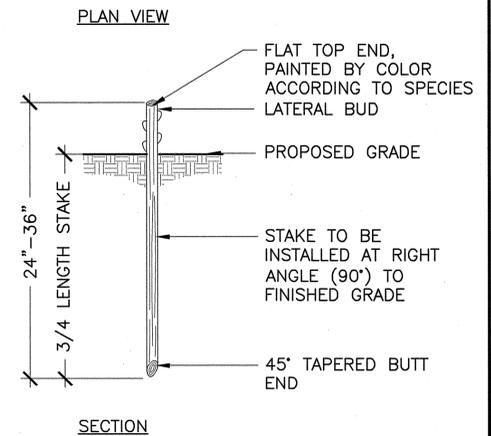
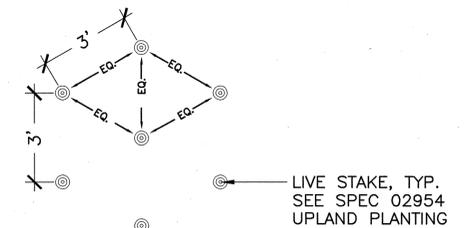
CITY OF CAMBRIDGE, MASSACHUSETTS	Sheet No.
CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS	L-13
CONTRACT NO. 12	File No.
STORMWATER TREATMENT AREA AND MITIGATION AREA GRADING AND DRAINAGE DETAILS II	



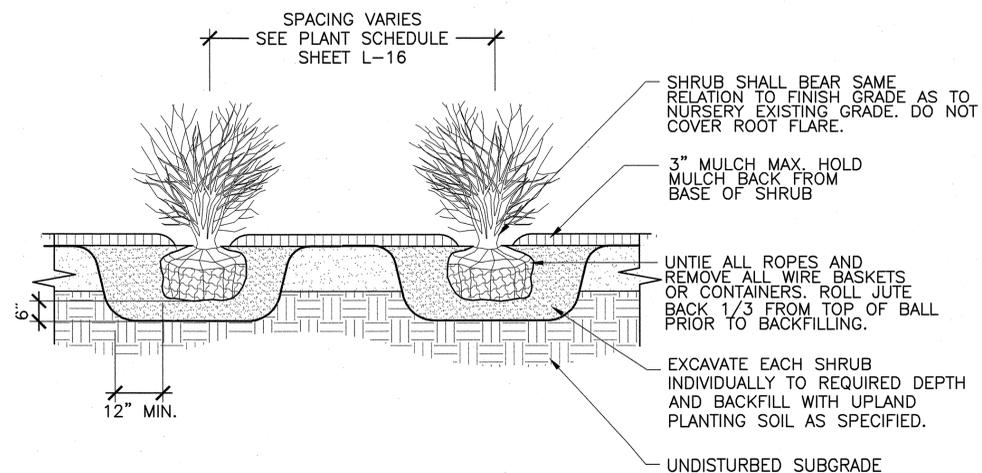
1 DECIDUOUS TREE PLANTING
 L-14 SCALE: NTS



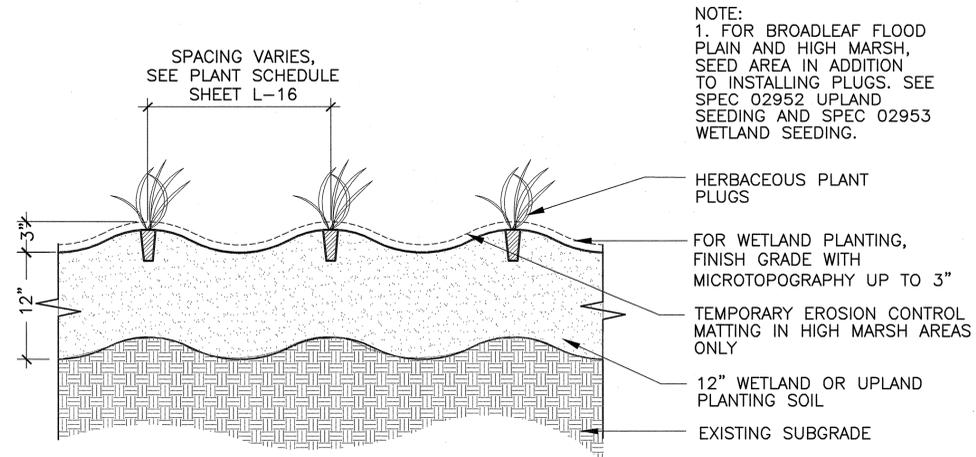
3 EVERGREEN TREE PLANTING
 L-14 SCALE: NTS



5 LIVESTAKE PLANTING
 L-14 SCALE: NTS

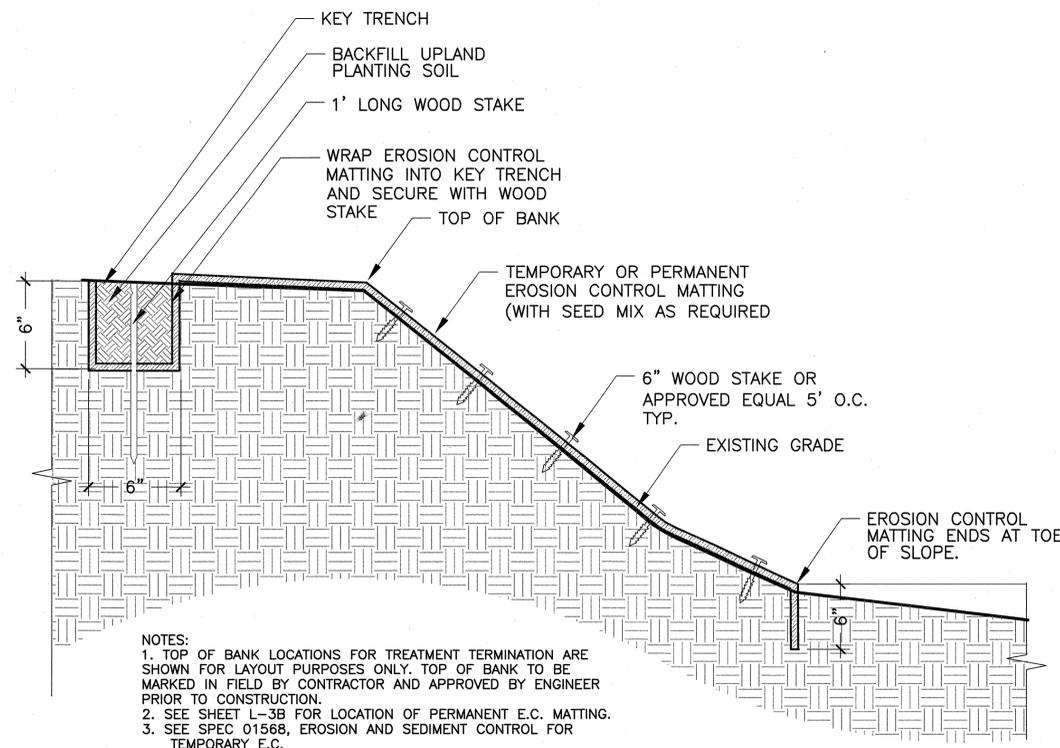


2 SHRUB PLANTING
 L-14 SCALE: NTS

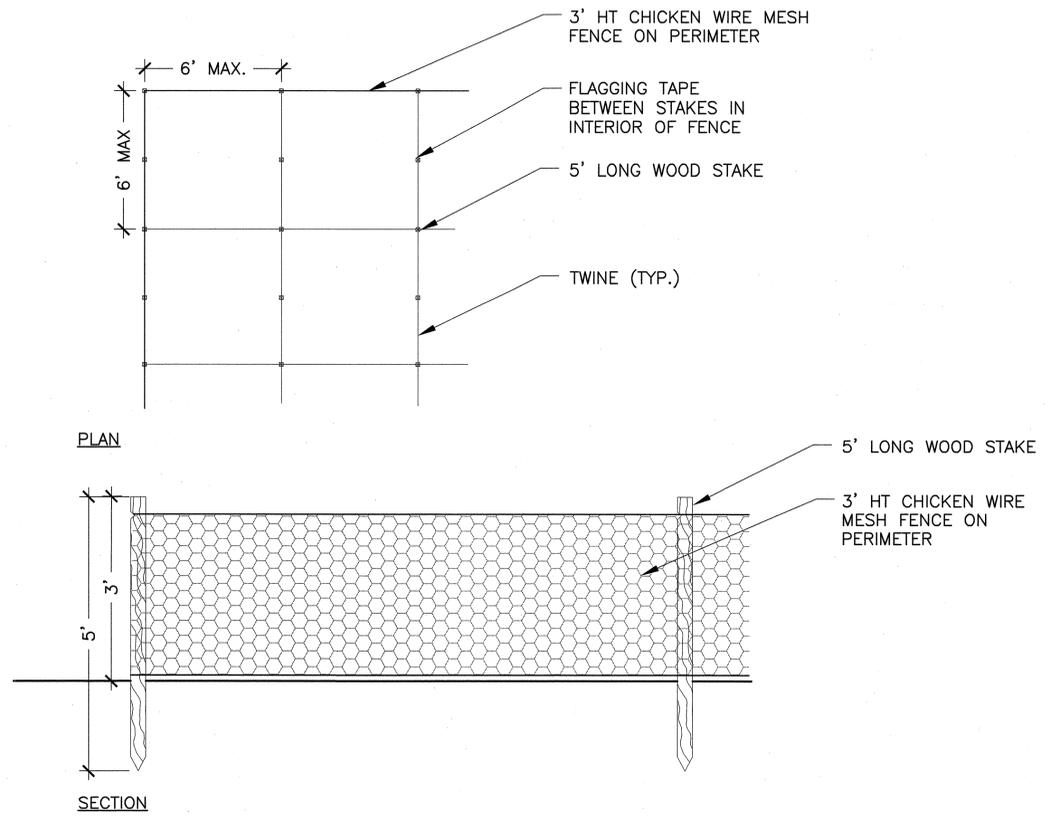


4 HERBACEOUS PLANTING
 L-14 SCALE: NTS

CONFORMED SET



1 EROSION CONTROL MATTING
 L-15 SCALE: NTS



2 GOOSE DETERRENT FENCE
 L-15 SCALE: NTS

CONFORMED SET

ENTRY WAY	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
TALL TURF SEED MIX	510 sf	2	Qr	Quercus rubra *	Red Oak	3" cal	25' O.C.	
SEE SHEET L-5								

AMPHI THEATRE	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
TALL TURF SEED MIX	5000 sf	1	Qa	Quercus alba *	White Oak	4" cal.	SEE L-6	
		3	Ns	Nyssa sylvatica *	Tupelo	2" cal.	SEE L-6	
		8	Bn	Betula Nigra *	River Birch	10' ht	SEE L-6	B&B Clump, 3-5 Stems
SEE SHEET L-6		256	Va	Vaccinium angustifolium	Low Bush Blueberry	6"-8" ht; #2 cont.	2' O.C.	

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
RIPARIAN WOODLAND TYPE 1	29,180 sf	ELEVATION: 6'-8' 8'-14'						Plant in groups of 2 or 3 plants of the same species, typ.
WOODLAND SEED MIX		7	27	Ac	Amelanchier canadensis *	8' ht	10' O.C. min	B&B Clump, 3-5 Stems
		7	25	Bp	Betula populifolia	8' ht	10' O.C. min	B&B Clump, 3-5 Stems
		7	37	Ps	Pinus strobus *	8' ht	10' O.C. min	B&B
		8	36	Qr	Quercus rubrum *	2" cal	20' O.C. min	B&B
		29	87	Gp	Gaylussacia baccata	18"-24" ht; #3 cont.	3' O.C. min	Plant in masses of 5-15 plants of the same species.
		58	233	Mp	Myrica pennsylvanica	18"-24" ht; #3 cont.	3' O.C. min	
SEE L-4A - L-4B		44	494	Va	Vaccinium angustifolium	6"-8" ht; #3 cont.	3' O.C. min	

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
RIPARIAN WOODLAND TYPE 2	39,410 sf	ELEVATION: 1'-3' 3'-6'						Plant in groups of 2 or 3 plants of the same species, typ.
WET WOODLAND SEED MIX		5	30	Ar	Acer rubrum *	8' ht	20' O.C. min	B&B Clump, 3-5 Stems
		5	30	Ar	Acer rubrum *	2" cal	20' O.C. min	Alternate with clump variety
		19	0	Au	Alnus rugosa	2" cal	20' O.C. min	B&B Clump, 3-5 Stems
		7	20	Fp	Fraxinus pennsylvanica	2" cal	20' O.C. min	B&B
		6	19	Ns	Nyssa sylvatica	2" cal	20' O.C. min	B&B
		20	0	Sn	Salix nigra	2" cal	20' O.C. min	B&B
		16	42	Ua	Ulmus americana	2" cal	20' O.C. min	B&B
		5	17	Qb	Quercus bicolor	2" cal	20' O.C. min	B&B
		104	300	le	Ilex verticillata	18"-24" ht; #3 cont.	3' O.C. min	Plant in masses of 5 plants of the same species, typ. Include 6 male plants
SEE L-4A - L-4B		117	300	Vd	Viburnum dentatum	2'-3" ht; #3 cont.	3' O.C. min	
		118	300	Vt	Viburnum trilobum	2'-3" ht; #3 cont.	3' O.C. min	

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
SCRUB/SHRUB TYPE 1	8,530 sf	ELEVATION: 1'-6'						Plant in masses of 5-15 plants of the same species, typ.
WET WOODLAND SEED MIX		177		Co	Cephalanthus occidentalis	Livestakes	3' O.C.	Dormant Installation Only
		177		Ca	Cornus amomum	Livestakes	3' O.C.	Dormant Installation Only
SEE L-4A - L-4B		177		Sd	Salix discolor	Livestakes	3' O.C.	Dormant Installation Only

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
SCRUB/SHRUB TYPE 2	14,700 sf	ELEVATION: 1'-6'						Plant in masses of 3 plants of the same species, typ.
WET WOODLAND SEED MIX		105		Am	Aronia melanocarpa	18"-24" ht; #2 cont.	3' O.C. min	
		105		Ca	Clethra alnifolia	18"-24" ht; #2 cont.	3' O.C. min	
SEE L-4A - L-4B		105		Sl	Spiraea latifolia	18"-24" ht; #2 cont.	3' O.C. min	
		105		Vc	Vaccinium corymbosum	18"-24" ht; #2 cont.	3' O.C. min	

NOTES:
 ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM, (NGVD).
 * TREES TO RECEIVE TREE GATORS. USE TREE GATORS FOR TREES PLANTED ON SLOPES ≤ 5%.

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
BROADLEAF FLOODPLAIN	4,270 sf	ELEVATION: 1'-6"						Plant in masses of 5-15 plants of the same species, typ.
NO SEED MIX		125		Ai	Asclepias incarnata	2" plug	2' O.C.	
		215		An	Aster novae angliae	2" plug	2' O.C.	
		125		Ap	Aster puniceus	2" plug	2' O.C.	
		125		Em	Eupatorium maculatum	2" plug	2' O.C.	
		44		Ep	Eupatorium perfoliatum	2" plug	2' O.C.	
		44		Oc	Osmunda cinamomea	2" plug	2' O.C.	
		44		Or	Osmunda regalis	2" plug	2' O.C.	
		44		Os	Onoclea sensibilis	2" plug	2' O.C.	
SEE L-4A - L-4B		120		Sc	Solidago canadensis	2" plug	2' O.C.	
		125		Vh	Verbena hastata	2" plug	2' O.C.	
	PLANT TOTAL	1011						

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
HIGH MARSH	39,920 sf	ELEVATION: 0.5'-1.0'						Plant in masses of 5-15 plants of the same species, typ.
WETLAND SEED MIX AND BIONET		570		Cp	Caitha palustris	2" plug	2' O.C.	
		560		Cs	Carex stipata	2" plug	2' O.C.	
		1085		Ct	Carex stricta	2" plug	2' O.C.	
		570		Cv	Carex vulpinodea	2" plug	2' O.C.	
		570		Eh	Elymus hystrix	2" plug	2' O.C.	
		570		Er	Elymus riparius	2" plug	2' O.C.	
		570		Ev	Elymus virginicus	2" plug	2' O.C.	
		1085		Hm	Hibiscus moscheutos	2" plug	2' O.C.	
		1085		Jc	Juncus canadensis	2" plug	2' O.C.	
		1085		Je	Juncus effusus	2" plug	2' O.C.	
SEE L-4A - L-4B		1085		Lo	Leersia oryzoides	2" plug	2' O.C.	
		1045		Sy	Scirpus cyperinus	2" plug	2' O.C.	
	PLANT TOTAL	9,880						

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
EMERGENT MARSH	41,310 sf	ELEVATION: 0.5'-0'						Plant in masses of 5-15 plants of the same species, typ.
NO SEED MIX		13,765		Ct	Carex stricta	2" plug	8" O.C.	
		13,765		Ep	Eleocharis palustris	2" plug	8" O.C.	
		13,765		Iv	Iris versicolor	2" plug	8" O.C.	
		13,765		Je	Juncus effusus	2" plug	8" O.C.	
		13,765		Pv	Peltandra virginica	2" plug	8" O.C.	
		13,765		Sa	Sparganium americanum	2" plug	8" O.C.	
SEE L-4A - L-4B		13,765		St	Scirpus atrovirens	2" plug	8" O.C.	
	PLANT TOTAL	96,355						

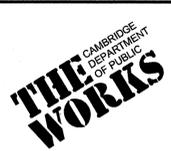
HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DEEP MARSH TYPE 1	1,470 lf	ELEVATION: -0.5'						Plant in single row, alternating species in groups of 10-20.
NO SEED MIX		310		Sm	Sparganium americanum	Lesser Bur-reed	#SP4 cont.	18" O.C.
		310		Su	Scirpus acutus	Hard Stem Bulrush	#SP4 cont.	18" O.C.
		555		Sv	Scirpus validus	Soft Stem Bulrush	#SP4 cont.	18" O.C.
SEE L-4A - L-4B								
	PLANT TOTAL	1175						

HABITAT TYPE / SEED MIX	TOTAL PLANTING AREA	ESTIMATED NUMBER	SYMBOL	SCIENTIFIC NAME	COMMON NAME	SIZE	SPACING	COMMENTS
DEEP MARSH TYPE 2	11,730 sf	ELEVATION: -0.5'-1.0'						Plant in masses of 5-15 plants of the same species, typ.
NO SEED MIX		2,083		No	Nymphaea odorata	White Water Lily	#SP4 cont.	18" O.C.
		2,083		Pc	Pontederia cordata	Pickeralweed	#SP4 cont.	18" O.C.
SEE L-4A - L-4B		2,083		Si	Sagittaria latifolia	Northern Arrowhead	#SP4 cont.	18" O.C.
	PLANT TOTAL	6,249						

CONFORMED SET

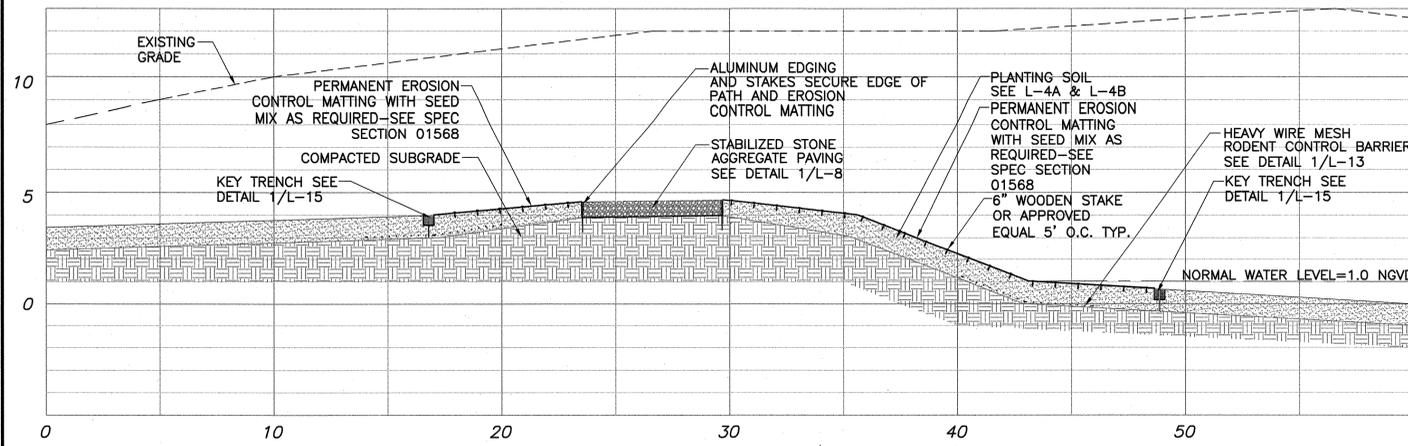


Scale	AS NOTED		
Date	SEPTEMBER 1, 2010		
Job No.	CAM		
Designed by	EJW		
Drawn by	MKO		
Checked by	RWG/KB	No.	Description
Approved by	RWG		REVISIONS

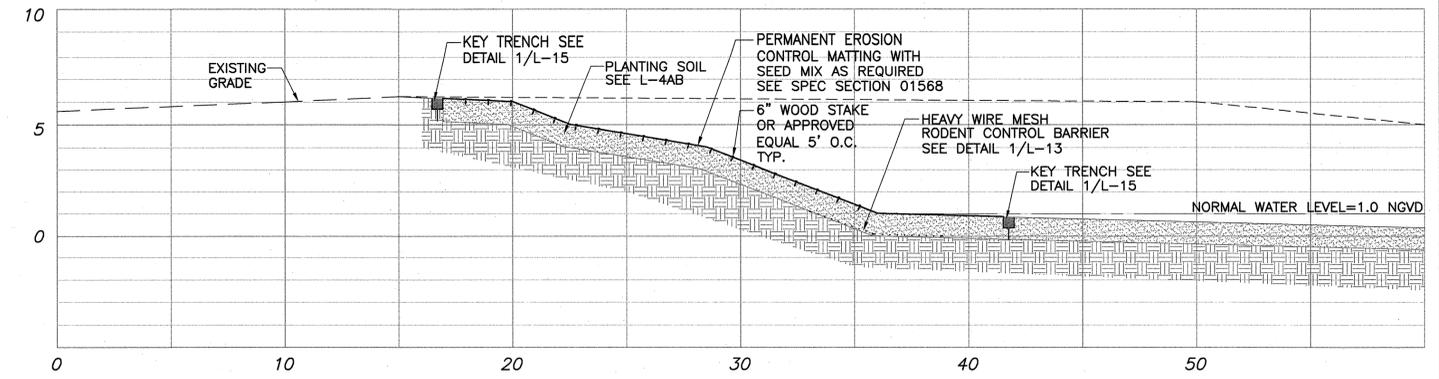


CITY OF CAMBRIDGE, MASSACHUSETTS
 CAMBRIDGEPARK DRIVE AREA DRAINAGE IMPROVEMENTS
 CONTRACT NO. 12
 STORMWATER TREATMENT AREA AND MITIGATION AREA
 GRADING AND DRAINAGE DETAILS III

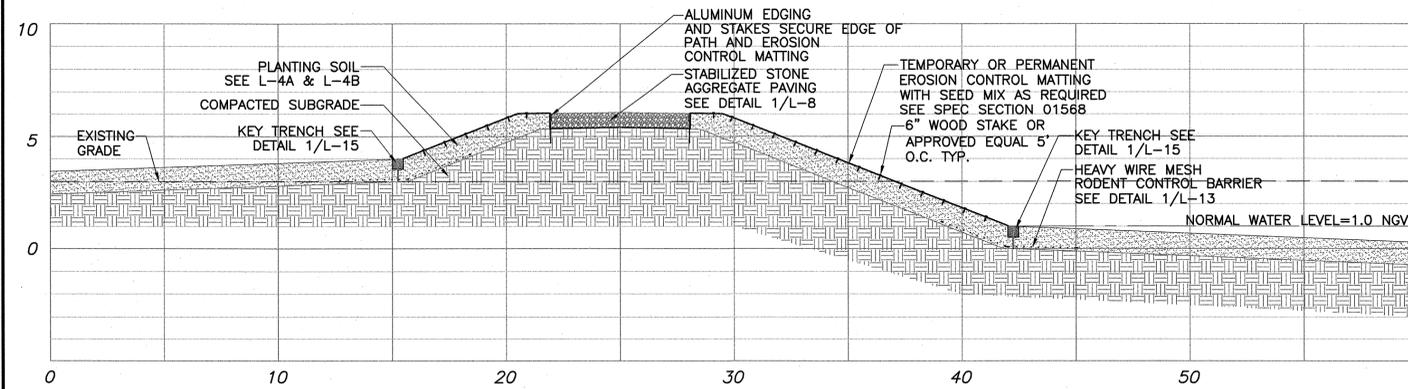
Sheet No. L-16
 File No.



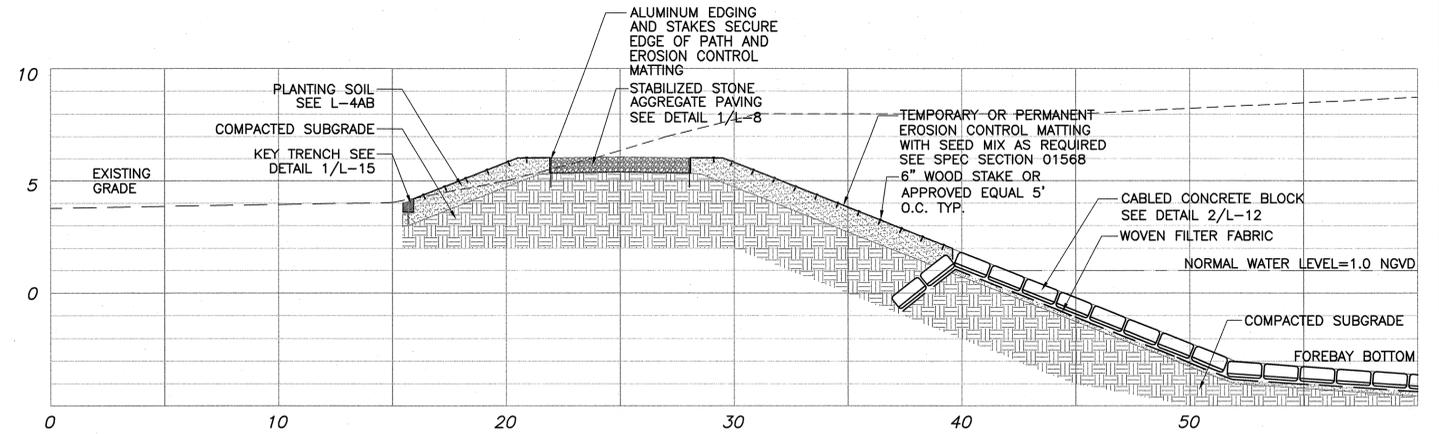
SECTION AA WEST SPILLWAY
SCALE: 1"=4'



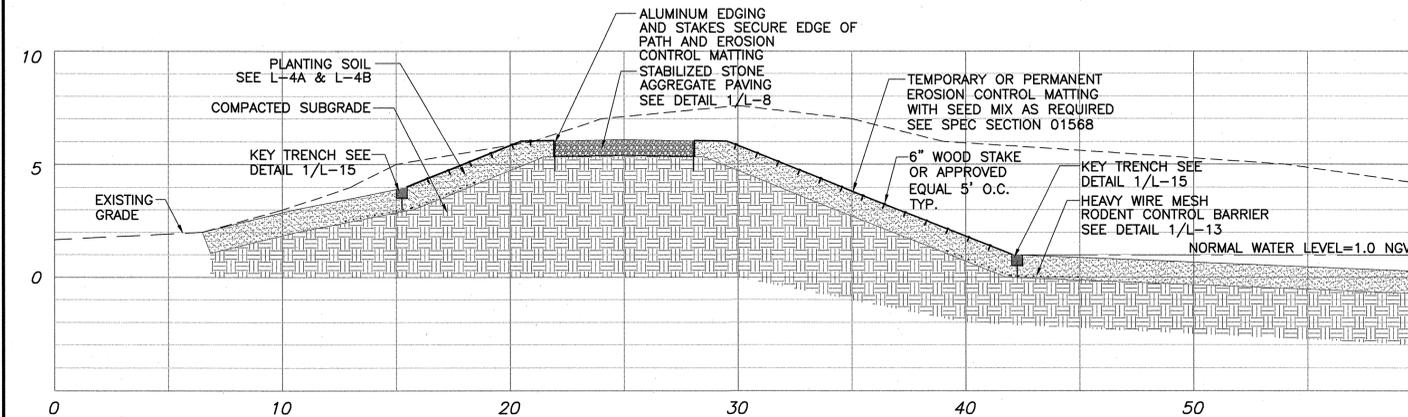
SECTION DD EAST SPILLWAY
SCALE: 1"=4'



SECTION BB
SCALE: 1"=4'



SECTION EE
SCALE: 1"=4'



SECTION CC
SCALE: 1"=4'

CONFORMED SET



Scale	AS NOTED		
Date	SEPTEMBER 1, 2010		
Job No.	CAM		
Designed by	EJW		
Drawn by	MKO		
Checked by	RWG/KB	No.	Description
Approved by	RWG		REVISIONS



CITY OF CAMBRIDGE, MASSACHUSETTS	
CAMBRIDGE PARK DRIVE AREA DRAINAGE IMPROVEMENTS	
CONTRACT NO. 12	
STORMWATER TREATMENT AREA AND MITIGATION AREA	
BERM CROSS SECTIONS	

Sheet No.	L-17
File No.	