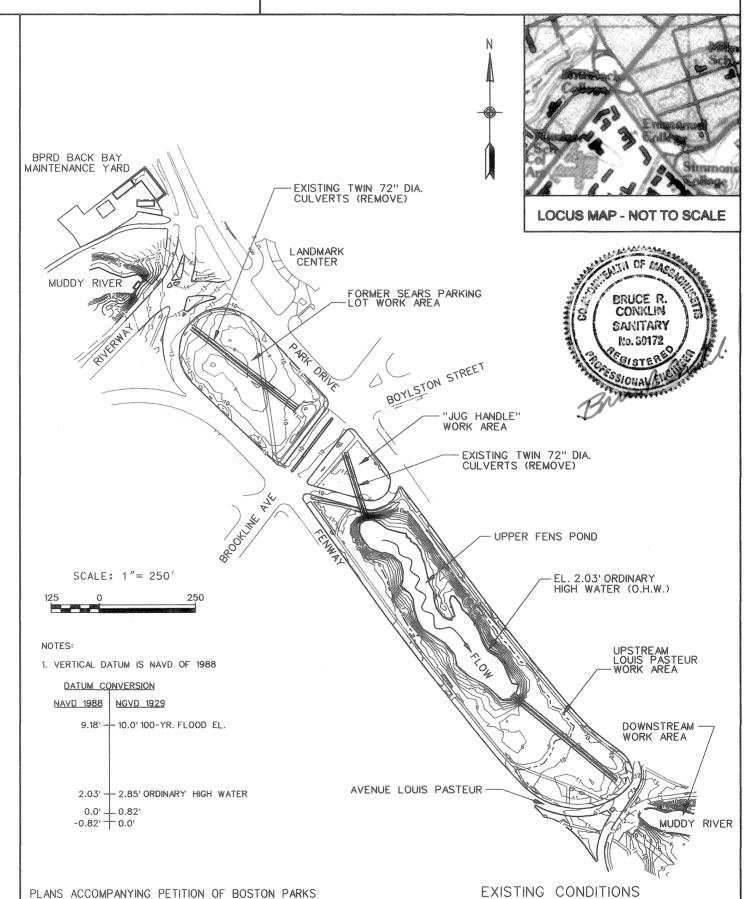


Bk: 2011 Pg: 297 Doc: PLAN Page: 1 of 1 08/26/2011 01:48 PM I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

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PLANS ACCOMPANYING PETITION OF BOSTON PARKS AND RECREATION DEPARTMENT, AND THE MASSACHUSETTS DEPARTMENT OF CONSERVATION AND RECREATION ON BEHALF OF THE U.S. ARMY CORPS OF ENGINEERS TO CONSTRUCT AND MAINTAIN THE MUDDY RIVER FLOOD DAMAGE AND ENVIRONMENTAL RESTORATION PROJECT - PHASE 1, IN AND ALONG THE MUDDY RIVER IN BOSTON, SUFFOLK COUNTY, MASSACHUSETTS.

FEBRUARY 24, 2011

PROJECT DESIGNED CORPS OF ENGINEERS.

BY THE U.S. ARMY

SHEET 1 OF 16 SHEETS

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I CERTIFY THAT THIS PLAN, AS PREPARED, CONFORMS TO THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS.

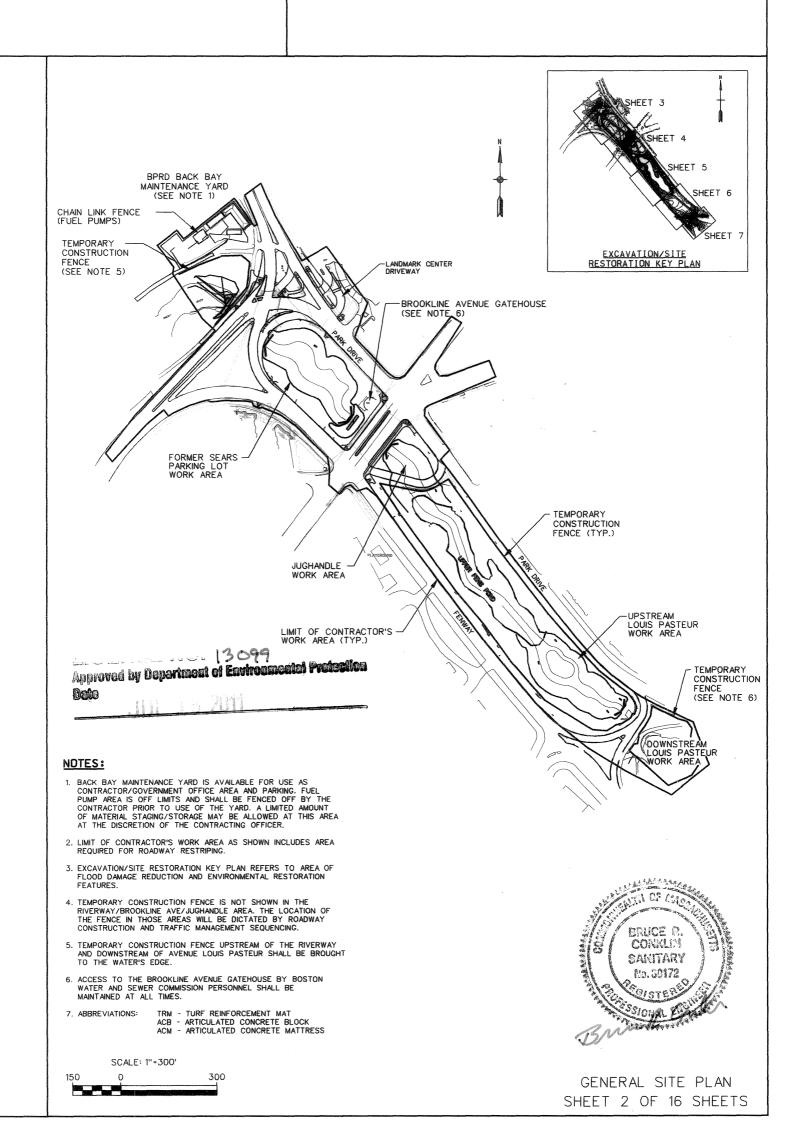
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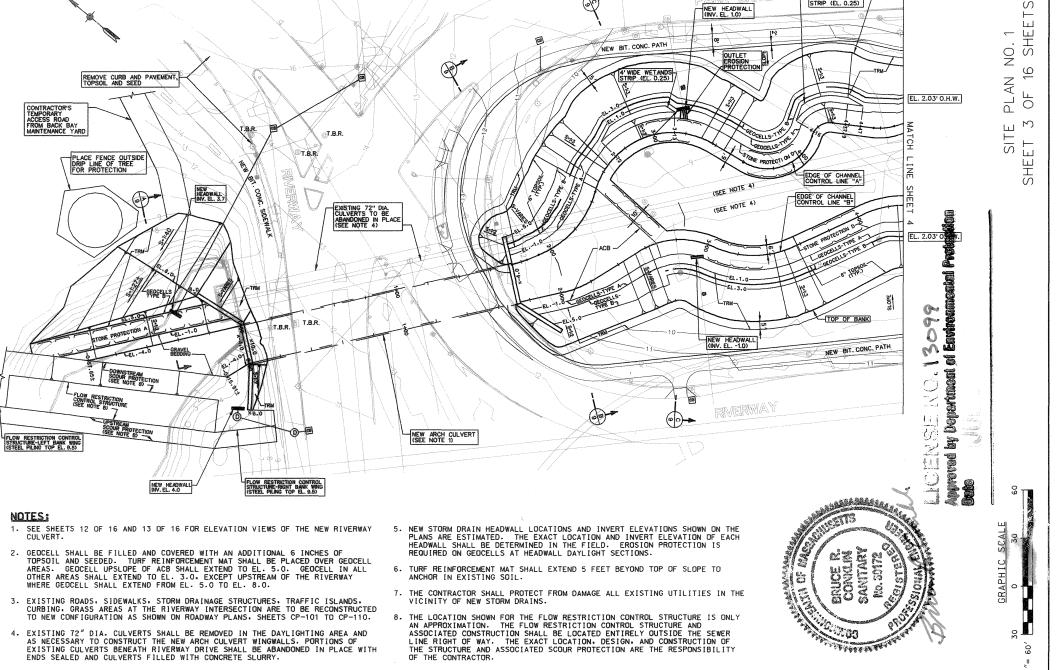
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- SEE SHEETS 12 OF 16 AND 13 OF 16 FOR ELEVATION VIEWS OF THE NEW RIVERWAY CULVERT.
- 2. GEOCELL SHALL BE FILLED AND COVERED WITH AN ADDITIONAL 6 INCHES OF TOPSOIL AND SEEDED. TURF REINFORCEMENT MAT SHALL BE PLACED OVER GEOCELL AREAS. GEOCELL UPSLOPE OF ACB SHALL EXTEND TO EL. 5.0. GEOCELL IN ALL OTHER AREAS SHALL EXTEND TO EL. 3.0. EXCEPT UPSTREAM OF THE RIVERWAY WHERE GEOCELL SHALL EXTEND FROM EL. 5.0 TO EL. 8.0.
- 3. EXISTING ROADS, SIDEWALKS, STORM DRAINAGE STRUCTURES, TRAFFIC ISLANDS, CURBING, GRASS AREAS AT THE RIVERWAY INTERSECTION ARE TO BE RECONSTRUCTED TO NEW CONFIGURATION AS SHOWN ON ROADWAY PLANS, SHEETS CP-101 TO CP-110.
- 4. EXISTING 72" DIA. CULVERTS SHALL BE REMOVED IN THE DAYLIGHTING AREA AND AS NECESSARY TO CONSTRUCT THE NEW ARCH CULVERT WINGWALLS. PORTIONS OF EXISTING CULVERTS BENEATH RIVERWAY DRIVE SHALL BE ABANDONED IN PLACE WITH ENDS SEALED AND CULVERTS FILLED WITH CONCRETE SLURRY.
- LINE RIGHT OF WAY. THE EXACT LOCATION, DESIGN, AND CONSTRUCTION OF THE STRUCTURE AND ASSOCIATED SCOUR PROTECTION ARE THE RESPONSIBILITY



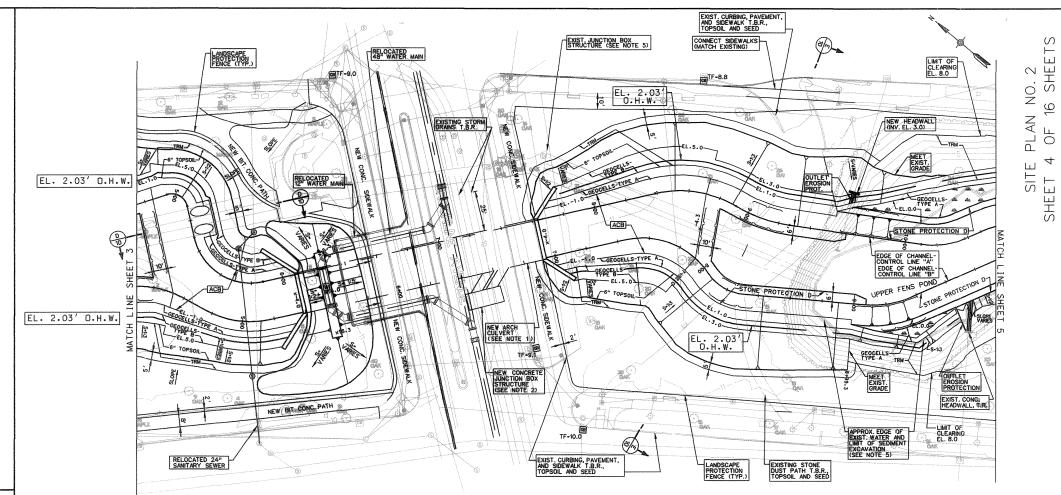
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NOTES:

- SEE SHEETS 14 OF 16 AND 15 OF 16 FOR ELEVATIONS OF THE NEW BROOKLINE AVENUE CULVERT.
- NEW JUNCTION BOX CONNECTS EXISTING 45" DIA. AND 51"X 51" STORM DRAIN LINES TO BROOKLINE AVE. CULVERT THROUGH TWO PIPES. EXISTING DRAIN LINES ARE TO BE ABANDONED NORTH OF NEW JUNCTION BOX.
- 3. GEOCELL SHALL BE FILLED WITH TOPSOIL AND SEEDED. GEOCELL UPSLOPE OF ACB SHALL EXTEND TO EL. 5.0. GEOCELL IN ALL OTHER AREAS SHALL EXTEND TO EL. 3.0.
- EXISTING ROADS, SIDEWALKS, TRAFFIC ISLANDS, CURBING, GRASS AREAS ARE TO BE RECONSTRUCTED TO NEW CONFIGURATION AS SHOWN ON ROADWAY PLANS.
- EXISTING JUNCTION BOX STRUCTURE AND 72" DIA. CULVERTS SHALL BE REMOVED TO THE EXTENT NECESSARY TO CONSTRUCT NORTH WING WALL AT DOWNSTREAM END OF BROOKLINE AVENUE CULVERT. OPENING TO EXISTING 84"X 108" CULVERT SHALL BE PERMANENTLY BLOCKED WITHIN EXISTING UNDERGROUND GATEHOUSE STRUCTURE.
- FOR NEW STORM DRAIN HEADWALLS IN DAYLIGHTING AREA. LOCATIONS AND INVERT ELEVATIONS SHOWN ON THE PLANS ARE ESTIMATED. THE EXACT LOCATION AND INVERT OF EACH HEADWALL SHALL BE DETERMINED IN THE FIELD. EROSION PROTECTION IS REQUIRED ON GEOCELLS AT HEADWALLS IN DAYLIGHT
- TURF REINFORCEMENT MAT SHALL EXTEND 5 FEET BEYOND TOP OF EXCAVATED SLOPES TO ANCHOR IN EXISTING SOIL. WHERE UPPER SLOPE IS CLEARED ONLY (UPPER FENS POND) MAT SHALL EXTEND TO LIMIT OF CLEARING (EL. 8.0).
- 8. SEDIMENT EXCAVATION IN UPPER FENS POND CONSISTS OF REMOVAL OF UPPER 2 FEET OF SEDIMENT WITHIN POND TO WATER'S EDGE AT NORMAL WATER SURFACE

LICENSE NO. 13099 Approved by Department of Environmental Projection



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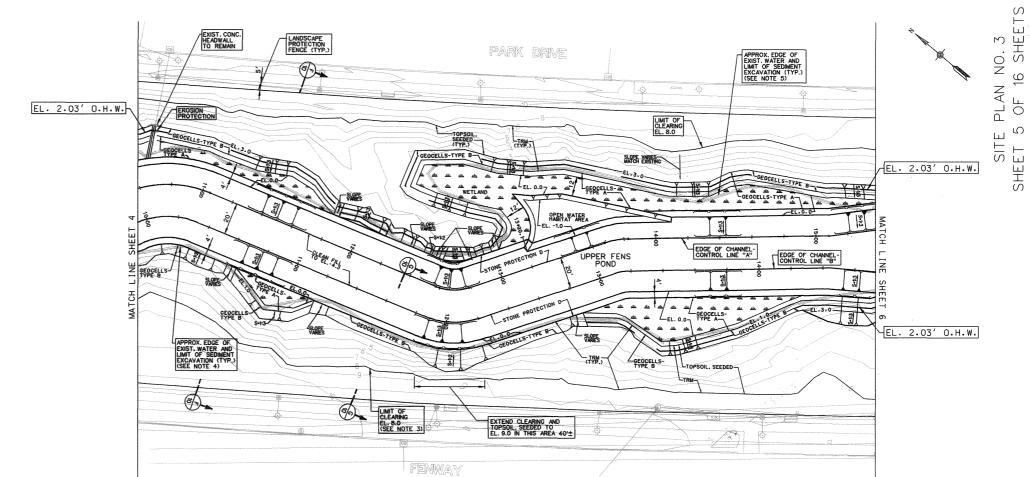
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NOTES:

- 1. GEOCELL SHALL BE FILLED WITH TOPSOIL AND SEEDED.
- WHERE UPPER SLOPE IS CLEARED ONLY (UPPER FENS POND) TURF REINFORCEMENT MAT SHALL EXTEND TO LIMIT OF CLEARING (EL. 8.0).
- 3. CLEARING ABOVE EL. 3.0 WITHIN THE UPPER FENS POND AREA SHALL BE SELECTIVE IN NATURE AS INDICATED ON THE LANDSCAPING PLAN AND PER DIRECTION IN THE FIELD BY THE CONTRACTING OFFICER'S REPRESENTATIVE.
- 4. SEDIMENT EXCAVATION IN UPPER FENS POND CONSISTS OF REMOVAL OF UPPER 2 FEET OF SEDIMENT WITHIN POND TO WATER'S EDGE AT NORMAL WATER SURFACE ELEVATION.
- EROSION PROTECTION IS REQUIRED ON GEOCELLS AT EXISTING STORM DRAIN HEADWALLS IN DAYLIGHT SECTIONS.

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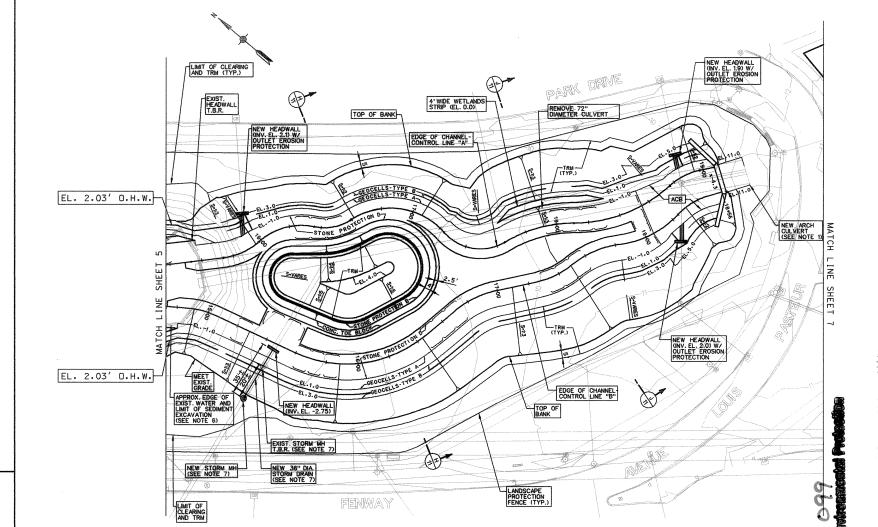
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NOTES:

- 1. SEE SHEET 8 OF 16 FOR PLAN AT AVENUE LOUIS PASTEUR.
- 2. NEW STORM DRAIN HEADWALLS IN DAYLIGHTING AREA LOCATIONS AND INVERT ELEVATIONS SHOWN ON THE PLANS ARE ESTIMATED. THE EXACT LOCATION AND INVERT ELEVATION OF EACH HEADWALL SHALL BE DETERMINED IN THE FIELD. EROSION PROTECTION IS REQUIRED AT HEADWALLS WHICH DAYLIGHT ON GEOCELLS OR TRM.
- 3. GEOCELL SHALL BE FILLED WITH TOPSOIL AND SEEDED.
 GEOCELL UPSLOPE OF ACB SHALL EXTEND TO EL. 5.0. GEOCELL
 IN ALL OTHER AREAS SHALL EXTEND TO EL. 3.0.
- 4. TURF REINFORCEMENT MAT SHALL EXTEND 5 FEET BEYOND TOP OF SLOPE TO ANCHOR IN EXISTING SOIL EXCEPT WHERE UPPER SLOPE IS CLEARED ONLY (UPPER FERS POND) WHERE TRM SHALL EXTEND TO THE LIMT OF CLEARING (EL. 8.0).
- 5. EXISTING 72" DIA. CULVERTS SHALL BE REMOVED IN THE DAYLIGHTING AREA INCLUDING AT THE ATTACHMENT TO THE FACE OF THE EXISTING JUNCTION BOX
- SEDIMENT EXCAVATION IN UPPER FENS POND CONSISTS OF REMOVAL OF UPPER 2
 FEET OF SEDIMENT WITHIN POND TO WATER'S EDGE AT NORMAL WATER SURFACE
- 7. EXISTING STORM MANHOLE SHALL BE REMOVED AND REPLACED BY A MANHOLE AT THE LOCATION SHOWN. THE EXISTING 30"X 30" STORM DRAIN SHALL BE TIED INTO THE NEW MANHOLE AND A NEW 36" DIA. STORM DRAIN SHALL REPLACE THE EXISTING 30"X 30" STORM DRAIN TO BE REMOVED.



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LICENSE NO. 13099 S Approved by Department of Environmental Probabilish NO.5 6 SHEET OF PREPARED, REGULATIONS 16 A V DATE EL. 2.03' O.H.W. 0 F 7 SITE ET 7 SHE ASA NOTES: S PLAN, RULES, DEEDS. 1. TREES GROWING FROM THE FACE OF THE HEADWALL SHALL BE REMOVED BY CUTTING AND TREATING STUMPS WITH HERBICIDE SO AS TO AVOID DAMAGE TO THE EXISTING HEADWALL. 2. NEW PROTECTION (ACB, GEOCELLS, TRM, ETC.) SHALL BE PLACED IN SUCH A MANNER AS TO AVOID DAMAGE TO THE EXISTING HEADWALL. -TEMP. CONSTRUCTION FENCE THIS THE F 3. AVENUE LOUIS PASTEUR BRIDGE IS UNRATED FOR HIGHWAY TRAFFIC LOADS. CERTIFY THAT TONFORMS TO THE REGISTERS POB CONTROL LINE E 4. EROSION PROTECTION IS REQUIRED AT EXISTING STORM DRAIN HEADWALLS WHICH DAYLIGHT ON GEOCELLS OR TRM. 5. EXCAVATE RIVER BOTTOM SEDIMENTS TO EL.-4.5 THROUGHOUT ENTIRE LENGTH OF EXISTING CULVERT. 6. LOCATE STEEL SHEET PILING TO AVOID BURIED STONE FOUNDATION OF EXISTING CULVERT. PRE-EXCAVATE TO DEPTH NECESSARY TO DETERMINE EXTENT OF EXISTING FOUNDATION. SIGNATURE 20 EL. 2.03' O.H.W. - EL. 2.03' O.H.W. 15 88 EXISTING AVENUE LOUIS PASTEUR STONE ARCH CULVERT (NAVD EXCAVATED CHANNEL BOTTOM EL. -4.5 -EXISTING CHANNEL BOTTOM GRAPHIC MEET EXISTING GRADE - ACR ELEVATION 2011-297 -5 EXCAVATED CHANNEL BOTTOM STEEL SHEET PILING TOP EL. -4.5 TIP EL. -25.0 -10 -10 2' GRAVEL BEDDING — GEOTEXTILE -30 12" STONE PROTECTION C--15 -15 - EXISTING CULVERT BOTTOM -20 PROFILE - CENTER LINE
SCALE: 1"= 100'