



GREENWOOD PARK

Stream Restoration

BACKGROUND

- Greenwood Park was established when the Town was created in 1923, and is shown on the oldest original maps and plats as public space.
- As development increased the density of the watershed, impacts to the stream became more severe leading to attempted stabilization projects over the years.
- First record of formal stream repairs occurred in 1992.

EXISTING STREAM CONDITIONS PRIOR TO 1991







STREAM REPAIRS 1991-1992

- ADDITION OF STORMWATER DRAINAGE SYSTEM
- DEMOLITION AND RECONSTRUCTION OF WATER LINE STREAM CROSSING
- STREAMBANK STABILIZATION USING GABION BASKETS AND RIP RAP













FAST FORWARD 30 YEARS...





GABION BASKET FAILURE



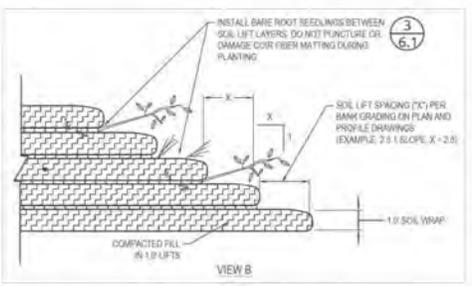
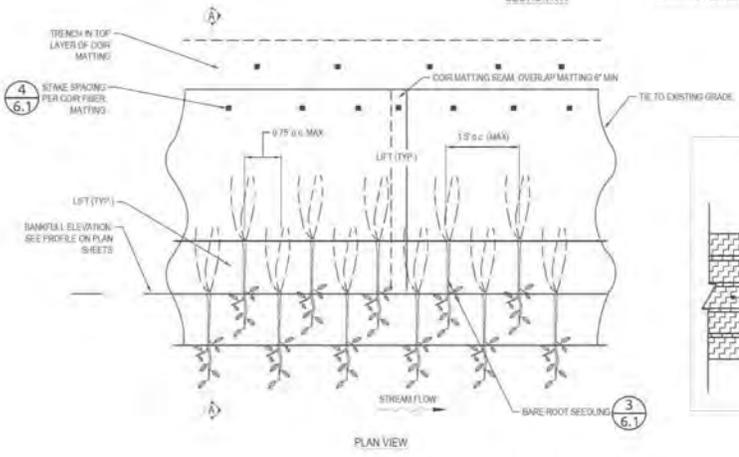
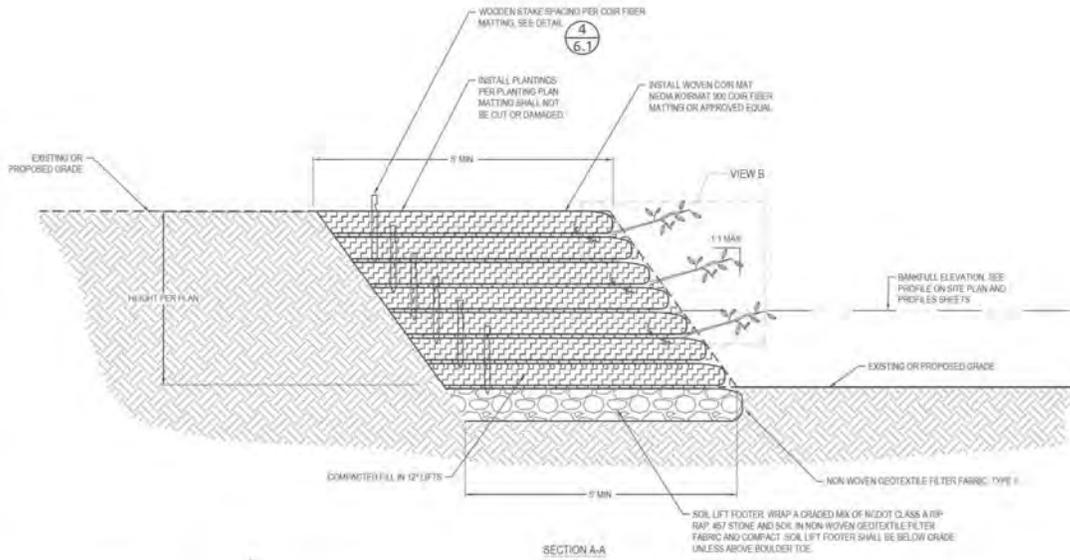
DEGRADED STREAM CHANNEL

STREAM RESTORATION - 2022

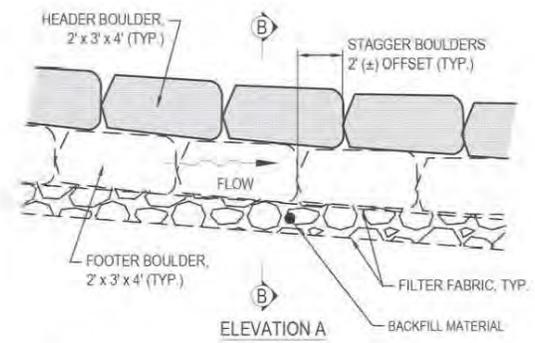
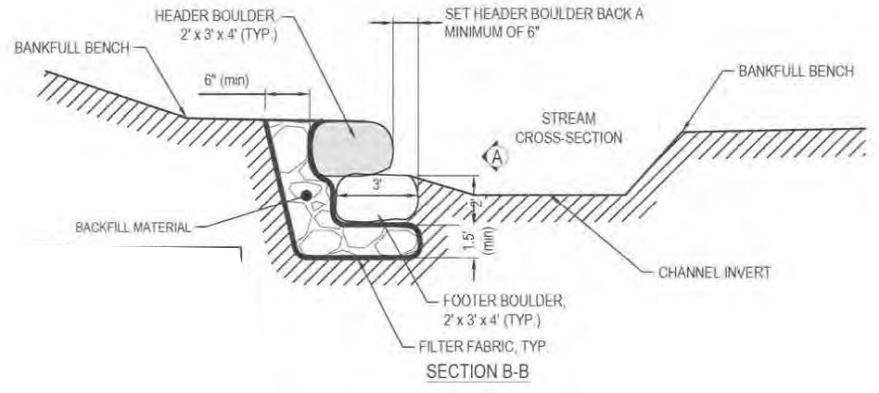
- REMOVE EXISTING GABION BASKETS AND RIP RAP
- ADJUST HORIZONTAL ALIGNMENT OF CREEK TO CREATE STABLE CONDITION
- INSTALL IN-STREAM STRUCTURES TO HELP DIRECT WATER FLOW IN THE CREEK
- USE BIO-ENGINEERING TECHNIQUES TO STABILIZE STREAM BANK
- INSTALL GRAVEL WETLANDS TO MITIGATE STORMWATER POLLUTION

SITE/LANDSCAPE PLAN





VEGETATED SOIL LIFT (1/6.1) NOT TO SCALE



BOULDER TOE (5/6.1) NOT TO SCALE

SLOPE STABILIZATION





BOULDER TOE AND GEOLIFT



ROCK VANE - 'A' TYPE

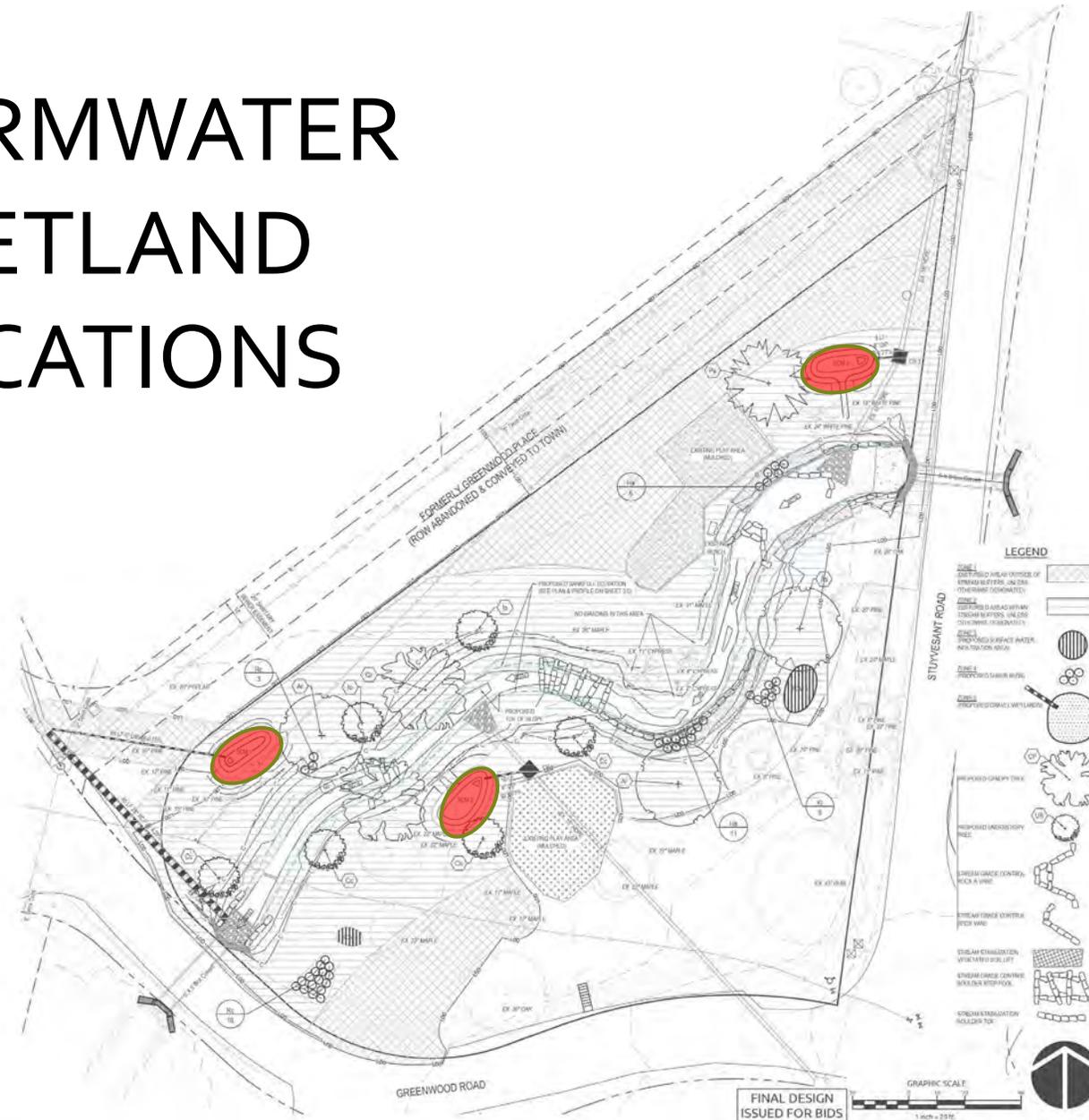


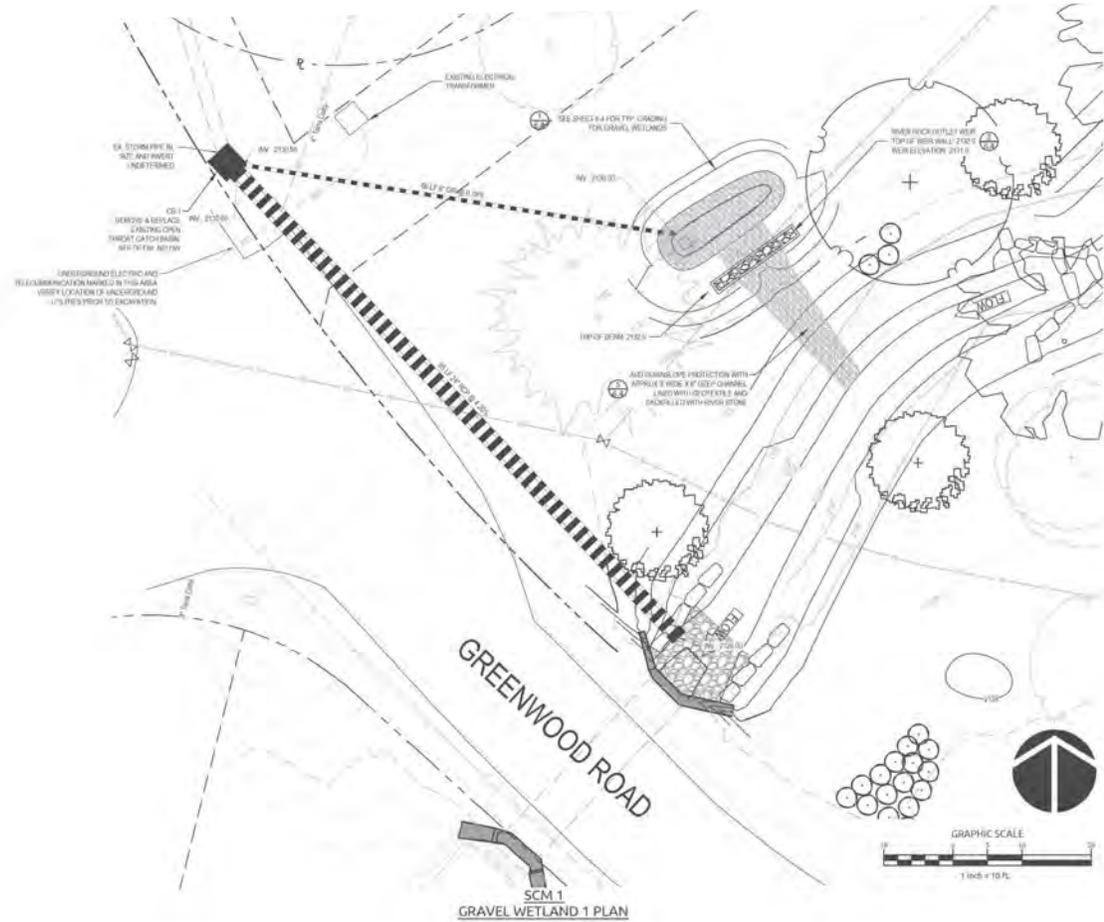
ROCK VANE - 'A' TYPE



ROCK VANE – 'J' TYPE

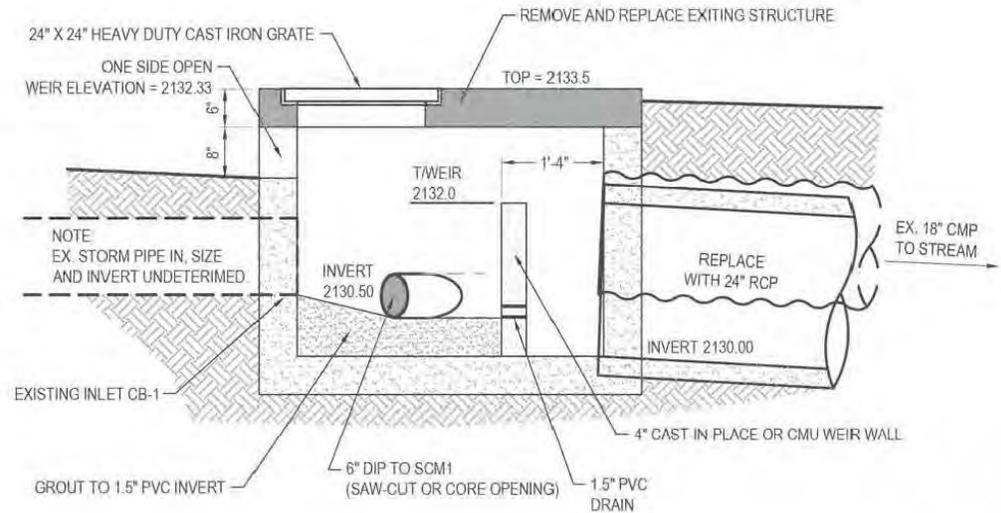
STORMWATER WETLAND LOCATIONS



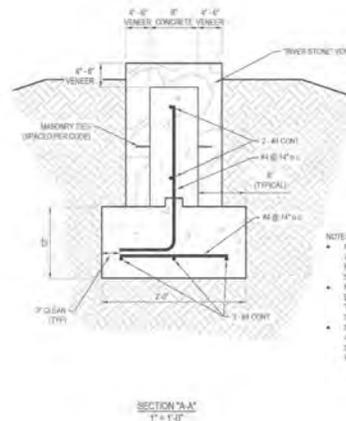
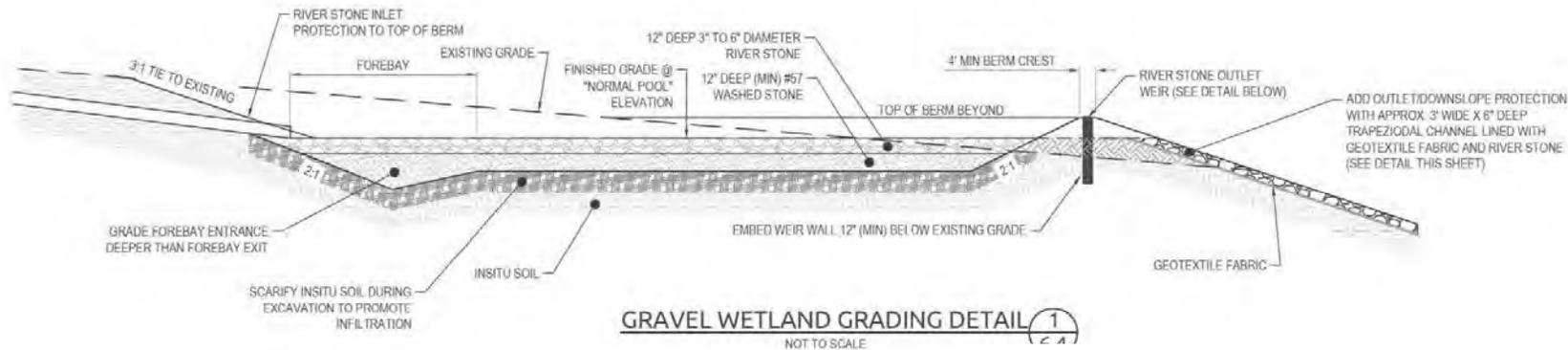


Plan View

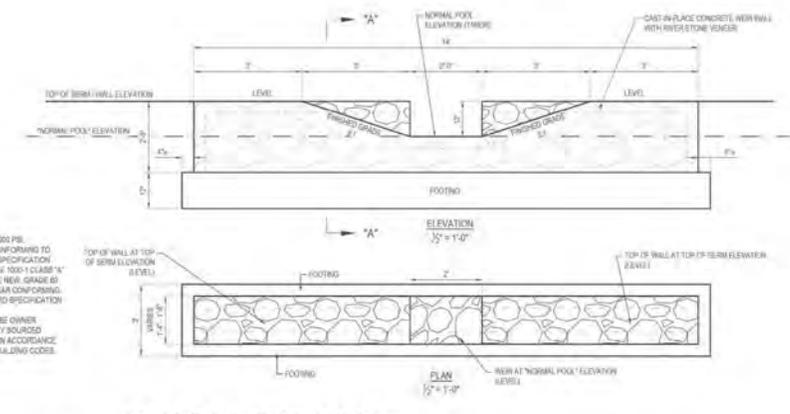
INLET CONTROL STRUCTURE



STORMWATER WETLAND



- NOTES
- CONCRETE TO BE 3000 PSI, AIR-ENTAINED, CONFORMING TO NCOT STANDARD SPECIFICATION SECTION 1000, TABLE 1000-1 CLASS "A"
 - REINFORCING TO BE NEW, GRADE 60 DEFORMED STEEL, EAM CONFORMING TO NCOT STANDARD SPECIFICATION SECTION 507
 - STONE VENER TO BE OWNER APPROVED, LOCALLY SOURCED STONE, INSTALLED IN ACCORDANCE WITH APPLICABLE BUILDING CODES.



STORMWATER WETLAND DETAILS





STORMWATER WETLAND

BEFORE AND AFTER





NEXT STEPS

- PROVIDE ACCESSIBILITY FOR HANDICAPPED AND ELDERLY USERS
- REVISE PLAY EQUIPMENT ON NORTH SIDE OF STREAM
- CONSTRUCT ADDITIONAL PARKING FOR USERS
- INSTALL SMALL COVERED PAVILION
- CONSTRUCT PEDESTRIAN BRIDGE ACROSS STREAM
- INSTALL NEW PARK AMMENITIES I.E. BENCHES, TRASH CAN, (PICNIC) TABLE, DOG WASTE STATION THAT WILL SET STANDARD FOR FUTURE PARK IMPROVEMENT IN TOWN