

EROSION AND SEDIMENT CONTROL PLAN

- The purpose of the construction activity is to extend the existing RCP culvert under Sherbrook Avenue to halt the erosion of the embankment next to the apartment building at 116 Sherbrook Avenue. A large reinforced concrete junction box will be constructed at the end of the existing 96" RCP allowing a culvert extension of 88' of 96" RCP to be installed at an angle matching the existing stream bed. Fill will be placed over the junction box and the RCP extension. A concrete headwall and permanent DOT Standard rip rap will be installed at the 96" RCP outlet.
- Potentially serious erosion problems may occur during construction of the junction box. Temporary erosion and sedimentation control will be installed downstream of the junction box and removed when the RCP extension is installed. Installation of the fill will create another potential for an erosion problem. Additional erosion and sedimentation control will be installed downstream of the headwall for the entire length of the project and removed when the site is stabilized.
- Entrance and exit to the stream bed may also be a potential erosion problem. The City Engineer will arrange with adjacent property owners for access and storage space. Additional erosion and sedimentation control may be needed such as a construction entrance, stockpile protection and additional stream bed protection.
- Construction methods must be developed by the contractor and approved by the City Engineer to allow flow of the stream over, under or through the ongoing construction, especially during a storm event.
- All construction procedures shall be in accordance with the "Connecticut Guidelines for Soil Erosion and Sediment Control" by the Connecticut Council on Soil and Water Conservation.
- Prior to the initiation of any site work, the Contractor will assign Erosion & Sedimentation (E & S) control responsibility to a Supervisor who is familiar with these plans and will be available for on-site inspection and supervision. That person's name and phone number shall be supplied to City Staff for contact during emergencies.
- The E & S Control Supervisor shall make daily inspections of all sediment and erosion controls and undertake corrective action as required to assure satisfactory operation. Regular reports of inspections and actions shall be supplied to City Staff at intervals specified by the Staff.
- Care shall be taken during construction to install and maintain all sediment and erosion controls so as to contain eroded sediments on site. Regular maintenance shall be undertaken as required to prevent the discharge of eroded

sediments into drainage systems or water courses.

- Pumped excavations will be discharged to temporary sediment pools constructed for that purpose. No pumping will be allowed to discharge directly to the street or downstream.

10. Construction Sequence

After the initial erosion and sediment control measures are in place, the construction shall proceed in the following recommended sequence:

- Clear and grub areas of proposed work, where required, including any necessary removal of existing site features and rubbish. Dispose of removed materials off-site.
- Strip and stockpile any existing topsoil from work area. Ring Stockpiles with a protective barrier of staked geotextile silt fence sediment barrier.
- Excavate to subgrade, where necessary. Stockpile and/or remove excess soil from site.
- Prepare subgrade and place approved material in accordance with plans and details.
- Clean accumulated sediment from behind sediment barriers; inspect, maintain, repair and/or replace barriers as necessary.
- Install reinforced concrete junction box.
- Install RCP extension pipe.
- Install headwall and rip rap.
- Backfill, spread topsoil and finish grade disturbed areas. Install grass sod ditches at headwall.
- Permanently restabilize all restored disturbed areas.
- Maintain and repair permanently stabilized areas.
- Clean accumulated sediment from erosion control.
- Remove and properly dispose of temporary sediment barriers and dispose of accumulated sediment.
- All areas not otherwise treated shall be restored by placement of 6" of topsoil and establishment of grass cover in accordance with the following procedure:
 - Apply limestone at a rate of 135 LBS/1000 SF.
 - Apply 10-10-10 or 10-20-20 fertilizer at a rate of 10 LBS/1000 SF or as otherwise established by laboratory testing of

samples of the actual topsoil placed and spread on the areas to be planted.

- Work lime and fertilizer into the topsoil uniformly to a depth of 4 inches by hand or with suitable equipment, following the finish contours.

- Smooth and firm the prepared topsoil and remove all stones 2 inches or larger in any dimension and all other extraneous debris and soil clumps from the surface. NOTE: All traffic shall be prevented from entering the areas where the seedbed has been prepared and is ready for seeding.

- Spread grass seed on the prepared topsoil surface and lightly rake in by hand to obtain a maximum of 1/4 inch soil cover over the seed.

- Spread seed by hand or mechanical means on the prepared topsoil surface. The seed mixture and application rate for all finished permanent grass areas shall be as follows:

GRASS SEED TYPE	PROPORTIONS
Kentucky Blue Grass 45%	20 LBS/Acre 0.45 LBS/1000 SF
Creeping Red Fescue 45%	20 LBS/Acre 0.45 LBS/1000 SF
Perennial Ryegrass 10%	5 LBS/Acre 0.10 LBS/1000 SF

Only "certified" seed varieties shall be used as listed in Article M.13.04 of Connecticut D.O.T. "Form 814", as amended.

Seeding shall be performed only during the periods of April 15 to June 15 or August 15 to September 15.

- Immediately following seeding, uniformly mulch the surface by hand or machine with straw or hay free from weeds and coarse matter at a rate of 70-90 LBS/SF. Anchor mulch immediately after spreading by application of a liquid mulch binder or mulch netting applied in accordance with the manufacturer's recommendations.

- If not seasonably possible to perform permanent seeding, or if incompatible with ongoing construction operations, temporarily seed and/or mulch the disturbed areas with perennial ryegrass having minimum purity of 98 percent and a minimum germination of 90 percent, applied at a rate of 2 LBS/1000 SF; or weed-free straw or hay or air-dried wood chips free of coarse matter, applied at a rate of 70-90 LBS/1000 SF or 185-275 LBS/1000 SF, respectively.

- Whether permanently or temporarily stabilized, maintain and repair all newly restored areas until vegetation is well established and growing self-sufficiently.

- Insofar as possible, disturbance of the land shall be limited to the minimum amount necessary to complete the proposed work.

The limits of disturbance shall be established in the field prior to starting any actual construction activities and shall be generally as shown by the proposed work on the site development plan drawing.

- Grading taking place as the site work progresses shall be done in a manner to allow drainage toward protected existing or temporary drainage facilities and/or erosion and sediment control barriers. Concentrated runoff shall not be permitted to overflow newly graded areas, sediment barriers or other erosion and sediment control measures. Soil and material stockpiles shall be placed in approved locations away from natural or created waterways and drainage ditches and ringed with a protective silt fence or haybale sediment barrier.

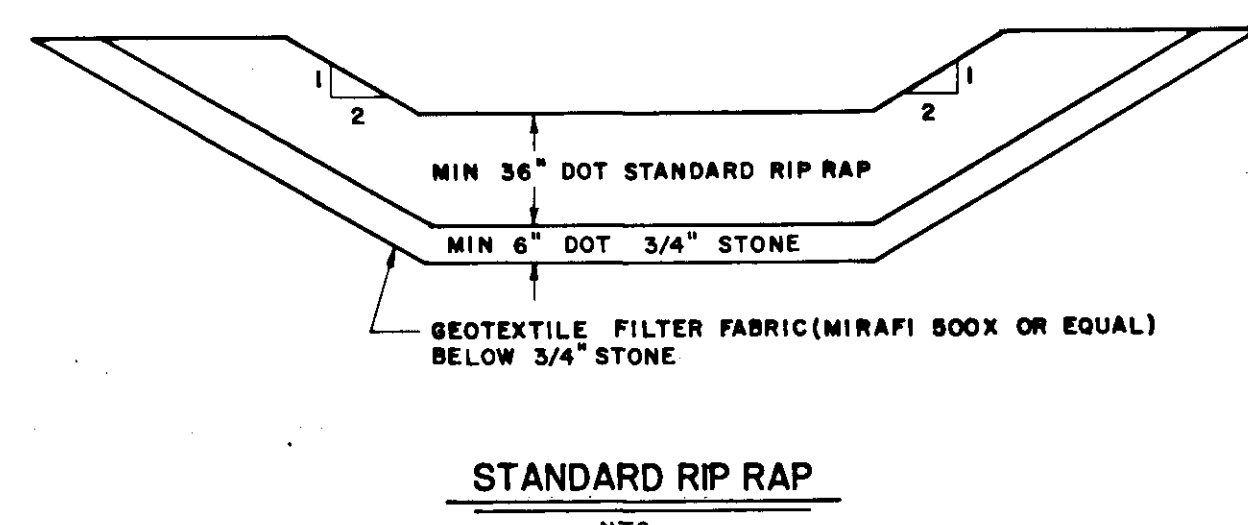
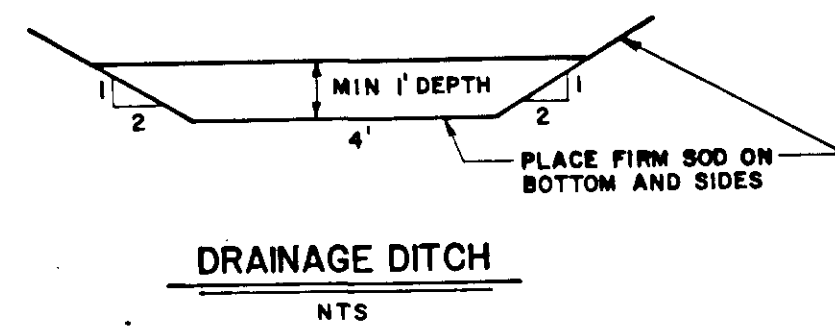
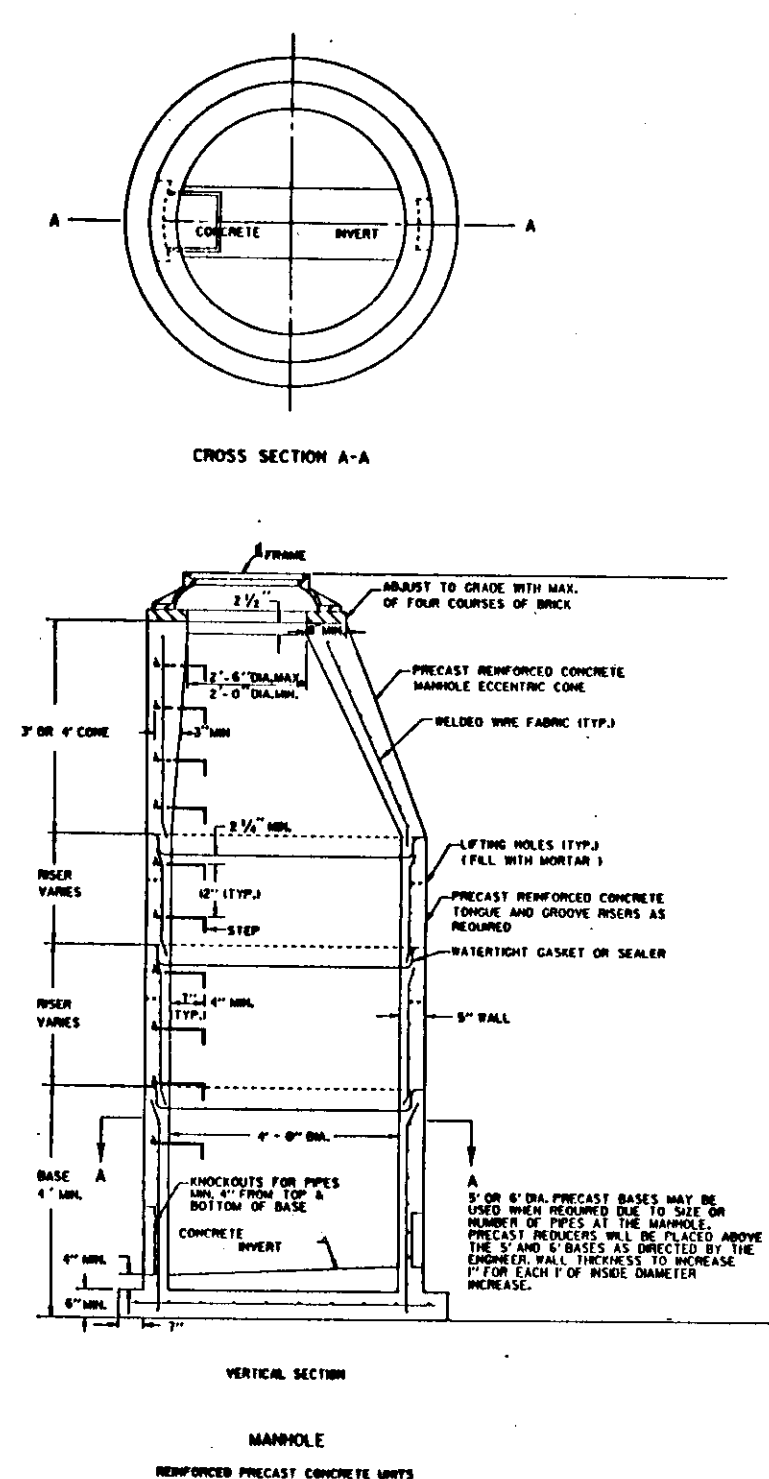
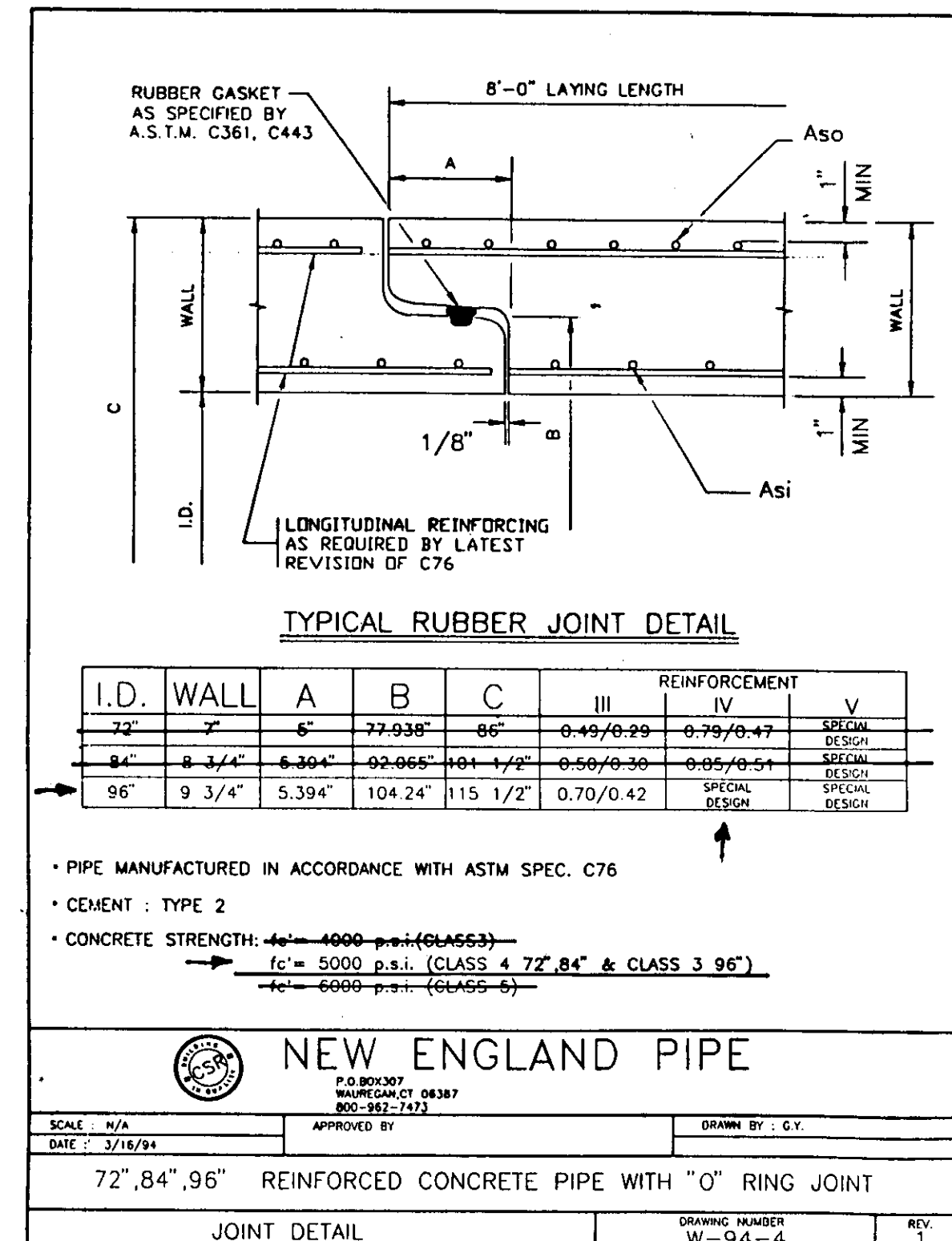
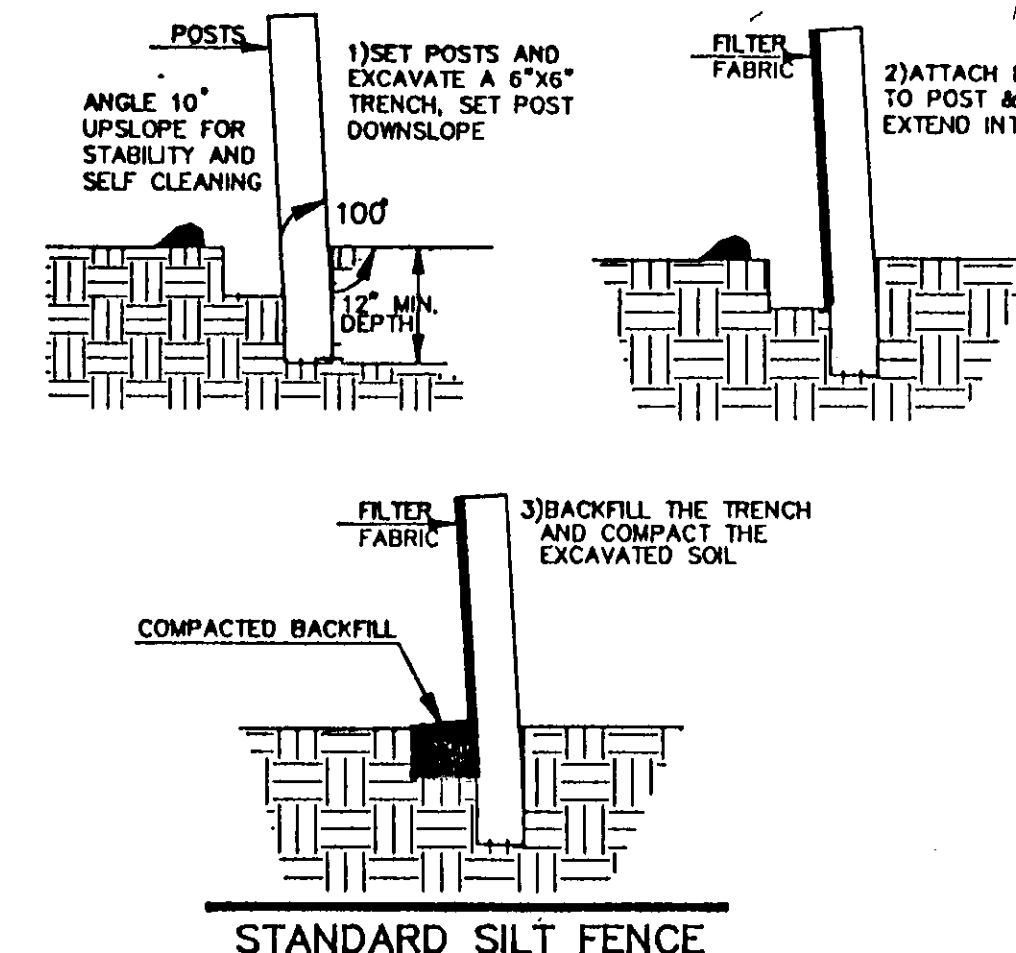
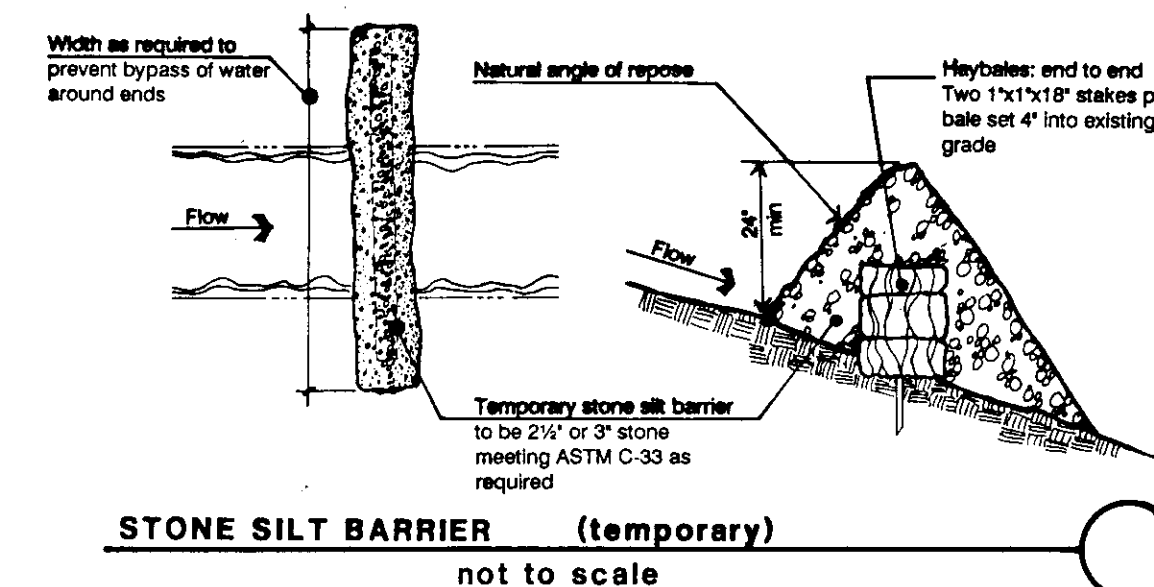
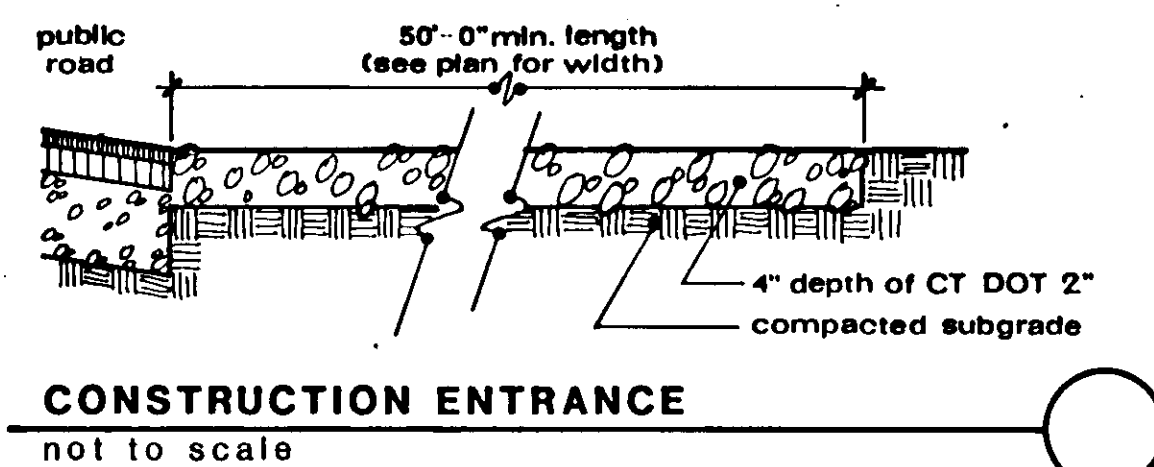
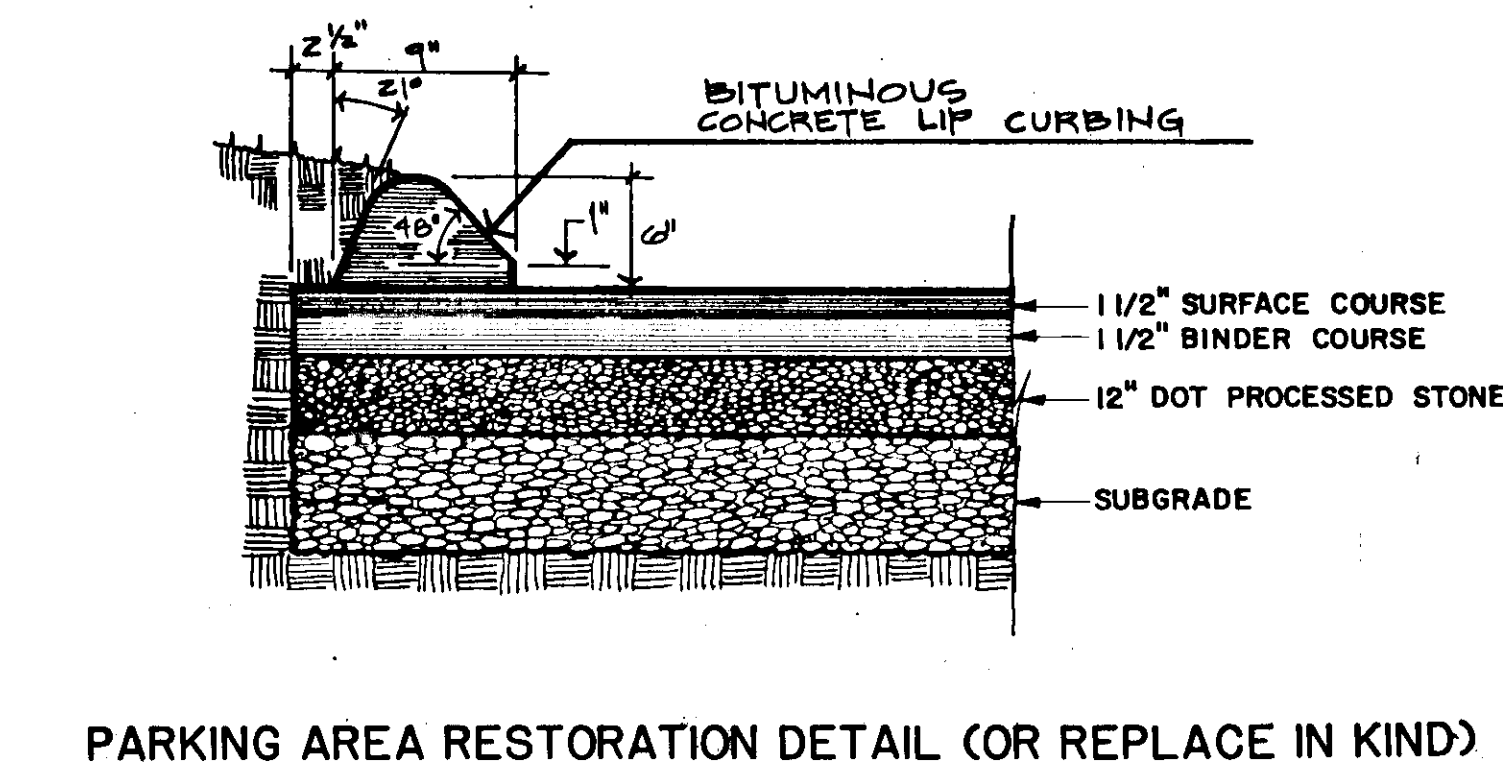
- All disturbed areas, regardless of their location on the site, shall be fine graded and stabilized as soon as practicable following substantial completion of surrounding construction. Where reasonably possible and where ongoing construction activities permit, the disturbed areas shall be permanently stabilized as described above. When permanent stabilization is not timely or possible, the disturbed areas shall be temporarily stabilized as also described above.

- Stockpiling of building materials shall be confined to the areas of disturbance. Vehicular movement shall be limited to established driveway and parking areas. No unnecessary encroachment of construction equipment or other vehicles shall be allowed in non-construction areas of the property. Vehicular access to areas outside the areas of disturbance shall be restricted to the minimum necessary to perform essential and required activities.

- Where de-watering operations are necessary in order to perform the required work, water pumped from the excavation and other poorly drained areas shall be free from silt and shall be discharged to temporary sediment/stilling basins prior to release to drainage ditches or a storm drain system. As a minimum, discharged water shall be directed toward securely installed haybale erosion and sedimentation check dams per the detail on this sheet or other acceptable sediment trapping measures, prior to entering any drainage ditch, storm drain or the streambed.

- Construction will begin during the summer of 1996 and will be completed prior to the end of the construction season.

- All areas disturbed by the Contractor, including pavement areas, curb and walk shall be restored in kind.



CEMETERY BROOK CULVERT EXTENSION

PREPARED FOR:

THE CITY OF HARTFORD

116 SHERBROOKE AVENUE
HARTFORD, CONNECTICUT

Wenners Engineering Group

DATE: 6/96

REVISIONS:

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