

STANDARD TRENCH RESTORATION NOTES (CONT.):

13. CONTROL DENSITY FILL (CDF) SHALL CONSIST OF A MIXTURE OF PORTLAND CEMENT, FLY ASH, AGGREGATE, WATER AND ADMIXTURES PROPORTIONED TO PROVIDE A NON-SEGREGATING, NON-SETTLING FILL PRODUCING UNCONFINED COMPRESSIVE 28 DAY STRENGTHS FROM 50 PSI TO A MAXIMUM OF 150 PSI.
  - a.) THE CONTROL DENSITY FILL (CDF) MIX DESIGN SHALL BE FROM AN APPROVED SOURCE.
  - b.) THE CONTRACTOR SHALL SUBMIT THE MIX DESIGN ONE WEEK MINIMUM PRIOR TO INTENDED USE FOR REVIEW AND APPROVAL. ALTERNATIVELY THE CONTRACTOR MAY PROVIDE THE SUPPLIER AND MIX NUMBER IF THE CDF MIX HAS BEEN APPROVED WITHIN THE PREVIOUS 12 MONTHS.
  - c.) THE CONTRACTOR WILL PROVIDE BATCH WEIGHTS SHOWING THE AMOUNTS OF ALL INGREDIENTS IN THE MIX, BATCH TIME, AND THE TOTAL AMOUNT OF THE BATCH.
  - d.) CONTROL DENSITY FILL SHALL BE PERFORMANCE BASED AND MEET THE FOLLOWING CRITERIA:
    - THE CDF MIXTURE SHALL BE FLOWABLE NON-SEGREGATING AND SELF LEVELING
    - CAN NOT BE PAVED ON UNTIL APPROVED BY CLARK COUNTY
    - TYPE F FLYASH: 200 LBS MINIMUM PER CUBIC YARD
    - TYPE I OR II CEMENT: 50 LBS MINIMUM PER CUBIC YARD
    - SETTLING SHALL BE LESS THAN 1/8" PER FOOT DEPTH
    - SHALL BE MACHINE DIGABLE UNLESS NOTED OTHERWISE
    - FINE AGGREGATE (LESS THAN 3/8") SHALL BE USED UNLESS OTHERWISE APPROVED
    - CONCRETE UNIT WEIGHT SHALL BE 100 PCF MINIMUM
  - e.) CDF SHALL NOT BE PLACED ON FROZEN GROUND. CDF PATCHING, MIXING AND PLACING MAY BE STARTED IF WEATHER CONDITIONS ARE FAVORABLE, WHEN THE TEMPERATURE IS AT 34-DEGREES F AND RISING. AT THE TIME OF PLACEMENT, CDF MUST HAVE A TEMPERATURE OF AT LEAST 40-DEGREES F. MIXING AND PLACING SHALL STOP WHEN THE TEMPERATURE IS 38-DEGREES F OR LESS AND FALLING. EACH FILLING STAGE SHALL BE AS CONTINUOUS AN OPERATION AS POSSIBLE.
  - f.) TRENCH SECTION TO BE FILLED WITH CDF SHALL BE CONTAINED AT EITHER END OF THE TRENCH SECTION BY BULKHEADS OR EARTH FILL.
  - g.) DURING CDF CURE TIME CONTRACTOR SHALL INSTALLED STEEL PLATES OR OTHER PROTECTIVE DEVICES WHICH WILL ALLOW FOR THE PASSAGE AND SAFETY OF TRAFFIC WITH NO LOAD TRANSFERRED TO THE CDF.
  - h.) CONTRACTOR SHALL ALLOW FOR A MINIMUM 48 HOUR CURE TIME FOR CDF PRIOR TO PLACING ASPHALT.
  - i.) 36-INCH DEPTH OF CDF MAY BE REDUCED IF CONFLICTING WITH PIPE ZONE BACKFILL.

STANDARD GRADING NOTES:

1. IF EARLY GRADING ACTIVITY IS APPROVED, IT IS TO BE PERFORMED AT APPLICANTS RISK.
2. FILL/GRADING SHALL BE PERFORMED IN COMPLIANCE WITH APPENDIX J OF THE INTERNATIONAL BUILDING CODE (IBC).
3. ALL SUBGRADE UNDER PAVED SURFACES, CURBS, BUILDINGS, FOOTINGS, SLABS AND CONCRETE WALKS SHALL BE COMPACTED TO 95% OF MAXIMUM RELATIVE DENSITY OR AS SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER. WHERE FILLING IS REQUIRED, THE FILL MATERIAL SHALL BE PLACED IN 8" LIFTS WITH EACH LIFT BEING COMPACTED TO 95% OF MAXIMUM RELATIVE DENSITY OF THE FILL MATERIAL BEFORE THE NEXT LIFT OR FINISHED SURFACE IS PLACED. WHERE FILLING IS REQUIRED OUTSIDE THE ABOVE-MENTIONED STRUCTURAL AREAS, COMPACTION REQUIREMENTS SHALL BE 90% OF MAXIMUM RELATIVE DENSITY. PROJECT GEOTECHNICAL ENGINEER SHALL SUBMIT COMPACTION TEST RESULTS TO COUNTY INSPECTOR FOR PROPER CERTIFICATION OF FILL PLACEMENT.
4. UNDER WET WEATHER CONDITIONS (OCT - APR) SUBGRADE THAT CAN NOT MEET COMPACTION MAY REQUIRE ADDITIONAL TESTING TO DETERMINE THE DEPTH OF OVER EXCAVATION, ADDITIONAL AGGREGATE AND GEOTEXTILE TO BE INSTALLED. UPON INSPECTION OF THE SUBGRADE, THE COUNTY INSPECTOR MAY REQUEST A GEOTECHNICAL ENGINEER TO SUBMIT AN ALTERNATE WET WEATHER STREET SECTION FOR REVIEW AND APPROVAL BY ENGINEERING SERVICES.

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PAGE 2 OF 2

NO.	REVISIONS	DATE	BY



Department of  
Public Works  
**CLARK COUNTY**  
WASHINGTON  
proud past, promising future

STANDARD TRENCH RESTORATION, AND  
GRADING NOTES

*Peter Capon*  
APPROVED  
COUNTY ENGINEER

*5/23/08*  
DATE

STANDARD  
**UGN**  
DETAIL  
DESIGNED  
DRAWN  
DATE 05/23/08