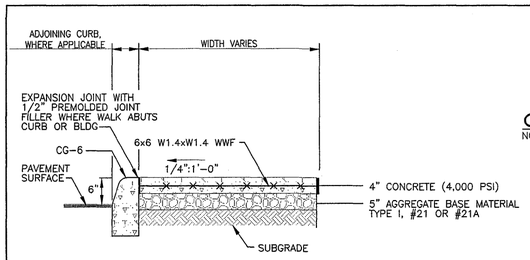
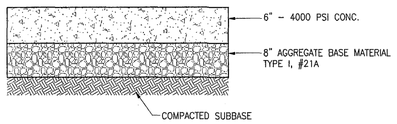


SIDEWALK SECTION
NO SCALE



CONCRETE PAVEMENT SECTION
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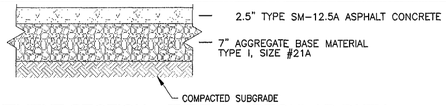
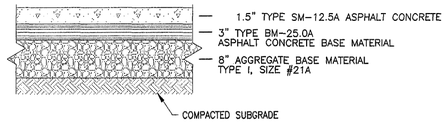
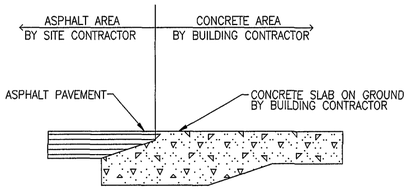


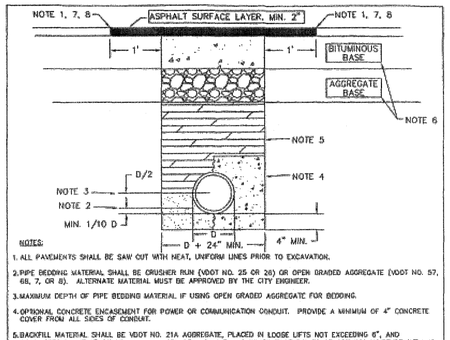
ON-SITE PAVEMENT SECTION - TYPE A - REGULAR DUTY
NO SCALE



ON-SITE PAVEMENT SECTION - TYPE B - HEAVY DUTY
NO SCALE



9 C4 C14 SECTION AT CONCRETE/ASPHALT TRANSITION
NO SCALE



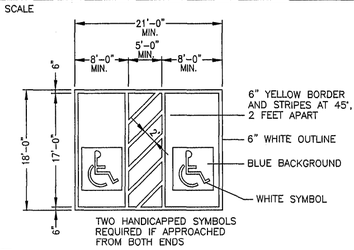
NOTES:
1. ALL PAVEMENTS SHALL BE SAW CUT WITH NEAT, UNIFORM LINES PRIOR TO EXCAVATION.
2. PIPE BEDDING MATERIAL SHALL BE CRUSHER RUN (VDOT NO. 25 OR 26) OR OPEN GRADED AGGREGATE (VDOT NO. 57, 68, 7, OR 8). ALTERNATE MATERIAL MUST BE APPROVED BY THE CITY ENGINEER.
3. MAXIMUM DEPTH OF PIPE BEDDING MATERIAL IF USING OPEN GRADED AGGREGATE FOR BEDDING.
4. OPTIONAL CONCRETE ENCASEMENT FOR POWER OR COMMUNICATION CONDUIT. PROVIDE A MINIMUM OF 4" CONCRETE COVER FROM ALL SIDES OF CONDUIT.
5. BACKFILL MATERIAL SHALL BE VDOT NO. 21A AGGREGATE, PLACED IN LOOSE LIFTS NOT EXCEEDING 6", AND COMPACTED TO AT LEAST 95% MAXIMUM DRY DENSITY WITHIN 2 PERCENTAGE POINTS OF OPTIMUM MOISTURE (VTM-1) WITH THE USE OF MECHANICAL TAMPERS OR VIBRATORY ROLLERS. WATER COMPACTION IS NOT PERMITTED. TYPE I SELECT MATERIAL MAY BE USED AS BACKFILL UPON PRIOR APPROVAL BY THE CITY ENGINEER. MATERIAL CLASSIFICATION SHALL BE PERFORMED ON THE ACTUAL SOIL TO VERIFY THAT SOIL MEETS VDOT SPECIFICATIONS FOR TYPE I SELECT MATERIAL BY A QUALIFIED TESTING LABORATORY AND TEST RESULTS SHALL BE CERTIFIED BY A VIRGINIA REGISTERED PROFESSIONAL ENGINEER. DENSITY REQUIREMENTS ARE THE SAME AS ABOVE, HOWEVER, MOISTURE CONTENT FOR SOILS MAY WITH WITHIN 20% OF OPTIMUM.

   ALL TESTING SHALL BE PERFORMED AND CERTIFIED BY A GEOTECHNICAL ENGINEER OR A VDOT-CERTIFIED TECHNICIAN. RESULTS SHALL BE PROVIDED TO THE INSPECTOR WITHIN 24 HOURS OF TESTING COMPLETION. THE COST OF ALL TESTING IS THE RESPONSIBILITY OF THE PERMITTEE. FIELD DENSITY TESTING METHODS SHALL BE APPROVED BY THE CITY ENGINEER PRIOR TO PERFORMING ANY TESTING.
6. ALL PAVEMENTS SHALL BE RESTORED TO MATCH DEPTHS OF EXISTING SURFACE, BASE, AND AGGREGATE LAYERS. THE ASPHALT SURFACE LAYER SHALL BE A MINIMUM OF 2" THICK AND EXTEND OVER UNDISTURBED BASE A MINIMUM OF 12" ON ALL SIDES. ALL PAVEMENT MATERIALS SHALL MEET VDOT REQUIREMENTS FOR SURFACE MIX (SM-9.5A, SM-9.5A, OR SM-12.5D), BASE MIX (BM-25), AND STONE AGGREGATE (21A OR 21B). PLANT CERTIFICATION FOR EACH MIX INCORPORATED INTO THE WORK SHALL BE PROVIDED TO THE INSPECTOR. WHEN MATCHING NON-STANDARD MATERIALS, THE INSPECTOR SHALL DETERMINE AN ACCEPTABLE MATERIAL.
7. THE REPAIR SHALL BE RECTANGULAR AND SAW CUT IN STRAIGHT, UNIFORM LINES THAT ARE ALIGNED WITH THE STREET CENTERLINE. WHEN EDGES OF PAVEMENT HAVE BEEN UNDERMINED, PAVEMENT SHALL BE REMOVED TO A NEAT LINE 12" BEYOND THE UNDERMINED AREA. THE FINISHED PATCH SURFACE SHALL BE WITHIN 1/4 INCH AT ANY POINT ACROSS THE PATCH AS IT RELATES TO THE SURROUNDING STREET SURFACE.
8. A FULL COVERAGE TACK COAT IS REQUIRED ON ALL SURFACES THAT WILL CONTACT THE NEW SURFACE LAYER.

OFFICE OF THE CITY ENGINEER – ROANOKE, VIRGINIA

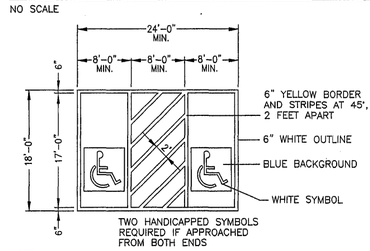
APPROVED: CITY ENGINEER
DATE: 12/01/04

UTILITY TRENCH REPAIR IN PAVEMENT USING VDOT NO. 21A AGGREGATE	UTR-1

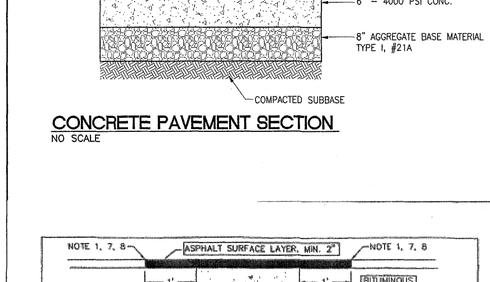


NOTE:
HANDICAP SIGNS SHALL BE LOCATED BEHIND WALK, CENTERED IN FRONT OF EACH HANDICAPPED PARKING SPACES.

STANDARD HANDICAPPED PARKING DETAILS
NO SCALE



NOTE:
HANDICAP SIGNS SHALL BE LOCATED BEHIND WALK, CENTERED IN FRONT OF EACH HANDICAPPED PARKING SPACES.



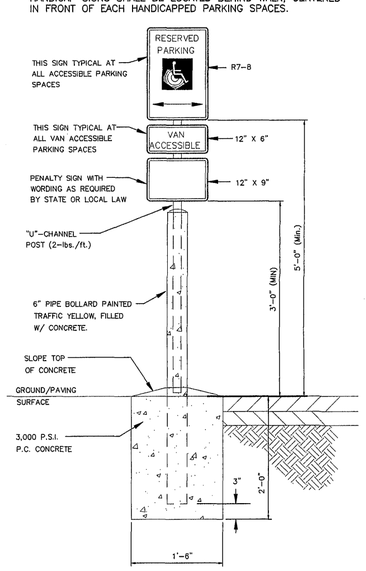
NOTES:
1. ALL PAVEMENTS SHALL BE SAW CUT WITH NEAT, UNIFORM LINES PRIOR TO EXCAVATION.
2. PIPE BEDDING MATERIAL SHALL BE CRUSHER RUN (VDOT NO. 25 OR 26) OR OPEN GRADED AGGREGATE (VDOT NO. 57, 68, 7, OR 8). ALTERNATE MATERIAL MUST BE APPROVED BY THE CITY ENGINEER.
3. MAXIMUM DEPTH OF PIPE BEDDING MATERIAL IF USING OPEN GRADED AGGREGATE FOR BEDDING.
4. OPTIONAL CONCRETE ENCASEMENT FOR POWER OR COMMUNICATION CONDUIT. PROVIDE A MINIMUM OF 4" CONCRETE COVER FROM ALL SIDES OF CONDUIT.
5. BACKFILL MATERIAL SHALL BE FLOWABLE FILL MEETING THE REQUIREMENTS OF VDOT SPECIAL PROVISION FOR FLOWABLE BACKFILL. THE MATERIAL MUST BE PLANT-CERTIFIED TO PROVIDE A 28-DAY COMPRESSIVE STRENGTH BETWEEN 30 AND 200 PSI. A CERTIFICATE OF MIX DESIGN MUST BE SUBMITTED TO THE INSPECTOR PRIOR TO PLACING THE MATERIAL IN THE TRENCH.

   A MINIMUM OF FOUR 6x12 TEST CYLINDERS SHALL BE TAKEN EVERY 50 CY OF PLACEMENT. CYLINDERS SHALL BE TESTED BY A QUALIFIED TESTING LABORATORY FOR 28-DAY STRENGTH. RESULTS SHALL BE PROVIDED TO THE INSPECTOR WITHIN 24 HOURS OF TESTING COMPLETION. THE COST OF ALL TESTING IS THE RESPONSIBILITY OF THE PERMITTEE. IF THE REPORT INDICATES THE COMPRESSIVE STRENGTHS ARE NOT BETWEEN 30 AND 200 PSI, THE PERMITTEE WILL BE RESPONSIBLE FOR REMOVING AND REPLACING THE BACKFILL WITH ACCEPTABLE BACKFILL AND COMPLETING THE RESTORATION OF THE STREET AT NO COST TO THE CITY.
6. ALL PAVEMENTS SHALL BE RESTORED TO MATCH DEPTHS OF EXISTING SURFACE, BASE, AND AGGREGATE LAYERS. THE ASPHALT SURFACE LAYER SHALL BE A MINIMUM OF 2" THICK AND EXTEND OVER UNDISTURBED BASE A MINIMUM OF 12" ON ALL SIDES. ALL PAVEMENT MATERIALS SHALL MEET VDOT REQUIREMENTS FOR SURFACE MIX (SM-9.5A, SM-9.5A, OR SM-12.5D), BASE MIX (BM-25), AND STONE AGGREGATE (21A OR 21B). PLANT CERTIFICATION FOR EACH MIX INCORPORATED INTO THE WORK SHALL BE PROVIDED TO THE INSPECTOR. WHEN MATCHING NON-STANDARD MATERIALS, THE INSPECTOR SHALL DETERMINE AN ACCEPTABLE MATERIAL.
7. THE REPAIR SHALL BE RECTANGULAR AND SAW CUT IN STRAIGHT, UNIFORM LINES THAT ARE ALIGNED WITH THE STREET CENTERLINE. WHEN EDGES OF PAVEMENT HAVE BEEN UNDERMINED, PAVEMENT SHALL BE REMOVED TO A NEAT LINE 12" BEYOND THE UNDERMINED AREA. THE FINISHED PATCH SURFACE SHALL BE WITHIN 1/4 INCH AT ANY POINT ACROSS THE PATCH AS IT RELATES TO THE SURROUNDING STREET SURFACE.
8. A FULL COVERAGE TACK COAT IS REQUIRED ON ALL SURFACES THAT WILL CONTACT THE NEW SURFACE LAYER.

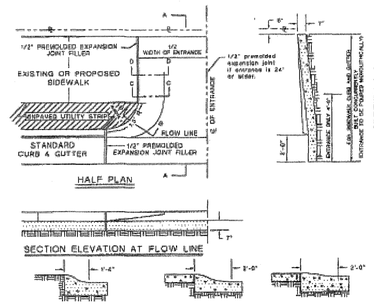
OFFICE OF THE CITY ENGINEER – ROANOKE, VIRGINIA

APPROVED: CITY ENGINEER
DATE: 12/01/04

UTILITY TRENCH REPAIR IN PAVEMENT USING CONTROLLED DENSITY FILL	UTR-2



ACCESSIBLE PARKING SIGN
N.T.S.

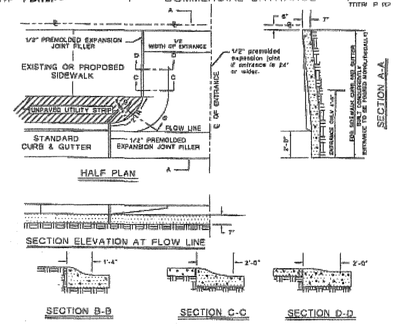


GENERAL NOTES:
1. Standard commercial "Entrance" shall have a minimum curb radius (R) of 7 1/2 feet.
2. Minimum Entrance width to be 12 feet.
3. Where curb & gutter already exists both curb & gutter shall be removed. If proposed entrance falls within five (5) feet of an existing joint removal & reconstruction shall be to that joint. Any concrete removed at other than an existing joint shall be cut with a mechanical saw specifically manufactured for that purpose; this also shall apply to street pavement.
4. Where sidewalk exists or is to be constructed across driveways the thickness thereof shall correspond with the thickness of the entrance.
5. Whenever "Entrance" exceeds twenty-four (24) feet in width a 1/2" premolded expansion joint filler shall be installed through the center perpendicular to flow line.
6. Finish "Entrance" shall have a "broom finish" running parallel to flow line.
7. Curing shall be accomplished by the use of a liquid membrane seal containing white pigment applied at the rate of one (1) gallon per 150 square feet.
8. All "Entrance Ways" shall be constructed according to City of Roanoke specifications and to line and grades approved by the City Engineering Department.
9. Entrances exceeding 30 feet in width shall be approved by the City Manager.

OFFICE OF THE CITY ENGINEER - ROANOKE, VIRGINIA

APPROVED: CITY ENGINEER
DATE: 12/01/03

STANDARD CITY OF ROANOKE COMMERCIAL ENTRANCE	SHEET 6 OF 9

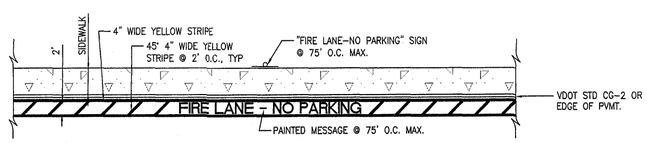


GENERAL NOTES:
1. Standard residential "Entrance" shall have a curb radius (R) of 2 feet.
2. Minimum Entrance width to be 12 feet at P.T. of radius return.
3. Where curb & gutter already exists, both curb & gutter shall be removed. If proposed entrance falls within five (5) feet of an existing joint, removal & reconstruction shall be to that joint. Any concrete removed at other than an existing joint shall be cut with a mechanical saw specifically manufactured for that purpose, this also shall apply to street pavement.
4. Minimum width, or distance between flares, for residential entrance driveways, the thickness thereof shall correspond with the thickness of the entrance.
5. Whenever "Entrance" exceeds twenty-four (24) feet in width a 1/2" premolded expansion joint filler shall be installed through the center perpendicular to flow line.
6. Finish "Entrance" shall have a "broom finish" running parallel to flow line.
7. Curing shall be accomplished by the use of a liquid membrane seal containing white pigment applied at the rate of one (1) gallon per 150 square feet.
8. All "Entrance Ways" shall be constructed according to City of Roanoke specifications and to line and grades approved by the City Engineering Department.
9. Entrances exceeding 30 feet in width shall be approved by the City Manager.

OFFICE OF THE CITY ENGINEER - ROANOKE, VIRGINIA

APPROVED: CITY ENGINEER
DATE: 12/18/03

STANDARD CITY OF ROANOKE RESIDENTIAL ENTRANCE	SHEET 5 OF 9



FIRE LANE MARKING DETAIL
NO SCALE

PAVEMENT NOTES:

1. THE PAVEMENT DESIGN SHOWN IS BASED ON A CBR VALUE OF 7. THE PAVEMENT DEPTH MAY BE ADJUSTED DEPENDING ON THE ACTUAL IN-PLACE CBR VALUE.

2. SOIL SAMPLE FREQUENCY AND CBR TESTS FOR DESIGN: FOR STREETS 200 TO 500 FEET IN LENGTH, AT LEAST TWO SOIL SAMPLES FOR CONDUCTING AASHTO SOIL CLASSIFICATION AND CBR TESTS IS REQUIRED, WHICH INCLUDES ONE AT EACH INTERSECTION OF AN EXISTING STATE ROAD. FOR LONGER STREETS, ONE SOIL SAMPLE SHALL BE TAKEN AT EACH INTERSECTION WITH AN EXISTING STATE ROAD PLUS ONE TEST SAMPLE EVERY 500 FEET IN LENGTH, OR PORTION THEREOF, IS REQUIRED FOR CONDUCTING AASHTO SOIL CLASSIFICATION AND CBR TESTS.

3. CONSTRUCTION FACTORS - THE DESIGN CBR DETERMINATION PROCESS ASSUMES THAT THE PROPERLY COMPACTED SUBGRADE SOIL WILL PRODUCE A STABLE PLATFORM FOR PAVEMENT CONSTRUCTION. IF AN UNSTABLE SUBGRADE IS ENCOUNTERED, IT SHOULD BE UNDERCUT TO A FIRM FOUNDATION AND BE REPLACED WITH ADEQUATELY COMPACTED SOIL OR AGGREGATE MATERIALS OR OTHERWISE BE STABILIZED BY LIME, CEMENT, OR THE USE OF A GEOTEXTILE TO PRODUCE A STABLE PLATFORM FOR CONSTRUCTION EQUIPMENT.

4. SUBGRADE COMPACTION SHALL BE VERIFIED EVERY 1000 FEET BEFORE PLACEMENT OF THE SUBBASE/BASE LAYER, WITH A MINIMUM OF TWO COMPACTION TESTS PER ROADWAY. THE COMPACTION SHALL BE 100 PERCENT OF STANDARD PROCTOR FOR ALL BUT GRAVELY SOILS. REFER TO SECTION 305.03 OF THE ROAD AND BRIDGE SPECIFICATION FOR COMPACTION REQUIREMENTS FOR GRAVELY SOILS.

5. ALL MATERIAL, METHOD OF CONSTRUCTION, AND TESTING SHALL CONFORM TO THE STANDARDS IN "VDOT ROAD & BRIDGE SPECIFICATIONS", 2002 EDITION.

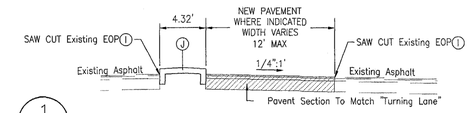
6. ALL TEST RESULTS SHALL BE SUBMITTED TO THE CITY OF ROANOKE AND VDOT.

7. PAVEMENT THICKNESS TESTING SHALL BE PERFORMED IN ACCORDANCE WITH VDOT SECTION 315.06 AND 315.07.

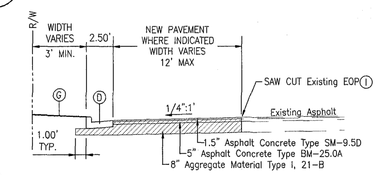
TYPICAL SECTION KEYNOTES:

(A) 220 LBS./S.Y. ASPHALT CONCRETE, SM-9.5
(B) ASPHALT CONCRETE BASE, TYPE BM-25.0 (SEE SECTION FOR DEPTH)
(C) AGGREGATE MATERIAL, SIZE 21B. AGGREGATE BASE TO BE SEALED WITH RC-250 AT 0.3 GAL/SQ. YD. AND NO. 78 STONE AT 15 LBS./SQ. YD. (SEE SECTION FOR DEPTH)
(D) VDOT STD. CG-6 CONCRETE CURB & GUTTER
(E) VDOT STD. CG-2 CONCRETE CURB
(F) POINT OF GRADE/CENTERLINE
(G) 1/2":1' SLOPE SHOULDER, WIDTH VARIES
(H) 5' WIDE, 4" THICK CONCRETE SIDEWALK (3,000 P.S.I.) SLOPE @ 1/4":1'
(I) SAW CUT EXISTING EDGE OF PAVEMENT TO PROVIDE SMOOTH AND UNIFORM JOINT. PROVIDE TACK COAT ON EXPOSED ASPHALT AND AGGREGATE.
(J) VDOT STD. MS-1A
(K) VDOT HR-1 (STANDARD HANDRAIL)

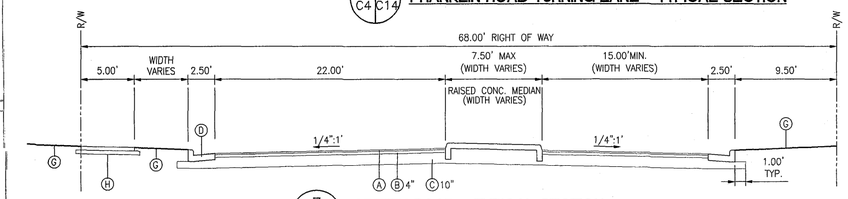
NOTE:
CONTRACTOR SHALL BE REQUIRED TO INCREASE DEPTH OF AGGREGATE MATERIAL SO SUBGRADE OF NEW PAVEMENT MATCHES SUBGRADE OF EXISTING PAVEMENT.



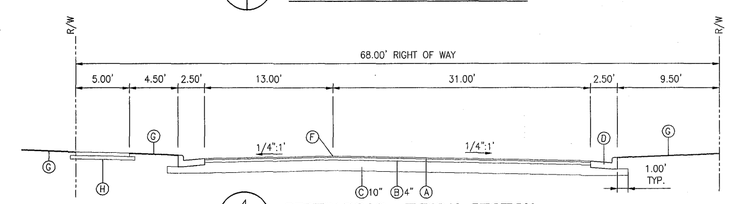
1 C4 C14 FRANKLIN ROAD MEDIAN - TYPICAL SECTION



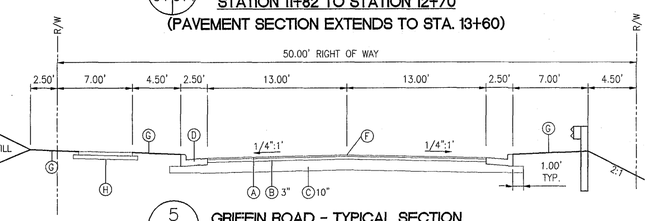
2 C4 C14 FRANKLIN ROAD TURNING LANE - TYPICAL SECTION



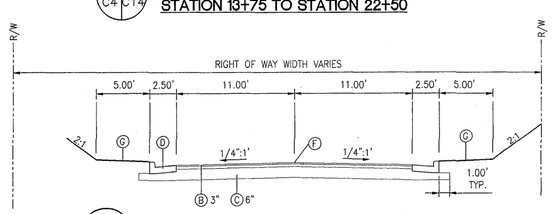
3 C4 C14 GRIFFIN ROAD - TYPICAL SECTION STATION 10+50 TO STATION 11+82



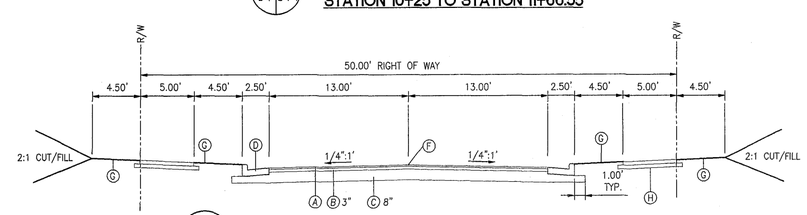
4 C4 C14 GRIFFIN ROAD - TYPICAL SECTION STATION 11+82 TO STATION 12+70 (PAVEMENT SECTION EXTENDS TO STA. 13+60)



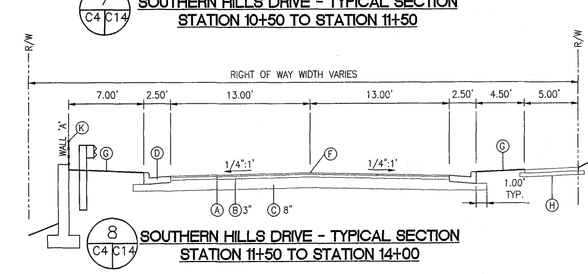
5 C4 C14 GRIFFIN ROAD - TYPICAL SECTION STATION 13+75 TO STATION 22+50



6 C4 C14 OLD GRIFFIN ROAD - TYPICAL SECTION STATION 10+25 TO STATION 11+66.55



7 C4 C14 SOUTHERN HILLS DRIVE - TYPICAL SECTION STATION 10+50 TO STATION 11+50



8 C4 C14 SOUTHERN HILLS DRIVE - TYPICAL SECTION STATION 11+50 TO STATION 14+00

Mattern & Craig
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ROANOKE, VIRGINIA 24016
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FAX: (540) 345-7891

THE HOME DEPOT - SITE DEVELOPMENT PLANS
FRANKLIN ROAD AND VALLEY AVENUE

SECTIONS AND DETAILS - CONSTRUCTION

CITY OF ROANOKE, VIRGINIA

Vertical Scale: N/A
Horizontal Scale: N/A
Commission No. 2358-A
Sheet No.: C-14

Issue Date: April 14, 2006
Drawn By: CDV
Designed By: WTA
Checked By: WTA
Date: 1-14-2006

Revisions
Date

Built On Reputation

R/W-1200

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