APPENDIX ITEM 1

WATER SYSTEM
PLAN REQUIREMENTS CHECK LIST

GENERAL REQUIREMENTS

1. Sheet size (24" x 36").
2. Vicinity Map.
3. Location Map.
4. Index to drawings.
5. List of quantities.
6. List of agencies, including surveyor, soils engineer and all involved agencies for the project.
7. General notes (refer to Item 2 in the Appendix).
8. Professional Engineer seal and signature on title sheet and each electrical and structural sheet (if included).
9. North arrow on vicinity map, location map and each plan view.
10. Title block on each sheet.
11. Bench mark, including U.S.G.S. datum, location, elevation and monument type.
12. Street alignment, existing and proposed, shown on overall plan.
13. Street names.
14. Horizontal curve data for street centerline and all curbs shown on plan, or recorded plat included in plan set.
15. Street grades, existing and proposed shown on profile.
16. Typical street cross-section(s).
17. Street addresses for all lots and/or buildings indicated on plan, or address plat included in plan set.
18. Lot and block numbers.
19. Front lot dimensions.
20. Property, easement and tract lines shown on plan.
21. Private improvements identified.
22. Existing improvements identified.
23. Match lines and sheet references called out in plan and profile.
24. Street cross-pans shown.
25. Center line of drainage channel(s) shown.
26. 100-year flood plain limits shown.
27. Estimated construction cost and proposed development build-out schedule submitted.
28. Recorded plat and address plat submitted.
29. Project in conformance with overall water system master plan.

WATER LINE REQUIREMENTS

A. General

1. Water line horizontal alignment generally 10' north and east of street centerline; 5' min. from lip of flow line or cross pan; 10' min. from R.O.W. line.
2. Water lines 12 inches and larger shown in both plan and profile.
3. Water demands, including peak fire flow and maximum hour use, shown at connection(s) to existing system. Number and type of units.
4. Water easement drawings and legal descriptions submitted with PLS seal and signature affixed.
5. Water system notes included (refer to attached).
6. Water system details included.
7. Service tees not allowed.
8. Signature of Fire Marshall on cover sheet.
9. Service tap locations, including size, to buildings, shown on as-builts.

B. Water Plan View

1. Scale: 1" = 50'
2. Pipe size and material called out.
3. All valves, fittings, fire hydrants, wet taps, thrust blocks, restraint lengths, blow-offs and other appurtenances called out.
4. Water line linear footage between valves, fittings and appurtenances called out.
5. Radius of deflected water line called out. 3 degrees maximum deflection per joint.
6. Water lines dimensioned from street centerline, ~~or~~ property line, and from other utilities, curb and gutter and other appurtenances.
7. Connections to existing system shown on plan and tied to property corner or section corner.
8. At least a 10' workable easement margin on each side of the water line.
9. Valves located at property line extensions. Valves required to isolate all fire hydrants, both ends of a water line through an easement or creek crossing and spaced to minimize the number of units put out of service during water line maintenance and repair work.
10. Valve and fitting markers included for water line outside of paved right-of-way.
11. Fire lanes called out.
12. PRV size and inlet and outlet pressures shown.
13. Match lines and sheet references.
14. All utility improvements including sanitary sewer and storm sewer, shown on plans.
15. All gate valves numbered.

C. Water Profile View (Required For Lines 12-Inches or Larger and for all sized lines at crossings with sanitary sewers, storm sewers and other utilities.)

1. Scales: 1" = 50' (horizontal)
   1" = 5' (vertical)
2. Water line stationed.
3. Pipe size, linear footage and grade called out between all grade breaks and fittings.
4. Top of pipe elevations called out at all grade breaks, fire hydrants, blow-offs, air and vacuum valves, plugs, connections to existing water system and match lines.
5. 4-1/2' minimum cover from finished grade to top of pipe.
6. 6-1/2' minimum cover for air and vacuum valve vaults.
7. Blow-offs at all low points.
8. Air relief valves at all high points.
9. Restrained pipe length shown on profile.
10. Connections to existing system shown on profile.
11. Crossings with other utilities shown on profile (1-1/2 minimum separation from outside of pipe to outside of pipe).
12. Match lines and sheet references.

APPENDIX ITEM 2

SOUTHGGATE WATER SYSTEM GENERAL NOTES

Southgate General Notes

1. All water lines and system plans and construction, shall conform with the Southgate Water District Standards and Specifications and the Denver Water Department Engineering Standards, and be subject to construction observation by District representatives. Copies of the District Standards and Specifications may be obtained from the District. The Owner, his engineer or contractor, shall schedule a preconstruction meeting with the District and Denver Water at least 48 hours prior to the start of construction. Plans with the District Review Stamp will be distributed at the preconstruction meeting. No construction will be permitted until formal completion of easements and recording, and prior to the preconstruction meeting.

2. Probationary acceptance of the new water lines is contingent upon receiving copies of:

    a. Water line trench compaction test results,
    b. Record drawings, and
    c. Health Department tests. (Chlorine and/or clear water as required).

3. Theoretical static water pressures are estimated to range from ____ psi at USGS Elevation ____ to ___ psi at USGS Elevation _____ based upon a hydraulic gradient of USGS Elevation _____. The District has provided only the hydraulic gradient elevation. This hydraulic gradient, which was provided at the time of plan review, may change in the future as overall water system operations warrant.

4. Existing valves in the District may only be operated by District personnel.

5. Final conveyance of facilities is dependent on completion of all road way improvements. Successful completion of a minimum one (1) year probation/conveyance documents.

6. The developer is responsible for maintenance of the system from probation to final conveyance. Failure to maintain water lines by the terms of the probation agreement may be considered grounds for permanent abandonment of facilities.

Water System Notes

Add the Denver Water notes (31) here with the following modifications.

The Engineer needs to modify the Denver Water fire hydrant and valve box note (by crossing out) to reflect the following:

A. Fire Hydrants
    1. Meuller Centurion Model A-423
    2. Waterous Pacer Model WB-67 with bronze bushed shoe and shaft coupling

B. Valve Boxes
    1. Tyler Screw-Type "C" cast iron valve box assembly series 6860 with No. 160 oval base