

SECTION 6

SEWERS

6.1 GENERAL

Sewers shall be installed by a Contractor holding the appropriate license for such work under the provisions of the State of California Business and Professions Code. Maps and Plans for developments for which the City Engineer deems there to be insufficient sewer treatment or conveyance capacity shall not be processed or approved.

6.2 DESIGN

Eight inch sewers not less than 0.40%, ten inch sewers not less than 0.30%, twelve inch sewers not less than 0.25%.

The minimum sewer grades set forth above may be modified only with the written approval of the City.

Normal practice is that sewers shall have a minimum cover of 3 feet from the top of the pipe to finished paving grade. Sewer with less than the minimum cover, if approved, shall be cast iron or ductile iron and shall require special written approval by the City.

Sewers within 100 feet of domestic wells shall be cast iron or ductile iron, with special seals similar to those crossing domestic water lines.

Where a sewer line crosses a water line, the sewer line shall be designed in accordance with these Improvement Standards and State Health Department Standards.

Sewer mains shall be 5' from centerline as measured from centerline to the nearest side of the pipe. Sewer mains shall be on the opposite side of the centerline from the water line.

6.3 MANHOLES

Manholes as shown in Drawings No. SS.1 and SS.2 shall be constructed at all changes in vertical or horizontal alignment and at all pipe intersections. The maximum distance between manholes shall be 400 feet. A terminal manhole as shown in Drawing No. SS.3 shall be constructed at all dead ends,

When a line is to be extended at a future date, a temporary lamphole as shown in Drawing No. SS.4 may be installed when approved by the City.

Elevation differentials of manhole inlets and outlets must conform to the improvement plans. The channel through the manhole shall be formed by laying the pipe through the manhole and removing the upper half of the pipe after the concrete is set. Special care

shall be taken in the finishing of the interior of all manholes to obtain the best hydraulic characteristics. All rough edges shall be chipped away and plastered to leave a smooth surface. Where called for on the plans, stubs shall be installed and plugged in a manner approved by the City.

Manholes shall be constructed of precast reinforced concrete sections which conform to A.S.T.M. specifications C478.

The frame and cover shall conform to the elevation of the adjacent ground or pavement as shown in Drawing No. ST.7.

6.4 PIPE FOR SEWER MAINS

Sewer pipe shall be Cast Iron Pipe, OVC – SDR35 or Ductile Iron Pipe.

Compression joints shall be used for all pipe and shall conform to the current standard specifications of the A.S.T.M. - C425-77.

Cast Iron Pipe shall conform to the current standard, specifications of the American National Standards Institute (A.N.S.I.) - A21.6, and shall be Class 150, with bell and spigot joints, Cast Iron fittings shall conform to A.N.S.I./A.W.W.A. CI 10-77.

Ductile Iron Pipe shall be Class 50 and shall conform to the current standard specifications of the American National Standards Institute (A.N.S.I.) A21.51. All fittings shall conform to A.N.S.I./A.W.W.A. - 0110-77.

Polyvinyl Chloride Gravity Sewer Pipe (SDR 35) and fittings shall meet or exceed the requirements of ASTM D 3034 (SDR 35). The installation of all PVC pipe shall conform to ASTM D2321. The maximum deflection shall not exceed 5% of the inside diameter of the pipe. If deflection exceeds 5% the pipe shall be removed and replaced by the Developer or City Contractor at his/her expense.

6.5 STAKING OF SEWER MAINS AND SERVICES

The sewer mains and services shall be staked by the Developer's engineer on projects installed by the Developer

6.6 EXCAVATION

Excavation shall include the removal of all materials encountered. All trenches shall be excavated in open cut following neat parallel lines distant from the pipe centerline as shown in Drawing No. ST.7. Maximum width of the trench at the level of the top of pipe shall not exceed the outside diameter of the pipe barrel plus 24 inches.

At no time shall there be more than 300 feet of trench open per trenching machine, including the section opened ahead for pipe laying and the section behind which is not completely backfilled, unless otherwise specified by the City.

Excavation shall be made at least 4 inches below the grade of the bottom of the pipe in areas where the material is too hard to permit proper bedding. This over-excavation shall be brought to grade with approved material compacted in place. Said material shall be a Sand Equivalent value of not less than 20 and shall conform to the following grading:

<u>Sieve Sizes</u>	<u>Percentage Passing</u>
3"	100
No. 4	35-100
No. 30	20-100

Pipeline bedding and backfill to 12" over the pipe shall conform to the manufacturer's requirement limiting the pH value of such materials, to minimize potential for corrosion.

Excess and/or rejected material shall be disposed of by the Developer or City Contractor at their expense.

No tunneling or jacking will be permitted without written permission from the City.

6.7 SHORING, BRACING AND SHEETING

The Contractor shall furnish, install and maintain such shoring, bracing and sheeting as required in these Improvement Standards, and by the State of California, Division of Occupational Safety and Health.

After the pipeline has been installed and sufficiently backfilled to protect the pipe, all shoring, bracing and sheeting shall be removed. All voids left by the removal of such bracing shall be carefully filled with suitable material compacted in place.

6.8 SEEPAGE, STORM WATER OR SEWAGE

The Developer or City Contractor shall remove from the trench any seepage, storm water, or sewage that may have accumulated during the progress of the work, and shall furnish all pumps and other equipment necessary. The Developer or City Contractor shall also keep his completed work reasonably free from accumulation of water and sewage and shall free it entirely at such times as may be required by the City for the purpose of inspection. The removed material shall not be discharged into the sewer.

6.9 LAYING PIPE

The pipe shall be laid to conform with the prescribed lines and grades. All adjustments of pipe to the line and grade shall be made by scraping away or filling in and tamping under the body of the pipe, not blocking or wedging.

Manufacturer's recommendations on proper procedure for laying pipe shall be followed.

All pipe shall be laid with bell end upstream and shall be laid upstream from structure to structure. A minimum of three grade stakes per 100 foot interval shall be provided, and each stake shall be used in establishing the grade and alignment for the sewer.

6.10 SEWER SERVICE MATERIALS

- A. Each individual property shall have separate sewer service(s) complete from the sewer main to the property. The minimum size sewer service lateral is 4 inch. Sewer services are not permitted in easements without prior written approval of the Engineer. This approval will be given only when insufficient grade makes it impossible to service the property directly from a sewer main in the right of way.

For non-typical single family residential, the Design Engineer shall take into account the anticipated sewer use, and service lateral length to size and grade the lateral.

If abnormal or unusual conditions occur, the City may allow alternative pipe materials. All service connections shall be installed with wye fittings.

All sewer services, including risers, wyes, tees, tee saddles and wye saddles, shall be installed in accordance with City of Hughson Standard Drawings No. SS.5 and SS.5a.

B. PVC SDR35

Materials for Public Sewer Lines. Pipe and fittings, jointing materials, and appurtenant materials shall be shown on the drawings and as specified herein.

- a. PVC PIPE - PVC pipe and fittings shall be permitted for sewers up to 27 inches in diameter. The use of PVC pipe for sewers larger than 27 inches in diameter will be considered on a case by case basis. PVC pipe shall meet either the sewer pipe specifications or the pressure pipe specifications listed below depending upon the depth of sewer installed.
1. For Gravity Sewers Up to 15 Feet Deep. At a minimum the gravity sewer pipe shall be SDR 35 PVC. Pipe up to 15 inches in diameter shall conform to ASTM Specification D-3034 (latest revision). Pipe with a diameter 18 inches or larger shall conform to ASTM Specification F679 (latest revision). The use of pipe conforming to ASTM F-794 and ASTM F-1803 will be considered on a case-by-case basis for pipe sizes 12 inches to 27 inches in diameter. Joints shall comply

with the specifications below. Pipe embedment and backfill shall be in accordance with the Embedment of Pipe Standard Detail.

2. For Gravity Sewers Deeper Than 15 Feet but Less Than 30 Feet Deep. At a minimum the gravity sewer pipe shall be SDR 26 heavy wall gravity sewer pipe. Pipe up to 15 inches shall conform to ASTM Specification D-3034 (latest revision). Pipe with a diameter 18 inches or larger shall have a minimum stiffness of 115 psi and conform to ASTM Specification F679 (latest revision)

PVC pressure rated pipe shall be permitted as follows. PVC pipe shall meet AWWA Specification C900 (latest revision), or AWWA Specifications C909 (latest revision), or AWWA specifications C905 (latest revision), or ASTM Specification D2241 (latest revision) SDR 26.

Joints shall comply with the specifications below. Pipe 505-2 embedment and backfill shall be in accordance with the Embedment of Pipe Standard Detail.

3. For Gravity Sewers Installed Deeper Than 30 Feet Deep. Gravity sewers installed deeper than 30 feet deep shall only be approved on a case by case basis.

Jointing Materials

Ordinary joints	ASTM D3212, integral bell push-on type elastomeric gasket joints .
Field cut joints and connections to other piping materials	Can-Tex "C-T Adapters"; Dickey "Plastic Pipe Adapters"; Fernco "PVC Donuts"; "Flexible Couplings"; Mission "Eastern Standard Band-Seal Couplings" with stainless steel shear rings; Nashua Pre-Cast Corporation "Flex-O-Joint"; or equal.

- b. DIP - Ductile iron pipe (DIP) shall be used for sanitary sewer in areas where the minimum 30 inches of cover over the top of pipe cannot be met, under creek crossings, deep gravity sewer applications, or as specified on the Contract plans. Pipe embedment and backfill shall be in accordance with the Embedment of Pipe Standard Detail.

<u>Pipe</u>	Ductile iron, ANSI A21.51; ASTM A536, Grade 60-42-10; thickness, class 52
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Fittings

Material	Gray iron, ANSI A21.10. 250 psi pressure rating, except shorter laying lengths will be acceptable or ductile iron, ASTM A536, Grade 80-60-03 or 70-50-05, ANSI A21.10, 350 psi pressure rating
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<u>Push-on Joints</u>	ANSI A21.11, except gaskets shall be neoprene or other synthetic rubber. Natural rubber will not be acceptable
Flanged Joints	ANSI A21.15
Flanges	ANSI B16.1, 125 lb or U.S. Pipe "Flange-Tyte"
Bolts	ASTM A 307, chamfered or rounded ends projecting 1/4 to 1/2 inch beyond outer face of nut
Nuts	ASTM A307, Hexagonal, ANSI B18.2, heavy semifinished pattern 505-3
Gaskets	ASTM D1330, Grade I rubber, ring type, 1/8-inch thick; or U.S. Pipe "Flange-type", 1/8-inch thick
Mechanical Joints	ANSI A.21.11
Wall Castings	Mechanical joint with waterstop and tapped holes, single casting or fabricated cast iron Midwest Pipe Fabricators "Adjustable Wall Pipe." All holes shall be plugged with plastic plugs.

Plastic Plugs Protective Closures "Caplug Series WW"

Mechanical Joints with Tie Rods

Tie Rods	TM A 307
Steel Pipe	STM A210, standard weight
Washers	NSI B27.2, plain steel
Mechanical Couplings	
Couplings	Dresser Style 38 or Rockwell/Smith-Blair 441 or 411 Flexible Coupling; without pipe stop
Gaskets	Oil-resistant synthetic rubber
Shop Coating and Lining	
Cement Lining	ANSI A21.4
Bituminous Coating	Manufacturer's standard

Rust-
Preventative
Compound

Houghton "Rust Veto 344" or Rush-Oleum "R9"

Field Coating

Heavy coal tar paint, MIL-C-18480; Koppers
"Bitumastic No. 50", or Mobil "35-J-10 Hi-Build
Bituminous Coating"

- c. RCP - RCP shall be permitted for gravity sewers with a diameter of 30 inches and larger. RCP shall conform to ASTM C76 (latest revision) Class III, Wall B. Pipe embedment and backfill shall be in accordance with the Embedment of Pipe Standard Detail.

1. Joints ASTM C-361, Bell and Spigot compressive type with resilient seals embedded in both ends and joined with O Ring rubber gaskets.
2. All rubber and rings shall be extruded or molded and cured in such a manner that any cross section will be dense, homogeneous, and free of porosity, blisters, pitting and other imperfections. The basic polymer shall be EPDM hydrocarbon.

The compound shall conform to the following requirements: The rubber EPDM material shall meet ASTM C-443 with the exception of the 40-60 duro hardness. For resilient interlocked end seals the hardness duro A shall be 40 to 70 + 5.

3. Each concrete pipe section shall be tested at the project site with low pressure air or equivalent vacuum test. The test shall be conducted in a manner using a cap, plug and gasket of the type and size to be used in the field to include the tongue and bell sealing surface. End to end testing using foam plates is not acceptable. Reference ASTM C924. Pipe passing the test shall be clearly marked "Air Tested."

Materials for Private Service Laterals. Pipe and fittings, jointing materials, and appurtenant materials shall be shown on the drawings and as specified herein. Private service laterals shall be a minimum of 4 inches in diameter.

1. Pipe and fittings for private service laterals that connect to the public sewer main at a depth of 15 feet or less shall at a minimum be SDR 35 solid wall PVC sewer pipe and shall conform to ASTM Specification D-3034 (latest revision).
2. Pipe and fittings for private service laterals that connect to the public sewer main at a depth deeper than 15 feet but less than 20 feet shall at a minimum be SDR 26 heavy wall PVC gravity sewer pipe and conform to ASTM Specification D-3034 (latest revision).
3. Private service laterals shall not be connected to public sewers that are deeper than 20 feet.

Manhole Connections. The Contractor shall use precast manhole base sections with integral circular flexible gasket as specified in the sewer manholes section of these specifications, plain end pipe shall be installed through the gasket in accordance with the instructions of the gasket manufacturer.

Drawings and Data. Drawings and data shall be submitted in accordance with the submittals section. Drawings and data shall include but not limited to the following:

Details of joints

Gasket material

Pipe length

Certification

Affidavit of Compliance. An affidavit shall be submitted to the Engineer certifying that pipe, fittings, and jointing materials are in compliance with the governing standards and specifications.

C. Cast Iron Pipe (C.I.P.)

All Cast Iron Pipe shall conform to the current standard specifications of the American National Standards Institute (A.N.S.I.) - A21.6 and shall be Class 150, with bell and spigot joints.

1. Connections

Only Cast Iron wyes and tees shall be used for connections to Cast Iron Sewer Mains, and shall conform to the current standard specifications of the A.N.S.I. - CI 10-77.

Only Class 50 Cast Iron straight pipe, elbows and fittings shall be used from the sewer main to the right of way line. Cast Iron Pipe shall be furnished with "Tyton Joints", "Ty-Seal Joints", or approved equal. Cast Iron transition couplings shall be installed in accordance with the manufacturer's specifications for each pipe size.

When connecting a sewer lateral directly from the manhole to the right of way line, Cast Iron Pipe shall be inserted into the manhole and brought to the right of way line.

D. Ductile Iron Pipe (D.I.P.)

All Ductile Iron Pipe shall be Class 50 and shall conform to the current standard specifications of the American National Standards Institute (A.N.S.I.) - A21.51 - 19756.

All Ductile Iron Pipe shall have a polyethylene encasement which shall conform to the current standard specifications of the A.N.S.I. - A21.5 (A.W.W.A. C105-72).

1. Connections

Connections to Ductile Iron Pipe sewer mains shall be at manholes only.

Only Cast Iron straight pipe, elbows and fittings shall be used from the sewer main to the right of way line. Cast Iron pipe shall be furnished with "Tyton Joints", "Ty-Seal Joints", or approved equal. Cast Iron transition couplings shall be installed in accordance with the manufacturer's specifications.

When connecting a sewer lateral directly from the manhole to the right of way line. Cast Iron Pipe shall be inserted into the manhole and brought to the right of way line.

6.11 MATERIALS TO BE FURNISHED AND INSTALLED BY DEVELOPER

The Contractor shall furnish all labor, materials, equipment and appliances required to complete the sewer mains and sewer services specified.

6.12 SERVICES INSTALLATION

The services shall be installed as per Standard Drawings No. SS.5 and SS.5a.

No direct connections are permitted on 15 inch or larger sewer mains without prior approval by the City. A service lateral may be connected to these mains, upon approval of the Engineer, when using one of the following methods:

1. A lateral (Min. 6 inch), may be extended from an existing manhole to the property, parallel to the main line.

The lateral extension shall end in a terminal manhole.

The building lateral shall be connected from the lateral extension to the right of way line.

Construction plans of the lateral shall be prepared by a registered civil engineer licensed in the State of California and shall be submitted to the City for approval.

2. If no manhole exists immediately adjacent to the property, a manhole may be placed over the main.
3. If manhole exists immediately adjacent to the property, the building lateral may be connected directly from the existing manhole to the right of way line.

6.13 BACKFILL

After the sewers and appurtenances have been properly constructed and inspected, (see Section 6.14 Inspection), the trench be backfilled and compacted as shown on Drawing No. E-1 and shall conform to Section 19-3.06 of the State Standards. The pipe shall be backfilled by hand shovel method to 1 foot over the pipe where clods exist in the spoil pile which may damage the pipe. (See note limiting pH in backfill, Section 6.6.) Above this hand placed backfill, all clods of any kind shall be removed which are larger than 4 inches in diameter.

Compaction tests on City contracts will be performed by the City. Compaction tests on other contracts shall be performed by a testing laboratory retained at the Developer's expense.

6.14 INSPECTION

All sewer lines shall be inspected for proper installation by the Engineer prior to backfilling of trenches.

All new sewer mains are to be inspected by television and videotaped at the contractor's expense.

The Contractor shall clean all lines of dirt and other debris, clean manholes, remove broken pipe, compact trench, raise manhole rims to grade, and correct all visible infiltration, leaks and deficiencies prior to inspection. Areas adjacent to manholes shall be leveled and made accessible to the television trailer. All inspection, including repeat work because the lines have not been cleaned, will be charged to the Developer on subdivision projects based on the time required of the crew and equipment.

All sewer mains and laterals shall be air tested as per the following paragraph.

Air tests shall be applied to length between adjacent manholes, and procedure shall be as follows:

Pressurize the test section to 3.5 psi and hold above 3.0 psi, for not less than 5 minutes. Add air if necessary to keep the pressure above 3.0 psi. At the end of this 5 minute saturation period, note the pressure (must be 3.0 psi min.) and begin the time period. If the pressure drops 0.5 psi in less the time given in the following table that section of pipe shall not have passed the test.

<u>Size</u>	<u>Minimum Time in Seconds</u>
8"	254
10"	310
12"	450

If the time for the pressure to drop 0.5 psi is 125% or less of the time indicated, the line shall immediately be re-pressurized to 3.0 psi and the test repeated. If, during the 5 minute

saturation period, the pressure drops less than 0.5 psi after the initial pressurization and air is not added, the section undergoing the test shall have passed.

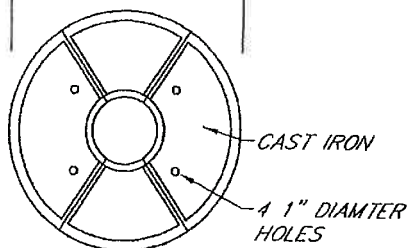
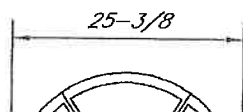
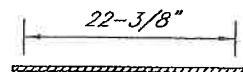
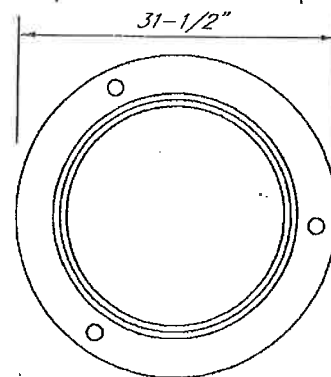
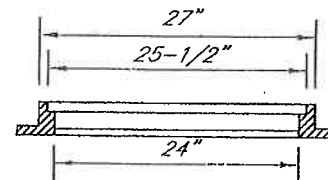
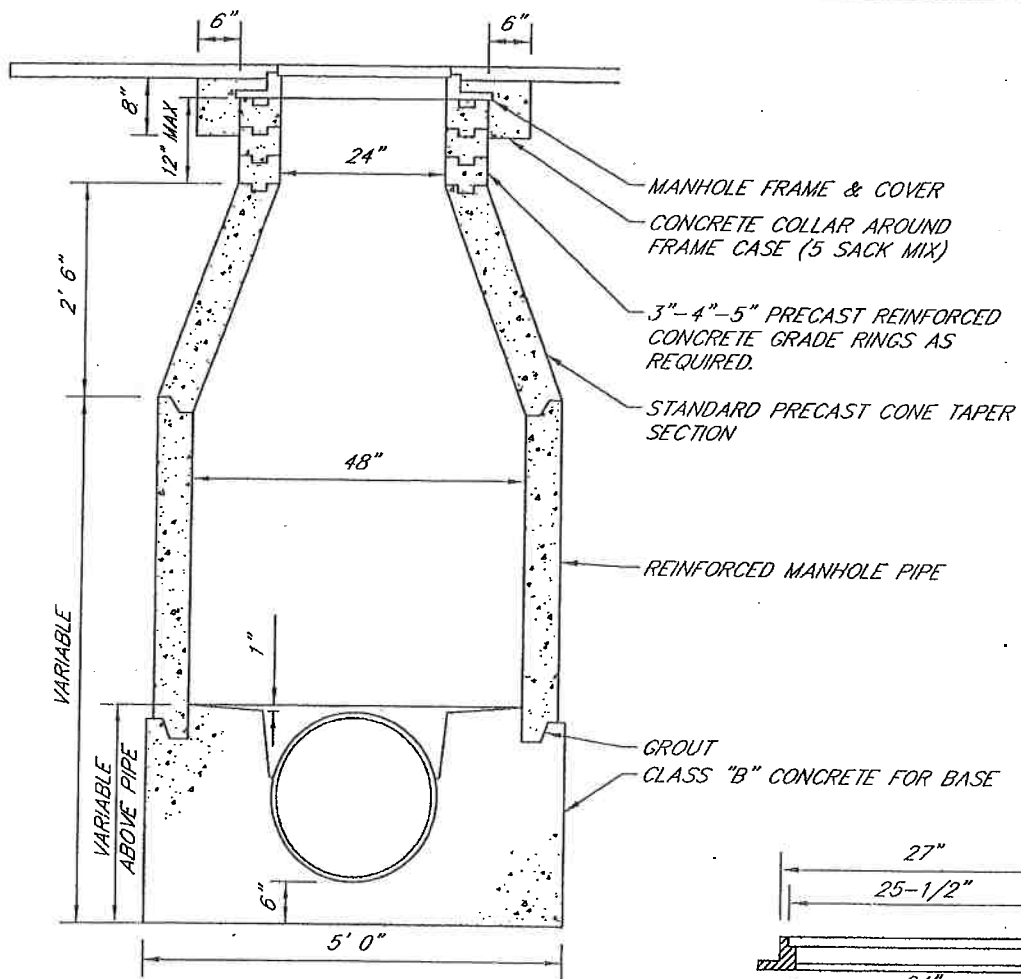
If the test is not passed, the leak shall be found and repaired to the satisfaction of the City, and the section retested.

6.15 GREASE TRAPS

Grease traps and interceptors shall be constructed by the Developer on private property 35 on the sewer service lateral for any facility whose operation will result in oil, grease, sand or other solids being discharged into the City's sanitary sewer system.

The traps or interceptor shall conform to Section 708 and 711 of the Uniform Plumbing Code, 1995 Edition, and it shall be constructed where it can be easily inspected for proper operation by the City.

For additional information regarding specific requirements for grease traps, contact the Building Official. A typical detail is shown herein as Detail SS.6.



COVER

FRAME

SOUTH BAY FOUNDARY NO. A-25
OR APPROVED EQUAL, LABELED SEWER



SANITARY SEWER MANHOLE

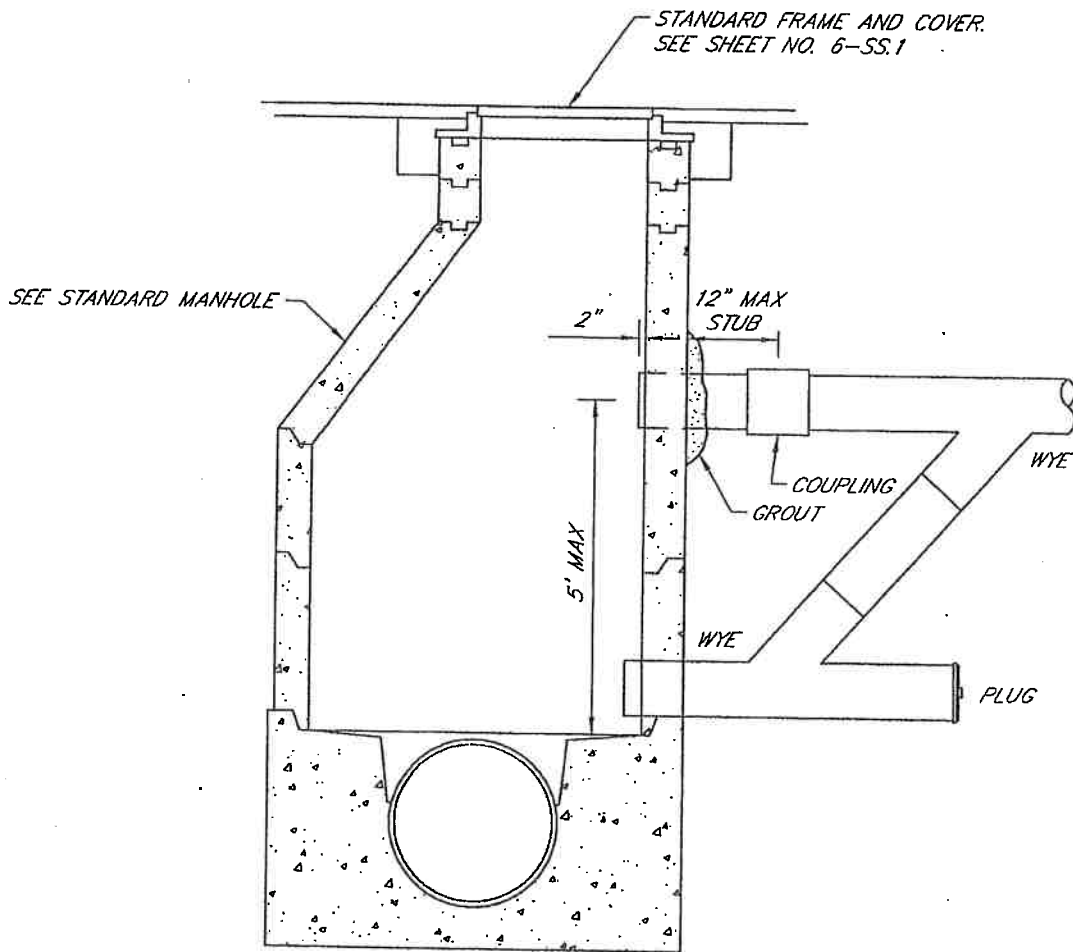
APPROVED BY: _____
DATE APPROVED: 6/2/07

CITY OF HUGHSON

DRAWN BY: A.D.R.
CHECKED BY: R.H.H.
SCALE: NONE
DATE: 1/04

STANDARD DETAIL

6-SS.1



NOTE:
THIS TYPE MANHOLE SHALL BE USED WHERE
DIFFERENCE IN INVERT ELEVATIONS AT
MANHOLE EXCEED 24".



SANITARY DROP MANHOLE

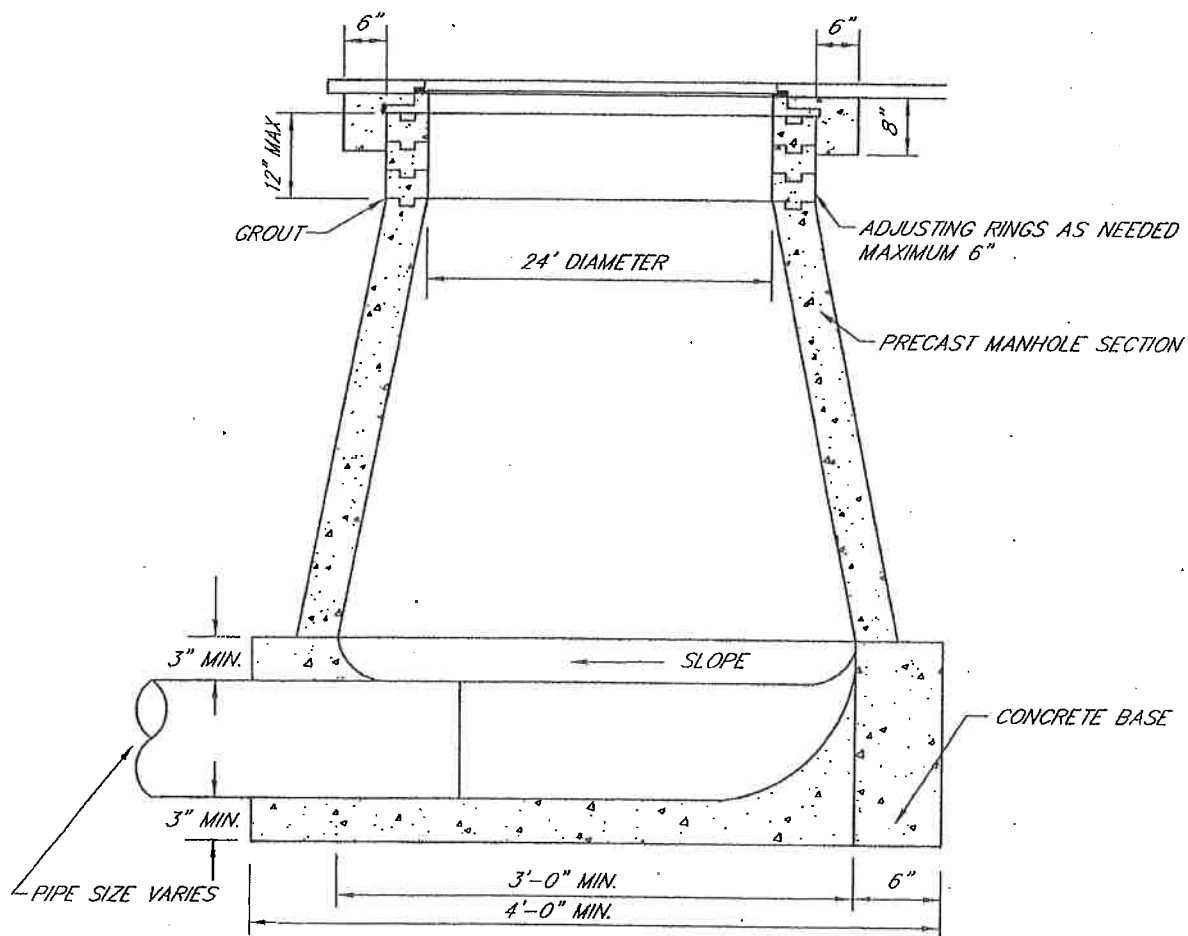
DRAWN BY: A.D.R.
CHECKED BY: R.H.H.
SCALE: NONE
DATE: 1/04

APPROVED BY: *[Signature]*
DATE APPROVED: 5/4/04

CITY OF HUGHSON

STANDARD DETAIL

6-SS.2



SANITARY TERMINAL MANHOLE

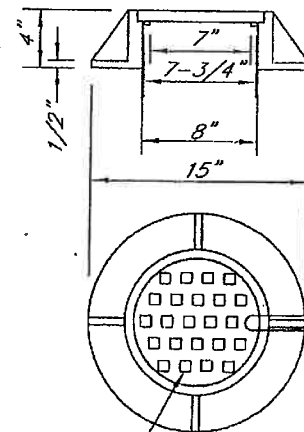
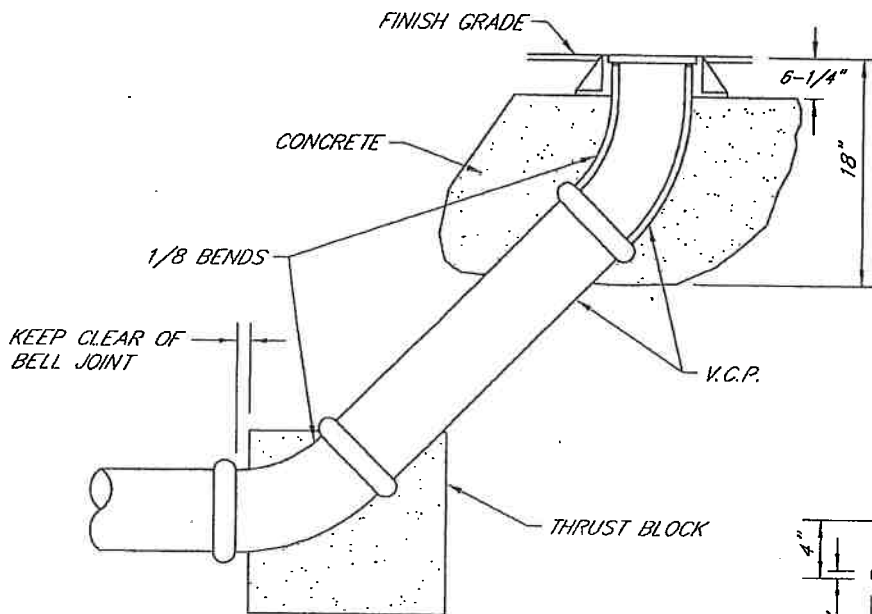
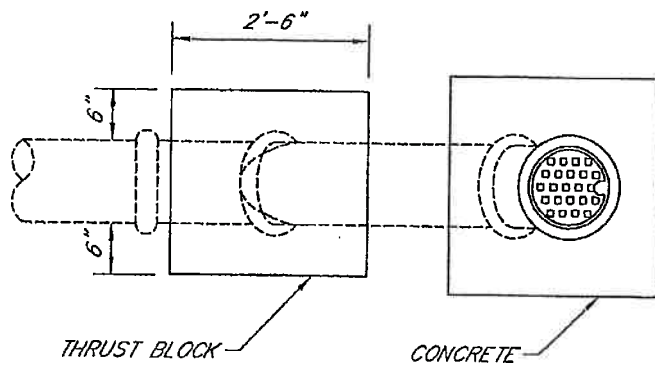
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CITY OF HUGHSON

DRAWN BY: A.D.R.
 CHECKED BY: R.H.H.
 SCALE: NONE
 DATE: 1/04

STANDARD DETAIL

6-SS.3




3/4" SQUARES SPACED
3/4" AS INDICATED
HT. 1/8"

PINKERTON FOUNDRY
OR APPROVED EQUAL



SANITARY SEWER LAMPHOLE

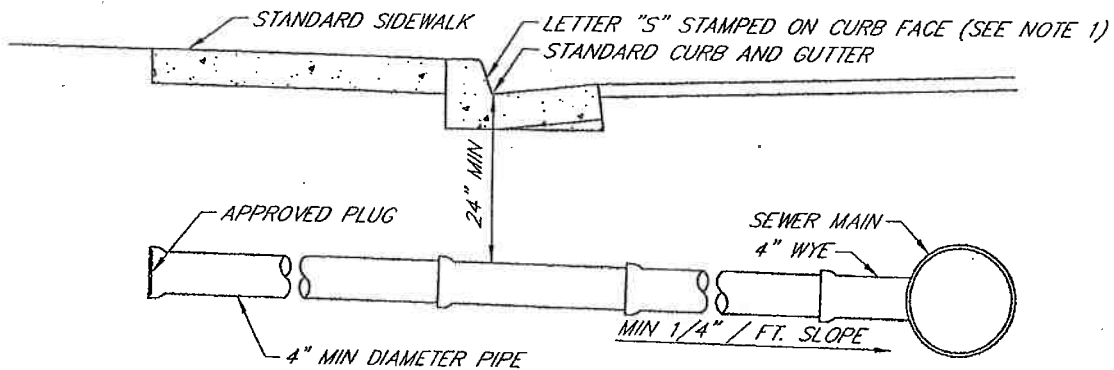
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DATE APPROVED: 8/12/07

CITY OF HUGHSON

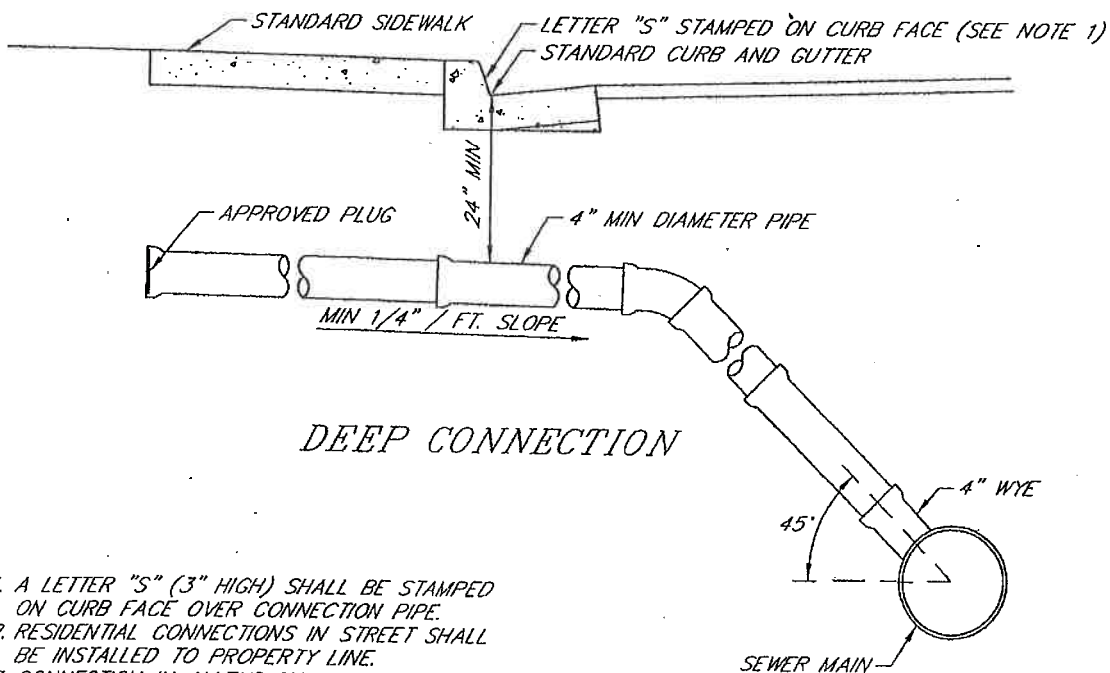
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CHECKED BY: R.H.H.
SCALE: NONE
DATE: 1/04

STANDARD DETAIL

6-SS.4



STANDARD CONNECTION



DEEP CONNECTION

1. A LETTER "S" (3" HIGH) SHALL BE STAMPED ON CURB FACE OVER CONNECTION PIPE.
2. RESIDENTIAL CONNECTIONS IN STREET SHALL BE INSTALLED TO PROPERTY LINE.
3. CONNECTION IN ALLEYS SHALL BE INSTALLED TO PROPERTY LINE.



HOUSE SERVICE LATERAL

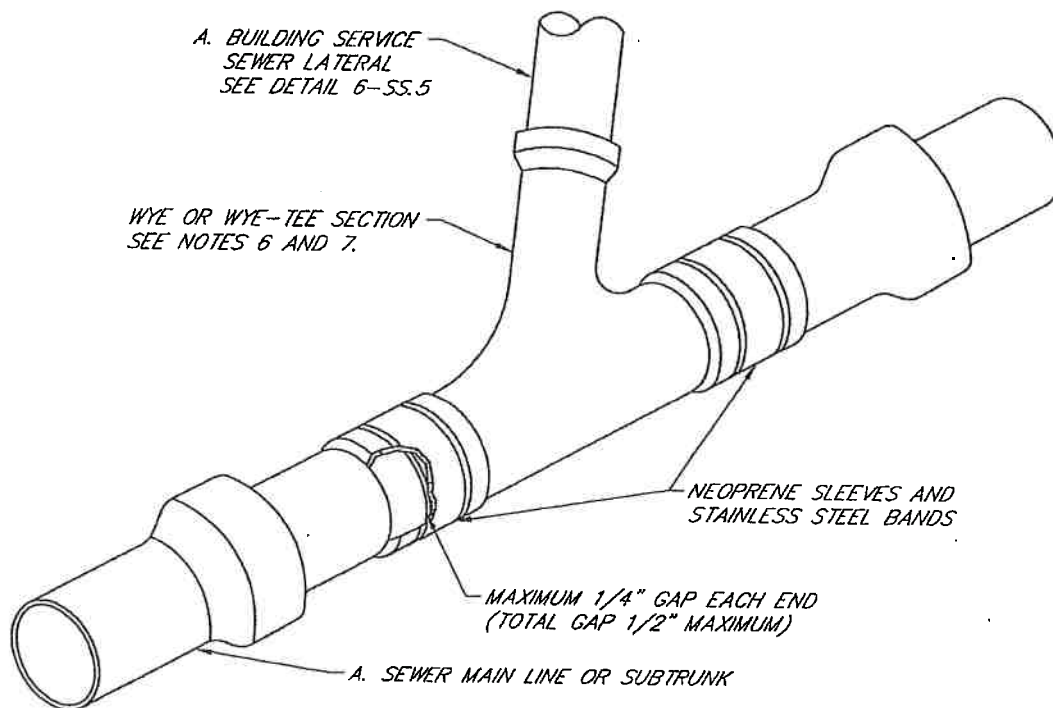
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SCALE: NONE
DATE: 1/04

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DATE APPROVED: 5/4/04

CITY OF HUGHSON

STANDARD DETAIL

6-SS.5



CASE A. - BUILDING SERVICE TO SEWER LATERAL CONNECTION
CASE B. - SEWER LATERAL TO SEWER MAIN CONNECTION

NOTES:

1. A SYNTHETIC RUBBER WEDGED INSERTED TEE, "TOP-TITE", MAY BE SUBSTITUTED FOR THE ABOVE PROCEDURE.
2. CUTS ARE TO BE MADE WITH A PIPE CUTTING TOOL.
3. THERE SHALL BE NO MORE THAN TWO BANDS IN FIVE FEET LENGTH OF SUB TRUNK RUN.
4. THERE SHALL BE NO MORE THAN TWO BANDS IN FIVE FEET LENGTH OF SEWER MAIN.
5. A MANHOLE SHALL BE REQUIRED TO CONNECT A SEWER LATERAL LARGER THAN 4" DIAMETER TO A SEWER MAIN, UNLESS OTHERWISE APPROVED BY THE CITY.
6. WYES SHALL BE INSTALLED WHEN CONNECTING TO 10" DIAMETER LINES OR SMALLER.
7. WYE-TEES CAN BE USED WHEN CONNECTING TO SEWER MAINS 5' OR DEEPER.



SEWER WYE CUT-IN DETAIL

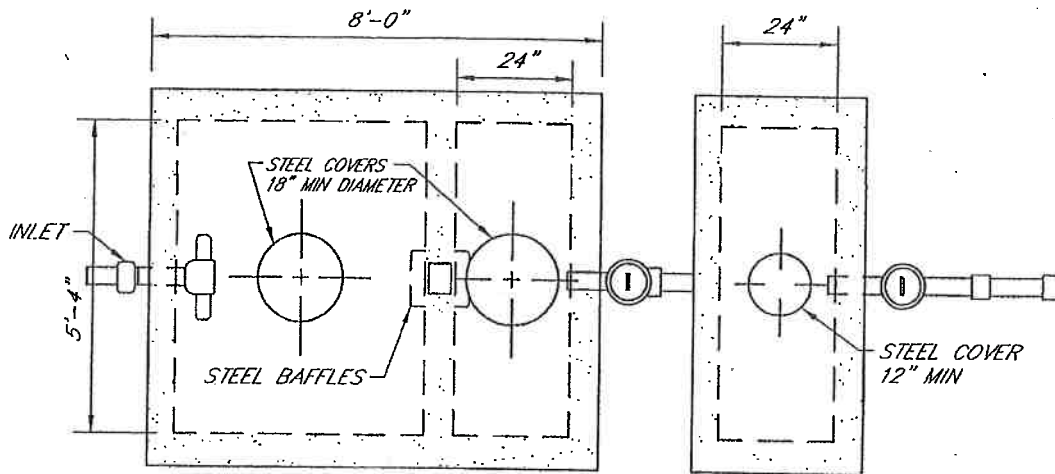
DRAWN BY: A.D.R.
CHECKED BY: R.H.H.
SCALE: NONE
DATE: 1/04

APPROVED BY: *[Signature]*
DATE APPROVED: 5/1/04

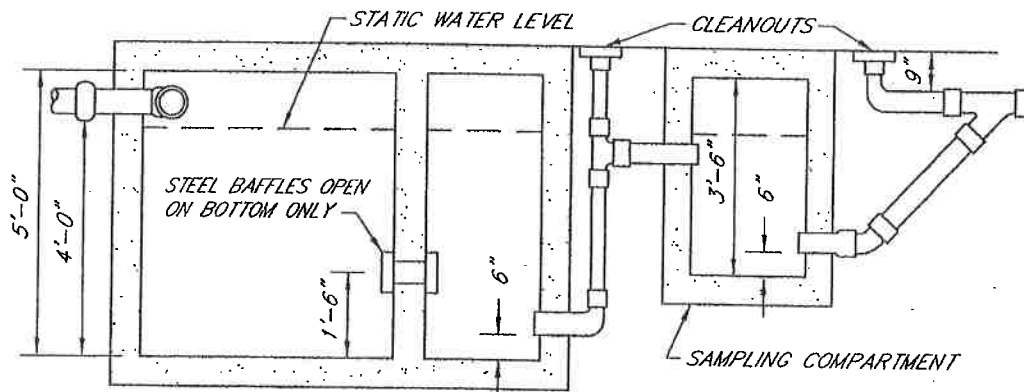
CITY OF HUGHSON

STANDARD DETAIL

6-SS.5A



PLAN



SECTION

1. SUGGESTED DETAIL. EACH UNIT SHALL BE DESIGNED BY A REGISTERED CIVIL ENGINEER AND APPROVED BY THE CITY.
2. DIMENSIONS SHOWN ARE FOR A MINIMUM SIZE (750 GALLON) TRAP.
3. CONCRETE SHALL BE MINIMUM 3000 PSI AT 28 DAYS.
4. ON 750 OR 800 GALLON TRAPS, SAMPLE BOX MAY BE ELIMINATED.
5. COVERS SHALL BE STEEL AND SHALL BE GAS TIGHT.
6. ALL WASTE SHALL ENTER TRAP THROUGH THE INLET PIPE ONLY.
7. REINFORCEMENT SHALL BE ADEQUATE FOR TRAFFIC CONDITIONS IN AREA WHERE TRAP IS LOCATED.



GREASE & SAND INTERCEPTOR

DRAWN BY: A.D.R.
CHECKED BY: R.H.H.
SCALE: NONE
DATE: 1/04

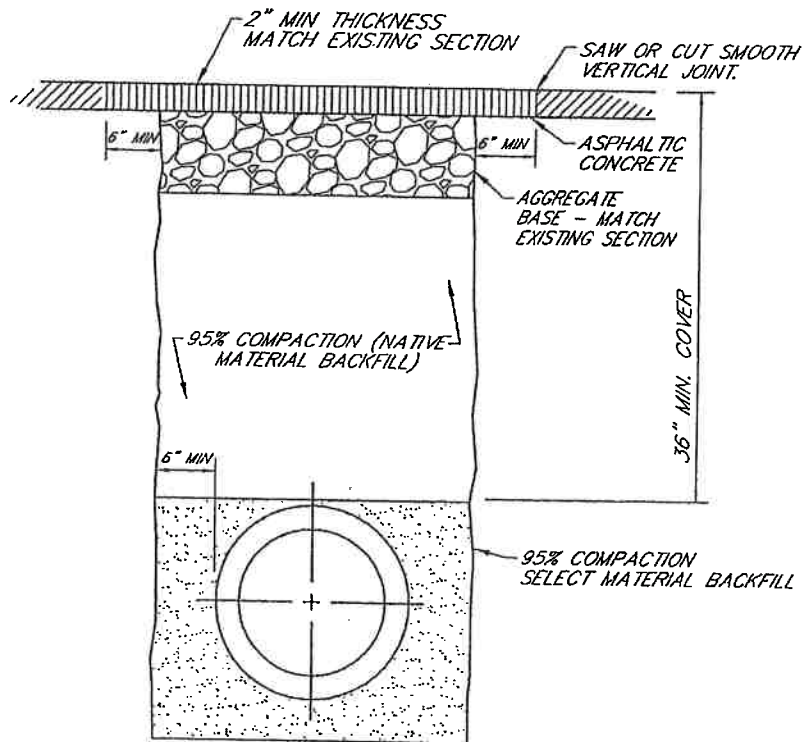
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DATE APPROVED: 5/1/04

CITY OF HUGHSON

STANDARD DETAIL

6-SS.6



BACKFILL AND STREET EXCAVATION

DRAWN BY: A.D.R.
CHECKED BY: R.H.H.
SCALE: NONE
DATE: 1/04

APPROVED BY: *[Signature]*
DATE APPROVED: 5/11/04

CITY OF HUGHSON

STANDARD DETAIL

6-SS.7