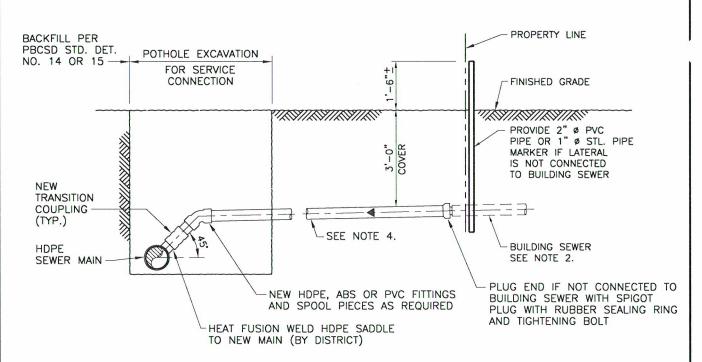


Wastewater Collection System STANDARD DETAILS

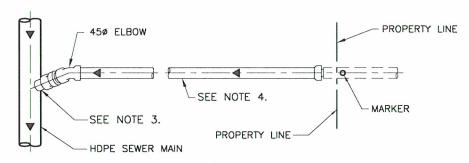
March 2013

STANDARD DRAWINGS

STANDARD DRAWING NO.	TITLE					
01	LATERAL SEWER SERVICE CONNECTION TO HDPE MAIN					
02	LATERAL SEWER SERVICE CONNECTION					
03	LATERAL SEWER SERVICE DEEP CUT CONNECTION TO HDPE MAIN					
04	LATERAL SEWER SERVICE DEEP CUT CONNECTION					
05	LATERAL SEWER SERVICE CONNECTION WITH GRADE CHANGE TO HDPE MAIN					
06	LATERAL SEWER SERVICE CONNECTION WITH GRADE CHANGE					
07	STANDARD SEWER MANHOLE					
08	SEWER DROP MANHOLE					
09	SHALLOW SEWER MANHOLE					
10	MANHOLE FRAME AND COVER					
11	BUILDING SEWER CLEANOUT					
12	BUILDING SEWER BACKWATER PROTECTION					
13	SEWER RELIEF VALVE					
14	TYPICAL TRENCH SECTION – IN UNPAVED AREAS					
15	TYPICAL TRENCH SECTION – IN PAVED AREAS					
16	PIPE ENCASEMENT CRADLE AND BACKFILL					
17	SEWER AND WATER MAIN SEPARATION REQUIREMENTS					
18	SEWER AND WATER MAIN SEPARATION REQUIREMENT EXCEPTIONS					
19	GREASE INTERCEPTOR – 750 GAL. TO 1,500 GAL. CAPACITY					



PROFILE



PLAN

NOTES:

- 1. SEWER LATERAL SHALL BE PROVIDED WITH A MINIMUM COVER OF 3'-0".
- LATERAL DEPTH AT PROPERTY LINE SHALL BE ADEQUATE TO MAINTAIN BUILDING SEWER MINIMUM SLOPE OF 1/4" PER FT. TO BUILDING PLUMBING.
- 3. SEWER LATERAL CONNECTIONS TO HDPE SEWER MAIN WILL BE PERFORMED BY PBCSD.
- 4. LATERAL SEWER:

MINIMUM PIPE DIAMETER = 4" DIAMETER

MINIMUM SLOPE - 4" DIAMETER = 0.020 FT./FT., 6" DIAMETER = 0.010 FT./FT.

PIPE MATERIAL: POLYVINYL CHLORIDE (PVC), ACRYLONITRILE BUTADIENE STYRENE (ABS), HIGH DENSITY POLYURETHANE (HDPE).



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

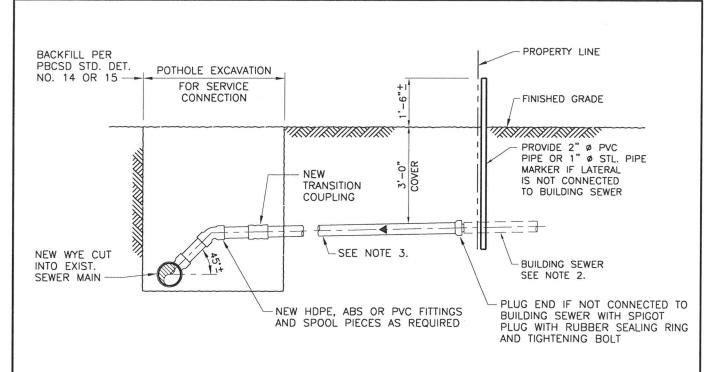
PEBBLE BEACH, CALIFORNIA

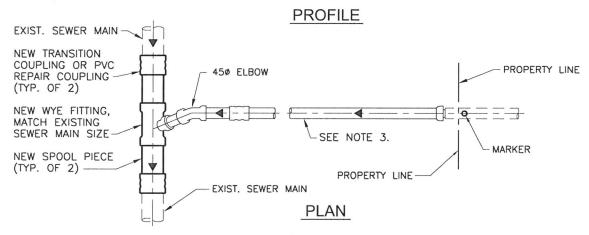
DATE: MARCH 2013

LATERAL SEWER SERVICE CONNECTION TO HDPE MAIN

STD. DWG. NO.

01





NOTES:

- 1. SEWER LATERAL SHALL BE PROVIDED WITH A MINIMUM COVER OF 3'-0".
- LATERAL DEPTH AT PROPERTY LINE SHALL BE ADEQUATE TO MAINTAIN BUILDING SEWER MINIMUM SLOPE OF 1/4" PER FT. TO BUILDING PLUMBING.
- LATERAL SEWER:

MINIMUM PIPE DIAMETER = 4" DIAMETER

MINIMUM SLOPE - 4" DIAMETER = 0.020 FT./FT., 6" DIAMETER = 0.010 FT./FT.

PIPE MATERIAL: POLYVINYL CHLORIDE (PVC), ACRYLONITRILE BUTADIENE STYRENE (ABS), HIGH DENSITY POLYURETHANE (HDPE).



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

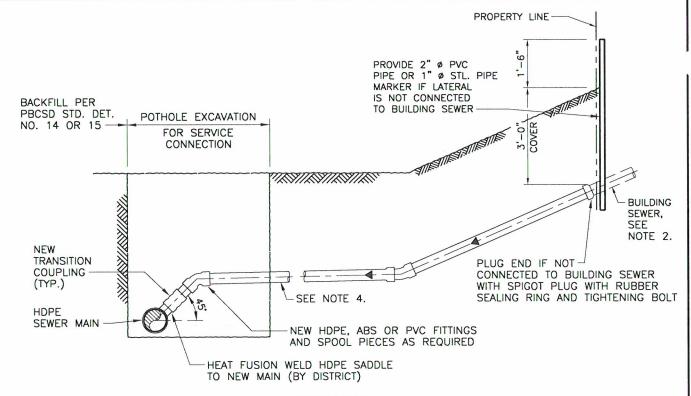
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

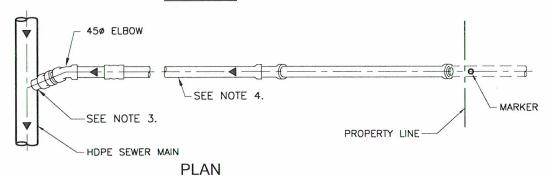
LATERAL SEWER SERVICE CONNECTION

STD. DWG. NO.

02



PROFILE



NOTES:

- 1. SEWER LATERAL SHALL BE PROVIDED WITH A MINIMUM COVER OF 3'-0".
- LATERAL DEPTH AT PROPERTY LINE SHALL BE ADEQUATE TO MAINTAIN BUILDING SEWER MINIMUM SLOPE OF 1/4" PER FT. TO BUILDING PLUMBING.
- 3. SEWER LATERAL CONNECTIONS TO HDPE SEWER MAIN WILL BE PERFORMED BY PBCSD.
- 4. LATERAL SEWER:

MINIMUM PIPE DIAMETER = 4" DIAMETER

MINIMUM SLOPE - 4" DIAMETER = 0.020 FT./FT., 6" DIAMETER = 0.010 FT./FT.

PIPE MATERIAL: POLYVINYL CHLORIDE (PVC), ACRYLONITRILE BUTADIENE STYRENE (ABS), HIGH DENSITY POLYURETHANE (HDPE).



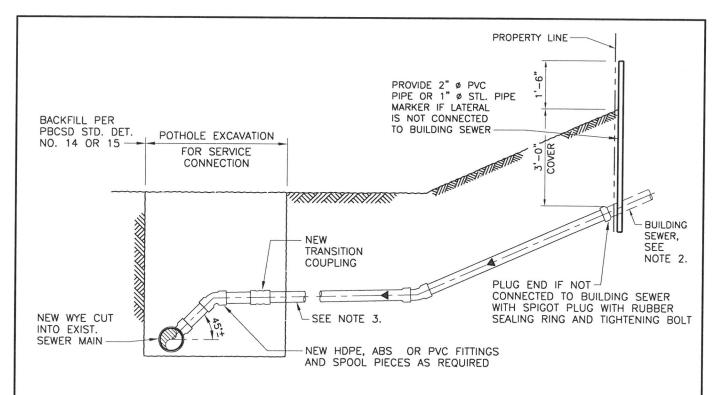
PEBBLE BEACH COMMUNITY SERVICES DISTRICT

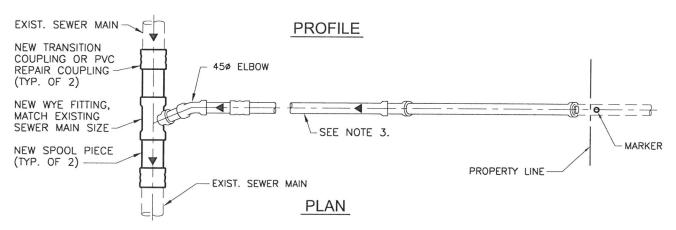
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013
APPROVED

LATERAL SEWER SERVICE DEEP CUT CONNECTION TO HDPE MAIN STD. DWG. NO.

03





NOTES:

- 1. SEWER LATERAL SHALL BE PROVIDED WITH A MINIMUM COVER OF 3'-0".
- 2. LATERAL DEPTH AT PROPERTY LINE SHALL BE ADEQUATE TO MAINTAIN BUILDING SEWER MINIMUM SLOPE OF 1/4" PER FT. TO BUILDING PLUMBING.
- 3. LATERAL SEWER:

MINIMUM PIPE DIAMETER = 4" DIAMETER

MINIMUM SLOPE -4" DIAMETER = 0.020 FT./FT., 6" DIAMETER = 0.010 FT./FT.

PIPE MATERIAL: POLYVINYL CHLORIDE (PVC), ACRYLONITRILE BUTADIENE STYRENE (ABS), HIGH DENSITY POLYURETHANE (HDPE).



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

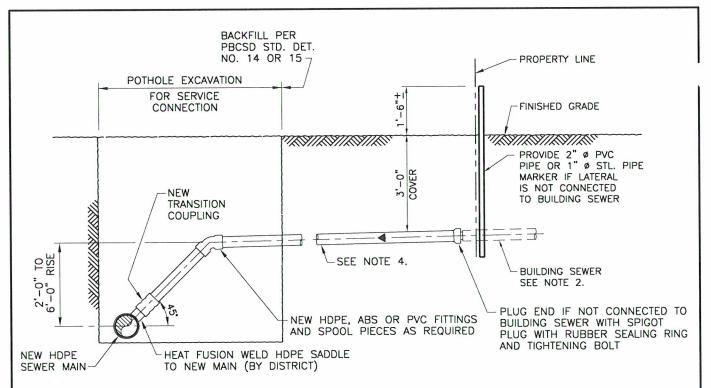
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

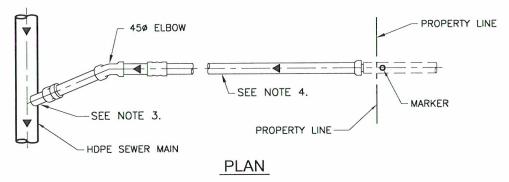
LATERAL SEWER SERVICE DEEP CUT CONNECTION

STD. DWG. NO.

04



PROFILE



NOTES:

- 1. SEWER LATERAL SHALL BE PROVIDED WITH A MINIMUM COVER OF 3'-0".
- LATERAL DEPTH AT PROPERTY LINE SHALL BE ADEQUATE TO MAINTAIN BUILDING SEWER MINIMUM SLOPE OF 1/4" PER FT. TO BUILDING PLUMBING.
- 3. SEWER LATERAL CONNECTIONS TO HDPE SEWER MAIN WILL BE PERFORMED BY PBCSD.
- 4. LATERAL SEWER:

MINIMUM PIPE DIAMETER = 4" DIAMETER

MINIMUM SLOPE - 4" DIAMETER = 0.020 FT./FT., 6" DIAMETER = 0.010 FT./FT.

PIPE MATERIAL: POLYVINYL CHLORIDE (PVC), ACRYLONITRILE BUTADIENE STYRENE (ABS), HIGH DENSITY POLYURETHANE (HDPE).



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

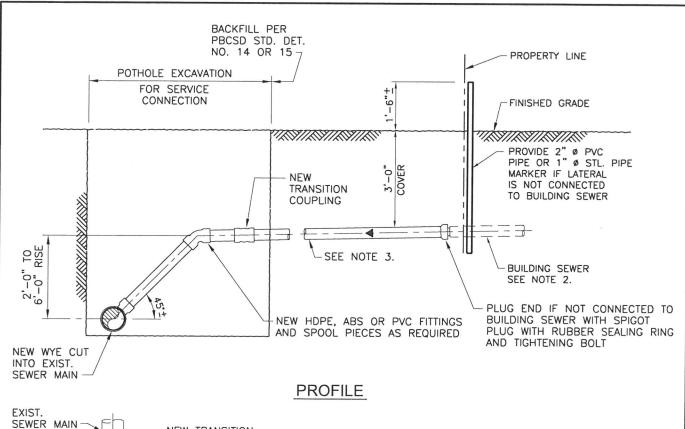
PEBBLE BEACH, CALIFORNIA

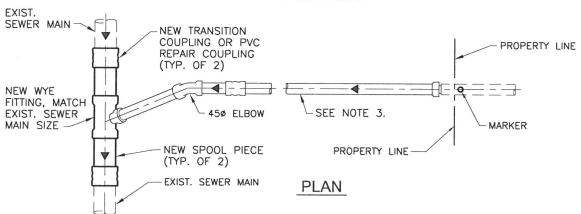
DATE: MARCH 2013

LATERAL SEWER SERVICE CONNECTION WITH GRADE CHANGE TO HDPE MAIN

STD. DWG. NO.

05





NOTES:

- 1. SEWER LATERAL SHALL BE PROVIDED WITH A MINIMUM COVER OF 3'-0".
- LATERAL DEPTH AT PROPERTY LINE SHALL BE ADEQUATE TO MAINTAIN BUILDING SEWER MINIMUM SLOPE OF 1/4" PER FT. TO BUILDING PLUMBING.
- 3. LATERAL SEWER:

MINIMUM PIPE DIAMETER = 4" DIAMETER

MINIMUM SLOPE - 4" DIAMETER = 0.020 FT./FT., 6" DIAMETER = 0.010 FT./FT.

PIPE MATERIAL: POLYVINYL CHLORIDE (PVC), ACRYLONITRILE BUTADIENE STYRENE (ABS), HIGH DENSITY POLYURETHANE (HDPE).



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

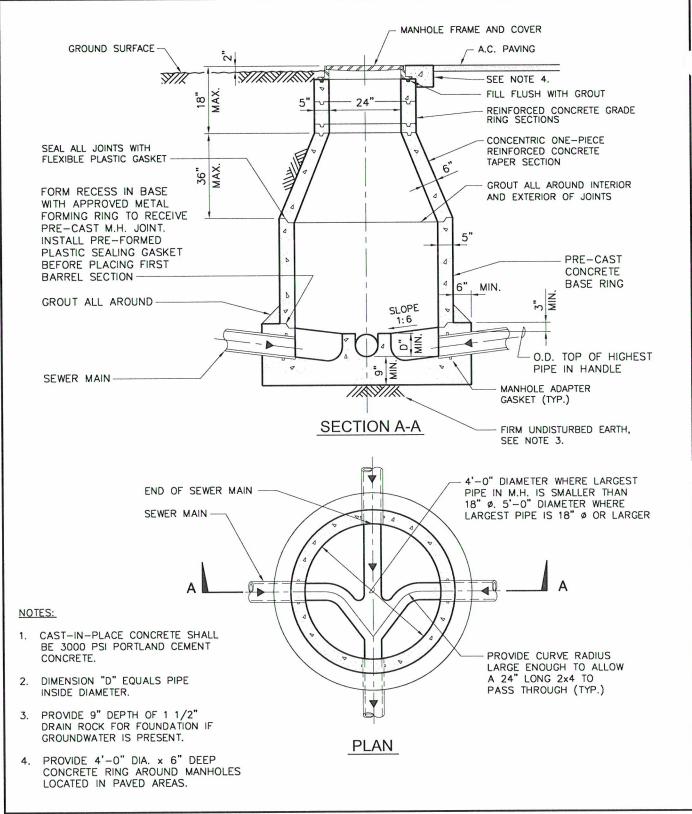
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

LATERAL SEWER SERVICE CONNECTION WITH GRADE CHANGE

STD. DWG. NO.

06





PEBBLE BEACH COMMUNITY SERVICES DISTRICT

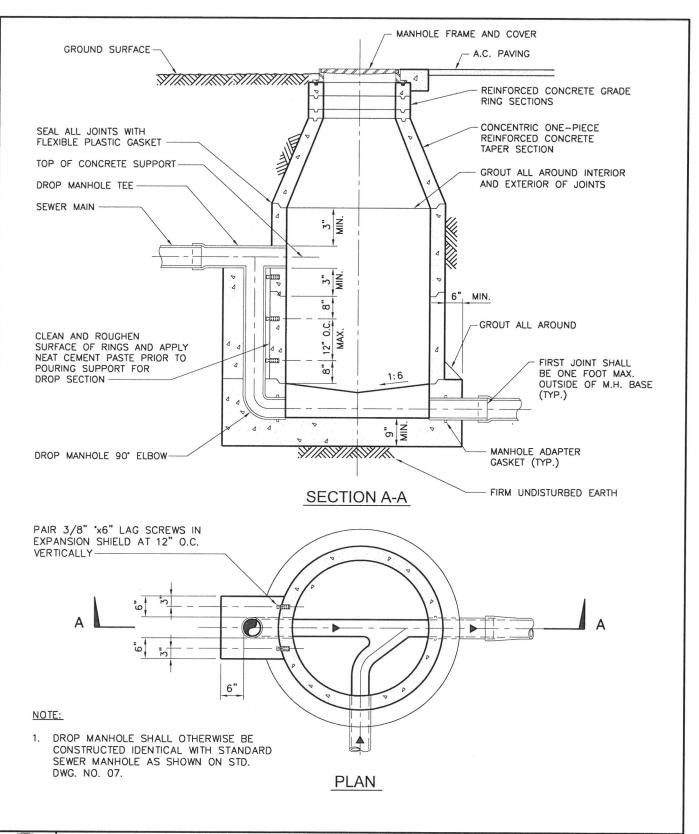
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013
APPROVED

STANDARD SEWER MANHOLE

STD. DWG. NO.

07





PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

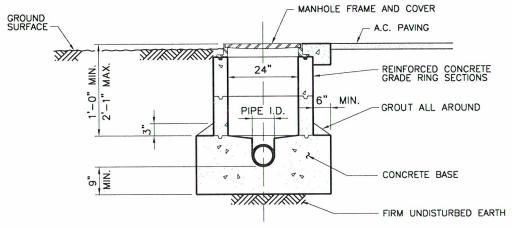
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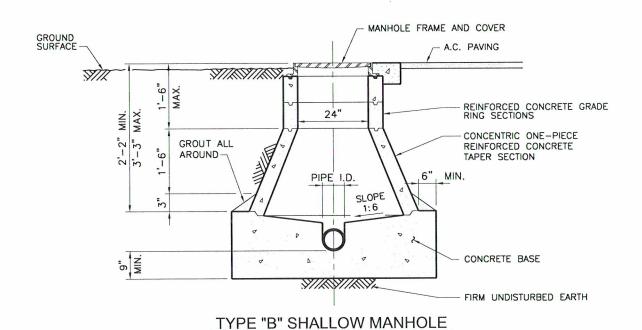
SEWER DROP MANHOLE

STD. DWG. NO.

80



TYPE "A" SHALLOW MANHOLE



NOTE:

SHALLOW SEWER MANHOLES SHALL OTHERWISE BE CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS FOR STANDARD SEWER MANHOLES AS INDICATED ON STANDARD DRAWING NO. 07.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

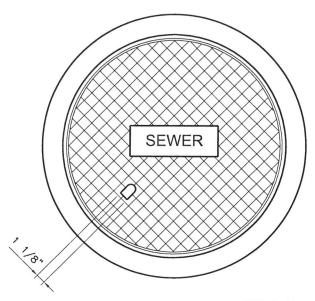
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

SHALLOW SEWER MANHOLE

STD. DWG. NO.

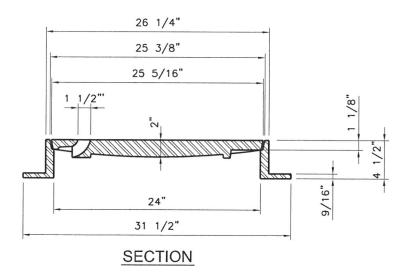
09



NOTES

PLAN

- 1. PHOENIX IRON WORKS P-1001, ALHAMBRA FOUNDRY CO. A-1175, SOUTHBAY FOUNDRY CO. A 42, OR APPROVED EQUAL, 24" FULL TRAFFIC TYPE NON-ROCKING MANHOLE FRAME AND COVER, MACHINED BEARING SURFACES, DESIGND FOR H-20 HIGHWAY LOADING.
- 2. CASTINGS SHALL BE DIPPED IN BLACK BITUMINOUS PAINT.





PEBBLE BEACH COMMUNITY SERVICES DISTRICT

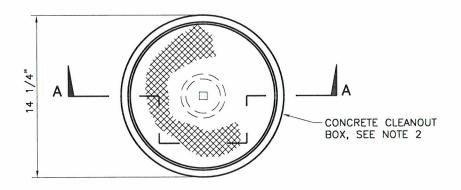
PEBBLE BEACH, CALIFORNIA

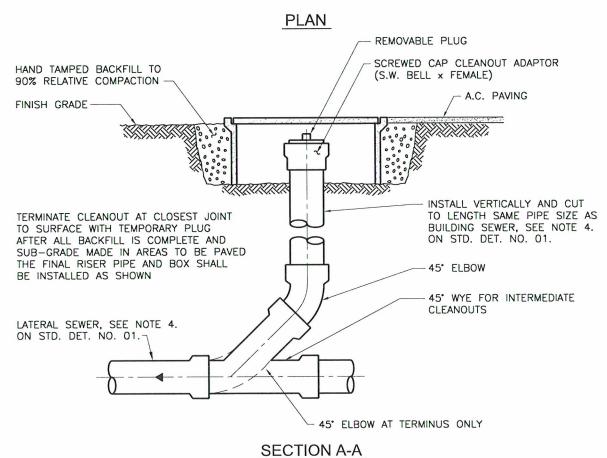
DATE: MARCH 2013 APPROVED

MANHOLE FRAME AND COVER

STD. DWG. NO.

10





NOTES

- CLEANOUT BOX SHALL BE CHRISTY G5 TRAFFIC VALVE BOX, OR APPROVED EQUAL, WITH IRON LID MARKED SEWER OR CLEANOUT.
- 2. PROVIDE CAST IRON OR STEEL CHECKER PLATE TRAFFIC COVER IN AREAS SUBJECT TO VEHICLE TRAFFIC, PROVIDE CONCRETE COVER IN NON-TRAFFIC AREAS.
- 3. SLOPE FINISHED GRAD AWAY FORM CLEANOUT BOX.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

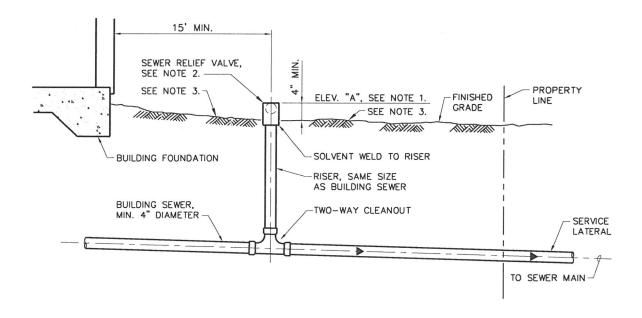
DATE: MARCH 2013

PPROVE

BUILDING SEWER CLEANOUT

STD. DWG. NO.

11



NOTES:

- ELEVATION "A" SHALL BE MINIMUM 6" LOWER THAN THE LOWEST PLUMBING FIXTURE OR DRAIN CONNECTED TO THE BUILDING SEWER.
- INSTALL SEWER RELIEF VALVE IN ACCORDANCE WITH MANUFACTURERS DIRECTIONS.
- GRADE AREA TO DRAIN AWAY FROM BACKWATER VALVE (OR SEWER RELIEF VALVE) AND BUILDING.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

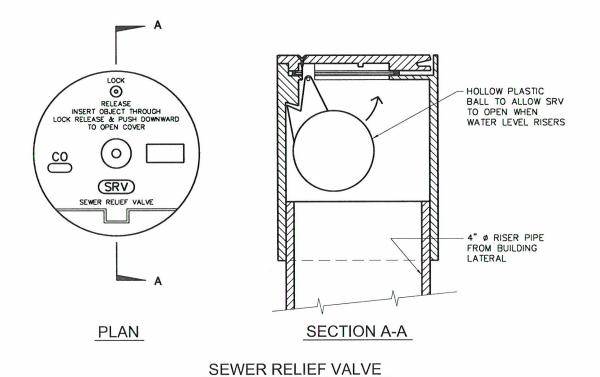
DATE: MARCH 2013

PPROVED

BUILDING SEWER
BACKWATER PROTECTION

STD. DWG. NO.

12





PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

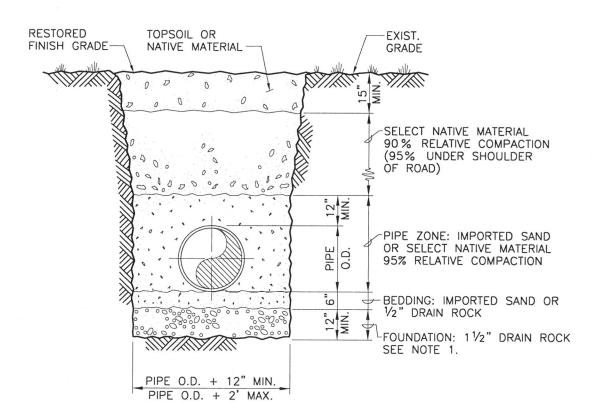
DATE: MARCH 2013

PPROVED

SEWER RELIEF VALVE

STD. DWG. NO.

13



TYPICAL TRENCH SECTION IN UNPAVED AREAS

NOTE:

1. FOUNDATION REQUIRED ONLY IN UNSTABLE SOIL CONDITIONS AS DETERMINED BY THE DISTRICT ENGINEER.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

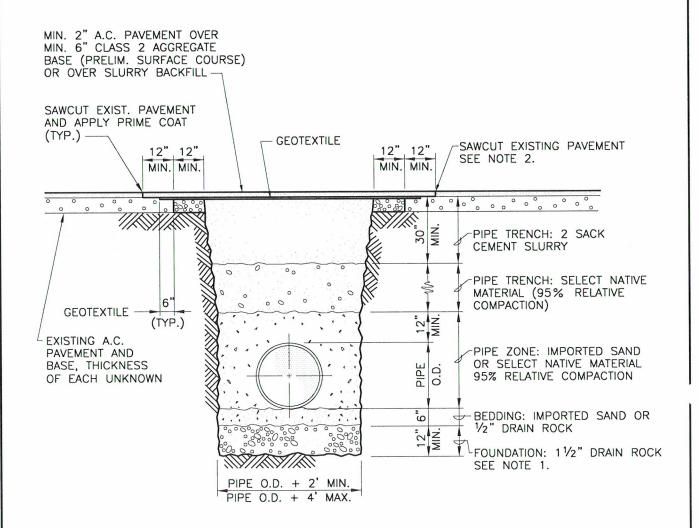
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

TYPICAL TRENCH SECTION IN UNPAVED AREAS

STD. DWG. NO.

14



TYPICAL TRENCH SECTION IN PAVED AREAS

NOTES:

- FOUNDATION REQUIRED ONLY IN UNSTABLE SOIL CONDITIONS AS DETERMINED BY THE DISTRICT ENGINEER.
- 2. MAKE SECOND SAWCUT IN EXIST. A.C. PAVEMENT PRIOR TO PAVEMENT RESTORATION TO REMOVE BROKEN EDGES AND PROVIDE STRAUGHT LINE.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

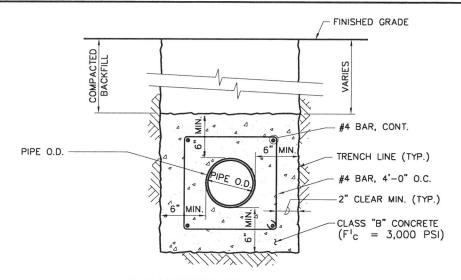
PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

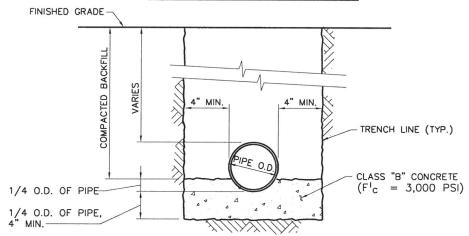
TYPICAL TRENCH SECTION IN PAVED AREAS

STD. DWG. NO.

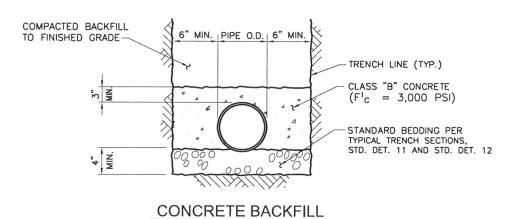
15



CONCRETE ENCASEMENT



CONCRETE CRADLE





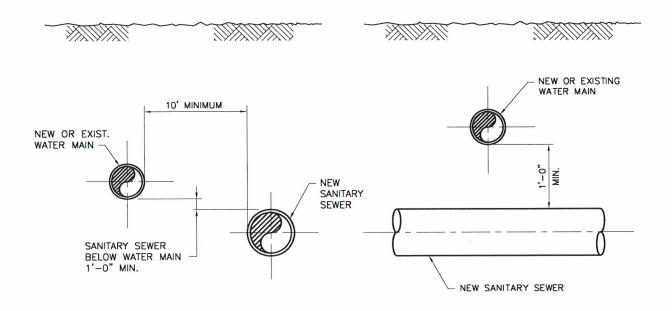
PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013 APPROVED

PIPE ENCASEMENT CRADLE AND BACKFILL STD. DWG. NO.

16



PARALLEL CONSTRUCTION

PERPENDICULAR CONSTRUCTION

NOTES

- SEWER SHOULD BE LOCATED AS FAR AWAY FROW WATER MAINS AS IS REASONABLY POSSIBLE IN BOTH THE HORIZONTAL AND VERTICAL DIRECTIONS.
- PARALLEL CONSTRUCTION
 THE HORIZONTAL DISTANCE BETWEEN PRESSURE WATER
 MAINS AND SEWER LINES SHALL BE AT LEAST TEN FEET, UNLESS OTHERWISE
 ALLOWED PER PBCSD STD. DETAIL NO. 16.
- 3. PERPENDICULAR CONSTRUCTION (A) WHEN A SEWER LINE MUST CROSS A WATER LINE THE CROSSING SHOULD BE AS CLOSE AS POSSIBLE TO BEING PERPENDICULAR.

 (B) THE TOP OF THE SEWER LINE SHALL BE AT LEAST ONE FOOT BELOW THE BOTTOM OF THE WATER LINE.

 (C) WHEN A SEWER FORCE MAIN CROSSES UNDER AN EXISTING WATER MAIN ALL PORTIONS OF THE SEWER FORCE MAIN WITHIN TEN FEET OF EITHER SIDE OF THE WATER MAIN MAIN SHALL BE ENCASED IN A CONTINUOUS STEEL PIPE SLEEVE WITH A MINIMUM WALL THICKNESS 1/4 INCH.
- 4. SEWER LINES DISCUSSED ABOVE INCLUDE GRAVITY MAINS, GRAVITY LATERALS, FORCE MAINS AND PRESSURE LATERALS.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

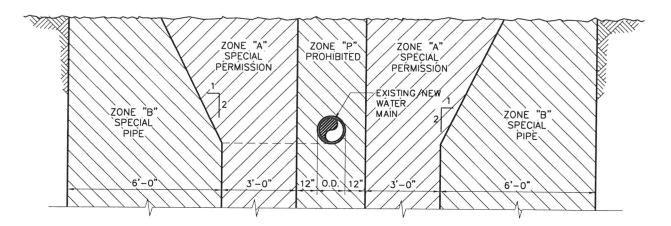
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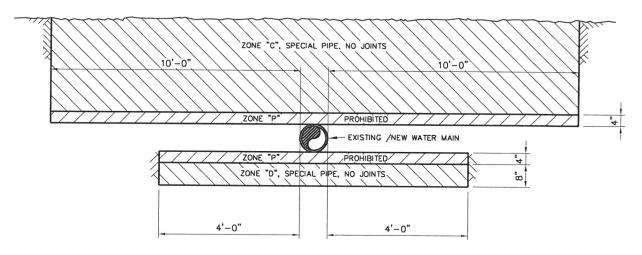
SEWER AND WATER MAIN SEPARATION REQUIREMENTS

STD. DWG. NO.

17



PARALLEL CONSTRUCTION



PERPENDICULAR CONSTRUCTION (CROSSINGS)

WHERE THERE IS NO ALTERNATIVE BUT TO INSTALL SEWERS AT LESS THAN MINIMUM SPECIFICATIONS PER STD. DWG. NO. 15. NOTE:

ZONE

- "p" SEWER LINES SHALL NOT BE PERMITTED IN THIS ZONE.
- SEWER LINES PARALLEL TO WATER MAINS SHALL NOT BE PERMITTED IN THIS ZONE WITHOUT APPROVAL FROM THE STATE DEPARTMENT OF PUBLIC HEALTH AND THE WATER SUPPLIER.
- "B" A SEWER LINE PLACED PARALLEL TO A WATER MAIN IN THIS ZONE SHALL BE CONSTRUCTED OF PVC SEWER PIPE WITH RUBBER RING JOINTS (PER ASTM D3034) OR OTHER APPROVED PIPE MATERIAL.
- A SEWER LINE CROSSING ABOVE A WATER MAIN IN THIS ZONE SHALL BE CONSTRUCTED OF A CONTINUOUS SECTION OF CLASS 200 (SDR 14 PER AWWA C900) PVC PIPE, OR OTHER APPROVED PIPE MATERIAL, CENTERED OVER THE PIPE BEING CROSSED, OR ANY SEWER PIPE IN A CONTINUOUS STEEL SLEEVE, MIN. WALL THICKNESS OF 1/4 INCH.
- "D" A SEWER LINE CROSSING BELOW A WATER MAIN IN THIS ZONE SHALL BE CONSTRUCTED AS PER ZONE "C".



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

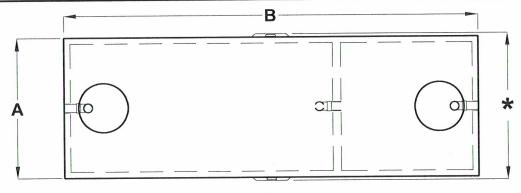
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APPROVED

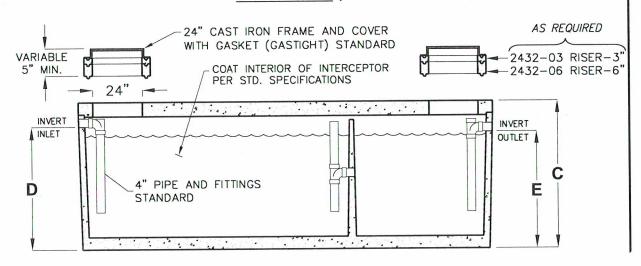
SEWER AND WATER MAIN SEPARATION REQUIREMENT EXCEPTIONS

STD. DWG. NO.

18



PLAN VIEW (COVERS REMOVED)



SIDE SECTION VIEW

MODEL NUMBER	LIQUID CAPACITY (GALLONS)	DIM A	DIM B	DIM C	DIM D	DIM E	MINIMUM EXCAVATION WIDTH	MINIMUM EXCAVATION LENGTH	DEPTH OF BURY
JP750EE-G	750	4'-0"	8'-1"	6'-0"	5'-0"	4'-9"	5'-3"	9'-1"	1' TO 6'
JP1000EE-G	1000	5'-1"	8'-2"	6'-0"	5'-0"	4'-9"	6'-4"	9'-2"	1' TO 6'
JP1200EE-G	1200	5'-9"	8'-6"	6'-0"	5'-0"	4'-9"	7'-0"	9'-6"	1' TO 6'
JP1500EE-G	1500	5'-7"	10'-8"	6'-0"	5'-0"	4'-9"	6'-10"	11'-8"	1' TO 6'

DESIGN LOAD: H-20 TRAFFIC WITH DRY SOIL CONDITIONS (WATER LEVEL BELOW TANK).

NOTES:

- 1. GREASE INTERCEPTOR SHALL BE JENSEN PRECAST DRAWING JP750EPE JP1500EPE, OR APPROVED EQUAL.
- 2. SIZE INTERCEPTOR PER STANDARD SPECIFICATIONS.
- 3. PLACE INTERCEPTOR ON LEVEL UNDISTURBED GROUND OR APPROVED COMPACTED BACKFILL.
- 4. ALL JOINTS IN PRECAST SECTIONS SHALL BE SEALED WITH BUTYL ROPE MASTIC. APPLY CEMENT MORTAR GROUT TO INTERIOR AND EXTERIOR OF ALL JOINTS.
- 5. LOCATED INTERCEPTOR AS CLOSE AS POSSIBLE TO GREASE SOURCE. PROVIDE EASY PUMPER TRUCK ACCESS.



PEBBLE BEACH COMMUNITY SERVICES DISTRICT

PEBBLE BEACH, CALIFORNIA

DATE: MARCH 2013

GREASE INTERCEPTOR 750 GAL. TO 1,500 GAL. CAPACITY STD. DWG. NO.

19