

CITY OF HUNTINGTON BEACH

DEPARTMENT OF PUBLIC WORKS

12" WATERLINE REPLACEMENT AT FOUNTAIN VALLEY CHANNEL (D-05)

GARFIELD AVENUE

STA. 9+27.15 TO STA. 16+56.15

MSC NO. 476

GENERAL NOTES:

- THE EXISTENCE AND LOCATION OF ANY UNDERGROUND UTILITY PIPES OR STRUCTURES SHOWN ON THESE PLANS ARE BASED ON A SEARCH OF THE AVAILABLE RECORDS. UTILITY SURFACE FEATURES ARE BASED ON FIELD OBSERVATION. THE CONTRACTOR SHALL TAKE DUE PRECAUTIONARY MEASURES TO PROTECT ALL UTILITY LINES, SHOWN OR NOT SHOWN ON THESE PLANS.
- PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST COMPLETE AND SUBMIT TO THE AGENCY THE UNDERGROUND SERVICE ALERT IDENTIFICATION FORM WHICH HAS BEEN PROVIDED IN THE PROJECT SPECIFICATIONS.
- ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE AGENCY'S STANDARD PLANS, PROJECT PLANS, SPECIFICATIONS, AND CONTRACT DOCUMENTS. THE CONTRACTOR SHALL KEEP A COPY OF THIS INFORMATION ON THE JOB SITE.
- A PRE-CONSTRUCTION MEETING SHALL BE HELD A MINIMUM OF 48 HOURS PRIOR TO THE COMMENCING OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE AGENCY'S CONSTRUCTION MANAGER, ERIC CHARLONNE, @ (714) 536-5430, A MINIMUM OF 5 WORKING DAYS PRIOR TO THE START OF CONSTRUCTION AND 48 HOURS IN ADVANCE FOR PROJECT INSPECTION. SURVEY STAKING SHALL BE PROVIDED BY THE CONTRACTOR.
- PROJECT STATIONING REFERS TO THE CENTERLINE OF STREET.
- STOCKPILING OF REMOVAL MATERIAL WILL NOT BE ALLOWED IN OR AROUND THE PROJECT SITE.
- DOORKNOB NOTIFICATION OF RESIDENTS AND BUSINESS OWNERS DIRECTLY AFFECTED BY CONSTRUCTION AND THE POSTING OF "NO PARKING" NOTIFICATION SIGNS SHALL OCCUR A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.
- PUBLIC AND/OR PRIVATE IMPROVEMENTS TO BE PROTECTED IN PLACE ARE NOT LIMITED TO THOSE SPECIFICALLY CALLED OUT ON THE PLANS. ALL EXISTING IMPROVEMENTS WHICH ARE NOT IDENTIFIED FOR REMOVAL AND/OR RECONSTRUCTION ON THE PLANS AND/OR SPECIFICATIONS SHALL BE PROTECTED IN PLACE AT THE CONTRACTOR'S EXPENSE PER SECTION 7-9 OF THE SPECIFICATIONS.

APPROVED: *Travis K. Hopkins* 8/9/2010
 for TRAVIS K. HOPKINS, P.E. DATE
 DIRECTOR OF PUBLIC WORKS

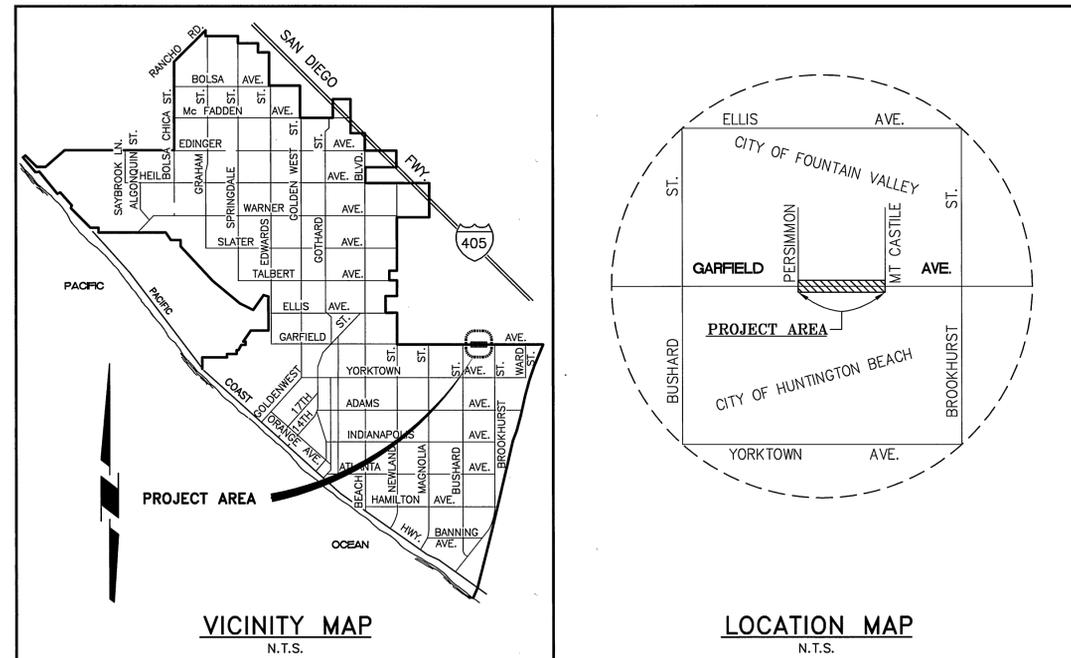
SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE - STA. 9+27.15 TO STA. 16+56.15
3	DETAIL SHEET

NPDES GENERAL NOTES:

- SEDIMENT FROM AREAS DISTURBED BY CONSTRUCTION SHALL BE RETAINED ON SITE USING STRUCTURAL CONTROLS AS REQUIRED BY THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
- STOCKPILES OF SOIL SHALL BE PROPERLY CONTAINED TO MINIMIZE SEDIMENT TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES OR ADJACENT PROPERTIES VIA RUNOFF, VEHICLE TRACKING, OR WIND AS REQUIRED BY THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
- APPROPRIATE BMPs FOR CONSTRUCTION-RELATED MATERIALS, WASTES, SPILLS OR RESIDUES SHALL BE IMPLEMENTED TO MINIMIZE TRANSPORT FROM THE SITE TO STREETS, DRAINAGE FACILITIES, OR ADJOINING PROPERTY BY WIND OR RUNOFF AS REQUIRED BY THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
- RUNOFF FROM EQUIPMENT AND VEHICLE WASHING SHALL BE CONTAINED AT CONSTRUCTION SITES AND MUST NOT BE DISCHARGED TO RECEIVING WATERS OR TO THE LOCAL STORM DRAIN SYSTEM.
- ALL CONSTRUCTION CONTRACTOR AND SUBCONTRACTOR PERSONNEL ARE TO BE MADE AWARE OF THE REQUIRED BEST MANAGEMENT PRACTICES AND GOOD HOUSEKEEPING MEASURES FOR THE PROJECT SITE AND ANY ASSOCIATED CONSTRUCTION STAGING AREAS.
- AT THE END OF EACH DAY OF CONSTRUCTION ACTIVITY ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND PROPERLY DISPOSED IN TRASH OR RECYCLE BINS.
- CONSTRUCTION SITES SHALL BE MAINTAINED IN SUCH A CONDITION THAT A STORM DOES NOT CARRY WASTES OR POLLUTANTS OFF THE SITE. DISCHARGES OF MATERIALS OTHER THAN STORMWATER (NON-STORMWATER DISCHARGES) ARE PROHIBITED EXCEPT AS AUTHORIZED BY AN INDIVIDUAL NPDES PERMIT OR THE STATEWIDE GENERAL CONSTRUCTION STORMWATER PERMIT.
- POTENTIAL POLLUTANTS INCLUDE, BUT ARE NOT LIMITED TO: SOLID OR LIQUID CHEMICAL SPILLS, WASTES FROM PAINTS, STAINS, SEALANTS, SOLVENTS, DETERGENTS, GLUES, LIME, PESTICIDE, HERBICIDE, FERTILIZERS, WOOD PRESERVATIVES AND ASBESTOS FIBERS, PAINT FLAKES OR STUCCO FRAGMENTS; FUELS, OILS, LUBRICANTS, AND HYDRAULIC, RADIATOR OR BATTERY FLUIDS; CONCRETE, AND RELATED CUTTING OR CURING RESIDUES; FLOATABLE WASTES; WASTES FROM ENGINE / EQUIPMENT STEAM CLEANING OR CHEMICAL DEGREASING; WASTES FROM STREET CLEANING; AND SUPER-CHLORINATED POTABLE WATER FROM LINE FLUSHINGS AND TESTING.
- DURING CONSTRUCTION, DISPOSAL OF SUCH MATERIALS SHOULD OCCUR IN A SPECIFIED AND CONTROLLED, TEMPORARY AREA ON-SITE AND PHYSICALLY SEPARATED FROM POTENTIAL STORMWATER RUNOFF, WITH ULTIMATE DISPOSAL IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
- DISCHARGING CONTAMINATED GROUNDWATER, PRODUCED BY DEWATERING GROUNDWATER THAT HAS INFILTRATED INTO THE CONSTRUCTION SITE IS PROHIBITED. DISCHARGING OF CONTAMINATED SOILS VIA SURFACE EROSION IS ALSO PROHIBITED. DISCHARGING NON-CONTAMINATED GROUNDWATER PRODUCED BY DEWATERING ACTIVITIES REQUIRES A NATIONAL POLLUTANTS DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FROM THE RESPECTIVE STATE REGIONAL WATER QUALITY CONTROL BOARD.
- NOTICE: ALL CONTRACTORS AND CONSTRUCTION PERSONNEL SHALL MEET THE REGULATORY CONSTRUCTION REQUIREMENTS ON THE PROJECT SITE, AS SHOWN IN THE LATEST EDITION OF THE ORANGE COUNTY STORMWATER PROGRAM "CONSTRUCTION RUNOFF GUIDANCE MANUAL."

COUNTY FLOOD CONTROL NOTES:

- A STANDARD ENCROACHMENT PERMIT ISSUED BY THE COUNTY OF ORANGE PUBLIC WORKS DEPARTMENT SHALL BE OBTAINED FOR WORK WITHIN THE ORANGE COUNTY FLOOD CONTROL (OCFD) RIGHT-OF-WAY, KNOWN AS THE FOUNTAIN VALLEY CHANNEL (D-05) FACILITY.
- CONTRACTOR SHALL KEEP A SIGNED COPY OF, AND ADHERE TO THE CONDITIONS THEREIN, THE ENCROACHMENT PERMIT ON THE JOB SITE DURING WORKING HOURS.



BASIS OF BEARING:

VERTICAL CONTROL:
 HELD O.C. SURVEYORS BENCHMARK FV-54-70, ELEV=16.838', NAVD 88 DATUM, SAID BENCHMARK IS MORE PARTICULARLY DESCRIBED AS BEING A 3.5" ALUMINUM DISK, LOCATED ON TOP OF A CATCH BASIN, IN THE NORTHEAST CORNER OF BROOKHURST STREET AND GARFIELD AVENUE.

HORIZONTAL CONTROL:
 HELD 0+00 AT THE CENTERLINE INTERSECTION OF BROOKHURST STREET AND GARFIELD AVENUE, STATIONS INCREASING WESTERLY, PER CITY OF HUNTINGTON BEACH, STREET IMPROVEMENT PLAN 4117.

NOTICE TO THE CONTRACTOR

CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD THE OWNER AND THE ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR THE ENGINEER.

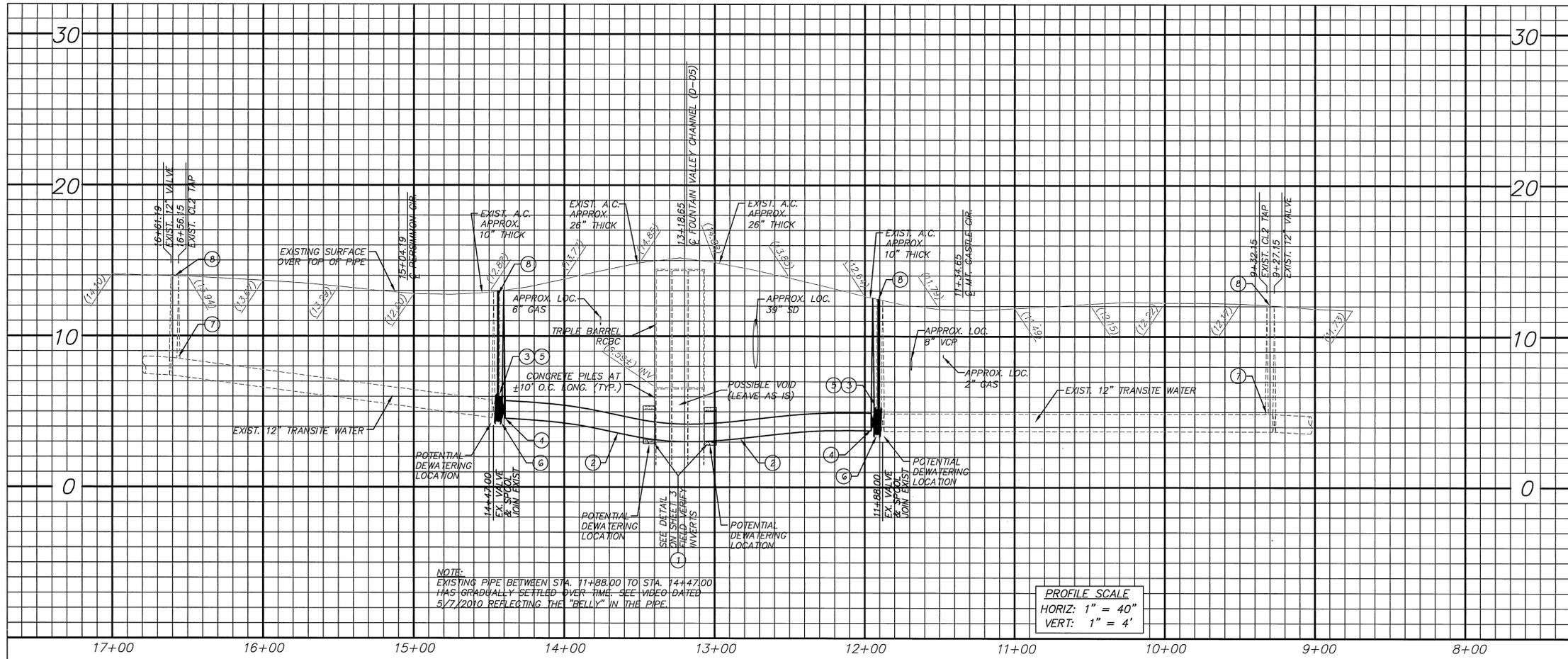
CONSTRUCTION NOTES:

- | | | |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| ① | INSTALL 24" DIA. RCP SLEEVE (D=1500 MIN.), 8-FOOT LONG, PLACED AGAINST BOTH SIDES OF BOX CULVERT EDGE AND MATCHING INVERTS OF NEW PE PIPE. FILL RCP VOIDS WITH APPROVED COMPRESSIBLE MATERIAL AND GAP BOTH ENDS. SEE INSTALLATION AND PIPE SLEEVE DETAIL SHOWN ON SHEET 3. | 2 EA |
| ② | PIPE BURST EXISTING 12" TRANSITE WATER MAIN AND FULL 14" PE3408, SDR 11, IPS, FLANGED BOTH ENDS. | 259 LF |
| ③ | CONSTRUCT TEMPORARY BLOW-OFF ASSEMBLY ON FLANGED ENDS WITH 14" PE PIPE PER TEMPORARY TESTING DETAIL SHOWN ON SHEET 3 AND CITY OF HUNTINGTON BEACH STD PLAN 608. | 2 EA |
| ④ | CONSTRUCT FLANGED ENDS DUCTILE IRON REDUCER, 12" X 14" PER CITY OF HUNTINGTON BEACH STD PLAN 614. | 2 EA |
| ⑤ | REMOVE TEMPORARY BLOW-OFF ASSEMBLY AFTER PASSING CHLORINATION TEST. | 2 EA |
| ⑥ | INSTALL EBAA IRON FLANGED 12" FLEX-TEND, P/N 412F22, AND CONNECT TO EXISTING SPOOL AND NEW PE PIPE PER CONNECTION DETAIL AS SHOWN ON SHEET 3. | 2 EA |
| ⑦ | ABANDON EXISTING TAP AT MAN BY REMOVING THE RISER, VALVE BOX AND PATCH PAVEMENT WITH AC PER TRENCH DETAIL ON SHEET 3. | 2 EA |
| ⑧ | EXCAVATE, SHORE, DEWATER, BACKFILL AND REPAIR EXISTING ASPHALT PAVEMENT (10" THICK AC OVER 12" THICK AGGREGATE BASE) PER TRENCH DETAIL ON SHEET 3. | SEE BID ITEM |

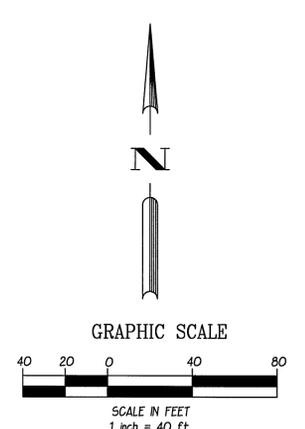
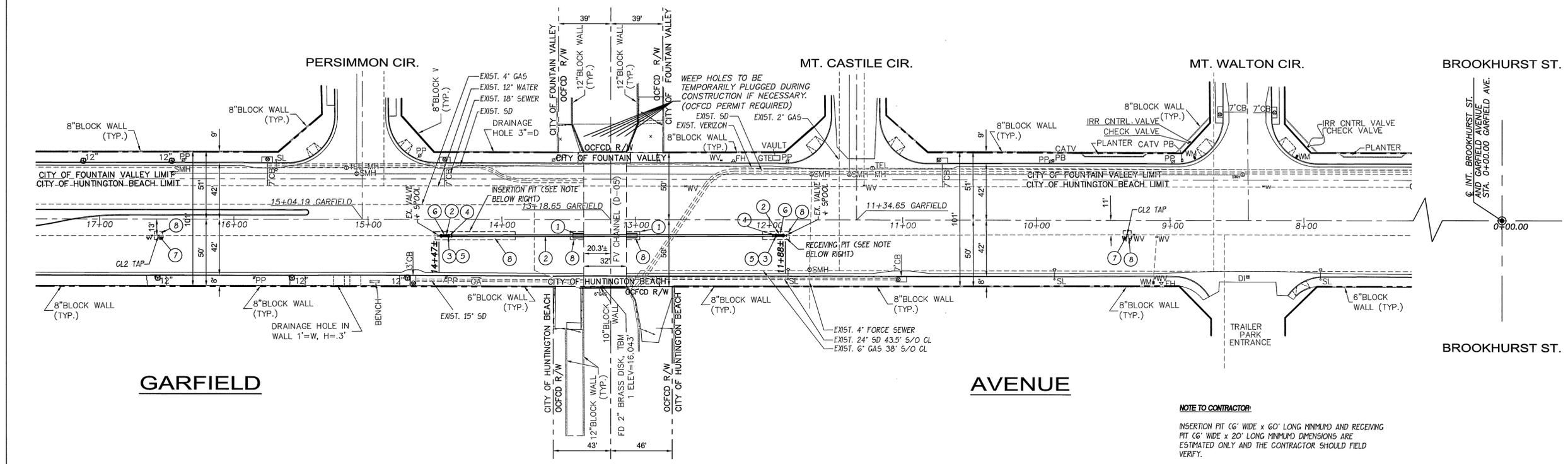
GARFIELD WATERLINE.DWG

<p>Underground Service Alert Call: TOLL FREE 1-800-422-4133 TWO WORKING DAYS BEFORE YOU DIG</p>	<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>REV.</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> <th>APP'VD</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>	REV.	DATE	BY	DESCRIPTION	APP'VD						<p>REFERENCES</p> <p>HORIZONTAL CONTROL: HELD 0+00 AT THE CENTERLINE INT. OF BROOKHURST ST. AND GARFIELD AVE. (STATION INCREASING WESTERLY).</p> <p>VERTICAL CONTROL: HELD O.C. SURVEYORS BENCHMARK FV-54-70, DESCRIBED AS A 3.75" ALUMINUM DISK SET IN THE SE CORNER OF CATCH BASIN IN THE NORTHEAST CORNER OF BROOKHURST ST. AND GARFIELD AVE. INTERSECTION. ELEVATION = 16.838' NAVD 88 DATUM, 1995 ADD.</p>	<p>UTIL. DIV. [initials] TRAFFIC [initials] ENG. SERVICES [initials] STREET DESIGN [initials] MAINTENANCE [initials] RIGHT-OF-WAY [initials] P.T. & L. [initials] CONSTRUCTION [initials] DRAWN BY: PLW 05/10/10 DESIGNED BY: PLW 05/10/10 CHECKED BY: LMM 06/15/10</p>	<p>CONSULTANTS ORP. CONSULTING ENGINEERS BREYA PARK CENTER 2801 SATURN STREET, SUITE 101 BREA, CALIFORNIA 92821 (714) 528-9500 OFFICE</p>	<p>CITY ENGINEER: <i>Antonio Olmos</i> 8/9/10 ANTONIO OLMOs, P.E. DATE R.C.E. NO.: C56814 EXP. DATE: 06/30/11</p> <p>PREPARED UNDER THE SUPERVISION OF: <i>Travis K. Hopkins</i> 8/9/10 MICHAEL M. KIM, P.E. DATE R.C.E. NO.: 27998 EXP. DATE: 03/31/12</p> <p>APPROVED BY: <i>Travis K. Hopkins</i> 8/9/10 DUNCAN LEE, PRINCIPAL C.E. DATE R.C.E. NO.: 44825 EXP. DATE: 03/31/12</p>	<p>CITY OF HUNTINGTON BEACH DEPARTMENT OF PUBLIC WORKS</p>	<p>12" WATERLINE REPLACEMENT AT FOUNTAIN VALLEY CHANNEL (D-05) GARFIELD AVENUE TITLE SHEET</p>	<p>SHEET NO. 1 OF 3</p>
	REV.	DATE	BY	DESCRIPTION	APP'VD													

12" WATERLINE REPLACEMENT AT FOUNTAIN VALLEY CHANNEL (D-05) MSC NO. 476



- CONSTRUCTION NOTES:**
1. INSTALL 24" DIA. RCP SLEEVE (D=1500 MM.), 8-FOOT LONG, PLACED AGAINST BOTH SIDES OF BOX CULVERT EDGE AND MATCHING INVERTS OF NEW PE PIPE. FILL RCP VOIDS WITH APPROVED COMPRESSIBLE MATERIAL AND CAP BOTH ENDS. SEE INSTALLATION AND PIPE SLEEVE DETAIL SHOWN ON SHEET 3.
 2. PIPE BURST EXISTING 12" TRANSITE WATER MAIN AND PULL NEW 14" PE3408 PIPE, SDR 11, IPS, FLANGED BOTH ENDS.
 3. CONSTRUCT TEMPORARY BLOW-OFF ASSEMBLY ON FLANGED ENDS WITH 14" PE PIPE PER TEMPORARY TESTING DETAIL SHOWN ON SHEET 3 AND CITY OF HUNTINGTON BEACH STD PLAN 60B.
 4. CONSTRUCT FLANGED ENDS DUCTILE IRON REDUCER, 12" X 14" PER STD PLAN G14.
 5. REMOVE TEMPORARY BLOW-OFF ASSEMBLY AFTER PASSING CHLORINATION TEST.
 6. INSTALL EBAA IRON FLANGED 12" FLEX-TEND, P/N 412F22, AND CONNECT TO EXISTING SPOOL AND NEW PE PIPE PER CONNECTION DETAIL AS SHOWN ON SHEET 3.
 7. ABANDON EXISTING TAP AT MAN BY REMOVING THE RISER, VALVE BOX AND PATCH PAVEMENT WITH AC PER TRENCH DETAIL ON SHEET 3.
 8. EXCAVATE, SHORE, DEWATER, BACKFILL AND REPAIR EXISTING ASPHALT PAVEMENT C10" THICK AC OVER 12" THICK AGGREGATE BASED PER TRENCH DETAIL ON SHEET 3.



NOTE TO CONTRACTOR:
 INSERTION PIT (6' WIDE x 60' LONG MINIMUM) AND RECEIVING PIT (6' WIDE x 20' LONG MINIMUM) DIMENSIONS ARE ESTIMATED ONLY AND THE CONTRACTOR SHOULD FIELD VERIFY.

Underground Service Alert
 Call: TOLL FREE
 1-800-422-4133
 TWO WORKING DAYS BEFORE YOU DIG

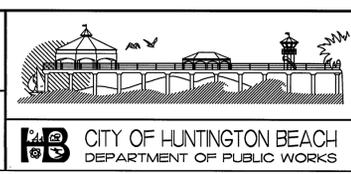
REVISIONS				
REV.	DATE	BY	DESCRIPTION	APP'VD

REFERENCES	
HORIZONTAL CONTROL: HELD D+00 AT THE CENTERLINE INT. OF BROOKHURST ST. AND GARFIELD AVE. (STATION INCREASING WESTERLY).	
VERTICAL CONTROL: HELD O.C. SURVEYOR'S BENCHMARK FV-54-70, DESCRIBED AS A 3.75" ALUMINUM DISK, SET IN THE SE CORNER OF GATCH BASIN IN THE NORTHEAST CORNER OF BROOKHURST ST. AND GARFIELD AVE. INTERSECTION.	
ELEVATION = 16.838' (NAVD 88 DATUM, 1995 ADJ.)	

UTIL. DIV.	REVIEWED BY	DATE
TRAFFIC		8/9/10
ENG. SERVICES		
STREET DESIGN		
MAINTENANCE		
RIGHT-OF-WAY		
P.T. & L.		
CONSTRUCTION		
DRAWN BY: PLW		05/10/10
DESIGNED BY: PLW		05/10/10
CHECKED BY: LMM		05/15/10



PREPARED UNDER THE SUPERVISION OF:
 MICHAEL M. KIM, P.E.
 R.C.E. NO.: 27998 EXP. DATE: 03/31/12
 APPROVED BY:
 DUNCAN LEE, PRINCIPAL C.E.
 R.C.E. NO.: 44825 EXP. DATE: 03/31/12

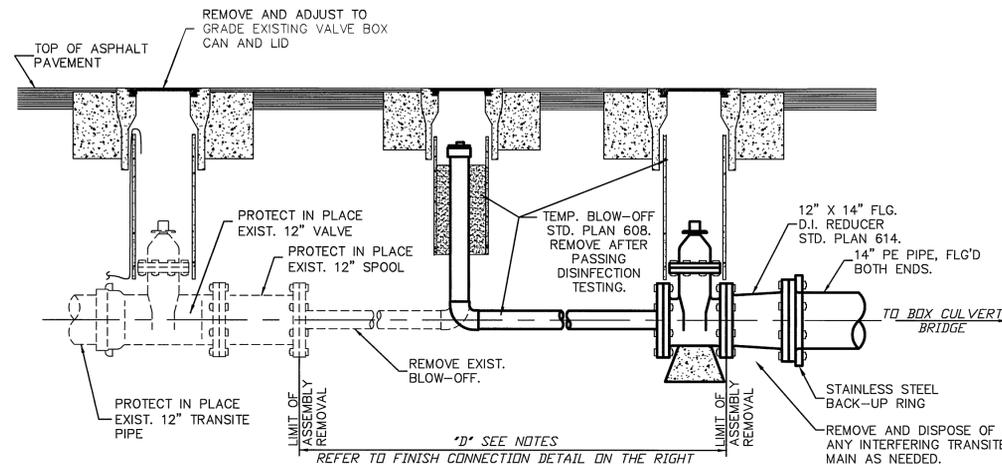


12" WATERLINE REPLACEMENT
 AT FOUNTAIN VALLEY CHANNEL (D-05)
GARFIELD AVENUE
 PLAN AND PROFILE
 STA. 09+27.15 TO STA. 16+56.15

SHEET NO. 2 OF 3

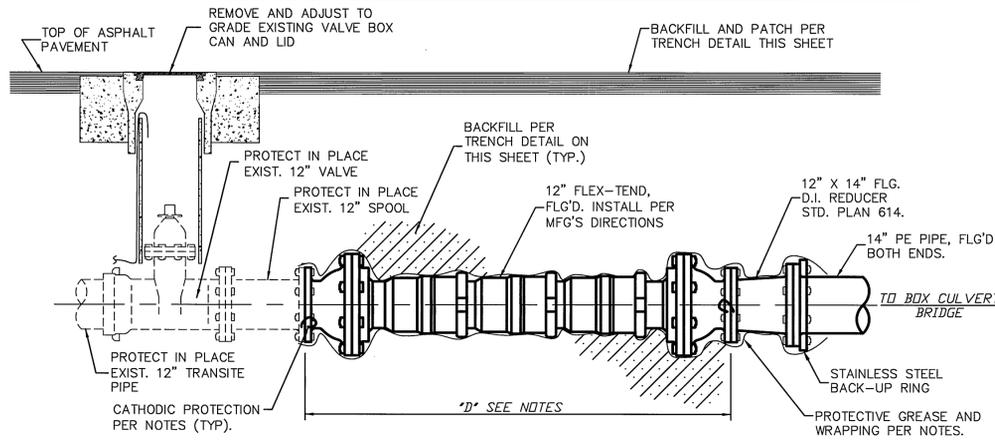
MSC NO. 476

GARFIELD WATERLINE.DWG



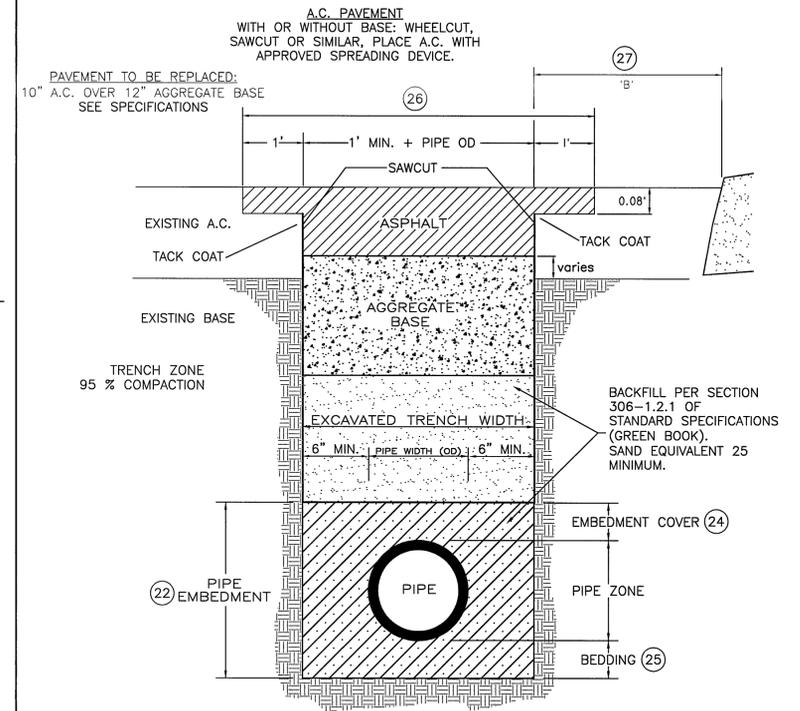
- NOTES:**
1. 'D' = LAY LENGTH OF THE EBAA IRON FLEX-TEND ASSEMBLY THAT ALLOWS AN EXPANSION OF 9-INCHES AND A CONTRACTION OF 3-INCHES. ACTUAL DISTANCE 'D' MUST BE CALCULATED USING THE FLEX-TEND BEING INSTALLED AT EACH LOCATION.
 2. ALLOW P.E. PIPE TO REST AT LEAST 24-HOURS BEFORE CUTTING AND INSTALLING FLANGES.
 3. INSTALL CONCRETE RESTRAINT AS NECESSARY TO PREVENT PIPE MOVEMENT PER STD PLAN G14.
 4. PROTECT ALL PIPE ENDS TO PREVENT FROM CONTAMINATION OR DEBRIS FROM ENTERING THE PIPE.
 5. THE EXISTING ASPHALT STREET SECTION IS APPROX. 10" AC OVER 12" BASE AT THESE LOCATIONS.
 6. CONTRACTOR SHALL LEGALLY DISPOSE OF ANY A.C. PIPE REMOVED FROM THIS PROJECT.

3 TEMPORARY TESTING DETAIL
STA. 11+88 AND STA. 14+47
N.T.S.



- NOTES:**
1. INSTALL CONCRETE RESTRAINING AS NECESSARY TO PREVENT MOVEMENT PER STD PLAN G14 AND EBAA IRON SPECIFICATIONS.
 2. 'D' = LAY LENGTH OF THE EBAA IRON FLEX-TEND ASSEMBLY THAT ALLOWS AN EXPANSION OF 9-INCHES AND A CONTRACTION OF 3-INCHES. ACTUAL DISTANCE 'D' MUST BE CALCULATED USING THE FLEX-TEND BEING INSTALLED AT EACH LOCATION.
 3. AFTER NEW P.E. PIPE HAS PASSED ALL TESTING, REMOVE BLOW-OFF ASSEMBLY AND ALL APPURTENANCES FROM EXISTING SPOOL FLANGE TO REDUCER FLANGE.
 4. PROTECT ALL PIPE ENDS TO PREVENT FROM CONTAMINATION OR DEBRIS FROM ENTERING THE PIPE.
 5. BACKFILL ALL SIDES OF FLEX-TEND TO ALLOW FOR MOVEMENT PER TRENCH DETAIL ON THIS SHEET.
 6. THE EXISTING ASPHALT STREET SECTION IS APPROX. 10" AC OVER 12" BASE AT THESE LOCATIONS.
 7. ALL HARDWARE SHALL COVERED WITH NO-OX-ID 'A' SPECIAL WW GREASE AND PROTECTIVE WRAP.
 8. ALL FITTINGS, RESTRAINTS, VALVES, COUPLINGS, ETAL. SHALL BE POLYETHYLENE ENCASED, PER AWWA C105.
 9. ALL FITTINGS, RESTRAINTS, VALVES, COUPLINGS, ETAL. SHALL BE CATHOLICALLY PROTECTED WITH A 17-LB PRE-PACKAGED MAGNESIUM ANODE. THE ANODE SHALL BE PLACED 24-INCHES BELOW THE INVERT OF THE PROTECTED FACILITY. THE ANODE SHALL BE EXOTHERMICALLY WELDED TO THE PROTECTED FACILITY AND THE WELD SHALL RECEIVE A BITUMINOUS COATING AND A ROYSTON HANDY CAP. REFER TO STD. PLANS G30 THRU G38.
 10. CONTRACTOR SHALL LEGALLY DISPOSE OF ANY A.C. PIPE REMOVED FROM THIS PROJECT.

6 FINISHED CONNECTION DETAIL
STA. 11+88 AND STA. 14+47
N.T.S.



TRENCH DETAIL
NOT TO SCALE

SIEVE SIZE	PERCENT PASSING
NO. 4	95 - 100
NO. 30	26 - 60
NO. 100	2 - 10

TRENCH NOTES:

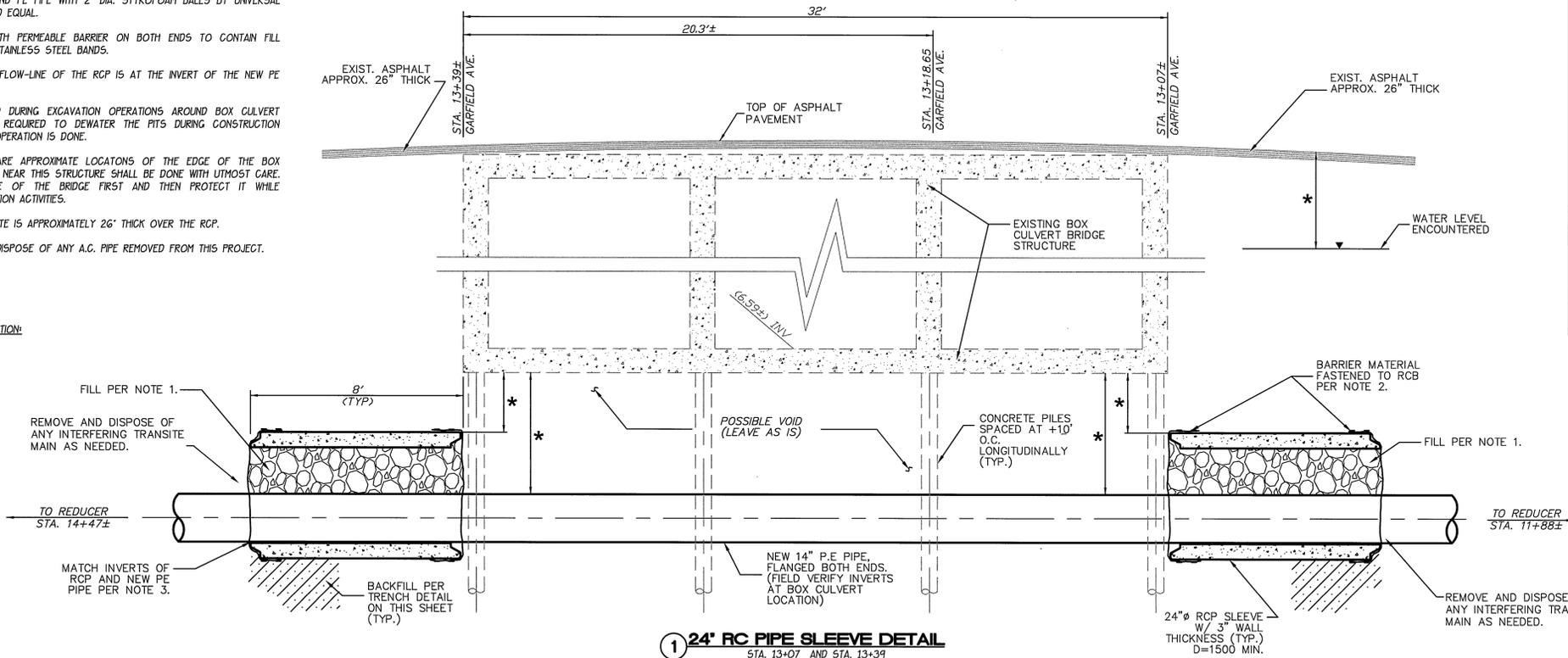
20. BACKFILL MATERIAL FOR ALL TRENCHES SHALL HAVE A CERTIFIED SAND EQUIVALENT OF NOT LESS THAN 25 AND SHALL CONFORM TO THE GRADATION AS SHOWN ABOVE.
21. PROJECT EXCAVATION MAY BE USED AS BACKFILL MATERIAL ONLY IF IT MEETS THE ABOVE REQUIREMENTS. CONTRACTOR SHALL PAY TESTING LABORATORY TO CERTIFY ALL BACKFILL.
22. COMPACTION METHODS SHALL CONFORM TO SECTIONS 301 AND 306-1.2 OF THE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (LATEST EDITION WITH THE EXCEPTION OF HYDRO-HAMMER. JETTED BACKFILL IS ALLOWED FOR THE PIPE EMBEDMENT AREA. SLURRY NOT ALLOWED IN THE PIPE EMBEDMENT AREA.
23. ALL TRENCHING + CONSTRUCTION SHALL COMPLY WITH THE REQUIREMENTS OF THE STATE DIVISION OF INDUSTRIAL SAFETY.
24. EMBEDMENT COVER SHALL BE 24" MINIMUM AND 12" ABOVE THE GROUND WATER LEVEL ENCOUNTERED WHILE EXCAVATING, WHICHEVER IS GREATER.
25. BEDDING SHALL BE 12" MINIMUM UNDER FLEX-TEND AND 6" MINIMUM UNDER TRENCHED PIPE.
26. COLD PLANE AND REPLACE A.C.
27. REMOVE AND REPLACE A.C. TO EDGE OF GUTTER (OR TO CURB FACE IF NO GUTTER EXISTS) WHERE 'B' IS LESS THAN 36'.

NOTES:

1. FILL VOID BETWEEN RC PIPE AND PE PIPE WITH 2" DIA. STYROFOAM BALLS BY UNIVERSAL FOAM PRODUCTS OR APPROVED EQUAL.
2. WRAP ENDS OF NEW RCP WITH PERMEABLE BARRIER ON BOTH ENDS TO CONTAIN FILL MATERIAL AND FASTEN USING STAINLESS STEEL BANDS.
3. INSTALL RCP SUCH THAT THE FLOW-LINE OF THE RCP IS AT THE INVERT OF THE NEW PE PIPE.
4. WATER WILL BE ENCOUNTERED DURING EXCAVATION OPERATIONS AROUND BOX CULVERT BRIDGE AND CONTRACTOR IS REQUIRED TO DEWATER THE PITS DURING CONSTRUCTION OPERATION UNTIL BACKFILLING OPERATION IS DONE.
5. STATIONS 13+07 + 14+47 ARE APPROXIMATE LOCATIONS OF THE EDGE OF THE BOX CULVERT AND ANY EXCAVATION NEAR THIS STRUCTURE SHALL BE DONE WITH UTMOST CARE. DETERMINE THE ACTUAL EDGE OF THE BRIDGE FIRST AND THEN PROTECT IT WHILE PROCEEDING WITH THE EXCAVATION ACTIVITIES.
6. THE EXISTING ASPHALT CONCRETE IS APPROXIMATELY 26" THICK OVER THE RCP.
7. CONTRACTOR SHALL LEGALLY DISPOSE OF ANY A.C. PIPE REMOVED FROM THIS PROJECT.

STYROFOAM DISTRIBUTOR'S INFORMATION:

UNIVERSAL FOAM PRODUCTS
16 STENERSEN LANE, STE. 4B
HUNT VALLEY, MD 21030
(410) 825-8300



1 24' RC PIPE SLEEVE DETAIL
STA. 13+07 AND STA. 13+39
N.T.S.

* CONTRACTOR SHALL PROVIDE ACTUAL DIMENSIONS WHEN TRENCHING AND INSTALLING 24" DIA. RCP SLEEVES. THE DISTANCES TO THE ENCOUNTERED WATER LEVEL, THE BOTTOM OF THE CULVERT TO THE TOP OF RC PIPE AND TO THE TOP OF THE PE PIPE AT EACH RCP SLEEVE LOCATION.

Underground Service Alert

Call: TOLL FREE
1-800-422-4133

TWO WORKING DAYS BEFORE YOU DIG

REVISIONS

REV.	DATE	BY	DESCRIPTION	APP'VD

REFERENCES

UTIL. DIV.	REVIEWED BY	DATE
TRAFFIC		8-9-10
ENG. SERVICES		
STREET DESIGN		
MAINTENANCE		
RIGHT-OF-WAY		
P.T. & L.		
CONSTRUCTION		
DRAWN BY:	PLW	05/10/10
DESIGNED BY:	PLW	05/10/10
CHECKED BY:	LMM	06/15/10



PREPARED UNDER THE SUPERVISION OF:
MICHAEL M. KIM, P.E. DATE: 8/8/10
R.C.E. NO.: 27988 EXP. DATE: 03/31/12
APPROVED BY:
Duncan Lee DATE: 8/9/10
DUNCAN LEE, PRINCIPAL C.E. DATE
R.C.E. NO.: 44825 EXP. DATE: 03/31/12



12" WATERLINE REPLACEMENT
AT FOUNTAIN VALLEY CHANNEL (D-05)
GARFIELD AVENUE
DETAIL SHEET

SHEET NO. 3
OF 3

MSC NO. 476

GARFIELD WATERLINE.DWG