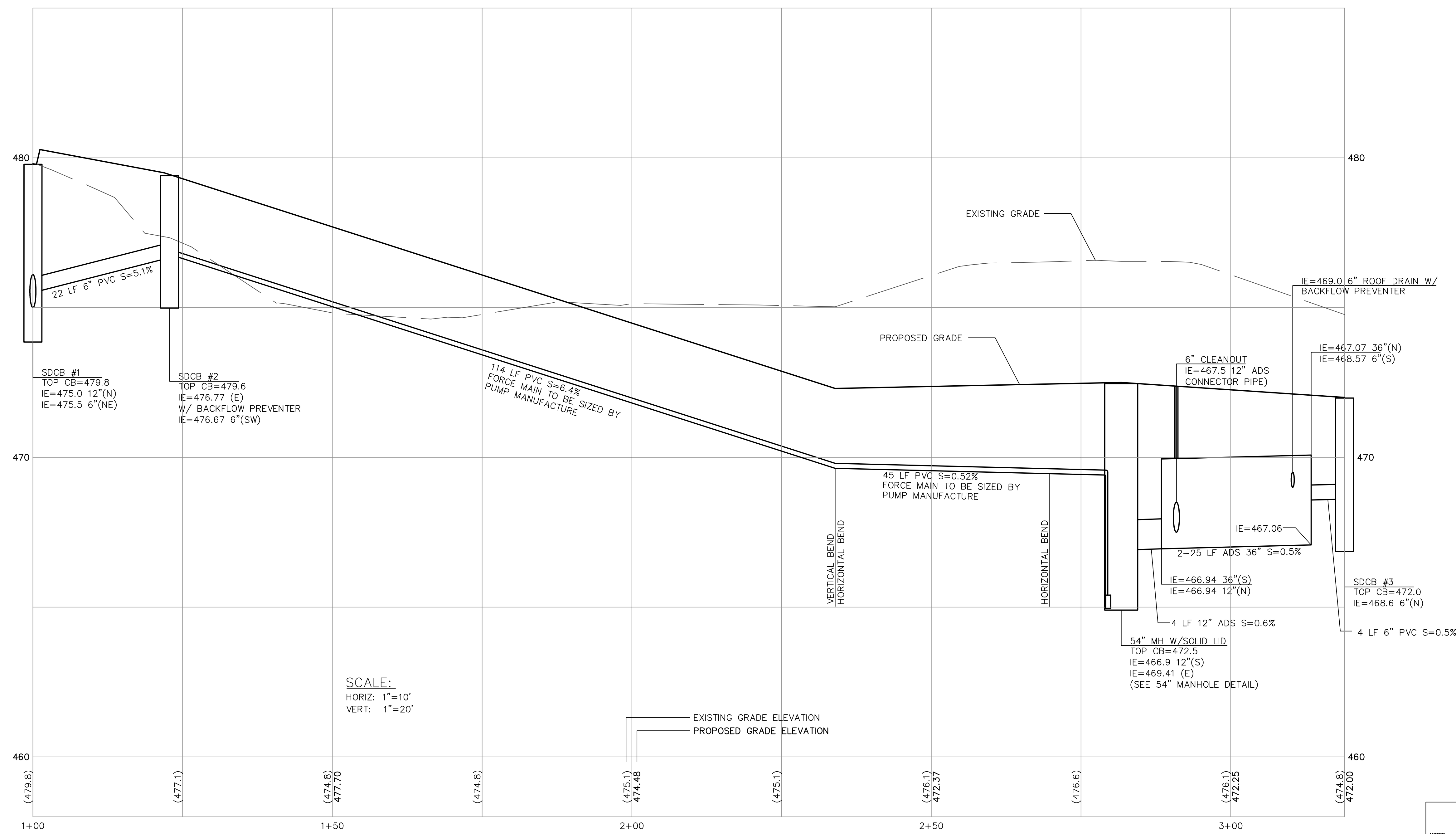
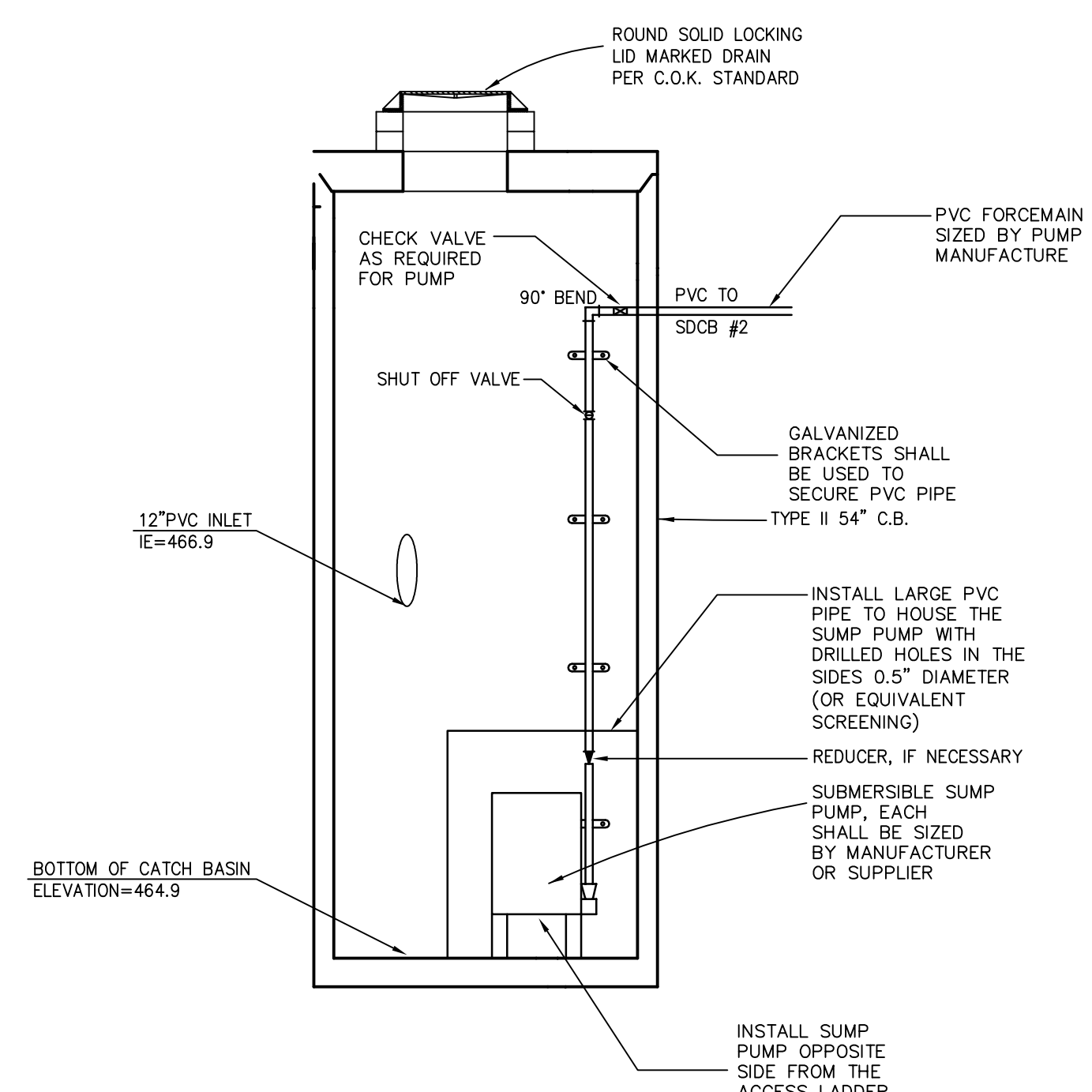


dev 03/18/08 1:59pm - P:_ods\04450445\0400CAD\EC\DWG\ECIMX04450445.dwg



SCALE:
HORIZ: 1"=10'
VERT: 1"=20'

FM PROFILE FOR SUMP PUMP



54" MANHOLE DETAIL TYPICAL
NO SCALE

NOTES:

- CATCH BASIN SHALL BE CONSTRUCTED IN ACCORDANCE WITH ASTM C478 (ASPH/TO M/P) AND ASTM C936 UNLESS OTHERWISE SHOWN ON PLANS OR NOTED IN THE STANDARD SPECIFICATIONS.
- HANDRAILS IN ADJUSTMENT SECTION SHALL HAVE 2" MIN. CLEARANCE. ETC. NO. CK-012. CATCH BASIN DETAILS: HANDRAILS SHALL BE PLACED IN ALTERNATING GRADE RINGS OR LEVELING BRICK COURSE WITH A MIN. OF ONE HANDRAIL BETWEEN THE LAST STEP AND TOP OF THE FINISHED GRADE.
- ALL REINFORCED CAST-IN-PLACE CONCRETE SHALL BE CLASS 4000. ALL PRECAST CONCRETE SHALL BE CLASS 4000.
- PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE WALL THICKNESS OF 2" MIN. UNLESS KNOCKOUTS NEED NOT BE GROUTED IF WALL IS LEFT IN PLACE. PIPES SHALL BE INSTALLED ONLY IN FACTORY KNOCKOUTS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
- KNOCKOUT OR CUTOUT HOLE SIZE SHALL EQUAL PIPE OUTER DIAM. PLUS CATCH BASIN WALL THICKNESS. MAX. HOLE SIZE SHALL BE 24" FOR 48" CATCH BASIN, 27" FOR 54" C.B., 30" FOR 60" C.B., 36" FOR 72" C.B., 48" FOR 96" C.B. MIN. DISTANCE BETWEEN HOLES SHALL BE 8" FOR 48", 54", AND 60" C.B.; 12" FOR 72" AND 96" C.B.
- CATCH BASIN FRAMES AND GRATES OR COVERS SHALL BE IN ACCORDANCE WITH SEC. 7.05 OF THE STANDARD SPECIFICATIONS. MATING SURFACES SHALL BE FINISHED TO ASSURE NON-ROCKING FIT WITH ANY COVER POSITION.
- ALL BASE REINFORCING STEEL SHALL HAVE A MIN. YIELD STRENGTH OF 60,000 PSI AND BE PLACED IN THE UPPER HALF OF THE BASE WITH 1" MIN. CLEARANCE.
- MIN. SOIL BEARING VALUE SHALL EQUAL 3,000 POUNDS PER SQUARE FOOT.
- FOR DETAILS SHOWING LADDERS, STEPS, HANDRAILS AND TOP SLABS, SEE STD. DTLS. NO. CK-012 AND CK-S-14.

REINFORCING STEEL FOR PRECAST BASE & INTERNAL RISER ONLY:
 0.15 SQ. IN./FT. IN EACH DIRECTION FOR 54" DIA.
 0.18 SQ. IN./FT. IN EACH DIRECTION FOR 60" DIA.
 0.24 SQ. IN./FT. IN EACH DIRECTION FOR 72" DIA.
 0.30 SQ. IN./FT. IN EACH DIRECTION FOR 84" DIA.
 0.36 SQ. IN./FT. IN EACH DIRECTION FOR 96" DIA.

REINFORCING STEEL FOR FOUNDATIONS:
 0.20 SQ. IN./FT. FOR 48" DIA.
 0.25 SQ. IN./FT. FOR 54" DIA.
 0.30 SQ. IN./FT. FOR 60" DIA.
 0.36 SQ. IN./FT. FOR 72" DIA.
 0.42 SQ. IN./FT. FOR 84" DIA.
 0.48 SQ. IN./FT. FOR 96" DIA.

REVISIONS: APPD.
 REV. PER. CITY COMMENTS 3/4/08

DATE: DECEMBER 10, 2007
 DESIGN: PCT
 DRAWN: PCT
 CHECKED: JDT
 REVISION NUMBER:
 SCALE: N/A

PROJECT NUMBER:
 ODSX0445-0445

DRAWING FILE:
 ECIMX04450445.DWG

SHEET NO.
 2
 OF 4

CITY OF KIRKLAND
 PLAN NO. CK-D.09
 CATCH BASIN
 TYPE 2
 48", 54", 60", 72", 96"

