CITY OF MOUNTLAKE TERRACE

ENGINEERING SERVICES DEPARTMENT

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS

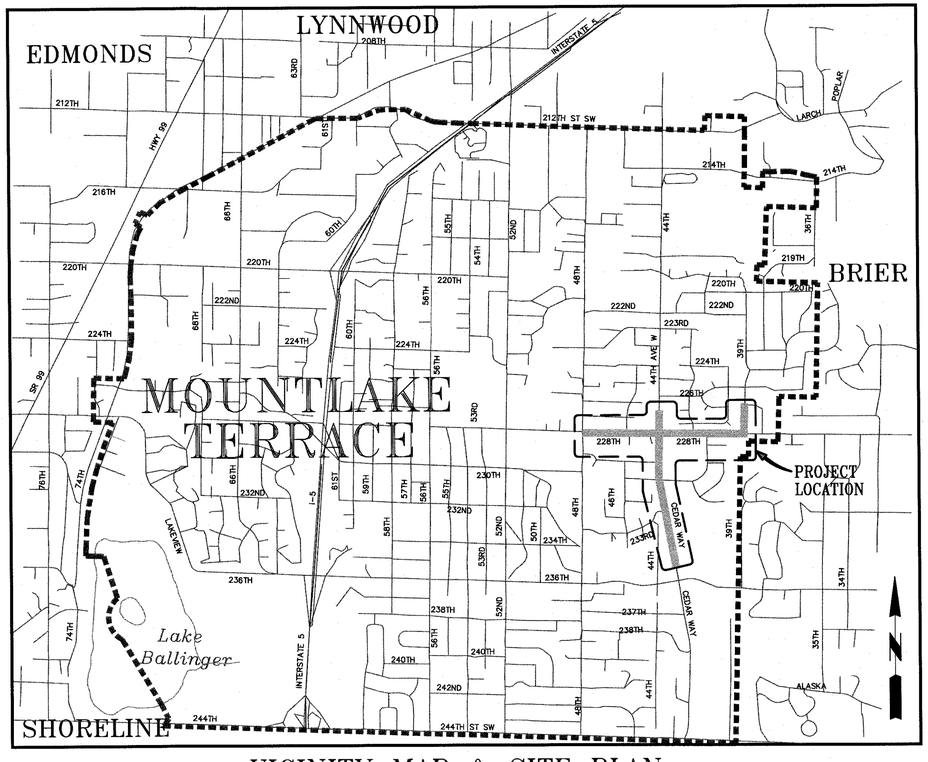
MLT PROJECT No. 2012-03

MAYOR
JERRY E. SMITH

CITY MANAGER
JOHN J. CAULFIELD

ENGINEERING SERVICES DIRECTOR
WILLEM H. VAN RY, P.E.

CITY COUNCIL
LAURA SONMORE, MAYOR PRO TEM
BRYAN WAHL
DOUG McCARDLE
KYOKO MATSUMOTO WRIGHT
RICK RYAN
SEAUN RICHARDS



VICINITY MAP & SITE PLAN

SHEET NO.	SHEET TITLE	SHEET DESCRIPTION	SCHEDULES
C-1	WATER MAIN PLAN AND PROFILE	CEDAR WAY – STA. 6+20B TO STA. 11+50B	BASE BID SCHEDULE A
C-2	WATER MAIN PLAN AND PROFILE	CEDAR WAY – STA. 11+50B TO STA. 17+25B	BASE BID SCHEDULE A
C-3	WATER MAIN & STORM DRAIN PLAN AND PROFILE	CEDAR WAY / 44TH AVE W – STA. 17+25B TO STA. 23+00B	BASE BID SCHEDULE A
C-4	WATER MAIN & STORM DRAIN PLAN AND PROFILE	44TH AVE W – STA. 23+00B TO STA. 28+75B	BASE BID SCHEDULE A & B
C-5	WATER MAIN & STORM DRAIN PLANS AND PROFILES	44TH AVE W – STA. 28+75B TO 29+70B, 228TH ST SW – STA. 79+25 TO 80+25, 230TH PL SW – STA. 49+50 TO STA. 60+50	BASE BID SCHEDULE A & B
C-6	WATER MAIN & STORM DRAIN PLAN AND PROFILE	228TH ST SW – STA. 16+25A TO STA. 22+25A	BASE BID SCHEDULE A
C-7	WATER MAIN & STORM DRAIN PLAN AND PROFILE	228TH ST SW – STA. 22+25A TO STA. 28+25A	BASE BID SCHEDULE A
C-8	WATER MAIN PLAN AND PROFILE	228TH ST SW – STA. 28+25A TO STA. 34+25A	BASE BID SCHEDULE A
C-9	WATER MAIN PLAN AND PROFILE	228TH ST SW – STA. 3+00A TO STA. 9+00A	ADDITIVE BID SCHEDULE C
C-10	WATER MAIN PLAN AND PROFILE	228TH ST SW – STA. 9+00A TO STA. 15+00A	ADDITIVE BID SCHEDULE C
C-11	WATER MAIN & STORM DRAIN PLANS AND PROFILES	228TH ST SW – STA. 15+00A TO STA. 17+50A	ADDITIVE BID SCHEDULE C
C-12	WATER MAIN PLAN AND PROFILE	39TH AVE W – STA. 49+75C TO STA. 55+50C	BASE BID SCHEDULE A
C-13	MISCELLANEOUS DETAILS	----	FOR ALL SCHEDULES
C-14	TOPO SURVEY BASE MAP DATUM, NOTES AND LEGEND	DATUM, NOTES & LEGENDS	FOR ALL SCHEDULES
C-15	UTILITY INVERT AND STATION ELEVATIONS	----	FOR ALL SCHEDULES
C-16	TOPOGRAPHIC SURVEY BASE MAPS, TESC NOTES & DETAILS	44TH AVE & CEDAR WAY SURVEY / TESC – STA. 5+50B TO STA. 31+00B	FOR ALL SCHEDULES
C-17	TOPOGRAPHIC SURVEY BASE MAP, TESC NOTES & DETAILS	228TH ST SW SURVEY / TESC – STA. 2+75A TO STA. 29+00A	FOR ALL SCHEDULES
C-18	TOPOGRAPHIC SURVEY BASE MAP, TESC NOTES & DETAILS	228TH ST SW SURVEY / TESC – STA. 29+00A TO STA. 34+70A, 39TH AVE W SURVEY / TESC – STA. 50+00C TO STA. 55+50C	FOR ALL SCHEDULES
C-19	DETOUR PLAN 1	----	FOR ALL SCHEDULES
C-20	DETOUR PLAN 2	----	FOR ALL SCHEDULES
C-21	CLASS A SIGNAGE PLAN		BASE BID SCHEDULE A

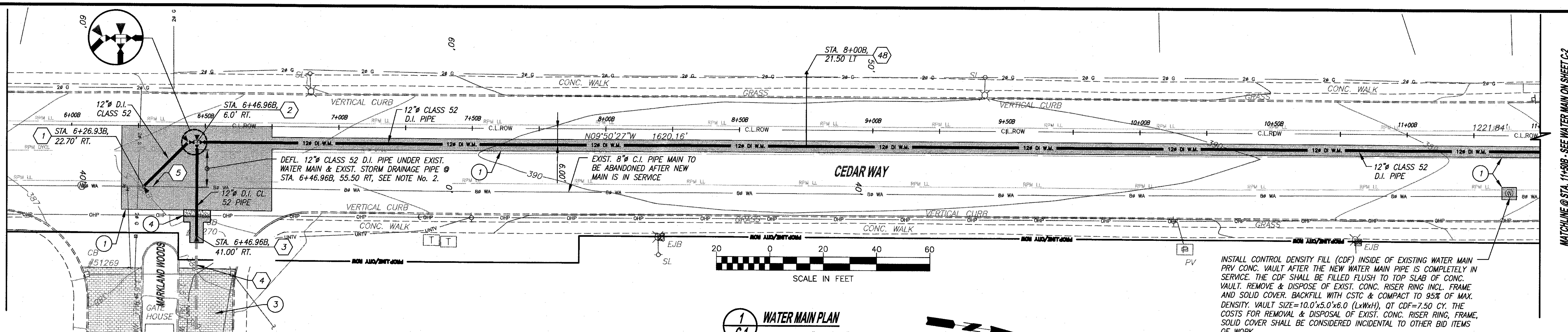
JANET HALL
TRAFFIC ENGINEER

ROTH SENG
PROJECT ENGINEER

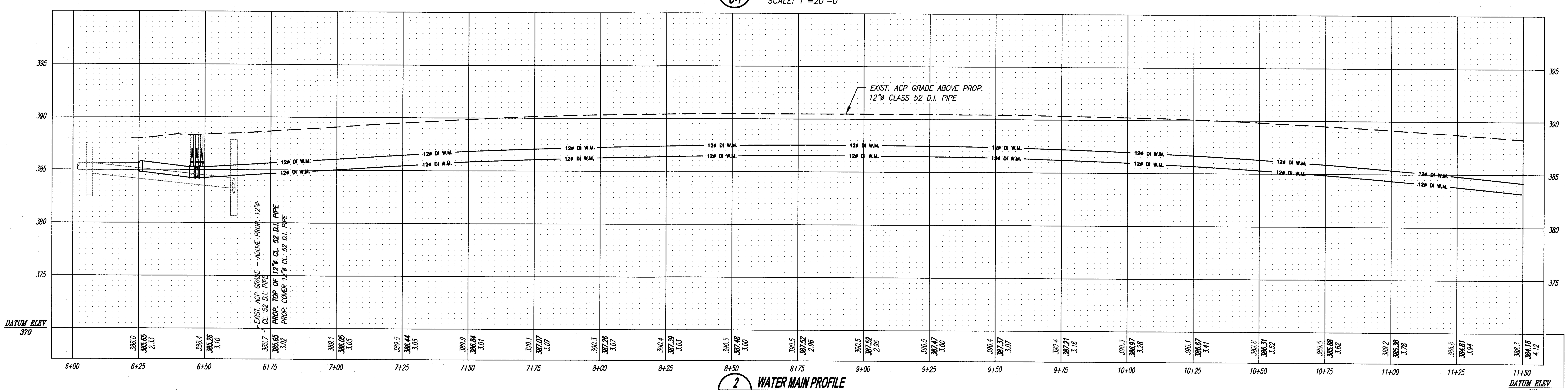
TOM MOEHRLE
CONSTRUCTION INSPECTOR

CURT BREES
PUBLIC WORKS DIRECTOR

WILLEM H. VAN RY
ENGINEERING SERVICES DIRECTOR



1 / C-1 **WATER MAIN PLAN**
SCALE: 1"=20'-0"



2 / C-1 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0"
V: 1"=5'-0"

GENERAL NOTES - (APPLY TO ALL SHEETS)

1. INSTALL 4"ø, 6"ø, 8"ø & 12"ø CLASS 52 D.I. WATER MAIN PIPE WITH MINIMUM OF 3.0' COVER FROM PIPE CROWN TO EXISTING GRADE UNLESS OTHERWISE SHOWN ON THE PLANS OR DIRECTED AND APPROVED BY ENGINEER. THE MAXIMUM ALLOWABLE DEFLECTION IS 15" (4.0°) PER 18 LF LENGTH OF PIPE.
2. "WEDDING RING" PIPE SPACER SHALL BE CLASS 52 D.I. PIPE AND EQUAL TO OR LESS THAN 2.0" IN WIDTH UNLESS OTHERWISE APPROVED BY ENGINEER. GAPS BETWEEN WEDDING RING & PIPE SHALL BE EQUAL OR LESS THAN 0.0625" (1/16").
3. WHETHER OR NOT SHOWN ON THE PLANS, INSTALL CLASS 3000 CONC. THRUST OR VERTICAL BLOCKS FOR ALL BENDS AND TEES PER MLT STD PLAN No. 209A THROUGH 209C IN APPENDIX OF CONTRACT OF PROVISIONS.
4. LOCATIONS OF EXIST. UTILITIES SHOWN ON PROFILE ARE APPROXIMATE. CONTRACTOR SHALL POTHOLE TO VERIFY THE EXIST. UTILITY DEPTH WHERE THE PROPOSED WATER MAIN IS CROSSING AN EXISTING UTILITY OR CONNECTING TO EXIST. MAIN. IF THE PROPOSED WATER MAIN CONFLICTS WITH EXIST. UTILITY, CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 3 WORKING DAYS IN ADVANCE OF COMMENCING THE INSTALLATION. THE COSTS RELATED TO POTHOLING SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM OF WORK.
5. WHERE THE WATER SERVICE LINE CONFLICTS WITH THE PROPOSED NEW MAIN, CONTRACTOR SHALL DEFLECT THE SERVICE LINE PRIOR TO INSTALLING NEW MAIN.
6. THE COST RELATED TO NOTES 4 THROUGH 5 AS REFERENCED ABOVE SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.
7. NEW TEES AND BENDS INSTALLED AS PART OF CONNECTING NEW MAINS TO EXISTING MAINS SHALL HAVE ADDITIONAL TEMPORARY BLOCKING INSTALLED ALONG WITH THE PERMANENT CONCRETE BLOCKING SO THE WATER SYSTEM CAN BE TURNED ON AND BACK IN SERVICE PRIOR TO THE CURING OF THE PERMANENT BLOCKING. THE TEMPORARY BLOCKING SHALL BE PROVIDED BY BLOCKING AGAINST ABANDONED WATER MAINS AND UNDISTURBED TRENCH WALLS USING PLATES, WEDGES, AND SMALL SECTIONS OF PIPE AS NEEDED TO RESTRAIN THE NEW CONNECTION BEFORE PERMANENT THRUST BLOCKING IS CURED. THIS TEMPORARY BLOCKING MAY BE BACKFILLED AND LEFT IN GROUND.

WATER MAIN NOTES:

1. CUT, REMOVE & DISPOSE OF EXIST. WATER MAIN PIPE AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   a. 1-12"ø 45° BEND, MJxMJ, CLASS 250
   b. 1-12"øx8"ø CONCENTRIC REDUCER, PExMJ
   c. 1-12"ø CLASS 52 D.I. PIPE, APPROX, L= 4 L.F.
   d. 1-12"ø CLASS 52 D.I. LONG BODY SLEEVE
   e. 1-CONC. THRUST BLOCK.
2. INSTALL:
   a. 1-12"ø TEE, FLxFL, CLASS 250
   b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-12"ø GATE VALVE, FLxFL, CLASS 250 (EAST SIDE)
   d. 1-12"ø 45° BEND, PExMJ, CLASS 250
   e. 1-12"ø 11.25° BEND, FLxMJ, CLASS 250, (VERT.) (EAST SIDE)
   f. 1-12"ø 11.25° BEND, MJxMJ, CLASS 250, (VERT.) (EAST SIDE)
   g. 1-12"ø CLASS 52 D.I. PIPE, APPROX. L= 18LF (SE OF CLUSTER)
   h. 3-CONC. THRUST BLOCK
   i. 1- CONCRETE VERTICAL BLOCK
   j. 1- TEMP. BLOWOFF WITH BLOCK FOR TESTING & FLUSHING

   NOTE:
   THE VERTICAL BENDS ARE NOT SHOWN ON PROFILE
3. INSTALL:
   a. 1- BLOWOFF PER MLT STANDARD 206 FOR TESTING & FLUSHING

   NOTE:
   THE BLOWOFF TO REMAIN AFTER TESTING & FLUSHING. ALL COST RELATED BLOWOFF & PER MLT STANDARD 206 SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.
4. FUTURE WATER MAIN TO BE INSTALLED BY OTHERS.
5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 47 ARE NOT USED ON THIS SHEET ****

48. INSTALL COMBINATION AIR RELEASE/AIR VACUUM VALVE ASSEMBLY PER MLT STD No. 205 IN APPENDIX OF CONTRACT PROVISIONS.

**** NOTES 49 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.
2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.
3. EXIST. CLAY BRICK "PAVERS" @ MARKLAND WOODS' DRIVEWAY SHALL BE PROTECTED BY CONTRACTOR DURING INSTALLATION OF WATER MAIN & BLOWOFF AND PAVEMENT RESTORATION. IF DAMAGED, THEY SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT CONTRACTOR'S EXPENSE.
4. INSTALL CEMENT CONC. VALLEY GUTTER PER DETAIL 3 ON SHEET C-13

**** NOTES 5 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

CHAD A. SCHULHAUSER, STATE OF WASHINGTON, 34846, REGISTERED PROFESSIONAL ENGINEER, 18 Dec 12

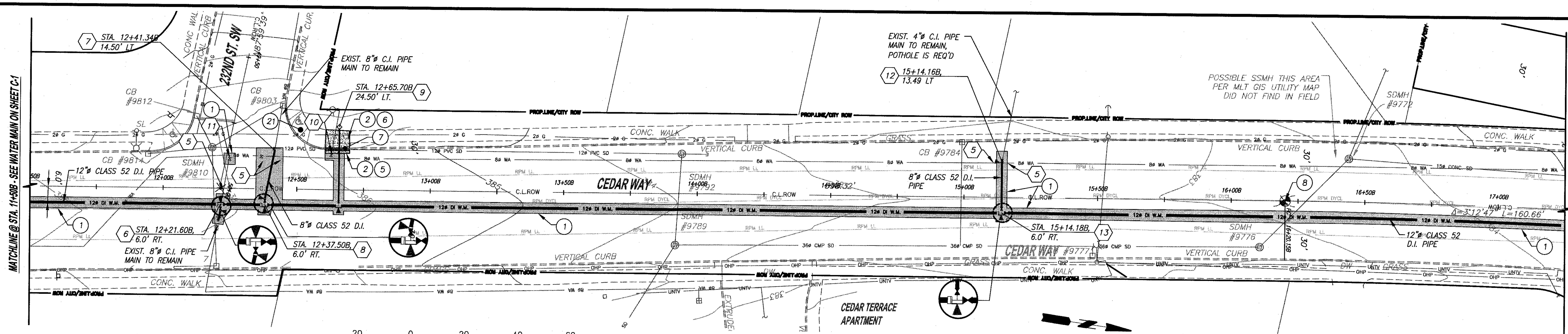
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS MLT PROJECT No. 2012-03

WATER MAIN PLAN AND PROFILE

DRAWING NO.	C-1
HORIZONTAL SCALE	1"=20'-0"
VERTICAL SCALE	1"=5'-0"
DRAWN BY	R. SENG
CHECKED BY	WILL VAN RY
APPROVED BY	WILL VAN RY — DATE: 8/8/2012
PROJECT ENGINEER	R. SENG — DATE: 8/8/2012
REVISION / DATE / DESCRIPTION	

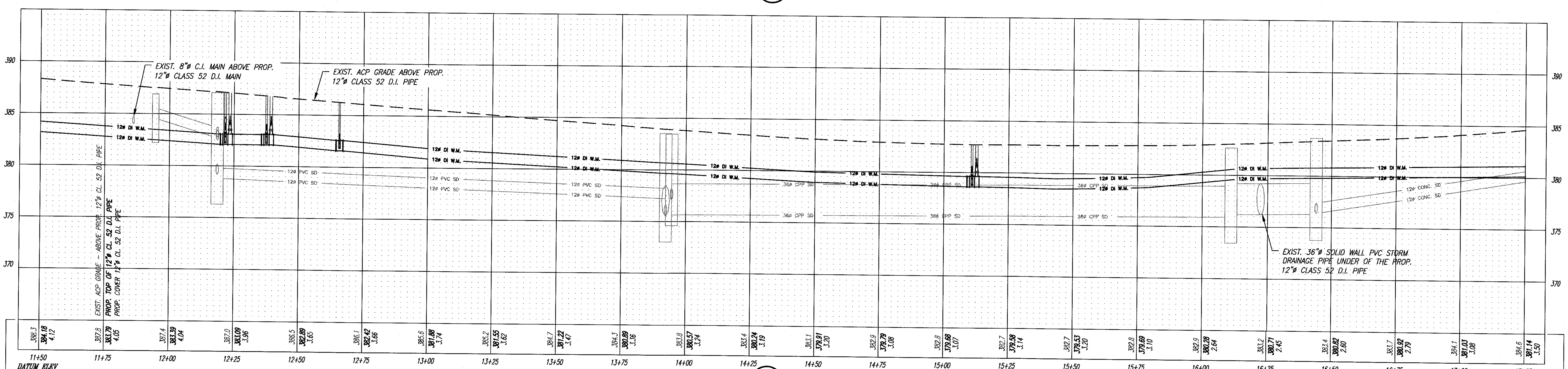
N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-01 TO C-16.DWG

PLOT DATE: Tuesday, December 18, 2012 9:37:01 AM



1 / C-2 WATER MAIN PLAN

SCALE: 1"=20'-0"



2 / C-2 WATER MAIN PROFILE

SCALE: H: 1"=20'-0"
V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

6. INSTALL:
   - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   - c. 1-12"ø ADAPTER, FLxMJ, CLASS 250
   - d. 1-8"ø GATE VALVE, FLxMJ CLASS 250
   - e. 1- 8"ø TEMP. MJ PLUG FOR TESTING
   - f. 1-CONC. THRUST BLOCK

   AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXISTING WATER MAIN AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   - f. 1-8"ø 11.25° BEND, PExMJ, CLASS 250
   - g. 1-8"ø 11.25° BEND, FLxMJ, CLASS 250 (VERT.)
   - h. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
   - i. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
   - j. 2-CONC. THRUST BLOCK
   - k. 1-CONC. VERTICAL BLOCK.

   NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST OR VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTINGS MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

7. CUT, REMOVE & DISPOSE OF EXIST. TEE, CONC. BLOCK, GATE VALVE ASSEMBLY INCL. VALVE BOX & COVER (SOUTH OF TEE) & PIPE AS NECESSARY TO CONNECT NEW MAIN. EXIST. GATE VALVE (WEST OF TEE) INCL. VALVE CHAMBER TO REMAIN & SHALL BE TURNED ON (OPEN VALVE) AND ABANDONED. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER (WEST OF TEE).
   INSTALL:
   - a. 1-8"ø CLASS 52 D.I., APPROXIMATE L=6 LF
   - b. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
   - c. ADAPTER, FLxMJ, CLASS 250, INCL. NEW GASKET (BOLT TO EXIST. VALVE)

   NOTE:
   ALL COSTS RELATED TO REMOVAL & DISPOSAL OF TEE, CONC. BLOCK, GATE VALVE ASSEMBLY, VALVE BOX & COVER SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

8. INSTALL:
   - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   - c. 1-12"ø ADAPTER, FLxMJ CLASS 250
   - d. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   - e. 1-8"ø 11.25° BEND, PExMJ, CLASS 250
   - f. 2-CONC. THRUST BLOCK
   - g, 1-8"ø CLASS 52 D.I. APPROX. L=12LF (WEST OF TEE)
   - h. 1-TEMP. BLOWOFF WITH BLOCK FOR FLUSHING AND TESTING

9. INSTALL HYDRANT ASSEMBLY PER MLT STD 201 (SIM.) IN APPENDIX OF CONTRACT PROVISIONS, SEE GENERAL NOTE No. 3 ON SHEET C-1 FOR CONC. THRUST BLOCK. CONNECTIONS OF HYDRANTS AND HYDRANT VALVES TO SPDOL SHALL BE MADE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES1400 MJ RETAINER GLANDS OR APPROVED EQUAL). IF HYDRANT SPOOL IS MADE OF MORE THAN ONE PIPE, PUSH ON PIPE SHALL BE MADE WITH "FIELD LOK" GASKET OR APPROVED EQUAL.

WATER MAIN NOTES:

10. CUT, REMOVE & DISPOSE OF EXIST. HYDRANT ASSEMBLY INCL. VALVE BOX, COVER, AND HYDRANT BARREL. EXIST. HYDRANT SPOOL TO REMAIN INCL. GATE VALVE. TURN VALVE OFF (SHUT-OFF VALVE) & PLUG EXIST. SPOOL WITH COMMERCIAL CONC. PER SS 7-08.3(4).

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

12. AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER,CUT, REMOVE & DISPOSE OF EXIST. TEE, GATE VALVE ASSEMBLY, CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN.
    INSTALL:
    - a. 1-4"øx8"ø CONCENTRIC REDUCER, MJxPE, CLASS 250
    - b. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250
    - c. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L= 7 LF
    - d. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
    - e. 1-CONC. THRUST BLOCK

    NOTE:
    1) DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEM OF WORK.
    2) ALL COSTS RELATED TO REMOVAL & DISPOSAL OF TEE, CONC. BLOCK, PIPE GATE VALVE ASSEMBLY, INCL VALVE BOX & COVER, SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

13. INSTALL:
    - a. 1-12"øx8"ø TEE, FLxFL
    - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    - d. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    - e. 1-CONC. THRUST BLOCK
    - f. 1-8"ø CLASS 52 D.I. APPROX. L=12LF (WEST OF TEE)
    - g. 1-TEMP. BLOWOFF WITH BLOCK FOR FLUSHING AND TESTING

**** NOTES 14 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. INSTALL CEMENT CONCRETE TRAFFIC CURB & GUTTER PER MLT STD PLAN No. 101 IN APPENDIX OF CONTRACT PROVISIONS, SEE DETAIL 5 ON SHEET C-13 FOR PAVEMENT REPAIR @ NEW TRAFFIC CURB AND GUTTER

6. INSTALL CEMENT CONCRETE SIDEWALK PER MLT STD PLAN No. 100 IN APPENDIX OF CONTRACT PROVISIONS.

7. INSTALL 4" TOPSOIL & COMPACT TO 85% OF MAX DENSITY. INSTALL SEEDED LAWN TO RESTORE DISTURBED AREA.

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 20 ARE NOT USED ON THIS SHEET ****

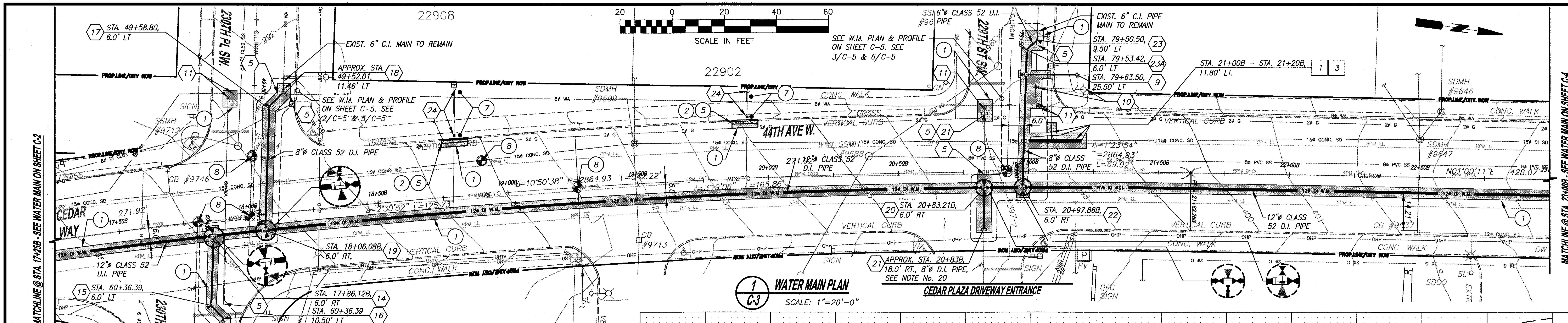
21. EXIST. CONC. SIDEWALK RAMP INCL. TRUNCATED DOME SHALL BE PROTECTED BY CONTRACTOR DURING REMOVAL & INSTALLATION OF NEW FIRE HYDRANT. IF DAMAGED, IT SHALL BE REPAIRED OR REPLACED AS DIRECTED BY ENGINEER @ CONTRACTOR'S EXPENSE.

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

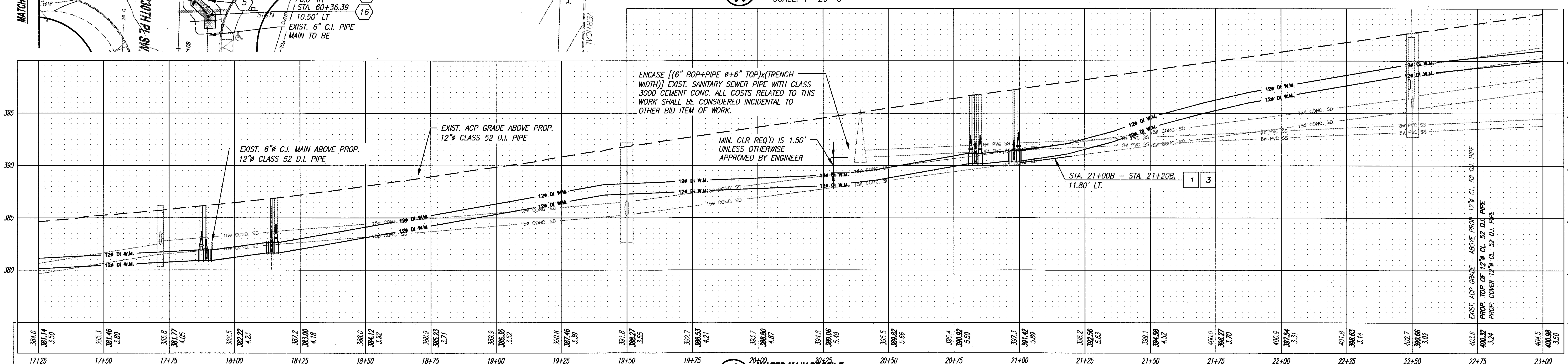
WATER MAIN PLAN AND PROFILE

DRAWING NO.: C-2
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"
DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
APPROVED BY: WILL VAN RY
PROJECT ENGINEER: R. SENG
DATE: 9/12/2012
DATE: 9/12/2012



1 / C-3 WATER MAIN PLAN

SCALE: 1"=20'-0"



2 / C-3 WATER MAIN PROFILE

SCALE: H: 1"=20'-0 & V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 8 ARE NOT USED ON THIS SHEET ****

9. INSTALL HYDRANT ASSEMBLY PER MLT STD 201 (SIM.) IN APPENDIX OF CONTRACT PROVISIONS, SEE GENERAL NOTE No. 3 ON SHEET C-1 FOR CONC. THRUST BLOCK. CONNECTIONS OF HYDRANTS AND HYDRANT VALVES TO SPOOL SHALL BE MADE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES1400 MJ RETAINER GLANDS OR APPROVED EQUAL). IF HYDRANT SPOOL IS MADE OF MORE THAN ONE PIPE, PUSH ON PIPE SHALL BE MADE WITH "FIELD LOK" GASKET OR APPROVED EQUAL.

10. CUT, REMOVE & DISPOSE OF EXIST. HYDRANT ASSEMBLY INCL. VALVE BOX, COVER, AND HYDRANT BARREL. EXIST. HYDRANT SPOOL TO REMAIN INCL. GATE VALVE. TURN VALVE OFF (SHUT-OFF VALVE) & PLUG EXIST. SPOOL WITH COMMERCIAL CONC. PER SS 7-08.3(4).

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 13 ARE NOT USED ON THIS SHEET ****

14. INSTALL:
    - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    - d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    - e. 1-8"ø 11.25° BEND, PExMJ, CLASS 250
    - f. 2-CONC. THRUST BLOCK

15. INSTALL:
    - a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN. INSTALL:
    - b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 250
    - c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    - d. 1-CONC. THRUST BLOCK

    NOTE: DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEM OF WORK.

16. CUT REMOVE & DISPOSE OF EXIST. C.I. PIPE AS REQUIRED TO CONNECT NEW MAIN. INSTALL:
    - a. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    - b. 2-6"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    - c. 1-6"ø CLASS 52 LONG BODY SLEEVE
    - d. 2-CONC. THRUST BLOCK
    - e. 1-CONC. VERTICAL BLOCK

    NOTE: DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN LONG BODY SLEEVE WITH UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL. EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

17. INSTALL:
    - a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN. INSTALL:
    - b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 250
    - c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    - d. 1-6"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
    - e. 2-CONC. THRUST BLOCK

    NOTE:
    DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

WATER MAIN NOTES:

18. CUT, REMOVE & DISPOSE OF EXIST. TEE, GATE VALVE ASSEMBLY (SOUTH OF TEE), CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN. EXIST. GATE VALVE (WEST OF TEE) INCL. VALVE CHAMBER TO REMAIN & SHALL BE TURNED ON (OPEN VALVE) & ABANDONED. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER (WEST OF TEE). CLEAN FACE OF EXIST. GATE VALVE FLANGE & INSTALL:
    - a. 1-6"ø 45° BEND, FLxMJ, INCL. NEW GASKET, CLASS 250
    - b. 1-6"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
    - b. 1-6"ø CLASS 52 D.I., APPROX. L=4 LF
    - c. 1-6"ø D.I. CLASS 52 LONG BODY SLEEVE (AS NECESSARY)
    - d. 1-CONC. THRUST BLOCK
    - e. 1-CONC. VERTICAL BLOCK

    NOTE:
    1) DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.
    2) ALL COSTS RELATED TO REMOVAL & DISPOSAL OF TEE, CONC. BLOCK, GATE VALVE ASSEMBLY, VALVE BOX & COVER SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

19. INSTALL:
    - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    - d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    - e. 1-8" 11.25° BEND, PExMJ, CLASS 250
    - f. 2-CONC. THRUST BLOCK

20. CUT, REMOVE & DISPOSE OF EXIST. PIPE AS NECESSARY TO INSTALL NEW MAIN. INSTALL:
    - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    - b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c. 1-8"ø GATE VALVE, FLxFL, CLASS 250
    - d. 1-8"ø TEMP. BLIND FLANGE FOR TESTING
    - e. 1-CONC. THRUST BLOCK

    AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN. INSTALL:
    - f. 1-8"ø 11.25° BEND, FLxMJ, CLASS 250 (VERT.)
    - g. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    - h.1-8"ø CLASS 52 D.I. PIPE, L=4 LF. MAX.
    - i. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
    - j.1-CONC. THRUST BLOCK
    - k. 1-CONC. VERTICAL BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

21. CUT, REMOVE & DISPOSE OF EXIST. C.I. & D.I. PIPE AS NECESSARY TO INSTALL THE PROPOSED NEW MAIN. INSTALL TEMP. BLOWOFF W/BLOCK TO MAINTAIN SERVICE. THE COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

22. INSTALL:
    - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    - d. 1-8"ø GATE VALVE, FLxFL, CLASS 250
    - e. 1-8"ø 11.25° BEND, FLxMJ, CLASS 250, (VERT.)
    - f. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250, (VERT.)
    - g. 2-CONC. THRUST BLOCK
    - h, 1-CONC. VERTICAL BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK.

23. CUT, REMOVE & DISPOSE OF EXIST. C.I. PIPE AS REQUIRED TO CONNECT TO NEW MAIN. INSTALL
    - a. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    - b. 1-6"ø CLASS 52 D.I. PIPE, APPROX. L=4 LF MAX.
    - c. 1-6"ø CLASS 52 D.I. LONG BODY SLEEVE
    - d. 1-6"ø 11.25° BEND, MJxMJ, CLASS 250, (VERT.)
    - e. 1-CONC. THRUST BLOCK
    - f, 1-CONC. VERTICAL BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEM OF WORK.

WATER MAIN NOTES:

23A. INSTALL:
    - a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN. INSTALL:
    - b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 250
    - c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    - d. 1-6"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    - e. 2-CONC. THRUST BLOCK

    NOTE:
    DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

24. INSTALL 3/4"ø & 1"ø COPPER PIPE SERVICE CONNECTION ASSEMBLY (MATCH EXISTING) INCLUDING NEW METER SETTER, CORPORATION STOP & BOX PER MLT STD PLAN 202 IN APPENDIX OF CONTRACT PROVISIONS. CONNECT TO EXIST. SERVICE FROM BUILDING; REMOVE & DISPOSE OF EXIST. METER SETTER INCL. BOX & ADJUST NEW BOX TO FINAL GRADE. SEE "SERVICE CONNECTION SCHEDULE" ON THIS SHEET FOR SERVICE DIAMETER AND METER BOX LOCATION

**** NOTES 25 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. INSTALL CEMENT CONCRETE TRAFFIC CURB & GUTTER PER MLT STD PLAN No. 101 IN APPENDIX OF CONTRACT PROVISIONS, SEE DETAIL 5 ON SHEET C-13 FOR PAVEMENT REPAIR @ NEW TRAFFIC CURB AND GUTTER

**** NOTE 6 IS NOT USED ON THIS SHEET ****

7. INSTALL 4" TOPSOIL & COMPACT TO 85% OF MAX DENSITY. INSTALL SEEDED LAWN TO RESTORE DISTURBED AREA.

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 21 ARE NOT USED ON THIS SHEET ****

STORM DRAINAGE NOTES:

1. REMOVE & DISPOSE OF EXIST. STORM DRAINAGE PIPE AS REQUIRED TO INSTALL NEW SOLID WALL SDR35 PVC PIPE AS SHOWN ON THE PLANS. THE COST RELATED TO REMOVING & DISPOSING OF EXIST. CONC. PIPE SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK

**** NOTE 2 IS NOT USED ON THIS SHEET ****

3. INSTALL 8"ø & 15"ø SOLID WALL SDR35 PVC PIPE WITH 15"øx15"øx8"ø SOLID WALL SDR35 TEE & CONNECT TO EXIST. 8"ø & 15"ø CONC. STORM DRAINAGE PIPE WITH FLEXIBLE COUPLING. SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL

**** NOTES 4 THROUGH 11 ARE NOT USED ON THIS SHEET ****

SERVICE CONNECTION SCHEDULE

No.	ADDRESS	PIPE SIZE		LENGTH		NOTES, WATER METER AND METER BOX LOCATION
		3/4"ø	1"ø	SHORT	LONG	
1	22908 - 44TH AVE W	X			X	23.50' LT - INSIDE PLANTER STRIP AREA
2	22902 - 44TH AVE W	X			X	23.50' LT - INSIDE PLANTER STRIP AREA

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

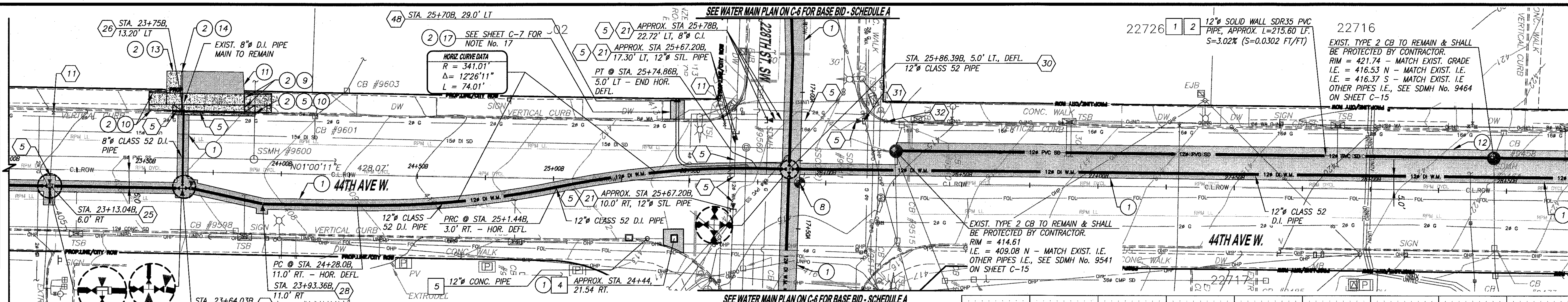
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN & STORM DRAIN PLAN AND PROFILE

DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
APPROVED BY: WILL VAN RY
DESIGNED BY: R. SENG
DATE: 9/12/2012

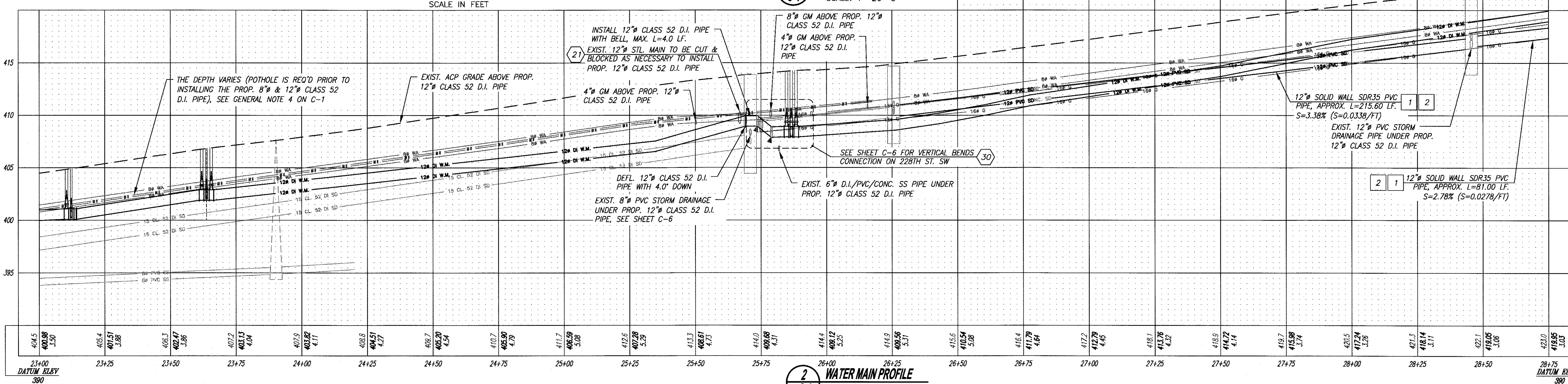
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"

DRAWING NO.: C-3



1 C-4 **WATER MAIN PLAN**

SCALE: 1"=20'-0"



2 C-4 **WATER MAIN PROFILE**

SCALE: H: 1"=20'-0" & V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 10 ARE NOT USED ON THIS SHEET ****

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 20 ARE NOT USED ON THIS SHEET ****

21. CUT, REMOVE & DISPOSE OF EXIST. C.I. & D.I. PIPE AS NECESSARY TO INSTALL THE PROPOSED NEW MAIN. INSTALL TEMP. BLOWOFF W/BLOCK TO MAINTAIN SERVICE. THE COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 22 THROUGH 24 ARE NOT USED ON THIS SHEET ****

25. INSTALL:
    - a.1-12"øx8"ø TEE, FLxFL, CLASS 250
    - b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c.1-12"ø ADAPTER, FLxMJ, CLASS 250
    - d. 1-8"ø GATE VALVE, FLxMJ CLASS 250
    - e. 1- 8"ø TEMP. MJ PLUG FOR TESTING
    - f. 1-CONC. THRUST BLOCK

    AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXISTING WATER MAIN AS NECESSARY TO CONNECT NEW MAIN.
    INSTALL:
    - g.1-8"ø 22.50° BEND, PExMJ, CLASS 250 (VERT.)
    - h. 1-8"ø 22.50° BEND, MJxMJ, CLASS 250 (VERT.)
    - i. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
    - j. 1-CONC. THRUST BLOCK
    - k.1-CONC. VERTICAL BLOCK

    NOTE: DOUBLE RESTRAIN BENDS WITHBOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST OR VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

26. EXIST. GATE VALVE ASSEMBLY TO REMAIN. AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT @ GATE VALVE (FL), REMOVE & DISPOSE OF EXIST. TEE, PIPE, AND BLOCK AS NECESSARY TO CONNECT TO NEW MAIN. CLEAN FACE OF EXIST. GATE VALVE FLANGE.
    INSTALL:
    - a. 1-8"ø ADAPTER, FLxMJ, CLASS 250
    - b. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=8 LF.
    - c. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE

    AFTER CONNECTING TO NEW MAIN, OPEN EXIST. GATE VALVE & ABANDON. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER.

27. INSTALL:
    - a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    - b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
    - c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    - d. 1-12"ø 11.25° BEND PExMJ, CLASS 250
    - e. 2-CONC. THRUST BLOCK
    - f. 1-12"ø CLASS 52 D.I. PIPE, APPROX L=18 LF. EXTENDING WEST OF TEE.
    - g. 1-TEMP. BLOWOFF W/BLOCK FOR TESTING AND FLUSHING

28. INSTALL:
    - o. 1-12"ø 11.25° BEND, MJxMJ
    - b. 1-CONC. THRUST BLOCK

**** NOTE 29 IS NOT USED ON THIS SHEET ****

30. INSTALL:
    - a. 1-12"øx12"ø CROSS, FLxFL, CLASS 250
    - b. 3-12"ø GATE VALVE, FLxMJ, CLASS 250 (NORTH, EAST, & SOUTH)
    - c. 1-12"ø GATE VALVE, FLxFL, CLASS 250 (WEST)
    - d. 1-12"ø 45° BEND, FLxMJ, CLASS 250 (WEST) (VERT.)
    - e. 1-12"ø 45° BEND, MJxMJ, CLASS 250 (WEST) (VERT.)
    - f. 2-12"ø 11.25 BEND, MJxMJ, CLASS 250 (SOUTH) (VERT.)
    - g. 2-CONC. THRUST BLOCK
    - h. 2-CONC. VERTICAL BLOCK

    NOTE: DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS . RESTRAIN ALL GATE VALVES (NORTH, SOUTH & EAST) WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

31. CUT @ EXIST. TEE, REMOVE & DISPOSE OF PIPE TO SOUTH AS NECESSARY TO CAP EXISTING MAIN. INSTALL 1-8"ø MJ PLUG WITH CONC. THRUST BLOCK. LINE TO REMAIN IN SERVICE TO NORTH AND WEST. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY

32. EXIST. GATE VALVE INCL. VALVE CHAMBER TO REMAIN & SHALL BE TURNED ON (OPENED VALVE) AND ABANDONED. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 33 THROUGH 47 ARE NOT USED ON THIS SHEET ****

48. INSTALL COMBINATION AIR RELEASE/AIR VACUUM VALVE ASSEMBLY PER MLT STD No. 205 IN APPENDIX OF CONTRACT PROVISIONS.

**** NOTES 49 THROUGH 55 ARE NOT USED ON THIS SHEET ****

STORM DRAINAGE NOTES:

1. REMOVE & DISPOSE OF EXIST. STORM DRAINAGE PIPE AS REQUIRED TO INSTALL NEW SOLID WALL SDR35 PVC PIPE AS SHOWN ON THE PLANS. THE COST RELATED TO REMOVING & DISPOSING OF EXIST. CONC. PIPE SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK

2. INSTALL 12"ø SDR35 SOLID WALL PVC PIPE & CONNECT TO EXIST CATCH BASIN WITH SAND COLLAR, TO EXIST. 12"ø CONC. PIPE WITH FLEXIBLE COUPLING. SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL

**** NOTE 3 IS NOT USED ON THIS SHEET ****

4. REMOVE & DISPOSE OF EXIST. CATCH BASIN TYPE 1 & STEEL PLATE UNDER ASPHALT. BACKFILL WITH EXIST. NATIVE SOIL OR IMPORT MATERIALS AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY.

5. INSTALL CDF INSIDE THE 12"ø CONC. PIPE. ALL COSTS RELATED TO THIS WORKS SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK. PIPE L=18 LF. & CDF QT. = 0.5 CY.(APPROXIMATE)

**** NOTES 6 THROUGH 11 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. INSTALL CEMENT CONCRETE TRAFFIC CURB & GUTTER PER MLT STD PLAN No. 101 IN APPENDIX OF CONTRACT PROVISIONS, SEE DETAIL 5 ON SHEET C-13 FOR PAVEMENT REPAIR @ NEW TRAFFIC CURB AND GUTTER

**** NOTES 6 THROUGH 7 ARE NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

9. INSTALL 3-DAY MIX. CEMENT CONC. DRIVEWAY PER DETAIL 6 ON SHEET C-13. THE 3-DAY MIX CEMENT CONC. DRIVEWAY ENTRANCE IS CONSIDERED PART OF CEMENT CONC. SIDEWALK. NO EXTRA PAYMENT SHALL BE MADE REGARDING THE DIFFERENT TYPE OF CEMENT CONC. MIX INCL. DIFFERENT THICKNESS OF CEMENT CONC.

10. INSTALL CEMENT CONC. SIDEWALK INCL. PEDESTRIAN CURB & CEMENT CONC. STRIP PER DETAIL 7 ON SHEET C-13. THE CEMENT CONC. STRIP & PEDESTRIAN CURB ARE CONSIDERED PART OF CEMENT CONC. SIDEWALK. THE MEASUREMENT SHALL BE TOP SURFACE OF CEMENT CONCRETE. NO EXTRA PAYMENT SHALL BE MADE REGARDING THE DIFFERENT THICKNESS OF CEMENT CONC. INCL. DIFFERENT TYPE OF CONC. MIX.

11. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (3" MAX. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM.) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

12. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAILS.

13. INSTALL 4" THICK CEMENT CONC. WALKWAY WITH 4" CSTC. THE CEMENT CONC. WALKWAY IS CONSIDERED PART OF CEMENT CONC. SIDEWALK.

14. INSTALL CEMENT CONC. EXTRUDED CURB PER MLT STD PLAN 105 IN APPENDIX OF CONTRACT PROVISIONS. ALL COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK. TOTAL LENGTH IS APPROX. 10 LINEAR FEET

**** NOTES 15 THROUGH 16 ARE NOT USED ON THIS SHEET ****

17. INSTALL 2" HMA CLASS 1/2" PG 64-22 WITH 2" CSTC & COMPACT TO 85% OF MAX. DENSITY

**** NOTES 18 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

CHAD M A SCHULHAUSER, STATE OF WASHINGTON, 34846, REGISTERED PROFESSIONAL ENGINEER, 18 DEC 12

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN & STORM DRAIN PLAN AND PROFILE

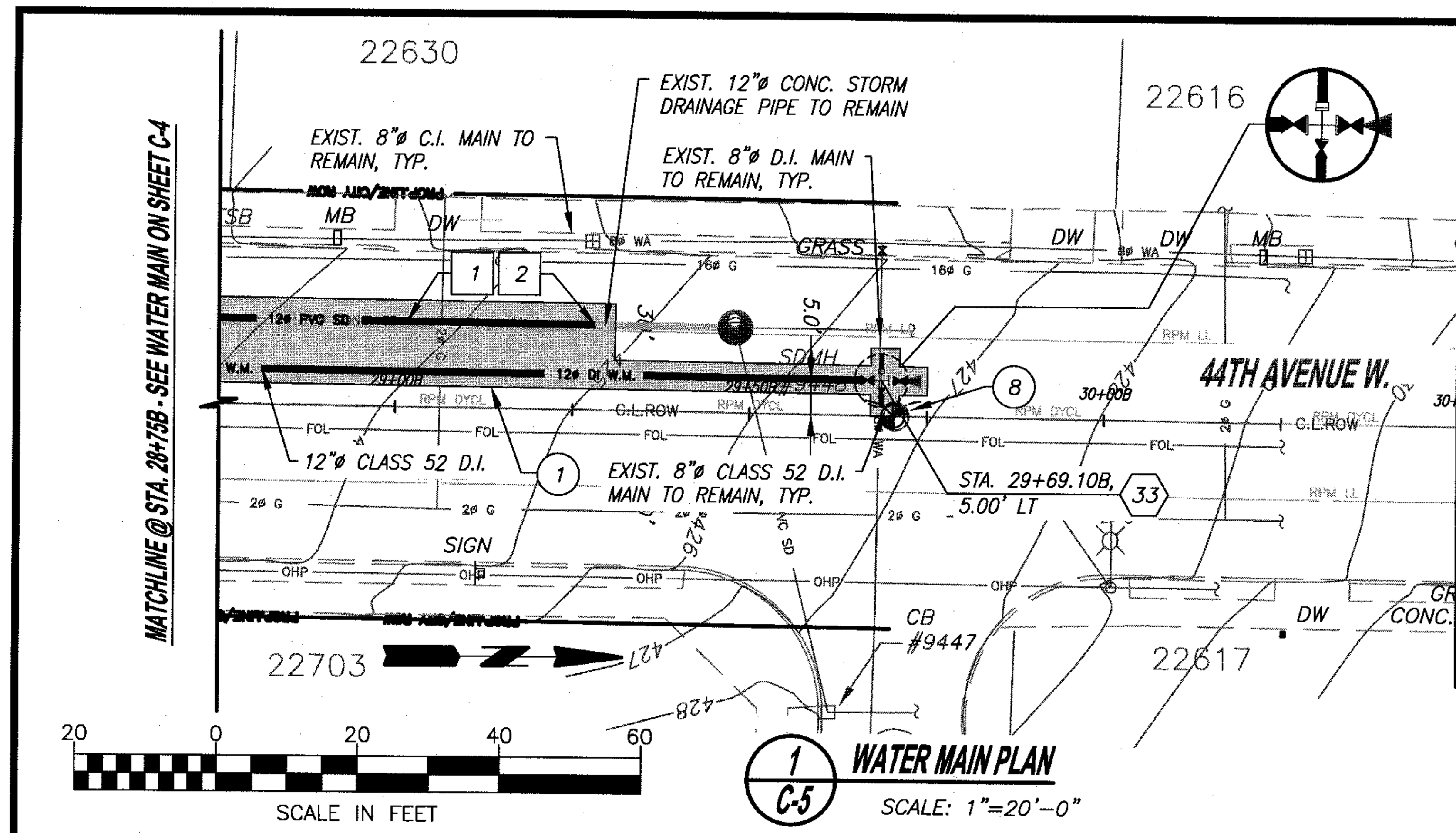
DRAWN BY: R. SENG | CHECKED BY: WILL VAN RY | APPROVED BY: WILL VAN RY | DATE: 9/12/2012 | PROJECT ENGINEER: R. SENG | DATE: 9/12/2012

REVISION | DATE | DESCRIPTION

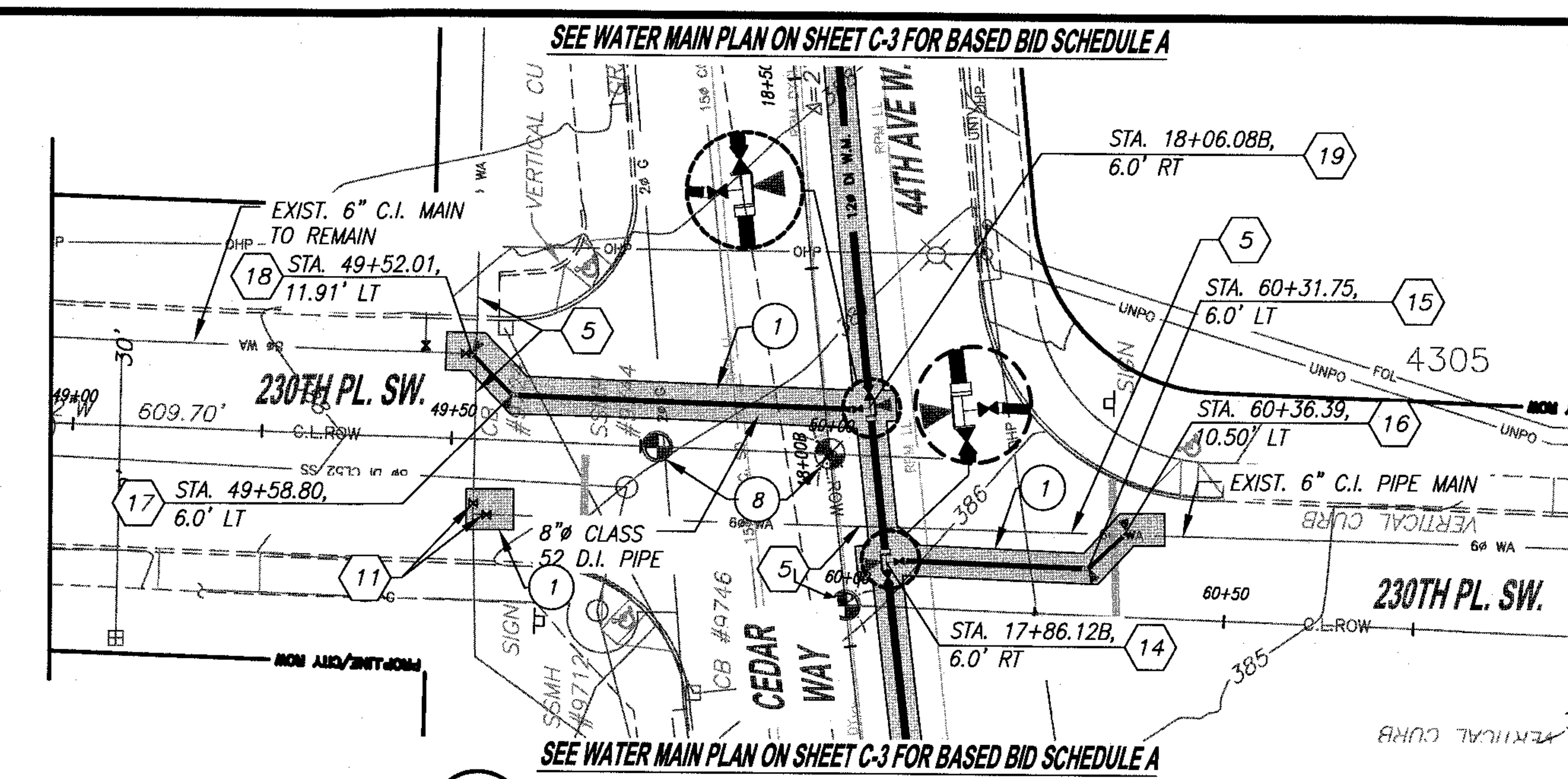
DRAWING NO.: C-4
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-01 TO C-16.DWG

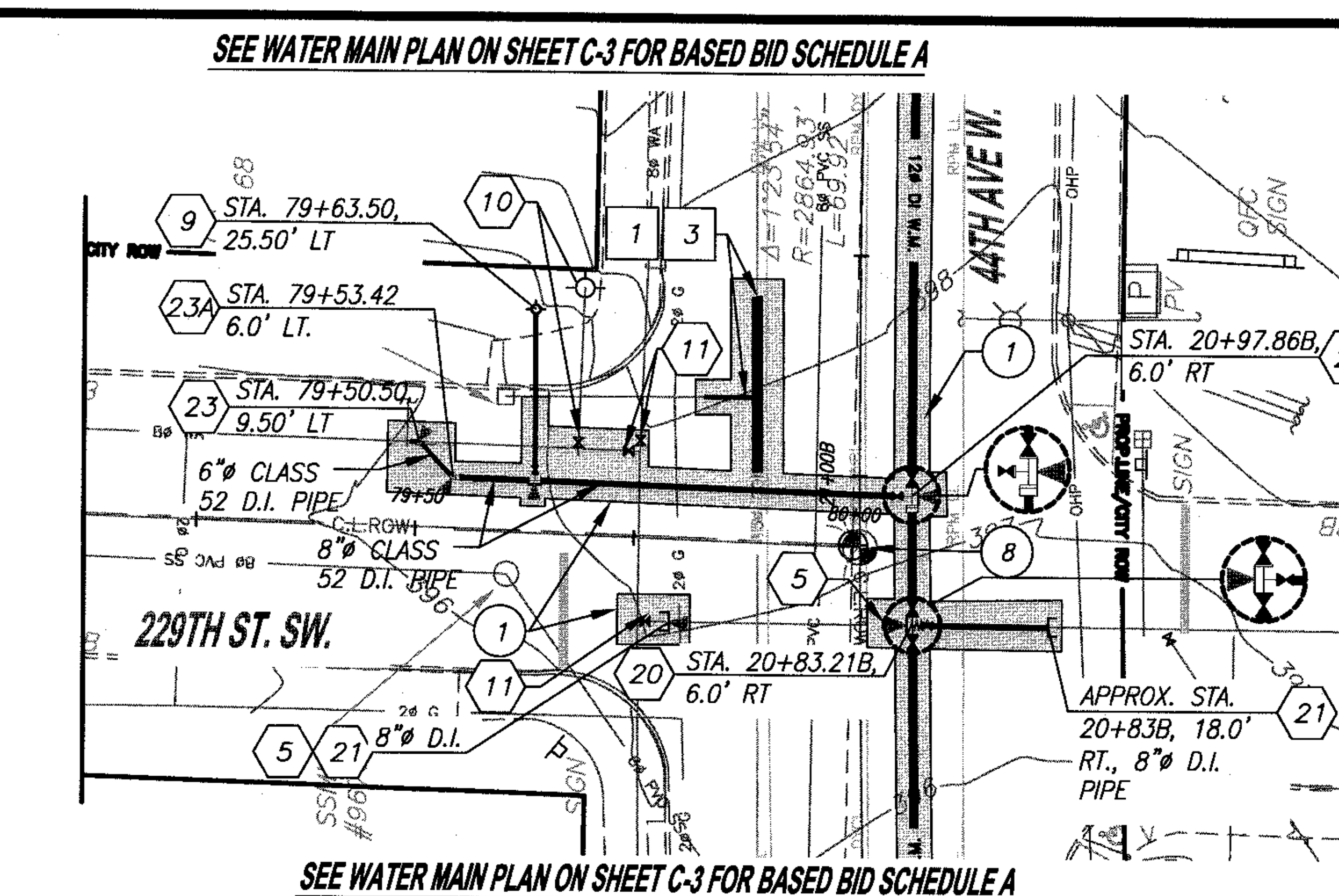
PLOT DATE: Tuesday, December 18, 2012 9:38:44 AM



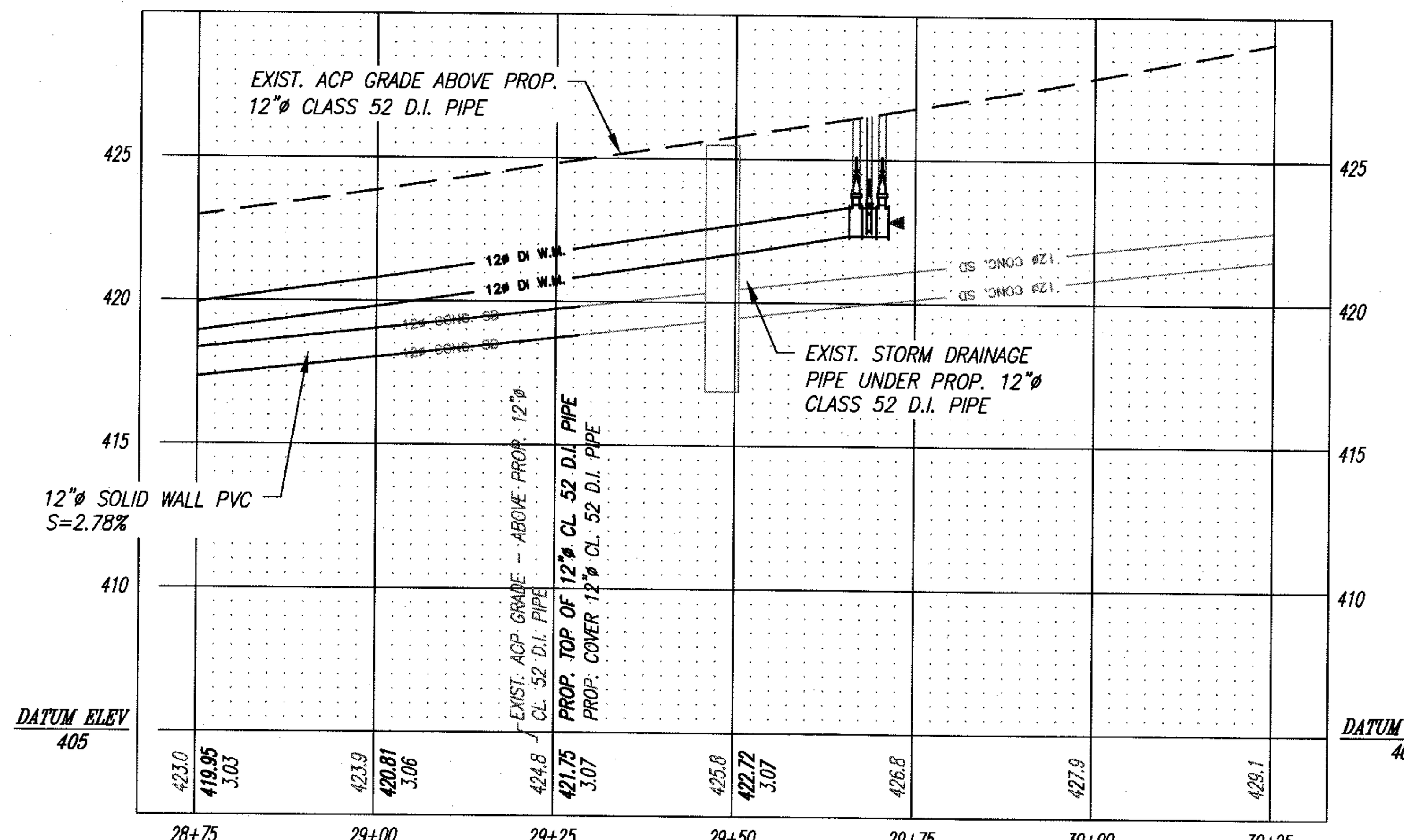
1 / C-5 **WATER MAIN PLAN**
SCALE: 1"=20'-0"



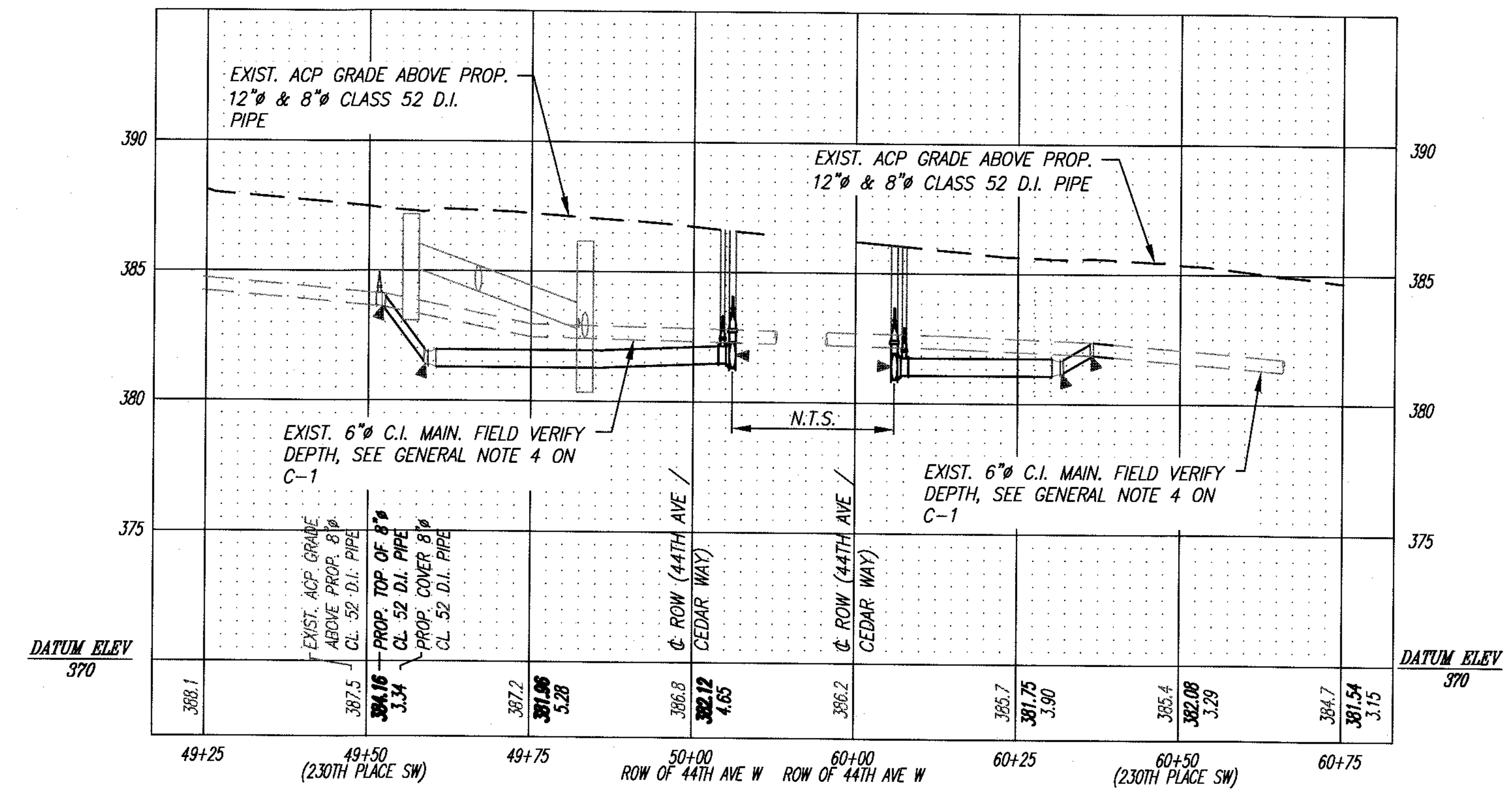
2 / C-5 **WATER MAIN PLAN ON 230TH PL. SW**
SCALE: 1"=20'-0"



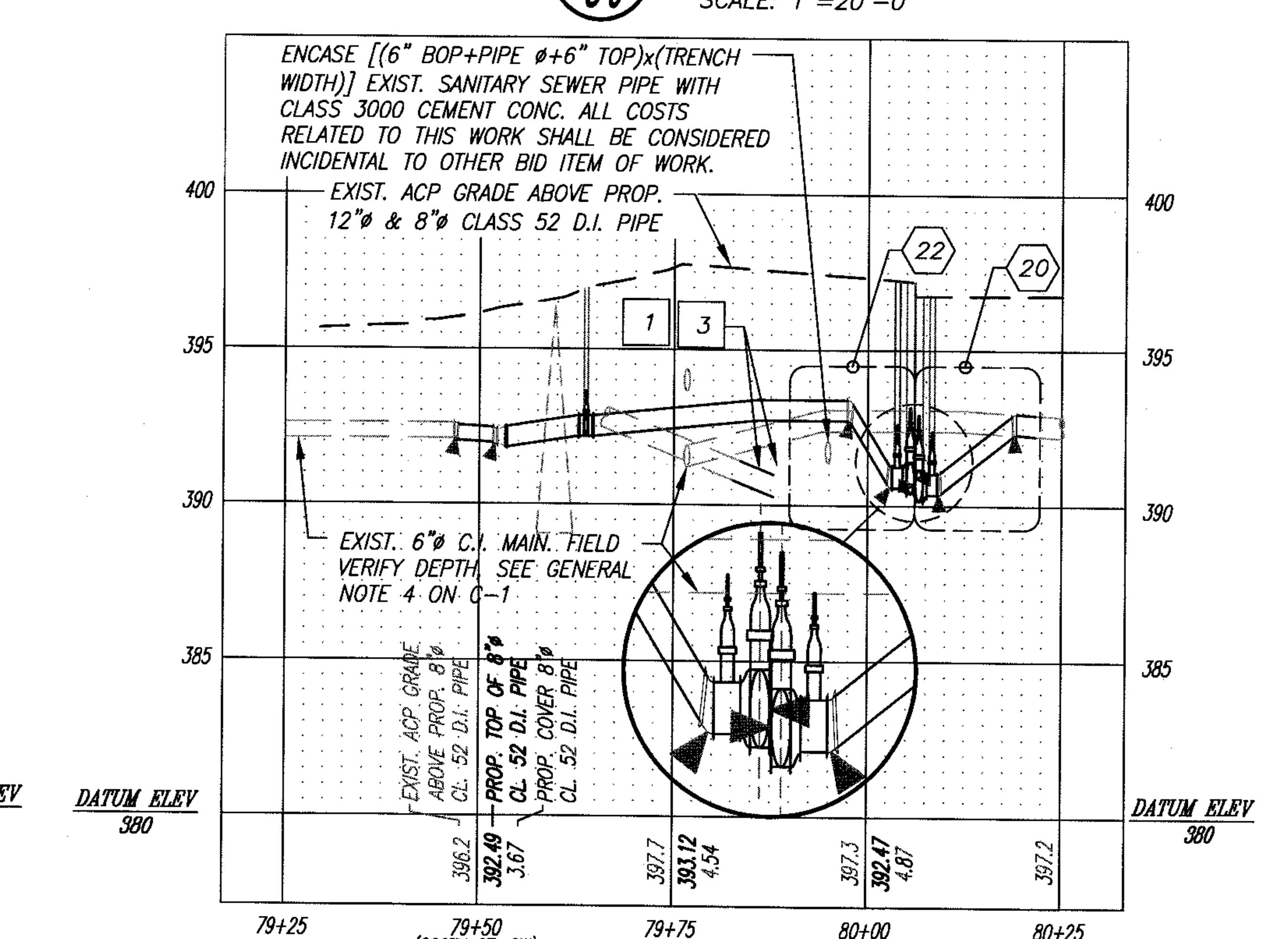
3 / C-5 **WATER MAIN PLAN ON 229TH ST. SW**
SCALE: 1"=20'-0"



4 / C-5 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0" & V: 1"=5'-0"



5 / C-5 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0" & V: 1"=5'-0"



6 / C-5 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0" & V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 8 ARE NOT USED ON THIS SHEET ****

9. INSTALL HYDRANT ASSEMBLY PER MLT STD 201 (SIM.) IN APPENDIX OF CONTRACT PROVISIONS, SEE GENERAL NOTE No. 3 ON SHEET C-1 FOR CONC. THRUST BLOCK. CONNECTIONS OF HYDRANTS AND HYDRANT VALVES TO SPOOL SHALL BE MADE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES1400 MJ RETAINER GLANDS OR APPROVED EQUAL). IF HYDRANT SPOOL IS MADE OF MORE THAN ONE PIPE, PUSH ON PIPE SHALL BE MADE WITH "FIELD LOK" GASKET OR APPROVED EQUAL.

10. CUT, REMOVE & DISPOSE OF EXIST. HYDRANT ASSEMBLY INCL. VALVE BOX, COVER, AND HYDRANT BARREL. EXIST. HYDRANT SPOOL TO REMAIN INCL. GATE VALVE. TURN VALVE OFF (SHUT-OFF VALVE) & PLUG EXIST. SPOOL WITH COMMERCIAL CONC. PER SS 7-08.3(4).

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 13 ARE NOT USED ON THIS SHEET ****

14. INSTALL:
    a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    e. 1-8"ø 11.25° BEND, PExMJ, CLASS 250
    f. 2-CONC. THRUST BLOCK

15. INSTALL:
    a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN. INSTALL:
    b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 25D
    c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    d. 1-CONC. THRUST BLOCK

    NOTE: DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEM OF WORK.

16. CUT REMOVE & DISPOSE OF EXIST. C.I. PIPE AS REQUIRED TO CONNECT NEW MAIN.
    INSTALL:
    a. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    b. 2-6"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    c. 1-6"ø CLASS 52 LONG BODY SLEEVE
    d. 2-CONC. THRUST BLOCK
    e. 1-CONC. VERTICAL BLOCK

    NOTE: DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN LONG BODY SLEEVE WITH UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL. EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

17. INSTALL:
    a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN.
    INSTALL:
    b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 250
    c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    d. 1-6"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
    e. 2-CONC. THRUST BLOCK

    NOTE:
    DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

WATER MAIN NOTES:

18. CUT, REMOVE & DISPOSE OF EXIST. TEE, GATE VALVE ASSEMBLY (SOUTH OF TEE), CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN. EXIST. GATE VALVE (WEST OF TEE) INCL. VALVE CHAMBER TO REMAIN & SHALL BE TURNED ON (OPEN VALVE) & ABANDONED. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER (WEST OF TEE). CLEAN FACE OF EXIST. GATE VALVE FLANGE & INSTALL:
    a. 1-6"ø 45° BEND, FLxMJ, INCL. NEW GASKET, CLASS 250
    b. 1-6"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
    b. 1-6"ø CLASS 52 D.I., APPROX. L=4 LF
    c. 1-6"ø D.I. CLASS 52 LONG BODY SLEEVE (AS NECESSARY)
    d. 1-CONC. THRUST BLOCK
    e. 1-CONC. VERTICAL BLOCK

    NOTE:
    1) DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.
    2) ALL COSTS RELATED TO REMOVAL & DISPOSAL OF TEE, CONC. BLOCK, GATE VALVE ASSEMBLY, VALVE BOX & COVER SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

19. INSTALL:
    a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    e. 1-8" 11.25° BEND, PExMJ, CLASS 250
    f. 2-CONC. THRUST BLOCK

20. CUT, REMOVE & DISPOSE OF EXIST. PIPE AS NECESSARY TO INSTALL NEW MAIN.
    INSTALL:
    a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-8"ø GATE VALVE, FLxFL, CLASS 250
    d. 1-8"ø TEMP. BLIND FLANGE FOR TESTING
    e. 1-CONC. THRUST BLOCK

    AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN.
    INSTALL:
    f. 1-8"ø 11.25° BEND, FLxMJ, CLASS 250 (VERT.)
    g. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    h.1-8"ø CLASS 52 D.I. PIPE, L=4 LF. MAX.
    i. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
    j.1-CONC. THRUST BLOCK
    k. 1-CONC. VERTICAL BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

21. CUT, REMOVE & DISPOSE OF EXIST. C.I. & D.I. PIPE AS NECESSARY TO INSTALL THE PROPOSED NEW MAIN. INSTALL TEMP. BLOWOFF W/BLOCK TO MAINTAIN SERVICE. THE COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

22. INSTALL:
    a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
    b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    d. 1-8"ø GATE VALVE, FLxFL, CLASS 250
    e. 1-8"ø 11.25° BEND, FLxMJ, CLASS 250, (VERT.)
    f. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250, (VERT.)
    g. 2-CONC. THRUST BLOCK
    h, 1-CONC. VERTICAL BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK.

23. CUT, REMOVE & DISPOSE OF EXIST. C.I. PIPE AS REQUIRED TO CONNECT TO NEW MAIN.
    INSTALL
    a. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    b. 1-6"ø CLASS 52 D.I. PIPE, APPROX. L=4 LF MAX.
    c. 1-6"ø CLASS 52 D.I. LONG BODY SLEEVE
    d. 1-6"ø 11.25° BEND, MJxMJ, CLASS 250, (VERT.)
    e. 1-CONC. THRUST BLOCK
    f, 1-CONC. VERTICAL BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEM OF WORK.

WATER MAIN NOTES:

23A. INSTALL:
    a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN. INSTALL:
    b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 250
    c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    d. 1-6"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    e. 2-CONC. THRUST BLOCK

    NOTE:
    DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 24 THROUGH 32 ARE NOT USED ON THIS SHEET ****

33. INSTALL:
    a. 1 TEMP. BLOWOFF W/BLOCK FOR TESTING & FLUSHING

    AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXISTING WATER MAIN AS NECESSARY TO CONNECT NEW MAIN. INSTALL:
    b. 1-12"øx8"ø CROSS, FLxFL, CLASS 250
    c. 2-12"ø GATE VALVES, FLxMJ, CLASS 250
    d. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    e. 1-8"ø ADAPTER, FLxMJ, CLASS 250
    f. 2-8"ø CLASS 52 D.I. PIPE, L=4 LF. MAX.
    g. 2-8"ø CLASS 52 D.I. LONG BODY SLEEVE
    h. 1-12"ø CLASS 52 D.I. PIPE, L=4 LF., MAX
    i. 1-12"ø CLASS 52 D.I, LONG BODY SLEEVE
    j. 1-12"ø BLIND FLANGE, CLASS 250
    k. 1-CONC. THRUST BLOCK

**** NOTES 34 THROUGH 55 ARE NOT USED ON THIS SHEET ****

STORM DRAINAGE NOTES:

1. REMOVE & DISPOSE OF EXIST. STORM DRAINAGE PIPE AS REQUIRED TO INSTALL NEW SOLID WALL SDR35 PVC PIPE AS SHOWN ON THE PLANS. THE COST RELATED TO REMOVING & DISPOSING OF EXIST. CONC. PIPE SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK

2. INSTALL 12"ø SDR35 SOLID WALL PVC PIPE & CONNECT TD EXIST CATCH BASIN WITH SAND COLLAR, TO EXIST. 12"ø CONC. PIPE WITH FLEXIBLE COUPLING. SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL

3. INSTALL 8"ø & 15"ø SOLID WALL SDR35 PVC PIPE WITH 15"øx15"øx8"ø SOLID WALL SDR35 TEE & CONNECT TO EXIST. 8"ø & 15"ø CONC. STORM DRAINAGE PIPE WITH FLEXIBLE COUPLING. SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL

**** NOTES 4 THROUGH 11 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

**** NOTES 2 THROUGH 7 ARE NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

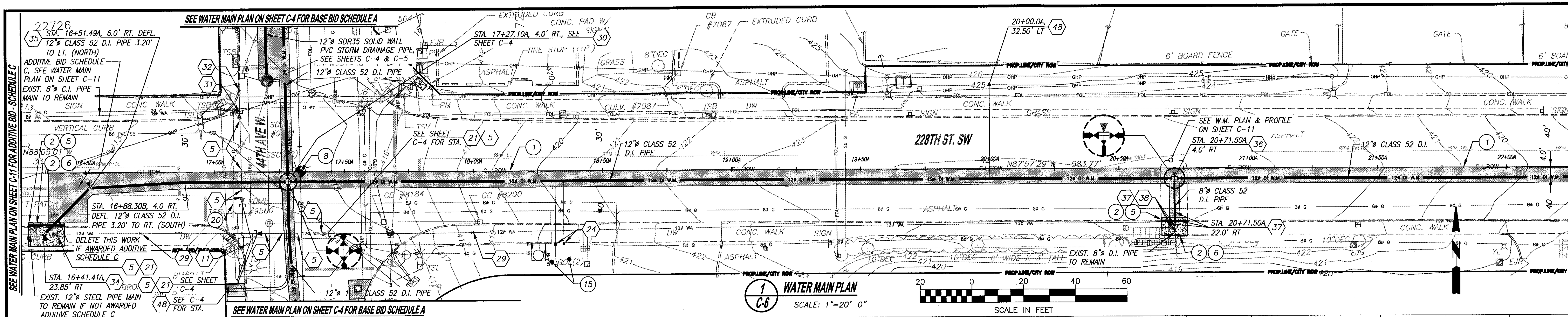
CHAD M. A. SCHULHAUSER, STATE OF WASHINGTON, 34846, REGISTERED PROFESSIONAL ENGINEER, 18 DEC 12

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN & STORM DRAIN PLANS AND PROFILES

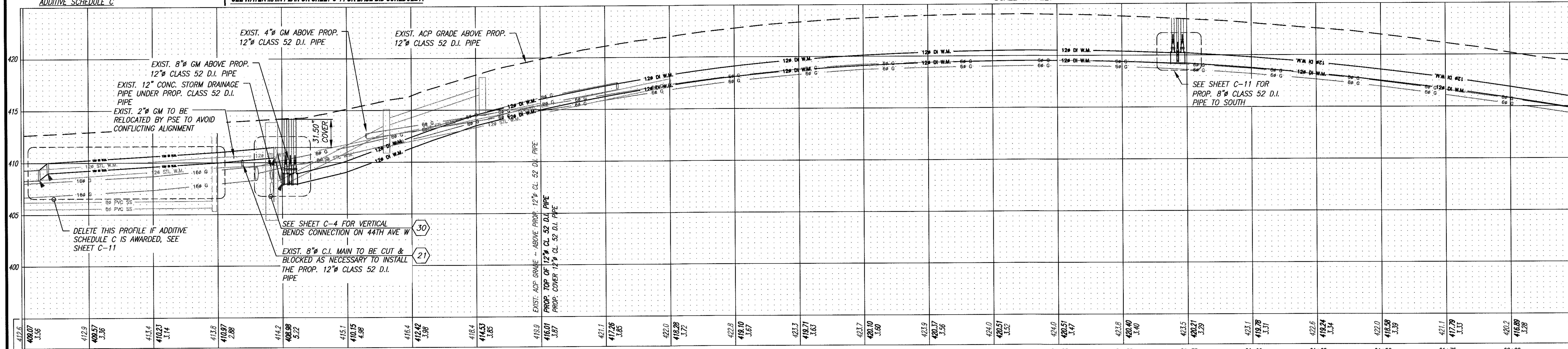
DRAWING NO.: C-5	DRAWN BY: R. SENG	APPROVED BY: WILL VAN RY	DATE: 9/12/2012
HORIZONTAL SCALE: 1"=20'-0"	CHECKED BY: WILL VAN RY	PROJECT ENGINEER: R. SENG	DATE: 9/12/2012
VERTICAL SCALE: 1"=5'-0"	REVISION	DATE	DESCRIPTION

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-01 TO C-16.DWG
PLOT DATE: Tuesday, December 18, 2012 9:39:33 AM



WATER MAIN PLAN

1 / C-6 — SCALE: 1"=20'-0"



WATER MAIN PROFILE

2 / C-6 — SCALE: H: 1"=20'-0" & V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 10 ARE NOT USED ON THIS SHEET ****

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 20 ARE NOT USED ON THIS SHEET ****

21. CUT, REMOVE & DISPOSE OF EXIST. C.I. & D.I. PIPE AS NECESSARY TO INSTALL THE PROPOSED NEW MAIN. INSTALL TEMP. BLOWOFF W/BLOCK TO MAINTAIN SERVICE. THE COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 22 THROUGH 23 ARE NOT USED ON THIS SHEET ****

24. INSTALL 3/4"ø & 1"ø COPPER PIPE SERVICE CONNECTION ASSEMBLY (MATCH EXISTING) INCLUDING NEW METER SETTER, CORPORATION STOP & BOX PER MLT STD PLAN 202 IN APPENDIX OF CONTRACT PROVISIONS. CONNECT TO EXIST. SERVICE FROM BUILDING; REMOVE & DISPOSE OF EXIST. METER SETTER INCL. BOX & ADJUST NEW BOX TO FINAL GRADE. SEE "SERVICE CONNECTION SCHEDULE" ON THIS SHEET FOR SERVICE DIAMETER AND METER BOX LOCATION

**** NOTES 25 THROUGH 28 ARE NOT USED ON THIS SHEET ****

29. TURN VALVE OFF (SHUT-OFF VALVE) AND ABANDON. REMOVE & DISPOSE OF EXIST. VALVE BOX COVER. INSTALL CLASS 3000 CEMENT CONC. INTO VALVE BOX. ALL COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

30. INSTALL:
   a. 1-12"øx12"ø CROSS, FLxFL, CLASS 250
   b. 3-12"ø GATE VALVE, FLxMJ, CLASS 250 (NORTH, EAST, & SOUTH)
   c. 1-12"ø GATE VALVE, FLxFL, CLASS 250 (WEST)
   d. 1-12"ø 45° BEND, FLxMJ, CLASS 250 (WEST) (VERT.)
   e. 1-12"ø 45° BEND, MJxMJ, CLASS 250 (WEST) (VERT.)
   f. 2-12"ø 11.25 BEND, MJxMJ, CLASS 250 (SOUTH) (VERT.)
   g. 2-CONC. THRUST BLOCK
   h. 2-CONC. VERTICAL BLOCK

   NOTE: DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS . RESTRAIN ALL GATE VALVES (NORTH, SOUTH & EAST) WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

31. CUT @ EXIST. TEE, REMOVE & DISPOSE OF PIPE TO SOUTH AS NECESSARY TO CAP EXISTING MAIN. INSTALL 1-8"ø MJ PLUG WITH CONC. THRUST BLOCK. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY

32. EXIST. GATE VALVE INCL. VALVE CHAMBER TO REMAIN & SHALL BE TURNED ON (OPENED VALVE) AND ABANDONED. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTE 33 IS NOT USED ON THIS SHEET ****

WATER MAIN NOTES:

34. IF AWARDED ADDITIVE SCHEDULE C, DELETE ENTIRE NOTE No. 34; OTHERWISE, AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXIST. WATER MAIN AS NECESSARY AND CONNECT TO NEW MAIN.
   INSTALL:
   a. 1-12"ø 45° BEND, MJxFL, CLASS 250
   b. 1-12"ø 11.25° BEND, FLxMJ, CLASS 250 (VERT.)
   c. 1-12"ø 11.25 BEND, MJxMJ, CLASS 250 (VERT.)
   d. 1-12"ø CLASS 52 D.I. PIPE, APPROX. L=7 LF.
   e. 1-12"ø CLASS D.I. LONG BODY SLEEVE
   f. 2-CONC. THRUST BLOCK
   g. 1-CONC. VERTICAL BLOCK

   NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

35. IF AWARDED ADDITIVE SCHEDULE C, DELETE ENTIRE NOTE No. 35 AND SEE SHEET C-11 THROUGH SHEET C-12; OTHERWISE
   INSTALL:.
   a. 1-12"ø 45° BEND, MJxMJ, CLASS 250
   b. 1-CONC. THRUST BLOCK
   c. 1-12"ø CLASS 52 D.I. PIPE, APPROX L=18 LF. EXTENDING SOUTHWEST OF BEND
   d. 1-TEMP. BLOWOFF W/BLOCK FOR TESTING AND FLUSHING

36. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 2-12"ø GATE VALVES, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-CONC. THRUST BLOCK
   e. 1-8"ø TEMP MJ PLUG FOR TESTING

   NOTE:
   RESTRAIN 8"ø GATE VALVE CONNECTION TO PIPE WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

37. AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXIST. TEE UNDER CURB, CONC. BLOCK, GATE VALVE ASSEMBLY ON NORTH SIDE OF EXIST TEE & STEEL PIPE AS NECESSARY TO CONNECT TO NEW MAIN, SEE NOTE No. 38 FOR GATE VALVES TO REMAIN.
   INSTALL:
   a. 1-8"ø 22.5° BEND, FLxMJ, CLASS 250 (VERT.)
   b. 1-8"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
   c. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=14 LF
   d. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE, AS NECESSARY
   e. 1-CONC. THRUST BLOCK
   f. 1-CONC. VERTICAL BLOCK

   NOTE:
   1) DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).
   2) METERS ON MANIFOLD SERVE RESTAURANTS AND OTHER COMMERCIAL ESTABLISHMENTS. WATER SHUT DOWNS TO THESE METERS SHALL OCCUR ONLY BETWEEN MIDNIGHT AND 6 AM.

38. EXIST GATE VALVES SOUTH AND WEST ON EXISTING TEE TO REMAIN. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER ON VALVE NORTH ON EXISTING TEE. ALL COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 39 THROUGH 47 ARE NOT USED ON THIS SHEET ****

48. INSTALL COMBINATION AIR RELEASE/AIR VACUUM VALVE ASSEMBLY PER MLT STD No. 205 IN APPENDIX OF CONTRACT PROVISIONS.

**** NOTES 49 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. INSTALL CEMENT CONCRETE TRAFFIC CURB & GUTTER PER MLT STD PLAN No. 101 IN APPENDIX OF CONTRACT PROVISIONS, SEE DETAIL 5 ON SHEET C-13 FOR PAVEMENT REPAIR @ NEW TRAFFIC CURB AND GUTTER

6. INSTALL CEMENT CONCRETE SIDEWALK PER MLT STD PLAN No. 100 IN APPENDIX OF CONTRACT PROVISIONS.

**** NOTE 7 IS NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 14 ARE NOT USED ON THIS SHEET ****

15. INSTALL 4" DEPTH OF BARK OR WOOD CHIP MULCH TO RESTORE DISTURBED AREA. ALL COST RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK

**** NOTES 16 THROUGH 19 ARE NOT USED ON THIS SHEET ****

20. EXIST. 2"ø GAS MAIN TO BE RELOCATED BY PSE TO AVOID CONFLICTS WITH PROPOSED PIPE ALIGNMENTS.

**** NOTE 21 IS NOT USED ON THIS SHEET ****

SERVICE CONNECTION SCHEDULE

No.	ADDRESS	PIPE SIZE		LENGTH		WATER METER NOTES & METER BOX LOCATION
		3/4"ø	1"ø	SHORT	LONG	
3	22801 - 44TH AVE W		X	X		@ EXISTING LOCATION
4	22801 - 44TH AVE W		X	X		@ EXISTING LOCATION

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 778-6420

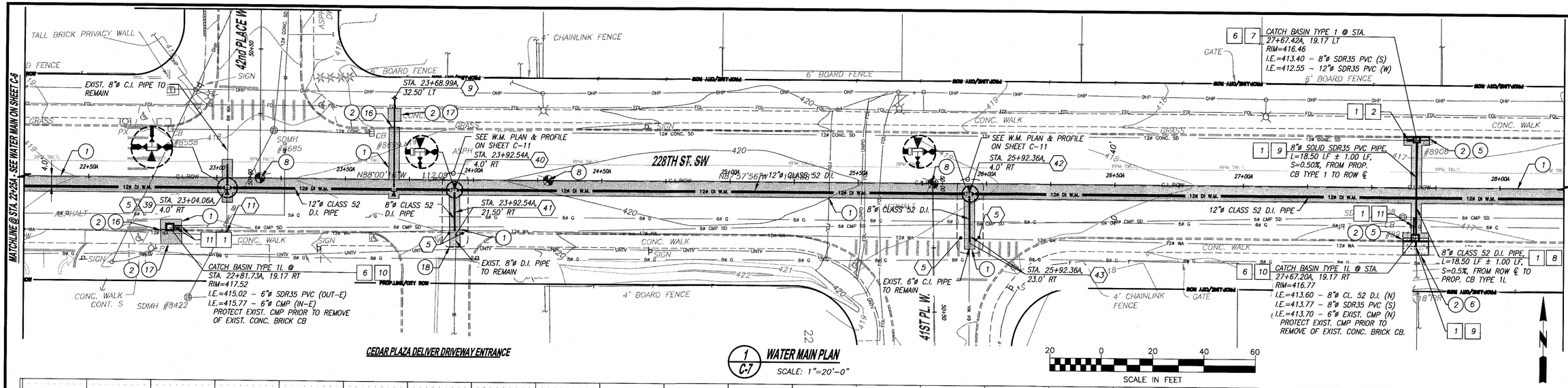
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN & STORM DRAIN PLAN AND PROFILE

DRAWN BY: R. SENG — CHECKED BY: WILL VAN RY — APPROVED BY: WILL VAN RY — DATE: 9/12/2012 — PROJECT ENGINEER: R. SENG — DATE: 9/12/2012

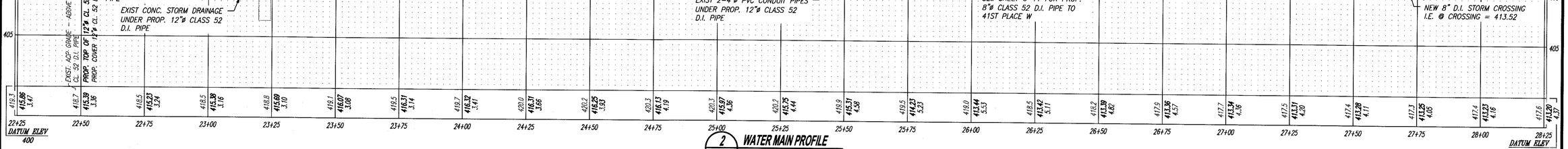
HORIZONTAL SCALE: 1"=20'-0" — VERTICAL SCALE: 1"=5'-0"

DRAWING NO.: C-6



1 / C-7 WATER MAIN PLAN
SCALE: 1"=20'-0"

SCALE IN FEET



22+25	22+50	22+75	23+00	23+25	23+50	23+75	24+00	24+25	24+50	24+75	25+00	25+25	25+50	25+75	26+00	26+25	26+50	26+75	27+00	27+25	27+50	27+75	28+00	28+25
419.3	418.7	418.5	418.5	418.8	419.1	419.5	419.7	420.0	420.2	420.3	420.3	420.2	419.9	419.5	419.0	418.5	418.2	417.9	417.7	417.5	417.4	417.3	417.4	417.6
415.86 3.47	415.39 3.36	415.23 3.24	415.39 3.16	415.69 3.10	416.07 3.08	416.31 3.14	416.32 3.41	416.25 3.53	416.31 3.66	416.13 4.19	415.97 4.36	415.75 4.44	415.31 4.58	414.23 5.23	413.44 5.33	413.42 5.11	413.39 4.82	413.36 4.57	413.34 4.36	413.31 4.20	413.28 4.11	413.25 4.05	413.23 4.16	413.20 4.37
DATUM ELEV 400																								DATUM ELEV 400

2 / C-7 WATER MAIN PROFILE
SCALE: H: 1"=20'-0" & V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 8 ARE NOT USED ON THIS SHEET ****

9. INSTALL HYDRANT ASSEMBLY PER MLT STD 201 (SIM.) IN APPENDIX OF CONTRACT PROVISIONS, SEE GENERAL NOTE No. 3 ON SHEET C-1 FOR CONC. THRUST BLOCK. CONNECTIONS OF HYDRANTS AND HYDRANT VALVES TO SPOOL SHALL BE MADE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES1400 MJ RETAINER GLANDS OR APPROVED EQUAL). IF HYDRANT SPOOL IS MADE OF MORE THAN ONE PIPE, PUSH ON PIPE SHALL BE MADE WITH "FIELD LOK" GASKET OR APPROVED EQUAL.

**** NOTE 10 IS NOT USED ON THIS SHEET ****

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 38 ARE NOT USED ON THIS SHEET ****

39. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxFL, CLASS 250
   d. 1-8"ø TEMP. BLIND FLANGE FOR TESTING
   e. 1-CONC. THRUST BLOCK

   AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXIST. PIPE AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   f. 1-8"ø 11.25° BEND, FLxMJ, CLASS 250 (VERT.)
   g. 1-8"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
   h. 1-8"ø CLASS 52 D.I. PIPE, L=4 LF. MAX.
   i. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
   j. 1-CONC. THRUST BLOCK
   k. 1-CONC. VERTICAL BLOCK

   NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

40. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
   e. 1-CONC. THRUST BLOCK
   f. 1-TEMP 8"ø MJ PLUG FOR TESTING

   NOTE:
   RESTRAIN 8"ø GATE VALVE CONNECTION TO PIPE WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

41. AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT @ EXIST. GATE VALVE, REMOVE & DISPOSE OF TEE, GATE VALVE, VALVE BOX & COVER, CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   a. 2-8"ø 45° BEND, MJxMJ, CLASS 250 (VERT.)
   b. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=11 LF.
   c. 1-8" CLASS 52 D.I. LONG BODY SLEEVE, AS NECESSARY
   d. 1-CONC. THRUST BLOCK
   e. 1-CONC. VERTICAL BLOCK

   NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

WATER MAIN NOTES:

42. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
   e. 1-CONC. THRUST BLOCK
   f. 1-TEMP 8"ø MJ PLUG FOR TESTING

   NOTE:
   RESTRAIN 8"ø GATE VALVE CONNECTION TO PIPE WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

43. AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT @ EXIST. GATE VALVE, REMOVE & DISPOSE OF TEE, GATE VALVE, VALVE BOX & COVER, CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   a. 1-6"ø x8"ø CONCENTRIC REDUCER, MJxFL, CLASS 250
   b. 1-8"ø 22.50° BEND, FLxMJ, CLASS 250, (VERT.)
   c. 1-8"ø 22.50° BEND, MJxMJ, CLASS 250, (VERT.)
   d. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=14 LF.
   e. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
   f. 1-CONC. THRUST BLOCK
   g. 1-CONC. VERTICAL BLOCK

   NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN REDUCER AND LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

**** NOTES 44 THROUGH 55 ARE NOT USED ON THIS SHEET ****

STORM DRAINAGE NOTES:

1. REMOVE & DISPOSE OF EXIST. STORM DRAINAGE PIPE AS REQUIRED TO INSTALL NEW SOLID WALL SDR35 PVC PIPE AS SHOWN ON THE PLANS. THE COST RELATED TO REMOVING & DISPOSING OF EXIST. CONC. PIPE SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK
2. INSTALL 12"ø SDR35 SOLID WALL PVC PIPE & CONNECT TO EXIST CATCH BASIN WITH SAND COLLAR, TO EXIST. 12"ø CONC. PIPE WITH FLEXIBLE COUPLING. SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL

**** NOTES 3 THROUGH 5 ARE NOT USED ON THIS SHEET ****

6. REMOVE & DISPOSE OF EXIST. CONC BRICK CATCH BASIN AS NECESSARY TO INSTALL NEW CATCH BASIN.
7. INSTALL CATCH BASIN TYPE 1 PER WSDOT STD PLAN No. B-5.20-01, RECTANGULAR FRAME (REVERSIBLE) PER WSDOT STD PLAN No. B-30.10-01 PLUS 2" ADJUSTMENT RISER (EAST JORDAN IRON WORKS #775092 OR APPROVED EQUAL), RECTANGULAR BI-DIRECTIONAL VANED GRATE PER WSDOT STD PLAN No. B-30.40.01 & ADJUST TO FINAL GRADE. ADJUSTMENT RISER TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
8. INSTALL 8"ø CLASS 52 D.I. STORM DRAINAGE PIPE, CONNECT PROPOSED CATCH BASIN, AND CONNECT TO EXISTING OR PROPOSED STORM DRAINAGE PIPE WITH FLEXIBLE COUPLING, SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL.
9. INSTALL 8"ø SOLID WALL SDR35 PVC PIPE & CONNECT TO EXISTING OR PROP. STORM DRAINAGE PIPE WITH FLEXIBLE COUPLING & CONNECT PROPOSED CATCH BASIN WITH SAND COLLAR, SEE DETAIL 4 ON SHEET C-13 FOR STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAIL.
10. INSTALL CATCH BASIN TYPE 1L PER WSDOT STD PLAN No. B-5.40-01, RECTANGULAR FRAME (REVERSIBLE) PER WSDOT STD PLAN No. B-30.10-01 PLUS 2" ADJUSTMENT RISER (EAST JORDAN IRON WORKS #775092 OR EQUAL), RECTANGULAR BI-DIRECTIONAL VANED GRATE PER WSDOT STD PLAN No. B-30.40.01 & ADJUST TO FINAL GRADE. ADJUSTMENT RISER TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
11. INSTALL 6"ø CLASS 52 D.I. PIPE, CONNECT PROPOSED CATCH BASIN, AND CONNECT TO EXIST. 6"ø STORM DRAINAGE PIPE WITH FLEXIBLE COUPLING OR TEE, AS NECESSARY. ALL COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.
2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. INSTALL CEMENT CONCRETE TRAFFIC CURB & GUTTER PER MLT STD PLAN No. 101 IN APPENDIX OF CONTRACT PROVISIONS, SEE DETAIL 5 ON SHEET C-13 FOR PAVEMENT REPAIR @ NEW TRAFFIC CURB AND GUTTER
6. INSTALL CEMENT CONCRETE SIDEWALK PER MLT STD PLAN No. 100 IN APPENDIX OF CONTRACT PROVISIONS.

**** NOTE 7 NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

*** NOTES 9 THROUGH 15 ARE NOT USED ON THIS SHEET ****

16. INSTALL 6" TEMPORARY HMA CURB & COMPACT TO 85% OF MAX. DENSITY. THE 6" HMA CURB SHALL BE CONSIDERED PART OF HMA PAVEMENT REPAIR. NO EXTRA PAYMENT SHALL BE MADE.
17. INSTALL 2" HMA CLASS 1/2" PG 64-22 WITH 2" CSTC & COMPACT TO 85% OF MAX. DENSITY
18. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (4" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

**** NOTES 19 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

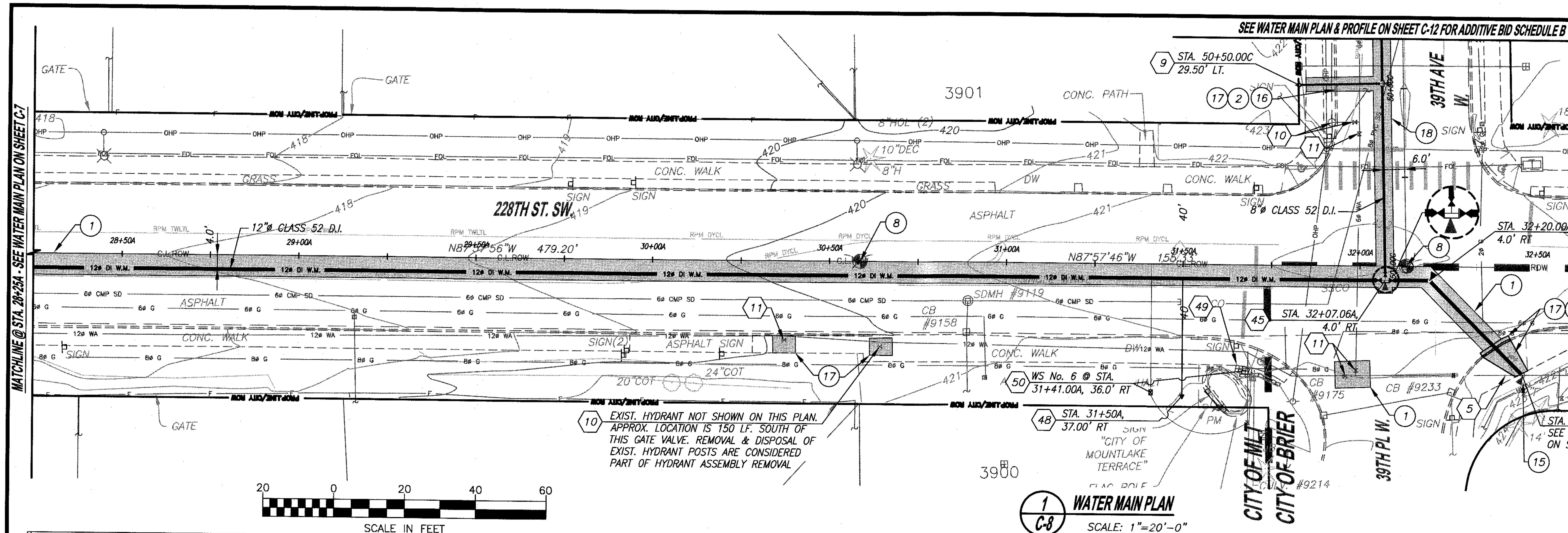
SCHILLHAUSER WASHINGTON 34846 REGISTERED PROFESSIONAL ENGINEER STATE OF WASHINGTON

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN & STORM DRAIN PLAN AND PROFILE

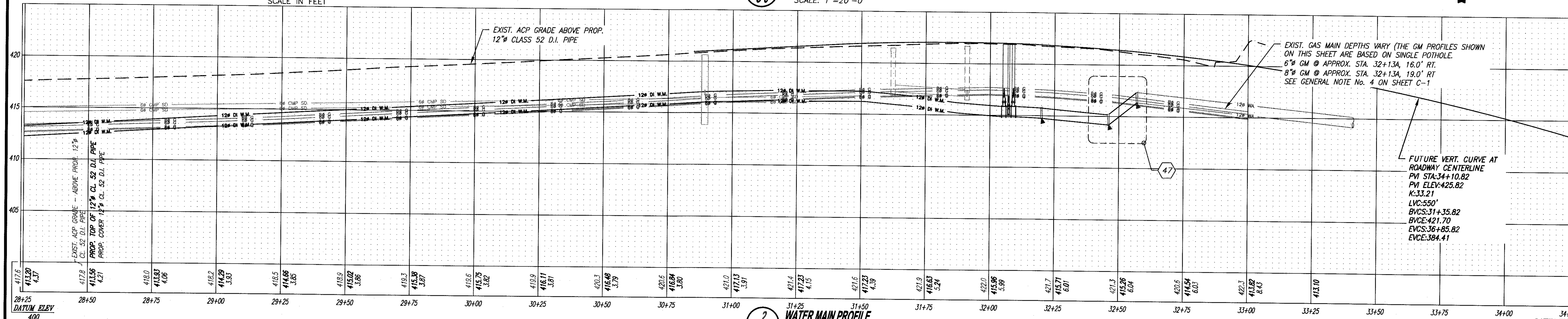
DRAWING NO.: C-7
DRAWN BY: R. SIENG
CHECKED BY: WILL VAN RY
REVISION: WILL VAN RY
DATE:
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"
APPROVED BY: WILL VAN RY
PROJECT ENGINEER: R. SIENG
DESCRIPTION:
DATE: 9/12/2012
DATE: 9/12/2012

K:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 41TH, CEDAR)\2 - DESIGN\DWGS\SHEET C-01 TO C-16.DWG
PLOT DATE: Tuesday, December 18, 2012 9:40:39 AM



1/C-8 WATER MAIN PLAN

SCALE: 1"=20'-0"



2/C-8 WATER MAIN PROFILE

SCALE: H: 1"=20'-0"
V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 8 ARE NOT USED ON THIS SHEET ****

9. INSTALL HYDRANT ASSEMBLY PER MLT STD 201 (SIM.) IN APPENDIX OF CONTRACT PROVISIONS, SEE GENERAL NOTE No. 3 ON SHEET C-1 FOR CONC. THRUST BLOCK. CONNECTIONS OF HYDRANTS AND HYDRANT VALVES TO SPOOL SHALL BE MADE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES1400 MJ RETAINER GLANDS OR APPROVED EQUAL). IF HYDRANT SPOOL IS MADE OF MORE THAN ONE PIPE, PUSH ON PIPE SHALL BE MADE WITH "FIELD LOK" GASKET OR APPROVED EQUAL.

10. CUT, REMOVE & DISPOSE OF EXIST. HYDRANT ASSEMBLY INCL. VALVE BOX, COVER, AND HYDRANT BARREL. EXIST. HYDRANT SPOOL TO REMAIN INCL. GATE VALVE. TURN VALVE OI (SHUT-OFF VALVE) & PLUG EXIST. SPOOL WITH COMMERCIAL CONC. PER SS 7-08.3(4).

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL A DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING ANI COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 16 ARE NOT USED ON THIS SHEET ****

17. INSTALL:
    a. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

    AFTER NEW 8"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CONNECT NEW MAIN.
    INSTALL:
    b. 1-8"ø x6"ø REDUCER, MJxPE, CLASS 250
    c. 1-6"ø 45° BEND, MJxMJ, CLASS 250
    d. 1-6"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
    e. 2-CONC. THRUST BLOCK

    NOTE:
    DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCEI WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENT. TO OTHER BID ITEMS OF WORK.

**** NOTES 18 THROUGH 44 ARE NOT USED ON THIS SHEET ****

45. INSTALL:
    a. 1-12"x8"ø TEE, FLxFL, CLASS 250
    b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    d. 1-CONC. THRUST BLOCK

46. INSTALL:
    a. 1-12"ø 45° BEND, MJxMJ, CLASS 250
    b. 1-CONC. THRUST BLOCK
    c. 1-12"ø CLASS 52 D.I. PIPE, APPROX L=18 LF. EXTENDING SOUTHEAST OF BEND
    d. 1-TEMP. BLOWOFF W/BLOCK FOR TESTING AND FLUSHING

    NOTE:
    DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK.

WATER MAIN NOTES:

47. CUT, REMOVE & DISPOSE OF EXIST. D.I. PIPE AS NECESSARY TO CONNECT NEW MAIN.
    INSTALL:
    a. 1-12"ø 45° BEND, MJxFL, CLASS 250
    b. 1-12"ø CLASS 52 D.I. PIPE, APPROX. L=6 LF.
    c. 1-12"ø CLASS 52 D.I. LONG BODY SLEEVE
    d. 1-12"ø 22.50° BEND, MJxMJ, CLASS 250, (VERT.)
    e. 1-12"ø 22.50° BEND, FLxMJ, CLASS 250 (VERT.)
    f. 2-CONC. THRUST BLOCKS
    g. 1-CONC. VERTICAL BLOCK

    NOTE:
    1) DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).
    2) FIELD VERIFY BENDS NECESSARY TO MAKE CONNECTIONS. SEE GENERAL NOTE No.4
    3) EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

48. INSTALL COMBINATION AIR RELEASE/AIR VACUUM VALVE ASSEMBLY PER MLT STD No. 205 IN APPENDIX OF CONTRACT PROVISIONS.

49. REMOVE & DISPOSE OF EXISTING COMBINATION AIR RELEASE AIR VACUUM VALVE ASSEMBLY.

50. INSTALL 3/4"ø COPPER PIPE SERVICE CONNECTION ASSEMBLY INCLUDING NEW METER SETTER, CORPORATION STOP & BOX PER MLT STD PLAN 202 IN APPENDIX OF CONTRACT PROVISIONS AT NEW LOCATION AS SHOWN ON THE PLANS. CONNECT 3/4"ø COPPER PIPE SERVICE FROM NEW METER BOX TO EXIST. DOUBLE CHECK VALVES AT THE BACK OF MLT PARK SIGN & PLANTER. REMOVE & DISPOSE OF EXIST. METER SETTER INCL. BOX & ADJUST NEW BOX TO FINAL GRADE. THIS WORK IS CONSIDERED "3/4"ø COPPER PIPI SERVICE CONNECTION, SHORT SIDE." EXTRA FITTINGS MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 51 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 7 ARE NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 14 ARE NOT USED ON THIS SHEET ****

15. INSTALL 4" DEPTH OF BARK OR WOOD CHIP MULCH TO RESTORE DISTURBED AREA. ALL COST RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK

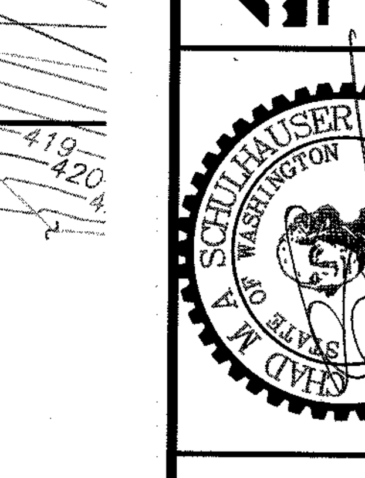
16. INSTALL 6" TEMPORARY HMA CURB & COMPACT TO 85% OF MAX. DENSITY. THE 6" HMA CURB SHALL BE CONSIDERED PART OF HMA PAVEMENT REPAIR. NO EXTRA PAYMENT SHALL BE MADE.

17. INSTALL 2" HMA CLASS 1/2" PG 64-22 WITH 2" CSTC & COMPACT TO 85% OF MAX. DENSITY

18. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (4" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

**** NOTES 19 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043



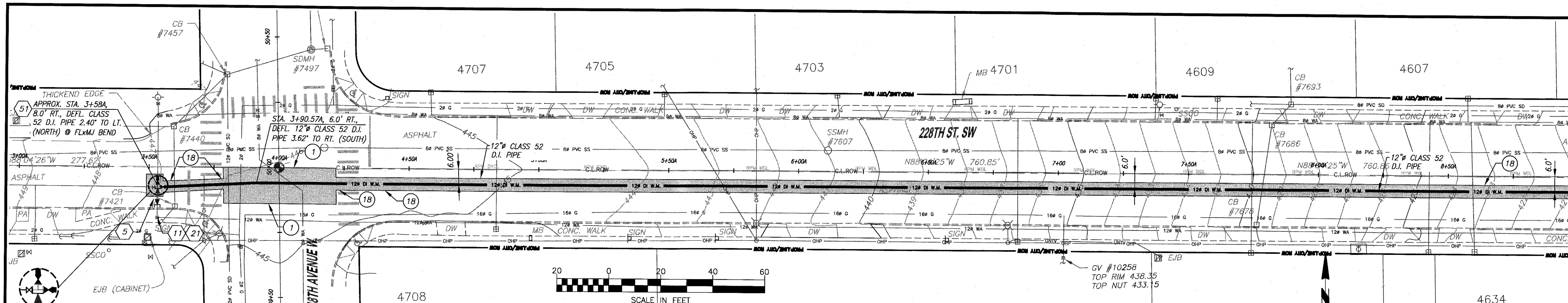
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN PLAN AND PROFILE

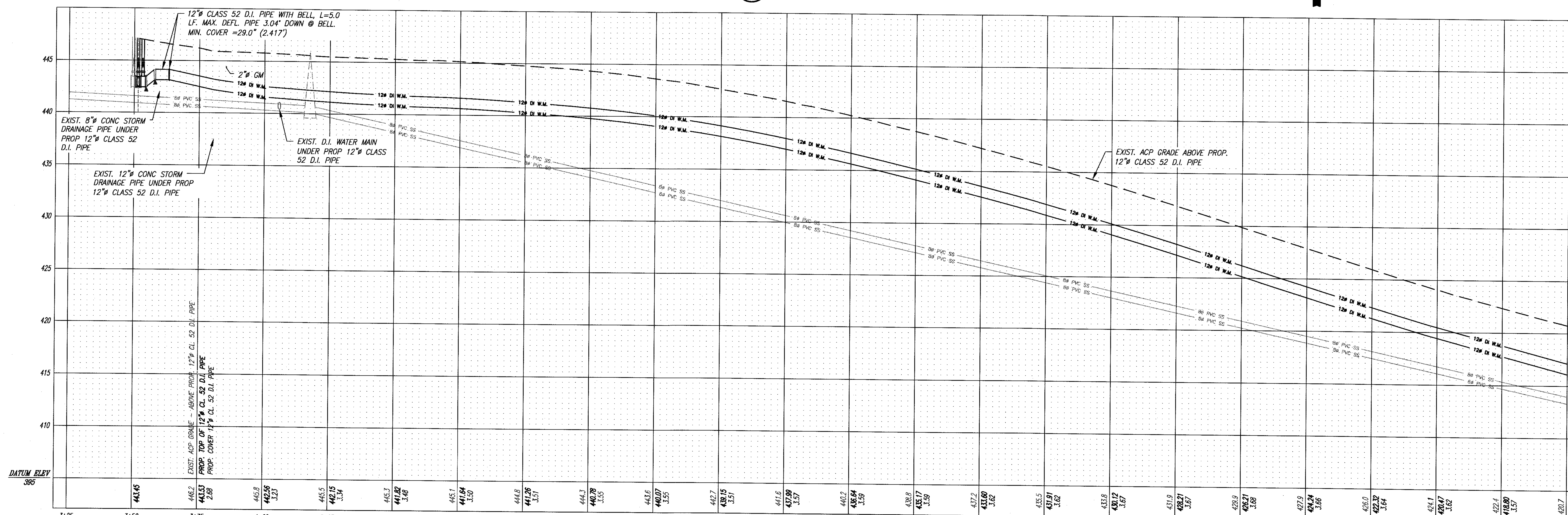
DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
APPROVED BY: WILL VAN RY
DATE: 9/12/2012

HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"

DRAWING NO.: C-8



1/C-9 **WATER MAIN PLAN**
SCALE: 1"=20'-0"



2/C-9 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0"
V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 10 ARE NOT USED ON THIS SHEET ****

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 20 ARE NOT USED ON THIS SHEET ****

WATER MAIN NOTES:

21. CUT, REMOVE & DISPOSE OF EXIST. C.I. & D.I. PIPE AS NECESSARY TO INSTALL THE PROPOSED NEW MAIN. INSTALL TEMP. BLOWOFF W/BLOCK TO MAINTAIN SERVICE. THE COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 22 THROUGH 50 ARE NOT USED ON THIS SHEET ****

51. INSTALL:
    a. 1-12"ø TEMP. BLOWOFF W/BLOCK FOR TESTING & FLUSHING

    AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT @ EXIST. GATE VALVE, REMOVE & DISPOSE OF TEE, CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN. EXIST. 12"ø GATE VALVE TO REMAIN & SHALL BE PROTECTED BY CONTRACTOR.
    INSTALL:
    b. 1-12"ø TEE, FLxFL, CLASS 250
    c. 1-12"ø GATE VALVE, FLxMJ, CLASS 250 (NORTH)
    d. 1-12"ø GATE VALVE, FLxFL, CLASS 250 (EAST)
    e. 1-12"ø 11.25° BEND, FLxMJ, CLASS 250 (VERT.)
    f. 1-12"ø 11.25° BEND, MJxMJ, CLASS 250 (VERT.)
    g. 1-12"ø CLASS 52 D.I. PIPE, APPROX. L=4 LF.
    h. 1-12"ø CLASS 52 D.I. PIPE, APPROX. L=8 LF
    i. 2-12"ø CLASS 52 D.I. LONG BODY SLEEVE
    j. 2-CONC. THRUST BLOCK
    k. 1-CONC. VERTICAL BLOCK

    NOTE:

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

**** NOTES 2 THROUGH 17 ARE NOT USED ON THIS SHEET ****

18. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (4" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

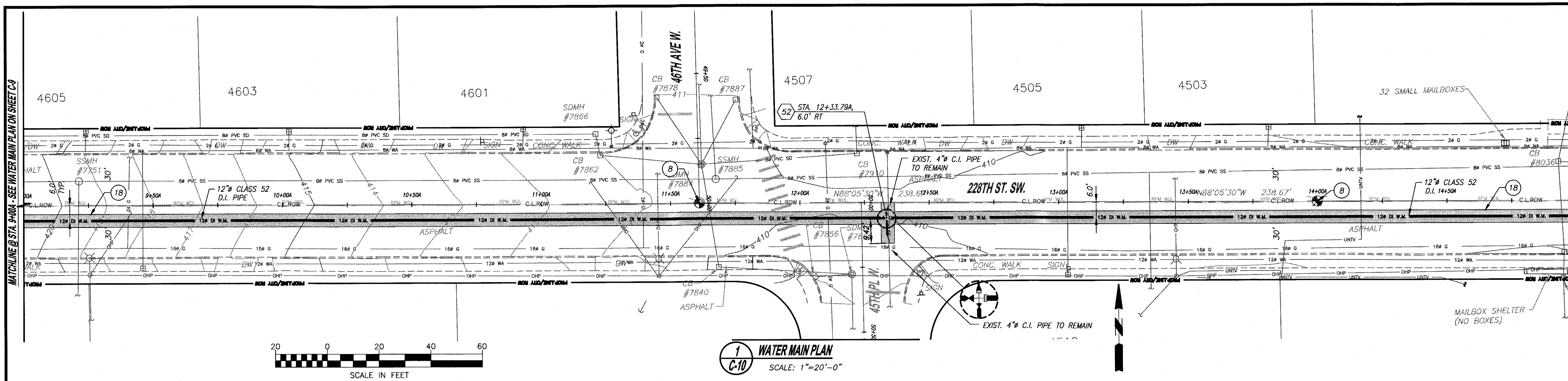
**** NOTES 19 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

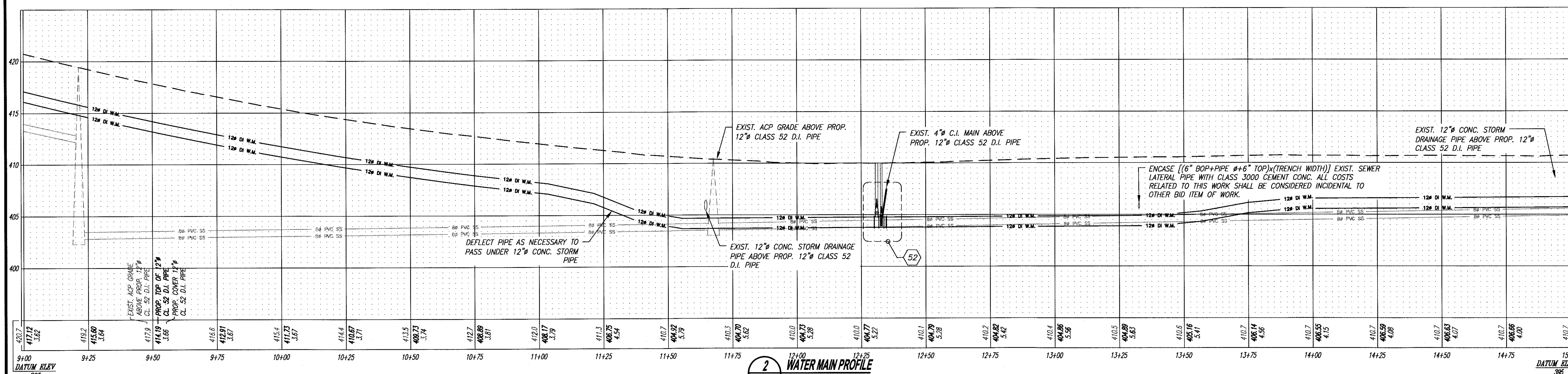
WATER MAIN PLAN AND PROFILE

DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
APPROVED BY: WILL VAN RY — DATE: 9/12/2012
PROJECT ENGINEER: R. SENG — DATE: 9/12/2012
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"
DRAWING NO.: C-9



1 / C-10 **WATER MAIN PLAN**

SCALE: 1"=20'-0"



2 / C-10 **WATER MAIN PROFILE**

SCALE: H: 1"=20'-0"
V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 51 ARE NOT USED ON THIS SHEET ****

52. INSTALL:
    a. 1-12"øx8"ø CROSS, FLxFL, CLASS 250
    b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
    e. 1-8"øx4"ø CONCENTRIC REDUCER, FLxFL, CLASS 250
    f. 1-TEMP. 4"ø BLIND FLANGE
    g. 1-TEMP. 8"ø MJ PLUG WITH BLOW-OFF FOR TESTING

    AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXIST. PIPE AS NECESSARY TO CONNECT NEW MAIN. INSTALL:
    h. 1-8"øx4"ø CONCENTRIC REDUCER, MJxPE, CLASS 250
    i. 1-4"ø 22.5° BEND, FLxMJ, CLASS 250
    j. 3-4"ø 22.5° BEND, MJxMJ, CLASS 250
    k. 2-4"ø CLASS 52 D.I. PIPE, APPROX. L=4 LF.
    l. 2-4"ø CLASS 52 D.I. LONG BODY SLEEVE
    m. 4-CONC. THRUST BLOCK

    NOTE:
    DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCKS. RESTRAIN LON BODY SLEEVE WITH WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

**** NOTES 53 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

**** NOTES 1 THROUGH 7 ARE NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 17 ARE NOT USED ON THIS SHEET ****

18. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (4" MIN. UNLESS OTHERWISE DIRECTED ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

**** NOTES 19 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

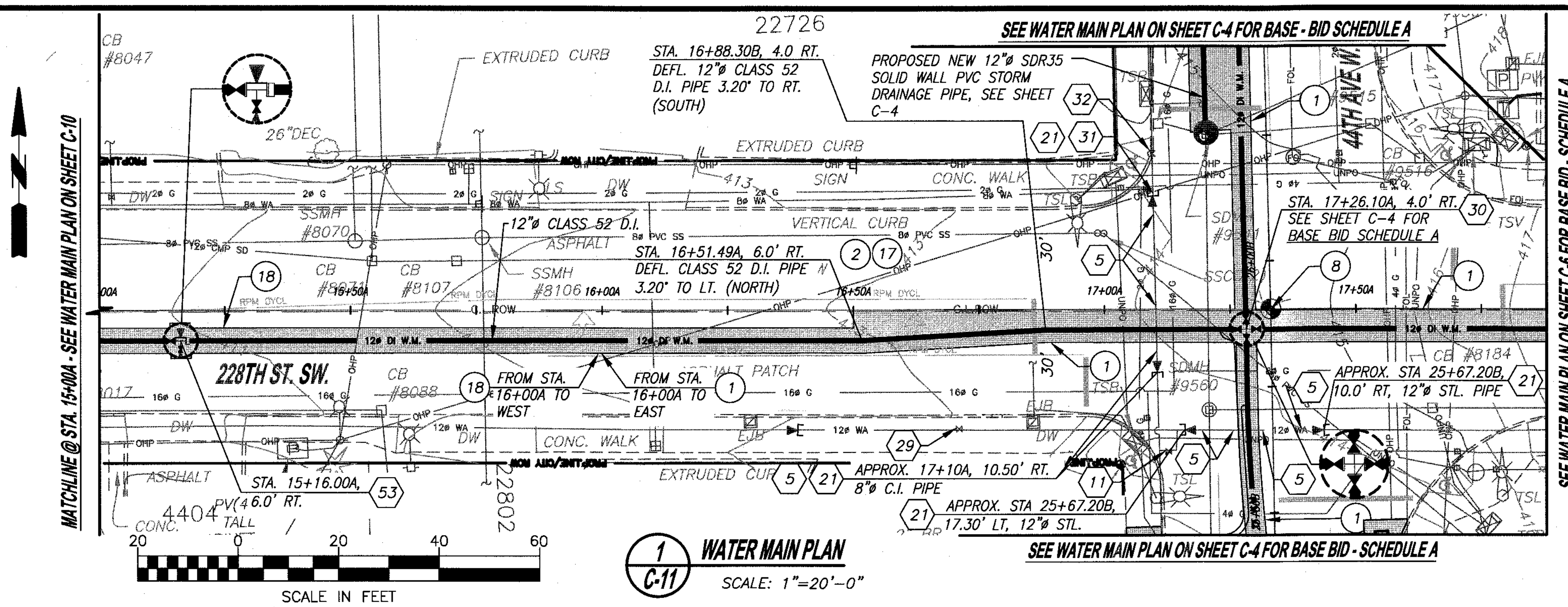
EASTSIDE WATER MAIN &
STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN PLAN AND PROFILE

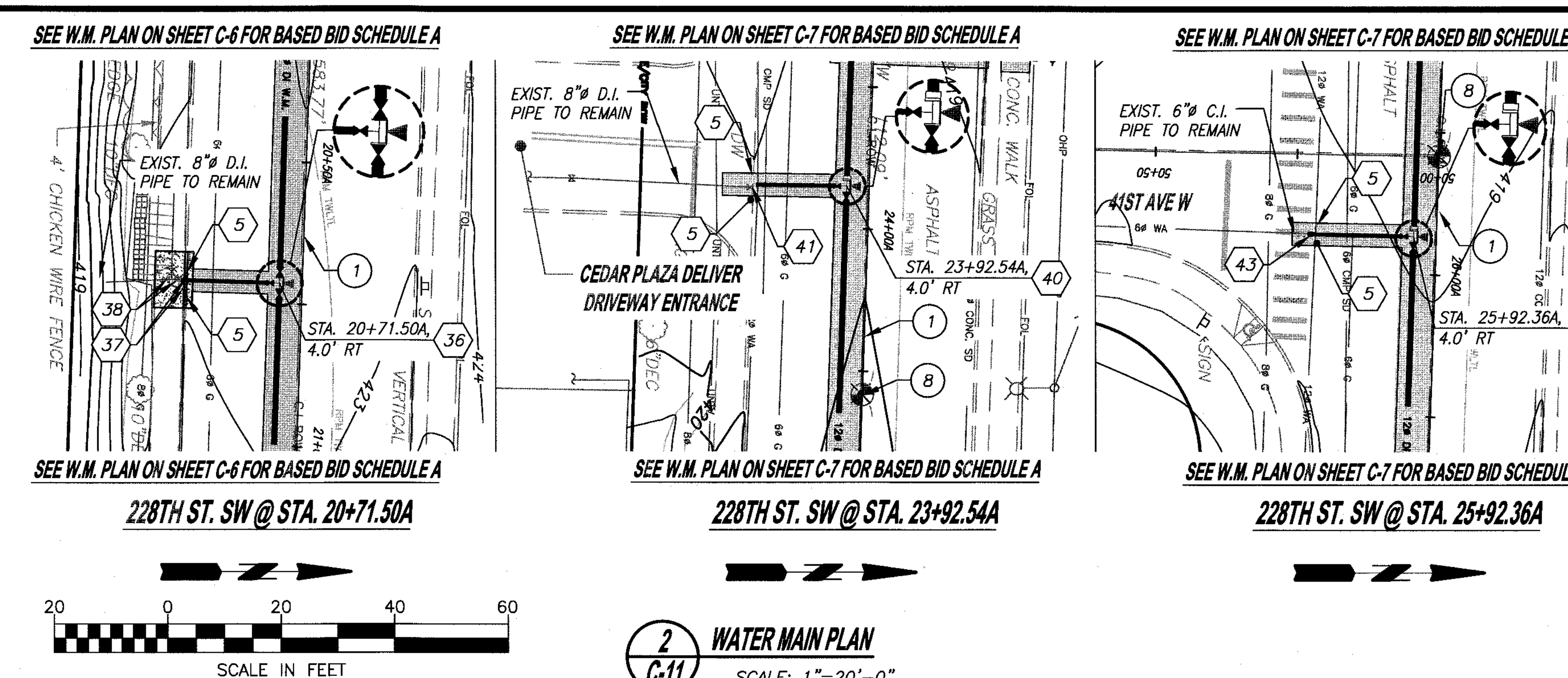
DRAWING NO.: C-10

HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"

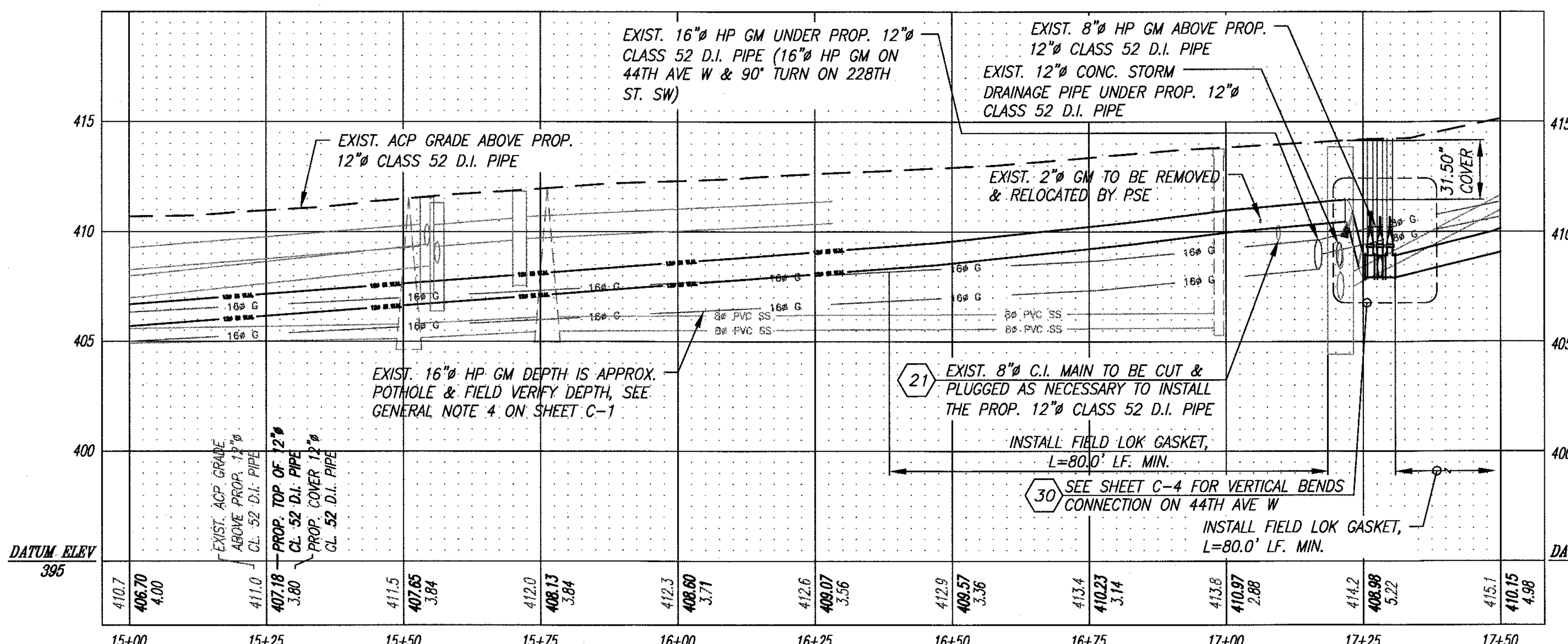
DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
APPROVED BY: WILL VAN RY DATE: 9/12/2012
PROJECT ENGINEER: R. SENG DATE: 9/12/2012



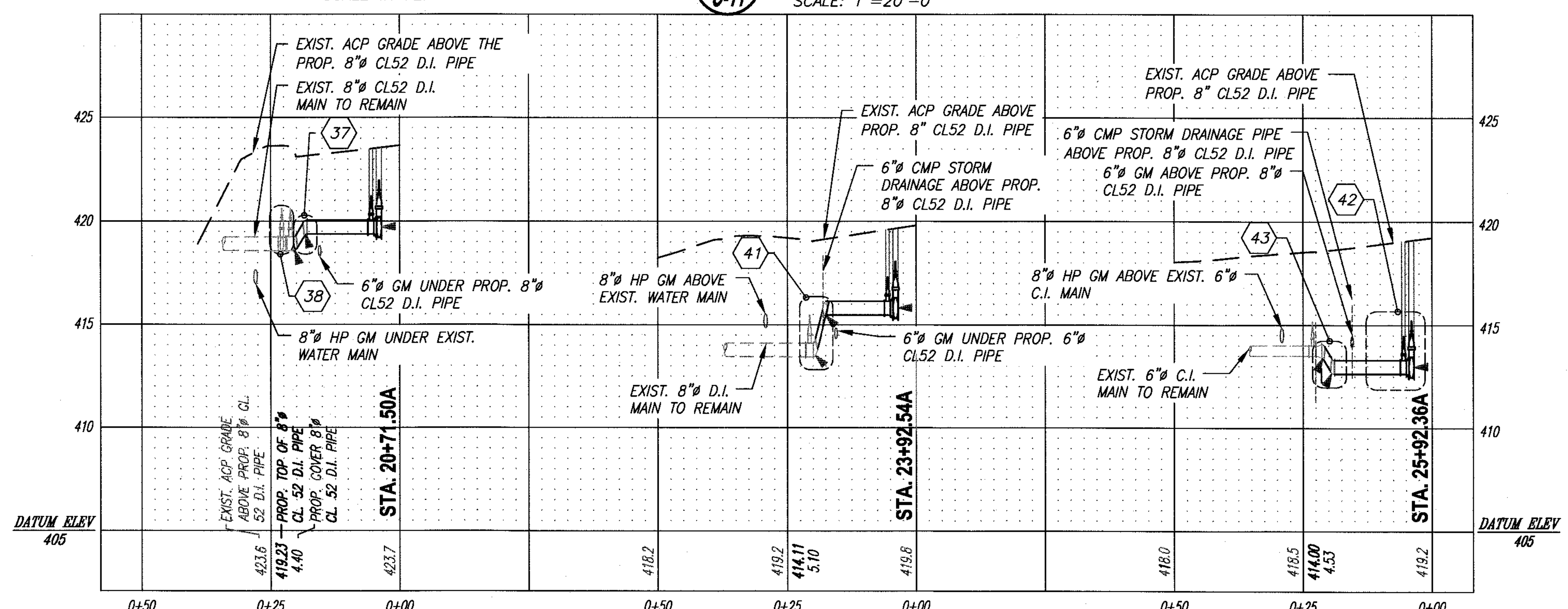
1 / C-11 **WATER MAIN PLAN**
SCALE: 1"=20'-0"



2 / C-11 **WATER MAIN PLAN**
SCALE: 1"=20'-0"



3 / C-11 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0"
V: 1"=5'-0"



4 / C-11 **WATER MAIN PROFILE**
SCALE: H: 1"=20'-0"
V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 10 ARE NOT USED ON THIS SHEET ****

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 20 ARE NOT USED ON THIS SHEET ****

21. CUT, REMOVE & DISPOSE OF EXIST. C.I. & D.I. PIPE AS NECESSARY TO INSTALL THE PROPOSED NEW MAIN. INSTALL TEMP. BLOWOFF W/BLOCK TO MAINTAIN SERVICE. THE COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 22 THROUGH 28 ARE NOT USED ON THIS SHEET ****

29. TURN VALVE OFF (SHUT-OFF VALVE) AND ABANDON. REMOVE & DISPOSE OF EXIST. VALVE BOX COVER. INSTALL CLASS 3000 CEMENT CONC. INTO VALVE BOX. ALL COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

30. INSTALL:
   a. 1-12"øx12"ø CROSS, FLxFL, CLASS 250
   b. 3-12"ø GATE VALVE, FLxMJ, CLASS 250 (NORTH, EAST, & SOUTH)
   c. 1-12"ø GATE VALVE, FLxFL, CLASS 250 (WEST)
   d. 1-12"ø 45° BEND, FLxMJ, CLASS 250 (WEST) (VERT.)
   e. 1-12"ø 45° BEND, MJxMJ, CLASS 250 (WEST) (VERT.)
   f. 2-12"ø 11.25 BEND, MJxMJ, CLASS 250 (SOUTH) (VERT.)
   g. 2-CONC. THRUST BLOCK
   h. 2-CONC. VERTICAL BLOCK

   NOTE: DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS . RESTRAIN ALL GATE VALVES (NORTH, SOUTH & EAST) WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

31. CUT @ EXIST. TEE, REMOVE & DISPOSE OF PIPE TO SOUTH AS NECESSARY TO CAP EXISTING MAIN. INSTALL 1-8"ø MJ PLUG WITH CONC. THRUST BLOCK. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY

32. EXIST. GATE VALVE INCL. VALVE CHAMBER TO REMAIN & SHALL BE TURNED ON (OPENED VALVE) AND ABANDONED. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 33 THROUGH 35 ARE NOT USED ON THIS SHEET ****

36. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 2-12"ø GATE VALVES, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-CONC. THRUST BLOCK
   e. 1-8"ø TEMP MJ PLUG FOR TESTING

   NOTE:
   RESTRAIN 8"ø GATE VALVE CONNECTION TO PIPE WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

37. AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT, REMOVE & DISPOSE OF EXIST. TEE UNDER CURB, CONC. BLOCK, GATE VALVE ASSEMBLY ON NORTH SIDE OF EXIST TEE & STEEL PIPE AS NECESSARY TO CONNECT TO NEW MAIN, SEE NOTE No. 38 FOR GATE VALVES TO REMAIN.
   INSTALL:
   a. 1-8"ø 22.5° BEND, FLxMJ, CLASS 250 (VERT.)
   b. 1-8"ø 22.5° BEND, MJxMJ, CLASS 250 (VERT.)
   c. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=14 LF
   d. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE, AS NECESSARY
   e. 1-CONC. THRUST BLOCK
   f. 1-CONC. VERTICAL BLOCK

   NOTE:
   1) DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).
   2) METERS ON MANIFOLD SERVE RESTAURANTS AND OTHER COMMERCIAL ESTABLISHMENTS. WATER SHUT DOWNS TO THESE METERS SHALL OCCUR ONLY BETWEEN MIDNIGHT AND 6 AM.

WATER MAIN NOTES:

38. EXIST GATE VALVES SOUTH AND WEST ON EXISTING TEE TO REMAIN. REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER ON VALVE NORTH ON EXISTING TEE. ALL COSTS RELATED TO THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTE 39 IS NOT USED ON THIS SHEET ****

40. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
   e. 1-CONC. THRUST BLOCK
   f. 1-TEMP 8"ø MJ PLUG FOR TESTING

   NOTE:
   RESTRAIN 8"ø GATE VALVE CONNECTION TO PIPE WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

41. AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT @ EXIST. GATE VALVE, REMOVE & DISPOSE OF TEE, GATE VALVE, VALVE BOX. & COVER, CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   a. 2-8"ø 45° BEND, MJxMJ, CLASS 250 (VERT.)
   b. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=11 LF.
   c. 1-8" CLASS 52 D.I. LONG BODY SLEEVE, AS NECESSARY
   d. 1-CONC. THRUST BLOCK
   e. 1-CONC. VERTICAL BLOCK

   NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

42. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
   e. 1-CONC. THRUST BLOCK
   f. 1-TEMP 8"ø MJ PLUG FOR TESTING

   NOTE:
   RESTRAIN 8"ø GATE VALVE CONNECTION TO PIPE WITH BOLTED RESTRAINT SYSTEM (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

43. AFTER NEW 12"ø D.I. MAIN HAS BEEN TESTED, DISINFECTED, FLUSHED & APPROVED BY ENGINEER, CUT @ EXIST. GATE VALVE, REMOVE & DISPOSE OF TEE, GATE VALVE, VALVE BOX. & COVER, CONC. BLOCK & PIPE AS NECESSARY TO CONNECT NEW MAIN.
   INSTALL:
   a. 1-6"ø x8"ø CONCENTRIC REDUCER, MJxFL, CLASS 250
   b. 1-8"ø 22.50° BEND, FLxMJ, CLASS 250, (VERT.)
   c. 1-8"ø 22.50° BEND, MJxMJ, CLASS 250, (VERT.)
   d. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=14 LF.
   e. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
   f. 1-CONC. THRUST BLOCK
   g. 1-CONC. VERTICAL BLOCK

   51NOTE:
   DOUBLE RESTRAIN BENDS WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST AND VERTICAL BLOCKS. RESTRAIN REDUCER AND LONG BODY SLEEVE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL).

**** NOTES 44 THROUGH 52 ARE NOT USED ON THIS SHEET ****

53. INSTALL:
   a. 1-12"øx8"ø TEE, FLxFL, CLASS 250
   b. 1-12"ø GATE VALVE, FLxMJ, CLASS 250
   c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
   d. 1-12"ø ADAPTER, FLxMJ, CLASS 250
   e. 1-8" MJ PLUG, CLASS 250
   f. 2-CONC. THRUST BLOCK

**** NOTES 54 THROUGH 55 ARE NOT USED ON THIS SHEET ****

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 7 ARE NOT USED ON THIS SHEET ****

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 16 ARE NOT USED ON THIS SHEET ****

17. INSTALL 2" HMA CLASS 1/2" PG 64-22 WITH 2" CSTC & COMPACT TO 85% OF MAX. DENSITY

18. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (4" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

**** NOTES 19 THROUGH 21 ARE NOT USED ON THIS SHEET ****

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

CHAD M. A. SCHULHAUSER · STATE OF WASHINGTON · 34846 · REGISTERED PROFESSIONAL ENGINEER · 18 DEC 12

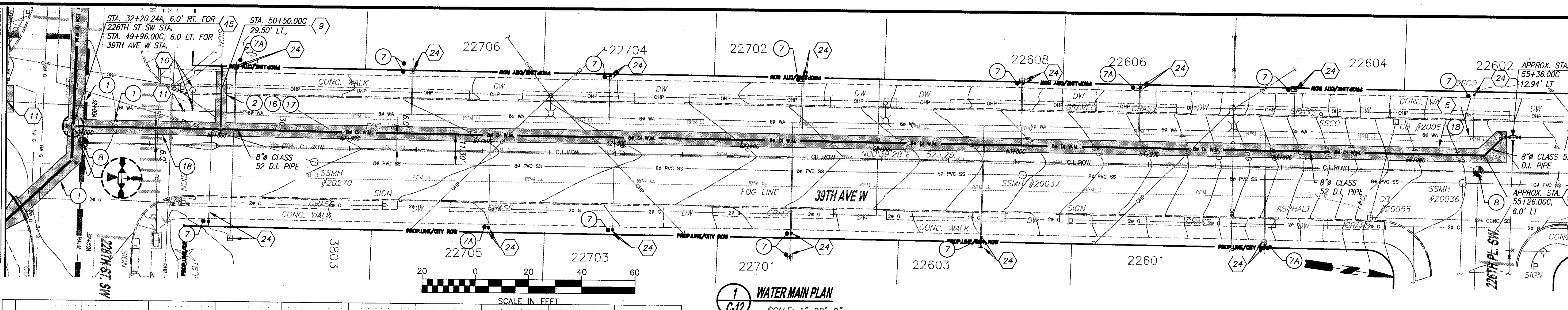
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN & STORM DRAIN PLANS AND PROFILES

DRAWN BY: R. SENG	APPROVED BY: WILL VAN RY	DATE: 9/12/2012	
CHECKED BY: WILL VAN RY	PROJECT ENGINEER: R. SENG	DATE: 9/12/2012	
REVISION	DATE	DESCRIPTION	

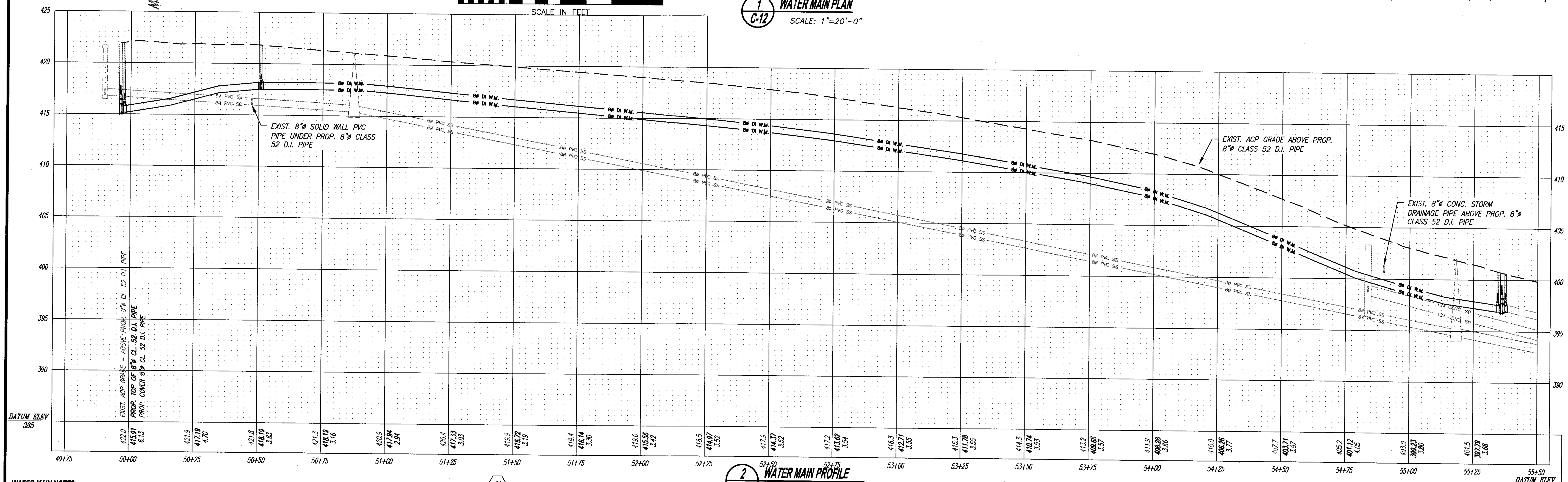
DRAWING NO.: C-11
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-01 TO C-16.DWG
PLOT DATE: Tuesday, December 18, 2012 9:42:27 AM



1 / C-12 **WATER MAIN PLAN**

SCALE: 1"=20'-0"



2 / C-12 **WATER MAIN PROFILE**

SCALE: H: 1"=20'-0" & V: 1"=5'-0"

WATER MAIN NOTES:

**** NOTES 1 THROUGH 4 ARE NOT USED ON THIS SHEET ****

5. EXIST. WATER MAIN TO BE ABANDONED. PLUG WITH COMMERCIAL CONC. PER SS 7-08.3(4). THIS WORK SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 6 THROUGH 8 ARE NOT USED ON THIS SHEET ****

9. INSTALL HYDRANT ASSEMBLY PER MLT STD 201 (SIM.) IN APPENDIX OF CONTRACT PROVISIONS, SEE GENERAL NOTE No. 3 ON SHEET C-1 FOR CONC. THRUST BLOCK. CONNECTIONS OF HYDRANTS AND HYDRANT VALVES TO SPOOL SHALL BE MADE WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES1400 MJ RETAINER GLANDS OR APPROVED EQUAL). IF HYDRANT SPOOL IS MADE OF MORE THAN ONE PIPE, PUSH ON PIPE SHALL BE MADE WITH "FIELD LOK" GASKET OR APPROVED EQUAL.

10. CUT, REMOVE & DISPOSE OF EXIST. HYDRANT ASSEMBLY INCL. VALVE BOX, COVER, AND HYDRANT BARREL. EXIST. HYDRANT SPOOL TO REMAIN INCL. GATE VALVE. TURN VALVE OFF (SHUT-OFF VALVE) & PLUG EXIST. SPOOL WITH COMMERCIAL CONC. PER SS 7-08.3(4).

11. TURN VALVE OFF (SHUT-OFF VALVE). REMOVE & DISPOSE OF EXIST. VALVE BOX & COVER INCL. VALVE CHAMBER. BACKFILL WITH EXIST. NATIVE MATERIAL OR IMPORT MATERIAL AS DIRECTED BY ENGINEER & COMPACT TO 95% OF MAX. DENSITY. ALL COSTS RELATED TO REMOVAL & DISPOSAL OF VALVE BOX & COVER INCL. VALVE CHAMBER, BACKFILLING AND COMPACTION SHALL BE INCIDENTAL TO OTHER BID ITEMS OF WORK.

**** NOTES 12 THROUGH 23 ARE NOT USED ON THIS SHEET ****

24. INSTALL 3/4"ø & 1"ø COPPER PIPE SERVICE CONNECTION ASSEMBLY (MATCH EXISTING) INCLUDING NEW METER SETTER, CORPORATION STOP & BOX PER MLT STD PLAN 202 IN APPENDIX OF CONTRACT PROVISIONS. CONNECT TO EXIST. SERVICE FROM BUILDING; REMOVE & DISPOSE OF EXIST. METER SETTER INCL. BOX & ADJUST NEW BOX TO FINAL GRADE. SEE "SERVICE CONNECTION SCHEDULE" ON THIS SHEET FOR SERVICE DIAMETER AND METER BOX LOCATION

**** NOTES 25 THROUGH 44 ARE NOT USED ON THIS SHEET ****

45. INSTALL:
    a. 1-12"x8"ø TEE, FLxFL, CLASS 250
    b. 2-12"ø GATE VALVE, FLxMJ, CLASS 250
    c. 1-8"ø GATE VALVE, FLxMJ, CLASS 250
    d. 1-CONC. THRUST BLOCK

**** NOTES 46 THROUGH 53 ARE NOT USED ON THIS SHEET ****

54. INSTALL:
    a. 1-8"ø 45° BEND, MJxMJ, CLASS 250
    b. 1-CONC. THRUST BLOCK
    c. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=4LF EXTENDING NW OF BEND
    d. 1-TEMP BLOWOFF W/BLOCK FOR FLUSHING AND TESTING

NOTE:
DOUBLE RESTRAIN BEND WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL) & CONC. THRUST BLOCK. RESTRAIN REDUCER WITH BOLTED RESTRAINT SYSTEMS (UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS OR APPROVED EQUAL). EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEMS OF WORK.

WATER MAIN NOTES:

55. CUT, REMOVE & DISPOSE OF EXIST. C.I. PIPE, TEE & GATE VALVE AS REQUIRED TO CONNECT TO NEW MAIN.
    INSTALL:
    a. 1-8"øx6"ø TEE, FLxFL, CLASS 250
    b. 2-8"ø GATE VALVE, FLxFL, CLASS 250
    c. 1-6"ø ADAPTER, FLxMJ, CLASS 250
    d. 1-6"ø CL52 D.I. LONG BODY SLEEVE
    e. 1-8"ø 45° BEND, MJxPE, CLASS 250
    f. 1-8"ø CLASS 52 D.I. PIPE, APPROX. L=4LF.
    g. 1-8"ø CLASS 52 D.I. LONG BODY SLEEVE
    h. 1-CONC. THRUST BLOCK

NOTE:
DOUBLE RESTRAIN BENDS WITH UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS & CONC. THRUST BLOCK. RESTRAIN LONG BODY SLEEVE WITH UNI-FLANGE SERIES 1400 MJ RETAINER GLANDS. EXTRA FITTING MAY BE REQUIRED & SHALL BE CONSIDERED INCIDENTAL TO OTHER BID ITEM OF WORK.

CIVIL NOTES

1. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (6" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

2. SAWCUT, REMOVE & DISPOSE OF EXIST. CONC. SIDEWALK, CONC. TRAFFIC CURB & GUTTER, CONC. EXTRUDED CURB, AND VALLEY GUTTER @ EXPANSION JOINTS PRIOR TO REMOVING OR INSTALLING FIRE HYDRANT, BLOWOFF, WATER MAIN PIPE, WATER SERVICE CONNECTIONS, AND CATCH BASINS.

**** NOTES 3 THROUGH 6 ARE NOT USED ON THIS SHEET ****

7. ISEEDING SHALL BE INCIDENTAL TO TOPSOIL INSTALLATION.

7A. RESTORATION SHALL BE INCIDENTAL TO TOPSOIL INSTALLATION.

8. DO NOT DISTURB MONUMENT. SEE SECTION 1-05.4 OF THE SPECIAL PROVISIONS.

**** NOTES 9 THROUGH 15 ARE NOT USED ON THIS SHEET ****

16. INSTALL 6" TEMPORARY HMA CURB & COMPACT TO 85% OF MAX. DENSITY. THE 6" HMA CURB SHALL BE CONSIDERED PART OF HMA PAVEMENT REPAIR. NO EXTRA PAYMENT SHAL BE MADE.

17. INSTALL 2" HMA CLASS 1/2" PG 64-22 WITH 2" CSTC & COMPACT TO 85% OF MAX. DENSITY

18. SAWCUT, REMOVE & DISPOSE OF EXIST. ASPHALT PAVEMENT. INSTALL HMA CLASS 1/2" PG 64-22 TO MATCH EXIST. THICKNESS (4" MIN. UNLESS OTHERWISE DIRECTED BY ENGINEER) WITH 4" MIN. OF CSTC, SEE DETAIL 1 (SIM) ON SHEET C-13 FOR WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS.

SERVICE CONNECTION SCHEDULE

No.	ADDRESS	PIPE SIZE		LENGTH		NOTES, WATER METER AND METER BOX LOCATION (OFFSET FROM 39TH AVE W ℄)
		3/4"ø	1"ø	SHORT	LONG	
5	22601 - 39TH AVE W	X			X	28.50' RT
6	22602 - 39TH AVE W	X		X		28.50' LT
7	22603 - 39TH AVE W	X			X	28.50' RT
8	22604 - 39TH AVE W	X		X		28.50' LT
9	22606 - 39TH AVE W	X		X		28.50' LT
10	22608 - 39TH AVE W	X		X		28.50' LT
11	22701 - 39TH AVE W	X			X	28.50' RT
12	22702 - 39TH AVE W	X		X		28.50' LT
13	22703 - 39TH AVE W	X			X	28.50' RT
14	22704 - 39TH AVE W	X		X		28.50' LT
15	22705 - 39TH AVE W	X			X	28.50' RT
16	22706 - 39TH AVE W	X		X		28.50' LT
17	3803 - 228TH ST SW	X			X	28.50' RT
18	3901 - 228TH ST SW	X		X		28.50' LT

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 778-6420

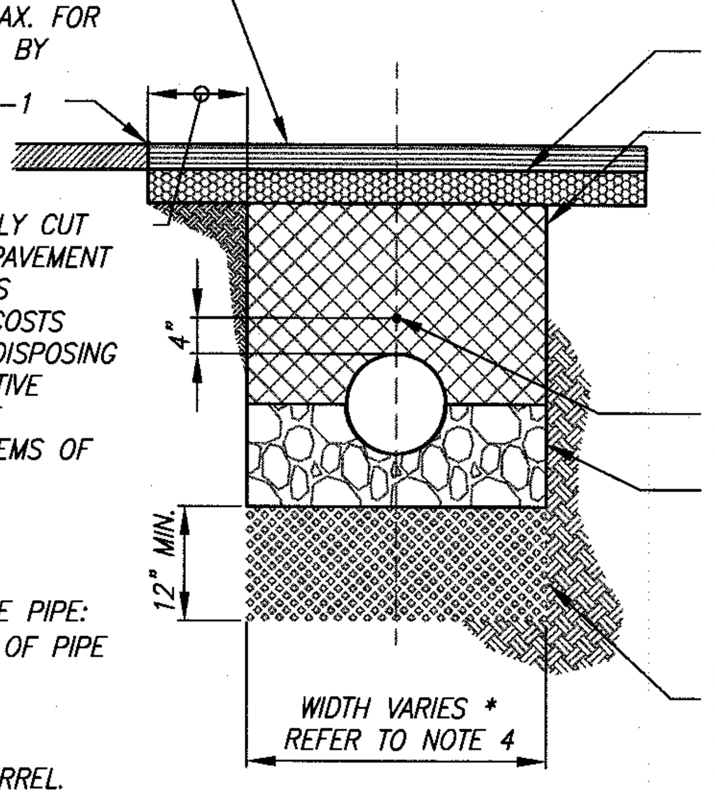
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

WATER MAIN PLAN AND PROFILE

DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
APPROVED BY: WILL VAN RY — DATE: 9/12/2012
PROJECT ENGINEER: R. SENG — DATE: 9/12/2012

HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: 1"=5'-0"

DRAWING NO.: C-12

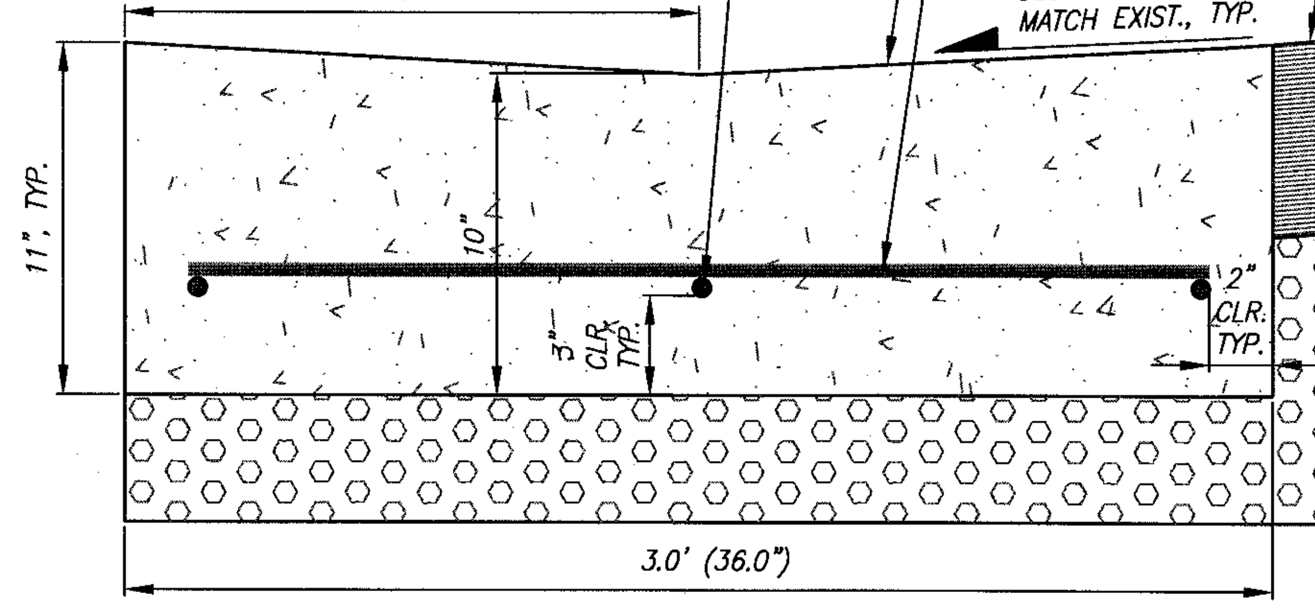


NOTES:
1. PROVIDE UNIFORM SUPPORT UNDER BARREL.
2. HAND TAMP UNDER HAUNCHES.
3. COMPACT BEDDING MATERIAL TO 95% OF MAXIMUM DENSITY.
4. SEE SECTION 7.09.3(7) OF THE STANDARD SPECIFICATIONS FOR TRENCH WIDTH AND SECTION 2-09.4 FOR TRENCHING OPTIONS.
5. NATIVE MATERIAL FOR TRENCH BACKFILL SHALL BE AS SPECIFIED IN SECTION 7-08.3(3).

1 / C-13 WATER MAIN TRENCH & PAVEMENT REPAIR DETAILS
SCALE: N.T.S.

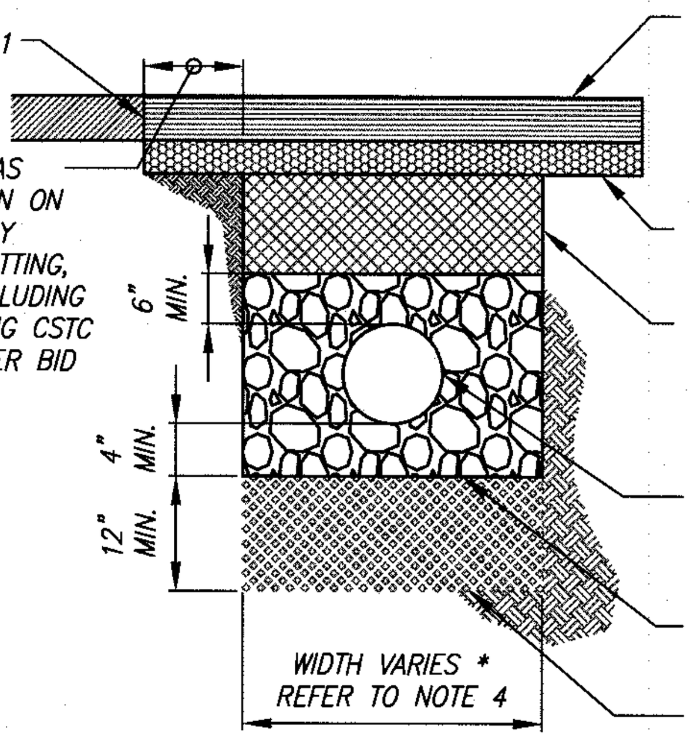
2 / C-13 NOT USED
SCALE: N.T.S.

NOTE:
THE 3-DAY MIX CEMENT CONC. COMPRESSION STRENGTH SHALL MEET OR EXCEED CLASS 4000D WITHIN 3-DAYS



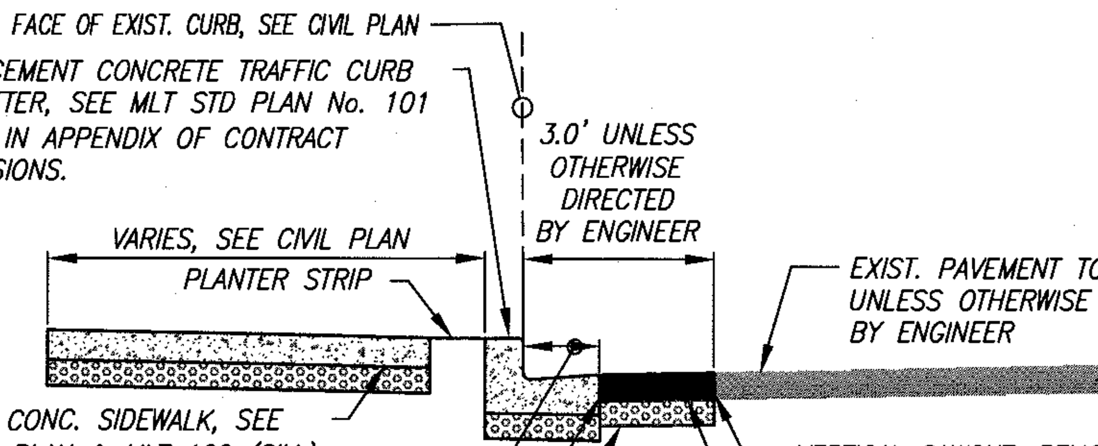
NOTE:
THE 3-DAY MIX CEMENT CONC. VALLEY GUTTER IS CONSIDERED PART OF CEMENT CONC. TRAFFIC CURB AND GUTTER. THE MEASUREMENT SHALL BE MEASURED PER LINEAR FOOT OF VALLEY GUTTER. NO EXTRA PAYMENT SHALL BE MADE REGARDING EXTRA WIDTH, THICKNESS OF CEMENT CONC. AND DIFFERENT CONC. MIX. INCLUDING REINFORCING STEEL

3 / C-13 CEMENT CONC. VALLEY GUTTER
SCALE: N.T.S.

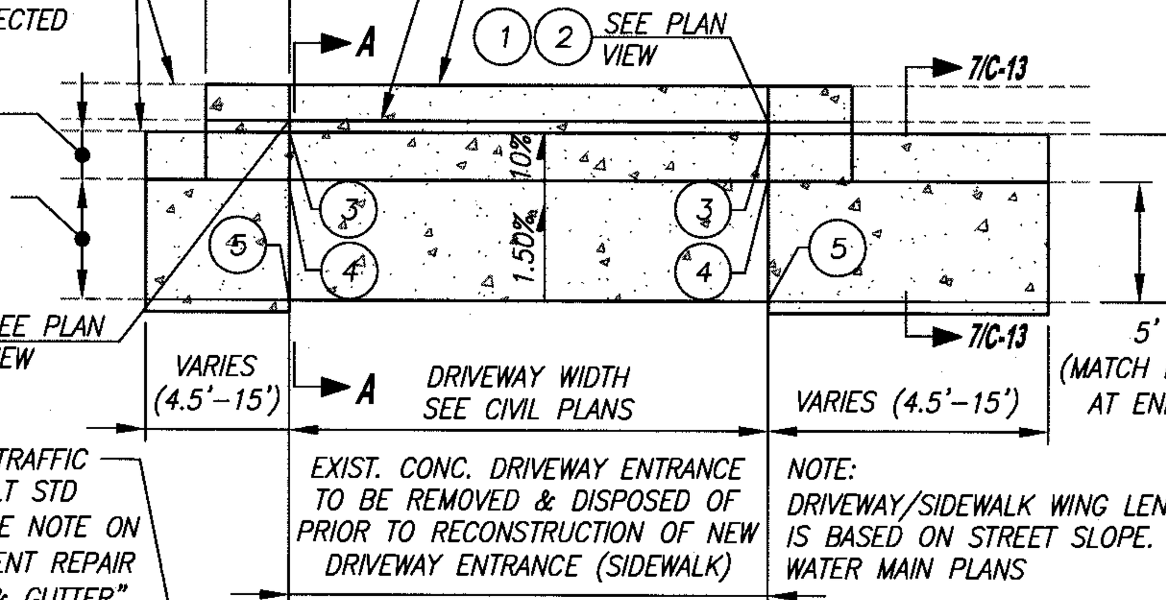


NOTES:
1. PROVIDE UNIFORM SUPPORT UNDER BARREL.
2. HAND TAMP UNDER HAUNCHES.
3. COMPACT BEDDING MATERIAL TO 95% OF MAXIMUM DENSITY.
4. SEE SECTION 2-09.4 OF THE STANDARD SPECIFICATIONS FOR TRENCH WIDTH AND TRENCHING OPTIONS.
5. NATIVE MATERIAL FOR TRENCH BACKFILL SHALL BE AS SPECIFIED IN SECTION 7-08.3(3).

4 / C-13 STORM & SANITARY SEWER TRENCH & PAVEMENT REPAIR DETAILS
SCALE: N.T.S.

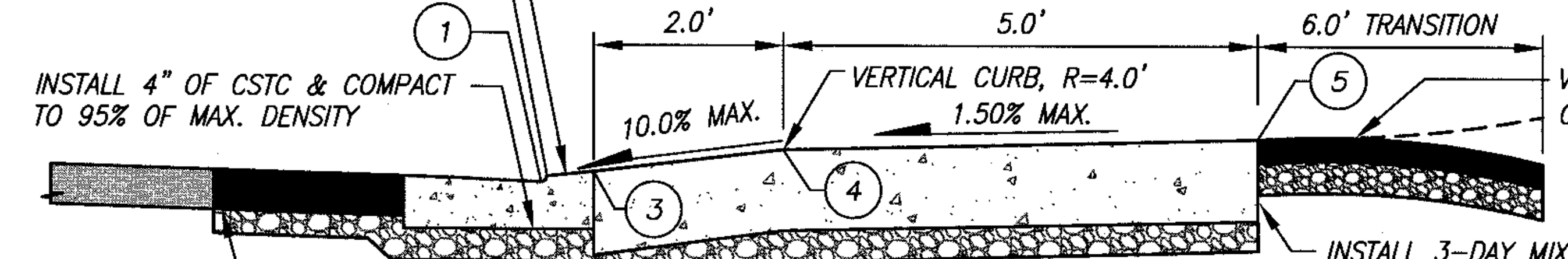


5 / C-13 TYPICAL HMA PAVEMENT REPAIR @ NEW CONC. TRAFFIC CURB & GUTTER
SCALE: N.T.S.

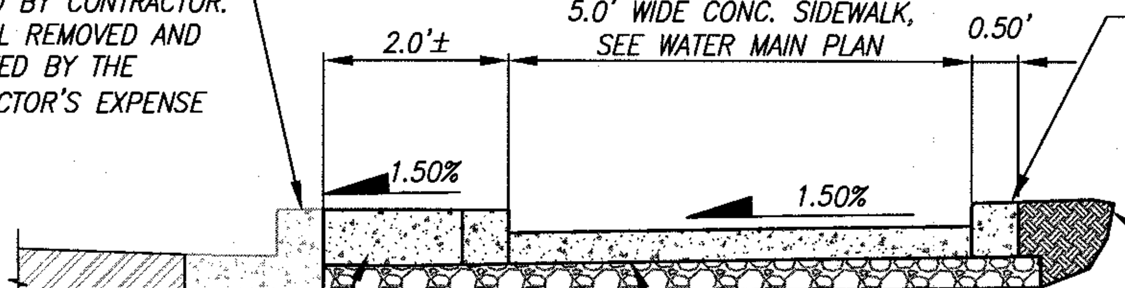


DRIVEWAY ENTRANCE SCHEDULE

NO.	DESCRIPTIONS	RELATIVE CROSS SECTION ELEVATION
1	GUTTER FLOW LINE	0.00'
2	TOP OF GUTTER LIP @ CURB FACE	0.06'
3	DRIVEWAY EDGE @ BACK OF CURB	0.11'
4	STREET SIDE OF DRIVEWAY - SIDEWALK	0.31'
5	BACK OF DRIVEWAY - SIDEWALK	0.38'

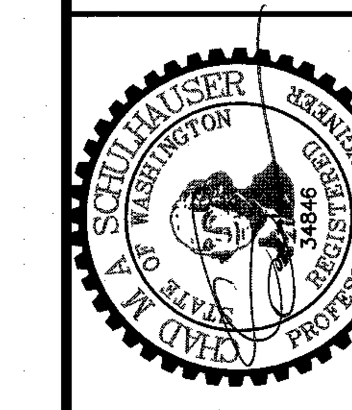


6 / C-13 TYPICAL CEMENT CONC. DRIVEWAY ENTRANCE DETAIL
SCALE: N.T.S.



7 / C-13 TYPICAL CEMENT CONC. SIDEWALK (SIDEWALK RAMP) @ DRIVEWAY WING
SCALE: N.T.S.

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420



EASTSIDE WATER MAIN &
STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

MISCELLANEOUS DETAILS

DRAWN BY: R. SENG	CHECKED BY: WILL VAN RY	APPROVED BY: WILL VAN RY	DATE: 9/12/2012
REVISION	DATE	PROJECT ENGINEER: R. SENG	DATE: 9/12/2012
		DESCRIPTION	

DRAWING NO.: C-13
HORIZONTAL SCALE: 1"=20'-0"
VERTICAL SCALE: VARIES

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-X_DETAILS.DWG
PLOT DATE: Tuesday, December 18, 2012 9:43:10 AM

HORIZONTAL DATUM

NAD 83/91 (WASHINGTON STATE PLANE COORDINATE SYSTEM – WA NORTH)

HORIZONTAL CONTROL POINTS WERE ESTABLISHED WITH GPS BY HOLDING THE FOLLOWING SNOHOMISH COUNTY SURVEY MONUMENTS:

MT 13 (WCCS #1473)
FOUND "X" IN 2" BRASS DISC IN CONCRETE MON IN CASE 0.3' BELOW GRADE AT INTERSECTION 54TH AVE W AND 228TH ST SW
N 292371.107
E 1278425.315

MT 18 (WCCS #1478)
FOUND "X" IN 2" BRASS DISC IN CONCRETE MON IN CASE 0.4' BELOW GRADE AT INTERSECTION 56TH AVE W AND 236TH ST SW
N 289740.568
E 1277805.867

MT 06 (WCCS #1466)
FOUND "X" IN 2" ALUMINUM CAP ON REBAR 0.1' NORTHERLY OF BACK OF WALK FOR 236TH ST SW ± 135' WEST OF CENTERLINE 39TH PL W
N 289538.141
E 1283495.497

MTLK 117 (WCCS #83)
FOUND "X" IN 2" BRASS DISC IN CONCRETE MON IN CASE 0.7' BELOW GRADE AT INTERSECTION 44TH AVE W AND 228TH ST SW
N 292255.105
E 1281834.217

MT 03 (WCCS #1463)
FOUND SCRIBED "X" 0.1' WEST OF BACK CONCRETE WALK AND 9.6' NORTH OF TOP FACE CONCRETE CURB OF THE NORTHERLY TOP CURB CUT FOR WHEELCHAIR RAMP IN THE NORTHEAST QUADRANT OF INTERSECTION 220TH ST SW AND 44TH AVE W
N 295103.057
E 1281896.384

MTLK 118 (WCCS #84)
FOUND "X" IN 3" BRASS DISC IN CONCRETE MON IN CASE 0.7' BELOW GRADE AT ℄ 228TH ST SW AND ± 240' W OF 35TH AVE W
N 292160.958
E 1284482.397

*WCCC = WASHINGTON COUNCIL OF COUNTY SURVEYORS DATABASE POINT ID NUMBER

VERTICAL DATUM

NGVD 29

ELEVATIONS ON HORIZONTAL CONTROL POINTS WERE ESTABLISHED WITH GPS BY HOLDING THE FOLLOWING CITY OF MOUNTLAKE TERRACE VERTICAL BENCHMARKS:

BM #300
TOP OF FOUND "X" IN 2" BRASS DISC IN CONCRETE MON IN CASE 0.3' BELOW GRADE AT INTERSECTION 54TH AVE W AND 228TH ST SW
ELEV = 477.12

BM #023
TOP OF FOUND 2" BRASS DISK IN CONCRETE WALK 1.4' NORTHEAST OF SIGNAL POLE IN THE NORTHEAST QUADRANT OF INTERSECTION 236TH ST SW AND CEDAR WAY (44TH AVE W)
ELEV = 365.24

BM #013
TOP OF FOUND 2" BRASS DISK ON TOP OF NORTHWEST CORNER OF CURB FOR PLANTER BOX AT THE BACK OF CONCRETE WALK IN THE SOUTHWEST QUADRANT OF INTERSECTION 228TH ST SW AND 44TH AVE W
ELEV = 414.43

BM #185
TOP OF FOUND 2" BRASS DISC IN CONCRETE MON IN CASE 0.3' BELOW GRADE AT INTERSECTION 220TH ST SW AND 44TH AVE W
ELEV = 465.60

BM #249
TOP OF FOUND 2" BRASS DISC IN CONCRETE MON IN CASE 0.3' BELOW GRADE AT INTERSECTION 222ND ST SW AND 36TH AVE W
ELEV = 459.14

BM #020
TOP OF FOUND 2" BRASS DISK IN TOP OF CONCRETE VERTICAL CURB ± 7.5' EAST OF SOUTHERLY POINT OF CURVATURE OF CURB RETURN IN THE NORTHEAST QUADRANT INTERSECTION 236TH ST SW AND 52ND AVE W
ELEV = 462.12

GENERAL NOTES

1.) PRIMARY CONTROL POINTS AND ACCESSIBLE MONUMENT POSITIONS WERE FIELD MEASURED UTILIZING GLOBAL POSITIONING SYSTEM (GPS) SURVEY TECHNIQUES USING LEICA SYSTEM 1200 EQUIPMENT. MONUMENT POSITIONS THAT WERE NOT DIRECTLY OBSERVED USING GPS SURVEY TECHNIQUES WERE TIED INTO THE CONTROL POINTS UTILIZING LEICA ELECTRONIC TOTAL STATIONS FOR THE MEASUREMENT OF BOTH ANGLES AND DISTANCES. THIS SURVEY MEETS OR EXCEEDS THE STANDARDS SET BY WAC 332-130-090.

2.) COORDINATES ASSOCIATED WITH THIS DRAWING ARE PROJECT COORDINATES WHICH MAY BE CONVERTED TO STATE PLANE GRID COORDINATES BY SUBTRACTING 2,000,000 FEET. THEN MULTIPLYING BY THE AVERAGE COMBINED FACTOR OF 0.9999434751. THE INITIAL COORDINATE CONVERSION WAS PERFORMED USING THE LEICA SKI-PRO PROGRAM VERSION 4.0.0.

3.) THE INFORMATION DEPICTED ON THIS MAP REPRESENTS THE RESULTS OF A SURVEY MADE IN APRIL AND MAY OF 2012 AND CAN ONLY BE CONSIDERED AS INDICATING THE GENERAL CONDITION EXISTING AT THAT TIME.

4.) STORM DRAINAGE FACILITIES HAVE BEEN ASBUILT THROUGH FIELD MEASUREMENTS OF THE LOCATION OF THE ACCESS STRUCTURES, THE TOP ELEVATION OF THE STRUCTURES, AND THE INVERT ELEVATIONS OF ANY PIPES ENTERING OR LEAVING THE STRUCTURES. IT IS STANDARD PRACTICE TO SHOW THE PIPES CONNECTING THESE STRUCTURES AS STRAIGHT LINES. THIS IS ONLY AN ASSUMPTION AND THE ACTUAL LOCATION OF THE PIPING MUST BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION.

5.) UTILITY LOCATIONS SHOWN ON THIS SURVEY DRAWING ARE BASED UPON FIELD LOCATION OF EXISTING UTILITY STRUCTURES, FIELD LOCATION OF CONDUCTIBLE UNDERGROUND UTILITIES BASED ON PAINT MARKS OR OTHER MARKINGS ESTABLISHED BY A UTILITY LOCATE SERVICE. OTHER UNDERGROUND UTILITIES MAY EXIST. NO SUB-SURFACE EXPLORATION WAS DONE TO VERIFY UTILITY ROUTINGS. THE ROUTING OF ALL BURIED UTILITIES SHOULD BE CONFIRMED WITH THE UTILITY PURVEYOR AND EXPOSED IN AREAS CRITICAL TO DESIGN.

6.) OVERHEAD POWER LINES (OHP) DELINEATED ON THIS MAP MAY ALSO INDICATE THE EXISTENCE OF COMMUNICATION LINES SUCH AS TELEPHONE, CABLE TELEVISION AND FIBER OPTIC.

7.) THE PORTIONS OF THIS SURVEY LABELED AS VERTICAL CURB INDICATES A STANDARD CONCRETE CURB AND GUTTER. IN SOME AREAS THE GUTTER PORTION MAY BE COVERED BY ASPHALT. FOR GRAPHICAL PURPOSES ON THIS SURVEY ONLY THE VERTICAL CURB PORTION IS SHOWN.

SYMBOL LEGEND

TSB	TRAFFIC SIGNAL BOX
TCB	TRAFFIC SIGNAL CABINET
TSV	TRAFFIC SIGNAL VAULT
EJB	ELECTRICAL JUNCTION BOX
PV	POWER VAULT
TSL	TRAFFIC SIGNAL
TT	TELEPHONE VAULT
TR	TELEPHONE RISER
PPL	POWER POLE W/ LIGHT
PPU	POWER POLE W/ UNDERGROUND CONDUIT
PP	POWER POLE
UTP	UTILITY POLE (GUY)
POST	POST (MISC)
PTL	POWER POLE w/LIGHT & TRANSFORMER
LS	LIGHT STANDARD (PARKING LOT)
SL	STREET LIGHT
YL	YARD LIGHT
PM	POWER METER
GUY	GUY ANCHOR
ICV	IRRIGATION CONTROL VALVE
WV	WATER VALVE
WM	WATER METER
FH	FIRE HYDRANT
CB	CATCH BASIN
SDMH	STORM DRAIN MANHOLE
SDCO	STORM DRAIN CLEANOUT
SSMH	SANITARY SEWER MANHOLE
GV	GAS VALVE
TV	TV RISER ASBUILT
FOMH	FIBER OPTIC MANHOLE
MW	MONITORING WELL
SSCO	SANITARY SEWER CLEANOUT
MB	MAILBOX
SIGN	STREET SIGN (VARIES)
PX	PEDESTRIAN CROSSING PEDESTAL
BOL	BOLLARD
PA	PLANTER AREA
DW	DRIVEWAY
	ADA RAMP
	FOUND MONUMENT IN CASE AS NOTED
	PK NAIL WITH WASHER SET AT PROPOSED MONUMENT POSITION
	ROCKERY

LINE LEGEND

OHP — OHP	OVERHEAD POWER LINE
UNPO — UNPO	UNDERGROUND POWER LINE
FOL — FOL	BURIED FIBER OPTIC LINE
UNTV — UNTV	BURIED CABLE TV LINE
G — G	BURIED GAS LINE
8ø WA	BURIED WATER LINE (VARIES)
8ø PVC SD	STORM DRAIN WITH PIPE SIZE AND TYPE (VARIES)
8ø PVC SS	SANITARY SEWER WITH PIPE SIZE AND TYPE (VARIES)
RPM DYCL	DOUBLE YELLOW CENTERLINE
RPM LL	LANE LINE
RPM TWLTL	TWO WAY LEFT TURN LINE
RPM WDL	WIDE DOTTED LINE
405	MAJOR CONTOUR LINE
401	MINOR CONTOUR LINE
F — F	FENCE AS NOTED

TREE LEGEND (SIZE IN INCHES)

DEC	DECIDUOUS TREE
	CONIFER TREE
C	CEDAR
F	FIR
H	HEMLOCK
	EVERGREEN TREE
HO	HOLLY

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

EASTSIDE WATER MAIN &
STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

TOPO SURVEY BASE MAP DATUM, NOTES AND LEGEND

DRAWING NO.: C-14	DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY	APPROVED BY: WILL VAN RY — DATE: 9/12/2012
PROJECT ENGINEER: R. SENG	DATE: 9/12/2012
REVISION / DATE / DESCRIPTION	
HORIZONTAL SCALE: 1"=20'-0"	VERTICAL SCALE: VARIES

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-X EXISTING CONDITIONS TESC.DWG

PLOT DATE: Tuesday, December 18, 2012 9:43:28 AM

STORM DRAINAGE TABLE

CB #7344 (TYPE 1 SOLID LOCKING LID)
TOP 452.14
IE 448.35 8" PVC (IN–N)
IE 448.35 8" PVC (OUT–E)

CB #7421 (TYPE 1)
TOP 446.74
IE 442.75 6" PVC (IN–SW)
IE 442.47 8" PVC (OUT–N)

CB #7440 (TYPE 1)
TOP 446.72
IE 441.89 8" PVC (IN–W)
IE 441.72 8" PVC (IN–S)
IE 441.52 10" PVC (OUT–NE)

CB #7457 (TYPE 2 48")
TOP 446.20
IE 442.33 8" PVC (IN–NW)
IE 440.82 10" PVC (IN–SW)
IE 439.71 12" PVC (OUT–ENE)
IE 439.31 12" PVC (OUT–S)

CB #7496 (TYPE 1)
TOP 446.25
IE 443.37 8" PVC (OUT–W)

CB #7497 (TYPE 1 SOLID LOCKING LID)
TOP 446.51
IE 441.38 8" PVC (IN–E)
IE 441.20 12" PVC (IN–N)
IE 441.10 12" PVC (OUT–SW)

CB #7678 (TYPE 1)
TOP 429.52
IE 427.20 8" PVC (OUT–NE)

CB #7686 (TYPE 1)
TOP 429.05
IE 426.64 8" PVC (IN–S)
IE 426.55 8" PVC (OUT–NE)

CB #7693 (TYPE 1 SOLID LOCKING LID)
TOP 428.59
IE 425.71 8" PVC (IN–SW)
IE 426.49 6" PVC (IN–W)
IE 426.24 6" PVC (IN–N)
IE 425.59 8" PVC (OUT–E)

CB #7862 (TYPE 1)
TOP 411.05
IE 408.45 8" PVC (IN–N)
IE 408.45 8" PVC (OUT–E)

CB #7840 (TYPE 2 48" DIA.)
TOP 410.65
IE 405.45 18" CONC (IN–N)
IE 405.13 18" CONC (OUT–E)

CB #7856 (TYPE 1)
TOP 408.93
IE 407.42 6" PVC (OUT–E)

SDMH #7861 (TYPE 2 48" DIA.)
TOP 409.40
IE 403.78 18" CONC (IN–W)
IE 405.68 6" PVC (IN–W)
IE 403.53 18" CONC (OUT–S)

CB #7866 (TYPE 1 SOLID LOCKING LID)
TOP 411.77
IE 408.34 8" PVC (IN–W)
IE 408.65 8" PVC (OUT–S)
(POSSIBLE REVERSE FLOW)

CB #7878 (TYPE 1)
TOP 410.69
IE 406.89 8" PVC (OUT–SE)

SDMH #7884 (TYPE 2 48" DIA.)
TOP 410.55
IE 406.32 8" PVC (IN–W)
IE 406.30 8" PVC (IN–E)
IE 406.25 8" PVC (IN–NW)
IE 405.85 8" PVC (IN–NE)
IE 405.50 18" CONC (IN–N)
IE 405.42 18" CONC (OUT–S)

CB #7887 (TYPE 1)
TOP 410.61
IE 407.26 8" PVC (OUT–SW)

CB #7910 (TYPE 1 THRU CURB INLET)
TOP 409.69
IE 407.94 6" PVC (IN–N)
IE 407.09 8" PVC (OUT–W)

CB #8017 (TYPE 1 THRU CURB INLET)
TOP 409.86
IE 406.81 12" DI (OUT–N)
IE 406.86 12" CONC (IN–E)
IE 406.76 8" CMP (OUT–S)

CB #8020 (TYPE 2 48" DIA.)
TOP 409.99
IE 406.75 8" CMP (IN–N)
IE 406.66 8" CMP (OUT–S)

CB #8036 (TYPE 1 SOLID LOCKING LID)
TOP 410.78
IE 408.31 12" CMP (IN–N)
IE 408.13 12" CMP (IN–E)
IE 408.04 12" DI (OUT–S)

CB #8047 (TYPE 1)
TOP 413.16
IE 409.03 12" CMP (IN–N)
IE 409.00 12" CMP W/LIFT GATE (OUT–S)

CB #8071 (TYPE 1 SOLID LOCKING LID)
TOP 411.63
IE 409.35 12" PVC (IN–N)
IE 409.28 12" DI (IN–E)
IE 409.36 12" CMP (OUT–W)

CB #8088 (TYPE 1)
TOP 411.21
IE 408.56 8" CONC (IN–S)
IE 408.47 12" CONC (OUT–W)

CB #8107 (TYPE 1 SOLID LOCKING LID)
TOP 411.92
IE 409.67 12" DI (IN–E)
IE 409.64 12" DI (OUT–W)

CB #8184 (TYPE 1 SOLID LOCKING LID)
TOP 415.34
IE 412.97 8" DI (OUT–W)
IE 413.50 8" DI (IN–E)

CB #8200 (TYPE 1)
TOP 418.09
IE 416.56 8" DI (OUT–W)

CB #8421 (TYPE 1)
TOP 417.52
IE 415.77 6" CMP (IN–E)
IE 415.02 6" CONC (OUT–E)

SDMH #8422 (TYPE 2 48" DIA.)
TOP 417.80
IE 408.35 12" CONC (IN–NE)
IE 408.05 12" CONC (OUT–E)

CB #8558 (TYPE 1)
TOP 417.74
IE 414.37 8" CONC (OUT–E)

CB #8633 (TYPE 1)
TOP 413.50
IE 410.86 10" CONC (IN–W)
IE 410.81 8" CONC (IN–N)
IE 412.49 4" PVC (IN–E)
IE 410.88 12" CONC (OUT–S)

CB #8685 (TYPE 2)
TOP 418.17
IE 413.52 8" CONC (IN–E)
IE 412.37 8" CONC (IN–W)
IE 409.85 8" CONC (IN–E)
IE 409.09 12" CONC (IN–N)
IE 409.27 12" CONC (OUT–S)

CB #8699 (TYPE 1)
TOP 418.42
IE 415.42 8" CONC (OUT–W)

CB #8906 (TYPE 1)
TOP 416.46
IE 412.46 8" CONC (IN–S)
IE 412.55 8" CONC (OUT–W)

SDMH #8908 (TYPE 1)
TOP 417.08
IE 414.20 6" CMP (IN–E)
IE 414.08 6" CMP (OUT–W)

CB #8911 (TYPE 1)
TOP 416.56
IE 413.77 8" CONC (IN–S)
IE 413.70 6" CMP (IN–N)
IE 413.62 8" CONC (OUT–N)

SDMH #9119 (TYPE 1)
TOP 420.68
IE 416.72 6" CMP (IN–S)
IE 415.95 6" CMP (IN–E)
IE 415.93 6" CMP (OUT–W)

CB #9158 (TYPE 1)
TOP 420.23
IE 418.34 8" PVC (IN–S)
IE 417.18 6" CMP (OUT–N)

CB #9175 (TYPE 1 THRU CURB INLET)
TOP 420.25
IE 417.65 12" CONC (OUT–E)

CULVERT #9213
IE 421.37 6" PVC (N END)
(POSSIBLE WALL DRAIN)

CULVERT #9214
IE 421.13 6" PVC (N END)
(POSSIBLE WALL DRAIN)

CB #9233 (TYPE 1)
TOP 420.37
IE 417.25 12" CONC (IN–W)
IE 417.17 12" ADS (OUT–S)

CB #9415 (TYPE 1)
TOP 407.10
IE 405.85 6" CONC (OUT–E)

CB #9447 (TYPE 1)
TOP 427.51
IE 424.55 8" PVC (IN–N)
IE 424.55 8" PVC (IN–S)
IE 424.55 8" PVC (OUT–SW)

SDMH #9448 (TYPE II 48" DIA)
TOP 425.48
IE 419.44 12" CONC. (IN–NE)
IE 419.40 12" CONC. (IN–N)
IE 419.38 8" PVC (OUT–S)

CB #9458 (TYPE I)
TOP 421.50
IE 418.00 8" PVC (OUT–E)

SDMH #9464 (TYP II 48" DIA.)
TOP 421.74
IE 417.15 8" PVC (IN–W)
IE 416.39 12" PVC (IN–E)
IE 416.53 12" CONC. (IN–N)
IE 416.37 12" PVC (OUT–S)

CB #9469 (TYPE I)
TOP 423.33
IE 420.78 6" PVC (IN–N)
IE 419.32 12" PVC (IN–E)
IE 419.39 12" PVC (OUT–W)

CB #9473
TOP 425.45
IE 420.64 12" PVC (IN–E)
IE 420.63 12" PVC (OUT–W)

CB #9485 (DETENTION PIPE ACCESS)
TOP 421.43
IE 411.60 36" CMP

CB #9503 (DETENTION PIPE ACCESS)
TOP 416.79
IE 411.66 36" CMP

SDMH #9504 (TYPE II 48" DIA. W/ FLOW RESTRICTOR)
TOP 416.79
TOP FLOW RESTRICTOR 415.58 (24" DIA.)
IE 411.79 4" PVC (IN–NE)
IE 411.34 24" CMP (IN–N)
IE 411.54 8" PVC (OUT–SW)(FLOW RES.)

CB #9515 (TYPE I)
TOP 415.29
IE 413.71 6" PVC (IN–SE)
IE 413.32 6" PVC (OUT–W)

CB #9516 (TYPE I)
TOP 415.27
IE 413.87 6"DI (OUT–NW)

CB #9540 (TYPE I)
TOP 414.48
IE 411.97 8" CONC. (OUT–E)

SDMH #9541 (TYPE II 48" DIA)
TOP 414.61
IE 410.16 8" PVC (IN–NE)
IE 410.08 6" PVC (IN–E)
IE 409.85 12" CONC. (IN–N)
IE 409.78 12" CONC. (OUT–S)
(UNABLE TO GET IE TO W)

SDMH #9560
TOP 413.74
IE 408.29 12" CONC. (IN–N)
IE 407.22 8" DI (IN–E)
IE 406.92 15" DI (OUT–S)

CB #9585 (POSSIBLE FRENCH DRAIN)
TOP 412.03
IE 410.28 6" PVC (OUT–N)

CB #9598 (TYPE I)
TOP 407.04
IE 403.34 12" CONC. (IN–N)(OUT–S)
(POSSIBLE ABANDONED TO N)

CB #9601 (TYPE I)
TOP 407.90
IE 405.62 6" CONC. (IN–NW)
IE 405.07 12" CONC. (OUT–E)
IE 12" CONC (PLUGGED)

CB #9603 (TYPE I)
TOP 408.98
IE 407.03 4" CONC. (IN–NW)
IE 406.33 6" CONC. (OUT–SE)

CB #9637
TOP 402.08
IE 398.48 12" CONC. (IN–N)
IE 398.41 12" CONC. (OUT–W)

SDMH #9646 (TYPE II 48" DIA. W/ FLOW RESTRICTOR)
TOP 403.36
TOP FLOW RESTRICTOR 410.36 (12" DIA.)
IE 395.54 24" CPP (IN–W)
IE 395.26 12" CMP (OUT–SE) (FLOW RES.)

SDMH #9647 (TYPE II 48" DIA.)
TOP 402.73
IE 395.93 8" CONC. (IN–SW)
IE 395.73 12" CONC. (IN–E)
IE 395.63 12" CONC. (IN–W)
IE 395.43 12" CONC. (IN–NW)
IE 395.38 15" CONC. (IN–N)
IE 395.23 15" CONC. (OUT–S)

CB #9668 (TYPE I)
TOP 396.42
IE 393.67 8" CONC. (OUT–E)

SDMH #9699 (TYPE II 48" DIA.) 1
TOP 329.92
IE 326.63 6" PVC (IN–W)
IE 323.24 18" CMP (IN–E)
IE 322.90 15" CONC. (IN–N)
IE 322.90 15" CONC. (OUT–S)

CB #9713
TOP 391.29
IE 385.19 18" CPP (IN–E)
IE 385.79 18" CPP (OUT–W)

SDMH #9714 (TYPE II 48" DIA. W/ FLOW RESTRICTOR)
TOP 393.03
IE 386.68 18" CMP (OUT–W)(FLOW RES)
18" CMP (E)
24" CMP (N)

CB #9724 (TYPE I)
TOP 387.09
IE 385.16 8" CONC. (OUT–SE)

CB #9746 (TYPE I)
TOP 386.13
IE 382.68 8" CONC. (IN–NW)
IE 382.43 8" CONC. (OUT–E)

SDMH #9766 (TYPE II 48" DIA)
TOP 382.60
IE 376.18 36" CPP (IN–NW)
IE 375.93 36" CPP (OUT–S)

CB #9777
TOP 382.05
IE 384.75 8" PVC (OUT–W)

SDMH #9789 (TYPE II 48" DIA)
TOP 383.51
IE 375.64 12" PVC (IN–W)
IE 375.64 36" CPP (IN–N)
IE 375.52 36" CPP (OUT–SE)

CULVERT #9790
IE 375.06 36" CMP (SE END)

SDMH #9772 (TYPE II DIA. UNKNOWN)
TOP 383.73
IE 376.28 36" CONC. (OUT–SE)
376.38 H20 LEVEL
(UNABLE TO GET IE TO N AND NW)

CB #9784 (TYPE I)
TOP 382.22
IE 379.43 8" PVC (OUT–E)

SDMH #9792 (TYPE II 48" DIA.)
TOP 383.37
IE 377.19 12" PVC (IN–S)
IE 377.11 12" PVC (OUT–E)

CB #9803 (TYPE I)
TOP 386.79
IE 384.24 8" CONC. (OUT–SE)

SDMH #9810 (TYPE II 48" DIA.)
TOP 386.69
IE 382.79 8" CONC. (IN–W)
IE 382.69 8" CONC. (IN–S)
IE 382.49 8" CONC. (IN–NW)
IE 379.17 8" CONC. (IN–E)
IE 378.79 8" CONC. (OUT–N)

CB #9812 (TYPE I)
TOP 347.38
(FILLED WITH DEBRIS UNABLE TO GET IE)

CB #9814 (TYPE I)
TOP 386.87
IE 384.54 8" CONC. (OUT–N)

CB #9817
TOP 386.14
IE 379.68 4" CONC. (IN–S)
IE 379.46 8" CONC. (OUT–W)

Cb #10024 (TYPE I)
TOP 421.50
IE 417.41 12" PVC (IN–N)
8" PVC (E & W)
18" PVC (S)

CB #51269
TOP 387.28
IE 384.63 12" PVC (OUT–N)

CB #51270
TOP 387.65
IE 383.22 12" PVC (IN–S)
IE 382.75 18" PVC (IN–NE)
IE 383.22 18" PVC (OUT–E)

CB #20055 (TYPE II 52" DIA) 2
TOP 403.15
IE 398.71 8" DI (IN–W)
IE 398.43 12" CONC. (OUT–N)

CB #20061 (TYPE I)
TOP 403.25
IE 401.55 8" CONC. (OUT–E)

SDMH #20034 (48" DIA.)
TOP 384.87
IE 378.44 12" CONC (IN–S)
IE 378.44 8" CONC. (IN–W)
IE 378.44 18" CONC. (IN–W)
IE 378.44 18" CONC. (IN–N)
IE 377.07 30" CONC. (OUT–E)

SANITARY SEWER TABLE

SSMH #7343 (TYPE 2 48" DIA.)
RIM 450.72
IE 442.20 CTR CHANNEL
8" PVC (IN–W)(OUT–E)

SSMH #7506 (TYPE 2 48" DIA.) 2
RIM 445.85
IE 440.09 CTR CHANNEL
8" PVC (IN–W)(OUT–E)

SSMH #7607 (TYPE 2 48" DIA.)
RIM 440.94
IE 431.15 CTR CHANNEL
8" PVC (IN–W)(OUT–E)

SSMH #7751 (TYPE 2 48" DIA.)
RIM 419.46
IE 412.11 8" PVC (IN–W)
IE 402.80 CTR CHANNEL
8" PVC (IN–W)(IN–E)(OUT–S)

SSMH #7885 (TYPE 2 48" DIA.)
RIM 410.44
IE 403.52 CTR CHANNEL
8" PVC (IN–N)(IN–E)(OUT–W)

SSMH #8070 (TYPE 2 48" DIA.)
RIM 411.54
IE 407.44 8" DI (IN–N)
IE 405.13 CTR CHANNEL
8" PVC (IN–E)(OUT–W)

SSMH #8106 (TYPE 2 48" DIA.)
RIM 411.54
IE 405.69 6" PVC (IN–N)
IE 406.11 6" PVC (IN–S)
IE 405.47 CTR CHANNEL
8" PVC (IN–E)(OUT–W)

SSMH #8646 (TYPE 2 48" DIA.)
RIM 414.22
NO PIPE TO SOUTH
(IN–NW)(IN–W)(OUT–E)

SSMH #8789 (TYPE 2 48" DIA.)
RIM 417.64
8" (IN–E)(OUT–S)
6" (IN–NW)

SSMH #9600 (TYPE 2 48" DIA.)
RIM 407.72
IE 394.87 CTR CHANNEL
8" UNKNOWN (IN–N)(IN–W)(OUT–S)

SSMH #9676 (TYPE 2 48" DIA.)
RIM 396.38
IE 389.55 CTR CHANNEL
8" UNKNOWN (IN–SE)(OUT–W)

SSMH #9688 (TYPE 2 48" DIA.)
RIM 395.37
IE 390.77 CTR. CHANNEL
8" PVC (IN–SE)(IN–N)(OUT–NW)

SSMH #9712 (TYPE 2 48" DIA.)
RIM 387.08
IE 381.75 CTR. CHANNEL
8" DI (IN–S)(OUT–N)

SSMH #9715 (TYPE 2 48" DIA.)
RIM 395.46
IE 390.78 CTR. CHANNEL
8" UNKNOWN (IN–SE)(IN–E)(OUT–NW)

SSMH #9744 (TYPE 2 48" DIA.)
RIM 387.00
IE 3841.51 CTR. CHANNEL
8" DI (IN–S)(OUT–W)

SSMH #9763 (TYPE 2 48" DIA.)
RIM 383.40
IE 375.96 CTR. CHANNEL
8" UNKNOWN (IN–W)(IN–NW)(OUT–E)

SSMH #20035 (TYPE 2 48" DIA.)
RIM 385.58
IE CTR. CHANNEL 377.88
8" (IN–N)(IN–S)(IN–W)
12" (OUT–E)

SSMH #20036 (TYPE 2 48" DIA.)
RIM 401.93
IE 394.49 CTR. CHANNEL
8" (IN–S)(IN–E)
10" (OUT–N)

SSMH #20137 (TYPE 2 48" DIA.)
RIM 414.28
IE 407.60 CTR. CHANNEL
8" (IN–S)(OUT–N)

SSMH #20270 (TYPE 2 48" DIA.)
RIM 421.23
IE 415.38 CTR. CHANNEL
8" (IN–SW)(OUT–N)

STREET CENTERLINE ELEVATIONS

44TH AVE. W. /CEDAR WAY			
STATION	ELEVATION	STATION	ELEVATION
5+50	386.50	18+00	386.58
6+00	387.56	18+50	388.18
6+50	388.33	19+00	390.03
7+00	389.07	19+50	391.92
7+50	389.83	20+00	393.85
8+00	390.23	20+50	395.66
8+50	390.37	21+00	397.44
9+00	390.39	21+50	399.35
9+50	390.35	22+00	400.85
10+00	390.17	22+50	402.63
10+50	389.75	23+00	404.43
11+00	389.08	23+50	406.28
11+50	388.17	24+00	408.05
12+00	387.32	24+50	409.90
12+50	386.47	25+00	411.62
13+00	385.51	25+50	413.31
13+50	384.61	26+00	414.35
14+00	383.78	26+50	415.62
14+50	383.15	27+00	417.22
15+00	382.87	27+50	418.86
15+50	382.86	28+00	420.52
16+00	383.09	28+50	422.15
16+50	383.54	29+00	423.90
17+00	384.29	29+50	425.83
17+50	385.32	30+00	427.88

228TH ST. SW.					
STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
3+00	449.78	15+50	411.37	28+00	417.46
3+50	447.89	16+00	412.35	28+50	417.82
4+00	446.20	16+50	412.89	29+00	418.24
4+50	445.64	17+00	413.67	29+50	418.83
5+00	445.14	17+50	414.50	30+00	419.54
5+50	444.20	18+00	417.57	30+50	420.24
6+00	442.28	18+50	420.71	31+00	420.98
6+50	439.67	19+00	422.55	31+50	421.67
7+00	436.49	19+50	423.69	32+00	422.13
7+50	432.95	20+00	424.13	32+50	421.78
8+00	428.97	20+50	424.03	33+00	420.31
8+50	425.11	21+00	423.45	33+50	418.14
9+00	421.68	21+50	422.43	34+00	415.09
9+50	418.66	22+00	420.81	34+50	411.44
10+00	416.09	22+50	419.11		
10+50	414.03	23+00	418.63		
11+00	412.44	23+50	419.09		
11+50	411.10	24+00	419.76		
12+00	410.32	24+50	420.21		
12+50	410.14	25+00	420.45		
13+00	410.45	25+50	420.18		
13+50	410.66	26+00	419.34		
14+00	410.87	26+50	418.46		
14+50	410.96	27+00	417.92		
15+00	410.96	27+50	417.62		

39TH AVENUE W.	
STATION	ELEVATION
50+00	421.64
50+50	422.04
51+00	421.10
51+50	420.17
52+00	419.21
52+50	418.11
53+00	416.54
53+50	414.62
54+00	412.19
54+50	408.00
55+00	403.27
55+50	400.66

229TH ST. SW.	
STATION	ELEVATION
0+00/20+92.46	397.17
0+50	396.18
1+00	395.63

230TH ST. SW. (E. OF 44TH)	
STATION	ELEVATION
0+00/17+80.77	386.00
0+50	385.10
1+00	384.10

230TH ST. SW. (W. OF 44TH)	
STATION	ELEVATION
0+00/18+00.87	386.60
0+50	387.47
1+00	388.91

41ST PL. W.	
STATION	ELEVATION
0+00/25+90.90	419.50
0+50	418.38
1+00	418.01
1+50	417.86

42ND PL. W.	
STATION	ELEVATION
0+00/23+28.83	418.39
0+50	417.29
1+00	415.65
1+50	414.53

232ND ST. SW. (W. OF 44TH)	
STATION	ELEVATION
0+00/12+21.83	386.98
0+50	389.24
1+00	397.28

NOTE: PK NAILS SET AT STATIONS LISTED BELOW

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100A - 216TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1151
FAX (425) 775-9420

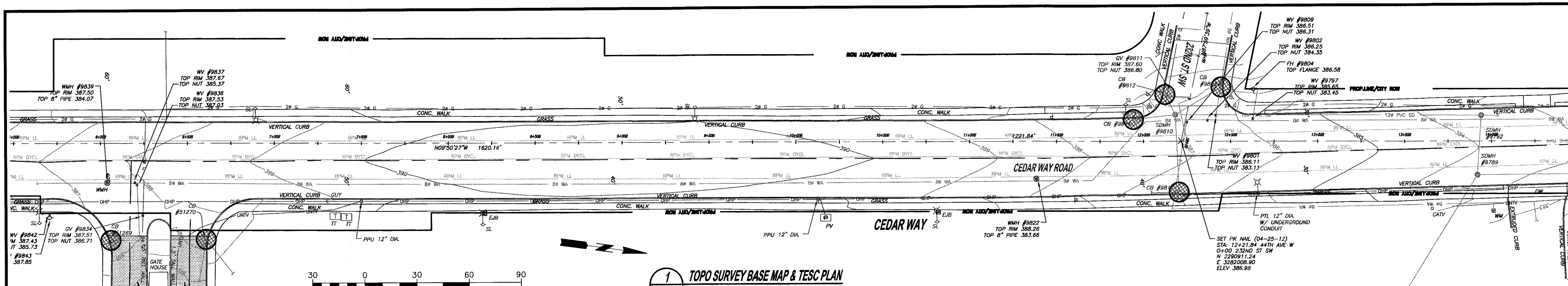
EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT No. 2012-03

UTILITY INVERT AND STATION ELEVATIONS

APPROVED BY: WILL VAN RY
PROJECT ENGINEER: R. SENG
DESCRIPTION
DATE: 9/12/2012
DATE: 9/12/2012

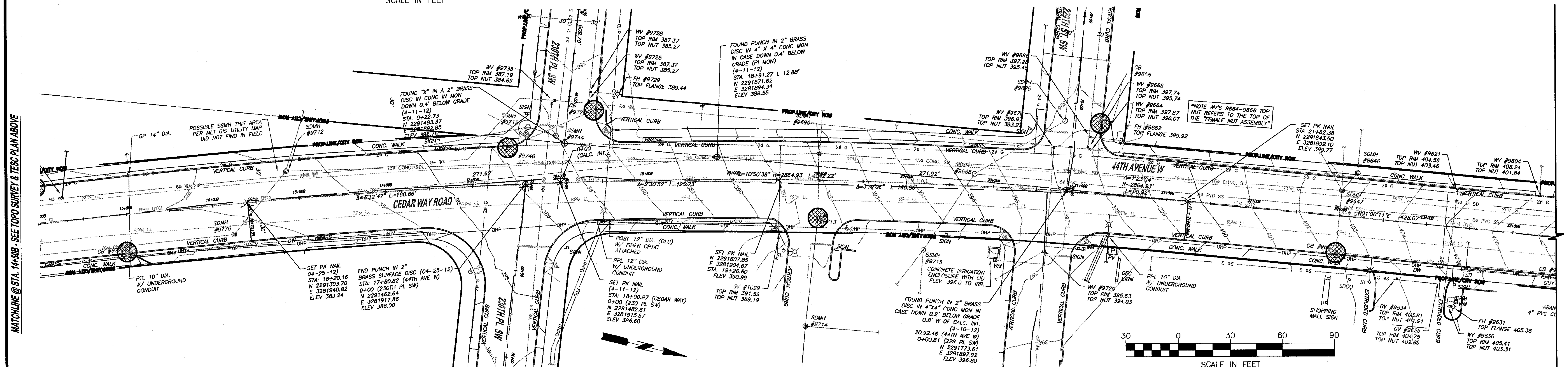
DRAWING NO.: C-15
DRAWN BY: R. SENG
CHECKED BY: WILL VAN RY
REVISION
DATE
HORIZONTAL SCALE: 1" = 20'-0"
VERTICAL SCALE: VARIES

X:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (128TH & 44TH, CEDAR)\2 - DESIGN\DWGS\SHEET C-1 EXISTING CONDITIONS TESC.DWG
PLOT DATE: Tuesday, December 18, 2012 8:43:59 AM



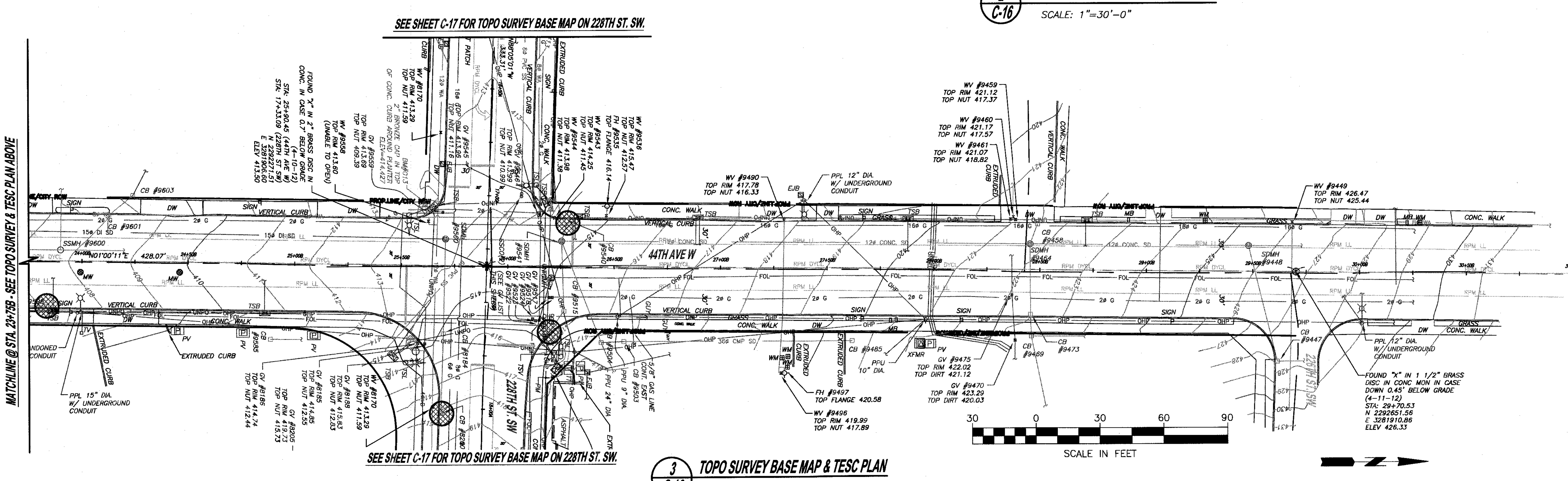
1 / C-16 TOPO SURVEY BASE MAP & TESC PLAN

SCALE: 1"=30'-0"



2 / C-16 TOPO SURVEY BASE MAP & TESC PLAN

SCALE: 1"=30'-0"



3 / C-16 TOPO SURVEY BASE MAP & TESC PLAN

SCALE: 1"=30'-0"

LEGEND

INSTALL STORM DRAIN INLET PROTECTION PER CONTRACT SPECS.

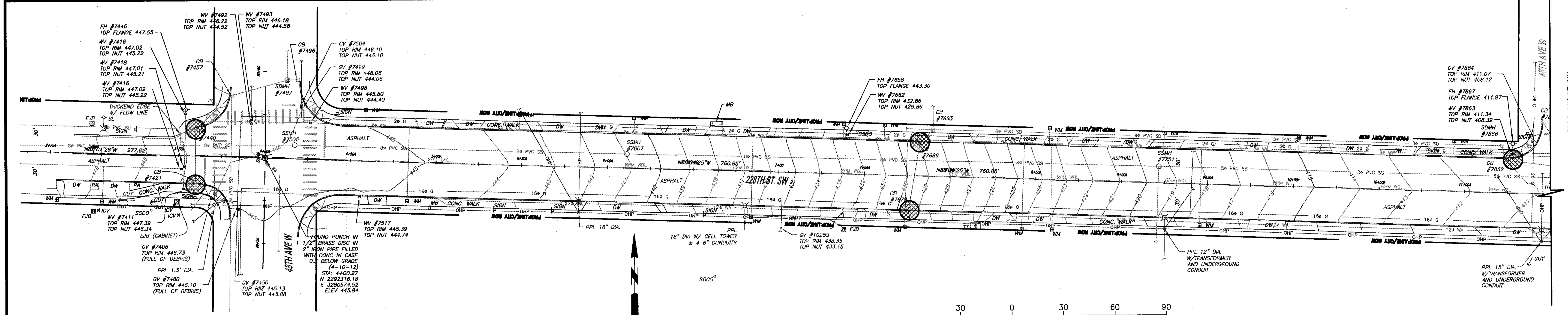
CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS

MLT PROJECT No. 2012-03

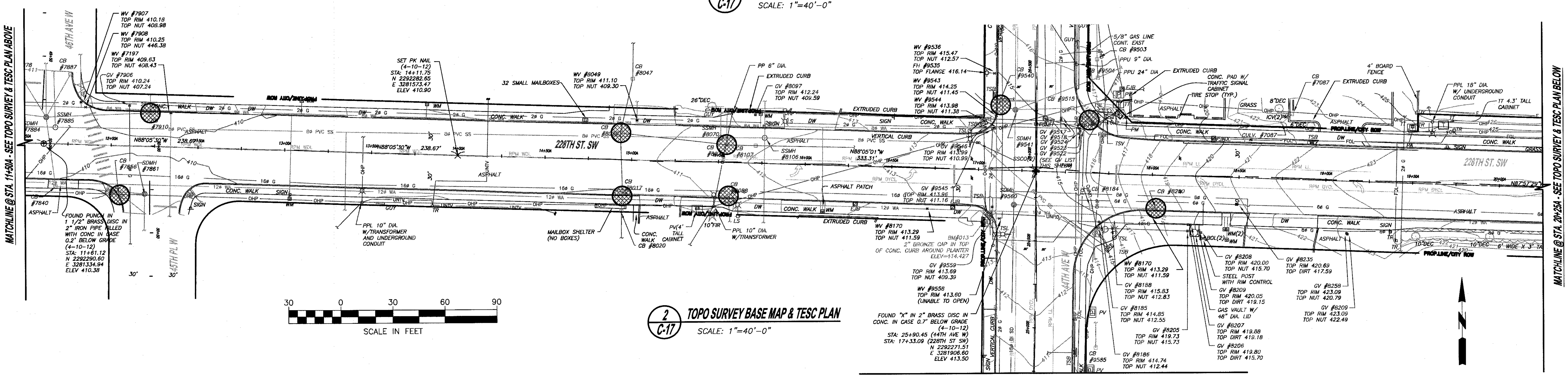
TOPOGRAPHIC SURVEY BASE MAPS, TESC NOTES & DETAILS

DRAWING NO.	C-16
HORIZONTAL SCALE	1"=30'-0"
VERTICAL SCALE	VARIES
DRAWN BY	R. SENG
CHECKED BY	WILL VAN RY
APPROVED BY	WILL VAN RY
PROJECT ENGINEER	R. SENG
DATE	9/12/2012



1 C-17 TOPO SURVEY BASE MAP & TESC PLAN

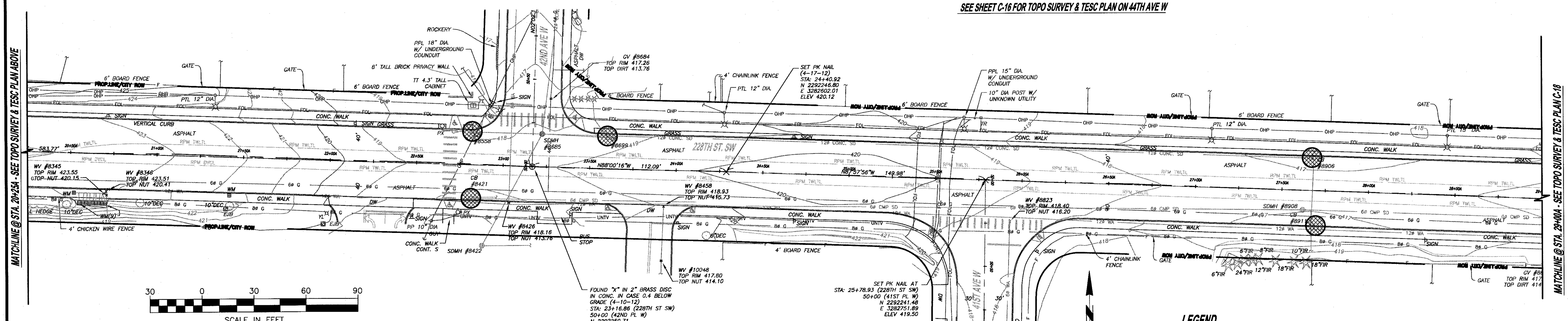
SCALE: 1"=40'-0"



2 C-17 TOPO SURVEY BASE MAP & TESC PLAN

SCALE: 1"=40'-0"

SEE SHEET C-16 FOR TOPO SURVEY & TESC PLAN ON 44TH AVE W



3 C-17 TOPO SURVEY BASE MAP & TESC PLAN

SCALE: 1"=40'-0"

LEGEND

INSTALL STORM DRAIN INLET PROTECTION PER CONTRACT SPECS.

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

CHAD M. A. SCHULHAUSER, STATE OF WASHINGTON, 34846, REGISTERED PROFESSIONAL ENGINEER

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS

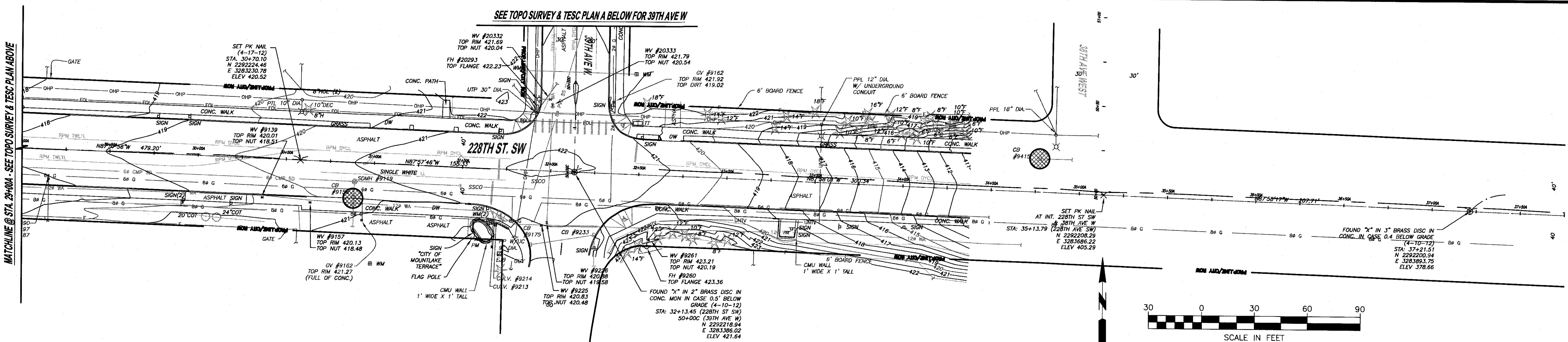
MLT PROJECT No. 2012-03

TOPOGRAPHIC SURVEY BASE MAP, TESC NOTES & DETAILS

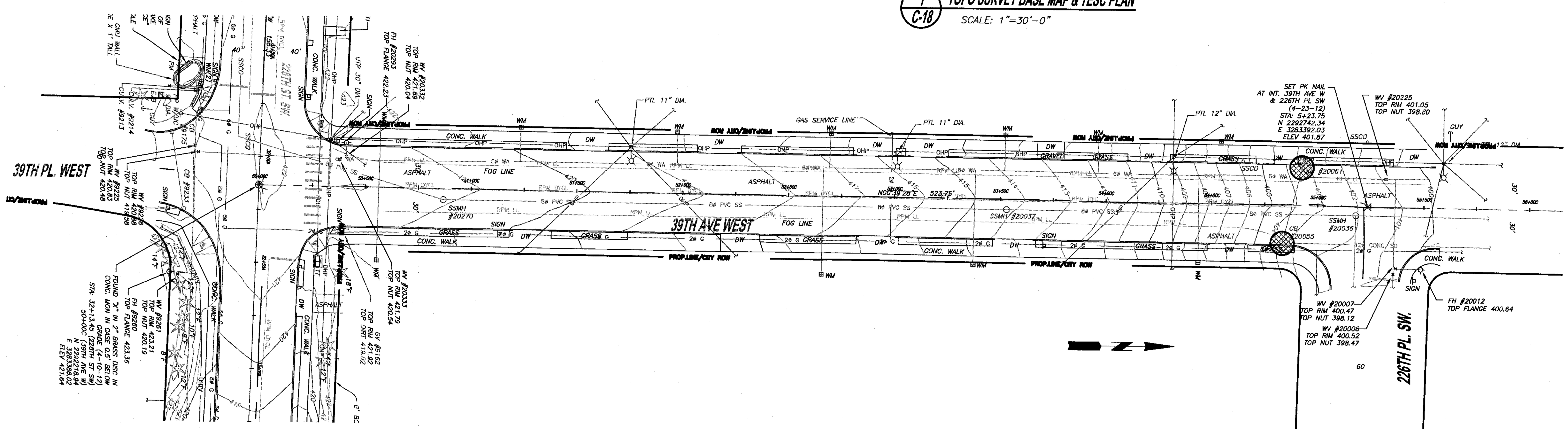
DRAWING NO.: C-17	
DRAWN BY: R. SENG	APPROVED BY: WILL VAN RY — DATE: 9/12/2012
CHECKED BY: WILL VAN RY	PROJECT ENGINEER: R. SENG — DATE: 9/12/2012
REVISION / DATE	DESCRIPTION
HORIZONTAL SCALE: 1"=30'-0"	
VERTICAL SCALE: VARIES	

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH, CEDAR)\2 - DESIGN\DWGS\SHEET C-X EXISTING CONDITIONS TESC.DWG

PLOT DATE: Tuesday, December 18, 2012 9:43:52 AM



1 / C-18 **TOPO SURVEY BASE MAP & TESC PLAN**
SCALE: 1"=30'-0"



2 / C-18 **TOPO SURVEY BASE MAP & TESC PLAN**
SCALE: 1"=30'-0"

LEGEND

INSTALL STORM DRAIN INLET PROTECTION PER CONTRACT SPECS.

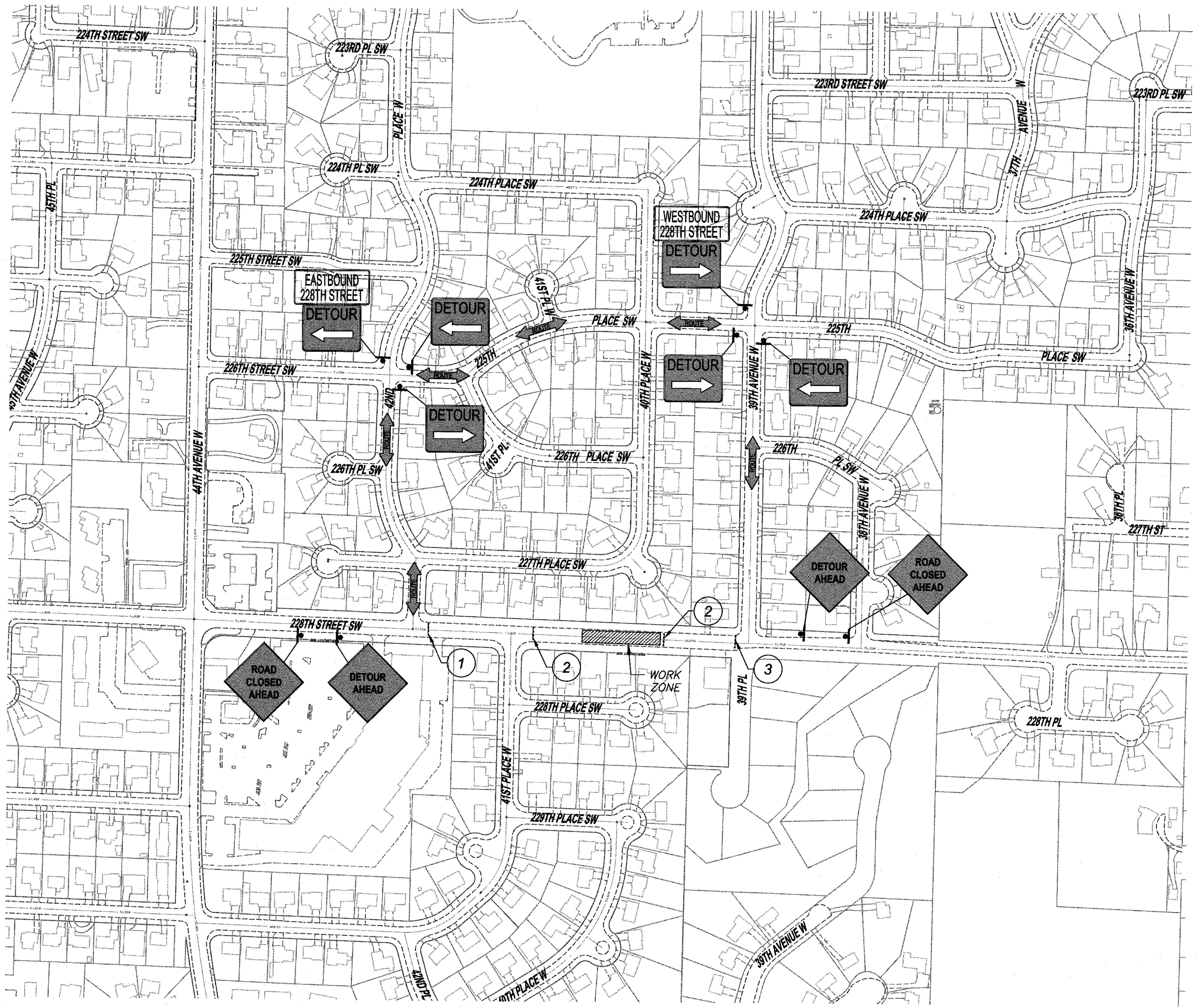
CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

EAST SIDE WATER MAIN IMPROVEMENTS
AND STORM DRAINAGE RECONSTRUCTION
MLT PROJECT No. 2012-03

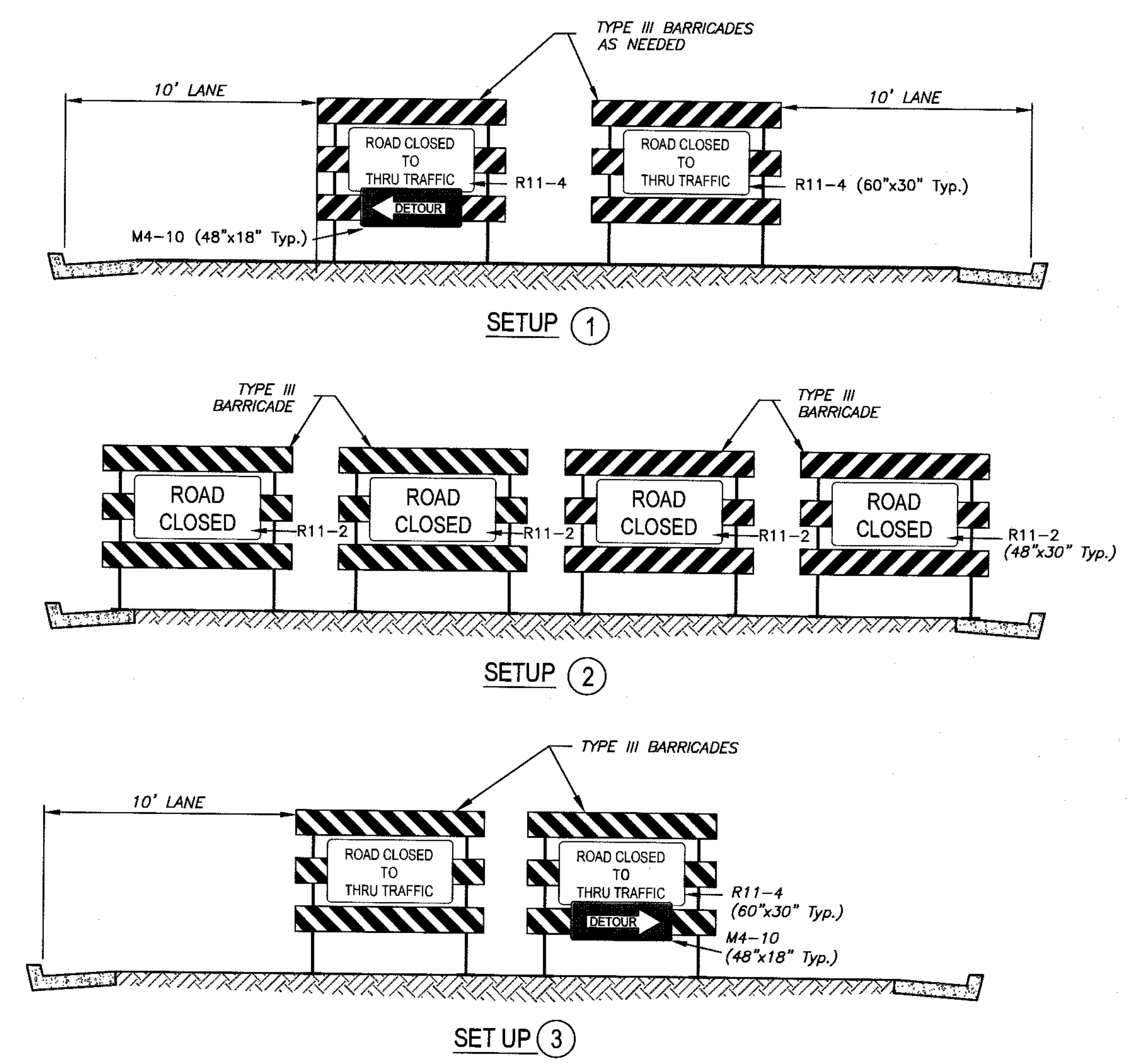
TOPOGRAPHIC SURVEY BASE MAP, TESC NOTES & DETAILS

DRAWN BY:	DATE:	APPROVED BY:	DATE:
R. SENG	8/8/2012	WILL VAN RY	8/8/2012
CHECKED BY:			
WILL VAN RY			

DRAWING NO.: C-18
HORIZONTAL SCALE: 1"=30'-0"
VERTICAL SCALE: VARIES



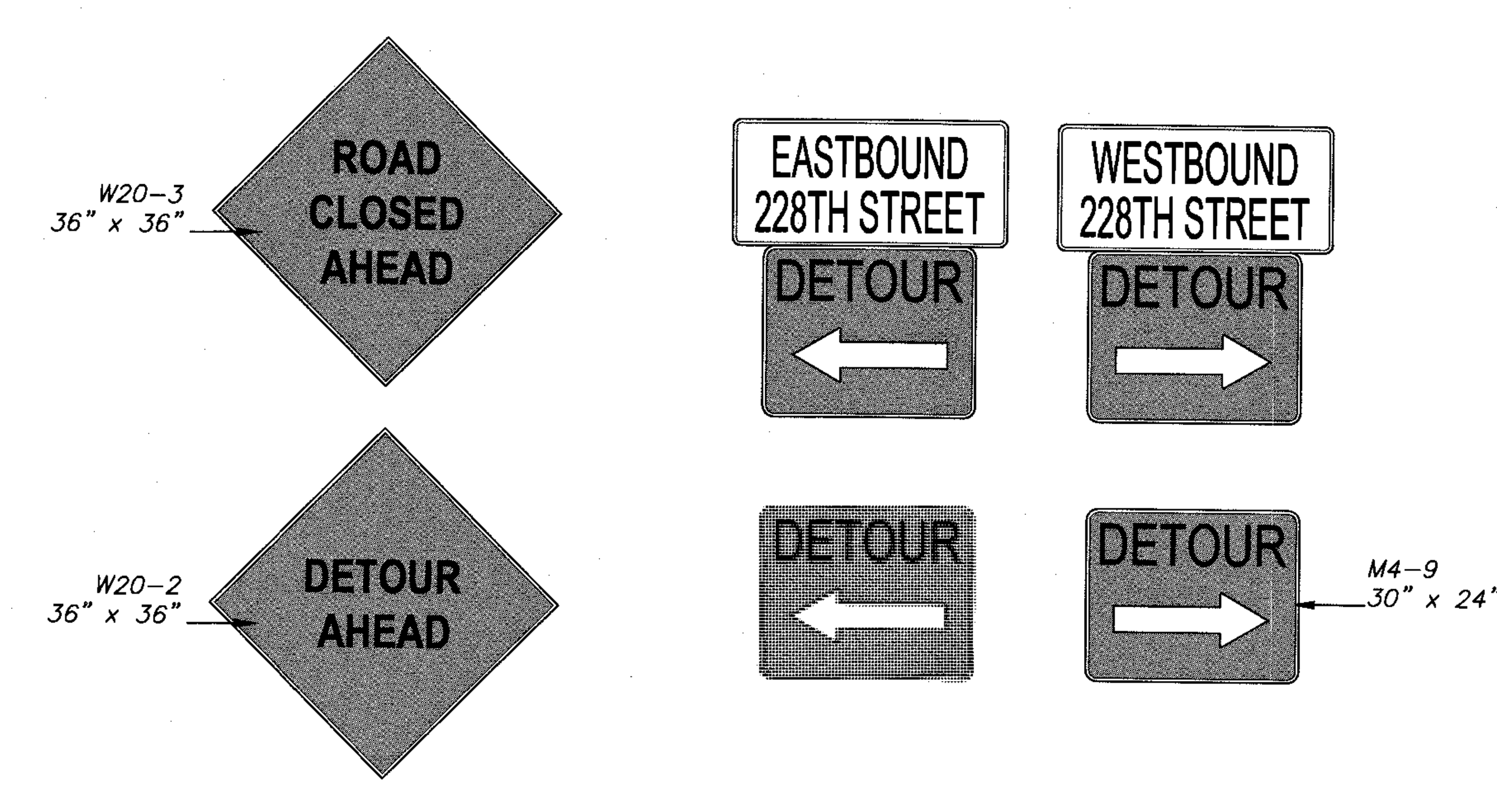
200 0 200 400 600
SCALE IN FEET



1 / C-19 BARRICADE SET UP DETAIL
SCALE: H: 1" = 30'

SIGN NOTES

1. CONTRACTOR TO FIELD VERIFY AND ADJUST SIGNAGE AS NECESSARY. LOCATIONS SHOWN ARE APPROXIMATE. ADDITIONAL SIGNAGE MAY BE REQUIRED, AS DIRECTED BY THE TRAFFIC CONTROL SUPERVISOR AND PROJECT ENGINEER.
2. ALL TEMPORARY "NO PARKING" IS TO BE COORDINATED WITH THE CITY'S INSPECTOR (TOM MOEHRLE, 425-744-6277). TEMPORARY "NO PARKING" SIGNS ARE TO BE IN PLACE 72 HOURS PRIOR TO THE EFFECTIVE DATE AND TIME ON THE SIGNS. SEE CONTRACT PROVISIONS SECTIONS 1-07.23(1)A AND 1-10.1(2).



2 / C-19 DETOUR SIGN DETAIL
SCALE: NTS

TRAFFIC CONTROL NOTES

1. WHEN WORK AFFECTS MULTIPLE CORNERS OF AN INTERSECTION, THE CONTRACTOR SHALL PHASE THE WORK TO ALLOW PEDESTRIAN ACCESS ON AT LEAST THREE LEGS OF THE INTERSECTION AT A TIME. WITH PRIOR APPROVAL, THE CONTRACTOR MAY PROVIDE A TEMPORARY PEDESTRIAN PATHWAY AROUND THE WORK AREA WHICH WILL BE AT NO COST TO THE CITY. THE TEMPORARY PEDESTRIAN PATHWAY SHALL MEET THE STANDARDS AND GUIDELINES STATED IN THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART VI, SECTIONS 6D.01 AND 6D.02.
2. CONSTRUCTION ACTIVITY, LANE CLOSURES, OR ACTIVITIES THAT IMPEDE OR MAY POTENTIALLY IMPEDE TRAFFIC SHALL ONLY OCCUR MONDAY THROUGH FRIDAY, BETWEEN 7:00 AM AND 6:00 PM ON LOCAL STREETS AND BETWEEN 9:00 AM TO 4:00 PM ON 44TH AVENUE W/CEDAR WAY, 228TH STREET SW, AND 39TH AVENUE W. COORDINATION WILL ALSO BE REQUIRED WITH EDMONDS SCHOOL DISTRICT PER CONTRACT SPECIAL PROVISIONS 1-10.2(1)A. FURTHER RESTRICTIONS ARE SET FORTH IN SECTIONS 1-07.23(1)A, 1-07.23(1)B AND 1-07.23(2) OF THE SPECIAL PROVISIONS.
3. SEE SECTIONS 1-05.18 AND 1-10.2(1)A OF THE SPECIAL PROVISIONS FOR NOTIFICATION REQUIREMENTS FOR COMMUNITY TRANSIT AND OTHER AFFECTED AGENCIES.
4. SEE WSDOT STANDARD PLAN K-34.20-00, INTERSECTION – PEDESTRIAN DETOUR, AND MLT STANDARD PLAN 113, SIDEWALK DETOUR, IN THE APPENDIX OF THE CONTRACT PROVISIONS FOR PEDESTRIAN DETOURS.
5. SEE WSDOT K SERIES STANDARD PLANS INCLUDED IN THE APPENDIX OF THE CONTRACT PROVISIONS FOR TEMPORARY TRAFFIC CONTROL.

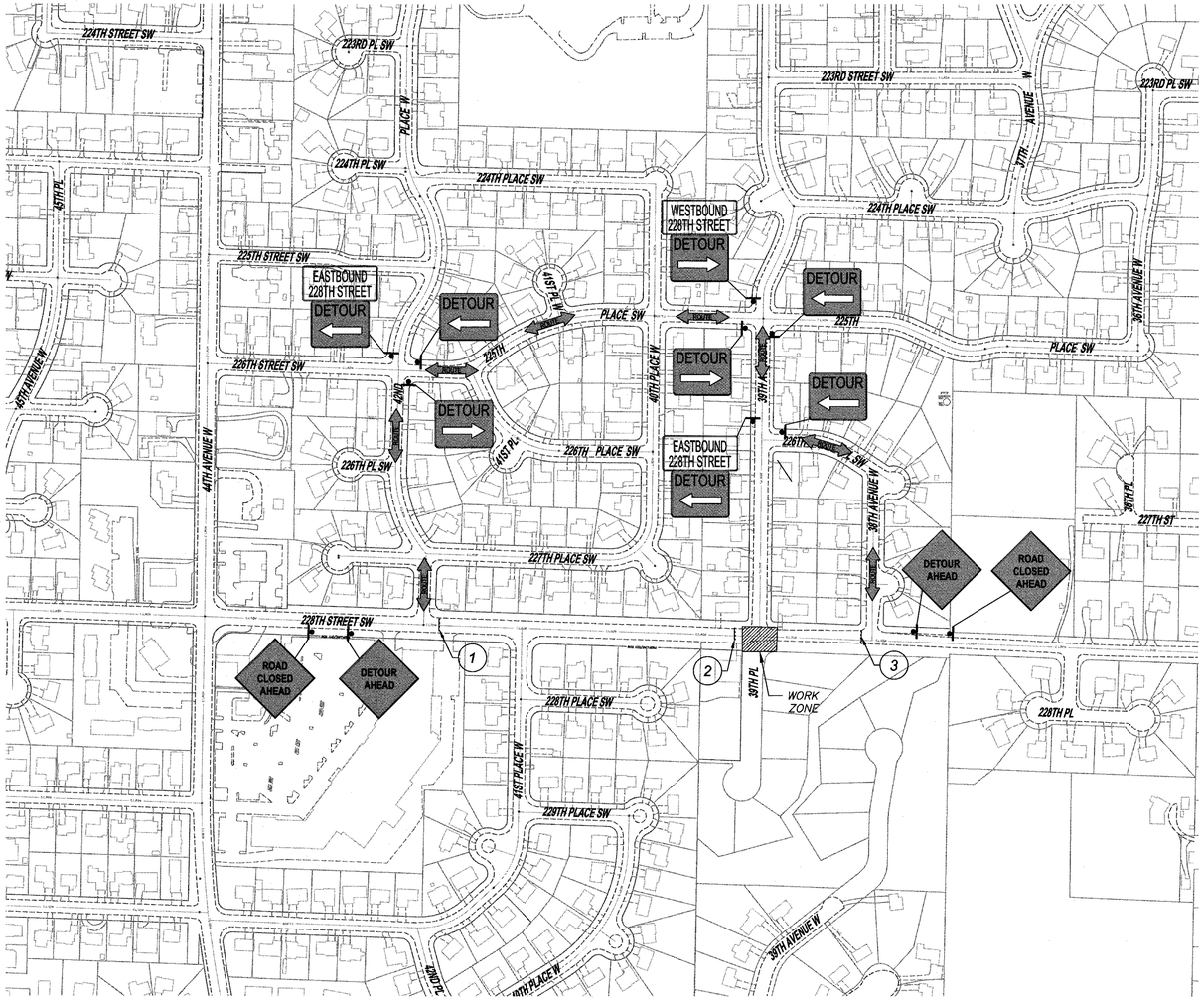
CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

JANET TOWLE HALL, STATE OF WASHINGTON, REGISTERED PROFESSIONAL ENGINEER 42714

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS MLT PROJECT No. 2012-03

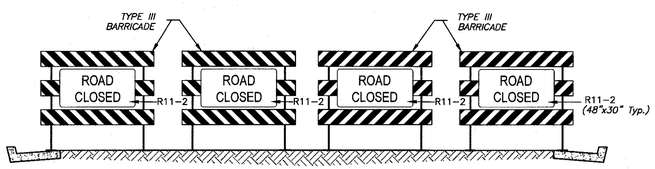
DETOUR PLAN 1

DRAWING NO.:	C-19
DRAWN BY:	THAD NEWPORT
CHECKED BY:	WILL VAN RY
APPROVED BY:	WILL VAN RY
	JANET HALL, PROJECT ENGINEER
HORIZONTAL SCALE:	1" = 200'
VERTICAL SCALE:	N/A



SETUP (1)

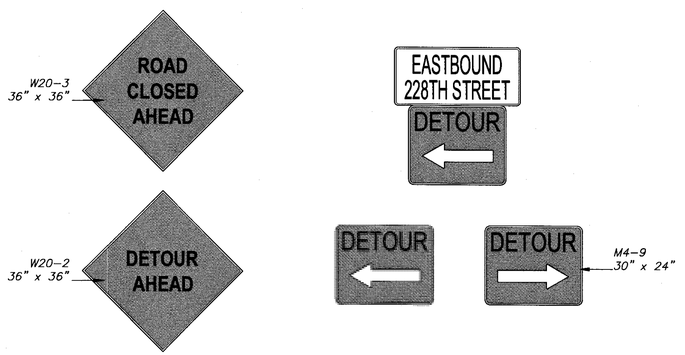
SET UP (3)



SETUP (2)

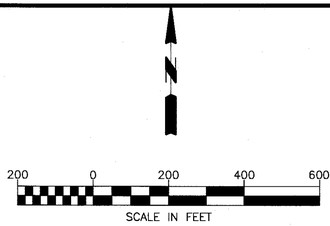
1 / C-20 **BARRICADE SET UP DETAIL**

SCALE: H: 1" = 30'



2 / C-20 **DETOUR SIGN DETAIL**

SCALE: NTS



SIGN NOTES

1. CONTRACTOR TO FIELD VERIFY AND ADJUST SIGNAGE AS NECESSARY. LOCATIONS SHOWN ARE APPROXIMATE. ADDITIONAL SIGNAGE MAY BE REQUIRED, AS DIRECTED BY THE TRAFFIC CONTROL SUPERVISOR AND PROJECT ENGINEER.
2. ALL TEMPORARY "NO PARKING" IS TO BE COORDINATED WITH THE CITY'S INSPECTOR (TOM MOEHRLE, 425-744-6277). TEMPORARY "NO PARKING" SIGNS ARE TO BE IN PLACE 72 HOURS PRIOR TO THE EFFECTIVE DATE AND TIME ON THE SIGNS. SEE CONTRACT PROVISIONS SECTIONS 1-07.23(1)A AND 1-10.1(2).

TRAFFIC CONTROL NOTES

1. WHEN WORK AFFECTS MULTIPLE CORNERS OF AN INTERSECTION, THE CONTRACTOR SHALL PHASE THE WORK TO ALLOW PEDESTRIAN ACCESS ON AT LEAST THREE LEGS OF THE INTERSECTION AT A TIME. WITH PRIOR APPROVAL, THE CONTRACTOR MAY PROVIDE A TEMPORARY PEDESTRIAN PATHWAY AROUND THE WORK AREA WHICH WILL BE AT NO COST TO THE CITY. THE TEMPORARY PEDESTRIAN PATHWAY SHALL MEET THE STANDARDS AND GUIDELINES STATED IN THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART VI, SECTIONS 6D.01 AND 6D.02.
2. CONSTRUCTION ACTIVITY, LANE CLOSURES, OR ACTIVITIES THAT IMPEDE OR MAY POTENTIALLY IMPEDE TRAFFIC SHALL ONLY OCCUR MONDAY THROUGH FRIDAY, BETWEEN 7:00 AM AND 6:00 PM ON LOCAL STREETS AND BETWEEN 9:00 AM TO 4:00 PM ON 44TH AVENUE W/CEDAR WAY, 228TH STREET SW, AND 39TH AVENUE W. COORDINATION WILL ALSO BE REQUIRED WITH EDMONDS SCHOOL DISTRICT PER CONTRACT SPECIAL PROVISIONS 1-10.2(1)A. FURTHER RESTRICTIONS ARE SET FORTH IN SECTIONS 1-07.23(1)A, 1-07.23(1)B AND 1-07.23(2) OF THE SPECIAL PROVISIONS.
3. SEE SECTIONS 1-05.18 AND 1-10.2(1)A OF THE SPECIAL PROVISIONS FOR NOTIFICATION REQUIREMENTS FOR COMMUNITY TRANSIT AND OTHER AFFECTED AGENCIES.
4. SEE WSDOT STANDARD PLAN K-34.20-00, INTERSECTION - PEDESTRIAN DETOUR, AND MLT STANDARD PLAN 113, SIDEWALK DETOUR, IN THE APPENDIX OF THE CONTRACT PROVISIONS FOR PEDESTRIAN DETOURS.
5. SEE WSDOT K SERIES STANDARD PLANS INCLUDED IN THE APPENDIX OF THE CONTRACT PROVISIONS FOR TEMPORARY TRAFFIC CONTROL.

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT
6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

JANET L. HALL — STATE OF WASHINGTON — 42774 — REGISTERED PROFESSIONAL ENGINEER — 12-19-12

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS
MLT PROJECT NO. 2012-03

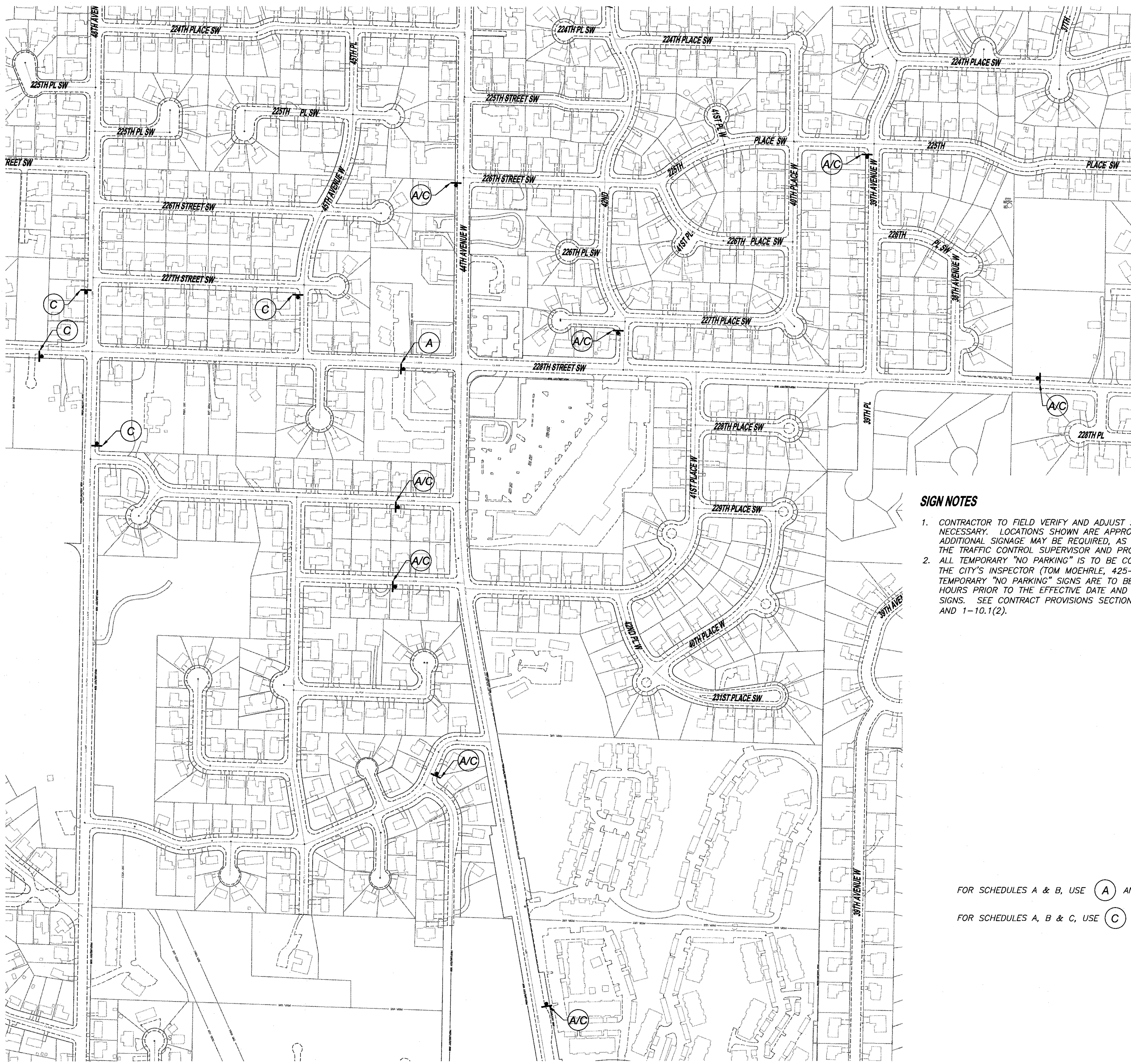
DETOUR PLAN 2

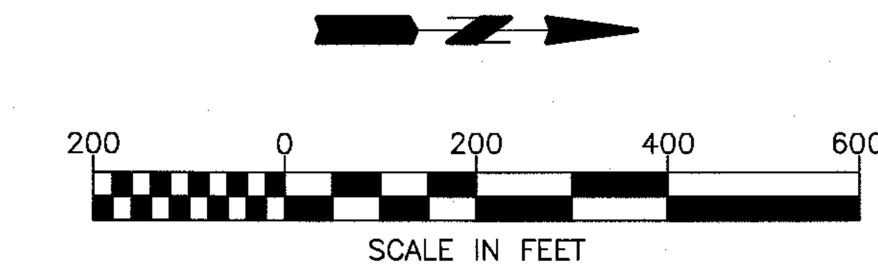
DRAWN BY: THAD NEWPORT
CHECKED BY: WILL VAN RY
DESIGN: WILL VAN RY
DATE:
HORIZONTAL SCALE: 1" = 200'
VERTICAL SCALE: N/A

APPROVED BY: WILL VAN RY
PROJECT ENGINEER: JANET HALL
DATE:
DESCRIPTION:

DRAWING NO.: C-20

K:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH)_CEDAR\3 - DESIGN\DWGS\SHEET C-1_DETOUR & SIGNING (2).DWG
Tuesday, December 18, 2012 9:44:51 AM





1
C-21
CLASS A SIGNAGE LOCATIONS
SCALE: 1" = 200'

SIGN NOTES

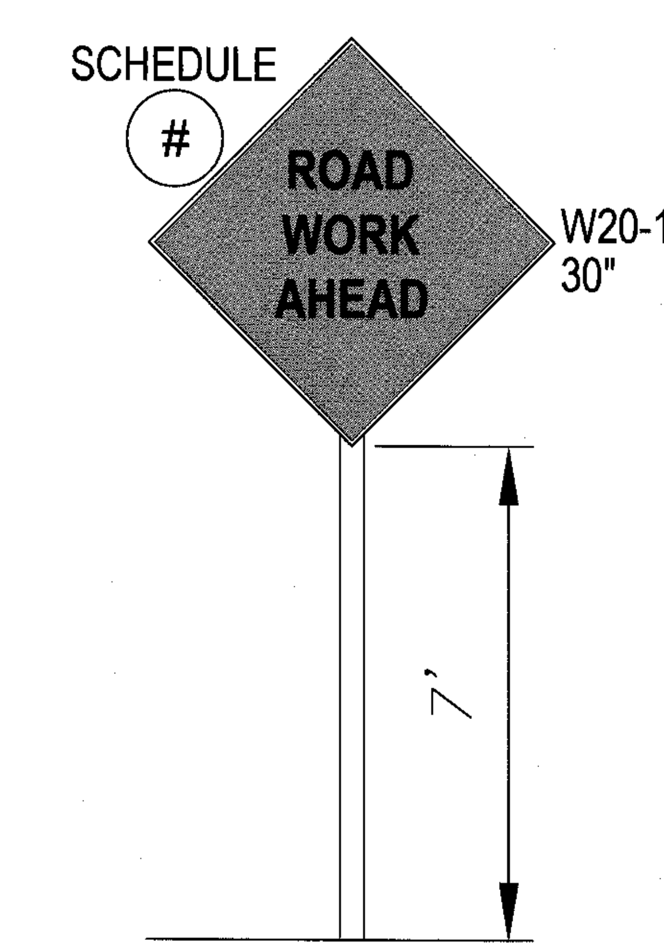
1. CONTRACTOR TO FIELD VERIFY AND ADJUST SIGNAGE AS NECESSARY. LOCATIONS SHOWN ARE APPROXIMATE. ADDITIONAL SIGNAGE MAY BE REQUIRED, AS DIRECTED BY THE TRAFFIC CONTROL SUPERVISOR AND PROJECT ENGINEER.
2. ALL TEMPORARY "NO PARKING" IS TO BE COORDINATED WITH THE CITY'S INSPECTOR (TOM MOEHRLE, 425-744-6277). TEMPORARY "NO PARKING" SIGNS ARE TO BE IN PLACE 72 HOURS PRIOR TO THE EFFECTIVE DATE AND TIME ON THE SIGNS. SEE CONTRACT PROVISIONS SECTIONS 1-07.23(1)A AND 1-10.1(2).

FOR SCHEDULES A & B, USE (A) AND (A/C)

FOR SCHEDULES A, B & C, USE (C) AND (A/C)

TRAFFIC CONTROL NOTES

1. WHEN WORK AFFECTS MULTIPLE CORNERS OF AN INTERSECTION, THE CONTRACTOR SHALL PHASE THE WORK TO ALLOW PEDESTRIAN ACCESS ON AT LEAST THREE LEGS OF THE INTERSECTION AT A TIME. WITH PRIOR APPROVAL, THE CONTRACTOR MAY PROVIDE A TEMPORARY PEDESTRIAN PATHWAY AROUND THE WORK AREA WHICH WILL BE AT NO COST TO THE CITY. THE TEMPORARY PEDESTRIAN PATHWAY SHALL MEET THE STANDARDS AND GUIDELINES STATED IN THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), PART VI, SECTIONS 6D.01 AND 6D.02.
2. CONSTRUCTION ACTIVITY, LANE CLOSURES, OR ACTIVITIES THAT IMPEDE OR MAY POTENTIALLY IMPEDE TRAFFIC SHALL ONLY OCCUR MONDAY THROUGH FRIDAY, BETWEEN 7:00 AM AND 6:00 PM ON LOCAL STREETS AND BETWEEN 9:00 AM TO 4:00 PM ON 44TH AVENUE W/CEDAR WAY, 228TH STREET SW, AND 39TH AVENUE W. COORDINATION WILL ALSO BE REQUIRED WITH EDMONDS SCHOOL DISTRICT PER CONTRACT SPECIAL PROVISIONS 1-10.2(1)A. FURTHER RESTRICTIONS ARE SET FORTH IN SECTIONS 1-07.23(1)A, 1-07.23(1)B AND 1-07.23(2) OF THE SPECIAL PROVISIONS.
3. SEE SECTIONS 1-05.18 AND 1-10.2(1)A OF THE SPECIAL PROVISIONS FOR NOTIFICATION REQUIREMENTS FOR COMMUNITY TRANSIT AND OTHER AFFECTED AGENCIES.
4. SEE WSDOT STANDARD PLAN K-34.20-00, INTERSECTION - PEDESTRIAN DETOUR, AND MLT STANDARD PLAN 113, SIDEWALK DETOUR, IN THE APPENDIX OF THE CONTRACT PROVISIONS FOR PEDESTRIAN DETOURS.
5. SEE WSDOT K SERIES STANDARD PLANS INCLUDED IN THE APPENDIX OF THE CONTRACT PROVISIONS FOR TEMPORARY TRAFFIC CONTROL.



2
C-21
CLASS A SIGN DETAIL
SCALE: NTS

CITY OF MOUNTLAKE TERRACE
ENGINEERING SERVICES DEPARTMENT

6100 - 219TH STREET SW, SUITE 200
MOUNTLAKE TERRACE, WA 98043
(425) 776-1161
FAX (425) 775-0420

JANET TOWLE HALL, STATE OF WASHINGTON, 42714, REGISTERED PROFESSIONAL ENGINEER, 12-18-12

EASTSIDE WATER MAIN & STORM DRAIN IMPROVEMENTS MLT PROJECT No. 2012-03

CLASS A SIGNAGE PLAN

DRAWING NO.: C-21	DRAWN BY: THAD NEWPORT	APPROVED BY: WILL VAN RY	DATE:
	CHECKED BY: WILL VAN RY	JANET HALL PROJECT ENGINEER	DATE:
HORIZONTAL SCALE: 1" = 200'	REVISION	DATE	DESCRIPTION
VERTICAL SCALE: N/A			

N:\ENGINEER\CONSTRUCTION PROJECTS\2012\EAST SIDE WATER MAIN (228TH & 44TH_CEDAR)\2 - DESIGN\DWGS\SHEET C-X_DETOUR & SIGNING.DWG

Tuesday, December 18, 2012 9:45:06 AM