

N.W. 1/4, SEC. 26, T. 21 N., R. 4 E., W.M.

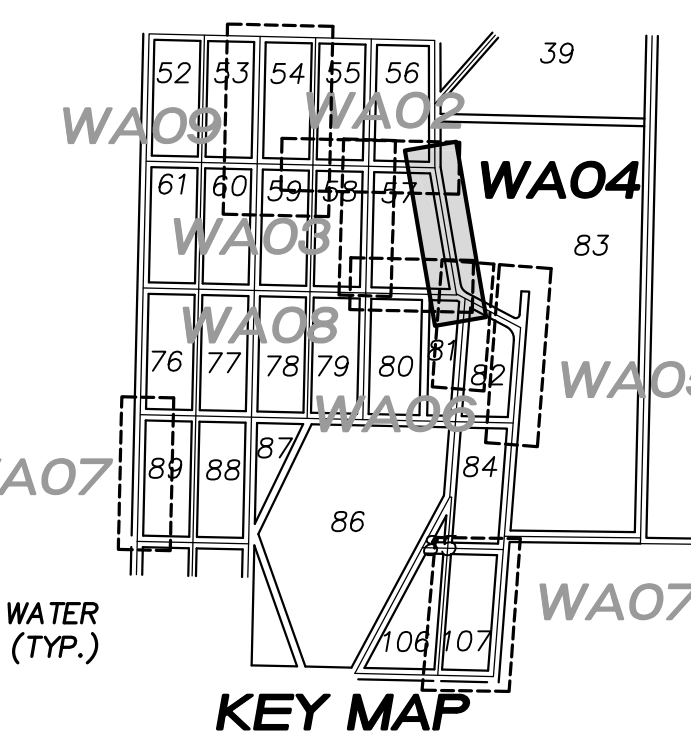
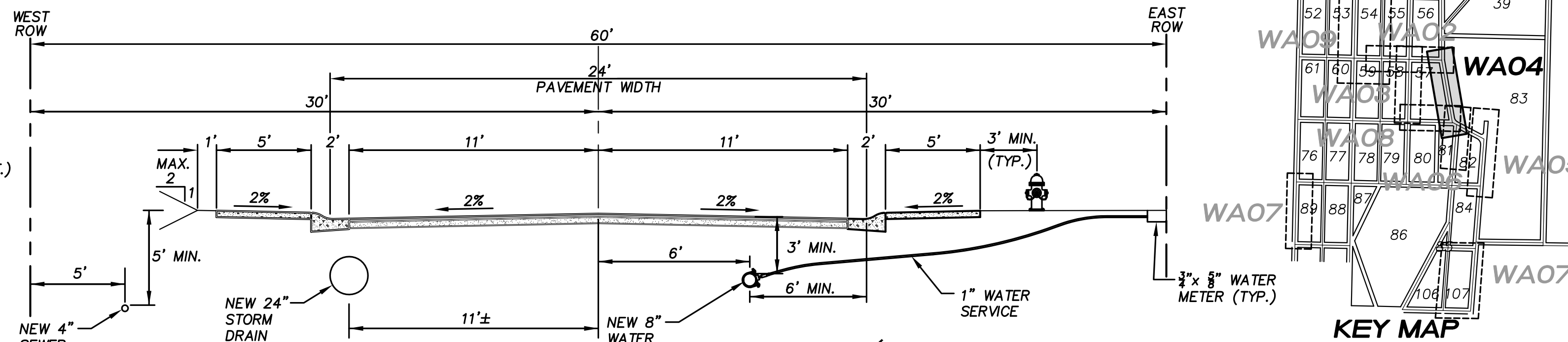
- 11 23+06.45, 4.82' R
1-8" 11 1/4' BEND (MJ)
W/CONC. BLOCKING
- 12 23+78.00, 6.00' R
1-8"x6" TEE (MJxMJxFL)
1-6" GATE VALVE (FLxMJ)
16LF 6" D.I.P.
1-FIRE HYDRANT ASSEMBLY
- 13 28+26.00, 6.00' R
1-8"x6" TEE (MJxMJxFL)
1-6" GATE VALVE (FLxMJ)
16 LF 6"D.I.P.
1-FIRE HYDRANT ASSEMBLY
- 13A 28+98.51, 6.00' R
BEGIN HORIZONTAL CURVE
(R=494')

- 14 MATCH POINT W/ SHEET WA02
29+41.71, 6.00' R (57TH/56TH AVE S.)
=122+22.76, 8.63' L (S 354TH ST)
1-8" TEE (ALL FL)
2-8" GATE VALVES (FLxMJ), W & S
1-8" BLIND FLANGE, N
W/ CONC. BLOCKING
END HORIZONTAL CURVE (R=494')
- 16 22+36.23, 4.82' R
1-8" 11 1/4' BEND
(MJ) W/CONC.
BLOCKING
- 17 MATCH POINT W/ SHEET WA06
22+01.70, 5.99' R (S. 356TH ST)
=155+37.74, 1.51' R (S. 56TH AVE S.)
1-8" TEE (ALL FL)
3-8" GATE VALVES (FLxMJ)
W/ CONC. BLOCKING

- 17A 22+04.04, 5.97' R
BEGIN HORIZONTAL CURVE
(R=200')
- 17B 23+41.55, 6.00' R
END HORIZONTAL CURVE
(R=200')
- 17C MATCH POINT W/ SHEET WA08
22+69.67, 6.00' R (56TH AVE. S.)
=264+92.25, 18.87' L (S. 356TH ST.)
1-8"x8" TEE (MJxFL)
1-8" GATE VALVE (FLxMJ)
W/ CONC. BLOCKING
- 17D 22+36.23, 4.82' R
1-8" 11 1/4' BEND
(MJ) W/CONC.
BLOCKING
- 17E 22+01.70, 5.99' R (S. 356TH ST)
=155+37.74, 1.51' R (S. 56TH AVE S.)
1-8" TEE (ALL FL)
3-8" GATE VALVES (FLxMJ)
W/ CONC. BLOCKING

NOTE:

EXISTING PARCEL NUMBERS AND LOT NUMBERS WILL BE UPDATED AFTER BOUNDARY LINE ADJUSTMENTS ARE RECORDED.



LAKEHAVEN UTILITY DISTRICT

Water Plan _____ Sewer Plan _____

Dated _____

APPROVED FOR CONSTRUCTION
SUBJECT TO CHANGES NOTED

The District's review is not a check of any dimension or quantities and will not relieve the Developer from responsibility for errors of any sort. No changes shall be made in the plans except by the consent of the District.

General Manager/District Engineer _____ Date _____

This construction plan will expire one year from plan approval date, if construction has not commenced.

VERTICAL DATUM:

NAVD 88

BENCH MARK:

KING COUNTY SURVEY CONTROL POINT No. 6905,
SW CORNER OF SECTION 27, T 24 N, R 4 E, W.M.,
CONCRETE MONUMENT WITH LEAD AND BRASS TACK,
SET 1.2 FEET BELOW GRADE, IN STANDARD KC MON. CASE.

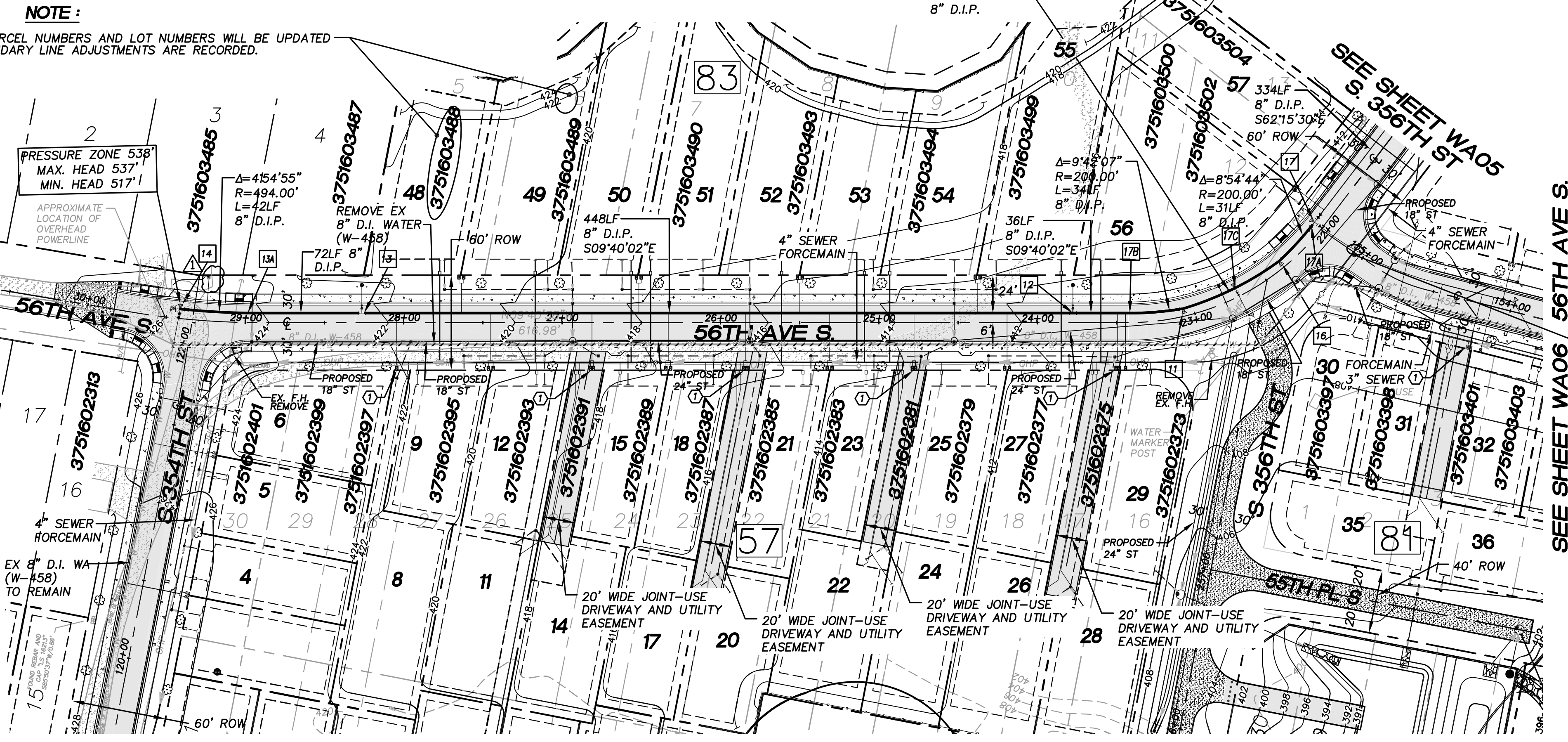
ELEVATION = 367.06

NOTE:

SALVAGE AND RETURN ALL REMOVED FIRE HYDRANTS TO THE LAKEHAVEN UTILITY DISTRICT.

NOTE:

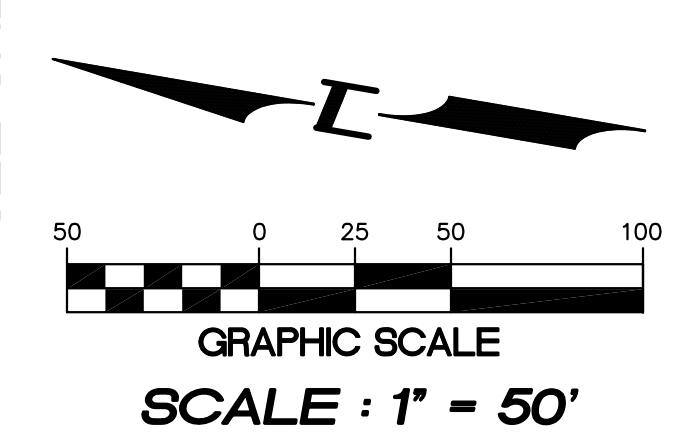
1. ALL SEWER FORCEMAIN PIPES ARE DR-11 HDPE PIPES. THE SEWER FORCEMAIN SHALL HAVE 10' MINIMUM HORIZONTAL CLEARANCE BETWEEN WATERMAIN. WHEN CROSSING WITH WATERMAIN, THE SEWER FORCEMAIN SHALL CROSS UNDER AND KEEP MINIMUM 18" VERTICAL CLEARANCE FROM THE WATERMAIN. IF THE EXISTING WATERMAIN IS AC PIPE, IT SHALL BE REPLACED WITH SAME SIZE DUCTILE IRON PIPE 10 FEET EACH SIDE OF SEWER CROSSING BUT NO LESS THAN 2 FEET INTO BOTH TRENCH WALLS (NO GDF GRADLE ALLOWED).
2. WATERMANS DEPICTED IN PROFILE VIEW TO HAVE MINIMUM 3' COVER. WATERMAIN VALVE OPERATING NUT TO HAVE 12" COVER.
3. LOCATIONS OF EXISTING UTILITIES ARE BASED ON FIELD SURVEY DATA. POT HOLE/RESEARCH EXISTING WATERMAIN AND OTHER UTILITIES BEFORE CONSTRUCTION.
4. ALL NEW WATERMANS ARE DUCTILE IRON PIPES WITH MINIMUM CLASS 50.
5. ALL NEW SERVICES TO INDIVIDUAL LOTS ARE 1" (SERVICE & METER) W/ 3/4" x 3/4" REDUCER BUSHINGS UNLESS NOTED OTHERWISE. ALL WATER METERS TO BE INSTALLED BY LAKEHAVEN FOLLOWING COMPLETION OF NEW WATERMAIN CONSTRUCTION. UNDER SEPARATE APPLICATIONS, ANY WATER SERVICE CONNECTIONS PROPOSED FROM EXISTING WATERMAIN SHALL BE ENTIRELY INSTALLED BY LAKEHAVEN. DEVELOPER SHOULD SUBMIT APPLICATIONS FOR THESE 'FULL' SERVICE INSTALLATIONS TO LAKEHAVEN AT THE COMMENCEMENT OF CONSTRUCTION.
6. WRAP MINIMUM NUMBER 12 COPPER TRACER WIRE AROUND ALL NON-PERPENDICULAR SERVICE LINES, WITH 12" LOOP INSIDE OF AFFECTED METER BOX(ES).
7. THE MINIMUM SEPARATION BETWEEN (PARALLEL PIPELINES) WATER MAIN, WATER SERVICE LINE AND PRESSURE SEWER FACILITIES (MUST BE BELOW WATER MAIN OR WATER SERVICE) MUST BE MET, ARE AS FOLLOWS:
HORIZONTAL ≥ 10', MEASURED EDGE TO EDGE
VERTICAL ≥ 18", MEASURED EDGE TO EDGE.
8. THE MINIMUM SEPARATION BETWEEN (CROSSING PIPELINES) WATER MAIN, WATER SERVICE LINE AND PRESSURE SEWER FACILITIES (MUST BE BELOW WATER MAIN OR WATER SERVICE) MUST BE MET, ARE AS FOLLOWS:
VERTICAL ≥ 18" MEASURED EDGE TO EDGE



LEGEND

- EX. ASPHALT PAVEMENT
- EX. GRAVEL PAVEMENT
- EX. WATER MAIN
- NEW ASPHALT PAVEMENT
- NEW CONC. SIDEWALK
- 8" D.I. NEW WATER MAIN
- NEW GATE VALVE
- NEW F.H. ASSEMBLY
- NEW WATER BEND W/ CONC. BLOCKING
- NEW WATER TEE W/ CONC. BLOCKING
- NEW WATER METER
- 428- EX. CONTOUR
- 406- FINISHED CONTOUR
- 57 BLOCK NUMBER

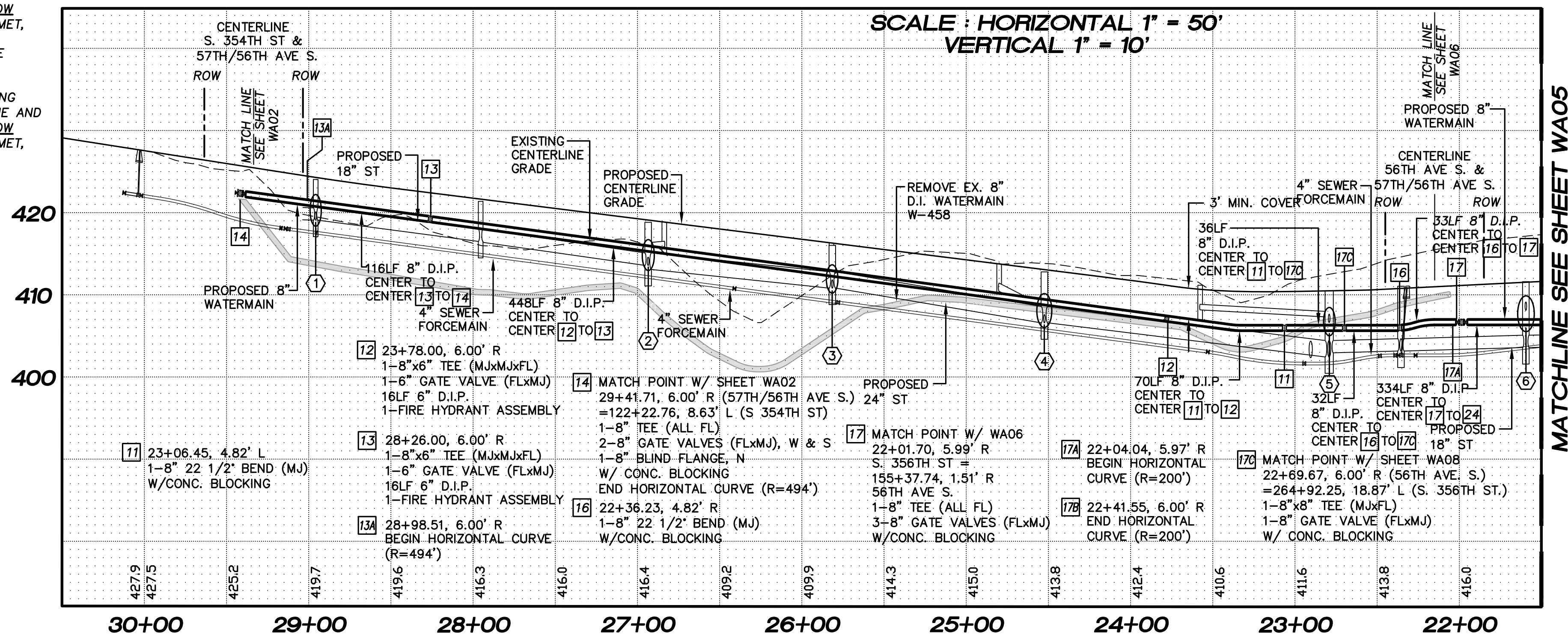
SEWER FORCEMAIN AND WATER CROSSING SEE NOTE BELOW



SCALE: 1" = 50'

SEE SHEET WA02 S. 354TH ST

SCALE: HORIZONTAL 1" = 50'
VERTICAL 1" = 10'



CROSSING TABLE:

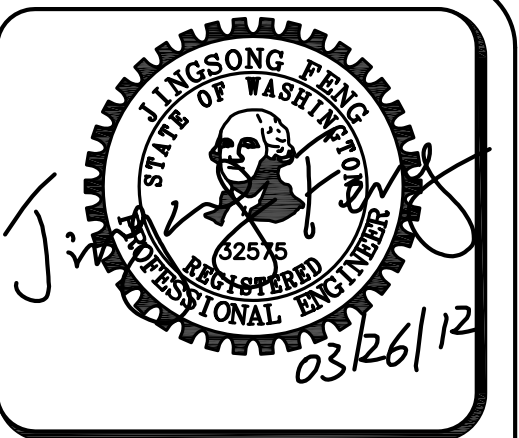
- 1 BOTTOM 12" WATER = 420.67
TOP 8" STORM = 420.17
- 2 BOTTOM 8" WATER = 415.29
TOP 12" STORM = 414.79
- 3 BOTTOM 12" WATER = 412.41
TOP 8" STORM = 411.91
- 4 BOTTOM 12" WATER = 408.77
TOP 8" STORM = 408.25
- 5 BOTTOM 12" STORM = 406.95
TOP 8" WATER = 406.30
- 6 BOTTOM 12" STORM = 408.12
TOP 8" WATER = 407.00

BLOCK 57
(PRESSURE ZONE 538', MAX. HEAD 537', MIN. HEAD 517')

LOT NO.	LOWEST FIXTURE ELEV. (FT.)	HIGHEST FIXTURE ELEV. (FT.)	ESTIMATED MIN. STATIC PRESSURE (PSI.)	ESTIMATED MAX. STATIC PRESSURE (PSI.)
12	419.00'	434.00'	36	51
15	417.00'	432.00'	37	52
18	417.00'	432.00'	37	52
21	415.00'	430.00'	38	53
22	413.00'	428.00'	39	54
23	414.00'	429.00'	38	53
24	411.00'	426.00'	39	55
25	411.00'	426.00'	39	55
26	409.00'	424.00'	40	55
27	410.00'	425.00'	40	55
28	407.00'	428.00'	39	56
29	409.00'	426.00'	39	55

BLOCK 83
(PRESSURE ZONE 538', MAX. HEAD 537', MIN. HEAD 517')

LOT NO.	LOWEST FIXTURE ELEV. (FT.)	HIGHEST FIXTURE ELEV. (FT.)	ESTIMATED MIN. STATIC PRESSURE (PSI.)	ESTIMATED MAX. STATIC PRESSURE (PSI.)
48	421.00'	436.00'	35	50
49	421.00'	436.00'	35	50
50	419.00'	434.00'	36	51
51	419.00'	434.00'	36	51
52	418.00'	433.00'	36	52
53	418.00'	433.00'	36	52
54	418.00'	433.00'	36	52
55	417.00'	432.00'	37	52
56	414.00'	429.00'	38	53
57	414.00'	429.00'	38	53



15445 53RD AVE. S.
SEATTLE, WA 98188
PHONE: (206) 431-7970
FAX: (206) 388-1648
WEB SITE: PACENG.COM

Pacific Engineering Design, LLC
Civil Engineering and Planning Consultants

LAKEHAVEN UTILITY DISTRICT PROJECT No. 6904025
PEPPER HILL ESTATES
KING COUNTY, WA.

FOR: HIGHLAND PACIFIC HOUSING GROUP I, LLC
1420 5TH AVE SUITE 2200
SEATTLE, WA 98101-5346
PHONE: (206) 521-5979 | FAX: (206) 254-2880

PROJECT NO.: 05052
DRAWN BY: JGC
ISSUE DATE: 07-31-07
SHEET REV.: 03-26-2012

WATER MAIN
S. 356TH ST/
56TH AVE. S.
STA. 21+50.00 TO
STA. 29+94.59
PLAN AND PROFILE

05052WA04-WA04.DWG
WA04