

KING COUNTY FIRE MARSHAL SERVICES FIRE PERMIT CONDITIONS FOR INSPECTION

KING COUNTY FIRE MARSHAL SERVICES REVIEW LETTER

PERMIT NUMBER: Fiel 17-0335

ATTENTION FIRE PROTECTION CONTRACTOR

YOU MUST READ ALL CONDITIONS IN THIS APPROVED PERMIT PACKAGE AND ON THE APPROVED DRAWING.

AFTER REVIEWING THESE CORRECTIONS AND BEFORE ANY INSPECTIONS ARE REQUESTED YOU MUST SIGN AND PRINT YOUR NAME TO VERIFY THAT THE CONDITIONS HAVE BEEN READ

INSPECTION'S WILL NOT BE SCHEDULED WITHOUT THIS FORM BEING RETURNED TO THE DEPUTY FIRE MARSHAL

Name	Print
Date:	

SCAN AND EMAIL THIS FORM BACK TO:

DEPUTY FIRE MARSHAL RIAN CUTHBERT AT rian.cuthbert@kingcounty.gov

☐ DEPUTY FIRE MARSHAL TED ERB AT ted.erb@kingcounty.gov



Department of Permitting and Environmental Review

35030 SE Douglas St., Ste. 210 Snoqualmie, WA 98065-9266 206-296-6600 TTY Relay: 711

Applicant: KING COUNTY HOUSING AUTHORITY 600 ANDOVER PARK WEST SEATTLE, WA 98188

Application Number: FIRP17-0335 Application Date: 08/08/2017

The Permit Conditions attached to this cover sheet apply to the permit referenced herein. These conditions must be complied with by the applicant and verified by DPER staff or this permit may become null and void.

Site Address/Location: 235 SW 97TH PL 98106

Parcel Number: 2895801080

Permit Type: Fire/Fire Permit Systems/Hydrant/NA

Title: KC HOUSING AUTHORITY

Description: RESIDENTIAL DOMESTIC AND FIRE SERVICES.

Valuation: \$0.00

Reviewed By:

2015 General Plan Review: Ted Erb, , ted.erb@kingcounty.gov

2015 HYDR-Mains-UG FDC: Ted Erb, , ted.erb@kingcounty.gov



AAF-ALL-0022 v1.1

Printed On: 8/30/2017

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FIRE PERMIT - SYSTEMS & EVENTS

Permit Number: F1RP17-0335

Expiration Date: 11/27/2018

Date Issued: 11/27/2017

Permit Status: Permit Issued

Permit type, Subtype: Fire Permit Systems, Hydrant

Title: WIND ROSE SUBDIVISION FIRE SYSTEM PERMIT

Description: INSTALLATION OF WATERMAIN AND HYDRANT

FOR NEW PLAT (L03P0022, STRV15-0006)

List of Parcels: 0623049296, 2895801080

Site Address: 301 SW ROXBURY ST 98106

Valuation: \$0.00

Applicant Name: KING COUNTY HOUSING AUTHORITY Applicant Address: 600 ANDOVER PARK WEST SEATTLE.

WA 98188

Comments and Conditions

- 1. Work Subject to Approved Plans and Conditions. Work Authorized by this permit is subject to the approved plans and corrections shown thereon and the attached conditions of permit approval. Failure to comply with all conditions once construction is begun may necessitate an immediate work stoppage until such time as compliance with the stipulated conditions is attained.
- 2. Posting on the job site. This permit must be posted on the job site at all times in a visible and readily accessible location.
- 3. Permit Status & Inspections; Scheduling, Est. Arrival Times* & Results. (*Building only)

Online: aca.accela.com/kingcounty

Inspection eutoff: 3:00 pm for next day inspections. Fire Inspection and land use requests will be confirmed and scheduled by a return phone call. Additional inspection information including IVR/Web info: http://www.kingcounty.gov/property/permits/info/inspections.aspx. Written inspection results left at the job site will be phased out.

IVR: 1-888-546-7728 - Inspection Help: 206-296-6630

- **4. Expiration**. Please note the expiration date on this permit located in the upper right corner. Permits are valid for one year from date of issuance or date of extension. Work must be substantially commenced within two years of permit issuance. Extensions beyond the third year shall only be granted to allow completion of the structure.
- 5. Compliance with State and Federal laws and the Endangered Species Act. The applicant is responsible for making a diligent inquiry regarding the need for concurrent state or federal permits to engage in the Work requested under this permit, and to obtain the required permits prior to issuance of this permit. It is understood that the granting of this permit shall not be construed as satisfying the requirements of other applicable Federal, State or Local laws or regulations. In addition this permit does not authorize the violation of regulations. In addition, the granting of this permit does not authorize the violation such "take" restrictions would be violated by work done pursuant to this permit, and is precluded by Federal law from undertaking work authorized by this permit if that work would violate the "take" restrictions set forth at 16 U.S.C. 8, 50 C.F.R. §17.21, 50 C.F.R. §223 and 50 C.F.R. §224.

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Department of Permitting and Environmental Review

35030 SE Douglas St., Ste. 210 Snoqualmie, WA 98065-9266 206-296-6600 TTY Relay 711 Permit: FIRP17-0335

Date Issued:

11/27/2017

Expiration Dat 11/27/2018

Permit Status: Permit Issued

FIRE INSPECTION REPORT CARD

	action Fire Inspection 24-Hour Construction Fire Inspection Ge	1	8-546-7728 296-6630	
APPROVALS: (Followed by 3-digit inspection codes for use with the inspection Request Line)				
1. Placement - Tank (291)	2. Device Placement (259)	3. Nozzle/Head Placement (283)	4. Flow/Trip Test (273)	
By:	By:	By:	By:	
5. Device/Panel Test (261)	6. Flush Test (274)	7. Run Test (191)	8. Pressure Test (168)	
Ву:	By:	By:	Ву:	
9. 1nsulation Cover (280)	10. Rack/Pile Inspection (298)	11. Emergency Shut Off (067)	12. Underground (235)	
By:	By:	By:	Ву:	
13. Hydrant/Watermain (245)	14. Other (134)	15. Final Acceptance (077)		
Ву:	By:	By:		
Notes:				

ALL PERMITS:

- a) Responsibility for the building's compliance with the provisions of the applicable King County Codes and for maintenance of the building rests exclusively with the permit applicants and their agents and the property
- b) King County inspection of the building and real property are spot checks designed to foster and encourage compliance with the applicable codes. Neither the approvals above nor the issuance of a Certificate of Occupancy guarantees or assures compliance with all applicable codes.
- c) The Owner/Applicant's copy of any applicable manufacturer's installation instructions, the approved set of plans, and the permit shall be available at the time of inspection.

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Permit Conditions

Fire

2015 General Plan Review

1) AA02 PLAN REVIEW CONTACT

Questions requiring the FIRE REVIEW of these plans shall be directed to:

Ted Erb - Deputy Fire Marshal 206-263-1972 ted.erb@kingcounty.gov

2) AA04 REQUIRED INSPECTIONS

The following inspections are required:

168 - Hydrostatic Pressure Test.

273 - Flow/Trip Test.

274 - Flush Test

077 - Final Inspection

3) AA06 ADDITIONAL FEES

If additional inspections are required to obtain final approval of the FIRE PERMIT or the approved plans are not on site at the time of the inspection, a RE-INSPECTION FEE OF \$202.00 will be issued per inspection to the sprinkler contractor. Payment must be received by the D.P.E.R finance office before any additional inspections will be conducted.

The contractor is required to read and sign the review letter confirmation sheet. This confirmation sheet the contractor has read and reviewed the permit conditions which are attached to the approved plans.

4) AA08 SAFEGUARD AGAINST ADDITIONAL FEES AND INSPECTIONS

- I) Incorporate any site specific conditions noted on the approved set of plans and attached permit review letter/conditions sheet.
- 2) Pre-test the system prior to calling for inspection. The contractor must have all required testing paperwork completed and available for the Deputy Fire Marshal at the time of the required inspection.
- 3) Be sure that necessary power and water supplies are available at the time of the inspection to allow for the flow/trip test.

5) AB01 GENERAL FIRE CONDITIONS

CONDITION SHEETS: The listing of permit conditions applied to this permit is requirements for construction installation.

FIELD CHANGES TO APPROVED PLANS: After plans are issued and approved, only minor changes, modifications or field revisions may be made to these plans. The field inspector has the latitude of allowing changes.

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IN SPECTION REQUEST: Requests for inspection can be made 24 hours a day, 7 days per week by either of the two following options.

- 1. Online: Go to https://aca.accela.com/kingcounty/ for online scheduling of building and fire inspections for new construction. Be sure to have your permit number on hand.
- 2. By phone at 1-888-5-INSPCT (1-888-546-7728): Call this automated 24-hour inspection request line to schedule or cancel building inspections, fire inspections or preconstruction conferences. Fire inspection staff will then contact you to schedule a specific time to conduct the inspection. Please allow at least 2 to 4 days in advance.

6) AB02 CONDITIONAL APPROVAL OF PLANS

The approval of these plans and issuance of a permit is based on a review of the documents submitted by the applicant and those documents being representative of actual configuration, use, anticipated construction/existing construction and/or installation of equipment and/or devices. Errors or omissions in submitted documents do not constitute approval of any condition relating to those errors or omissions. Approval of plans does not condone or authorize any violation of any King County code/ordinance regulation.

7) AB03 COPYING OF APPROVED PLANS

If approved plans are copied for use as Job Site copies, such plans are not acceptable without all condition sheets (plan review requirements) being attached to the copied plans. Attached requirements (condition sheets) are part of the approved set of plans.

8) XF400.1 FIRE LANE MARKINGS

See fire lane makings locations on plans.

Signs to be spaced 150 feet or portion thereof apart and posted on or immediately next to the curb. Signs shall be placed at a maximum center-to center spacing of 150 feet on both sides of the fire lane or put an additional sign beneath the fire lane sign lettered as "both sides." Signs must be a type "R 8-31" or equivalent reflective sign no less than 12" x 18" in size, with a white background and the wording NO PARKING FIRE LANE in red letters. The number and spacing of sign maybe modified by the King County Fire Marshal as needed.

Signs posted at a minimum height of 7' measured from the street or sidewalk to the top of the sign

2015 HYDR-Mains-UG FDC

9) FH 500 WHERE REQUIRED

Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an approved route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the fire code official.

Ref: IFC 507.5.1, 2015 Ed.

10) FH502 FIRE HYDRANT STANDARDS AND DESIGN

- A. Fire hydrants shall have a minimum six (6) inch barrel, shall have a minimum of two 2 1/2 inch outlets and one 4 inch minimum inside diameter pumper port.
- B. All hydrant connections shall have threads compatible with those used by the local fire department.

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- C. Fire hydrants shall be self-draining and frost-free.
- D. Fire hydrants shall meet American Water works Association standards and any additional specifications required by the local water purveyor.
- E. Fire hydrants shall be provided with an auxiliary gate valve, installed to permit the repair and/or replacement of the fire hydrant without disruption of water service.
- F. Flush-type hydrants are prohibited, except upon specific approval of the Fire Marshal.
- G. All hydrants shall be subject to testing by the local fire department and the Fire Marshal. The water purveyor shall be notified prior to any such testing. Testing shall be done in cooperation with such purveyors. Fire hydrants shall meet American Water works Association standards and any additional specifications required by the local water purveyor.

Ref. K.C.C. Title 17, 17.08.020

11) FH504 FIRE HYDRANT INSTALLATION

Where fire apparatus access roads or water supplies for fire protection are required to be installed, such protection shall be installed and made serviceable prior to and during the time of construction except when approved alternative methods of protection are provided. Temporary street signs shall be installed at each street intersection where construction of new roadways allows passage by vehicles in accordance with Section 505.2.

Ref: IFC 501.4, 2015 Ed.

12) FH506 INSTALLATION CRITERIA

- A. Fire hydrants and water mains shall be installed to meet sound engineering practices as specified by the Fire Marshal based on applicable circumstances. The Fire Marshal shall make applications and plans available for comment by the local fire department. Fire hydrants shall be accessible to fire department pumpers over roads capable of supporting such vehicles.
- B. Fire hydrants shall stand plumb and be set to the finished grade. The bottom of the lowest outlet of the fire hydrants shall be not less than eighteen (18) inches above finished grade. There shall be thirty-six (36) inches of clear area around the hydrant to allow for operation of a hydrant wrench on the outlets and on the control valve.
- C. The pumper port shall face the street. Where the street cannot be clearly defined or recognized, the port shall face the most likely route of approach and location of the fire apparatus while pumping, as determined by the Fire Marshal.
- D. Fire hydrants shall be located a minimum of fifty (50) feet from buildings, from the buildings to be protected except upon specific approval of the Fire Marshal.
- E. All hydrants shall be located between 18 and 120 inches from the edge of the roadway surface, unless specifically approved otherwise by the Fire Marshal. Hydrants located in areas subject to commercial or industrial motor traffic shall be protected against vehicular damage by curbs, space se paration, grade-level changes, guard ports or other means approved by the Fire Marshal.
- F. Hydrants shall not be obstructed by any structure or vegetation nor shall the visibility of the hydrant be impaired for a distance of fifty (50) feet in the direction of vehicular approach to the fire hydrant.
- G. Fire hydrants shall, when possible, be located at street intersections.
- H. The location and design of all water mains, fire hydrants, and valves to be installed shall be properly and accurately marked on identifiable plans or drawings, two copies of which shall be attached to the building plans for Fire Marshal approval.

Ref: K.C.C Title 17, 17.08.030

13) FH508 FIRE HYDRANTS

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Coordinate the installation of: FIRE HYDRANTS with the local water district. Verify requirements for backflow protection, types of material, depth of bury, etc., with local water district. Any revisions made to these approved plans to satisfy local water district requirements shall be submitted to the King County Fire Marshal's Office, Fire Engineering Unit for review and approval. INSPECTION OF SYSTEM IS REOUIRED.

Ref. K.C.C. Title 17, 17.08.020

14) FH510 Number of Fire Hydrants

- A. All buildings having a gross ground floor area of twenty thousand (20,000) square feet or more, or requiring a fire flow of three thousand (3,000) gallons per minute or more, shall have fire hydrants located on all sides, spaced three hundred (300) feet on center, unless otherwise approved by the Fire Marshal.
- B. All buildings which have a gross ground floor area of less than twenty thousand (20,000) square feet and a fire flow of less than three thousand (3,000) gallons per minute may have fire hydrants located on one side only.
- C. All fire hydrants required pursuant to this section shall be located within one hundred and fifty (150) feet of the building, unless otherwise approved by the Fire Marshal.
- D. All buildings having automatic sprinklers and/or standpipe system(s) shall have one fire hydrant located within one hundred and fifty (150) feet of each fire department pumper connection or group of fire department pumper connections.
- E. If the required fire flow for a structure or use exceeds 1250 gallons per minute; the minimum number of fire hydrants shall be not less than the required flow divided by one thousand two hundred fifty (1250), rounded off to the nearest whole number. In no case shall the fire flow be reduced below that required by these rules and regulations as a result of this computation.

Ref: K.C.C. Title 17, 17-08.040

15) FH512 FIRE HYDRANT SPACING

Fire hydrants shall be located as noted on the approved site plan.

- A. Residential
- 1. 700 feet maximum spacing.
- 2. Not more than 350 feet from each lot.
- B. Commercial
- 1. 300 feet maximum spacing.
- 2. Located no closer than 50 feet to the building, and not further than 150 feet from the building.
- 3. Buildings in excess of 20,000 square feet (gross ground floor) or requiring a fire flow of 3,000 gallons or more shall have fire hydrants located on all sides.

Ref. K.C.C. Title 17, 17.08.040

16) FH514 MINIMUM NUBER OF HYDRANTS AND SPCING FOR A BUILDING

The number of fire hydrants available to a building shall be not less than the minimum specified in Table C102.1.

Specify number and spacing here based on fire flow.

1FC Appendix "C" Table C102.1, 2015 Ed.

17) FH516 FLUSH TYPE FIRE HYDRANTS

Flush-type hydrants are prohibited, except upon specific approval of the Fire Protection Engineering Unit.

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Ref. K.C.C. Title 17, 17.08.020(F)

18) FH518 FIRE HYDRANT TESTING

All hydrants shall be subject to testing by the King County Fire Inspector.

The fire code official shall be notified prior to the water supply test. Water supply tests shall be witnessed by the fire code official or approved documentation of the test shall be provided to the fire code official prior to final approval of the

Ref: IFC 507.5.1, 2015 Ed.

19) FH520 FIRE HYDRANT CONNECTION THREADS

All hydrant connections shall have threads compatible with those used by the local fire department.

20) FH522 FIRE HYDRANT PROXIMITY TO ROAD

All hydrants shall be located between 18 and 120 inches from the edge of the roadway surface, unless specifically approved otherwise by the Fire Protection Engineer. Where fire hydrants are subject to impact by a motor vehicle, guard posts or other approved means shall comply with Section 312.

Ref: K.C.C. Title 17; 1FC 507.5.6, 2015 Ed.

21) FH524 FIRE HYDRANT OBSTRUCTIONS

Unobstructed access to fire hydrants shall be maintained at all times. The fire department shall not be deterred or hindered from gaining immediate access to fire protection equipment or fire hydrants. Ref: IFC 507.5.4, 2015 Ed.

22) FH526 BLUE REFLECTIVE HYDRANT MARKERS

In accordance with International Fire Code Section 509.1 install blue-colored reflective hydrant markers on the finished street surface. Markers shall be located on the hydrant side of the centerline of the street and in direct line with the hydrant. Where hydrants are installed and operational prior to the final hard surfacing of the street, marker installation may be deferred until final surfacing is done. If marker installation is not completed at the time of final inspection of this permit, the fire inspector shall obtain written confirmation from the permit applicant agreeing to install required markers following final street surfacing.

Ref: 1FC 509, 2015 Ed.

23) FH528 FIRE HYDRANT HEIGHT/CLEARANCE

Fire hydrants shall stand plumb and be set to the finished grade. The bottom of the lowest outlet of the fire hydrants shall be not less than eighteen (18) inches above finished grade. There shall be thirty-six (36) inches of clear area around the hydrant to allow for operation of a hydrant wrench on the outlets and on the control valve.

Ref: K.C.C. Title 17, 1FC 507.5.5 2015 Ed.

24) FH536 HYDROSTATIC TEST OF PIPING

All piping and attached appurtenances subjected to system working pressure shall be hydrostatically tested at 200 psi (13.8 bar) or 50 psi (3.5 bar) in excess of the system working pressure, whichever is greater, and shall maintain that pressure at ± 5 psi (0.35 bar) for 2 hours.

Ref: NFPA 13, 24, 10.10.2.2 2013 Ed.

The installation or modification of any underground water main, public or private, supplying a water-based fire protection system shall be in accordance with NFPA 24 and chapter 18.130 RCW.

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Piping and appurtenances downstream of the first control valve on the lateral or fire service line from the distribution main to one-foot above the finished floor shall be approved by the fire code official. Such underground piping shall be installed by a fire sprinkler system contractor licensed in accordance with chapter 18.160 RCW and holding either a level U or a Level 3 license. For underground piping supplying systems installed in accordance with section 903.3.1.2, a level 2, 3 or U licensed contractor is acceptable.

25) FH538 FLUSHING OF UNDERGROUND MAINS AND LEAD-IN CONNECTIONS

Underground piping, from the water supply to the system riser, and lead-in connection to the system riser shall be completely flushed before connection is made to downstream fire protection system piping.

The flushing operation shall be continued for a sufficient time to ensure thorough cleaning.

The minimum rate of flow shall be not less than one of the following:

- (1) Hydraulically calculated water demand rate of the system, including any hose requirements
- (2) Flow in accordance with Table 10.10.2.1.3
- (3) Maximum flow rate available to the system under fire conditions Ref: NFPA 13, 24, 10.10.2.1.1 2013 Ed.

26) FH540 TEST CERTIFICATION

Ref: IFC 903.3.5.3, 2015 Ed.

Within 10 days after final inspection of the installation, provide the following to King County Fire Marshal's Office, Fire Inspection Unit for FDC lines, private fire hydrants and sprinkler system lead in:

Contractor's material and test certificate; and/or all inspection, testing and maintenance criteria form[s] for water based fire protection systems as required in conformance to the requirements of NFPA 25; 2014 Ed. NFPA 13, 2013 Ed, NFPA 24, 2013

All required forms shall be provided by the installing contractor and/or testing or maintenance contractor.

Ref: IFC 901.5, 2015 ed. and NFPA 13, 2013 Ed.

For public fire hydrants or water supply and fire hydrants on private property:

The fire code official shall be notified prior to the water supply test. Water supply tests shall be witnessed by the fire code official or approved documentation of the test shall be provided to the fire code official prior to final approval of the water supply system.

Ref: 1FC 507.5.1, 2015

27) UG546 DEPTH OF COVER

The depth of cover over water pipes shall be determined by the maximum depth of frost penetration in the locality where the pipe is laid.

The top of the pipe shall be buried not less than 1 ft. (0.3 m) below the frost line for the locality. Re f: NFPA 13, 24, 10.4.1 2013 Ed.

28) UG548 PIPE UNDER DRIVEWAY/ROADWAYS

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Pipe under driveways shall be buried a minimum of 3 ft. Ref: NFPA 13, 24, 10.4.4 2013 Ed.

29) UG550 PROTECTION AGAINST DAMAGE

Pipe shall not run under buildings, where pipe must run under buildings, special precautions shall be taken, including the following:

- (1) Arching the foundation walls over the pipe
- (2) Running pipe in covered trenches
- (3) Providing valves to isolate sections of pipe under buildings

Ref: NFPA 13, 24, 10.6.2 2013 Ed.

30) UG554 PIPE JOINTS

Pipe joints shall not be located under foundation footings.

Ref: NFPA 13, 24, 10.6.4 2013 Ed.

31) UG556 RESTRAINTS

All tees, plugs, caps, bends, reducers, valves, and hydrant branches shall be restrained against movement by using thrust blocks in accordance with 10.8.2 or restrained joint systems in accordance with 10.8.3.

Ref: NFPA 13, 24, 10.8.1.1 2013 Ed.

32) UG558 THRUST BLOCKING

Thrust blocks shall be placed between undisturbed earth and the fitting to be restrained and shall be capable of resisting the calculated thrust forces

Ref: NFPA 13, 24, 10.8.2.3 2013 Ed.

33) UG560 CORROSION RESISTANCE

After installation, pipe, rods, nuts, bolts, washers, clamps, and other restraining devices shall be cleaned and thoroughly coated with a bituminous or other acceptable corrosion-retarding material. Ref: NFPA 13, 24, 10.8.3.5 2013 Ed.

34) UG562 BACKFILLING

Backfill shall be tamped in layers or puddled under and around pipes to prevent settlement or lateral movement and shall contain no ashes, cinders, refuse, organic matter, or other corrosive materials.

Rocks shall not be placed in trenches.

Frozen earth shall not be used for backfilling.

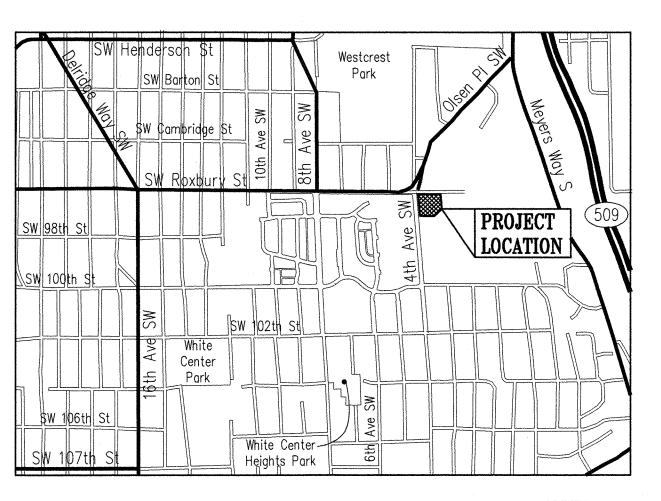
WIND ROSE FIRE PERMIT APPLICATION

SEC. 6, T.23 N., R.4E., W.M.

King County, Washington

JULY 2017

PERMIT SUBMITTAL



VICINITY MAP

N.T.S.

DRAWING INDEX	
SHEET	DRAWING TITLE
CVR	COVER SHEET
EX	FIRE HYDRANT COVERAGE EXHIBIT
1	SPU COVER SHEET
2	SW 97TH PLACE WATER PLAN & PROFILE
3	SW 97TH PLACE WATER PLAN & PROFILE
4	WATER PLAN & PROFILE
5	SW ROXBURY ST WATER PLAN & PROFILE
6	WATER DETAILS

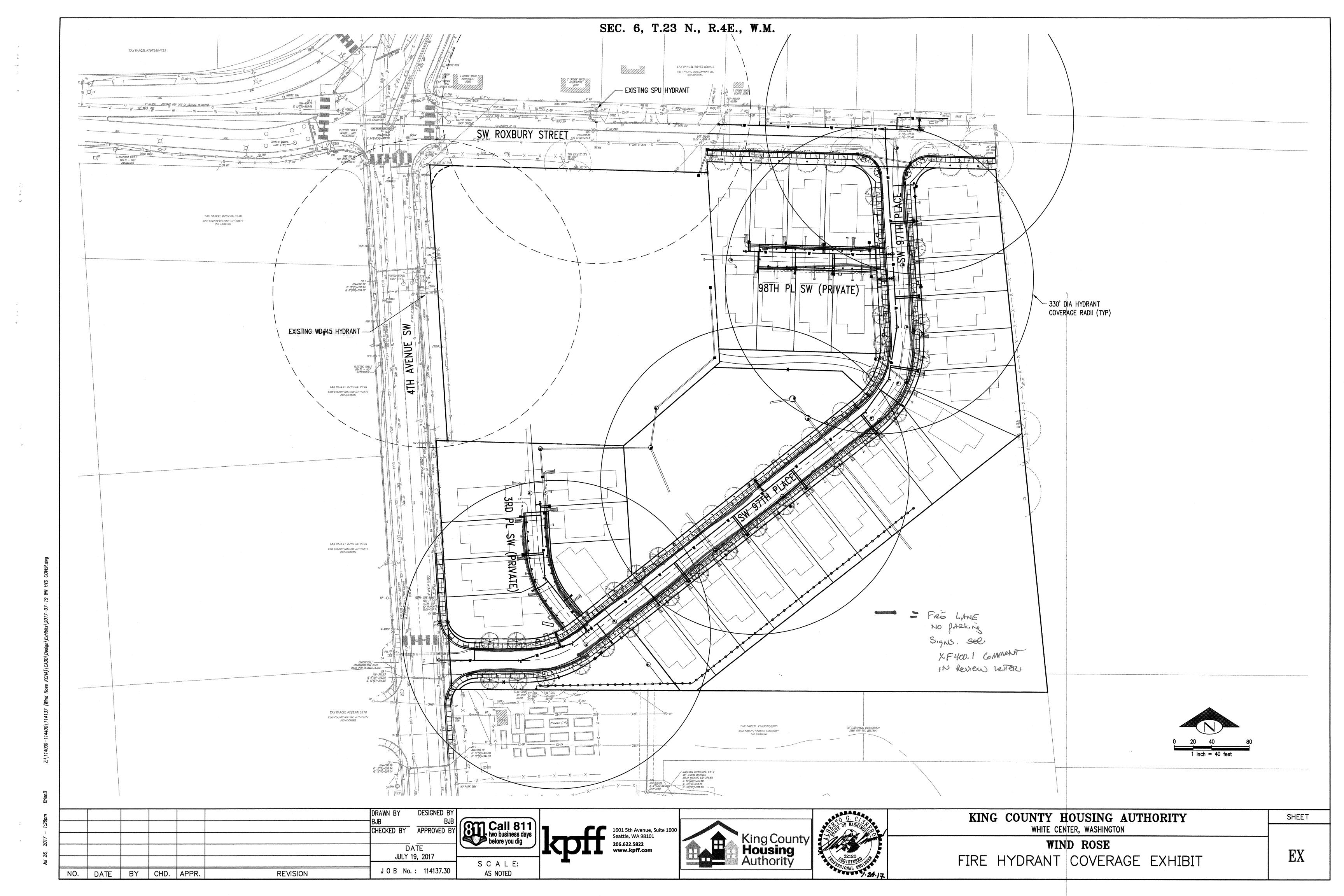


SITE COPY

PROJECT DEVELOPER

KING COUNTY HOUSING AUTHORITY
600 ANDOVER PARK WEST
SEATTLE, WA. 98188-3326
TELEPHONE: (206) 574-1196
CONTACT PERSON: JOHN ELIASON





GENERAL NOTES

- A COPY OF THE APPROVED PLAN SHALL BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT OF WAY.
- PRIOR TO ANY CONSTRUCTION ACTIVITY, THE CONTRACTOR SHALL SCHEDULE AND ATTEND A PRE-CONSTRUCTION CONFERENCE WITH THE CITY OF SEATTLE. THE CONTRACTOR SHALL NOTIFY THE OWNER'S PROFESSIONAL ENGINEERING CONSULTANT OF THE PRECONSTRUCTION MEETING TIME AND LOCATION.
- VERTICAL DATUM: NAVD 88

BENCHMARK "B": SOUTHERLY TOP FLANGE BOLT BETWEEN THE LETTERS "E" AND "L" IN THE WORD MULLER ON FIRE HYDRANT AT SOUTHWEST CORNER OF 8TH AVENUE SW AND SW 102ND STREET. ELEVATION = 407.61 FEET.

BENCHMARK "C": CHISELED SQUARE AT INTERSECTION OF BACK OF CONCRETE WALKS AND BACK OF CURBS AT THE NORTHEAST CORNER OF 4TH AVENUE SW AND SW 102ND STREET. ELEVATION = 423.37 FEET.

SITE BM #1: FOUND LEAD AND TACK WITH TAG AT THE SOUTHWEST FILLET OF THE INTERSECTION OF 4TH AVENUE SW AND SW ROXBURY STREET. THE BM IS 2.2 FEET SOUTHWEST OF THE TOP BACK OF CURB AND 4.0 FEET NORTHEAST OF 4 FOOT HIGH FENCE POST. ELEVATION = 400.91 FEET.

SITE BM #2: FOUND PK WITH TAG STAMPED "PACE CONTROL" AT SOUTH EDGE OF PAVEMENT OF SW RÖXBURY STREET AND 31 FEET± S 22° W OF UTILITY POLE NO. 206. ELEVATION = 376.14 FEET.

SITE BM #3: FOUND REBAR AND CAP LS #6090 AT THE ANGLE POINT OF THE SOUTH PROPERTY LINE. ELEVATION = 381.19 FEET.

SITE BM #4: SET REBAR AND CAP 105.1 FEET NORTH AND 32.7 FEET EAST OF THE SOUTHWEST PROPERTY CORNER. ELEVATION = 394.83 FEET.

SITE BM #5: FOUND 1 1/2" ALUMINUM CAP AND PUNCH ON CENTERLINE OF 4TH AVENUE SW AT APPRÖXIMATE INTERSÉCTION WITH SW 97TH PLACE (VACATED ROAD TO EAST). ELEVATION = 397.71 FEET.

- THE CONTRACTOR SHALL NOTIFY THE HIGHLINE FIRE DEPARTMENT DISPATCHER (206) 243-0330. TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL WATER SERVICE INTERRUPTIONS, HYDRANT SHUTOFFS, AND STREET CLOSURES OR OTHER ACCESS BLOCKAGE. THE CONTRACTOR SHALL ALSO NOTIFY THE DISPATCHER OF ALL NEW, RELOCATED, OR ELIMINATED HYDRANTS RESULTING FROM THIS WORK.
- ALL LOCATIONS OF EXISTING UTILITIES SHOWN HEREON HAVE BEEN ESTABLISHED BY FIELD SURVEY OR OBTAINED FROM AVAILABLE RECORDS AND SHOULD THEREFORE BE CONSIDERED APPROXIMATE ONLY AND NOT NECESSARILY COMPLETE. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INDEPENDENTLY VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN HEREON WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
- THE CONTRACTOR SHALL LOCATE AND PROTECT ALL CASTINGS AND UTILITIES DURING CONSTRUCTION AND SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURE LIDS, VALVE BOXES. AND UTILITY ACCESS STRUCTURES TO FINISH GRADE WITHIN AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS.
- UTILITY SERVICE CONNECTIONS ARE TO BE MAINTAINED PRIVATELY AND NOT BY THE CITY OF SEATTLE.
- COORDINATE SIGN AND METER HEAD REMOVAL AND INSTALLATION WITH SEATTLE TRANSPORTATION DIVISION (ROBERT BURNS) AT 684-5370. SIGN POSTS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD PLAN NO'S. 620, 622, 624, & 625.
- ALL WORK PERFORMED BY SEATTLE CITY LIGHT, SPU/WATER DEPARTMENT, AND OTHER PUBLIC/PRIVATE UTILITIES TO REMOVE OR RELOCATE EXISTING UTILITIES AT THE DEVELOPER'S EXPENSE. SHALL BE COORDINATED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL FIELD VERIFY THE HORIZONTAL AND VERTICAL POSITION OF ALL PROPOSED UTILITY POINTS OF CONNECTION, AND SHALL POTHOLE ALL CROSSINGS WITH EXISTING UTILITIES PRIOR TO THE START OF DEMOLITION AND INSTALLATION OF PROPOSED UTILITIES.

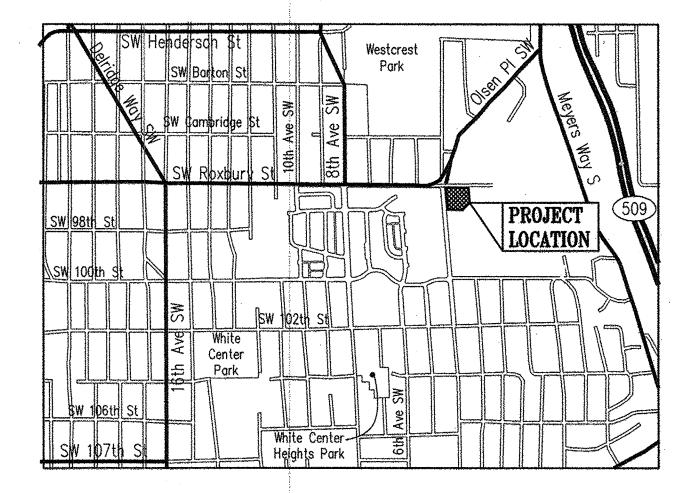
WATER SERVICE NOTES

- APPLICATION FOR A NEW METERED WATER SERVICE AND PAYMENT OF ALL FEES IS REQUIRED BEFORE SERVICE WILL BE AVAILABLE.
- APPLICANT WILL NEED A WATER AVAILABILITY CERTIFICATE (WAC) AND LEGAL DESCRIPTION OF PROPERTY WHEN SUBMITTING THE APPLICATION. TO OBTAIN A WAC, PLEASE CONTACT THE DEVELOPMENT SERVICES OFFICE AT (206) 684-3333 OR SPUWATERAVAILABILITY@SEATTLE.GOV.
- ALL WATER SERVICES SHALL BE LOCATED IN THE PUBLIC RIGHT OF WAY AND WITHIN THE FRONTAGE OF THE PARCEL BEING SERVED.
- 4. WATER SERVICES SERVING PARCELS WITHOUT FRONTAGE TO THE PUBLIC RIGHT OF WAY (SUCH AS UNIT LOT SUBDIVISIONS) OR LANDLOCKED PARCELS SHALL BE SERVED BY A PRIVATE WATER SERVICE EXTENDING FROM THE WATER METER TO THE PARCEL BEING SERVED. THE WATER SERVICE SHALL BE INSTALLED IN A DEDICATED EASEMENT. THE EASEMENT SHALL BE OBTAINED BY THE DEVELOPER, RECORDED, AND A COPY SHALL BE PROVIDED TO SEATTLE PUBLIC UTILITIES (SPU) AT THE TIME OF APPLICATION SUBMITTAL.
- ALL WATER SERVICES PIPING ON PROPERTY MUST BE INSPECTED PRIOR TO BACKFILLING TRENCH. CONTACT (206) 684-5800 TO REQUEST AN INSPECTION.
- 6. CUSTOMERS ARE REQUIRED TO INSTALL AN APPROVED AIR GAP OR REDUCED-PRESSURE BACKFLOW ASSEMBLY (RPBA/RPDA) ON ALL WATER SERVICE CONNECTIONS POSING A HIGH HEALTH CROSS-CONNECTION HAZARD (PURSUANT TO WAC 246-290-490). BACKFLOW PREVENTION IS ALSO REQUIRED ON WATER SERVICE CONNECTIONS SUCH AS FIRE SERVICES, IRRIGATION SERVICES, BUILDINGS EXCEEDING THREE STORIES OR 30 FT. IN HEIGHT ABOVE THE METER (MEASURED TO THE HIGHEST WATER FIXTURE), AND MAY BE REQUIRED FOR OTHER WATER SERVICES. SPU AND KING COUNTY HEALTH DEPARTMENT (KCHD) ARE THE ADMINISTRATIVE AUTHORITIES ENGAGED IN A JOINT PROGRAM IDENTIFYING ACTUAL AND POTENTIAL CROSS-CONNECTIONS BETWEEN THE PUBLIC WATER SUPPLY AND POSSIBLE SOURCES OF CONTAMINATION. FOR ANSWERS TO SPECIFIC CROSS—CONNECTION CONTROL QUESTIONS OR TO REQUEST AN INSPECTION, PLEASE CALL (206) 684-3536.
- CONTRACTOR IS RESPONSIBLE FOR ADJUSTING ALL WATER METER BOXES TO GRADE.

GENERAL NOTES ON PLANS FOR 4" THROUGH 12" WATER MAINS

UNLESS OTHERWISE NOTED

- 1. ALL PIPE, APPURTENANCES AND WORK SHALL CONFORM TO THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS, 2011 OR LATEST EDITION, UNLESS OTHERWISE NOTED ON THE APPROVED PLANS.
- ALL MATERIALS FOR WATER DISTRIBUTION SHALL BE NEW. SPU WILL PROVIDE ANY REQUIRED HYDRANTS. PROJECT OWNER SHALL PROVIDE THE CONNECTING PIPE AND FITTINGS.
- 3. PIPE (W) 4" AND LARGER SHALL BE D. 1. P. CL, 52 CONFORMING TO AWWA C-151 WITH CEMENT MORTAR LINING CONFORMING TO AWWA C-104. JOINTS SHALL HAVE RESTRAINED JOINTS (RJ). REFER TO COS 9-30.2(6)A.
- UNLESS PROVIDED BY A PRE-APPROVED MANUFACTURER, PIPE (W) 4" AND LARGER SHALL BE SUBJECT TO SPU TASTE TESTING PROCEDURES PRIOR TO INSTALLATION.
- 5. ALL FITTINGS SHALL BE DUCTILE IRON CONFORMING TO AWWA C-110 AND C-111, OR AWWA C-153, AND SHALL BE CEMENT MORTAR LINED CONFORMING TO AWWA C-104.
- 6. ALL CONNECTIONS TO EXISTING WATER MAINS SHALL BE MADE IN CONFORMANCE WITH STANDARD PLAN #300.
- PRIOR TO LAYING PIPE THE CONTRACTOR SHALL:
- A. IN THE PRESENCE OF THE SPU RESIDENT ENGINEER, EXPOSE THE EXISTING WATER MAIN TO
- DETERMINE ITS ELEVATION AND ALIGNMENT. (SPU TO OBTAIN O.D. AT THE SAME TIME) PROVIDE ALL CONTROL SURVEYS REQUIRED TO DEFINE THE ALIGNMENT AND ELEVATIONS OF THE WATER MAIN IN CONFORMANCE WITH THE APPROVED PLAN. THE SURVEYS SHALL BE PERFORMED BY A SURVEYOR LICENSED BY THE STATE OF WASHINGTON. ALL REFERENCE MARKS SHALL BE PRESERVED DURING CONSTRUCTION. A GRADE SHEET, IN ACCEPTABLE FORMAT, SHALL BE PROVIDED PRIOR TO BEGINNING WORK.
- CONTRACTOR SHALL NOTIFY OWNERS (MINIMUM 48 HOURS IN ADVANCE) OF ALL AFFECTED UNDERGROUND UTILITIES FOR FIELD LOCATING THEIR FACILITIES. THE ONE CALL NOTIFICATION NUMBER IS 1-800-424-5555.
- CARE SHALL BE EXERCISED WHEN EXCAVATING NEAR EXISTING CHARGED WATER MAINS.
- LOCATIONS SHOWN FOR EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE. UTILITIES HAVING NO RECORDED DEPTH ARE SHOWN AT THEIR STANDARD DEPTH. UTILITIES THAT APPEAR CLOSE TO THE PROPOSED WATER MAIN SHALL BE EXPOSED BY THE CONTRACTOR PRIOR TO LAYING THE WATER MAIN TO DETERMINE IF CHANGES ARE NEEDED. WATER/SEWER SEPARATION SHALL BE PER STANDARD PLAN #286. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO INSTALL DUCTILE IRON PIPE IN PLACE OF ANY OTHER SANITARY SEWER PIPE MATERIAL WHERE SANITARY SEWERS ARE LOCATED ABOVE AND CLOSER THAN 10 FEET, OR CROSS OVER ANY WATER LINE. SEE SPECIAL PROVISIONS FOR MINIMUM CLEARANCES, SECTION I- I 07.17(2)B REGARDING CROSSING OF GAS
- ALL WATER MAINS SHALL BE PRESSURE TESTED (300 PSI) AND DISINFECTED IN ACCORDANCE WITH SECTION 7-11.3(12) OF THE STANDARD SPECIFICATIONS. ALL PRESSURE TESTING SHALL BE DONE IN THE PRESENCE OF THE CONSTRUCTION ENGINEER. THE CONTRACTOR IS TO PROVIDE PLUGS AND TEMPORARY BLOWOFF ASSEMBLIES FOR PRESSURE TESTING AND DISINFECTION. SEE STANDARD PLAN #300 FOR FLUSHING CONNECTION DETAILS.
- 12. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS OF THE PERMITS ISSUED FOR THIS
- 13. HORIZONTAL ANGLE POINTS & VERTICAL GRADE POINTS SHALL BE CONSTRUCTED BY DEFLECTING PIPE JOINTS, UNLESS OTHERWISE SPECIFIED.
- 14. CONCRETE WATER MAIN THRUST BLOCKING FOR HORIZONTAL FITTINGS SHALL BE PER STANDARD PLAN #331.1.
- HYDRANT INSTALLATION SHALL BE PER STANDARD PLAN #311.1A
- 16. RESTRAINT JOINT PIPE IS REQUIRED IN THOSE AREA WHERE THE TERRAIN IS GREATER THAN 15% OR THE SOIL IS SUBJECT TO LIQUEFACTION OR THE AREA IS DEFINED AS SENSITIVE OR WHERE SPACE IS CONFINED (NO ROOM FOR MECHANICAL JOINT OR CONCRETE BLOCKING) OR WHERE REQUIRED BY SPU.
- 17. HYDRANT CONNECTION SHALL BE 6" DIP CL 52 CONFORMING TO AWWA C-151 WITH CEMENT MORTAR LINING CONFORMING TO AWWA C-104.
- 18. VALVE BOX AND OPERATING NUT EXTENSIONS SHALL BE PER STANDARD PLAN # 315.1A.
- 19. PIPE SHALL BE WRAPPED WITH 8 ML POLYETHYLENE, CONFORMING TO AWWA C-105.
- 20. WATER MAIN TRENCH SHALL BE AS SHOWN ON STANDARD PLAN 350.21.
- 21. ALL FITTINGS SHALL BE RESTRAINED PER SECTION 9-30.2(6) OF CITY OF SEATTLE 2011 STANDARD SPECIFICATIONS OR LATEST EDITION.



VICINITY

N.T.S.

	DRAWING INDEX
SHEET	DRAWING TITLE
1	COVER SHEET
2	SW 97TH PLACE WATER PLAN & PROFILE
3	SW 97TH PLACE WATER PLAN & PROFILE
4	WATER PLAN & PROFILE
5	SW ROXBURY ST WATER PLAN & PROFILE
6	WATER DETAILS

LEGEND AND ABBREVIATIONS

$X \rightarrow X$	DETAIL REFERENCE NUMBER SHEET	R/SECTION	
B/C	BACK OF CURB	STD(S)	STANDARD(S)
B/W	BACK OF WALK	SPU	SEATTLE PUBLIC UTILITIES
CL	CENTERLINE	TB	THRUST BLOCK
CTR	CENTER	WL .	WATER LINE
EL	ELEVATION	VBOX	VALVE BOX
FL	FLANGE JOINT	W/	WITH
G	GAS	lacktriangle	SURVEY MONUMENT
GD	GREEN DRAINAGE	***	FIRE HYDRANT
GV	GATE VALVE	+	HORIZONTAL BED W/ BLOCKING
MJ	MECHANICAL JOINT	-1041-	GATE VALVE
EX, EXIST.	EXISTING	- 	TEE W/ BLOCKING
IE.	INVERT ELEVATION	+	ADAPTER
R	PROPERTY LINE		WATER METER
P.O.C.	POINT OF CONNECTION	LE	
R/W	RIGHT OF WAY		TEMPORARY CAP
RJ	RESTRAINED JOINT		BLOW OFF ASSEMBLY
RS	RESILIANT SEATED	E-+6	PROPOSED WATER SYSTEM
SCL	SEATTLE CITY LIGHT	EI-X	EXISTING WATER SYSTEM
SD	STORM DRAINAGE		STD REDUCER
SL	SLEEVE		PROJECT LIMITS



SERIAL NO. 36956

SHEET 1 OF 6

Seattle, WA 98101 206.622.5822





APPROVED FOR CONSTRUCTION BY SEATTLE PUBLIC UTILITIES

INITIALS AND DATE NAME OR INITIALS AND DATE REVIEWED: CHECKED AC 02-21-17 PROJ. MGR. DRAWN. TD/BB 02-21-17 RECEIVED CHECKED BB/AC 02-21-17 REVISED AS BUILT ALL WORK DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFI-CATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL

Seattle Public ORDINANCE NO.

SCALE: H.= 20' V.= 5'

City of Seattle Ray Hoffman, Director

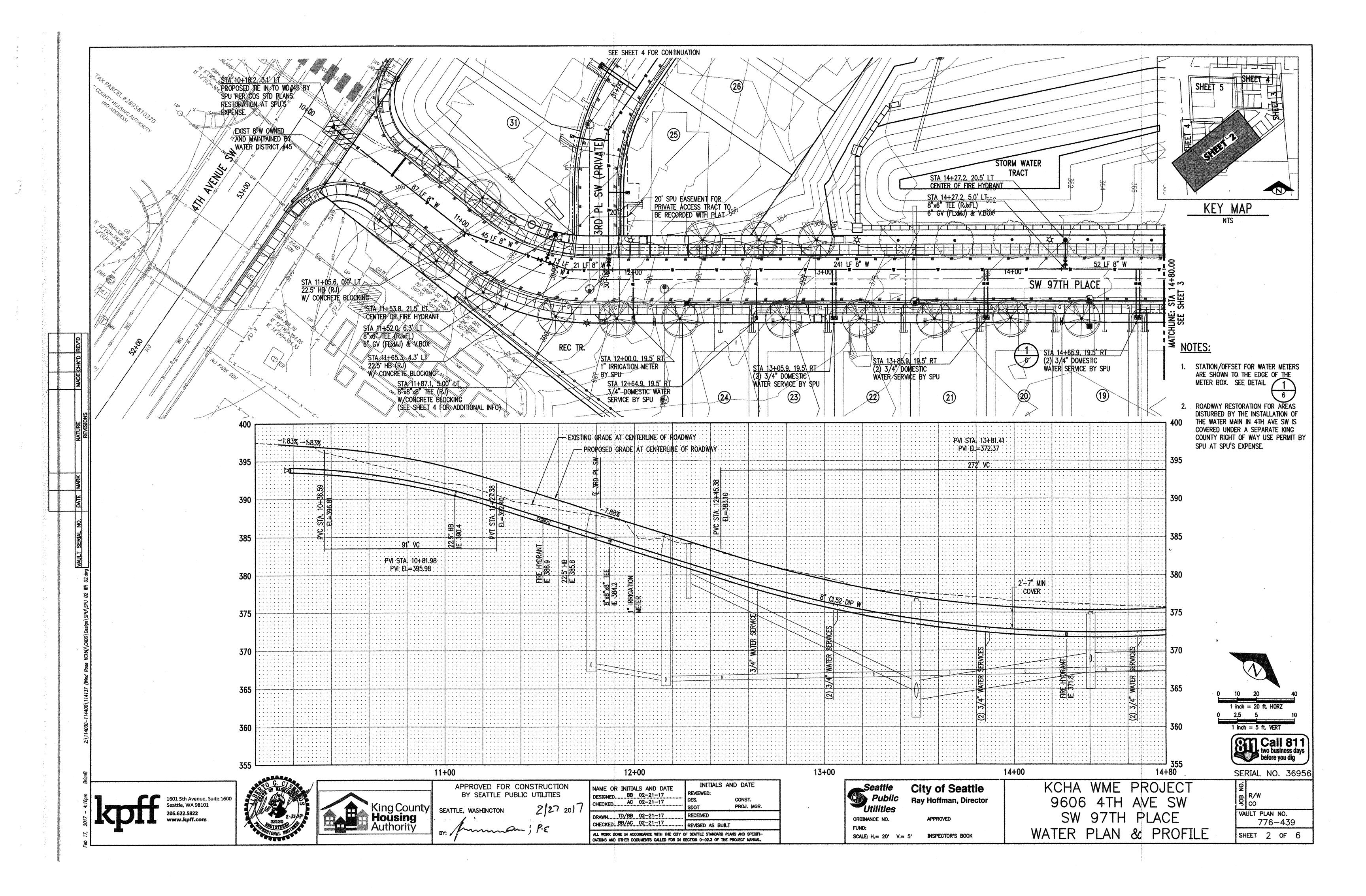
APPROVED

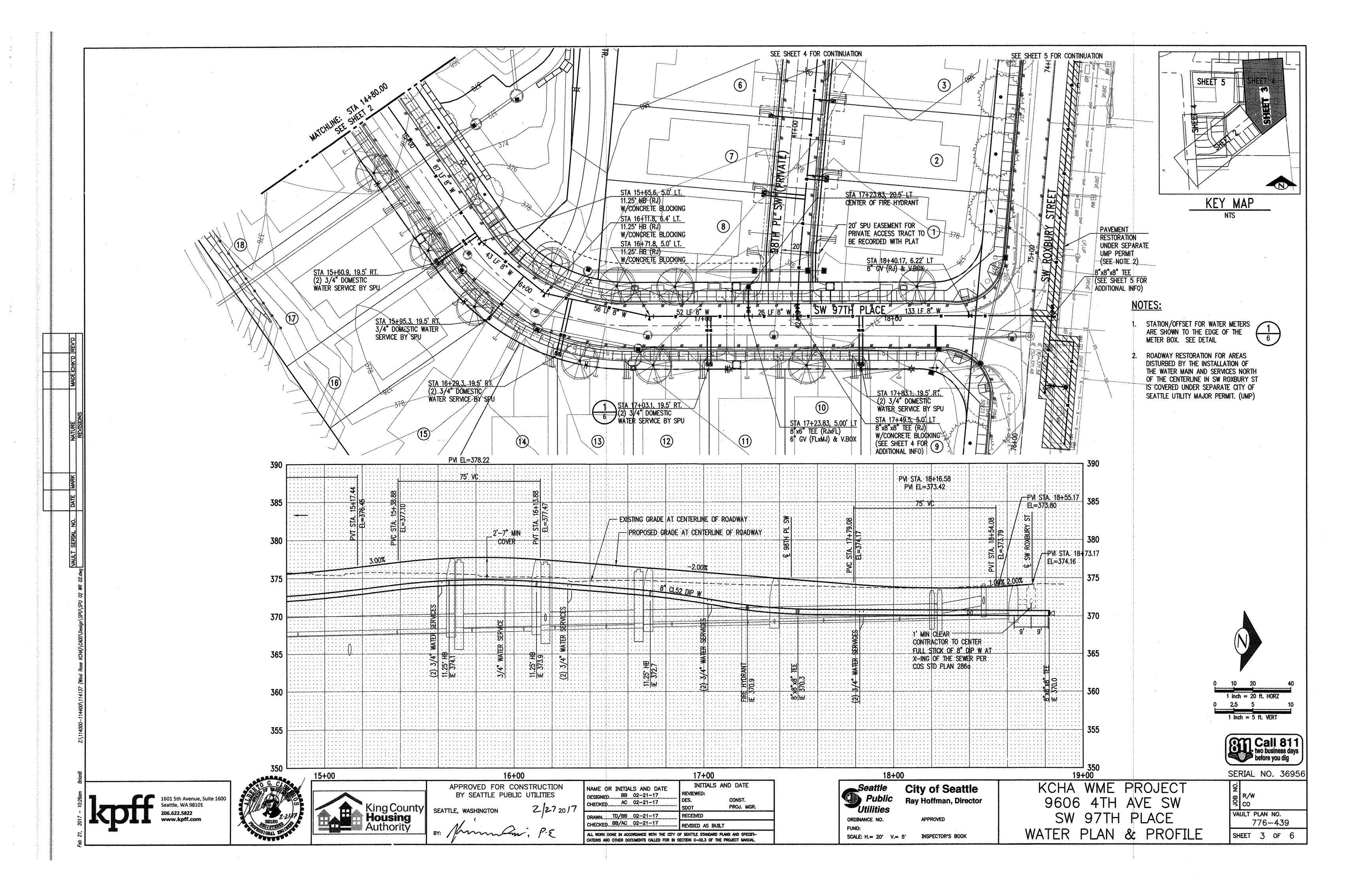
INSPECTOR'S BOOK

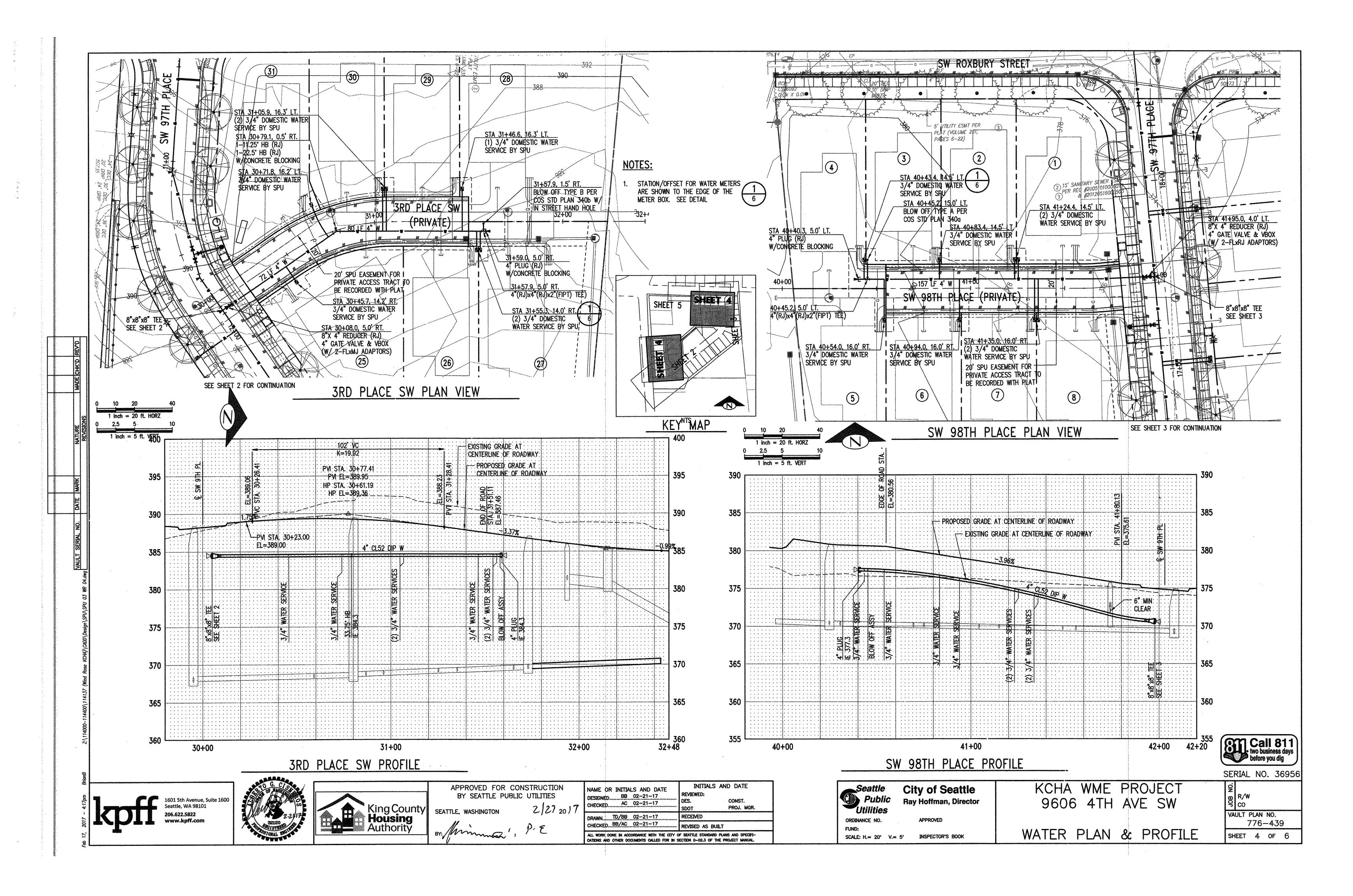
KCHA WME PROJECT 9606 4TH AVE SW

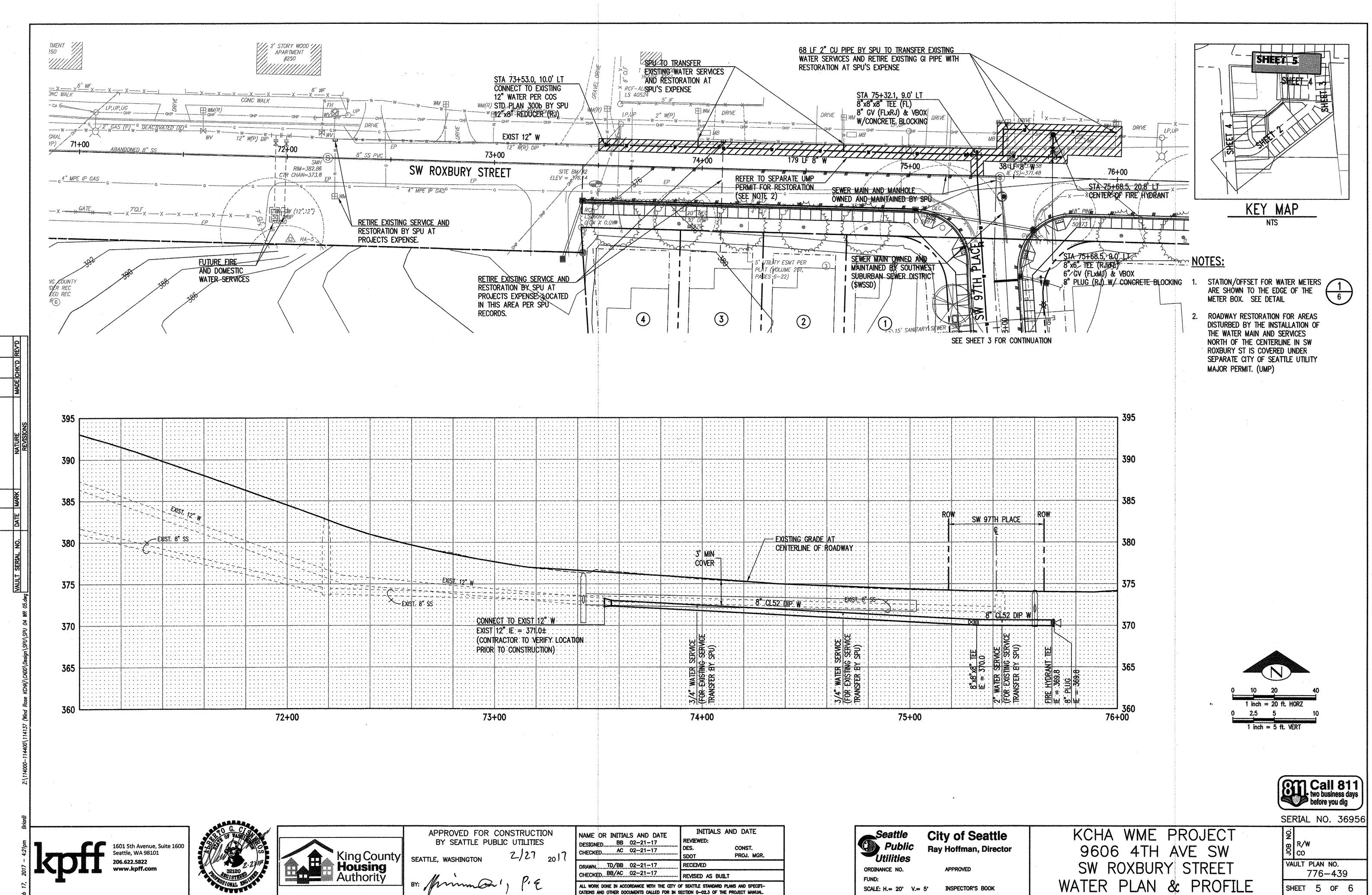
COVER SHEET

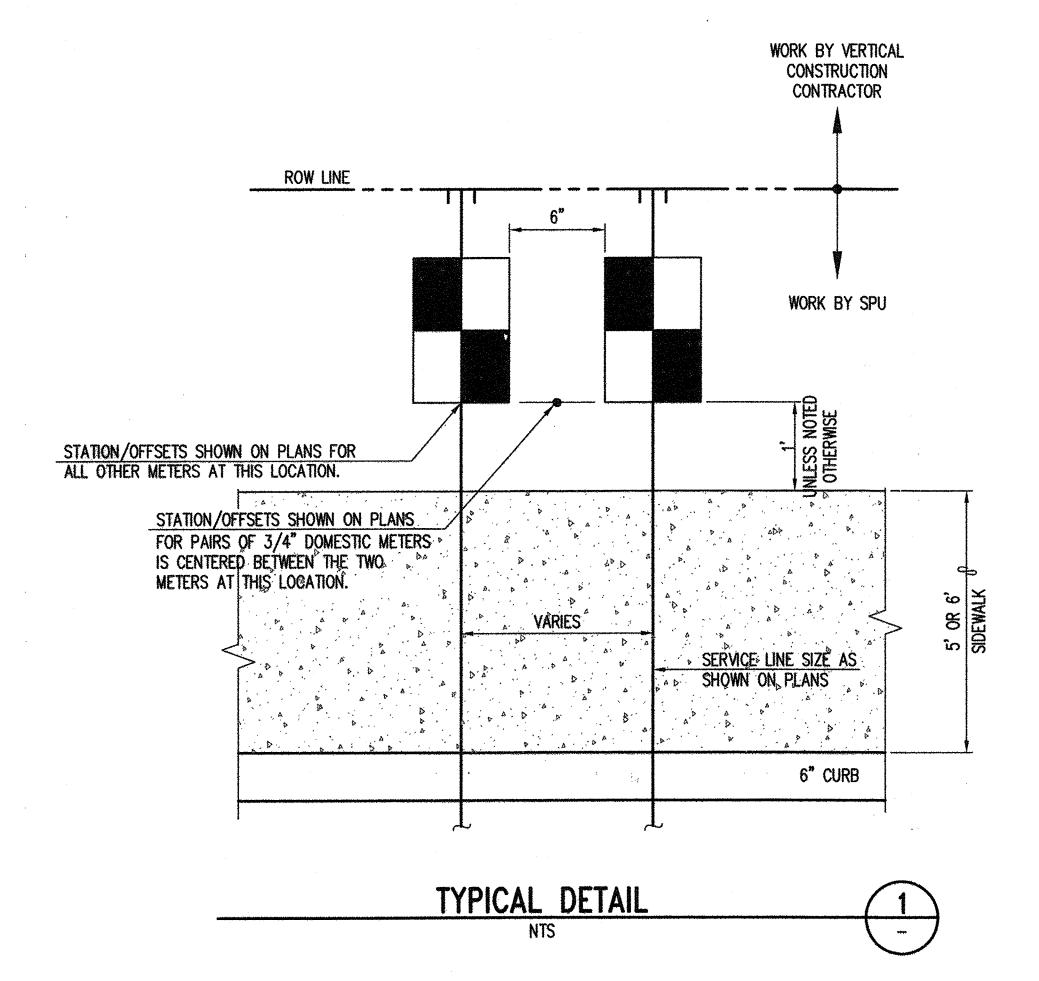
R/W VAULT PLAN NO. 776-439















APPROVED FOR CONSTRUCTION BY SEATTLE PUBLIC UTILITIES

NAME OR INITIALS AND DATE DESIGNED. BB 02-21-17 CHECKED. AC 02-21-17	INITIALS AND DATE REVIEWED: DES. CONST. SDOT PROJ. MGR.	
DRAWN TD/BB 02-21-17	RECEIVED	
CHECKED BB/AC 02-21-17	REVISED AS BUILT	
ALL WORK DONE IN ACCORDANCE WITH THE CITY CATIONS AND OTHER DOCUMENTS CALLED FOR IN		

ORDINANCE NO.

SCALE: AS NOTED

City of Seattle Ray Hoffman, Director

KCHA WME PROJECT 9606 4TH AVE SW WATER DETAILS

SHEET 6 OF 6

INSPECTOR'S BOOK

SERIAL NO. 36956 R/W CO VAULT PLAN NO. 776-439