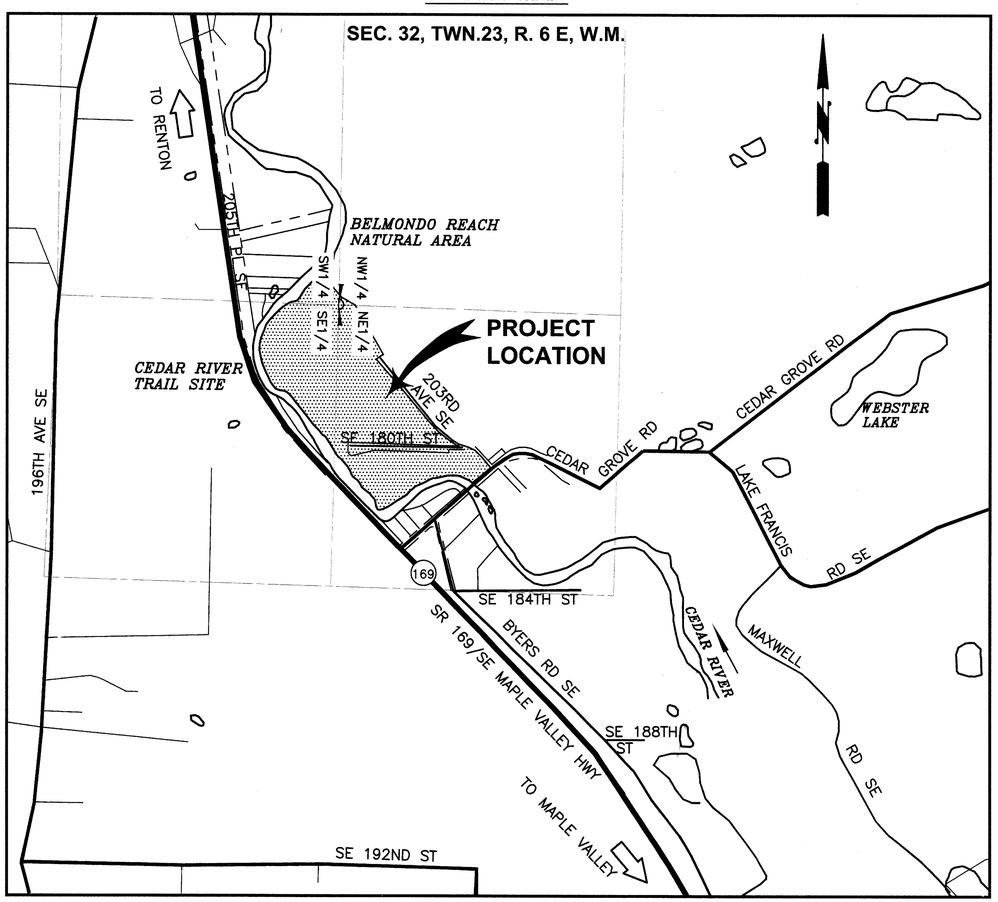
VICINITY MAP



NOT TO SCALE

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit

Christie True, Director
Department of Natural Resources and Parks

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

AT INTERSECTION OF CEDAR GROVE RD. AND 203RD AVE SE BETWEEN RM. 10.7 AND 11.5 ON THE CEDAR RIVER

MERIDIAN
W.S.L.G.N.Z.
NAD 83/91

DATUM

NAVD 88

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

VICINITY MAP

MARK	DATE	NATURE REVISIONS	MADE	CHK'D	REV'D

VAULT SERIAL NO.

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT1 COV.dwg
lucyt Mar-28-13 10:03am

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		DES.	CONST.
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ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.

WILLIS R. MANSFIELD
STATE OF WASHINGTON
48388
REGISTERED
PROFESSIONAL ENGINEER
4-4-13

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director

ORDINANCE NO.
FUND:
SCALE: N/A
APPROVED
INSPECTOR'S BOOK

RAINBOW BEND
LEVEE REMOVAL AND
FLOODPLAIN RECONNECTION

JOB NO. PC 1044405
R/W
CO

VAULT PLAN NO. 777-747

1 OF 22

DRAWING INDEX

GENERAL (G)

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4	DESIGN SITE PLAN
5	LEVEE REMOVAL PLAN AND PROFILE
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7	CUTOFF CHANNEL – GRADING PLAN AND PROFILE STA. 0+00 TO STA. 9+39
8	203RD AVE. ROAD FILL PLAN AND PROFILE STA. 0+00 TO STA. 10+50
9	BACKWATER GRADING PLAN
10	CROSS SECTIONS AND DETAILS
11	CROSS SECTIONS AND DETAILS
12	DEMOLITION PLAN – PAVING AND UTILITIES REMOVAL

LARGE WOODY DEBRIS (LWD)

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CONSTRUCTION STORMWATER AND EROSION CONTROL (CSEC)

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LANDSCAPE PLAN (L)

18	PLANTING PLAN
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20	PLANT COMMUNITY LAYOUT DETAILS
21	PLANTING SCHEDULE

STAKING (S)

22	STAKING PLAN

LEGEND

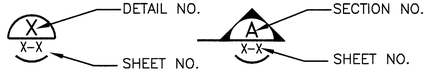
EXISTING DESCRIPTION

- BUILDING LINE
- EDGE OF PAVEMENT (EAC)
- GRAVEL PATH
- CREEK/DITCH THALWEG
- INTERIOR / EXTERIOR — WB — WETLAND PERIMETER (DELINEATED BY BIOLOGIST)
- OHW — O.H.W.M. (ORDINARY HIGH WATER MARK)
- EXISTING TREE CANOPY
- CONTOUR (INTERVAL)
- XXX — CONTOUR (INDEX)
- PROPERTY LINE
- RIGHT–OF–WAY
- SECTION LINE
- PK — SURVEY NAIL
- RBC — REBAR & CAP
- PUMP
- GAUGE
- EXISTING BRIDGE
- GROUND WATER MONITORING WELL
- W — WATER WELL

EXISTING UTILITIES

- CABLE ---TV---TV---TV---
- GAS ---G---G---G---
- POWER ---P---P---P---
- TELEPHONE ---T---T---T---
- SEWER ---SS---
- WATER ---W---W---W---
- STORM DRAIN ---SD---
- SEWER MANHOLE
- CATCH BASIN
- STORM DRAIN GRATE
- W — WATER METER
- T — TELEPHONE RISER
- UVT — UNDERGROUND TELEPHONE VAULT
- GUY WIRE ANCHOR
- POWER POLE
- P — POWER METER
- P — POWER RISER
- UVP — UNDERGROUND POWER VAULT

SYMBOLS



CSEC

DESCRIPTION

- HVF — HVF — HIGH VISIBILITY FENCE
- SF — SF — SILT FENCE
- C — C — CONSTRUCTION LIMIT
- OHW — OHW — ORDINARY HIGH WATER
- WAM — WAM — WATER MANAGEMENT
- CHECK DAM
- PROJECT LIMITS
- SF — SF — SF — SILT FENCE

KEY CONSTRUCTION ACTIONS:

1. MARK CLEARING LIMITS AND TREES TO BE SAVED ON SITE.
2. INSTALL CSEC MEASURES AS PER SHEETS CSEC1 AND CSEC2.
3. CLEAR VEGETATION EXCEPT FOR TREES MARKED TO BE SAVED IN ALL GRADING AREAS AND STOCKPILE.
4. REMOVE AND HAUL AWAY EXISTING UTILITIES AND ROADWAY PAVEMENT. FILL HOLES CREATED BY SEPTIC VAULT REMOVALS USING SPOILS FROM EXCAVATION FOR CHANNELS.
5. EXCAVATE AND GRADE THE CUT OFF CHANNEL AND HAUL MATERIAL TO SPOILS AREA.
6. EXCAVATE AND GRADE THE SIDE CHANNEL AND HAUL MATERIAL TO SPOILS AREA.
7. EXCAVATE AND GRADE THE BACKWATER CHANNELS AND HAUL MATERIAL TO THE SPOILS AREA.
8. INSTALL WATER DIVERSION AND WATER MANAGEMENT MEASURES AS NEEDED FOR THE RAINBOW BEND LEVEE AND REVETMENT REMOVAL.
9. COORDINATE WITH ON SITE KING COUNTY FISH BIOLOGIST PRIOR TO IN–WATER EXCAVATION. FISH REMOVAL TO BE DONE BY KING COUNTY IF NECESSARY.
10. EXCAVATE AND REMOVE MATERIAL FROM THE RAINBOW BEND LEVEE AND THE ROCKFACE ROCK. HAUL SALVAGED ROCK AS NEEDED TO THE CEDAR RIVER TRAIL ROCK PLACEMENT AND ROCK REVETMENT.
11. REMOVE ROCK REVETMENT ALONG RIGHT BANK DOWNSTREAM OF THE RAINBOW BEND LEVEE AND HAUL TO STOCKPILE.
12. REMOVE WATER DIVERSION AND WATER MANAGEMENT MEASURES.
13. PLACE LWD AND INSTALL LOG CLUSTERS.
14. INSTALL ROAD FILL ON 203RD AVE SE.
15. INSTALL LANDSCAPING.
16. REMOVE CSEC MEASURES.

CONSTRUCTION DESCRIPTION

- CENTERLINE
- CONTOUR (INTERVAL)
- XXX — CONTOUR (INDEX)
- TREE TOP WITH BRANCHES
- CONIFER WOOD (OWNER PROVIDED)
- SANDBAG PLUG
- PAVEMENT REMOVAL
- LEVEE REMOVAL
- REVETMENT REMOVAL
- LARGE DECIDUOUS
- SLASH
- KEY LOGS
- EXISTING TREES
- TREES TO BE REMOVED

ABBREVIATIONS

ABAND	ABANDONED
APPROX.	APPROXIMATELY
AVE	AVENUE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BNSK	BERNSTEIN NAIL
℄	CENTERLINE
DIAM	DIAMETER
DWY	DRIVEWAY
EA	EACH
EAC	EDGE OF ASPHALT CONC. PAVEMENT
EL	ELEVATION
LWD	LARGE WOODY DEBRIS
MAX	MAXIMUM
MIN	MINIMUM
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES
NTS	NOT TO SCALE
OHW	ORDINARY HIGH WATER
R/W	RIGHT–OF–WAY
SPEC	SPECIAL
SPECS	SPECIFICATIONS
SR	STATE ROUTE
TYP	TYPICAL
WSE	WATER SURFACE ELEV.

CALL 2 WORKING DAYS BEFORE YOU DIG
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

SHEET INDEX, CONSTRUCTION SEQUENCE
LEGEND AND ABBREVIATIONS

	MADE	CHK'D	REV'D
NATURE REVISIONS			
MARK			
DATE			
VAULT SERIAL NO.			

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WILLIS R. MANSFIELD — STATE OF WASHINGTON — 18388 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
ORDINANCE NO.
FUND:
SCALE: ####

City of Seattle
Ray Hoffman, Director
APPROVED
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RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777–747
2 OF 22

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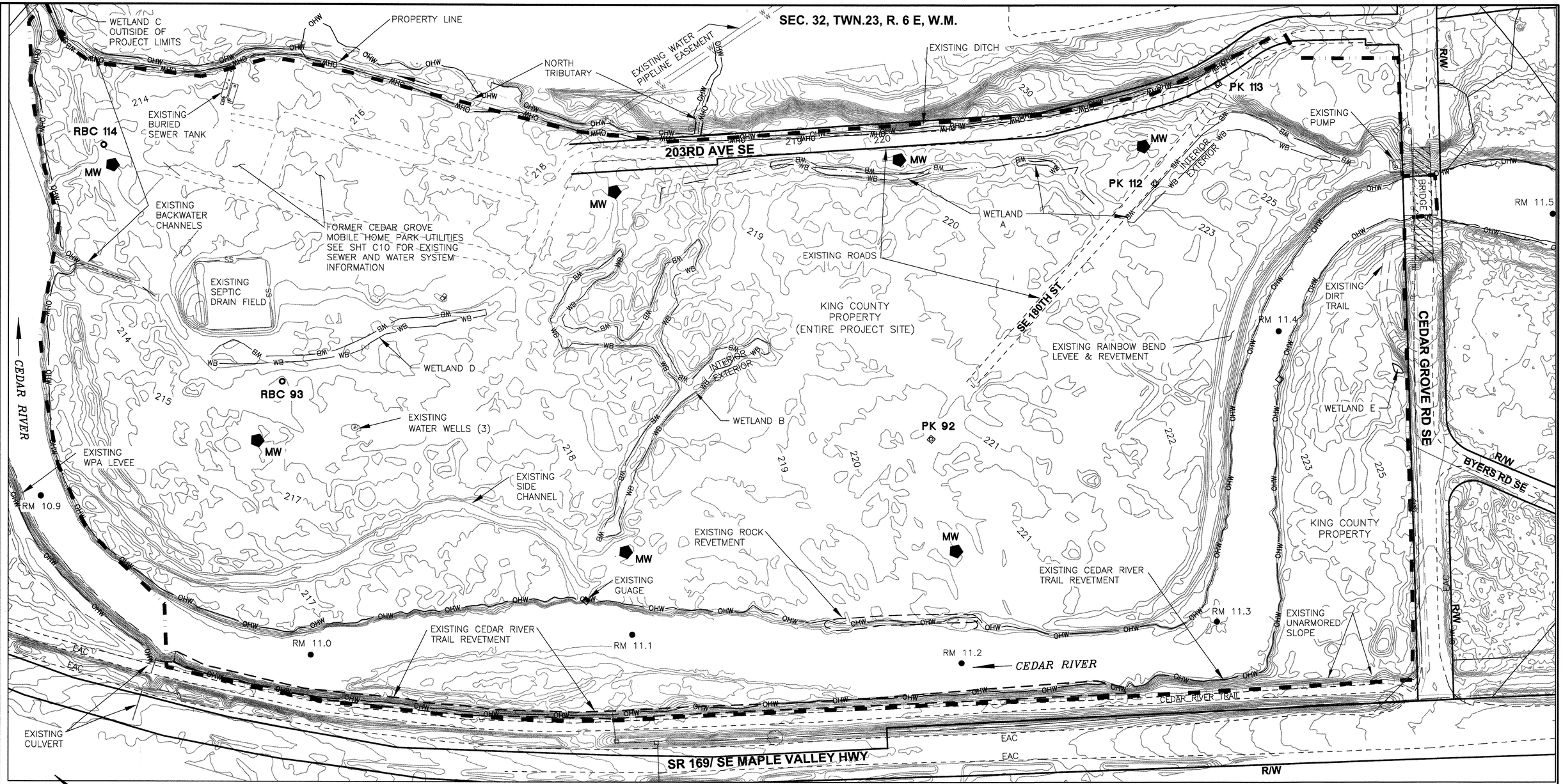

SURVEY CONTROL PTS	NORTHING	EASTING	ELEV.	DESC.
92	163243.87	1335017.88	220.54	AT-2 PK
93	164126.06	1334400.49	216.22	AT-3 RBC
112	163234.14	1335581.00	222.46	PK
113	163262.18	1335775.82	230.84	AT-1 PK
114	164605.70	1334512.26	213.02	AT-4 RBC

80 0 80 160 240
SCALE IN FEET

NOTES:
1. BASIS OF BEARING IS THE WASHINGTON STATE PLANE COORDINATES SYSTEM. NORTH ZONE, N.A.D. 83/91, VERTICAL DATUM IS NGVD 88.
2. CONTOURS SHOWN ARE BASED ON MARCH 2010 LIDAR SURVEY, AT 1 FT INTERVALS.
3. CHANNEL BED PROFILES IN DETAILS ARE BASED ON IN-WATER SURVEY. NO BATHYMETRIC SURFACE CONTOURS WERE CREATED WITHIN CHANNNEL FOR PLAN VIEWS.

CALL 2 WORKING DAYS BEFORE YOU DIG
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

EXISTING SITE CONDITIONS PLAN AND SURVEY CONTROL

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WILLIS R. MANSFIELD
STATE OF WASHINGTON
46388
REGISTERED PROFESSIONAL ENGINEER
4-1-13

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
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RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405
R/W
CO
VAULT PLAN NO. 777-747
3 OF 22

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT3 EXIST SITE.dwg
lucyt Mar-28-13 8:33am

SEC. 32, TWN.23, R. 6 E, W.M.

SHEET C6

SHEET C4

SHEET C3

SHEET C5

SHEET C7

REMOVE EXISTING UTILITIES FOR CEDAR GROVE MOBILE HOME PARK (SEE SHT C10)

ROAD FILL

SPOILS SITE MAX. EL=222'

203RD AVE SE

RIP RAP STOCKPILE

PAVEMENT REMOVAL SEE SHT C10

EXISTING REVETMENT TO REMAIN

NEW ROCK REVETMENT

SIDE CHANNEL

LEVEE REMOVAL

SE 18DTH ST

SIDE CHANNEL INLET

BACKWATER CHANNEL GRADING

KING COUNTY PROPERTY (ENTIRE PROJECT SITE)

CUTOFF CHANNEL INLET

CUTOFF CHANNEL

ROCK REVETMENT REMOVAL

BYERS RD SE

CEDAR GROVE RD SE

ROCK REVETMENT TO BE REMOVED

CEDAR RIVER

CEDAR RIVER TRAIL

SR 169/ SE MAPLE VALLEY HWY

80 0 80 160 240
SCALE IN FEET

NOTES:

1. HAVE A COPY OF APPROVED PLANS AND ALL REGULATORY PERMITS ON SITE AT ALL TIMES.
2. WATER WORK IN CEDAR RIVER SHALL ONLY TAKE PLACE DURING THE FISH WINDOW FROM JULY 1ST THROUGH AUGUST 31.
3. IF ARCHEOLOGICAL OR HISTORIC ARTIFACTS ARE ENCOUNTERED DURING EXCAVATION AND GRADING, IMMEDIATELY CEASE WORK AND NOTIFY THE ENGINEER.
4. REMOVE, HAUL AWAY AND DISPOSE OF ANY TRASH IN WORK AREAS OR ENCOUNTERED IN EXCAVATION AREAS.

CALL 2 WORKING DAYS BEFORE YOU DIG
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

DESIGN SITE PLAN

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

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STATE OF WASHINGTON
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REGISTERED
PROFESSIONAL ENGINEER
4-11-13

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SEC. 32, TWN.23, R. 6 E, W.M.

NEW CUTOFF CHANNEL

NEW SIDE CHANNEL

PLACE SANDBAG PLUG TO BE REMOVED BY OTHERS (2/11)

RIP RAP STOCKPILE

INSTALL NEW ROCK REVETMENT (1/11)

REMOVE EXISTING ROCK REVETMENT STA. 0+00–STA. 10+50. SEE CESC SHEETS FOR WATER MANAGEMENT MEASURES.

REMOVE EXISTING LEVEE STA. 4+00 TO STA. 10+50

REMOVE EXISTING ROCK REVETMENT STA. 0+00–STA. 10+50. SEE CSEC SHEETS FOR WATER MANAGEMENT MEASURES.

STA. 4+00 BEGIN LEVEE REMOVAL

STA. 10+50 END LEVEE REMOVAL

ORDINARY HIGH WATER

WETLAND E
167 S.F.

CEDAR RIVER

CEDAR RIVER TRAIL

CEDAR GROVE RD SE

SCALE IN FEET
40 0 40 80 120

LEVEE AND REVETMENT REMOVAL – PLAN

MERIDIAN
W.S.L.G.N.Z.
DATUM
NAVD88

EXISTING LEVEE CENTERLINE GRADE

LEVEE REMOVAL

0.25%

FINISHED GRADE LEVEE

FINISHED GRADE CUTOFF CHANNEL BOTTOM EL.=220.0

FINISHED GRADE SIDE CHANNEL BOTTOM EL.=218.40

INSTALL NEW REVETMENT AT END OF LEVEE REMOVAL (1/11)

STA. 4+08 EL.=222.50

10+50 EL.=223.85

230 225 220 215

0+00 0+40 0+80 1+20 1+60 2+00 2+40 2+80 3+20 3+60 4+40 4+80 5+20 5+60 6+00 6+40 6+80 7+20 7+60 8+00 8+40 8+80 9+20 9+60 10+00 10+40 10+70

SCALE IN FEET
40 0 40 80 120

LEVEE REMOVAL – PROFILE

CALL 2 WORKING DAYS BEFORE YOU DIG
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LEVEE REMOVAL PLAN AND PROFILE

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5 OF 22

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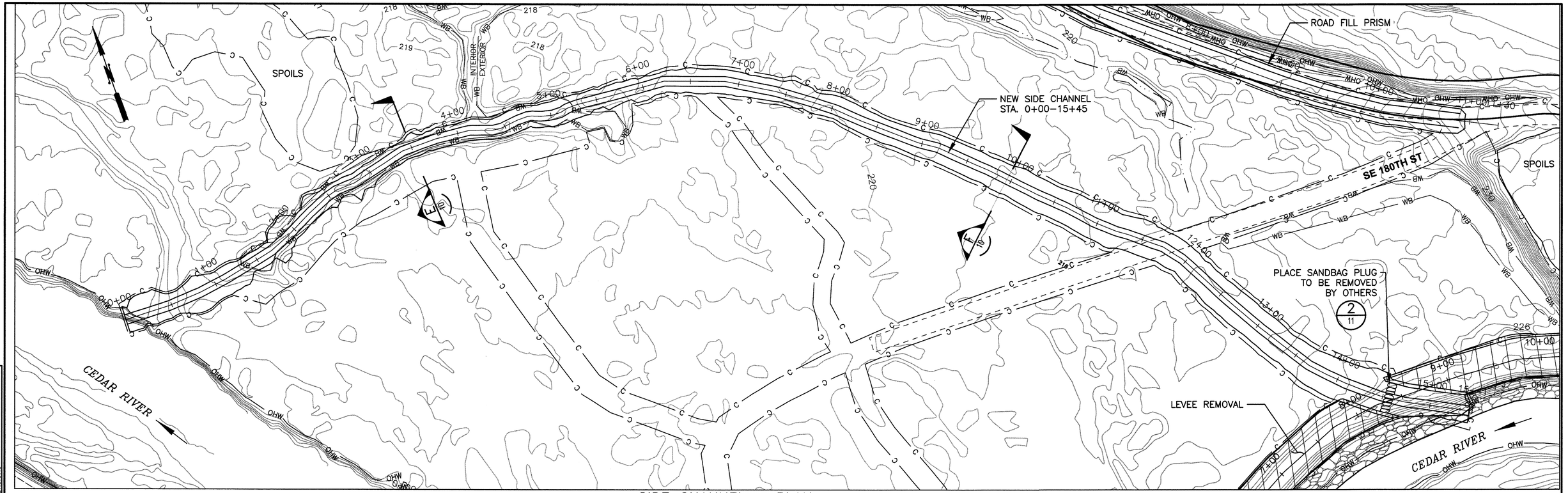

SIDE CHANNEL – PLAN
STA. 0+00 TO STA. 15+45

SCALE IN FEET
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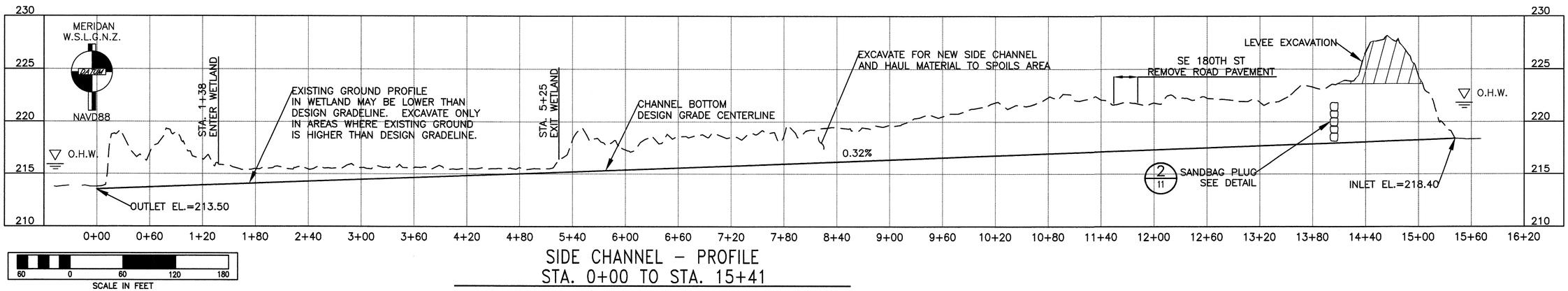

SIDE CHANNEL – PROFILE
STA. 0+00 TO STA. 15+41

SCALE IN FEET
60 0 60 120 180

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SIDE CHANNEL – GRADING PLAN AND PROFILE
STA. 0+00 TO STA. 15+41

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1-1-14

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RAINBOW BEND
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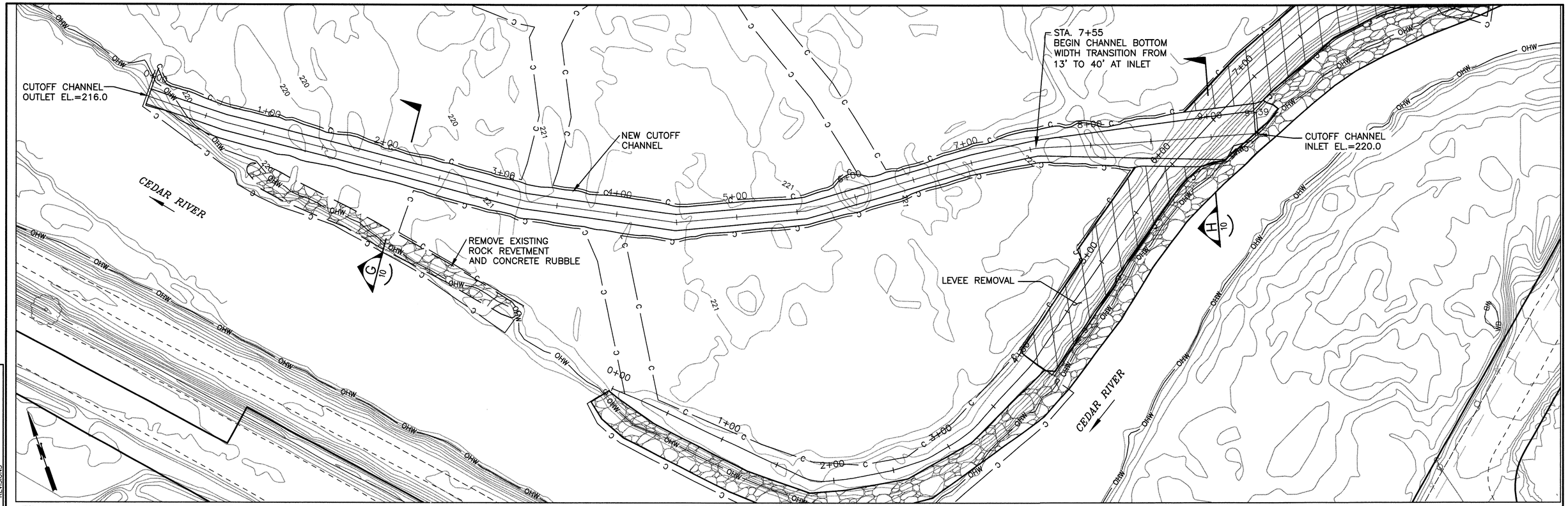

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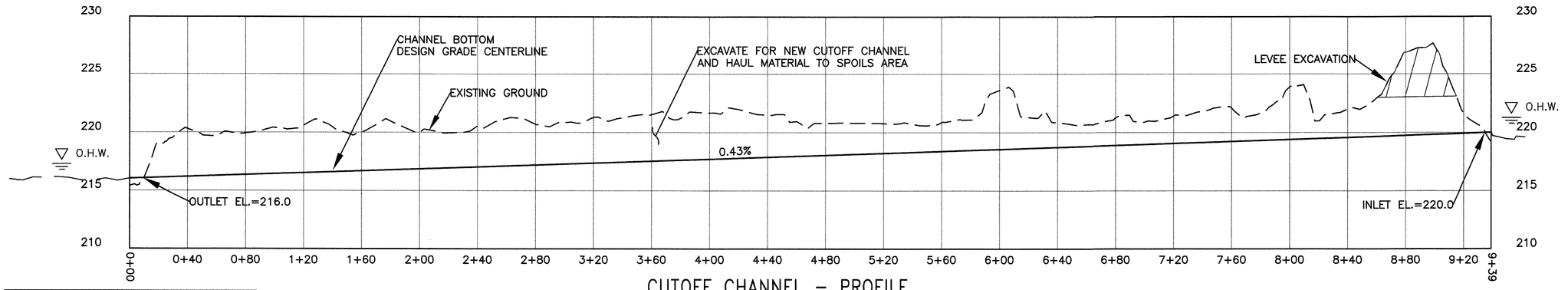
CUTOFF CHANNEL – PLAN
STA. 0+00 TO 9+39

MERIDIAN
W.S.L.G.N.Z.
NAD 83/91

DATUM

NAVD 88



40 0 40 80 120
SCALE IN FEET

CUTOFF CHANNEL – PROFILE
STA. 0+00 TO 9+39

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CUTOFF CHANNEL GRADING PLAN AND PROFILE STA. 0+00 TO STA.9+39

NO.	DATE	MARK	REVISIONS	MADE	CHK'D	REV'D
			NATURE			

VAULT SERIAL NO.

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ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.

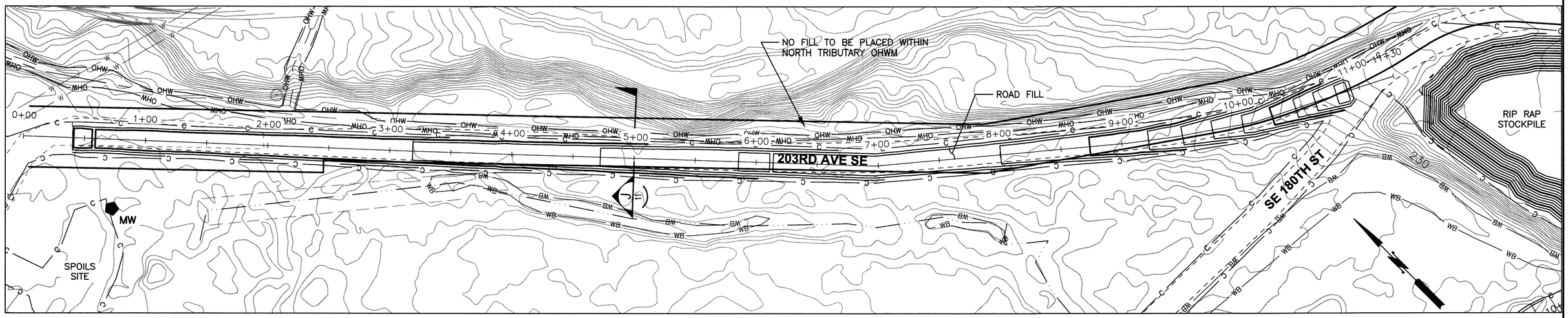
WILLIS R. MANSFIELD
STATE OF WASHINGTON
18388
REGISTERED
PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: ####
APPROVED
INSPECTOR'S BOOK

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

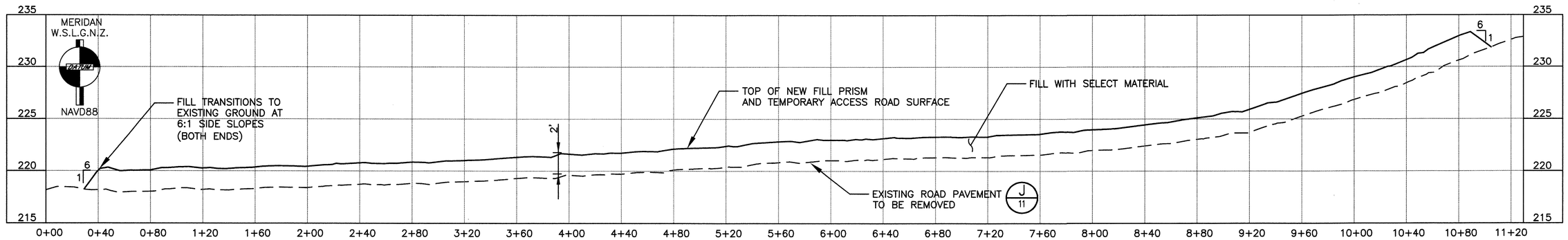
JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
7 OF 22

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT7 CUTOFF CHNL PlanPro.dwg
lucyt Mar-28-13 3:00pm



203RD AVE. ROAD FILL
STA. 0+40 TO STA. 10+89

40 0 40 80 120
SCALE IN FEET



40 0 40 80 120
SCALE IN FEET

203RD AVE. ROAD FILL – PROFILE
STA. 0+40 TO STA. 10+89

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

203RD AVE. ROAD FILL PLAN AND PROFILE

VAULT	SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

APPROVED FOR ADVERTISING
NANCY LOCKE
DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE		INITIALS AND DATE
DESIGNED	W. MANSFIELD, J. BETHEL D. EASTMAN, T. THINLEY, (ALL 4/13)	REVIEWED:
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DRAWN	L. TRAXINGER (4/2013)	SDOT PROJ. MGR.
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WILLIS R. MANSFIELD
STATE OF WASHINGTON
16388
REGISTERED
PROFESSIONAL ENGINEER
4-19-13

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
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SCALE: ####
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RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777–747
8 OF 22

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT8 ROAD FILL.dwg
lucyt Mar-29-13 10:34am

PROPERTY LINE

EXISTING NORTH TRIBUTARY

203RD AVE ROAD FILL

PLACE 4 INCHES OF CHANNEL EXCAVATION SPOILS

SPOILS SITE MAX. EL=222)

SEE DEMOLITION PLAN FOR UTILITY AND PAVEMENT REMOVAL

PLACE 4 INCHES OF CHANNEL EXCAVATION SPOILS

REMOVE EXISTING CULVERT

SANDBAG PLUG

BACKWATER CHANNEL

PLACE 4 INCHES OF CHANNEL EXCAVATION SPOILS

CEDAR RIVER

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

40 0 40 80 120
SCALE IN FEET

BACKWATER GRADING PLAN

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT9 BACKWATER GRADING.DWG
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Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

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WILLIS R. MANSFIELD
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16388
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4-1-13

Seattle Public Utilities
City of Seattle
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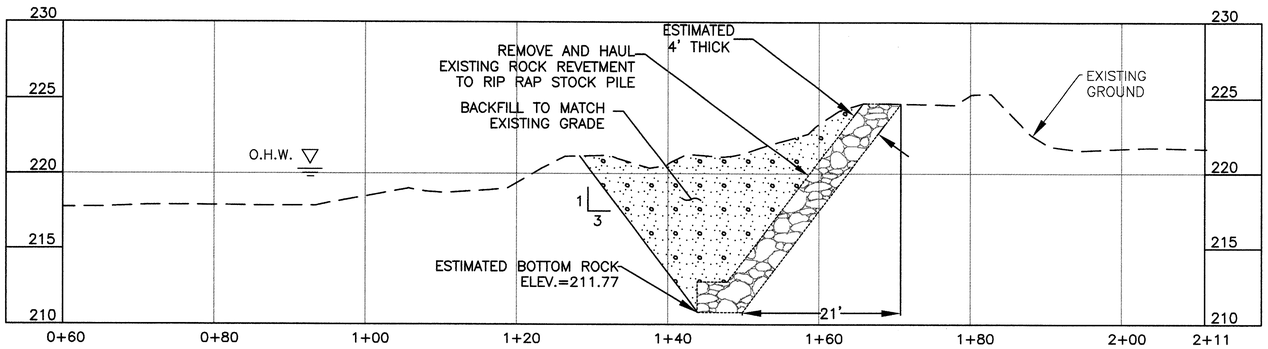
RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

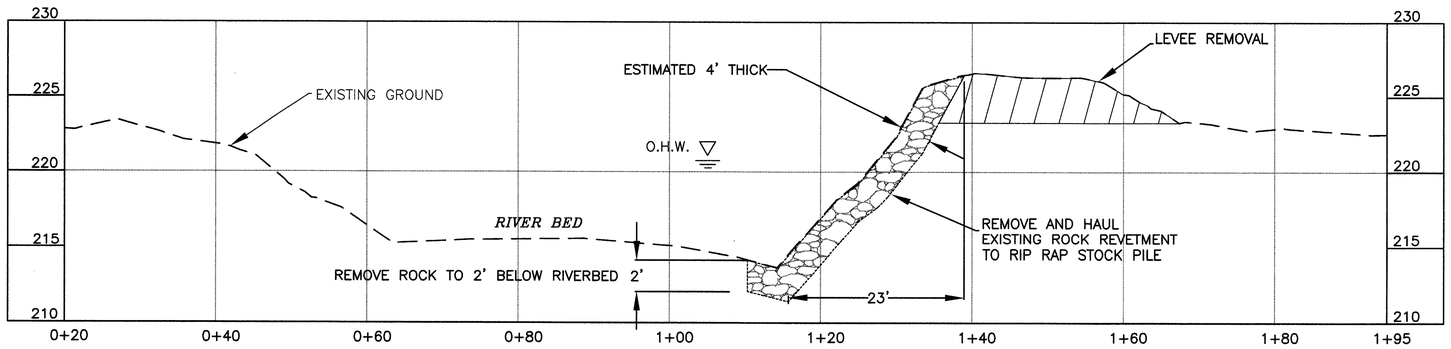
JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
9 OF 22



LEVEE SECTION w/BATHYMETRY STA. 2+26

A / 5

SCALE: 1"=10' HORIZ., 1"=10' VERT.

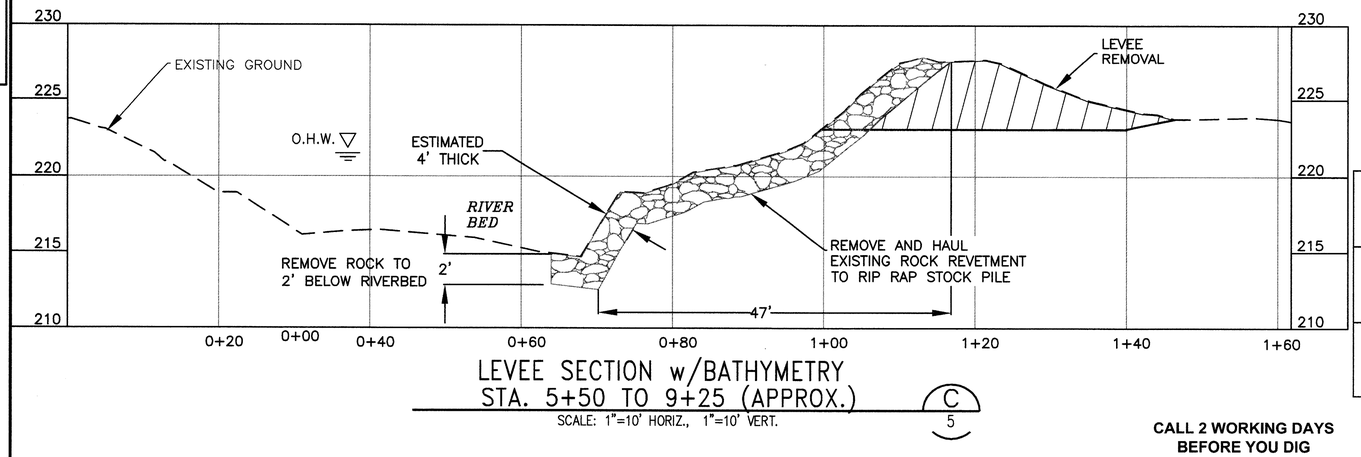


LEVEE SECTION w/BATHYMETRY STA. 5+00

B / 5

SCALE: 1"=10' HORIZ., 1"=10' VERT.

NOTE:
ALL SECTION VIEWS LOOK DOWNSTREAM



LEVEE SECTION w/BATHYMETRY STA. 5+50 TO 9+25 (APPROX.)

C / 5

SCALE: 1"=10' HORIZ., 1"=10' VERT.

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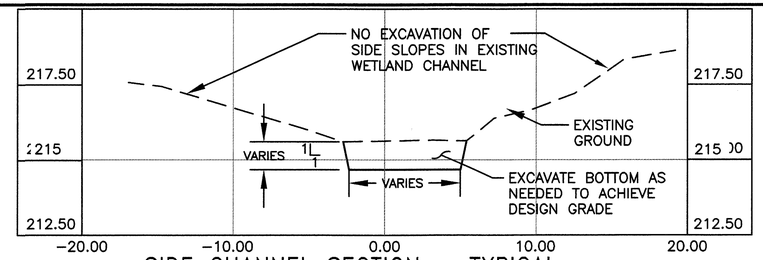
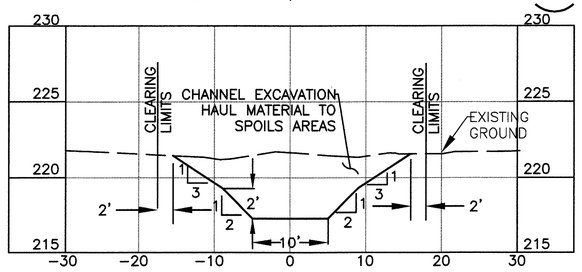
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)



SIDE CHANNEL SECTION – TYPICAL STA.1+38 TO 5+25

E / 6

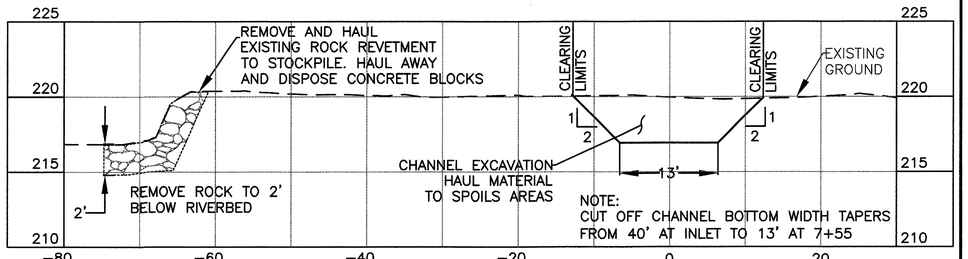
SCALE: 1"=5' HORIZ., 1"=5' VERT.



SIDE CHANNEL SECTION – TYPICAL STA. 0+00 – 1+38, 5+25–15+41

F / 6

SCALE: 1"=10' HORIZ., 1"=5' VERT.

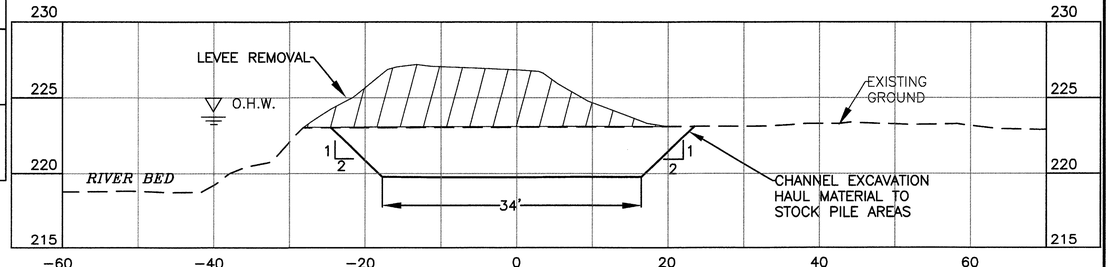


NOTE:
CUT OFF CHANNEL BOTTOM WIDTH TAPERS FROM 40' AT INLET TO 13' AT 7+55

CUT OFF CHANNEL SECTION–STA. 2+20 TYPICAL BETWEEN STA. 0+00 TO 7+55 AND EXISTING REVETMENT REMOVAL

G / 7

SCALE: 1"=10' HORIZ., 1"=5' VERT.



CUT OFF CHANNEL SECTION STA. 9+00

H / 7

SCALE: 1"=10' HORIZ., 1"=5' VERT.

CROSS SECTIONS AND DETAILS

NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

VAULT SERIAL NO.

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT10 SECTIONS.dwg
lucyt Mar-29-13 4:00pm

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Ecological Restoration and Engineering Services Unit
Christie True, Director

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DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

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WILLIS R. MANSFIELD — STATE OF WASHINGTON — 16388 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
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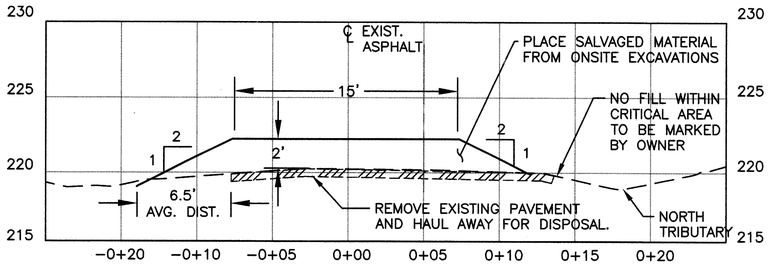
RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

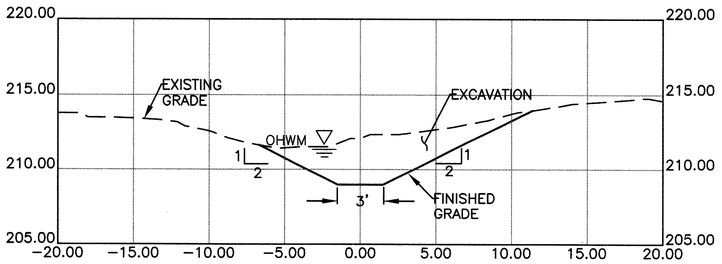
JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
10 OF 22



203RD AVE. ROAD FILL PRISM SECTION STA. 0+40–STA. 10+89

SCALE: 1"=5' HORIZ, 1"=5 VERT.

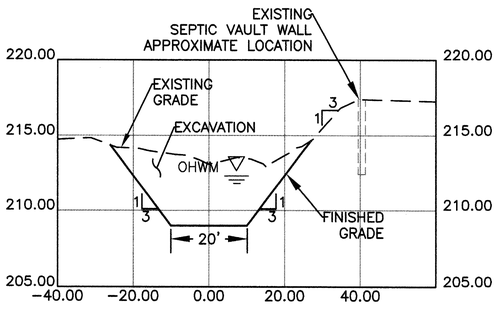
J / 8



BACKWATER CHANNEL SECTION STA. 0+50

SCALE: 1"=5' HORIZ., 1"=5' VERT.

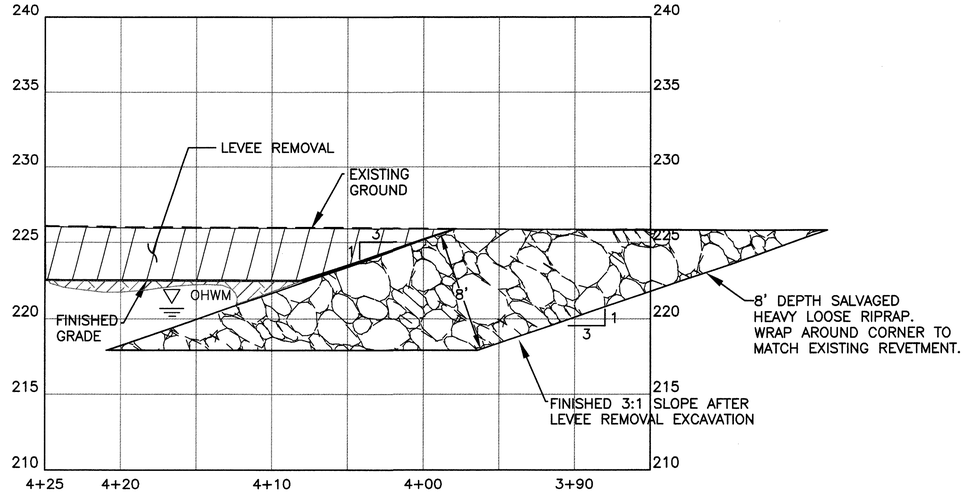
L / 9



BACKWATER CHANNEL SECTION STA. 2+77

SCALE: 1"=20' HORIZ., 1"=5' VERT.

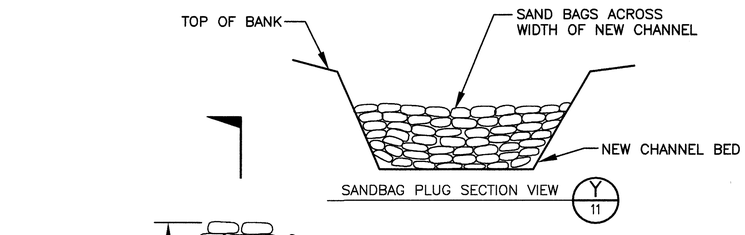
L1 / 9



NEW REVETMENT DETAIL

SCALE: 1"=5' HORIZ., 1"=5' VERT.

1 / 5



SANDBAG PLUG DETAIL

NOT TO SCALE

2 / 6, 9, 16

MERIDIAN
W.S.L.G.N.Z.
NAD 83/91
DATUM
NAVD 88

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

VAULT SERIAL NO.	DATE	MARK	REVISIONS	MADE	CHK'D	REV'D
			NATURE			

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SH111 SECTIONS-DET.dwg
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King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

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DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
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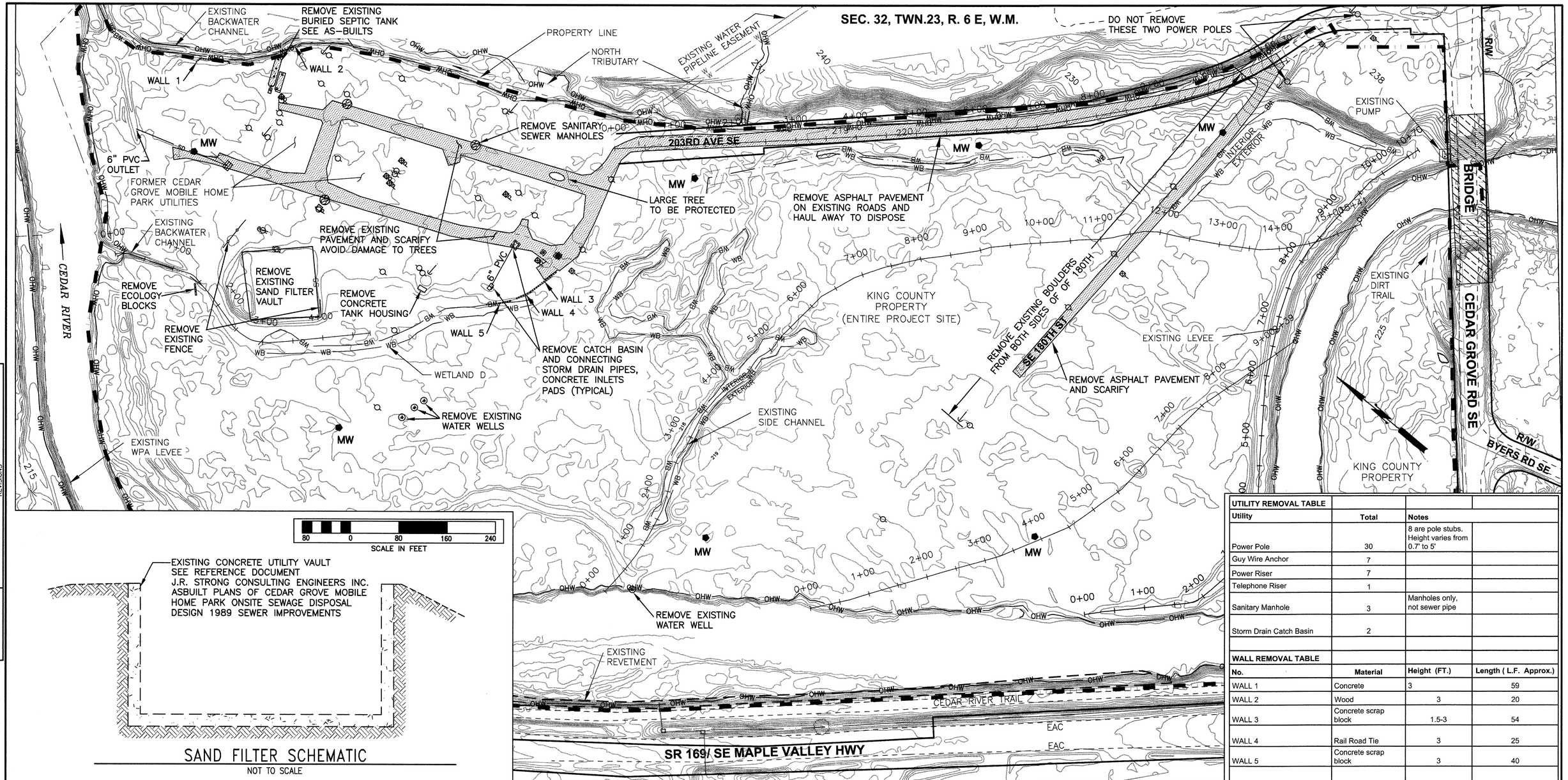
WILLIS R. MANSFIELD — STATE OF WASHINGTON — 18388 — REGISTERED PROFESSIONAL ENGINEER
4-1-13

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: ####
APPROVED
INSPECTOR'S BOOK

CROSS SECTIONS AND DETAILS

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777–747
11 OF 22



SAND FILTER SCHEMATIC
NOT TO SCALE

UTILITY REMOVAL TABLE			
Utility	**Total**	**Notes**	
Power Pole	30	8 are pole stubs. Height varies from 0.7' to 5'	
Guy Wire Anchor	7		
Power Riser	7		
Telephone Riser	1		
Sanitary Manhole	3	Manholes only, not sewer pipe	
Storm Drain Catch Basin	2		
WALL REMOVAL TABLE			
No.	**Material**	**Height (FT.)**	**Length (L.F. Approx.)**
WALL 1	Concrete	3	59
WALL 2	Wood	3	20
WALL 3	Concrete scrap block	1.5-3	54
WALL 4	Rail Road Tie	3	25
WALL 5	Concrete scrap block	3	40

KEY DEMOLITION REQUIREMENTS:

1. REMOVE, HAUL AWAY AND DISPOSE OF ALL UNDERGROUND SEPTIC TANKS AND SAND FILTER VAULT. SEE REFERENCE DOCUMENT PLANS (1989) BY DR STRONG CONSULTING ENGINEERS INC.
2. REMOVE, HAUL AWAY AND DISPOSE OF EXISTING ASPHALT PAVEMENT ON S.E. 180TH ST, 203RD AVE SE AND THE PAVED ACCESS ROADS NEAR THE PREVIOUS CEDAR GROVE MOBILE HOME PARK. AVOID DAMAGE TO TREE IN THE MIDDLE OF THE PAVED AREA NEAR THE MOBILE HOME PARK.
3. REMOVE, HAUL AWAY AND DISPOSE OF ALL EXISTING STORM DRAIN LINES AND CATCH BASINS NEAR THE PREVIOUS CEDAR GROVE MOBILE HOME PARK.
4. REMOVE, HAUL AWAY AND DISPOSE OF ALL EXISTING UTILITIES SUCH AS POWER POLES, LIGHT POSTS, GATE POSTS, CONCRETE PADS, UTILITY LIDS AND TRASH LOCATED NEAR THE THE PREVIOUS CEDAR GROVE MOBILE HOME PARK.
5. REMOVE POWER POLE REMNANTS ON THE GROUND, ADJACENT TO POLE STUBS. EACH STUB AND REMNANT CONSTITUTES ONE POLE.
6. REMOVE, HAUL AWAY AND DISPOSE OF ALL WATER SYSTEM LINES, DRAIN PIPES AND OTHER UTILITY LINES IF ENCOUNTERED DURING EXCAVATION. HOWEVER, DO NOT CHASE LINES DURING REMOVAL.
7. REMOVE, HAUL AWAY AND DISPOSE 2 POWER POLES AS SHOWN ON SE 180TH ST. DISCONNECT LINE AT LIVE POWER POLE AS SHOWN.
8. FILL HOLES CREATED BY UTILITY EXCAVATIONS USING EXCAVATED MATERIAL FROM UTILITY REMOVAL.
9. REMOVE, HAUL AWAY AND DISPOSE OF BOLLARDS, FENCING POSTS AND SIGNS ON SE 180TH ST.
10. HAUL LARGE ROCKS ON SIDE OF SE 180TH ST TO STOCK PILE.
11. REMOVE, HAUL AWAY AND DISPOSE OF CONCRETE BLOCKS AND PIECES FOUND DURING THE RAINBOW BEND REVETMENT REMOVAL.

UTILITIES TO BE REMOVED

- PAVEMENT REMOVAL
- SEWER MANHOLE
- CATCH BASIN
- STORM DRAIN GRATE
- TELEPHONE RISER
- GUY WIRE ANCHOR
- POWER POLE
- POWER RISER

CALL 2 WORKING DAYS BEFORE YOU DIG
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DEMOLITION PLAN PAVING AND UTILITIES REMOVAL

NATURE REVISIONS	MADE	CHK'D	REV'D
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WILLIS R. MANSFIELD — STATE OF WASHINGTON — 46388 — REGISTERED PROFESSIONAL ENGINEER — 4-1-13

Seattle Public Utilities
City of Seattle
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RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
12 OF 22

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT12 DEMO PLAN.dwg
lucyt Mar-29-13 2:51pm

SEC. 32, TWN.23, R. 6 E, W.M.

SHEET 14

BACKWATER WOOD CLUSTERS 6/15

LARGE WOOD STRUCTURE #1

LARGE WOOD STRUCTURE #2

LARGE WOOD STRUCTURE #3

FLOODPLAIN ROUGHNESS 5/15

LARGE WOOD STRUCTURE #4

APPROX. 60 TREES 12–18" DIAM. FOR SALVAGE

EXISTING TREES TO BE SALVAGED (TYP.)

CEDAR RIVER

SR 169/ SE MAPLE VALLEY HWY

CEDAR GROVE RD SE

BYERS RD SE

80 0 80 160 240
SCALE IN FEET

LOG PLACEMENT TABLE	
Type and Size	Count
Large deciduous (60' L, 30" Diam.)	4
Key log (conifer, 80' L, 20" Diam)	2
Conifer (40' L, 16" Diam)	34
Deciduous (50' L, 16" Diam)	13
Small deciduous (30' L, 10" Diam)	36
Vertical Log (conifer, 12' L, 12" Diam)	4
Buried deciduous (50' L, 16" Diam)	11
Buried Key Log (80' L, 20" Diam)	1
TOTAL	104

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WOOD PLACEMENT PLAN

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB Sht13 WOOD PLAN.dwg
lucyt Mar-28-13 9:08am

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Water and Land Resources Division
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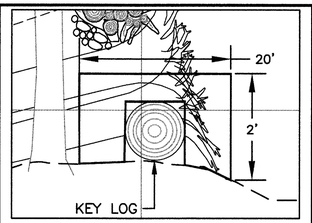
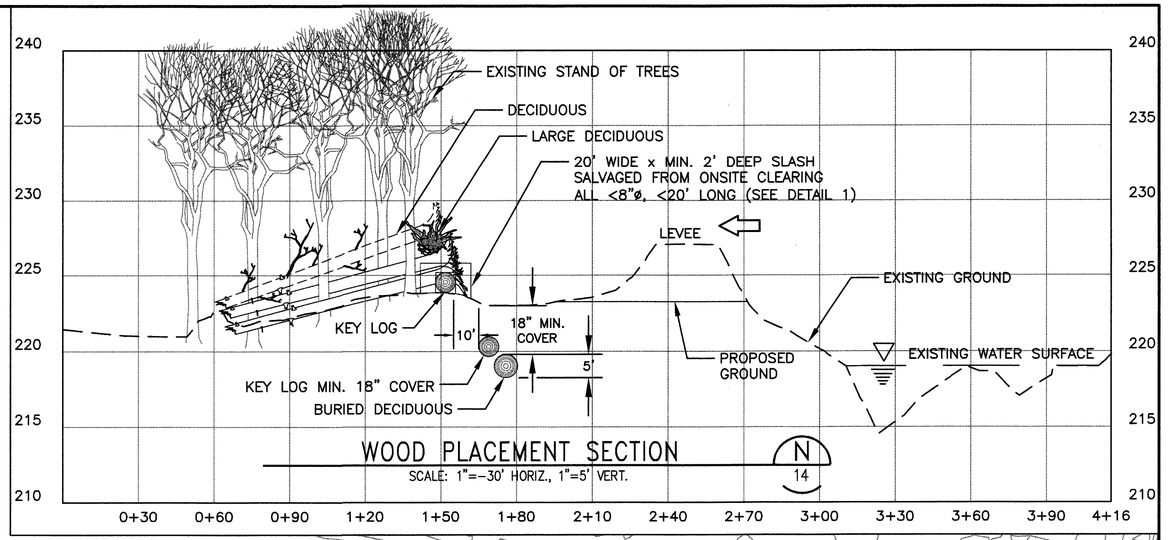
JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777–747
13 OF 22

WOOD LEGEND

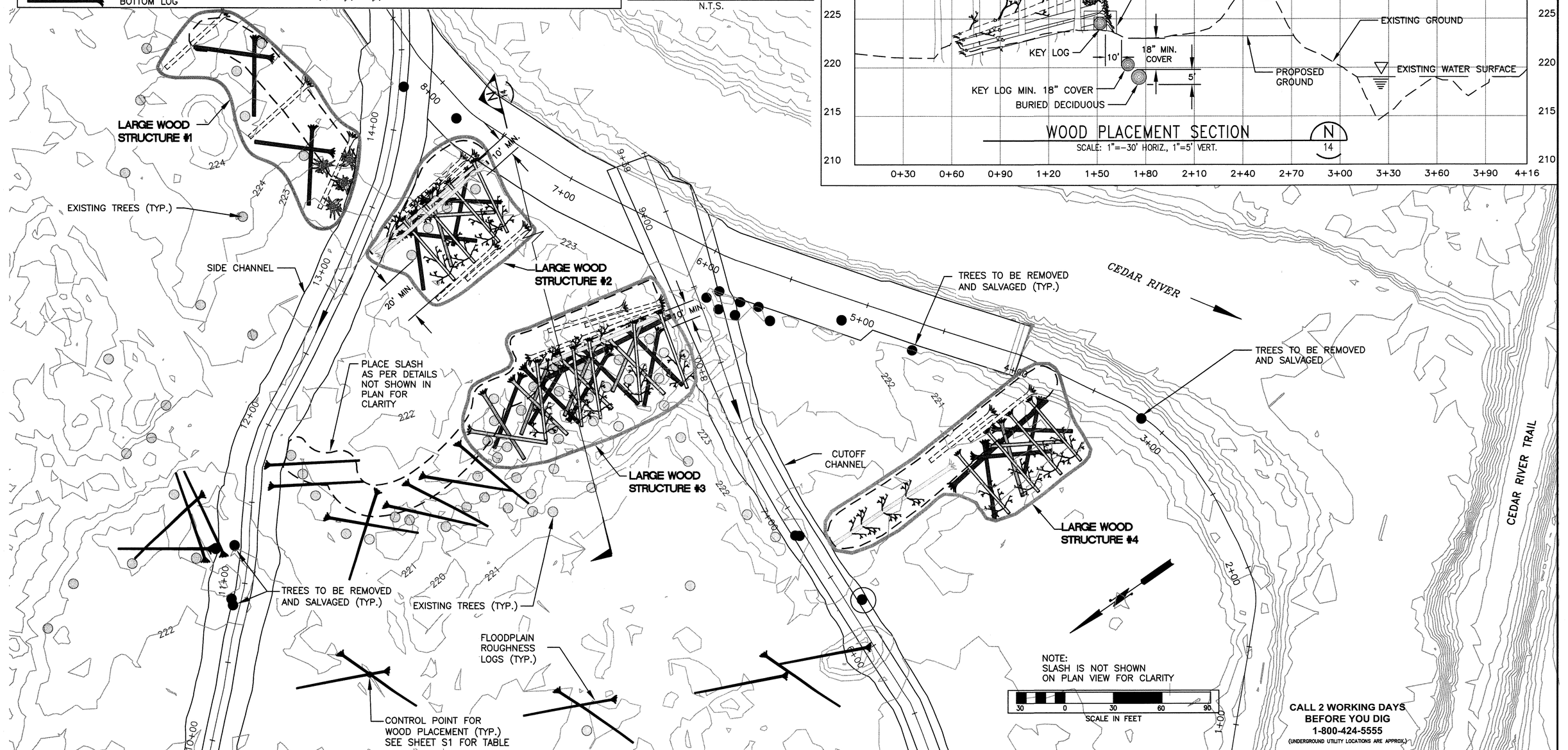
- SMALL DECIDUOUS 30'Lx10'ø
- SLASH PILE W/LIVE STAKES
- VERT. LOG
- CONIFER LOG STRUCTURES (~40'Lx16"ø)
  - TOP LOG
  - MIDDLE TOP LOG
  - MIDDLE BOTTOM LOG
  - BOTTOM LOG
- EXISTING TREES
- TREES TO BE REMOVED
- KEY LOG (~80'Lx20"ø)
- BURIED DECIDUOUS LOG (~50'Lx16"ø)
- BURIED KEY LOG (~80'Lx20"ø)
- DECIDUOUS LOG (~50'Lx16"ø)
- LARGE DECIDUOUS (~60'Lx30"ø)



SLASH DETAIL 1
N.T.S.



WOOD PLACEMENT SECTION
SCALE: 1"=-30' HORIZ., 1"=5' VERT.
N 14



NOTE:
SLASH IS NOT SHOWN ON PLAN VIEW FOR CLARITY

30 0 30 60 90
SCALE IN FEET

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

WOOD PLACEMENT DETAILS SHT 1 OF 2

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT14 WOOD DETAILS 1 OF 2.dwg
lucyt Mar-28-13 9:08am

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

APPROVED FOR ADVERTISING
NANCY LOCKE
DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE		INITIALS AND DATE
DESIGNED	W. MANSFIELD, J. BETHEL D. EASTMAN, T. THINLEY, (ALL 4/13)	REVIEWED:
CHECKED	WILL MANSFIELD (4/13)	DES. CONST. SDOT PROJ. MGR.
DRAWN	L. TRAXINGER (4/2013)	RECEIVED
CHECKED	W. MANSFIELD (4/2013)	REVISED AS BUILT

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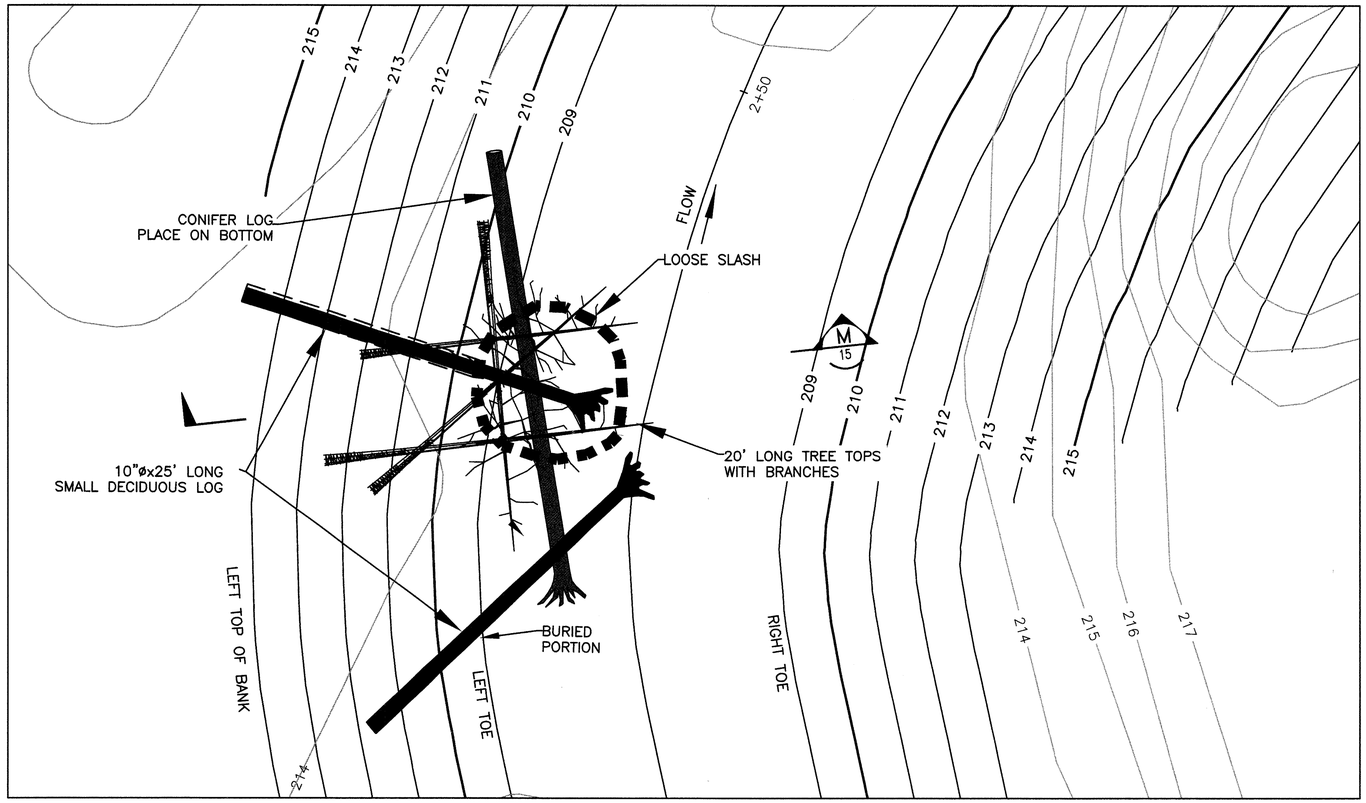
WILLIS R. MANSFIELD
STATE OF WASHINGTON
16388
REGISTERED PROFESSIONAL ENGINEER
4-4-13

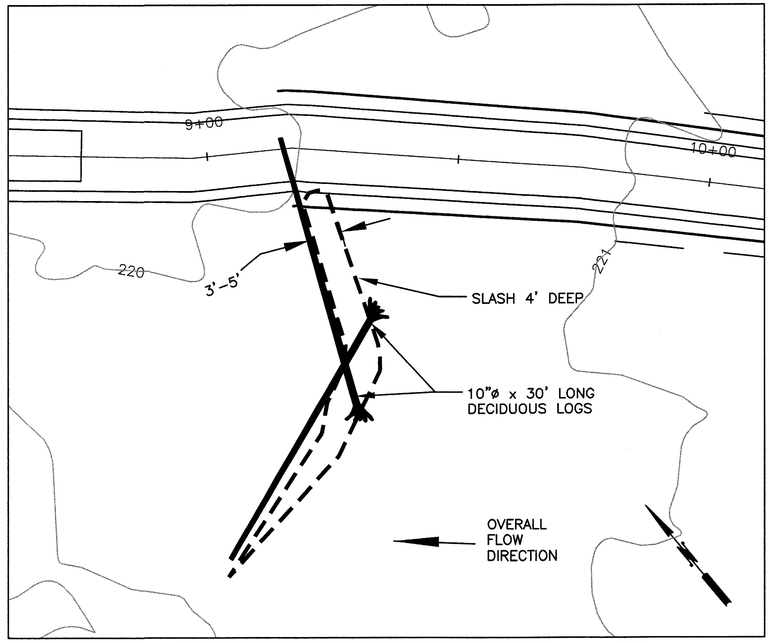
Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: 1"=30'
APPROVED
INSPECTOR'S BOOK

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

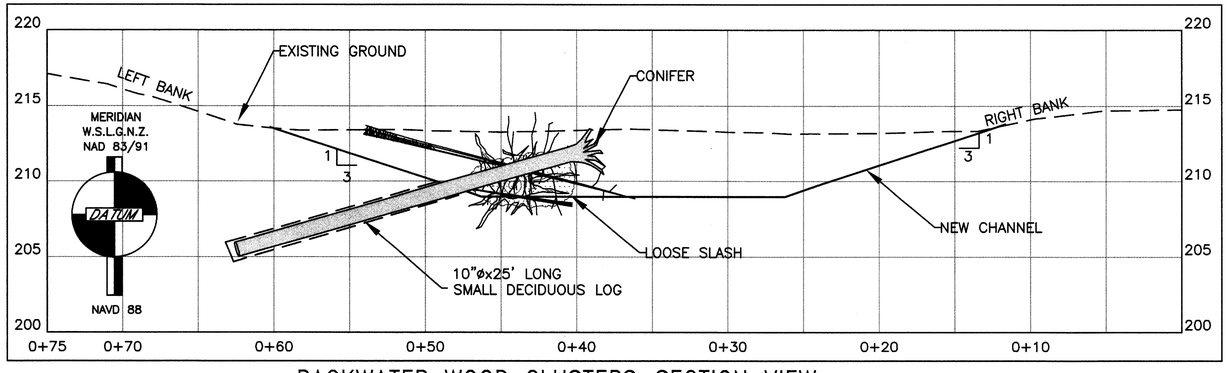
JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
14 OF 22



BACKWATER WOOD CLUSTERS–PLAN VIEW (6)
SCALE: 1"=5 — 13



FLOODPLAIN ROUGHNESS – PLAN VIEW (5)
SCALE: 1"=15' — 13



BACKWATER WOOD CLUSTERS–SECTION VIEW (TYPICAL) (M 15)
SCALE: 1"=5' HORIZ, 1"=2.5' VERT.

Large wood structure #1	
Conifer (from Landsburg)	4
Vertical log (conifer stump from Landsburg)	4
Key log (conifer salvaged from onsite)	0
Buried deciduous (salvaged from onsite)	3
Large wood structure #2	
Conifer (from Landsburg)	6
Large deciduous (salvaged from onsite)	2
Buried deciduous (salvaged from onsite)	4
Deciduous (salvaged from onsite)	4

Large wood structure #3	
Conifer (from Landsburg)	15
Buried key log (conifer salvaged from onsite)	1
Key log (conifer salvaged from onsite)	1
Buried deciduous (salvaged from onsite)	2
Deciduous (salvaged from onsite)	5
Large deciduous (salvaged from onsite)	1
Large wood structure #4	
Conifer (from Landsburg)	6
Large deciduous (salvaged from onsite)	1
Buried deciduous (salvaged from onsite)	2
Deciduous (salvaged from onsite)	4
Key log (conifer salvaged from onsite)	1

Backwater wood cluster (each)	
Conifer (from Landsburg)	1
Small Deciduous (salvaged from onsite)	2
Floodplain Roughness Logs (each)	
Small deciduous (salvaged from onsite)	30

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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

WOOD PLACEMENT DETAILS SHT 2 OF 2

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT15 WOOD DETAILS 2 OF 2.dwg
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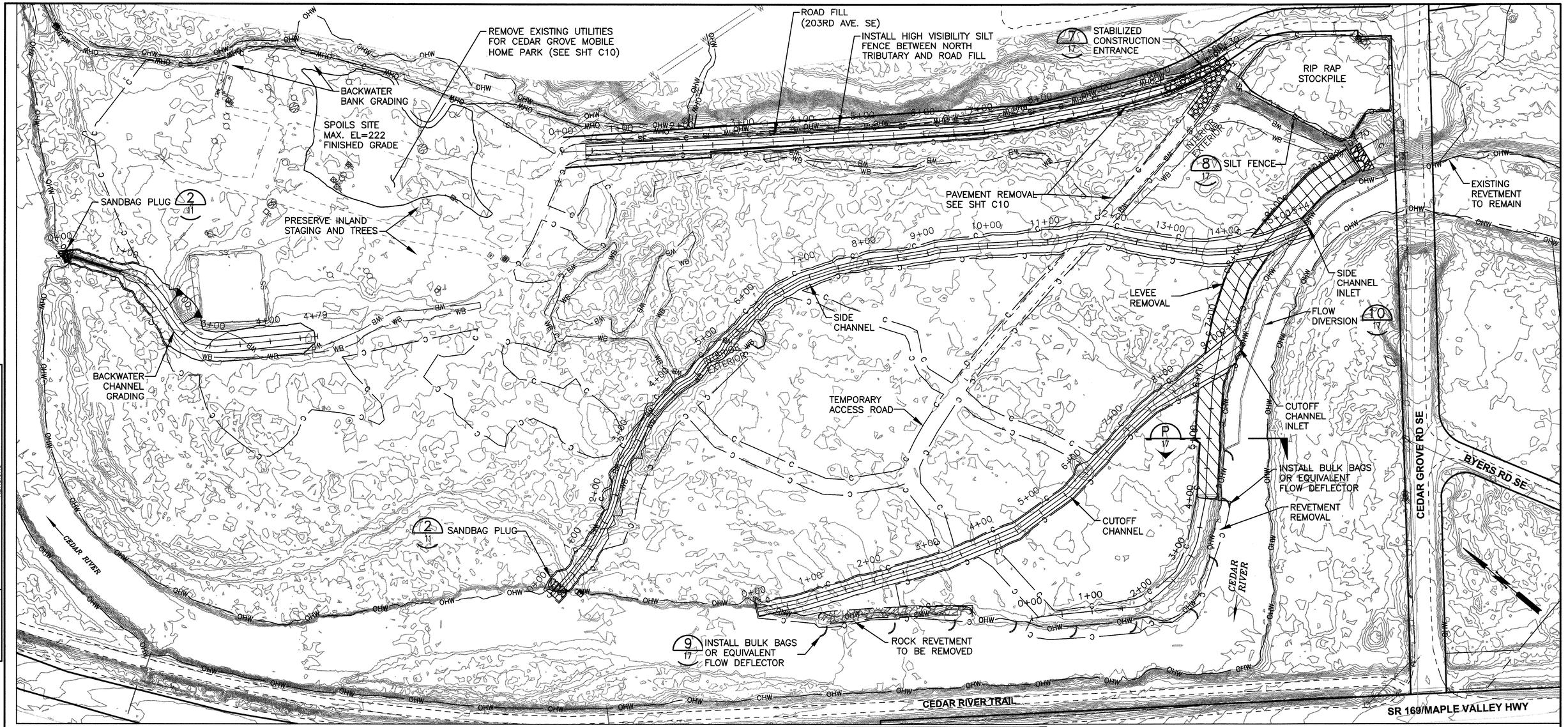
STATE OF WASHINGTON · WILLIS R. MANSFIELD · 48388 · REGISTERED PROFESSIONAL ENGINEER
4-1-13

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO. APPROVED
FUND:
SCALE: ####
INSPECTOR'S BOOK

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777–747
15 OF 22



TEMPORARY EROSION AND SEDIMENT CONTROL NOTES :

1. INSTALL TEMPORARY CONSTRUCTION ACCESS PAD AS PER PLAN.
2. INSTALL SILT FENCE AT BOTTOM OF SLOPE AS PER PLAN.
3. THE ESC FACILITIES MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO INSURE THAT SEDIMENT LADEN WATER DOES NOT ENTER THE DRAINAGE SYSTEM OR VIOLATE APPLICABLE WATER STANDARDS. (KCC 9.04.020 AA, KCRS 7.09 D).
4. INSTALL FLOW DIVERSION MEASURES AS NEEDED FOR REVETMENT REMOVAL AT THE RAINBOW BEND LEVEE.
5. ALL IN CEDAR RIVER WATER WORK SHALL COMPLY WITH THE WASHINGTON STATE DEPARTMENT OF FISH AND WILDLIFE HYDRAULIC PERMIT APPROVAL CONDITIONS AND OTHER PERMIT CONDITIONS. MUST MAINTAIN STATE WATER QUALITY STANDARDS.
6. BIODEGRADABLE HYDRAULIC FLUID AND DIESEL FUEL WILL BE USED IN ALL EQUIPMENT OPERATING IN THE OHWM OF THE CEDAR RIVER OR WITHIN A WETLAND BOUNDARY.
7. PLACE CONSTRUCTION ACCESS ONLY AFTER PAVEMENT IS REMOVED.

80 0 80 160 240
SCALE IN FEET

SWPP LEGEND

SF SF SILT FENCE
C C CONSTRUCTION LIMITS
SILT FENCE XX CSEC2

CALL 2 WORKING DAYS BEFORE YOU DIG
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

CONSTRUCTION STORMWATER AND EROSION CONTROL PLAN

NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

VAULT SERIAL NO.

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT16 CESC PLAN.dwg
lucyt Mar-28-13 8:42am

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Department of Natural Resources and Parks
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Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

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SEATTLE, WASHINGTON 20
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Seattle Public Utilities
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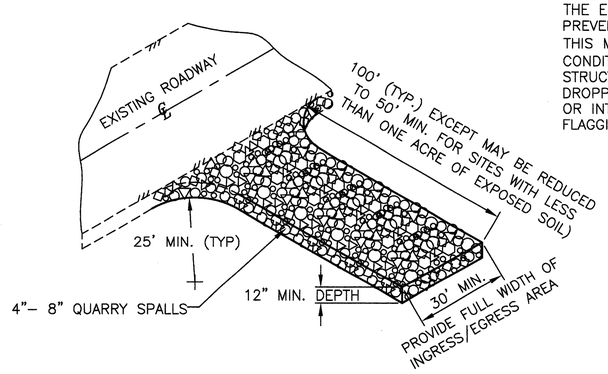
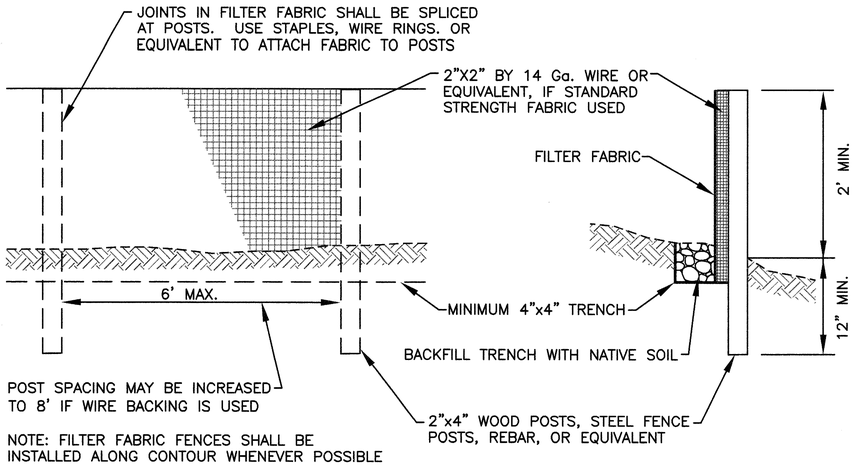
RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
16 OF 22

NOTE:
THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 2" STONE, AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN-OUT OF ANY STRUCTURES USE TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. PROVIDE FLAGGING FOR CONSTRUCTION VEHICLES ENTERING AND LEAVING SITE.

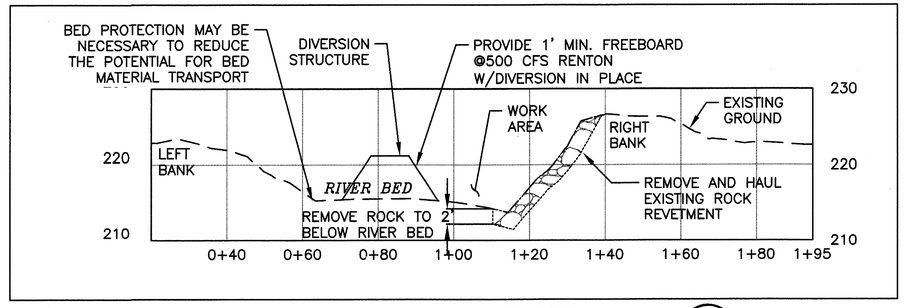


STABILIZED CONSTRUCTION ACCESS
NTS — 7 / 16

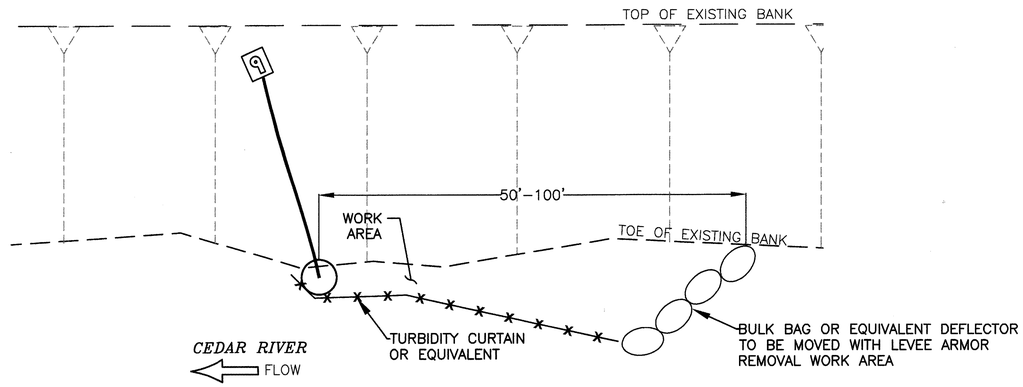


SILT FENCE DETAIL
NTS — 8 / 16

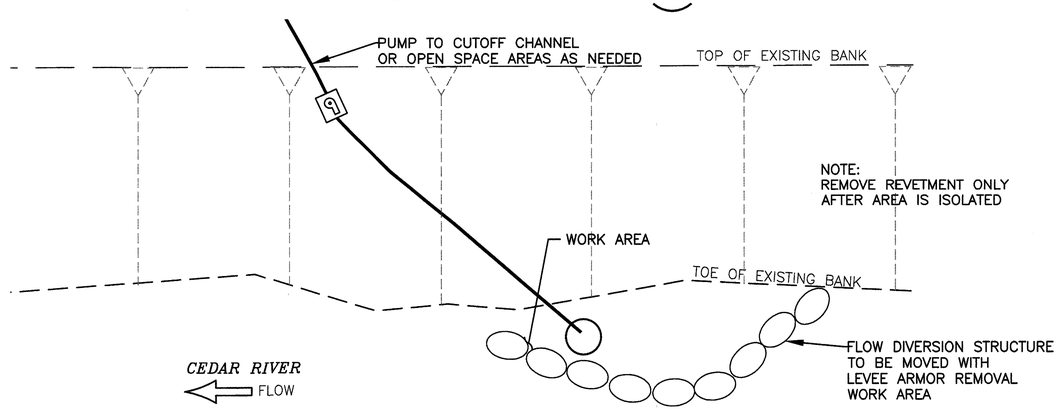
1. MAXIMIZE DETENTION OF STORMWATER BY PLACING FENCE AS FAR AWAY FROM TOE OF SLOPE AS POSSIBLE WITHOUT ENCROACHING ON SENSITIVE AREAS OR OUTSIDE OF THE CLEARING BOUNDARIES.
2. INSTALL SILT FENCING ALONG CONTOURS WHENEVER POSSIBLE.
3. INSTALL THE ENDS OF THE SILT FENCE TO POINT SLIGHTLY UP-SLOPE TO PREVENT SEDIMENT FROM FLOWING AROUND THE ENDS OF THE FENCE.
4. PERFORM MAINTENANCE IN ACCORDANCE WITH STANDARD SPECIFICATIONS 8.01.3(9)A AND 8.01.3(15).



FLOW DIVERSION SECTION
SCALE: 1"=20' HORIZ., 1"=10' VERT. — P / 16



APPLICATION OF FLOW DEFLECTION STRUCTURE DETAIL (TYP.)
NTS — 9 / 16



FLOW DIVERSION STRUCTURE DETAIL (TYP.)
NTS — 10 / 16

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

CONSTRUCTION STORMWATER AND EROSION CONTROL DETAILS

NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

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Water and Land Resources Division
Rural and Regional Services Section
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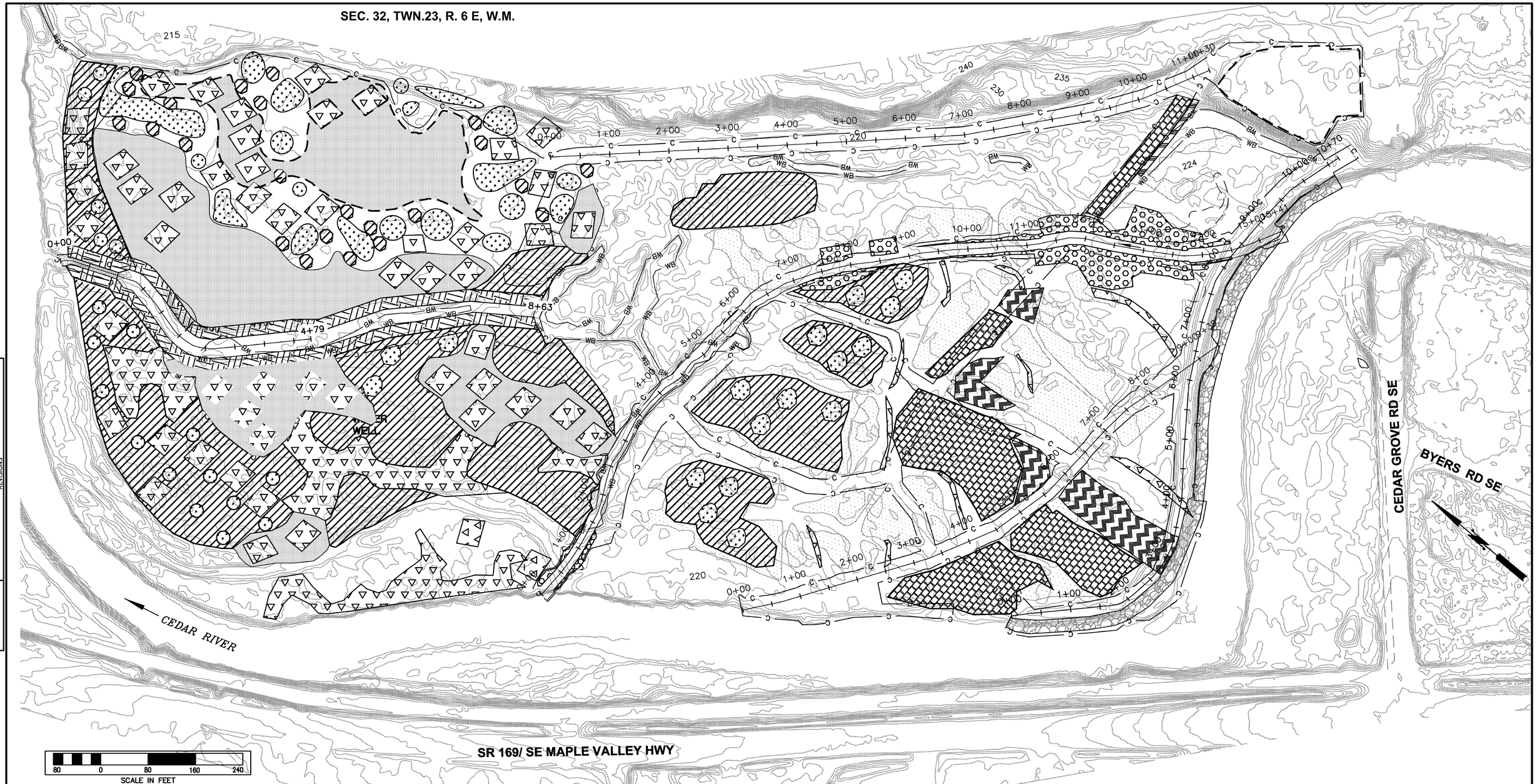
WILLIS R. MANSFIELD — STATE OF WASHINGTON — 18388 — REGISTERED PROFESSIONAL ENGINEER — 4-1-13

Seattle Public Utilities — **City of Seattle**
Ray Hoffman, Director
ORDINANCE NO. — APPROVED
FUND:
SCALE: **AS NOTED ABOVE** — INSPECTOR'S BOOK

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
17 OF 22

SEC. 32, TWN.23, R. 6 E, W.M.



80 0 80 160 240
SCALE IN FEET

NOTE:

1. REFER TO SHEET L2 FOR PLAN SCHEDULE AND LEGEND.

CALL 2 WORKING DAYS BEFORE YOU DIG
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(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

PLANTING PLAN

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
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SEATTLE, WASHINGTON 20

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Seattle Public Utilities
City of Seattle
Ray Hoffman, Director

ORDINANCE NO.
FUND:
SCALE: **1"=80'**
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RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777-747
18 OF 22

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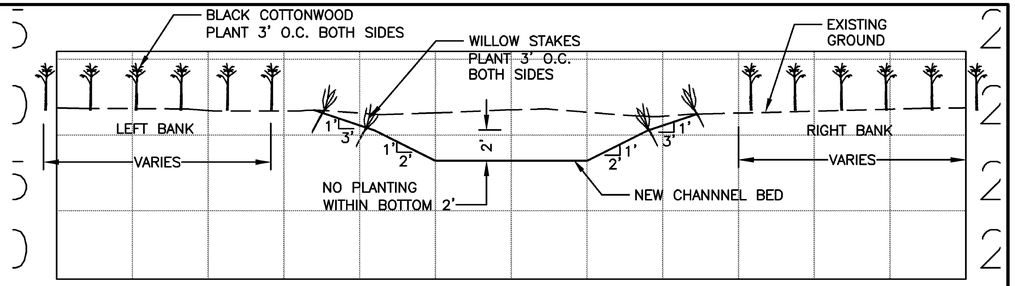
lucyt Apr-01-13 4:40pm

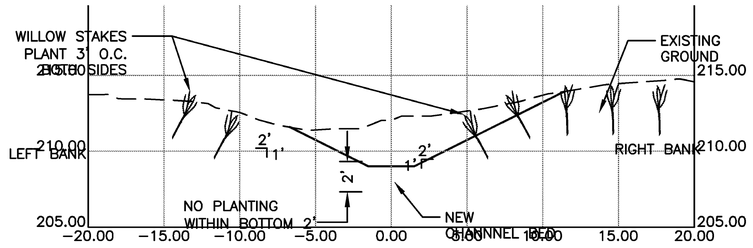
Rainbow Bend Planting Plan					
HATCH	**COMMON NAME**	**SCIENTIFIC NAME**	**QUANTITY**	**SPACING**	**CONDITION**
	OTHER TREES				
	Western red cedar	*Thuja plicata*	1000	8 feet O.C.	One gallon
	Sitka spruce	*Pinus sitchensis*	500	8 feet O.C.	One gallon
	Douglas fir	*Pseudotsuga menziesii*	450	8 feet O.C.	One gallon
	Oregon ash	*Fraxinus latifolia*	1000	8 feet O.C.	One gallon
	Cascara	*Rhamnus purshiana*	500	8 feet O.C.	One gallon
	Big leaf maple	*Acer macrophyllum*	400	10 feet O.C.	One gallon
	TOTAL		**3850**		
	SHRUBS				
	Red twig dogwood	*Cornus sericea*	750	6 feet O.C.	Bareroot
	Twinberry	*Lonicera involucrata*	600	5 feet O.C.	Bareroot
	Snowberry	*Symphoricarpos albus*	600	3 feet O.C.	Bareroot
	Salmonberry	*Rubus spectabilis*	600	4 feet O.C.	Bareroot
	Red elderberry	*Sambucus racemosa*	200	5 feet O.C.	Bareroot
	Thimbleberry	*Rubus parviflorus*	600	5 feet O.C.	Bareroot
	Vine maple	*Acer circinatum*	400	5 feet O.C.	Bareroot
	TOTAL		**3750**		
	Thimbleberry	*Rubis Parviflorus*	100	5 feet O.C.	Bareroot
	TOTAL		**100**		
	ALDER AND COTTONWOOD				
	Red alder	*Alnus rubra*	2690	5 feet O.C.	One gallon
	Black cottonwood	*Populus balsamifera*	2690	5 feet O.C	Live stakes
					5'Lx1/2-1"Dia.
	TOTAL		**5380**		
	BACKWATER CHANNEL PLANTING				
	Willow spp.	*Salix Stichensis*	2625	3 feet O.C	Live stakes
					5'Lx1/2-1" Dia.
	TOTAL		**2625**		
	SIDE CHANNEL PLANTING				
	Willow	*Salix Stichensis*	500	3 feet O.C	Live stakes
					5'Lx1/2-1" Dia.
	Cottonwood	*Populus balsamifera*	1000	3 feet O.C	Live stakes
					5'Lx1/2-1" Dia.
	TOTAL		**1500**		
	COTTONWOOD STAKING				
	Cottonwood	*Populus balsamifera*	7345	3 feet O.C	Live stakes
					6'Lx1"-2"Dia.
	Cottonwood	*Populus balsamifera*	2790	3 feet O.C	Live stakes
					6'Lx3"-5"Dia.
	TOTAL		**10135**		
	Grand Total		**27,340**		

EXISTING 2011/2012 PLANTING AREAS

SPOILS AREA

NATURAL RECRUITMENT AREA

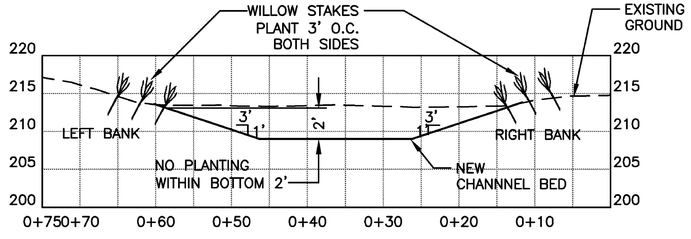




BACKWATER CHANNEL – BANK STABILIZATION
STA. 0+00 TO 1+00

V2 / L2

SCALE: 1"=5' HORIZ., 1"=5' VERT.



BACKWATER CHANNEL – BANK STABILIZATION
STA. 1+00 TO 4+79

V3 / L2

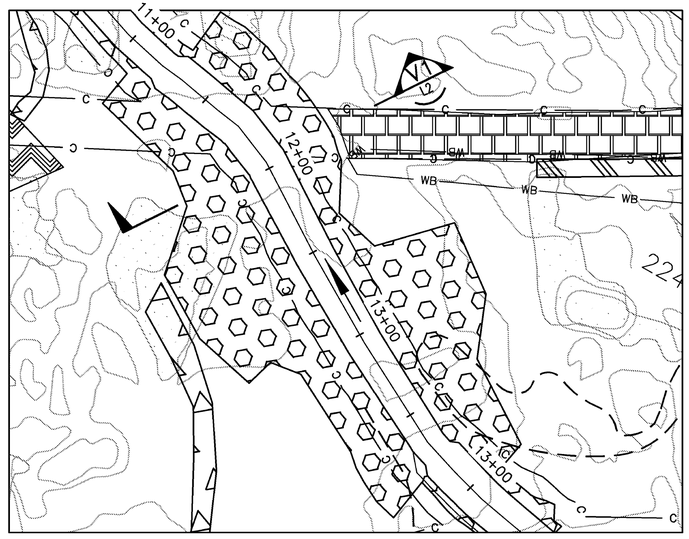
SCALE: 1"=10' HORIZ., 1"=5' VERT.

NOTE:
ALL SECTIONS LOOK DOWNSTREAM

SIDE CHANNEL – BANK STABILIZATION
STA. 0+00 TO 15+45 (TYPICAL)

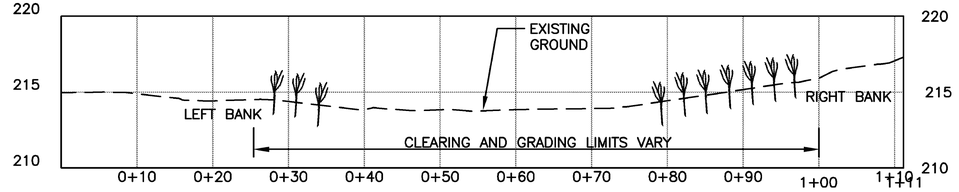
V1 / L2

SCALE: 1"=5' HORIZ., 1"=5' VERT.



SIDE CHANNEL
BANK STABILIZATION PLANTING PLAN

SCALE: 1"=40' HORIZ.



BACKWATER CHANNEL – BANK STABILIZATION
STA. 4+79 TO 8+63

V4 / L2

SCALE: 1"=10' HORIZ., 1"=5' VERT.

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PLANTING SCHEDULE AND SECTIONS

NO.	DATE	MARK	REVISIONS	MADE	CHK'D	REV'D
VAULT SERIAL NO.			NATURE			

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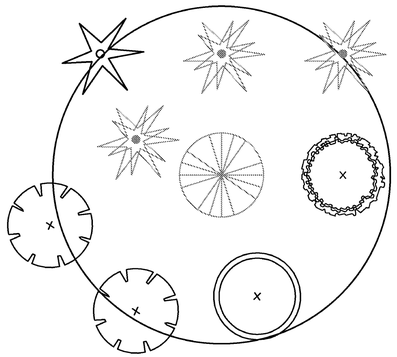
lucyt Apr-01-13 4:41pm



OTHER TREES
TYPICAL COMMUNITY PLANTING PLAN DETAIL

	COMMON NAME	SCIENTIFIC NAME	QUANTITY	SPACING	CONDITION	LOCATION
	Western red cedar	*Thuja plicata*	1000	8 feet O.C.	One gallon	Shade to part sun
	Sitka spruce	*Pinus sitchensis*	500	8 feet O.C.	One gallon	Shade to part sun
	Douglas fir	*Pseudotsuga menziesii*	450	8 feet O.C.	One gallon	Sun
	Oregon ash	*Fraxinus latifolia*	1000	8 feet O.C.	One gallon	Sun to part shade
	Cascara	*Rhamnus purshiana*	500	8 feet O.C.	One gallon	Shade to part sun
	Big leaf maple	*Acer macrophyllum*	400	10 feet O.C.	One gallon	Shade to part sun
	TOTAL		**3,850**			

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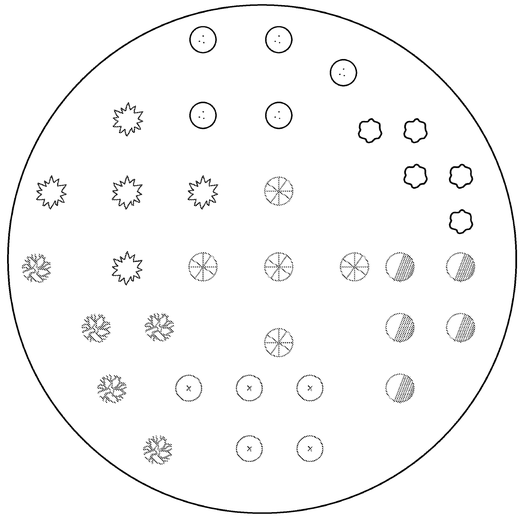
SCALE IN FEET



SHRUBS
TYPICAL COMMUNITY PLANTING PLAN DETAIL

	COMMON NAME	SCIENTIFIC NAME	QUANTITY	SPACING	CONDITION	LOCATION
	Red twig dogwood	*Cornus sericea*	750	5 feet O.C.	2' bareroot	Shade to sun
	Twinberry	*Lonicera involucrata*	600	5 feet O.C.	2' bareroot	Shade to sun
	Snowberry	*Symphoricarpos albus*	600	3 feet O.C.	1' bareroot	Shade to sun
	Salmonberry	*Rubus spectabilis*	600	4 feet O.C.	2' bareroot	Shade to sun
	Red elderberry	*Sambucus racemosa*	200	5 feet O.C.	2' bareroot	Shade to part sun
	Thimbleberry	*Rubus parviflorus*	600	5 feet O.C.	2' bareroot	Sun to part shade
	Vine maple	*Acer circinatum*	400	5 feet O.C.	2' bareroot	Shade
	TOTAL		**3,750**			

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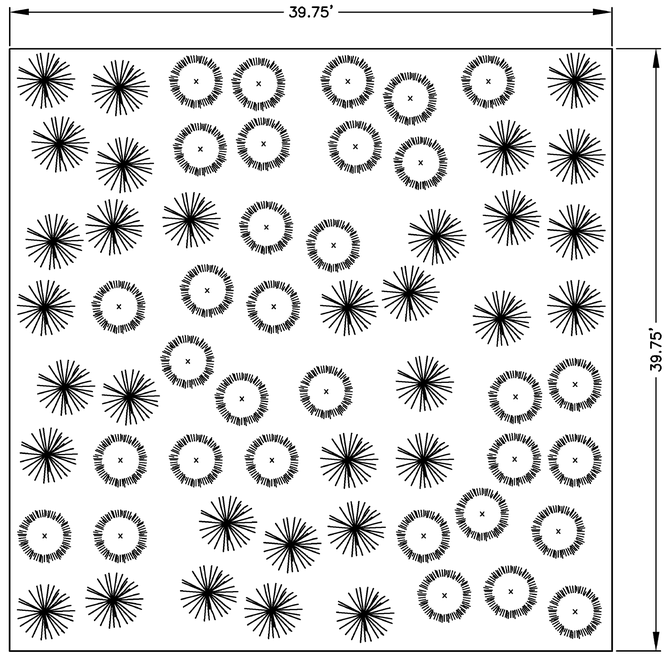

ALDER AND COTTONWOOD
TYPICAL COMMUNITY PLANTING PLAN DETAIL

	COMMON NAME	SCIENTIFIC NAME	QUANTITY	SPACING	CONDITION	LOCATION
	Red alder	*Alnus rubra*	2,690	5 feet O.C.	One gallon	Sun
	Black cottonwood	*Populus balsamifera*	2,690	5 feet O.C.	Stakes	Sun
	TOTAL		**5,380**			

5 0 5 10 15
SCALE IN FEET

NOTES:

GENERAL:

1)PLANTS WILL BE INSTALLED IN THE FALL/WINTER OF 2013/2014.

2)THE CONTRACTOR WILL WATER ALL PLANTS DURING THE GROWING SEASON OF 2014.

PLANTS:

1)CONIFERS AND DECIDUOUS TREES WILL BE PLANTED IN AREAS AT LEAST 8 FEET FROM EXISTING TREES.

2)HOG FUEL (WOOD CHIPS) SHALL BE USED TO SUPPRESS WEEDS AND RETAIN MOISTURE. HOG FUEL SHALL BE MADE UP OF TREES AND OTHER WOODY PLANTS ONLY AND CONSIST OF NO NON-WOOD MATERIAL. FOR INSTANCE, IT CANNOT BE MADE OF SUCH PRODUCTS AS PARTICLE BOARD AND PLYWOOD. IN OPEN AREAS (NOT UNDER PLANTINGS),HOG FUEL SHALL BE PLACED AT LEAST 6 INCHES DEEP AND 3 FEET WIDE IN DIAMETER AROUND EVERY BAREROOT AND POTTED PLANT MAKING CERTAIN THAT THE MATERIAL IS APPROXIMATELY 2 INCHES FROM THE PLANT. IT MUST BE PLACED IN APRIL 2014.

3)ALL SPECIFIED BAREROOT STOCK SHALL BE "BAREROOT TRANSPLANT QUALITY".

4)CONTRACTOR SHOULD BE AWARE THAT HERBIVORY BY ANIMALS SUCH AS DEER, VOLES, AND BEAVER SHOULD BE EXPECTED AND MAY AFFECT PLANT HEALTH AND SURVIVAL.

5)THE CONTRACTOR IS RESPONSIBLE FOR ALL PLANT PLACEMENT. ALL PLANTS SHALL BE INSTALLED IN AREAS ACCORDING TO THE REQUIRED LIGHT CONDITIONS. FOR INSTANCE, DOUGLAS FIR, WILLOW, COTTONWOOD AND ALDER SHOULD BE PLANTED IN FULL SUN AND VINE MAPLE SHALL BE PLANTED IN SHADE.

NATURAL RECRUITMENT AREAS:

1)TWO ONE ACRE PLOTS WILL BE RESERVED IN THE NATURAL RECRUITMENT AREAS TO TEST TREATMENTS TO ENCOURAGE NATURAL RECRUITMENT.

2)NO COMPACTION OF SPOILS WILL BE ALLOWED IN THE NATURAL RECRUITMENT AREA.

FUTURE PLANTINGS (NOT IN CONTRACT):

1)ALDER AND COTTONWOOD WILL BE PLANTED AFTER THE FIRST GROWING SEASON IF NATURAL RECRUITMENT IS FOUND TO BE UNSUCCESSFUL.

2)ADDITIONAL CONIFERS AND SHRUBS WILL BE PLANTED AFTER SHADE IS CREATED BY ALDER AND COTTONWOOD (IE AFTER THE SECOND GROWING SEASON).

3)SHRUBS AND TREES WILL BE WATERED AS NEEDED IN THE SPRING/SUMMER OF 2015 AND 2016.

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

PLANT COMMUNITY LAYOUT DETAILS

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT18 PLANT PLAN.dwg
lucyt Apr-01-13 4:42pm

King County
Department of Natural Resources and Parks
Water and Land Resources Division
Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

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DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20

BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

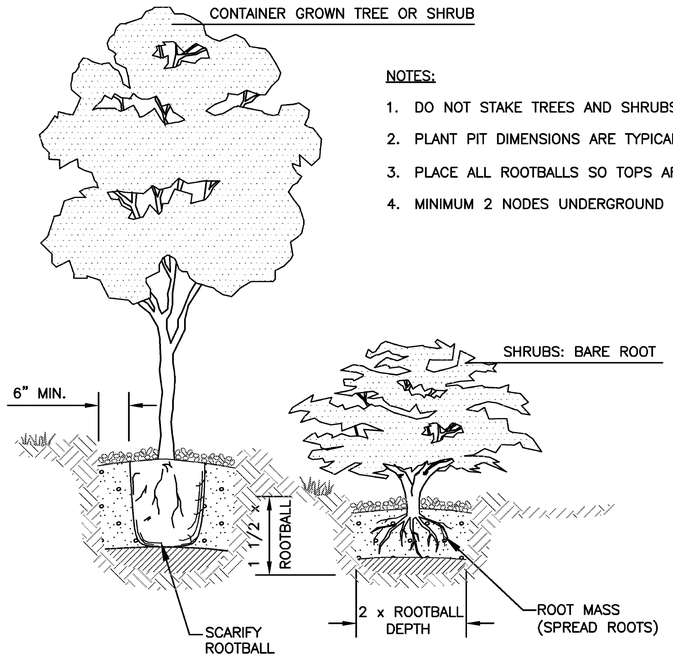
NAME OR INITIALS AND DATE		INITIALS AND DATE	
DESIGNED	C. YOUNG (4/2013) K. AKYUZ (4/2013)	REVIEWED: DES.	CONST.
CHECKED	J. HANSEN (4/2013)	SDOT	PROJ. MGR.
DRAWN	L. TRAXINGER (4/2013)	RECEIVED	
CHECKED	J. HANSEN (4/2013)	REVISED AS BUILT	

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: **N/A**
APPROVED
INSPECTOR'S BOOK

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

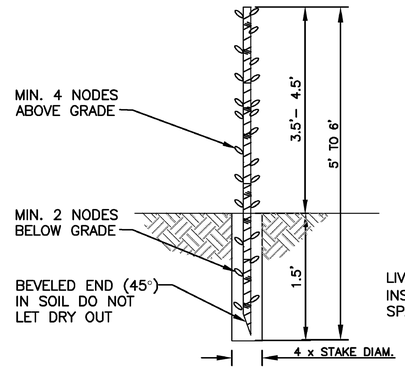
JOB NO: PC 1044405 R/W CO
VAULT PLAN NO. 777-747



NOTES:

1. DO NOT STAKE TREES AND SHRUBS
2. PLANT PIT DIMENSIONS ARE TYPICAL FOR ALL TREES AND SHRUBS.
3. PLACE ALL ROOTBALLS SO TOPS ARE LEVEL W/FINISH GRADE.
4. MINIMUM 2 NODES UNDERGROUND FOR LIVE STAKES.

TREE, SHRUB AND DETAIL
NTS



LIVE STAKE INSTALLATION: INSTALL LIVE STAKES AT 3' SPACING. INSTALL PER DETAIL.

LIVE STAKE DETAIL
NTS

CALL 2 WORKING DAYS BEFORE YOU DIG
1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

PLANTING DETAILS

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT18 PLANT PLAN.dwg
lucyt Apr-01-13 4:43pm

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Ecological Restoration and Engineering Services Unit
Christie True, Director

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DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20

BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE		INITIALS AND DATE
DESIGNED	C. YOUNG (4/2013) K. AKYUZ (4/2013)	REVIEWED: DES. CONST. SDOT PROJ. MGR.
CHECKED	J. HANSEN (4/2013)	
DRAWN	L. TRAXINGER (4/2013)	RECEIVED
CHECKED	J. HANSEN (4/2013)	REVISED AS BUILT

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Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: **N/A**
APPROVED
INSPECTOR'S BOOK

RAINBOW BEND LEVEE REMOVAL AND FLOODPLAIN RECONNECTION

JOB NO. PC 1044405 R/W CO
VAULT PLAN NO. 777–747
21 OF 22

SEC. 32, TWN.23, R. 6 E, W.M.

SCALE IN FEET 80 0 80 160 240

203RD AVE SE

ROAD FILL

SPOILS SITE 1

SPOILS SITE 2
MAX. EL=222'

SIDE CHANNEL

SIDE CHANNEL INLET

CUTOFF CHANNEL INLET

CUTOFF CHANNEL

WETLAND E
167 S.F.

SE 180TH ST

SEE DETAIL INSET THIS SHEET

BACKWATER CHANNEL GRADING

LEVEE REMOVAL

REVETMENT REMOVAL

ROCK REVETMENT TO BE REMOVED

ROCK PLACEMENT

CEDAR RIVER

CEDAR GROVE RD SE

BYERS R

CEDAR RIVER TRAIL

SR 169/ SE MAPLE VALLEY HWY

DETAIL INSET

RAINBOW BEND STAKING TABLE	
DESIGN FEATURE	**POINTS**
Levee and Revetment Removal	2986-2999
Revetment Removal	2978-2999
Cutoff Channel	3001-3020
Side Channel	3021-3052
Backwater Channel	3076-3087
203rd Ave SE Road Fill	3053-3075
Spoils 1	3119-3133
Spoils 2	3088-3089,3102-3109,3111-3118
Large Deciduous Wood	3155-3163
Landsburg Wood Boundaries	3164-3217
Backwater Channel Wood	3218-3220

NOTE:
SEE POINT LIST FOR COORDINATES
OF ALL STAKING POINTS

CALL 2 WORKING DAYS BEFORE YOU DIG 1-800-424-5555
(UNDERGROUND UTILITY LOCATIONS ARE APPROX.)

STAKING PLAN

VAULT | SERIAL NO. | DATE | MARK | NATURE REVISIONS | MADE | CHK'D | REV'D

I:\2006-27 Rainbow Bend_Cedar Grove Rest\DWG\006-27 RB SHT22 STAKING PLAN.dwg
lucyt Mar-28-13 8:45am

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Rural and Regional Services Section
Ecological Restoration and Engineering Services Unit
Christie True, Director

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DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20

BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE		
DESIGNED	W. MANSFIELD, J. BETHEL D. EASTMAN, T. THINLEY, (ALL 4/13)	
CHECKED	WILL MANSFIELD	(4/13)
DRAWN	L. TRAXINGER	(4/2013)
CHECKED	W. MANSFIELD	(4/2013)

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INITIALS AND DATE	
REVIEWED:	
DES.	CONST.
SDOT	PROJ. MGR.
RECEIVED	
REVISED AS BUILT	

WILLIS R. MANSFIELD — STATE OF WASHINGTON — 46388 — REGISTERED PROFESSIONAL ENGINEER — 4-4-13

Seattle Public Utilities
ORDINANCE NO.
FUND:
SCALE: ####

City of Seattle
Ray Hoffman, Director
APPROVED
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22 OF 22