

SETTLEMENT AGREEMENT

This Settlement Agreement ("**Agreement**") is by and between Skagit County Dike, Drainage, and Irrigation Improvement District 12 (hereinafter "**DDID12**"); the City of Sedro-Woolley (hereinafter "**Sedro-Woolley**"); and the City of Burlington (hereinafter "**Burlington**"), pursuant to RCW Chapter 39.34.

RECITALS

- A. DDID12 and Burlington are substantially located in FEMA's 100 year flood plain and both entities desire to provide adequate flood protection for their communities.
- B. Sedro-Woolley is located upstream of DDID12 and Burlington and is concerned about potential upstream impacts to Sedro-Woolley from flood protection projects planned by DDID12 and Burlington, specifically increased flood waters in Sedro-Woolley as a direct result of planned projects downstream.
- C. DDID12 and Burlington completed a final environmental impact statement on July 16, 2010 ("EIS") which studied several alternatives to provide meaningful flood protection to Burlington and portions of DDID12.
- D. DDID12 selected Certified Levee Alternative 2, SR 20 to Pulver Road ("Alternative 2") from the EIS and applied for a Shoreline Substantial Development permit # PL12-0191 (hereinafter "permit") on July 9, 2012, attached hereto and incorporated as Exhibit "A", to build a portion of Alternative 2 from South Gardner Road to Lafayette Road.
- E. Public hearing was held on June 12, 2013 and the Hearing Examiner approved the application in a written decision issued on June 28, 2013 determining that the proposal was consistent with Skagit County Shoreline Management Master Program.
- F. Sedro-Woolley appealed the Skagit County Hearing Examiner's decision to the Skagit County Commissioners on July 2, 2013, who remanded the matter to the Hearing Examiner under Resolution #R20130278 on September 10, 2013.
- G. The parties also acknowledge the inherent statutory rights and powers which authorizes DDID12 to initiate and pursue levee and dike repairs, improvements, and emergency powers, for the protection of the public, life and property, including authority granted by RCW 85 *et seq.*, and federal programs under U.S. Army Corps of Engineers, and including PL84-99.

- H. The parties agree that the community and its taxpayers are best served by a cooperative, collective approach to public infrastructure, including flood protection, through joint planning and financing, to maximize efficiency and promote economies of scale and to minimize unnecessary delays and costs related to litigation.
- I. The parties have met numerous times as part of the Hearing Examiner remand in an attempt to find an agreed upon solution to the current appeal.
- J. The parties acknowledge DDID12's needs to pursue work within the scope of the permit identified in the FEIS dated July 16, 2010. Sedro-Woolley, however, has appealed due to its concern regarding future work, and potential impacts of flooding after the completion of permit work, and relating to any unknown future work or project including tieback to higher ground.
- K. The parties to this Agreement have expressed a willingness to negotiate and reach agreements to avoid costly litigation and land use appeals regarding future projects in favor of a more collaborative and coordinated approach on future projects and flood impacts, if possible, while retaining abilities of each entity to protect their jurisdictions.
- L. This Agreement is also for the purpose of settling, resolving and terminating the Sedro-Woolley appeal to allow DDID12 to continue with all work approved under the permit, without disruption, delay or interference of DDID12's statutory rights and powers under RCW 85 *et seq.* for protection of life and property.

NOW, THEREFORE, in consideration of the foregoing, the parties make this Agreement based upon the follows terms and conditions:

AGREEMENT

1. **AGREEMENT.** This Agreement shall become effective when all parties set forth above have duly executed this Agreement.
2. **WITHDRAWAL OF APPEAL.** Sedro-Woolley shall withdraw its appeal currently pending on remand before the Skagit County Hearing Examiner and further agrees during the term of this Agreement to not oppose, delay, interfere with, or appeal DDID12's and/or Burlington's projects that are part of Alternative 2 permit scope of work more particularly described in permit, Exhibit "A" and Exhibit "B" (hereafter "EIS 2.2b"), *provided* that EIS 2.2b shall not include any tie back to higher ground.

3. SEDRO-WOOLLEY WWTP. During and subsequent to completion of permit work under EIS 2.2.b, DDID12 and Sedro-Woolley shall discuss the extent of any impacts from permit work to Sedro-Woolley and Sedro-Woolley's Wastewater Treatment Plant ("WWTP") to determine if there is any basis for cooperation in obtaining funding or joint participation, and interlocal agreements, which may be available to enhance flood protection for the WWTP. The parties may agree to cost-sharing if possible and practicable. After mutual agreement of terms, DDID12 may provide a set of design, construction and as-built documents in format acceptable to Sedro-Woolley for review.

4. UGH DISTRICT 304 PROTECTION PROJECT. In consideration of this settlement, DDID12 agrees, at its own expense, with the exception of Sedro-Woolley contributions noted in this paragraph below, to move forward with planning, preparation and performance of work for ultimate completion of the United General Hospital/Public Hospital District 304 vicinity flood control project, including a ring dike and possible adjacent properties within DDID12's District (hereinafter "UGH Project"). Sedro-Woolley will at its expense continue to provide the normal and customary services provided by Sedro-Woolley including but not limited to police and security services, fire and public safety duties, road construction and highway services, planning and permit services, and land use actions and inspections, and in addition will participate in planning and coordination meetings with DDID12 and other parties in an effort to make this project successful. Burlington will not oppose or appeal permits for this project.

5. COOPERATION AND JOINT PARTICIPATION. The parties agree to continue to communicate and pursue possible joint participation in flood control and protection measures within the cities of Burlington, Sedro-Woolley, and DDID12's District. Parties will also endeavor to pursue agreements for funding, cost-sharing, including any applicable partnership, interlocal agreement, or joint participation agreement to obtain funding for flood control to the joint benefit of all parties. All parties agree to the free exchange of information, surveying, plans, engineering, studies, and hazard mitigation plans which become available, or are requested by any other party.

6. FUTURE PROJECTS AFTER COMPLETION OF PERMIT WORK POTENTIALLY IMPACTING SEDRO-WOOLLEY. After the completion and approval of DDID12's current permit scope of work any future planned scope of work for flood protection projects relating to or affecting this permit project area by DDID12 or Burlington, including physical improvements, levee modifications, or other related projects, and which may have potential adverse effects on Sedro-Woolley (i.e., increased flooding or risk of flooding) shall be submitted pursuant to the terms of this section.

A. A notice summarizing the proposed project including a detailed scope of work shall be given to Sedro-Woolley. This notice shall require a

response within 30 days from Sedro-Woolley and a statement regarding whether the planned project would constitute a flood risk or have detrimental effects to Sedro-Woolley or if additional data from DDID12 or Burlington is needed to accurately evaluate the proposed project. Sedro-Woolley shall respond within 30 days of receipt with either an approval of DDID12's proposed project or with written communication regarding detailed concerns and specific questions or a request for specific information/data that may resolve those specific concerns or be required for Sedro-Woolley to analyze the impacts of the proposed project.

- B. DDID12 will respond in writing within 30 days, including providing additional data, if any is available. The parties will meet within this period to discuss, review and attempt to come to an agreed proposed project scope. Additional time may be allocated to this step as agreed upon to produce additional data.
- C. In the event agreement is still not reached regarding DDID12's proposed project, the parties may, upon mutual agreement, continue for an additional 30 days, or longer if agreed, to negotiate further and exchange engineering analysis, hydrology, and to meet to further attempt to reach agreement. Also during this time, and in the event that all parties agree, then this matter may be submitted to mediation, along with agreement to extend this 30 day period as needed to select a mediator and proceed to a mediation of this dispute. In the event that the parties have still not reached agreement by the end of this time limit or mutually accepted extension of time, or by the end of any agreed mediation, then DDID12 will provide written notice to Sedro-Woolley that due to failure to reach agreement that it intends to terminate this process and to proceed to filing its Permit Application.
- D. In this case, DDID12 may exercise all legal rights it otherwise has to submit the project for Permit Application approval. Each party shall retain their respective rights to exercise all legal remedies in any future Permit Appeal, LUPA action or litigation.
- E. During this process, each party agrees to share any available engineering data or studies, or plans available, or are requested by any other party to this Agreement, and shall not be unreasonably withheld. All parties to this Agreement agree to act in good faith. Timelines may only be extended by mutual agreement.
- F. In the event that Sedro-Woolley accepts DDID12's proposed scope of work and project, then the parties will proceed in good faith to memorialize an agreement in writing. This written agreement or stipulation shall then be available to submit to the County, or other

applicable administrative board dealing with permit approval, which may be incorporated in the staff findings of the County or other administrative body, or as otherwise needed by DDID12. The agreement may be subject to consideration and potential approval by the County or administrative body for issuance of a future permit. Once submitted, this agreement cannot be withdrawn unless the scope of the proposed project changes.

- G. The parties acknowledge that nothing herein prevents any party from taking any and all emergency measures it deems necessary during an emergency event, or declaration of emergency, or flood event, or as directed by the U.S. Army Corps of Engineers regarding flood protection, emergency repairs under PL84-99, or any disaster response required by any party under its statutory authorities or any other customary flood protection, or necessary measures for the protection of life and property.

7. INDEMNIFICATION. Each party to this Agreement shall indemnify and hold harmless the other parties and its officers, agents, and employees from any and all claims, actions, suits liability, loss, costs, expenses, and damages of any nature whatsoever, by any reason or arising out of any intentional or negligent act or omission of the indemnifying party, its officers, agents, and employees, or any of them relating to or arising out of the performance of service pursuant to this Agreement. In the event that any such claims, action, loss or damages is brought against the other parties to this Agreement, the indemnifying party shall defend the same at its sole cost and expense, including attorney fees.

8. TERM. This Agreement shall be effective for an initial ten (10) year term after which it shall be renewed for successive ten (10) year periods, unless terminated by any party to this Agreement by providing written notice to all parties to this Agreement at least six (6) months prior to the end of the initial term or any successive term. All parties to this Agreement acknowledge and agree to the need for cooperation, good faith dealings and responsibilities, and further agree not to unreasonably delay performance of provisions in this Agreement.

9. TIME IS OF THE ESSENCE. Time is of the essence in this matter, given that due to the unpredictability and ravages of flooding, that projects and repairs, and other similar work, need to be pursued on a timely and expeditious manner, to protect and avoid devastation and damages to communities, including all parties to this Agreement. All parties to this Agreement acknowledge this, and the need for cooperation, good faith and responsibilities of each entity and its public bodies to protect residents, within jurisdictions and outside of jurisdictions from damage to property and life from flood disasters.

10. VENUE. Venue and jurisdiction for any action arising under this Agreement shall lie in Skagit County Superior Court, Skagit County, Washington.

In the event of any dispute arising under this Agreement, the Court shall award attorney fees, costs, expert witness fees, mediation costs, and any and all other costs related to the dispute payable to the prevailing party.

11. NO THIRD PARTY BENEFICIARIES. This Agreement is not intended to benefit any person, entity or municipality not a party to this Agreement, and no other person, entity or municipality shall be entitled to be treated as beneficiary of this Agreement. This Agreement is not intended to nor does it create any third party beneficiary or other rights in any third person or party, including, but not limited to, any agent, contractor, subcontractor, consultant, volunteer, or other representative of any party. No agent, employee, contractor, subcontractor, consultant, volunteer or other representative of the parties hereto shall be deemed an agent, employee, contractor, subcontractor, consultant, volunteer or other representative of any other party hereto.

12. SEVERABILITY. In the event any term or condition of this Agreement or application thereof to any person or circumstances is held invalid by a court of competent jurisdiction, such invalidity shall not affect other terms, conditions or applications of this Agreement which can be given effect without the invalid term, condition or application. To this extent and end the terms and conditions of this Agreement are declared severable.

13. COMPLIANCE WITH LAWS. The parties to this Agreement shall comply with all applicable federal, state and local laws, rules and regulations in carrying out the terms and conditions of this Agreement. The parties shall obtain and comply with any and all necessary permits, approvals, consents and notice from or to all applicable jurisdictions prior to commencing any work or action related to this Agreement.

14. CAPTIONS AND COUNTERPARTS. The captions in this Agreement are for convenience and reference only, and do not define, limit, or describe the scope or intent of this Agreement. This Agreement may be executed in any number of counterparts, and each such counterpart hereof shall be deemed to be an original instrument, but all such counterparts together shall constitute one Agreement.

15. NO SEPARATE LEGAL ENTITY. This Agreement establishes a cooperative undertaking, and it is not the intention of the parties to create a new or separate legal entity by this Agreement. This Agreement does not establish or create a joint venture or partnership between the parties, and no party shall be responsible for the liabilities and debts of the other parties hereto.

16. INTEGRATED AGREEMENT. This is an integrated agreement. Neither party has relied on any representation other than those expressly set forth herein in entering this Agreement.

17. NEUTRAL AUTHORSHIP. Each of the terms and conditions of this Agreement have been reviewed and negotiated with resort to legal counsel, and represents the combined work product of the parties hereto, and this Agreement shall not be interpreted for or against parties herein. The parties represent that they have had a full and fair opportunity to seek legal advice with respect to the terms of this Agreement, and have either done so or have voluntarily chosen not to do so. The parties represent and warrant that they and their authorized representatives executing this Agreement have fully read this Agreement, that they understand its meaning and effect, and that they enter into this Agreement with full knowledge of its terms.

18. FURTHER ACTS. The parties agree to take such further actions and to execute documents as in their reasonable judgment may be necessary or desirable in order to carry out the terms of, and complete the transactions contemplated by, this Agreement.

[remainder of page left intentionally blank]

DATED this 12th day of February, 2018.


BOARD OF DIKE, DRAINAGE, AND
IRRIGATION IMPROVEMENT
DISTRICT No. 12
SKAGIT COUNTY, WASHINGTON



John E. Burt, Commissioner

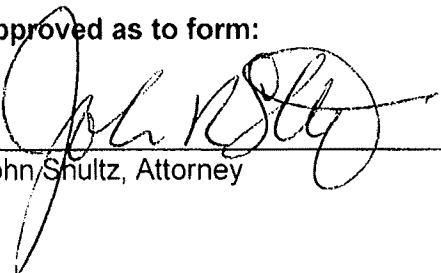


Ed Tjeerdsma, Commissioner



Lorna Ellestad, Commissioner


Approved as to form:



John Shultz, Attorney

DATED this 3rd day of May 2018.

CITY OF BURLINGTON



Mayor Steve Sexton

Attest:



Finance Director

Approved as to form:



Leif Johnson, City Attorney

DATED this 1st day of May 2018.

CITY OF SEDRO-WOOLLEY




Mayor Julia Johnson

Attest:



Patsy Nelson, Finance Director

Approved as to form:



Eron Berg, City Attorney



Planning & Development Services Fact Sheet
Community Development Division

PL# 12-019/
Date Received

- ☐ Binding Site Plan
- ☐ Bldg Permits Triggering SEPA
- ☐ Fill & Grade Triggering SEPA
- ☐ Forest Practice Waiver - HE
- ☐ Level II, III and IV Applications
- ☐ Long CaRD ☐ Pre ☐ Final
- ☐ Plat or SPU Modification

- ☐ Rezone
- ☒ Shoreline Substantial Use Permit
- ☐ Short CaRD
- ☐ Short Plat
- ☐ Special Use Permit Level II
- ☐ Variance Level II
- ☐ Other : _____

SKAGIT COUNTY
PERMIT OFFICE

JUN 14 2011

RECEIVED

1. Applicant name: Skagit County Dike, Drainage and Irrigation District No. 12
2. Proposed project description: Levee Maintenance
3. Related Permits or Approvals: Fill and Grade
4. Parcel ID#: P38223 Assessor Tax #: P38305 P38304 P38302 P38307
Parcel ID#: P38303 Assessor Tax #: P38220 P38308
5. Section 33 Township 35 N Range 4 E Comprehensive Plan/Zoning Designation: Ag-NRL
6. Site Address: N/A
7. Lot of Record: ☐ Yes ☒ No PL# N/A
8. Urban Growth Area: ☐ Yes ☒ No If yes, City: _____
9. Comp Plan/Zoning within 200 feet: Ag-NRL
10. Mineral Resource Overlay within 1/4 mile ☐ Yes ☒ No
11. Critical Area/Water within 200 feet: ☒ Yes ☐ No
12. Acreage/Lot Dimensions: N/A
13. Flood Zone: A7 FIRM Map Panel # 0250 C and 0235 C Map Date: 1/03/1985
14. Road access: ☒ Private ☐ County - Permit # _____ ☐ State - Permit # _____
15. Water Source: ☐ Drilled well - Permit # N/A ☐ Community Well ☐ Public _____
16. Sewage Disposal: ☐ Septic - Permit # N/A ☐ Public Sewer: _____
17. Legal Description: _____

(Attach additional sheet if necessary.)

Ex 2



Planning & Development Services
Community Development Division

Applicant

Dan Lefeber, Manager

Name

1317 S Anacortes Street, Burlington, WA 98233

Address

360-757-3484

360-757-1214

dkdist12@cnw.com

Phone

Fax

e-mail address

Signature:

Owner

Skagit County Dike, Drainage and Irrigation District No. 12

Name

1317 S Anacortes Street, Burlington, WA 98233

Address

Phone

Fax

e-mail address

Contact

John B Semrau, PE & PLS

Name

2118 Riverside Drive, Suite 208, Mount Vernon, WA 98273

Address

360-424-9566

360-424-6222

john@semrau.com

Phone

Fax

e-mail address

Contractor (When applicable. If owner, write owner-builder)

Name

Address

Phone

Fax

e-mail address

Contractors License #

Expiration Date

OWNERSHIP CERTIFICATION

I, LORNA ELLESTAD, hereby certify that I am the major property owner or officer of the corporation owning property described in the attached application, and I have familiarized myself with the rules and regulations of Skagit County with respect to filing this application for a SHORELINE SUBSTANTIAL DEVELOPMENT PERMIT, FLOODPLAIN DRA and that the statements, answers and information submitted present the argument on behalf of this application and are, in all respects, true and correct to the best of my knowledge and belief.

Street Address: 1317 S ANACORTES STREET,

City, State, Zip: BURLINGTON, WA 98233

Phone: (360) 757-3484

Signature(s):

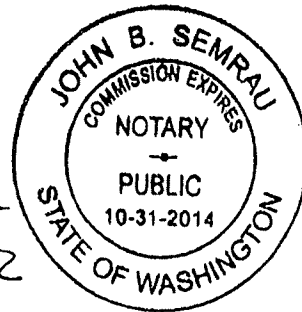
Lorna Ellestad

DISTRICT COMMISSIONER

for:

SKAGIT COUNTY DIKE DRAINAGE
(corporation or company name, if applicable)

AND IRRIGATION DISTRICT NO. 12



ACKNOWLEDGMENT

STATE OF WASHINGTON

COUNTY OF SKAGIT

On this day personally appeared before me LORNA ELLESTAD to me known to be the individual(s) described in and who executed the within and foregoing instrument, and acknowledged that they signed the same as their free and voluntary act and deed for the uses and purposes therein mentioned.

GIVEN under my hand and official seal this 5 day of JULY, 2007, 2012

[Signature]

Notary Public in and for the State of Washington
Residing at MOUNT VERNON

My Commission Expires 10-31-2014

Skagit County Dike, Drainage and Irrigation District No. 12
Skagit County, WA

This application is for a Shoreline Substantial Development Permit pursuant to WAC 173-27-040. This project involves work on the top and landward side of the levee. This project will be within shorelines of state-wide significance (RCW 90.58.030). Portions of this project will be within the Skagit River shoreline within a Rural Residential designation. The master program provision applicable to this development is the Skagit County Shoreline Management Master Program, SCC 14.26.

This project and application is submitted by Skagit County Dike, Drainage and Irrigation District No. 12. This Application for Permit is made for maintenance, elevation maintenance, repair, post-flood repair, backsloping, critical facility protection, installation of keyways, sheet pile walls, restoration, and to improve the existing Levee within Dike District 12 to conform to the plan, standards and specifications of the "City of Burlington and Dike District No. 12 Levee Certification Project." The Project is also known as the "Existing Northeastern Levee" or "Northeastern Area Project" and is the construction phase of the first Project Action identified within the "FINAL ENVIRONMENTAL IMPACT STATEMENT TO ADOPT A STRATEGIC PROGRAM FOR COMPREHENSIVE FLOOD HAZARD MITIGATION IN THE BURLINGTON URBAN AREA AND ADJACENT LAND WITH A RANGE OF STRUCTURAL AND NON-STRUCTURAL COMPONENTS," issued July 16, 2010 (EIS).

The purpose of this program is to reduce flood risk in the urban area while minimizing adverse impacts upstream and downstream of the levee system.

Strategic Goals Include:

- Protect the existing urban built environment without further expansion into the floodplain.*
- Reduce flood risk and improve safety for the 100-year flood event.*
- Implement flood measures which minimize risk to adjacent communities, in addition to Burlington's urban area, to the maximum practicable extent.*
- Ensure additional protection to the community by participating in the larger, regional planning effort for flood hazard mitigation.*

The levee system has existed for more than 100 years, and clearly existed prior to June 1, 1971 and WAC 173-27-040. This part of the Dike District No. 12 levee system was established in 1895.

Skagit River hydrology used for the design of this Project has been performed independently by the Corps of Engineers, Pacific International Engineering, and Northwest Hydraulic Consultants. A synopsis for the differences in their work can be found in the EIS. The measures considered in the final work by Northwest Hydraulic Consultants were defined in a series of meetings of the Skagit River Flood Risk Management General Investigation Study (Skagit GI) Project Delivery Team (PDT), and defined in discussions with several of the project stakeholders.

Skagit County Dike, Drainage and Irrigation District No. 12
Skagit County, WA

The investigation and analysis for the Project design is included in "Final Report, Geotechnical Investigation and Levee Analysis, City of Burlington and Dike District 12 Levee Certification Project, Burlington, Washington," prepared by Golder Associates Inc, November 20, 2009.

Demonstration of Endangered Species Act (ESA) and National Environmental Policy Act (NEPA) compliance has been addressed for this project in the EIS.

In September, 2008, the northwest Region of the National Marine Fisheries Service published a final Biological Opinion, pursuant to a judicial order, regarding the effects of elements of National Flood Insurance Program throughout the Puget Sound region. A series of Reasonable and Prudent Alternatives (RPAs) were included in the Biological Opinion.

Subsequently, FEMA has developed a model ordinance to provide guidance to local jurisdictions such as Burlington and Dike District 12 in implementing RPAs. The FEMA model ordinance proposed to meet RPA's has a definition of Protected Area that includes the Floodway, the Riparian Habitat Zone and the Channel Migration Zone/Area. The area in which the levees are located is classified as a Protected Area. Because no work will be undertaken on the waterward side of the levees, No Effect to listed species will occur to the Protected Area with the proposed action.

The "Floodway" (or "Flood-like Tool", Exhibit 6, pages 9 and 17) in Burlington and adjacent to the City, in accordance with the 1984 flood insurance study, is specifically limited to the area between the levees and extending landward from the toe a distance of 300 feet in the City and 500 feet in the County...

With the existing riverfront currently protected by a levee system, no changes are proposed to the Essential Fish Habitat, the Riparian Area, or the Floodway. There are two existing forested riparian habitat zones in locations where the existing levees are set back from the riverfront, a total of 1.29 miles out of a total of 4.6 miles of levee, or 28%. The remainder of the levees that are along the river frontage consist of mowed levee vegetation that is required to be maintained under Corps of Engineers levee vegetation maintenance standards, in order to maintain eligibility for emergency repairs under PL 84-99. Dike District 12 relies on this program to maintain its levees' structural integrity and to qualify for Corps of Engineers assistance during and after flood events.

Burlington and Dike District 12's proposal to achieve levee certification and subsequent FEMA accreditation without any changes on the river side of the existing levees is therefore expected to gain a "No Effect" on listed species or habitat.....

This Project relates strictly to the enlarging of both width and height of the existing levee in place for the 1.53 mile portion within Skagit County. Project extends from the Burlington City limits at Gardner Road north to the terminus south of the BNSF Railroad on Lafayette Road. Construction will occur on top of and landward of the existing levee. This Project is undertaken

Skagit County Dike, Drainage and Irrigation District No. 12
Skagit County, WA

for the protection of life and property in the City of Burlington and Skagit County, and for maintenance of flood control facilities relating to the Skagit River.

The Levee Certification process has established a new design template for this portion of the levee system. The portion of the Project within the City Limits of Burlington is from Station 79+00 at Whitmarsh Road to Station 159+00 at Gardner Road as shown on Sheets 2 through 9 of the 24 sheet plan set prepared by Reichhardt & Ebe Engineering, Inc, March 3, 2011 (R&E). This portion of the Project has been submitted for a Shoreline Master Development permit through the City of Burlington.

The portion of the Project included in the plan between Stations 159+00 to 240+00 as shown on Sheets 9 through 17 is located in the County and is the portion of the Project seeking coverage under a Shoreline Master Development Permit through Skagit County.

There are three active Fill and Grade Permits in place that permit maintenance fill up to the level of the existing levee top from Stations 159+00 to 232+00.

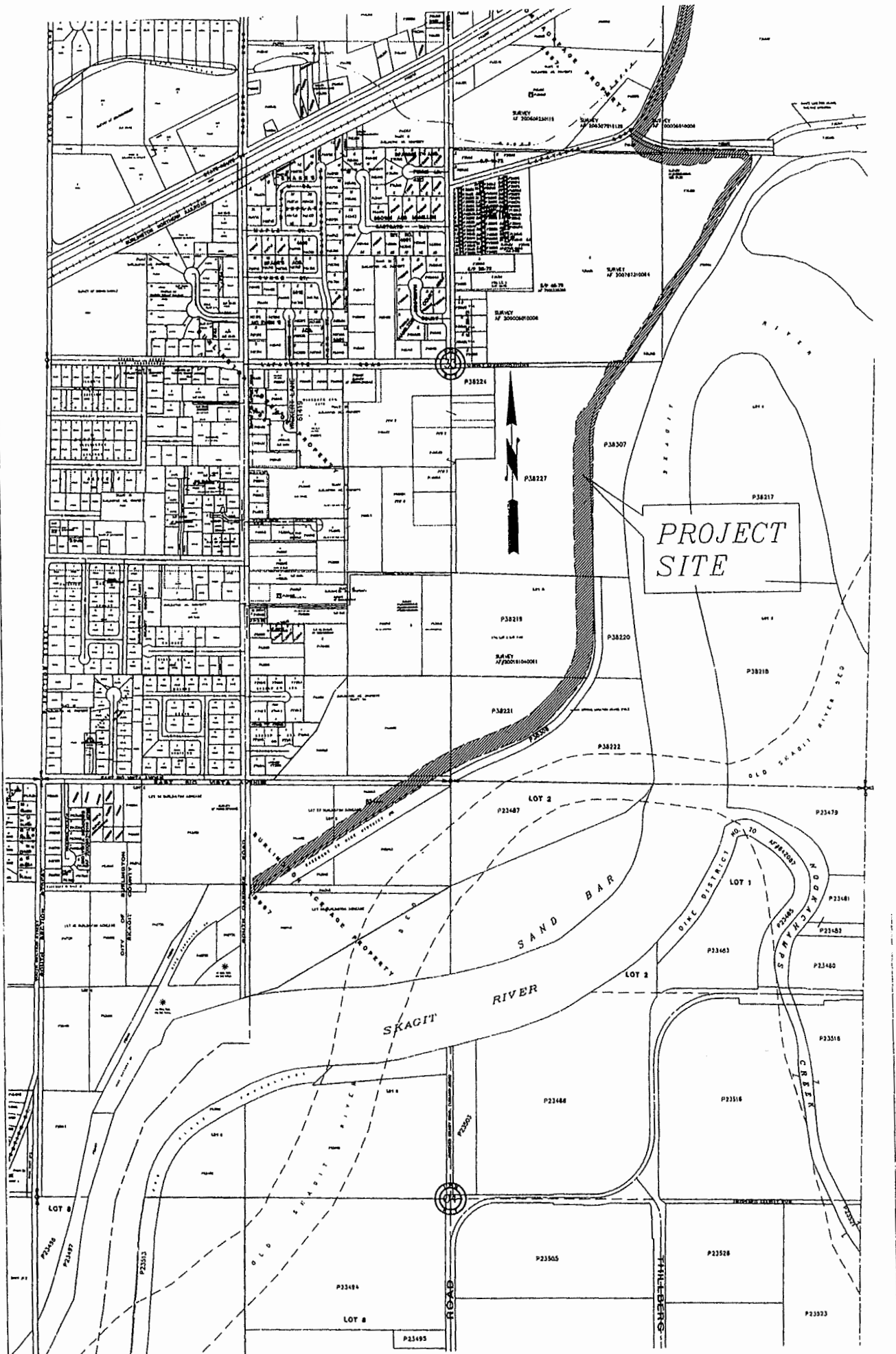
Fill and Grade Permit BP 07-0267 was submitted on March 15, 2007 and issued for construction on May 15, 2010. BP 07-0267 represents work on the R&E plan from Station 159+00 to 204+00. This permit expires on May 14, 2013.

Fill and Grade Permit BP 03-0564\BP 06-0817 with Shoreline Exemption PL 03-0487 was submitted on May 16, 2003, reissued on July 27, 2009 and expires on 7/26/2012. This work is almost complete and will be done before the expiration of this permit. This permit represents work on the R&E plan from Station 204+00 to Station 228+00.

Fill and Grade Permit BP 07-1051 was submitted on August 24, 2007, issued on November 5, 2010, and will expire November 14, 2013. This permit represents work from Station 228+00 to 232+00.

The County portion of the Project requires import of fill totaling 178,425 cubic yards. Of this quantity, 86,000 cubic yards have already been permitted leaving 92,425 cubic yards to be permitted to raise the levee top. SEPA requirements for this fill quantity have been included and covered by the Final EIS.

Boundary Line Adjustments for additional right-of-way and associated annexation to the City limits will need to occur between approximate stations 150+00 to 158+00.



SEMAU ENGINEERING & SURVEYING
 SURVEYING • ENGINEERING • PLANNING
 MOUNT VERNON, WA 98273 360-424-9566

VICINITY MAP

DATE: 5/25/12
 DRAWING: 4450VC.DWG
 JOB NO. 4450

DIKE 12 LEVEE CERTIFICATION

PHASE 1: NORTHWEST TERMINUS TO BNSF CROSS LEVEE

CITY OF BURLINGTON

SHEET INDEX

COV.) COVER SHEET	5.) DIKE 12 PLAN & PROFILE STA 110+00 TO 119+50	10.) DIKE 12 PLAN & PROFILE STA 163+00 TO 173+00	15.) DIKE 12 PLAN & PROFILE STA 210+00 TO 220+50	22.) S. GARDNER DEMO PLAN
KEY.) KEY MAP	6.) DIKE 12 PLAN & PROFILE STA 119+50 TO 130+00	11.) DIKE 12 PLAN & PROFILE STA 173+00 TO 182+50	16.) DIKE 12 PLAN & PROFILE STA 220+50 TO 230+00	23.) S. GARDNER PLAN & PROFILE
1.) DIKE 12 PLAN & PROFILE STA 79+00-89+00	7.) DIKE 12 PLAN & PROFILE STA 130+00 TO 140+50	12.) DIKE 12 PLAN & PROFILE STA 182+50 TO 192+00	17.) DIKE 12 PLAN & PROFILE STA 230+00 TO 240+00	24.) S. GARDNER CROSS SECTIONS
2.) DIKE 12 PLAN & PROFILE STA 89+00-98+00	8.) DIKE 12 PLAN & PROFILE STA 140+50 TO 152+00	13.) DIKE 12 PLAN & PROFILE STA 192+00 TO 200+00	18.) SHOP WALL PLAN & PROFILE	
3.) DIKE 12 PLAN & PROFILE STA 98+00-107+00	9.) DIKE 12 PLAN & PROFILE STA 152+00 TO 163+00	14.) DIKE 12 PLAN & PROFILE STA 200+00 TO 210+00	19.) SHOP WALL TYPICAL SECTIONS	
4.) DIKE 12 PLAN & PROFILE STA 107+00 TO 110+000			20.) SHOP WALL DETAILS	
			21.) WWTP OUTFALL STRUCTURE DETAILS	

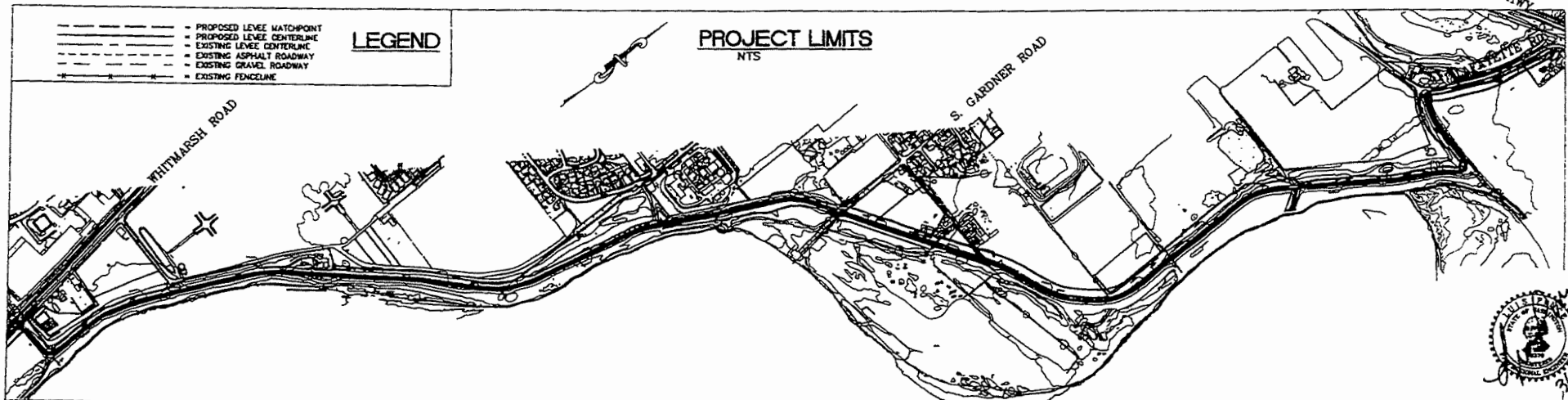
SKAGIT COUNTY
PERMIT CNTR.

JUL 9 2012

RECEIVED

PL12-0191

N. CASCADES HWY



DESIGNED BY
LP
DRAWN BY
LUC
CHECKED BY
LP

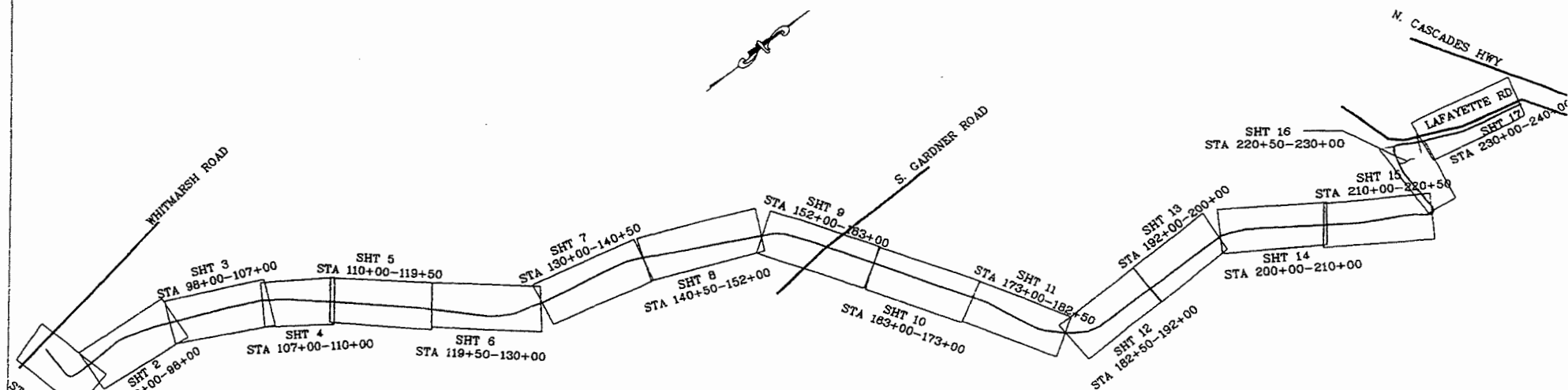
REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS
PO Box 978 423 Front St., Ste 201
Lynden, Washington 98281

Ph. (360) 334-3457
Fax (360) 334-0407

CITY OF BURLINGTON

DIKE 12 LEVEE CERTIFICATION
PROPOSED LEVEE ALIGNMENT
COVER SHEET

DATE / DWG	SP1	DATE
09031		3-3-11
SCALE		SHEET
N/A	N/A	COV



DESIGNED BY
LP
DRAWN BY
LAC
CHECKED BY
LP



REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS

PO Box 878 423 Front St., Ste 201
Lynn, Washington 98561
Ph (360) 354-3681
Fax (360) 354-0407

NO.	DATE	REVISION	BY

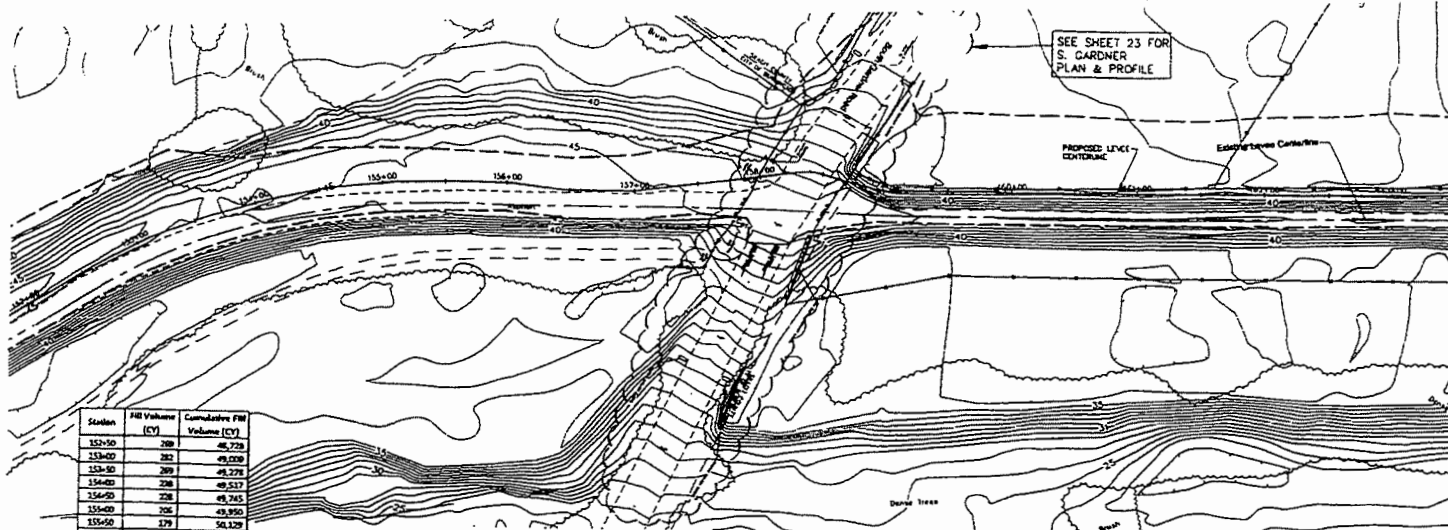
CITY OF BURLINGTON

DIKE 12 LEVEE CERTIFICATION
PROPOSED LEVEE ALIGNMENT
KEY MAP

DATE / CMC	DATE
09031	3-3-11
SCALE	SHEET
N/A	N/A
N/A	KEY



\\ny101\my101\1.ME.REVISED.dwg, DIKE P&P W\XSEC. 3/3/2011 2:43:31 PM



Station	Fill Volume (CY)	Cumulative Fill Volume (CY)
152+00	209	209.000
153+00	282	491.000
154+00	289	780.000
155+00	228	1008.000
156+00	206	1214.000
157+00	279	1493.000
158+00	382	1875.000
159+00	308	2183.000
160+00	240	2423.000
161+00	280	2703.000
162+00	361	3064.000
163+00	728	3792.000
164+00	1,070	4862.000
165+00	1,068	5930.000
166+00	1,054	6984.000
167+00	1,077	8061.000
168+00	978	9039.000
169+00	971	10010.000
170+00	1,016	11026.000
171+00	1,066	12092.000
172+00	1,085	13177.000

PROPOSED LEVEE MATCHPOINT

PROPOSED LEVEE CENTERLINE

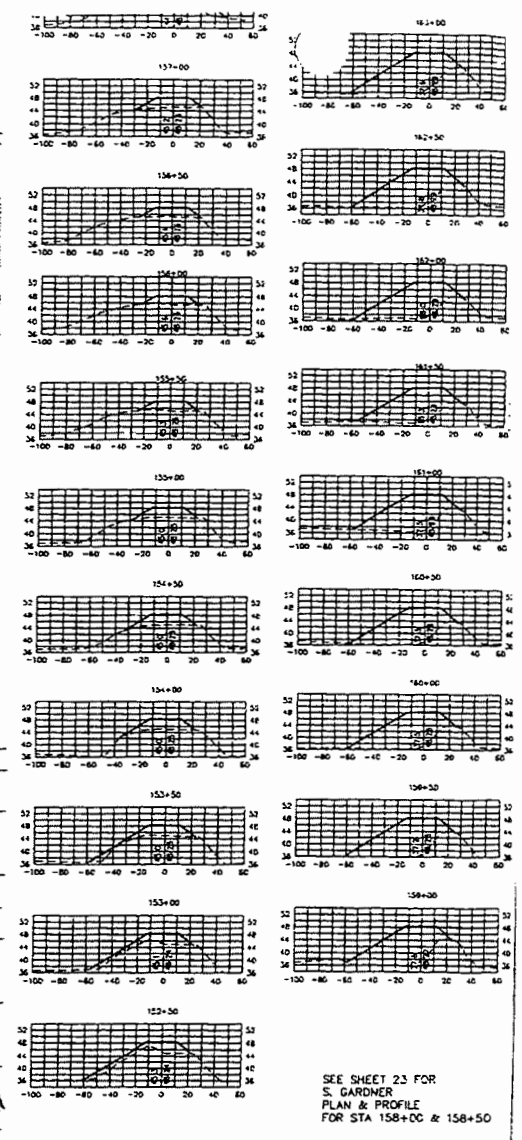
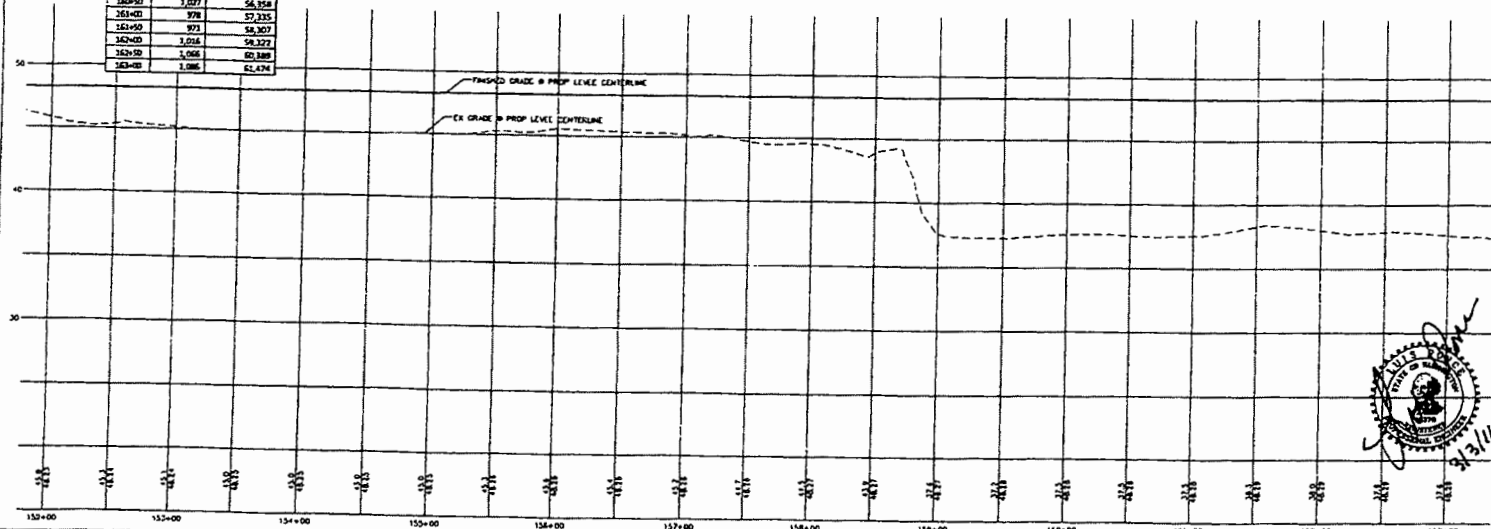
EXISTING LEVEE CENTERLINE

EXISTING ASPHALT ROADWAY

EXISTING GRAVEL ROADWAY


EXISTING FENCELINE

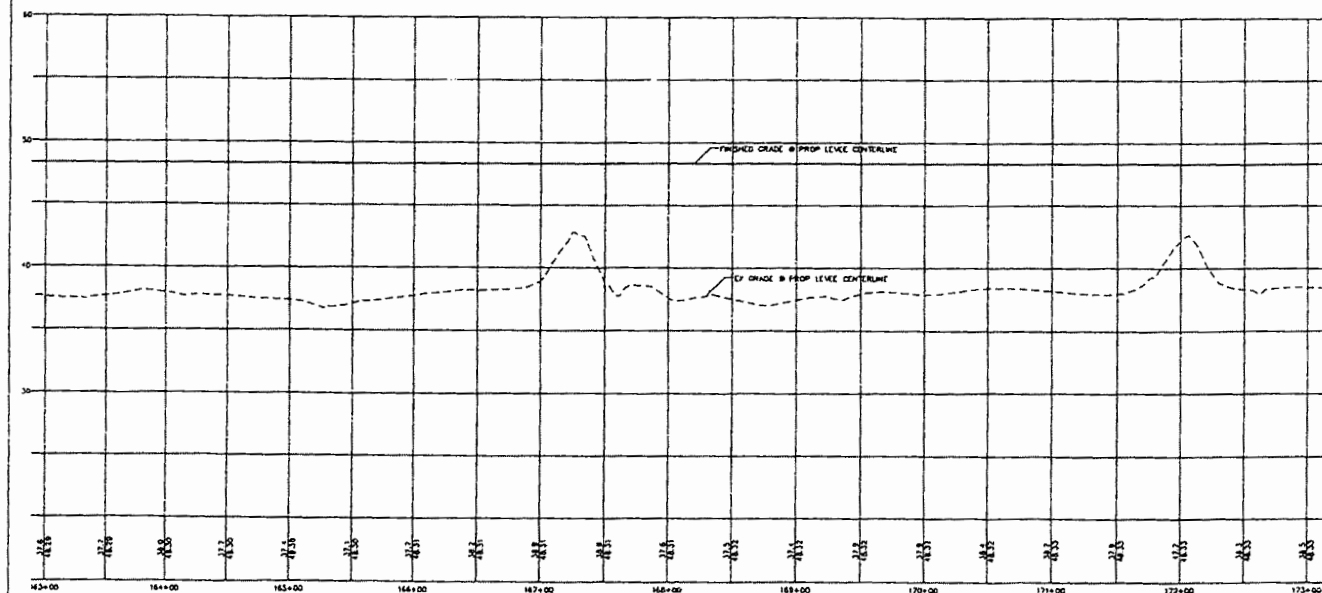
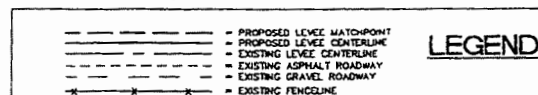
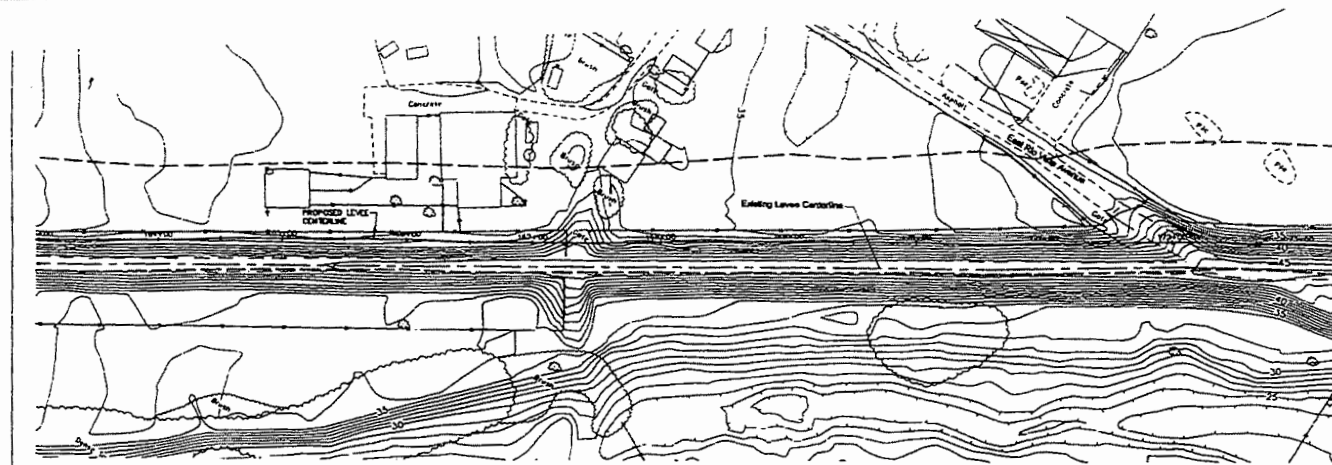
LEGEND



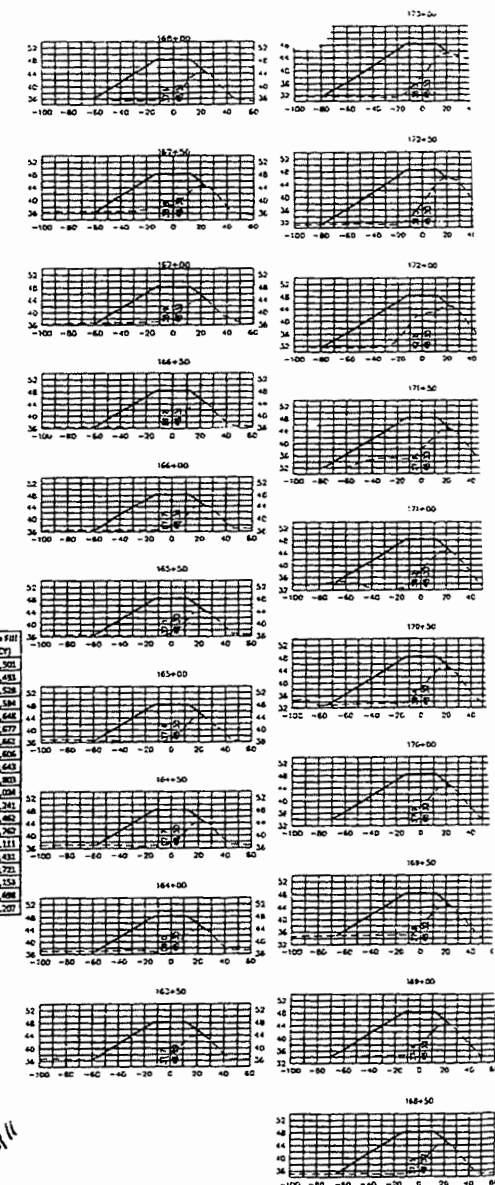
SEE SHEET 23 FOR S. GARDNER PLAN & PROFILE FOR STA 158+00 & 159+50



DESIGNED BY LP		REICHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 878 423 Front St., Ste 201 Lynden, Washington 98284 Ph (360) 354-3687 Fax (360) 354-0407	1	12-3-10	S. GARDNER PLAN & PROFILE, CATCH	GC	
DRAWN BY LMC			NO	DATE	REVISION	BY	
CHECKED BY LP							
CITY OF BURLINGTON					DIKE 12 LEVEE CERTIFICATION PROPOSED LEVEE ALIGNMENT STA 152+00 TO 163+00		DATE 09031 3-3-11
					SCALE H 1"=50' V 1"=5'		SHEET 9



Station	F&I Volume (CY)	Cumulative Fill Volume (CY)
163+50	1,027	52,301
164+00	995	53,296
164+50	1,036	54,332
165+00	1,065	55,397
165+50	1,054	56,451
166+00	1,029	57,480
166+50	989	58,469
167+00	945	59,414
167+50	1,027	60,441
168+00	1,161	61,602
168+50	1,223	62,825
169+00	1,227	64,052
169+50	1,221	65,273
170+00	1,300	66,573
170+50	1,350	67,923
171+00	1,379	69,302
171+50	1,393	70,695
172+00	1,432	72,127
172+50	1,545	73,672
173+00	1,508	75,180



DESIGNED BY
LP
DRAWN BY
LWC
CHECKED BY
LP



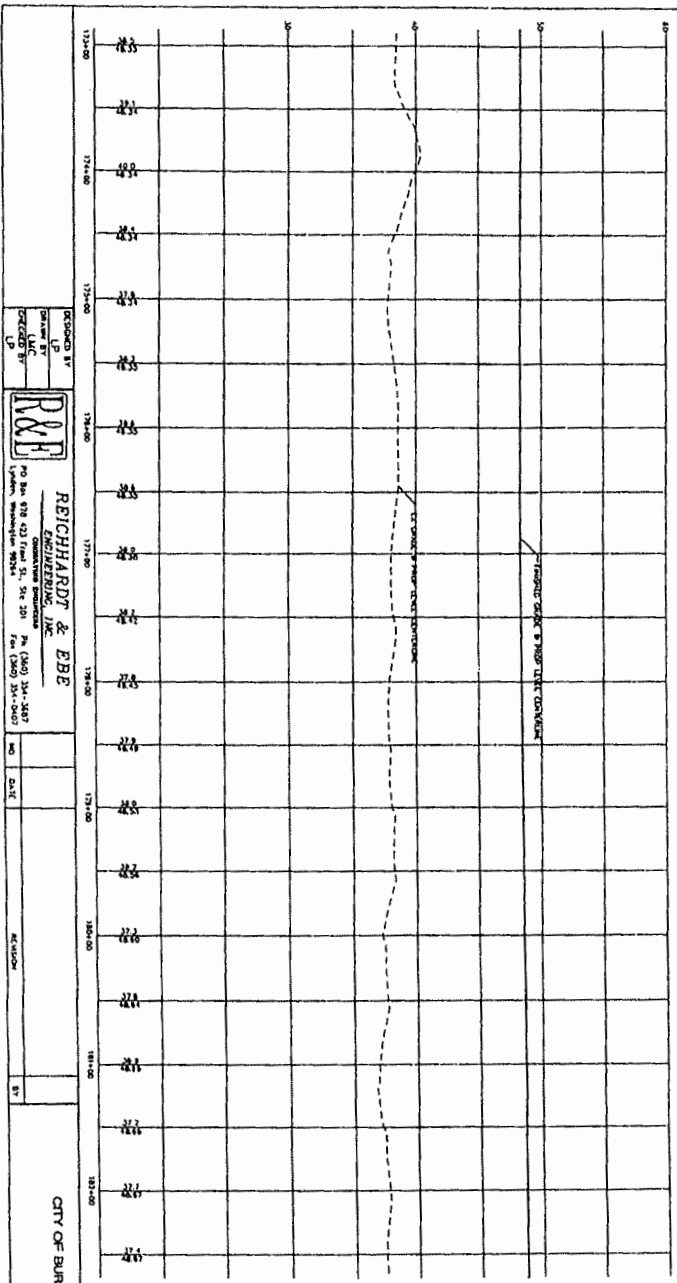
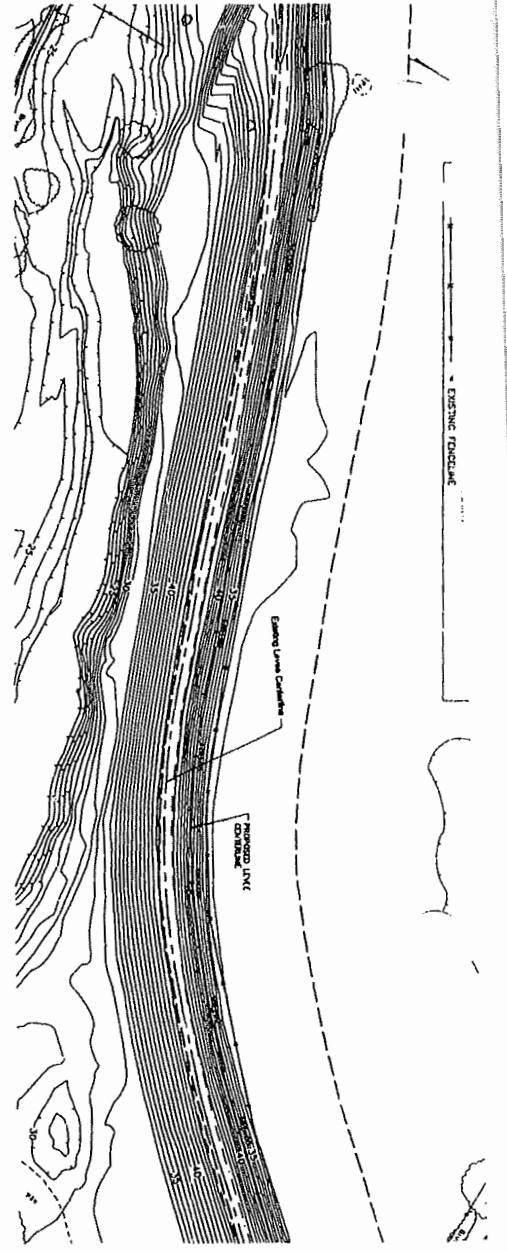
REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS
PO Box 978 • 23 Front St., Ste 201
Lynden, Washington 98264
Ph (360) 334-3687
Fax (360) 334-0407

NO DATE REVISION BY

CITY OF BURLINGTON

DIKE 12 LEVEE CERTIFICATION
PROPOSED LEVEE ALIGNMENT
STA 163+00 TO 173+00

DATE / DWN
09031 SP1
SCALE
1" = 50' V 1" = 5'
SHEET
10



REICHARDT & BBE
CONSULTING ENGINEERS
1000 N. 10th St., Suite 200
Minneapolis, MN 55412
Tel: (612) 338-3300
Fax: (612) 338-3301
www.reichardt.com

DATE: 3/3/11
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

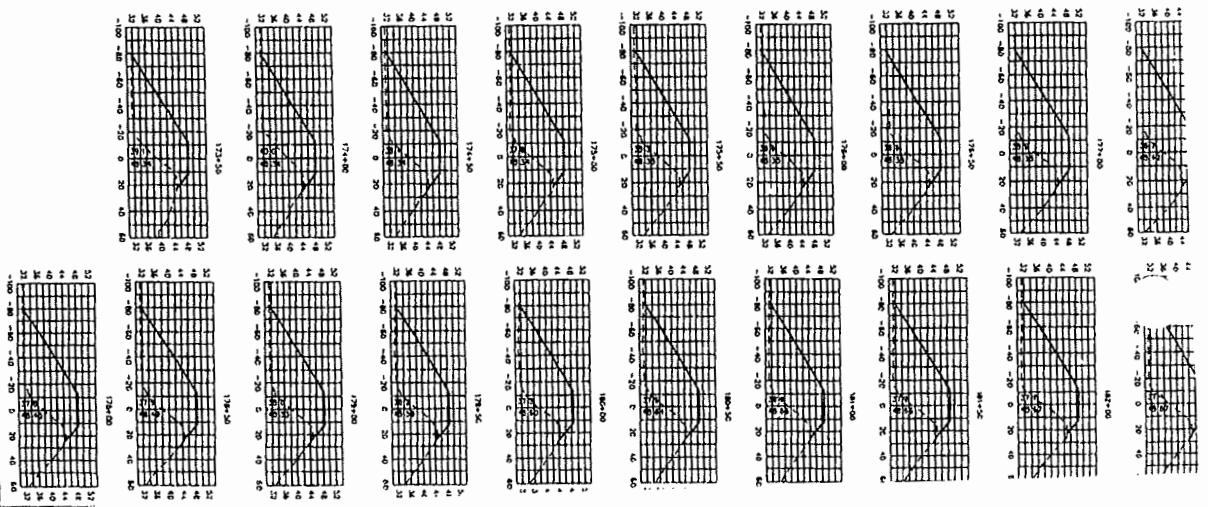
CITY OF BURLINGTON

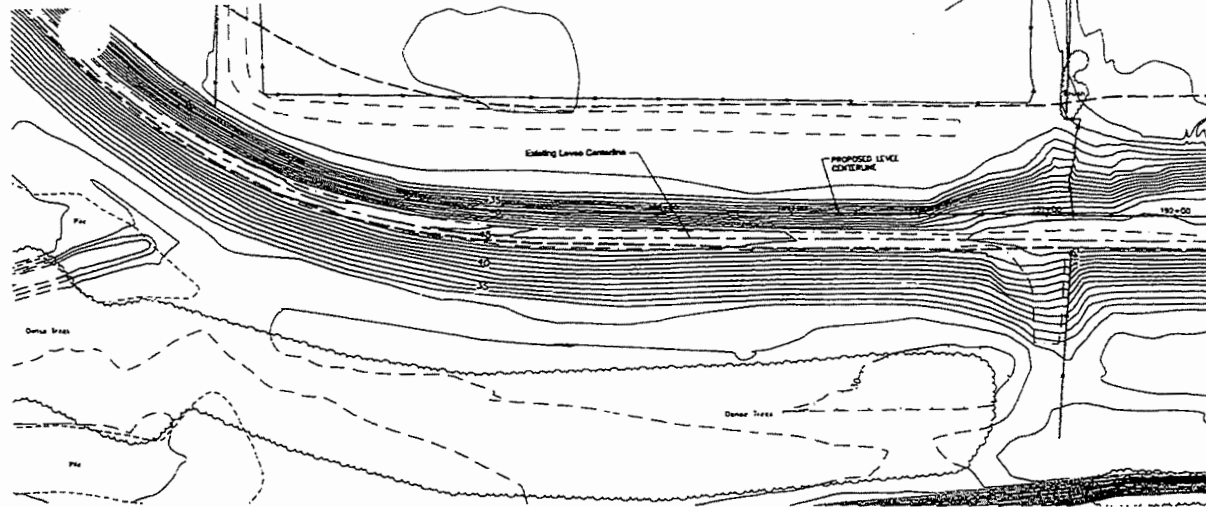
DIKE 12 LEVEL CERTIFICATION
PROPOSED LEVEE ALIGNMENT
STA 173+00 TO 182+00

Scale: 1" = 50'
Sheet: 11 of 11



Station	FT Volume	Cumulative FT
173+00	1.482	1.482
173+10	1.508	2.990
173+20	1.534	4.524
173+30	1.560	6.084
173+40	1.586	7.670
173+50	1.612	9.282
173+60	1.638	10.920
173+70	1.664	12.584
173+80	1.690	14.274
173+90	1.716	15.990
174+00	1.742	17.732
174+10	1.768	19.500
174+20	1.794	21.294
174+30	1.820	23.114
174+40	1.846	24.960
174+50	1.872	26.832
174+60	1.898	28.730
174+70	1.924	30.654
174+80	1.950	32.604
174+90	1.976	34.580
175+00	1.998	36.578
175+10	2.024	38.602
175+20	2.050	40.652
175+30	2.076	42.728
175+40	2.102	44.830
175+50	2.128	46.958
175+60	2.154	49.112
175+70	2.180	51.292
175+80	2.206	53.498
175+90	2.232	55.730
176+00	2.258	57.988
176+10	2.284	60.272
176+20	2.310	62.582
176+30	2.336	64.918
176+40	2.362	67.280
176+50	2.388	69.668
176+60	2.414	72.082
176+70	2.440	74.522
176+80	2.466	76.988
176+90	2.492	79.480
177+00	2.518	81.998
177+10	2.544	84.542
177+20	2.570	87.112
177+30	2.596	89.708
177+40	2.622	92.330
177+50	2.648	94.978
177+60	2.674	97.652
177+70	2.700	100.352
177+80	2.726	103.078
177+90	2.752	105.830
178+00	2.778	108.608
178+10	2.804	111.412
178+20	2.830	114.242
178+30	2.856	117.098
178+40	2.882	119.980
178+50	2.908	122.888
178+60	2.934	125.822
178+70	2.960	128.782
178+80	2.986	131.768
178+90	3.012	134.780
179+00	3.038	137.818
179+10	3.064	140.882
179+20	3.090	143.972
179+30	3.116	147.088
179+40	3.142	150.230
179+50	3.168	153.398
179+60	3.194	156.592
179+70	3.220	159.812
179+80	3.246	163.058
179+90	3.272	166.330
180+00	3.298	169.628
180+10	3.324	172.952
180+20	3.350	176.302
180+30	3.376	179.678
180+40	3.402	183.080
180+50	3.428	186.508
180+60	3.454	190.000
180+70	3.480	193.500
180+80	3.506	197.020
180+90	3.532	200.570
181+00	3.558	204.140
181+10	3.584	207.720
181+20	3.610	211.330
181+30	3.636	214.960
181+40	3.662	218.620
181+50	3.688	222.300
181+60	3.714	225.990
181+70	3.740	229.710
181+80	3.766	233.450
181+90	3.792	237.220
182+00	3.818	241.030

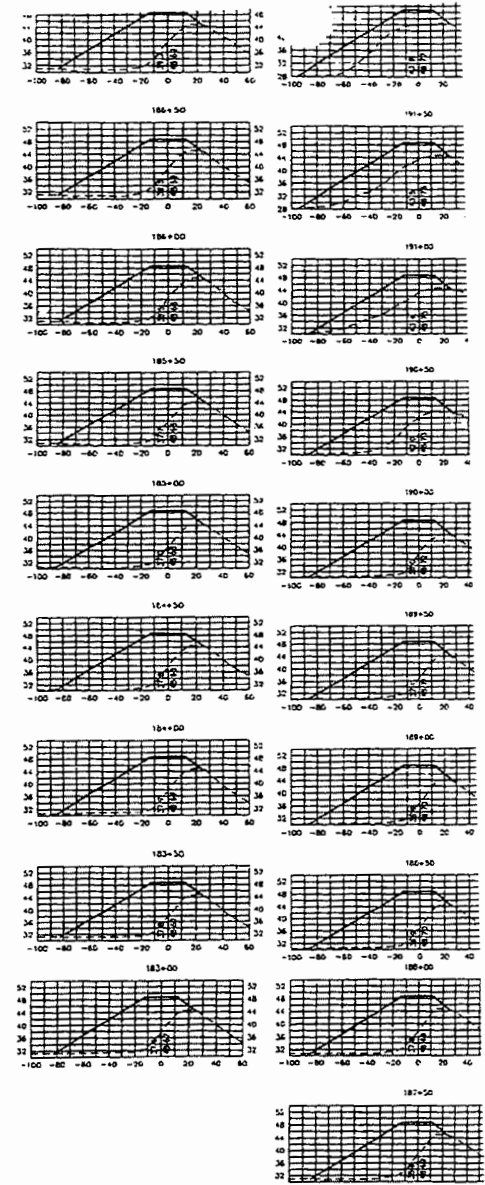
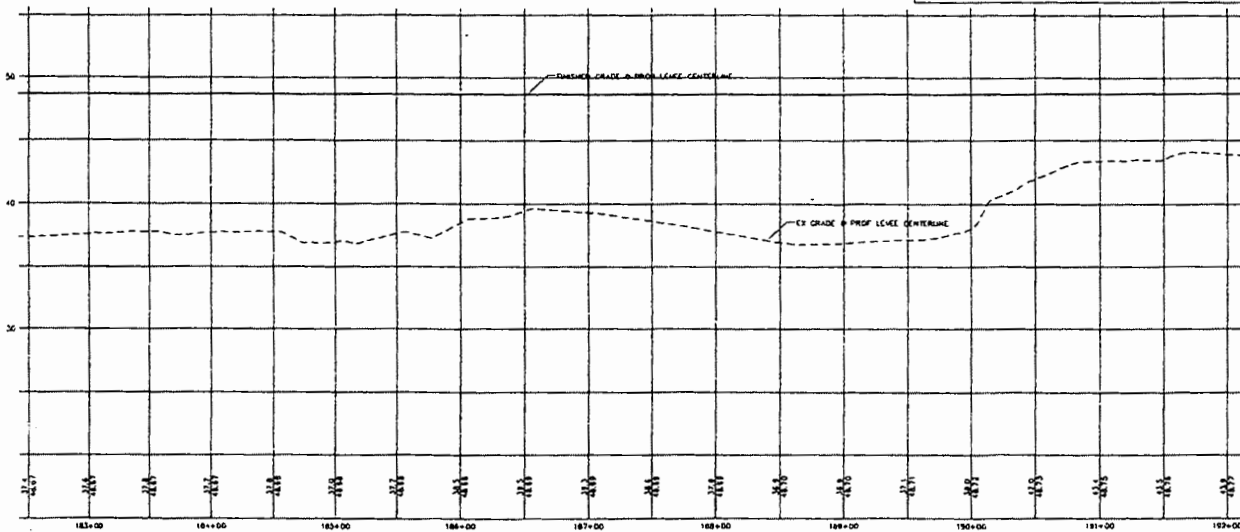




Station	Fill Volume (CY)	Cumulative Fill Volume (CY)
183+00	2,569	216,951
183+50	1,495	218,446
184+00	1,754	220,200
184+50	1,809	222,009
185+00	2,795	224,804
185+50	1,740	226,544
186+00	1,649	228,193
186+50	1,638	229,831
187+00	1,648	231,479
187+50	1,687	233,166
188+00	1,763	234,929
188+50	1,819	236,748
189+00	1,834	238,582
189+50	1,835	240,417
190+00	1,822	242,239
190+50	1,782	244,021
191+00	1,764	245,785
191+50	1,782	247,567
192+00	1,094	248,661

- PROPOSED LEVEE MATCHPOINT
- PROPOSED LEVEE CENTERLINE
- EXISTING LEVEE CENTERLINE
- EXISTING ASPHALT ROADWAY
- EXISTING GRAVEL ROADWAY
- EXISTING FENCELINE

LEGEND



DESIGNED BY
LP



REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS
PO Box 978 133 First St., Ste 201
Lynden, Washington 98281

Ph (360) 351-3887
Fax (360) 351-0407

NO

DATE

NEWSON

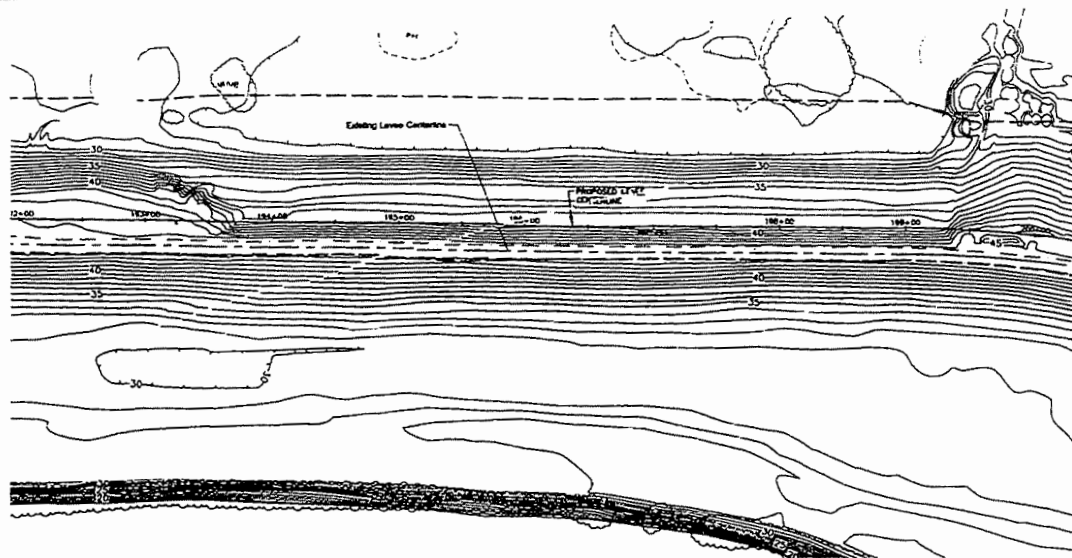
BT

CITY OF BURLINGTON

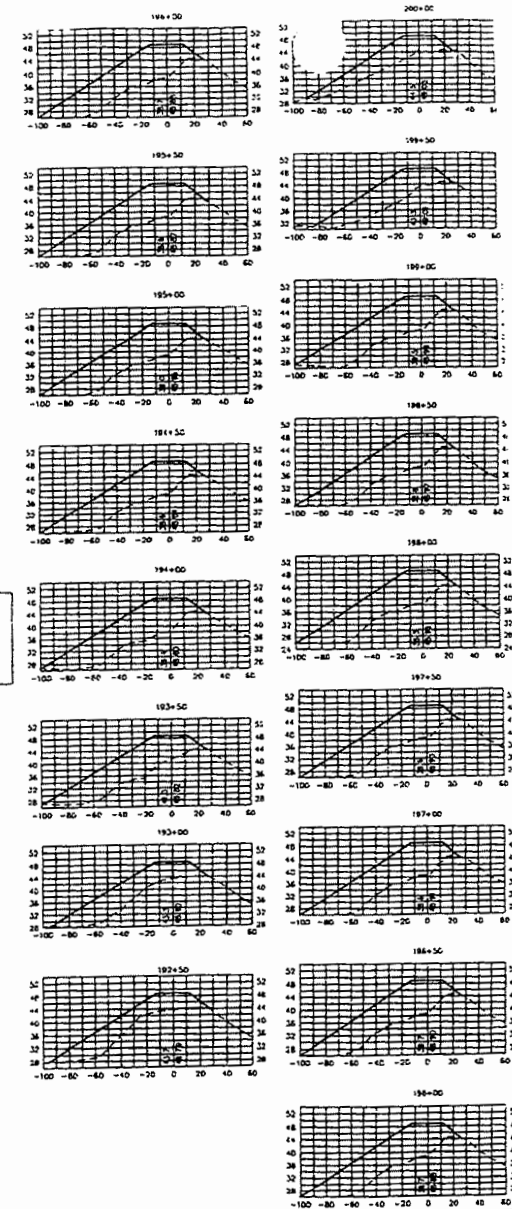
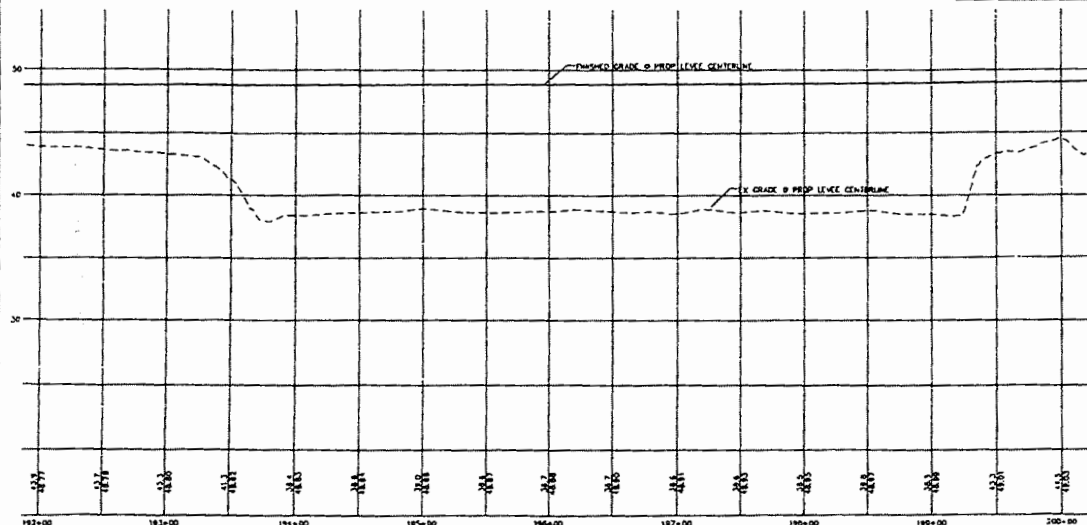
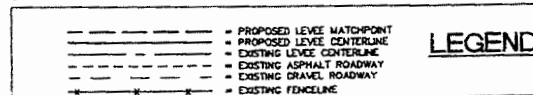
DIKE 12 LEVEE CERTIFICATION
PROPOSED LEVEE ALIGNMENT
STA 182+50 TO 192+00

09031 SP1
SCALE
H 1"=50' V 1"=5'

CAT# 3-3
SHEET 12



Station	Fill Volume (CY)	Excavation Volume (CY)
182+00	1,171	147,118
183+00	1,442	148,561
184+00	1,709	150,264
185+00	1,753	153,254
186+00	1,725	153,240
187+00	1,348	155,487
188+00	1,757	157,245
189+00	1,796	158,980
190+00	1,743	160,723
191+00	1,755	162,476
192+00	1,347	164,233
193+00	1,344	165,988
194+00	1,772	167,739
195+00	1,499	169,239
196+00	1,086	170,525
200+00	1,053	171,383



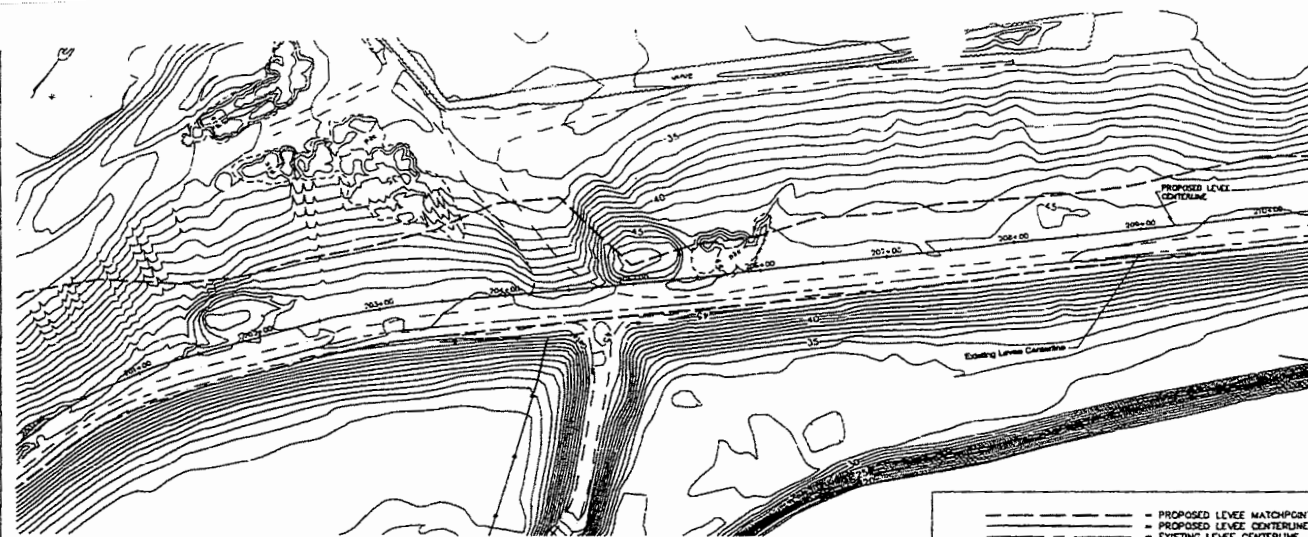
DESIGNED BY: LP
 DRAWN BY: LMC
 CHECKED BY: LP

REICHARDT & EBE
 ENGINEERING, INC.
 CONSULTING ENGINEERS
 P.O. Box 978 423 Front St., Ste 201
 Lynden, Washington 98284
 Ph: (360) 354-3627
 Fax: (360) 354-0407

CITY OF BURLINGTON

DIKE 12 LEVEE CERTIFICATION
 PROPOSED LEVEE ALIGNMENT
 STA 182+00 TO 200+00

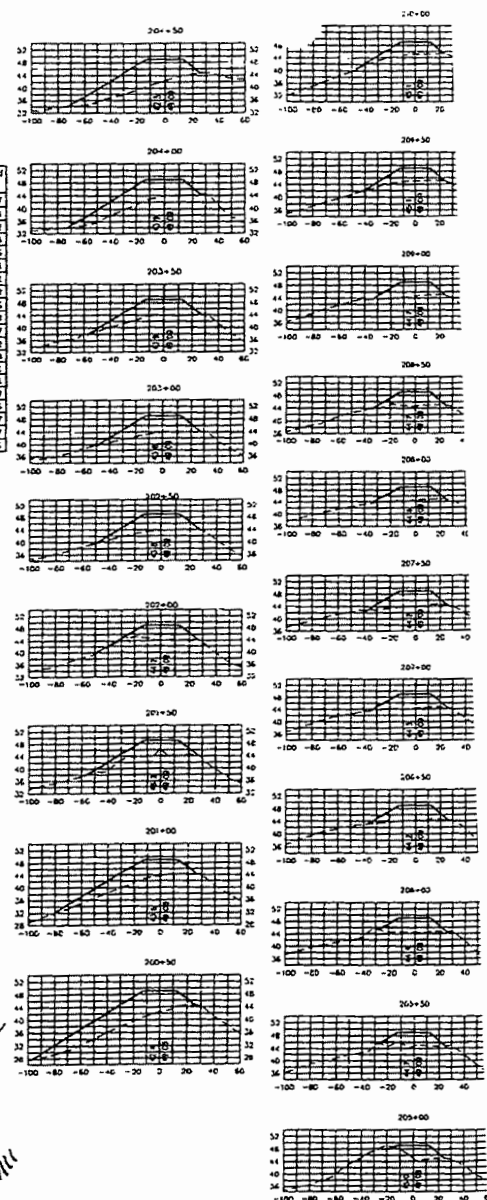
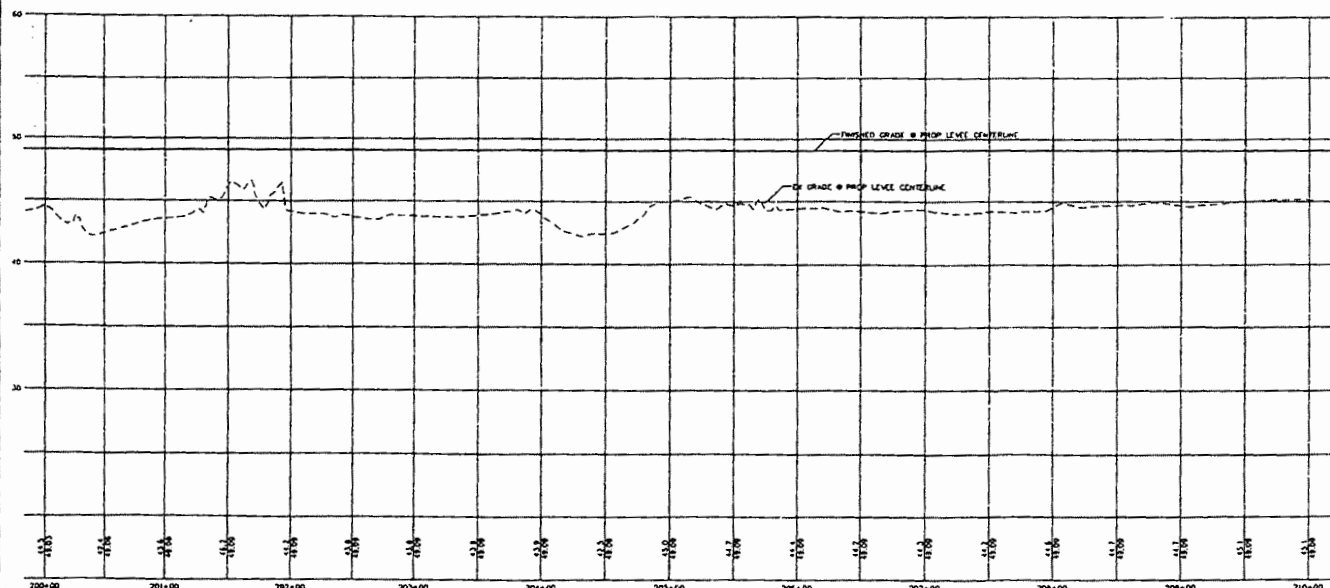
DATE: 3-3-11
 SHEET: 13
 SCALE: 1" = 50' v 1" = 5'



Station	Fill Volume (CY)	Cumulative Fill Volume (CY)
200+00	911	172,317
201+00	528	172,844
202+00	408	173,252
203+00	431	173,683
204+00	517	174,200
205+00	578	174,778
206+00	640	175,418
207+00	811	176,229
208+00	563	176,792
209+00	249	177,041
210+00	313	177,354
211+00	365	177,719
212+00	386	178,105
213+00	393	178,500
214+00	380	178,880
215+00	377	179,257
216+00	335	179,592
217+00	343	179,935
218+00	340	180,275
219+00	348	180,623

LEGEND

- PROPOSED LEVEE MATCHPOINT
- PROPOSED LEVEE CENTERLINE
- EXISTING LEVEE CENTERLINE
- EXISTING ASPHALT ROADWAY
- EXISTING GRAVEL ROADWAY
- EXISTING FENCELINE



DESIGNED BY
L.P.
DRAWN BY
LMC
CHECKED BY
L.P.



REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS
PO Box 878 123 Front St, Ste 201
Lynn, Washington 98544
Ph: (360) 351-3467
Fax: (360) 351-0407

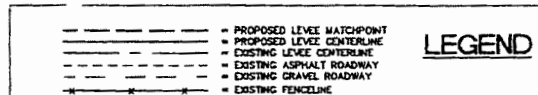
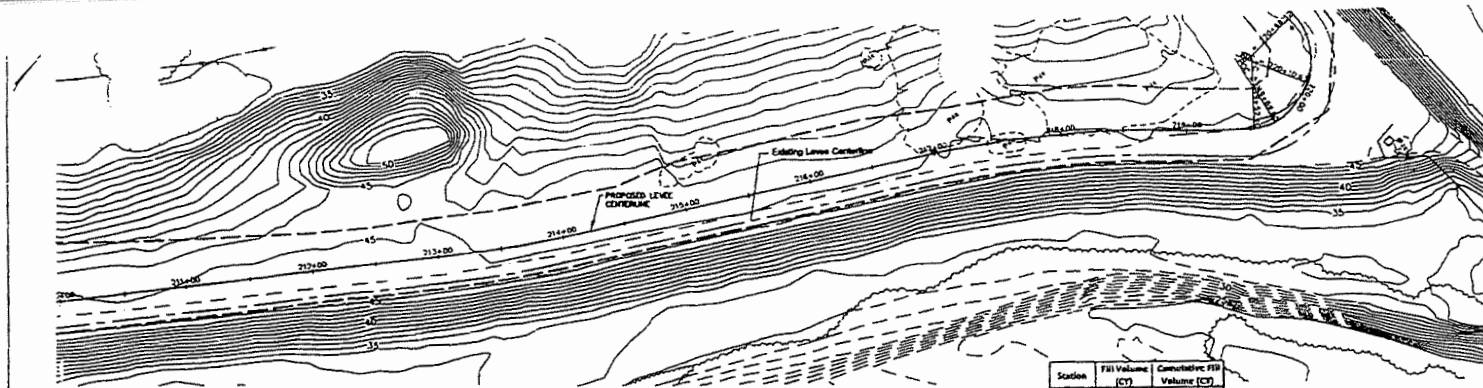
NO DATE REVISION BY

CITY OF BURLINGTON

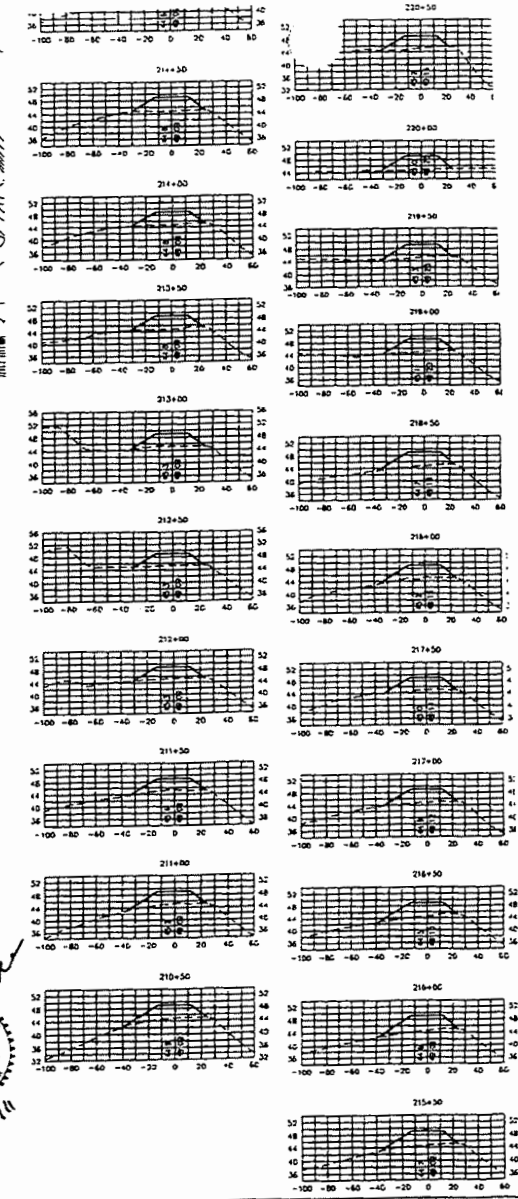
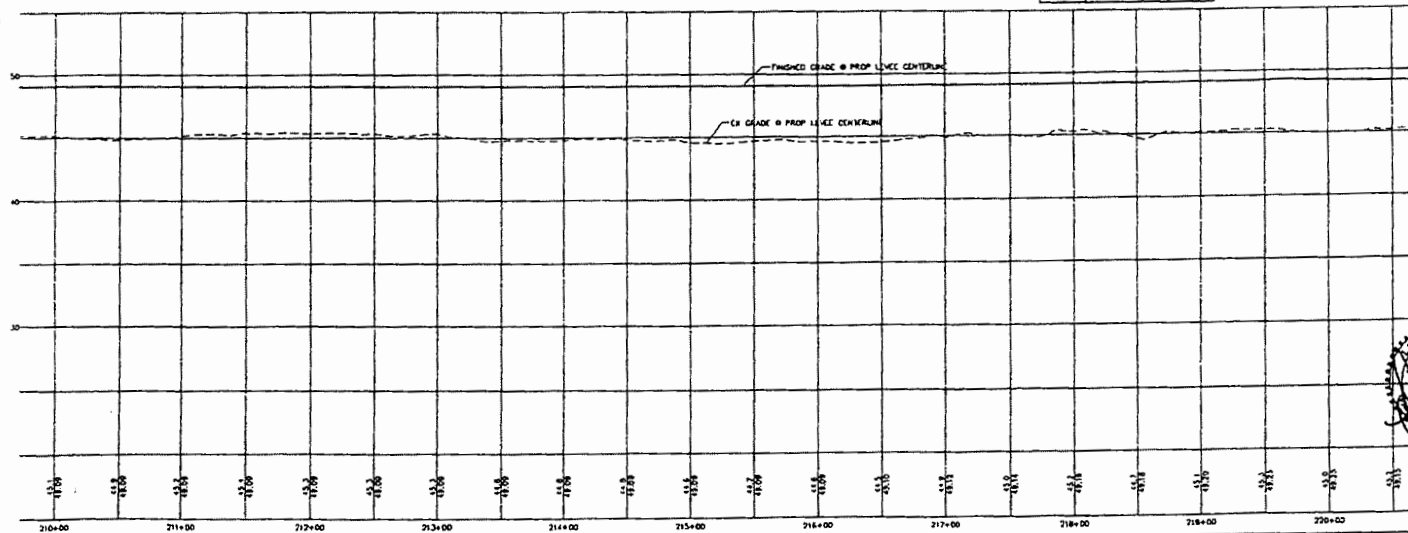
DIKE 12 LEVEE CERTIFICATION
PROPOSED LEVEE ALIGNMENT
STA 200+00 TO 210+00

DATE 3-3-11
SHEET 14
SCALE 1"=50' x 1"=5'

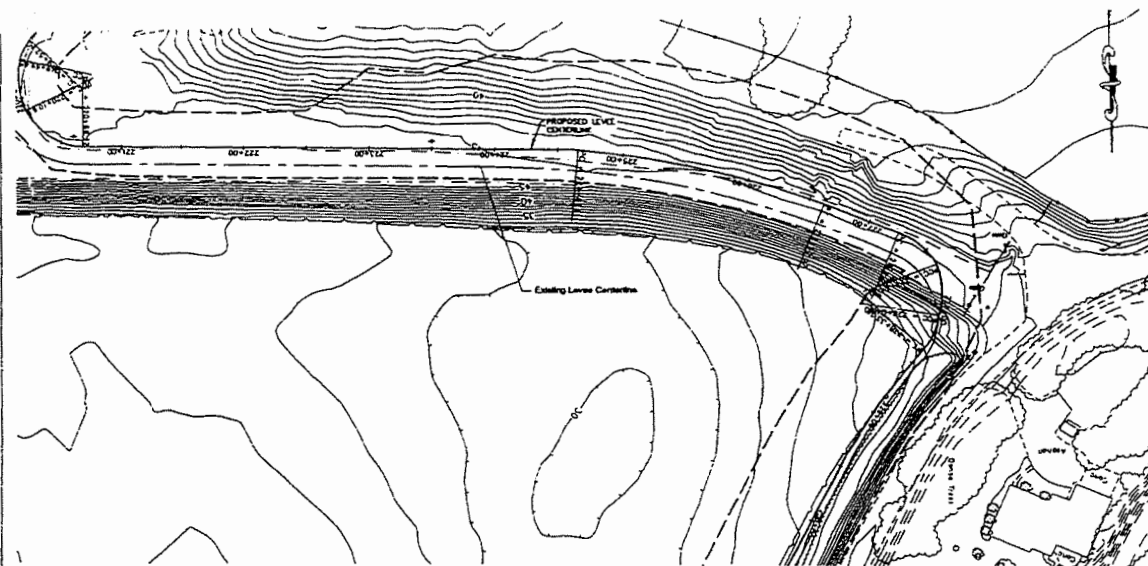
r:\proj\cis\031\dwg\SP1.RE REVISED.dwg, DIKE P&P W XSEC, 3/3/2011 2:51:37 PM



Station	Fill Volume (CY)	Compacting Fill Volume (CY)
210+00	736	185,953
211+00	309	183,240
212+00	288	181,548
213+00	278	180,225
214+00	281	180,107
215+00	297	182,404
216+00	332	182,716
217+00	313	183,027
218+00	317	183,364
219+00	363	183,725
220+00	363	184,086
221+00	369	184,455
222+00	351	184,806
223+00	330	185,136
224+00	331	185,466
225+00	340	185,807
226+00	329	186,136
227+00	306	186,442
228+00	299	186,742
229+00	294	187,035
230+00	282	187,317



DESIGNED BY LP	REICHHARDT & EBE ENGINEERING, INC. CONSULTING ENGINEERS PO Box 978 423 Front St. Ste 201 Linden, Maryland 21644 Ph (304) 354-3687 Fax (304) 354-8487	CITY OF BURLINGTON	DIKE 12 LEVEE CERTIFICATION PROPOSED LEVEE ALIGNMENT STA 210+00 TO 220+00	DATE 3-3-11
DRAWN BY LWC	NO DATE REVIEWED BY		SCALE 1"=50' x 1"=5'	SHEET 15
CHECKED BY LP				



Station	Fill Volume [CY]	Cumulative Fill Volume [CY]
221+00	270	187,547
221+50	269	187,816
222+00	273	188,089
222+50	334	188,423
223+00	367	188,790
223+50	430	189,220
224+00	524	189,744
224+50	639	190,383
225+00	207	190,590
225+50	818	191,408
226+00	879	192,287
226+50	796	193,083
227+00	824	193,907
227+50	815	194,722
228+00	1,159	195,881
228+50	1,662	197,543
229+00	1,683	199,226
229+50	1,737	200,963
230+00	1,769	202,732

— PROPOSED LEVEE MATCHPOINT

— PROPOSED LEVEE CENTERLINE

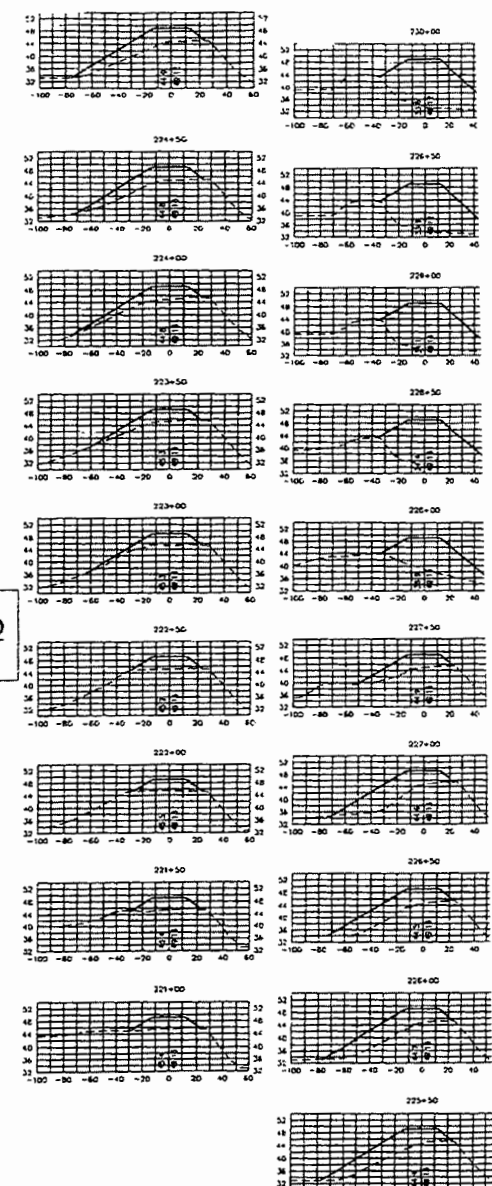
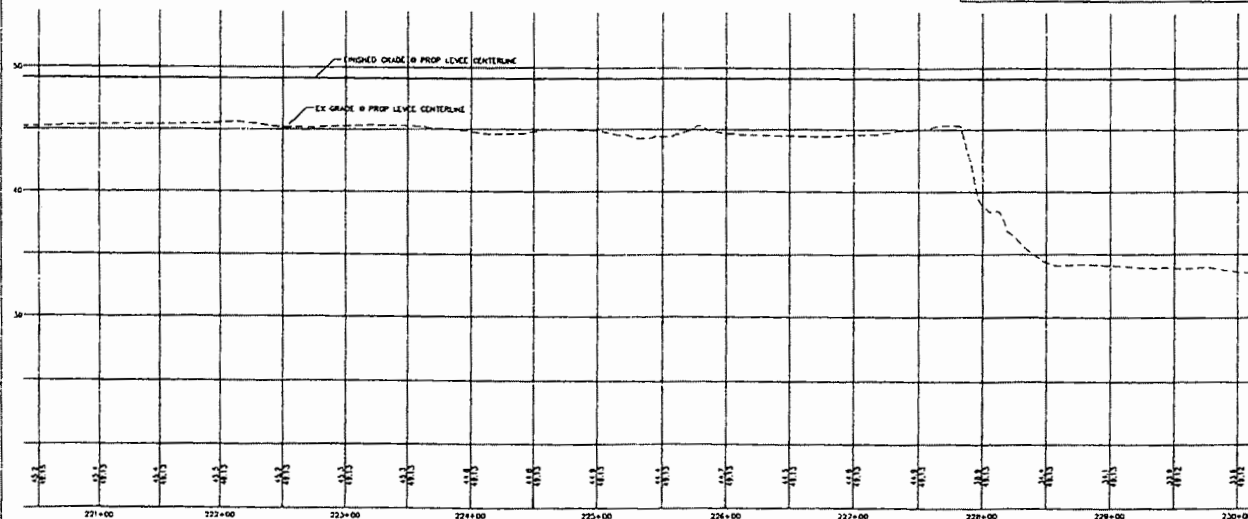
--- EXISTING LEVEE CENTERLINE

--- EXISTING ASPHALT ROADWAY

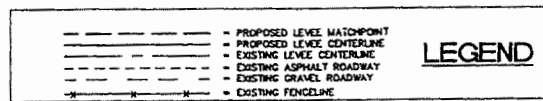
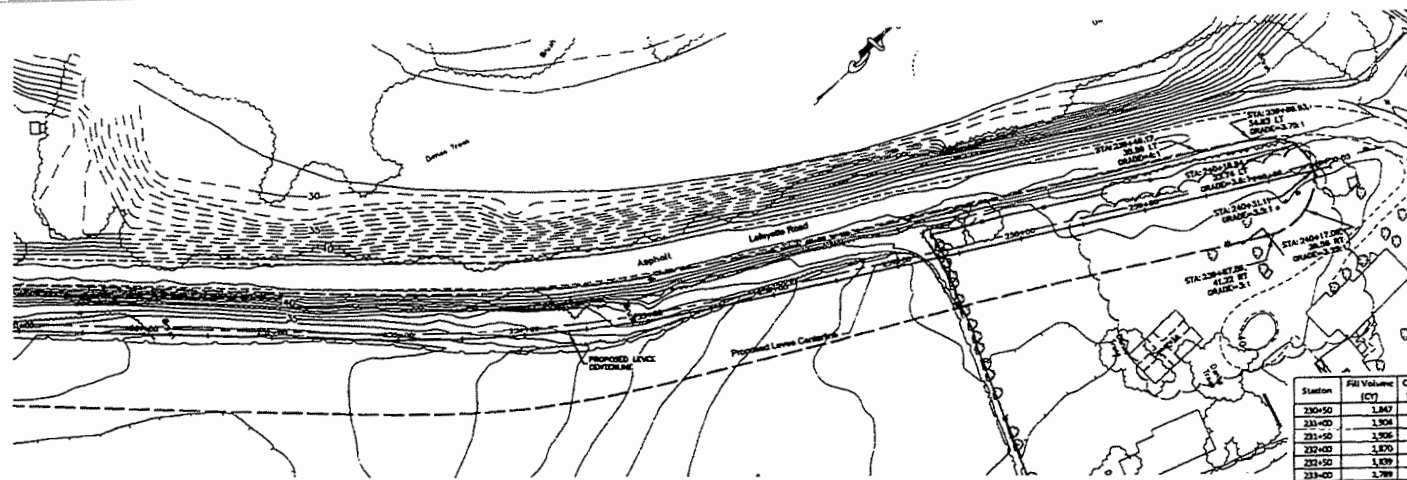
--- EXISTING GRAVEL ROADWAY

--- EXISTING FENCELINE

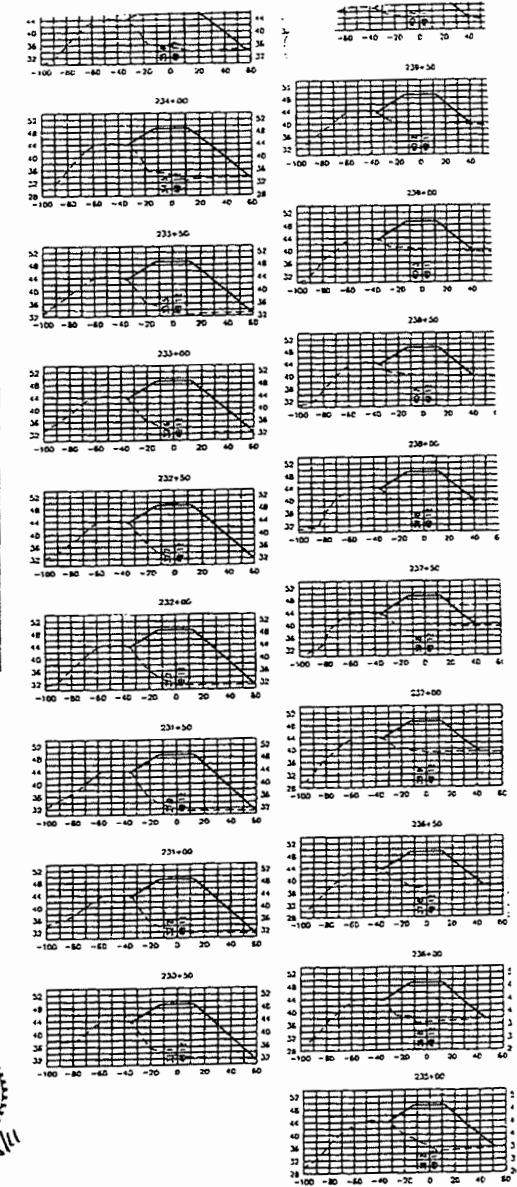
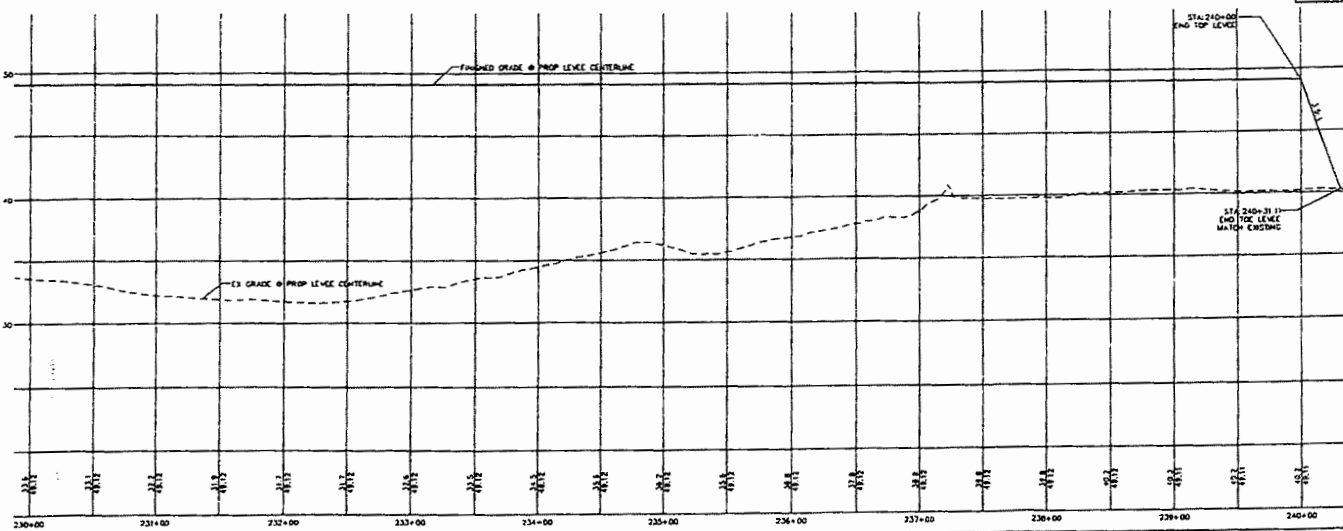
LEGEND



DESIGNED BY LP DRAWN BY LNC CHECKED BY LP	R&E REICHHARDT & EBE ENGINEERING, INC. <small>CONSULTING ENGINEERS</small> PO Box 978 • 23 Front St., Ste 201 Lynden, Washington 98949 Ph (360) 354-3487 Fax (360) 354-0407	NO DATE REVISION BY	CITY OF BURLINGTON	DIKE 12 LEVEE CERTIFICATION PROPOSED LEVEE ALIGNMENT STA 220+50 TO 230+00	DATE 05031 SCALE H 1"=50' V 1"=5' SHEET 3-3 5-611 16
--	---	------------------------------	--------------------	---	---



Station	Fill Volume (CY)	Cumulative Fill Volume (CY)
230+00	1,847	205,028
231+00	1,906	206,934
232+00	1,870	208,804
233+00	1,839	210,643
234+00	1,799	212,442
235+00	1,689	214,131
236+00	1,563	215,694
237+00	1,407	217,101
238+00	1,301	218,402
239+00	1,230	219,632
240+00	1,185	220,817
241+00	1,038	221,855
242+00	936	222,791
243+00	927	223,718
244+00	863	224,581
245+00	856	225,437
246+00	861	226,298
247+00	863	227,161
248+00	787	227,948



DESIGNED BY
LP
DRAWN BY
LMC
CHECKED BY
LP



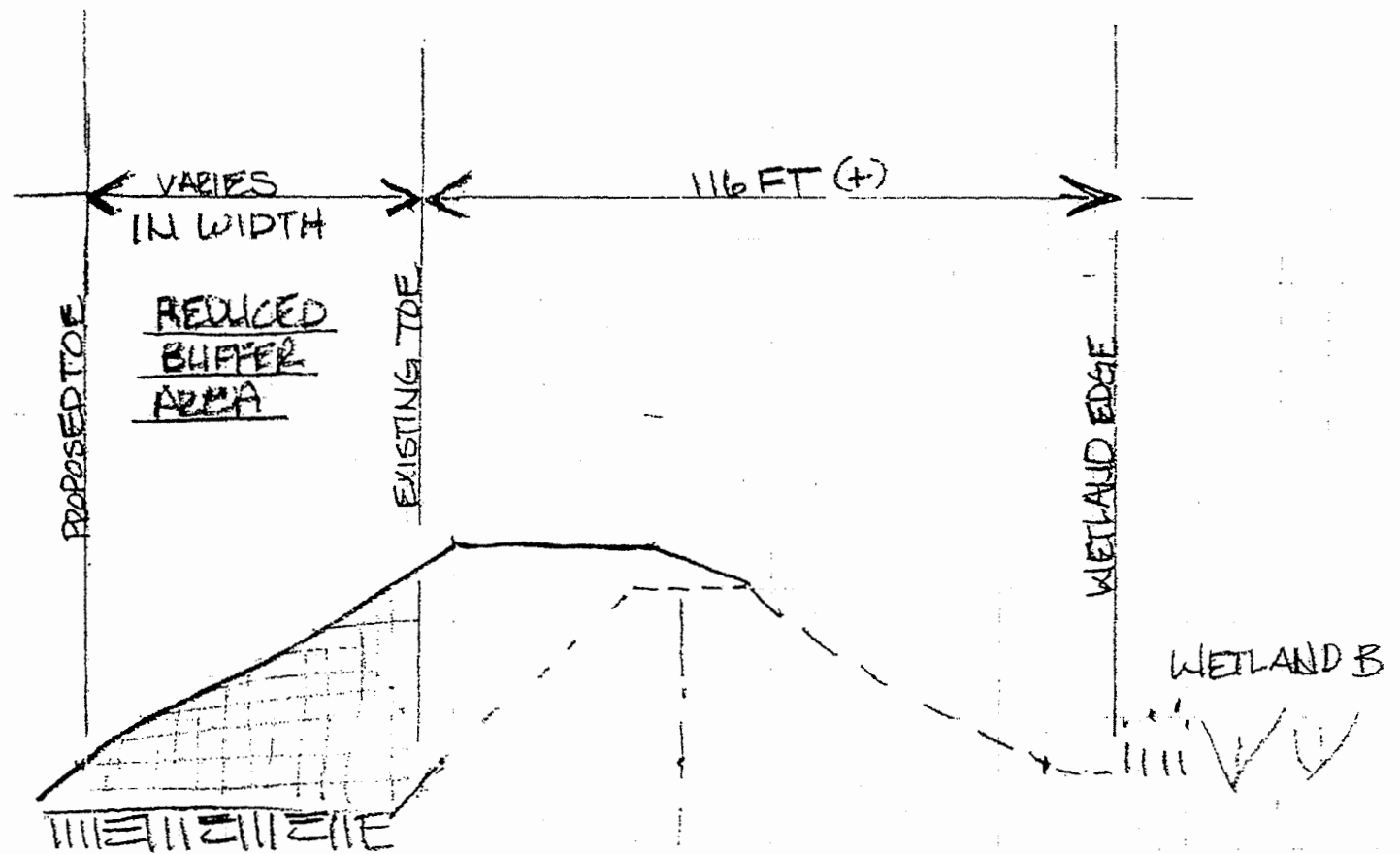
REICHHARDT & EBE
ENGINEERING, INC.
CONSULTING ENGINEERS
PO Box 978 435 Front St., Ste 201
Lynden, Washington 98281
Ph (360) 354-3687
Fax (360) 354-0407

1 10-11-10 ADDED GRADING PLAN STA 238+00-240+00
DATE REVISION BY

CITY OF BURLINGTON

DIKE 12 LEVEE CERTIFICATION
PROPOSED LEVEE ALIGNMENT
STA 230+00 TO 240+00

JOB / DWG 09031 SP1
SCALE 1" = 50' x 1" = 5'
DATE 3-3-11
SHEET 17



SKETCH

CROSS-SECTION LOOKING DOWNSTREAM NEAR STA: 178

WETLAND B BUFFER PD-12

Project Routing Form

File Number PL12-0191

Land Use Approval , SHSD

Description: Shoreline Substantial Development for improving

Application date: 06/19/2012

People:

APPLICANT DIKE DISTRICT #12

06/19/2012 Phone:

% Dan Lefeber, Manager

1317 South Anacortes Street

Burlington WA 98233

License:

OWNER DIKE DISTRICT #12

06/19/2012 Phone:

1317 S ANACORTES ST

BURLINGTON WA

98233

License:

CONTACT John B Semrau, PE & PLS

06/19/2012 Phone: 360-424-9566

2118 Riverside Drive, Suite 208

Mount Vernon WA

98273

License:

Parcel No:

8223

8220

8302

8304

8305

8307

8308

Legal desc:

0433-0-007-0009

S _____ T _____ R _____

X 1 TR IN NE1/4 NE1/4 BAT SW C TH S 8 7-25-30 E 725FT TH N 1-12 E 96FT TH N 89 -39 W 595FT TH ON 10DEG
V TO RHT 125FT TO W LI SD SUB TPB-1.30AC

Address:

Adjacent road _____

Site to: _____

Permit circulated: 11-13-2012 _____

Turn by: _____

Turn to: John Cooper

Comments: _____

Reviewed by: _____ Date: _____

GA 3

Skagit County Assessor's Parcel & Tax Account Number List

P38223	350433-0-007-0009
P38220	350433-0-004-0002
P38302	350433-1-005-0009
P38305	350433-1-008-0006
P38304	350433-1-007-0007
P38307	350433-4-001-0007
P38308	350433-4-002-0006
P38303	350433-1-006-0008

SKAGIT COUNTY PLANNING AND DEVELOPMENT SERVICES

NOTICE OF DEVELOPMENT APPLICATION

Files # PL12-0191

Notice is hereby given that on July 9, 2012, Dike District No. 12 filed an application for a Shoreline Substantial Development Permit to increase the size of the existing dike between Gardner and Lafayette Road. Dike District No. 12 proposes to increase the height of the existing dike by 4 feet higher which would result in an increase of the base of the dike by approximately 60 feet. All improvement to the dike would extend landward of the existing dike and would not encroach into the currently existing riparian buffer of the Skagit River. The proposed project is located within the Agriculture - Natural Resource Land zoning/comprehensive plan designated area and within the "Rural" shoreline designated area as indicated in Skagit County's Shoreline Management Master Program. For additional information contact the County.

The proposed improvements will be located on the landward side of the existing dike between Gardner and Lafayette Roads within a portion of Section 33, Township 35 North, Range 4 East, WM. & Section 4, Township 34 North, Range 4 East, WM. Skagit County, WA (Parcels P38223, P38305, P38304, P38302, P38307, P38220, P38308 & P38303).

A completed narrative, final EIS, site plan and other application materials and all pertinent information are on file at Skagit County Planning & Development Services. This information is available to the public on request. A decision on the application will be made within 120 days of the date the application was deemed complete, which was November 13, 2012 unless such time period is extended consistent with RCW 36.70B.090. A public hearing before the Skagit County Hearing Examiner is required for this project.

Any person desiring to express his or her views or be notified of the action taken on this application should notify John Cooper, Planner, in writing of his or her interest within thirty (30) days of the final date of publication of this notice which is November 29, 2012. **The file can be viewed at the Planning and Development Services office. Mailed written comments must be received by 4:30 p.m. December 28, 2012. Skagit County accepts comments online only through the form at www.skagitcounty.net/pdscomments.**

John Cooper, Planner/Geologist
Skagit County Planning and Development Services
1800 Continental Place
Mount Vernon, WA 98273
(360) 336-9410

Transmitted to Skagit Valley Herald: November 20, 2012.
Mailed to Applicant: November 20, 2012

cc: WDOE, Public Works, NW Clean Air Agency, Fire marshal, WSDF&W, Skagit River System Coop, WSDOT, WDNR, Applicant

Please publish: November 22 & 29, 2012.

**SKAGIT COUNTY PLANNING AND DEVELOPMENT SERVICES
FINDINGS OF FACT**

HEARING AUTHORITY: Skagit County Hearing Examiner

HEARING DATE: April 24, 2013

APPLICATION NUMBER: Shoreline Substantial Development Application PL12-0191

APPLICANT: Skagit County Dike, Drainage and Irrigation District No. 12

CONTACT PERSON: Semrau Engineering and Surveying
Mr. John Semrau
2118 Riverside Drive
Mount Vernon, WA 98273

PROJECT LOCATION

The area subject to the proposed shoreline stabilization and flood protection improvements is located along the right (north & west) bank of the Skagit River extending from Lafayette Road in the North to Gardner Road in the South, East of Burlington, Washington, within Section 4, Township 34 North, Range 4 East & Section 33, Township 35 North, Range 4 East, W.M., Skagit County, WA.

PROJECT DESCRIPTION

This project is an eastern extension of the levee maintenance project initiated by the City of Burlington, and Skagit County Dike, Drainage and Irrigation District No. 12, intended to increase flood protections for the City of Burlington. Skagit County Dike, Drainage and Irrigation District No. 12 propose to enlarge both the width and the height of the existing Skagit River levee along the 1.53 mile long project site. The project extends from the Burlington City limits at Gardner Road north to the terminus of the Burlington Northern Santa Fe Railroad on Lafayette Road in the North. The elevation at the top of the levee will be increased by approximately 4 feet in height and the toe or base of the levee will be increased by approximately 60 feet in width. The widening of the dike will be limited to an area landward of the existing levee toe. The purpose of the improvements is for structural reinforcement of the levy system to prevent a failure during elevated flood events.

SITE DESCRIPTION

This section of the existing levee is constructed on an alluvial terrace and runs along the outer bend of an elongated meander of the Skagit River. Bank erosion continues along this reach of the river and has progressed to the base of the levee on the north end. Rock has been placed at the waterward toe of the levee at this location to prevent further erosion and encroachment into the levee prism.

Environmental Setting

The Skagit River watershed supports the Puget Sound's largest populations of naturally reproducing salmon and steelhead trout, and has been identified as a core watershed for the recovery of Endangered Species Act-listed Chinook salmon, steelhead, and bull trout. The assessment reach is

utilized by recreationalists such as boaters and fisherman.

The area water ward of the proposal provides habitat for the Chinook salmon, steelhead trout, and bull trout including adult and juvenile migration in the channel; juvenile rearing along the channel margins; spawning habitat, and refuge habitat in riparian forests during high flow events. Habitat conditions for terrestrial species are primarily dominated by forest plant communities with the exception of small scale farms, roads, and residences. Bald eagles perch on suitable-sized trees along the riparian corridor and feed on salmon within the project area.

EXHIBITS:

1. Departmental Staff report.
2. Shoreline Substantial Development/Conditional Use application PL12-0050 submitted July 9, 2012.
3. Skagit County Assessor's Parcel & Tax Account Number list for PL12-0191.
4. Site Plans.
5. Notice of Development Application, published November 22 & 29, 2012.
6. SEPA Final EIS issued July 16, 2010 by the City of Burlington.
7. Wetland Site Assessment Report by Graham Bunting Associates, dated November 8, 2012.
8. Fish and Wildlife Site Assessment Report by Graham Bunting Associates, dated February 27, 2013.

COMMENTS RECEIVED

9. A comment letter was received from Dike District No. 20, dated January 2, 2013, indicating that the addition to the height of the levee at the proposed location will result in increased flood levels in the Nookachamps Drainage.
10. A comment letter was received from DeVries Dairy, dated January 2, 2013, indicating that the addition to the height of the levee at the proposed location will result in increased flood levels in the Nookachamps Drainage.

GENERAL PROPERTY/PROJECT INFORMATION:

- **PARCEL #:** P38223, P38305, P38304, P38302, P38307, P38220, P38308 & P38303
- **DEVELOPMENT SCHEDULE** – Skagit County Dike, Drainage and Irrigation District No. 12 has completed some of the actions by placing some fill on the landward side of the dike. The remainder of the grading project will be completed during the spring, summer and early fall of 2013.
- **PROJECT ACCESS** – The project is served by access off of Gardner Road or Lafayette Road.
- **PROJECT TRAFFIC AND PARKING** – No additional traffic or parking should occur as a result of the improvements. Temporary traffic delays may be necessary during construction of the expanded levee.

- **SURROUNDING LAND USE** – Current use of the adjacent properties is dominated by residential properties, agriculture, and natural areas such as the riparian corridor along the Skagit River. The land adjacent to the project site is designated by the Skagit County Comprehensive Plan as Agriculture - Natural Resource Land.
- **AESTHETIC IMPACTS** – The improvements are located on the shoreline of the Skagit River. Some aesthetic impacts are anticipated as a result of increasing the size of the levee. This may alter the visual character of the shoreline until the riparian areas recover.

DEPARTMENTAL FINDINGS:

1. **ZONING/COMPREHENSIVE PLAN.** The subject property is designated as Agriculture - Natural Resource Lands as indicated on the Comprehensive Plan and Zoning maps adopted December 23, 2008, and as amended thereafter. The subject site has a shoreline designation of Rural as indicated in the Skagit County Shoreline Management Master Program (SCSMMP). The Skagit River is a Shoreline of Statewide Significance.
2. **PROCESSING.** A Notice of Development Application was posted on the subject property and published in a newspaper of general circulation on November 22 & 29, 2012 as required by Section 14.26.9.04 of Skagit County Code. Notification was provided to all property owners within 300 feet of the subject property. There was a 30 day comment period associated with the Notice of Development which ended on December 28, 2012. Two comment letters were received, see exhibits 9 & 10.
3. **STATE ENVIRONMENTAL POLICY ACT.** A Determination of Significance (DS) was issued by the City of Burlington and a draft environmental impact statement (DEIS) was completed on Feb 13, 2009 for the dike stabilization project. The Final Environmental Impact Statement (EIS) was issued on July 16, 2010. The final EIS is included as Exhibit 6.
4. **FLOOD AREA REVIEW.** The existing levee is located within an A7 flood zone which is designated as a 100 year flood area as indicated on FIRM Community Panel Number 530151 0235D, effective September 29, 1989, and Panel Number 530151 250C, effective January 3, 1985.
5. **CRITICAL AREA REVIEW:** The subject parcel was reviewed with respect to the Skagit County Critical Areas Ordinance, Chapter 14.24 of the Skagit County Code. The results of the critical areas review indicated that critical areas/conditions were on or within 200 feet of the proposed development, which include wetlands and fish & wildlife habitat conservation areas. The applicant submitted a wetland site assessment report by Graham Bunting Associates, dated November 8, 2012, a fish and wildlife site assessment by Graham Bunting Associates, dated February 27, 2013, and a Biological Assessment by Anchor QEC, LLC, dated October 2009. (The biological assessment is specific to the three bridge corridor south and west of the subject site. Although the study was limited to the three bridge corridor).

The assessments indicate that the proposed improvements were determined to be in compliance with Skagit County's Critical Areas regulations. Additional critical areas compliance and environmental protections are provided under the provisions of SCC 14.24.040 (3), Jurisdictional Substitution with the United States Army Corps of Engineers.

6. **HEALTH DEPARTMENT REVIEW:** The application was routed to the Skagit County Health Department for review. The Health Department commented "WAC 173-200 & 173-201A shall be observed. As long as staging/fill areas and work do not impact any septic & wells we have no concerns. SCC 14.24.330 2 (a) requires a narrative memo that no wells are in the area that could be impacted." The Health Department requested that the following condition be added to the staff report: If the demolition of any buildings occurs that discovers septic systems, DF/tanks, septic lines or pipes under the proposed project area, then the contractor shall call SCHD to obtain decommissioning approval. Any wells GB-1 to GB-9 impacted or removed from the project site shall be decommissioned per state WAC.
7. **PUBLIC WORKS DEPARTMENT REVIEW:** Public Works commented "The proposed project will need to comply with section 14.32.060 of the Skagit County Code. This section deals with erosion and sediment controls. A grading permit is required."
8. **CURRENT PLANNING REVIEW:** Current Planning staff had no comment on the project.
9. **BUILDING OFFICIAL/FLOODPLAIN MANAGER REVIEW:** The Building Official comments: A grading and floodplain permit will be required. If the construction results in modification of the regulatory floodplain, first a CLOMR and then a LOMR will be required.
10. **FIRE MARSHAL REVIEW:** The Fire Marshal did not have any comments on this project.
11. **SHORELINE MANAGEMENT MASTER PROGRAM CRITERIA:** Skagit County's SMMP, SCC 14.26, indicates that SMMP policies and regulations will be reviewed when approving or denying Shoreline permits. The proposed improvements are located within a Shoreline of Statewide Significance. Chapter 5.03 Shoreline of Statewide Significance, Chapter 7.06 Landfills, and Chapter 7.16, Shoreline stabilization and Flood Protection were all reviewed with respect to the project and found to be in general compliance. Comments to Chapter 7.16 are as follows:

Shoreline Stabilization and Flood Protection – Policies – General, 7.16, 1A.

- (1) Streamway modification and marine diking programs should be coordinated and monitored to provide for more comprehensive planning of Skagit County's Shorelines.

Streamway modification and marine diking is not included within the project proposal. However, increasing the dike height may result in minor modification of the Skagit River hydrology during elevated flood events. This project has been coordinated between Dike District 12 and the City of Burlington. The proposal is not considered a coordinated response or an approved mitigation measure for flooding prescribed by the members of the Skagit River General Investigation. The proposal is solely designed to modify the existing diking system on the north and west side of the Skagit River in order to provide shoreline stabilization and greater flood protection to the City of Burlington.

- (2) Recognizing that streamway modifications may cause interference with normal river geohydraulic processes that may lead to erosion of other up and down river shorelines, then such modifications and stabilization measures should incorporate basic geohydraulic principles and be located, designed, coordinated and maintained for homogeneous river reaches. Such modifications and measures should be sited and designed by qualified, professional personnel.

This project was designed by the engineers of Pacific International Engineering utilizing geohydraulic principles in design and construction. Although hydraulic modeling of the proposal indicates that upstream and downstream impacts may occur during elevated flood events, Dike District 12 and the City of Burlington utilized designs that will minimize those impacts. The proposal is also required to comply with the Flood Damage Prevention Ordinance SCC 14.34.

Shoreline Stabilization and Flood Protection – Policies – Design and Location, 7.16, 1B.

- (1) All bank stabilization and flood protection measures should be constructed to comply with the design and location standards and guidelines of applicable agencies.

The project has been designed according to the United States Army Corps of Engineers (USACE) guidelines, designs and standards in an effort to receive levee certification. The proposal is also required to comply with the Flood Damage Prevention Ordinance SCC 14.34.

- (2) Riprapping and other bank stabilization measures should be located, designed, and constructed primarily to prevent damage to agricultural land, public roads and bridges, existing homes and residential areas, or other structures or natural features whose preservation is in the public interest. Such measures should not restrict the flow of the river or stream.

Although riprapping is not proposed, the bank stabilization project is located and designed to minimize impacts from the Skagit River to the City of Burlington during flood events. Hydraulic modeling completed by Pacific International

Engineering indicates the proposal should not result in significant adverse impacts to areas upstream or downstream of the subject site.

- (3) **Fish and Wildlife Resources** - Recognizing the value and interdependency of water bodies and associated wetlands as biologically productive habitats and recognizing the intent of the Shoreline Management Act (RCW 90.58.030(2) and WAC 173.22.030, shoreline stabilization and flood protection projects should be located landward of natural wetlands, marshes, and swamps of associated fresh and marine water bodies.

The shoreline stabilization project is not located within wetlands, marshes or swamps. However, the hydraulic model generated by the City of Burlington and Dike District 12 indicates that some impacts to wetlands located downstream and across the river may receive some additional flooding during a elevated flood event. It is not anticipated that the additional flood waters will have a significant adverse impact to the wetlands.

- (4) Braided and meandering channels and associated shoreline areas should not be the locations for intensive land use developments such as those of an industrial, commercial, or residential nature.

With the exception of existing farmworker housing and urban residential development within Burlington City limits, This proposal is not directly associated with intensive land use developments.

- (5) Substantial stream channel direction modification, realignment, and straightening should be discouraged as a means of shoreline and flood protection and for protection of road rights-of-way, navigational routes, and other construction or developmental projects.

The project does not include provisions for stream channel direction modification, realignment and straightening.

Shoreline Stabilization and Flood Protection – Policies – Materials, 7.16, 1C.

- (1) Shoreline stabilization and revetment material should consist of substantial rock and should meet the standards and guidelines of the Soil Conservation Service.

The project proposes to utilize glacially derived fill material sufficiently well sorted, ranging from fine to coarse, to function as a hydraulic barrier and meet the Army Corp of Engineering standards and guidelines for geotechnical construction of the diking system.

- (2) Junk and solid waste should not be permitted for shoreline stabilization and revetment material. Concrete and concrete waste should not be used as stabilization and revetment material.

Concrete, junk and solid waste, including concrete waste, are not proposed to be utilized in project construction.

- (3) Shoreline stabilization programs should utilize natural, perennial vegetation either as stabilization material alone or as complementary to other materials.

Consistent with diking practices in Skagit County, the dike will be reseeded with grass and maintained. Perennial vegetation maybe used in areas that do not conflict with ongoing dike maintenance.

Shoreline Stabilization and Flood Protection – Policies – Natural Features, 7.16, 1D.

- (1) Natural features such as snags, stumps or uprooted trees which support fish and other aquatic systems, and do not intrude on the navigational channel or reduce flow, and do not threaten agricultural land and existing structures and facilities should be allowed to remain.

No snags, stumps and uprooted trees are currently located within the proposed improvement area. The area east and south of the existing dike, adjacent to the Skagit River will remain in its current configuration. Any snags, stumps or uprooted trees occurring at or near the OHWM will not be removed.

Shoreline Stabilization and Flood Protection – Policies – Alternatives, 7.16, 1F.

Shoreline stabilization programs should be encouraged to develop alternative methods of streamway modifications utilizing natural systems of stabilization and geohydraulic principles.

The project does not include provisions for streamway or channel direction modification, realignment and straightening

Stabilization and Flood Protection – Policies – Impacts, 7.16, 1G.

- (1) Recognizing that shorelines of recreation, wildlife, and aesthetic value are limited and irreplaceable resources, than shoreline stabilization and flood protection projects should consider their potential effects and impacts upon such resources.

All work is proposed west or landward of the existing levy. It is not anticipated that this proposal will have a significant adverse impact on recreation opportunities, fish and wildlife habitat, or current aesthetic values.

- (2) Recognizing that the related shoreline stabilization and flood protection activities of filling, grading, lagooning, and dredging may have a substantial impact upon the existing aquatic and biological systems, navigation, and river hydraulics by subsequent erosion and sedimentation, then these activities and their possible impacts should be recognized.

All work is proposed west or landward of the existing levee. It is not anticipated that this proposal will have a significant adverse impact on fish and wildlife habitat or create navigation barriers. The possible impacts were recognized and balanced with the need to provide public protections. Potential biologic impacts resulting from this project may be mitigated by re-establishing and maintaining native vegetation in riparian and upland areas.

Stabilization and Flood Protection – Regulations – Shoreline Areas, 7.16, 2A.

(3) Rural.

- a. Shoreline stabilization and flood protection measures are permitted subject to the General Regulations.

Stabilization and Flood Protection – Regulations – General, 7.16, 2B.

(2) Qualifications for approval - Shoreline stabilization and flood protection measures shall be allowed only when adequate evidence is presented that one of the following conditions exist:

- a. Significant erosion of agricultural lands.
- b. High water or erosion threatens public works and properties, including roads, bridges, railroads, and utility systems.
- c. High water or significant erosion damages or threatens existing homes and residential areas.
- d. High water or significant erosion damages or threatens to damage existing commercial and industrial uses and developments.

This project is designed to provide additional flood protection to the City of Burlington, and meets the criteria for high water threatening public works and properties, including roads, bridges, railroads, and utility systems, for high water threatening existing homes and residential areas, and for high water threatening existing commercial and industrial uses and developments.

(3) Professional design - The County may require professional design of shoreline stabilization and flood protection works where such projects will cause interference with normal river geohydraulic processes, leading to erosion of other up and down river shoreline properties or adverse effects to shoreline resources and uses.

This project was designed by Washington State licensed professional engineers utilizing geohydraulic principles in design and construction. The City of Burlington in conjunction with the Army Corps of Engineers designed this project to protect the city from elevated flood events while minimizing upstream and downstream hydraulic impacts from the proposed dike improvement.

- (4) **Channel modifications** - River and stream channel direction modification, realignment, and straightening are not permitted unless for substantiated purposes connected with uses consistent with this program.

The project does not include provisions for river realignment and straightening.

(5) **Design and construction**

- a. Existing streambank vegetation shall be preserved to the maximum extent feasible during shoreline stabilization and flood protection work.
- b. New or expanded dike, revetment, or riprap systems, cut and fill slopes, and backfilled areas shall be progressively planted with compatible, self-sustaining, and soil stabilizing vegetation.
- c. All works shall allow for the passage of surface and ground waters.
- d. All works shall be designed and constructed to meet the requirements and standards of the County Engineer, State Departments of Fisheries and/or Game, Corps of Engineers where applicable, and Soil Conservation Service.

The Department has concluded that all of the above criteria, a –d, will be met. The City of Burlington and Dike District 12 have proposed to preserve the natural vegetation in the area waterward of the existing dike. Areas exposed as a result of grading activities will be replanted with grass for soil stabilization. The expanded levee system should not interfere with the passage of surface or ground waters greater than what currently exist. The project has been designed and constructed to meet the requirements of the Army Corps of Engineers for levee design.

(6) **Materials**

- a. Materials for shoreline stabilization and flood protection works shall not consist of solid waste, junk or abandoned automobiles, asphalt or macadam, or any building demolition debris except that which is used for emergency purposes.
- b. Techniques utilizing totally or in part vegetative bank stabilization procedures shall be preferred over structural means such as concrete revetments or extensive riprap.

Junk and solid waste including asphalt & demolition debris are not proposed to be utilized in construction of the project. The proposed improvements will be replanted with natural grass vegetation in the upland areas of the project site.

- (7) **Estuaries and wetlands** - Any proposal to dike, drain, or fill tidelands, estuaries, salt marshes, and associated water bodies and wetlands shall provide a thorough evaluation of the natural productivity of the wetlands to be displaced and the proposed use.

A wetlands complex is located on the west side of the Skagit River adjacent to the project site. As all work is proposed landward of the existing levee, it is not

anticipated that this project will have an adverse impact on the wetland complex. A second wetland complex is located landward of the existing levee. The wetland site assessment prepared by Graham Bunting Associates indicates the wetland landward of the levee meets Skagit County's critical areas ordinance criteria as not regulated by Skagit County.

- (9) **Project information** - The county shall require and utilize the following substantiating information during review of shoreline stabilization and flood protection proposals:
- a. River channel hydraulics and floodway characteristics up and down stream from the project area shall be identified contingent upon the extent and nature of project work involved. Updated topography maps or phased (old and recent) aerial photography would be adequate.
 - b. Existing shoreline stabilization and flood protection works within the area stipulated above.
 - c. Physical, geological, and/or soil characteristics of the area.
 - d. Existing and proposed shoreline water uses for the project area and area stipulated above.
 - e. Predicted impact upon area shore and hydraulic processes, adjacent properties, and shoreline and water uses.

The Department is satisfied that the appropriate information has been provided as part of the application.

The Department also reviewed SCC 14.26, Chapter 5.03 Shoreline of Statewide Significance and Landfills SCC 14.26, Chapter 7.06. The review indicated that the project is consistent with the policies and regulations of these chapters.

13. **Time Requirements:** Under the provisions of RCW 90.58.143 (2) & (3) and WAC 173-27-090 (2)(a), the applicant is required to begin the project within 2 years and complete the project within 5 years.

RECOMMENDATION

Based on a review of all submitted information and the above findings, Skagit County Planning and Development Services recommends approval of shoreline substantial development permit request PL12-0191 for the proposed shoreline stabilization and flood protection project by Dike District 12 and the City of Burlington subject to the following conditions:

- 1) The applicant and its contractors shall comply with the State Water Quality Criteria, Surface Water WAC 173—201A and Ground Water WAC 173-200.
- 2) Temporary erosion/sedimentation control measures shall be utilized in accordance with the Skagit County Code 14.32 Drainage.
- 3) The applicant shall comply with Northwest Clean Air Agency requirements.
- 4) The applicant shall comply with all relevant provisions of Skagit County Code 14.26 Shoreline Management Master Program, Skagit County Code 14.24 Critical

Areas Ordinance, Skagit County Code 14.34 Flood Damage Prevention Ordinance and Skagit County Code 14.16 Zoning.

- 5) Aesthetic impacts shall be minimized.
- 6) The applicant shall strictly adhere to the project information (site diagram) submitted for this proposal. If the applicant proposes any modification of the subject proposal, he/she shall request a permit revision from this office.
- 7) If the demolition of any buildings occurs that discovers septic systems, drain fields, septic tanks, septic lines or pipes under the proposed project area, then the contractor shall contact the Skagit County Health Department to obtain decommissioning approval. Any wells GB-1 to GB-9 impacted or removed from the project site shall be decommissioned per state requirements..

Prepared By: John Cooper

Dated: April 17, 2013



PL12-0191
SKAGIT COUNTY
PERMIT CENTER
JUL - 9 2012
RECEIVED

with

**DIKE DISTRICT #12
AS CO-LEAD AGENCY**

FINAL ENVIRONMENTAL IMPACT STATEMENT

**TO ADOPT A STRATEGIC PROGRAM FOR COMPREHENSIVE FLOOD
HAZARD MITIGATION IN THE BURLINGTON URBAN AREA AND
ADJACENT LAND WITH A RANGE OF STRUCTURAL
AND NON-STRUCTURAL COMPONENTS**

THIS IS A PHASED REVIEW PURSUANT TO WAC 197-11-060 (5)

CITY OF BURLINGTON, WASHINGTON AND DIKE DISTRICT #12

Prepared for review by Citizens and Government Agencies in Compliance with the State Environmental Policy Act of 1971 (Chapter 43.21C Revised Code of Washington) as revised; the State Environmental Policy Act Rules, as revised (Chapter 197-11 Washington Administrative Code); and City of Burlington Municipal Code Chapter 15.12 Environmental Policy; and the National Environmental Policy Act Pub. L 91-19, 42 U.S.C.4321-4347 as amended.

DATE OF ISSUE: JULY 16, 2010

Ex 6

b. Obtain FEMA Accreditation of a Certified Riverine Levee in a Delta Area with No High Ground Tieback Option

According to the Code of Federal Regulations (CFR)¹², a registered professional engineer certifies the levees which are then reviewed and accepted by FEMA for accreditation. Once the levees are accredited by FEMA, they can be included in the hydraulic modeling that is conducted to define the 100-year floodplain.

Because the levees are currently not accredited, the methodology FEMA has employed to date in establishing Base Flood Elevations (BFEs) assumed that no levee exists and the overflow elevations are at the top of the river bank and not at the top of the levee. This is a necessary and conservative approach from FEMA's perspective, although it is also an unrealistic scenario because the levees do, in fact, exist and they do prevent flooding at certain flow levels within the City of Burlington. Burlington and Dike District #12 recently completed a geotechnical study of the existing levees. This study indicated that although the levees needed to be enlarged and raised in the segment expected to be certified, the levees in general were already constructed soundly enough to withstand significant flooding, as has been confirmed through experience in the recent floods of 1990, 1995, 2003, and 2006. These floods had return intervals ranging from 25 to 50 years, depending on the hydrology used in the analysis.

Levee certification requirements state that *"riverine levees must provide a minimum freeboard of 3 feet above the 1% annual chance flood elevation. An additional 0.5 feet above that minimum is required along the length of the upstream tieback levee and at the upstream end of the main levee...An additional 1 foot of freeboard above the 3-foot minimum is required within 100 feet of either side of structures within the levees (bridges)."*¹³ This discussion of freeboard along the length of the upstream and downstream tieback levees implies that the tieback levees are part of all levee systems. In the City's proposed action, no such tieback levee is envisioned. Rather, water will naturally overflow in the Sterling area, with some of the overflow spreading northerly onto the flood plain, and some into Burlington along the low areas near Gages Slough. This natural overflow area at Sterling takes pressure off the system and reduces the downstream flood peak. Burlington and Dike District #12 are hopeful FEMA will consider the benefits of conveying some of the flood peak out of the system, thereby mitigating upstream and downstream effects. Appendix H of the 2003 Guidelines states, *"Under certain circumstances, FEMA may also grant exceptions to the requirements itemized above or approve alternate analysis techniques."* Based on this statement, there does seem to be a basis for FEMA to accept a levee system for accreditation that intentionally does not have high ground tiebacks.

The City / Dike District #12 proposal is to begin the upstream end of the certified levee adjacent to Lafayette Road where the road turns south near SR-20, and ending at Bennett Road, at the City's western corporate boundary limit. The total length of this levee is about 4.6 miles and includes a new 1.3-mile setback levee below the BNSF Bridge and a 3.3-mile improved levee above the BNSF Bridge. Both ends of the levee do not tie to any high ground. The FLO-2D modeled maximum velocity is less than 3 ft/sec at both upstream and downstream ends of this

¹²Title 44 – Emergency Management and Assistance, Chapter I - Federal Emergency Management Agency, Department of Homeland Security, Subchapter B – Insurance and Hazard Mitigation, Part 65 - Identification and Mapping of Special Hazard Areas.

¹³ FEMA, Guidelines and Specifications for Flood Hazard Mapping Partners, April 2003.

levee during the 100-year flood. These low velocities (< 5 ft/sec) indicate that if water did flow overland in these areas, the nature of the flooding would be less dangerous to life and property.

In response to the Draft EIS, one comment stated “that [the levee] does not isolate the flooding source from the community and therefore does not provide protection from the base flood.” The Skagit River presents a serious flood risk, and the City / Dike District #12 program is focused on reducing flood risk. This flood risk reduction will be incremental. In the case of the riverine levee in the Skagit River delta area, the “protection” goal for Burlington is to have a levee system that will solidly withstand the 100-year flood event, lower Base Flood Elevations in the City, remove a percentage of the City from the 100-year floodplain (although flood insurance will be strongly encouraged since the potential for a larger flood always exists), and ensure that the established Base Flood Elevations adequately communicate the best estimates of 100-year water surface flood elevations to property owners. The other component of “protection” for Burlington is to minimize the upstream and downstream effects of the levee improvements on neighboring areas. This is an important component of the regional approach.

As described earlier in this section, Base Flood Elevations are determined by incorporating topographic features into the hydraulic model. In the case of Burlington and Dike District #12, the levees are not accredited; therefore, they will not be included as a topographic feature in the Corps’ hydraulic model. Under this somewhat abstract theoretical circumstance, the disagreement over the hydrologic basis of a 100-year flood event makes little difference – both floods would overflow the City, with similar results in flood water surface elevations. Therefore, regardless of the outcome of the hydrologic analysis, FEMA will publish higher BFEs in Burlington until the levee segment is certified and accredited. Once this occurs, the differences in modeled water surface elevations during flood events are significantly different between the Corps hydrologic analysis and Pacific International Engineering’s hydrologic analysis. However, for the purpose of conservatism, the proposed action incorporates the Corps’ hydrologic analysis.

A key component of developing the levee certification project is addressing the impacts of the proposed action on the upstream and downstream areas. Burlington and Dike District #12 recognize that positive support from the community is essential for successful project implementation, including Sedro-Woolley and the Sedro-Woolley Wastewater Treatment Plant, United General Hospital, Mount Vernon, La Conner, the Anacortes Water Treatment Plant, the Dike and Drainage Districts between Sedro-Woolley and the mouth of the Skagit River, Skagit County, the agricultural community, and those living in the vicinity of the Samish River.

To ensure that impacts to the neighboring areas are minimized, the approach is to first study the minimum work necessary to protect Burlington from significantly increased BFE heights, i.e. levee certification along the river frontage of the urban area with setbacks through the bridge corridor and no high ground tiebacks. With that work in place, the remaining measures to be implemented would be determined through the regional planning process (Corps of Engineers General Investigation Study and the Flood Control Zone District (FCZD)).

The primary structure to consider when addressing downstream impacts is the constriction of the BNSF Bridge. The bridge can only pass about 150,000 cubic feet per second (cfs). It is noteworthy that Pacific International Engineering’s estimation of the 100-year regulated event is

a little over 160,000 cfs at the Riverside Bridge. With some additional upstream storage in Upper Baker and Ross Reservoirs and possibly a project in the Nookachamps area, this flow could be reduced such that the downstream effects would not change during a 100-year Skagit flood event. Conversely, using the Corps hydrology of 192,900 cfs will certainly result in significantly larger flood measures with associated impacts.

The 1984 Burlington Flood Insurance Study details how the overbank sheet flow patterns function north, at Sterling, and the variety of scenarios that result with levee failures or overtopping at downstream locations. If Burlington and Dike District #12 are able to go forward with the concept to upgrade the existing levee segment with no extension to the east, this will continue to allow water to escape at Sterling and prevent any upstream backwater effects. In addition, continued conveyance of reduced peak flows would not change downstream impacts.

The City of Burlington and Dike District #12 believe the proposal for levee certification and accreditation is viable and consistent with federal regulations.

c. Obtain Letter of Map Revision (LOMR) for the Burlington Urban Area

The mechanism to enable “credit” for a certified levee is a Letter of Map Revision. This is essentially an engineering report which documents the work completed to ensure the improved or new levees will withstand a 100-year flood event. Additionally, the report includes hydraulic modeling which will show what the revised Base Flood Elevations will be when the levees are included in the modeling. When approved by FEMA, the LOMR will become the basis for revised Base Flood Elevations within the City.

d. Retain Administrative Floodway

As part of the 1984 Flood Insurance Study, conventional floodways were determined not to be appropriate for the Skagit River delta area for a number of reasons. An agreement was reached with FEMA to address the regulatory floodway in two ways, the first being to define “Floodway” – “the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the 100 year flood without cumulatively increasing the water surface elevation more than one foot. Floodways in Burlington consist of all areas riverward of the riverward toe of dikes and levees along the Skagit River.” (See Appendix D, Exhibit 6, in the Draft EIS). In lieu of a floodway, pursuant to additional study, FEMA accepted a “most probable failure point” analysis, which concluded a 100-year flood would overtop the railroad tracks at Sterling.

The 1984 Flood Insurance Study stated “...for the Skagit River proper, the levees confining the channel and adjacent areas have been designated as floodways,” using the most landward levees to establish the floodway boundary.

“Conventional floodways are not appropriate for the Skagit River delta area for a number of reasons. Although flood elevation and depth criteria can be established for the delta based upon general flood risk assessments which consider possible modes and locations of levee failure in flow path computations, such analyses are not appropriate for establishing floodways on the delta. Unlike typical valley situations, the exact location of flow paths during any particular flood event on the delta cannot be known in advance due to the uncertainty of where levee failures will occur, the relative sequence of levee failures, and the