APPENDIX C

2007 AS-BUILT DRAWINGS AND 2011 DESIGN DRAWINGS

Appendix C has been provided as a separate file due to the large file size.
It is available on the Seattle District website http://www.nws.usace.army.mil/ers.

VICINITY MAP - SITE 1-3

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.
		/ /	

Designed by: DESJARDIN
Drawn by: RUDIE
Checked by: FISCHER
Date: 22 NOV 10
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Rev.

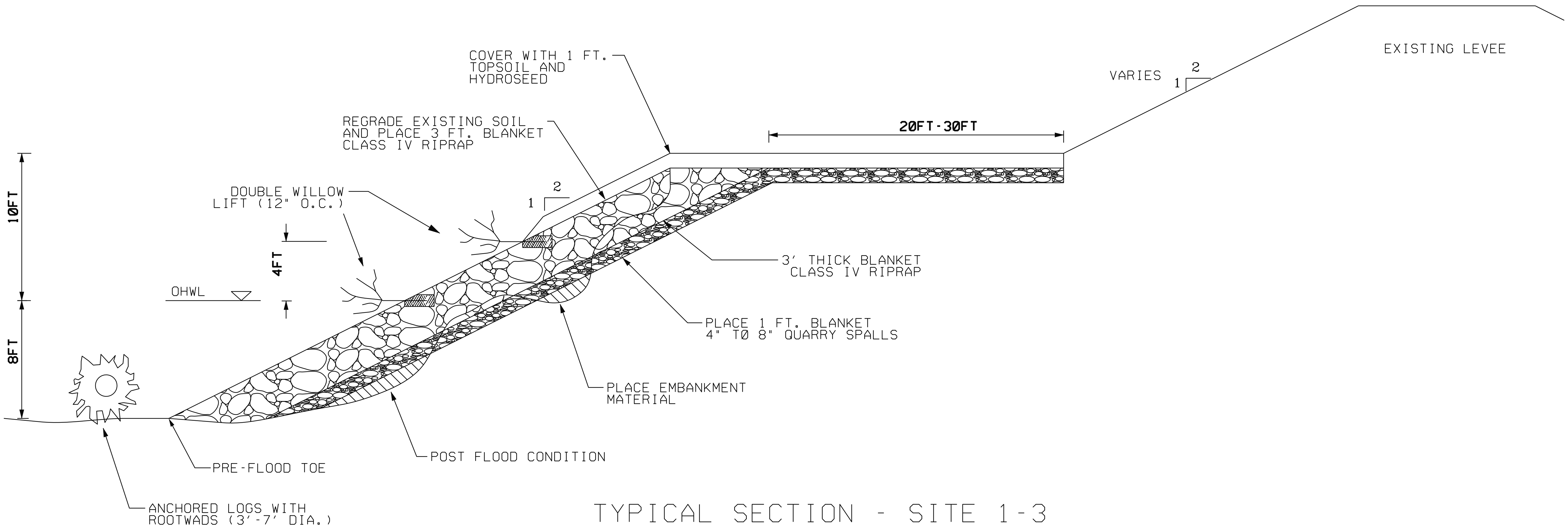
U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Prepared by: IFFT/VILLARREAL

SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 1
PLAN VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
C-001
Sheet 1 of 2

DATE AND TIME PLOTTED: $$$DATE$$$$ $$TIME DESIGN FILE: $$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$



TYPICAL SECTION - SITE 1-3

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD) PLACED AT U/S AND D/S ENDS. (SEE LOG/ROOTWAD DETAIL)
7. TOTAL REPAIR LENGTH 75 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 1
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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Sheet 2 of 2

VICINITY MAP - SITE 1-13

US Army Corps of Engineers Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 1
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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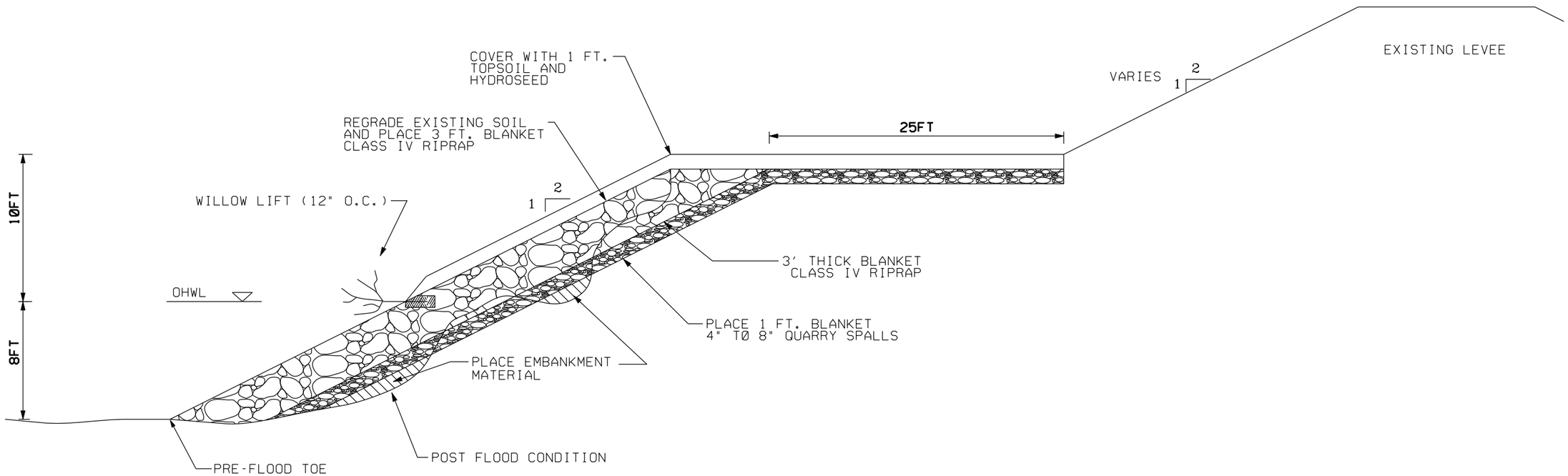

TYPICAL SECTION - SITE 1-13

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL WILLOW LIFT. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFT WITH TOPSOIL AND HYDROSEED.
6. VERIFY THAT FINISHED SLOPE GRADE MATCHES EXISTING UPSTREAM AND DOWNSTREAM BANK.
7. TOTAL REPAIR LENGTH 50 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 1
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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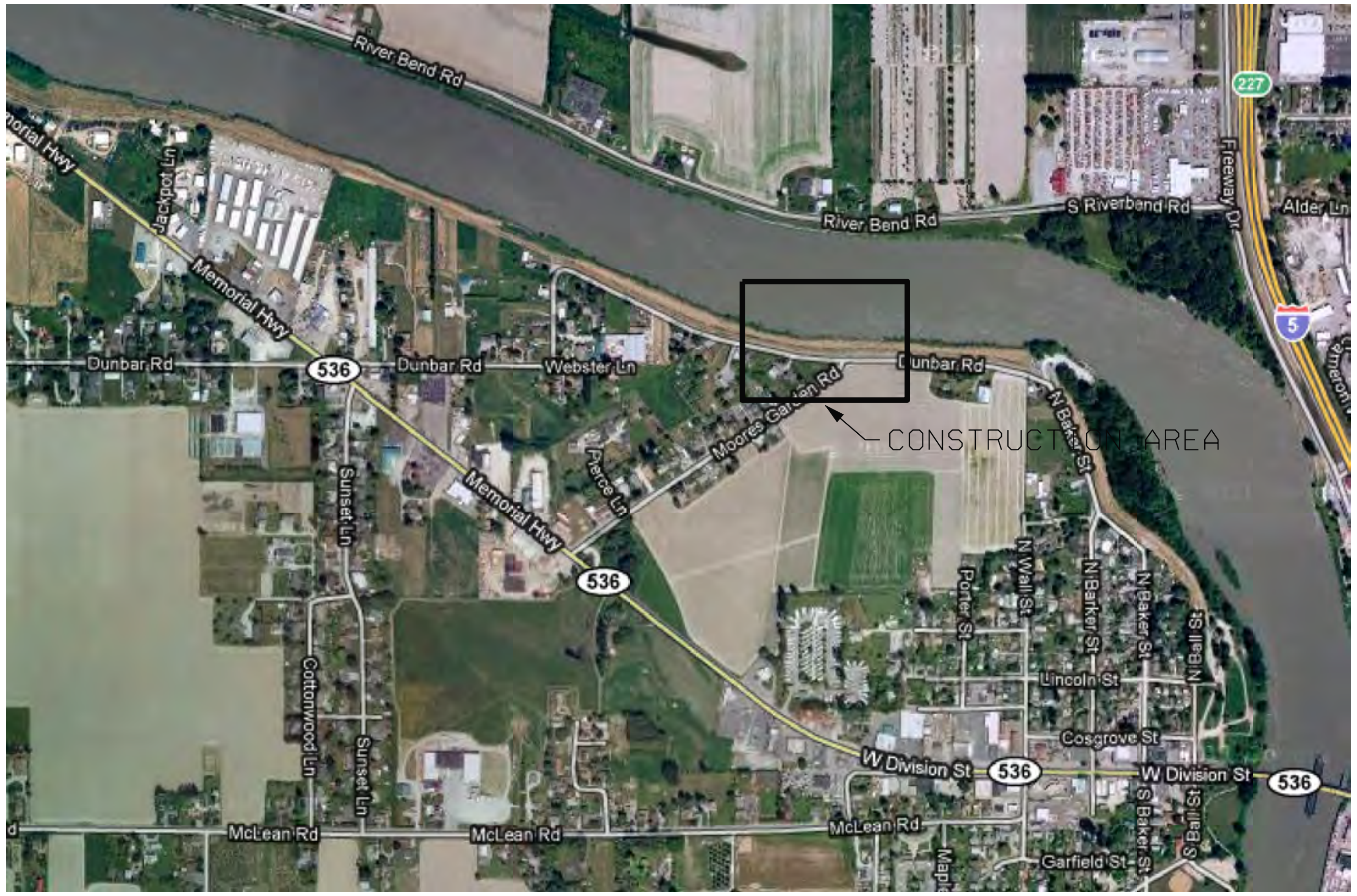
VICINITY MAP - SITE 1-14



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DIKE DISTRICT 1
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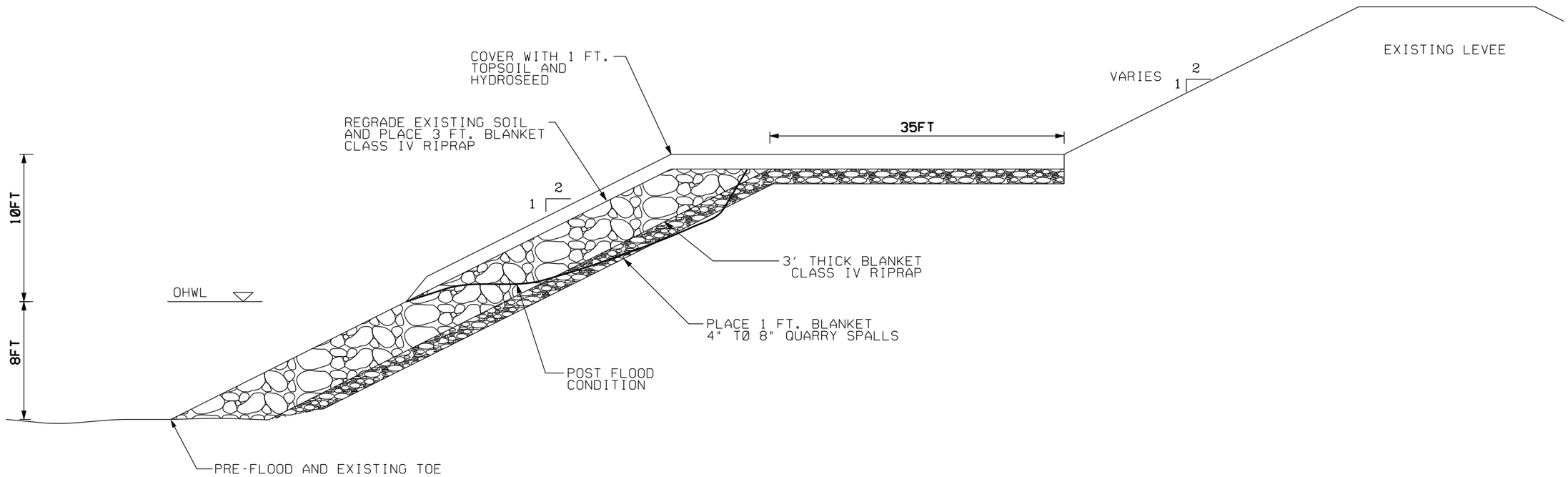

TYPICAL SECTION - SITE 1-14

(N.T.S.)

NOTES:

1. DAMAGED PORTION IS ON UPPER EMBANKMENT SLOPE, AVOID IN-WATER WORK IF POSSIBLE.
2. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. COVER EXPOSED ROCK ABOVE ESTIMATED OHWL WITH TOPSOIL AND HYDROSEED.
5. VERIFY THAT FINISHED SLOPE GRADE MATCHES EXISTING UPSTREAM AND DOWNSTREAM BANK.
6. TOTAL REPAIR LENGTH 30 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 1
SECTION VIEW
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VICINITY MAP - SITE 3-6

US Army Corps of Engineers
Seattle District

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Drawn by: RUDIE

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 3
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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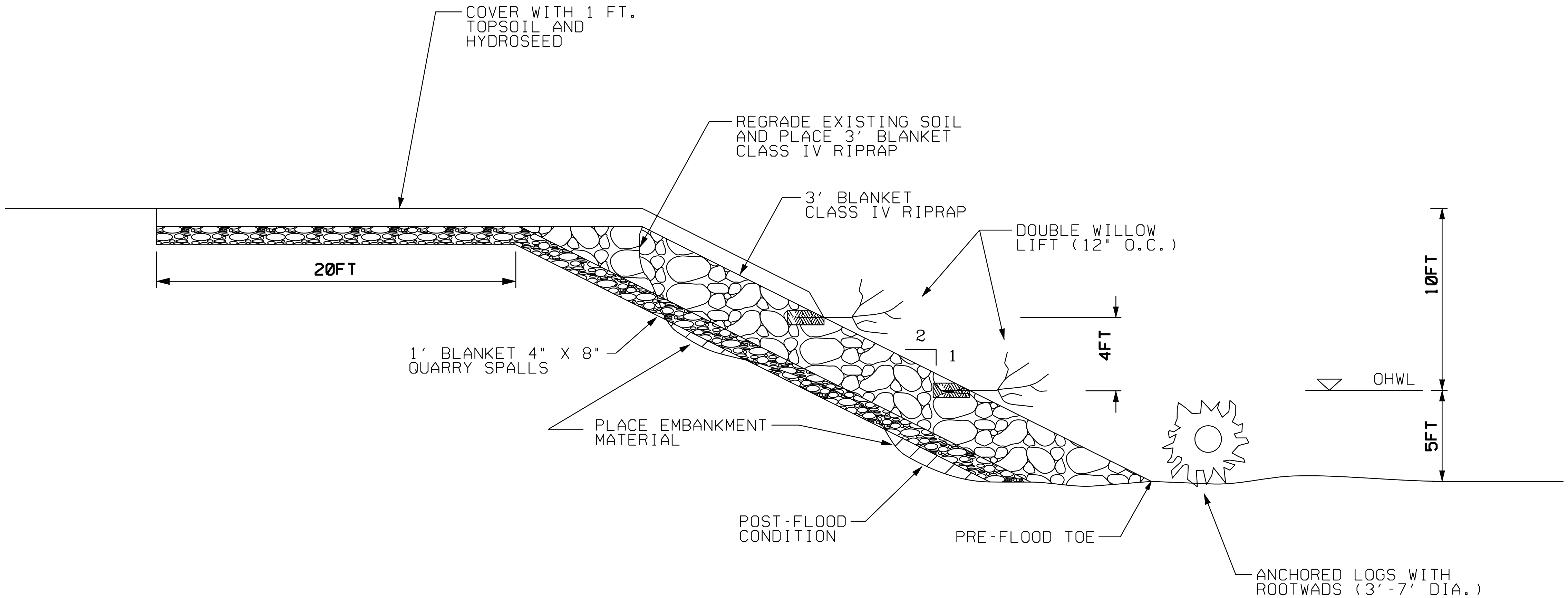

TYPICAL SECTION - SITE 3-6

NOTES:

1. REGRADE DAMAGED SECTION TO 2H:1V.

2. FILL SCOUR HOLE EMBANKMENT MATERIAL.

3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

4. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.

6. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD). INSTALL FOR 150' OF THIS REPAIR AND 375'OF 2007 COMPLETED REPAIR.(SEE LOG/ROOTWAD DETAIL)

7. TOTAL REPAIR LENGTH 150 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 3
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 3-8

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
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PLAN VIEW
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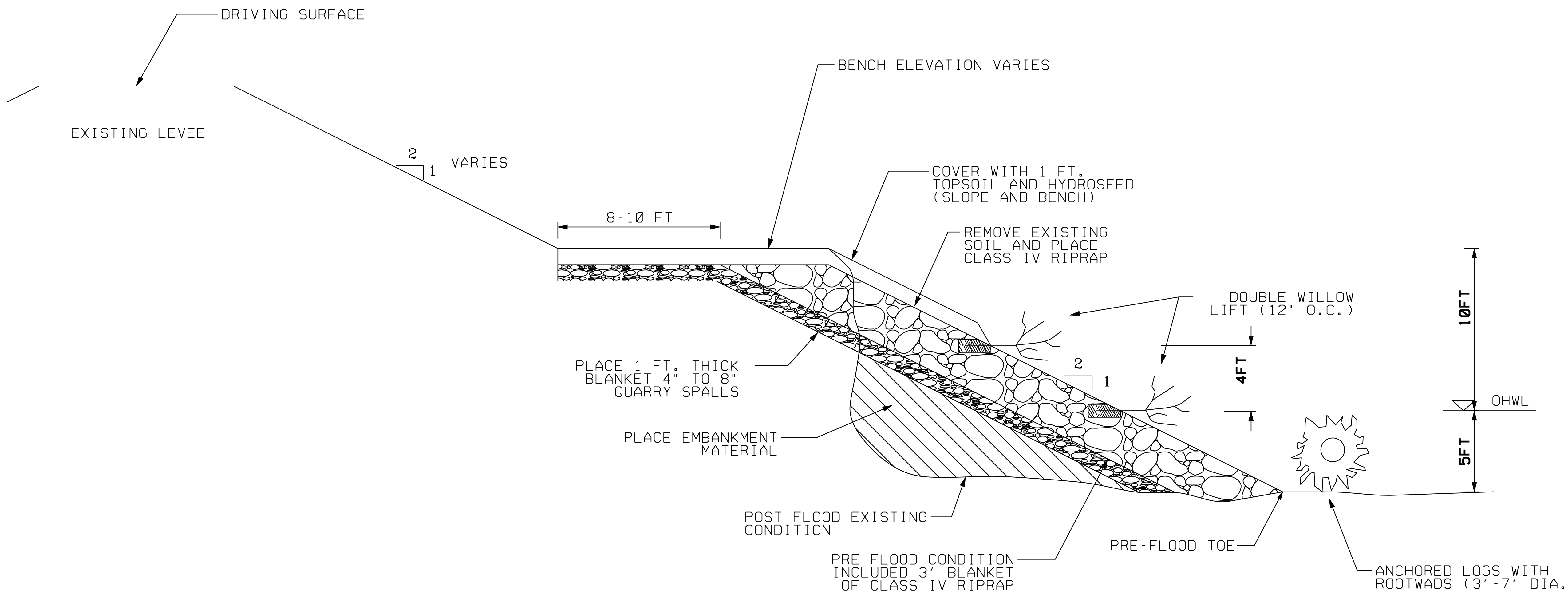

TYPICAL SECTION - SITE 3-8

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE TO 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD). PLACE AROUND EXISTING PILINGS. TAKE CARE TO AVOID ANY CONTACT WITH EXISTING PILINGS. (SEE LOG/ROOTWAD DETAIL)
7. TOTAL REPAIR LENGTH 225 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 3
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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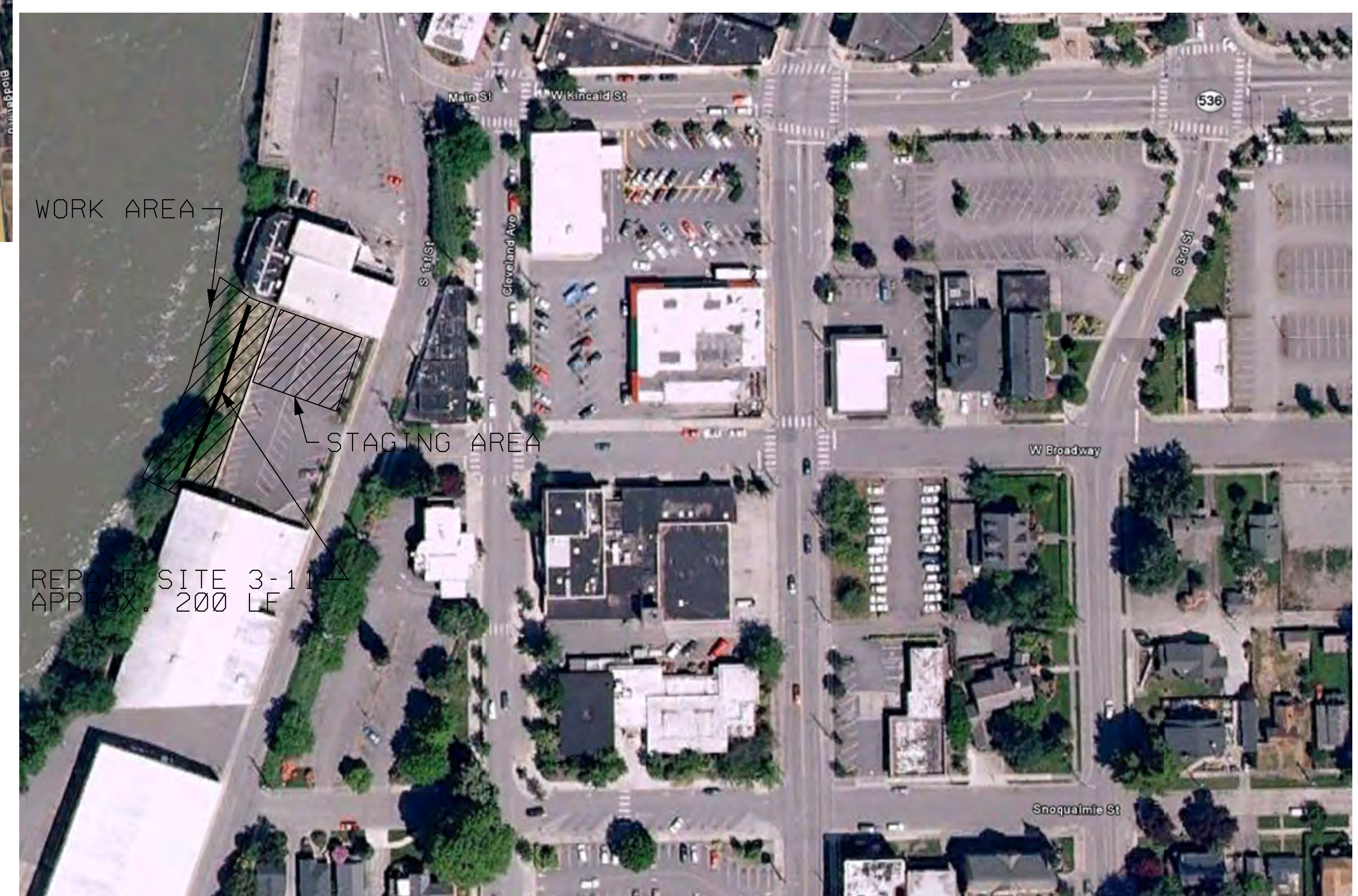
Sheet 2 of 2

VICINITY MAP - SITE 3-11



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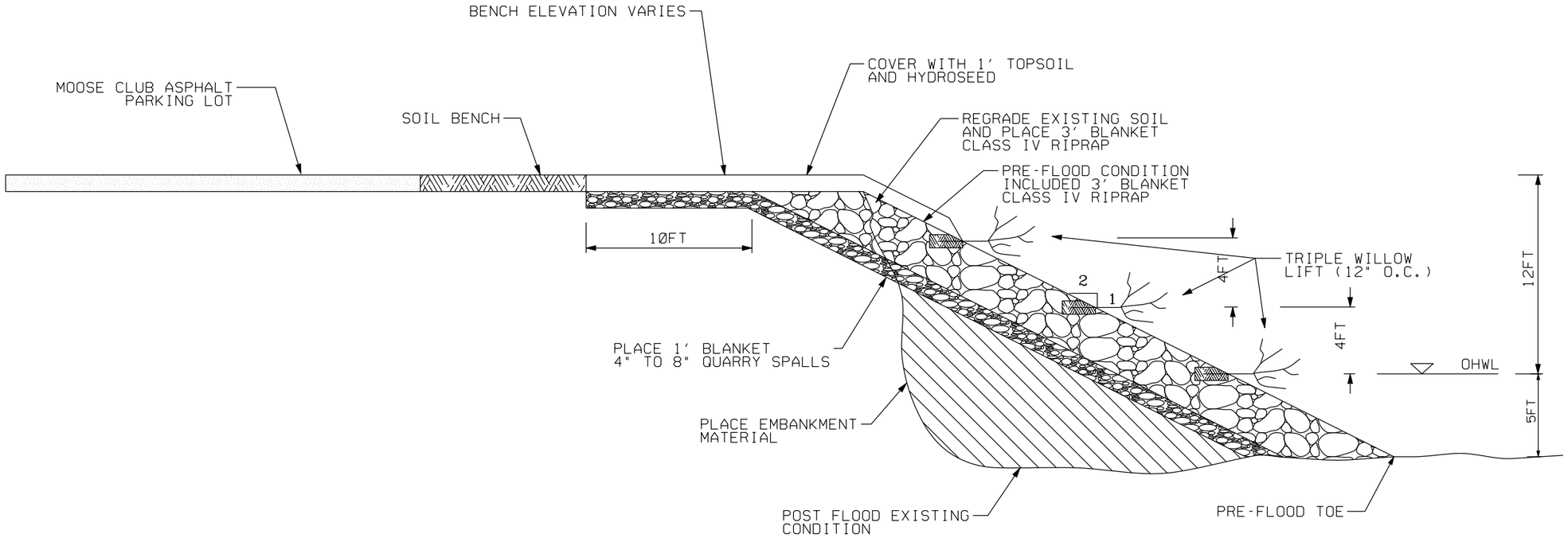

TYPICAL SECTION - SITE 3-11

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE TO 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. EXCAVATE AND RECOMPACT BENCH WHERE SINK HOLES ARE PRESENT ACCORDING TO EM 1110-2-1913, TABLE 7.1, CATEGORY 2.
4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
5. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
7. TOTAL REPAIR LENGTH 200 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

* IT MAY BE NECESSARY TO MOVE EXISTING ECOLOGY BLOCKS FOR SITE ACCESS. REPLACE AT CONSTRUCTION CONCLUSION.

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 3
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
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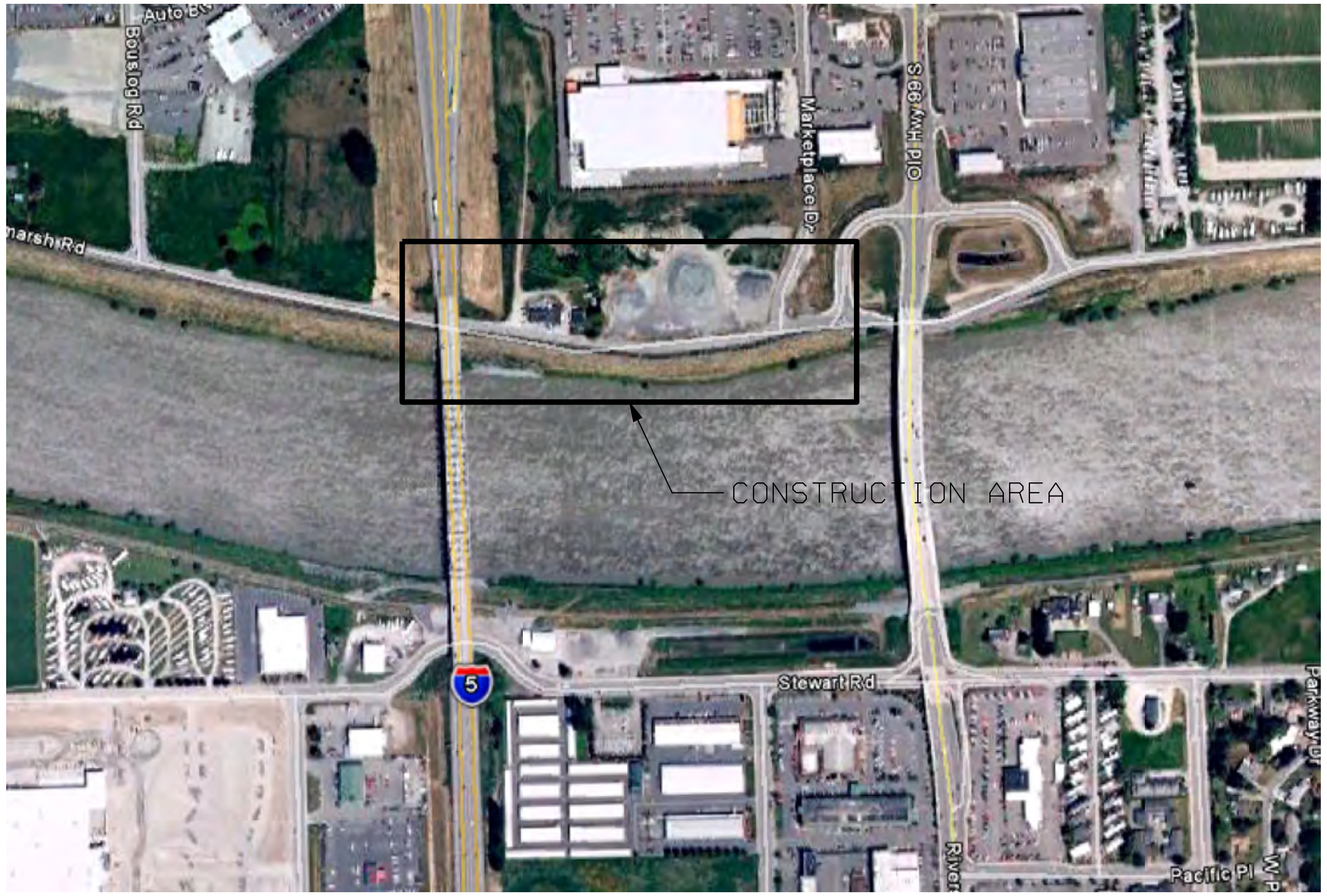

VICINITY MAP - SITE 12-4

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 12
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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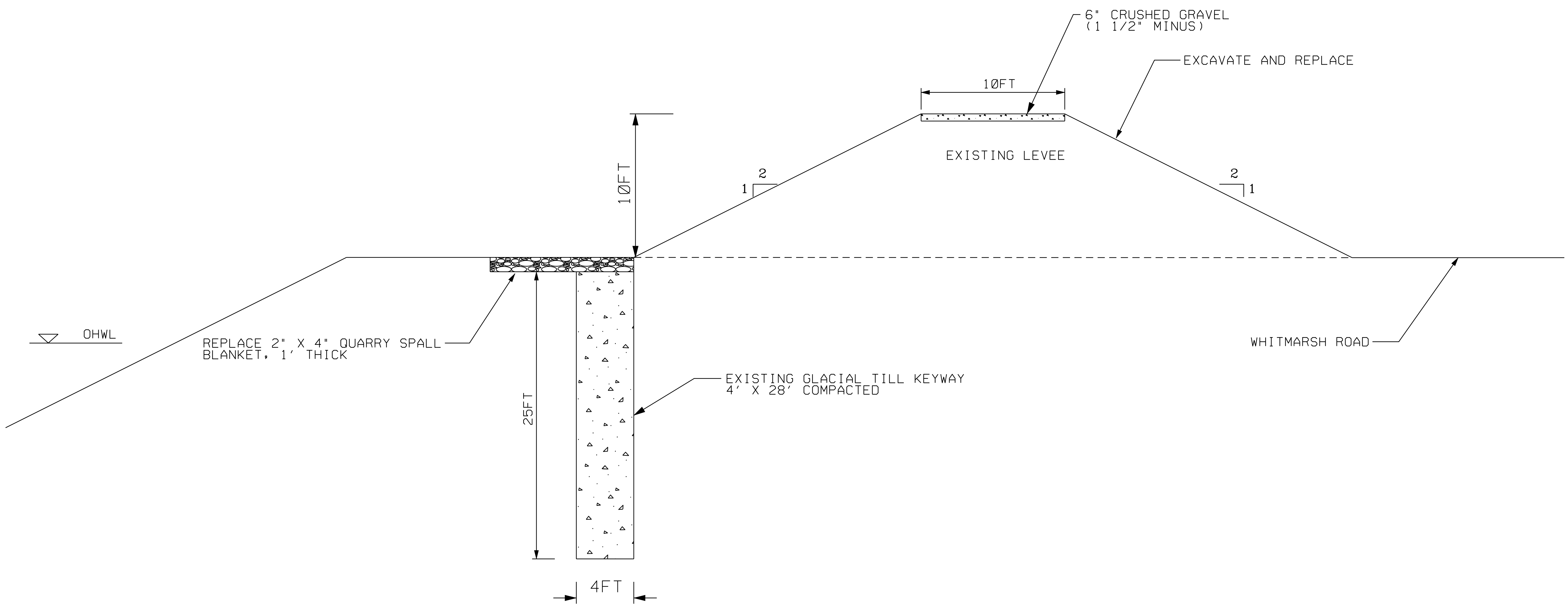
Sheet 1 of 2



TYPICAL SECTION - SITE 12-4

NOTES:

1. EXCAVATE LEVEE PRISM AND REPLACE WITH EMBANKMENT MATERIAL.
2. REMOVE AND DISPOSE OF ENCOUNTERED FOREIGN DEBRIS AT APPROPRIATE DISPOSAL SITE.
3. MIX EXCAVATED AND IMPORTED FILL ON SITE AND COMPACT IN LIFTS ACCORDING TO EM 1110-2-1913, TABLE 7-1, CATEGORY 1.
4. REPLACE ASPHALT PAVEMENT, IF NECESSARY.
5. HYDROSEED ALL DISTURBED AREAS WITH NATIVE GRASSES.
6. PLACE 6" LIFT 1 1/2" MINUS CRUSHED GRAVEL ON LEVEE CROWN FOR DRIVING SURFACE.
7. DISTANCE FROM LANDWARD TOE TO EDGE OF PAVEMENT VARIES (0"-4"). NOTE AND RECORD DISTANCES IN FIELD PRIOR TO EXCAVATION.
8. REPAIR LENGTH APPROXIMATELY 250 LF.(FROM D/S END OF GAUGING STATION TO LEVEE RAMP UNDER BRIDGE).

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DIKE DISTRICT 12
SECTION VIEW
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VICINITY MAP - SITE 12-4B

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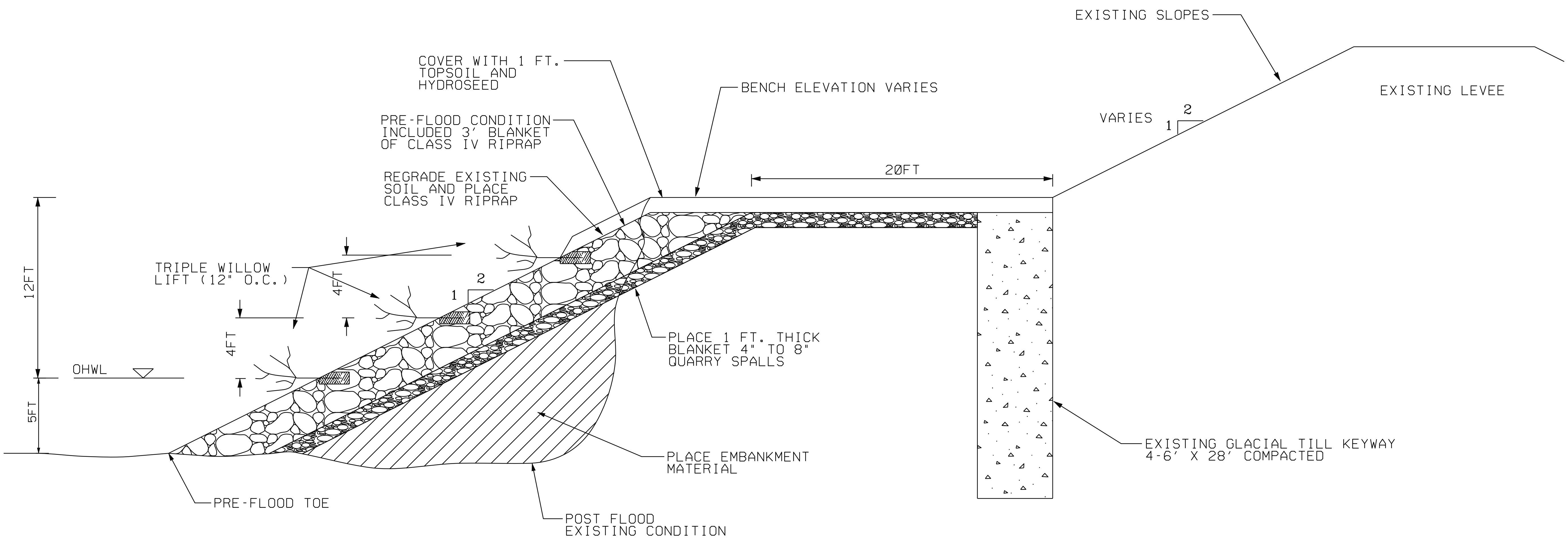

TYPICAL SECTION - SITE 12-4B

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE TO 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. TOTAL REPAIR LENGTH 970 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 12
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VICINITY MAP - SITE 12-6

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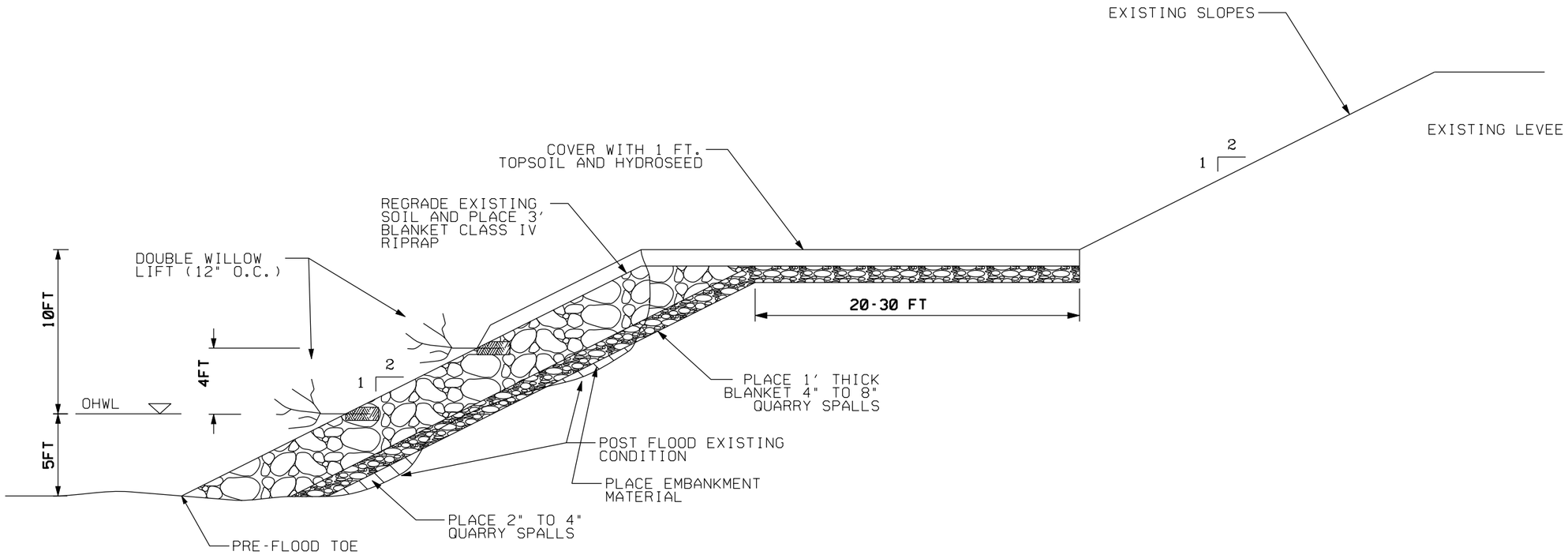

TYPICAL SECTION - SITE 12-6

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. REMOVE EXISTING UNWANTED INVASIVE PLANTS.
4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
5. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDEDINTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
7. TOTAL REPAIR LENGTH 160 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
Seattle District

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DIKE DISTRICT 12
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 12-9

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Seattle District

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DIKE DISTRICT 12
PLAN VIEW
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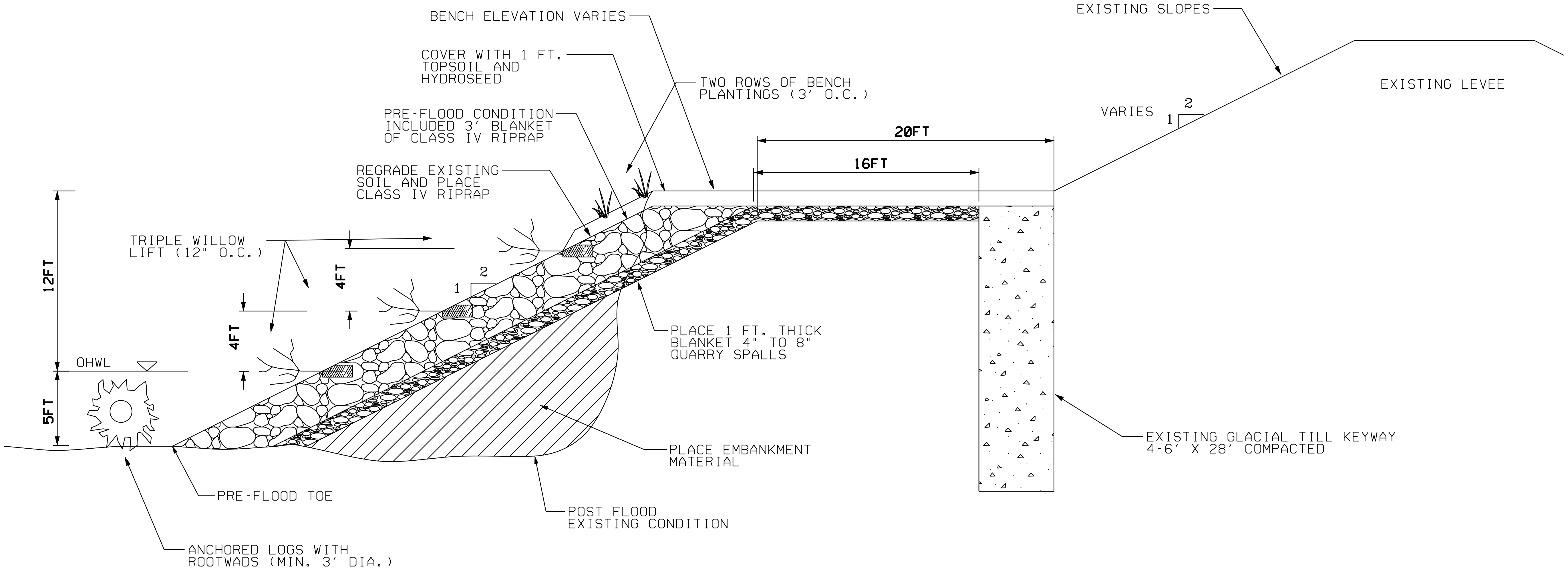

TYPICAL SECTION - SITE 12-9

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.TAKE CARE TO NOT DAMAGE KEYWAY.

2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.

3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.

6. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD) (SEE LOG/ROOTWAD DETAIL). ONLY PLACE FOR D/S 1575' OF REPAIR LENGTH.

7. PLACE TWO ROWS OF PLANTINGS (3' O.C.) ON RIVERWARD SLOPE. MAINTAIN 15' CLEARANCE FROM LEVEE TOE TO PLANTINGS.

8. TOTAL REPAIR LENGTH 1850 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 12
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VICINITY MAP - SITE 12-11

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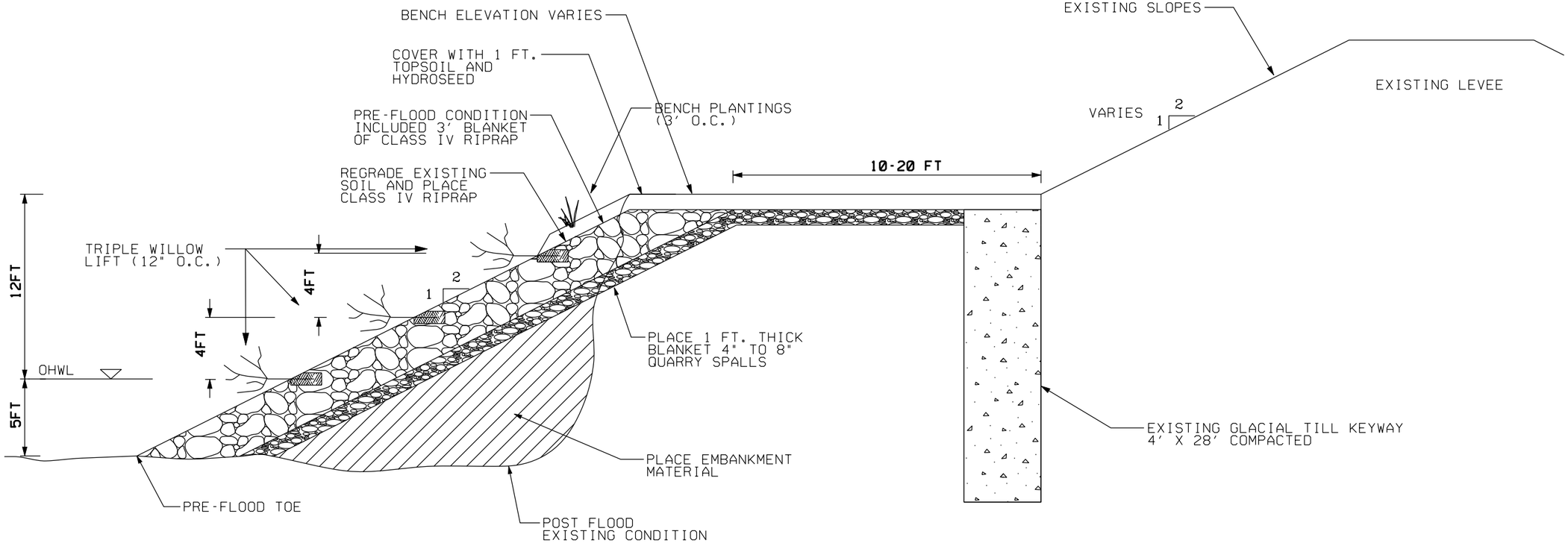

TYPICAL SECTION - SITE 12-11

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. PLACE ONE ROW OF BENCH PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE, 3' FROM BENCH SHOULDER.
7. TOTAL REPAIR LENGTH 600 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

*PRIOR TO CONSTRUCTION, EXISTING ECOLOGY BLOCKS MAY NEED TO BE REMOVED TO ALLOW ACCESS. REPLACE AT CONSTRUCTION CONCLUSION.

US Army Corps of Engineers
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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 12
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
C-002
Sheet 2 of 2

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VICINITY MAP - SITE 12-12

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DIKE DISTRICT 12
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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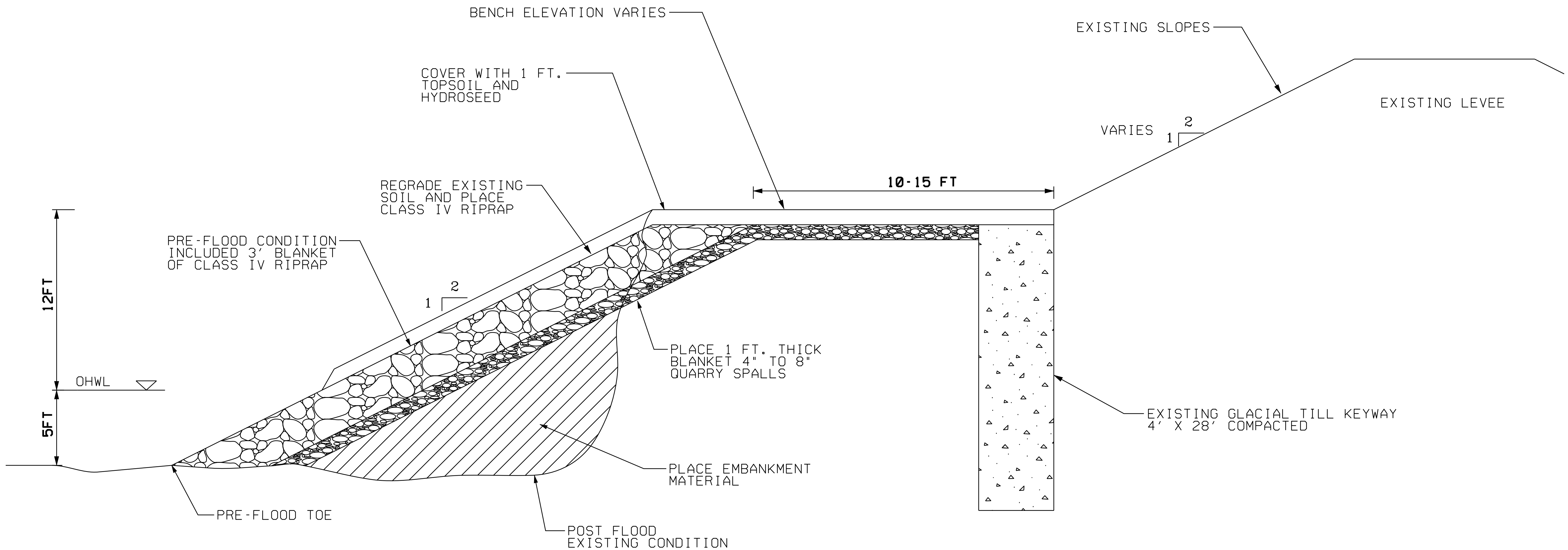

TYPICAL SECTION - SITE 12-12

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V. TAKE CARE TO NOT DAMAGE KEYWAY.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. COVER EXPOSED ROCK ABOVE OHWL WITH TOPSOIL AND HYDROSEED.
5. TOTAL REPAIR LENGTH 50 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 12
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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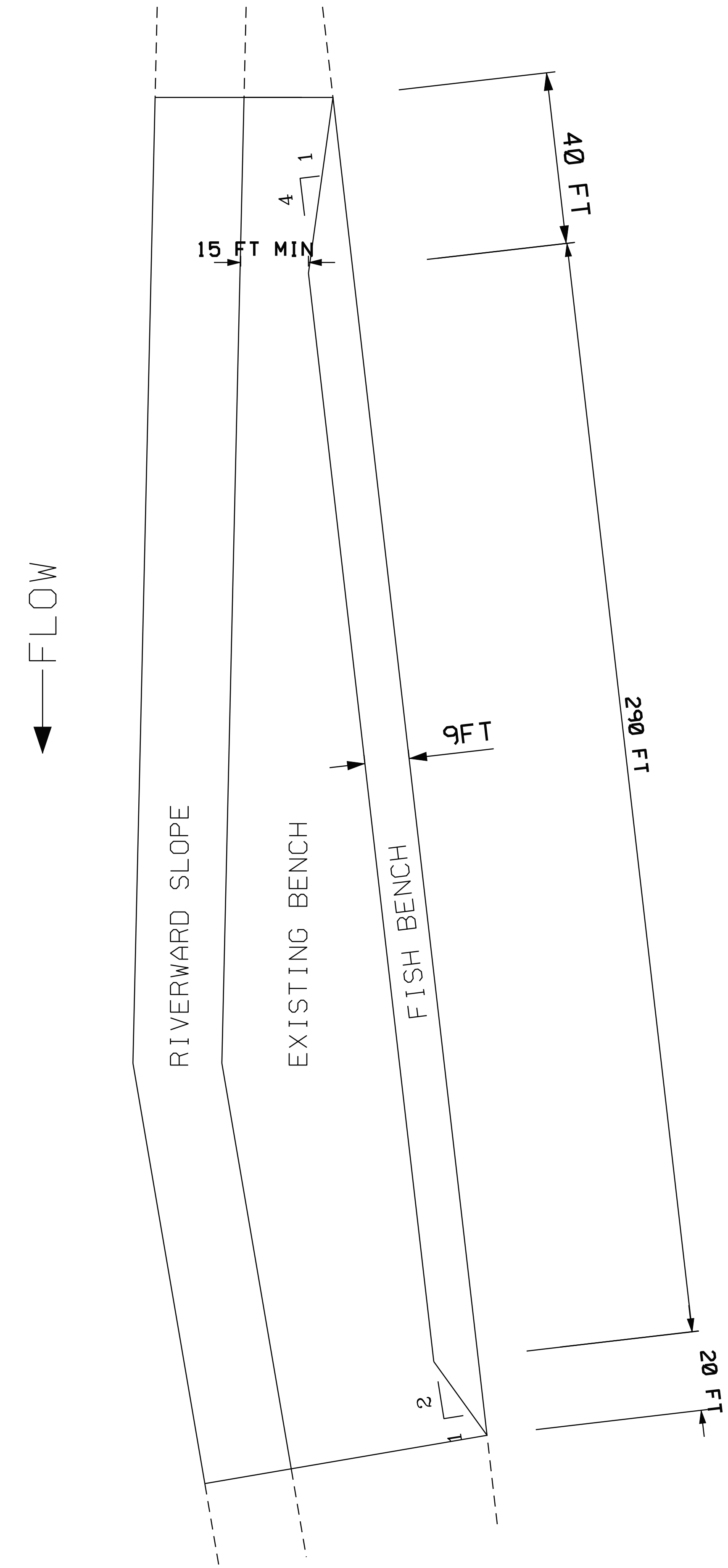
VICINITY MAP - SITE 12-13



PLAN VIEW - SITE 12-13

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PLAN VIEW
SKAGIT COUNTY WASHINGTON

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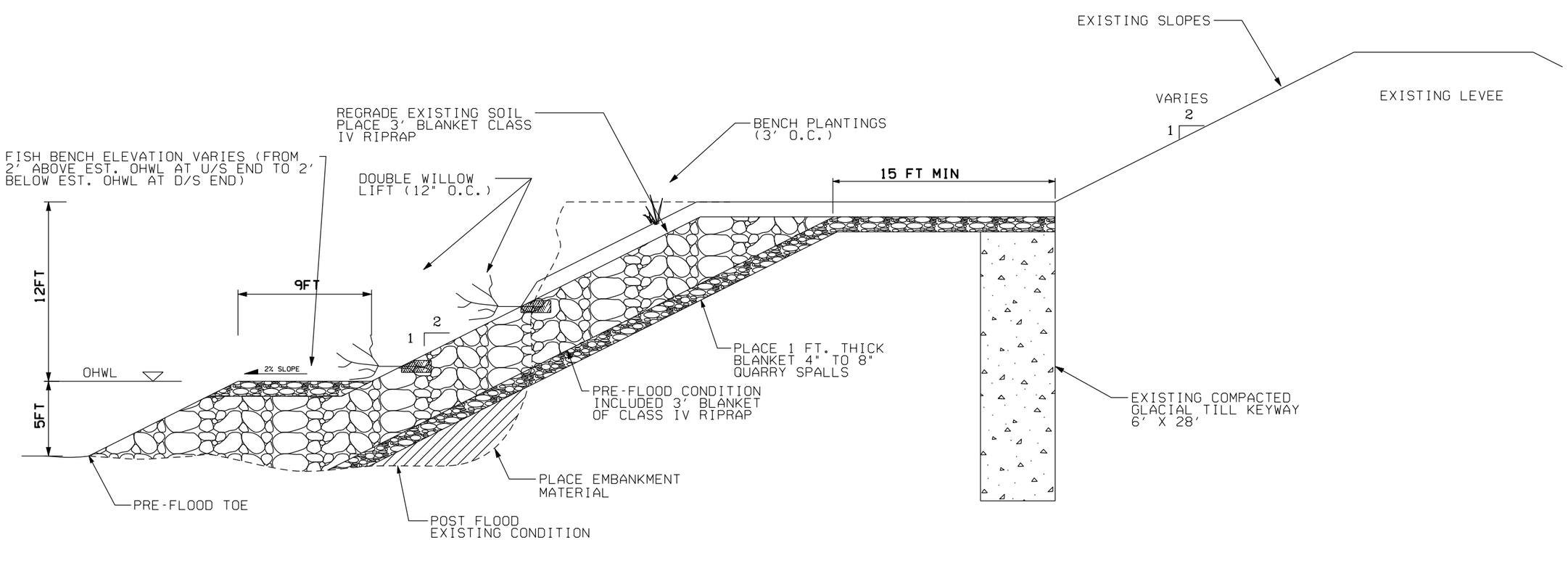

FISH BENCH - SITE 12-13

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.

2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.

3. CONSTRUCT FISH BENCH 2' ABOVE EST. OHWL AT U/S END AND 2' BELOW AT D/S END. FISH BENCH TO BE SLOPED 2% OUT TOWARD CHANNEL. LENGTH OF FISH BENCH SHOULD BE APPROXIMATELY 290 FT, WITH AN UPSTREAM TRANSITION APPROXIMATELY 40 FT LONG, AND A DOWNSTREAM TRANSITION APPROXIMATELY 20 FT LONG. (SEE PLANVIEW).

4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

5. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.

7. PLACE ONE ROW OF BENCH PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE, 3' FROM BENCH SHOULDER.

8. TOTAL REPAIR LENGTH 350 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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FISH BENCH
SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 12-14

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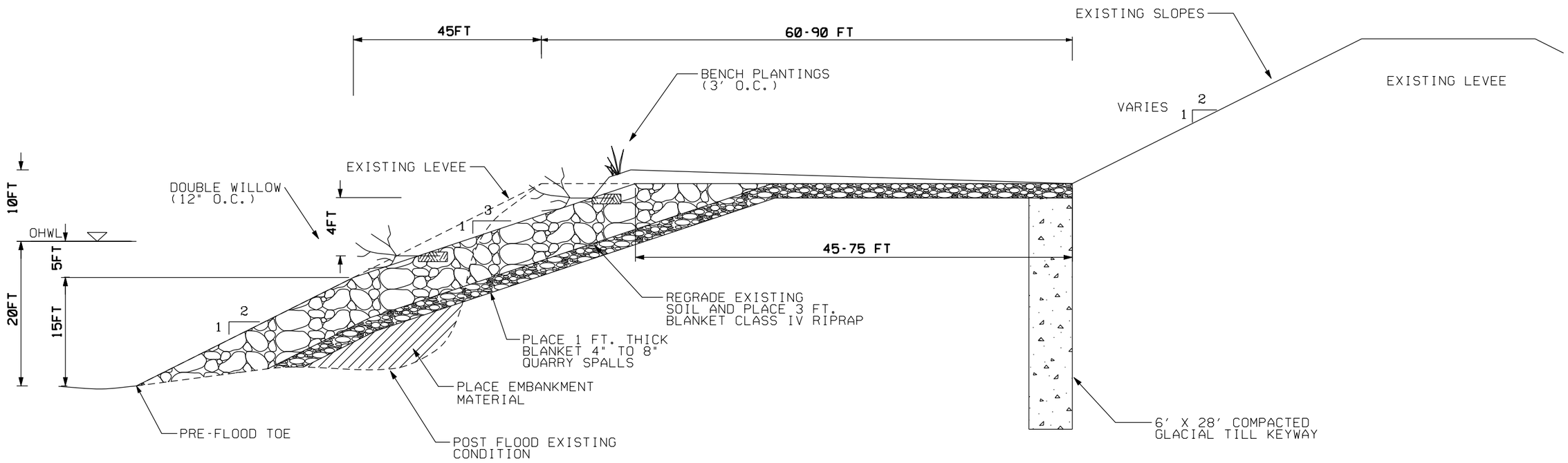

TYPICAL SECTION - SITE 12-14

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE TO 3:1 FOR 250 LF, TRANSITION OUTSIDE THIS FOOTPRINT TO MATCH EXISTING SLOPES.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS V RIPRAP.
4. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. PLACE ONE ROW OF BENCH PLANTINGS (3' O.C.) AT TOP OF RIVERWARD SLOPE.
7. TOTAL REPAIR LENGTH 250LF. 3:1 SLOPE FOR ENTIRE 250 LF, TRANSITIONS WILL BE OUTSIDE THIS 250 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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VICINITY MAP - SITE 12-15

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DIKE DISTRICT 12
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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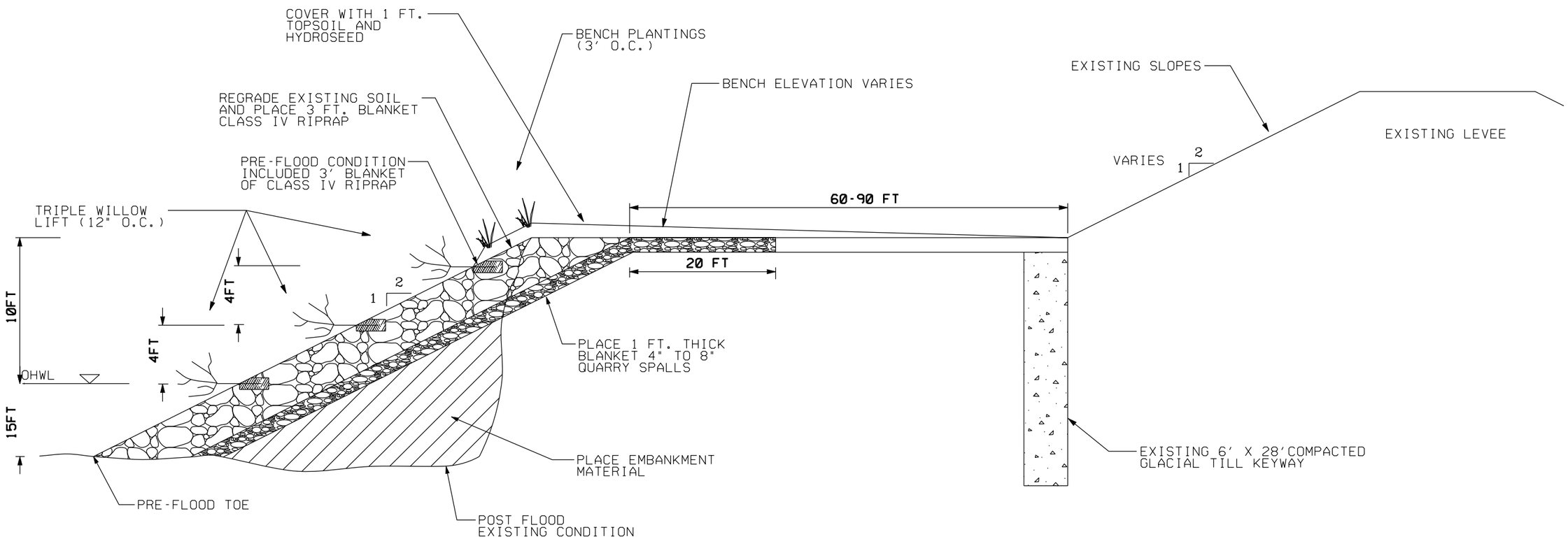

TYPICAL SECTION - SITE 12-15

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V. TAKE CARE TO NOT DAMAGE KEYWAY.

2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.

3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

5. COVER EXPOSED ROCK ABOVE HIGHEST WILLOW LIFT WITH TOPSOIL AND HYDROSEED.

6. PLACE TWO ROWS OF PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE.

7. TOTAL REPAIR LENGTH 180 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 12
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 12-16

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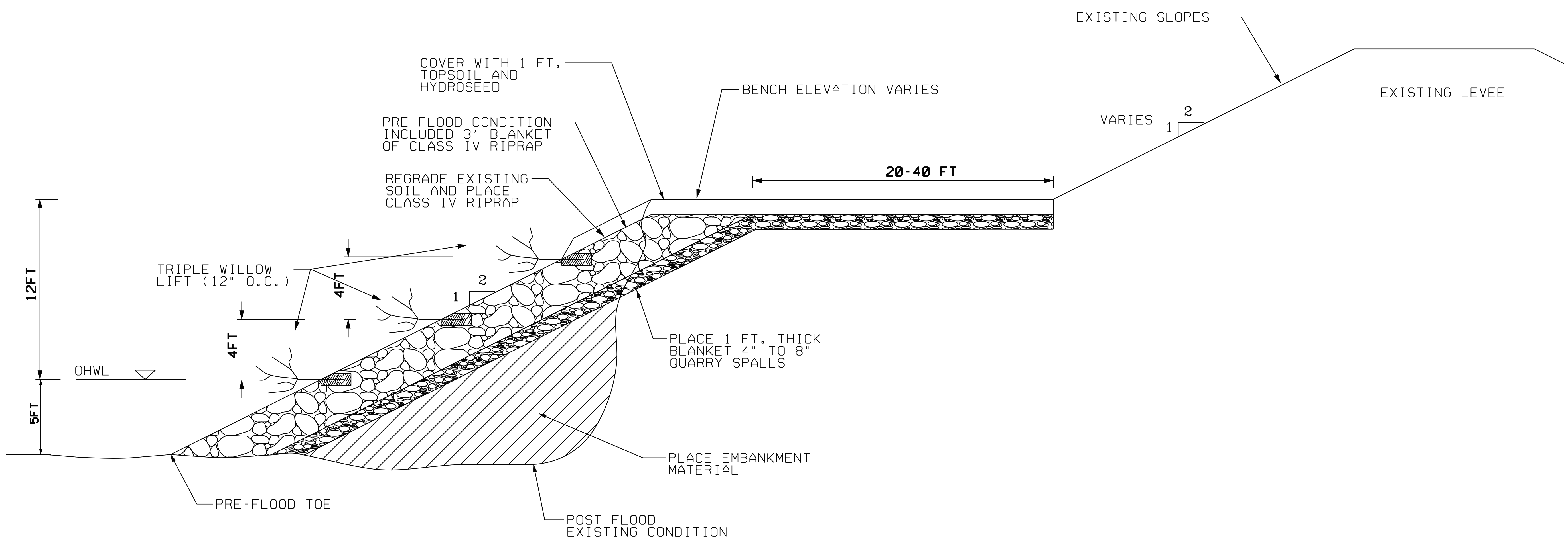

TYPICAL SECTION - SITE 12-16

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE TO 2H:1V.
2. FILL SCOUR HOLES WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. TOTAL REPAIR LENGTH 670 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 12-17

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 12
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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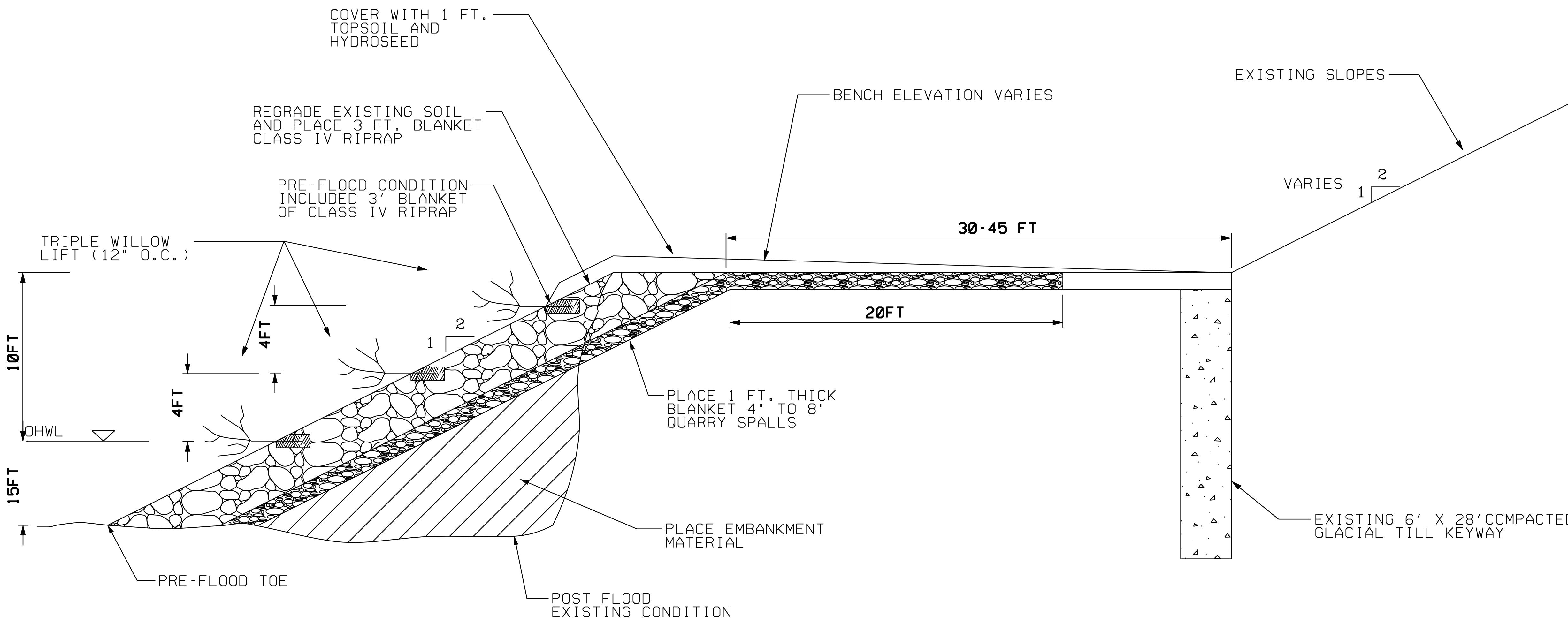

TYPICAL SECTION - SITE 12-17

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V. TAKE CARE TO NOT DAMAGE KEYWAY.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE HIGHEST WILLOW LIFT WITH TOPSOIL AND HYDROSEED.
6. TOTAL REPAIR LENGTH 450 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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DIKE DISTRICT 12
SECTION VIEW
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VICINITY MAP - SITE 17-7

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DIKE DISTRICT 17
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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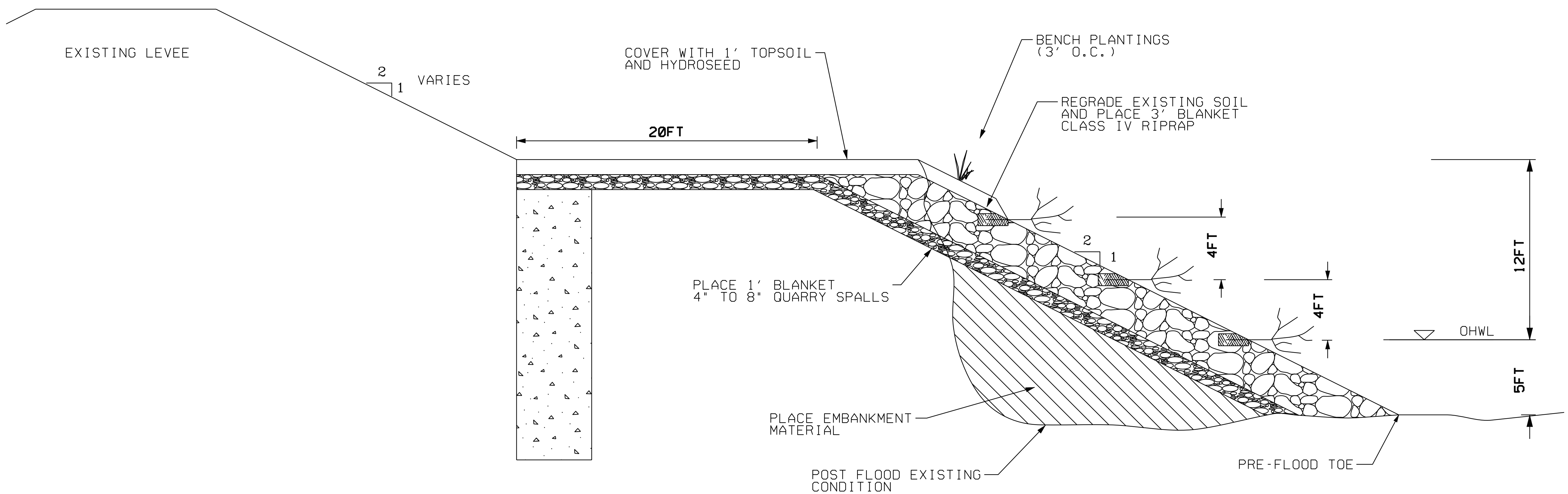

TYPICAL SECTION - SITE 17-7

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 2H:1V.

2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.

3. EXCAVATE AND RECOMPACT BENCH WHERE SINK HOLES ARE PRESENT ACCORDING TO EM 1110-2-1913, TABLE 7.1, CATEGORY 2.

4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

5. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.

7. PLACE ONE ROW OF BENCH PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE.

8. TOTAL REPAIR LENGTH 800 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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VICINITY MAP - SITE 17-9

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PLAN VIEW
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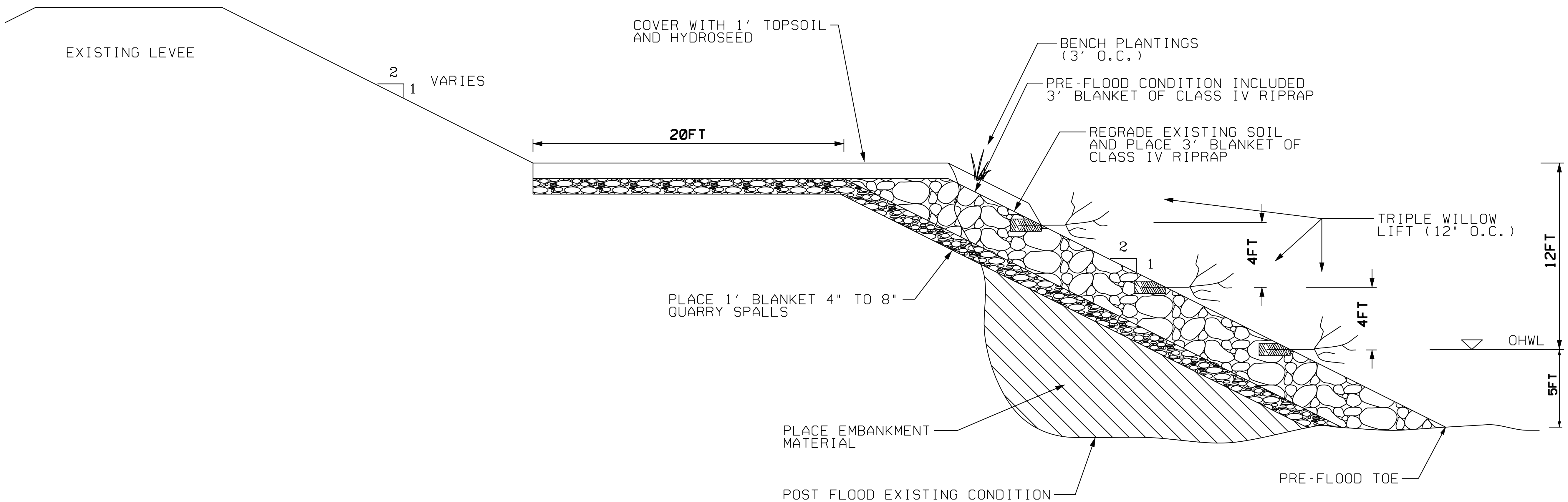

TYPICAL SECTION - SITE 17-9

NOTES:

1. REGRADE REVETTED SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. EXCAVATE AND RECOMPACT BENCH WHERE SINK HOLES ARE PRESENT ACCORDING TO EM 1110-2-1913, TABLE 7.1, CATEGORY 2.
4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
7. PLACE ONE ROW OF BENCH PLANTINGS (3' O.C.) AT TOP OF EMBANKMENT SLOPE.
8. TOTAL REPAIR LENGTH 700 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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VICINITY MAP - SITE 17-10

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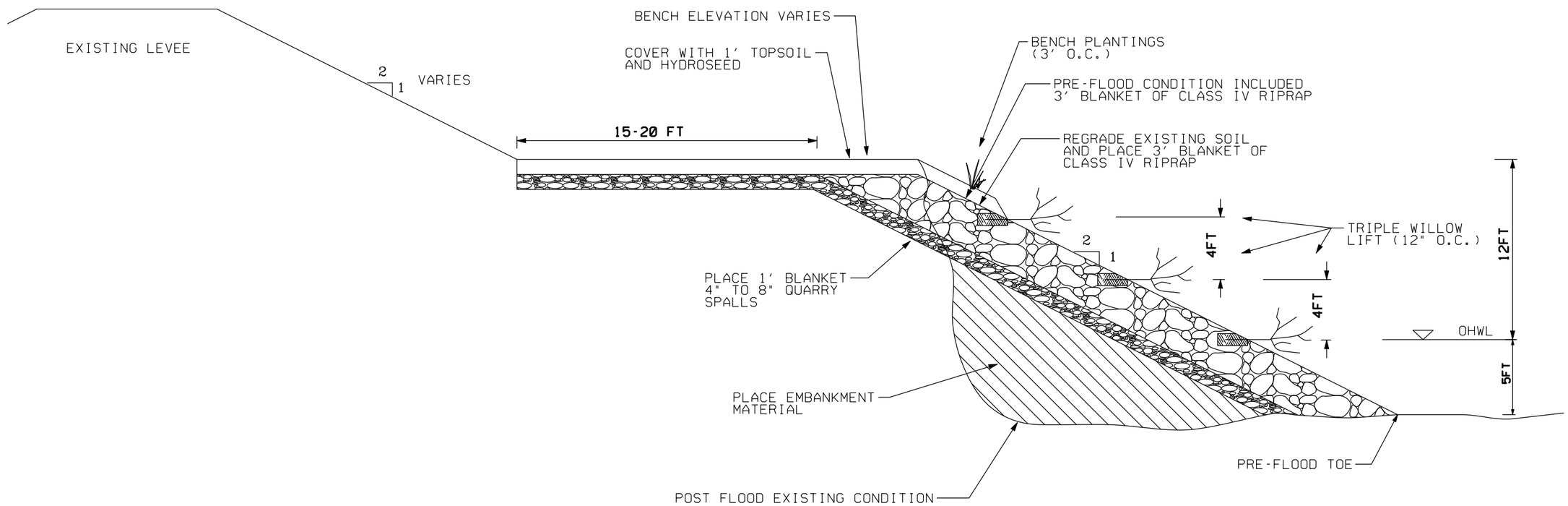

TYPICAL SECTION - SITE 17-10

(N.T.S.)

NOTES:

1. REGRADE REVETTED SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. EXCAVATE AND RECOMPACT BENCH WHERE SINK HOLES ARE PRESENT ACCORDING TO EM 1110-2-1913, TABLE 7.1, CATEGORY 2.
4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
5. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
7. PLACE ONE ROW OF BENCH PLANTINGS (3' O.C.) ON RIVERWARD SLOPE 3' FROM BENCH SHOULDER.
8. TOTAL REPAIR LENGTH 200 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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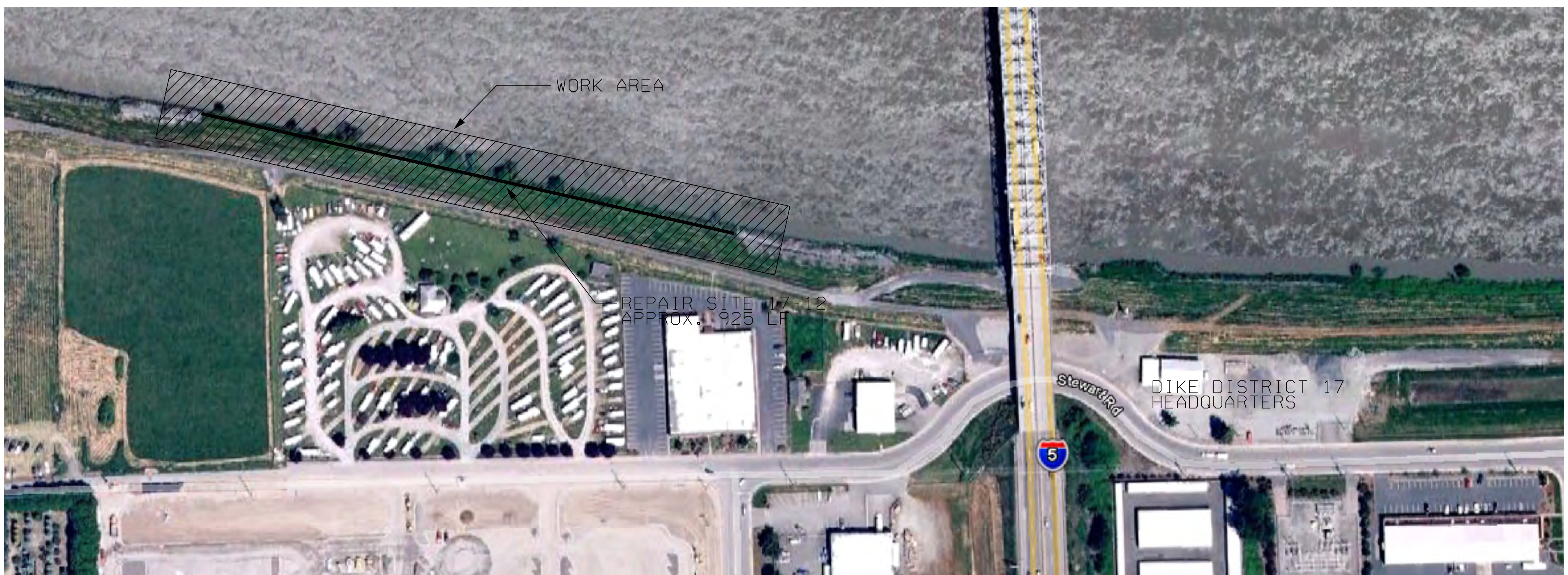
VICINITY MAP - SITE 17-12



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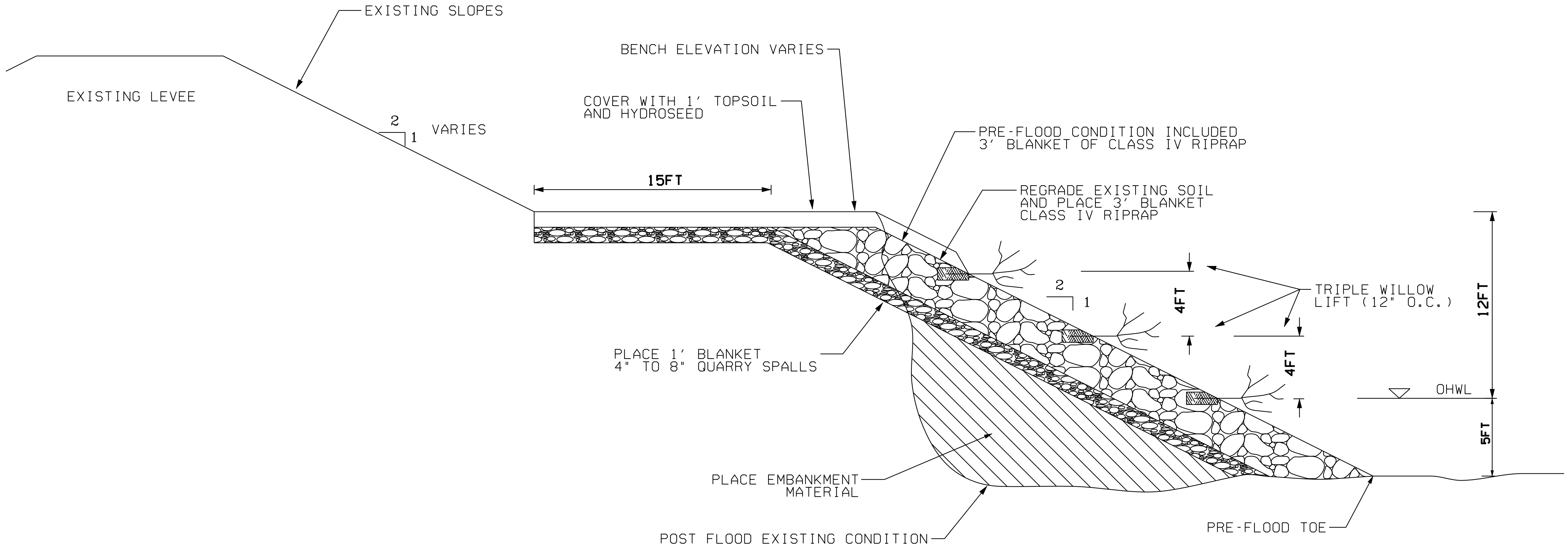

TYPICAL SECTION - SITE 17-12

NOTES:

1. REGRADE REVETTED SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. TOTAL REPAIR LENGTH 925 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
Seattle District

Designed by: DESJARDIN
Drawn by: RUDIE
Checked by: FISCHER
Date: 27 NOV 10
File:
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U.S.ARMY ENGINEER DISTRICT,SEATTLE
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SEATTLE, WASHINGTON
Prepared by: IFFT/VILLARREAL

SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 17
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number: C-002
Sheet 2 of 2

DATE AND TIME PLOTTED: $$$DATE$$$ $TIME DESIGN FILE: $$

VICINITY MAP - SITE 17-15

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 17
PLAN VIEW
SKAGIT COUNTY WASHINGTON

Plate number: C-001
Sheet 1 of 2

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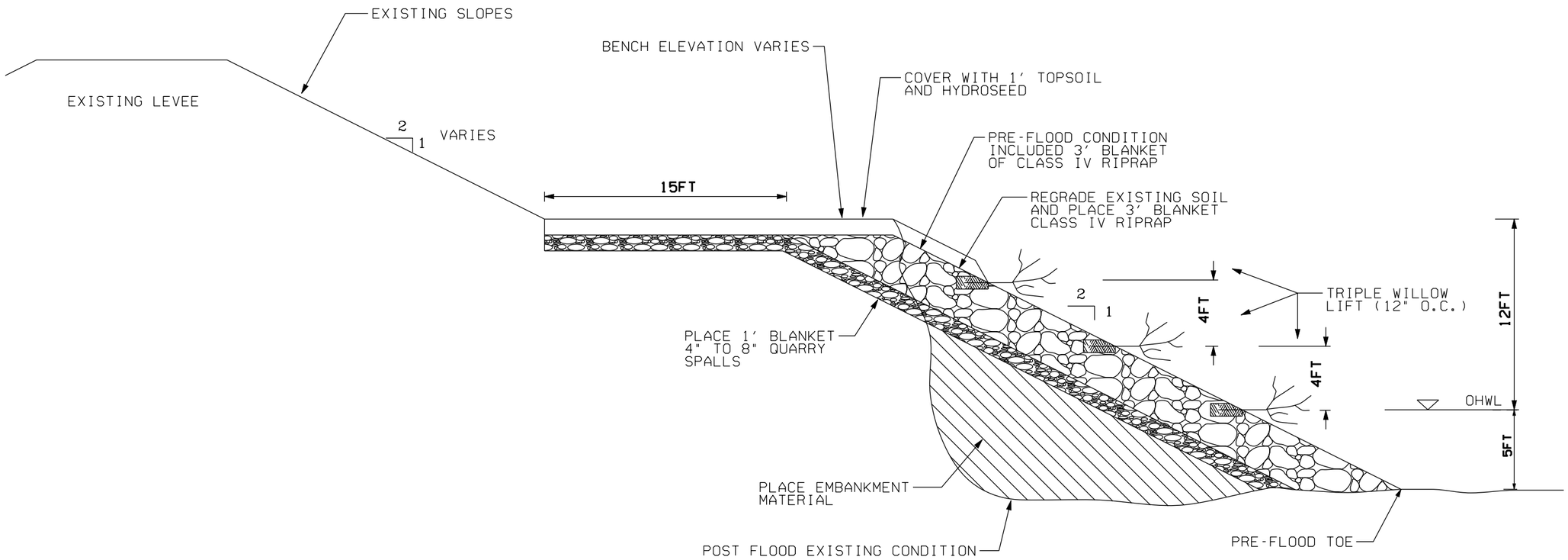

TYPICAL SECTION - SITE 17-15

NOTES:

1. REGRADE REVETTED SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
5. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
6. TOTAL REPAIR LENGTH 125 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 17
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
C-002
Sheet 2 of 2

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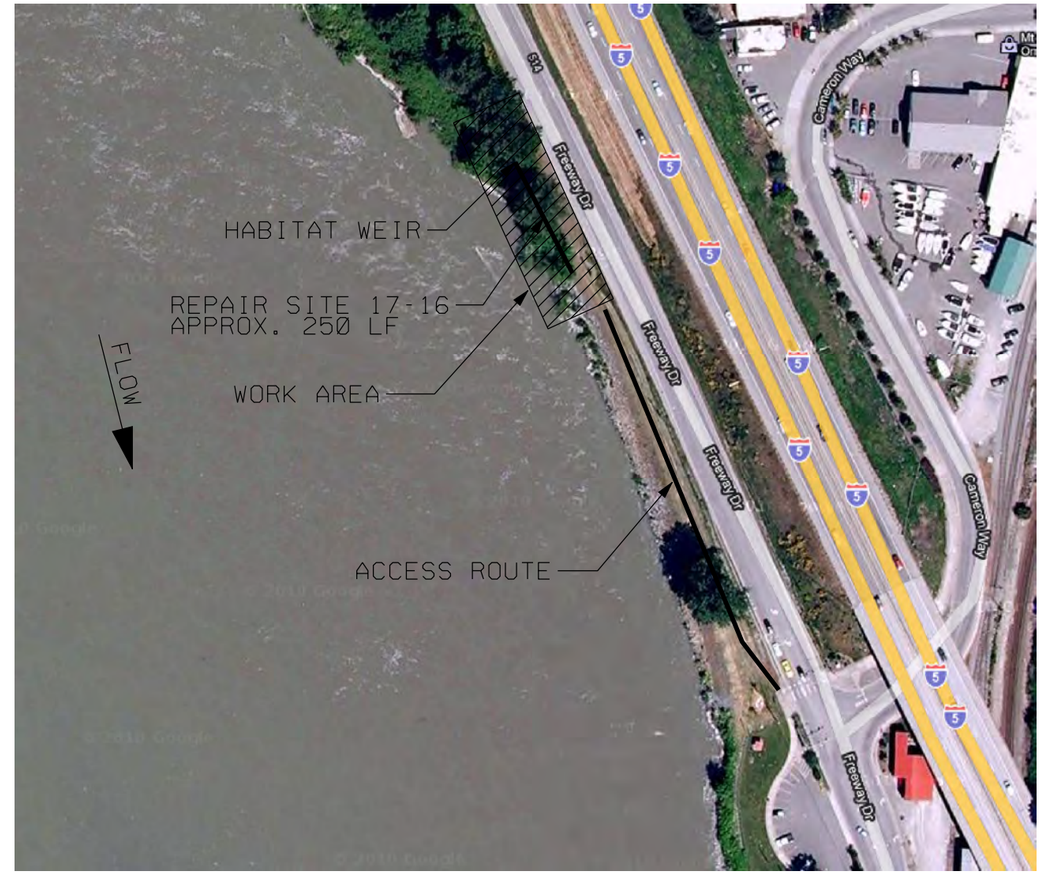
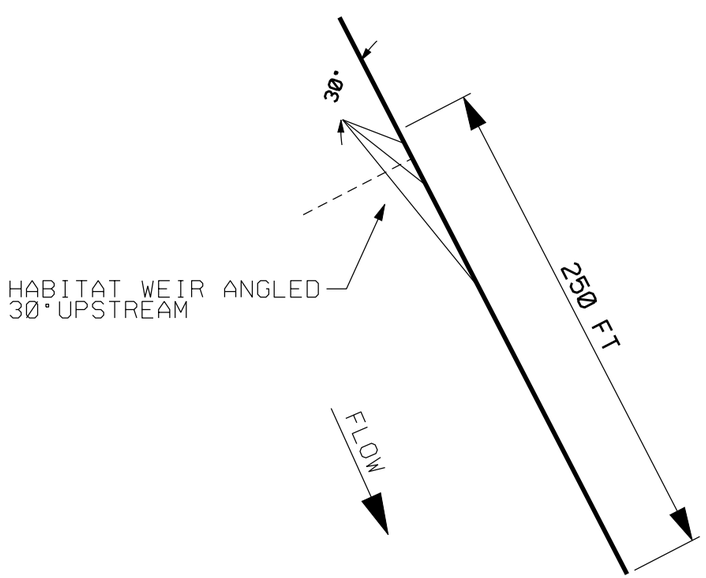
VICINITY MAP - SITE 17-16



ACCESS - SITE 17-16



ELEVATION VIEW - SITE 17-16

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Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 17
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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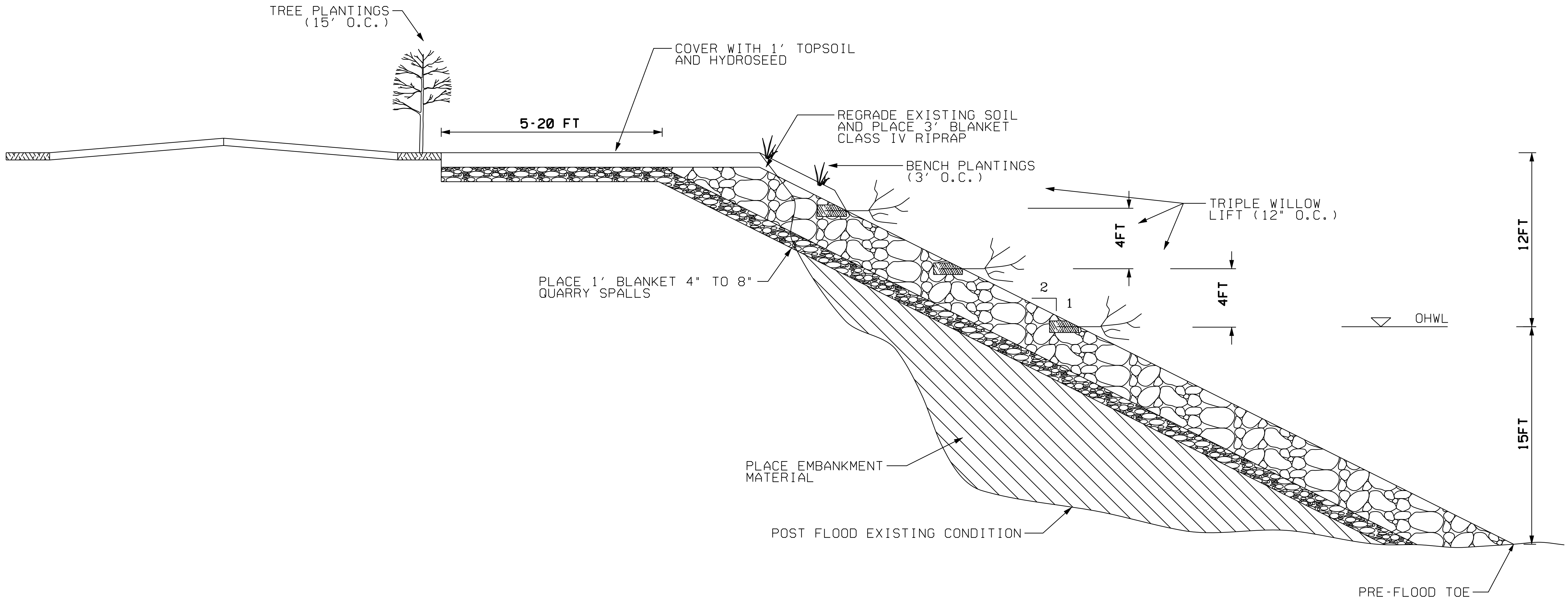

TYPICAL SECTION - SITE 17-16

(N.T.S.)

NOTES:

1. REGRADE REVETTED SLOPE 2H:1V.
2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
4. HABITAT WEIR TO BE PLACED AT UPSTREAM END OF PROJECT LIMIT. CONSTRUCT TOP OF WEIR 2' ABOVE EST. OHWL. WEIR WILL HAVE A 5' PLATFORM AND BE SLOPED AT 2:1.
5. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
6. PLACE TWO ROWS OF BENCH PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE.
7. PLACE ONE ROW OF TREE PLANTINGS (15' O.C.) ON LANDWARD SIDE OF LEVEE CROWN.
8. COVER BENCH AREA AND SLOPE WITH TOPSOIL AND HYDROSEED.
9. TOTAL REPAIR LENGTH 250 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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Seattle District

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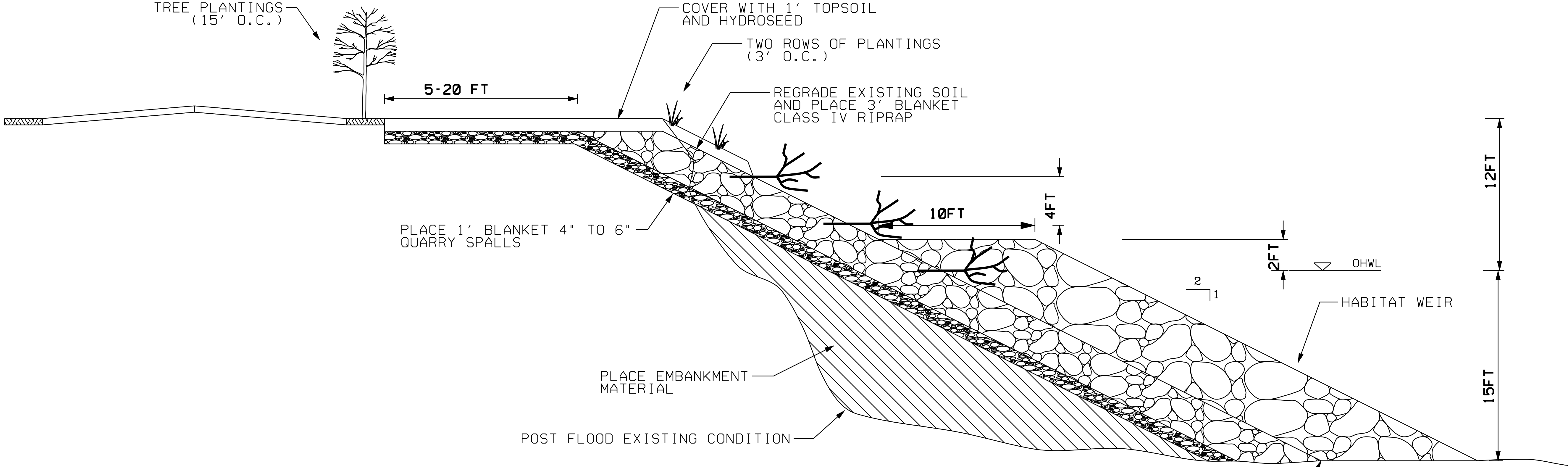
SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 17
SECTION VIEW
SKAGIT COUNTY WASHINGTON

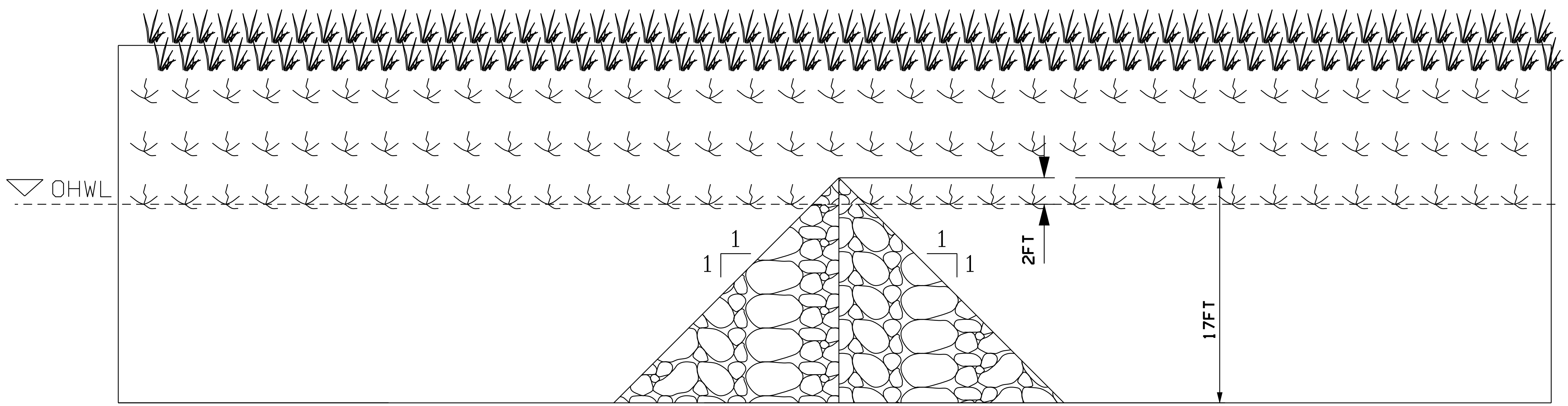
Plate number: C-002

Sheet 2 of 3



SECTION VIEW - SITE 17-16

(N.T.S.)



PROFILE VIEW - SITE 17-16

NOTES:

1. REGRADE REVETTED SLOPE 2H:1V.
2. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS V RIPRAP.
3. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
4. PLACE TWO ROWS OF BENCH PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE.
5. HABITAT WEIR TO BE PLACED AT UPSTREAM END OF PROJECT LIMIT. CONSTRUCT TOP OF WEIR 2' ABOVE EST. OHWL. WEIR WILL HAVE A 10' PLATFORM AND BE SLOPED AT 2:1.
6. COVER BENCH AREA AND SLOPE WITH TOPSOIL AND HYDROSEED.

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 17
HABITAT WEIR
SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 22-3

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
PLAN VIEW
SKAGIT COUNTY WASHINGTON

Plate number: C-001
Sheet 1 of 2

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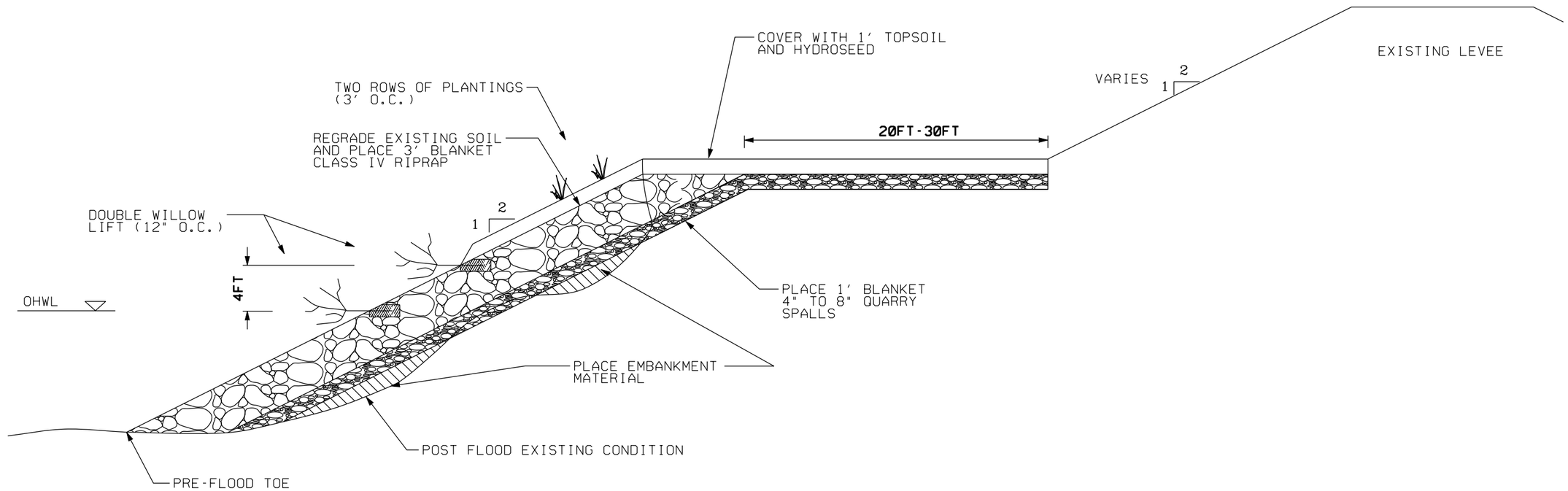

TYPICAL SECTION - SITE 22-3

(N.T.S.)

NOTES:

1. REGRADE SLOPE TO TIE-IN UPSTREAM REPAIR TO DOWNSTREAM EXISTING GRADE.

2. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.

3. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

4. INSTALL THREE WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

5. PLACE TWO ROWS OF PLANTINGS (3' O.C.) ON EMBANKMENT SLOPE.

6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.

7. TOTAL REPAIR LENGTH 110 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
C-002
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VICINITY MAP - SITE 22-7

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
PLAN VIEW
SKAGIT COUNTY WASHINGTON

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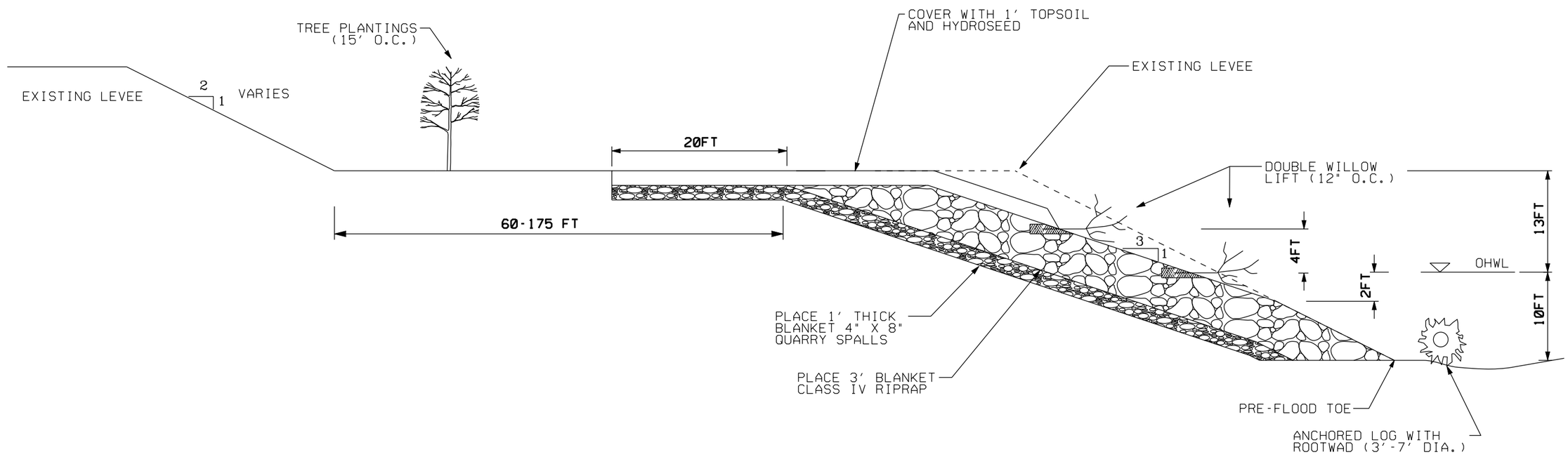

TYPICAL SECTION - SITE 22-7

(N.T.S.)

NOTES:

1. REGRADE EXISTING EMBANKMENT SLOPE 3H:1V FOR 350 LF OF THIS REPAIR. SLOPE LAYBACK SHOULD BE INITIATED 2' BELOW EST. OHWL. TRANSITIONS TO TOTAL 150 LF OUTSIDE THIS 350 LF LAYBACK AND ARE INCLUDED IN 2007 SITE MITIGATION DRAWINGS.

2. ONLY REMOVE TREES MARKED FOR DEMO. PLACE ON U/S DEPOSITIONAL BENCH.

3. DO NOT DISTURB WETLAND ALONG RIVERWARD TOE OF SETBACK PORTION OF LEVEE.

4. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.

5. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.

6. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.

7. INSTALL SIX LOGS WITH ROOTWADS (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD) ANCHORED WITH HOLD DOWN ROCK. (SEE LOG/ROOTWAD DETAIL)

8. PLACE ONE ROW OF TREE PLANTINGS (15' O.C.) ON BENCH AREA NEAR WETLAND.

9. TOTAL REPAIR LENGTH 350 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
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Sheet 2 of 2

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VICINITY MAP- SITE 22-10

US Army Corps of Engineers
Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
PLAN VIEW
SKAGIT COUNTY WASHINGTON

Plate number: C-001
Sheet 1 of 2

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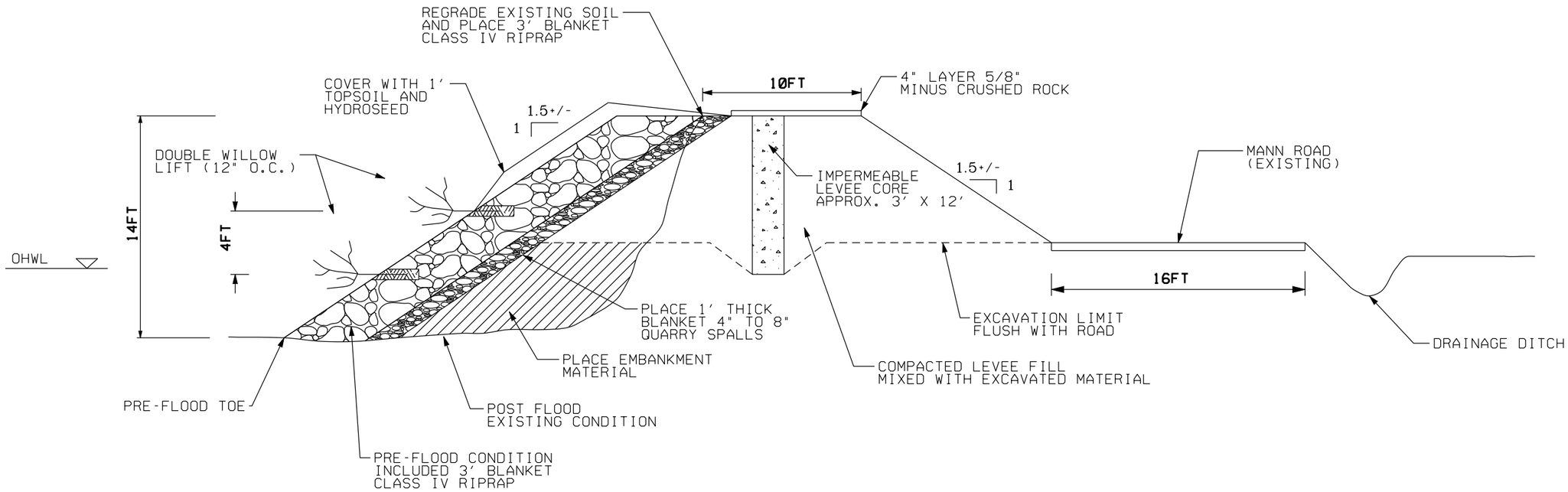

TYPICAL SECTION - SITE 22-10

(N.T.S.)

NOTES:

1. EXCAVATE LEVEE. TRANSMISSION POLE MUST BE RELOCATED.
2. INSTALL IMPERMEABLE CORE. COMPACT WITH VIBRATORY COMPACTOR OR OTHER.
3. EXCAVATE AND RECOMPACT LEVEE ACCORDING TO EM 1110-2-1913, TABLE 7.1, CATEGORY 2.
4. RECONSTRUCT RIVERWARD AND LANDWARD SLOPES TO MATCH EXISTING U/S AND D/S SECTIONS.
5. FILL SCOUR HOLE WITH EMBANKMENT MATERIAL.
6. PLACE SPALL FILTER BLANKET OVERLAIN WITH CLASS IV RIPRAP.
7. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2'EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM.PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
8. COVER EXPOSED ROCK ABOVE WILLOW LIFTS WITH TOPSOIL AND HYDROSEED.
9. TOTAL REPAIR LENGTH 300 LF. PROJECT LIMITS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

US Army Corps of Engineers
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DIKE DISTRICT 22
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
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VICINITY MAP - SITE 22-11

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
PLAN VIEW
SKAGIT COUNTY WASHINGTON

Plate number:
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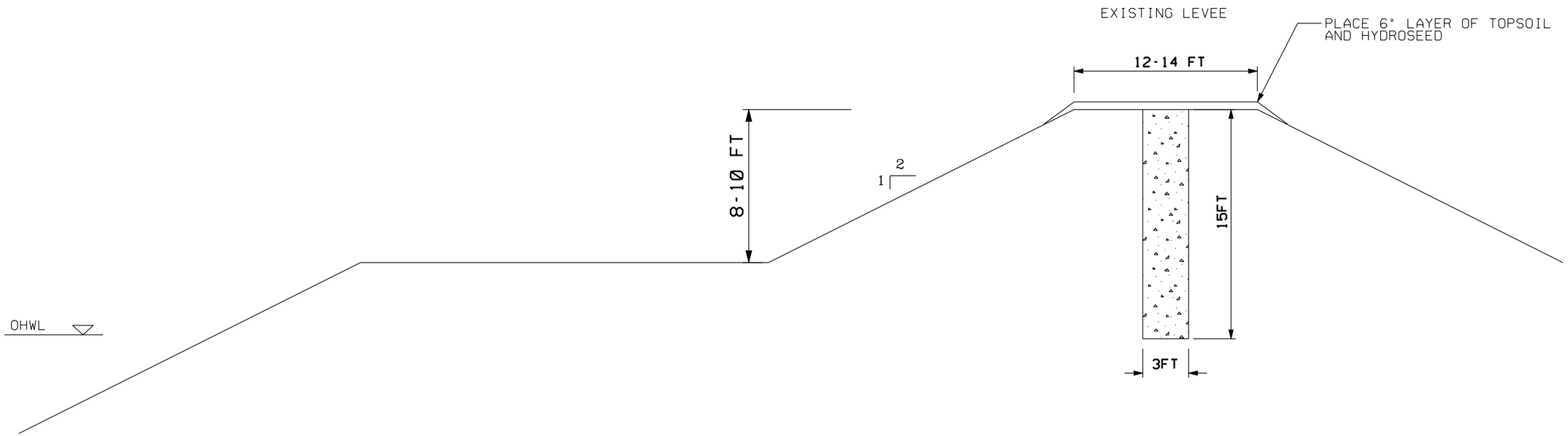

TYPICAL SECTION - SITE 22-11

(N.T.S.)

NOTES:

1. SEEPAGE KEYWAY(3' X 15') TO BE CONSTRUCTED DOWN CENTER OF LEVEE. REMOVE AND DISPOSE OF EXISTING MATERIAL. REPLACE WITH IMPERMEABLE MATERIAL (SEE SPEC).

2. PLACE 6" LAYER OF TOPSOIL AND HYDROSEED ON LEVEE CROWN.

3. TOTAL REPAIR LENGTH 800 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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Seattle District

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
SECTION VIEW
SKAGIT COUNTY WASHINGTON

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VICINITY MAP - SITE 22-12

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
PLAN VIEW
SKAGIT COUNTY WASHINGTON

Plate number: C-001
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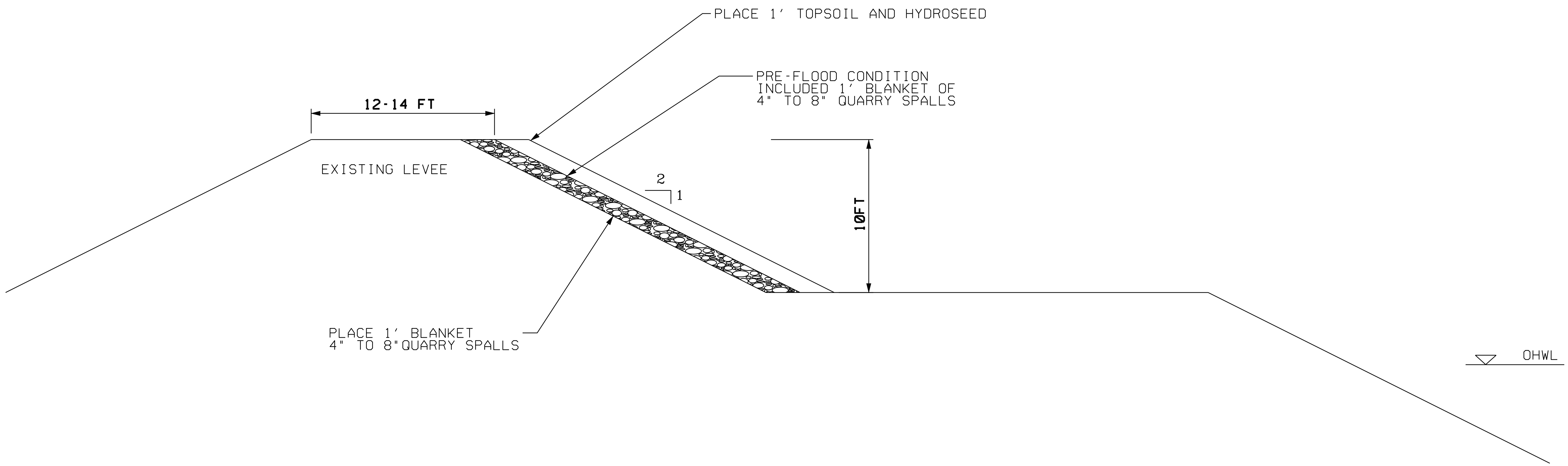

TYPICAL SECTION - SITE 22-12

(N.T.S.)

NOTES:

1. REGRADE EXISTING SLOPE AND PLACE 1' BLANKET 4" TO 6" QUARRY SPALLS.
2. PLACE 1' LAYER OF TOPSOIL AND HYDROSEED ON LEVEE SLOPE.
3. TOTAL REPAIR LENGTH 240 LF. PROJECT EXTENTS WILL BE MARKED IN FIELD PRIOR TO CONSTRUCTION.

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SKAGIT COUNTY LEVEE REHABS
DIKE DISTRICT 22
SECTION VIEW
SKAGIT COUNTY WASHINGTON

Plate number: C-002
Sheet 2 of 2

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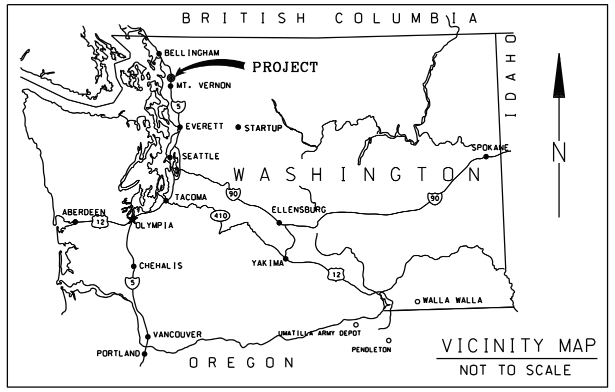
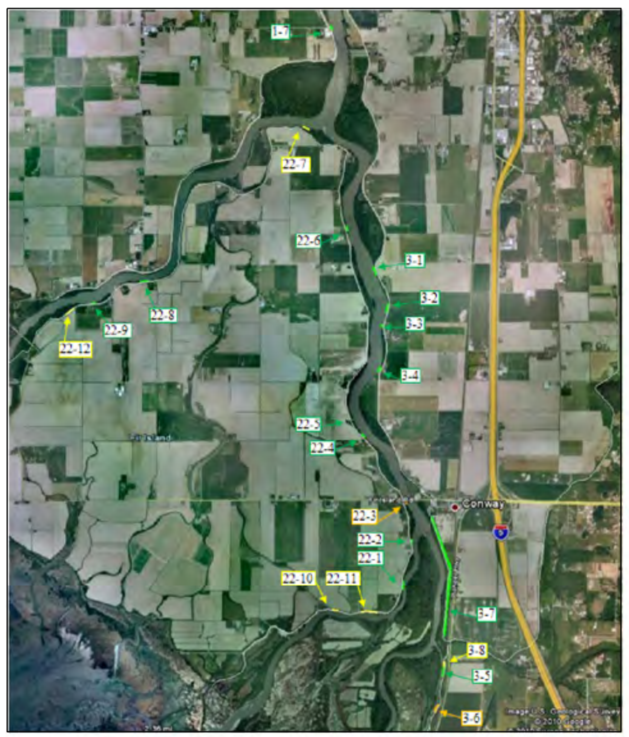
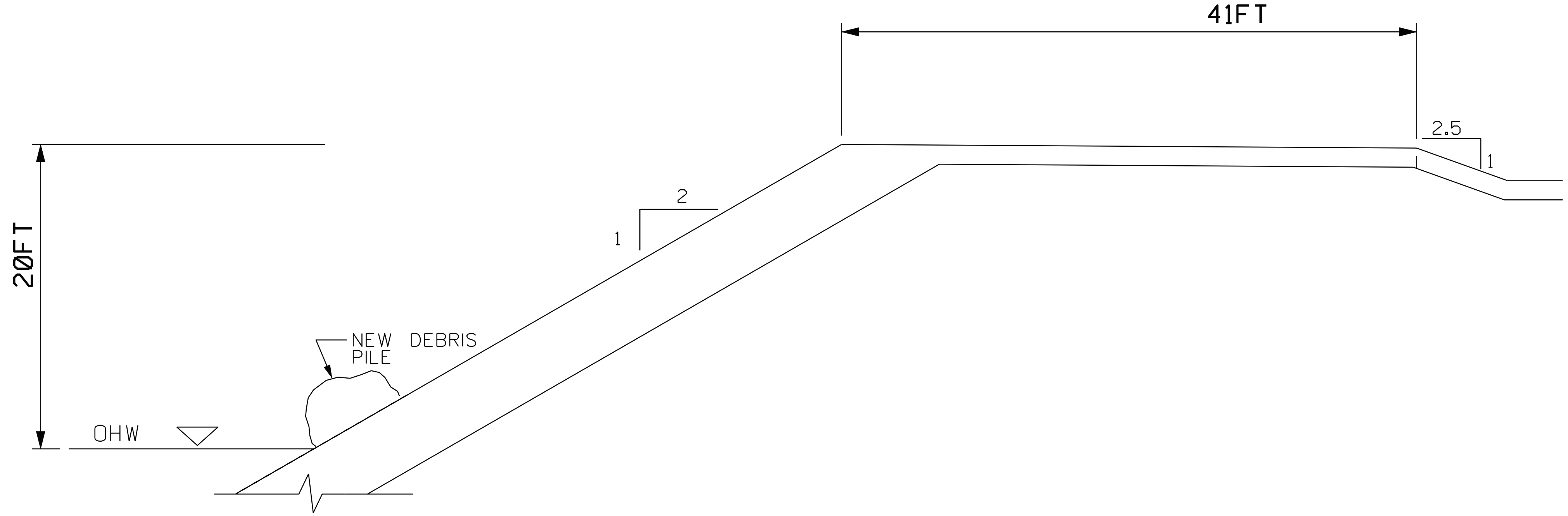
SKAGIT SITE I-7 MITIGATION





VICINITY MAPS

PHOTOS



TYPICAL SECTION - SITE I-7

NOT TO SCALE

NOTES:

1. SLOPES ARE APPROXIMATE.
2. PLACE WOODY DEBRIS IN PILE ALONG TOE OF RIVERWARD LEVEE SLOPE.
3. MITIGATION LENGTH FOR THIS SITE IS 100 LF.

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2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 1-7

Plate number:

Sheet 1 of 11

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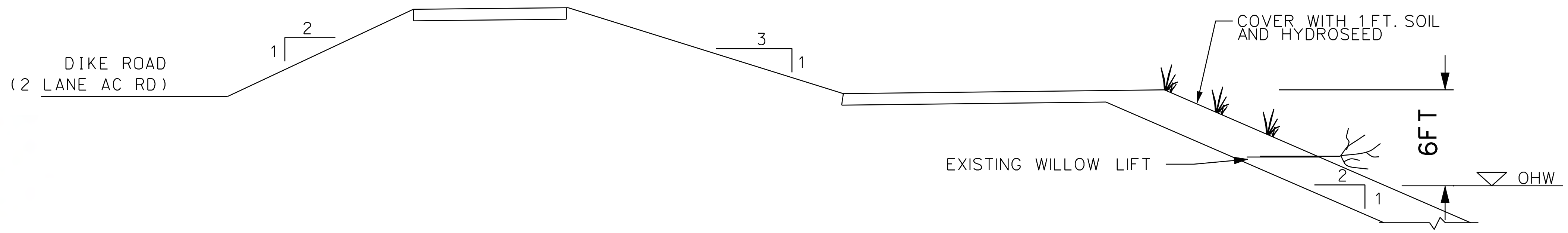
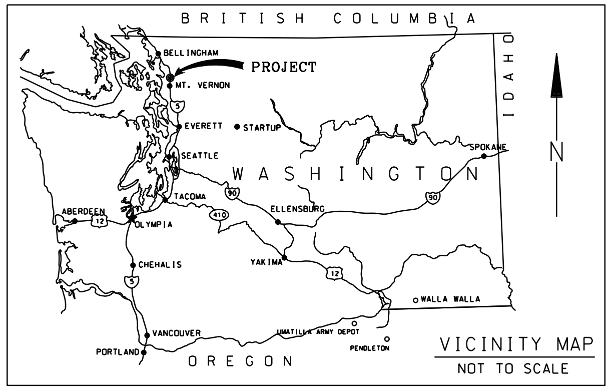
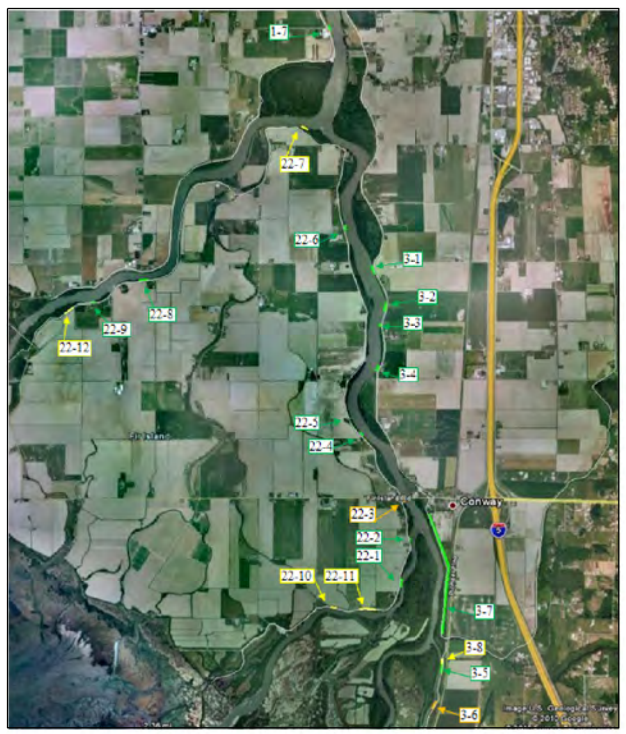
SKAGIT SITE 3-1 MITIGATION

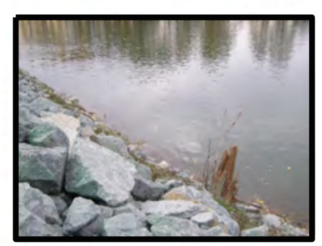


TYPICAL SECTION - SITE 3-1
NOT TO SCALE





VICINITY MAPS



PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.

2. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.

3. PLACE THREE LAYERS OF PLANTINGS (3' O.C.) ON BANK, ROWS SPACED AT 2', FIRST ROW 2' ABOVE EXISTING WILLOWS.

4. MITIGATION LENGTH AT THIS SITE IS 382 LF.

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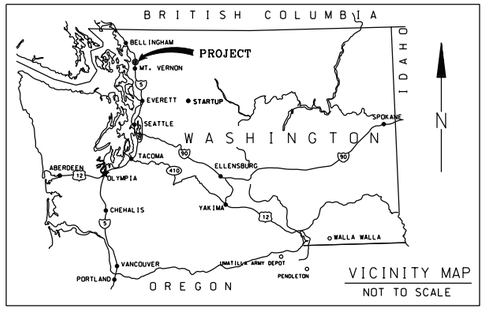
2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 3-1

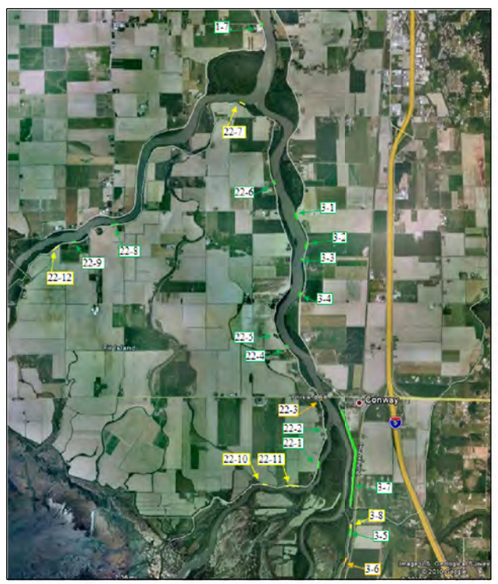
Plate number:

Sheet 2 of 11

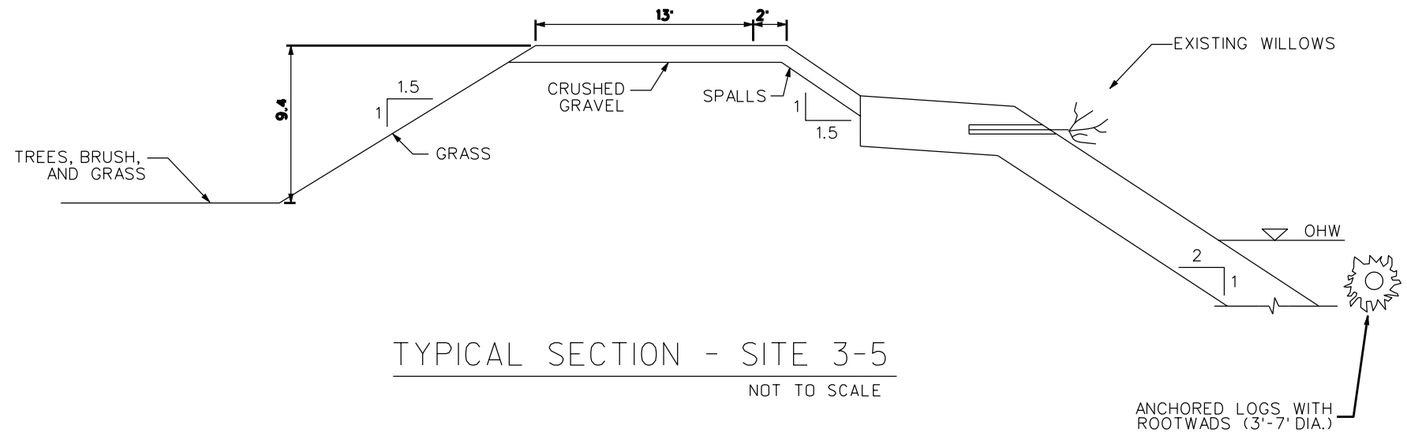
SKAGIT SITE 3-5 MITIGATION



VICINITY MAP
NOT TO SCALE



VICINITY MAPS



TYPICAL SECTION - SITE 3-5
NOT TO SCALE

PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.

2. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD) PLACED IN FRONT OF RIVERWARD TOE. (SEE LOG/ROOTWAD DETAIL)

3. MITIGATION SITE LENGTH IS 460 LF.

US Army Corps of Engineers
Seattle District

Symbol	Description	Symbol	Appr.	Date	Description
				/ /	

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Designed by: IFFT
Drawn by: VILLARREAL
Checked by: FISCHER
Date:
File #
Rev.
Prepared by:

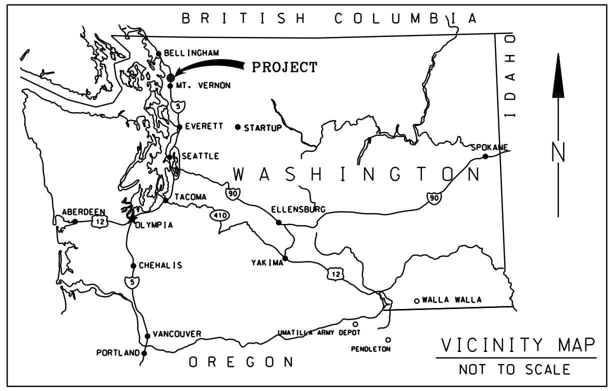
2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 3-5

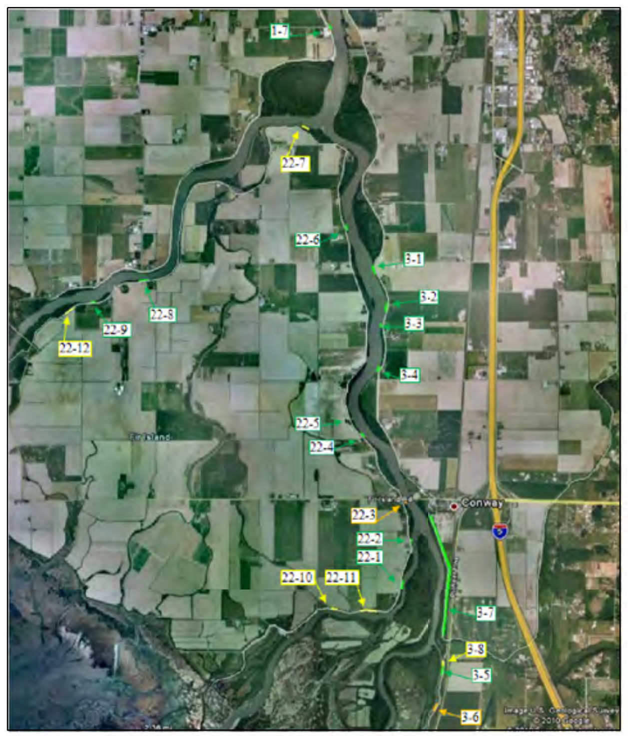
Plate number:

Sheet 3 of 11

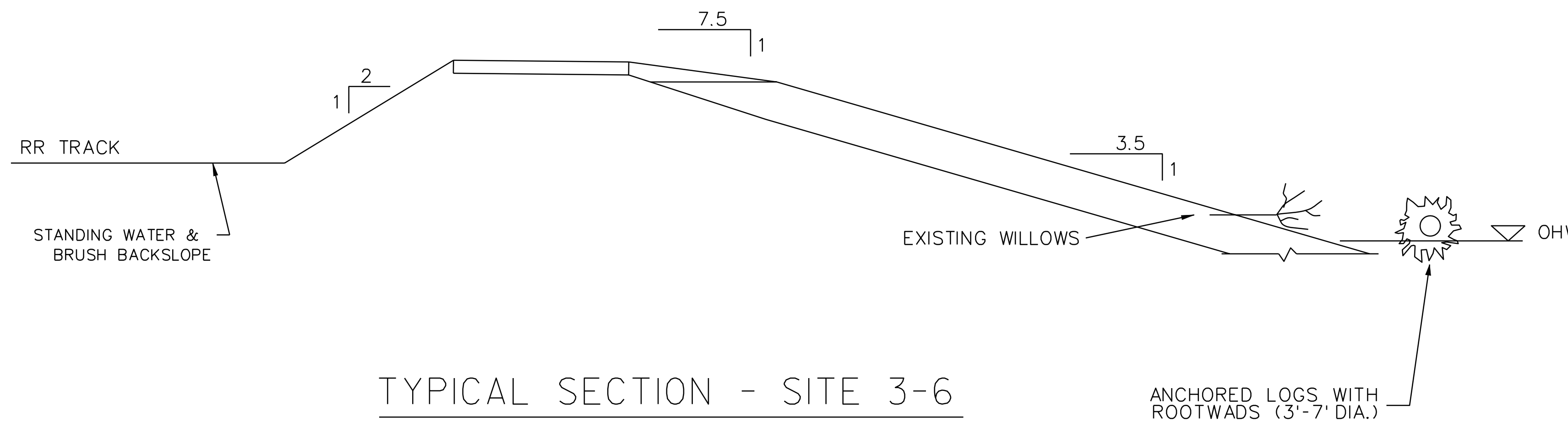
DATE AND TIME PLOTTED: $$$$DATE$$$$ $TIME DESIGN FILE: $$$$DGN$$$$

SKAGIT SITE 3-6 MITIGATION





VICINITY MAPS



TYPICAL SECTION - SITE 3-6

NOT TO SCALE

PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.
2. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD) PLACED IN FRONT OF RIVERWARD TOE. (SEE LOG/ROOTWAD DETAIL)
3. 38 TOTAL LOG/ROOTWAD ASSEMBLIES REQUIRED FOR THIS SITE.
4. MITIGATION SITE LENGTH IS 375 LF.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.
		/ /	

Designed by: IFFT
Drawn by: VILLARREAL
Checked by: FISCHER
Date:
File #
Rev.

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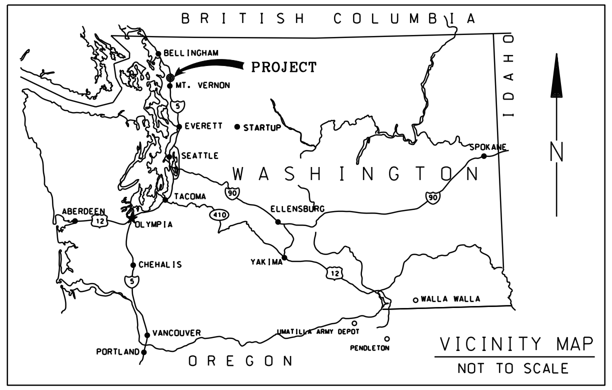
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 3-6

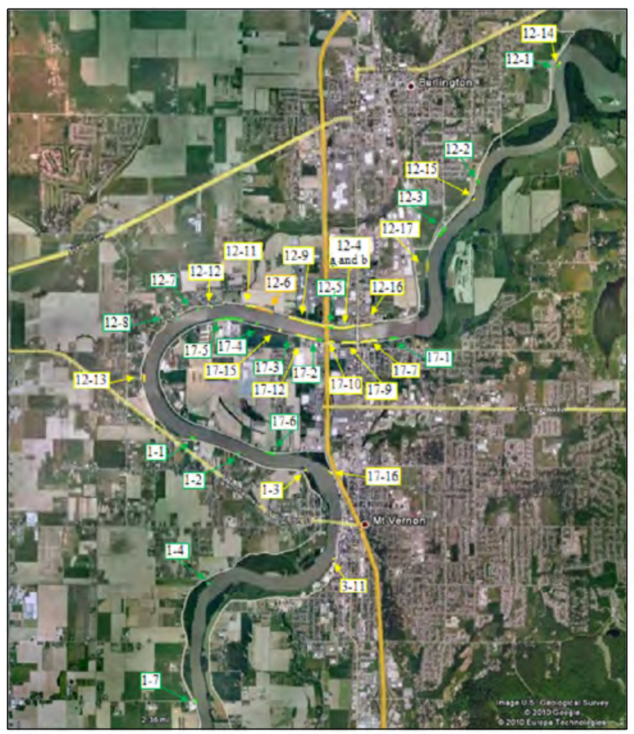
Plate number:
Sheet 4 of 11

DATE AND TIME PLOTTED: $$$DATE$$$$ $TIME DESIGN FILE: $$$DGN$$

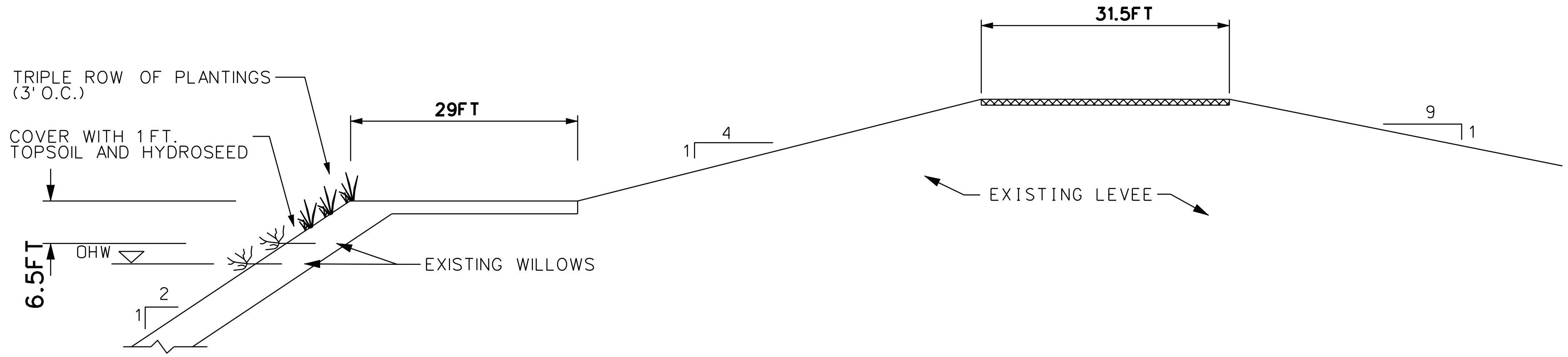
SKAGIT SITE 12-3 MITIGATION



VICINITY MAP
NOT TO SCALE



VICINITY MAPS



TYPICAL SECTION - SITE 12-3

NOT TO SCALE

PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.
2. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.
3. PLACE THREE LAYERS OF PLANTINGS (3' O.C.) ON BANK, ROWS SPACED AT 2', FIRST ROW 2' ABOVE EXISTING WILLOWS.
4. MITIGATION LENGTH AT THIS SITE IS 500 LF.

US Army Corps of Engineers
Seattle District

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SEATTLE, WASHINGTON

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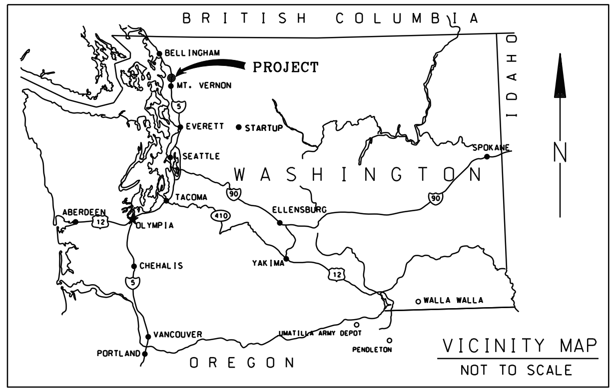
Checked by: FISCHER

2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 12-3

Plate number:

SKAGIT SITE 12-6 MITIGATION



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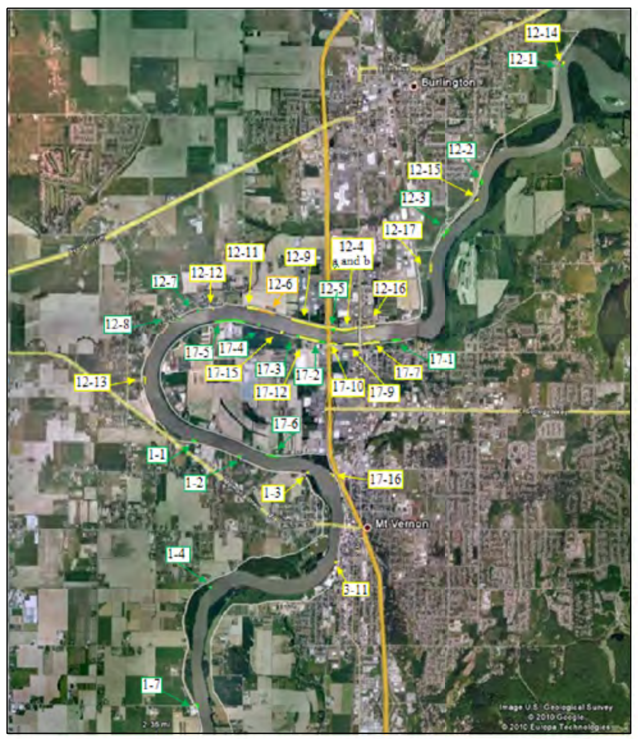
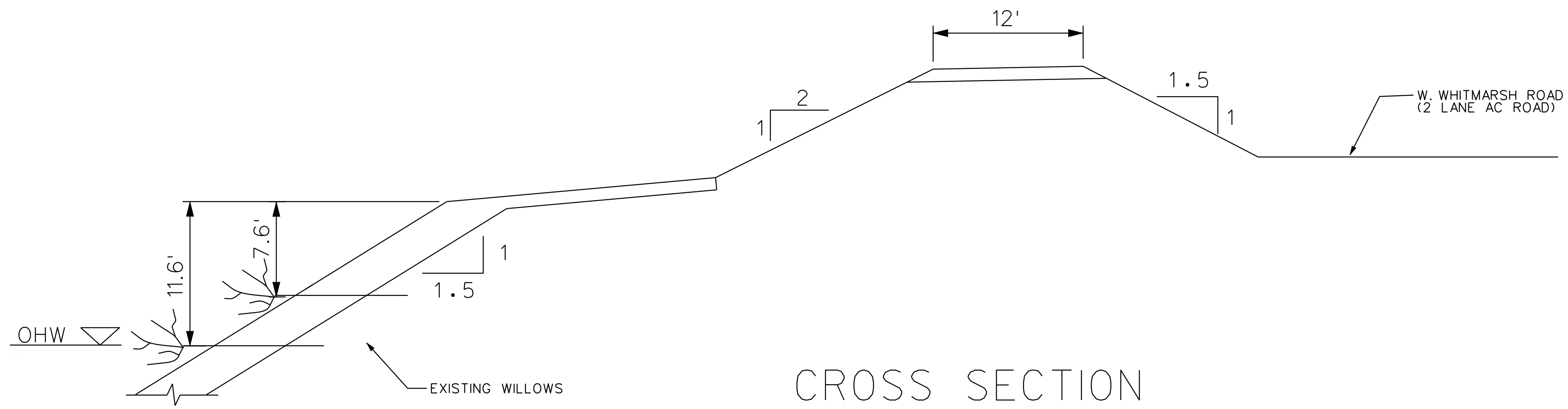
NOT TO SCALE

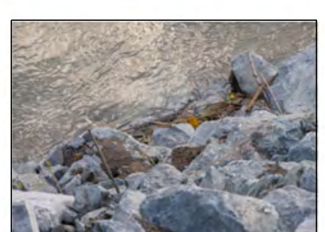


VICINITY MAPS



CROSS SECTION

NOT TO SCALE



PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.
2. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.
3. MITIGATION LENGTH AT THIS SITE IS 651 LF.

US Army Corps of Engineers
Seattle District

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Date:
File
Rev.

U.S.ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

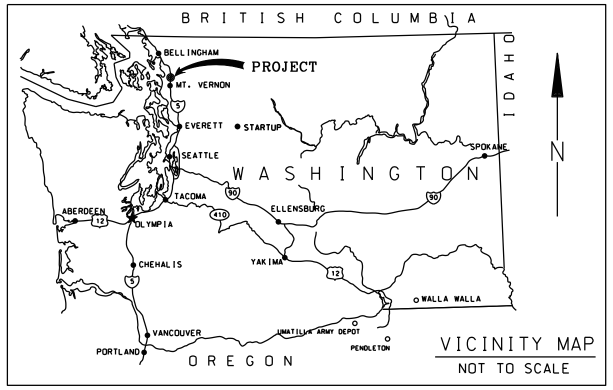
2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 12-6

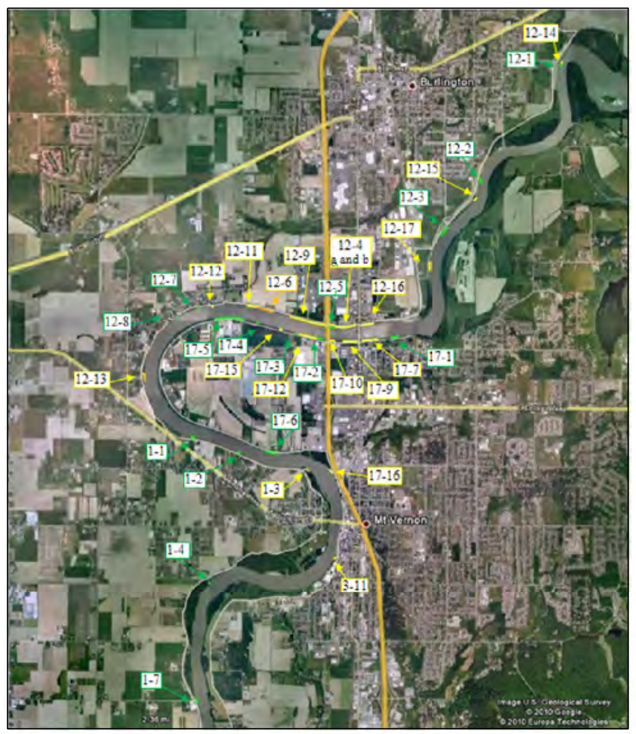
Plate number:

Sheet 6 of 11

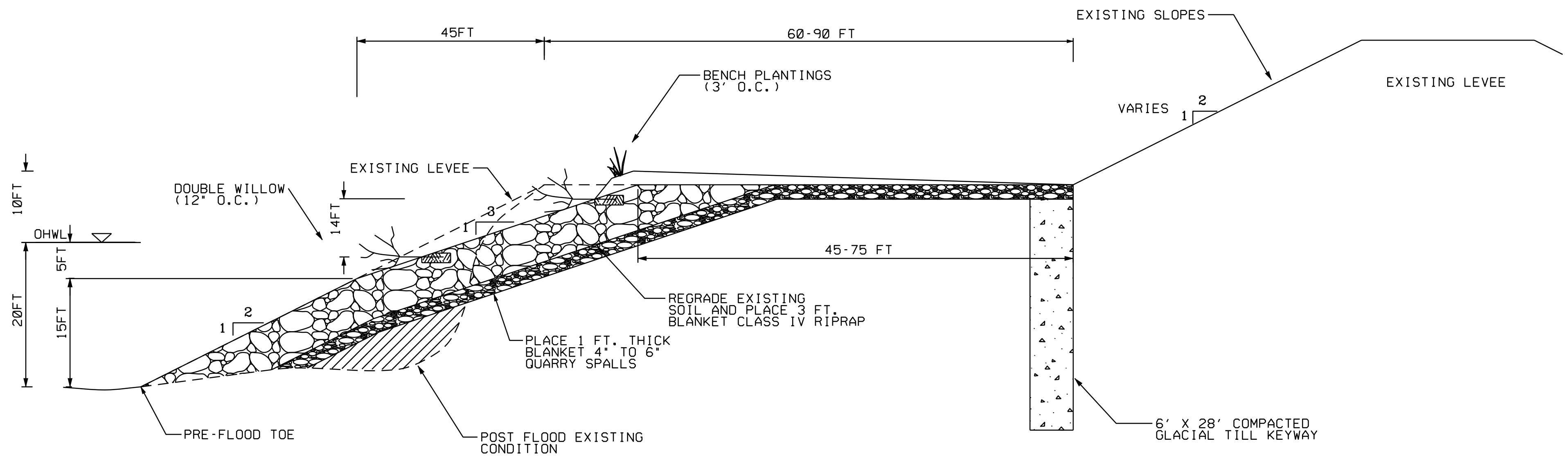
DATE AND TIME PLOTTED: $$DATE$$$ $TIME DESIGN FILE: $$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

SKAGIT SITE 12-14 MITIGATION





VICINITY MAPS



TYPICAL SECTION - SITE 12-14

NOT TO SCALE

PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.
2. TRANSITION LAYBACK AT 2011 REPAIR SITE 12-14 INTO EXISTING SLOPE AND GRADE AT UPSTREAM AND DOWNSTREAM ENDS.
3. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
4. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.
5. MITIGATION LENGTH AT THIS SITE IS 150 LF.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.
		/ /	

Designed by: IFFT
Drawn by: VILLARREAL
Checked by: FISCHER
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SEATTLE, WASHINGTON
Prepared by:

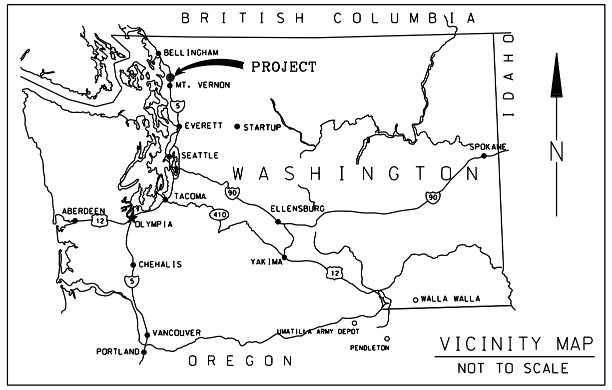
2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 12-14

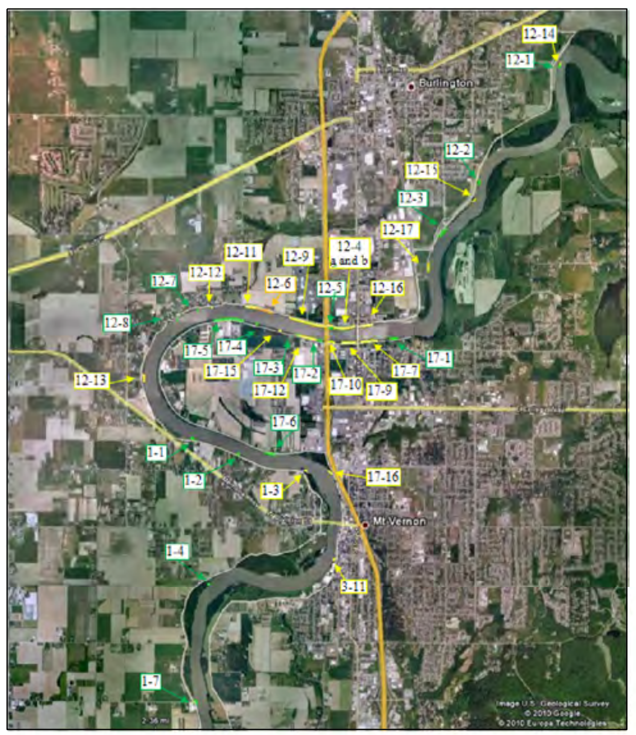
Plate number:

Sheet 7 of 11

DATE AND TIME PLOTTED: $$$DATE$$$$ $TIME DESIGN FILE: $$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

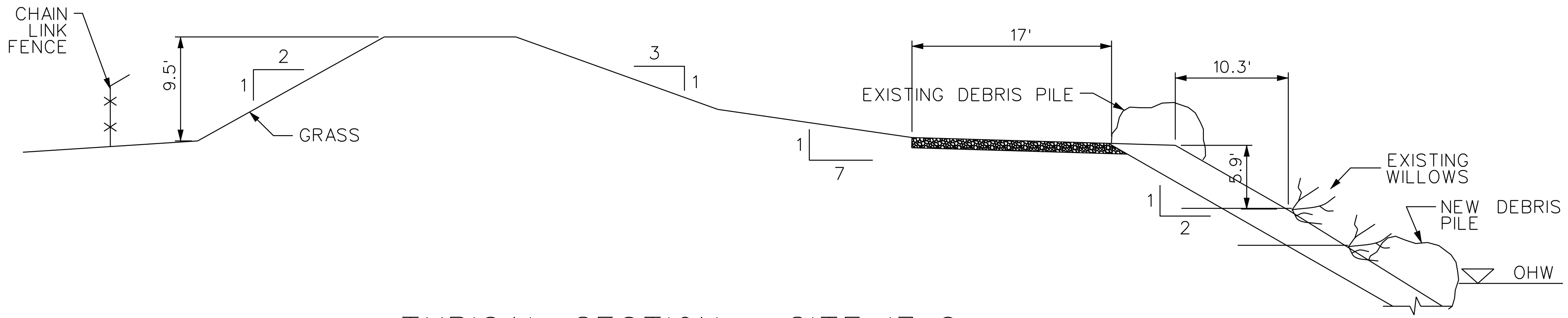
SKAGIT SITE 17-2 MITIGATION





VICINITY MAPS

PHOTOS



TYPICAL SECTION - SITE 17-2

NOT TO SCALE

NOTES:

1. SLOPES ARE APPROXIMATE.

2. PLACE WOODY DEBRIS IN PILE ALONG TOE OF RIVERWARD LEVEE SLOPE.

3. MITIGATION LENGTH AT THIS SITE IS 100 LF.

US Army Corps of Engineers Seattle District

Symbol	Description	Date	Appr.
		/ /	

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Drawn by: VILLARREAL
Checked by: FISCHER
Date:
File:
Rev.:

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CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

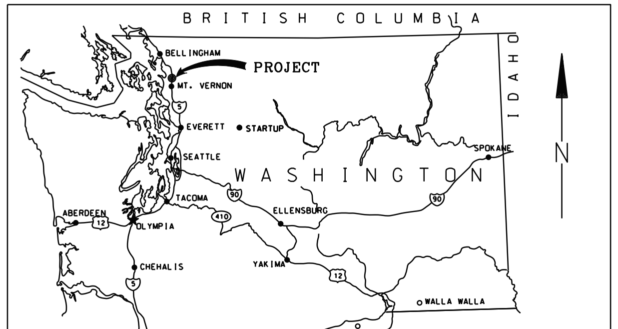
2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 17-2

Plate number:

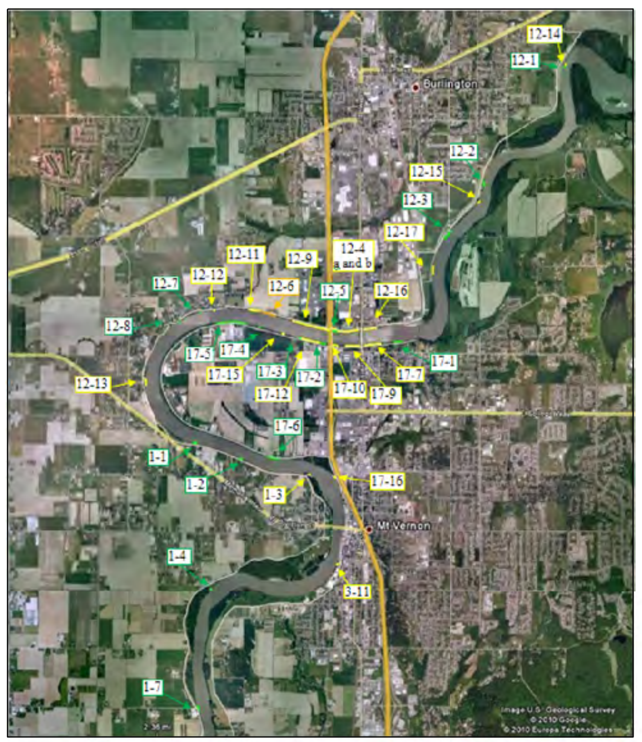
Sheet 8 of 11

$$$DGN$$ DESIGN FILE: $$$DATE$$$$ $TIME DATE AND TIME PLOTTED:

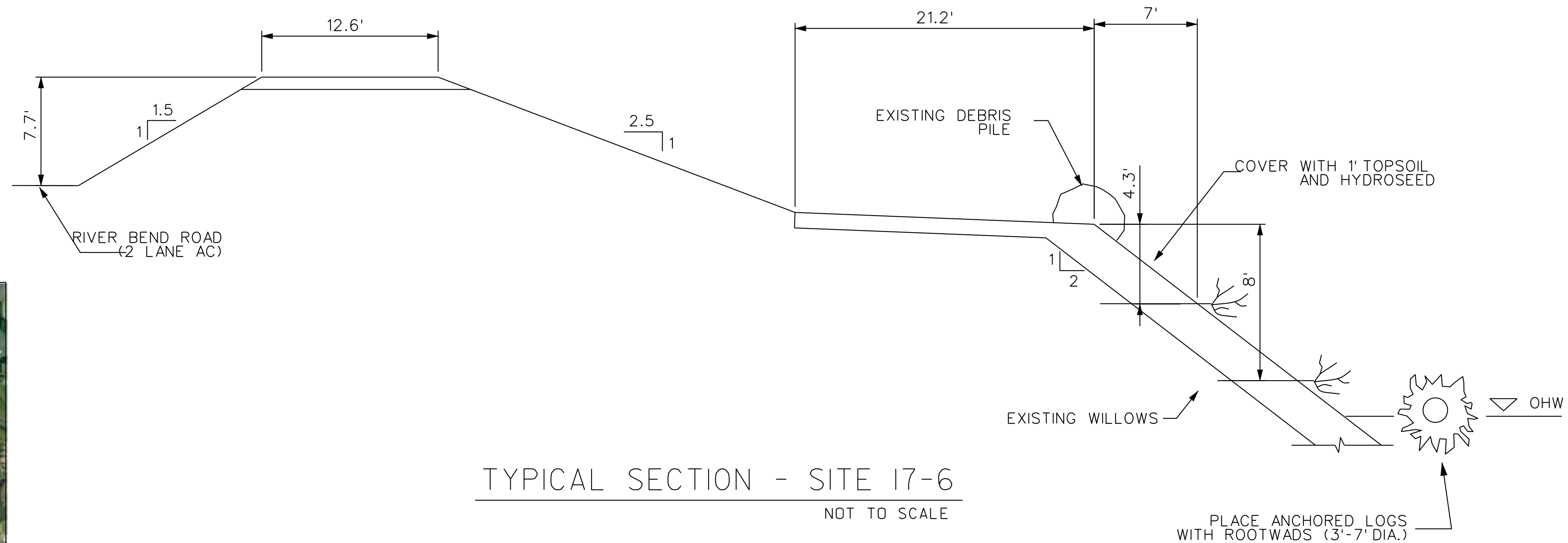
SKAGIT SITE 17-6 MITIGATION



VICINITY MAP
NOT TO SCALE



VICINITY MAPS



TYPICAL SECTION - SITE 17-6
NOT TO SCALE

PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.

2. PLACE LOGS WITH ROOTWADS ANCHORED WITH HOLD DOWN ROCK (20' UNIT LENGTH, 3'-7' DIAMETER ROOTWAD) PLACED IN FRONT OF RIVERWARD TOE. (SEE LOG/ROOTWAD DETAIL)

3. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.

4. MITIGATION LENGTH AT THIS SITE IS 400 LF.

US Army Corps of Engineers
Seattle District

Date: 18 FEB 11
Designed by: IFFT
Drawn by: VILLARREAL
Checked by: FISCHER

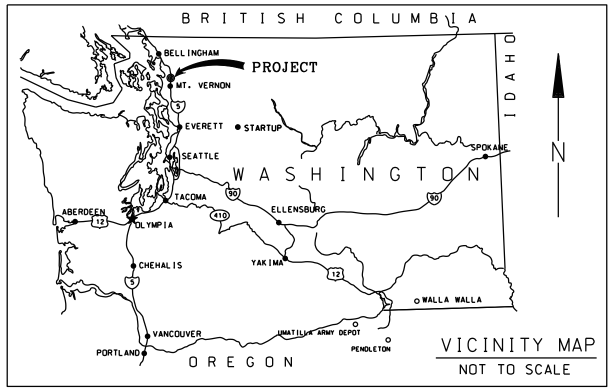
U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

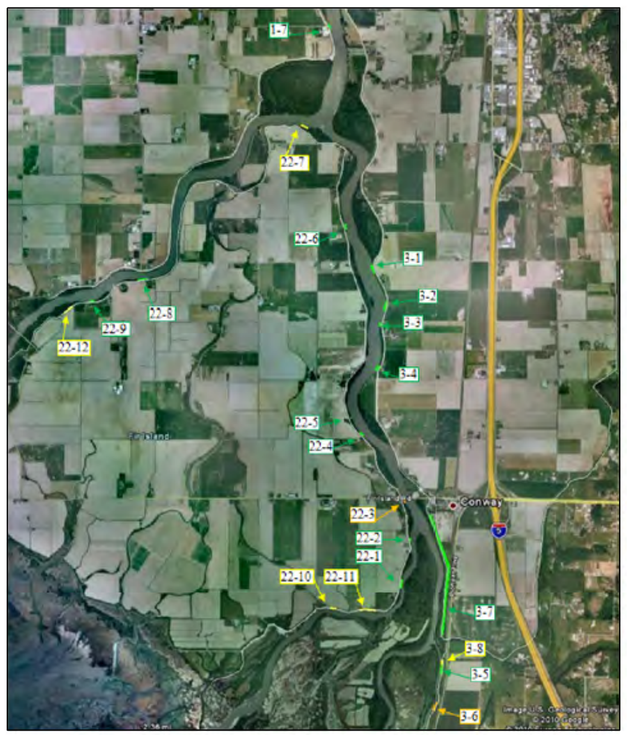
2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 17-6

Plate number:
Sheet 9 of 11

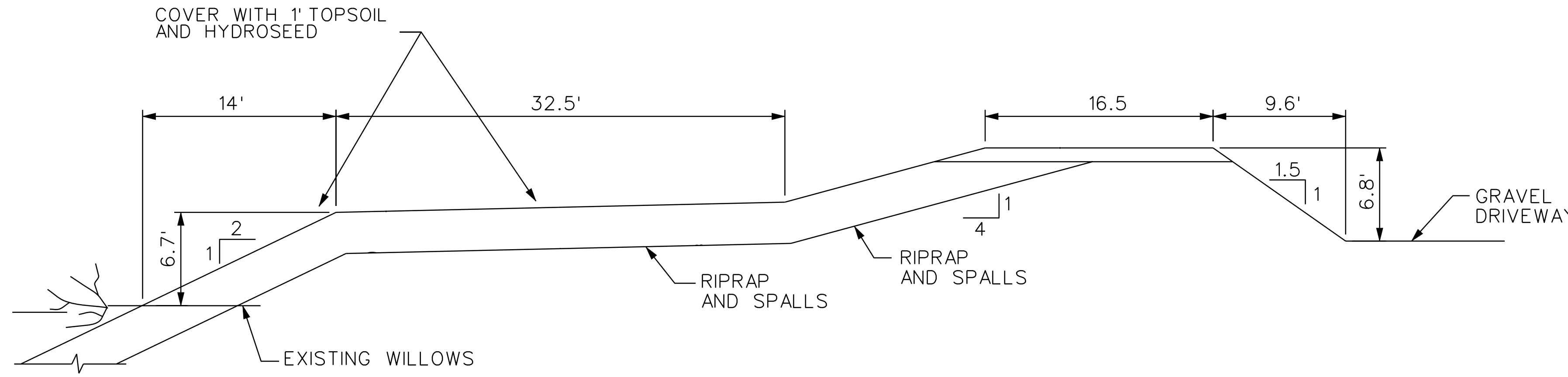
DATE AND TIME PLOTTED: $$DATE$$$$ $TIME DESIGN FILE: $$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$

SKAGIT SITE 22-3 MITIGATION





VICINITY MAPS



TYPICAL SECTION - SITE 22-3

NOT TO SCALE

PHOTOS

NOTES:

1. SLOPES ARE APPROXIMATE.
2. REMOVE INVASIVE VEGETATION AND REPLACE WITH NATIVE SPECIES.
3. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.
4. MITIGATION LENGTH AT THIS SITE IS 273 LF.

US Army Corps of Engineers Seattle District

Designed by: IFFT
Drawn by: VILLARREAL
Checked by: FISCHER

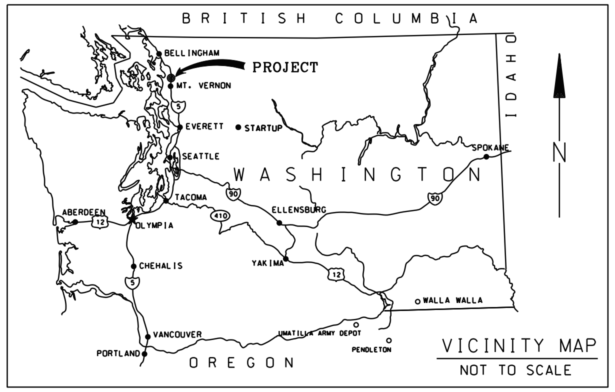
U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON

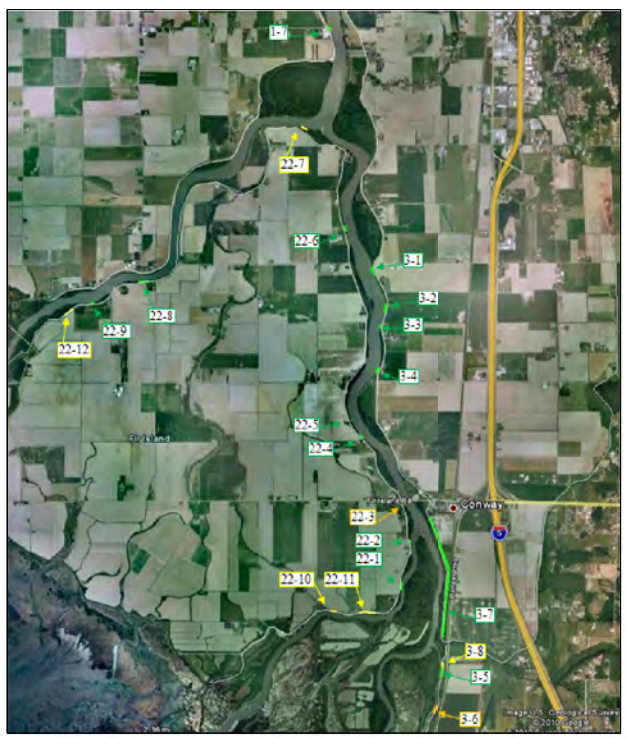
2007 REPAIR SITES
ADDITIONAL MITIGATION SITE 22-3
SKAGIT COUNTY WASHINGTON

Plate number:

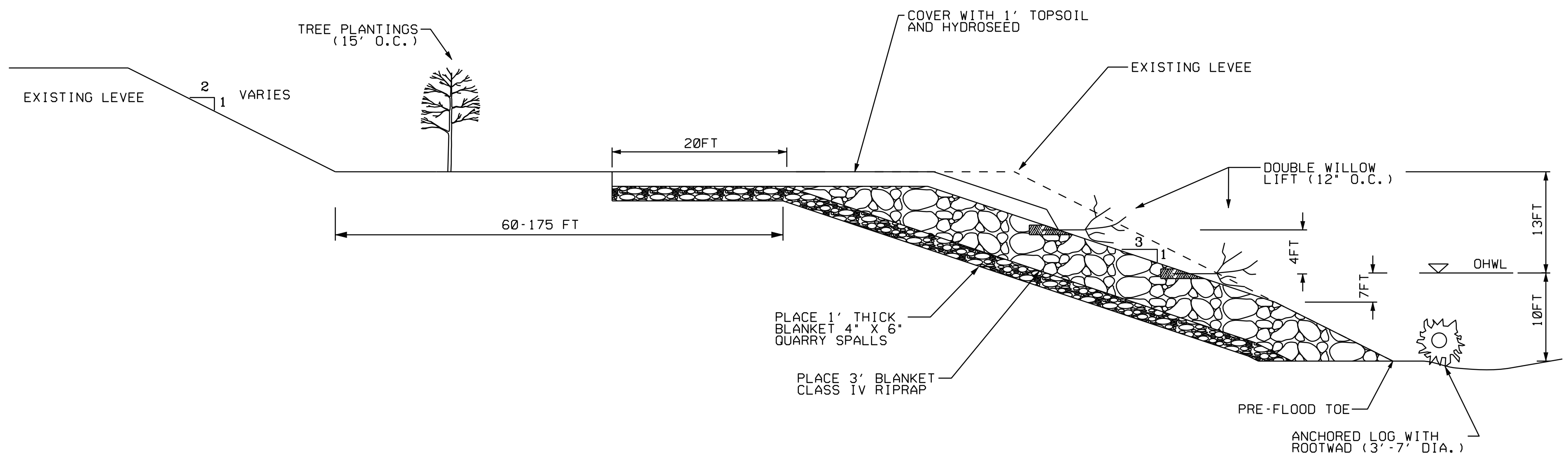
Sheet 10 of 11

SKAGIT SITE 22-7 MITIGATION





VICINITY MAPS



TYPICAL SECTION - SITE 22-7

NOT TO SCALE

NOTES:

1. SLOPES ARE APPROXIMATE.
2. THIS 150 LF MITIGATION SITE INCLUDES TRANSITION ZONE FOR 2011 REPAIR SITE (350 LF).
3. INSTALL TWO WILLOW LIFTS. WILLOWS TO HAVE 3' STEMS WITH 2' EMBEDDED INTO SOIL, 1' EXPOSED. 4" LAYER OF TOPSOIL ABOVE AND BELOW STEM. PLACE FIRST LIFT AT LOWEST POSSIBLE ELEVATION BUT NOT ABOVE OHWL.
4. COVER EXPOSED ROCK ABOVE WILLOWS WITH SOIL AND HYDROSEED.
5. MITIGATION LENGTH AT THIS SITE IS 150 LF.

US Army Corps of Engineers
Seattle District

Designed by: IFFT
Drawn by: VILLARREAL
Checked by: FISCHER
Date:
File #
Rev.

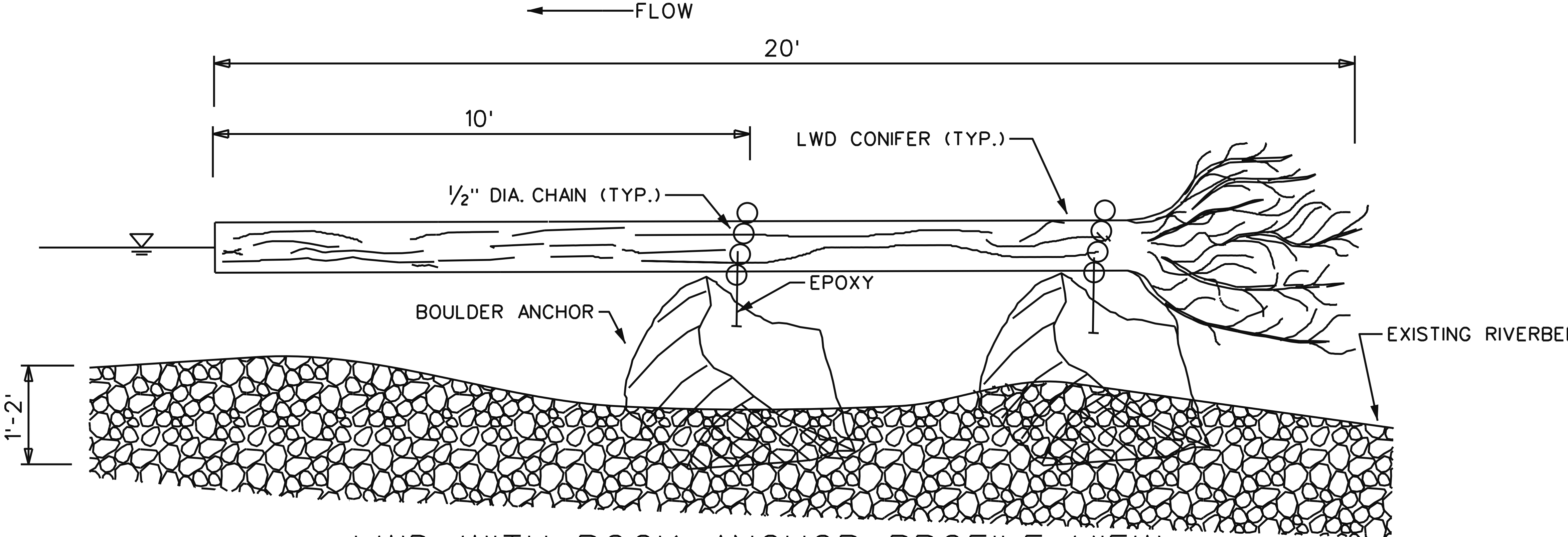
U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 REPAIR SITES
ADDITIONAL MITIGATION
SITE 22-7
SKAGIT COUNTY WASHINGTON

Plate number:

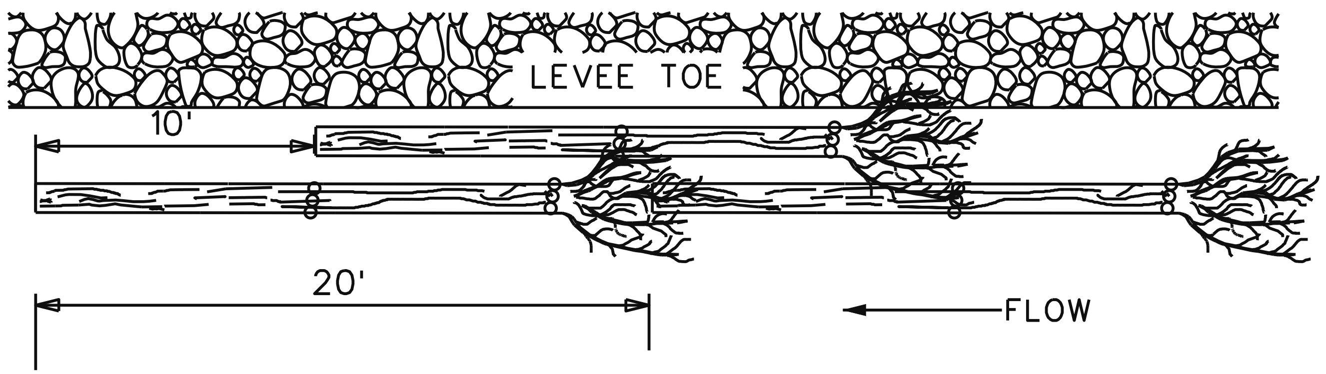
Sheet 11 of 11

DATE AND TIME PLOTTED: $$$DATE$$$ $TIME DESIGN FILE: $$$DGN$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$$



LWD WITH ROCK ANCHOR PROFILE VIEW

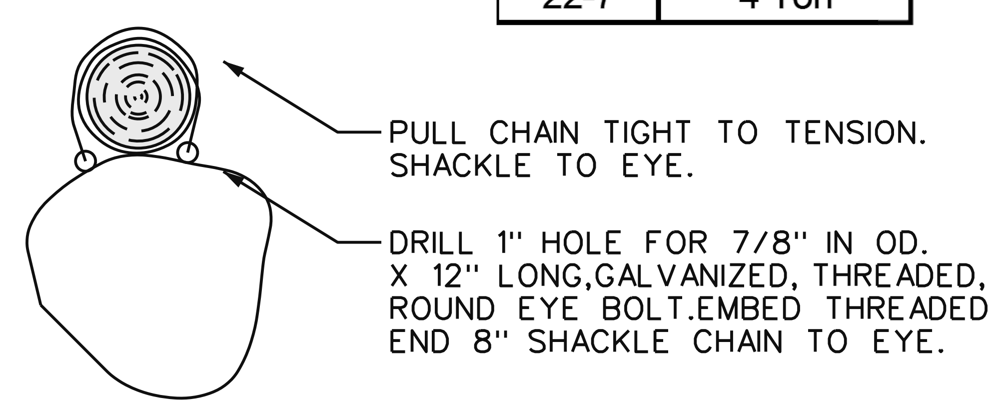
NOT TO SCALE



LWD PLAN VIEW

NOT TO SCALE

Site	Boulder Size
1-3	4 Ton
3-5	2 Ton
3-6	2 Ton
3-8	2 Ton
12-9	5 Ton
17-6	5 Ton
22-7	4 Ton



TYPICAL LOG TO BOULDER ANCHOR CONNECTION

NOT TO SCALE

NOTES:

1. TREES RECRUITED FOR USE IN THE LOG/ROOTWAD STRUCTURES MUST BE HEMLOCK, SPRUCE, CEDAR, FIR,OR PINE.

2. ROCK TO BE USED FOR LOG/ROOTWAD BOULDER ANCHORS.

3. EMBED HALF OF ROCK ANCHORS INTO EXISTING RIVERBED TO SECURE IN PLACE.

US Army Corps of Engineers
Seattle District

Designed by: IFFT/WALKER
Drawn by: BARRETT
Checked by:
Date: 15 DEC 10

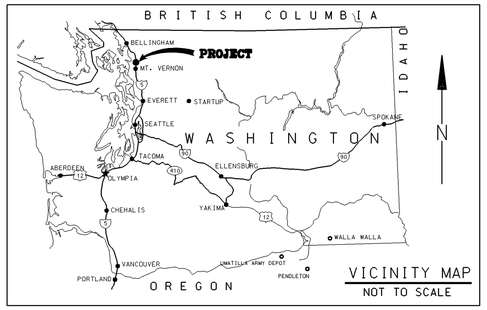
U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by: VILLARREAL

LWD WITH ROCK ANCHOR DETAIL
SEATTLE WASHINGTON

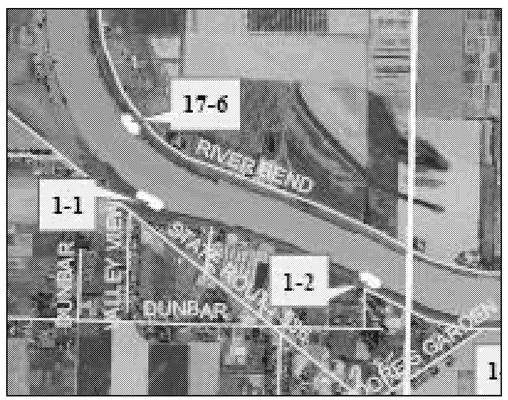
Plate number: A-1
Sheet 1 of 1

DATE AND TIME PLOTTED: $$$DATE$$$$ $TIME
DESIGN FILE: $$$DGN$$

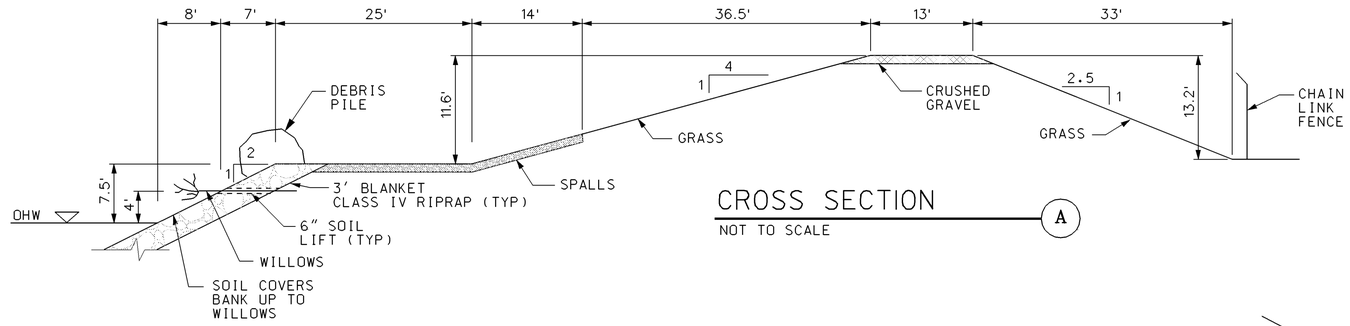
SKA-1-07 (1-1) - SKAGIT LEVEE AS-BUILT



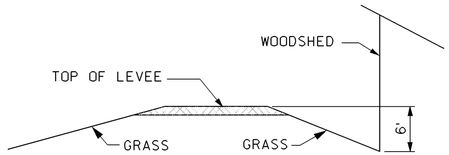
VICINITY MAP
NOT TO SCALE



VICINITY MAPS



CROSS SECTION (A)
NOT TO SCALE



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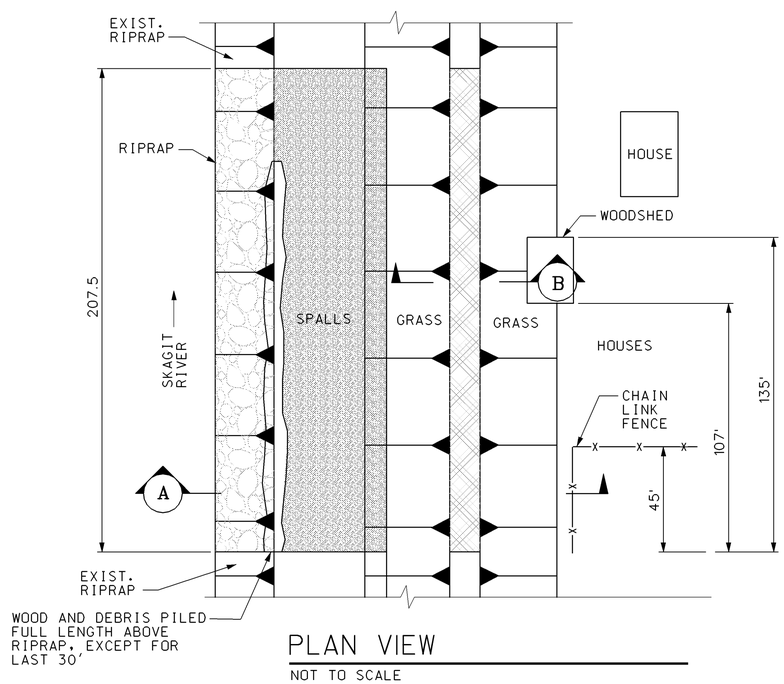
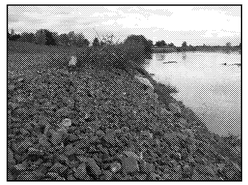
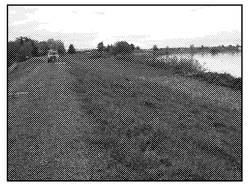
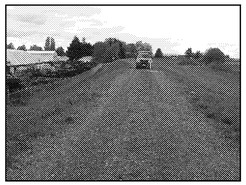


PLAN VIEW
NOT TO SCALE

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	415 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 14.6, SECTION 13, T34N, R3E, SKAGIT COUNTY, WASHINGTON
2. SLOPES ARE APPROXIMATE.

PHOTOS

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Prepared by:
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

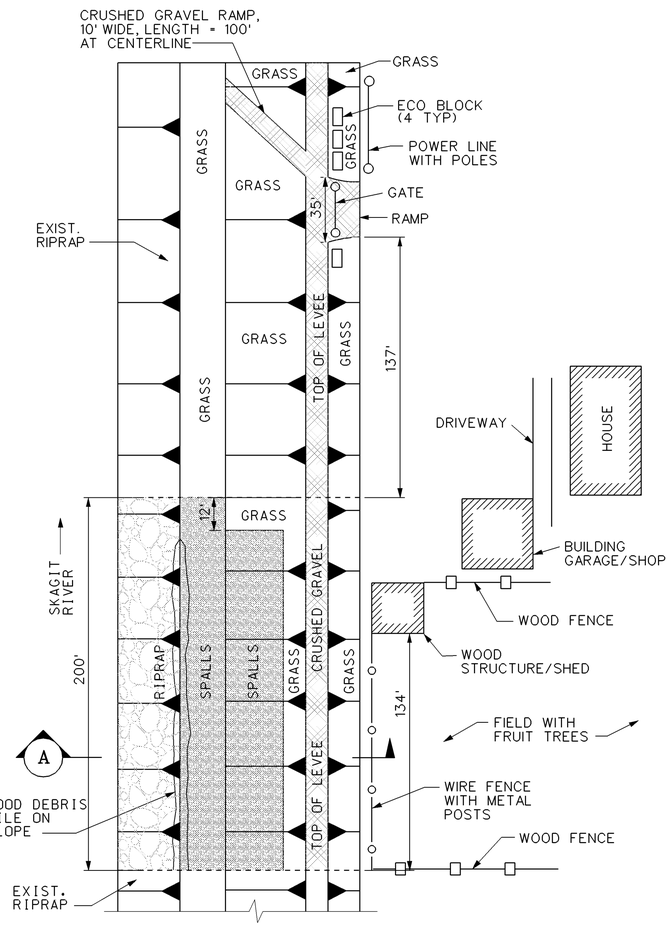
2007 LEVEE REHAB AS-BUILTS
SKA-1-07 (1-1)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 14 of 32

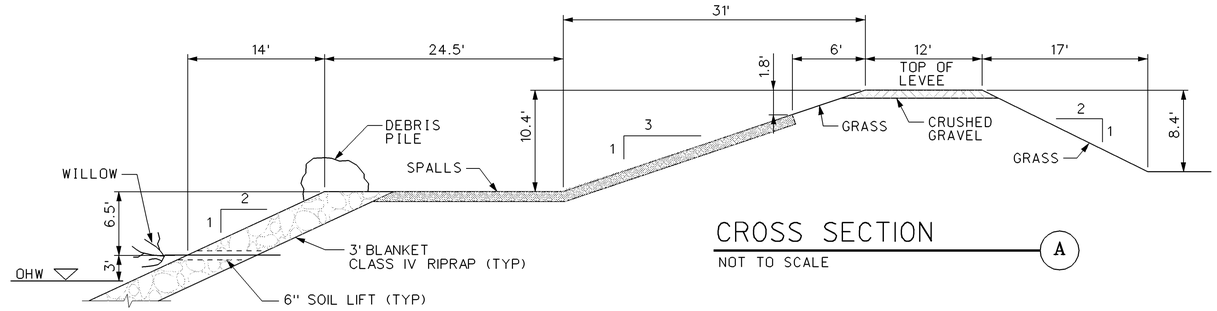
DATE AND TIME PLOTTED: 19-DEC-2007 13:12
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 1\SKA-1-07 (1-1).DGN

SKA-1-07 (1-2) - SKAGIT LEVEE AS-BUILT



PLAN VIEW

NOT TO SCALE



CROSS SECTION

NOT TO SCALE

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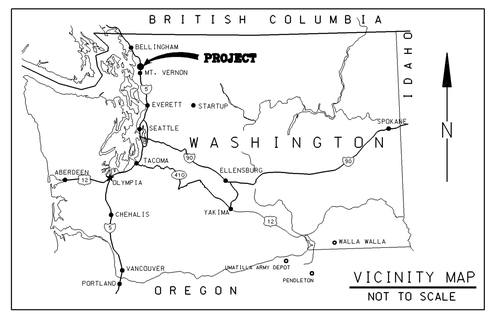
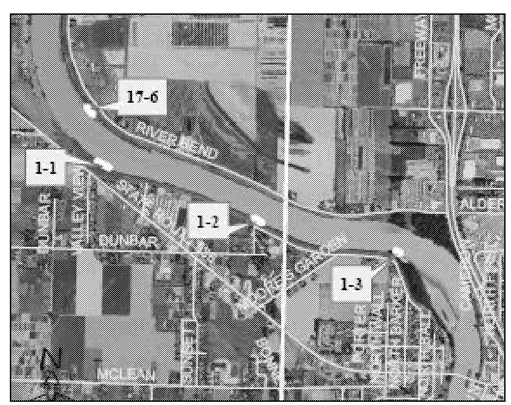


VICINITY MAP

NOT TO SCALE



VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	1,000 TONS
SPALLS	300 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	400 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 13.8, SECTION 13, T34N, R3E, SKAGIT COUNTY, WASHINGTON

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

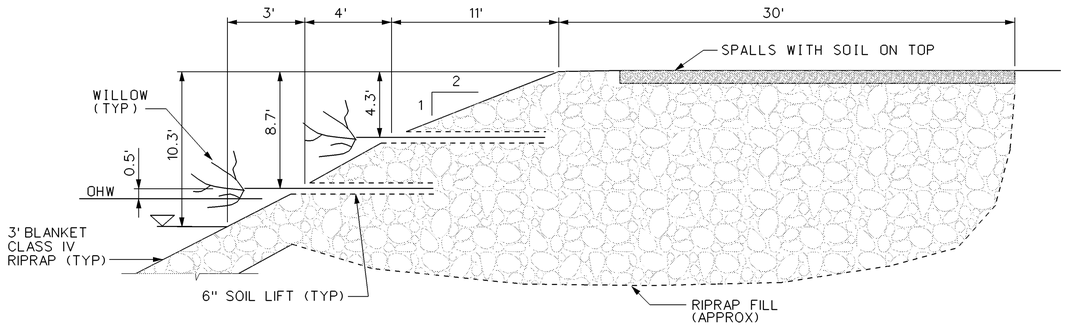
2007 LEVEE REHAB AS-BUILTS
SKA-1-07 (1-2)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 15 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 13:19
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 1\SKA-1-07 (1-2).DGN

SKA-1-07 (1-4) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (B)

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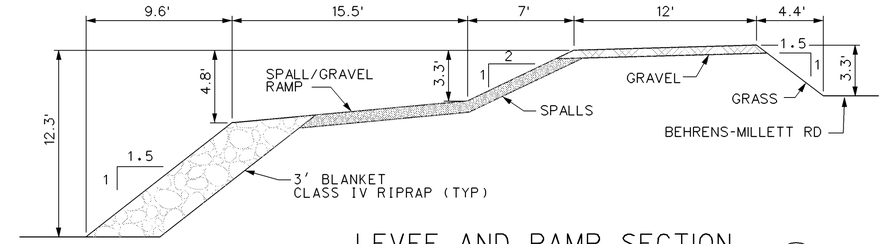
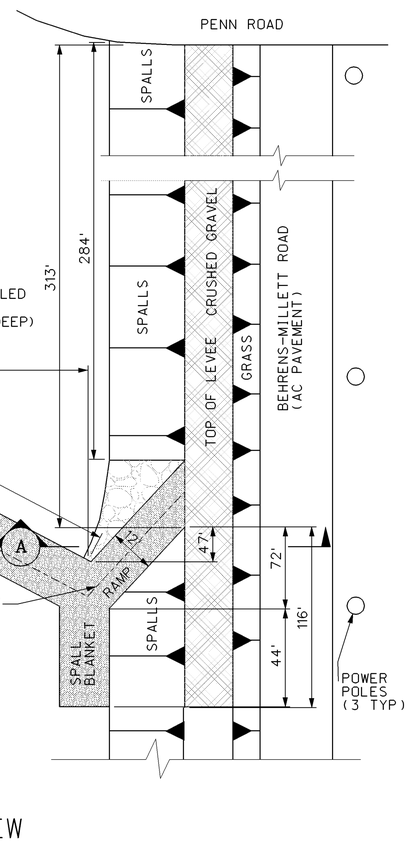


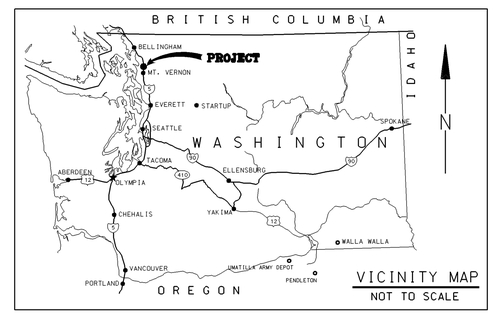
LEVEE AND RAMP SECTION (A)

NOT TO SCALE



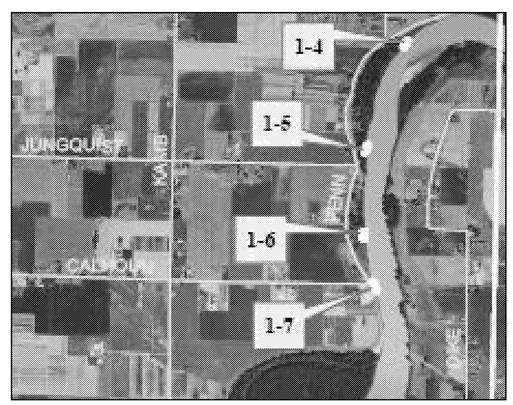
PLAN VIEW

NOT TO SCALE

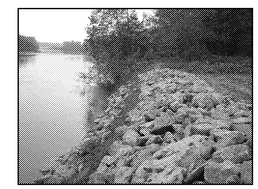


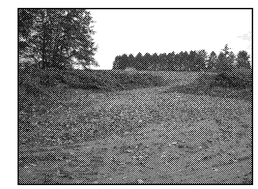
VICINITY MAP

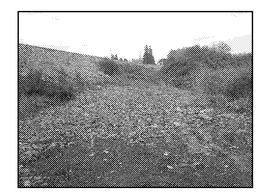
NOT TO SCALE

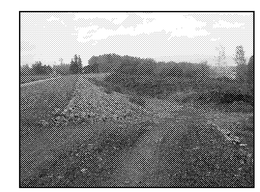


VICINITY MAPS









PHOTOS

QUANTITIES	
CLASS IV RIPRAP	1,000 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	432 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 13.3, SECTION 25, T34N, R3E, SKAGIT COUNTY, WASHINGTON

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

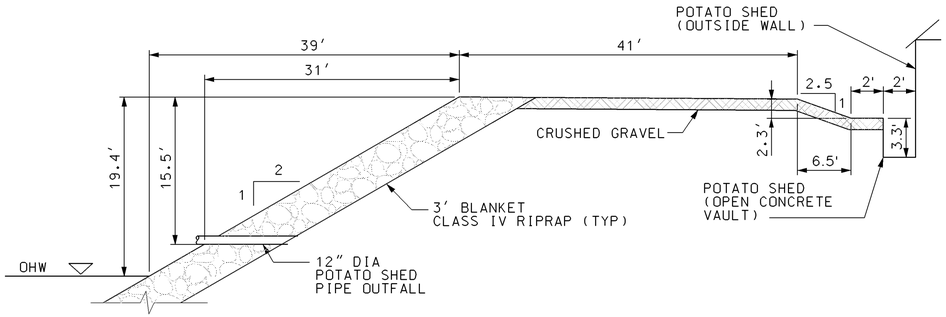
2007 LEVEE REHAB AS-BUILTS
SKA-1-07 (1-4)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 16 of 32

DATE AND TIME PLOTTED: 20-DEC-2007 13:31
DESIGN FILE: I:\MISCCIV\2007 PIR ASBUILTS\SKAGITDD I\SKA-1-07 (1-4).DGN

SKA-1-07 (1-7) - SKAGIT LEVEE AS-BUILT



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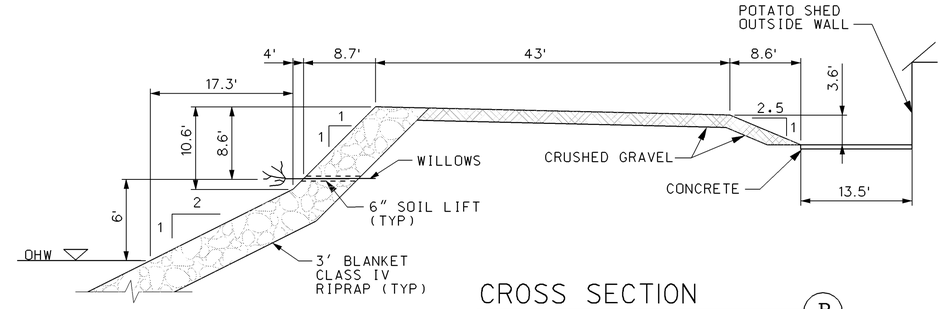

CROSS SECTION (B)
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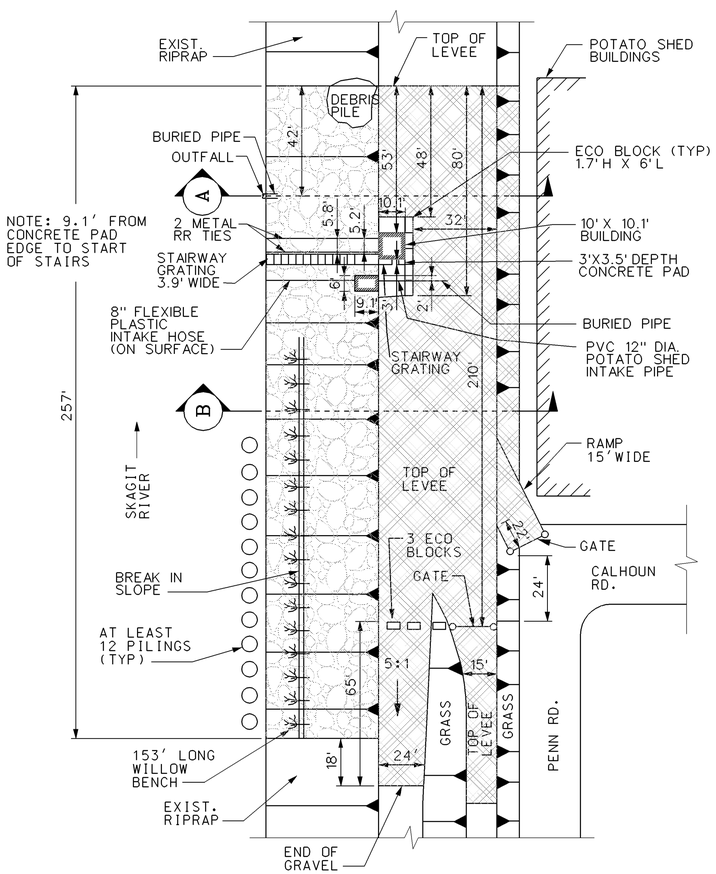
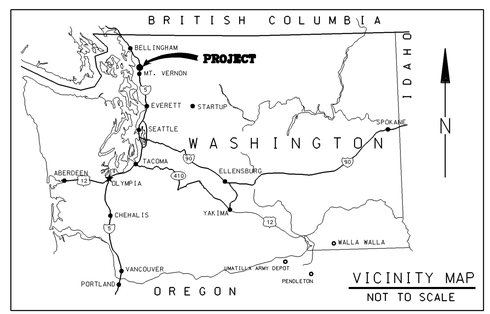
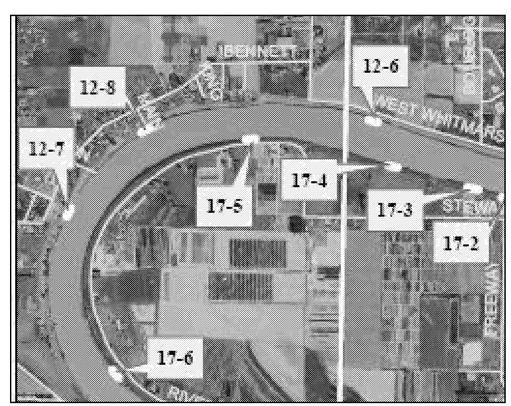


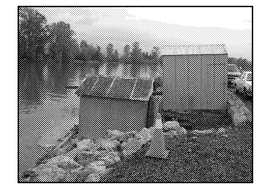
PLAN VIEW
NOT TO SCALE

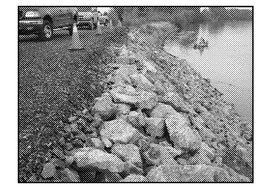


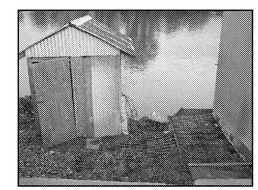
VICINITY MAP
NOT TO SCALE

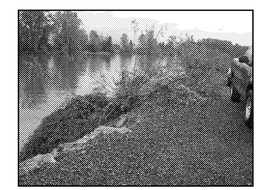


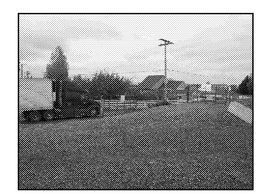
VICINITY MAPS











PHOTOS

QUANTITIES	
CLASS IV RIPRAP	3,000 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	306 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 10.4, SECTION 25, T34N, R3E, SKAGIT COUNTY, WASHINGTON
2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.

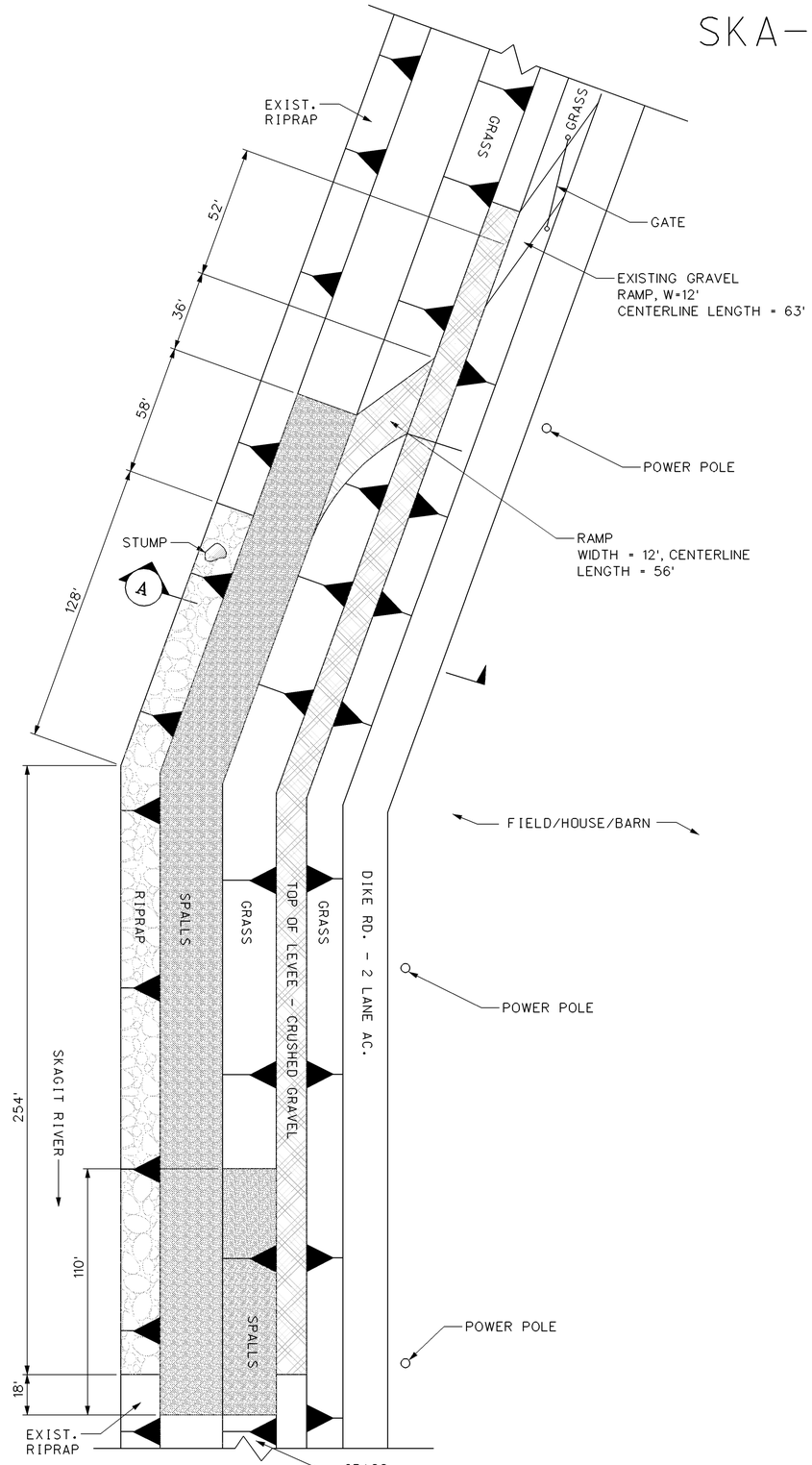
U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 LEVEE REHAB AS-BUILTS
SKA-1-07 (1-7)
SKAGIT LEVEE AS-BUILT

Plate number:
Sheet 17 of 32

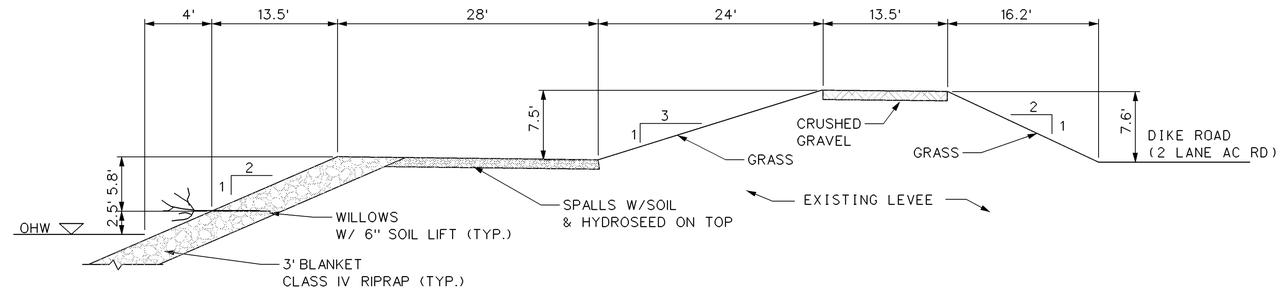
DATE AND TIME PLOTTED: 19-DEC-2007 13:21
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD I\SKA-1-07 (1-7).DGN

SKA-3-07 (3-1) - SKAGIT LEVEE AS-BUILT



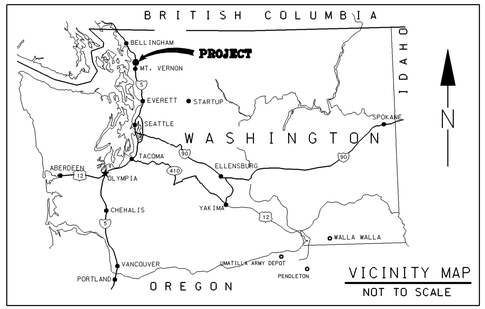
PLAN VIEW

NOT TO SCALE



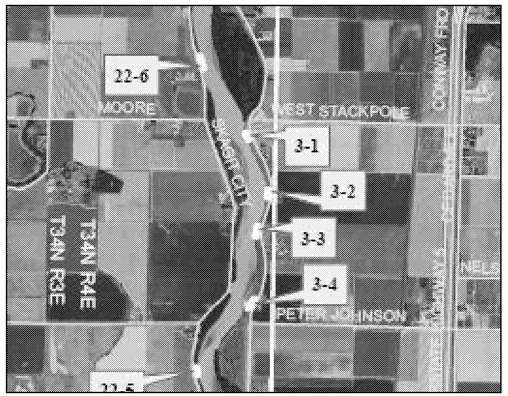
CROSS SECTION A

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	764 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 7.8 ON THE SOUTH FORK, SECTION 1, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Prepared by:
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

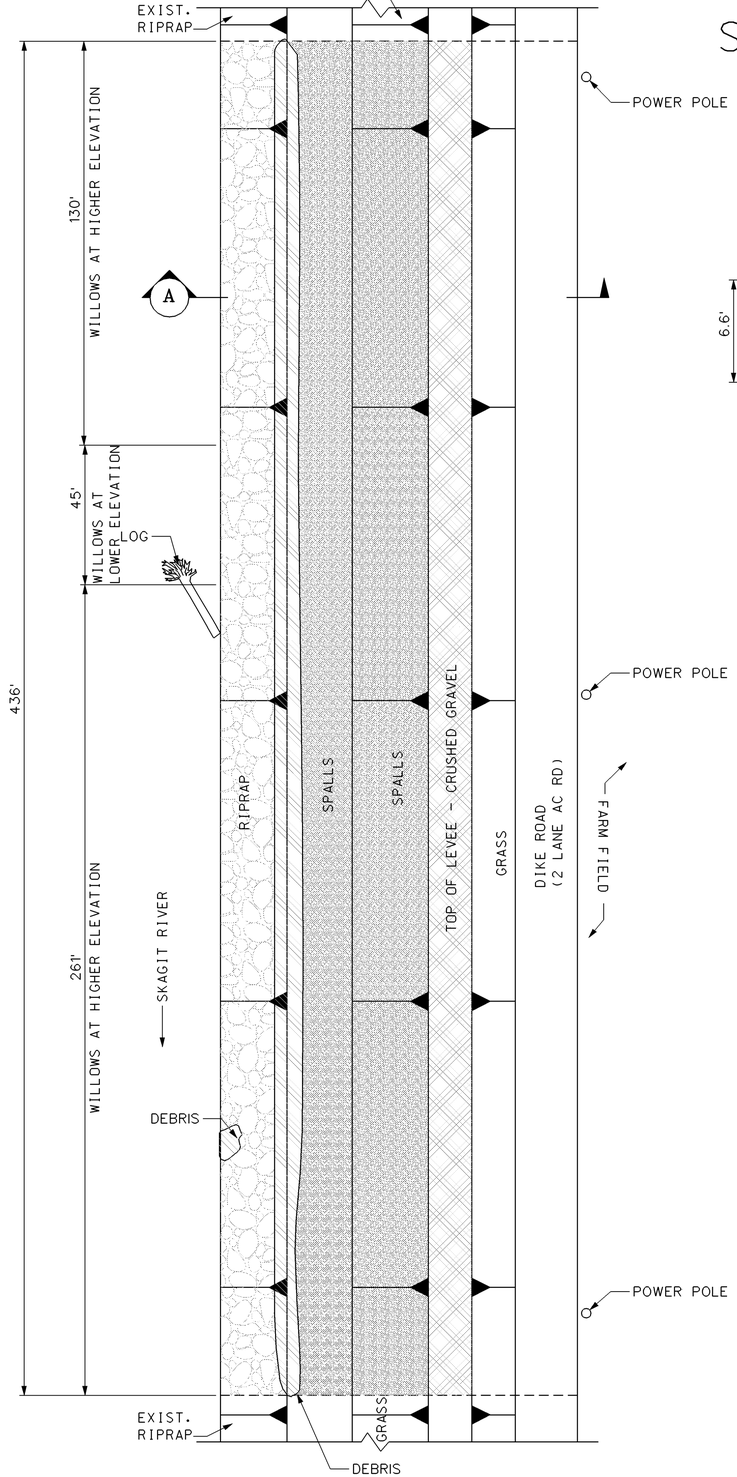
2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-1)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 18 of 32

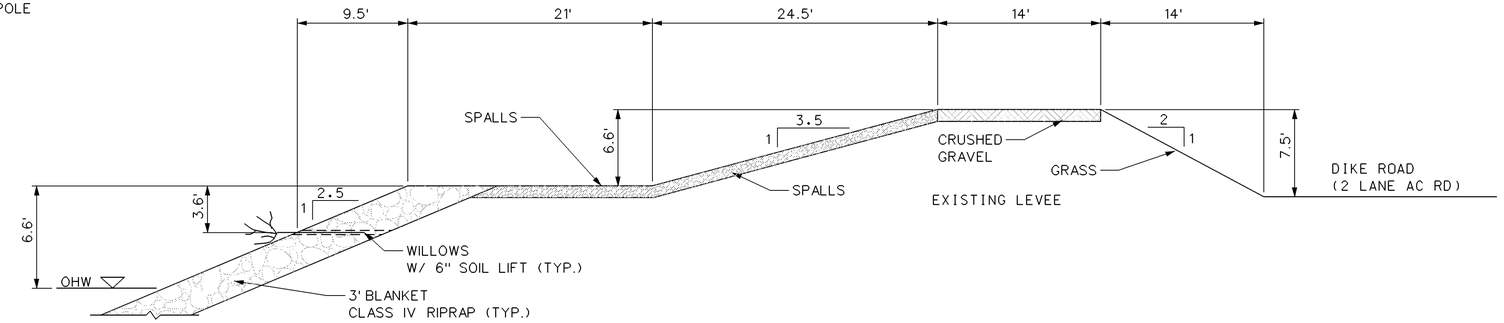
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-1).DGN
DATE AND TIME PLOTTED: 19-DEC-2007 12:05

SKA-3-07 (3-2) - SKAGIT LEVEE AS-BUILT



PLAN VIEW

NOT TO SCALE



CROSS SECTION (A)

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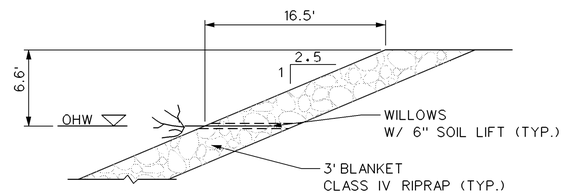
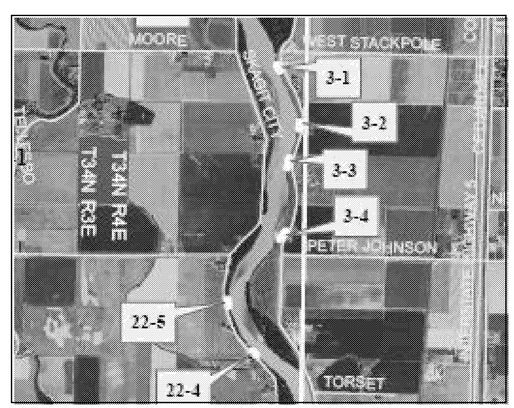


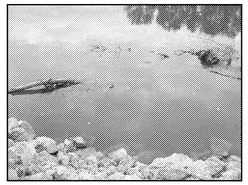
NOTE:
ONE WILLOW LIFT THROUGHOUT PROJECT LENGTH.
WILLOW LIFT ELEVATION CHANGES PARTWAY THROUGH THE PROJECT. THIS DETAIL DEPICTS THE WILLOWS AT THE LOWER ELEVATION.

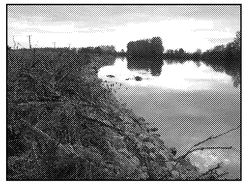
VICINITY MAP

NOT TO SCALE



VICINITY MAPS





PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	872 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTE:
1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 7.8 ON THE SOUTH FORK, SECTION 7, T33N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Prepared by:

Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST

Date: 31 OCT 2007
File: E-6-6-386
Rev.

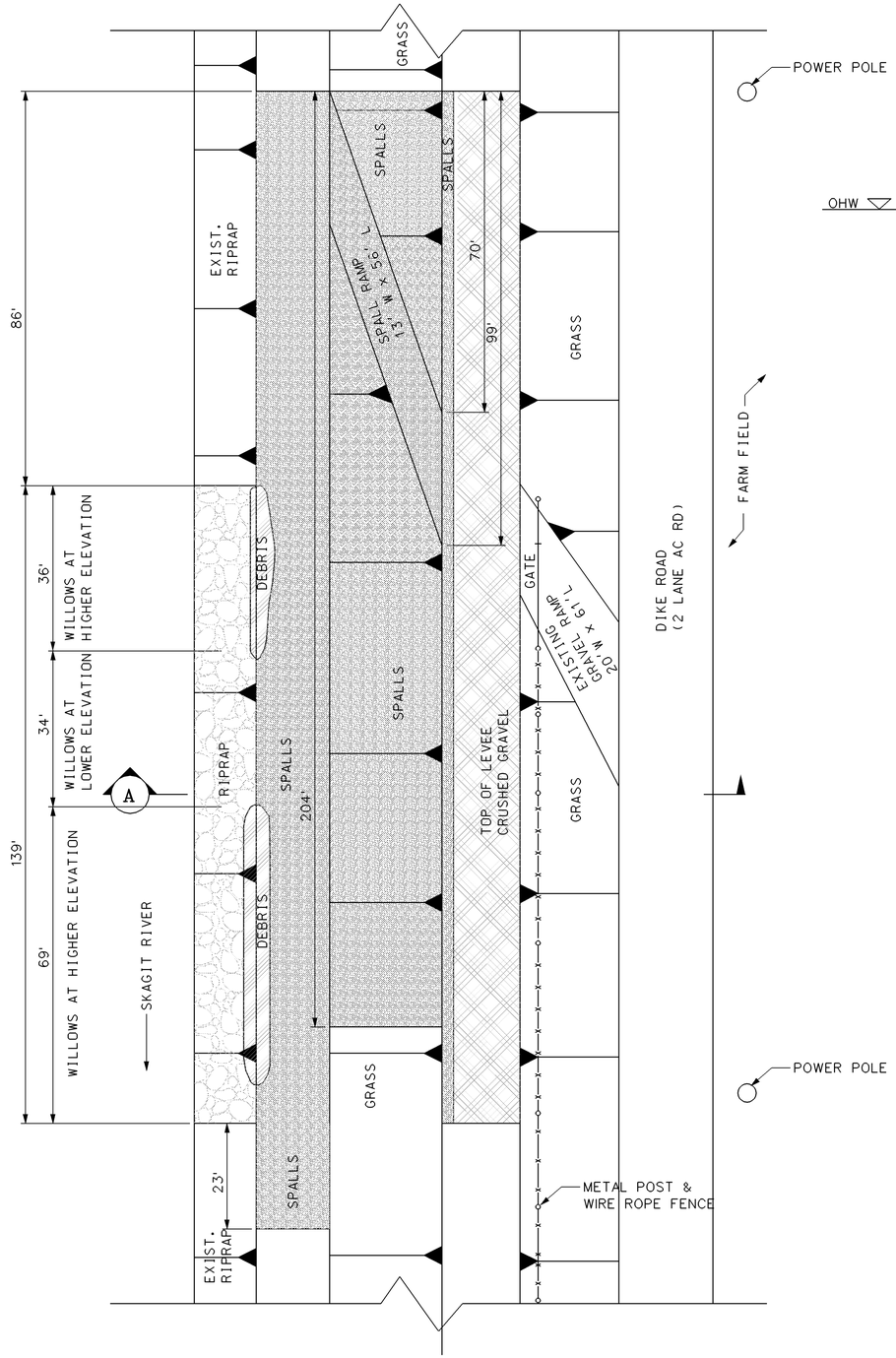
2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-2)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 19 of 32

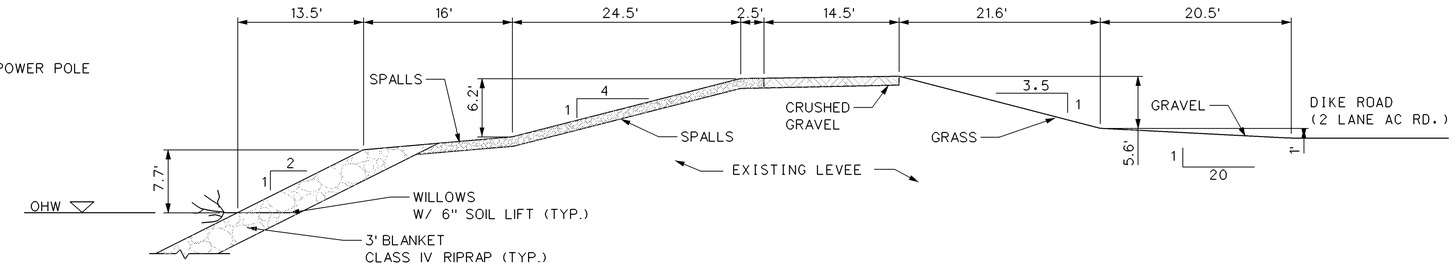
DATE AND TIME PLOTTED: 19-DEC-2007 12:08
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-2).DGN

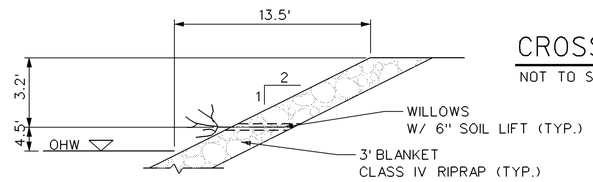
SKA-3-07 (3-3) - SKAGIT LEVEE AS-BUILT



PLAN VIEW

NOT TO SCALE





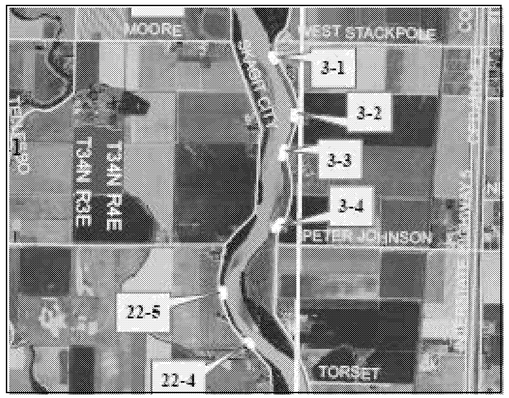
CROSS SECTION (A)

NOT TO SCALE

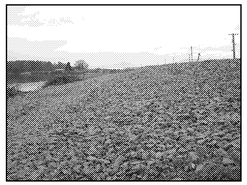
NOTE:
ONE WILLOW LIFT THROUGHOUT PROJECT LENGTH. WILLOW LIFT ELEVATION CHANGES PARTWAY THROUGH THE PROJECT. THIS DETAIL DEPICTS THE WILLOWS AT THE HIGHER ELEVATION.

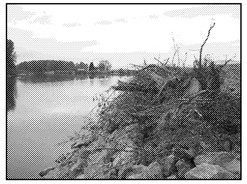
VICINITY MAP

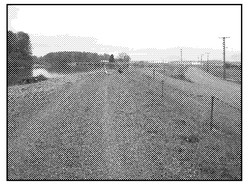
NOT TO SCALE



VICINITY MAPS







PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	278 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1) PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 7.8 ON THE SOUTH FORK, SECTION 7, T33N, R4E, SKAGIT COUNTY, WASHINGTON

2) SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Date: 31 OCT 2007
File: E-6-386
Rev.

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

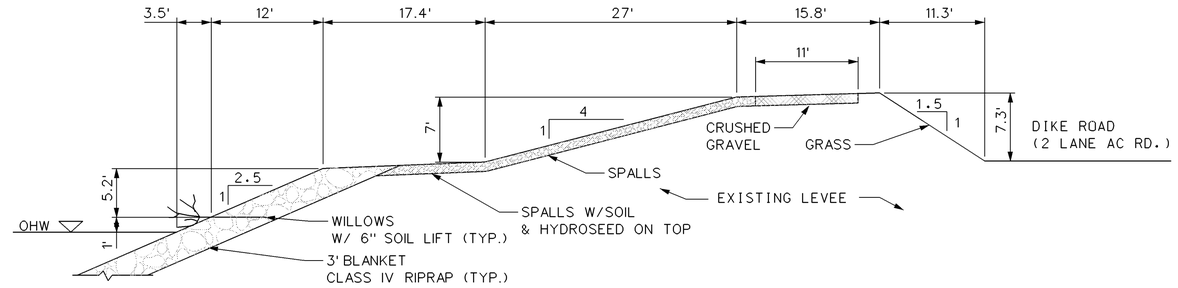
2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-3)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 20 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 12:10
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-3).DGN

SKA-3-07 (3-4) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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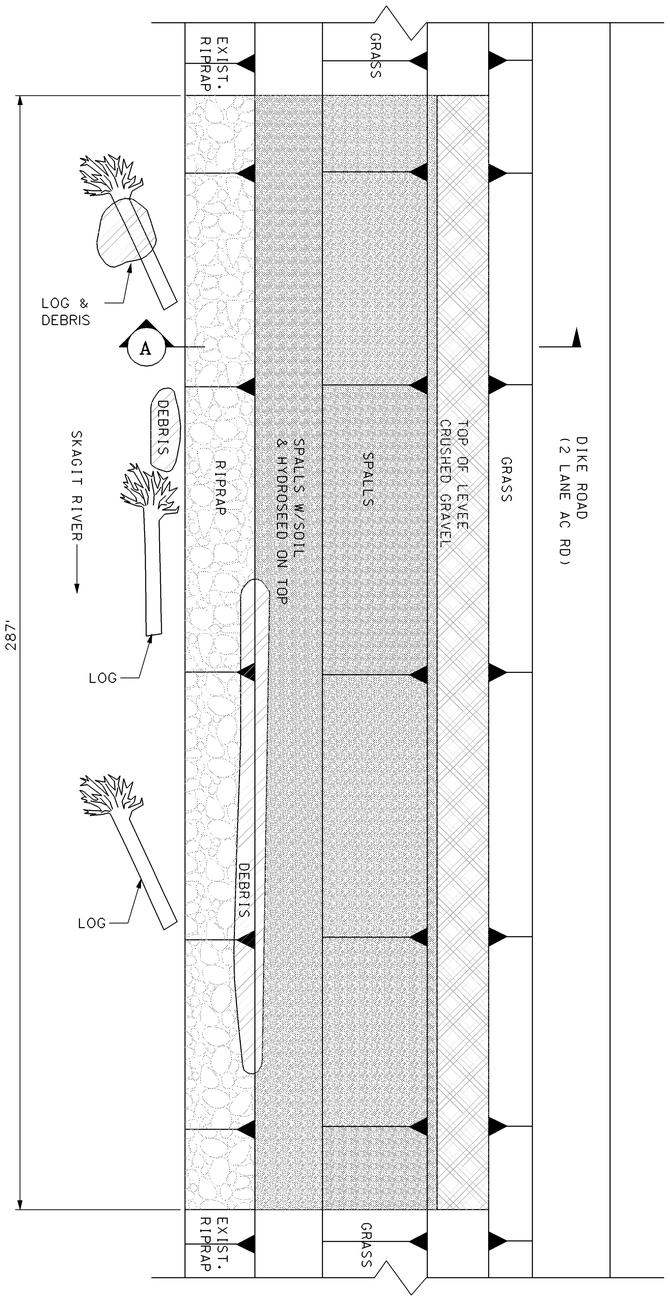
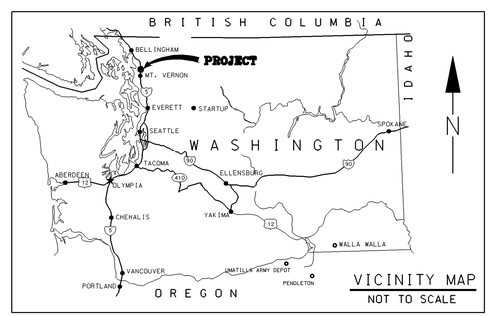


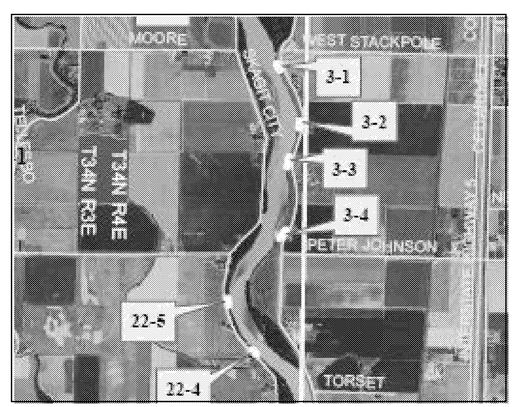
PLAN VIEW

NOT TO SCALE

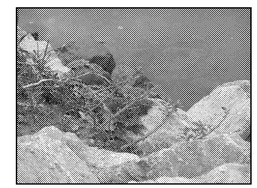


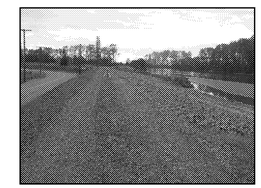
VICINITY MAP

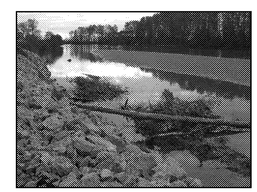
NOT TO SCALE

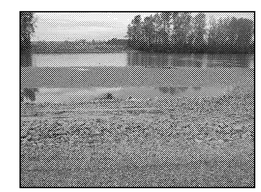


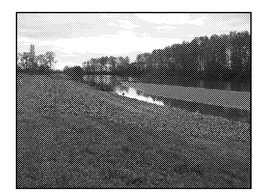
VICINITY MAPS

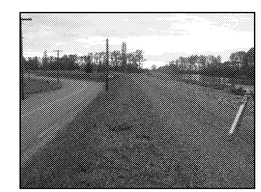












PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	574 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION AT APPROXIMATELY RIVER MILE 6.95, SECTION 7, N33N, R4E, SKAGIT COUNTY, WASHINGTON

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Prepared by:

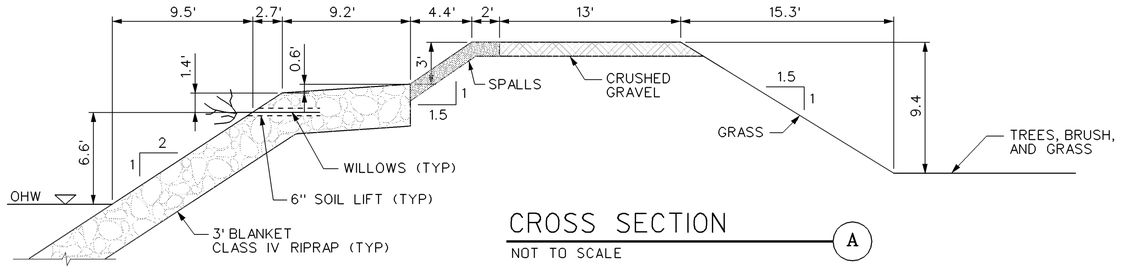
Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-4)
SKAGIT LEVEE AS-BUILT

Plate number:

DATE AND TIME PLOTTED: 19-DEC-2007 12:14
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-4).DGN

SKA-3-07 (3-5) - SKAGIT LEVEE AS-BUILT



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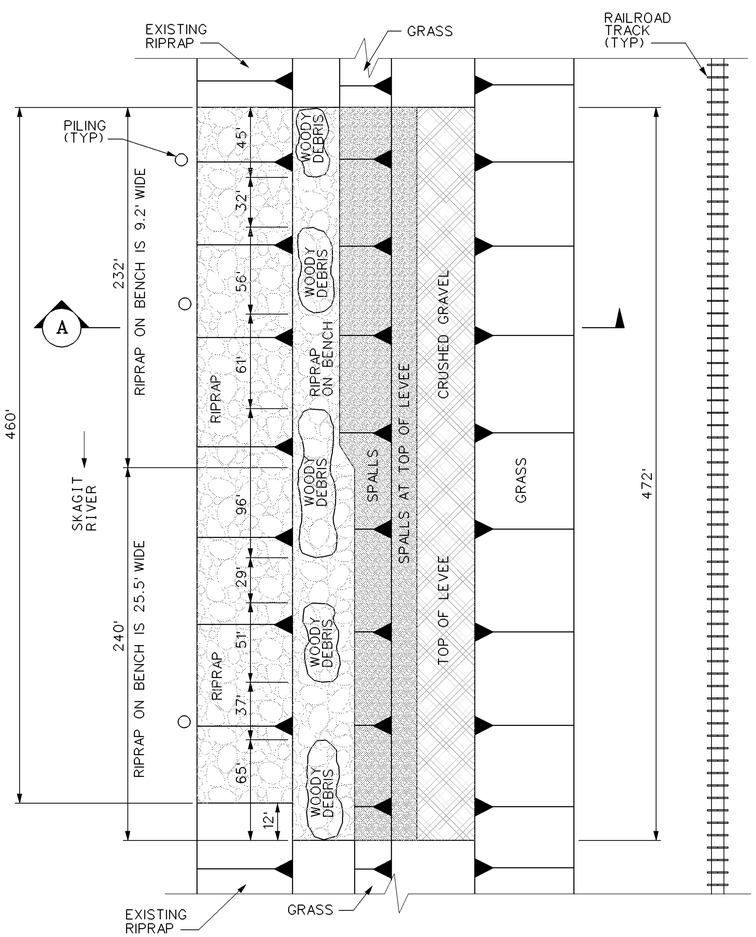

PLAN VIEW

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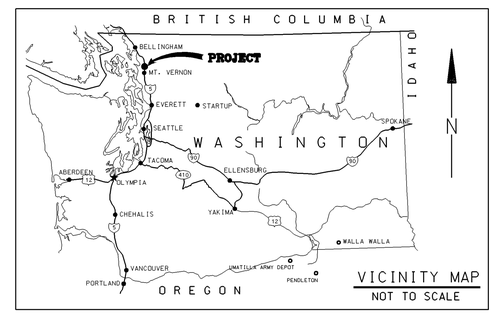
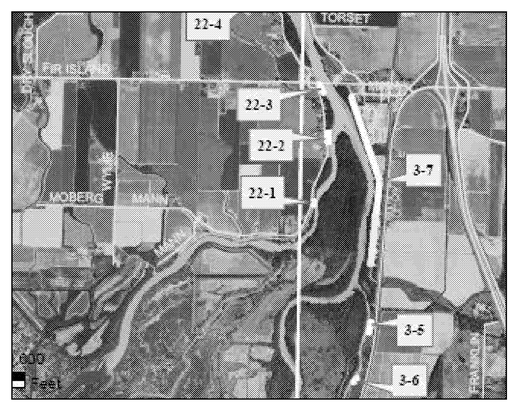
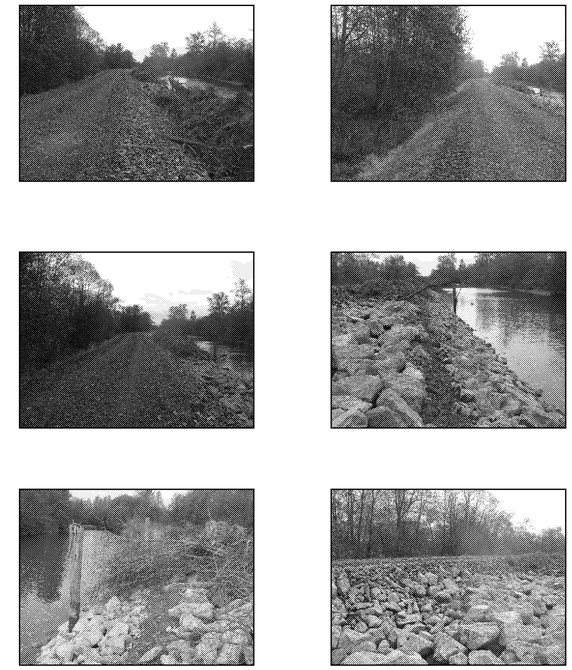




VICINITY MAPS



PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	920 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 4.65, SECTION 30, T33N, R4E, SKAGIT COUNTY, WASHINGTON.
2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAMSER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

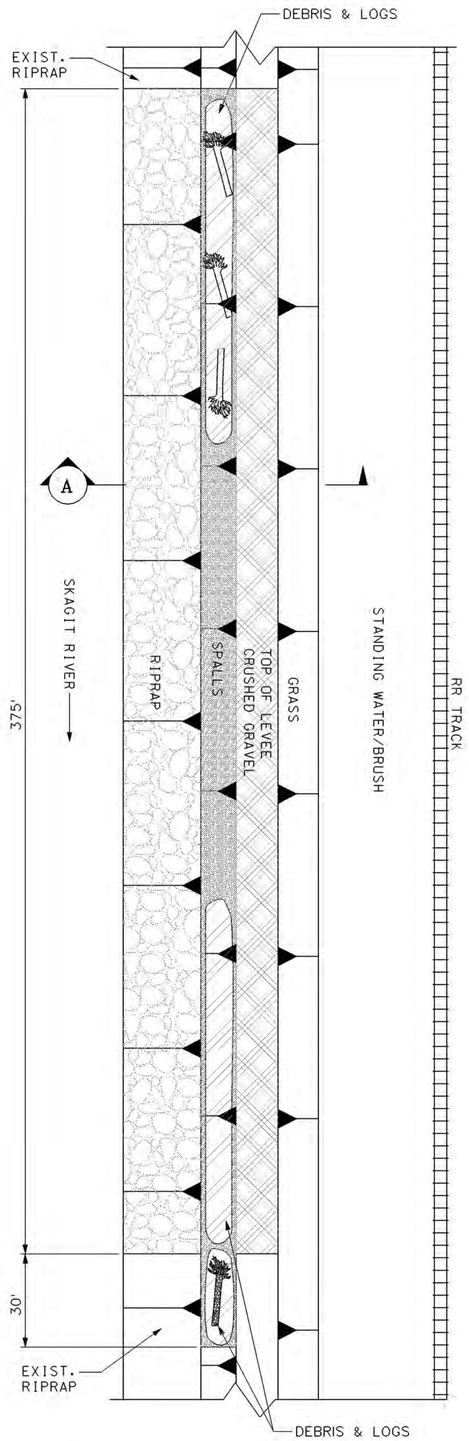
2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-5)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 22 of 32

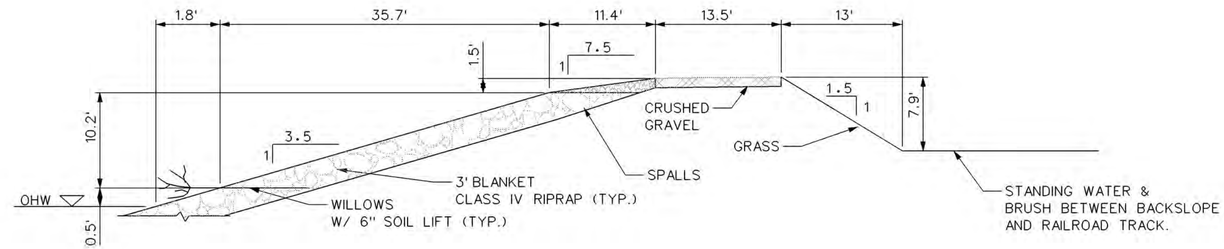
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-5).DGN
DATE AND TIME PLOTTED: 21-DEC-2007 08:32

SKA-3-07 (3-6) - SKAGIT LEVEE AS-BUILT



PLAN VIEW

NOT TO SCALE



CROSS SECTION

NOT TO SCALE

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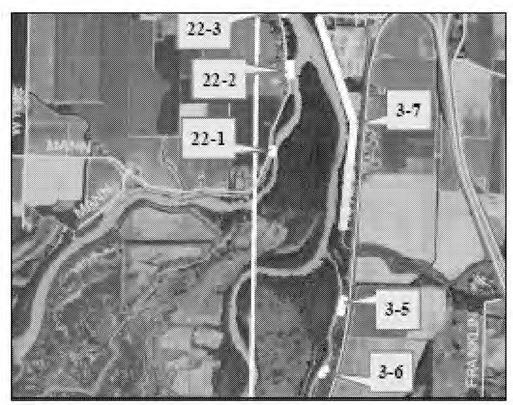
VICINITY MAP

NOT TO SCALE



VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	750 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 4.65, SECTION 30, T33N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXOMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-389
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

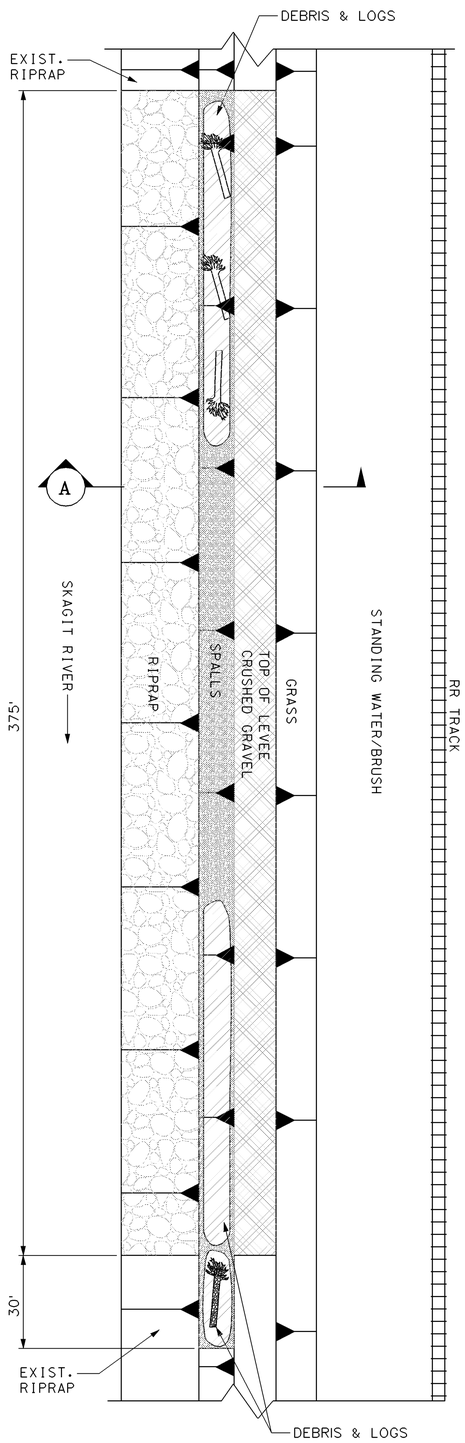
2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-6)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 23 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 12:17
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-6).DGN

SKA-3-07 (3-6) - SKAGIT LEVEE AS-BUILT



PLAN VIEW

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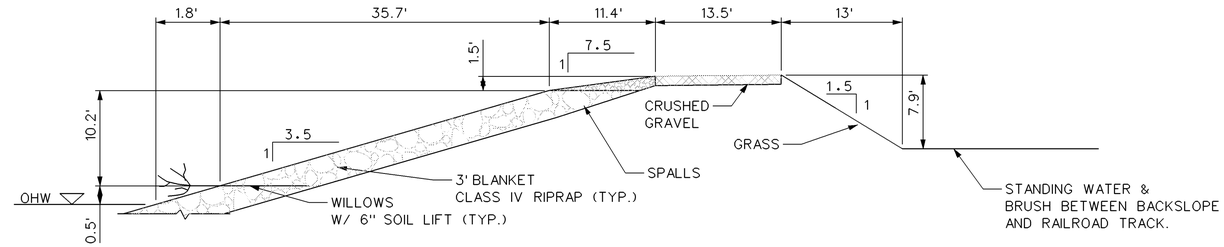

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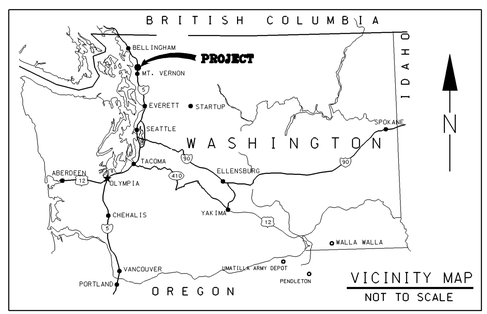

VICINITY MAP

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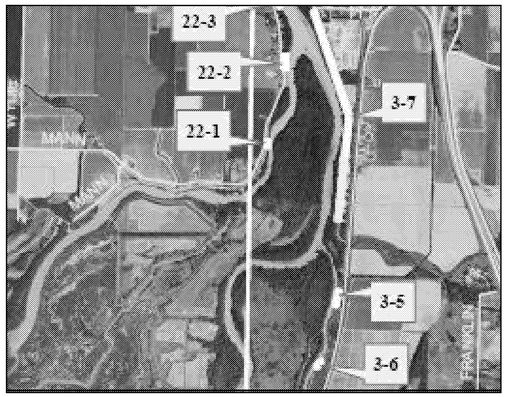
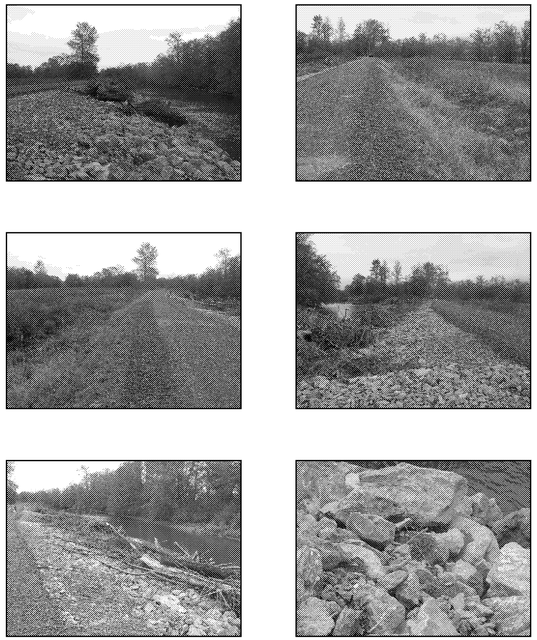


VICINITY MAPS



PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	750 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 4.65, SECTION 30, T33N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXOMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
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Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-3
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

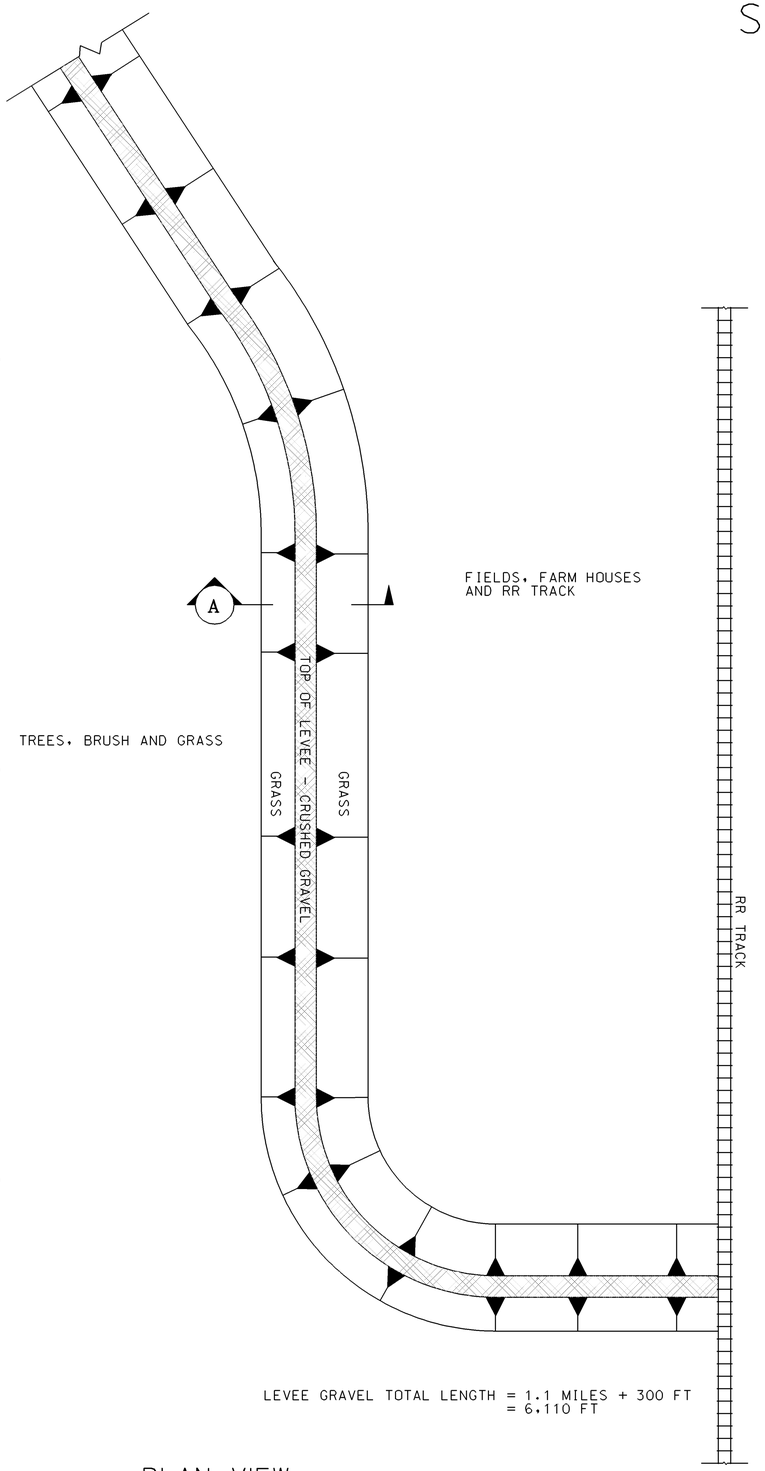
2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-6)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 23 of 32

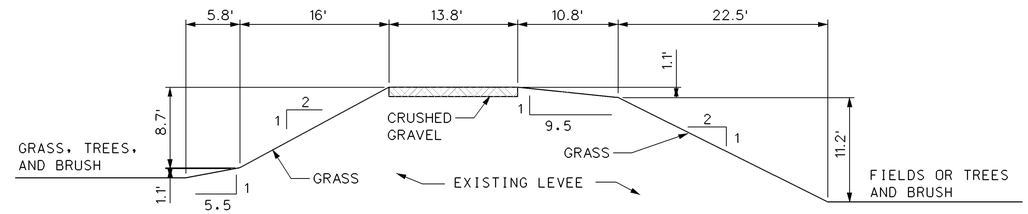
DATE AND TIME PLOTTED: 19-DEC-2007 12:17
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-6).DGN

SKA-3-07 (3-7) - SKAGIT LEVEE AS-BUILT



PLAN VIEW

NOT TO SCALE



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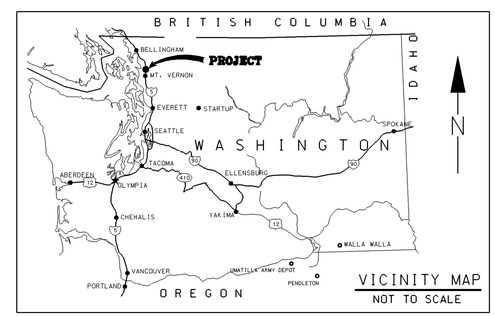

VICINITY MAP

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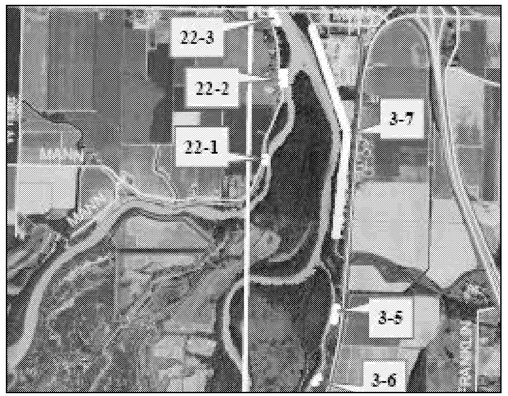


VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	0 TONS
SPALLS	0 TONS
1¼" MINUS CRUSHED GRAVEL	3,000 TONS
WILLOW CUTTING	0 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 4.65, SECTION 19, T33N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.

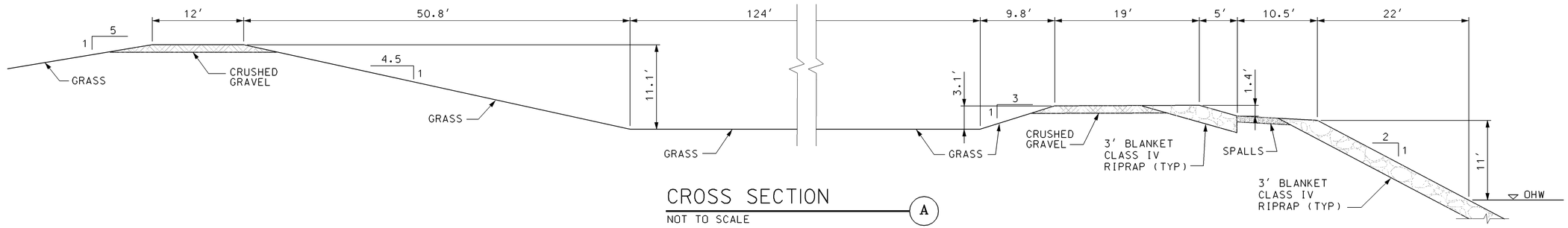
U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 LEVEE REHAB AS-BUILTS
SKA-3-07 (3-7)
SKAGIT LEVEE AS-BUILT

Plate number:

DATE AND TIME PLOTTED: 19-DEC-2007 12:19
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 3\SKA-3-07 (3-7).DGN

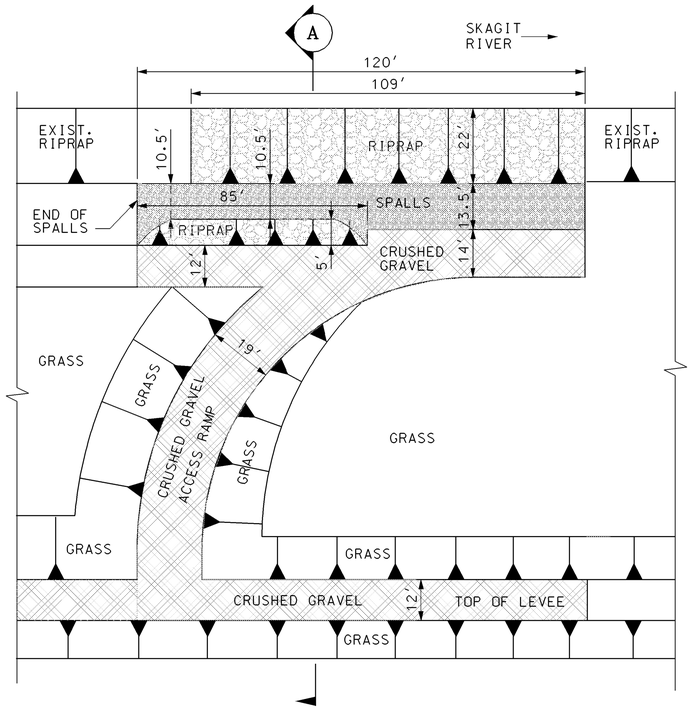
SKA-4-07 (12-1) - SKAGIT LEVEE AS-BUILT



CROSS SECTION

NOT TO SCALE

A



PLAN VIEW

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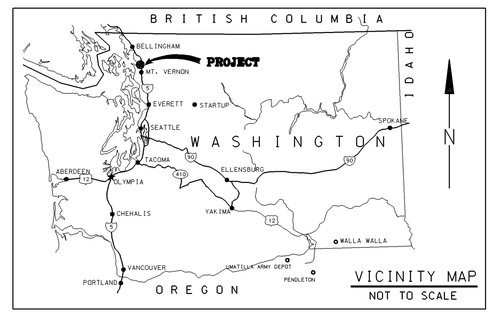


VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	400 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 20.6, SECTION 33, T35N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

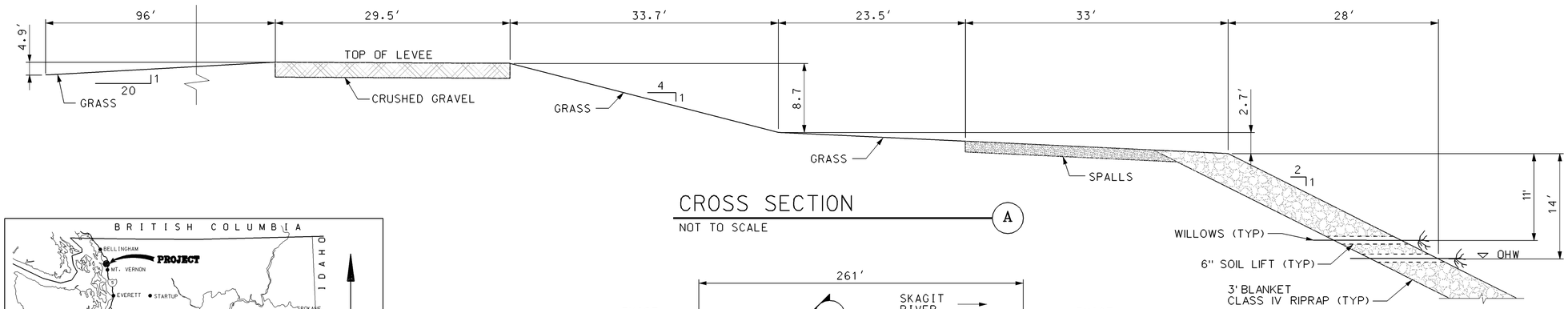
2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-1)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 1 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 12:24
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-1).DGN

SKA-4-07 (12-2) - SKAGIT LEVEE AS-BUILT



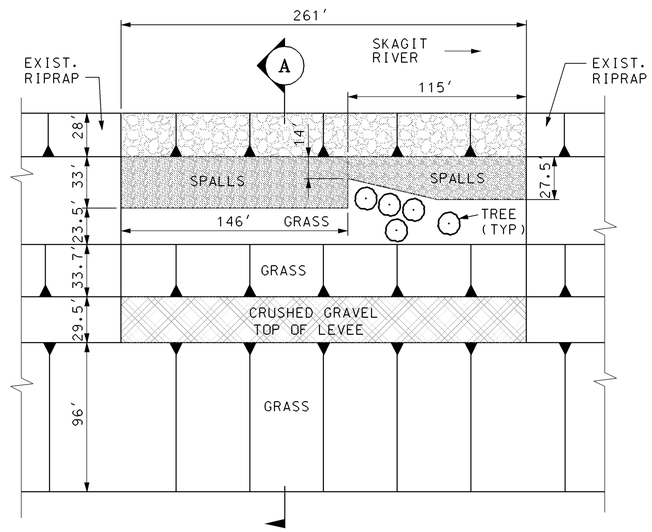
CROSS SECTION

NOT TO SCALE

A

VICINITY MAP

NOT TO SCALE



PLAN VIEW

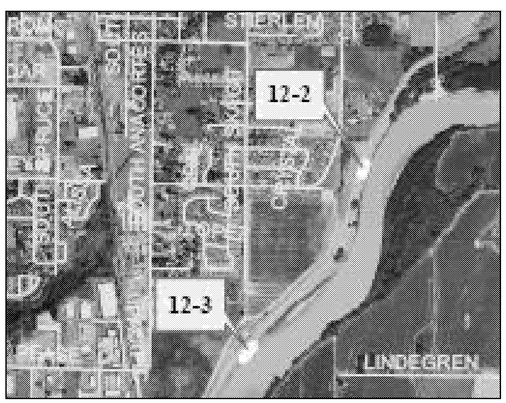
NOT TO SCALE

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	1,044 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

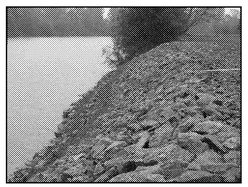
NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 19.1, SECTION 4, T34N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.



VICINITY MAPS



PHOTOS

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

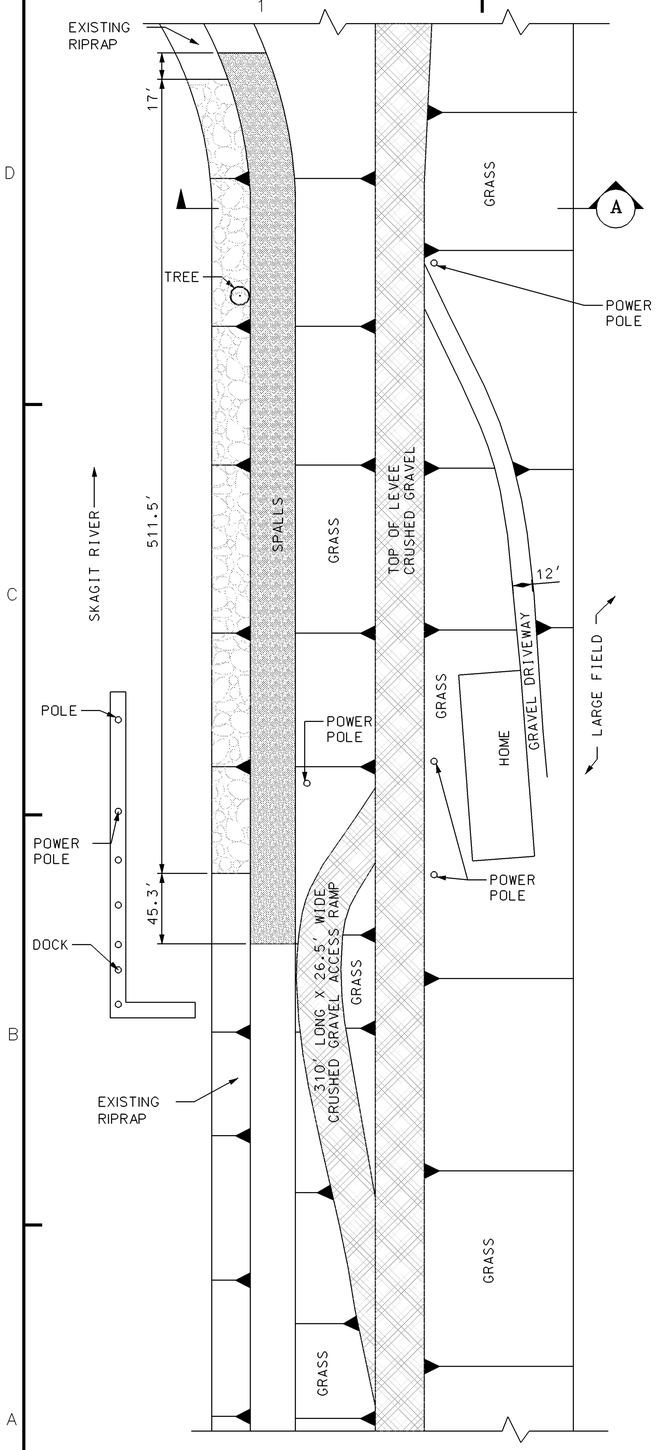
2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-2)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 2 of 32

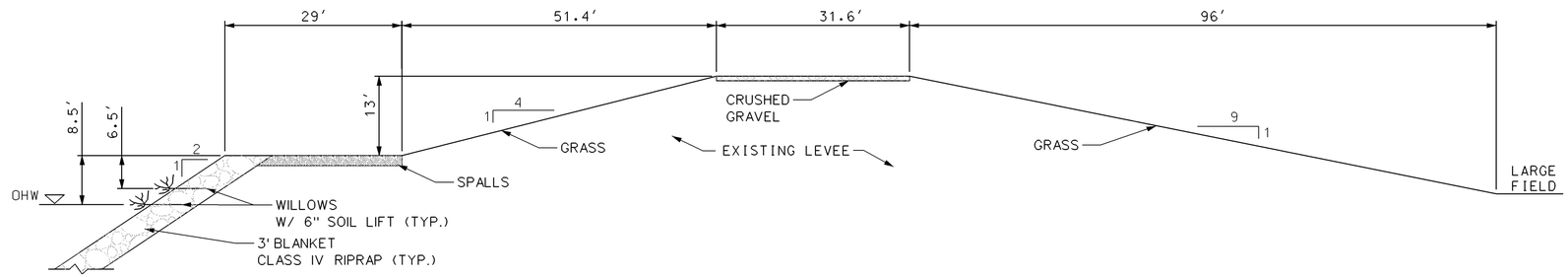
DATE AND TIME PLOTTED: 19-DEC-2007 12:29
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-2).DGN

SKA-4-07 (12-3) - SKAGIT LEVEE AS-BUILT



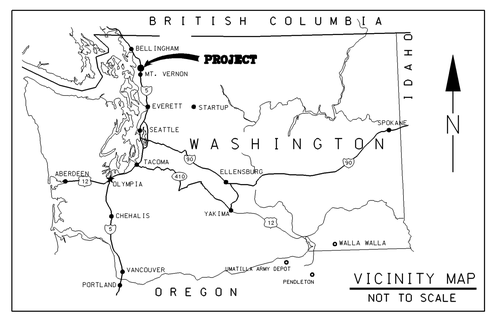
PLAN VIEW

NOT TO SCALE

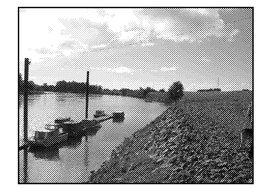


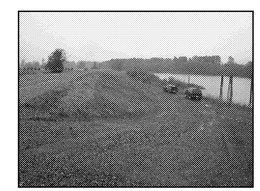
CROSS SECTION

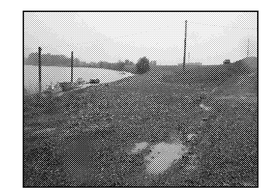
NOT TO SCALE



VICINITY MAPS







PHOTOS

QUANTITIES	
CLASS IV RIPRAP	3,500 TONS
SPALLS	1,200 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	2,046 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTE:
1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 18.7, SECTION 5, T34N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

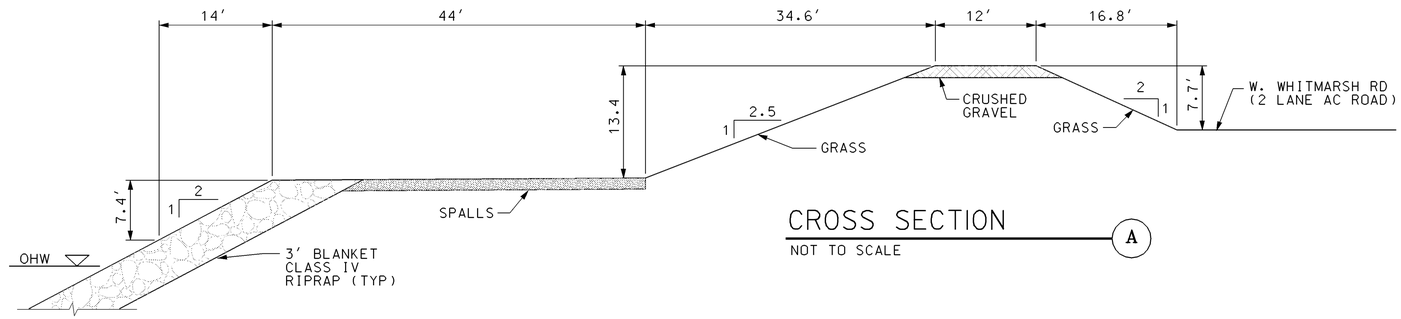
Designed by: KAISER
Drawn by: BARRETT
Checked by: WEST
Prepared by:
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-3)
SKAGIT LEVEE AS-BUILT

Plate number:

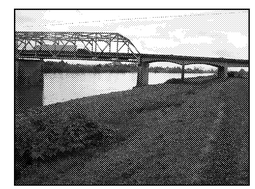
DATE AND TIME PLOTTED: 20-DEC-2007 13:22 DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-3).DGN

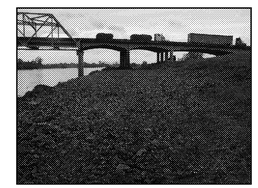
SKA-4-07 (12-5) - SKAGIT LEVEE AS-BUILT

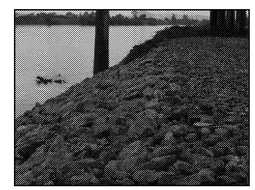


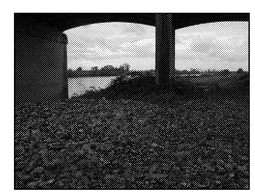
CROSS SECTION (A)

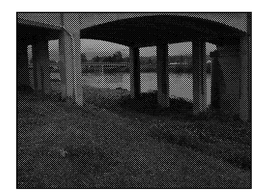
NOT TO SCALE

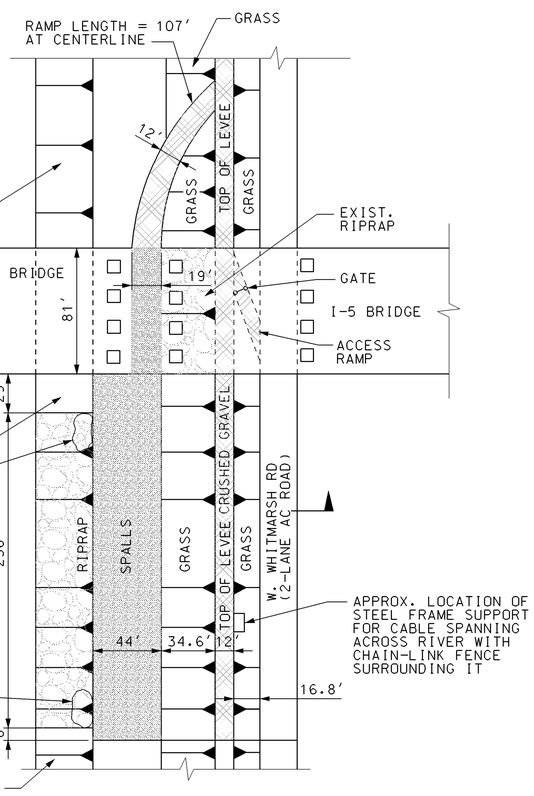






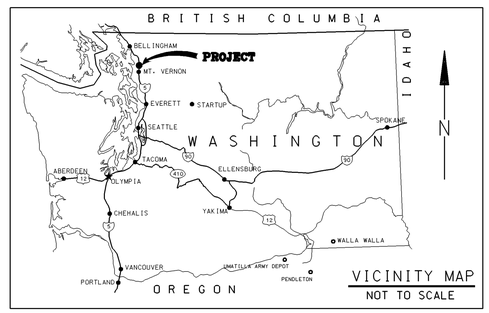


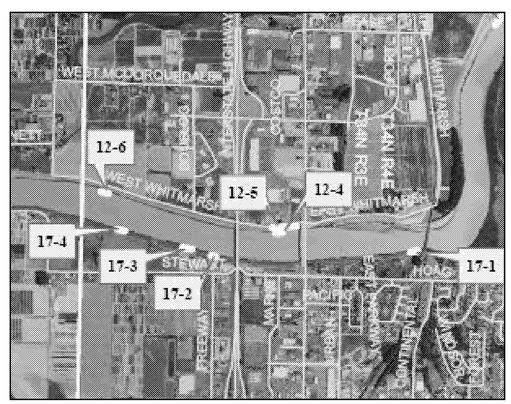




PLAN VIEW

NOT TO SCALE





VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 16.9, SECTION 7, T34N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

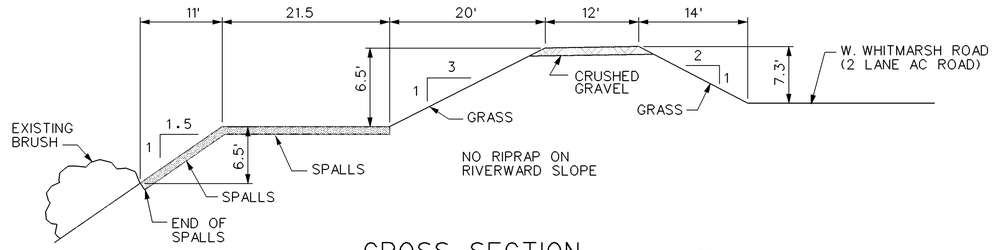
2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-5)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 4 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 12:36 DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-5).DGN

SKA-4-07 (12-6) - SKAGIT LEVEE AS-BUILT



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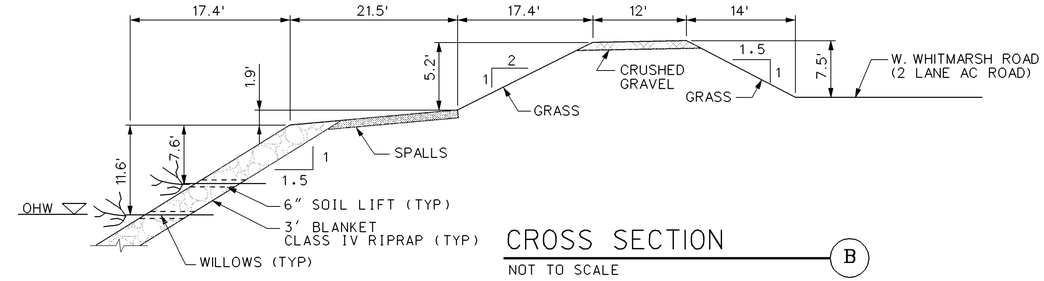

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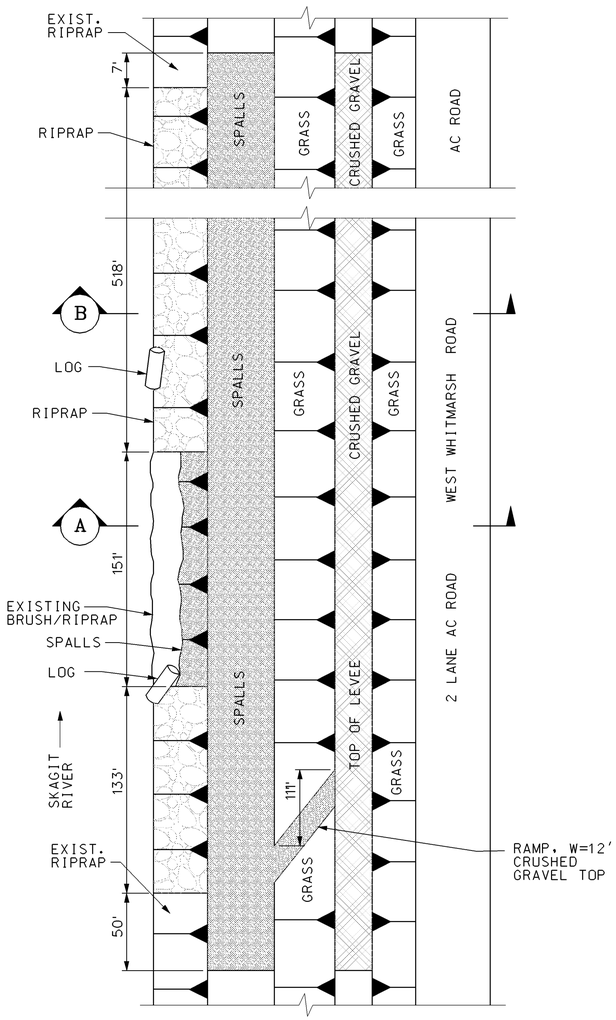
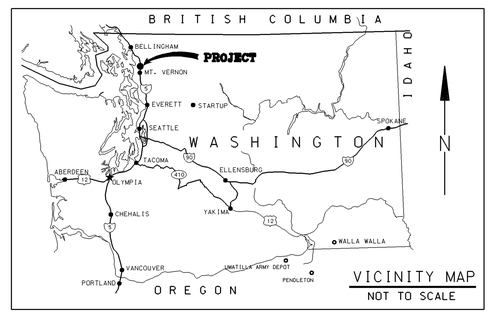
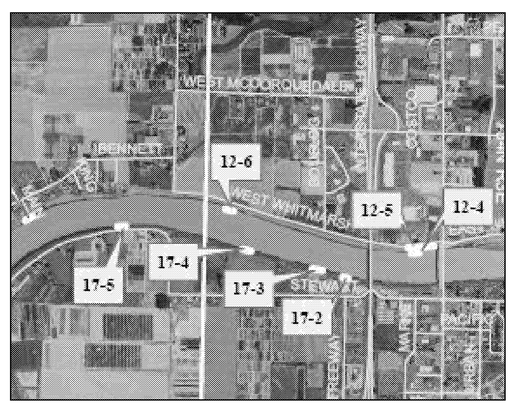
NOT TO SCALE



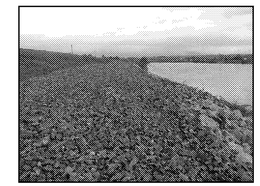
PLAN VIEW
NOT TO SCALE

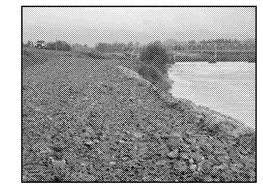


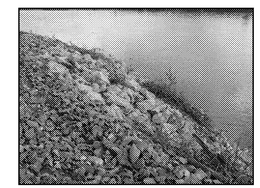
VICINITY MAP
NOT TO SCALE

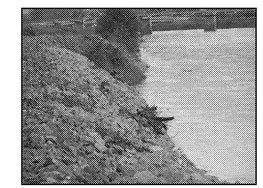


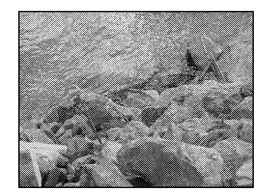
VICINITY MAPS

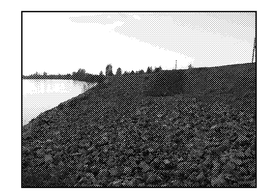












PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	1,200 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	2,604 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 16.1, SECTION 7, T34N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

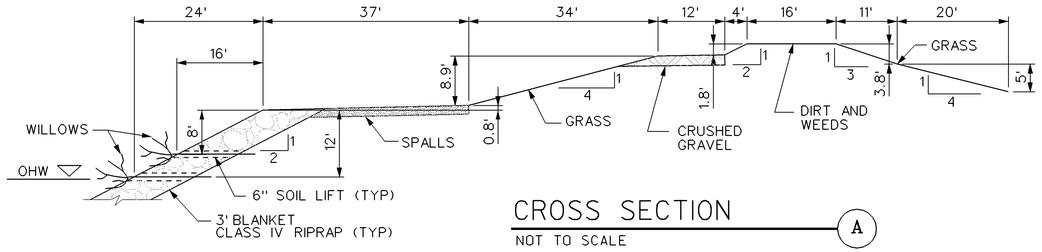
2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-6)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 5 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-6).DGN
DATE AND TIME PLOTTED: 19-DEC-2007 12:37

SKA-4-07 (12-7) - SKAGIT LEVEE AS-BUILT



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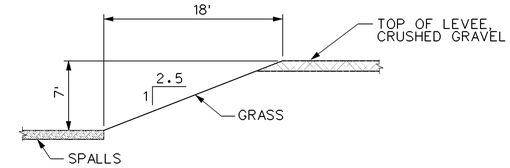

CROSS SECTION (B)

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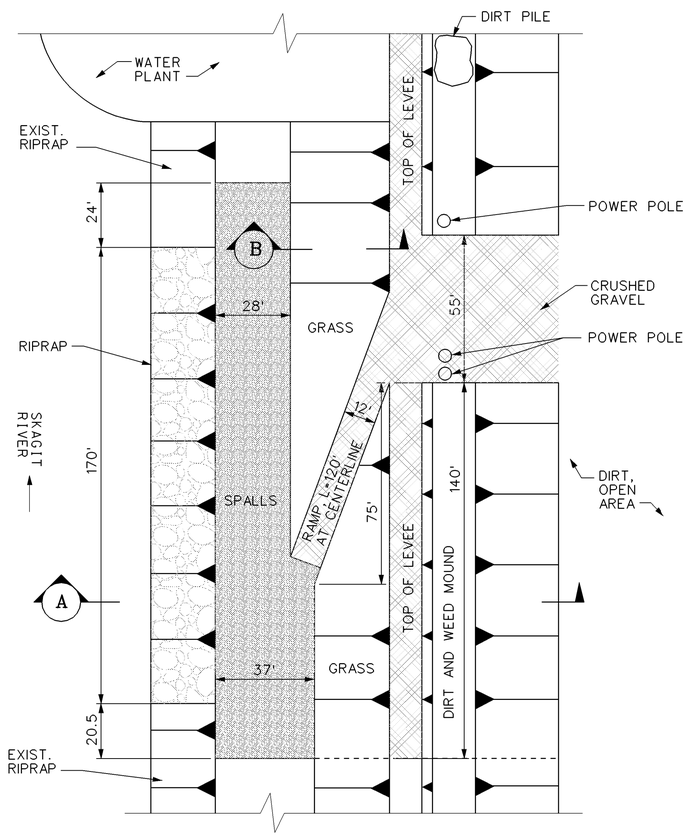
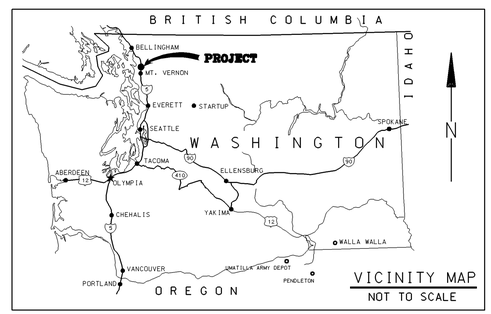


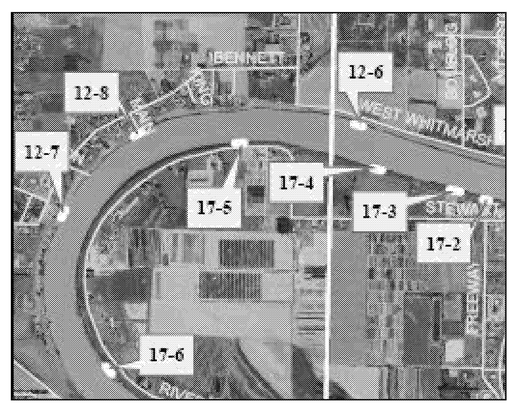
PLAN VIEW

NOT TO SCALE

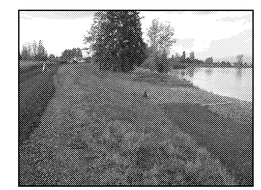


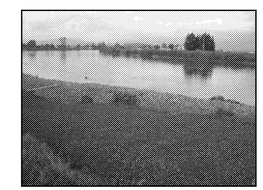
VICINITY MAP

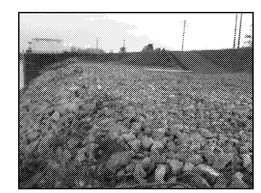
NOT TO SCALE

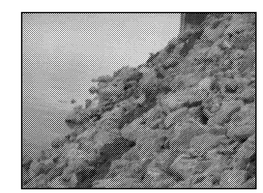


VICINITY MAPS









PHOTOS

QUANTITIES	
CLASS IV RIPRAP	3,000 TONS
SPALLS	1,200 TONS
1¼" MINUS CRUSHED GRAVEL	500 TONS
WILLOW CUTTING	680 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 14.9, SECTION 12, T34N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-7)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 6 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-7).DGN

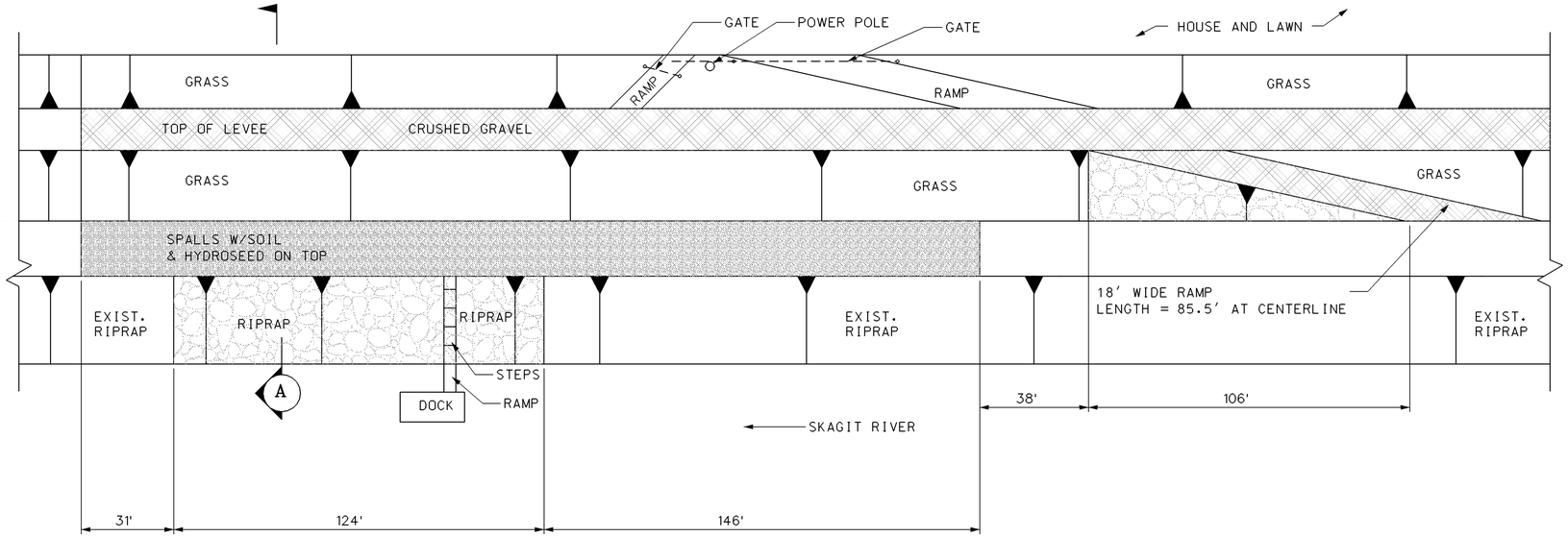
DATE AND TIME PLOTTED: 19-DEC-2007 12:42

SKA-4-07 (12-8) - SKAGIT LEVEE AS-BUILT

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	300 TONS
WILLOW CUTTING	496 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

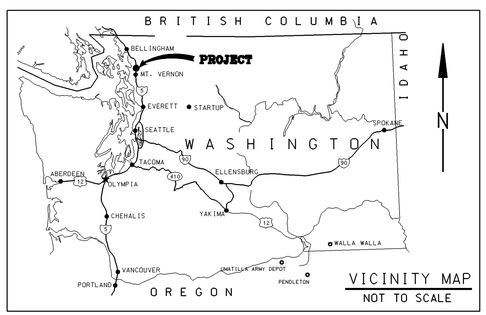
NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 15.3, SECTION 12, T34N, R3E, SKAGIT COUNTY, WASHINGTON
2. SLOPES ARE APPROXIMATE.



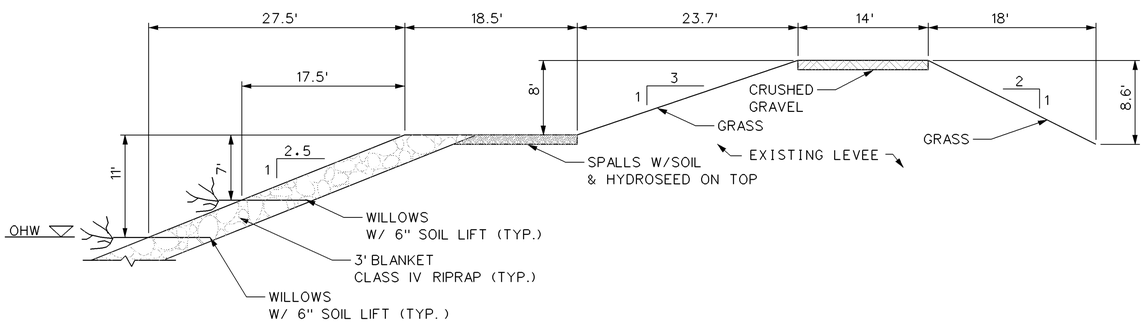
PLAN VIEW

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



CROSS SECTION (A)

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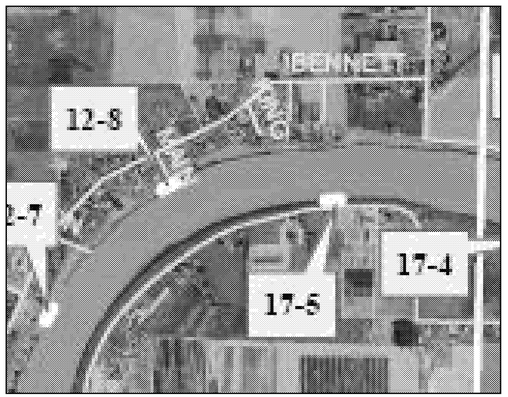
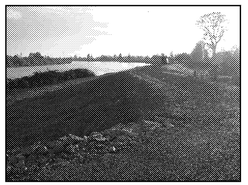
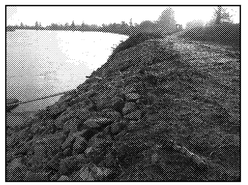
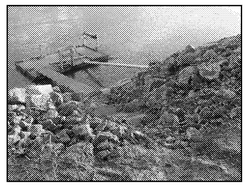
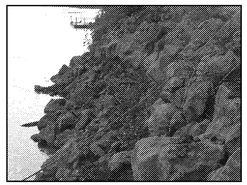


VICINITY MAPS

PHOTOS

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Designed by: K. KAISER
Drawn by: BARRETT
Checked by: WEST
Prepared by:
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

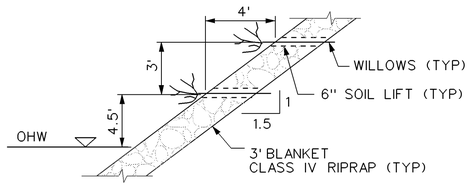
2007 LEVEE REHAB AS-BUILTS
SKA-4-07 (12-8)
SKAGIT LEVEE AS-BUILT

Plate number:

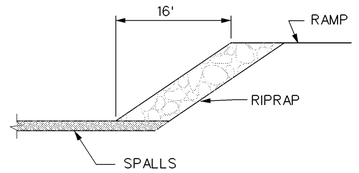
Sheet 7 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 12:51
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 12\SKA-4-07 (12-8).DGN

SKA-5-07 (17-1) - SKAGIT LEVEE AS-BUILT



NOTE:
TWO WILLOW LIFTS THROUGHOUT PROJECT LENGTH. WILLOW LIFT ELEVATION CHANGES PARTWAY THROUGH THE PROJECT. THIS DETAIL DEPICTS THE WILLOWS AT THE LOWER ELEVATION.



CROSS SECTION (B)

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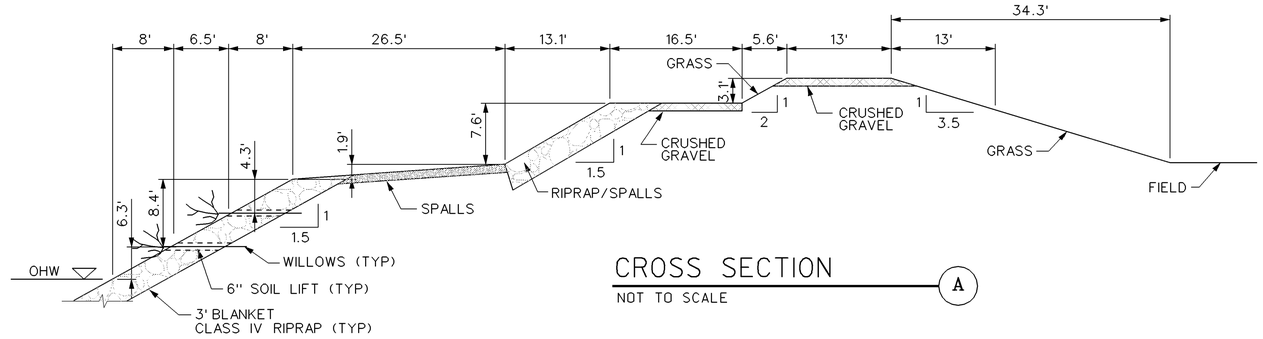

CROSS SECTION (A)

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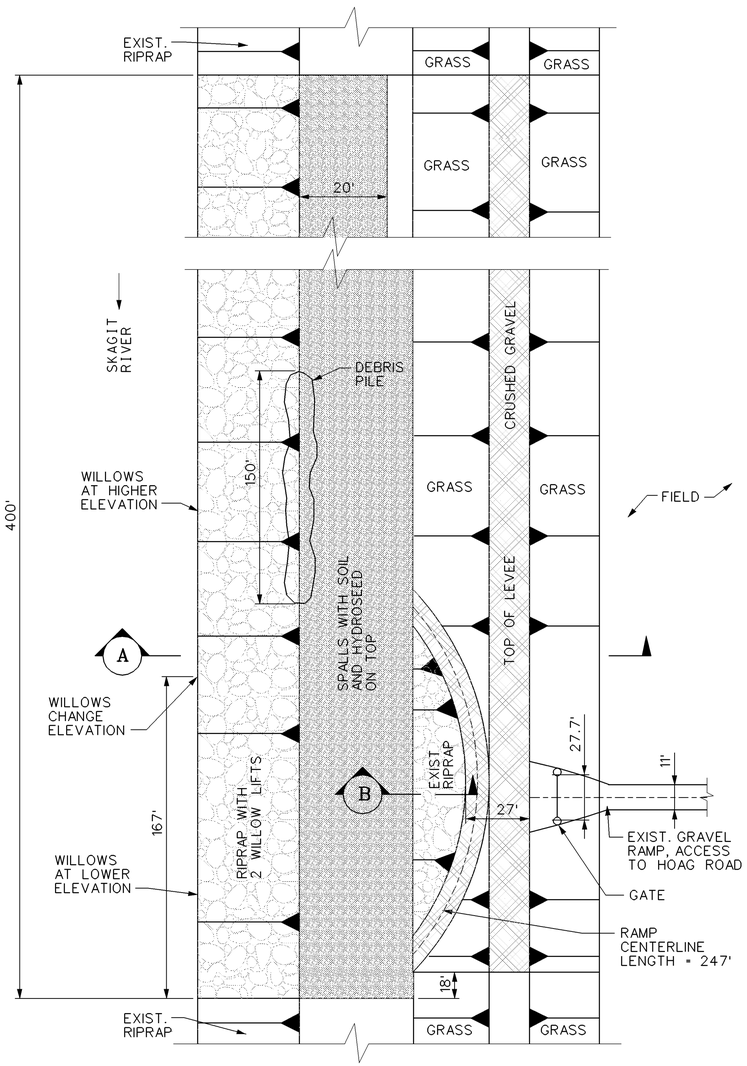
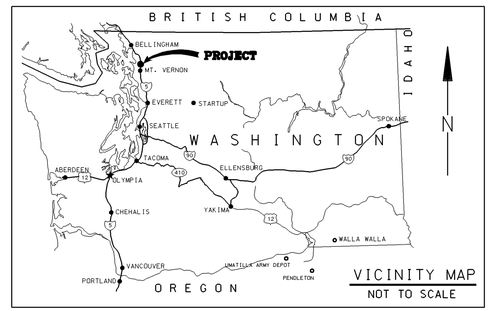


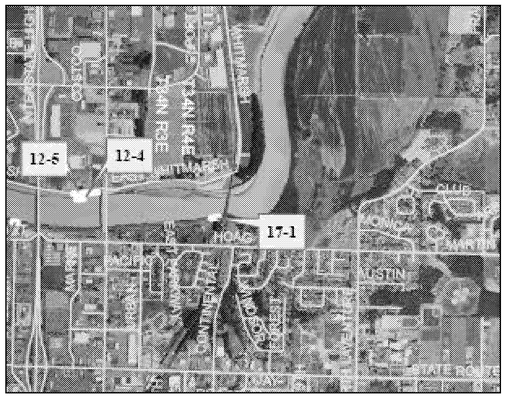
PLAN VIEW

NOT TO SCALE

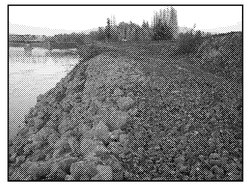


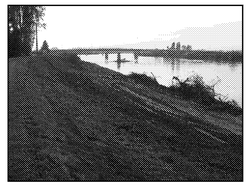
VICINITY MAP

NOT TO SCALE



VICINITY MAPS





PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	1,600 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 17.3, SECTION 8, T34N, R4E, SKAGIT COUNTY, WASHINGTON.
2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

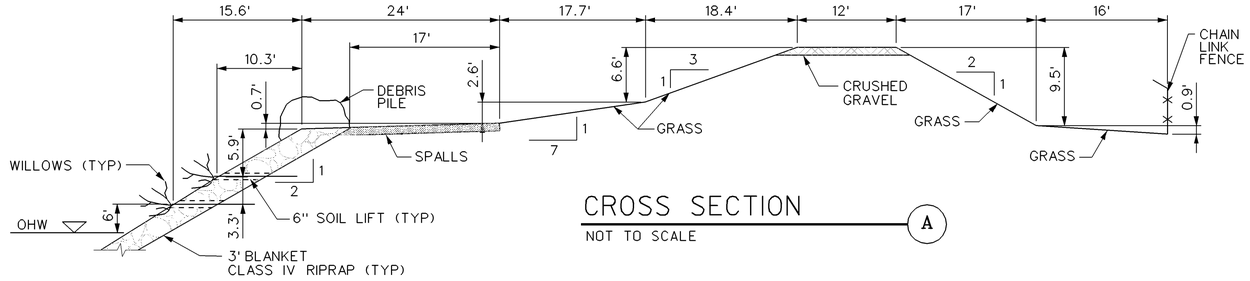
2007 LEVEE REHAB AS-BUILTS
SKA-5-07 (17-1)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 8 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 10:18
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 17\SKA-5-07 (17-1).DGN

SKA-5-07 (17-2) - SKAGIT LEVEE AS-BUILT



CROSS SECTION A

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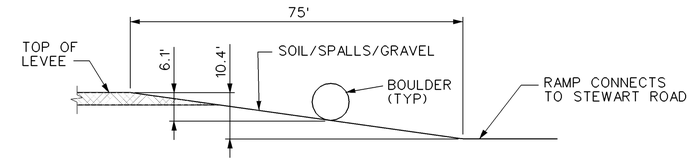

CROSS SECTION B

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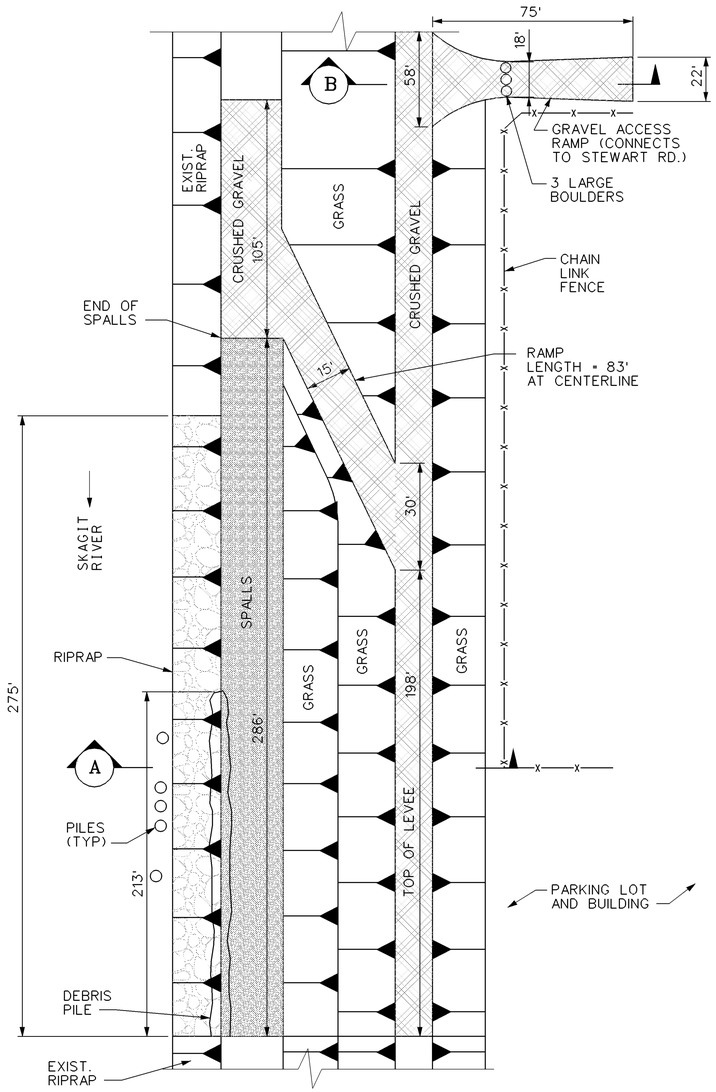
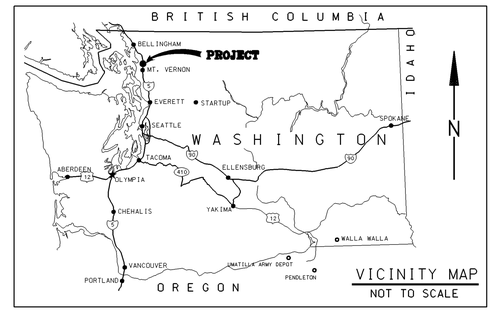


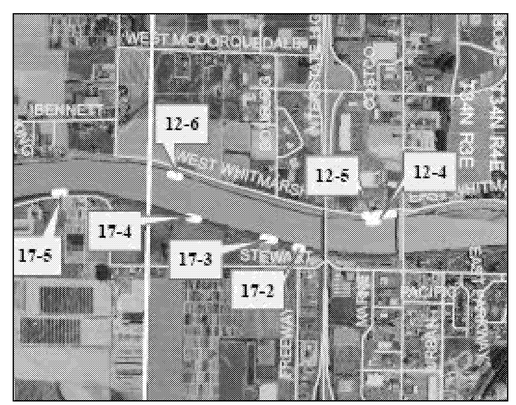
PLAN VIEW

NOT TO SCALE

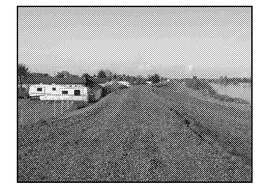


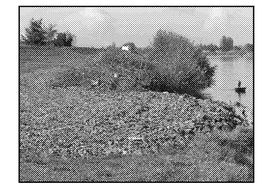
VICINITY MAP

NOT TO SCALE



VICINITY MAPS





PHOTOS

QUANTITIES	
CLASS IV RIPRAP	1,500 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	1,100 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 17.3, SECTION 8, T34N, R4E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

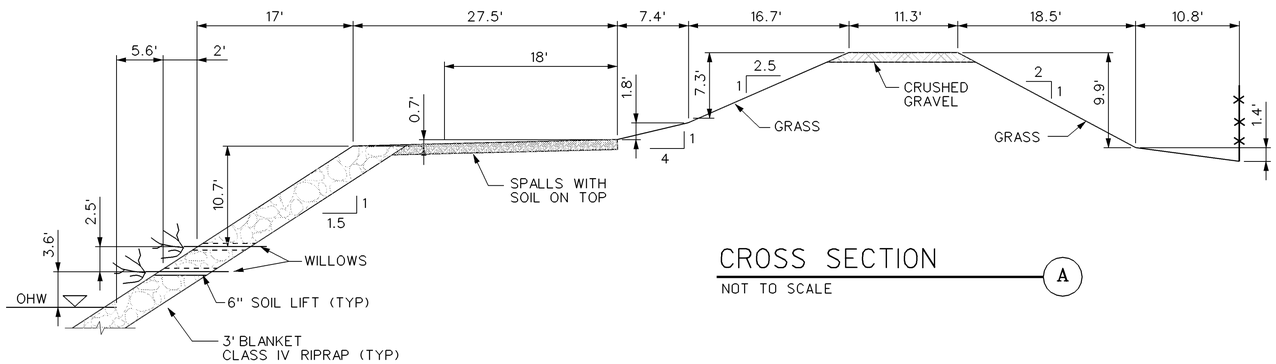
2007 LEVEE REHAB AS-BUILTS
SKA-5-07 (17-2)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 9 of 32

DATE AND TIME PLOTTED: 19-DEC-2007 10:23
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 17\SKA-5-07 (17-2).DGN

SKA-5-07 (17-3) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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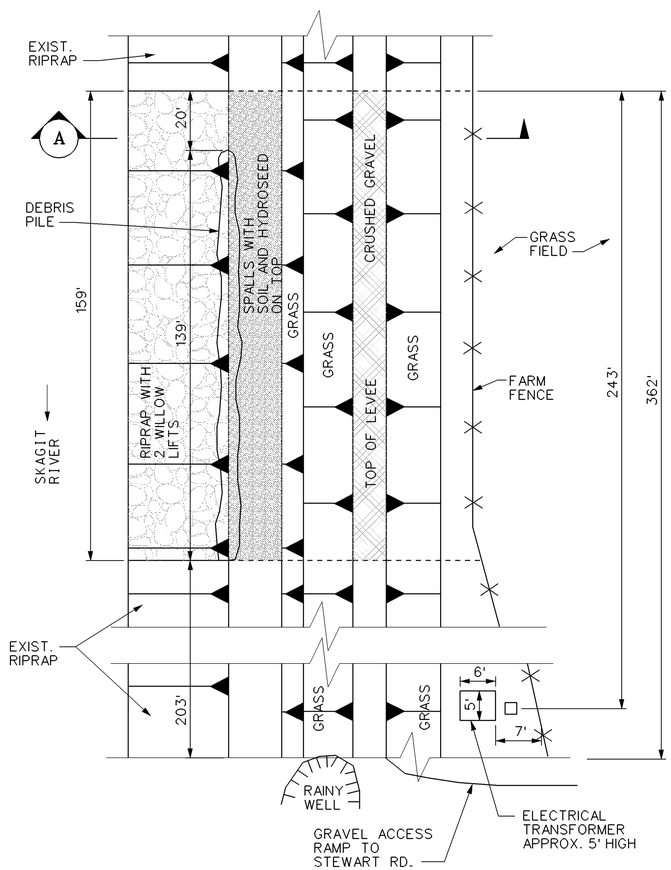
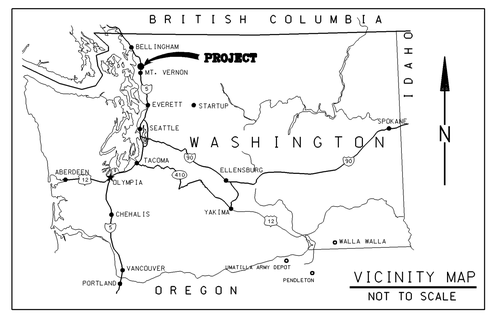


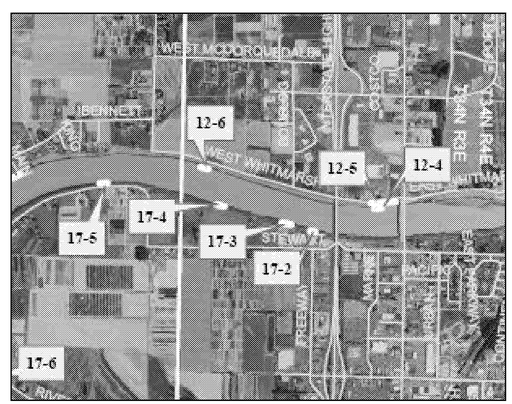
PLAN VIEW

NOT TO SCALE

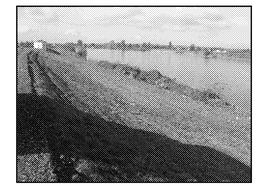


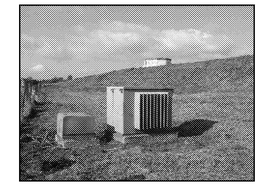
VICINITY MAP

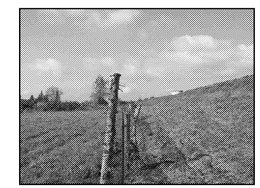
NOT TO SCALE



VICINITY MAPS







PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	636 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 16.7, SECTION 7, T34N, R4E, SKAGIT COUNTY, WASHINGTON.
2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

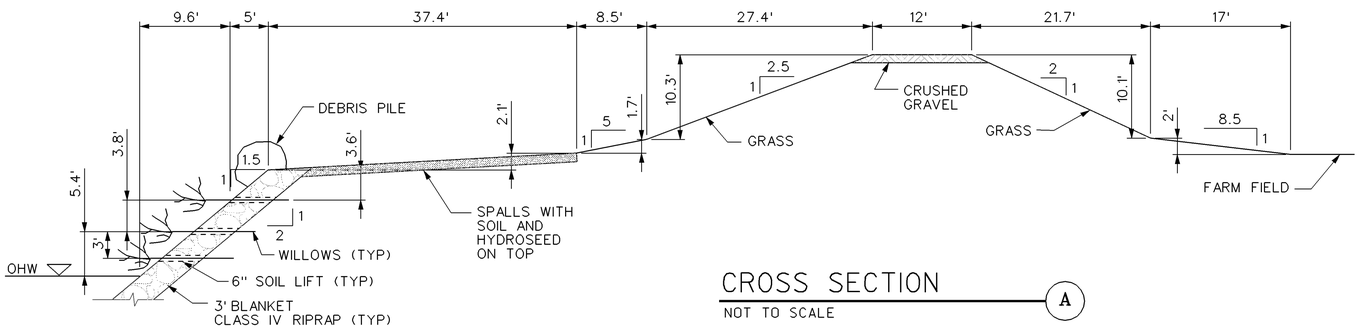
2007 LEVEE REHAB AS-BUILTS
SKA-5-07 (17-3)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 10 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 17\SKA-5-07 (17-3).DGN
DATE AND TIME PLOTTED: 19-DEC-2007 10:30

SKA-5-07 (17-4) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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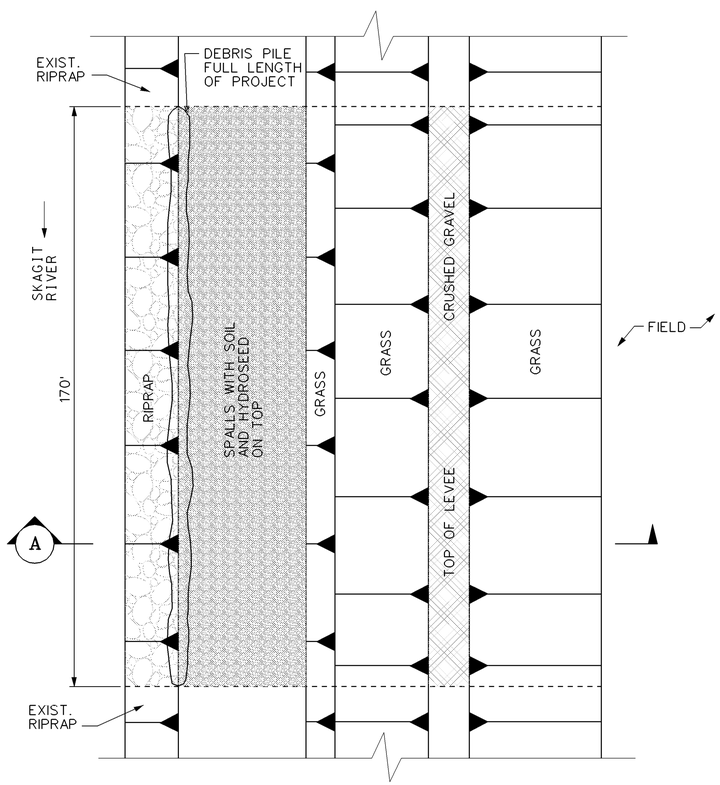
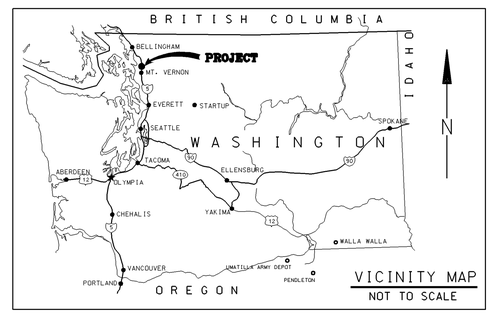


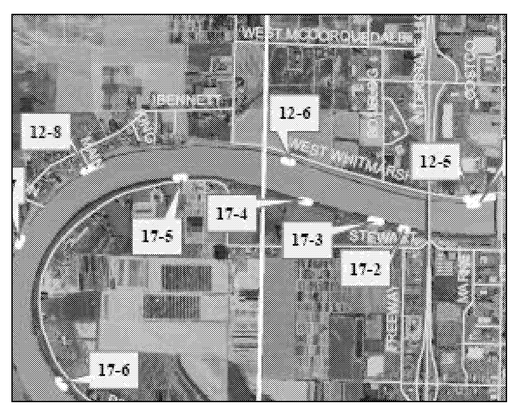
PLAN VIEW

NOT TO SCALE

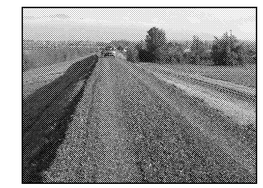
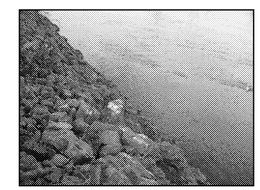
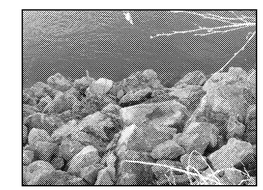


VICINITY MAP

NOT TO SCALE



VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	500 TONS
WILLOW CUTTING	1,020 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 16.3, SECTION 13, T34N, R3E, SKAGIT COUNTY, WASHINGTON.
2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

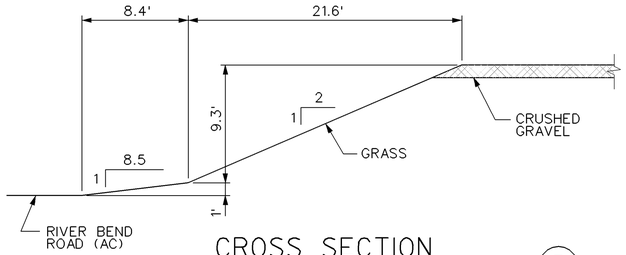
2007 LEVEE REHAB AS-BUILTS
SKA-5-07 (17-4)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 11 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 17\SKA-5-07 (17-4).DGN
DATE AND TIME PLOTTED: 19-DEC-2007 10:52

SKA-5-07 (17-5) - SKAGIT LEVEE AS-BUILT



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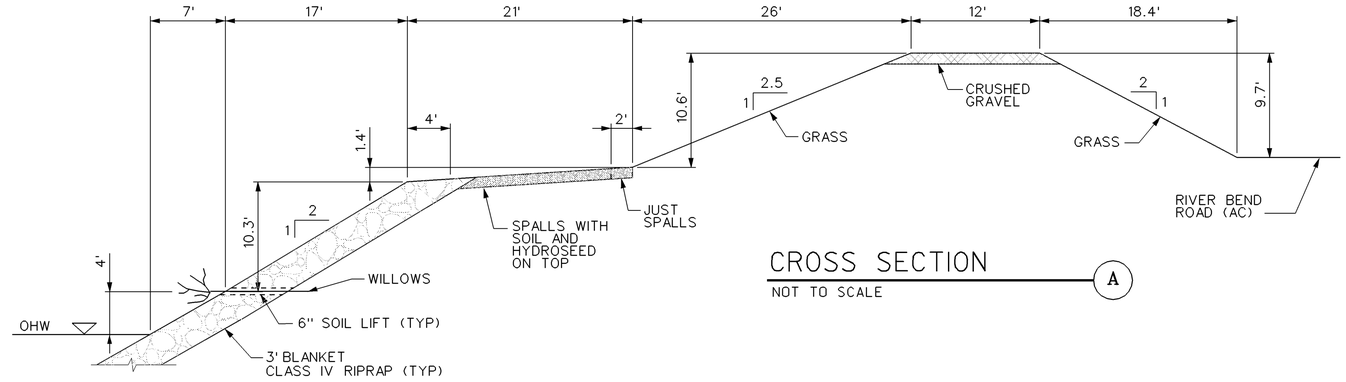

CROSS SECTION (A)
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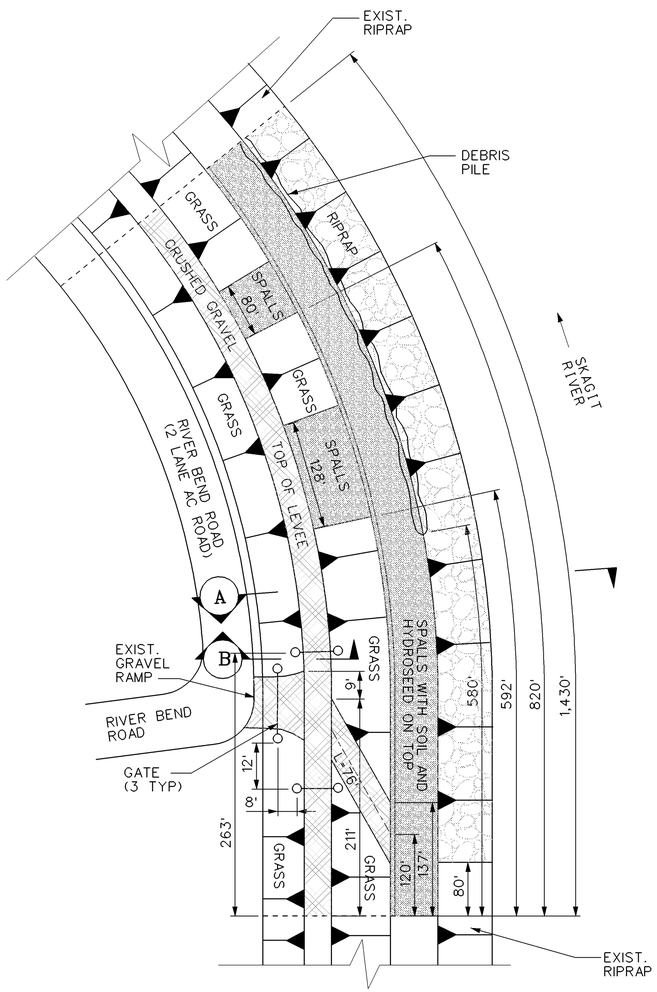
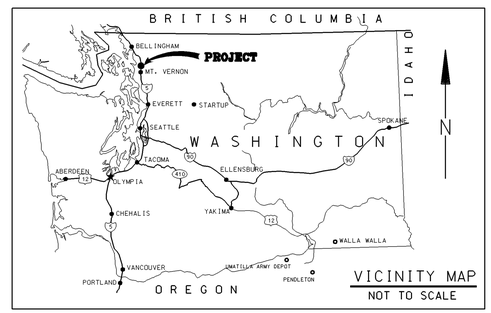
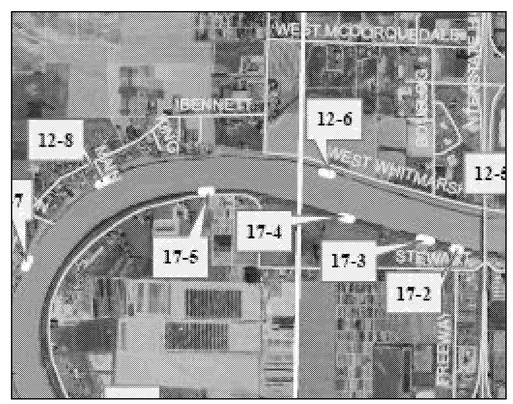


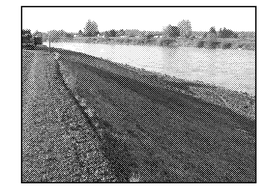
PLAN VIEW
NOT TO SCALE

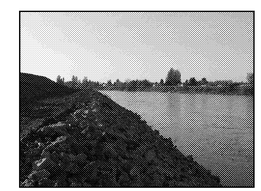


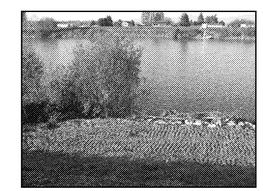
VICINITY MAP
NOT TO SCALE



VICINITY MAPS







PHOTOS

QUANTITIES	
CLASS IV RIPRAP	4,500 TONS
SPALLS	2,000 TONS
1¼" MINUS CRUSHED GRAVEL	500 TONS
WILLOW CUTTING	2,860 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 15.8, SECTION 12, T34N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:
Prepared by:

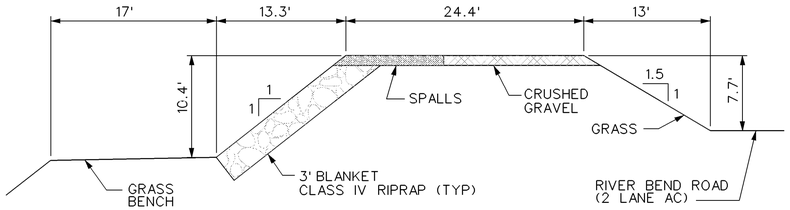
2007 LEVEE REHAB AS-BUILTS
SKA-5-07 (17-5)
SKAGIT LEVEE AS-BUILT

Plate number:

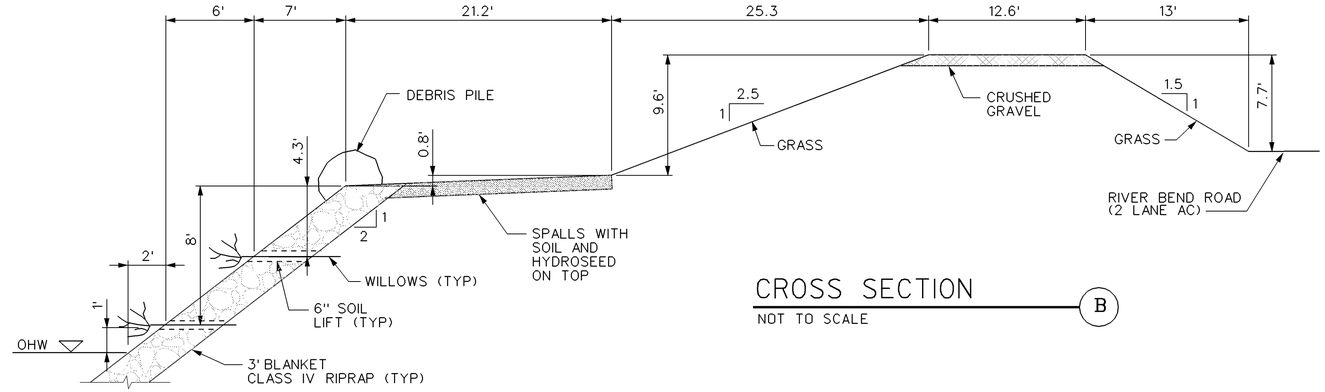
Sheet 12 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 17\SKA-5-07 (17-5).DGN
DATE AND TIME PLOTTED: 19-DEC-2007 10:54

SKA-5-07 (17-6) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)
NOT TO SCALE



CROSS SECTION (B)
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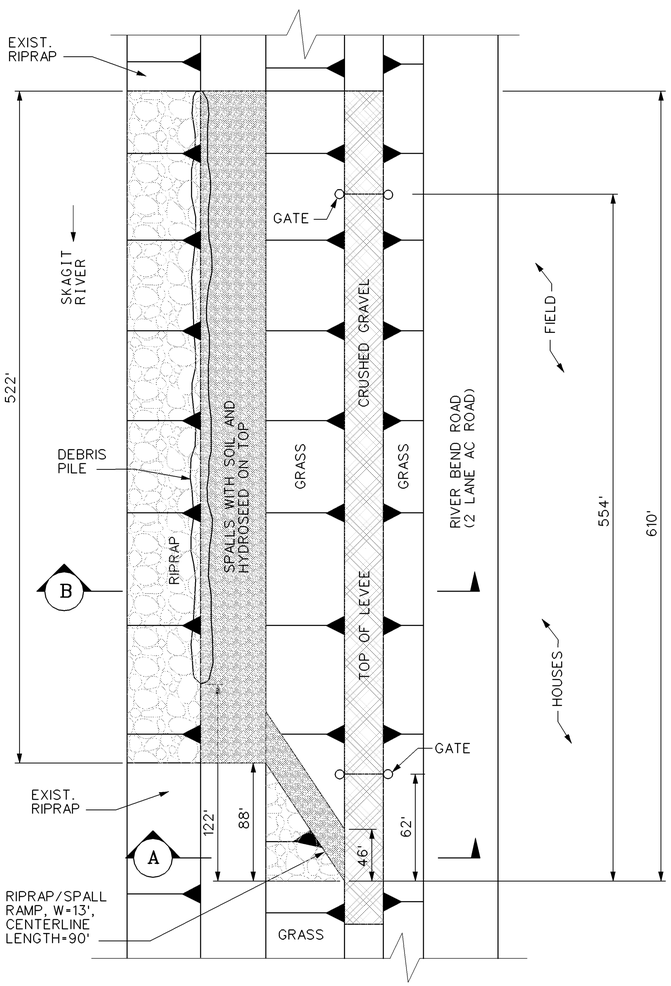
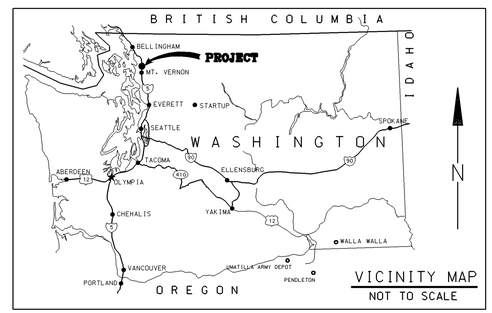
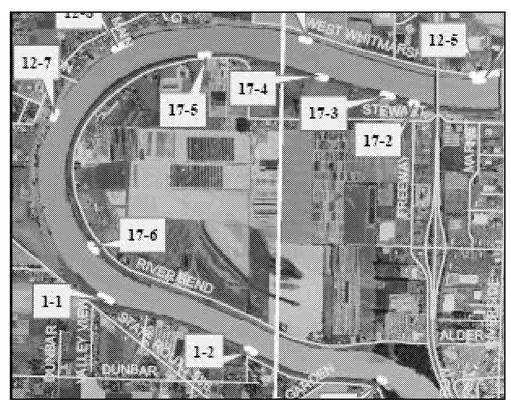


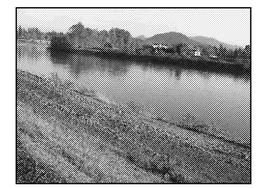
PLAN VIEW
NOT TO SCALE

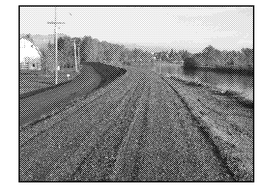


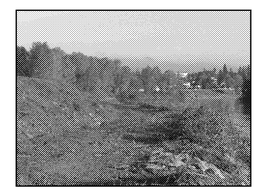
VICINITY MAP
NOT TO SCALE

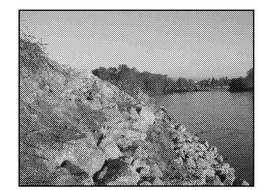


VICINITY MAPS









PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	2,000 TONS
WILLOW CUTTING	2,088 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 14.4, SECTION 13, T34N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

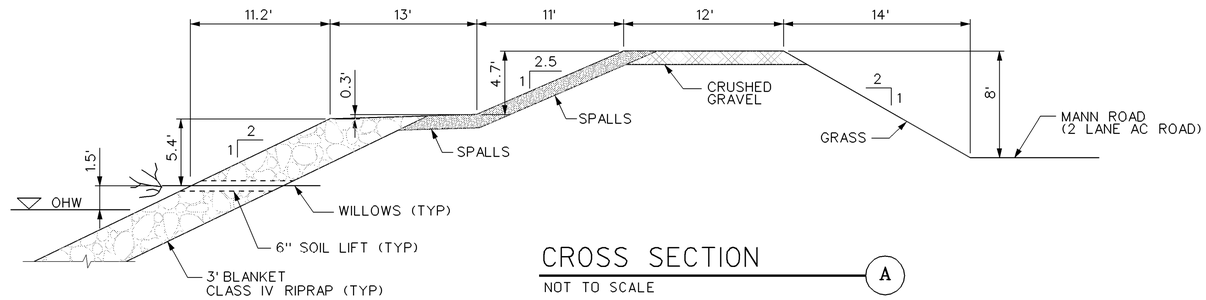
2007 LEVEE REHAB AS-BUILTS
SKA-5-07 (17-6)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 13 of 32

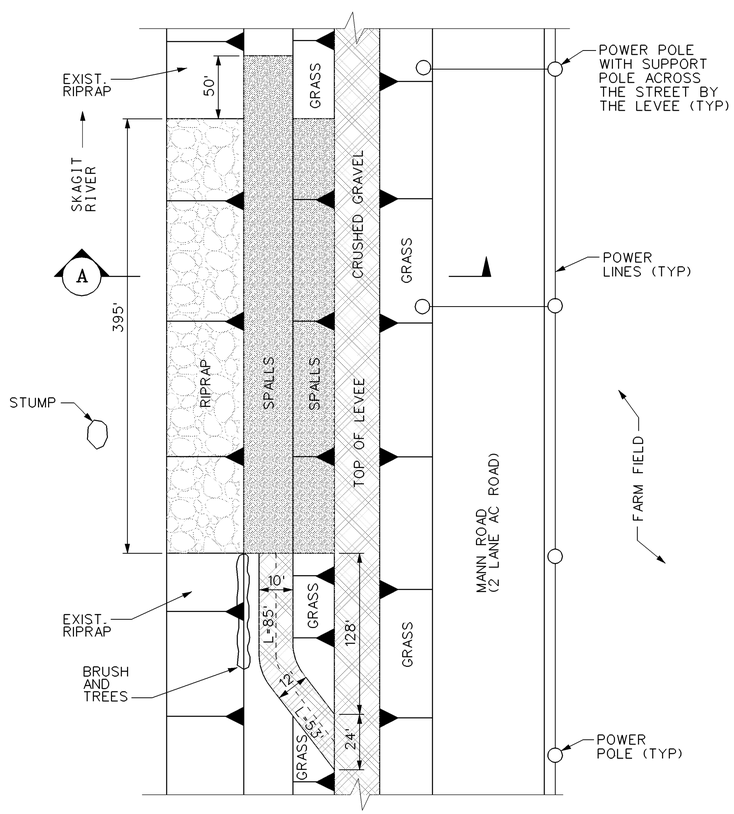
DATE AND TIME PLOTTED: 19-DEC-2007 10:58 DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 17\SKA-5-07 (17-6).DGN

SKA-2-07 (22-1) - SKAGIT LEVEE AS-BUILT



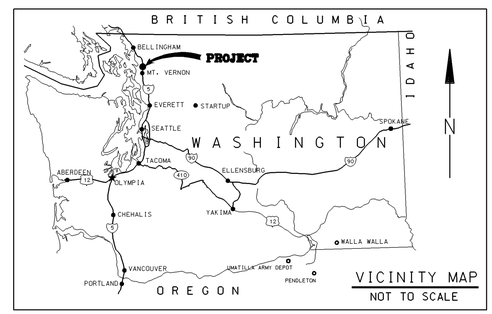
CROSS SECTION (A)

NOT TO SCALE



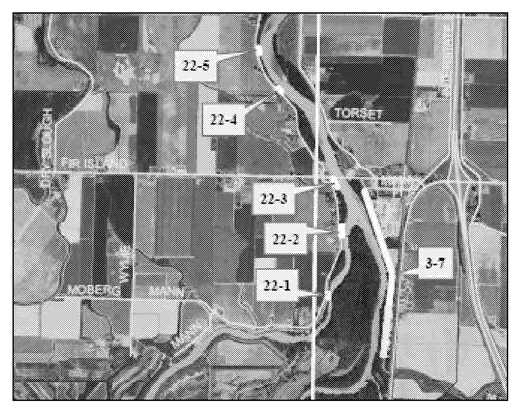
PLAN VIEW

NOT TO SCALE

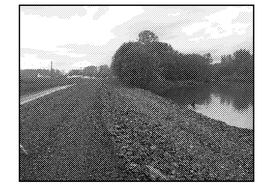


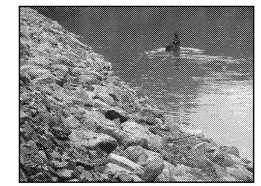
VICINITY MAP

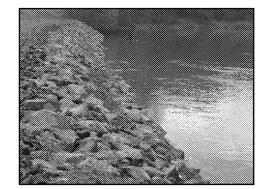
NOT TO SCALE

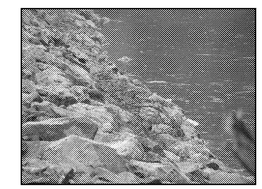


VICINITY MAPS









PHOTOS

QUANTITIES	
CLASS IV RIPRAP	1,000 TONS
SPALLS	300 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	790 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 4.65 ON FRESHWATER SLOUGH (SOUTH FORK), SECTION 19, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-1)
SKAGIT LEVEE AS-BUILT

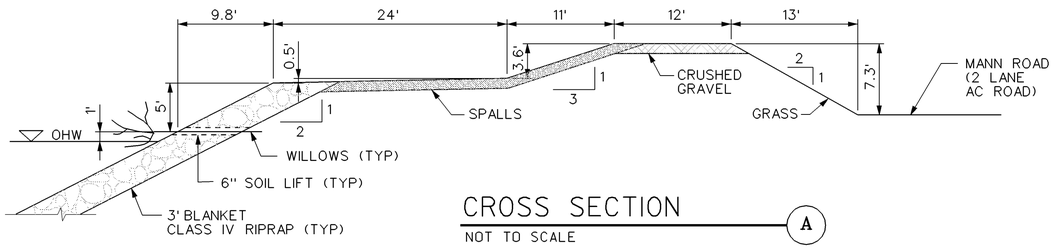
Plate number:

Sheet 25 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-1).DGN

DATE AND TIME PLOTTED: 19-DEC-2007 13:26

SKA-2-07 (22-2) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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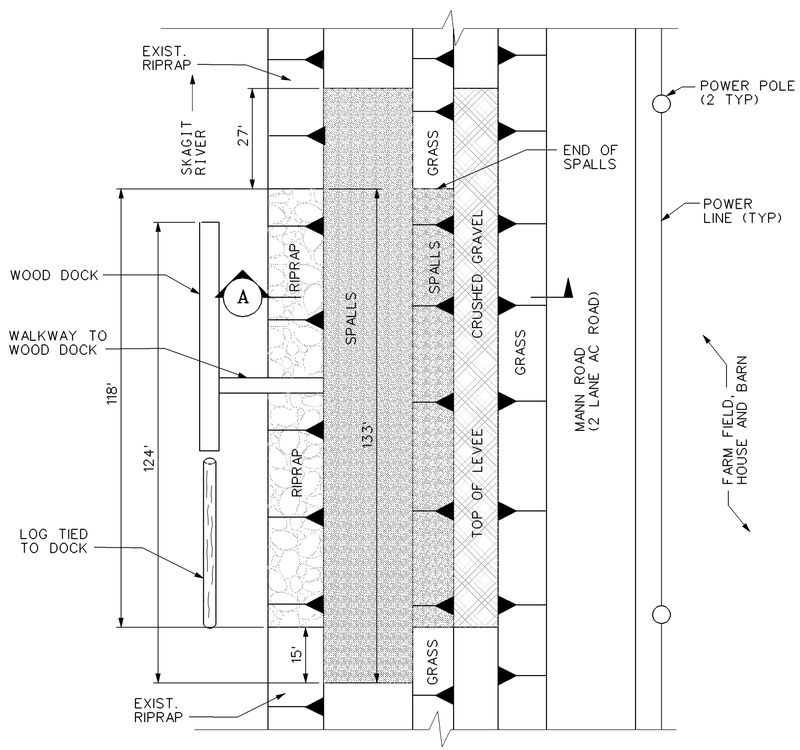
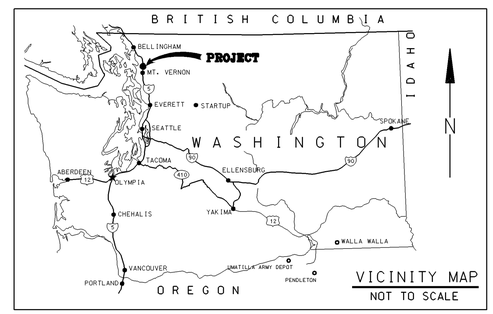


PLAN VIEW

NOT TO SCALE



VICINITY MAP

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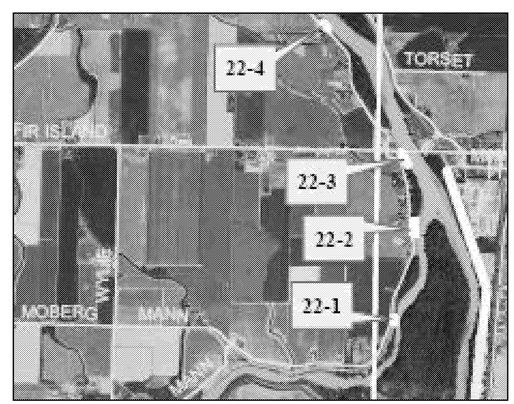
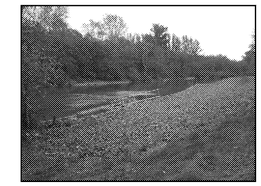
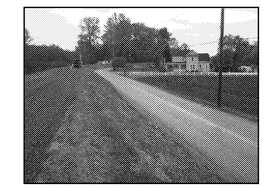
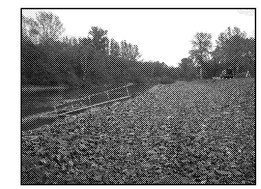
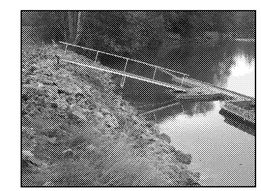


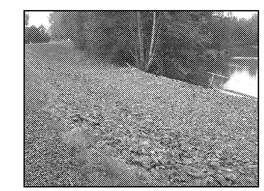
VICINITY MAPS











PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,000 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	236 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 5.25 ON FRESHWATER SLOUGH (SOUTH FORK), SECTION 19, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

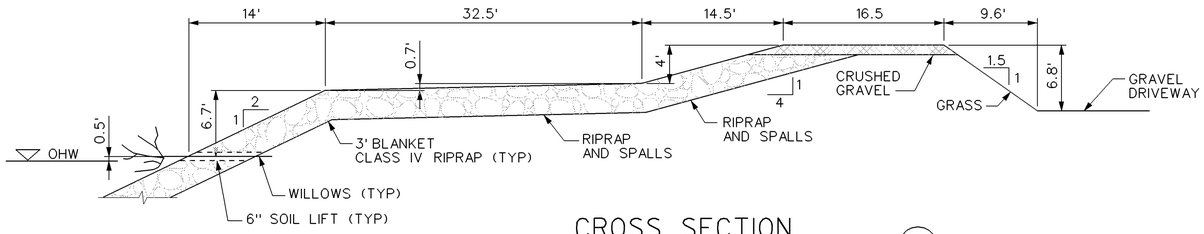
2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-2)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 26 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-2).DGN
DATE AND TIME PLOTTED: 19-DEC-2007 13:35

SKA-2-07 (22-3) - SKAGIT LEVEE AS-BUILT



CROSS SECTION

NOT TO SCALE

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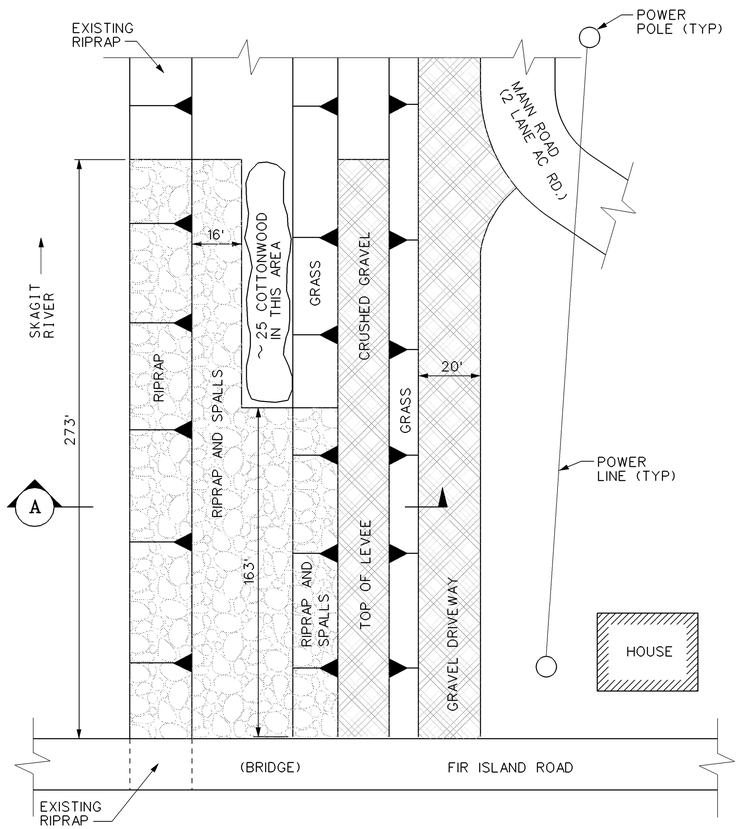
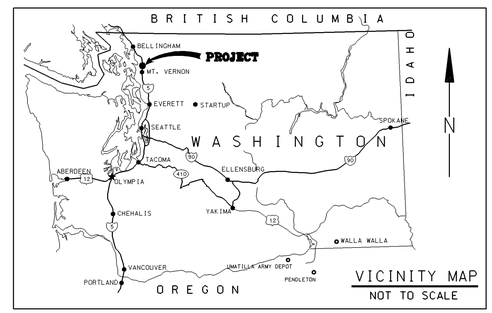


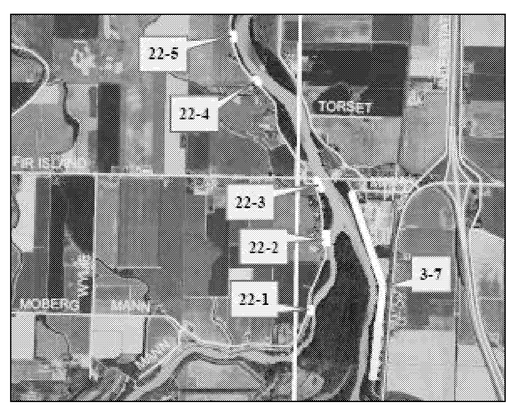
PLAN VIEW

NOT TO SCALE

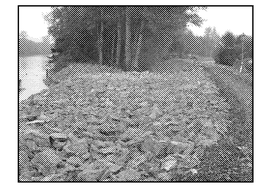


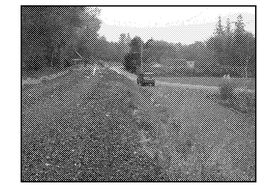
VICINITY MAP

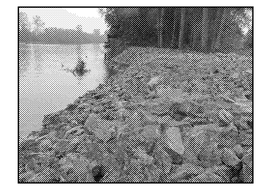
NOT TO SCALE

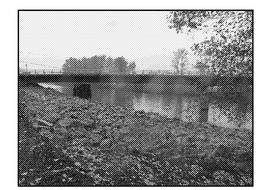


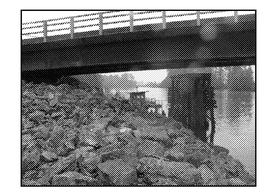
VICINITY MAPS











PHOTOS

QUANTITIES	
CLASS IV RIPRAP	2,500 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	200 TONS
WILLOW CUTTING	546 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 5.8 ON THE SOUTH FORK, SECTION 19, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

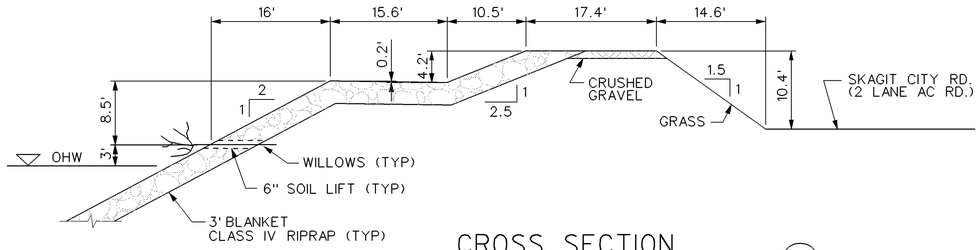
2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-3)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 27 of 32

DATE AND TIME PLOTTED: 21-DEC-2007 08:08
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-3).DGN

SKA-2-07 (22-4) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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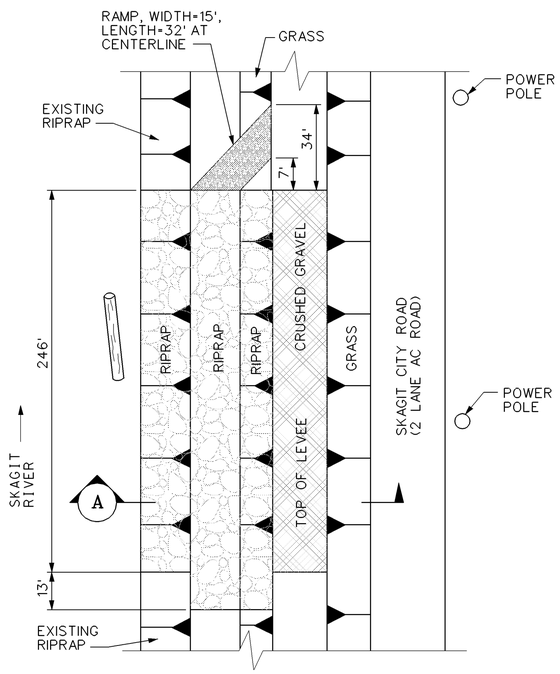

PLAN VIEW

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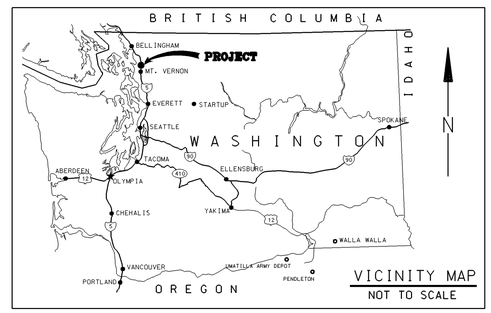
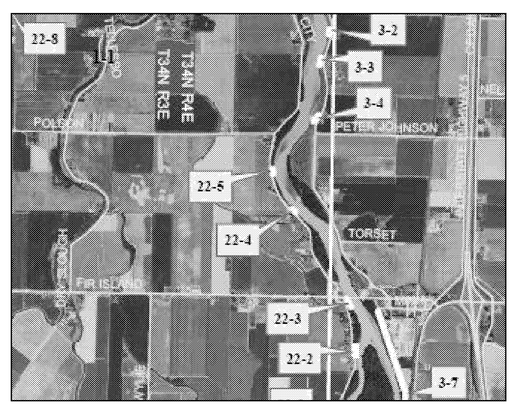
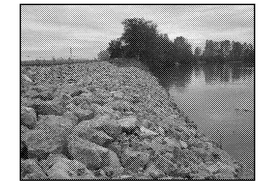


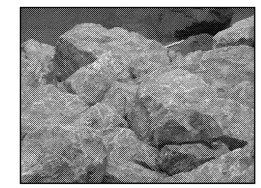
VICINITY MAP

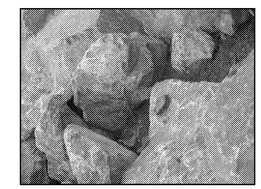
NOT TO SCALE

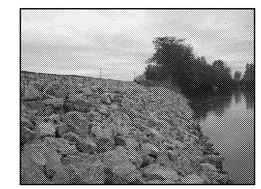


VICINITY MAPS









PHOTOS

QUANTITIES	
CLASS IV RIPRAP	3,000 TONS
SPALLS	800 TONS
WILLOW CUTTING	492 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTE:
PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 6.3 ON THE SOUTH FORK, SECTION 13, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

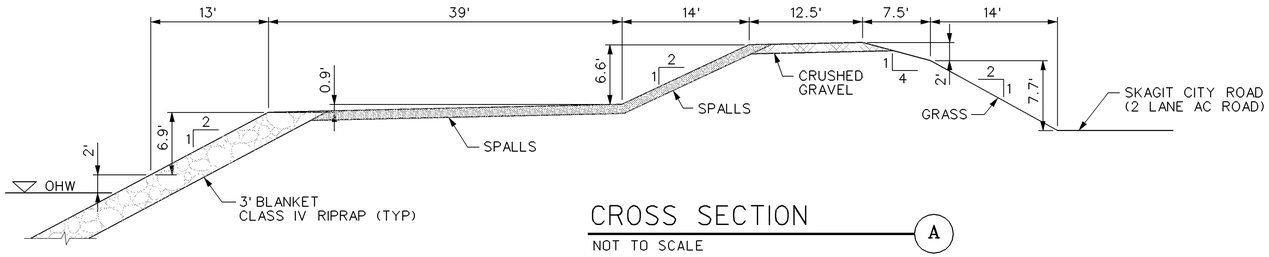
2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-4)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 28 of 32

DATE AND TIME PLOTTED: 21-DEC-2007 08:11
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-4).DGN

SKA-2-07 (22-5) - SKAGIT LEVEE AS-BUILT



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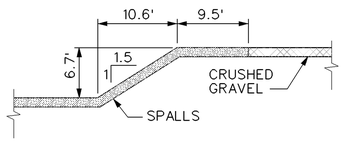

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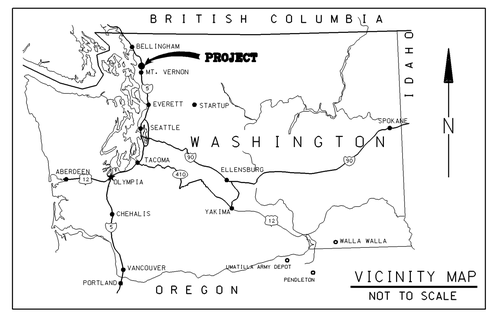
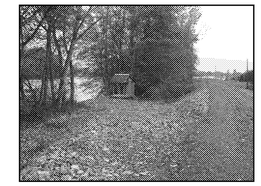
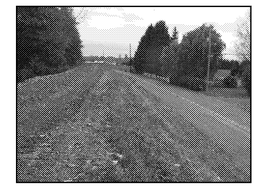
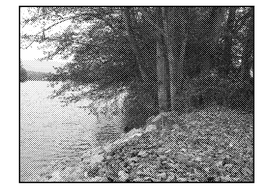
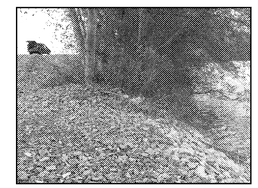
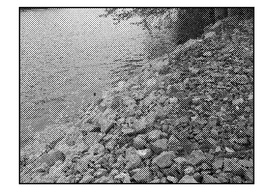




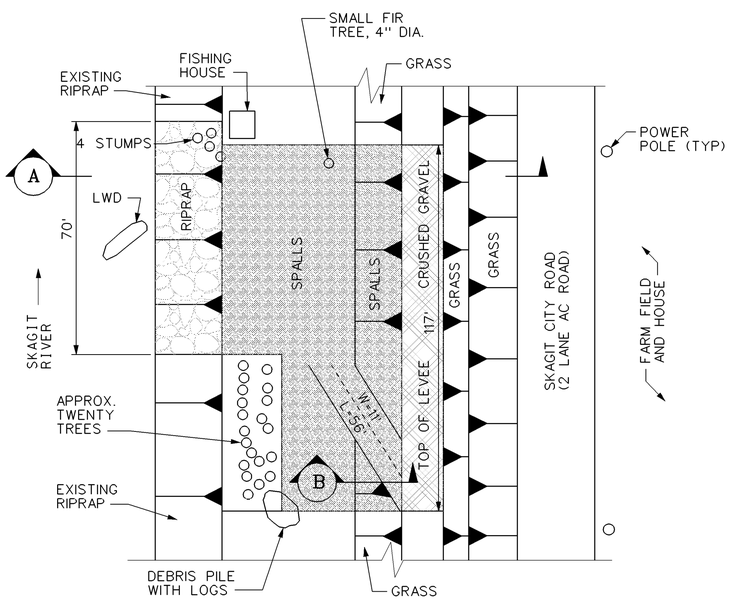






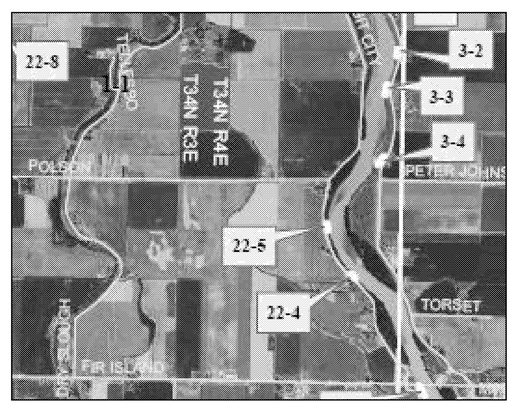


PHOTOS



PLAN VIEW

NOT TO SCALE



VICINITY MAPS

QUANTITIES	
CLASS IV RIPRAP	1,500 TONS
SPALLS	500 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 6.3 ON THE SOUTH FORK, SECTION 13, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

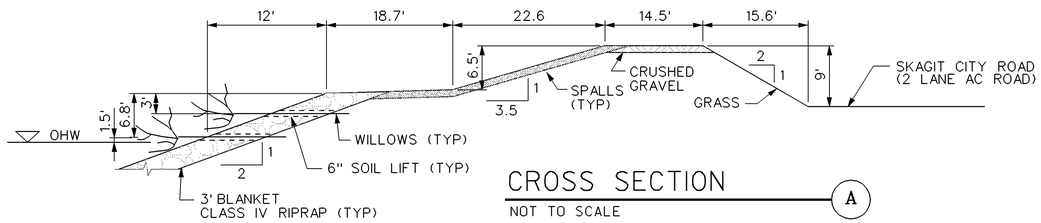
2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-5)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 29 of 32

DATE AND TIME PLOTTED: 21-DEC-2007 08:15
DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-5).DGN

SKA-2-07 (22-6) - SKAGIT LEVEE AS-BUILT



CROSS SECTION

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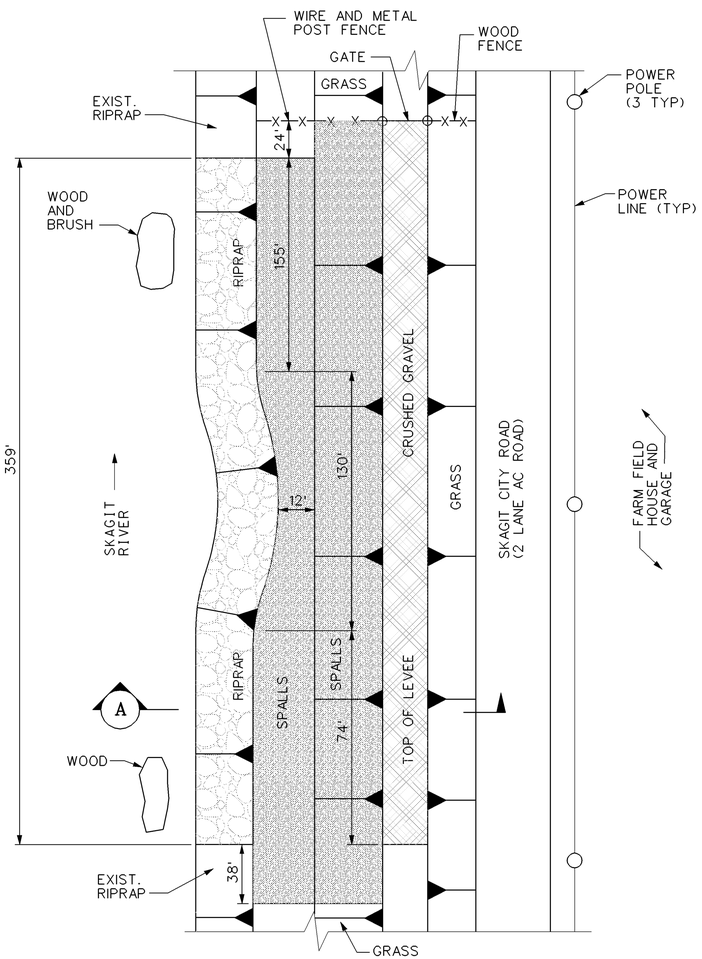
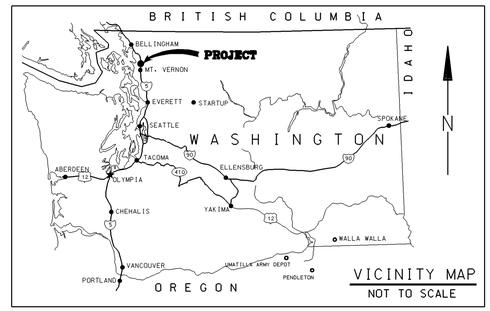


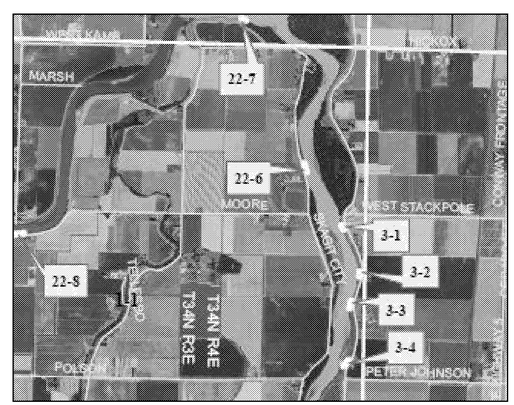
PLAN VIEW

NOT TO SCALE

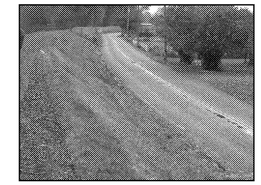


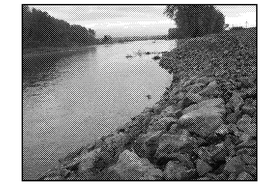
VICINITY MAP

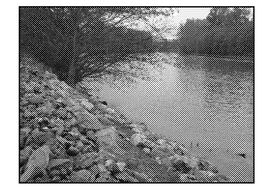
NOT TO SCALE

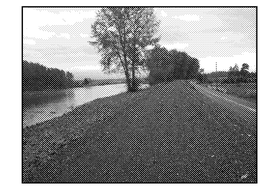


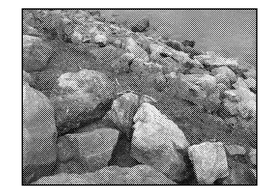
VICINITY MAPS











PHOTOS

QUANTITIES	
CLASS IV RIPRAP	3,000 TONS
SPALLS	800 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	1,436 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 8.75 ON THE SOUTH FORK, SECTION 1, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-6)
SKAGIT LEVEE AS-BUILT

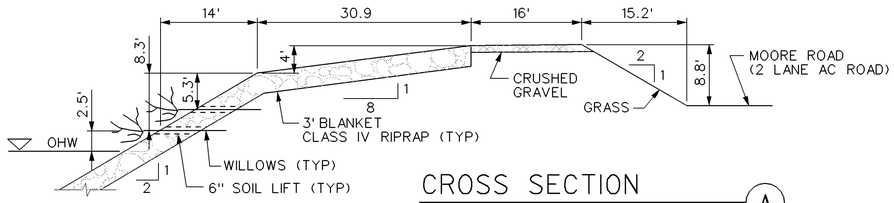
Plate number:

Sheet 30 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-6).DGN

DATE AND TIME PLOTTED: 19-DEC-2007 13:40

SKA-2-07 (22-8) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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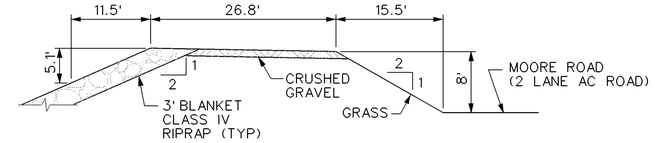

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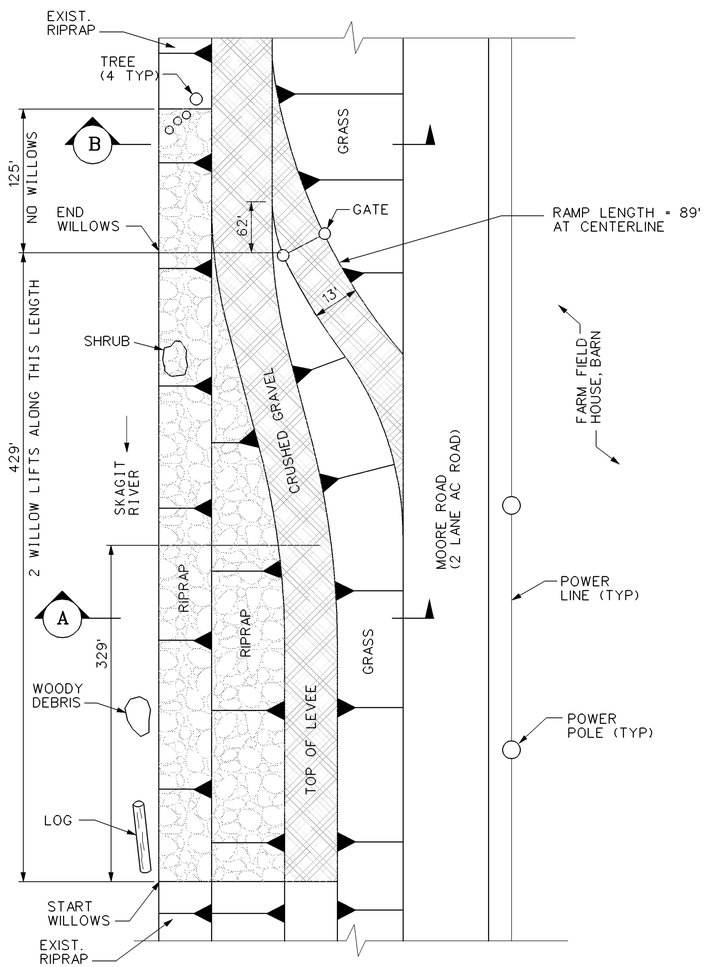
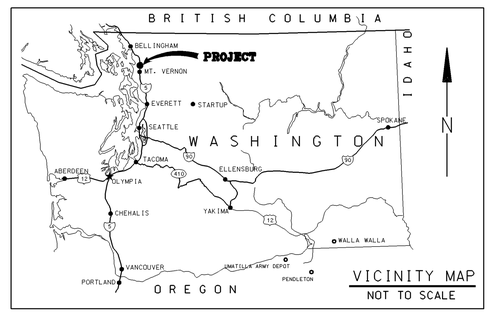


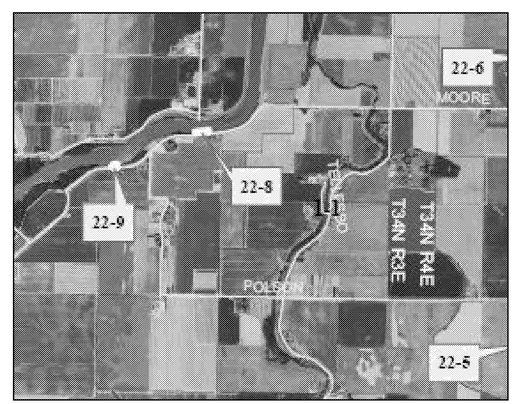
PLAN VIEW

NOT TO SCALE



VICINITY MAP

NOT TO SCALE



VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	4,000 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	1,716 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 7.2 ON THE NORTH FORK, SECTION 11, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

Designed by: KAISER
Drawn by: LEJON
Checked by: WEST
Date: 31 OCT 2007
File: E-6-6-386
Rev.:

U.S.ARMY ENGINEER DISTRICT,SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON
Prepared by:

2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-8)
SKAGIT LEVEE AS-BUILT

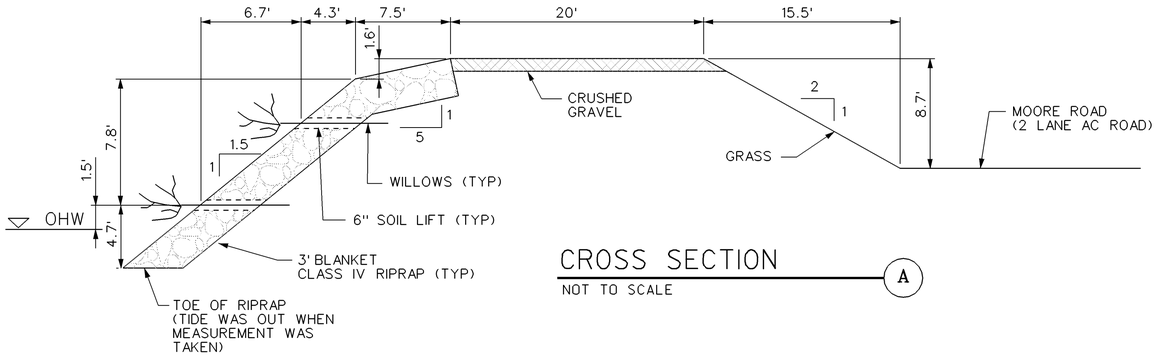
Plate number:

Sheet 31 of 32

DESIGN FILE: I:\MISC\CIV\2007 PIR ASBUILTS\SKAGIT\DD 22\SKA-2-07 (22-8).DGN

DATE AND TIME PLOTTED: 19-DEC-2007 13:44

SKA-2-07 (22-9) - SKAGIT LEVEE AS-BUILT



CROSS SECTION (A)

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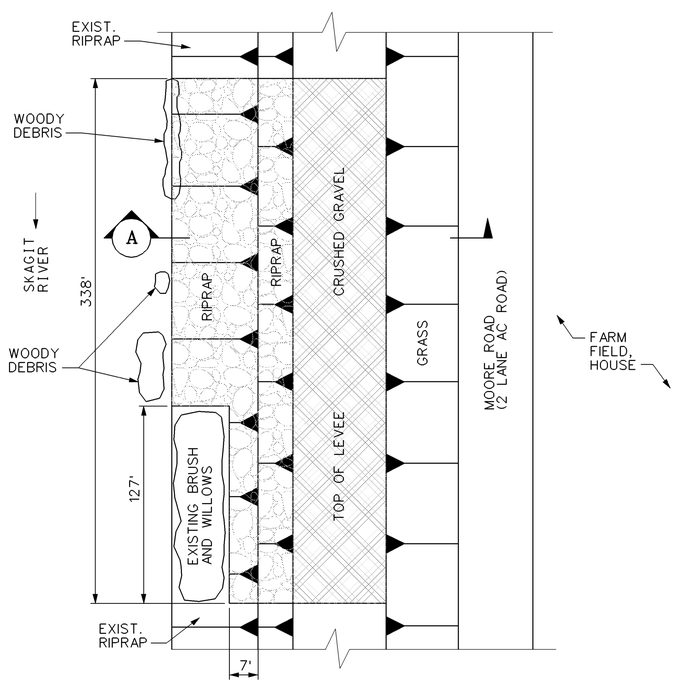
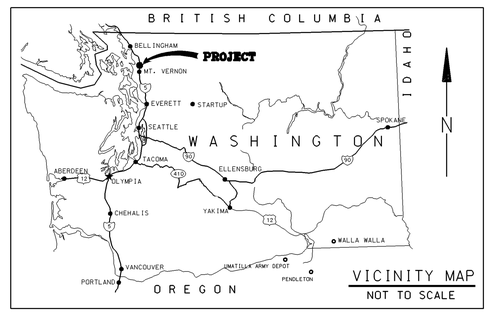


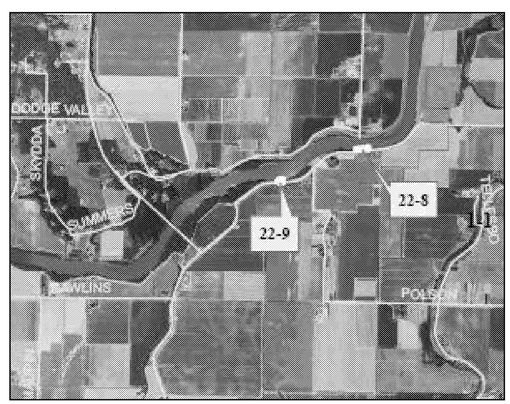
PLAN VIEW

NOT TO SCALE

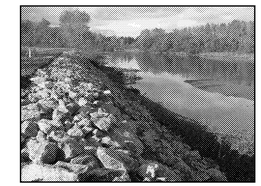
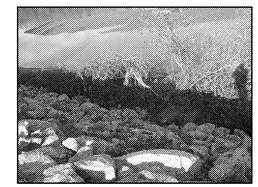
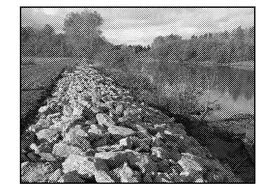
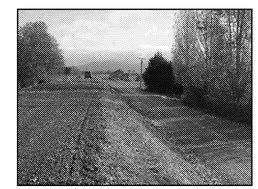


VICINITY MAP

NOT TO SCALE



VICINITY MAPS

PHOTOS

QUANTITIES	
CLASS IV RIPRAP	4,500 TONS
SPALLS	1,000 TONS
1¼" MINUS CRUSHED GRAVEL	400 TONS
WILLOW CUTTING	844 EA
HYDROSEED WAS APPLIED TO THE COMPLETED PROJECT	

NOTES:

1. PROJECT LOCATION IS AT APPROXIMATELY RIVER MILE 6.6 ON THE NORTH FORK, SECTION 10, T33N, R3E, SKAGIT COUNTY, WASHINGTON.

2. SLOPES ARE APPROXIMATE.

US Army Corps of Engineers
Seattle District

Symbol	Description	Date	Appr.	Symbol	Description
		/ /			

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

Designed by: KAISER
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Date: 31 OCT 2007
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2007 LEVEE REHAB AS-BUILTS
SKA-2-07 (22-9)
SKAGIT LEVEE AS-BUILT

Plate number:

Sheet 32 of 32

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