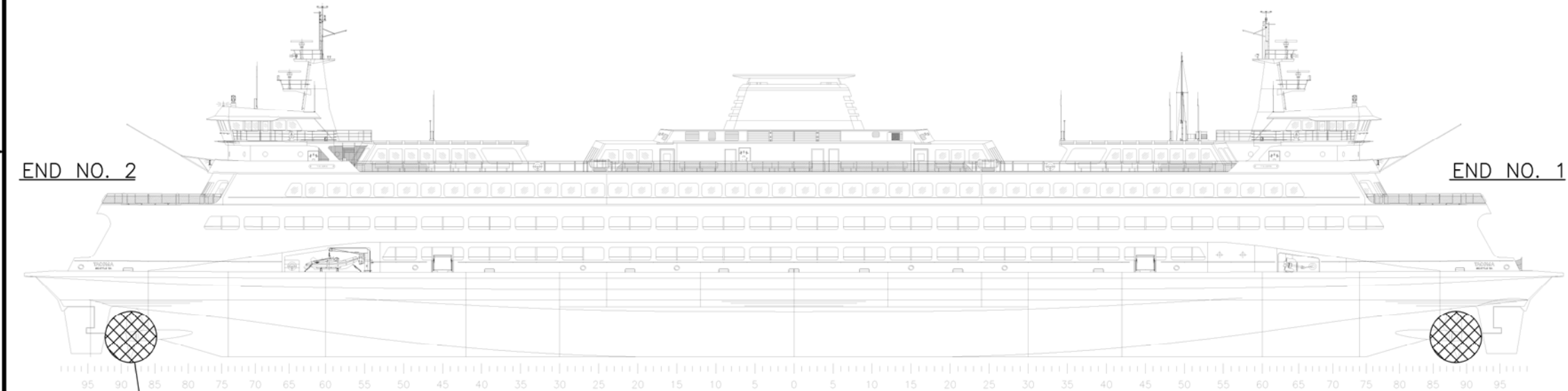


REVISIONS			
REV	ZONE	DESCRIPTION	PROFESSIONAL ENGR STAMP PER:
-	ALL	1. INITIAL ISSUE.	REV: - ENGR: E. FAY DATED: 10/11/2011 STATE: WA REG NO: 38912 EXPIRES: 05/13/2013 DRAWN: C. RAY
A	11-C	1. DIMENSION WAS SHOWN AS 511.594.	REV: A ENGR: E. FAY DATED: 12/10/12 STATE: WA REG NO: 38912 EXPIRES: 05/13/2013 DRAWN: C. RAY
B	11-B SH 3	1. ADDED KEYWAY DETAIL. 2. DELETED REQUIREMENT FOR DRILLING AND TAPPING FILL & VENT HOLES ON KEYWAY C.	REV: B ENGR: E. FAY DATED: 04/16/2013 STATE: WA REG NO: 38912 EXPIRES: 05/13/2015 DRAWN: C. RAY
C	SH 4 & 5	1. ADDED SHEETS 4 & 5 TO SHOW SECTIONS THRU 0.300, 0.500, 0.700 & 0.900 RADII.	REV: c ENGR: E. FAY DATED: 06/10/2013 STATE: WA REG NO: 38912 EXPIRES: 05/13/2015 DRAWN: C. RAY



NEW PROPELLERS TO BE PROVIDED AND
INSTALLED ON ENDS NO. 1 & 2-SEE SH 2

KEYPLAN

INDEX	
SHEET	DESCRIPTION
1.	TITLE, GENERAL NOTES, REFERENCES, INDEX & KEYPLAN.
2.	PROPELLER SPECIFICATIONS
3.	HUB SECTION & DETAILS
4.	SECTIONS THRU 0.300 AND 0.500R
5.	SECTIONS THRU 0.700 AND 0.900



06/10/13 FOR REV C

GENERAL NOTES

1. THE PURPOSE OF THIS DRAWING IS TO PROVIDE DESIGN CRITERIA FOR NEW FIVE-BLADED PROPELLERS TO BE INSTALLED ON ENDS NO. 1 & 2.
2. REMOVE AND REINSTALL ALL INTERFERENCES NECESSARY TO ACCOMPLISH THE WORK.
3. BLADE TOLERANCES PER ISO 484/2 CLASS S.
4. MATERIALS USED TO MANUFACTURE THE PROPELLER SHALL MEET ABS REQUIREMENTS AND ABS CERTIFICATION IS REQUIRED.
5. CAST STAINLESS MATERIAL SHALL BE ASTM A743 GRADE CF-8.
6. CASTING SHALL CONTAIN A MINIMUM FERRITE LEVEL OF 15.
7. ALL DIMENSIONS SHOWN IN METRIC (MM) EXCEPT AS SHOWN.
8. FASTENER SIZES (DRILL & TAP) ARE SHOWN AS IMPERIAL (INCHES) TO SUIT EXISTING VESSEL INSTALLATION.
9. FOR PURPOSES OF THIS DRAWING END NO. 1 IS CONSIDERED FORWARD AND END NO. 2 AFT.
10. SCALES SHOWN ARE FOR "D" SIZE (22"x34") SHEETS; "B" SIZE (11"x17") SHEETS ARE HALF SCALE.
11. REFERENCES WERE DEVELOPED AND PROVIDED BY BIRD JOHNSON COMPANY FOR JUMBO MARK II CLASS FERRIES AND ARE ON FILE IN THE VESSEL ENGINEERING TECH LIBRARY.

REFERENCES

1	100054009	PROPELLER
2	S001-940504	SHAFTING ARRANGEMENT
3	S001-941230	SHAFT LINE ASSEMBLY
4	S001-941104	DUNCE CAP
5	S001-940505	TAIL SHAFT
6	S001-941027	PROPELLER NUT

SHIP APPLICABILITY

VESSEL	DWG APPLICABILITY	SHIP CHECK DATE	SHIP UNIQUE DETAIL
MV TACOMA	✓	*	*
MV WENATCHEE	✓	*	*
MV PUYALLUP	✓	*	*

APPROVALS

OWNER USCG



WASHINGTON STATE
DEPARTMENT OF TRANSPORTATION

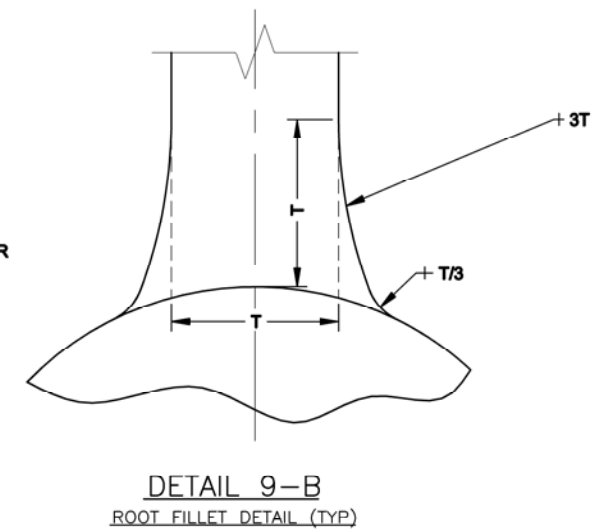
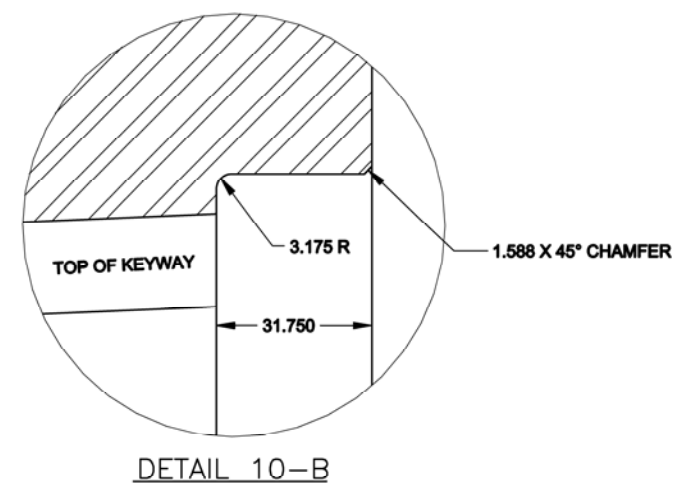
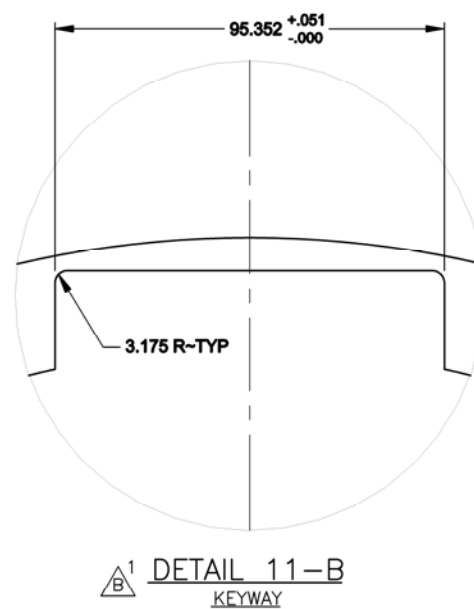
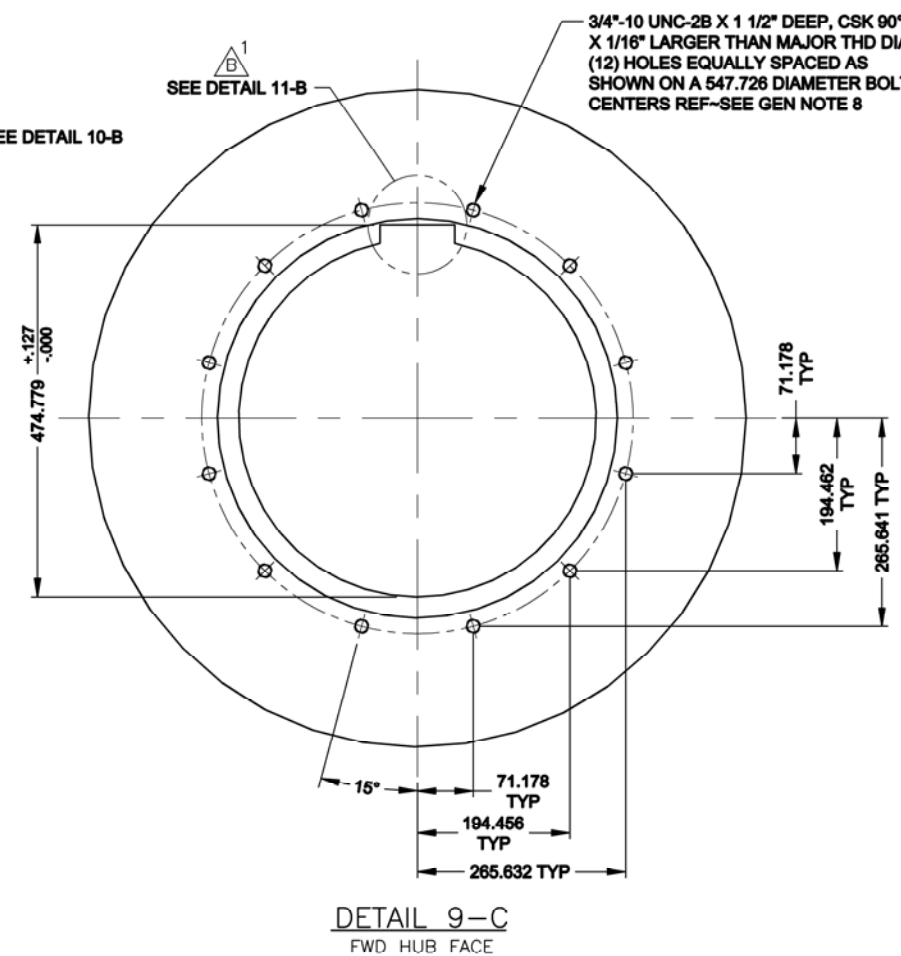
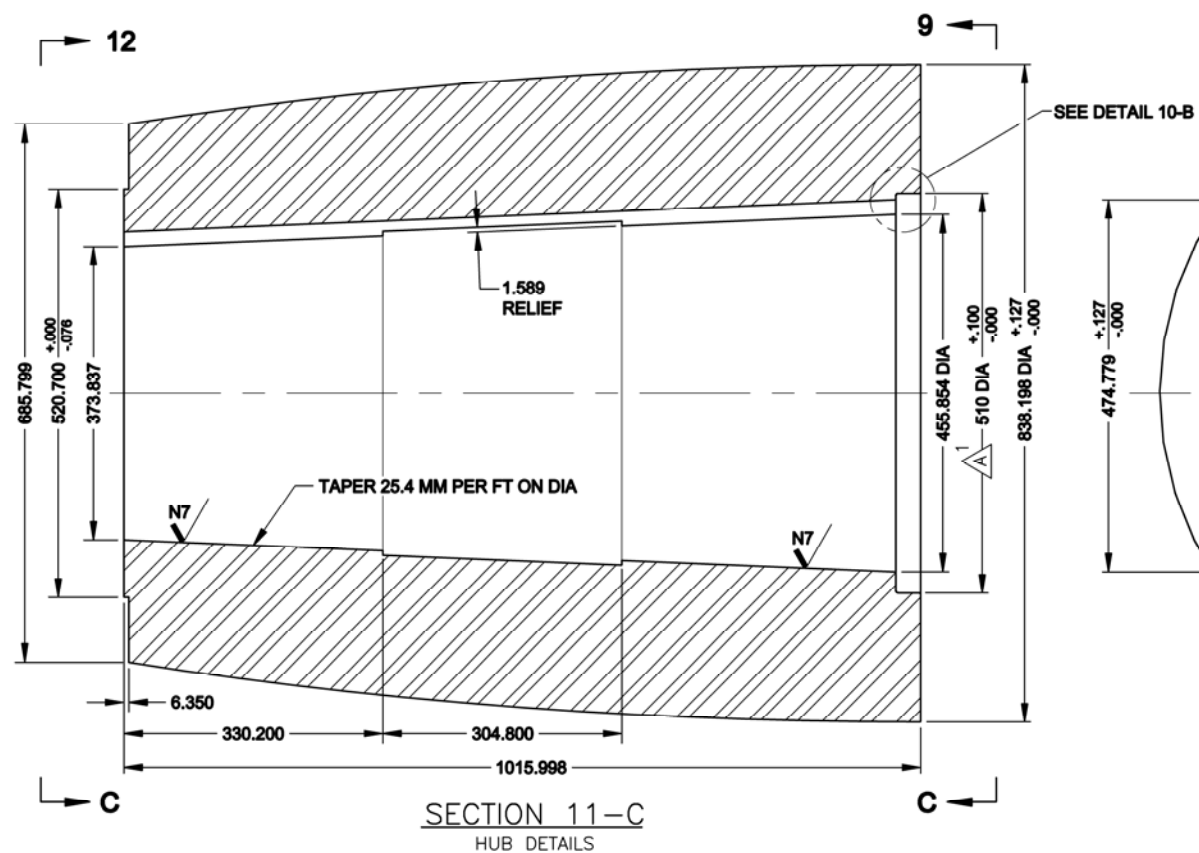
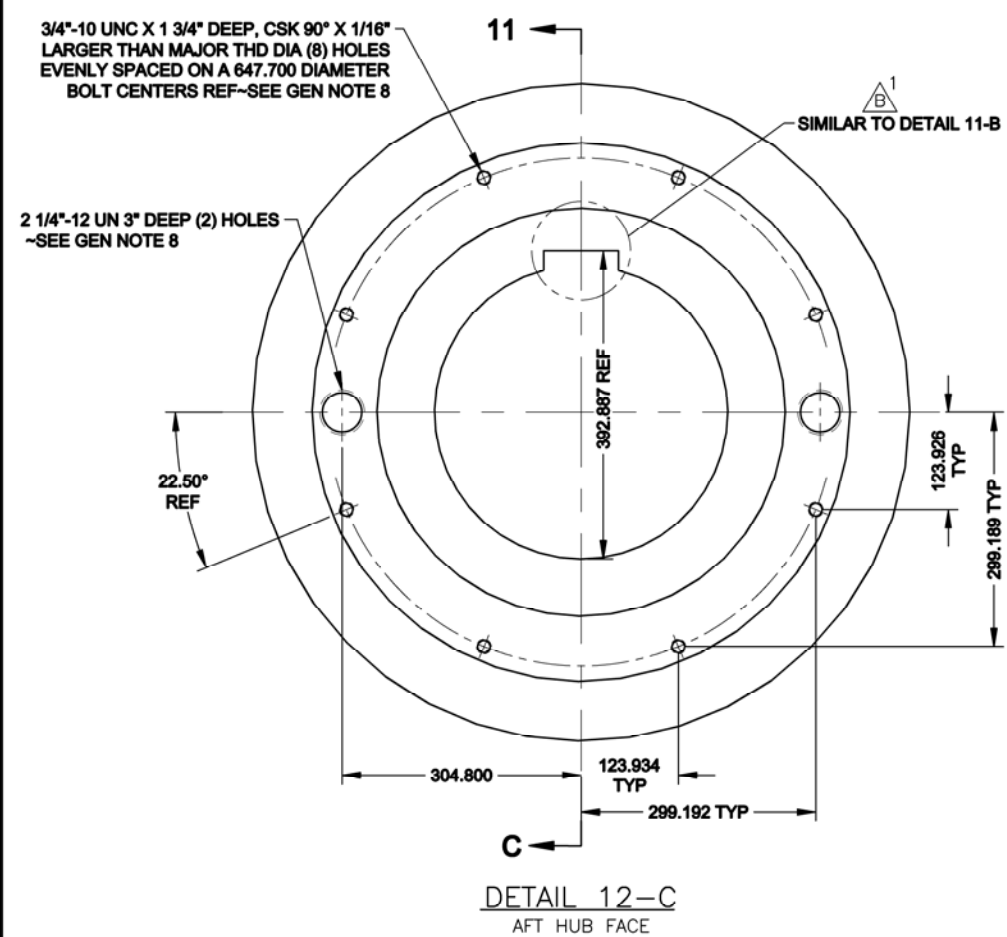
WASHINGTON STATE FERRIES

JUMBO MARK II CLASS VESSELS
FIVE-BLADED PROPELLER

APPROVED: E. FAY	DESIGN: E. FAY DRAWN: C. RAY	CHECKED: C. WAY CHECKED: M. MINNIG	DATE: 10/11/11 SCALE: NONE
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DWG NO. 8110-770-053-01

SH 1 OF 5 REV C



06/10/13 FOR REV C

APPROVED:	DESIGN: E. FAY	CHECKED: C. WAY	DATE: 10/11/11
E. FAY	DRAWN: C. RAY	CHECKED: M. MINNIG	SCALE: NONE
DWG NO. 8110-770-053-01			SH 3 OF 5 REV C

