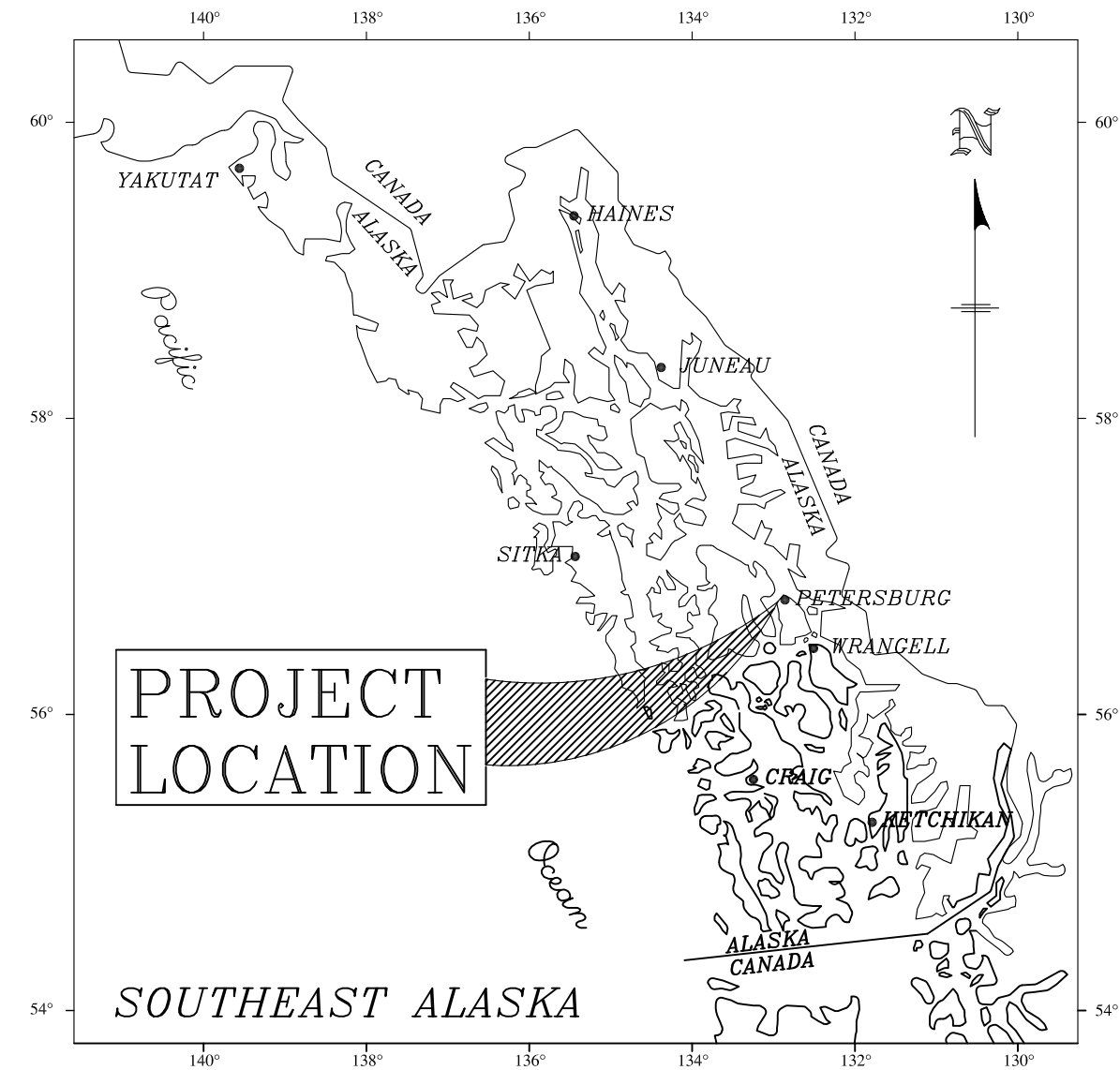


PROJECT SUMMARY: TRAIL CONSTRUCTION 1,345'	
PROJECT SCOPE: TO CONSTRUCT APPROXIMATELY 1,345' OF NEW PEDESTRIAN TRAIL. THE NEW BOARDWALK TRAIL WILL CONNECT TO THE EXISTING HUNGRY POINT BOARDWAK. THE NEW TRAIL WILL BE A 5' WIDE RAISED WOODEN BOARDWALK ON STEEL PIPE PILE .	
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1.	TITLE SHEET
2.	PROJECT PLAN VIEW
3.	WOODEN WALKWAY PLAN & PROFILE
4.	TRAIL LOCATION DETAILS
5.	WOODEN WALKWAY DETAILS AND GENERAL NOTES
6.	WOODEN WALKWAY DETAILS
7.	WOODEN WALKWAY TURNOUT DETAILS

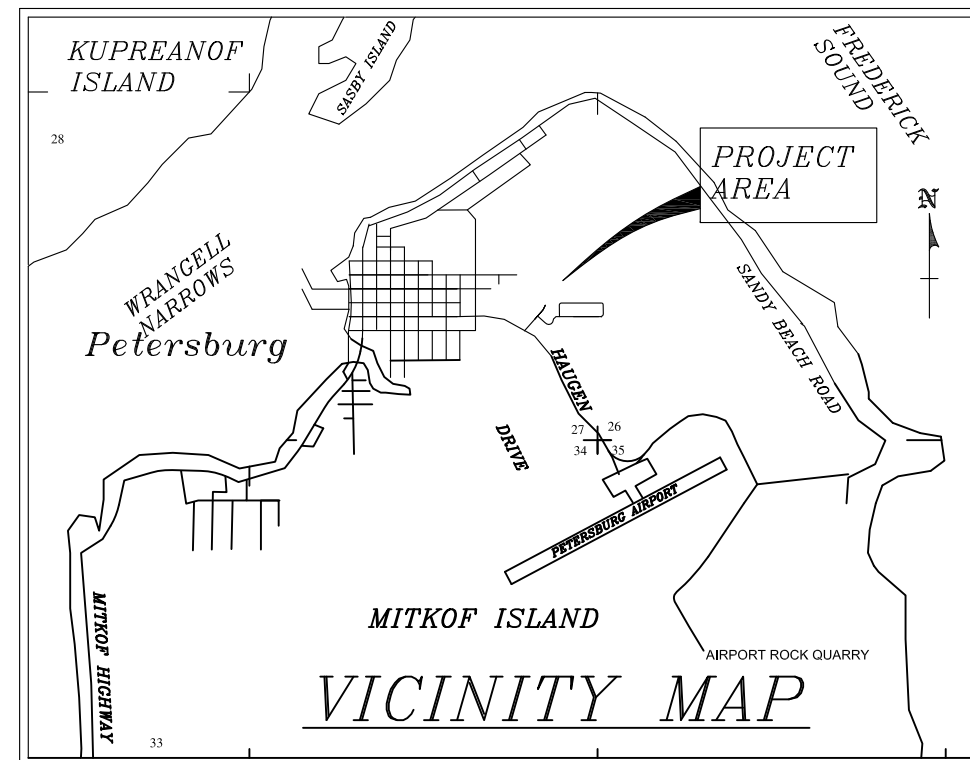


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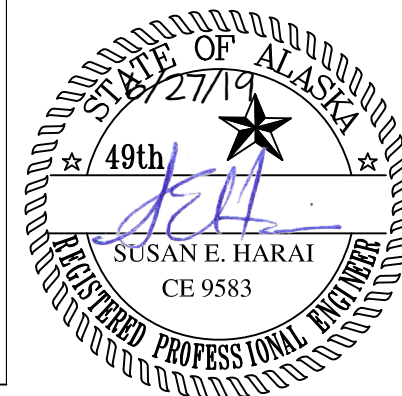
CONSTRUCTION PROJECT MOUNTAIN VIEW MANOR TRAIL ~ 2019 ~



NEW TRAIL QUANTITIES

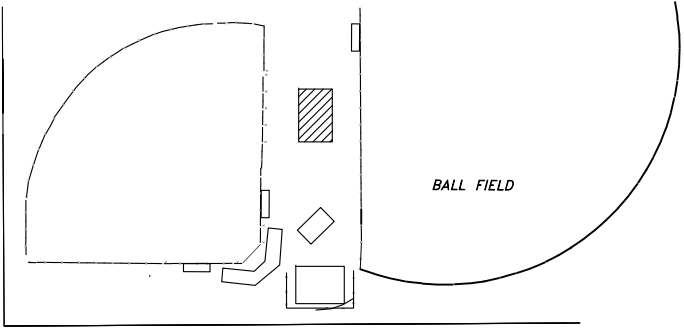
RAISED WOODEN BOARD WALK ~ 1,345 LINEAR FEET

APPROVED: <i>Cris Morrison</i>	7/1/2019
PIA PRESIDENT - CRIS MORRISON	DATE



DESIGNED BY:
HARAI & ASSOCIATES, INC
P.O. BOX 625
PETERSBURG, ALASKA 99833
JULY 2018

BOARDWALK WORK LOG	
STATION	WORK DESCRIPTION
0+00	TRANSITION EXISTING HUNGRY POINT BOARDWALK STATION 16+50 TO NEW WOODEN MOUNTAIN VEIW MANOR BOARDWALK.
13+45	CONSTRUCT RAISED WOODEN BOARDWALK. INTERSECTION WITH GRAVEL TURNOUT ON 13 TH STREET @ STATION 13+45.



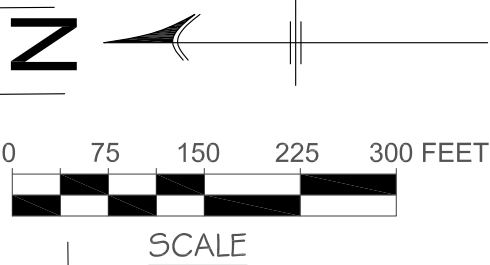
NEW MOUNTAIN VIEW
MANOR BOARDWALK

Trail Centerline is on un-constructed Right of Way
which is composed of open Muskeg

MUSKEG PROBE DEPTH FROM TOP OF GROUND			TRAIL SURVEY POINT DATA			
PT.	STA.	DEPTH	NORTHING	EASTING	ELEV	NOTES
1	0+00	6'	12141.7	10358.2	111.1	INTERSECTS BOARDWALK
2	1+13	12'	12051.0	10290.8	111.7	
3	2+75	12.5'	11916.5	10201.9	111.4	
4	4+24	11'	11768.1	10197.2	111.2	
5	5+38	9'	11654.2	10196.7	113.2	
6	6+42	6'	11553.8	10169.3	114.8	
7	6+88	12.5'	11509.6	10156.7	115.0	
8	7+88	9'	11413.4	10129.3	114.9	
9	8+65	8'	11339.4	10108.2	113.5	
10	9+95	5.5'	11214.4	10072.5	115.3	
11	11+27	11'	11087.4	10036.3	115.9	
12	12+21	7.5'	10997.0	10010.8	116.3	
13	12+84	5'	10934.1	10008.0	117.2	
14	13+35	5'	10883.1	10007.7	117.8	
15	13+43.9		10874.2	10007.6	119.9	Top of Bank
16	13+45		10873.1	10007.6	119.9	End of Trail

SURVEY CONTROL DATA				
PT.	NORTHING	EASTING	ELEV.	DESCRIPTION
M#1	10000.00	10000.00	124.13	C34 BC PSG AP (BRASS CAP MONUMENT, FOUND)
M#2	10329.93	10000.00	135.83	C34 BC PSG AP (BRASS CAP MONUMENT, FOUND)

COORDINATE SYSTEM AND ELEVATIONS ARE WITHIN PROJECT ONLY. HORIZONTAL
CONTROL BASIS OF BEARING IS M#1 AND M#2, FOUND INVERSE DISTANCE OF 329.93'
AND BEARING OF NORTH. MONUMENT AND SURVEY INFORMATION IS FROM PLAT#77-2,
PETERSBURG RECORDING DISTRICT.



DRAWING:

PLANVIEW

PROJECT:

Mountain View Manor Trail
~PETERSBURG, ALASKA~

PETERSBURG INDIAN
ASSOCIATION
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(907) 772-3636

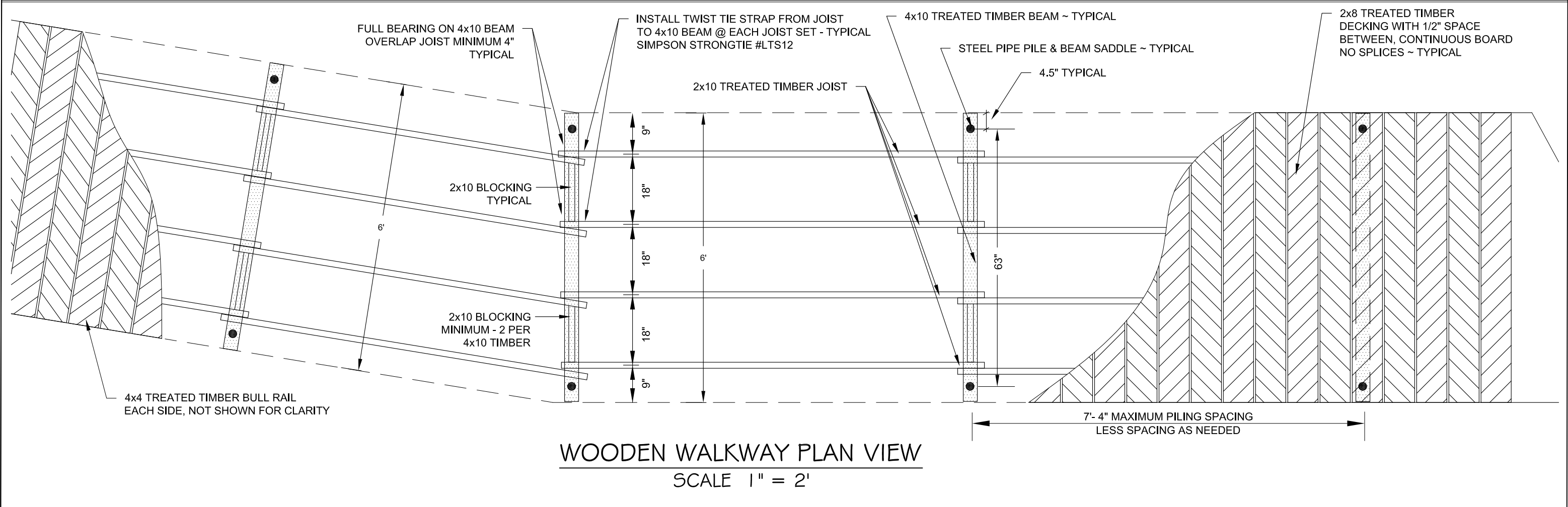
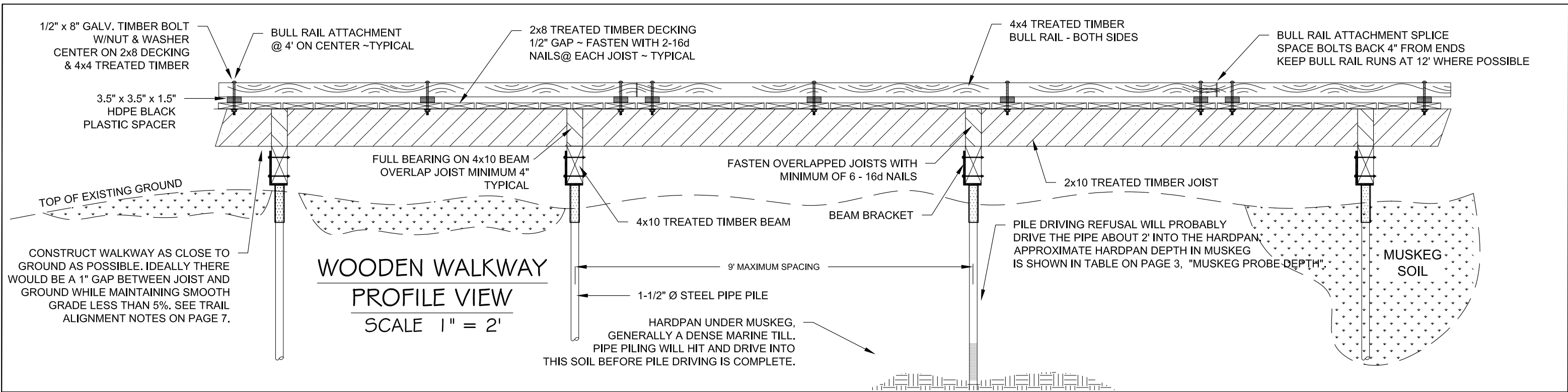
REVISIONS		
REV	DATE	DESCRIPTION



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DATE: July 2018

SHEET NUMBER 2 TOTAL SHEETS 7



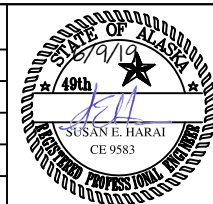
DRAWING:
WOODEN
WALKWAY
PLAN & PROFILE

PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

**PETERSBURG INDIAN
ASSOCIATION**
P.O. BOX 1418, PETERSBURG, AK. 99833
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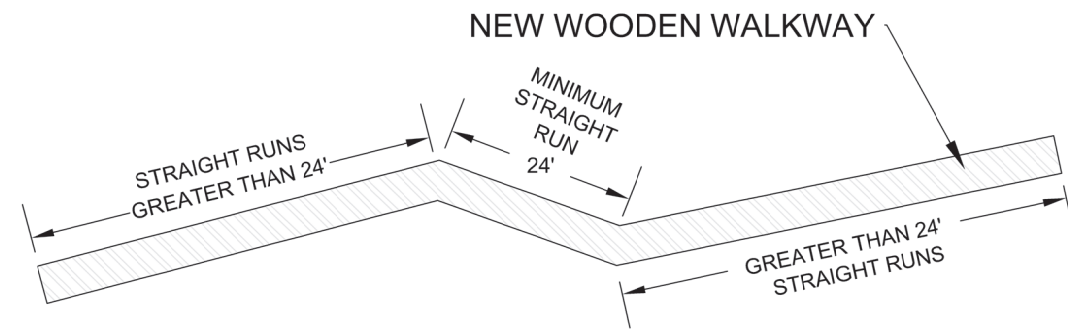
REV	DATE	DESCRIPTION



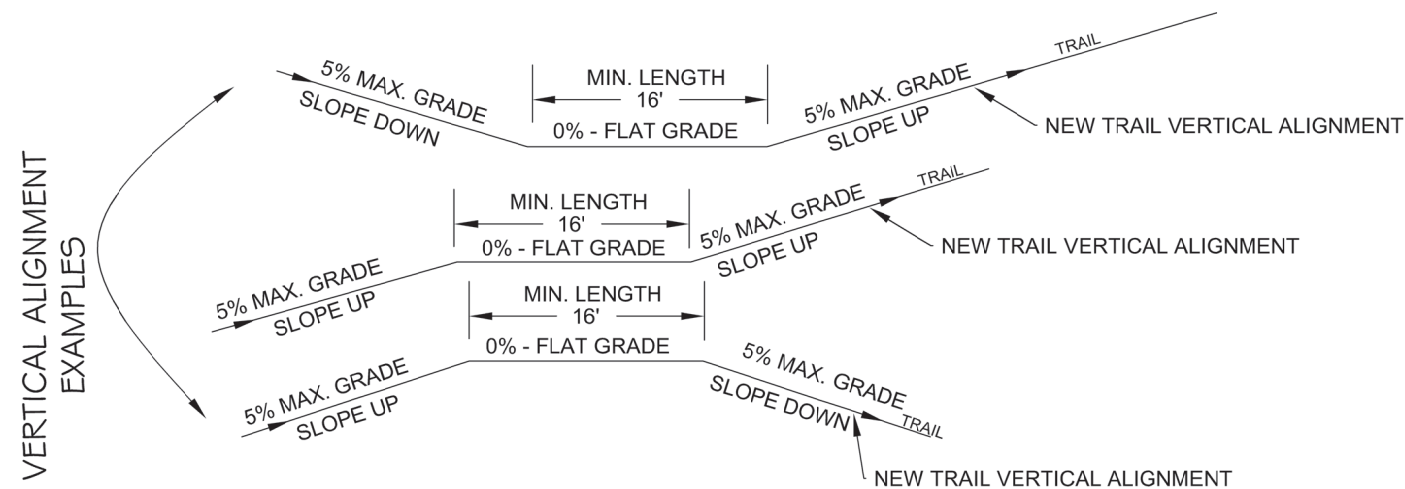
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DATE: MAY 2019

SHEET NUMBER	TOTAL SHEETS
3	7



NEW TRAIL HORIZONTAL ALIGNMENT



NEW TRAIL VERTICAL ALIGNMENT

TRAIL FINAL LOCATION NOTES :

NEW TRAIL MAY BE FIELD LOCATED WITHIN 20' EITHER SIDE OF THE SURVEY LINE THAT IS STAKED IN THE FIELD. THE TRAIL LOCATION WILL VARY DUE TO ROUTING AROUND MUSKEG HOLES, TREES, AESTHETICS, AND MAINTAINING A GRADE LESS THAN 5%. TREE AND BRUSH CUTTING WILL BE KEEP AT A MINIMUM.

TRAIL HORIZONTAL ALIGNMENT NOTES:

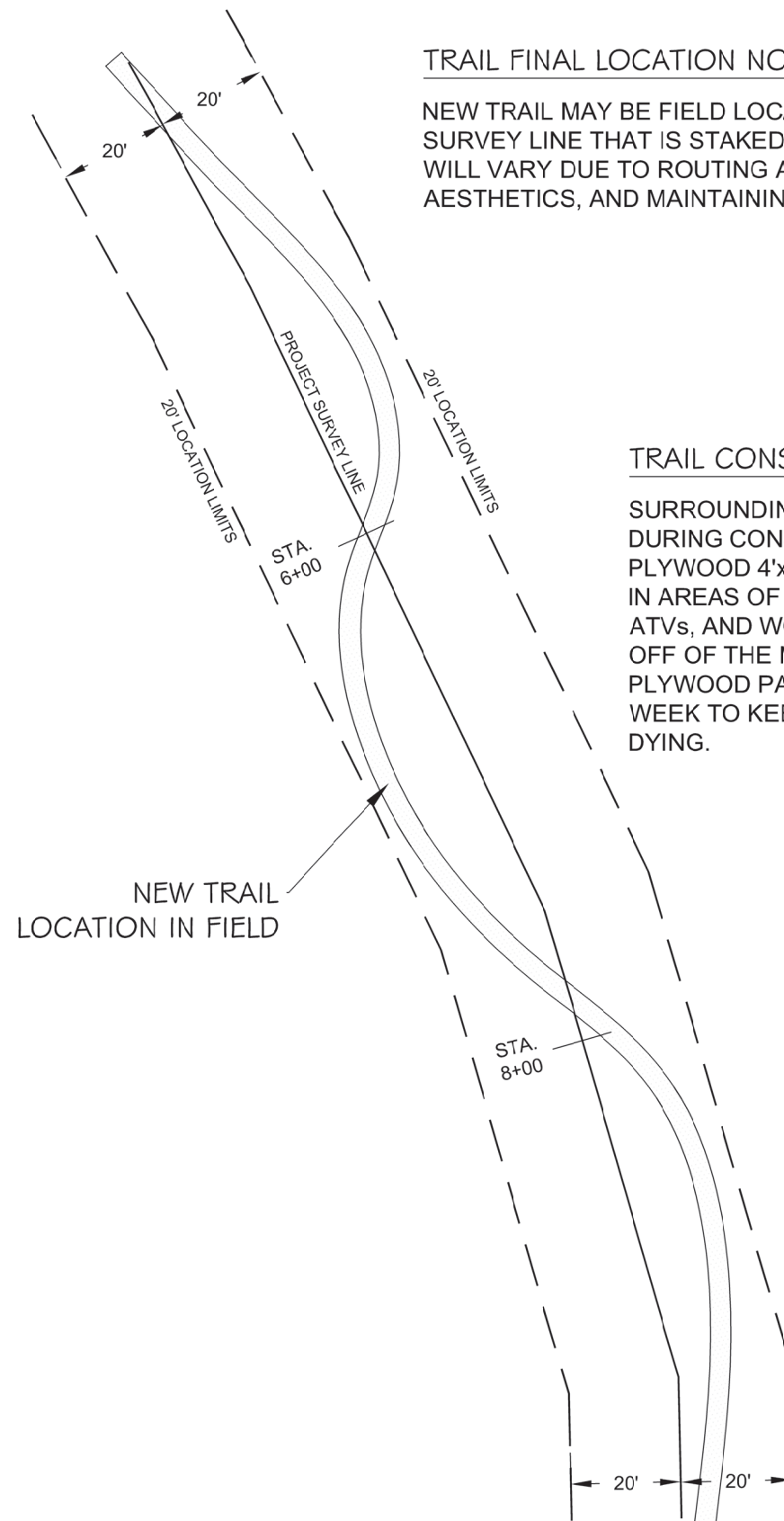
NEW TRAIL HORIZONTAL ALIGNMENT RUNS MUST BE GREATER THAT 24' IN LENGTH. THIS WILL PROVIDE FOR EASIER PEDESTRIAN WALKING WITHOUT SHORT CHANGES OF DIRECTION.

TRAIL VERTICAL ALIGNMENT NOTES:

NEW TRAIL VERTICAL ALIGNMENT RUNS OF THE SAME GRADE WILL BE AS LONG AS POSSIBLE BUT GREATER THAN 16'. ANY GRADE CHANGES GREATER THAN 1% WILL HAVE A TRANSITION RUN OF 0% BEFORE NEXT GRADE CHANGE. THIS WILL PROVIDE FOR EASIER PEDESTRIAN WALKING WITHOUT SHORT GRADE CHANGES. WOODEN BOARDWALK WILL BE CONSTRUCTED AS CLOSE TO GROUND AS POSSIBLE BUT NO GREATER THAN DECK 30" ABOVE EXISTING GROUND. IDEALLY THE BOTTOM OF THE JOIST WILL BE 1" ABOVE THE GROUND. RECOMMEND USE OF A STRING LINE FOR VERTICAL ALIGNMENT LAYOUT.

TRAIL CONSTRUCTION NOTES:

SURROUNDING MUSKEG WILL BE PROTECTED DURING CONSTRUCTION OF THE TRAIL. 4' x 8' PLYWOOD PANELS 3/4" THICK WILL BE USED IN AREAS OF CONSTRUCTION FOR MACHINERY, ATVs, AND WORKERS AS STAGING AREA TO KEEP OFF OF THE MUSKEG AND PROTECT THE AREA. PLYWOOD PANELS WILL BE REMOVED WITHIN A WEEK TO KEEP PLANTS UNDERNEATH FROM DYING.



TRAIL FINAL LOCATION NOTES:

NEW TRAIL MAY BE FIELD LOCATED WITHIN 20' EITHER SIDE OF THE SURVEY LINE THAT IS STAKED IN THE FIELD. THE TRAIL LOCATION WILL VARY DUE TO ROUTING AROUND MUSKEG HOLES, TREES, AESTHETICS, AND MAINTAINING A GRADE LESS THAN 5%.

TRAIL CONSTRUCTION NOTES:

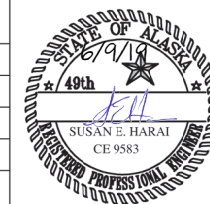
SURROUNDING MUSKEG WILL BE PROTECTED DURING CONSTRUCTION OF THE TRAIL. PLYWOOD 4'x8' PANELS 3/4" THICK WILL BE USED IN AREAS OF CONSTRUCTION FOR MACHINERY, ATVs, AND WORKERS AS STAGING AREA TO KEEP OFF OF THE MUSKEG AND PROTECT THE AREA. PLYWOOD PANELS WILL BE REMOVED WITHIN A WEEK TO KEEP PLANTS UNDERNEATH FROM DYING.

DRAWING:
**LOCATION
DETAILS**

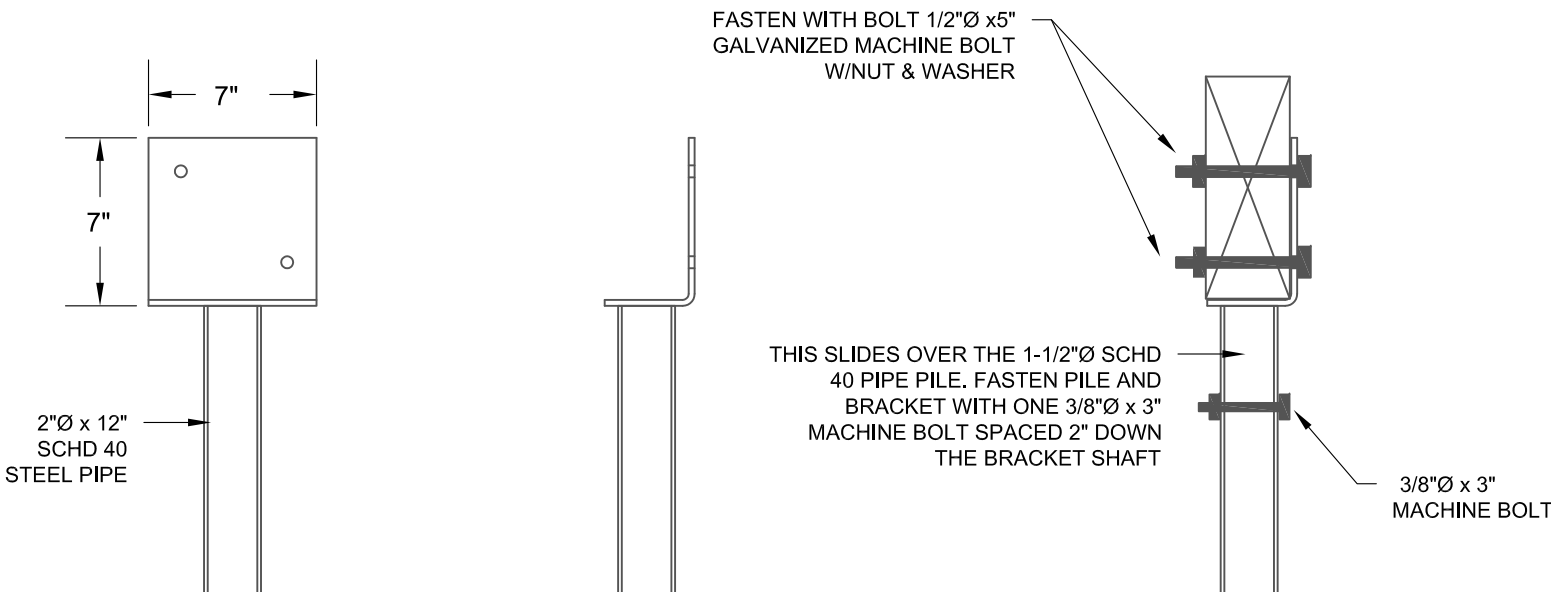
PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

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(907) 772-3636

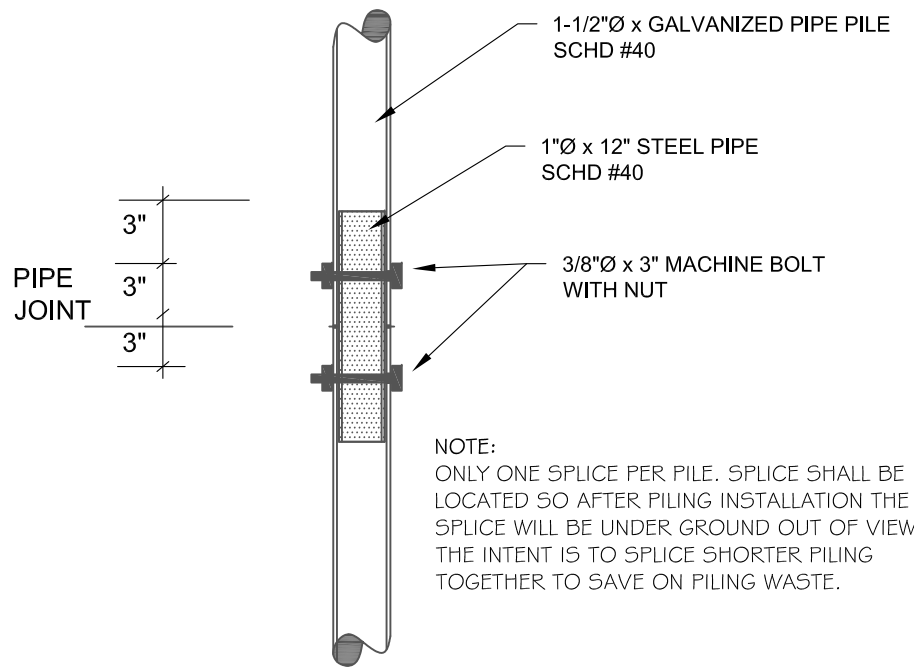
REVISIONS		
REV	DATE	DESCRIPTION



DESIGNED BY:
HARAI & ASSOCIATES, INC
P.O. BOX 625, PETERSBURG, ALASKA 99833
DATE: JULY 2018
SHEET NUMBER 4 TOTAL SHEETS 7



STANDARD TIMBER BEAM SUPPORT BRACKET



TYPICAL PILE SPLICE

GENERAL NOTES WOODEN BOARDWALK

- HARDWARE:
- ALL HARDWARE GALVANIZED AS PER ASTM 153
 - NAILS SHALL BE 16d COMMON - DECKING
 - NAILS SHALL BE 10d COMMON -JOIST TIE DOWN STRAP (4x10 BEAM)
 - NAILS SHALL BE 10d x 1.5" - JOIST TIE DOWN STRAP (2x10 JOIST)
 - BOLTS ASTM A307
 - NUTS ASTM A563 OR ASTM A194 GRADE 2H
 - WASHERS (FLAT OR BEVELED) ASTM F436
 - ALL THREAD ROD SHALL BE GALVANIZED STEEL (ASTM A325)

GALVANIZING TREATMENT: ALL NAILS, BOLTS, NUTS, WASHERS, SHALL BE HOT DIPPED GALVANIZED PER ASTM A153. STEEL CONNECTORS MAY ALSO BE GALVANIZED PER ASTM A653 (ZMAX-G185)

STEEL PIPE & PILING: 1-1/2" Ø SCHEDULE 40, A500, GALVANIZED

WOOD TIMBERS:
MATERIALS: SAWN LUMBER SHALL BE PRESERVATIVE-TREATED, HEM-FIR NO. 2 OR BETTER. ALL TIMBERS SHALL BE S4S FINISHED.

PRESERVATIVE-TREATMENT: ACZA OR CCA TO 0.60 RETENTION, LP-22. TREAT PER AWPA SECTION C2 FOR 'SOIL AND FRESH WATER USE'. USE BEST MANAGEMENT PRACTICES FOR USE IN AQUATIC ENVIRONMENTS AS PER WWPI. ALL TREATMENT WILL BE COMPATIBLE WITH GALVANIZED HARDWARE OR IF REQUIRED USE STAINLESS STEEL FASTENERS.TREAT ALL CUTS AS PER AWPA STANDARDS OR 1 COAT OF PRESERVATIVE.

JOIST TIE DOWNS: INSTALL TWIST TIE STRAP FROM JOIST TO 4x10 BEAM @ EACH JOIST SET, SIMPSON STRONGTIE #LTS12. BRACKETS WILL BE HOT DIP GALVANIZED.

BEAM SADDLES: CHANCE CIVIL CONSTRUCTION, WALKWAY SUPPORT BRACKET, #C110-0682, HOT DIP GALVANIZED. OR APPROVED EQUAL.

PILE DRIVING: PILING WILL BE DRIVEN TO REFUSAL BY HAND OR MACHINE. IF HAND DRIVEN, A MINIMUM OF A 50 POUND SLIDE HAMMER DROPPING 3' WILL BE ACCEPTABLE. IF MACHINE DRIVEN, A MINIMUM ENERGY RATING OF 300 FOOT/POUNDS IS REQUIRED. GAS ENGINE POWERED POST DRIVER OR 90 POUND PAVEMENT BREAKER OR JACK HAMMER CLASS IS ACCEPTABLE. REFUSAL IS DEFINED AS MORE THAN 20 BLOWS TO THE INCH WITH SLIDE HAMMER. .

REQUIRED DOCUMENTATION:
CONTRACTOR WILL PROVIDE THE ENGINEER WITH ALL MATERIAL LIST, MANUFACTURERS INFORMATION AND CUT SHEETS OF ALL MATERIAL PRIOR TO ORDERING. ENGINEER'S APPROVAL IS REQUIRED BEFORE PROCEEDING WITH ORDERING MATERIALS AND SUPPLIES. THE ENGINEER WILL NEED TWO WEEKS LEAD TIME BEFORE APPROVE/DISAPPROVE CONSTRUCTION MATERIALS.

DRAWING:
WOODEN WALKWAY
DETAILS AND
GENERAL NOTES

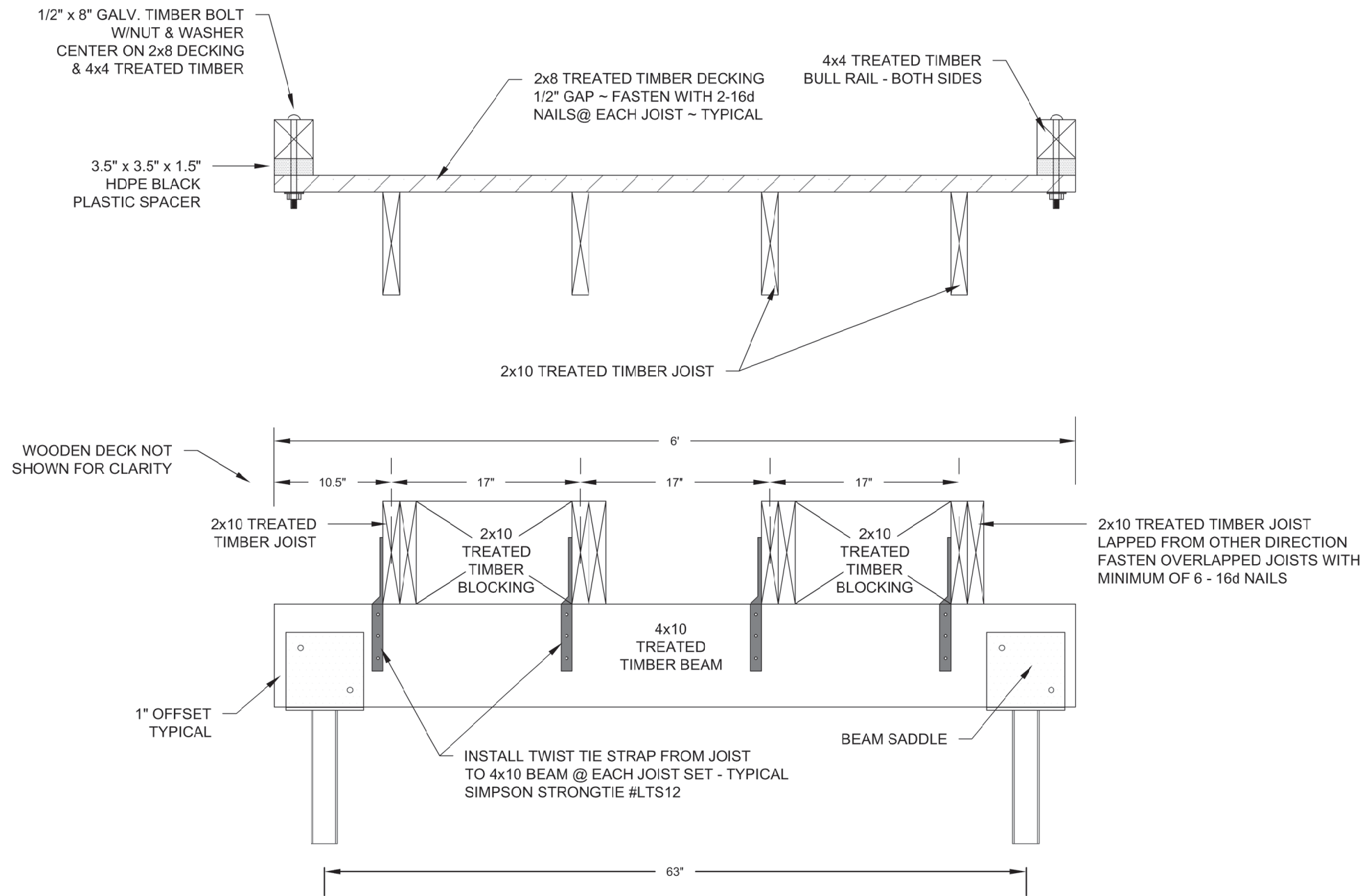
PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

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DATE: JULY 2018	
SHEET NUMBER 5	TOTAL SHEETS 7



WOODEN WALKWAY BEAM DETAIL
SCALE 1" = 1'

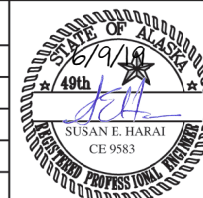
DRAWING:
**WOODEN
WALKWAY
DETAILS**

PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

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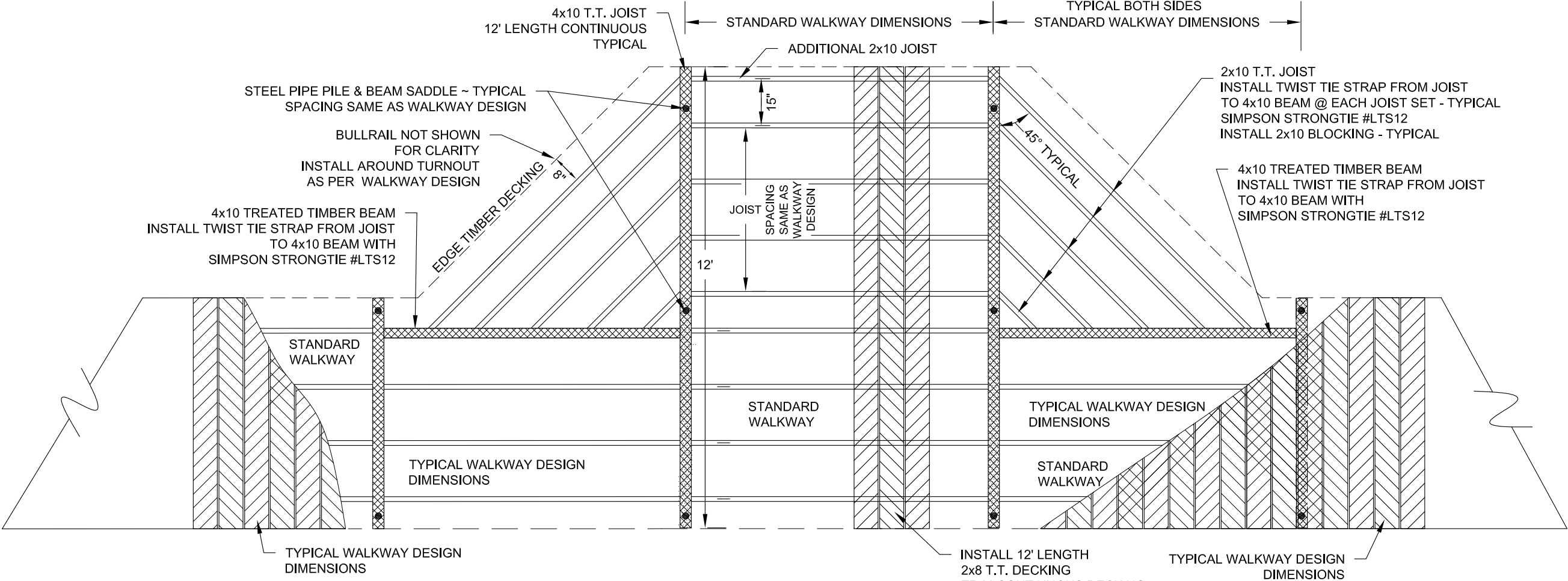
REV	DATE	DESCRIPTION



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DATE: MAY 2019

SHEET NUMBER 6	TOTAL SHEETS 7
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WOODEN WALKWAY TURNOUT
SCALE: 1" = 3'

INSTALL WOODEN WALKWAY TURNOUT SECTION
ON STANDARD WOODEN WALKWAY

CONSTRUCTION NOTE:
THE LOCATION OF THE TURNOUTS WILL BE SPECIFIED BY THE ENGINEER.
IN GENERAL, THE ADDITIONAL WIDTH IS CONSTRUCTED THE SAME AS THE STANDARD WOODEN WALKWAY DESIGN. THE ADDITIONAL PIPE PILE ARE SPACED THE SAME AS THE STANDARD WALKWAY DESIGN. THE DIFFERENCE IS THE 4x10 BEAM ON THE PILE SADDLES IS A CONTINUOUS 12' BEAM AND THE OUTER JOIST ON THE ADJOINING WALKWAY IS A 4x10 BEAM INSTEAD OF THE STANDARD DESIGN 2x10. SPECIFICATIONS AND FASTENING REQUIREMENTS FOR THE TURNOUT ARE THE SAME AS THE STANDARD WOODEN WALKWAY.

DRAWING:
WOODEN
WALKWAY
DETAILS

PROJECT:
Mountain View Manor Trail
~PETERSBURG, ALASKA~

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REV	DATE	DESCRIPTION



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DATE: MAY 2019	
SHEET NUMBER 7	TOTAL SHEETS 7